GOLDEN ENERGY AND RESOURCES LIMITED

(formerly known as United Fiber System Limited)

Incorporated in the Republic of Singapore
(Company Registration No: 199508989E)

Independent Qualified Person's Reports from HDR Pty. Ltd

PT Borneo Indobara Concession ("BIB")

PT Kuansing Inti Makmur Concession ("KIM")

PT Trisula Kencana Sakti Concession ("TKS")

PT Wahana Rimba Lestari Concession ("WRL")

6 February 2017

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SALVA
Mining Consultants



Golden Energy and Resources Ltd

PT Borneo Indobara Concession

Independent Qualified Person's Report

6 February 2017

Golden Energy and Resources Ltd

PT Borneo Indobara Concession

Independent Qualified Person's Report

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6 February 2017

Effective Date: 31 December 2016

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Key abbreviations

$ or USD	United States Dollar
adb	Air dried basis, a basis on which coal quality is measured
AMSL	Above Mean Sea Level
AMDAL	Analisis Mengenai Dampak Lingkungan Hidup- Environmental Impact Assessment (EIA), which contains three sections, the ANDAL, the RKL and the RPL
ANDAL	Analisis Dampak Lingkungan Hidup, component of the AMDAL that reports the significant environmental impacts of the proposed mining activity
arb	As received basis
AS	Australian Standards
ASR	Average stripping ratio
AusIMM	Australasian Institute of Mining and Metallurgy
Batter	Slope of Advancing Mine Strip
bcm	bank cubic meter
BD	Bulk density
CCoW	Coal Contract of Work
CHPP	Coal Handling and Processing Plant
CV	Calorific value
Capex	Capital Expenditure
Coal Resource	A 'Coal Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, quality, and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, quality, continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
Coal Reserve	A 'Coal Reserve' is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Reserves are defined, usually the point where the Coal is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
DGMC	Directorate General of Minerals and Coal within the Ministry of Energy and Mineral Resources
FC	Fixed Carbon
gar	gross as received, a basis on which coal quality is measured
GEAR	Golden Energy and Resource Ltd
GEM	Pt Golden Energy Mines Tbk
gm	Gram
h	Hour

ha	Hectare(s)
HDR	HDR Pty Ltd
IM	Inherent Moisture
IPPKH	'Izin Pinjam Pakai Kawasan Hutan' which translates to a borrow to use permit in a production forest
IUP	'Izin Usaha Pertambangan' which translates to 'Mining Business Licence'
JORC	2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia
k	Thousand
kcal/kg	Unit of energy (kilocalorie) per kilogram
kg	kilogram
km	Kilometers(s)
km2	Square kilometre(s)
kt	kilo tonne (one thousand tonne)
L	Litre
m	Meter
lcm	loose cubic metre
LOM	Life of Mine
lcm	lcm loose cubic metre
M	Million
Mbcm	Million bank cubic metres
Mbcmpa	Million bank cubic metres per annum
MEMR	Ministry of Energy and Mineral Resources within the central government
m RL	metres reduced level
m^3	cubic metre
m/s	metres per second
Mt	Millions of tonnes
Mtpa	Millions of tonnes per annum
MW	Megawatt
NAR	Net as received
Opex	operating expenditure
PKP2B	'Perjanjian Kerjasama Pengusahaan Pertambangan Batubara' – same as CCoW
RD	Relative density
RKL	'Rencana Pengelolaan Lingkungan' - environmental management plan
ROM	Run of Mine
RKL	Relative Level - survey reference for height of landforms above a datum level
RPL	'Rencana Pemantauan Lingkungan' - environmental monitoring plan
Salva Mining	Salva Mining Pty Ltd
SE	Specific Energy

SMGC	PT SMGC Consultants
SR	Strip ratio (of waste to ROM coal) expressed as bcm per tonne
t	Tonne
tkm	Tonne kilometer
tpa	Tonnes per annum
TM	Total Moisture (%)
TS	Total Sulphur (%)
VALMIN	2015 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
VM	VM Volatile Matter (%)

Executive Summary

Golden Energy and Resources Limited ("GEAR" or ""Client") commissioned Salva Mining Pty Ltd (Salva Mining) to prepare an independent qualified person's report ("Report") which includes estimate of Open Cut Coal Resource and Reserves for the BIB (PT Borneo Indobara) coal concession in Kalimantan, Indonesia. Salva Mining understands that this report will be shared with the GEAR's shareholders as a part of continuous disclosure requirements of the company.

The estimate of Coal Resources and Reserves as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Editon of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

BIB (PT Borneo Indobara) Project in Indonesia

The BIB Project covers an area of 24,100 ha and is located in the Tanah Bumbu district of South Kalimantan Province, Indonesia. The concession tenure is held under a PKP2B, granted on 17th February 2006 and is valid for 30 years. The current concession area has been divided into six mining blocks namely – Kusan Girimulya (KG), Batulaki South (BS), Batulaki North (BN), Sebamban South (SS), Sebamban North (SN) and Pasopati (PP). Mining has been carried out in four blocks – Kusan (KG), Batulaki South (BS), Sebamban South (SS) and Sebamban North (SN). Currently mining in SS block is under care and maintenance since 2014 due to land compensation agreement which is under progress. GEAR is proposing to open up the SS Pit again in 2017. Mining activity in PP block is proposed to commence in 2019. No mining operations in Batulaki South (BS) block are being carried out at this stage as coal in the dip side falls into the plantation area where land is still to be acquired. The current estimate does not include any reserve from Batulaki North (BN) as this block is not well explored and only localised correlation has been established. BN block should be considered as a potential for future Resource and Reserve upside.

Geology

The BIB coal concession area has a general inverted U shape which follows both limbs of a synclinal structure with an approximate north-northeast trending synclinal axis. The coal seams generally display shallow dips of around 10-20 degrees towards this synclinal axis but dips can increase locally up to around 60 degrees. The entire Pasopati resource area, which is adjacent to obducted basement volcanics and ophiolites, exhibits dips of around 60 degrees. The increased dip in the Pasopati resource area is associated with increased coal rank, as seen from the fact that coals in the Pasopati area have in general higher calorific values compared to coals in the rest of the concession.

There have been a number of phases of exploration completed in the BIB coal concession area over the past 10 years. The first phase involved generally shallow drilling and field mapping. In-fill drilling and deeper stratigraphic drilling followed in phase two, in order to allow for more accurate definition of the structural geology and coal quality characteristics of the deposit.

A total of 2,818 drill holes were used by Salva to construct five geological models in the BIB coal concession area comprising KG Block – 1,523 drill holes, BS Block - 552 drill holes, SS Block – 212 drill holes, SN Block - 358 drill holes and PP Block - 173 drill holes.

Coal Resource

Salva Mining have estimated total Coal Resources of 1,817 million tonnes (Mt) on an in situ air dried moisture basis (adb), to a maximum depth of 250 m. The total tonnes are comprised of 916 Mt of Measured, 335 Mt of Indicated and 565 Mt of Inferred Resources.

Coal Resources Estimate as at 31 December 2016

Coal Resources (Mt)										
Area	Measured	Ash% (adb)	CV adb Kcal/kg	Indicated	Ash% (adb)	CV adb Kcal/kg	Inferred	Ash% adb	CV adb Kcal/kg	Total
KG	857	5.38	5,329	278	6.09	5,297	335	6.63	5,266	1,470
BS	21	4.71	5,567	27	5.61	5,560	155	5.94	5,563	203
SS	18	6.22	5,510	10	6.29	5,559	15	5.59	5,570	42
SN	10	4.69	5,357	10	6.17	5,258	50	6.97	5,078	71
PP	10	8.58	6,716	10	9.32	6,593	10	8.48	6,615	31
Total	916			335			565			1817

Mineral Resources are reported inclusive of the Mineral Reserves
(*Note: individual totals may differ due to rounding, final Inferred Resource rounded to nearest 5 Mt)*

Mining Operations

Mining operation commenced in 2005 in the SS and BS Blocks. The SS pit was mined until 2014 and will be recommenced in 2017. The Kusan pit (KG) was started in 2011 while the SN Pit commissioned in 2015. The mining operation at BIB uses standard truck and excavator methods which are a common practice in Indonesia. Waste material is mined using hydraulic excavators and loaded into standard rear tipping off-highway trucks and hauled to dumps in close proximity to the pits or to in-pit dumps where possible. For the purpose of this Reserve Statement, it is proposed that contractors will continue to be used for mining and haulage operations over the life of mine, and the unit costs used for the Reserve estimate reflect this style of mining.

Mining Modification factors – Resource to Reserve

This Coal Reserve estimate uses the most recent geological model and the Coal Resources estimate prepared by Salva Mining as of 31 December 2016 . Potential open cut reserves inside different blocks of the Project area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. The optimiser was run across a wide range of coal prices using a set of site specific costs (waste removal, land compensation, coal removal, haulage costs, etc.). These costs were adjusted to suit the conditions for this project.

An economic model was prepared for the mining operation from each of the BIB coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal.

A life of mine plan was completed based on the final pit design. This was done to ensure that the proposed mining method would be practical and achievable and that the proposed dumping strategy would be able to contain the waste mined in the final pit design. The mining schedule

targeted production of 13Mt in 2018, 22Mt in year 2020 and ramping up to a target of 40 Mt from year 2023 onwards.

The coal price estimate was based on Salva Mining's view on the outlook for global thermal coal fundamentals and including the demand and supply outlook for the sector. Capital and operating costs were derived by Salva Mining for the BIB project based on a combination of existing contracts and Salva Mining's in house knowledge database about Indonesian operations. These are considered to be reasonable and suitable for the purpose of this study. There is a significant amount of capital requirement for the Infrastructural upgrade to achieve projected mine plan.

The BIB mine has been operating since 2005 (Kusan-Girimulya Pit started production in 2011). It has produced 6.3 Mt in 2015 and 7.5 Mt of product coal during 2016.

Pre-feasibility studies were completed prior to commencement of mining operations. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being given mining operations approval (CCoW).

Where an entity has an operating mine for an Ore Reserve, its Life of Mine Plan would generally be expected to contain information at better than Pre-Feasibility or Feasibility level for the whole range of inputs normally required for a Pre-Feasibility or Feasibility study and this would meet the requirement in Clause 29 for the Ore Reserve to continue that classification. Salva Mining has used actual modifying factors based on current operations at the BIB Mine which were independently verified by the HDR's subject specialist during the site visit. In Salva Mining's opinion, the Modifying Factors at BIB Mine are better defined based on actual mining practices compared to a greenfield project at Pre-Feasibility stage.

Optimised Pit Shell

The optimised pitshells for BIB blocks as delineated in the final pit design do contain Inferred Resources which are excluded from the Coal Reserves reported for the BIB concession. Under the JORC Code, Inferred Resources cannot be converted to Reserves due to poor confidence in structural continuity and quality variables. Insitu quantities and mine scheduled tonnes within optimized pitshell along with Reserves are shown in Table below.

Insitu & Scheduled Quantities & Reserves, BIB Concession

Concession	Insitu			Mine Scheduled Tonnes within Optimised Pit shell			Coal Reserves,
	Waste, Mbcm	Coal, Mt	SR, bcm/t	Waste, Mbcm	Coal, Mt	SR, bcm/t	Mt
KG Block	2,781	770	3.6	2,642	659	4.0	602.9
BS Block	198	48	4.1	188	41	4.6	20.3
SS Block	69	22	3.1	66	19	3.5	15.9
SN Block	53	13	4.1	52	12	4.3	8.7
PP Block	94	8	11.2	90	7	12.5	4.2
Total, BIB	**3196**	**861**	**3.7**	**3038**	**737**	**4.1**	**652**

Coal Reserves

Coal Reserves were estimated by applying appropriate modifying factors and exclusion criteria to the Coal Resources. Surface water management, infrastructure and the location of the IUP boundary were considered when determining the surface constraints for the mining operation. Coal Reserves were estimated by applying appropriate density adjustment and mining loss and dilution parameters to the Measured and Indicated Coal Resources inside the final pit design. All the final pits used for the Reserve estimate were designed following the existing geotechnical recommendations and operating practices.

Coal Reserves have been reported in Proved and Probable categories to reflect the reliability of the estimate. No Inferred Coal Resources are included in the reported Coal Reserves. The total Coal Reserve for PT Borneo Indobara coal deposit ("BIB") as of 31 December 2016 is 652 Mt comprising of 516 Mt Proved and 136 Mt Probable categories. No beneficiation of coal product is planned other than crushing to a nominal top size (50mm). ROM Coal Reserves for BIB coal concession along with the estimated quality are presented in Table below.

Coal Reserves Estimate as at 31 December 2016

Block	Reserve (Mt)			RD	TM arb	IM	Ash adb %	CV	TS adb %
	Proved	Probable	Total	adb t/m3	%	adb %		arb Kcal/kg	
KG	482.9	120.0	602.9	1.38	35.3	15.4	5.2	4,085	0.22
BS	13.7	6.6	20.3	1.37	33.5	13.2	6.3	4,207	0.17
SS	11.4	4.5	15.9	1.47	38.6	12.5	5.8	3,866	0.21
SN	5.1	3.5	8.7	1.37	38.5	16.7	4.6	3,941	0.14
PP	3.0	1.2	4.2	1.33	8.7	6.1	12.5	6,528	1.39
Total	**516.1**	**135.8**	**652.0**	**1.38**	**35.2**	**15.2**	**5.2**	**4,097**	**0.22**

**This table must be presented with the entire JORC Reserve Statement of PT Borneo Indobara*

The coal will be sold as a run of mine (ROM) product; hence Marketable Reserves will equal ROM Coal Reserves.

This report may only be presented in its entirety. Parties wishing to publish or edit selected parts of the text, or use the Statement for public reporting, must obtain prior written approval from Salva Mining and the signatories of this report.

1 Introduction

Golden Energy and Resources Limited ("GEAR" or "Client") commissioned Salva Mining Pty Ltd ("Salva Mining") to prepare an independent qualified person's report ("Report") which includes estimate ("Statement") of the Open Cut Coal Resources and Reserves for the PT Borneo Indobara coal deposit ("BIB") located in South Kalimantan, Indonesia.

Salva Mining understands that this report will be shared with the GEAR's shareholders as part of continuous disclosure requirements of the company.

The estimate of Coal Resources and Reserves as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Editon of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

1.1 Approach

The principal data used in the preparation of this report included:

- A JORC Resource and Reserve Report titled "Independent Resource & Reserve Report, PT Borneo Indobara", 25 October 2016, Prepared for GEAR by Salva Mining;
- A JORC Resource and Reserve Report titled "Independent Resource & Reserve Report, PT Borneo Indobara", 5 Febuary 2016, Prepared for GEAR by HDR;
- Collar, down hole logging, seam pick and coal quality information, provided by GEAR;
- Updated mined out surface DTM , provided by GEAR, showing the extent of mine face positions as at the end of December 2016;
- A JORC Resource Report titled "JORC Resource Statement", PT Borneo Indobara, 21st October 2013, Prepared for GEMS by PT SMG Consultants;
- PT Ground Risk management (GRM), "Engineering Report for Geo-technical and Surface Water Study on Kusan Coal Mine"; 11 July 2011;
- Capex and Opex data supplied by GEAR and also derived from Salva Mining's cost database of typical Indonesian operations; and
- A Life of Mine Plan Report titled "Life of Mine Plan", PT Borneo Indobara, 21st October 2013, Prepared for GEMS.

The following approach was undertaken by Salva Mining to estimate Coal Resource and Reserves:

- Salva Mining has reviewed the geological data set provided by GEAR for the coal block covered under scope of report;
- Using the existing bore hole information provided to Salva Mining by GEAR, a geological model was created using Minescape stratigraphic modelling software. While creating the model, a thickness cut off limit of 0.1m was applied and is termed as an "in situ" model;
- This model and the underlying raw data such as Drill hole logs, coal quality reports and geophysical logs were reviewed by Salva Mining's team of geologists headed by Mr Davies.
- On the basis of confidence limits (as described in the Resource Classification Section), the in-situ geological model was then categorised into Measured, Indicated and Inferred categories according to the JORC Code (2012). Once these categories were ascertained, coal volume, tonnage and qualities were estimated;
- Cross sections, plans and deposit characteristics such as structure, number and thickness of seams were examined in conjunction with the proposed equipment and mining method

to decide on minimum mining thickness, coal losses and dilution factors. These factors were then used to convert the in situ geological model to a ROM model;

- Physical surface constraints were studied and consideration was made for surface water runoff and management, as well as the location of significant infrastructure and communities inside the potential mining area. Appropriate mining limits were then determined based on this data;
- Indicative cost and revenue factors were reviewed with GEAR and checked for reasonableness by Salva Mining. Optimiser software was used to incorporate other criteria such as depth constraints, geotechnical criteria and minimum mining thickness. In this way a series of different pit shells were derived for varying cost and revenue inputs;
- Optimised pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal and then practical pit design were made (Mineable Pit Shell). This pit shell formed the basis of the subsequent reserves estimate;
- The Measured and Indicated confidence limits were overlaid on the main pit shell and any Inferred tonnes were excluded from the estimate;
- The overall economic viability of the results was tested by creating an economic model which included provision for capital and operating cost;
- Based on Resource confidence and present mine planning detail, the reserves were categorised into Proved and Probable categories;
- All of the modifying factors and checks adopted to ascertain the estimate have been provided in the respective section of this report.

1.2 Data sources

This review is based on the information provided by GEAR, the technical reports of consultants and previous explorers, as well as other published and unpublished data relevant to the area. Salva Mining has carried out, to a limited extent, its own independent assessment of the quality of the geological data. The status of agreements, royalties or concession standing pertaining to the assets was provided by the company.

In developing our assumptions for this Statement, Salva Mining has relied upon information provided by the company and information available in the public domain. Key sources are outlined in this Report and all data included in the preparation of this Report has been detailed in the references section of this report. Salva Mining has accepted all information supplied to it in good faith as being true, accurate and complete, after having made due enquiry as of 31 December 2016 .

1.3 Limitations

After due enquiry in accordance with the scope of work and subject to the limitations of the Report hereunder, Salva Mining confirms that:

- The input, handling, computation and output of the geological data and Coal Resource and Reserve information has been conducted in a professional and accurate manner, to the high standards commonly expected within the mining professions;
- The interpretation, estimation and reporting of the Coal Reserve Statement has been conducted in a professional and competent manner, to the high standards commonly

expected within the Geosciences and mining professions, and in accordance with the principles and definitions of the JORC Code (2012);

- In conducting this assessment, Salva Mining has addressed and assessed all activities and technical matters that might reasonably be considered relevant and material to such an assessment conducted to internationally accepted standards. Based on observations and a review of available documentation, Salva Mining has, after reasonable enquiry, been satisfied that there are no other relevant material issues outstanding;
- The conclusions presented in this report are professional opinions based solely upon Salva Mining's interpretations of the documentation received and other available information, as referenced in this Report. These conclusions are intended exclusively for the purposes stated herein;
- For these reasons, prospective investors must make their own assumptions and their own assessments of the subject matter of this Report.

Opinions presented in this report apply to the conditions and features as noted in the documentation, and those reasonably foreseeable. These opinions cannot necessarily apply to conditions and features that may arise after the date of this report, about which Salva Mining have had no prior knowledge nor had the opportunity to evaluate.

1.4 Disclaimer and warranty

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of its Statement or the success or failure for the purpose for which the report was prepared. Neither Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

A draft version of this Statement was provided to the directors of GEAR for comment in respect of omissions and factual accuracy. As recommended in Section 39 of the VALMIN Code, GEAR has provided Salva Mining with an indemnity under which Salva Mining is to be compensated for any liability and/or any additional work or expenditure, which:

- Results from Salva Mining's reliance on information provided by GEAR and/or Independent consultants that is materially inaccurate or incomplete, or
- Relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

The conclusions expressed in this Statement are appropriate as at 31 December 2016. The report is only appropriate for this date and may change in time in response to variations in economic, market, legal or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in United States dollars ($) unless otherwise stated. Salva Mining services exclude any commentary on the fairness or reasonableness of any consideration in relation to this acquisition.

2 Independent Competent Persons and Experts Statement

This Resource and Reserve report has been written following the guidelines contained within the 2005 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Experts Reports ("the VALMIN Code") and the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("the JORC Code"). It has been prepared under the supervision of Mr Manish Garg (Director – Consulting / Partner, Salva Mining) who takes overall responsibility for the report and is an Independent Expert as defined by the VALMIN Code.

Sections of the report which pertain to Coal Resources have been prepared by Mr. Grenville Davies (Principal Consultant, Geology) who is a subject specialist and a Competent Person as defined by the JORC Code. Sections of the report which pertain to Coal Reserves have been prepared by Mr. Sunil Kumar (Principal Consultant, Mining) who is a subject specialist and a Competent Person as defined by the JORC Code.

This report was prepared on behalf of Salva Mining by the signatory to this report, assisted by the subject specialists' competent persons whose qualifications and experience are set out in Appendix A of this report.



Mr. Manish Garg
Director
Salva Mining Pty Ltd

2.1 Statement of Independence

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of this report. The above mentioned person(s) have no interest whatsoever in the mining assets reviewed and will gain no reward for the provision of this report.

Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

Neither Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR, or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

3 Project Description

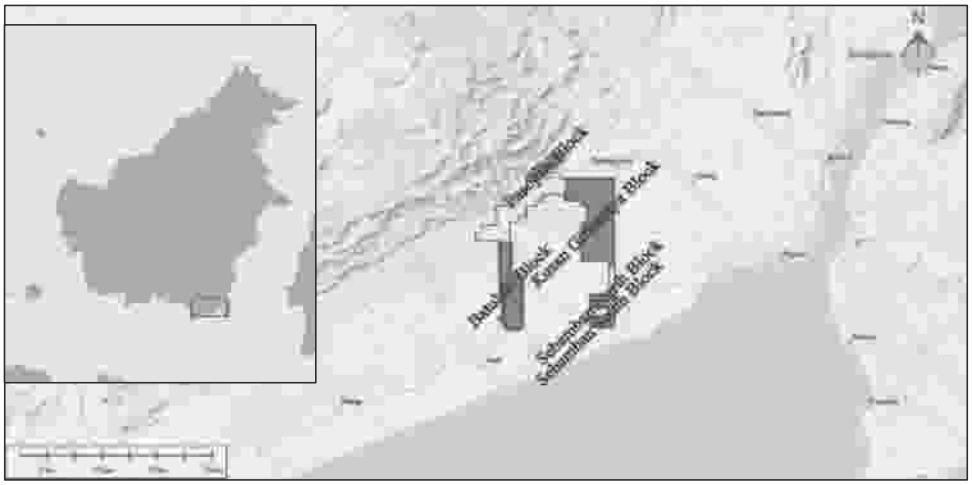
3.1 Property Description and Access

The BIB Project is located in the Tanah Bumbu Regency of the South Kalimantan Province of Indonesia. The BIB concession is a second generation Perjanjian Kerjasama Pengusahaan Pertambangan Batubara (PKP2B) coal concession ("CCoW") covering a total area of 24,100 ha. The BIB concession is located within the coal mining hub of South Kalimantan province and consists of following 5 coal blocks:

- Kusan Girimulya Block ("KG Block");
- Sebamban North Block ("SN Block");
- Sebamban South Block ("SS Block");
- Batulaki Block ("BS Block"); and
- Pasopati Block ("PP Block").

Conventional open-pit coal mining operations were commenced in the SS and BS blocks in 2005 and in the KG block in 2011. At the time of writing of this report, the mining operations are continuing at the BIB project. Various mining blocks are located between 6 km to 30 km to the South Kalimantan coastline (Figure 3:1).

Figure 3:1 General Location Plan



Locations of individual coal blocks and CCOW boundary is shown below in Figure 3:2.

Figure 3:2 CCoW Boundary and Location of Individual Coal Blocks



3.2 Ownership

Golden Energy and Resources ltd (GEAR) holds the mining rights to the BIB concession through its subsidiary PT Roundhill Capital Indonesia (Net 98.0951%). Tenure at the BIB concession is held under the second generation PKP2B. The PKP2B was originally executed on 15 August 1994 between PT Borneo Indobara ("PT BIB") and PT Tambang Batubara Bukit Asam ("PTBA"), a government owned company for an area of 93,164 ha. Approval to commence production was granted on 17 February 2006 for a period of 30 years for a reduced area of 24,100 ha. The detail of the coal concession is given in Table 3.1.

Table 3.1 BIB Concession Details

No.	Concession Type	Area (ha)	Status	Granted	Expiry
10.K/40.00/ DJB/2006	(CCoW)	24,100 ha	Granted	17-Feb-2006	17-Feb-2036

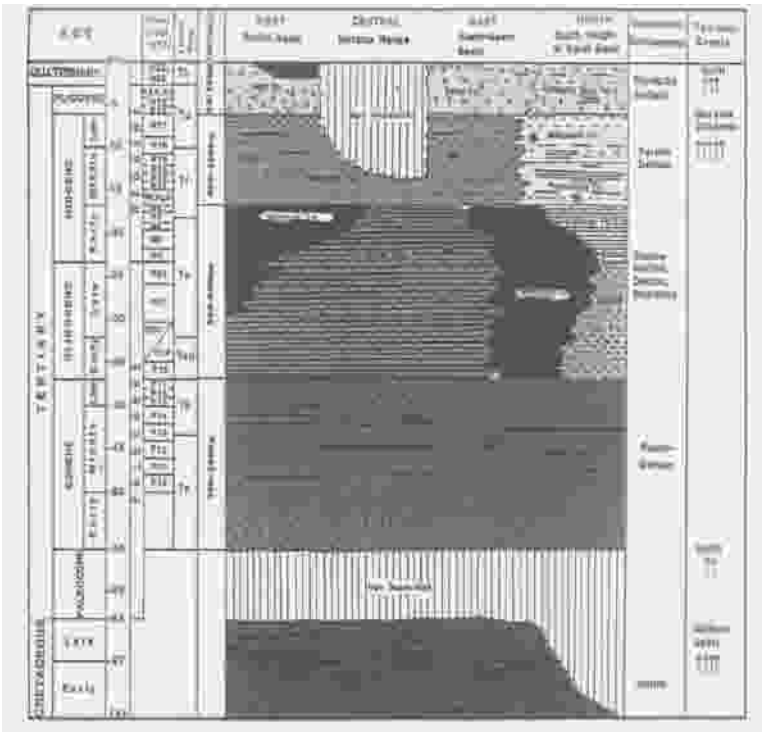
4 Geology

4.1.1 Regional Geology

The coal deposits found within the BIB coal concession area are located within the Asem Asem Basin of South-eastern Kalimantan. The Asem Asem Basin has been previously termed the Pasir or Asem Asem sub-basin to the larger Barito Basin, found to the north of the Meratus Range Mountains, which form a general north-easterly trending divide between the two basins. Sediments within both the Barito and Asem Asem Basins have been deposited from Eocene times (Figure 4:1) and represent an initial transgressive sedimentation sequence from Eocene fluvio-deltaic sediments at the base up through Oligocene to mid-Miocene deltaic to shallow marine sediments. The Meratus orogenic uplift commenced in the mid-Miocene which resulted in a subsequent mid-Miocene to Quaternary regressive sequence of deltaic to fluvio-deltaic sediments at the top of the sedimentary package.

Orogenic uplift of the Meratus Range resulted in obduction of Ophiolite Complex slabs mainly within the Meratus Range area (Figure 4:1). These Cretaceous age ophiolites and other metamorphic, volcanic and sedimentary rocks form the basement rocks, separated by an unconformable contact, to the coal bearing sediments of the Barito and Asem Asem Basins. As can be seen from Figure 4:3 This unconformable contact is often marked by thrust faulting, which has allowed to older Cretaceous age rocks to be uplifted adjacent to the younger Eocene to Quaternary age sediments.

Figure 4:1 Generalised Stratigraphy of South-East Kalimantan



From Panggabean (1991)

Figure 4:2 Regional Geological Setting

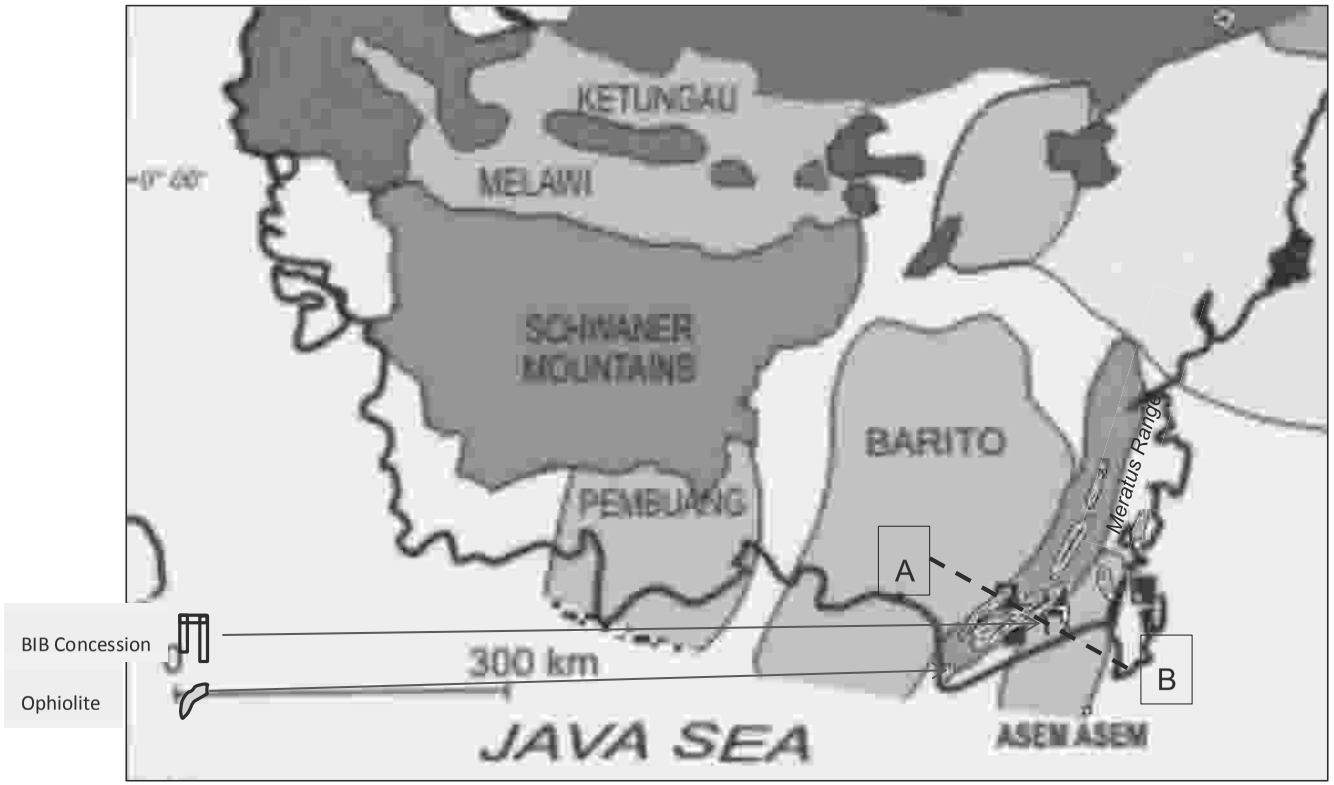
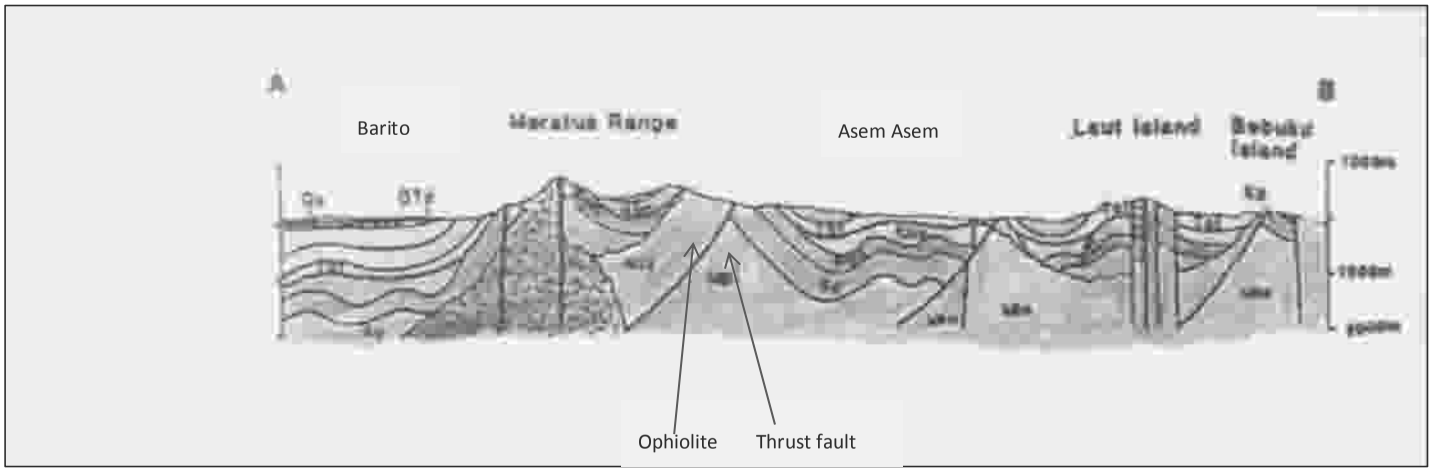
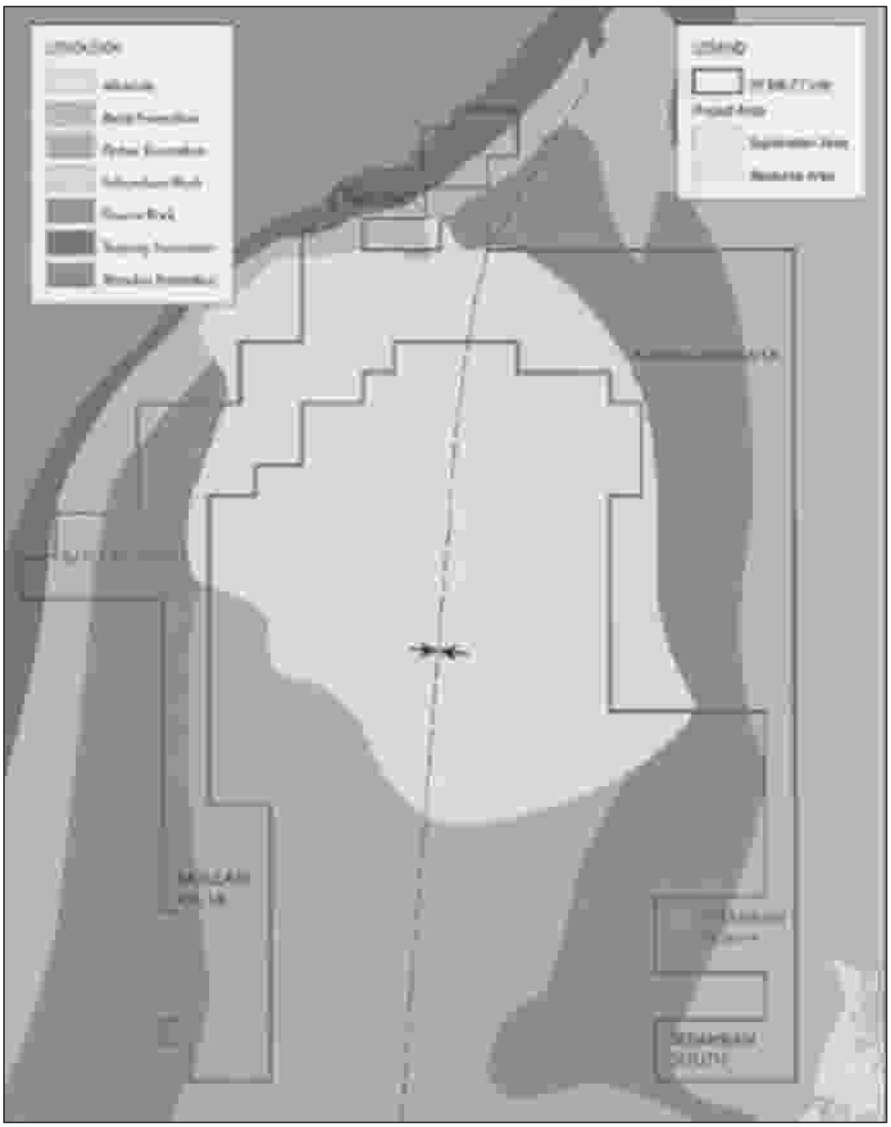


Figure 4:3 Cross-Section showing Barito and Asem Asem sedimentary basins



From Panggabean (1991)

Figure 4:4 Local geological map of the BIB concession area



4.2 Local Geology

The BIB coal concession area has a general inverted U shape which follows both limbs of a synclinal structure with an approximate north-northeast trending synclinal axis (Figure 4:4). The seams generally display shallow dips of around 20 degrees but dips can increase locally up to around 60 degrees. The entire Pasopati resource area, which is adjacent to obducted basement

volcanics and ophiolites (labelled Source Rock in Figure 4:4), exhibits dips of around 60 degrees. The increased dip in the Pasopati resource area is associated with increased coal rank, as seen from the fact that coals in the Pasopati area have in general higher calorific values compared to coals in the rest of the concession.

Structure within the area is relatively benign, with most of the significant faults in the area consisting of the north-east trending thrust faults that follow the general trend of the fold axes. Normal and block faulting is seen mainly in the basement (Pre-Tertiary) rocks (Panggabean, 1991). However, localised increase in seam dips have been observed in the coal models constructed for resource estimation purposes and this may be due to as yet un-mapped faults.

In general the stratigraphic sequence within the BIB concession, from the youngest to oldest is as follows:

Alluvium

The Alluvium is comprised of gravels, sand, silt, clay and mud, found as alluvial, swamp and coastal deposits.

Dahor Formation

This unit consists of friable quartzitic sandstones, locally interbedded with clays, lignites and basalt gravels.

Warukin Formation

This formation is a mainly deltaic sequence comprised of alternating quartzitic sandstones and claystone, intercalated with shales, coal seams, limestones and carbonaceous claystone. This formation contains the majority of the coal resources in the BIB concession area.

Berai Formation

The Berai Formation is shallow marine derived sediment which is comprised of limestones alternating locally with marl and sandstone.

Tanjung Formation

This is a fluvio-deltaic sequence found at the base of the coal bearing sedimentary basin sequence, deposited on an unconformable contact with underlying basement rocks. The formation consists of alternating conglomerate, sandstone and claystone, intercalated with shale, coal and limestone. The lower part consists of conglomerate and sandstone, with claystone, shale and coal, whereas the upper part consists of sandstone and claystone intercalated with limestone. The coals within the Pasopati resource area form part of this formation.

4.3 Coal Seams

4.3.1 Kusan Girimulya (KG Block)

The deposit at KG Block contains approximately 52 modelled coal seams (Table 4:1) of which 20 have been split into upper and lower plies. Some seams are less continuous than others and have been modelled to pinch out where not present in a particular drill hole. In particular the D1 seam has a limited extent through the deposit due to the fact that has not been correlated in the majority of holes drilled. In contrast, the BL2U seam is one of the most continuous seams and is present throughout the deposit. This resource area covers the eastern outcrop of the Warukin formation coals and seams dip shallowly to the west. The coal quality is low rank with high inherent moisture and low ash and sulphur contents. This area is currently being mined.

4.3.2 Batulaki South (BS Block)

This resource area is situated on the western flank of the syncline and seams consequently dip to the east. Seams in this area also form part of the Warukin Formation with coal quality characteristics that are very similar to KG, SS Block and SN Block areas. There are 40 named and correlated seams in this area. No correlation between the Warukin coals across the western and eastern limbs of the syncline has been undertaken. This area is currently being mined.

4.3.3 Sebamban South (SS Block)

Warukin Formation coal seams occur in this resource area, dipping shallowly to the west. There are 20 named and correlated seams including splits that have been identified in this area. The coal quality is similar to the KG, BS Block and SN Block areas but no correlation of seams between these areas has been made to date. This area has been mined in the past and the operation will be recommenced during 2017.

4.3.4 Sebamban North (SN Block)

This resource area is found immediately north of the SS Block and has many characteristics in common with SS Block coals. Warukin Formation coal seams dip shallowly to the west and 22 seams have been named and correlated across the area. The coal quality is similar to the KG, BS Block and SS Block areas. Mining commenced in this area since 2015 onwards.

4.3.5 Pasopati (PP Block)

The coal seams in this resource area belong to the Tanjung Formation and are therefore older than the Warukin Formation coals found in the rest of the concession. The coal is steeply dipping (60 degrees) to the east and exhibits higher rank and resultant higher energy. There are 13 named and correlated seams in this area. The area has not been officially mined to date but has been extensively worked by artisanal miners in the past due to the prized high quality of the coal in this area. This area has not been mined yet, however it is planned to be mined in 2018 onwards.

Table 4:1 KG Block Seam Splitting Relationships

Master Seam	1st Phase Splitting	2nd Phase Splitting	3rd Phase Splitting
H	H2		
	H1		
G	G2	G2U	
		G2L	
	G1		
F	F2		
	F1		
FL	FL2		
	FL1		
E	E2	E2U	
		E2L	E2L2
			E2L1
	E1	E1U	E1U2
			E1U1
		E1L	E1L2
			E1L1
EL	EL2	EL2U	
		EL2L	
	EL1	EL1U	
		EL1L	
D	D1	D1U	D1U2
			D1U1
		D1L	D1L2
			D1L1
	DU	DU2	DU2U
			DU2L
		DU1	DU1U
			DU1L
	DL	DL2	DL2U
			DL2L
		DL1	DL1U
			DL1L
CR	CR2	CR2U	
		CR2L	
	CR1	CR1U	
		CR1L	
CU	CU2		
	CU1		
CL	CL2	CL2U	

Master Seam	1st Phase Splitting	2nd Phase Splitting	3rd Phase Splitting
		CL2L	
	CL1	CL1U	
		CL1L	
B	BU	BU2	BU2U
			BU2L
		BU1	BU1U
			BU1L
	BL	BL2	BL2U
			BL2L
		BL1	BL1U
			BL1L
A	AU		
	AL	AL2	

Table 4:2 BS Block Seam Splitting Relationships

Master Seam	1st Phase Splitting	2nd Phase Splitting
D		
C	CU	
	CL	
B	BU	
	BL	BL2
		BL1
A5		
A4U	A4U2	A4U2B
		A4U2A
	A4U1	
A4L		
A3U	A3U2	
	A3U1	
A3L		
A2U	A2U2	
	A2U1	
A2L		
A1U	A1U2	
	A1U1	
A1L	A1L2	
	A1L1	
AL2		
AL1		
S1		

Master Seam	1st Phase Splitting	2nd Phase Splitting
S2	S2U	
	S2L	
S3		
S4	S4U	
	S4L	
S5		
S6		
S7U		
S7L		
S8U		
S8L		
S9		
S10	S10U	
	S10L	
S11		
S12		

Table 4:3 SS Block Seam Splitting Relationships

Master Seam	1st Phase Splitting	2nd Phase Splitting	3rd Phase Splitting
F	F2		
	F1		
E	E2	E2U	
		E2L	
	E1	E1U	
		E1L	
D1	D1U		
	D1L		
D	DU	DU2	
		DU1	
	DL	DL2	DL2U
			DL2L
		DL1	
C			
B1			
B	BU	BU2	
		BU1	
	BL	BL2	
		BL1	
A2			

Table 4:4 SN Block Seam Splitting Relationships

Master Seam	1st Phase Splitting	2nd Phase Splitting	3rd Phase Splitting
G			
F	F2		
	F1		
FL			
E	E2	E2U	
		E2L	
	E1	E1U	E1U2
			E1U1
		E1L	E1L2
			E1L1
D3			
D2	D2U		
	D2L		
D1			
D	DU		
	DL	DL2	
		DL1	
C	CU		
	CL		
BU			
BL	BL2		
	BL1		
A	A2		
	A1		
AL			

Table 4:5 PP Block Seam Splitting Relationships

Master Seam	1st Phase Splitting
SU1	SU1U
	SU1L
SU2	
SM1	
SM2	SM2U
	SM2L
SL1	SL1U
	SL1L
SL2	SL2U
	SL2L
SL3	SL3U
	SL3L
SB	

5 Exploration

5.1 Exploration History

There have been a number of phases of exploration completed in the BIB coal concession area over the past 10 years by PT Golden Energy Mines Tbk (GEMS) and Golden Energy and Resources (GEAR) staff. The first phase involved generally shallow drilling and field mapping. In-fill drilling and deeper stratigraphic drilling followed in phase two, in order to allow for more accurate definition of the structural geology and coal quality characteristics of the deposit.

Successive phases of exploration drilling in the BIB concession have involved the following:

- Resource expansion drilling
- Resource upgrade drilling
- In fill pre-production drilling
- Dump and infrastructure sterilization drilling
- Production drilling

The results of the various phases of drilling have been assessed and geological models have been updated on a regular basis previously by GEMS staff and by PT SMG Consultants and now by GEAR staff geologist. The last phase of exploration drilling was completed in early 2013 and PT SMG Consultants produced updated geological models and an updated coal resource statement as at 28 July 2013, which details a total coal resource of 1.8 Bt, considered by PT SMG Consultants to have been reported in accordance with JORC Code (2004). Subsequently, resource delineation was further refined with production and infill drilling on regular basis. HDR Pty Ltd (HDR) prepared a Resource and Reserve statement as at 30 June 2014 reported in accordance with JORC Code (2012), which was subsequently updated in February 2015 and Febuary 2016.

Salva Mining prepared a Resource and Reserve statement as at 31 August 2016 and reported in accordance with JORC Code (2012) after incorporating information from the additional holes drilled during 2016. This coal resource and reserve was updated as at 31 Decemebr 2016 to account for mining that occurred between Sept – Dec 2016.

5.2 Other prospective areas

The only exploration area within the concession boundary that has no current coal resources is Batulaki North (found between the BS and PP Blocks resource areas (Figure 3:1). This area contains Warukin Formation coals that dip eastward. The area is not well explored and only localised correlation of intersected seams has been established to date. As such, seam continuity has not yet been established from the data available and further drilling will be required to allow for resource estimation within this area.

6 Geological Data and QAQC

6.1 Data Supplied

The geological data provided by GEAR for the BIB concession was independently reviewed by Salva Mining's geologists and is considered appropriate and reasonable for the purpose of estimating Coal Resources.

This data, used by Salva Mining for the purpose of resource estimation, includes but is not limited to:

- Drill hole collar information inclusive of total depth drilled per hole;
- Drill hole lithological data inclusive of seam picks identified and correlated on the basis of down-hole geophysics;
- Coal sample table and associated raw coal qualities per sample;
- Drill hole completion reports for most of the holes drilled containing details of core recoveries achieved;
- Down-hole geophysical data in the form of both LAS files and Minex drill hole databases;
- Minex geological models for the KG Block, BS Block, PP Block and SS Block areas constructed by PT SMG Consultants in 2013, which contains a complete drill hole database as well has grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface;
- A Minescape geological model of the SN Block resource area constructed by GEMS geologists in 2014 which contains a complete drill hole database as well has grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface.
- Minesape geological models for the KG Block, BS Block, PP Block, SN Block and SS Block areas constructed by HDR (5 Febuary 2016), which contains a complete drill hole database as well has grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface;

6.2 Lithological Data

A total of 2,818 drill holes were used to construct five geological models in the BIB coal concession area comprising:

- KG Block 1,523 drill holes;
- BS Block 552 drill holes;
- SS Block 212 drill holes;
- SN Block 358 drill holes; and
- PP Block 173 drill holes.

Of these holes, a small percentage are barren, i.e. no coal intersected; this is due to drill-rig limitations (maximum 60 m depth in earlier campaigns). Barren holes are never the less useful for geological modelling purposes as they prevent coal from being modelled where it is not present. In

other cases no seam picks were supplied for a number of holes. In these instances the hole is marked as 'not logged' and the model is allowed to project seams though these holes if warranted by surrounding holes.

Approximately 98% of the holes have been logged using down-hole geophysics. Down-hole geophysical data acquired by GEAR is predominantly comprised of gamma, density and calliper logs and has allowed for accurate identification of coal seams in each hole (seam picks) and the correlation of coal seams between holes.

Drill hole locations for the five resource areas can be seen in Appendix E and coal intercept statistics for the five resource areas can be seen in Table 6:1 to Table 6:5.

Table 6:1 KG Block Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
H2	12	CPSMG_097A	0.03	CSMGC068	1.15	0.53	0.39
H1	12	DHKS09078	0.08	CPSMG_094	7.70	1.72	2.82
G2U	98	CSMGC063	0.08	CPSMG_056	2.60	0.34	0.36
G2L	100	KS_INF09145CR	0.16	CPSMG_106R	2.45	0.66	0.57
G1	103	CSMGC063	0.06	CPSMG_097A	6.75	0.53	1.16
F2	227	CPSMG_014	0.07	CPSMG_107	5.30	1.04	0.69
F1	226	CPSMG_014	0.05	CPSMG_106R	4.00	0.48	0.38
FL2	101	GM06014	0.10	CPSMG_095	4.30	0.76	0.82
FL1	99	CSMGC044	0.06	CPSMG_106R	3.00	0.55	0.61
E2U	405	CSMGC044	0.02	CPSMG_092	5.96	0.76	0.73
E2L2	405	CSMGC044	0.01	GM09405A	9.34	0.59	0.78
E2L1	405	DHKS09077	0.01	GM09405A	3.56	0.23	0.31
E1U2	430	CSMGC044	0.02	CPSMG_065	12.86	1.61	1.97
E1U1	430	CSMGC044	0.04	CSMGC075	10.64	1.22	1.01
E1L2	438	CSMGC044	0.04	CPSMG_034	11.45	1.54	1.30
E1L1	440	CPSMG_112	0.03	CSMGC074	10.51	1.91	1.48
EL2U	322	CPSMG_032	0.09	CSMGC064	5.86	1.11	0.95
EL2L	322	CPSMG_012	0.07	CSMGC068	4.75	0.90	0.77
EL1U	249	CSMGC051	0.10	CSMGC056	6.13	1.21	1.17
EL1L	249	CSMGC051	0.01	GM06045R	2.00	0.14	0.24
D1U2	141	KS_0843	0.02	GM09411	1.92	0.30	0.26
D1U1	140	KS_0843	0.03	GM09411	1.66	0.41	0.31
D1L2	149	KS_08258	0.01	CPSMG_041	2.50	0.42	0.47
D1L1	144	KS_08258	0.01	GM06042	1.90	0.42	0.39
DU2U	366	KS_08258	0.01	CPSMG_065	6.66	0.66	0.75
DU2L	366	KS_08258	0.01	CPSMG_044	10.40	0.60	0.73
DU1U	354	KS_08258	0.02	CPSMG_043	6.46	0.63	0.80
DU1L	355	KS_08258	0.01	CPSMG_043	6.14	0.75	0.79

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
DL2U	371	CPSMG_097A	0.05	DHKS09045	5.35	1.78	1.33
DL2L	370	CPSMG_097A	0.05	CSMGC036	5.30	1.52	1.13
DL1U	358	KS_08290	0.04	CPSMG_038	8.65	1.32	1.18
DL1L	360	KS_08290	0.02	CPSMG_037	5.25	0.64	0.67
CR2U	118	DHKS09120	0.08	GM06008R	3.19	0.48	0.47
CR2L	118	DHKS09120	0.04	GM06008R	1.96	0.29	0.29
CR1U	116	GM09003	0.09	GM10034	1.70	0.43	0.34
CR1L	116	DHKS09120	0.04	GM10034	0.85	0.22	0.17
CU2	180	DHKS09054	0.12	DHKS09004	4.65	0.54	0.54
CU1	176	DHKS09029	0.13	CSMGC003	2.70	0.52	0.40
CL2U	190	DHKS09052C	0.08	GM10028	6.52	1.01	1.18
CL2L	189	DHKS09052C	0.02	CPSMG_016	2.40	0.29	0.33
CL1U	193	CSMGC004	0.05	CPSMG_037	1.92	0.29	0.26
CL1L	194	CSMGC004	0.05	CPSMG_037	2.28	0.35	0.32
BU2U	186	DHKS09025	0.04	DHKS09104	2.46	0.60	0.42
BU2L	184	DHKS09025	0.03	DHKS09104	1.88	0.45	0.33
BU1U	194	DHKS09025	0.06	DHKS09116	4.08	0.80	0.62
BU1L2	4	KS_15211	0.30	KS_15163	0.90	0.63	0.28
BU1L1	4	KS_15211	0.20	KS_15163	0.50	0.38	0.13
BL2U	244	DHKS09025	0.06	GM_15027	13.90	2.46	2.48
BL2L	253	DHKS09025	0.04	GM_14377	14.30	2.17	2.23
BL1U	204	DHKS09025	0.04	CPSMG_063	1.80	0.59	0.34
BL1L	204	DHKS09025	0.05	GM09029	2.75	0.71	0.42
B1	30	KS_08195	0.30	KS_08161	1.70	0.75	0.33
AU	89	GM_14374	0.15	DHKS09034	0.95	0.54	0.15
AL2	51	DHKS09084	0.25	DHKS09024	1.00	0.61	0.17
BL2	101	GM_14371	0.20	GM924C	14.05	5.49	4.53
BL1	118	KS_14142	0.20	GM_14675	4.60	1.24	0.79
BL	82	KS_14189	0.20	GM_14341	6.80	0.82	0.76
BU2	100	KS_15186	0.20	KS_15172	2.60	1.11	0.46
BU1L	196	DHKS09025	0.04	KS_14175C	3.40	0.61	0.61
BU1	129	KS_14132	0.30	KS_14204C	5.22	2.83	1.15
BU	14	GM_15185	1.40	GM_15197	2.70	2.02	0.41
CU	9	GM_14610	0.20	GM_14605	0.70	0.47	0.16
CL1	31	GM_15064	0.70	GM_15209	3.90	2.20	0.88
CL2	11	GM_15040	0.30	GM_15174	1.50	0.64	0.35
CL	11	GM_15183	1.20	GM_15186	4.20	3.00	1.08
CR1	19	KS_15013	0.35	GM_15060	2.30	0.88	0.54
CR2	15	KS_15091	0.20	DHGM09040C	1.52	0.62	0.35

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
CR	6	GM_15210	0.20	DHGM09037C	0.65	0.36	0.16
DL1	44	KS_15110	0.20	KS_15102	4.60	0.84	1.05
DL2	38	KS_15017	0.40	KS_15064	8.30	3.21	1.94
DU1	23	KS_15070	0.20	GM1350C	5.45	1.48	1.10
DU2	23	KS_15039	0.30	KS_15070	3.00	0.99	0.82
DL	41	KS_15101	2.30	KS_15114	11.90	8.50	2.71
DU	37	KS_15095	0.30	KS_15093	7.20	1.66	1.56
D	11	KS_15034	9.80	KS_15049	12.50	11.53	0.89
D1	1	KS_15063	0.60	KS_15063	0.60	0.60	-
EL1	2	KS_15127	0.60	KS_15070	0.90	0.75	0.21
EL2	2	KS_15127	0.40	KS_15070	3.70	2.05	2.33
EL	35	KS_15103	0.30	KS_15097	3.60	1.84	0.99
E1L	5	KS_15109	0.50	KS_15095	4.40	2.48	1.56
E1U	8	KS_15103	0.20	KS_15109	2.10	1.09	0.73
E1	5	DHGM09015C	2.05	GL115RC	10.60	5.02	3.44
E2L	1	GM1135C	0.50	GM1135C	0.50	0.50	-
E2	6	GL115RC	0.30	KS_15096	1.20	0.78	0.32

Table 6:2 BS Block Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
D	6	BL_F709	0.35	B_09020A	1.15	0.64	0.32
CU	22	BL_F858	0.20	BL_0611	0.63	0.40	0.13
CL	27	BL_0631	0.20	BL_0678	0.96	0.50	0.20
BU	39	BL_0675	0.22	BL_F701	3.85	1.63	1.04
B	185	B_F9007	0.80	BL_F842	17.10	9.35	4.50
BL2	28	BL_0613C	0.18	BL_0682	4.47	1.61	1.27
BL1	24	BL_0613C	0.16	BL_F864	2.90	1.08	0.88
A5	22	BL_0607	0.20	B_F9020C	1.10	0.44	0.21
A4U2B	4	BL_F836	0.30	BL_F716	0.50	0.41	0.10
A4U2A	4	BL_F716	0.95	BL_0622C	2.45	1.78	0.72
A4U1	54	BL_F840C	0.34	BL_F859C	2.30	1.20	0.44
A4L	61	BL_0601A	0.21	BLK13033	1.95	0.71	0.32
A3U2	18	BLK_11026	0.30	BL_0608	2.08	0.79	0.44
A3U1	16	BL_F714C	0.75	B_10028	4.92	3.49	1.40
A3L	79	BLK_11019	0.20	B_09012	1.25	0.43	0.14
A2U2	21	BLK_11059	0.35	B_10032	2.18	1.38	0.63

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
A2U1	20	BL_0625	0.28	BLK_12009	4.70	1.05	1.02
A2L	73	B_09023	0.35	B_F9031	2.33	1.04	0.36
A1U2	17	B_F9055	0.20	B_10032	4.76	2.56	1.79
A1U1	17	B_09028	0.10	BLK_12012	0.95	0.45	0.23
A1L2	8	BL_0625	0.32	BLK_12009	1.20	0.70	0.27
A1L1	8	BL_0625	0.28	BLK_12009	3.30	0.81	1.01
AL2	22	B_09145	0.10	BS_13027	1.65	0.68	0.41
AL1	12	B_09144	0.20	B_F9032	1.50	0.80	0.36
S1	5	B_F9032	0.25	B_F9043	0.60	0.41	0.16
S2U	5	B_F9050	0.45	B_F9044	0.90	0.67	0.17
S2L	5	B_09017	0.30	B_09036	0.80	0.44	0.20
S3	26	B_09032	0.15	B_F9029	1.20	0.50	0.23
S4U	10	BLK_11045E	0.40	B_F9044	1.90	0.97	0.56
S4L	10	BLK_11045E	0.35	B_09017	0.85	0.57	0.19
S5	15	B_F9063	0.15	B_10035	0.67	0.28	0.14
S6	24	BLK_12006B	0.15	B_F9045	1.90	0.52	0.51
S7U	32	BLK_12005	0.25	B_F9062	5.45	0.94	1.03
S7L	32	BLK_12004B	1.95	B_09016	6.25	3.90	1.37
S8U	25	B_F9063	1.65	BLK_12007	3.90	2.98	0.58
S8L	16	B_09140	0.20	BLK_11045D	0.70	0.43	0.16
S9	14	B_F9059	0.20	B_09141	1.10	0.57	0.29
S10U	5	B_09021	0.25	B_09026	0.40	0.33	0.06
S10L	5	B_09016	0.32	B_09026	0.50	0.39	0.08
S11	10	B_09016	0.25	B_F9068	4.30	2.52	1.64
S12	9	B_F9047	2.30	B_F9061	6.10	4.99	1.06
C	90	BL_F879C	0.10	B_F9XX09	2.25	0.84	0.35
BL	76	B_09033	0.25	BL_F811	3.10	0.66	0.48
A4U2	49	BL_0611	0.32	B_10016	4.90	1.97	1.06
A4U	37	B_F9074	0.30	B_09002A	7.35	2.46	1.72
A3U	83	B_F9XX07	0.50	BL_F719	5.85	3.64	1.13
A2U	57	B_F9015A	0.20	B_F9XX07	4.45	2.42	1.00
A1U	45	BLK_12018	0.20	BL_F702C	5.00	1.84	1.50
A1L	42	BLK_12025	0.15	B_F9071	1.10	0.57	0.25
S2	6	B_F9064	0.25	B_F9071	1.30	0.52	0.39
S4	22	BLK_11056	0.30	BLK_12006	3.25	1.89	1.26
S10	3	B_F9047	0.35	B_F9069	0.75	0.58	0.21

Table 6:3 SS Block Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
F2	56	SB-INF813C	0.85	SB-INF815	2.78	1.92	0.50
F1	56	SBM0806	0.42	SB-INF803C	1.45	0.91	0.24
E2U	86	DUMMY2	1.10	SB-INF807C	5.64	2.74	0.84
E2L	87	SB-0630	0.50	SB-INF807C	5.22	2.53	0.81
E1U	70	SB-0616	0.15	SB-INF810	3.59	0.77	0.54
E1L	70	SB-0616	0.15	SB-INF810	3.66	0.78	0.56
EL	49	SB-INF837	0.25	SB-INF805	4.00	2.10	0.86
D1U	57	SB-0642	0.22	DHSB9057	1.60	0.84	0.41
D1L	56	SB-0642	0.12	CHKSB907TC	1.00	0.45	0.21
DU2	82	DHSB9001C	0.25	DHSB9005C	5.99	2.19	0.98
DU1	78	SB-INF812	0.12	DHSB9005C	2.06	0.76	0.37
DL2U	2	SB-0650	0.36	SB-0659	0.43	0.40	0.05
DL2L	2	SB-0650	0.44	SB-0659	0.80	0.62	0.26
DL2	72	SB-INF808	0.20	SB-0643	3.54	1.58	0.82
DL1	78	SB-INF808	0.30	DCSB814	4.01	2.40	1.10
C	42	SB-0605C	0.30	DHSB9003C	1.25	0.67	0.20
B1	9	CHKSB914	0.40	DHSB9081C	1.20	0.66	0.27
BU2	29	CHKSB915A	0.14	DHSB9003C	0.98	0.43	0.24
BU1	28	CHKSB915A	0.16	DHSB9003C	1.13	0.49	0.28
BL2	33	DCSB809	0.40	DHSB9003C	2.99	1.31	0.64
BL1	34	DCSB809	0.31	DHSB9003C	2.30	0.99	0.49
A2	5	SB-0636	0.70	DCSB813	0.80	0.77	0.05

Table 6:4 SN Block Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
G	4	SBA_13016	0.30	SBA_13037	0.50	0.41	0.09
F2	26	SBA_13064	0.20	DH_SB09029	0.90	0.53	0.21
F1	26	SBA_15011	0.20	DH_SB09027	0.60	0.33	0.10
FL	10	DH_SB09011	0.25	SBA_15143	0.70	0.42	0.14
E2U	5	SBA_15119	0.60	SBA_15143	3.90	1.66	1.33
E2L	5	SBA_15119	0.20	DH_SB09026	3.45	1.25	1.31
E1U2	1	SBA_15119	1.30	SBA_15119	1.30	1.30	-
E1U1	1	SBA_15119	0.50	SBA_15119	0.50	0.50	-
E1L2	1	SBA_15119	0.60	SBA_15119	0.60	0.60	-

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
E1L1	1	SBA_15119	0.30	SBA_15119	0.30	0.30	-
D3	4	DH_SB09021C	0.35	SBA_13006	0.80	0.64	0.21
D2U	10	DH_SB09024	0.35	SBA_13023	4.20	1.82	1.21
D2L	9	GT_SBA_06	0.20	SBA_13016	0.70	0.33	0.15
D1	13	SBA_13005	0.20	SBA_13008	0.80	0.39	0.21
DU	23	DH_SB09005	0.25	SBA_15079	6.80	1.00	1.34
DL2	8	SBA_13049	0.80	SBA_13020	6.60	3.26	2.14
DL1	7	SBA_13021	0.20	SBA_14016	1.10	0.49	0.30
CU	9	SBA_13003	0.30	GT_SBA_04	1.04	0.68	0.24
CL	8	GT_SBA_04	0.10	SBA_13068	0.80	0.45	0.25
BU	17	GT_SBA_06	0.30	SBA_13053	2.00	0.77	0.43
BL2	5	SBA_13055C	0.33	SBA_14096	0.60	0.47	0.13
BL1	6	SBA_14096	1.20	SBA_13056	3.70	2.23	0.99
A2	21	SBA_13062	0.20	SBA_13061	1.20	0.58	0.28
A1	11	SBA_13036C	0.10	SBA_13055C	0.60	0.41	0.15
AL	7	SBA_13049	0.22	GT_SBA_09	0.80	0.42	0.27
F	12	GT_SBA_01	0.22	SBA_13029C	2.60	0.62	0.65
E2	31	SBA_15132	0.30	SBA_13016	5.60	2.45	1.76
E1	39	SBA_15125	0.20	SBA_15116	5.90	1.28	1.39
E	120	SBA_15027	0.20	SBA_15014	9.20	3.95	2.11
D2	62	DH_SB09006	0.25	GT_SBA_08	2.80	1.21	0.59
DL	36	SBA_14023	0.10	GT_SBA_06	6.20	3.38	1.55
D	46	SBA_14023A	1.80	SBA_15075	8.60	7.13	1.43
C	31	SBA_13004	0.20	SBA_13062	1.60	0.74	0.32
BL	21	SBA_13022	0.22	SBA_13049	4.90	2.60	1.52

Table 6:5 PP Block Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
SU1U	1	CPS11029E	1.95	CPS11029E	1.95	1.95	-
SU1L	1	CPS11029E	3.45	CPS11029E	3.45	3.45	-
SU2	10	CPS11025	0.50	CPS11042F	6.15	4.01	2.39
SM1	23	PS11042E	0.90	CPS11043A	4.00	1.91	0.75
SM2U	3	CPS11095B	1.10	CPS11094B	1.25	1.20	0.09
SM2L	3	CPS11095B	0.90	CPS11094B	0.95	0.93	0.03
SL1U	3	CPS11091B	0.85	CPS11026C	2.20	1.68	0.73
SL1L	3	CPS11026C	1.00	CPS11092B	1.90	1.58	0.51
SL2U	3	CPS11029F	1.10	CPS11006H	8.15	3.75	3.84

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
SL2L	4	PS11038B	1.00	CPS11006C	12.00	4.65	5.15
SL3U	2	PS11033	0.90	CPS11032B	5.00	2.95	2.90
SL3L	2	PS11033	1.20	CPS11032B	2.10	1.65	0.64
SB	33	CPS11034	0.35	CPS11006D	3.80	1.09	0.67
SU1	6	CPS11025	0.40	CPS11041	3.00	2.23	1.20
SM2	36	CPS11011B	0.80	CPS11034X	5.35	2.37	1.51
SL1	40	CPS11096B	0.90	CPS11012	6.00	2.87	1.43
SL2	50	CPS11026D	0.55	CPS11012	9.00	3.26	1.75
SL3	54	CPS11036C	1.25	PS11006B	12.70	4.44	2.51

6.3 Topographic Survey and base of weathering (BOW)

Topography data used in the five BIB geological models has been derived from Light Detecting and Ranging (LiDAR) remote sensing surveys conducted by PT Surtech Utama in 2012. During this survey GPS ground control points were combined with flight trajectories and LiDAR scanning equipment to produce an accurate dataset of XYZ topographic coordinate points for the entire concession area.

The topography is regularly updated by GEAR for production reporting basis. This is done by conducting of topographic survey in mining area on a periodic basis by the mine site surveyors. The topographic survey of the actrive mining area is switched with the virgin area to develop the topographic contours.

A 'non-conformable' base of weathering (BOW) surface was generated for the geological models by translating the topographic surface down by 3 m in the Z direction. This is based on the observation that the average weathered horizon thickness, where it has been logged, is approximately 3 m.

6.4 Data Quality Assurance and Quality Control (QAQC) Measures

6.4.1 Core Sampling

At the completion of each run, core lengths were checked in the splits for recovery to ensure coal seams have been recovered as required. A target core recovery of 90% has been applied throughout all drilling phases. If core recovery was found to be less than 90% within the coal seam, the hole was re-drilled to collect a sample with ≥ 90% recovery. The core was also photographed routinely and logged in the splits by a geologist before being sampled. For open holes, chip samples were collected at 1 m intervals for lithological logging purposes.

All the drill rigs used during each phase of exploration were operated by experienced personnel and drilling was supervised by fully qualified geologists working in shifts.

Sampling of the coal seams was conducted by the rig geologist on duty and was conducted in accordance with the following sampling procedure supplied to rig geologists;

- Open core barrel inner split tube and remove sample from the barrel;
- Transfer the core to the PVC split or core box;
- Determine the core depth ("From" and "To") from the drill depth; and
- Reconstruct the core in the split to allow for any gaps;
- Determine the core recovery;
- Wash down using water and a cloth and/or brush prior to logging if covered by mud or oil;
- Complete geological logging and photograph structure or any abnormal features. The photograph should show information of drill hole number and from and to depths;
- The division of samples follows the simple scheme of sample all coal, sample separately any contained bands (plies) and take 10 cm roof and floor non-coal samples;
- Place samples into plastic bags which should be doubled to minimise moisture loss. Insert one bag inside another so that they are doubled;
- Label the sample by ID card, the label should give information about the sample number, hole number, from/to depth, and Project Code. Place the label ID card inside the small re-sealable plastic bag before putting it into the sample bag;
- Seal the sample bag with tape and write the sample number on the plastic bag;
- Dispatch sample to an accredited laboratory

The coal quality sampling technique detailed above is considered by Salva Mining to adequately address the QAQC requirements of coal sampling. As a further coal quality validation step prior to importing coal quality sample results for coal quality modelling purposes, Salva Mining constructed spreadsheets which compare the sampled intervals against the logged seam intervals in order to ensure that sampled intervals match the seam pick intervals.

6.4.2 Down-hole Geophysics and Seam Picks

Down-hole geophysical logs were completed during each drilling program by PT Surtech International and by PT Recsalog. Geophysical logging was conducted following the completion of a drill hole. After drilling is complete the logging unit deploys down-hole geophysical sondes, including gamma ray, calliper and density tools to assist with characterising the down-hole formation and its geological properties. Stratigraphic information, intercepted along the entire length of the drill hole (collar to total depth), is recorded and plotted in acrobat pdf format. A digital copy of the data is stored in LAS file format.

Logging was performed on the majority of drill holes (including cored and open holes) and approximately 98% of all holes have geophysical data. Seam picks and lithologies have all been corrected for geophysics.

Geophysical logging provides information on the coal seams intersected and aids in the definition of horizon boundaries and marker horizons, used to correlate the subsurface geology. The presence or absence of geophysical logging is one of the criteria used in the determination of points of observation for resource classification purposes. Under normal conditions coal-bearing sections of each drill hole were geophysically logged at the completion of drilling. In some instances, poor ground conditions restricted the ability to geophysically log the entire hole upon completion. In these

cases, collapsed portions of holes were re-drilled in order to allow for density and gamma logging to be accomplished by lowering the geophysical probe through the drill string.

6.4.3 Coal Quality

Coal quality sampling was undertaken by GEMS and GEAR and contract geologists, with the analysis testing being completed by PT Geoservices Coal Laboratories in Asam Asam or Banjarbaru. PT Geoservices laboratories are accredited to ISO 17025 standards and quality control is maintained by daily analysis of standard samples and by participation in regular "round robin" testing programs.

International Standards Organisation (ISO) methods have been used for Moisture Holding Capacity tests; Australian Standards (AS) have been used for Relative Density and American Society for Testing and Materials (ASTM) methods have been used for all other quality variables.

The following tests were undertaken as standard on all coal samples:

- Inherent Moisture (IM);
- Ash Content (Ash);
- Volatile Matter (VM);
- Fixed Carbon (FC);
- Total Sulphur (TS);
- Calorific Value-air dried basis (CV adb) – selected samples only;
- Relative Density (RD).

6.4.4 Data validation by Salva Mining prior to geological model construction

Prior to using the lithological (seam pick) and coal quality data for geological model construction purposes, Salva performed the following data validation and verification checks on the data;

- Checking of seam picks against the down-hole geophysics in selected instances in order to validate seam pinch outs or correlations during structural model construction.
- Validation of coal quality sample intervals against seam pick intervals
- Scatter plots of raw coal quality data pairs were constructed in order to determine outliers. In a few cases spurious data values were identified and removed from the quality data set prior to importing the data into Minescape.
- In cases where RD (adb) data was not determined for a sample, linear regression equations determined from the RD-ash scatter plot constructed from the rest of the raw coal quality data set were used to determine the RD value for the sample concerned from the ash value for that sample.
- Core recovery percentages per core run were compiled and merged with the coal quality sample data set in order to determine if any samples in the coal quality data set are from coal seam intersections with less than 90% core recovery over the seam width. Core recovery was observed to be satisfactory with over 90% recovery within the coal horizon although less than 90% recovery is often seen in the immediate roof or floor

to the coal seam (coal samples with less than 90% core recovery were previously rejected by GEAR staff prior to being forwarded data to Salva Mining).

- During the importation of coal quality samples and associated raw coal quality data into the geological modelling software, a few instances of overlapping samples were identified and these were corrected and the samples re-imported
- After compositing the coal quality samples over the seam width on a seam by seam basis, histograms were constructed of the composited raw coal quality for each seam, in each of the five resource areas (Appendix D). Analysis of these histograms shows that in a few instances, raw ash% outliers are present as a result of excessive overlap of the coal quality sample into the seam roof or floor. In the majority of such instances, the proportion of outlier composite samples is very small compared to the total number of samples per seam and hence the presence of these outliers has no material impact on the modelled raw coal quality for affected seams. In very few instances, in the case of some minor seams with small total numbers of coal quality composites per seam, one or two overlapping samples do result in a material change to the raw coal quality of that seam. However in all such cases (F1, D1L1, D1L2, D1U1, D1U2 at KG Block, A3U at BS Block and SL1L at PP Block) the total tonnage represented by theses seams is less than 1% of the total tonnage of the block concerned and hence there is no material impact on the coal quality of the resource area as a whole.

6.5 Coal Density

No information on in situ moisture was obtained from the laboratory, resulting in the fact that the Preston and Sanders equation could not be applied to obtain in situ relative densities. As a result all resource tonnages are quoted on an in situ air dried density basis, as volumes are calculated on an in situ basis and density on an air dried basis. However the density of in situ coal is in reality not at an air dried basis but at a higher moisture in situ moisture basis. The estimate of resources on an air dried basis will therefore result in a higher tonnage as compared to the equivalent in situ moisture basis calculation. This effect has been accounted for to a large extent in the reserving process, where the total moisture as been used as proxy for the in-situ moisture and a Preston Sanders calculation has been made on this basis. However, given the unknown accuracy of this approximation, this calculation was not done at the resource stage, preferring rather to use the more accurately known air dried density and state the moisture basis used in the resource.

6.6 Coal Quality Data

Within the BIB concession, Warukin Formation coals are classified as a low energy sub-bituminous class B coal (ASTM – Guidebook of Thermal Coal page 35). The Tanjung Formation coals in the PP Block are classified as Bituminous class A coal.

Raw coal quality composite sample statistics for all seams in each resource area are given from Table 6:6 to Table 6:10.

Table 6:6 KG Block Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
H2	Number of Values	3	3	3	3	3	3	3	3
	Min Value	1.68	5,188	35.85	12.36	1.27	35.96	0.13	40.06
	Max Value	7.41	5,590	41.38	16.04	1.36	37.50	0.16	44.38
	Mean	4.75	5,397	38.66	14.63	1.3	36.74	0.15	41.97
H1	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.30	4,934	36.48	13.10	1.24	35.73	0.08	37.57
	Max Value	11.73	5,615	38.74	16.04	1.43	40.33	0.16	46.04
	Mean	6.40	5,304	37.20	14.43	1.3	37.35	0.12	42.11
G2U	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.84	4,180	29.56	12.92	1.29	32.78	0.13	33.68
	Max Value	22.39	5,433	39.38	15.79	1.5	38.00	0.20	41.31
	Mean	10.88	4,981	35.83	14.39	1.4	35.64	0.16	38.91
G2L	Number of Values	4	4	4	4	4	4	4	4
	Min Value	5.14	4,180	29.56	12.92	1.3	32.78	0.14	33.68
	Max Value	22.39	5,425	39.36	15.88	1.5	38.00	0.20	41.26
	Mean	11.98	4,939	34.46	14.37	1.4	35.10	0.16	39.19
G1	Number of Values	9	9	9	9	9	9	9	9
	Min Value	3.64	4,180	29.56	12.87	1.27	32.78	0.10	33.68
	Max Value	22.39	5,548	40.49	16.81	1.5	38.21	0.29	43.74
	Mean	7.73	5,171	36.93	14.85	1.35	35.37	0.17	40.49
FL2	Number of Values	13	13	13	13	13	13	13	13
	Min Value	2.39	4,118	28.93	13.42	1.27	32.57	0.09	32.84
	Max Value	24.74	5,566	40.15	18.28	1.42	39.43	0.26	43.32
	Mean	6.80	5,133	37.80	15.38	1.35	35.85	0.17	40.02
FL1	Number of Values	17	17	17	17	17	17	17	17
	Min Value	2.39	4,118	28.93	12.42	1.27	32.32	0.10	32.84
	Max Value	24.74	5,566	40.15	17.79	1.45	39.43	0.26	43.32
	Mean	7.01	5,205	37.32	14.87	1.35	35.52	0.18	40.79
F2	Number of Values	26	26	26	26	26	26	26	26
	Min Value	1.30	4,875	33.99	10.38	1.27	33.43	0.13	36.53
	Max Value	11.67	5,890	42.22	24.72	1.42	39.08	0.54	45.77
	Mean	4.59	5,443	39.02	14.95	1.37	36.12	0.22	41.44
F1	Number of Values	24	24	24	24	24	24	24	24
	Min Value	2.82	2,172	16.02	7.53	1.26	25.24	0.11	19.38
	Max Value	58.21	5,757	41.18	20.01	1.9	41.16	0.54	45.24
	Mean	9.67	5,165	36.21	14.45	1.4	35.22	0.22	39.76
EL2U	Number of Values	81	81	81	81	81	81	81	81
	Min Value	1.84	4,142	22.73	10.96	1.26	25.97	0.08	34.72
	Max Value	25.57	5,975	41.48	20.13	1.56	38.23	0.94	46.70
	Mean	6.68	5,283	37.58	15.03	1.38	35.07	0.19	40.72
EL2L	Number of Values	85	85	85	85	85	85	85	85
	Min Value	1.84	4,142	22.73	11.15	1.26	25.97	0.08	34.72

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Max Value	25.57	6,112	41.48	23.02	1.56	38.23	0.65	47.87
	Mean	6.56	5,295	37.46	15.18	1.38	35.02	0.18	40.82
EL2	Number of Values	2	2	2	2	2	2	2	2
	Min Value	8.14	5,043	35.53	14.82	1.39	35.84	0.17	39.16
	Max Value	10.22	5,219	37.37	15.09	1.42	37.59	0.21	39.67
	Mean	9.18	5,131	36.45	14.95	1.4	36.71	0.19	39.41
EL1U	Number of Values	56	56	56	56	56	56	56	56
	Min Value	2.60	4,181	24.00	10.54	1.3	26.75	0.09	33.55
	Max Value	27.26	5,827	41.48	21.56	1.58	38.32	0.50	45.12
	Mean	6.70	5,327	37.24	15.16	1.38	34.56	0.17	40.91
EL1L	Number of Values	51	51	51	51	51	51	51	51
	Min Value	2.60	1,565	13.04	8.05	1.32	22.91	0.09	15.68
	Max Value	62.58	5,803	41.48	20.18	1.97	39.20	0.37	49.16
	Mean	12.71	5,006	34.92	14.44	1.43	33.67	0.18	38.62
EL1	Number of Values	2	2	2	2	2	2	2	2
	Min Value	8.14	5,043	35.53	14.82	1.39	35.84	0.17	39.16
	Max Value	10.22	5,219	37.37	15.09	1.42	37.59	0.21	39.67
	Mean	9.18	5,131	36.45	14.95	1.4	36.71	0.19	39.41
EL	Number of Values	3	3	3	3	3	3	3	3
	Min Value	2.82	4,863	34.31	13.28	1.38	35.18	0.14	38.08
	Max Value	12.38	5,555	41.01	15.79	1.43	41.05	0.28	40.50
	Mean	6.83	5,295	38.75	14.77	1.41	37.58	0.21	39.65
E2U	Number of Values	100	100	100	100	101	100	100	100
	Min Value	1.99	4,234	30.22	10.47	1.26	27.59	0.08	34.87
	Max Value	23.56	5,811	42.05	19.26	1.56	39.15	0.34	45.30
	Mean	5.15	5,366	38.75	15.24	1.37	35.47	0.17	40.86
E2L2	Number of Values	105	105	105	105	106	105	105	105
	Min Value	2.34	3,479	25.85	11.50	1.25	27.59	0.08	28.08
	Max Value	32.66	5,773	42.47	19.26	1.61	39.90	0.34	44.97
	Mean	5.60	5,336	38.60	15.17	1.37	35.42	0.16	40.62
E2L1	Number of Values	107	107	107	107	108	107	107	107
	Min Value	2.34	2,903	19.28	10.03	1.25	26.48	0.08	24.96
	Max Value	45.73	5,729	42.47	19.83	1.71	39.90	0.34	44.97
	Mean	6.16	5,294	38.35	15.20	1.38	35.34	0.16	40.29
E1U2	Number of Values	120	120	120	120	121	120	120	120
	Min Value	2.46	3,858	23.32	10.68	1.23	26.71	0.08	33.96
	Max Value	29.83	5,729	42.47	23.89	1.55	40.99	0.34	46.05
	Mean	4.94	5,348	38.94	15.37	1.37	35.32	0.14	40.75
E1U1	Number of Values	122	122	122	122	123	122	122	122
	Min Value	2.39	3,275	21.57	11.52	1.23	28.43	0.07	27.09
	Max Value	37.79	5,729	46.36	27.29	1.66	42.07	0.34	46.05
	Mean	4.66	5,367	39.14	15.43	1.37	35.58	0.14	40.77
E1L2	Number of Values	123	123	123	123	124	123	123	123

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Min Value	2.53	4,619	29.71	4.33	1.24	30.14	0.08	36.54
	Max Value	23.42	5,734	43.58	18.96	1.51	41.59	0.34	50.53
	Mean	4.60	5,401	39.17	15.01	1.37	35.49	0.14	41.22
E1L1	Number of Values	124	124	124	124	125	124	124	124
	Min Value	2.58	2,747	20.11	4.33	1.24	30.14	0.08	25.29
	Max Value	42.50	5,732	42.05	18.96	1.72	40.99	0.59	50.53
	Mean	5.21	5,368	38.75	15.14	1.37	35.37	0.15	40.92
DU2U	Number of Values	72	72	72	72	72	72	72	72
	Min Value	2.24	1,871	13.32	6.85	1.27	22.75	0.09	18.11
	Max Value	61.72	5,677	41.29	19.00	1.99	39.42	1.07	44.96
	Mean	7.61	5,201	37.40	15.06	1.39	35.18	0.22	39.94
DU2L	Number of Values	73	73	73	73	73	73	73	73
	Min Value	2.24	1,871	13.32	6.85	1.27	22.75	0.09	18.11
	Max Value	61.72	5,677	41.29	19.00	1.99	39.42	1.07	44.96
	Mean	7.72	5,197	37.36	14.95	1.39	35.14	0.22	39.98
DU2	Number of Values	5	5	5	5	5	5	5	5
	Min Value	4.13	5,246	37.05	13.68	1.36	34.28	0.18	39.89
	Max Value	7.53	5,566	40.56	15.08	1.39	38.11	0.29	43.34
	Mean	5.33	5,471	38.45	14.40	1.37	35.79	0.24	41.82
DU1U	Number of Values	74	74	74	74	74	74	74	74
	Min Value	2.24	3,665	27.45	11.45	1.27	28.17	0.09	29.87
	Max Value	30.85	5,677	41.29	19.00	1.47	40.46	1.07	44.92
	Mean	6.57	5,259	38.04	15.24	1.38	35.52	0.21	40.15
DU1L	Number of Values	73	73	73	73	73	73	73	73
	Min Value	2.24	3,665	27.45	10.95	1.27	28.17	0.09	29.87
	Max Value	30.85	5,677	42.20	19.00	1.51	40.46	1.07	44.08
	Mean	6.84	5,244	37.94	15.21	1.39	35.48	0.22	40.02
DU1	Number of Values	2	2	2	2	2	2	2	2
	Min Value	4.59	5,221	37.81	12.55	1.38	36.34	0.11	41.87
	Max Value	5.70	5,538	40.59	14.62	1.38	37.42	0.20	42.27
	Mean	5.14	5,380	39.20	13.59	1.38	36.88	0.16	42.07
DU	Number of Values	1	1	1	1	1	1	1	1
	Min Value	5.85	5,497	37.71	14.20	1.4	37.58	0.20	42.24
	Max Value	5.85	5,497	37.71	14.20	1.4	37.58	0.20	42.24
	Mean	5.85	5,497	37.71	14.20	1.4	37.58	0.20	42.24
DL2U	Number of Values	73	73	73	73	73	73	72	73
	Min Value	2.43	4,631	31.48	11.15	1.3	30.69	0.09	35.41
	Max Value	18.87	5,796	43.08	22.98	1.51	40.81	1.96	46.50
	Mean	5.54	5,313	38.67	15.29	1.39	35.80	0.20	40.49
DL2L	Number of Values	77	77	77	77	77	77	76	77
	Min Value	2.43	3,848	26.37	11.15	1.3	30.69	0.09	30.71
	Max Value	30.79	5,796	43.08	22.98	1.57	39.67	1.07	46.50
	Mean	6.06	5,281	38.36	15.33	1.39	35.57	0.18	40.25

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
DL2	Number of Values	4	4	4	4	4	4	4	4
	Min Value	2.52	4,522	34.68	13.71	1.34	35.66	0.07	34.07
	Max Value	12.44	5,665	41.57	18.81	1.44	38.59	0.30	43.02
	Mean	5.67	5,298	39.26	15.28	1.38	37.21	0.19	39.79
DL1U	Number of Values	72	72	72	72	72	72	71	72
	Min Value	2.43	3,234	21.46	9.67	1.28	26.26	0.09	28.02
	Max Value	40.85	5,796	43.08	22.98	1.72	38.94	1.07	46.50
	Mean	6.86	5,249	38.05	15.17	1.4	35.27	0.19	39.92
DL1L	Number of Values	72	72	72	72	72	72	71	72
	Min Value	2.43	3,234	21.46	9.67	1.28	26.26	0.09	28.02
	Max Value	40.85	5,796	43.08	22.98	1.72	38.94	1.07	46.50
	Mean	7.74	5,199	37.52	15.13	1.4	35.04	0.21	39.63
DL	Number of Values	2	2	2	2	2	2	2	2
	Min Value	3.54	5,427	39.11	15.18	1.35	35.98	0.16	40.67
	Max Value	4.46	5,467	39.66	16.68	1.39	36.27	0.17	40.70
	Mean	4.00	5,447	39.39	15.93	1.37	36.12	0.16	40.68
D1U2	Number of Values	11	11	11	11	11	11	11	11
	Min Value	3.02	3,566	24.50	10.40	1.28	31.06	0.14	31.32
	Max Value	33.78	5,729	41.21	17.35	1.62	39.36	0.34	43.93
	Mean	10.13	5,100	36.41	14.08	1.41	35.26	0.22	39.39
D1U1	Number of Values	13	13	13	13	13	13	13	13
	Min Value	3.54	3,566	24.50	9.77	1.25	31.06	0.14	31.32
	Max Value	33.78	5,625	40.97	16.49	1.62	39.36	0.34	44.55
	Mean	9.74	5,120	36.62	14.05	1.4	35.14	0.22	39.59
D1L2	Number of Values	16	16	16	16	16	16	16	16
	Min Value	3.27	3,566	24.50	9.77	1.26	31.06	0.02	31.32
	Max Value	33.78	5,625	40.97	16.79	1.62	39.36	0.34	44.55
	Mean	8.49	5,215	36.97	14.26	1.39	35.07	0.21	40.28
D1L1	Number of Values	15	15	15	15	15	15	15	15
	Min Value	3.54	3,498	24.21	9.12	1.3	28.89	0.14	29.36
	Max Value	36.20	5,625	40.97	16.79	1.63	39.36	0.35	43.14
	Mean	9.60	5,162	36.29	14.05	1.41	34.80	0.22	40.07
CU2	Number of Values	23	23	23	23	23	23	23	23
	Min Value	3.56	3,312	22.09	10.09	1.29	28.36	0.15	31.84
	Max Value	36.06	5,656	41.69	18.32	1.72	40.07	2.12	42.86
	Mean	9.92	5,135	36.19	14.65	1.41	34.28	0.62	39.25
CU1	Number of Values	25	25	25	25	25	25	25	25
	Min Value	3.88	2,864	19.07	9.34	1.29	27.67	0.15	29.20
	Max Value	42.46	5,656	41.69	17.82	1.81	38.75	2.21	42.86
	Mean	10.90	5,120	35.81	14.03	1.43	34.58	0.92	39.29
CR2U	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.70	4,038	26.87	11.42	1.28	29.29	0.09	34.24
	Max Value	27.47	6,318	41.44	19.57	1.54	38.22	2.42	47.47

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Mean	7.86	5,362	36.44	14.50	1.39	34.28	0.36	41.08
CR2L	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.70	4,038	26.87	11.42	1.28	29.29	0.09	34.24
	Max Value	27.47	6,318	41.44	19.57	1.54	38.22	2.42	47.47
	Mean	8.05	5,350	36.34	14.47	1.39	34.24	0.35	41.02
CR1U	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.70	4,676	32.16	11.80	1.28	29.55	0.09	34.96
	Max Value	17.80	6,318	41.44	19.38	1.47	38.22	2.42	47.47
	Mean	7.81	5,386	36.55	14.34	1.38	34.33	0.38	41.19
CR1L	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.70	4,326	24.84	11.60	1.28	29.55	0.09	34.96
	Max Value	24.40	6,318	41.44	19.38	1.54	38.22	2.42	47.47
	Mean	8.06	5,368	36.26	14.32	1.39	34.30	0.38	41.23
CR1	Number of Values	1	1	1	1	1	1	1	1
	Min Value	5.39	5,536	39.23	12.35	1.4	38.13	0.30	43.03
	Max Value	5.39	5,536	39.23	12.35	1.4	38.13	0.30	43.03
	Mean	5.39	5,536	39.23	12.35	1.4	38.13	0.30	43.03
CR	Number of Values	2	2	2	2	2	2	2	2
	Min Value	3.89	5,389	37.46	14.67	1.35	39.22	0.12	40.67
	Max Value	6.64	5,557	39.01	16.43	1.37	39.66	0.40	41.23
	Mean	5.26	5,473	38.23	15.55	1.36	39.44	0.26	40.95
CL2U	Number of Values	36	36	36	36	36	36	36	36
	Min Value	2.13	4,806	33.78	12.17	1.29	30.85	0.11	36.63
	Max Value	14.46	5,839	41.91	20.55	1.49	42.60	1.96	45.99
	Mean	6.42	5,321	37.85	15.18	1.39	35.99	0.51	40.54
CL2L	Number of Values	33	33	33	33	33	33	33	33
	Min Value	2.01	4,806	31.80	12.11	1.29	30.85	0.11	36.63
	Max Value	14.75	5,875	42.26	20.55	1.49	40.63	1.96	44.37
	Mean	6.47	5,323	37.89	15.16	1.39	35.58	0.50	40.48
CL2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	3.51	5,743	39.67	13.01	1.37	36.41	0.43	43.81
	Max Value	3.51	5,743	39.67	13.01	1.37	36.41	0.43	43.81
	Mean	3.51	5,743	39.67	13.01	1.37	36.41	0.43	43.81
CL1U	Number of Values	35	35	35	35	35	35	35	35
	Min Value	3.43	3,987	27.74	9.89	1.29	29.55	0.12	32.63
	Max Value	29.71	5,863	39.91	20.55	1.65	39.17	1.96	44.24
	Mean	8.48	5,206	36.53	15.06	1.4	35.02	0.52	39.92
CL1L	Number of Values	33	33	33	33	33	33	33	33
	Min Value	3.43	4,042	28.99	11.66	1.29	29.55	0.12	32.63
	Max Value	24.78	5,748	41.44	20.55	1.54	39.17	1.96	42.70
	Mean	7.66	5,260	36.97	15.24	1.39	35.22	0.54	40.12
CL1	Number of Values	4	4	4	4	4	4	4	4
	Min Value	3.37	5,039	35.76	12.76	1.29	31.06	0.29	38.95

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Max Value	9.24	5,539	40.19	16.05	1.42	38.85	0.53	43.53
	Mean	5.22	5,370	38.70	14.90	1.37	35.81	0.36	41.18
CL	Number of Values	1	1	1	1	1	1	1	1
	Min Value	5.59	5,154	36.46	18.73	1.38	36.02	0.32	39.22
	Max Value	5.59	5,154	36.46	18.73	1.38	36.02	0.32	39.22
	Mean	5.59	5,154	36.46	18.73	1.38	36.02	0.32	39.22
BU2U	Number of Values	41	41	41	41	41	41	41	41
	Min Value	2.70	3,617	26.71	10.58	1.31	26.23	0.16	27.64
	Max Value	35.07	5,687	42.17	19.51	1.68	41.49	1.60	43.49
	Mean	7.52	5,253	38.24	14.58	1.41	35.88	0.54	39.67
BU2L	Number of Values	41	41	41	41	41	41	41	41
	Min Value	2.56	3,617	26.46	10.58	1.33	20.26	0.16	27.64
	Max Value	35.07	5,698	42.42	19.51	1.68	41.49	1.89	43.49
	Mean	8.26	5,197	37.92	14.46	1.42	35.50	0.56	39.35
BU2	Number of Values	3	3	3	3	3	3	3	3
	Min Value	3.84	5,162	37.48	13.39	1.39	37.08	0.24	39.23
	Max Value	7.21	5,622	40.49	16.08	1.4	39.35	0.86	42.22
	Mean	5.09	5,399	39.38	14.85	1.39	38.06	0.62	40.68
BU1U	Number of Values	41	41	41	41	41	41	41	41
	Min Value	2.61	4,049	24.88	11.49	1.28	29.41	0.16	32.73
	Max Value	26.56	5,641	42.05	19.51	1.57	41.49	1.60	47.35
	Mean	6.69	5,300	38.23	14.82	1.4	35.99	0.52	40.26
BU1L	Number of Values	42	42	42	42	42	42	42	42
	Min Value	1.32	4,049	29.22	10.80	1.3	29.41	0.16	32.73
	Max Value	26.56	5,755	42.51	19.51	1.57	41.49	1.60	43.68
	Mean	7.21	5,263	38.23	14.73	1.4	35.83	0.51	39.82
BU1	Number of Values	5	5	5	5	5	5	5	5
	Min Value	2.27	5,220	38.82	13.16	1.35	7.69	0.30	39.31
	Max Value	5.43	5,653	42.37	16.44	1.41	39.94	0.63	42.20
	Mean	3.56	5,493	40.57	14.67	1.38	32.84	0.47	41.20
BL2U	Number of Values	73	73	73	73	73	73	73	73
	Min Value	1.39	4,752	35.35	11.72	1.28	31.76	0.14	35.00
	Max Value	15.10	5,695	42.11	19.29	1.48	41.49	3.98	43.59
	Mean	4.73	5,364	39.59	15.29	1.39	36.30	0.48	40.38
BL2L	Number of Values	74	74	74	74	74	74	74	74
	Min Value	1.78	4,613	34.41	11.72	1.28	31.76	0.14	35.00
	Max Value	16.75	5,695	42.32	19.29	1.5	41.49	3.98	44.20
	Mean	5.01	5,343	39.44	15.37	1.39	36.53	0.51	40.17
BL2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	2.27	4,826	34.34	25.70	1.27	37.21	0.12	37.69
	Max Value	2.27	4,826	34.34	25.70	1.27	37.21	0.12	37.69
	Mean	2.27	4,826	34.34	25.70	1.27	37.21	0.12	37.69
BL1U	Number of Values	54	54	54	54	54	54	54	54

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Min Value	2.90	3,651	24.30	10.79	1.27	26.64	0.16	31.42
	Max Value	33.52	5,754	42.18	28.12	1.62	41.49	4.12	45.15
	Mean	7.06	5,266	38.11	15.01	1.4	36.19	0.73	39.82
BL1L	Number of Values	51	51	51	51	51	51	51	51
	Min Value	2.90	3,414	23.95	10.47	1.27	26.39	0.16	29.11
	Max Value	36.47	5,754	42.35	19.22	1.66	41.49	4.12	45.15
	Mean	6.86	5,298	38.43	14.81	1.4	36.25	0.71	39.89
BL1	Number of Values	2	2	2	2	2	2	2	2
	Min Value	5.79	5,258	37.03	12.08	1.39	33.59	1.37	40.13
	Max Value	10.76	5,548	37.25	14.33	1.48	40.89	3.83	42.63
	Mean	8.28	5,403	37.14	13.20	1.44	37.24	2.60	41.38
BL	Number of Values	1	1	1	1	1	1	1	1
	Min Value	6.78	5,541	37.88	12.92	1.41	36.48	2.07	42.42
	Max Value	6.78	5,541	37.88	12.92	1.41	36.48	2.07	42.42
	Mean	6.78	5,541	37.88	12.92	1.41	36.48	2.07	42.42
B1	Number of Values	4	4	4	3	4	4	4	4
	Min Value	5.11	5,107	35.99	11.62	1.38	34.33	1.80	38.54
	Max Value	11.37	5,575	38.32	15.35	1.43	37.87	2.35	42.36
	Mean	8.19	5,362	37.54	13.78	1.41	36.16	2.03	40.42
AU	Number of Values	1	1	1	1	1	1	1	1
	Min Value	35.40	3,554	22.81	11.25	1.64	29.47	0.36	30.54
	Max Value	35.40	3,554	22.81	11.25	1.64	29.47	0.36	30.54
	Mean	35.40	3,554	22.81	11.25	1.64	29.47	0.36	30.54
AL2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	13.43	5,174	36.11	12.15	1.46	36.90	2.20	38.32
	Max Value	13.43	5,174	36.11	12.15	1.46	36.90	2.20	38.32
	Mean	13.43	5,174	36.11	12.15	1.46	36.90	2.20	38.32

Table 6:7 BS Block Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
CU	Number of Values	1	1	1	1	1	1	1	1
	Min Value	8.8	5403	37.4	13.77	1.38	33.54	0.36	40.03
	Max Value	8.8	5403	37.4	13.77	1.38	33.54	0.36	40.03
	Mean	8.8	5403	37.4	13.77	1.38	33.54	0.36	40.03
C	Number of Values	9	9	9	9	9	9	9	9
	Min Value	5.59	3725	23.58	12.03	1.36	26.17	0.15	31.32
	Max Value	33.07	5700	40.25	15.1	1.57	38.59	0.61	44.08
	Mean	11.32	5240	35.18	13.6	1.41	32.27	0.23	39.89
CL	Number of Values	3	3	3	3	3	3	3	3
	Min Value	6.5	4811	32.69	7.85	1.39	31.29	0.16	36.87

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Max Value	19.13	5811	40.4	16.06	1.48	36.49	0.19	42.55
	Mean	11.61	5315	37.48	11.74	1.42	34.76	0.17	39.17
BU	Number of Values	6	6	6	6	6	6	6	6
	Min Value	4.16	4295	31.21	10.05	1.34	29.92	0.13	33.05
	Max Value	24.37	5515	40.28	16.57	1.55	38.5	0.28	41.15
	Mean	12.95	4957	36.43	13.42	1.44	33.38	0.17	37.2
B	Number of Values	36	36	36	36	36	36	36	36
	Min Value	1.17	5142	35.48	8.31	1.33	26.82	0.08	37.71
	Max Value	10.04	6007	43.76	15.87	1.62	41.79	0.54	44.16
	Mean	3.93	5605	39.97	14.03	1.37	33.19	0.16	42.07
BL2	Number of Values	4	4	4	4	4	4	4	4
	Min Value	2.86	5305	33.6	7.27	1.36	23.45	0.15	40.48
	Max Value	9.63	6197	43.68	14.28	1.39	35.92	0.2	45.64
	Mean	6.03	5787	38.88	11.33	1.38	31.66	0.17	43.76
BL	Number of Values	8	8	8	8	8	8	8	8
	Min Value	1.75	4977	34.11	9.46	1.37	29.62	0.17	37.84
	Max Value	13.04	6202	42.26	16.02	1.42	35.82	0.38	46.52
	Mean	7.48	5461	38.34	13.76	1.39	32.87	0.27	40.4
BL1	Number of Values	4	4	4	4	4	3	4	4
	Min Value	3.82	5006	28.66	7.03	1.35	23.59	0.15	39.06
	Max Value	13.87	6221	44.99	13.84	1.44	36.93	0.26	45.72
	Mean	8.81	5674	37.47	10.39	1.39	29.28	0.19	43.33
A5	Number of Values	2	2	2	2	2	2	2	2
	Min Value	14.03	4554	32.33	12.35	1.42	31.22	0.32	35.13
	Max Value	20.2	4940	35.12	13.04	1.45	32.55	0.4	37.8
	Mean	17.11	4747	33.73	12.69	1.43	31.89	0.36	36.47
A4U2	Number of Values	7	7	7	7	7	7	7	7
	Min Value	1.54	5391	35.68	11.96	1.32	32.53	0.14	41.76
	Max Value	7.23	6060	39.23	15.34	1.38	35.98	0.52	47.4
	Mean	4.36	5707	38.22	13.83	1.35	34.17	0.22	43.6
A4U2A	Number of Values	1	1	1	1	1	1	1	1
	Min Value	3.3	6064	40.14	10.38	1.34	33.59	0.14	46.18
	Max Value	3.3	6064	40.14	10.38	1.34	33.59	0.14	46.18
	Mean	3.3	6064	40.14	10.38	1.34	33.59	0.14	46.18
A4U	Number of Values	4	4	4	4	4	4	4	4
	Min Value	2.7	5454	37.23	8.11	1.34	26.95	0.13	41.36
	Max Value	6.02	5954	43.48	15.79	1.41	35.26	0.23	44.95
	Mean	4.34	5778	40	12.46	1.37	31.5	0.19	43.2
A4U1	Number of Values	10	10	10	10	10	10	10	10
	Min Value	2.96	5407	36.57	10.56	1.3	29.18	0.12	40.19

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Max Value	7.78	6048	40.28	16.81	1.37	34.77	0.2	45.64
	Mean	4.99	5699	37.71	13.93	1.35	32.09	0.17	43.38
A4L	Number of Values	5	5	5	5	5	5	5	5
	Min Value	5.7	3695	25.86	8.22	1.32	27.95	0.13	28.7
	Max Value	34.51	5963	38.43	14.75	1.63	33.53	0.23	45.98
	Mean	14.41	5131	33.91	12.34	1.43	30.88	0.17	39.34
A3U	Number of Values	8	8	8	8	8	8	8	8
	Min Value	1.95	2791	19.64	7.43	1.28	24.59	0.15	25.21
	Max Value	46.05	6247	44.25	16.45	1.78	34.43	0.39	46.19
	Mean	9.37	5388	37.49	11.79	1.39	32.15	0.2	41.35
A2U2	Number of Values	2	2	2	2	2	2	2	2
	Min Value	8.7	4848	35.11	13.8	1.26	30	0.15	35.96
	Max Value	11.24	5324	36.4	17.69	1.39	31.1	0.17	41.1
	Mean	9.97	5086	35.75	15.74	1.33	30.55	0.16	38.53
A2U	Number of Values	1	1	1	1	1	1	1	1
	Min Value	7.58	5526	40.04	11.03	1.44	34.12	0.15	41.34
	Max Value	7.58	5526	40.04	11.03	1.44	34.12	0.15	41.34
	Mean	7.58	5526	40.04	11.03	1.44	34.12	0.15	41.34
A2U1	Number of Values	3	3	3	3	3	3	3	3
	Min Value	6.68	5266	36.4	13.8	1.26	30	0.17	37.23
	Max Value	8.84	5365	39.96	16.63	1.41	34.33	0.2	41.1
	Mean	8.07	5318	37.87	14.8	1.33	32.05	0.19	39.26
A2L	Number of Values	2	2	2	2	2	2	2	2
	Min Value	5.1	4258	29.57	9.26	1.36	30.2	0.18	33.28
	Max Value	27.89	5720	38.42	12.68	1.57	32.93	0.19	43.8
	Mean	16.49	4989	33.99	10.97	1.46	31.57	0.19	38.54
A1U2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	4.04	5629	43.22	12	1.4	34.42	0.13	40.74
	Max Value	4.04	5629	43.22	12	1.4	34.42	0.13	40.74
	Mean	4.04	5629	43.22	12	1.4	34.42	0.13	40.74

Table 6:8 SS Block Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
F2	Number of Values	12	12	12	12	12	12	12	12
	Min Value	3.78	4184	29.42	9.58	1.36	35.93	0.08	33.94
	Max Value	25.18	5656	42.83	19.86	1.81	40.71	0.17	42.72
	Mean	6.85	5274	38.88	13.99	1.44	38.18	0.14	40.29
F1	Number of Values	11	11	11	11	11	11	11	11

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Min Value	3.29	3107	23.06	7.08	1.37	33.58	0.09	27.94
	Max Value	39.48	5650	45.99	16.63	1.78	40.26	0.17	42.27
	Mean	13.05	4994	36.42	12.19	1.49	36.33	0.13	38.34
E2U	Number of Values	15	15	15	15	15	15	15	15
	Min Value	3.5	4567	30.12	8.96	1.36	32.29	0.09	37.3
	Max Value	18.89	5916	41.93	17.14	1.79	39.25	0.24	44.94
	Mean	5.97	5507	39	13.03	1.46	37.29	0.14	41.99
E2L	Number of Values	16	16	16	16	16	16	16	16
	Min Value	3	4371	29.87	8.7	1.32	32.83	0.09	35.27
	Max Value	19.5	5892	42.35	16.45	1.81	40.86	0.17	45.91
	Mean	6.63	5415	38.34	13.47	1.46	37.58	0.12	41.56
E1U	Number of Values	8	8	8	8	8	8	8	8
	Min Value	2.92	4846	31.99	8.78	1.34	34.72	0.07	39.52
	Max Value	15	5867	42.34	18.34	1.8	38.59	0.31	44.7
	Mean	6.17	5536	38.31	12.89	1.46	37.44	0.15	42.66
E1L	Number of Values	7	7	7	7	7	7	7	7
	Min Value	3.05	2917	19.82	8.46	1.35	27.16	0.07	24.95
	Max Value	46.77	5966	42.34	18.55	1.8	40.13	0.18	46.12
	Mean	10.33	5284	36.82	12.54	1.55	36.9	0.13	40.31
EL	Number of Values	7	7	7	7	7	7	7	7
	Min Value	3.83	4639	34.1	8.28	1.38	34.6	0.14	36.07
	Max Value	13.4	6160	40.85	16.44	1.8	38.67	0.28	44.89
	Mean	7.82	5497	38.5	12.22	1.5	36.84	0.21	41.45
D1U	Number of Values	4	4	4	4	4	4	4	4
	Min Value	2.09	5799	39.78	7.57	1.35	37.62	0.2	44.18
	Max Value	3.37	6324	42.12	13.57	1.4	39.18	0.31	48.49
	Mean	2.79	6055	40.82	10.18	1.37	38.36	0.27	46.21
D1L	Number of Values	3	3	3	3	3	3	3	3
	Min Value	2.09	5645	41.51	7.91	1.37	36.97	0.21	40.82
	Max Value	4.3	6324	42.68	14.46	1.78	39.21	0.27	48.49
	Mean	3	5961	42.1	10.25	1.51	38.45	0.23	44.65
DU2	Number of Values	8	8	8	8	8	8	8	8
	Min Value	2.77	5113	36.9	8.57	1.39	37.68	0.09	38.55
	Max Value	8.43	5971	43.73	16.12	1.81	42.45	0.24	44.27
	Mean	4.94	5637	41.21	11.5	1.45	39.51	0.18	42.35
DU1	Number of Values	6	6	6	6	6	6	6	6
	Min Value	1.7	5475	41.09	9.25	1.37	39.18	0.1	40.71
	Max Value	4.36	5836	44.4	14.38	1.81	41.02	0.18	42.85
	Mean	3.33	5679	42.83	11.41	1.47	39.97	0.14	42.07
DL2	Number of Values	6	6	6	6	6	6	6	6

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Min Value	2.63	5471	40.57	8.9	1.37	38.16	0.12	40.47
	Max Value	5.9	5860	43.43	14.62	1.82	40.03	0.22	44.49
	Mean	4.48	5646	41.48	11.39	1.53	39.49	0.16	42.51
DL1	Number of Values	7	7	7	7	7	7	7	7
	Min Value	4.53	5437	38.91	8.3	1.38	38.68	0.15	40.13
	Max Value	6.19	5859	43.07	13.98	1.82	40.58	0.32	44.59
	Mean	5.34	5666	40.85	11.39	1.48	39.5	0.19	42.43
C	Number of Values	4	4	4	4	4	4	4	4
	Min Value	9.92	4765	32.38	10.54	1.42	36.06	1.42	37.19
	Max Value	19.81	5467	37.82	12.38	1.53	37.04	2.96	40.7
	Mean	15.84	5047	34.23	11.3	1.48	36.57	2.14	38.63
BU2	Number of Values	1	1	1	1	1	0	1	1
	Min Value	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
	Max Value	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
	Mean	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
BU1	Number of Values	1	1	1	1	1	0	1	1
	Min Value	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
	Max Value	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
	Mean	7.39	5426	38.7	13.71	1.4	-	1.21	40.2
BL2	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.27	5465	39.99	9.41	1.39	38.44	0.3	40.88
	Max Value	5.72	5814	42.93	14.43	1.84	41.55	0.65	43.12
	Mean	4.89	5617	41.52	12.05	1.52	40.32	0.47	41.54
BL1	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.37	5425	40.15	10.4	1.39	39.42	0.32	39.47
	Max Value	6.96	5677	43.76	14.31	1.85	42.45	0.5	40.98
	Mean	5.3	5551	41.79	12.68	1.52	40.65	0.4	40.25

Table 6:9 SN Block Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
F2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	8.12	5117	36.71	16.43	1.4	37.8	0.26	38.74
	Max Value	8.12	5117	36.71	16.43	1.4	37.8	0.26	38.74
	Mean	8.12	5117	36.71	16.43	1.4	37.8	0.26	38.74
F	Number of Values	1	1	1	1	1	1	1	1
	Min Value	7.04	5496	37.22	13.2	1.36	39.4	0.21	42.54
	Max Value	7.04	5496	37.22	13.2	1.36	39.4	0.21	42.54
	Mean	7.04	5496	37.22	13.2	1.36	39.4	0.21	42.54

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
FL	Number of Values	1	1	1	1	1	1	1	1
	Min Value	17.54	4774	32.39	12.7	1.43	38.95	0.3	37.37
	Max Value	17.54	4774	32.39	12.7	1.43	38.95	0.3	37.37
	Mean	17.54	4774	32.39	12.7	1.43	38.95	0.3	37.37
E2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	3.64	5479.94	39.78	15.59	1.39	36.99	0.14	41
	Max Value	3.64	5479.94	39.78	15.59	1.39	36.99	0.14	41
	Mean	3.64	5479.94	39.78	15.59	1.39	36.99	0.14	41
E	Number of Values	13	13	13	13	13	13	13	13
	Min Value	1.68	5022	35.67	11.54	1.3	35.16	0.1	39.34
	Max Value	6.31	5680	41.37	21.19	1.44	42.48	0.22	42.74
	Mean	4.33	5359.57	38.49	16.3	1.37	39.28	0.17	40.89
E1	Number of Values	1	1	1	1	1	1	1	1
	Min Value	4.46	5372	38.62	16.35	1.36	38.18	0.24	40.57
	Max Value	4.46	5372	38.62	16.35	1.36	38.18	0.24	40.57
	Mean	4.46	5372	38.62	16.35	1.36	38.18	0.24	40.57
D3	Number of Values	1	1	1	1	1	1	1	1
	Min Value	7.29	5420	39.37	13.32	1.39	39.18	0.27	40.02
	Max Value	7.29	5420	39.37	13.32	1.39	39.18	0.27	40.02
	Mean	7.29	5420	39.37	13.32	1.39	39.18	0.27	40.02
D2U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	4.89	5199	35.15	14.54	1.36	36.87	0.15	41.31
	Max Value	5.32	5553	38.83	18.39	1.42	43.12	0.24	41.57
	Mean	5.11	5376	36.99	16.46	1.39	39.99	0.2	41.44
D2	Number of Values	11	11	11	11	11	11	11	11
	Min Value	3.44	5155	34.93	13.4	1.34	34.22	0.15	39.41
	Max Value	10.34	5641	38.97	19.92	1.42	41.71	0.35	43.98
	Mean	5.4	5396.36	37.26	16.29	1.36	38.12	0.22	41.05
DU	Number of Values	5	5	5	5	5	5	5	5
	Min Value	3.15	4637	29.31	16.57	1.33	34.51	0.11	34.5
	Max Value	18.77	5493	39	21.3	1.44	40.26	0.26	42.15
	Mean	6.58	5130.8	35.86	18.22	1.37	37.26	0.2	39.33
DL2	Number of Values	2	2	2	2	2	2	2	2
	Min Value	4.56	4739	36.29	14.12	1.39	38.3	0.12	35.45
	Max Value	7.06	5532	39.27	21.2	1.39	38.63	0.26	42.05
	Mean	5.81	5135.5	37.78	17.66	1.39	38.47	0.19	38.75
D	Number of Values	11	11	11	11	11	11	11	11
	Min Value	2.9	5188	37.8	12.83	1.32	33.95	0.06	38.81
	Max Value	4.72	5599.2	40.89	20.36	1.41	42.13	0.19	41.96
	Mean	3.78	5427.79	39.7	16.08	1.37	38.16	0.11	40.44

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
DL	Number of Values	7	7	7	7	7	7	7	7
	Min Value	3.2	4747	33.46	13.4	1.32	35.55	0.09	37.32
	Max Value	6.5	5498	40.43	24.44	1.39	41.78	0.2	42.26
	Mean	4.88	5200.71	37.44	17.98	1.36	38.47	0.14	39.7
CU	Number of Values	3	3	3	3	3	3	3	3
	Min Value	6.57	5110	35.33	11.93	1.37	37.05	1.98	37.82
	Max Value	9.05	5585	38.33	17.8	1.39	41.13	2.2	42.13
	Mean	7.74	5335	36.74	15.83	1.38	39.35	2.1	39.68
C	Number of Values	5	5	5	5	5	5	5	5
	Min Value	7.47	4941	33.82	10.42	1.38	33.38	1.38	37.13
	Max Value	14.2	5348	36.88	18.28	1.45	45.46	3.1	40.98
	Mean	11.84	5133.8	35.03	14.32	1.42	37.87	2.2	38.81
CL	Number of Values	1	1	1	1	1	1	1	1
	Min Value	22.3	4415	31.3	12.64	1.5	39.63	0.9	33.76
	Max Value	22.3	4415	31.3	12.64	1.5	39.63	0.9	33.76
	Mean	22.3	4415	31.3	12.64	1.5	39.63	0.9	33.76
BU	Number of Values	3	3	3	3	3	3	3	3
	Min Value	5.26	4992	31.93	10.69	1.34	36.38	0.56	39.6
	Max Value	13.52	5550	37.02	17.08	1.42	39.99	1.89	43.68
	Mean	9.49	5341	34.96	14.24	1.39	38.49	1.39	41.31
BL	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.27	5246	37.15	11.72	1.36	37.42	0.38	38.74
	Max Value	8.37	5622	40.06	17.71	1.42	41.68	2.17	42.67
	Mean	5.94	5457.75	38.93	13.99	1.39	39.34	0.87	41.14
BL1	Number of Values	1	1	1	1	1	1	1	1
	Min Value	7.8	5118	35.36	18.5	1.38	38.45	1.32	38.34
	Max Value	7.8	5118	35.36	18.5	1.38	38.45	1.32	38.34
	Mean	7.8	5118	35.36	18.5	1.38	38.45	1.32	38.34
A2	Number of Values	2	2	2	2	2	2	2	2
	Min Value	7.65	4975	34.91	13.67	1.35	38.02	0.15	37.96
	Max Value	13.46	5666	36.91	14.06	1.44	39.64	2.04	41.38
	Mean	10.56	5320.5	35.91	13.87	1.4	38.83	1.09	39.67
A1	Number of Values	2	2	2	2	2	2	2	2
	Min Value	13.54	4745	33.77	12.88	1.44	37.89	3.07	35.9
	Max Value	15.79	5206	33.97	14.54	1.44	38.05	3.33	39.61
	Mean	14.66	4975.5	33.87	13.71	1.44	37.97	3.2	37.76
AL	Number of Values	2	2	2	2	2	2	2	2
	Min Value	6.55	5182	34.07	14.71	1.32	35.97	2.09	38.59
	Max Value	11.9	5278	34.8	19.73	1.41	37.45	2.29	39.65
	Mean	9.22	5230	34.43	17.22	1.37	36.71	2.19	39.12

Table 6:10 PP Block Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
SU1U	Number of Values	1	1	1	1	1	1	1	1
	Min Value	12.9	6316	40.88	5.6	1.37	11.28	2.02	40.63
	Max Value	12.9	6316	40.88	5.6	1.37	11.28	2.02	40.63
	Mean	12.9	6316	40.88	5.6	1.37	11.28	2.02	40.63
SU1	Number of Values	1	1	1	1	1	1	1	1
	Min Value	10.1	6498	43.23	7.12	1.31	9.27	0.66	43.49
	Max Value	10.1	6498	43.23	7.12	1.31	9.27	0.66	43.49
	Mean	10.1	6498	43.23	7.12	1.31	9.27	0.66	43.49
SU1L	Number of Values	1	1	1	1	1	1	1	1
	Min Value	15.46	6135	39.17	4.9	1.38	10.79	1.07	40.47
	Max Value	15.46	6135	39.17	4.9	1.38	10.79	1.07	40.47
	Mean	15.46	6135	39.17	4.9	1.38	10.79	1.07	40.47
SU2	Number of Values	3	3	3	3	3	3	3	3
	Min Value	6.41	6504	42.72	5.8	1.3	9.7	0.39	42.2
	Max Value	10.5	6923	44.7	6.7	1.36	17.91	1.73	44.35
	Mean	7.8	6756	43.57	6.39	1.33	13.48	1.2	42.92
SM1	Number of Values	6	6	6	6	6	6	6	6
	Min Value	7.21	5285	32.94	4.07	1.3	9.81	0.48	36.07
	Max Value	25.8	6822	45.84	6.43	1.41	16.72	3.62	45.12
	Mean	12.63	6359	41.34	5.55	1.34	13.08	1.38	41.18
SM2U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	9.35	6500	39.89	6	1.33	13.22	1.32	41.67
	Max Value	9.48	6552	42.21	6.6	1.38	19.07	2.76	44.75
	Mean	9.41	6526	41.05	6.3	1.36	16.14	2.04	43.21
SM2	Number of Values	8	8	8	8	8	8	8	8
	Min Value	4.8	4580	25.83	2.8	1.3	4.79	0.5	34.32
	Max Value	37.05	6874	44.81	7.4	1.61	19.26	2.88	43.51
	Mean	11.45	6406	41.09	6.06	1.37	11.73	1.16	41.39
SM2L	Number of Values	2	2	2	2	2	2	2	2
	Min Value	9.48	6500	39.55	4.8	1.29	13.22	1.32	41.67
	Max Value	10.81	6576	42.21	6.6	1.38	17.94	2.61	44.86
	Mean	10.14	6538	40.88	5.7	1.33	15.58	1.96	43.26
SL1U	Number of Values	3	3	3	3	3	3	3	3
	Min Value	6.58	6328	41.99	6.2	1.31	9.58	0.51	38.89
	Max Value	11.68	6799	43.94	6.4	1.36	14.79	1.85	43.3
	Mean	9.87	6497	42.99	6.33	1.33	12.34	0.97	40.81
SL1	Number of Values	11	11	11	11	11	11	11	11
	Min Value	3.76	6658	41.9	5.3	1.27	8.2	0.39	41.07

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Max Value	9.03	6989	45.58	7.1	1.35	19.83	1.98	44.32
	Mean	6.68	6828	43.99	6.26	1.32	12.54	0.79	43.07
SL1L	Number of Values	2	2	2	2	2	2	2	2
	Min Value	12.54	6396	31.38	3.6	1.38	8.88	3.34	36.56
	Max Value	28.42	6500	40.15	4.9	1.48	12	3.82	42.38
	Mean	20.48	6448	35.77	4.25	1.43	10.44	3.58	39.47
SL2U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	5.56	6758	43.07	4.7	1.29	13.3	0.49	41.06
	Max Value	8.6	7256	44.34	6	1.34	15.2	1.03	46.7
	Mean	7.08	7007	43.7	5.35	1.31	14.25	0.76	43.88
SL2	Number of Values	13	13	13	13	13	13	13	13
	Min Value	4.3	6404	34.01	4.8	1.28	8.46	0.46	41.61
	Max Value	11.3	7198	46.07	7.6	1.38	18.38	2.16	48.47
	Mean	6.62	6875	43.37	5.98	1.31	12.22	1.17	44.03
SL2L	Number of Values	2	2	2	2	2	2	2	2
	Min Value	8.89	6423	36.02	3.5	1.34	8.35	1.28	42.62
	Max Value	16.71	6780	43.38	5.1	1.37	13.67	2.08	43.73
	Mean	12.8	6601	39.7	4.3	1.36	11.01	1.68	43.17
SL3	Number of Values	15	15	15	15	15	15	15	15
	Min Value	5.14	6253	39.95	4.3	1.28	7.72	0.53	41.09
	Max Value	13.34	7245	45.83	7	1.38	17.32	2.15	45.64
	Mean	8.59	6698	42.95	5.65	1.33	12.78	1.52	42.8
SB	Number of Values	8	8	8	8	8	8	8	8
	Min Value	5.9	5679	36.54	4.3	1.3	8.81	0.44	37.03
	Max Value	21.37	6871	44.5	8.8	1.39	19.2	1.97	43.53
	Mean	11.97	6386	41.07	5.98	1.34	13.27	0.98	40.99

7 Resource Model Construction

7.1 Structural Model

After completion of the previously detailed QA/QC processes, the available valid lithological and coal quality data was then imported into the MineScape software to generate both structural and quality models for each of the five resource areas.

The topographic model for each of the deposit was constructed by importing the Minescape topography grid models. These topography models describe both virgin topography and mined voids within the concession as of 31 December 2016.

The lithological data was then modelled to create structural grids. The schema, stored within the Stratmodel module of the MineScape software controls the modelling of seam elements and their structural relationships, grid model cell size, interpolators and other parameters. The details of these parameters stored in the applied schemas used in the structural modelling process are listed in Table 7:1.

Within the modelling schema, all of the stratigraphic intervals were modelled with pinched continuity. This is applied in areas where intervals are missing in a drill hole. In this situation, the modelling algorithm stops the interpolation of the missing interval halfway between the two drill holes between which it ceases to be present.

7.1.1 Structural Model Validation

Structural and thickness contours were generated and inspected to identify any irregularities, bulls-eyes, unexpected discontinuities etc. Cross-sections were also generated to identify any further structures such as faulting and any areas where seams were modelled as being discontinuous due to short drilling. Selected cross-sections from each resource area are shown in Appendix E.

Table 7:1 Model Schema Settings and Parameters

Model Component	Details
Modelling Software	Ventyx MineScape - Stratmodel module
Schema	kg2016,pp2014,km16,sbs14,sbn16
Topography Model	Topogmks_1212 (KG), Tops (PP, SS),_Tptopnew16(SN)
Topography Model Cell Size	25 m
Structural Model Cell Size	25 m
Interpolator (thickness)/order	Finite Element Method (FEM)/0
Interpolator (surface)/order	Finite Element Method (FEM)/1
Interpolator (trend)/order	Finite Element Method (FEM)/0
Extrapolation Distance	5500 m (PP), 4000 m (KG), 2500 m (BS, SS, SN)
Parting Modelled	No
Minimum Ply Thickness	10 cm
Minimum Coal Parting	30 cm (PP) otherwise not defined
Conformable Sequences	Weathered, Fresh

Model Component	Details
Upper Limit for Seams	Base of Weathering (BOW)
Control Points	Yes
Constraint File	No
Penetration File	Yes
Model Faults	No
Maximum Strip Ratio	1:15 (PP)
Maximum Resource Depth	250 m
Tonnage Calculations	Based on volumes using relative density on an air dried basis

7.2 Coal Quality Model

Coal quality data has been composited on a seam basis. The Inverse distance interpolator was selected for modelling coal quality as it has been shown to perform adequately for most coal quality attributes and it is also less likely to introduce spurious trends into the data. Testing indicated that a power value of two and a search radius of 2500 metres are the most suitable inverse distance interpolation parameters for modelling of the BIB coal deposits. Parameters used for quality modelling are summarized in Table 7:2.

Table 7:2 Quality Model Parameters

Model Component	Details
Coal Quality Data Type	Raw
Model Type	MineScape Table
Interpolator	Inverse distance
Power	2
Search Radius	2500 metres

7.3 Quality Model Validation

After the completion of quality model gridding, selected qualities for selected seams were contoured and contours inspected to ensure that quality models had been gridded correctly. As a second validation measure, average qualities reported during resource reporting for all seams were compared against the average qualities of the input data to ensure consistency between input and output data sets.

8 Coal Resources

8.1 Prospects for Eventual Economic Extraction and Resource Classification

Coal Resources present in the BIB concession have been reported in accordance with the JORC Code, 2012. The JORC Code identifies three levels of confidence in the reporting of resource categories. These categories are briefly explained below.

Measured – "*...That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors to support detailed mine planning and financial evaluation*";

Indicated – *"…That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors in sufficient detail to support mine planning and evaluation"; and*

Inferred – *"…That part of a Mineral Resources for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling.".*

For the purpose of coal resource classification according to JORC Code (2012) Code, Salva Mining has considered a drill hole with a coal quality sample intersection and core recovery above 90% over the sampled interval as a valid point of observation.

In terms of Coal Resource classification, Salva is also guided by the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) (The Coal Guidelines) specifically referred to under clause 37 of the JORC Code (2012).

Based on due consideration of the continuity of the coal seams as observed in the geological models for each of the five resource areas, the relative lack of evidence for significant faulting and the population statistics of the coal quality composites per seam, Salva has sub-divided Coal Resources within the BIB concession into resource classification categories based on the following spacing's (expressed as a radius of influence around points of observation which is half of the spacing between points of observation):

- Measured 250m or 375m;
- Indicated 500m or 650m; and
- Inferred 2000 m radius of influence.

Larger spacings for the Measured and Indicated Resource categories were used for KG Block only and is based on geostatistical analysis of raw ash variation in one of the main seams in this block (BL2U).

In general structural point data is more variable however this is considered to be adequately modelled by the much greater amount of structural data points. Hence classification is based on the more sparsely distributed coal quality data points as the quality estimate is considered to have the lower confidence in continuity. The resultant classification adequately reflects the CP's view of the deposit.

Resource polygons for the main seams from each resource area are shown in Appendix E. It is furthermore a requirement of the JORC Code (2012) that the likelihood of eventual economic extraction be considered prior to the classification of coal resources.

The average coal quality attributes of the coal seams considered is sufficient to be marketed as a mid CV thermal coal for power generation purposes. Therefore, Salva Mining considers that it is reasonable to define all coal seams within the classification distances discussed above, to a depth of 250m below the topographic surface, as potential open cut coal resources or to a maximum vertical stripping ratio of 15:1 in the case of the more steeply dipping PP Block (where a depth of 250 m below surface would result in overall stripping ratios that are unlikely to be economic due to the steep dips).

8.2 Coal Resource Statement

The estimated Coal Resources have been classified and reported according to the JORC Code (2012) and the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) as at 31 December 2016 are detailed in Table 8:1 below.

Table 8:1 Coal Resource Estimate as at 31 December 2016

Coal Resources (Mt)										
Area	Measured	Ash% (adb)	CV adb Kcal/kg	Indicated	Ash% (adb)	CV adb Kcal/kg	Inferred	Ash% adb	CV adb Kcal/kg	Total
KG	857	5.38	5,329	278	6.09	5,297	335	6.63	5,266	1,470
BS	21	4.71	5,567	27	5.61	5,560	155	5.94	5,563	203
SS	18	6.22	5,510	10	6.29	5,559	15	5.59	5,570	42
SN	10	4.69	5,357	10	6.17	5,258	50	6.97	5,078	71
PP	10	8.58	6,716	10	9.32	6,593	10	8.48	6,615	31
Total	916			335			565			1817

Mineral Resources are reported inclusive of the Mineral Reserves
(*Note: individual totals may differ due to rounding*)
Final Inferred Resource rounded to nearest 5 Mt.

8.3 Comparison with Previous Estimates

The August 2016 BIB resource estimate incorporates an additional 70 drill holes for KG Block and 57 drill holes for SN Block. The other resource blocks have had no additional information since the last estimate and hence remain unchanged from the previous estimate of this block done by HDR in January 2016.

In the case of KG Block, the additional drilling information from 70 drill holes, particularly the addition of 9 new coal quality points of observation, has resulted in an increase in Measured Resources and Indicated Resources by 48 Mt and 3 Mt respectively, largely at the expense of Inferred Resources which decreased by 15 Mt. There is an overall increase in the total resource from the previous estimate from 1,434 Mt to 1,472 Mt (38 Mt increase).

In the case of SN Block, an additional 57 drill hole data, particularly the addition of 4 coal quality points of observation, have resulted in reclassified of 2 Mt from Indicated to the Measured Resources category compared to the previous estimate. Concurrent mining in this area of around the same tonnage as the increase in M&I Resources results in the fact that there is no change in the total M&I Resource from the previous estimate.

The August 2016 resource estimate was updated in December 2016 to adjust for the coal production mined during the Sept 2016 to December 2016 period (2.7 Mt).

Table 8:2 below shows a breakdown of the difference in resource tonnes for the entire BIB concession between this (December 2016) and the previous estimates.

Table 8:2 Coal Resources - Comparison with Previous Estimate

Resource Category	Salva Mining Dec 2016 (Mt)	Salva Mining Aug 2016 (Mt)	HDR Jan 2016 (Mt)	HDR Feb 2015 (Mt)	HDR Salva July 2014 (Mt)
Measured	916	919	869	857	414
Indicated	335	335	334	353	623
Total M&I	1,251	1,254	1,203	1,210	1,038
Inferred	565	565	580	530	740
Total	**1,816**	**1,819**	**1,782**	**1,740**	**1,777**

9 Reserves Estimation

9.1 Estimation Methodology

Salva Mining prepared the Coal Resource estimate for BIB Concession coal deposit as at 31 December 2016 which is used as a basis for the Coal Reserve estimate.

The Coal Reserves estimates presented in this report are based on the outcome of pit optimisation results and the Techno-economics study carried out by Salva Mining. The mining schedule for the BIB concession blocks includes 4 existing open cut mines, Kusan Girimulya (KG), Batulaki South (BS), Sebamban North (SN) and Sebamban South (SS) and a proposed open cut mine at Pasopati (PP) with a targets combined total coal production of 40 Mtpa from all the pits from the year 2023 onwards.

The subject specialist for Coal Reserves considers the proposed mine plan and mining schedule is techno-economically viable and achievable. This has been done by reviewing all the modifying factors, estimating reserves in the pit shell and doing a strategic production schedule and economic model which confirms a positive cash margin using the cost and revenue factors as described below in this report.

9.2 Modifying Factors

The BIB mine has been operating since 2005 (Kusan-Girimulya Pit started from 2011). It has produced over 6.2 Mt in 2015 and 7.5 Mt in 2016.

Pre-feasibility studies were completed prior to commencement of mining operations. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being given mining operations approval (CCoW).

Where an entity has an operating mine for an Ore Reserve, its Life of Mine Plan would generally be expected to contain information at better than Pre-Feasibility or Feasibility level for the whole range of inputs normally required for a Pre-Feasibility or Feasibility study and this would meet the requirement in Clause 29 for the Ore Reserve to continue that classification. Salva Mining has used actual modifying factors based on current operations at the BIB Mine which were independently verified by the HDR's subject specialist during the site visit. In Salva's opinion, the Modifying Factors at BIB Mine are better defined based on actual mining practices compared to a greenfield project at Pre-Feasibility stage.

The following table (Table 9:1) outlines the factors used to run the mine optimisation and estimate the Coal Reserve Tonnage.

Table 9:1 Modifying & Mine Optimisation Factors

Factor	Chosen Criteria
Seam roof & floor coal loss of 0.05 m each	0.10m
Seam roof & floor dilution 0.02 m each	0.04m
Geological & Mining loss including loss in transportation and handling at port	5%

Factor	Chosen Criteria
Minimum mining thickness minable coal seam	0.3m
Dilution default density	2.2bcm/t
Dilution default calorific value	500Kcal/kg
Dilution default ash	75%
Overall Highwall and Endwall slope (varies in different blocks)	20 deg to 42 deg
Maximum Pit depth	Varies (200m max.)
Minimum Mining width at Pit bottom	50m
Exclusion of Mining lease (CCOW) and offset from Pit crest	50m
Offset from the river edge	300m
Mining , Coal handling and Transport Cost	Available and Used
Long Term Coal Selling Price used for Break-even Stripping Ratio calculation	US$ 36/t (except Pasopati), Pasopati- US$ 62.5/t
Government Documents / approvals	Available and Used
Environment Report	Available and Used
Geotechnical Report	Available and Used
Hydrogeology Report	Available & Used

9.3 Notes on Modifying Factors

9.3.1 Mining Factors

General

The mining limits are determined by considering physical limitations, mining parameters, economic factors and general modifying factors as above (See Table 9:1). The mining factors applied to the Coal Resource model for deriving mining quantities were selected based on the use of suitably sized excavators and trucks. The assumptions are that due to the shallow to moderate and steep dip of the coal mining will need to occur in strips and benches.

The mining factors (such as recovery and dilution) were defined based on the proposed open cut mining method and the coal seam characteristics. The exclusion criteria included the lease boundary, Kusan River (for Girimulya Pit & Pasopati pit) and a minimum working section thickness.

Determination of Open Cut Limits

The geological models that were used as the basis for the estimation of the Reserves are the Minescape geological models prepared by Salva Mining to compute the Resources.

Potential open cut reserves inside different blocks of the Project Area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. By generating the financial value (positive or negative) for each mining block within a deposit and then applying the physical relationship between the blocks, the optimal economic pit can be determined.

This method is widely accepted in the mining industry and is a suitable method for determining economic mining limits in this type of deposit. The optimiser was run across a wide range of coal prices using a standard set of costs that was developed by Salva Mining and based on typical industry costs in similar operations. These costs were adjusted to suit the conditions for this project.

Unit Costs

The Contractor and Owner unit costs used in the Lerchs Grossman optimiser for various blocks are detailed in Table 9:2 and Table 9:3. These costs were used to create a series of waste and coal cost grids which were used to generate the optimiser nested pit shells.

Table 9:2 Contractor Unit Rates (Real Terms)

Cost Item	Unit	Rate
Land Clearing	$/ha	1,700
Topsoil Removal	$/bcm	1.80
Waste Mining	$/bcm	1.80
Waste Haulage	$/bcm/km	0.15
Coal Mining	$/t	0.70
Haul to ROM Stockpile	$/t km	0.12
Haul to Port Stockpile – Road	$/t km	0.10
Barging	$/t km	0.045
Transhipment	$/t	1.30

Note: All quoted cost in local currency is adjusted for fuel price and exchange rate

Table 9:3 Variable Owner Unit Costs (Real Terms)

Cost Item	Unit	Rate
ROM Coal Handling	$/t	0.30
Haul to Port Stockpile – Conveyor	$/t km	0.04
Port Stockpile and Barge Loading	$/bcm	0.70
Mine Closure	$/ha	8,500
Environmental and Rehabilitation	$/t	0.10
Water Treatment	$/t	0.05
Salary and Wages	$/t	0.25
Camp and Accommodation	$/t	0.05
Medical & Community Development	$/t	0.05
Land Use Payment	$/t	0.25
Corporate Overheads	$/t	0.50
Contingency	$/t	0.82

Royalty was estimated 13.5% based on the respective sale prices of the coal for each block. A 10% VAT has been applied to all services purchased.

Apart from the unit costs described in the above section, land compensation cost per Ha was also considered during optimisation. These land compensation costs were obtained from the GEAR

technical team and verified by Salva Mining. Finally this was converted to an equivalent unit cost per square meter of land for use in the optimiser.

Base Pit for Optimiser

In addition to the mining and economic constraints, the optimisers were mostly limited by a 3 dimensional shell which was built for each block following either a surface constraint or geological model extent. These constraints are detailed in Table 9:4. This pit shell effectively represented the maximum pit possible in the deposit that was reasonable for the estimation of Coal Reserves.

Table 9:4 Block wise Optimiser Base Pit limits

Block Name	North	South	East	West
Kusan Girimulya	IUP and River	Geomodel	Sub-Crop	IUP and Geomodel
Batulaki	Geomodel	Geomodel	Geomodel	IUP and River
Sebamban South	IUP	IUP	Sub-Crop	IUP
Sebamban North	IUP	IUP	Sub-Crop	IUP
Pasopati	Geomodel	Geomodel	Geomodel	Geomodel

In Pasopati the base pit was divided into two separate pits – North and South – as a river runs almost through middle of the block. A 300 m offset was taken from the river in both sides.

Artisanal Mining in Pasopati

Artisanal mining was prevalent in the Pasopati block before the LiDAR topography was surveyed in 2009. No accurate survey was available for the current mined out situation in this block. A polygon delineating the extent of this mining in both north and south was surveyed. Salva Mining has performed a tentative estimation on the maximum depth of this artisanal mining and generated a mined out surface. This surface was used in optimisation for this block to exclude any possible mined out tonnage from the current reserve estimate.

9.3.2 Optimisation Result

The optimiser produced a series of nested pit shells using same cost parameters with varying sale price of coal. The method starts with a very low discounted sale price following a high discount factor and moves toward higher sale prices by decreasing the discount on sale price. It estimates the net margin by subtracting the total cost from the revenue within a particular shell at a particular discount factor using the cost-revenue parameters and the physical quantities within the pit shell. As the method progresses, the incremental margin per tonne of coal slowly drops down to zero at "zero" discount factor and then goes negative as the pit shells go deeper following higher sale prices. As a result the cumulative margin slowly rises up to a maximum level at "zero" discount factor and then starts dropping off. Thus the pit shell (OPT000) which represents the "zero" discount factor is called the optimum pit shell as any smaller or bigger shell will have a lower cumulative margin ("value"). The goal in this process is intended to have economic pit sensitivity.

9.3.3 Selection of Pit Shell

GEAR is proposing to mine 40 Mtpa of coal from BIB coal concession blocks from 2023 onwards and as such would need around 600 - 700 Mt of mineable ROM coal to achieve this target.

An economic model was prepared for the mining operation from each of the BIB coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio.

Break Even Stripping Ratio

Table 9:5 summarises the calculation of the Break Even Stripping Ratio for BIB Blocks. The methodology adopted involves taking the cost to mine a tonne of coal and adding all the costs associated with getting the coal to the point of sale.

Table 9:5 Break-even Stripping Ratio (BESR)

	KG /BS /SS & SN Blocks	PP Block
Coal Price, US$ /t, FOB	$36.00	$62.50
Royalty, US $/t, FOB barge	$4.53	$8.11
Overheads, US $/t	$3.56	$3.56
Offsite Cost, US $/t	$4.98	$6.50
Coal Mining, US $/t	$0.70	$0.70
Waste mining including waste overhaul (US$/bcm)	$1.94	$1.94
Break Even Strip Ratio	11.5	22.5

For the purpose of reserve estimation, total moisture was considered to be equal to in-situ moisture for determination of in-situ relative density as in-situ moisture values were not available. The in-situ density of the coal has been estimated using the Preston-Sanders method to account for the difference between air-dried density and in-situ density. The formula and inputs were as follows:

$$RD2 = RD1 \times (100 - M1) / (100 + RD1 \times (M2 - M1) - M2)$$

Where

- RD2 = In-situ Relative Density (arb)
- RD1 = Relative density (adb)
- M1 = Inherent Moisture (adb)
- M2 = Total Moisture (arb)

It should be noted that while the total moisture from laboratory measurements may not necessarily equal the in-situ moisture, this is considered to be a best estimate given the limited amount of data. Salva Mining has assumed that no moisture reduction takes place for the determination of product quality.

9.3.4 Geotechnical Factors

All pits except for Pasopati block have been designed such that low walls commenced at the subcrops and followed the coal floors. In Pasopati block, low-wall does not follow the seam floor due to block's steeply dipping stratigraphy. Hence a geo-technically stable batter angle was selected for this block and used for the pit design. As a consequence, the low wall batter has to lie

below the seam floor of the bottommost seam. It is important to understand that any undercut of bedding on the low wall (or up dip mining) creates a high risk of failure.

The current geotechnical studies deals with KG block and have recommended the slope parameters up-to 200m depth. Geotechnical parameters used in this report were based on either actual operations or previous geotechnical studies.

9.3.5 Surface Water Management

Pit water management is of critical importance to the effective operation of the mine. Dewatering operations observed during the site visit were considered to be of a high standard with well constructed pit sumps and efficient drainage from operating areas into the sump. The overall strategy for water management over the life of mine will be to:

1. Minimise surface water entering the pit by:
    a. Building dams and drains to divert water from external catchments away from pits; and
    b. Profiling dumps so that water is diverted away from the pits.
2. Removing water from excavations by:
    a. Constructing a main sump at the deepest point of each pit and draining all in pit water to that sump; and
    b. Installing sufficient pumps and pipes of suitable size to pump water from the pit. Two stage pumping will be required in deeper areas in the later years of the mine life.

9.3.6 Mining Method & Operations

Mining operation commenced in 2005 in Sebamban South Pit (SB) and Batulaki South Pit (BS) Blocks. The Sebamban South Pit (SS) and Batulaki South Pits were mined until 2014. Mining is planned to recommence at SS Pit during 2017.

The Kusan Pit (KG) was started in 2011 while the Sebamban North Pit (SN) was started in 2015. The mining operation in BIB is an open pit mine using standard truck and excavator methods which are a common practice in Indonesia. Waste material is mined using hydraulic excavators and loaded into standard rear tipping off-highway trucks and hauled to dumps in close proximity to the pits or to in-pit dumps where possible. For the purpose of this Reserve Statement it is proposed that contractors will continue to be used for mining and haulage operations over the life of mine, and the unit costs used for the Reserve estimate reflect this style of mining.

Currently, the mining activities in Kusan pit are concentrated over Seam D and Seam B group. Girimulya pit has been opened in 2015 to target seam B group. Contractors are currently using truck and excavator combinations of 200t excavator with 100T trucks & 110t excavator with 60T trucks for waste removal whereas coal mining is being carried out by smaller size excavators (PC200-PC400 Komatsu excavators) with 30-40 T trucks. Coal from Kusan Pit is being hauled (about 20 km) to Port Bunati (Sea port owned by GEAR) for export to customers. The mining method can be described as a multi seam, moderate dip, open cut coal mine using truck and shovel equipment in a combination of strip and haulback operations. Figure 9:1 and Figure 9:2 shows the current mining operations at KG and SN pit respectively.

Figure 9:1 Mining Operations at KG Pit



Figure 9:2 Current Mining at SN Pit



Coal mining operations at the BS Pit is planned to be re-started again in 2018 by another contractor deploying similar size equipment as deployed earlier. Coal from BS Pit will be hauled to the Port Abidin to about 16 km. Port Abidin is a river based port where all the coal handling arrangements are being rented including loading onto the barges (7500-8000t barges).

Mining at SS is planned to recommence in 2017.

9.3.7 Processing Factors

The coal is to be sold unwashed so no processing factors have been applied. Other than crushing to a 50 mm top size no other beneficiation will be applied.

9.3.8 Mine Logistics Factors

Salva Mining has carried out a high level assessment of logistic options to assess the project economics. A number of options were identified and techno-economic assessment of each option was carried out. Based on assessment of available information and data gathered from site visit, two logistic chains for coal blocks comprising BIB projects exist and need to be strengthened.

Presently at KG block, coal handling and infrastructure is already in place as coal mining activities are underway since 2011. The existing infrastructure at KG includes a run of mine (ROM) stockpile, a primary crushing and screening plant at the mine site and a weigh bridge, port stockpile, secondary crushing circuit at the Bunati port. Bunati Port also has jetty and barge loading conveyor (recently expanded to 12mtpa capacity). Offices, camps, workshops and other associated facilities are currently in place both at mine site and at the port.

At present, current operations use both the coal crushing plants located at ROM stockpile and at the port. Coal mined from the BIB block is currently hauled by using a recently completed dedicated haul road. A new haul road joining Kusan and Girimulya to the port including an underpass of the main highway (Figure 9:3). This haul road has capacity to haul up to 20 Mtpa of coal from KG Block area. Sebamban North and Sebamban South pits also uses the recently built haul road to transport coal from the pit head to the Bunati port.

For handling 40Mtpa annual output from BIB concession blocks, a major upgrade is required for coal handling circuits including crushing, coal conveying and stockpiles (Both at ROM & Bunati Port). During the recent site visit, it was acknowledged and the preparation is on for such upgrades. The proposed coal handling and logistics infrastructure for the Kusan and Girimulya Blocks require construction of the following components:

- Overland conveyors from Kusan pit to directly to the port, anticipated to be in operation from 2021 onwards;
- Upgrade to Run of Mine Coal handling facilities and stockpiles at both Kusan and Girimulya mine sites for receiving coal from the mine; and
- Upgrade to Port stockpile coal handling, blending, stockpiling and barge-loading facilities with a total capacity in excess of 40 Mtpa.

Similar coal handling arrangement exists for the coal mined from Batulaki pit which is hauled to the Abidin port located at Satui River. Abidin Port is a third party owned port where infrastructures required for crushing and coal loading are being rented for coal export. Pasopati coal is also

proposed to utilize the services of Port Abidin when the mining activities will start in 2018. BIB existing coal logistics, proposed infrastructure and new haul roads are shown in Figure 9:3 and Figure 9:4 while barge loading facilities at port has been shown in Figure 9:6.

Figure 9:3 BIB Road Logistics



Figure 9:4 BIB OffShore Loading Anchorage

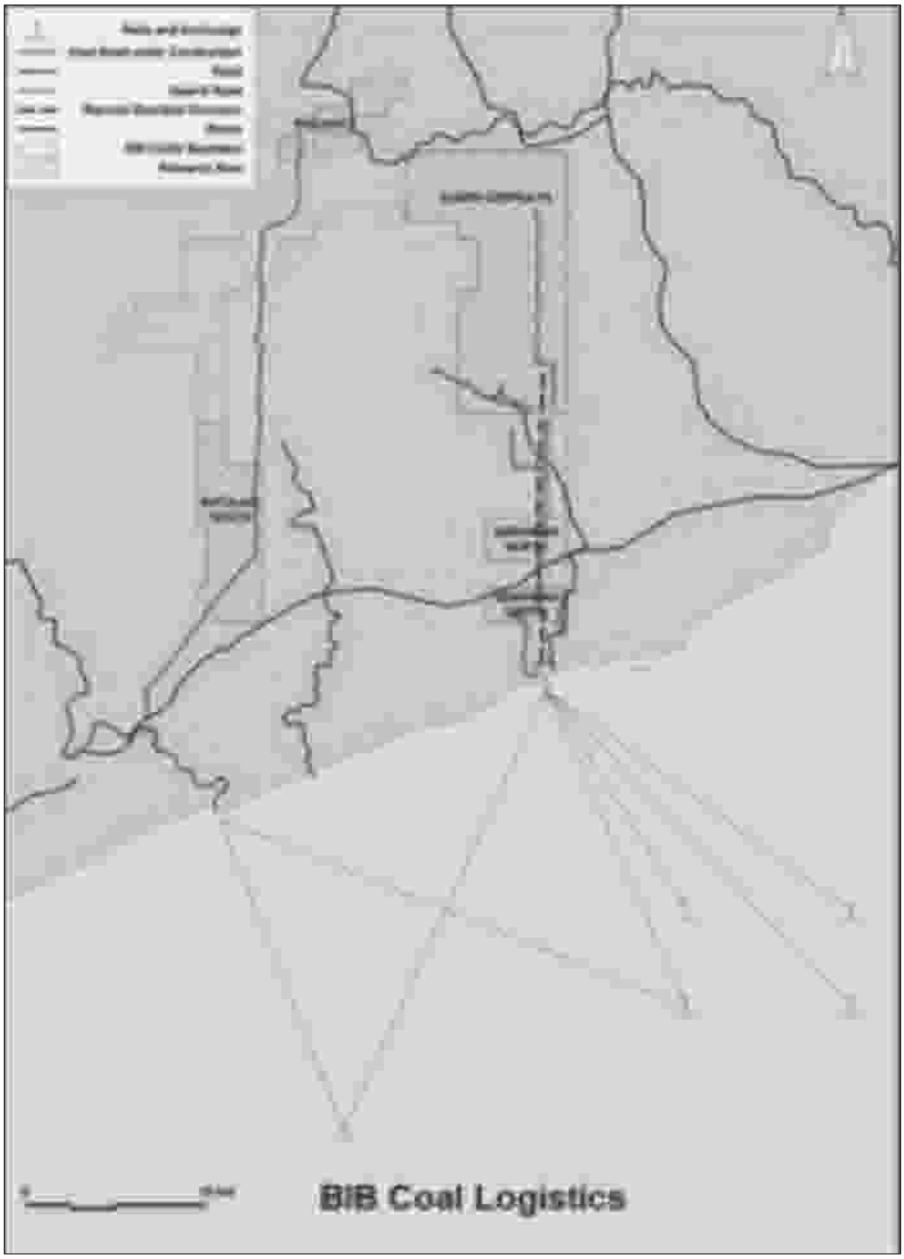


Figure 9:5 Coal Loading Facilities at Port



9.3.9 Permits and Approvals

Salva Mining understands that the permits and approvals with regard to further mining activities in the BIB Coal Concession deposits are in good standing.

9.3.10 Cost and Revenue Factors

General

GEAR provided a "data sheet" of indicative unit costs and revenues relevant for this project. Salva Mining did an independent coal marketing study to review the coal prices forecast for reasonableness. Salva Mining also reviewed the costs for reasonableness against known current mining costs for similar mining conditions within Indonesia. An in-house NPV based economic model was developed to show that the project and reserves are "economic". These unit rates were then used to estimate the cost to deliver coal to a ship (FOB vessel). This allowed a break even strip ratio to be estimated and the rates were also used to calibrate the Optimiser software.

The following points summarise the cost and revenue factors used for the estimate:

- All costs are in US dollars;
- Long term coal price of US$36.00 per tonne (all except Pasopati), Pasopati - US$62.50;
- Royalties of 13.5% of revenue less marketing, costs have been allowed along with VAT of 10%;

- Allowances were made for hauling, crushing, quality control, stockpiling, barge loading, barging and ship loading which totalled approximately $5.0/t (all except Pasopati) to $6.5 (Pasopati) per tonne;
- Coal mining rate is taken as US$0.70 per tonne; and
- Waste mining rate (excluding waste overhaul) has been taken as US$1.80 per bank cubic metre.

Operating Cost

GEAR provided the operating costs for mining and other activities including coal hauling, barging and port handling charges, which Salva Mining checked for reasonableness. Total operating costs per tonne of coal product including royalty for the BIB Project has been estimated as US $21.72 per tonne over the life of the mine. The updated operating cost for the BIB projects has been summarised below in Table 9:6.

Table 9:6 Average Unit Operating Cost (Real Terms) over Life of Mine

Operating Cost Elements	US $/t
Land Clearing	0.01
Topsoil Removal	0.03
Waste Mining	7.42
Waste Haulage	0.58
Coal Mining	0.70
Haul to ROM Stockpile	0.57
ROM Coal Handling	0.30
Haul to Port Stockpile – Road	0.26
Haul to Port Stockpile – Conveyor	0.71
Port Stockpile and Barge Loading	0.70
Barging	1.15
Transhipment	1.30
Mine Closure	0.05
Environmental and Rehabilitation	0.10
Land Access fees	0.25
Water Treatment	0.05
Salary and Wages	0.25
Camp and Accommodation	0.05
Medical & Community Development	0.05
Corporate Overheads	0.50
Local Government Fees	0.25
VAT	1.20
Contingency	0.82
Operating Cost Excl. Royalty	17.31
Royalty	4.47
Operating Cost incl. Royalty	21.78

Capital Cost

As GEAR is engaging contractors for mining operations at BIB concession blocks, it is envisaged that no major capital expenditure shall be incurred towards the mining equipment. But major capital will be required for infrastructure upgrades for initial development and ramp-up facilities at the BIB projects including mining and logistics infrastructure both at mine site and at the port.

Salva Mining estimates total capital expenditure of US$ 271M which includes a contingency of US$ 35M. A contingency of 15% has been applied to the capital cost estimate. These estimated are considered to have an accuracy of ± 15%.

In addition to the expansion capital of US$ 271M, Salva Mining has factored 2.5% of the invested capital as sustaining capital per annum for asset maintenance over the life of mine. While preparing these estimates, Salva Mining has relied on industry benchmarks, its internal database and expertise and internal studies on the BIB concessions.

Salva Mining notes that use of an overland conveyor is not very widespread in Indonesia. However Salva Mining has reviewed operations of numerous overland conveyors working globally including the operation of PT. Kaltim Prima Coal's 13 km overland conveyor, currently under operation in East Kalimantan region. The capital and operating costs for these systems are thus also considered to be relatively well understood using existing operations as a basis, although a conservative approach to estimating these costs has been taken. The Capital Cost estimates and the basis of its estimation are shown in Table 9:7. The cost estimate was prepared in Q3 2016 in US dollars ($).

Table 9:7 Capital Cost (Real Terms)

Sr. No.	Particulars	Direct Cost ($M)	Contingency ($M)	Total Cost ($M)
1.1	Land Compensation	42.5	6.4	48.9
1	Land Compensation	42.5	6.4	48.9
2.1	Diversion Channel	6.0	0.9	6.9
2.2	Road From Pit to ROM Stockpile	1.0	0.2	1.2
2.3	Workshop, Office and Laboratory	2.5	0.4	2.9
2.4	Backup Power Generation	1.5	0.2	1.7
2.5	Explosive Magazine and Site Preparation	1.0	0.2	1.2
2.6	Miscellaneous Roads	0.8	0.1	0.9
2.7	Coal Power Station and Distribution	0.0	0.0	0.0
2.8	Coal Handling Equipment	8.0	1.2	9.2
2.9	ROM - Crushing and Screening	30.0	4.5	34.5
2.1	Contractor Mobilisation	5.0	0.8	8.5
2.11	Accommodation Camp	6.0	0.9	6.9
2.12	Fuel Storage	3.0	0.5	3.5
2.13	Water supply and Sewage System	1.0	0.2	1.2
2.14	Communications	0.5	0.1	0.6
2	Mine Infrastructure	66.3	9.9	76.2
3.1	Haul Road Construction	0.0	0.0	0.0
3.2	Overland Conveyor	63.0	9.5	72.5

Sr. No.	Particulars	Direct Cost ($M)	Contingency ($M)	Total Cost ($M)
3	Hauling to Jetty	63.0	9.5	72.5
4.1	Port Stockpile and Jetty	60.0	9.0	69.0
4	Port Facilities	60.0	9.0	69.0
5.1	Additional Studies	4.0	0.6	4.6
5	Other Capital Expenses	4.0	0.6	4.6
	Total Project Capital	**235.8**	**35.4**	**271.1**

Salva Mining has compared these against the industry benchmarks and estimated these to be reasonable.

9.3.11 Marketing Factors

To estimate the long term price for different types of project coals, Salva Mining has adopted the latest Consensus brokers forecast for the Newcastle thermal coal prices ex Australia (USD/t, FOB) as a benchmark price. These data collected by Consensus Economics in December 2016 includes forecasts of future prices for coal over a 10 year horizon from each expert. Salva Mining has adopted average of this forecast prices as a reasonable benchmark price. Utilising the historical price differential for this type of Indonesian coal over benchmark price, Salva Mining has discounted long term benchmark price to accommodate low rank sub bituminous (higher moisture) coal based on the historical discount. Salva Mining has checked the latest actual price realised for the BIB coal product. The BIB Mine is currently achieving US$42 – US$45/t of coal in line with this calculation.

The following Table 9:8 summarises long term price forecast taken to estimate reserves.

Table 9:8 Long Term Price Estimate

Mining Blocks	GCV, kcal/kg (gar)	Long term Price FOB (US $/t)
KG, BS, SS and SN	4,100	36.0
PP	6,663	62.5

9.3.12 Product Quality

As previously stated, Salva Mining have assumed no moisture change in the product coal chain. Therefore it is assumed that the final product will have the same quality of ROM coal which is summarised in the Table 9:9 below.

Table 9:9 Product Coal Quality

Block	RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV (GAR) Kcal/Kg	TS adb %
KG	1.38	35.29	15.42	5.16	4,085	0.22
BS	1.37	33.54	13.18	6.31	4,207	0.17
SS	1.47	38.63	12.49	5.84	3,866	0.21
SN	1.37	38.50	16.69	4.60	3,941	0.14
PP	1.33	12.47	6.10	8.72	6,528	1.39
Total	**1.38**	**35.21**	**15.23**	**5.22**	**4,097**	**0.22**

9.3.13 Other Relevant Factors

Limitations to Drilling

Approximately 2,818 boreholes are located within the BIB Project Area. 98% of boreholes have been logged using down-hole geophysics. Geophysical data is predominantly comprised of gamma, density and calliper logs and has allowed for accurate seam definition. The Resource is limited to 250 m depth below topography in all the BIB concession coal blocks except Pasopati block where it is limited to cut off stripping ratio of 15:1.

Surface Constraints

Mining operations are constrained physically by the concession boundary and seam out crops. Other constraints that were used to define the project were limits of exploration drilling, constraints due to river and variable land compensation rates. No significant surface features exist that would further constrains mining activities.

Continuation of work will be required to support future update of Reserve Estimates and Mine Plans. These include:

- detailed geotechnical studies to confirm the overall slope angles and other parameters in deeper pit area;
- detailed hydrogeological studies to know the water flow gradient and dewatering arrangement;
- more quality data as well as detailed drilling and updates to the geological model;
- land compensation issues; and
- changes in life of mine schedule, infrastructure constraints, coal transportation issues and due to changes in marketing and costing during the mining operation.

These items may cause the pit shell and mining quantities to change in future Reserve Statements.

Salva Mining is not aware of any other environmental, legal, marketing, social or government factors which may hinder the economic extraction of the Coal Reserves other than those disclosed in this report.

In the opinion of Salva Mining the uncertainties in areas discussed in the report are not sufficiently material to prevent the classification of areas deemed Measured Resources to be areas of Proved Reserves for the purpose of this report. Salva Mining also believes that the uncertainties in each of these areas also not sufficiently material to prevent the classification of areas deemed Indicated Resources to be areas of Probable Reserve.

Key project risk for the BIB Project emanates from the following factors in order of importance.

- Lower long term coal prices or domestic coal demand;
- Higher life of mine operating costs and logistics issues;
- Higher levels of capital costs.

Any downside to these factors will likely have a significant impact on the economic feasibility of this project. However the projected cash flows in the financial analysis currently show a healthy margin.

9.4 Final Pit Design

For the purposes of this report, Salva Mining has limited the pit depth to the limit of exploration drilling within the limit applied to the Resource estimates. Other factors considered in the final optimum pit designs included:

- The location and proximity of coal to exploration data;
- Proximity to the concession boundary;
- Out of pit dumping room;
- Geotechnical parameters; and
- Surface water management considerations.

The final pit designs closely followed the selected pit shell in most locations (Figure 9:3 to Figure 9:7).

9.4.1 Cut-off Parameters and Pit Limit

Overall low-wall slopes as per the basal seam dip, endwall slopes and highwall slopes for the final pit design were considered as per table given below. The slope parameters are based on the geotechnical study carried out for Kusan block.

Table 9:10 Pit Design Parameters for BIB blocks

Pit Design Parameters	Kusan Girimulya (KG)	Batulaki (BS)	Sebamban South (SS)	Sebamban North (SN)	Pasopati (PP)
Overall Highwall Slope	30 deg up to 100m depth, 18 deg for depth up-to 200m depth	35 deg up to 100m depth, 20 deg up to 200 m depth	35 deg up to 100m depth, 20 deg up to 200 m depth	35 deg up to 100m depth, 20 deg up to 200 m depth	42 deg up to 100m depth
Bench Slope	45 deg	45 deg	45 deg	45 deg	60 deg
Bench Height	10 m	10 m	10 m	10 m	10 m
Highwall berm	10 m	5 m	5 m	5 m	5 m
Low wall slope	3-4 deg (Kusan), 5-7 deg (Girimulya)	12-14 deg	8-10 deg	8-10 deg	-
Ramp Width	30 m	30 m	30 m	30 m	30 m
Maximum Ramp Grade	8%	8%	8%	8%	8%

9.4.2 Pit Designs

The coal seam distribution within the BIB Concession deposits resulted in the Optimiser identifying several pits with the different basal seams. The pits were subjected to adjustments to form a practical pit design, which lead to the exclusion of the minor narrow pit shells and the resultant formation of Mineable Pit Shells, which formed the basis of the subsequent reserves estimate (Figure 9:6 to Figure 9:10).

Pits for various blocks have been designed within the limits as defined by the pit optimisation analysis. These limits are rationalised to ensure access between floor benches and walls were straightened to generate mineable pits.

Figure 9:6 Pit shell selection & Final Pit Design – KG Block

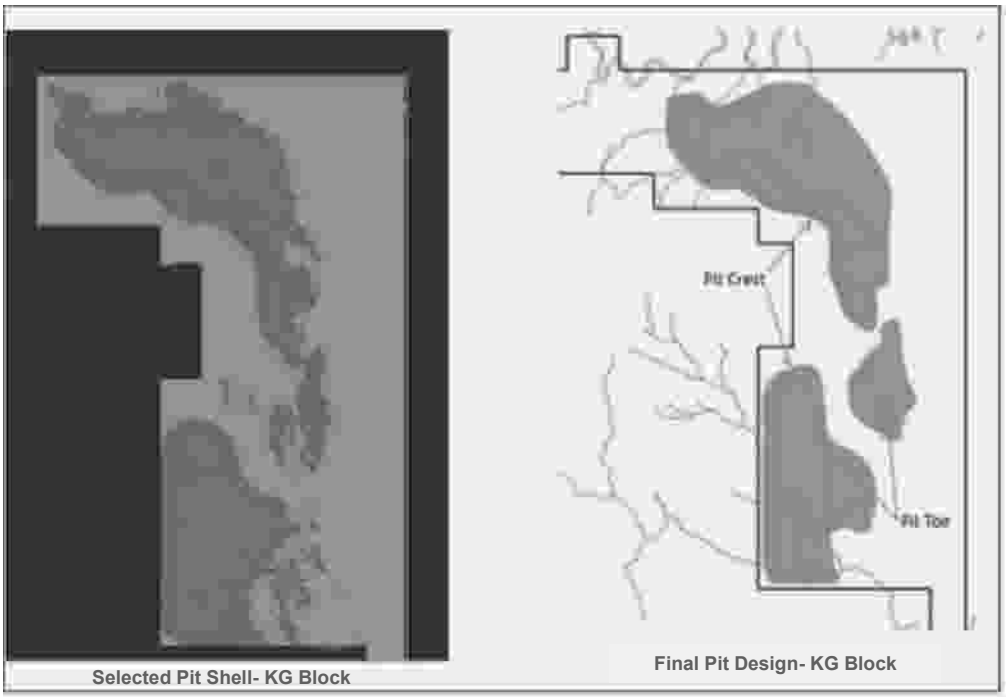


Figure 9:7 Pit shell selection & Final Pit Design – BS Block

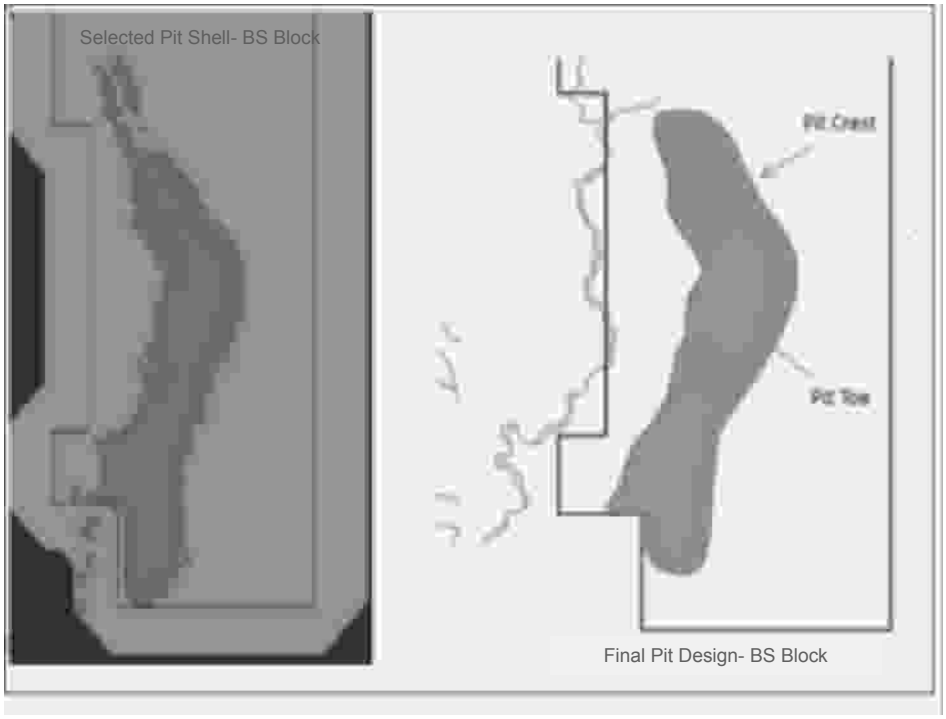


Figure 9:8 Pit shell selection & Final Pit Design – SS Block

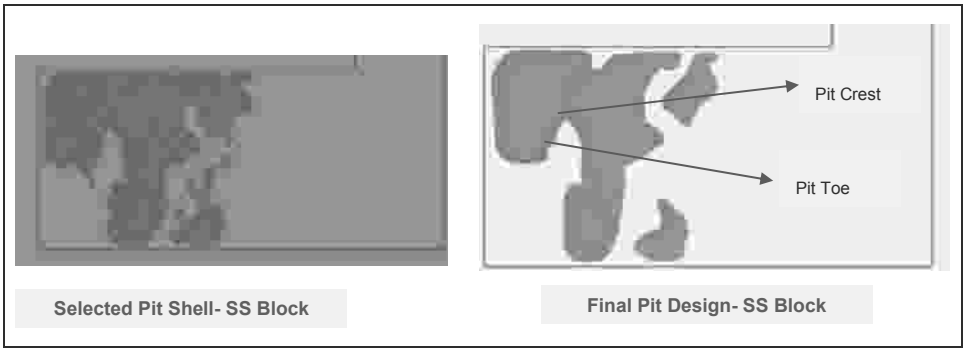
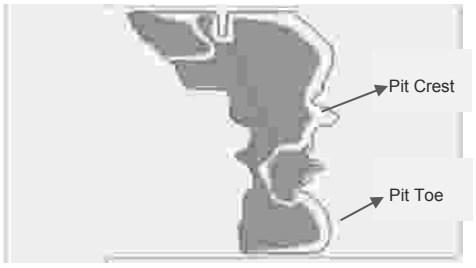


Figure 9:9 Pit shell selection & Final Pit Design – SN Block

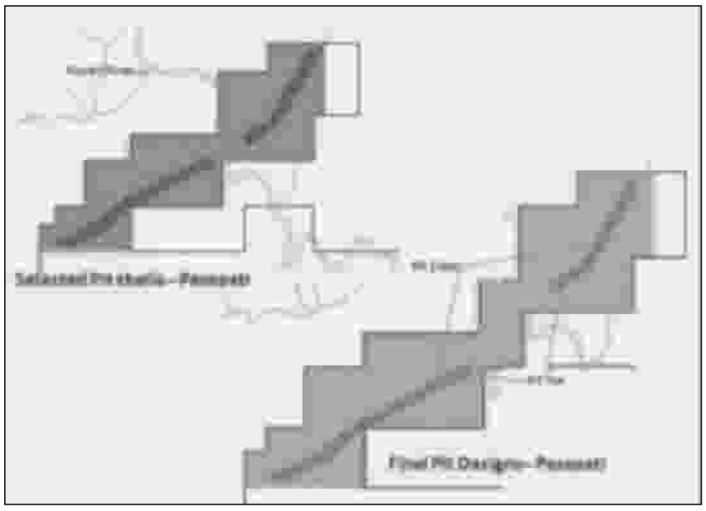


Selected Pit Shell- SN Block



Final Pit Design- SN Block

Figure 9:10 Pit shell selection & Final Pit Design – PP Block



All pits except for Pasopati block have been designed such that low walls commenced at the subcrops and followed the coal floors. The overall highwall batter angle approximately varies from 20 to 35 degrees as the ultimate pit depth ranges from a little more than 80 m to 200 m. This was done in accordance with the geotechnical study done on the KG Block.

In Pasopati, it was not possible to follow any seam floor at the lowwall side because of the block's steeply dipping stratigraphy. Hence a geotechnically stable batter angle was selected for this block and used for the pit design. As a consequence this pit includes a significant amount of underburden material below the bottommost seam.

The ROM coal quantities within the Mineable Pit Shells were then tested so that only Measured and Indicated Coal Resources were classified as Coal Reserves. Coal Reserves within the seams having Measured Resources are reported as Proved Reserves whereas seams having Indicated Resources are reported as Probable Reserves. The final pit designs and associated cross sections

for estimating Coal Reserves for BIB Coal concession deposits are shown on Figure 9:9 to Figure 9:19 as below.

9.4.3 Mining Schedule

A life of mine plan was plan was completed based on the final pit design. This was done to ensure that the proposed mining method would be practical and achievable and that the proposed dumping strategy would be able to contain the waste mined in the final pit design. This provides a check on the reasonableness of the assumed waste mining costs and estimates the average waste haul per period. The schedule targets production is 9 Mt in 2017, 11Mt in 2018, 15 Mt by year 3, 23Mt by year 5 and ramping up to an average 40 Mt from year 8 onwards.

BIB coal mining blocks (KG and SN) produced 7.5 Mt for the year year of 2016. Historical production from BIB mines have shown below in Table 9.11.

Table 9:11 Historical Production – BIB Mine (Mt, Coal)

Pit	2010	2011	2012	2013	2014	2015	2016
Kusan Girimulya		0.6	2.1	2.2	3.2	5.5	6.7
Batulaki	0.8	0.9	1.2	1.1	1.1		
Sebamban North	0.3	1.2	0.5	0.7	0.3	0.7	0.8
BIB Mine (Total)	**1.1**	**2.8**	**3.8**	**4.1**	**4.6**	**6.3**	**7.5**

"The final pit designs and representative cross section of mining blocks at BIB concessions have been shown from Figure 9:11 to 9:21.

Figure 9:11 Final Pit Design – Kusan Girimulya Pits

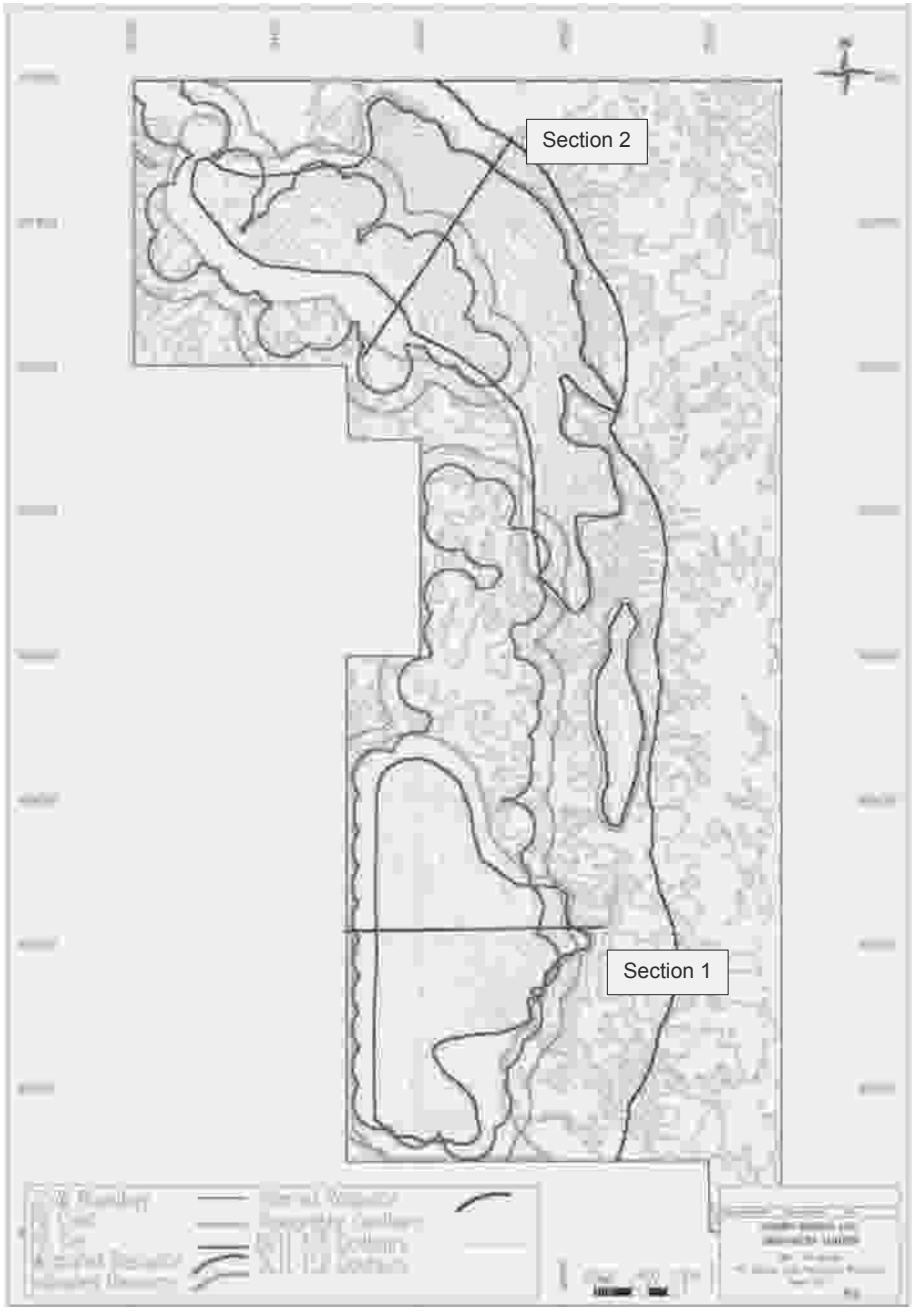


Figure 9:12 Representative Cross Sections – Kusan Girimulya Pit

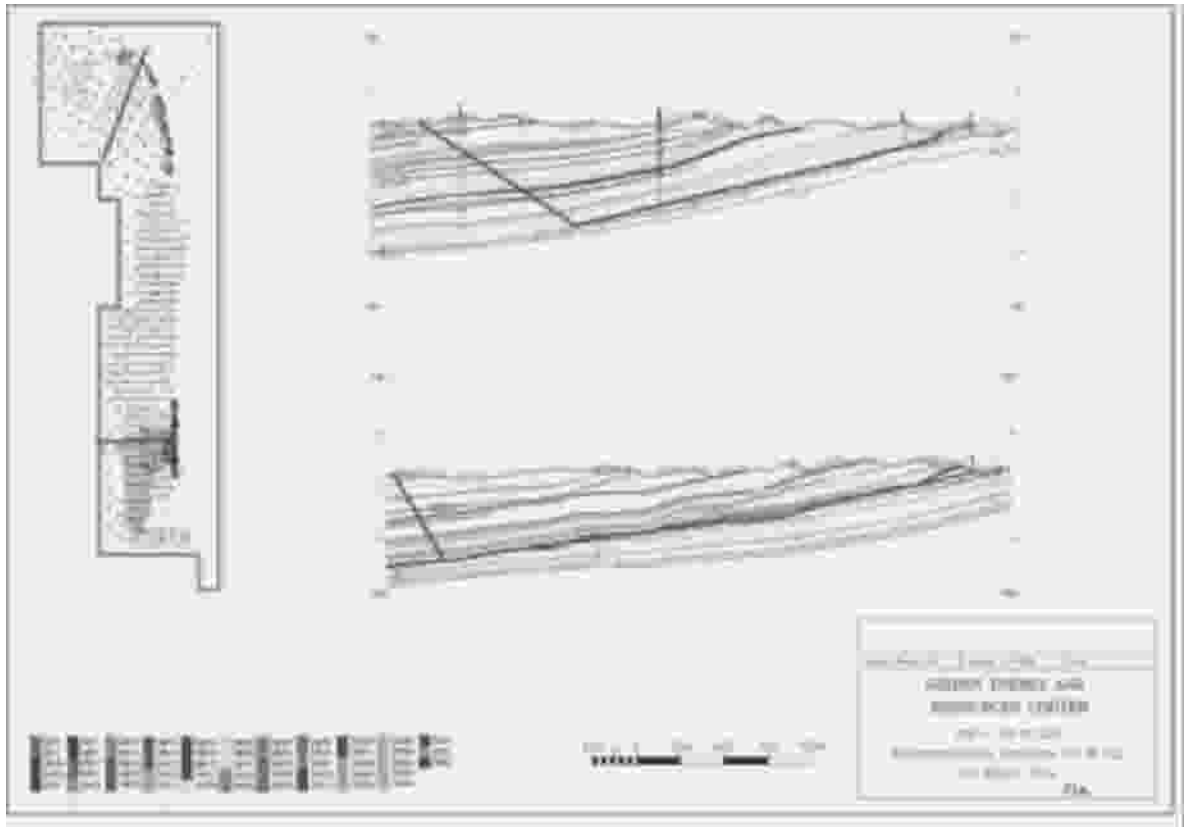


Figure 9:13 Final Pit Design – Batulaki Pit (BS Pit)

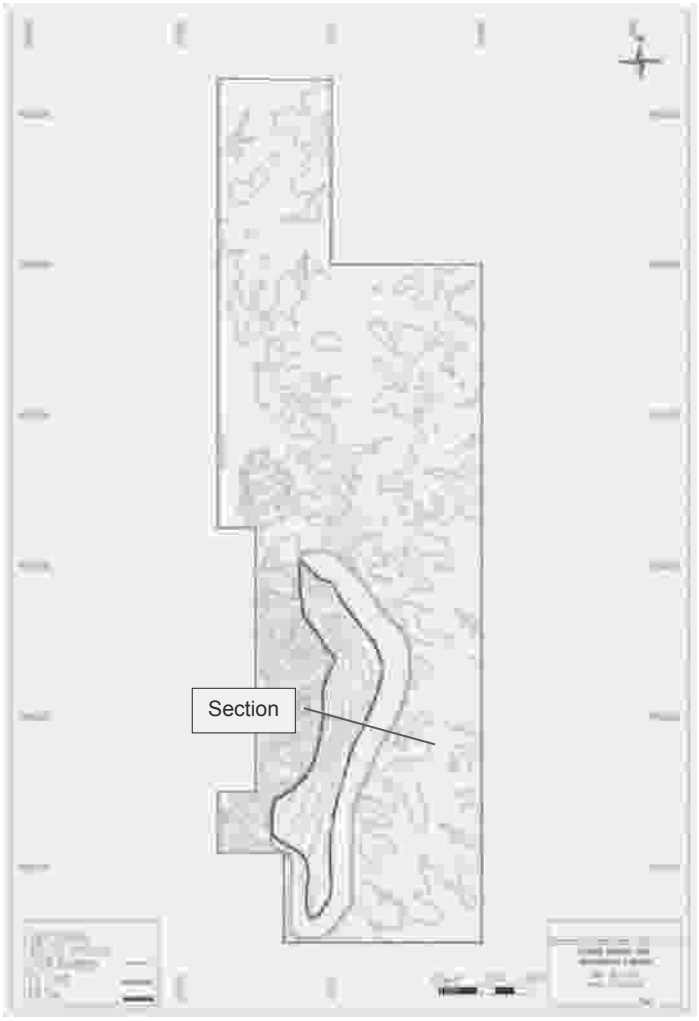


Figure 9:14 Representative Cross Section – Batulaki Pit

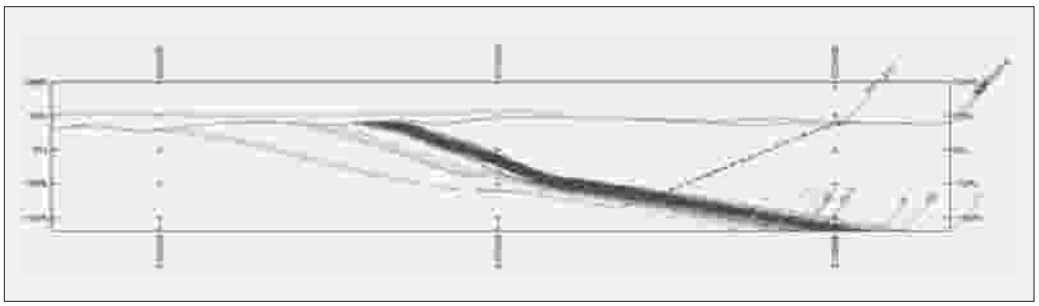


Figure 9:15 Final Pit Design – Sebamban South (SS Pit)

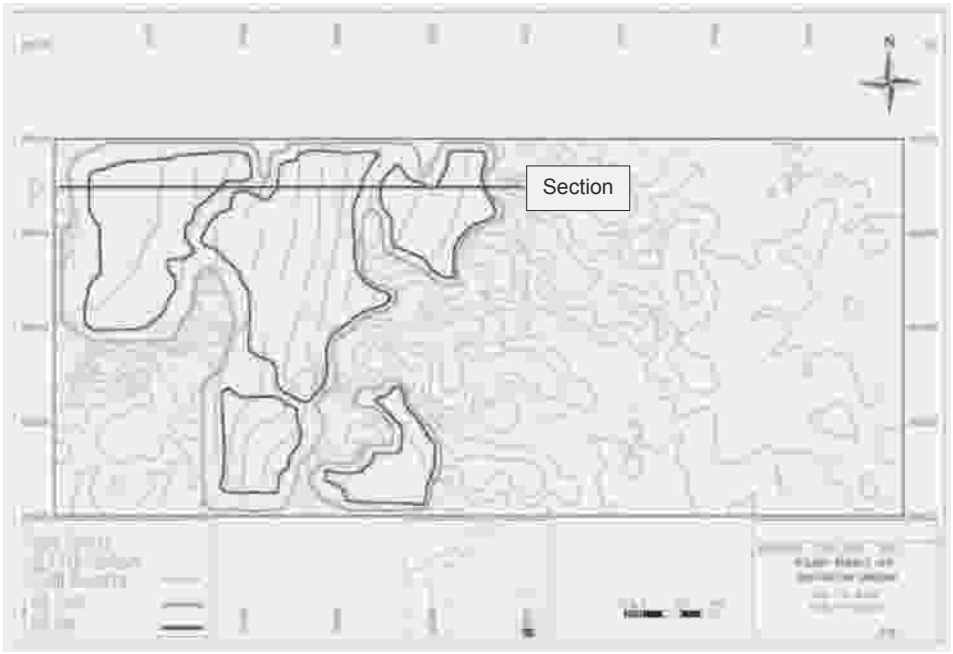


Figure 9:16 Representative Cross Section – Sebamban South Pit

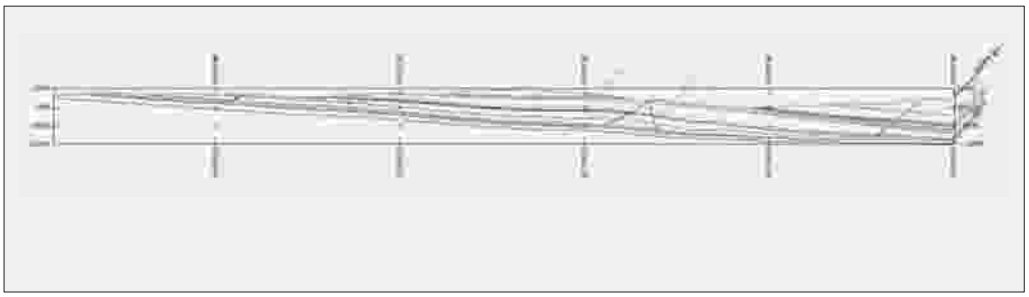


Figure 9:17 Final Pit Design – Sebamban North (SN Pit)

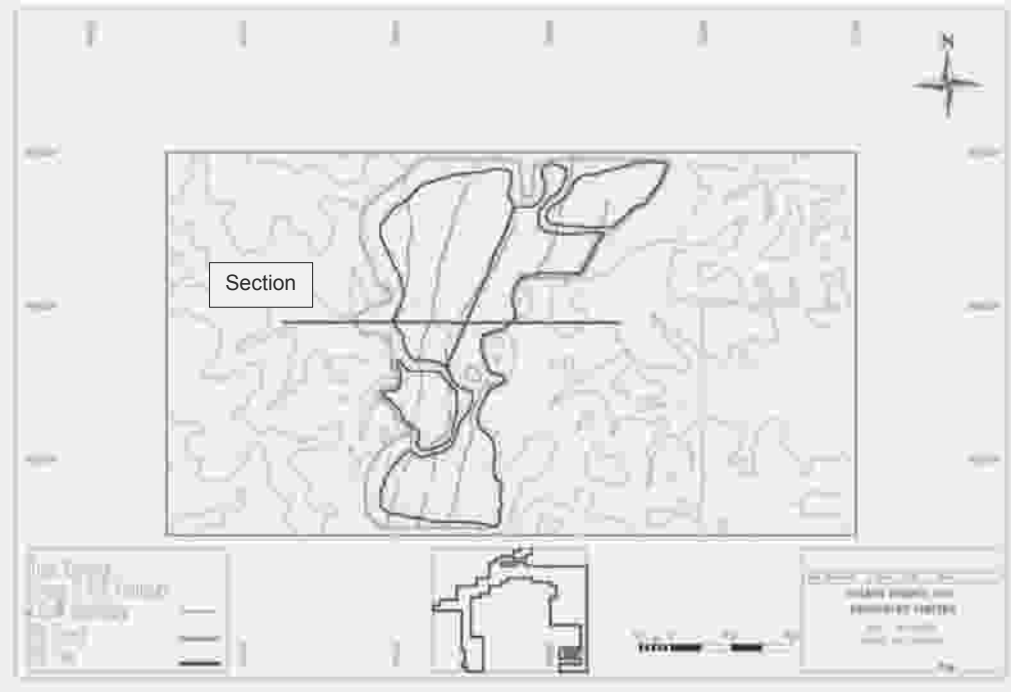


Figure 9:18 Representative Cross Section – Sebamban North Pit

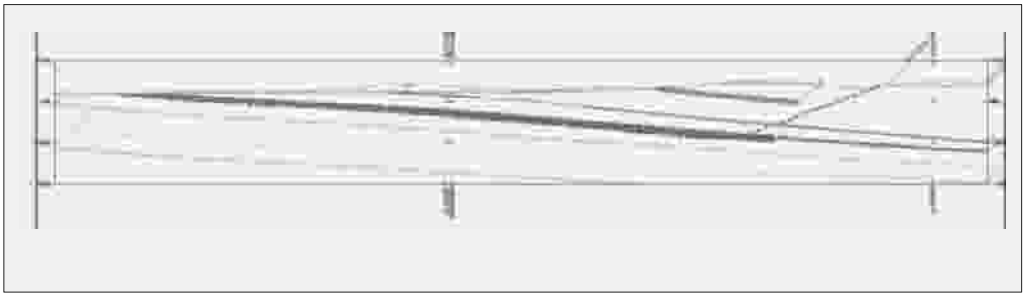


Figure 9:19 Final Pit Design – Pasopati Pits (PP Pits)

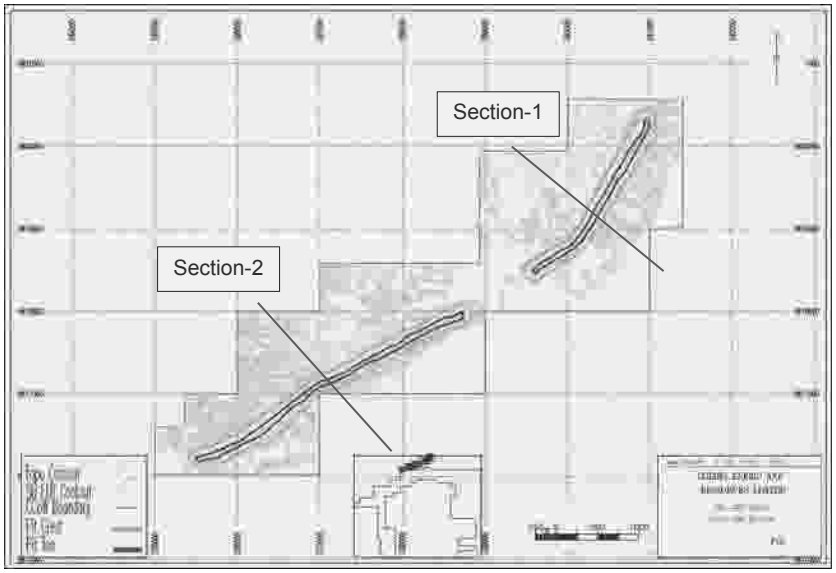


Figure 9:20 Representative Cross Section (Upper Pit) – Pasopati Pit

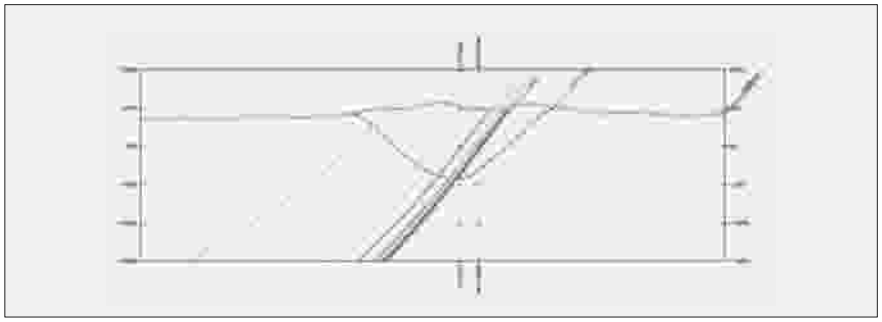
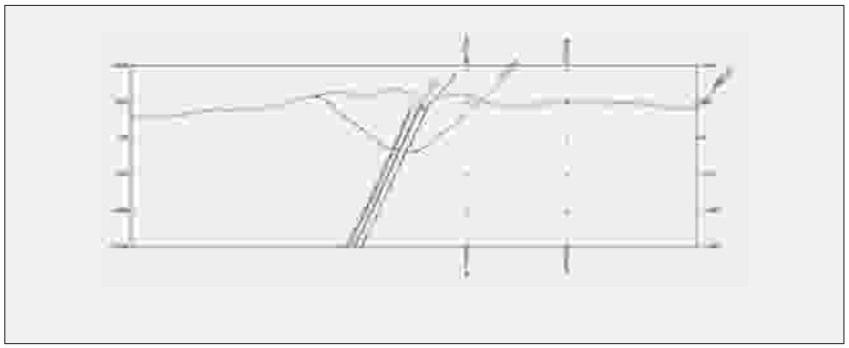


Figure 9:21 Representative Cross Section (Lower Pit) – Pasopati Pit



9.5 Audits and Reviews

Checks were done to validate the Minex Coal Resources to Coal Reserves estimation by repeating it manually in an Excel spread sheet. Other validation work included estimating the total volume of coal and waste in the pit shells using the separate industry standard computer programs MineScape. As MineScape structure and quality grids were imported into Minex for optimisation work, volume and area checks were also carried out in Minex within the pit shells.

The difference between the Proved and Probable Reserves with respect to Measured and Indicated Resources respectively is explained by the following:

- The Measured and Indicated Resource polygons extend beyond the Mineable Pit Shells;
- There are some Inferred tonnes in the pit shell which cannot be counted as Coal Reserves; and
- There are geological and mining losses and dilution gains in the coal reserve estimation.

9.6 Discussion of Relative Accuracy and Confidence

A comparison between the actual coal mined and geo model predicted coal tonnages have been done in the Kusan block since commencement of mining in June 2011 till end of December 2016 and it shows an overall 96% recovery for the said period as shown in Table 9:12. The Ply-by-Ply in-situ Geo Model was used for generating the model predicted number.

Table 9:12 Production Reconciliation

Actual Coal Tonnes, Mt	Geo-Model Coal Tonnes (Mt)	Difference in Percentage (%)
16.3	17.0	4

9.7 Reserves Classification

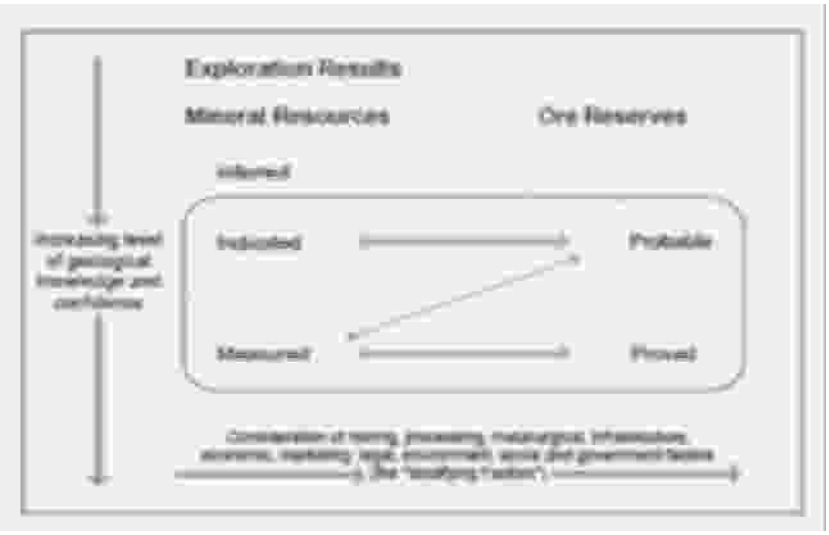
Under the JORC Code as shown below only Measured and Indicated Coal Resources can be considered for conversion to Coal Reserves after consideration of the "Modifying Factors" including mining, processing, economic, environmental, and social and government factors.

To convert Resources to Reserves it must be demonstrated that extraction could be justified after applying reasonable investment assumptions. The highest confidence level establishes Proved Reserves from Measured Resources and a lesser confidence level establishes Probable Reserves from Indicated Resources. A level of uncertainty in any one or more of the Modifying Factors may result in Measured Resources converting to Probable Reserves depending on materiality. A high level of uncertainty in any one or more of the Modifying Factors may preclude the conversion of the affected Resources to Reserves.

This classification is also consistent with the level of detail in the mine planning completed for BIB Coal concession deposits. Inferred Coal Resources in the mineable pit shell have been excluded from the Reserve Statement.

In the opinion of Salva Mining, the uncertainties in most of these are not sufficiently material to prevent the classifications of areas deemed Measured Resources to be areas of Proved Reserves and areas deemed Indicated Resources to be the areas of Probable Reserves.

Table 9:13 General relationships between Mineral Resources & Ore Reserves



Source: JORC Code 2012

9.8 Statement of Coal Reserves

The Statement of Coal Reserves has been prepared in accordance with the 2012 Edition of the JORC Code. Total ROM coal Reserves for PT Borneo Indobara coal deposit ("BIB") are summarised in Table 9:14 as of 31 December 2016 . Total ROM coal reserves are same as total marketable coal reserves.

Table 9:14 Coal Reserves for BIB Coal Concession as at 31 December 2016

Block	Reserve (Mt)			RD	TM arb	IM	Ash adb %	CV	TS adb %
	Proved	Probable	Total	adb t/m3	%	adb %		arb Kcal/kg	
KG	482.9	120.0	602.9	1.38	35.3	15.4	5.2	4,085	0.22
BS	13.7	6.6	20.3	1.37	33.5	13.2	6.3	4,207	0.17
SS	11.4	4.5	15.9	1.47	38.6	12.5	5.8	3,866	0.21
SN	5.1	3.5	8.7	1.37	38.5	16.7	4.6	3,941	0.14
PP	3.0	1.2	4.2	1.33	8.7	6.1	12.5	6,528	1.39
Total	**516**	**136**	**652**	**1.38**	**35.2**	**15.2**	**5.2**	**4,097**	**0.22**

(*Note: individual totals may differ due to rounding*)

9.9 Seam by Seam Coal Reserve

Total ROM Coal Reserves for each of BIB coal concessions are reported by seam and are presented in Table 9:15 to Table 9:19.

Table 9:15 Coal Reserves for Kusan–Girimulya (KG) as at 31 December 2016

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	ASH, %	IM, %	TM, %	CV (Gar), Kcal/kg	TS, %
H1	0.1	0.0	0.1	1.25	4.4	13.5	38.1	3,683	0.09
GL2	0.0	0.0	0.0	1.43	11.1	13.0	37.8	3,581	0.20
G1	0.2	0.1	0.3	1.37	6.1	15.3	36.5	3,782	0.17
F2	0.2	0.1	0.3	1.32	6.2	14.8	34.5	3,953	0.21
F1	0.1	0.2	0.3	1.31	6.0	14.4	34.4	3,987	0.22
FL2	1.4	1.1	2.5	1.35	5.9	15.7	35.4	3,889	0.15
FL1	2.2	0.5	2.7	1.36	6.4	14.7	35.2	3,921	0.16
E2U	13.8	2.7	16.5	1.37	4.7	15.5	35.0	4,107	0.14
E2L2	10.8	2.4	13.3	1.36	5.1	15.4	35.0	4,112	0.14
E2L1	4.9	1.0	5.9	1.36	5.4	15.4	34.9	4,105	0.14
E1U2	41.8	5.8	47.7	1.37	4.8	15.4	35.3	4,079	0.13
E1U1	28.9	2.8	31.7	1.38	3.9	15.5	35.3	4,150	0.12
E1L2	35.9	3.3	39.1	1.37	4.3	15.0	35.3	4,130	0.13
E1L1	42.1	3.6	45.7	1.37	4.5	15.2	35.0	4,176	0.14
EL2U	23.0	5.3	28.3	1.37	5.3	15.6	35.0	4,124	0.18
EL2L	19.3	4.3	23.6	1.38	5.4	15.6	34.9	4,152	0.17
EL1U	17.0	4.8	21.8	1.38	6.1	15.4	34.2	4,162	0.15
EL1L	1.6	0.6	2.2	1.44	12.4	14.6	33.3	3,972	0.16
D1U2	0.0	0.3	0.4	1.39	5.7	13.0	36.7	4,021	0.22
D1U1	0.2	0.6	0.9	1.37	6.4	13.8	35.9	4,026	0.23
D1L2	0.5	0.8	1.3	1.35	5.3	14.4	35.1	4,106	0.20
D1L1	0.0	1.0	1.0	1.39	7.2	13.8	35.2	4,046	0.26
DU2U	10.6	3.6	14.2	1.38	6.0	15.1	35.0	4,040	0.20
DU2L	10.3	3.2	13.5	1.38	6.1	15.1	34.9	4,074	0.21
DU1U	11.1	3.7	14.8	1.37	5.1	15.2	35.1	4,094	0.19
DU1L	11.1	4.2	15.2	1.38	5.4	15.2	35.2	4,090	0.19
DL2U	19.4	5.5	24.9	1.39	4.9	15.4	36.1	4,052	0.18
DL2L	18.4	5.1	23.5	1.39	5.1	15.5	36.0	4,064	0.16
DL1U	20.4	5.4	25.8	1.39	5.7	15.6	35.2	4,066	0.18
DL1L	11.9	2.9	14.8	1.40	6.5	15.6	34.7	4,043	0.21
CR2U	1.8	0.5	2.3	1.39	6.0	14.7	35.6	4,150	0.17
CR2L	1.1	0.3	1.4	1.39	6.0	14.8	35.6	4,141	0.17
CR1U	1.1	0.4	1.4	1.39	6.7	14.8	35.4	4,155	0.19
CR1L	0.6	0.2	0.8	1.39	6.7	15.1	35.6	4,117	0.20
CU2	0.8	0.6	1.4	1.40	9.0	15.2	33.9	4,027	0.41
CU1	0.8	0.9	1.6	1.40	8.5	14.5	35.2	3,980	0.72
CL2U	14.1	4.4	18.5	1.39	5.9	15.4	35.4	4,045	0.33

CL2L	4.4	1.6	6.0	1.40	6.3	15.4	35.1	4,047	0.36
CL1U	3.7	1.9	5.6	1.40	7.8	15.6	34.9	3,996	0.38
CL1L	4.1	2.4	6.5	1.39	7.0	15.7	35.1	4,038	0.38
BU2U	2.6	0.8	3.4	1.42	7.6	14.4	36.5	3,874	0.53
BU2L	1.9	0.5	2.4	1.41	7.4	14.4	36.3	3,901	0.48
BU1U	3.2	0.9	4.1	1.40	5.4	14.7	36.8	3,985	0.44
BU1L	0.0	0.0	0.0	1.40	5.0	14.6	37.1	3,971	0.44
BL2U	43.5	15.6	59.1	1.38	4.3	15.9	35.6	4,065	0.34
BL2L	32.3	8.7	41.0	1.39	4.8	16.0	35.9	4,028	0.36
BL1U	4.4	2.6	7.0	1.39	7.0	15.0	35.8	3,933	0.75
BL1L	5.3	2.8	8.1	1.39	6.3	14.8	35.7	4,017	0.70
B1	0.0	0.0	0.0	1.39	6.7	14.4	36.3	3,953	2.13
Total	**482.9**	**120.0**	**602.9**	**1.38**	**5.2**	**15.4**	**35.3**	**4,085**	**0.22**

(*Note: individual totals may differ due to rounding*)

Table 9:16 Coal Reserves for Batulaki (BS) as at 31 December 2016

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	ASH, %	IM, %	TM, %	CV (Gar), Kcal/kg	TS, %
CU	0.2	0.0	0.2	1.39	-	-	-	-	-
CL	0.1	0.1	0.2	1.42	11.91	11.55	34.65	4,103	0.17
BU	0.1	0.1	0.1	1.39	9.68	15.61	32.82	4,204	0.15
B	9.8	0.5	10.2	1.37	3.54	13.90	33.75	4,342	0.15
BL2	0.0	0.6	0.6	1.38	3.25	7.99	35.33	4,346	0.20
BL1	0.0	0.4	0.4	1.40	4.03	7.37	36.93	4,619	0.20
A4U2B	0.3	0.1	0.4	1.39	-	13.00	33.00	-	-
A4U2A	0.5	0.3	0.8	1.39	-	13.00	33.00	-	-
A4U1	0.6	0.2	0.8	1.35	5.15	13.97	32.08	4,499	0.17
A4L	0.1	0.1	0.2	1.41	12.22	11.74	31.37	4,230	0.18
A3U2	0.5	1.4	1.9	1.39	-	-	-	-	-
A3U1	1.0	1.8	2.8	1.39	-	-	-	-	-
A2U2	0.3	0.2	0.5	1.34	10.26	16.19	30.68	4,045	0.16
A2U1	0.2	0.4	0.6	1.34	8.08	14.79	32.11	4,172	0.19
A2L	0.3	0.3	0.6	1.45	15.30	11.15	31.71	3,836	0.19
Total	**13.7**	**6.6**	**20.3**	**1.37**	**6.31**	**13.18**	**33.54**	**4,207**	**0.17**

(*Note: individual totals may differ due to rounding*)

Table 9:17 Coal Reserves for Sebamban South (SS) as at 31 December 2016

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	ASH, %	IM, %	TM, %	CV (Gar), Kcal/kg	TS, %
F2	0.4	0.0	0.4	1.43	6.44	13.93	38.09	3,813	0.14
F1	0.2	0.0	0.2	1.49	14.65	12.06	35.89	3,525	0.14
E2U	1.4	0.2	1.7	1.45	5.30	13.41	37.46	3,988	0.14
E2L	1.4	0.1	1.5	1.44	6.51	13.70	37.45	3,909	0.12
E1U	0.4	0.1	0.5	1.49	5.43	13.47	37.66	3,983	0.15
E1L	0.4	0.1	0.4	1.54	9.76	13.08	37.09	3,770	0.13
EL	0.9	0.1	0.9	1.51	8.80	13.18	37.24	3,826	0.18
D1U	0.3	0.0	0.4	1.37	2.90	10.68	38.19	4,151	0.27
D1L	0.2	0.0	0.2	1.55	3.26	10.72	38.23	4,064	0.22
DU2	1.7	1.1	2.8	1.45	4.63	11.52	39.29	3,864	0.18
DU1	0.6	0.4	1.0	1.47	3.22	11.62	39.95	3,846	0.14
DL2	1.0	0.5	1.5	1.51	4.27	11.74	39.54	3,854	0.15
DL1	1.7	0.8	2.5	1.46	5.33	11.56	39.51	3,856	0.19
C	0.1	0.3	0.4	1.50	17.04	11.06	36.66	3,536	2.41
BL2	0.4	0.5	0.8	1.52	4.86	12.29	40.52	3,806	0.45
BL1	0.3	0.4	0.6	1.52	5.23	12.94	40.74	3,773	0.39
Total	**11.4**	**4.5**	**15.9**	**1.47**	**5.84**	**12.49**	**38.63**	**3,866**	**0.21**

(*Note: individual totals may differ due to rounding*)

Table 9:18 Coal Reserves for Sebamban North (SN) as at 31 December 2016

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	ASH, %	IM, %	TM, %	CV (Gar), Kcal/kg	TS, %
E	1.2	0.0	1.3	1.38	4.6	16.1	38.9	3,895	0.16
D2U	0.0	0.2	0.2	1.39	5.1	16.2	39.5	3,900	0.20
D2	0.4	0.2	0.6	1.36	5.5	16.3	38.7	3,954	0.21
DU	0.0	0.3	0.4	1.37	6.8	17.9	37.2	3,945	0.19
D	2.6	0.4	3.0	1.37	3.7	16.5	38.2	4,012	0.10
DL	0.8	2.4	3.2	1.37	4.9	17.1	38.7	3,894	0.14
Total	**5.1**	**3.5**	**8.7**	**1.37**	**4.6**	**16.7**	**38.5**	**3,941**	**0.14**

(*Note: individual totals may differ due to rounding*)

Table 9:19 Coal Reserves for Pasopati (PP) as at 31 December 2016

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	ASH, %	IM, %	TM, %	CV (arb), Kcal/kg	TS, %
SU1	0.0	0.0	0.0	1.33	-	-	-	-	-
SU2	0.0	0.0	0.0	1.35	7.23	5.96	16.98	6,709	1.52
SM1	0.0	0.0	0.0	1.31	7.55	6.24	12.44	6,609	0.75
SM2U	0.0	0.0	0.0	1.33	9.35	6.01	19.02	6,421	2.75
SM2	0.4	0.2	0.6	1.36	10.13	6.42	11.15	6,351	1.09
SM2L	0.0	0.0	0.0	1.29	10.80	4.82	17.90	6,444	2.60
SL1U	0.1	0.0	0.1	1.33	9.20	6.31	12.52	6,428	1.14
SL1	0.6	0.1	0.7	1.32	6.13	6.47	12.55	6,675	1.14
SL1L	0.1	0.0	0.1	1.42	18.83	4.39	10.12	6,308	3.63
SL2U	0.2	0.0	0.2	1.32	7.09	5.35	14.26	6,865	0.76
SL2	0.1	0.5	0.5	1.30	6.13	6.96	12.48	6,640	1.48
SL2L	0.2	0.0	0.2	1.35	12.76	4.31	11.04	6,471	1.68
SL3U	0.2	0.0	0.2	1.33	-	-	-	-	-
SL3	0.9	0.1	1.0	1.33	8.77	5.97	12.56	6,508	1.72
SL3L	0.1	0.0	0.1	1.33	-	-	-	-	-
SB	0.2	0.2	0.4	1.34	10.85	6.32	14.05	6,297	0.95
Total	**3.0**	**1.2**	**4.2**	**1.33**	**8.65**	**6.14**	**12.48**	**6,528**	**1.39**

(*Note: individual totals may differ due to rounding*)

10 JORC Table 1

This Coal Reserve Report has been carried out in recognition of The 2012 JORC Code published by the Joint Ore Reserves Committee ("JORC") of the Australasian Institute of Mining and Metallurgy, the AIG and the Minerals Council of Australia in 2012. Under the report guidelines all geological and other relevant factors for this deposit are considered in sufficient detail to serve as a guide to on-going development and mining.

In the context of complying with the Principles of the Code, Table 1 of the JORC code (Appendix C) has been used as a checklist by Salva Mining in the preparation of this report and any comments made on the relevant sections of Table 1 have been provided on an 'if not, why not' basis. This has been done to ensure that it is clear to an investor whether items have been considered and deemed of low consequence or have yet to be addressed or resolved.

The order and grouping of criteria in Table 1 reflects the normal systematic approach to exploration and evaluation. Relevance and Materiality are the overriding principles which determine what information should be publicly reported and Salva Mining has attempted to provide sufficient comment on all matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. It is important to note that the relative importance of the criteria will vary with the particular project and the legal and economic conditions pertaining at the time of determination.

In some cases it may be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision for the company issuing the Public Report, and such a decision should be made in accordance with any relevant corporation regulations in that jurisdiction.

In cases where commercially sensitive information is excluded from a Public Report, the report should provide summary information (for example the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for the purpose of informing investors or potential investors and their advisers.

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Appendix A: CVs

Person	Role
Manish Garg (Director)	
Qualification	B. Eng. (Hons), MAppFin
Prof. Membership	MAusIMM; GAICD
Contribution	Overall Supervision, Economic Assessment (VALMIN 2015)
Experience	Manish has more than 25 years' experience in mining Industry. Manish have worked for mining majors including Vedanta, Pasminco, WMC Resources, Oceanagold, BHP Billiton - Illawarra Coal and Rio Tinto Coal. Manish has been in consulting roles for past 5 years predominately focusing on due diligence, valuations and M&A area. A trusted advisor, Manish has qualifications and wide experience in delivering due diligences, feasibility studies and project valuations for banks, financial investors and mining companies on global projects, some of these deals are valued at over US$5 billion.
Grenville Davies (Principal Consultant - Geology)	
Qualification	B. Sc. (Geology)
Prof. Membership	MAusIMM
Contribution	Geology, Resource (JORC 2012)
Experience	Grenville has more than 35 years of experience in most aspects of coal geology; including exploration, geological modelling, resource estimation, open cut and underground mine geology. He has worked for two of the major Australian software houses responsible for developing both Minex and Minescape as well as working for mining majors like BHP Billiton and consulting to major mining companies for both geological modelling. As a consultant he has worked on audits and due diligence for companies within Australia and overseas. He has strong expertise in data management, QA/QC and interpretation; reviews/audits of data sets, models and resource estimates.
Sunil Kumar (Principal Consultant - Mining)	
Qualification	B. Engg. (Mining)
Prof. Membership	MAusIMM
Contribution	Mine Scheduling, Reserve (JORC 2012)
Experience	Sunil is a mining engineer with 25 years' experience in the mining industry across operations and consulting. His career spans 4 years in working in mining operations and about 21 years as a mining consultant primarily in the mine planning & design role which included estimation of coal reserves, DFS/FS, due diligence studies, techno-commercial evaluations and technical inputs for mining contracts. Prior to joining Salva Mining, Sunil was working as Principal Mining Engineer at Xstrata Coal. To date Sunil has worked on over 25 coal projects around the world, inclusive of thermal and coking coal projects in Australia, as well as in major coalfields in India, Indonesia, Mongolia and Mozambique.

Appendix B: SGX Mainboard Appendix 7.5

Cross-referenced from Rules 705(7), 1207(21) and Practice Note 6.3

Summary of Mineral Reserves and Resources

Name of Asset / Country: Borneo Indobara / Indonesia

Category	Mineral Type	Gross (100% Project)		Net Attributable to GEAR		Remarks
		Tonnes (millions)	Grade	Tonnes (millions)	Grade	
Reserves						
Proved	Coal	516	Bituminous A / Subbituminous B	506	Bituminous A / Subbituminous B	
Probable	Coal	136	Bituminous A / Subbituminous B	133	Bituminous A / Subbituminous B	
Total	Coal	652	Bituminous A / Subbituminous B	640	Bituminous A / Subbituminous B	
Resources*						
Measured	Coal	916	Bituminous A / Subbituminous B	899	Bituminous A / Subbituminous B	
Indicated	Coal	335	Bituminous A / Subbituminous B	329	Bituminous A / Subbituminous B	
Inferred	Coal	565	Bituminous A / Subbituminous B	554	Bituminous A / Subbituminous B	
Total	Coal	1,817	Bituminous A / Subbituminous B	1,782	Bituminous A / Subbituminous B	

* Mineral Resources are reported inclusive of the Mineral Reserves.
GEAR holds 98.0951% of asset directly and indirectly.

Appendix C: JORC Table 1

Criteria	Explanation	Comment
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips etc.) and measures taken to ensure sample representivity. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Chip samples were collected at every 1m for lithology logging. Sampled all cored coal, sampled separately any bands and taken 10cm of roof and floor for non coal samples.
Drilling techniques	Drill type (e.g.. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka etc.) and details (e.g.. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Drilled pilot hole to ascertain coal seams and then drilled a cored drill hole.
Drill sample recovery	Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	After the completion of each core run, core loss is determined by the on site geologist and recorded in the drill hole completion sheet. If recovery is found to be less than 90% within a coal seam intersection, the hole is re-drilled in order to re-sample this seam with greater than 90% core recovery. All samples with less than 90% core recovery over the width of the seam intersection were excluded from the coal quality database. Followed drilling SOP's for loose and carbonaceous formations to achieve full sample recovery.
Logging	Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography. The total length and percentage of the relevant intersections logged.	Detailed logging of chips and core. Core photographs were taken.

Criteria	Explanation	Comment
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected. Whether sample sizes are appropriate to the grainsize of the material being sampled.	No sub-sampling of the core
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	PT Geoservices laboratories are accredited to ISO 17025 standards. Coal quality laboratory adheres to internal QAQC and inter-laboratory QAQC checks. ISO methods have been used for MHC tests. Australian Standards have been used for RD and American Society for testing and materials (ASTM) methods have been used for all other quality variables. Geophysical traces were observed to be generally of good quality.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Coal quality sampling undertaken by GEAR and is in-line with the coal quality being achieved during the actual mining operations. Twinned holes checked for agreement of seam intersection depths and in most of the cases there was good agreement.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	Borehole collars have been surveyed using standard total station techniques employed by the survey contractors. Surveys have been validated by GEAR survey staff. The surveyed borehole locations for BIB match well with topographic data. The topography was generated by PT Surtech Utama across BIB project area using LIDAR remote sensing data.
Data spacing and Distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Data spacing sufficient to establish continuity in both thickness and coal quality. Data sets include topography and base of weathering as well as seam structure and coal quality. Ply sampling methodology use. Sample compositing has been applied.
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Ply by Ply sampling used therefore orientation of sampling not seen to introduce bias as all drilling is vertical.

Criteria	Explanation	Comment
geological structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample Security	The measures taken to ensure sample security.	Proper measures for sample security was taken .
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	PTSMGC conducted a review of the drill hole database in 2013 for historical data set and found it to be satisfactory. Standard database checks also performed by Salva Mining as outlined on Section 5.4.4 prior to resource modelling and found it to be satisfactory..
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenure are secured and currently available. .
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No exploration by other parties.
Geology	Deposit type, geological setting and style of mineralisation.	See Section 4 of the Resource and Reserve Report.
Drill hole	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	This report pertains to resource estimation not exploration results. As such the details of the drill holes used in the estimate are too numerous to list in this Table.

Criteria	Explanation	Comment
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	All samples have been composited over full seam thickness and reported using Minescape modelling software. No metal equivalents used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Ply sampling methodology prevents samples from crossing ply boundaries. Therefore orientation of sampling not seen to introduce bias as all drilling is vertical and seams mostly gently dipping except in the case of the PP deposit
Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.	See figures in the Report and Appendices.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.	No reporting of exploration results.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Geophysical survey results available for 98% of the holes..
Further work	The nature and scale of planned further work (e.g.. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further work will be necessary to improve the confidence levels of the deposits further and understanding of the full seam stratigraphy as part of on-going mining activity. No proposed exploration plan has been proposed in this report.
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	The database for all blocks is considered of an acceptable standard to report a Coal Resource. Drill hole data used to construct Minescape model. Checks against original down hole geophysics (las) files used to verify data during modelling.
Site Visits	Site Visits undertaken by the Competent Person and the outcome of these visits. If no site visits have been undertaken, indicate why this is the case	Frequent site visit by Mining Engineer (CP for Reserving) during 2014, 2015 and 2016. Geological site visit not conducted due to the fact that the geology had been well

Criteria	Explanation	Comment
		documented by previous consultants. Salva Mining's geologist has reviewed and discussed the available geological data in companies office in Jakarta.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	High degree of confidence in seam picks made using down hole geophysical data. The BIB geological models created by Salva Mining are considered to accurately represent the deposits. No major faults have been reported within the tenements concerned although major faulting exists outside the tenements. Current Minescape model tonnes agree with previous model by developed by HDR to within 5% error margin range.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	See figures in the Report and Appendices.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	FEM interpolator used for surface elevation, thickness and trend. Inverse distance squared used for coal quality throughout. Based on experienced gained in the modelling of over 40 coal deposits around the world, the FEM interpolator is considered to be the most appropriate for structure and inverse distance the most appropriate for coal quality. Grid cell size of 25 m for the topographic model, 25 m for the structural model. Table 7:1 contains additional model construction parameters. Visual validation of all model grids performed. Sulphur is below 1% on average for most seams (apart from the C and BU seams in some instances) for all deposits except for the PP deposit where Sulphur is on average mainly above 1%.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All tonnages estimated on air dried basis.

Criteria	Explanation	Comment
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The coal resources contained in this report are confined within the concession boundary. The resources were limited to 250m below topography except in the case of PP Block where a 15:1 strip ratio limit was used. A minimum ply thickness of 10cm and maximum thickness of 30cm was used for coal partings.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	The KG and SN blocks are currently being mined as open pit excavations by truck and shovel method. SS and BS block has been mined till 2014 and is now under care and maintenance.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	N/A in situ air dried tonnes quoted
Environmental	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Portions of deposit is currently being mined with dedicated waste dumps and water management system. The company is progressively rehabilitating the waste dumps. Salva Mining is not aware of any environmental factors that may impact on eventual economic extraction.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	See discussion on density with regard to moisture basis.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. Whether the result appropriately reflects the Competent Person(s)' view of the deposit.	Classification distances based on an assessment of the variability of critical variables through statistical analysis and by an assessment of the degree of geological complexity. Classification radii for the three resource categories are: Measured: 250m apart from KG (375m) Indicated: 500m apart from KG (650m) Inferred: 2000m
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Reconciliation exercises between planned and actual mining is occurring on an ongoing basis.

Criteria	Explanation	Comment
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Spacing ranges for the three resource categories are considered to adequately reflect the degree of confidence in the underlying estimate on a global basis. Local variation to estimated values may arise and will be addressed by adequate grade control procedures during mining operations. Reconciliation of estimate vs actual mined tonnes for mining since 2013 is within 10% difference.
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Basis of the estimates is "BIB JORC Resource Statement as at 31 December 2016. Coal resources is inclusive of Coal reserves
Site Visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	Mr Sunil Kumar, Mining Engineer, CP for Reserves, has been making regular site visit and held discussions 2014, 2015 and 2016.
Study Status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Two pits (KG & SN) within BIB Coal concession blocks are being currently mined. It is proposed to recommence mining in SS Pit in 2017 and BS Pit in 2018. PP is expected to be mined from 2019 onwards.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied	Refer Table 9:5, Break even Stripping Ratio analysis

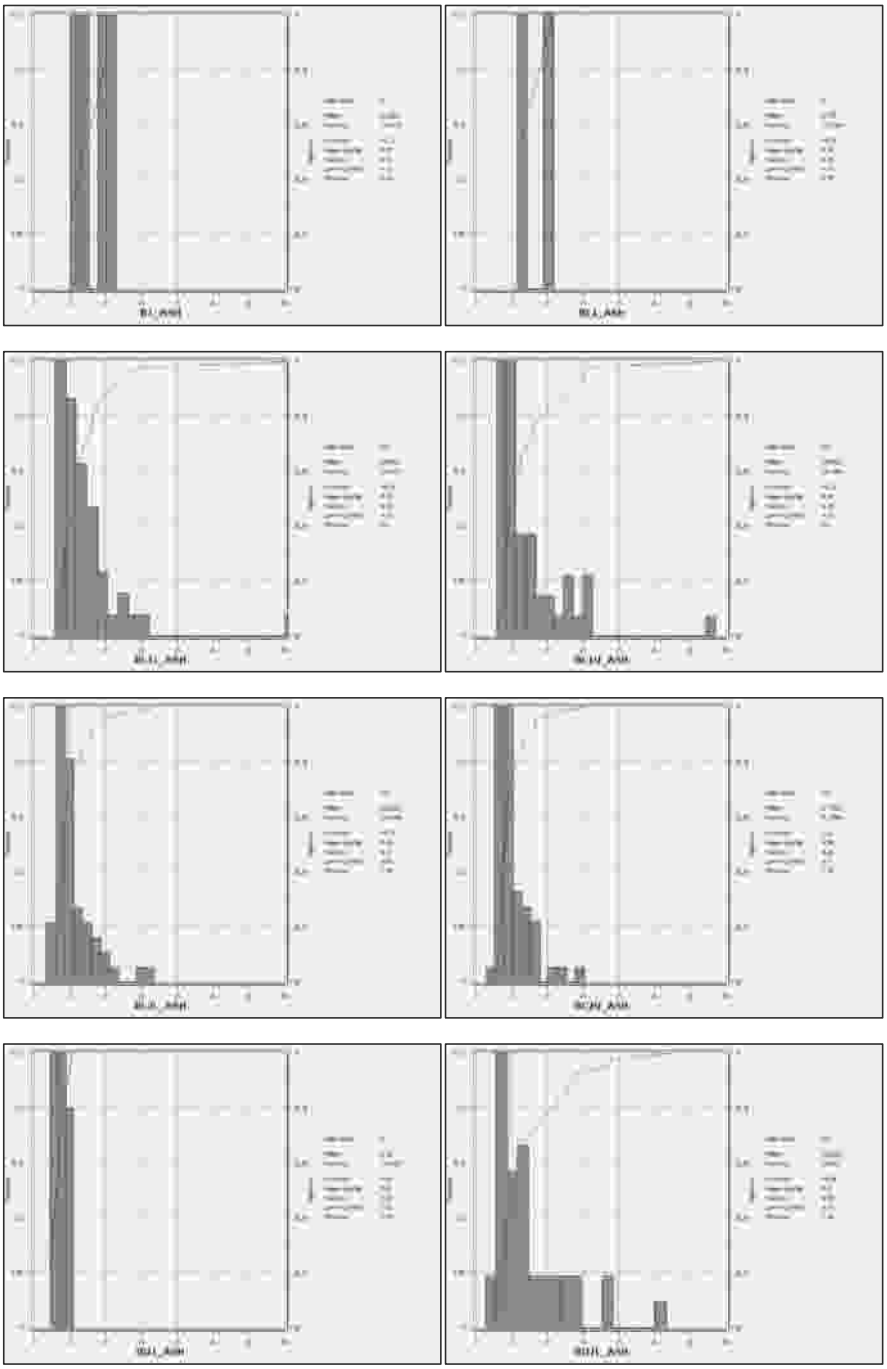
Criteria	Explanation	Comment
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.	Refer Table 9:1 Modifying Factors and Pit Optimisation Parameters and Section 9:3 on Notes on Modifying Factors. The BIB mine has been operating since 2005 (Kusan-Girimulya Pit started from 2011). It has produced 6.3 Mt in 2015 and 7.5Mt in 2016. Pre-feasibility studies were completed prior to commencement of mining operations. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being given mining operations approval (CCoW). Where an entity has an operating mine for an Ore Reserve, its Life of Mine Plan would generally be expected to contain information at better than Pre-Feasibility or Feasibility level for the whole range of inputs normally required for a Pre-Feasibility or Feasibility study and this would meet the requirement in Clause 29 for the Ore Reserve to continue that classification. Salva Mining has used actual modifying factors based on current operations at the BIB Mine which were independently verified by the Salva Mining's subject specialist during the site visit. In Salva Mining's opinion, the Modifying Factors at BIB Mine are better defined based on actual mining practices compared to a greenfield project at Pre-Feasibility stage.
Metallurgical Factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications.	The coal is to be sold unwashed so no processing factors have been applied. Other than crushing to a 50 mm top size no other beneficiation will be applied.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Refer Section 9.3.9, Permits and approvals

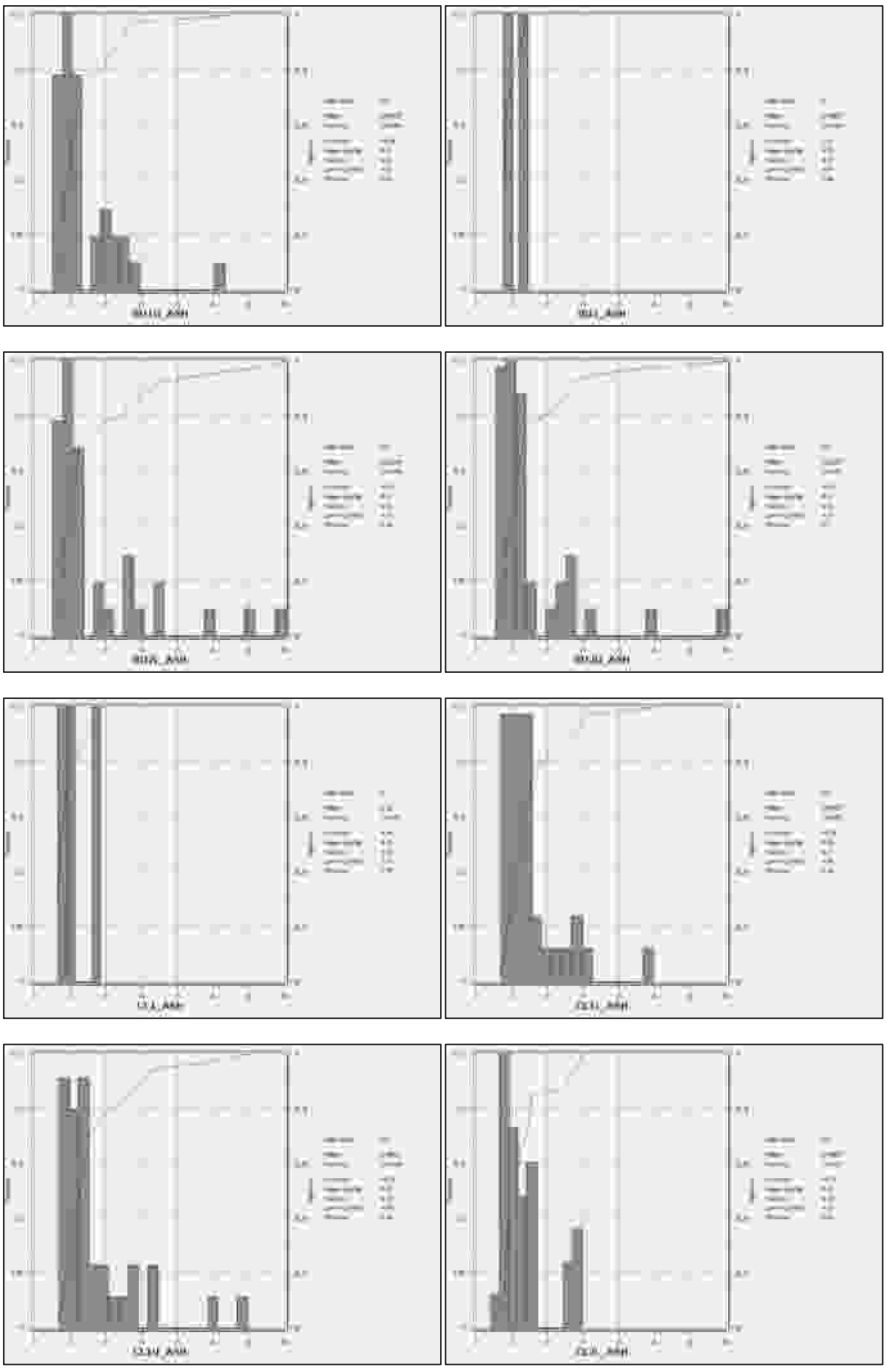
Criteria	Explanation	Comment
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Discussed in Section 9.3.8 Mine Logistic Factors
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	Discussed in Section 9.3.10 Cost and Revenue factors.
Revenue Factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products	Discussed in Section 9.3.10 Cost and Revenue factors
Market Assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Discussed in Section 9.3.11Marketing Factors
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs	Economic analysis (NPV) done based on long term price outlook and the cost estimates (Contractor mining operation)
Social	The status of agreements with key stakeholders and matters leading to social licence to operate	Refer Section 9.3.9, Permits and approvals

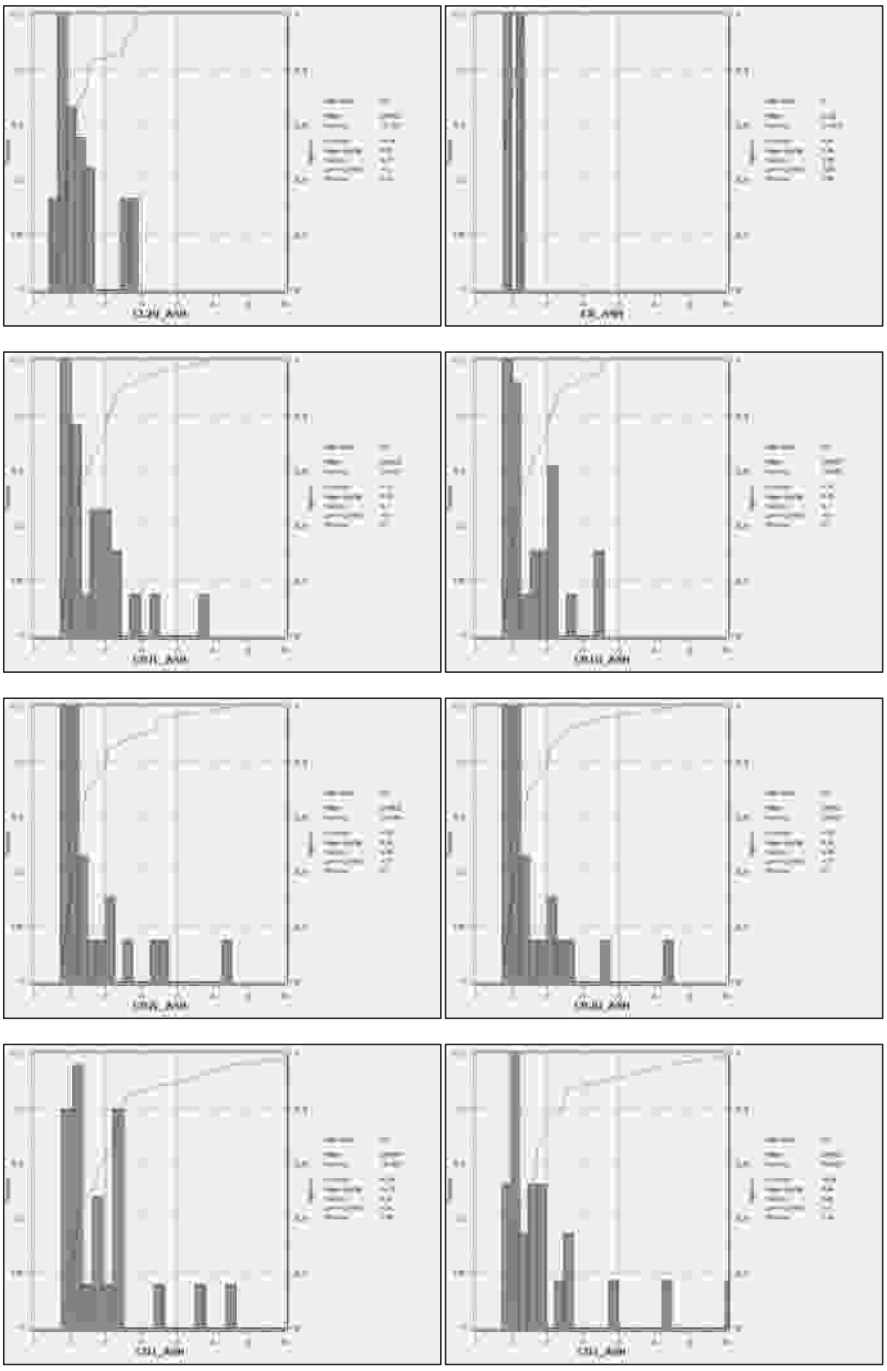
Criteria	Explanation	Comment
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingency.	Discussed under Section 9.3.13, Other Factors
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Discussed under Section 9.7, Reserve Classification
Audit & Reviews	The results of any audits or reviews of Ore Reserve estimates.	Discussed under Section 9.5, Audits & Reviews.
Discussion of Relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Discussed under Section 9.6, Relative Accuracy and confidence.

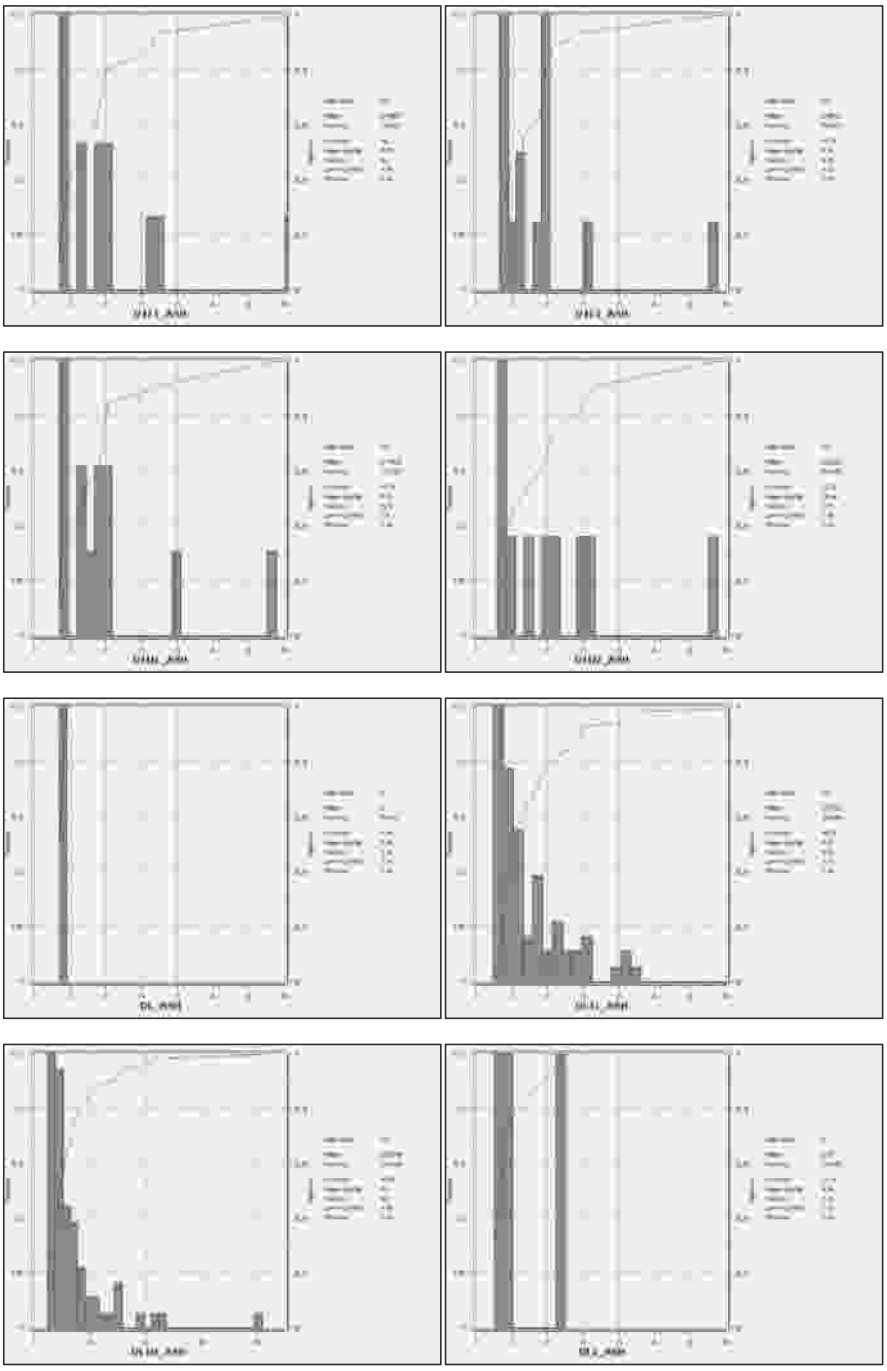
Appendix D: Raw coal quality histograms per seam

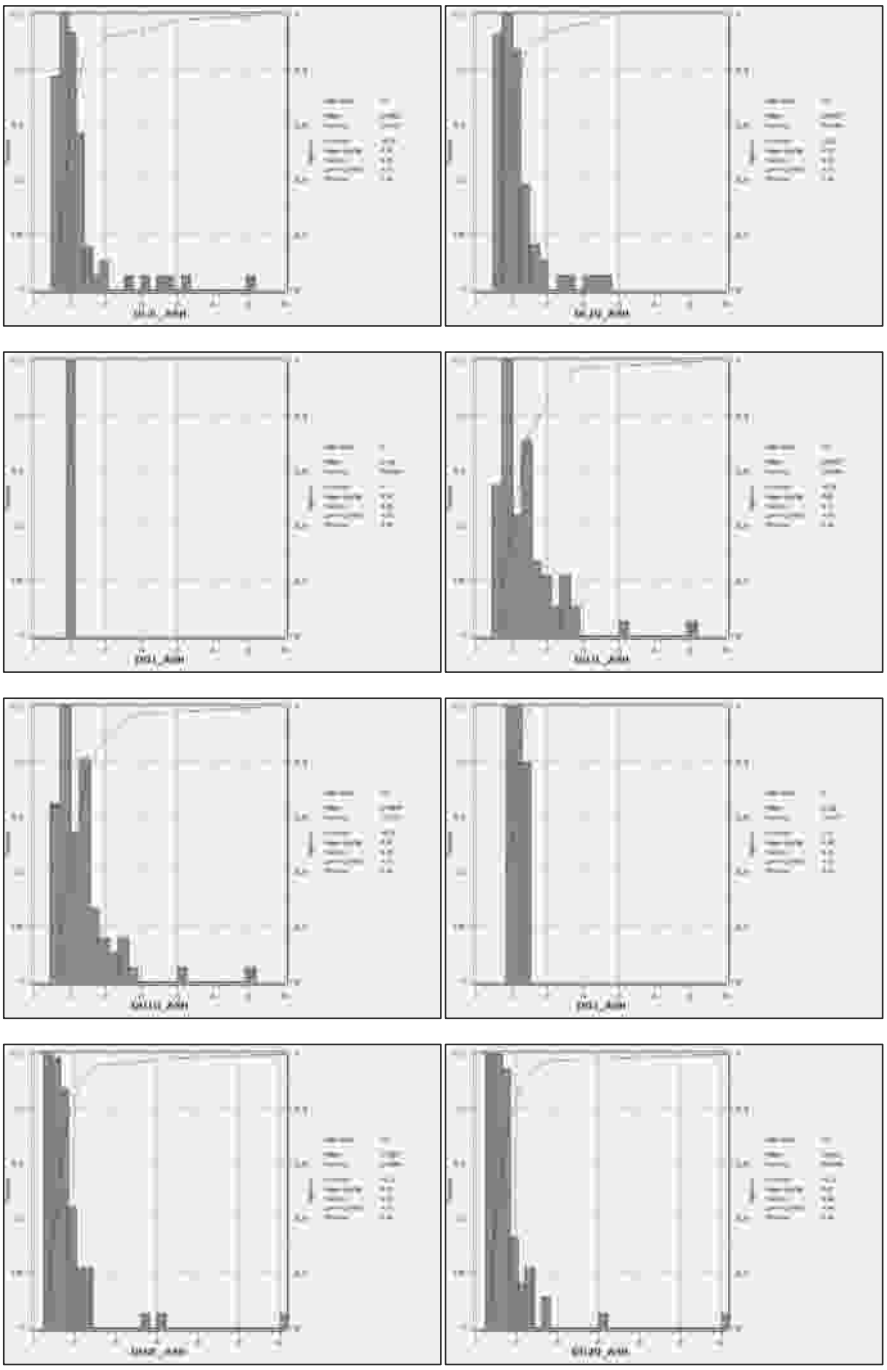
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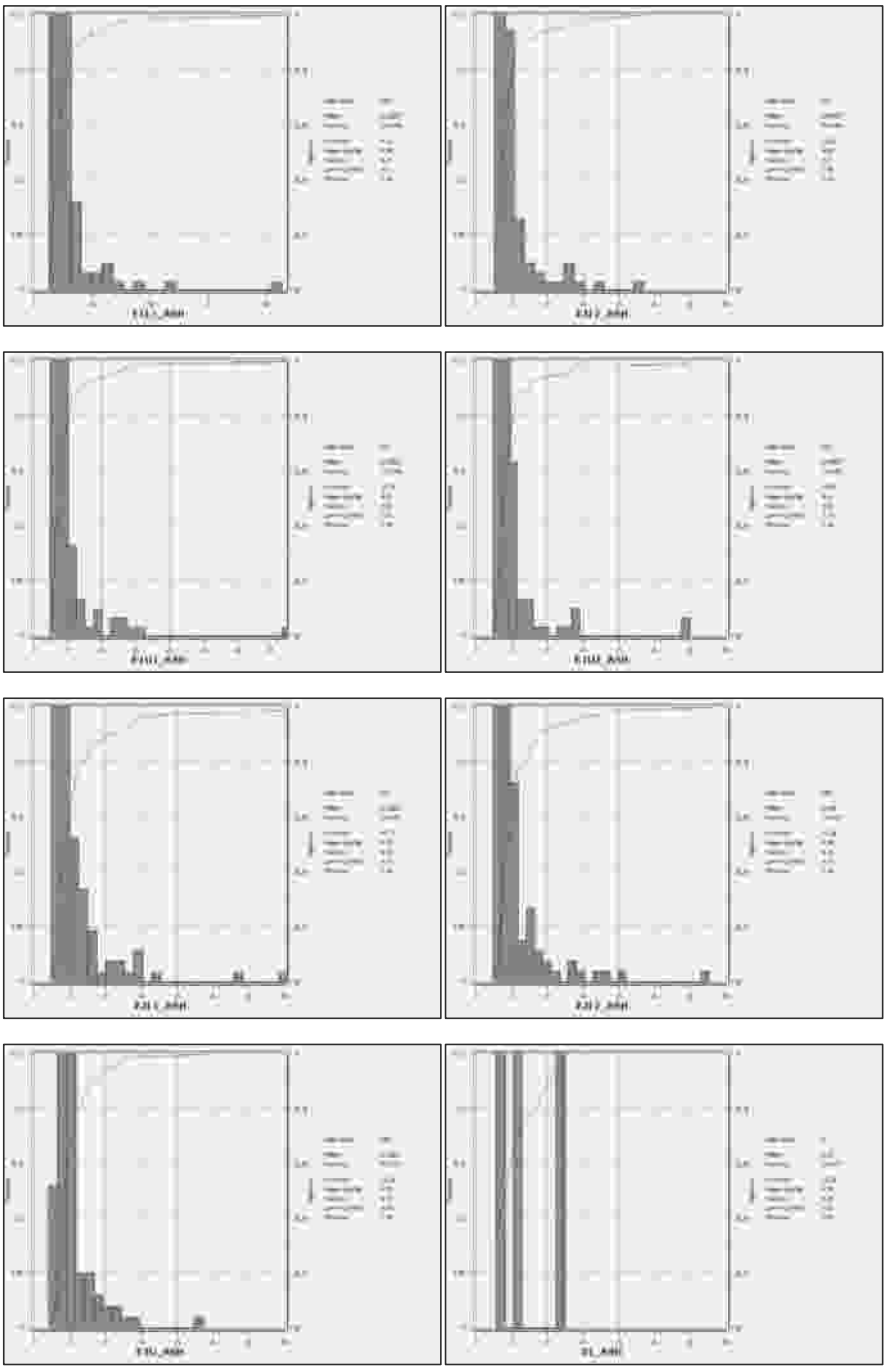


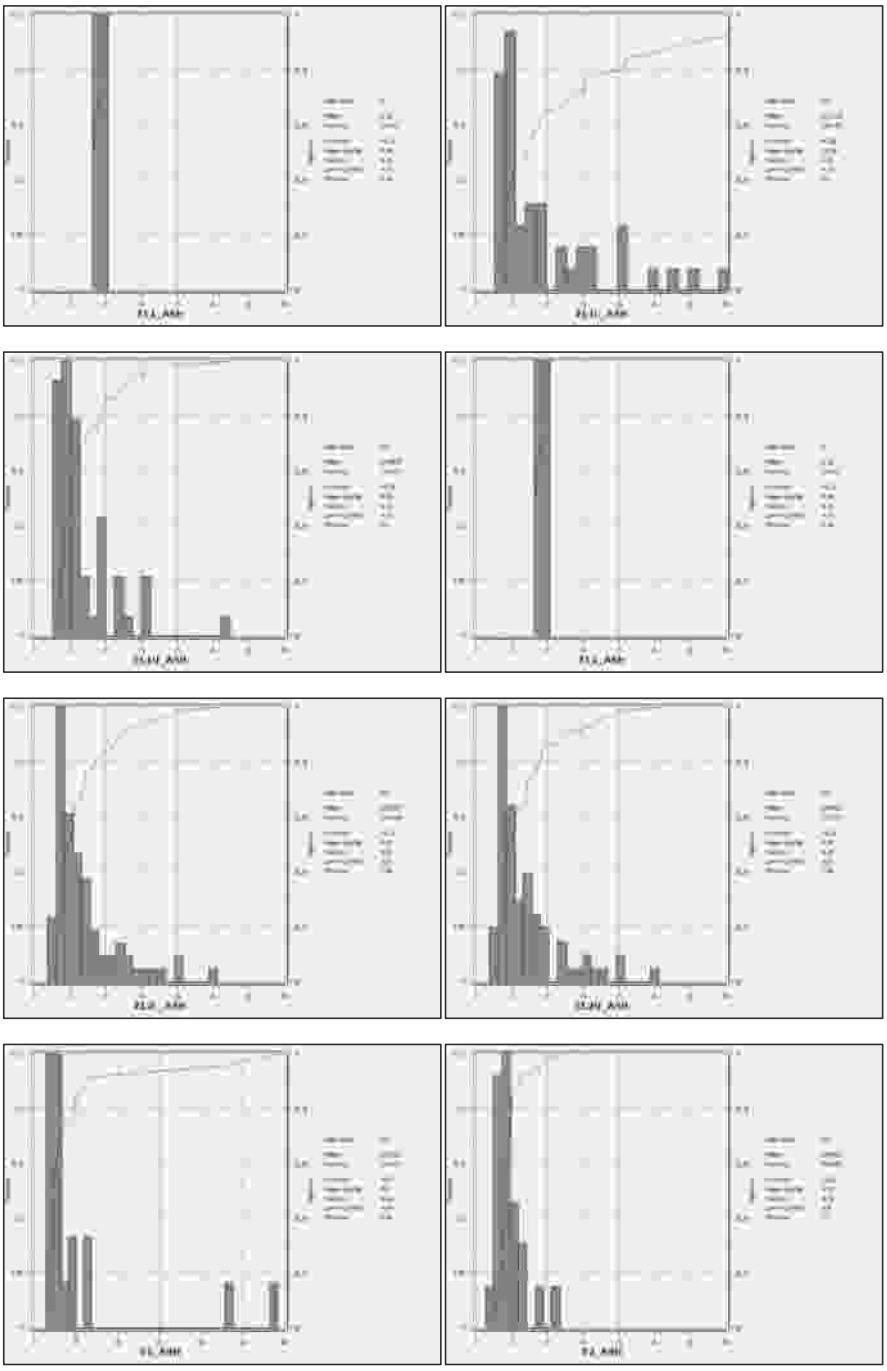


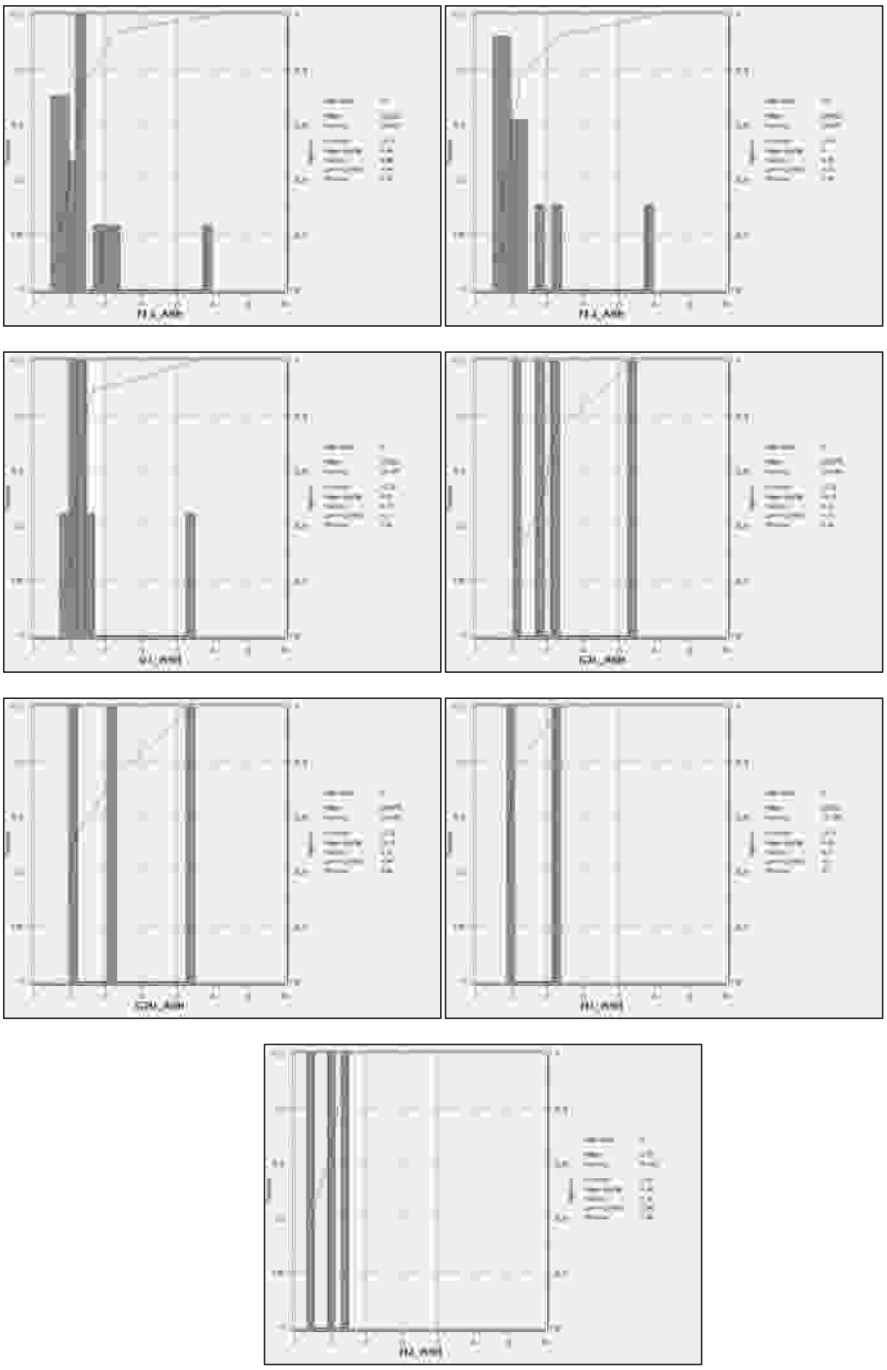






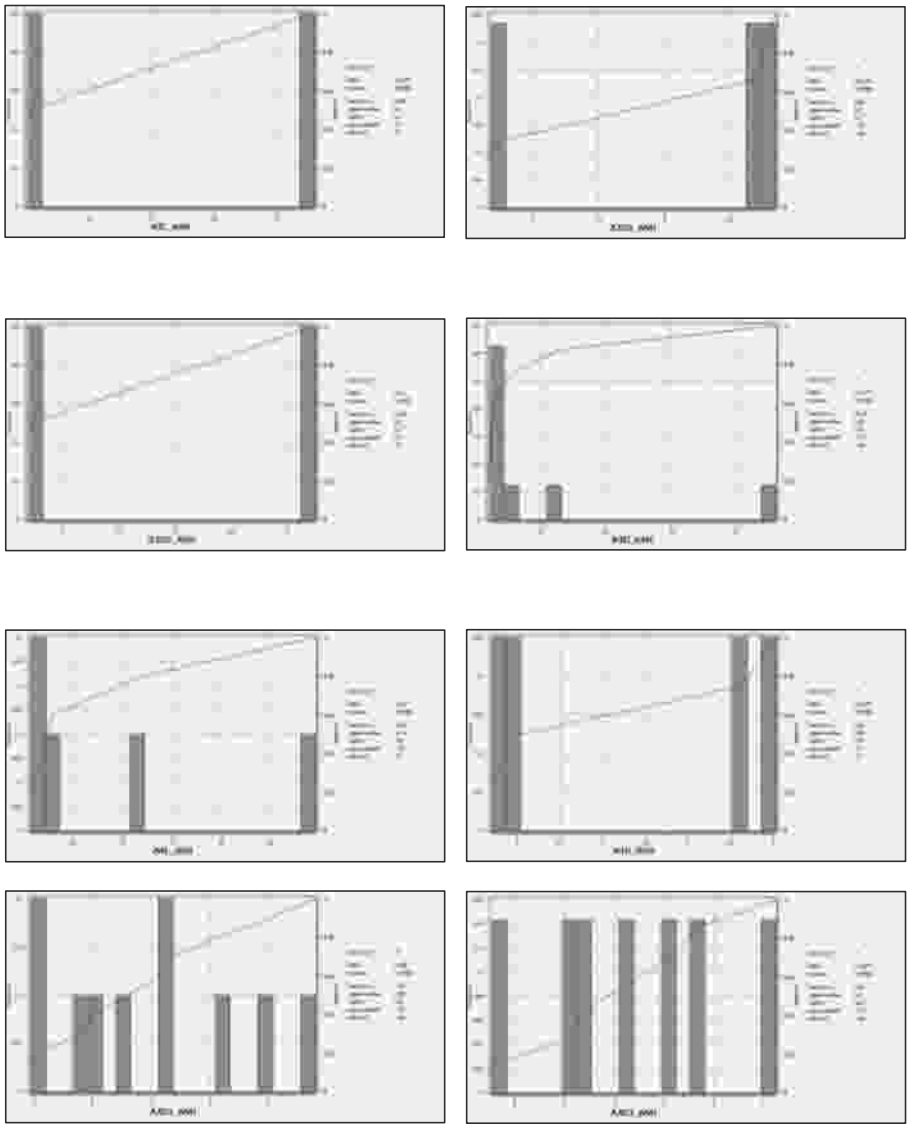


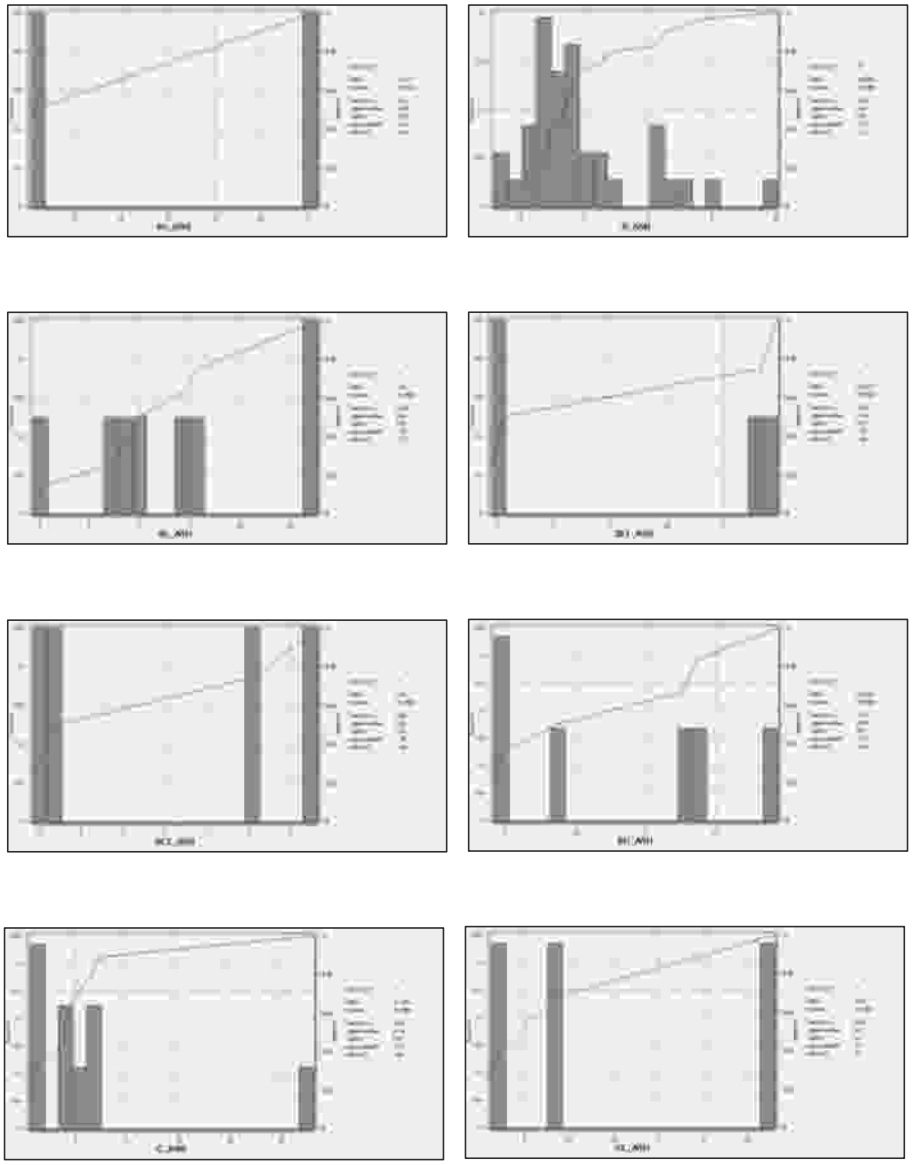




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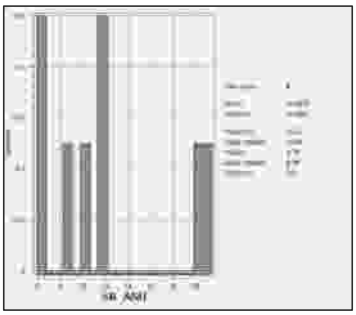
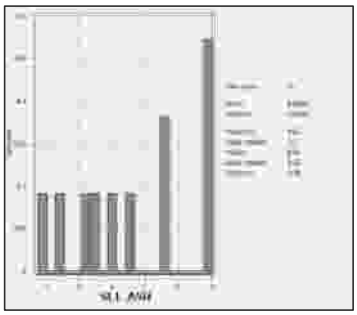
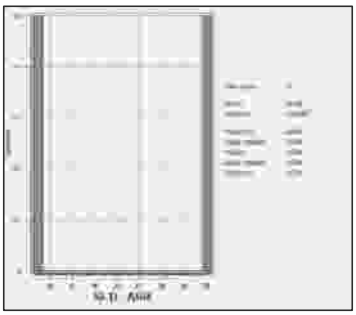
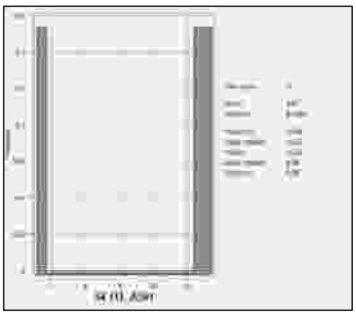
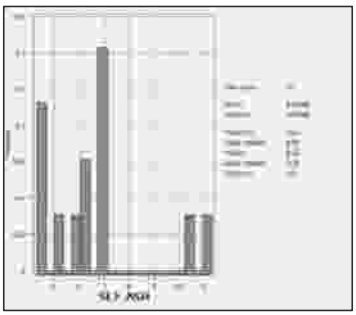
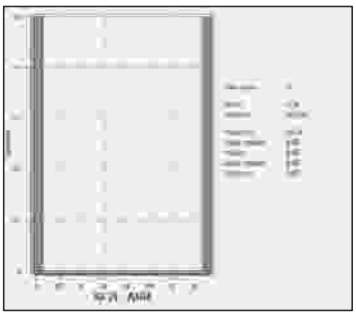
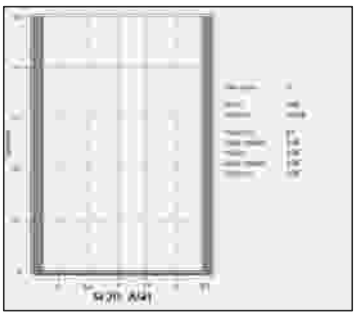
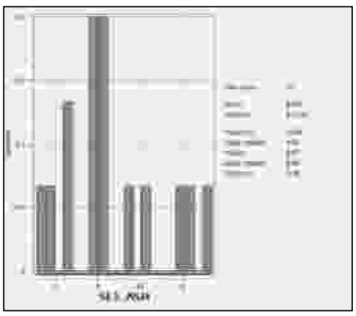
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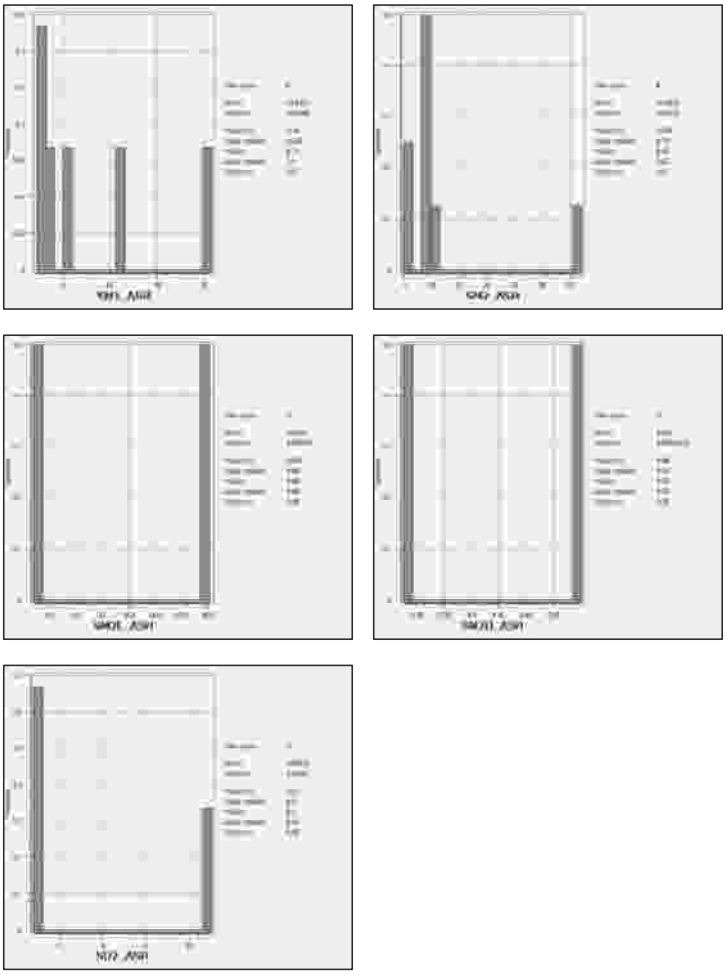




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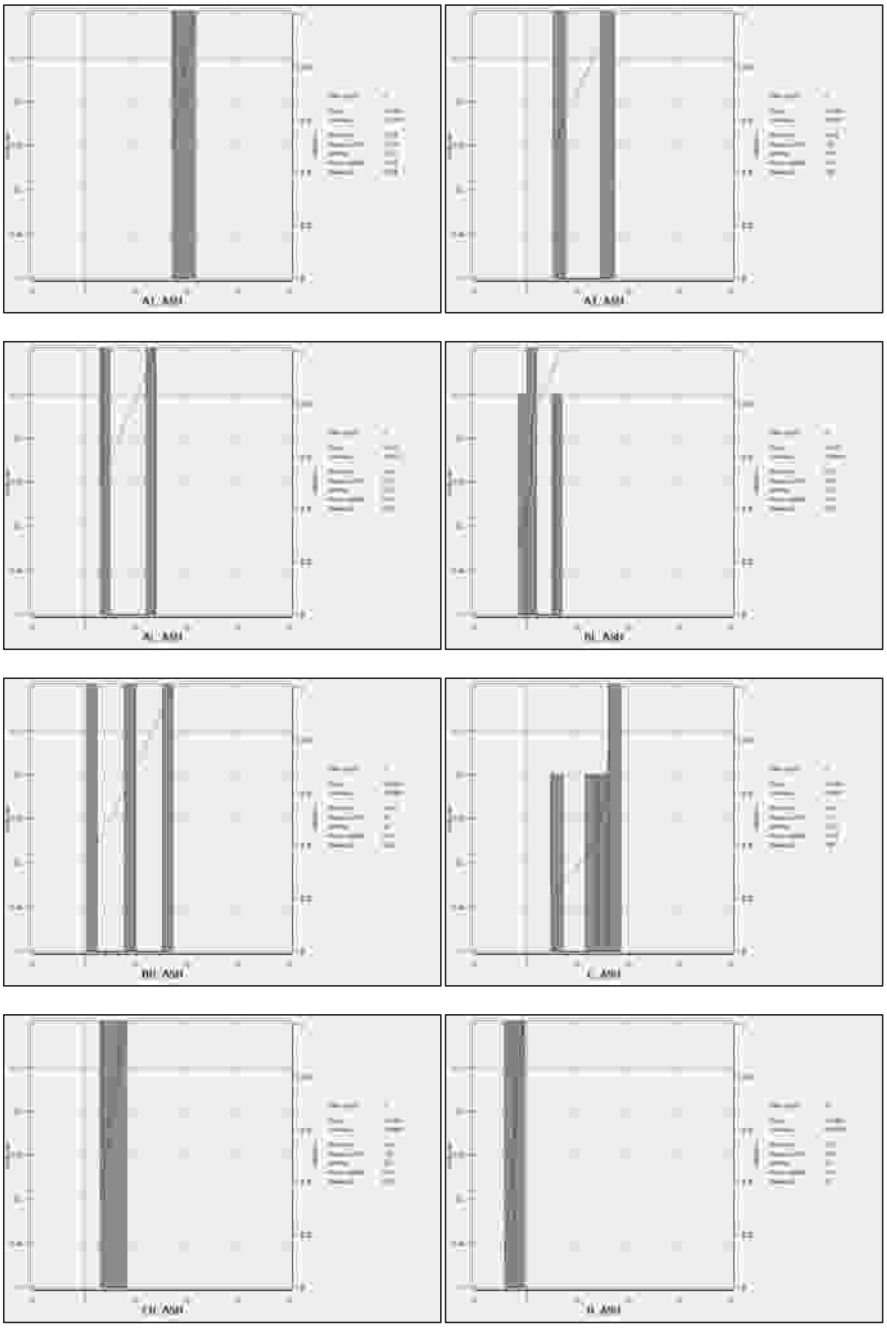
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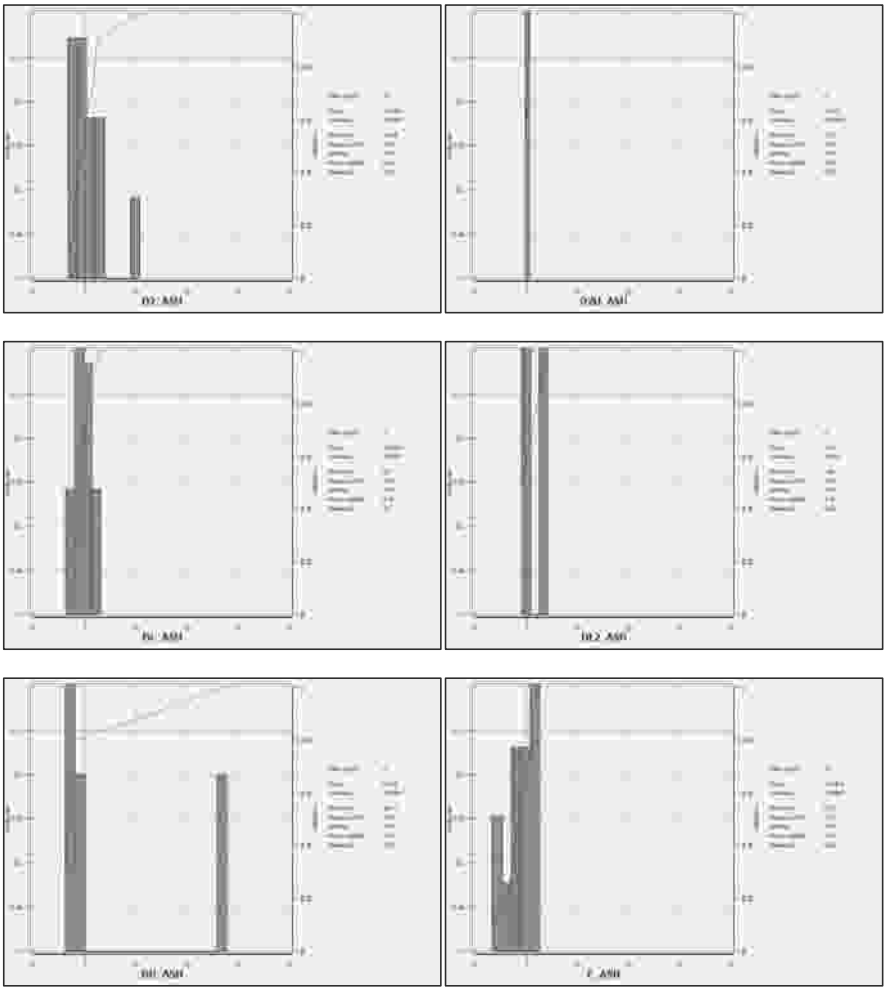











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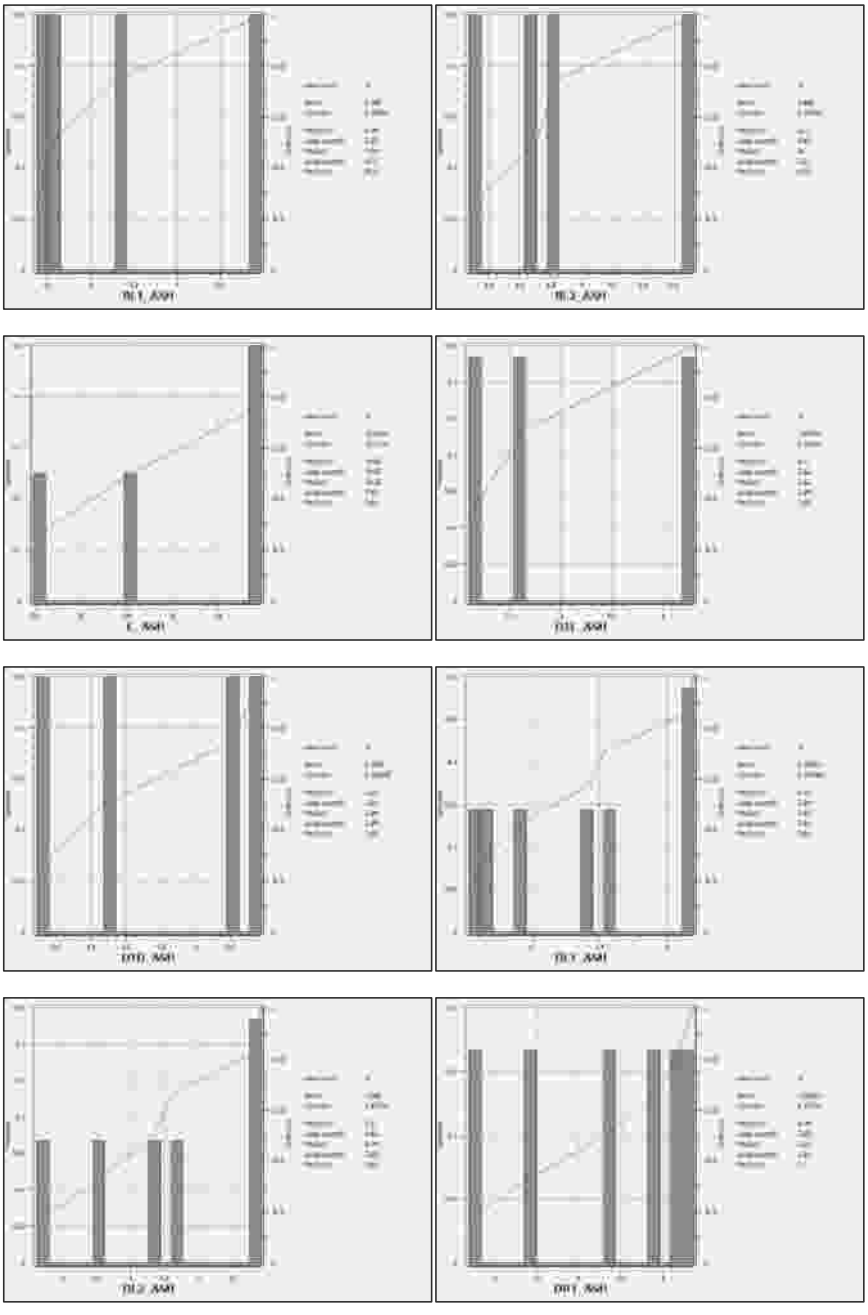
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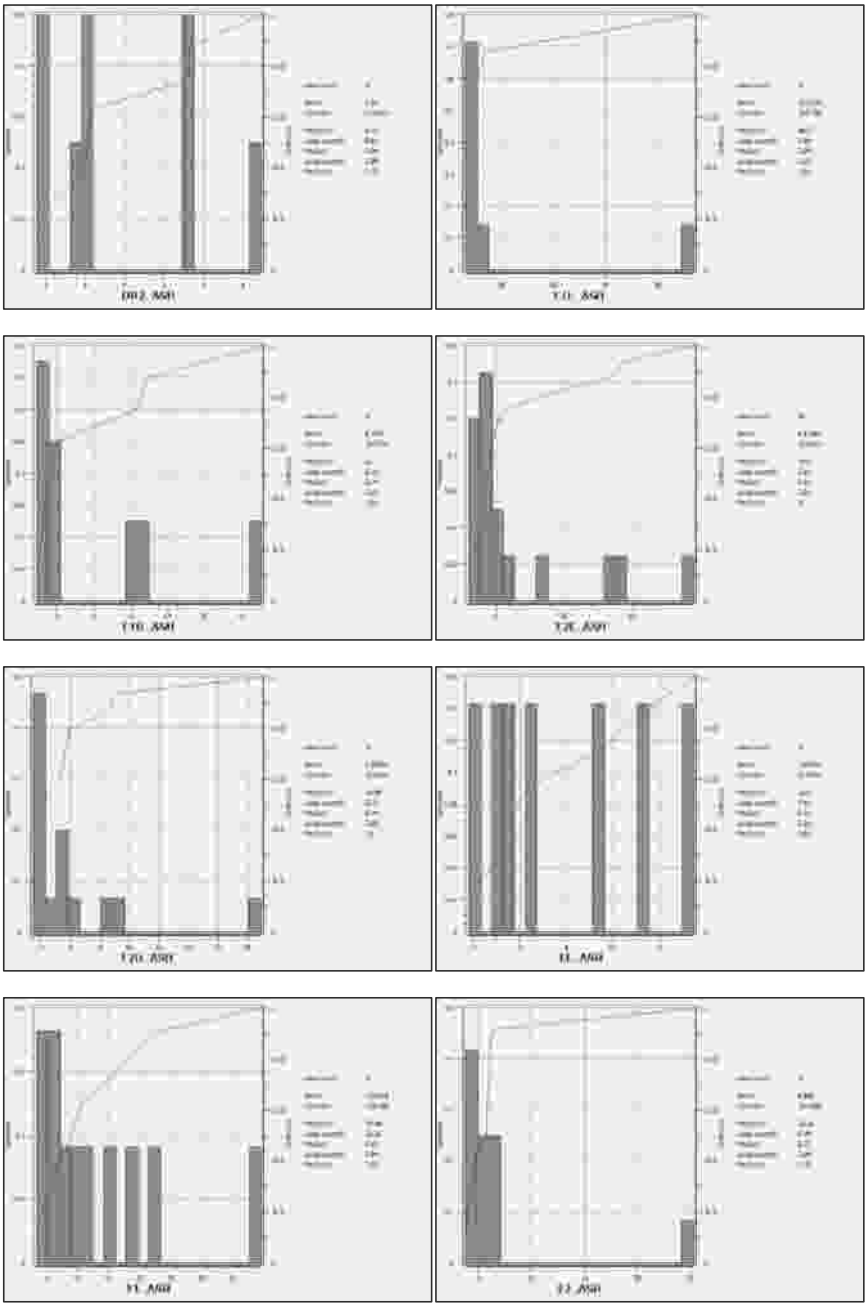




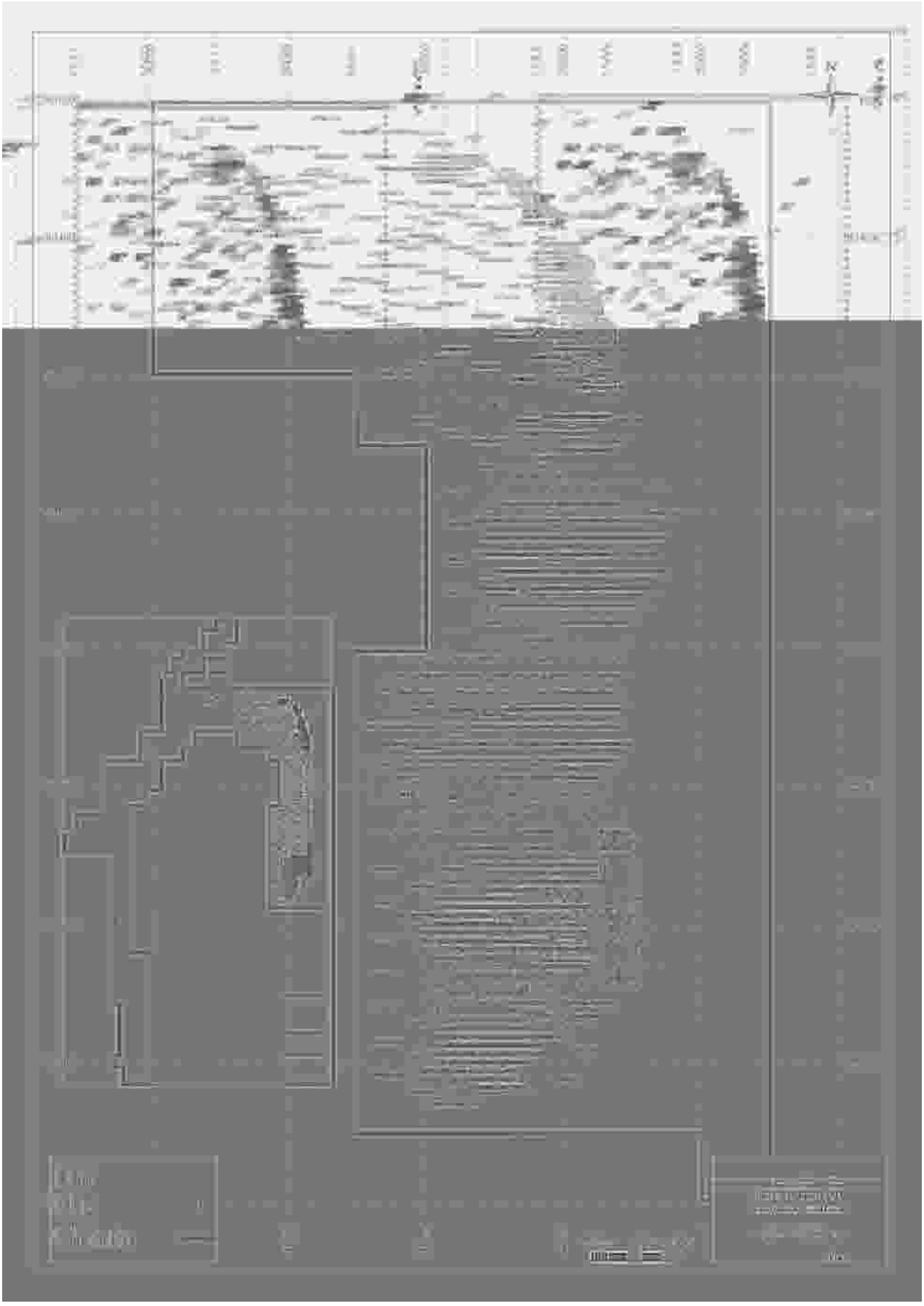
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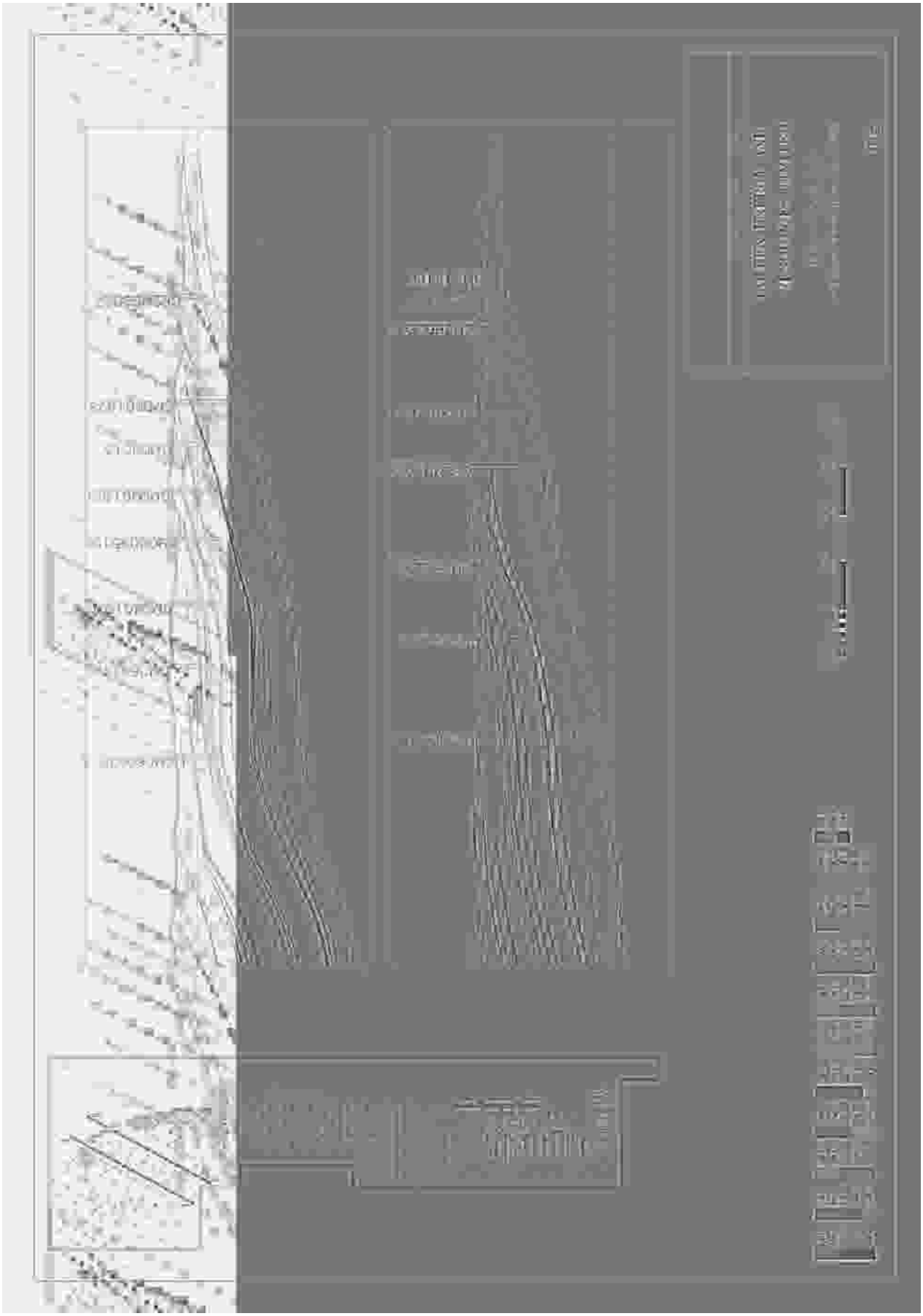
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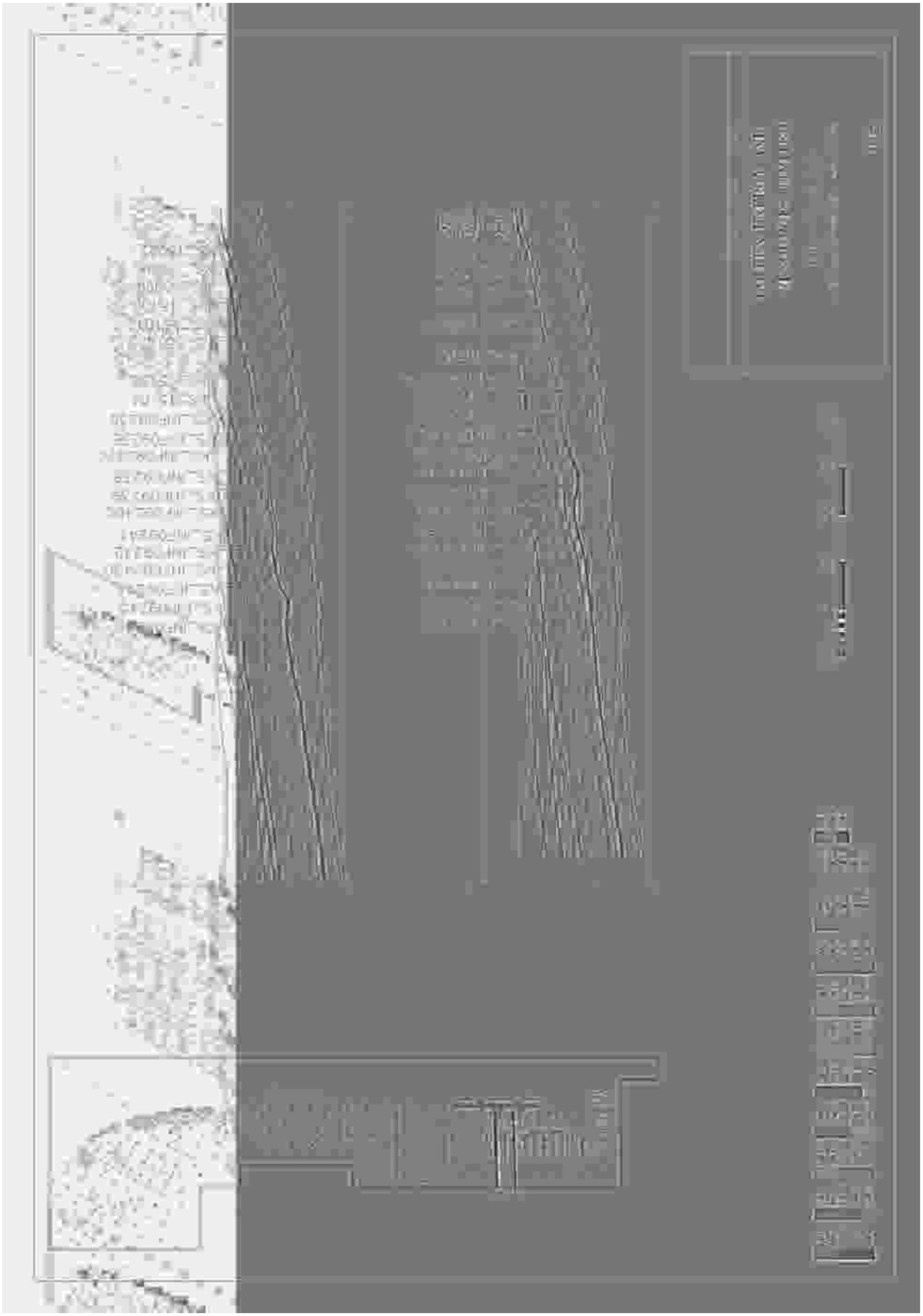


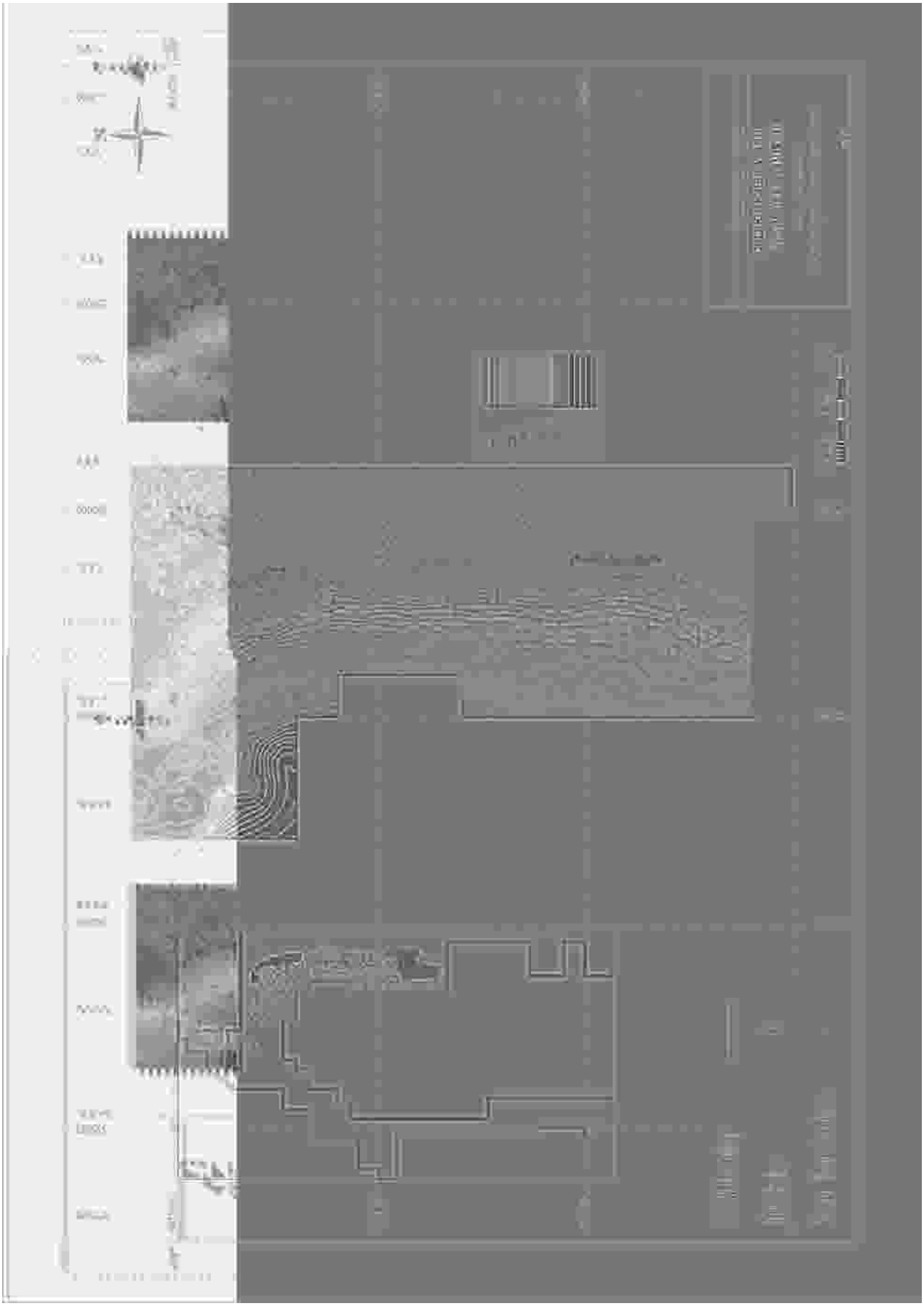


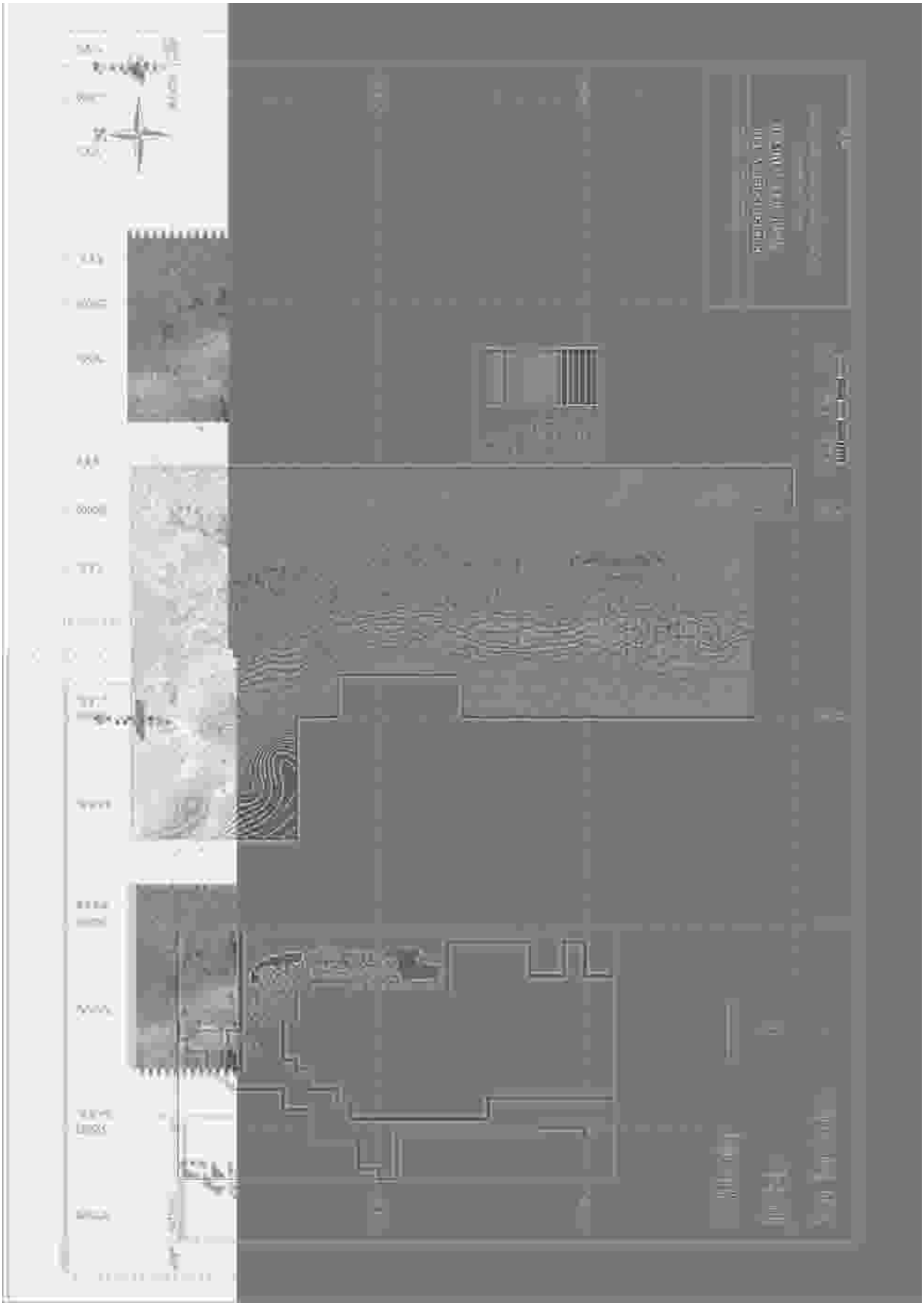
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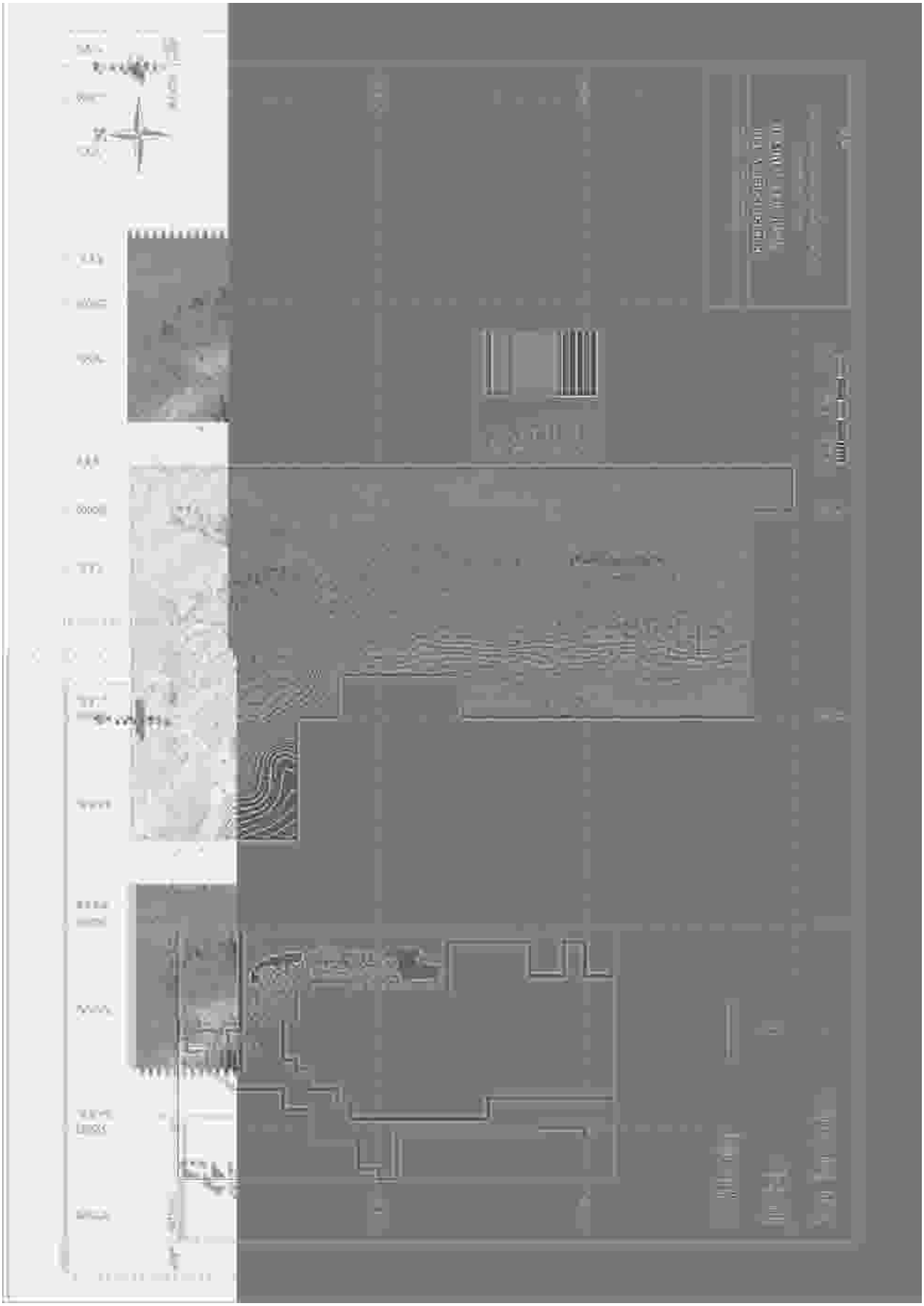


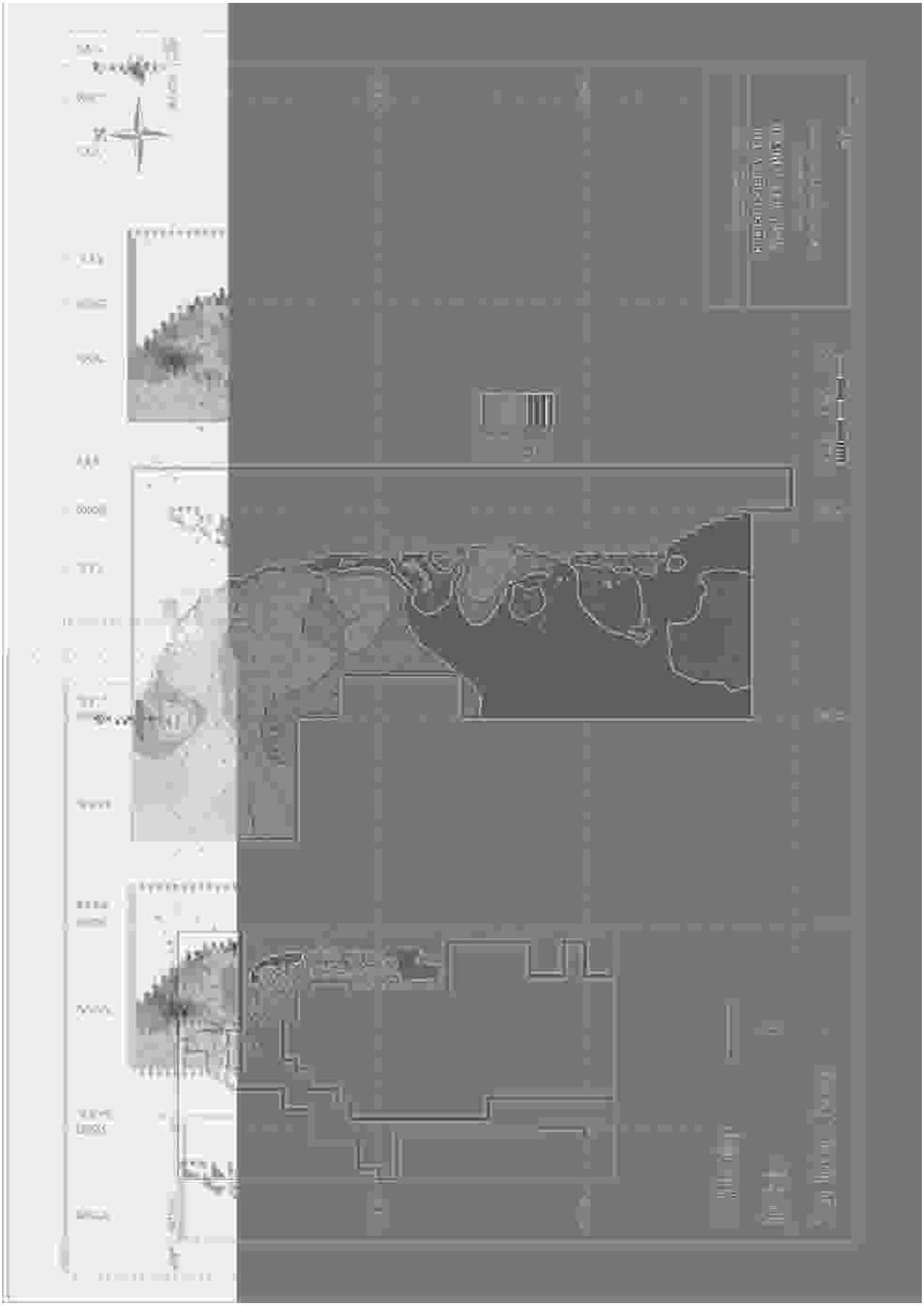


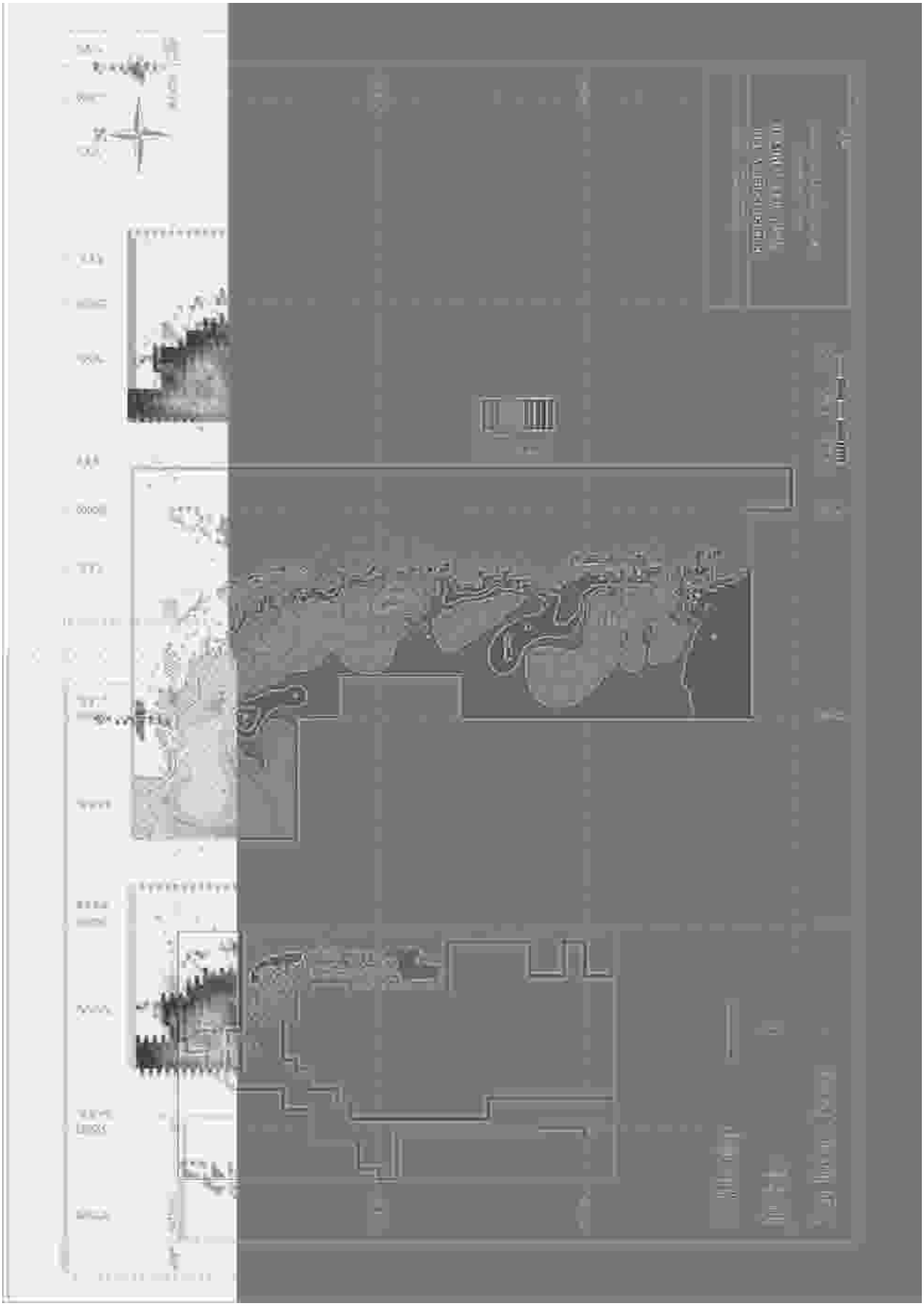


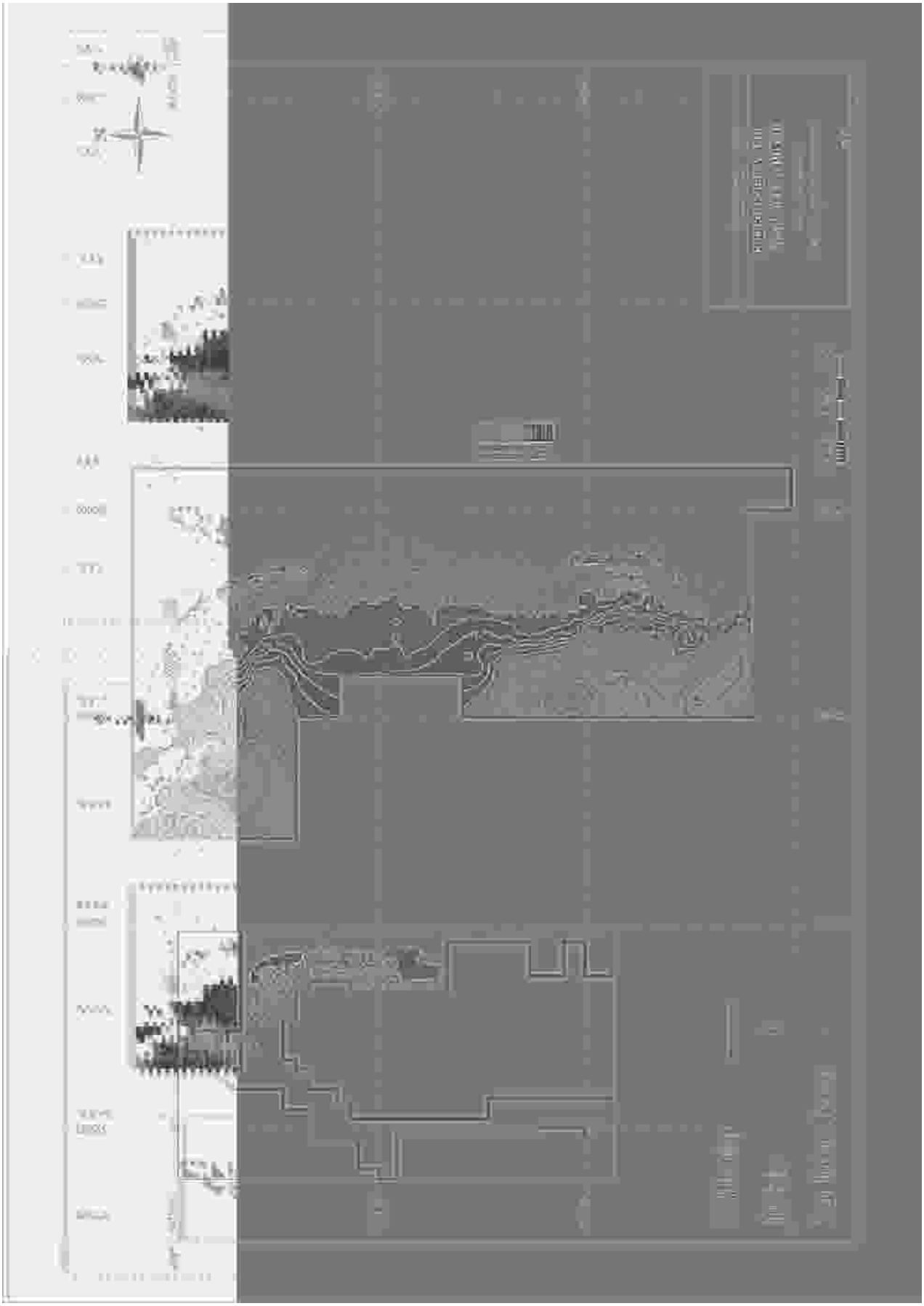


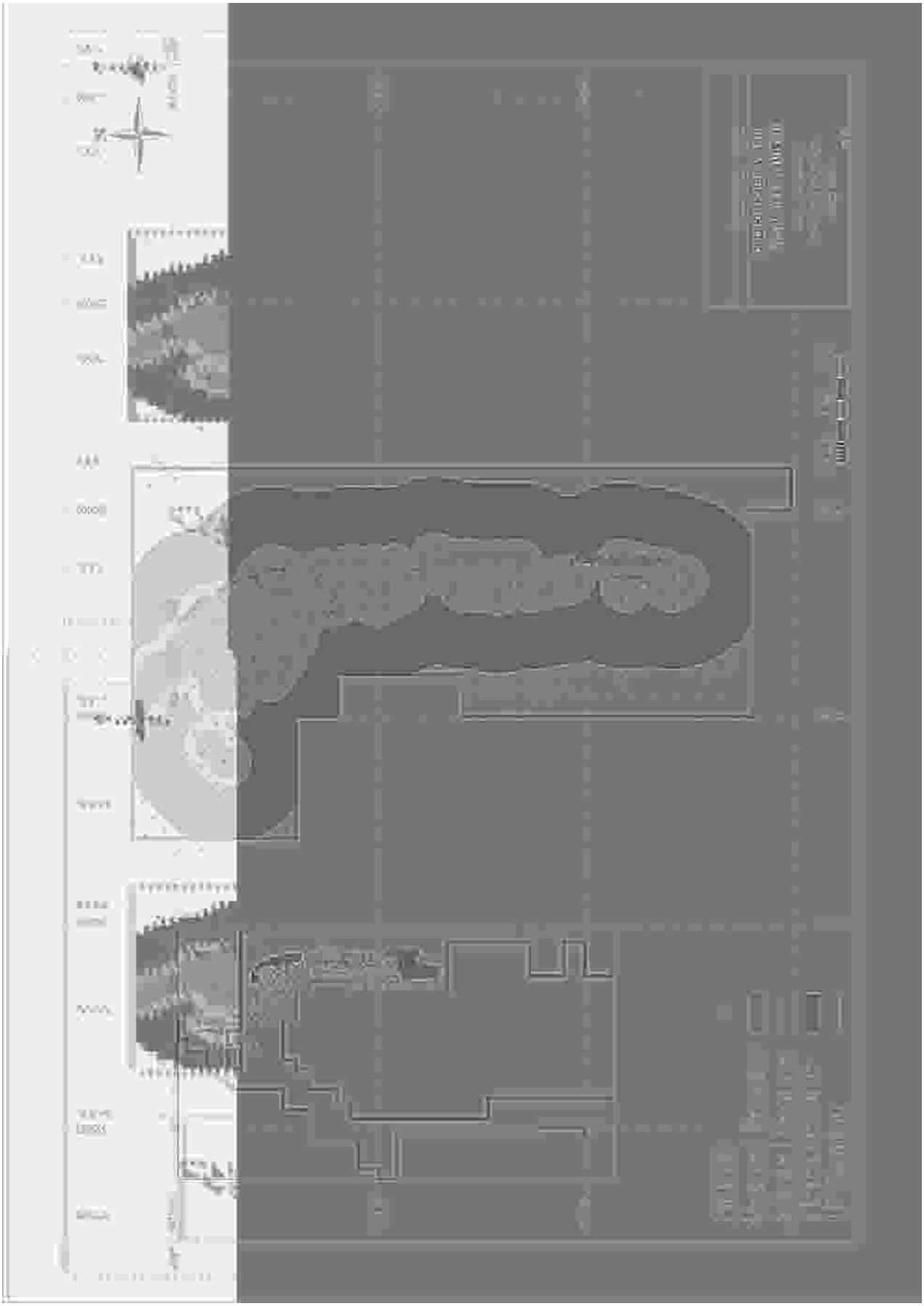


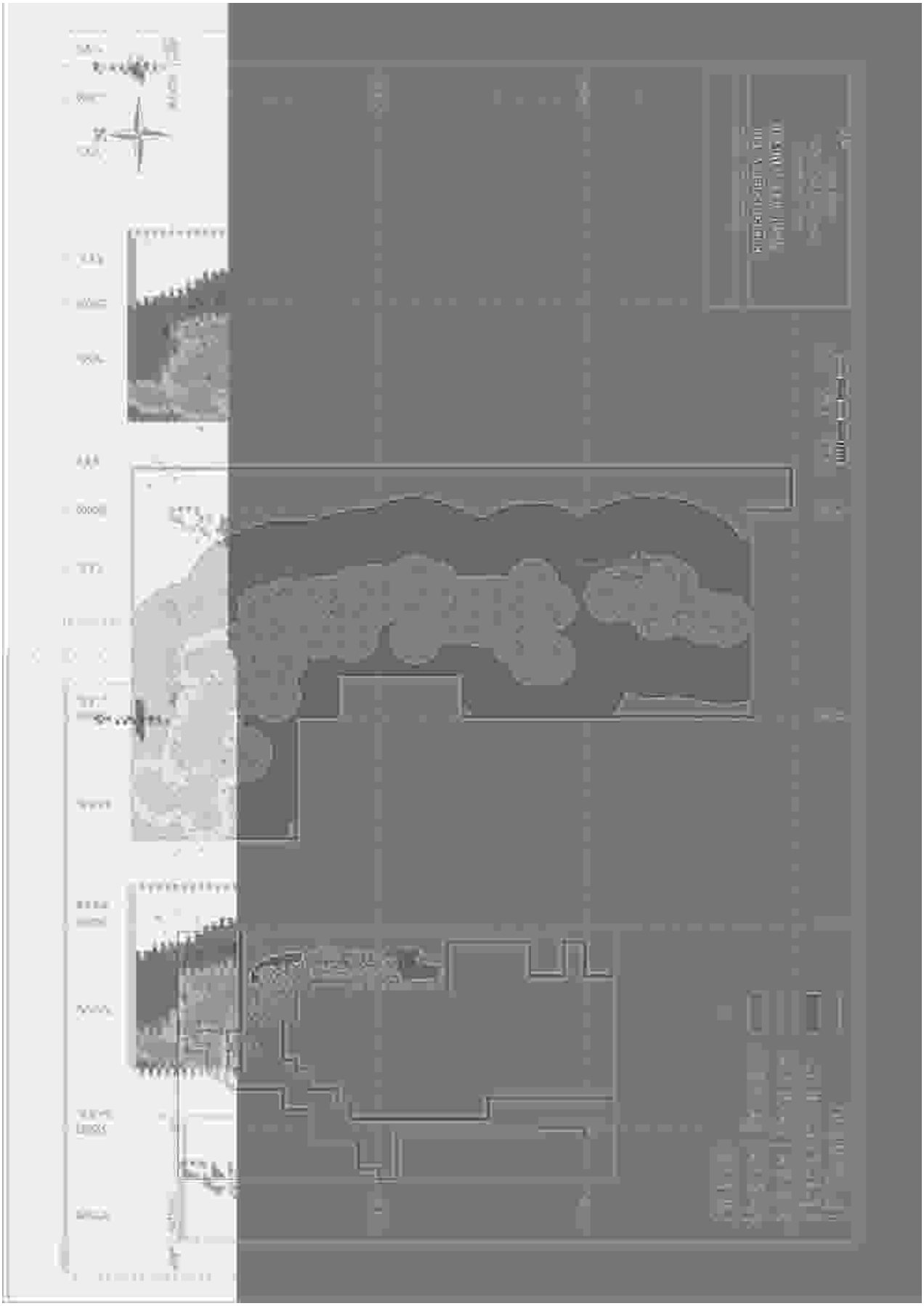


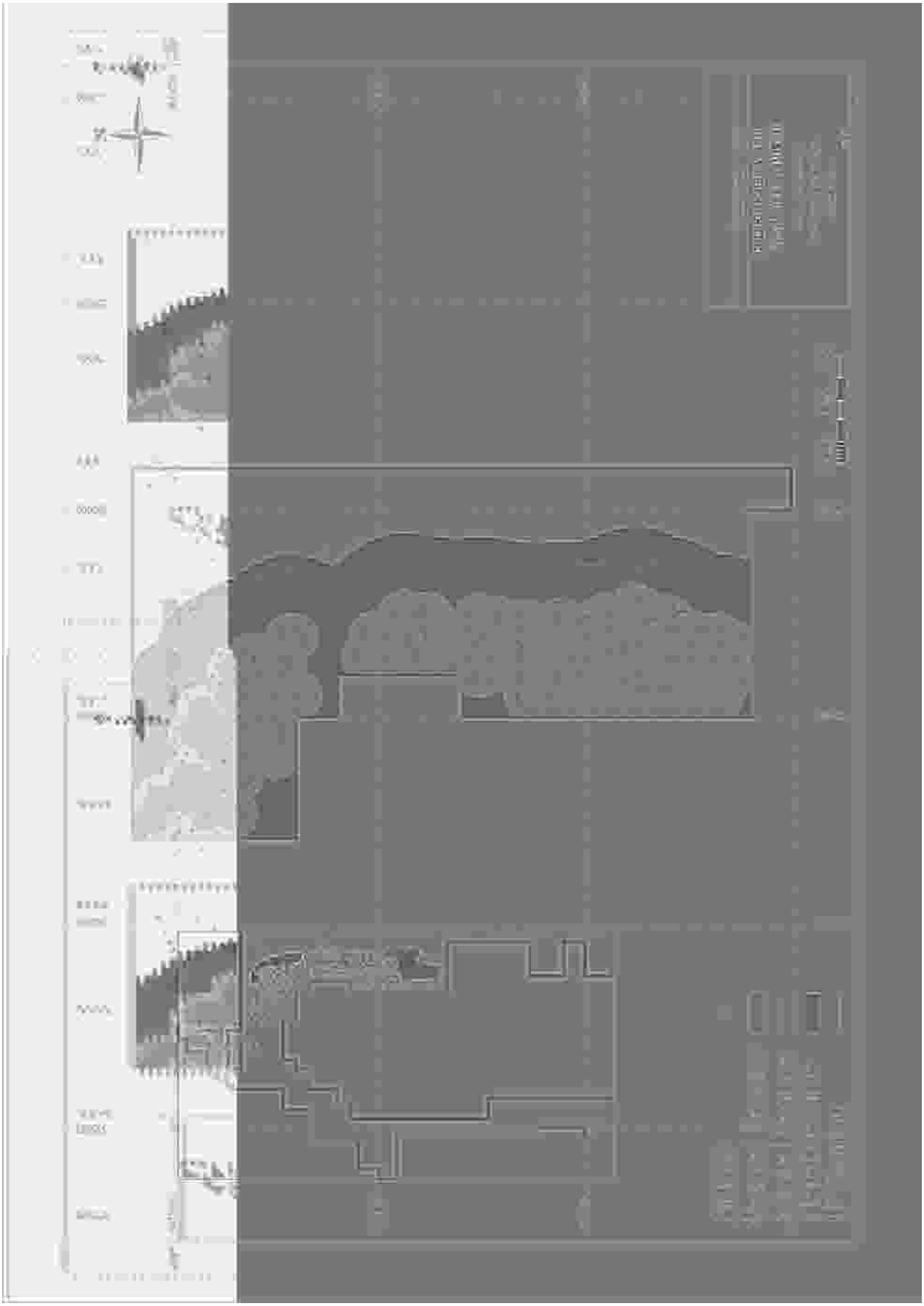


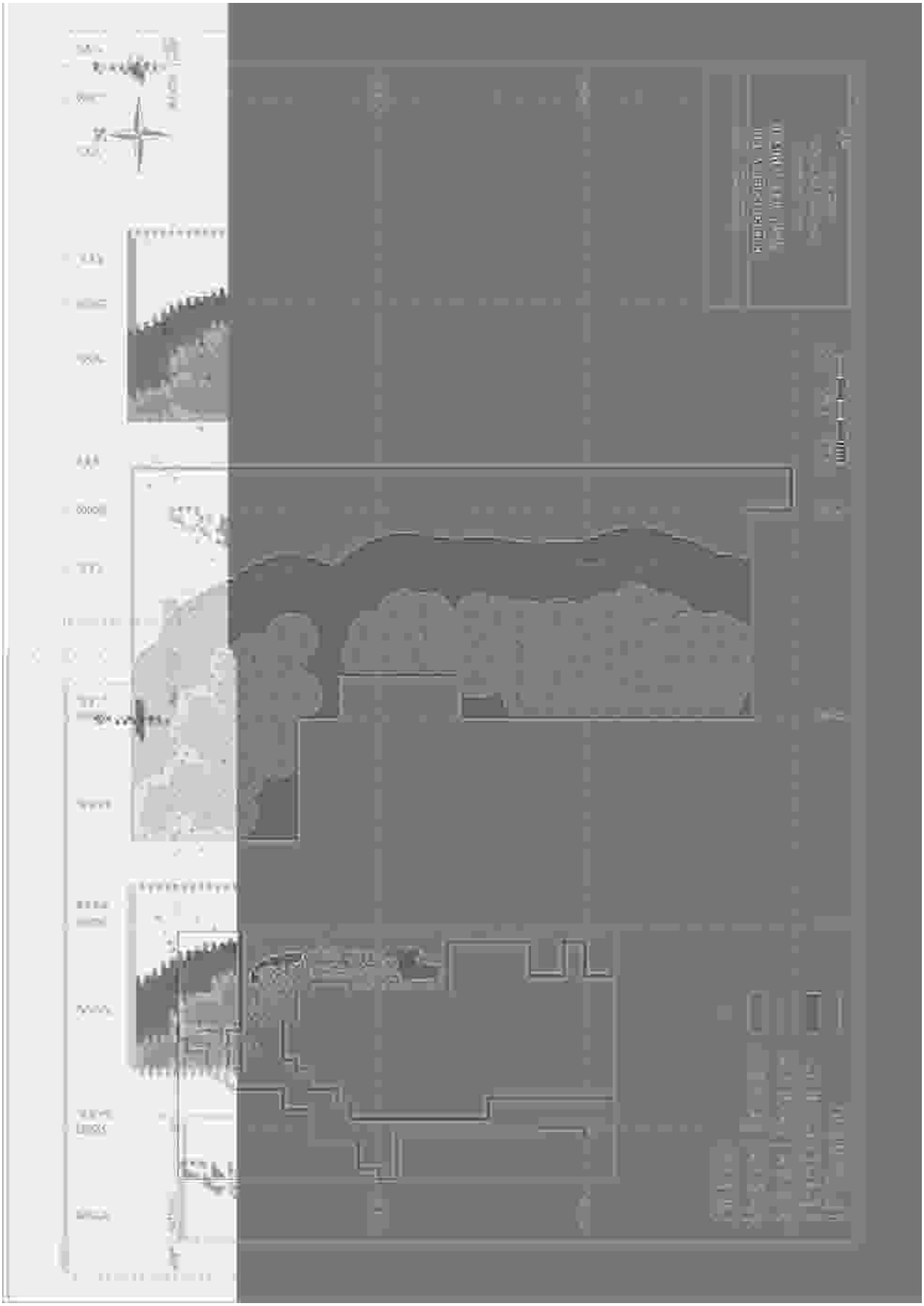


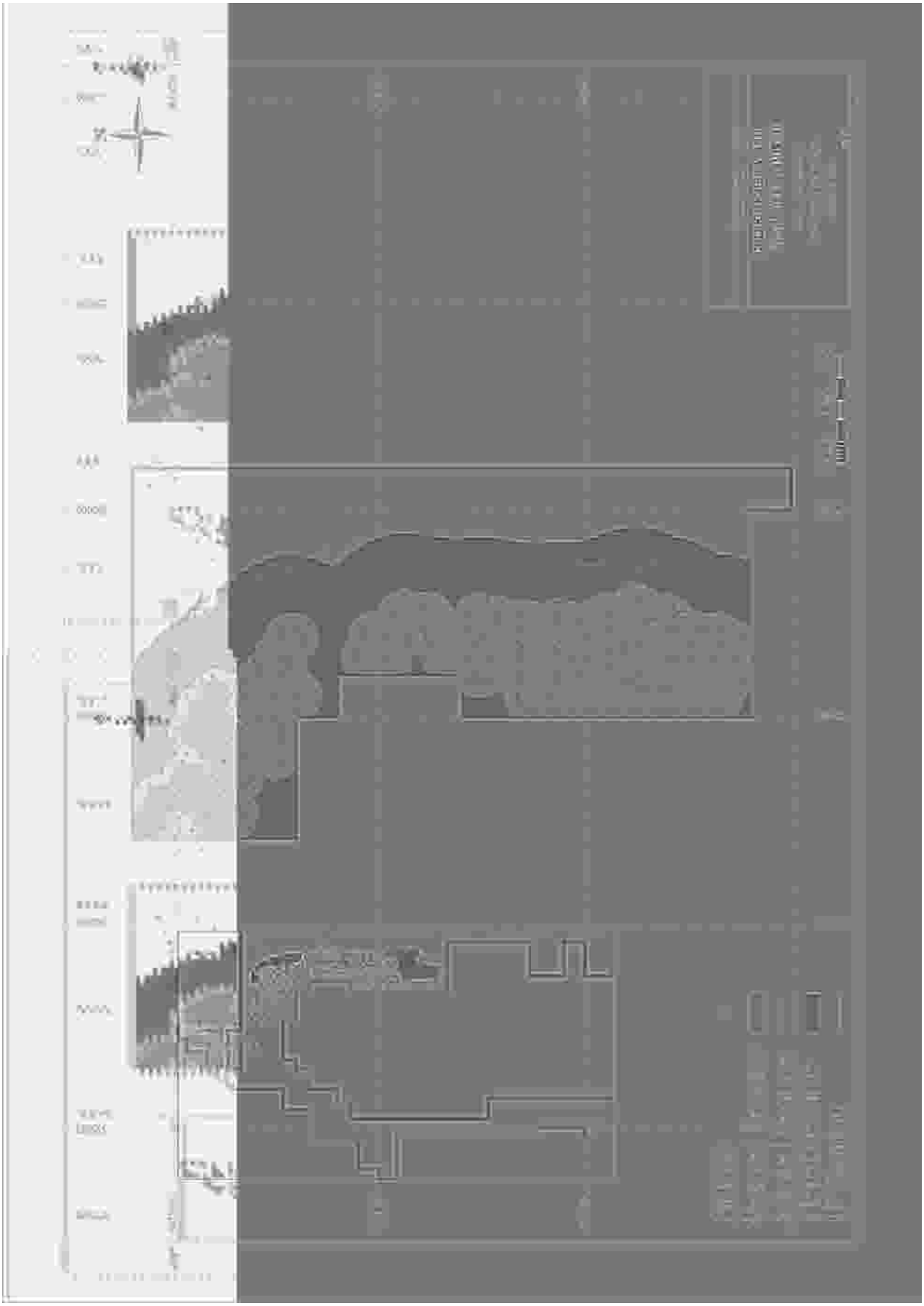




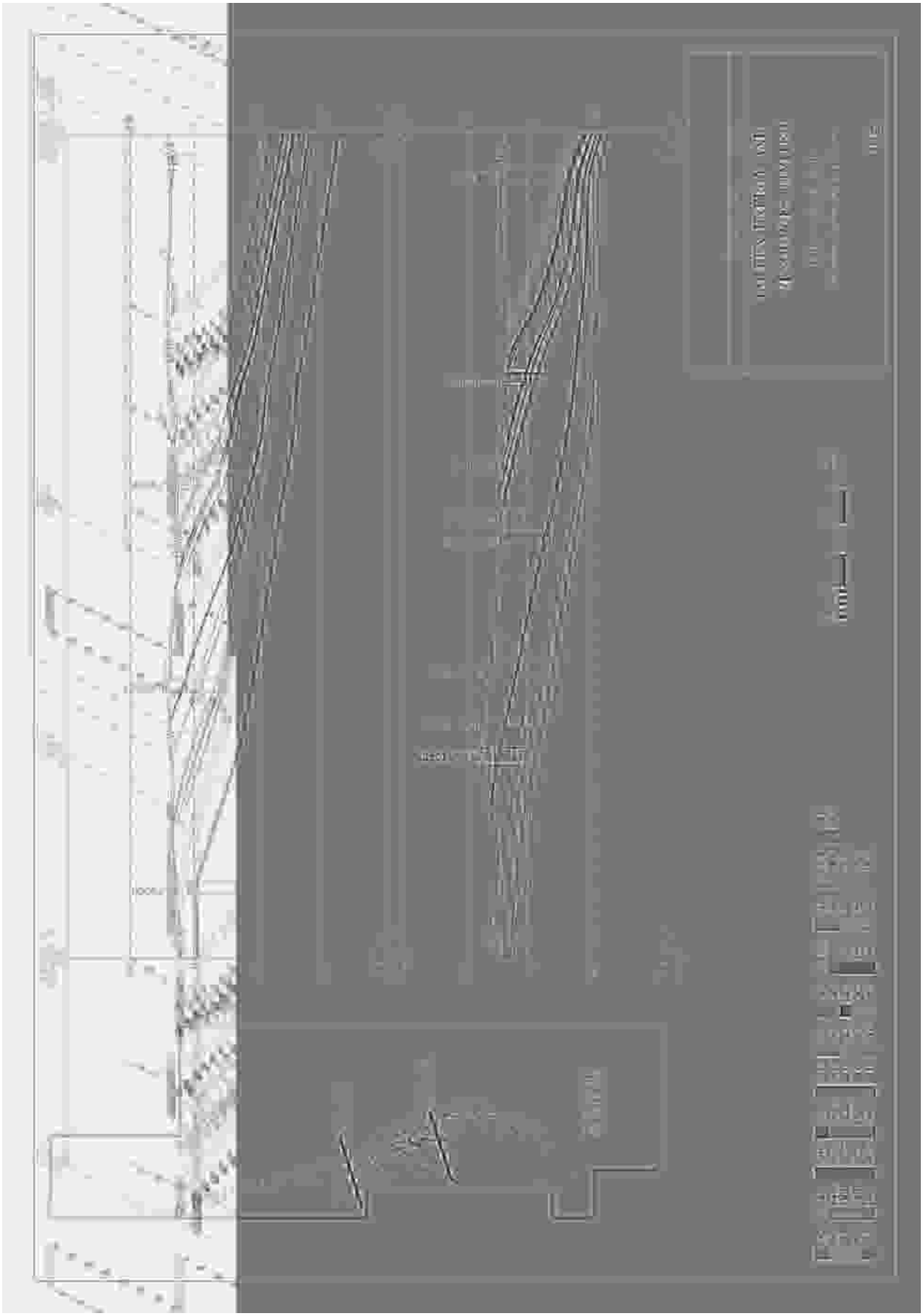


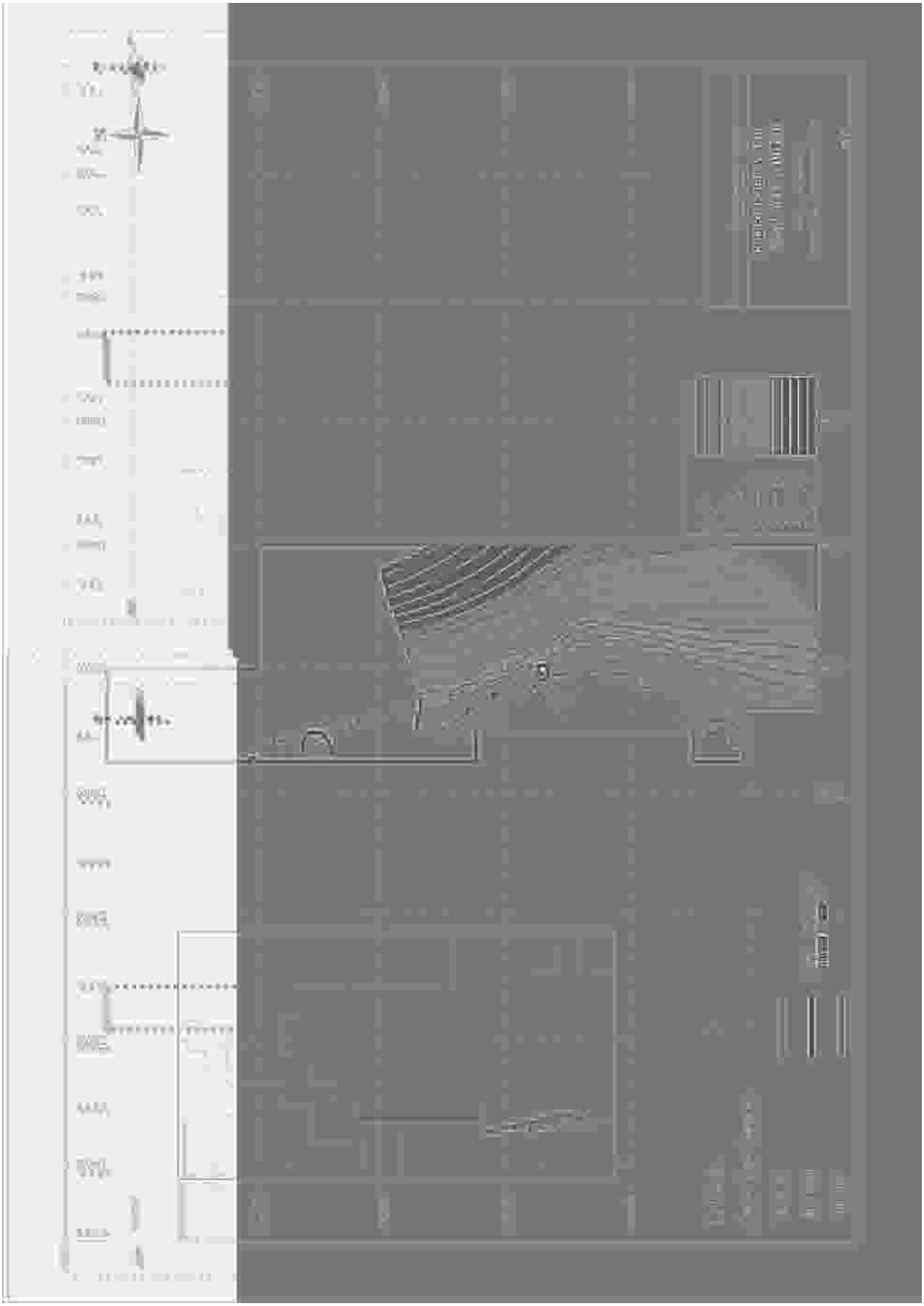


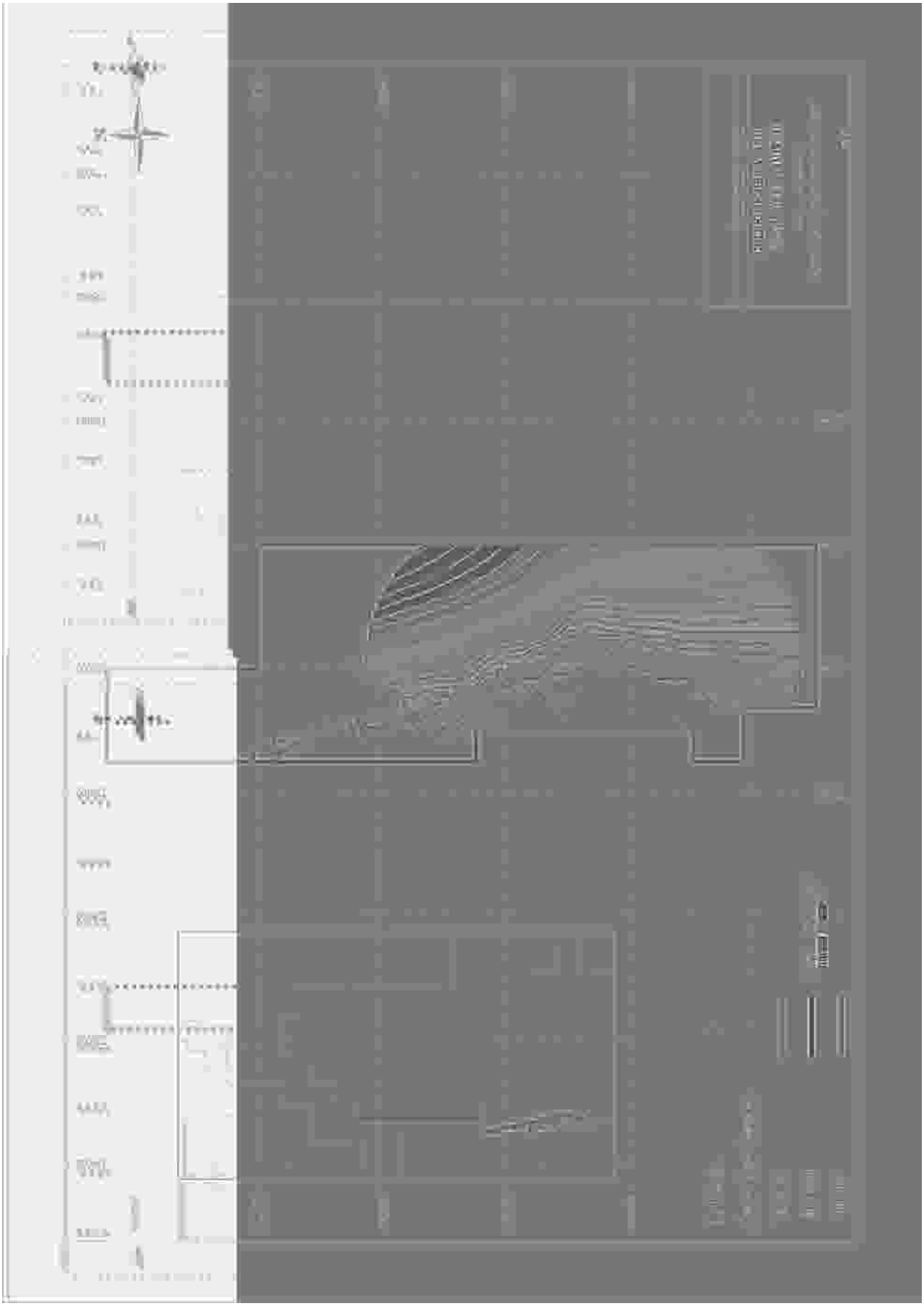


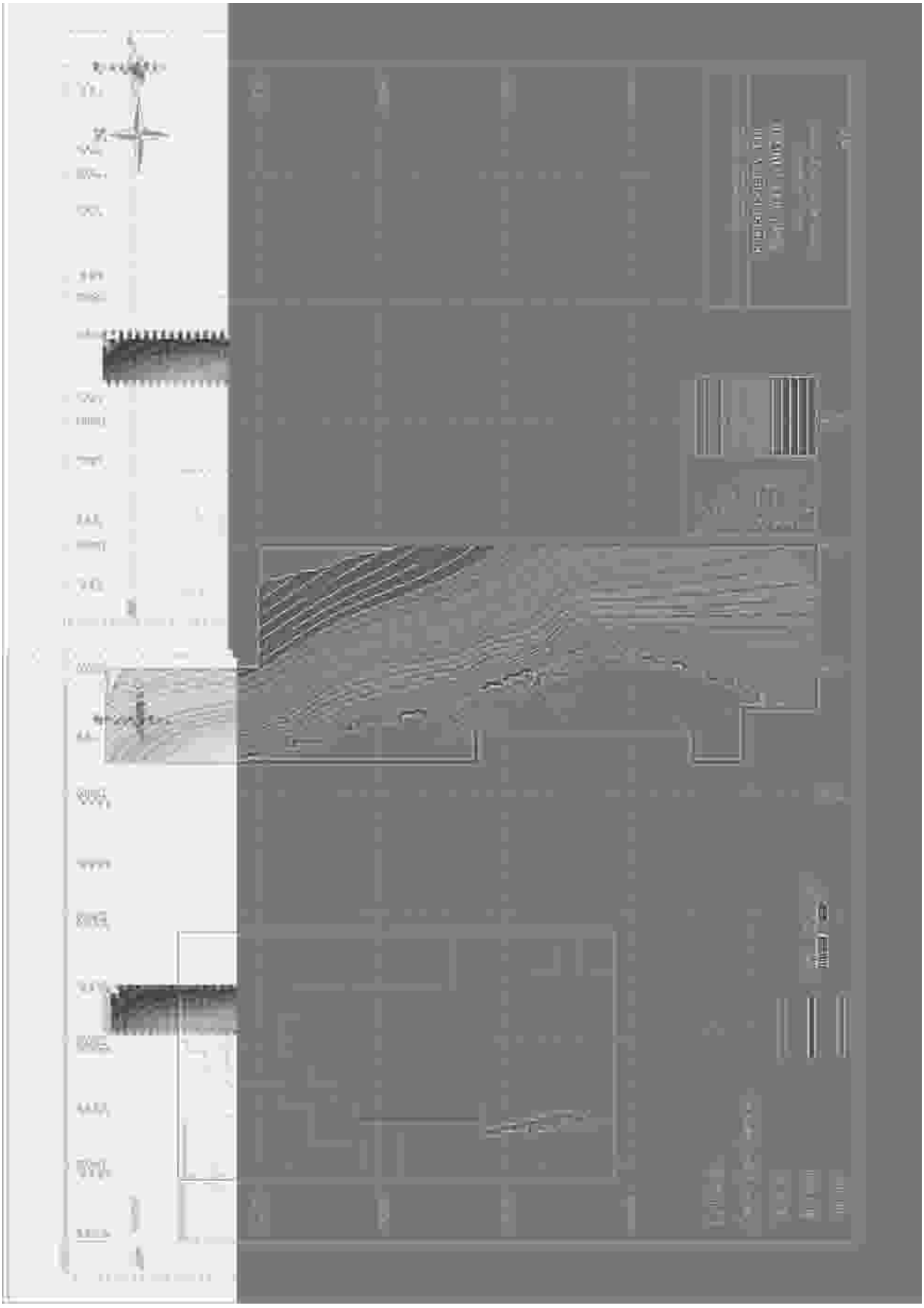


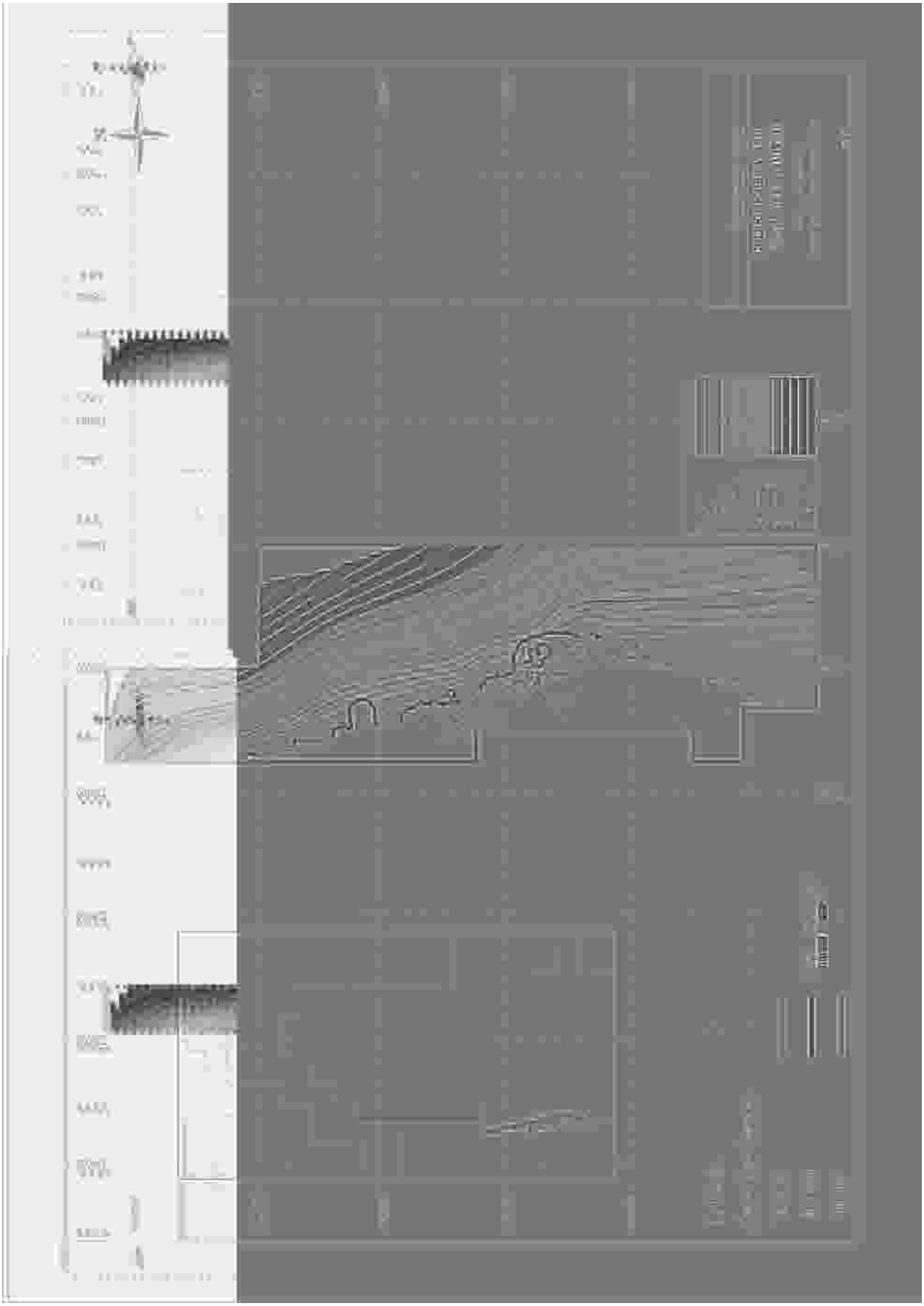




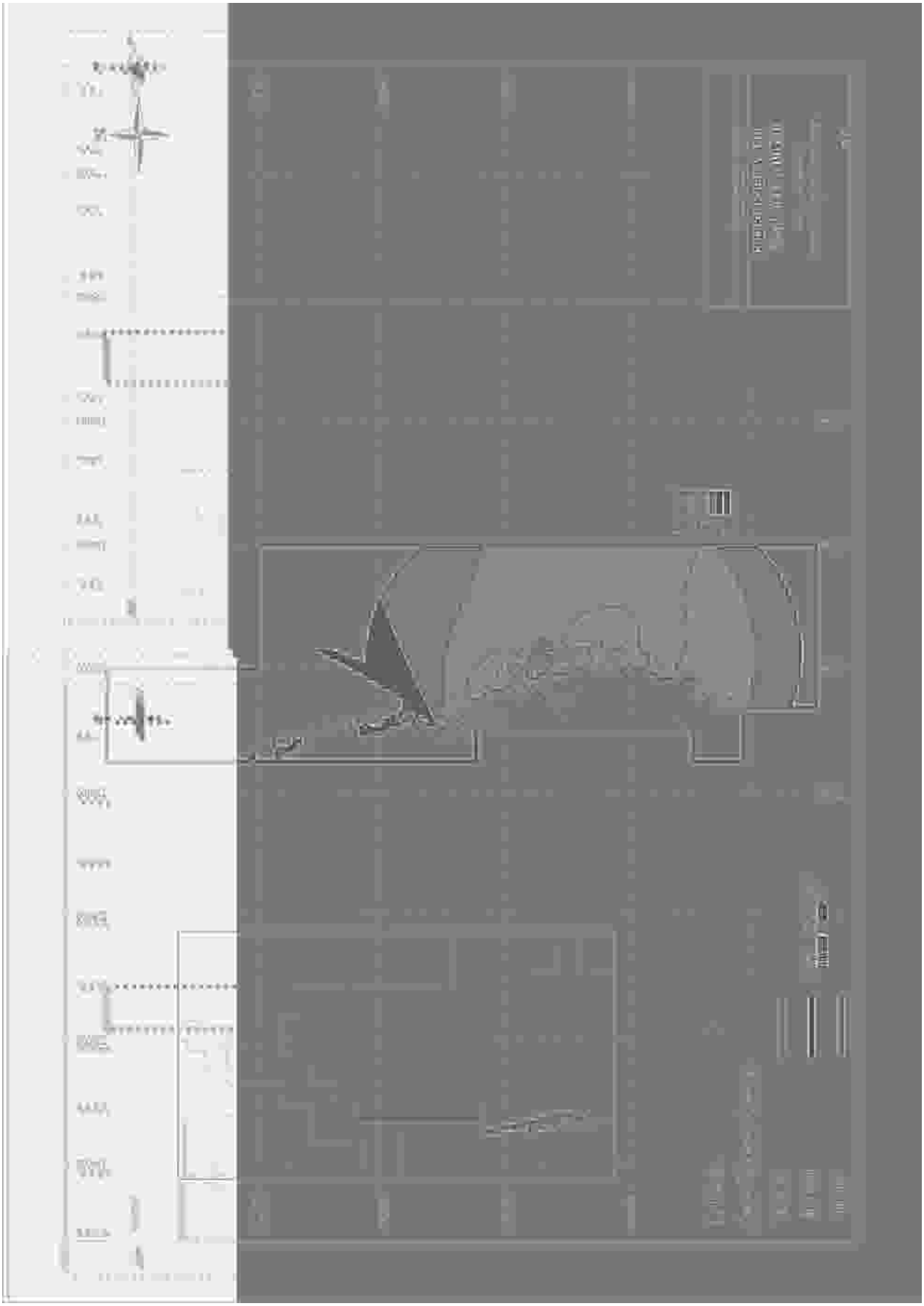


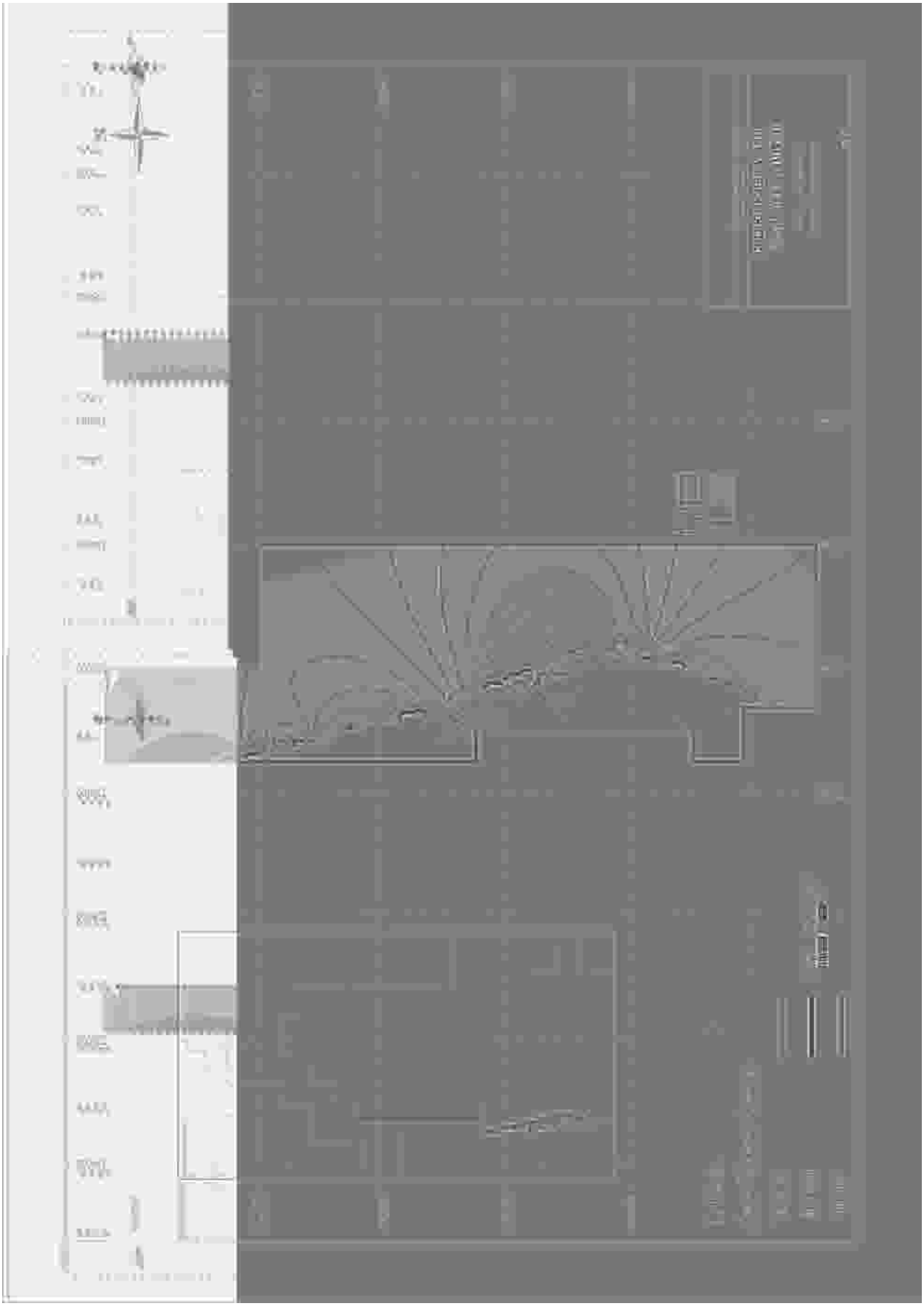


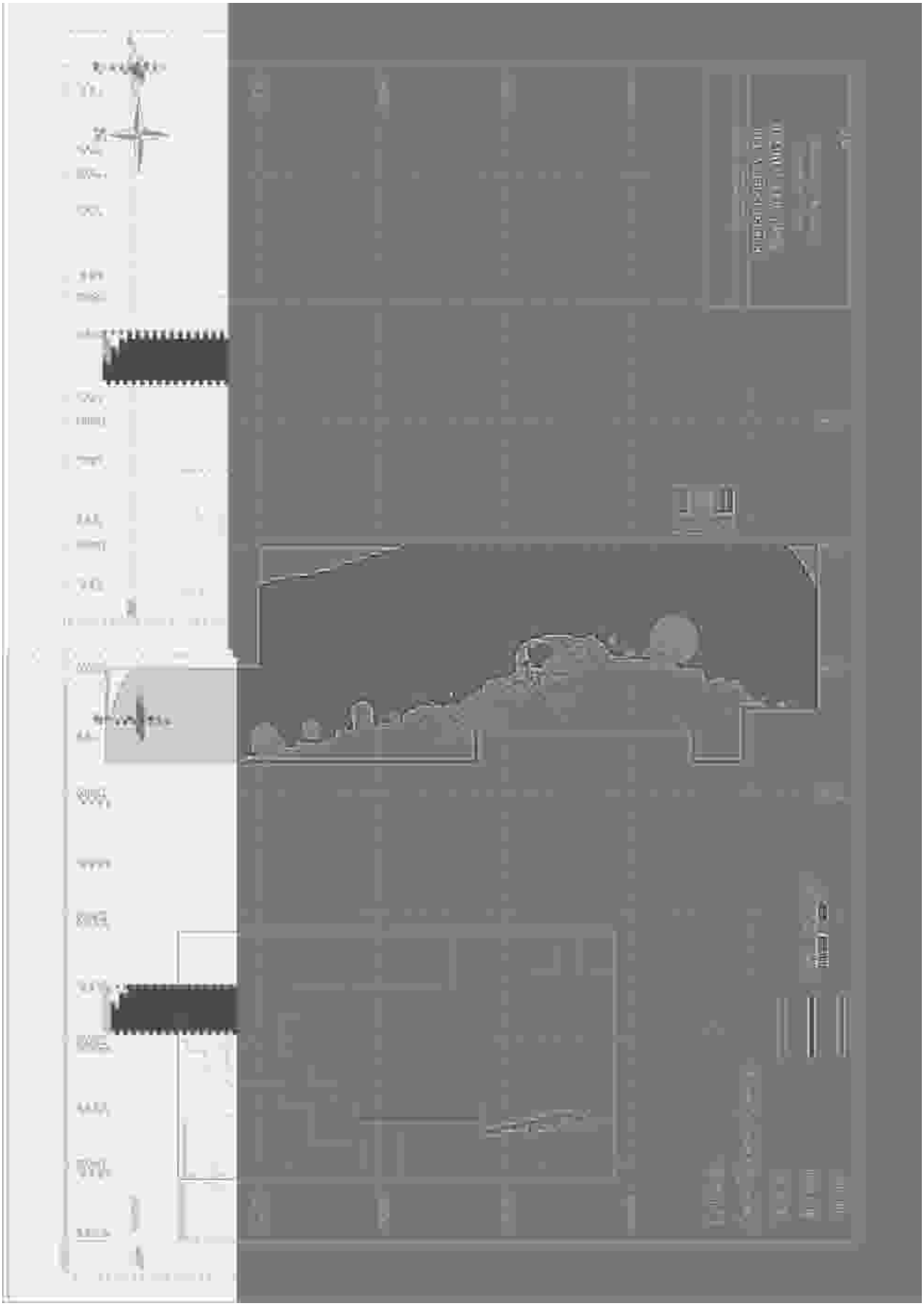


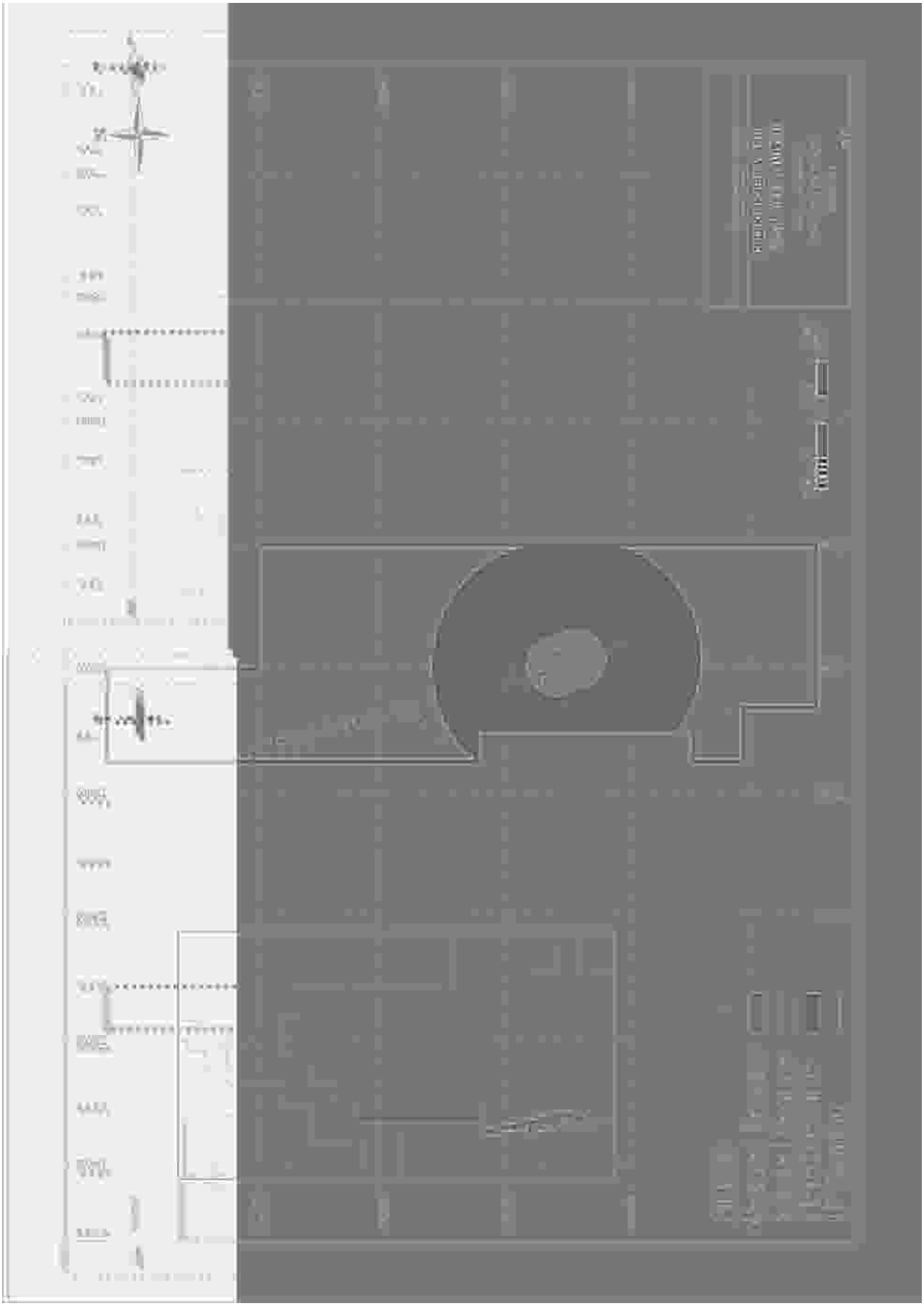


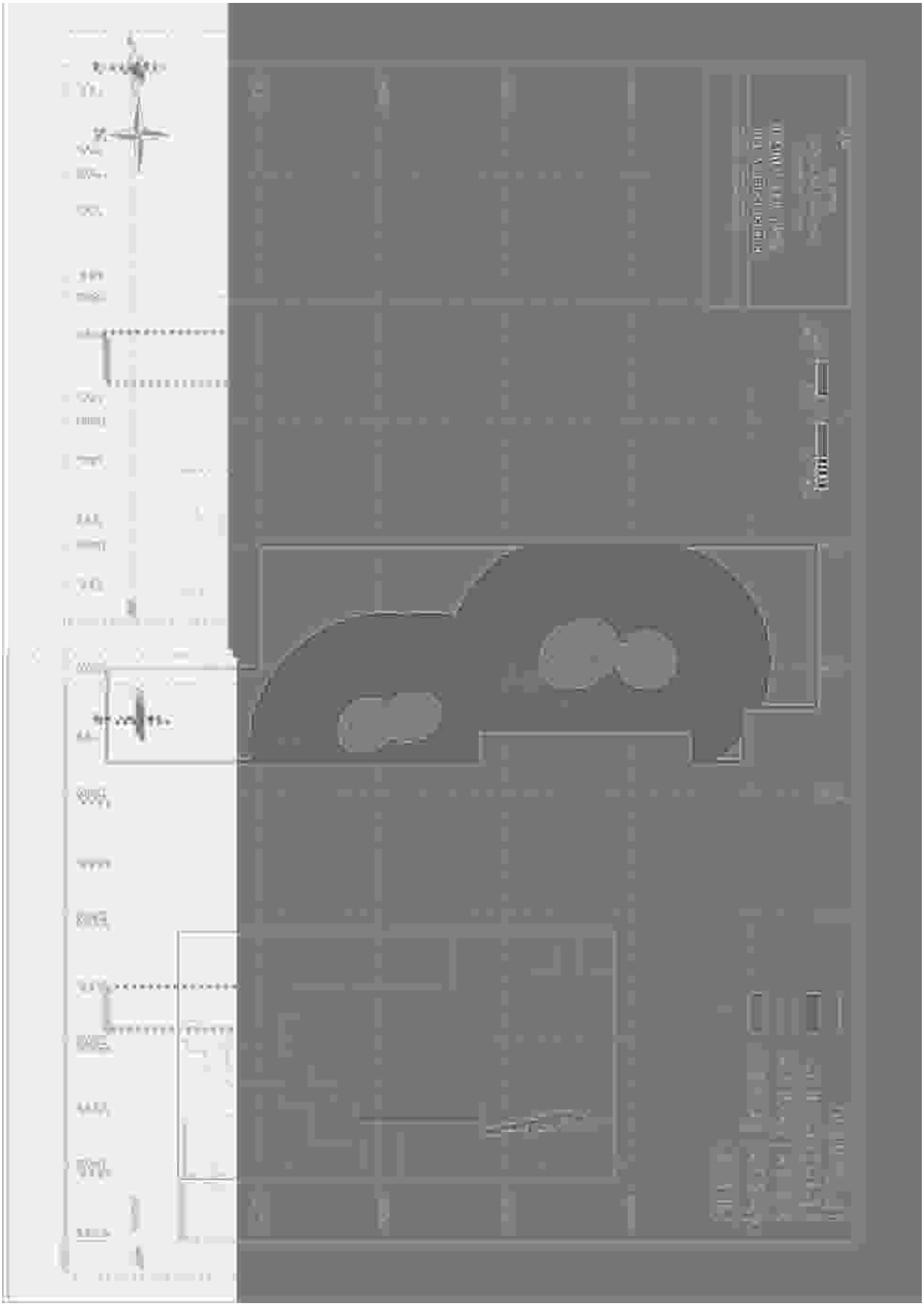


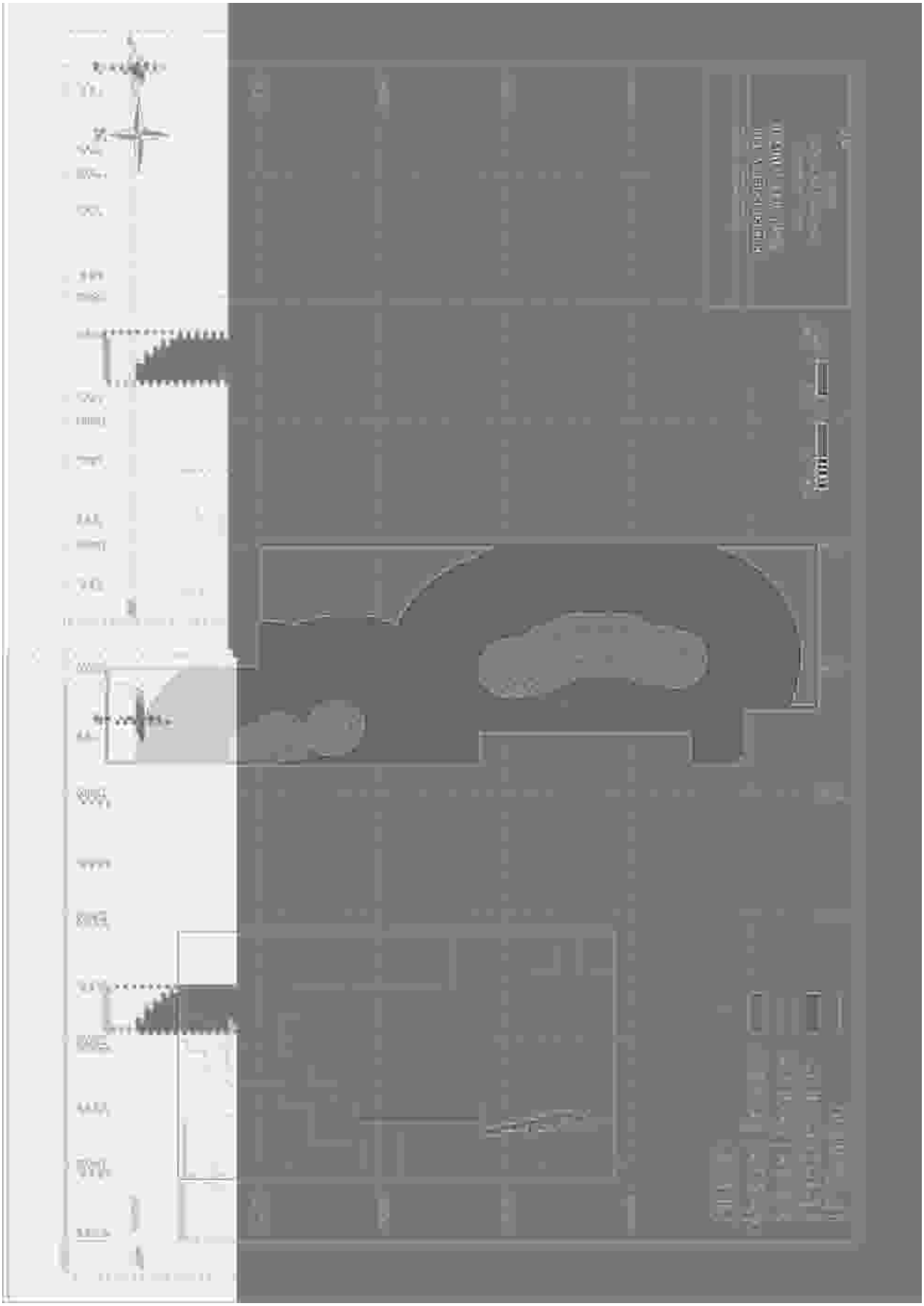


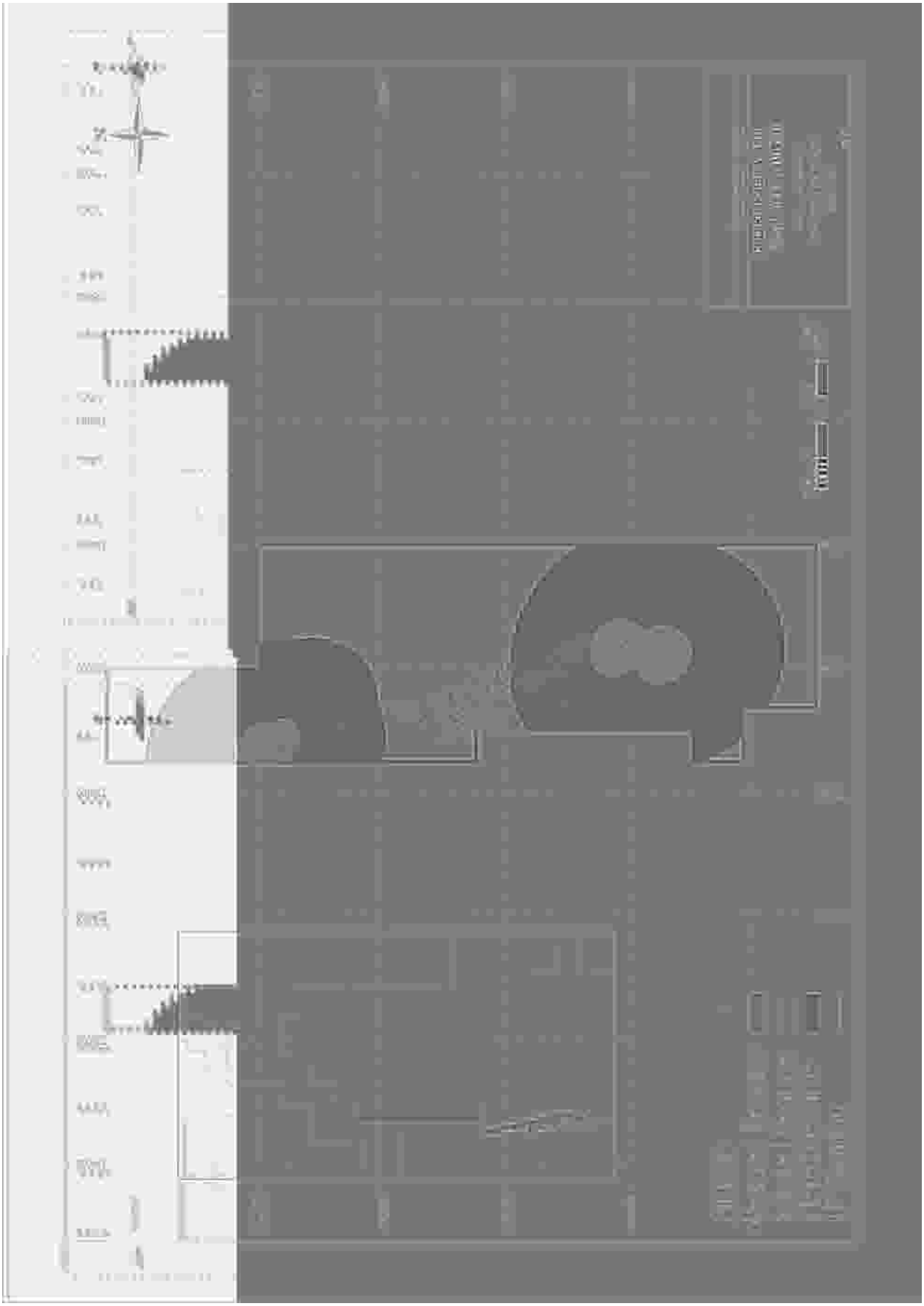


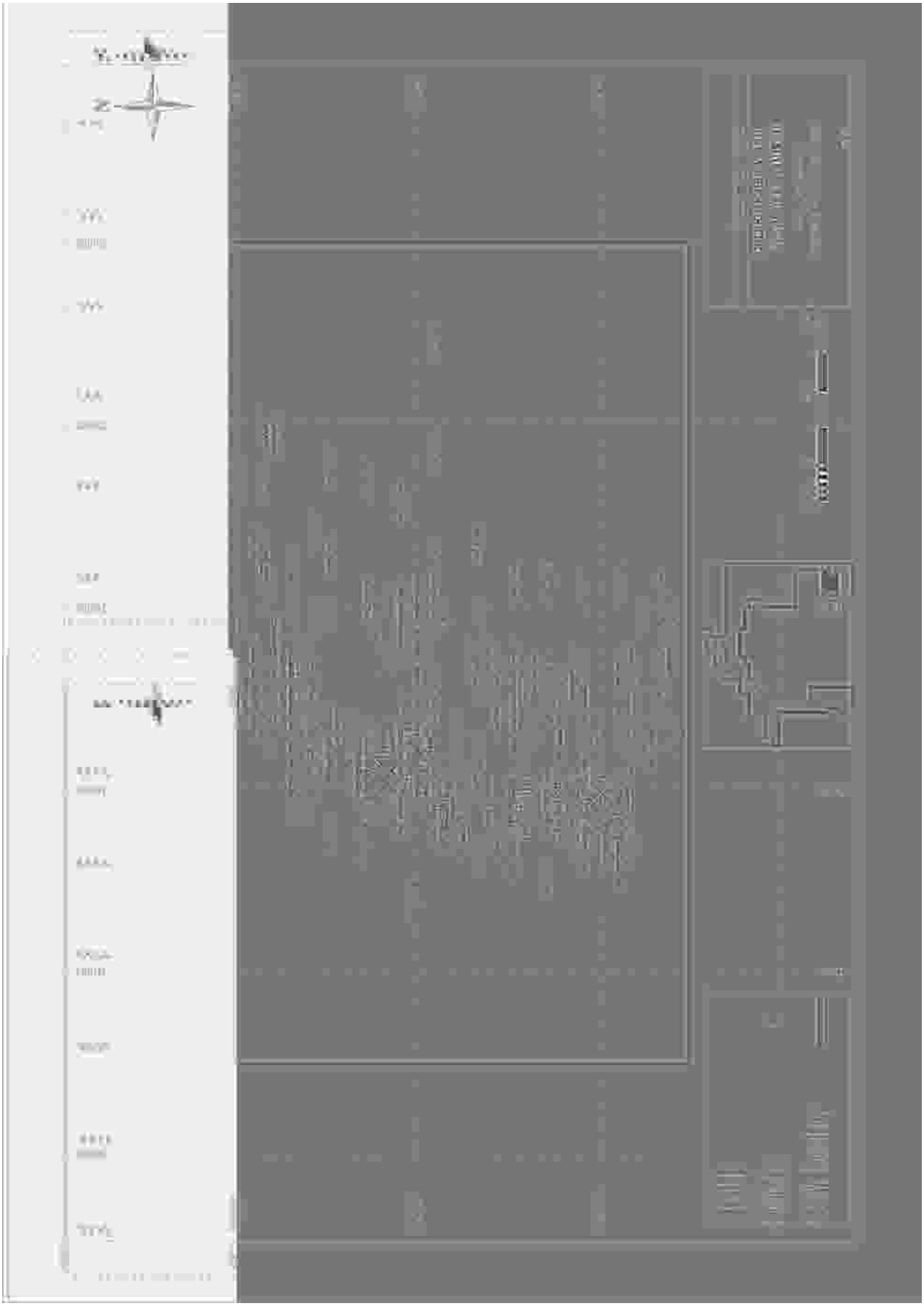


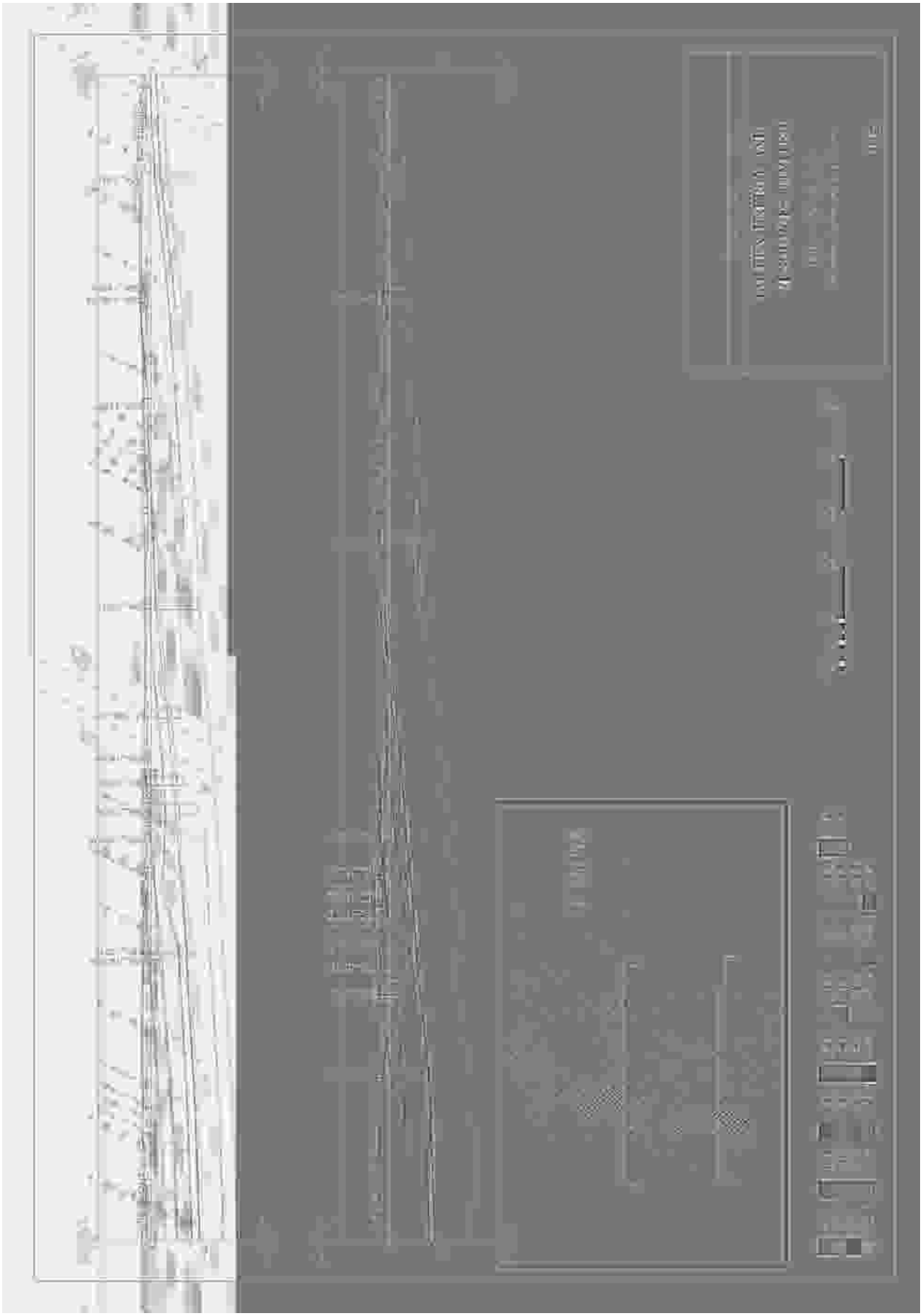


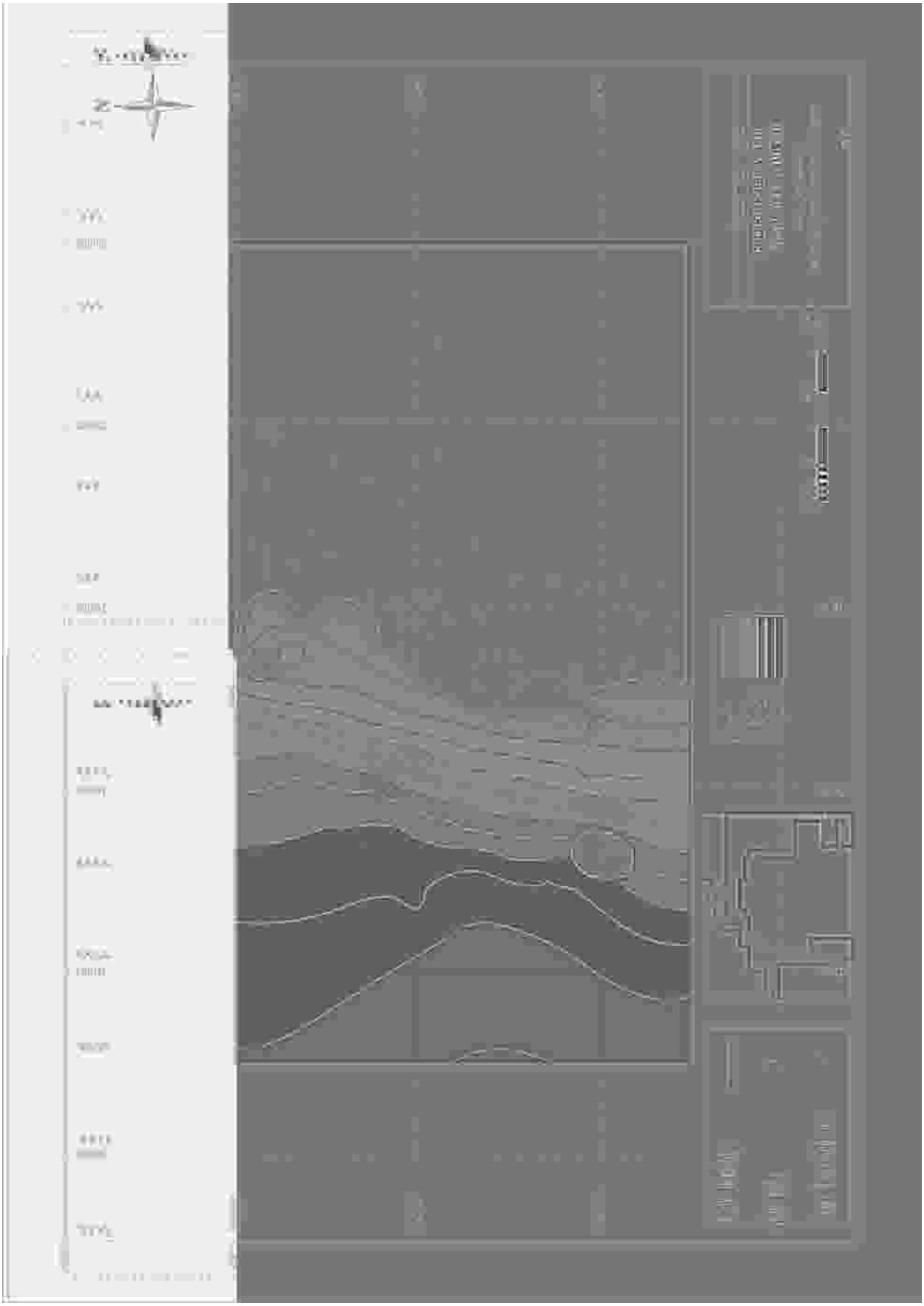


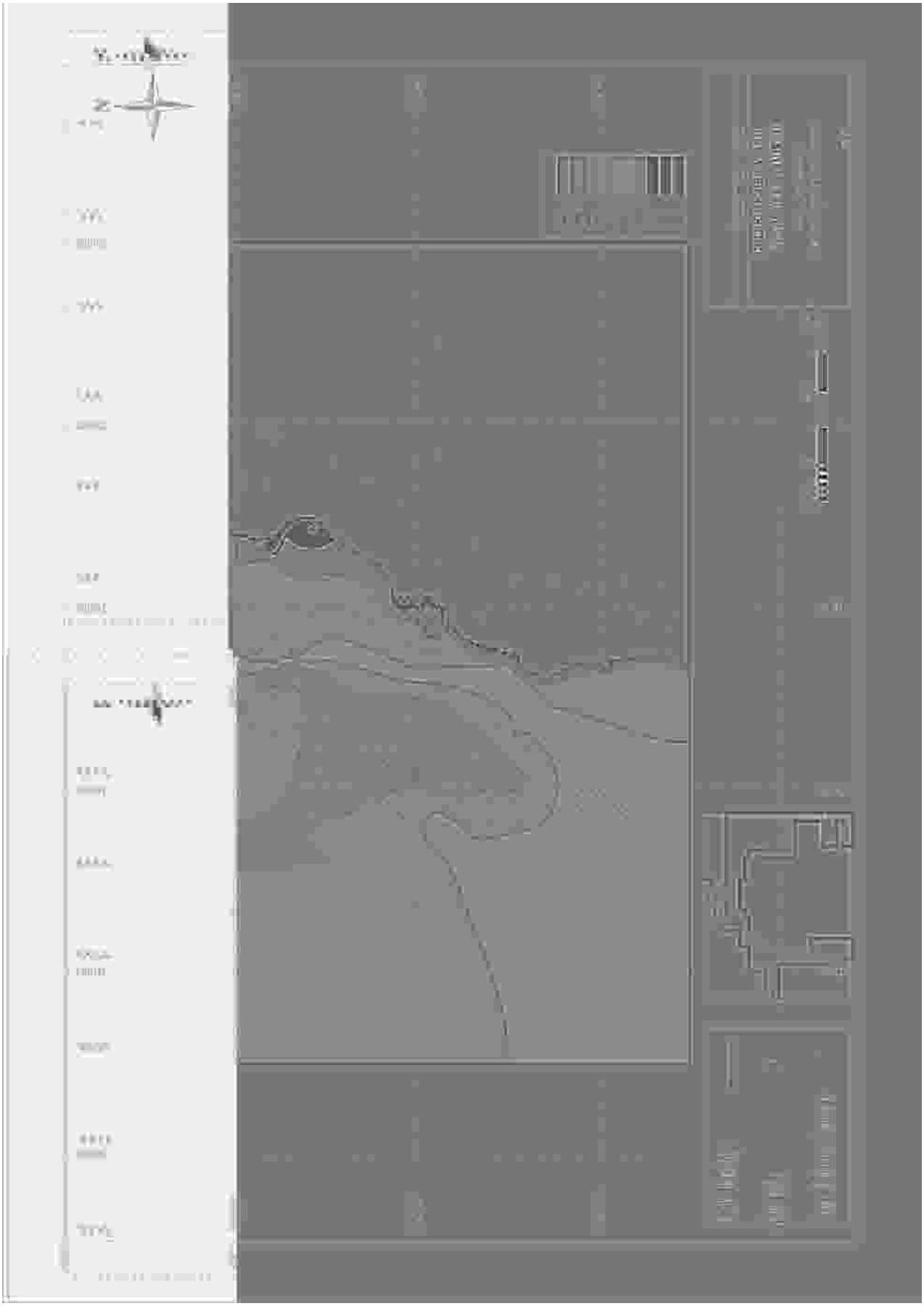


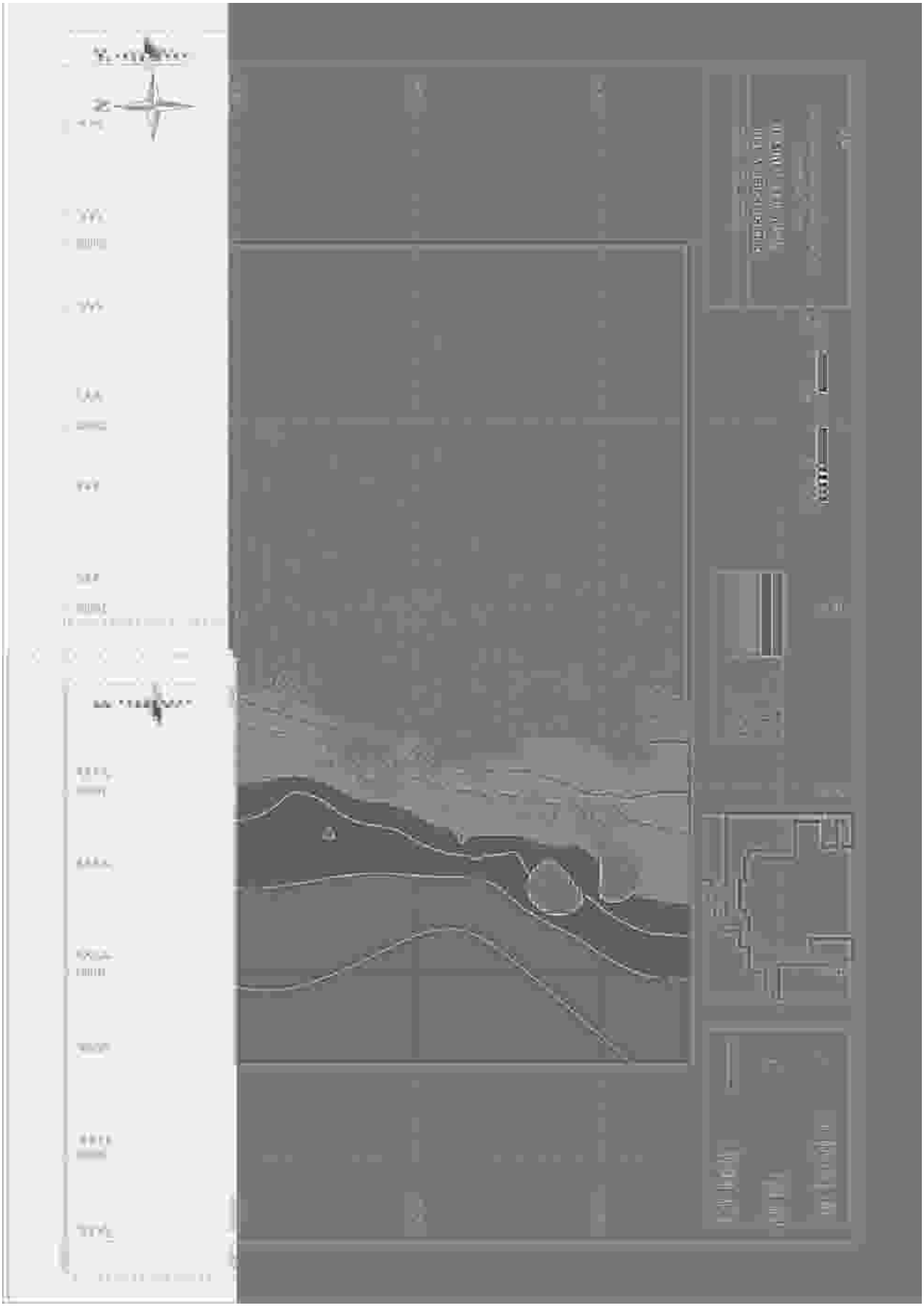


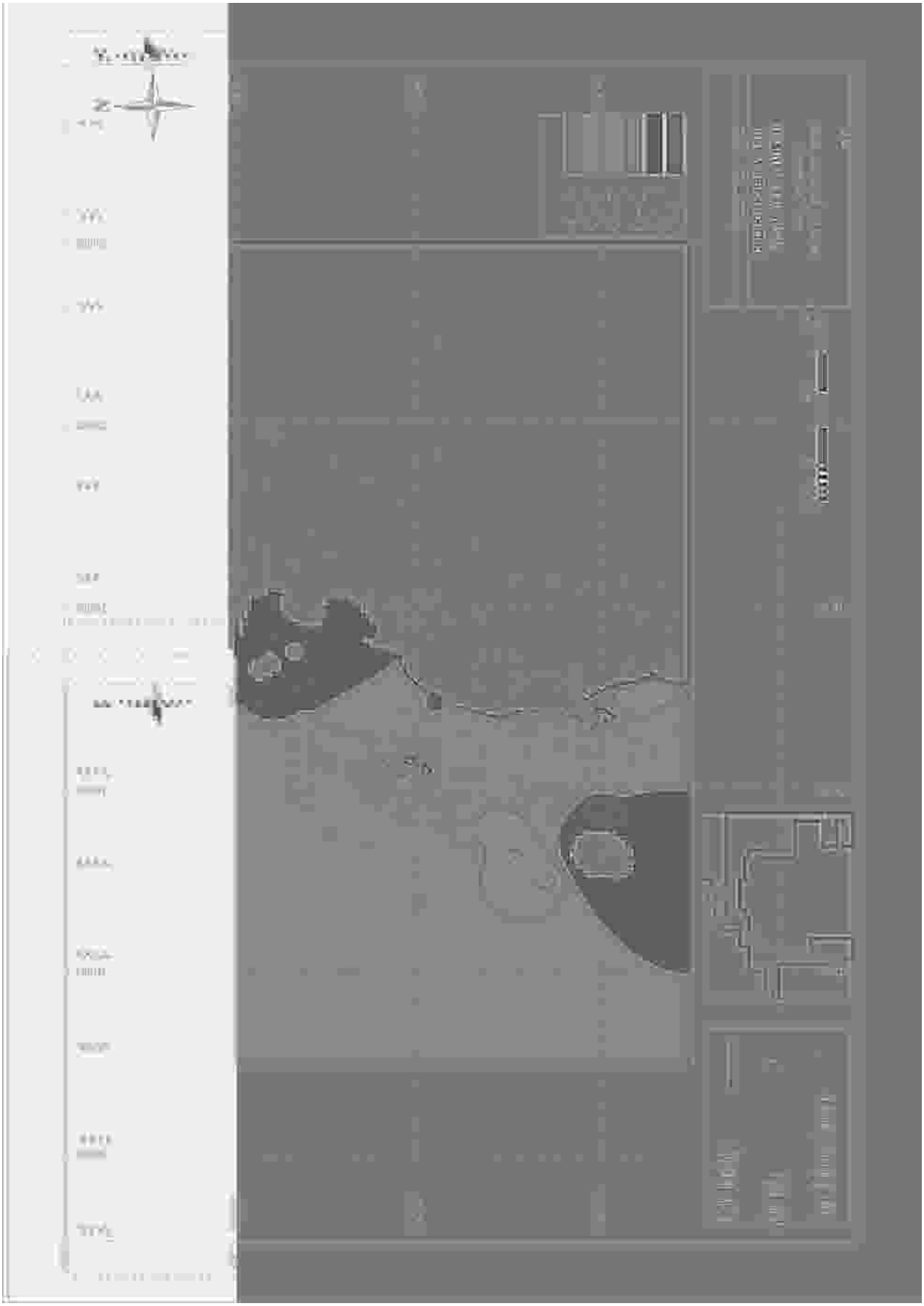


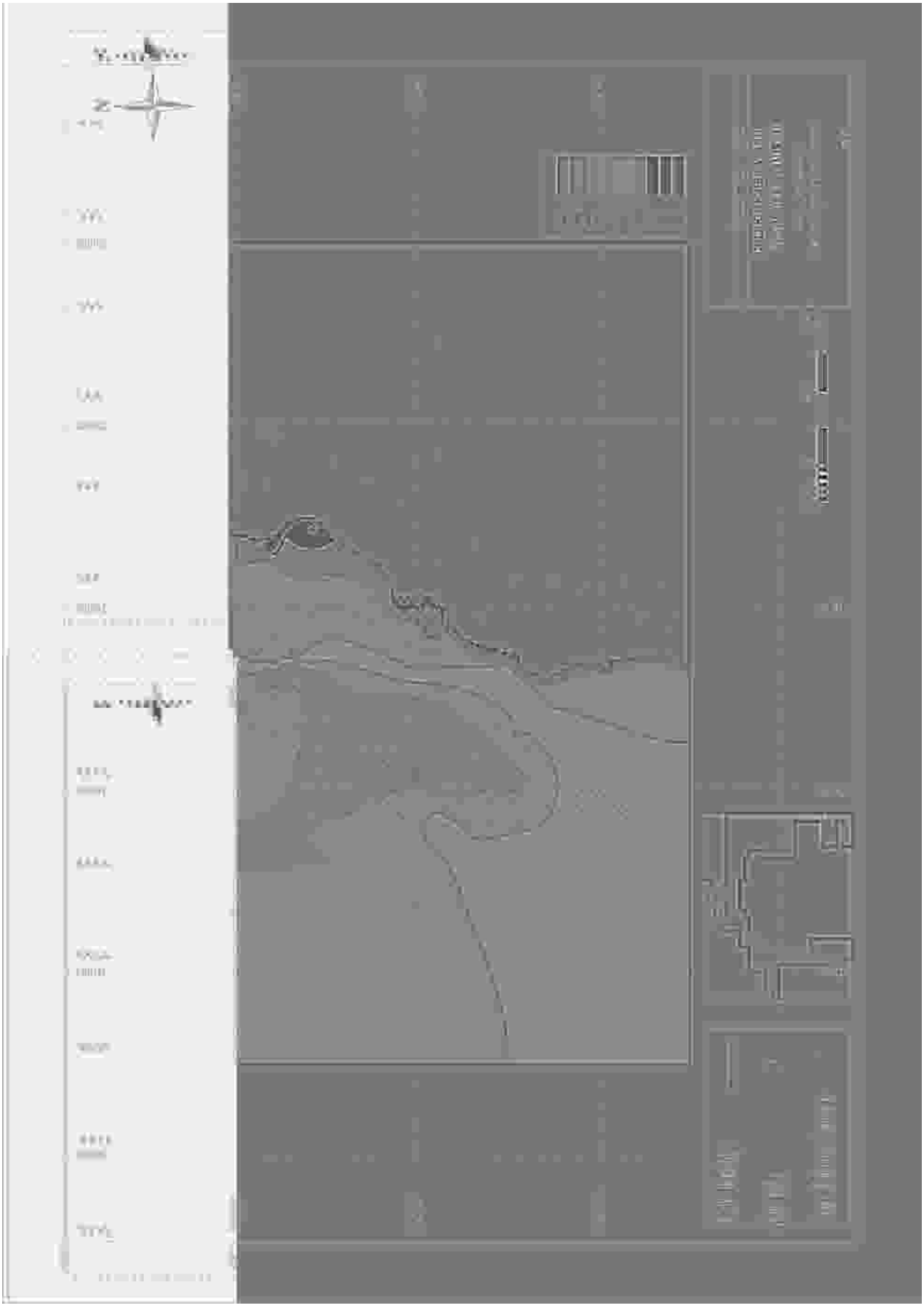


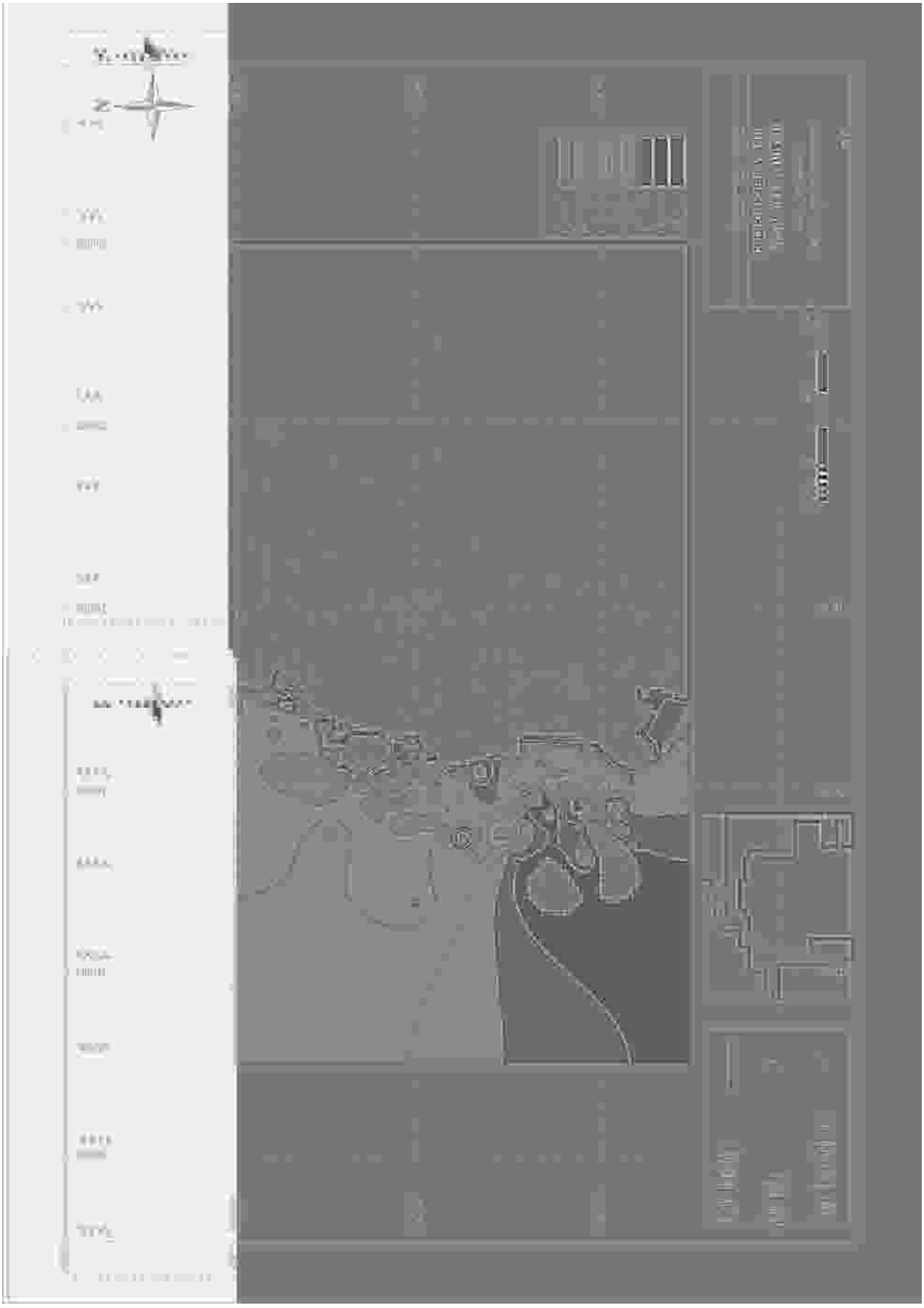


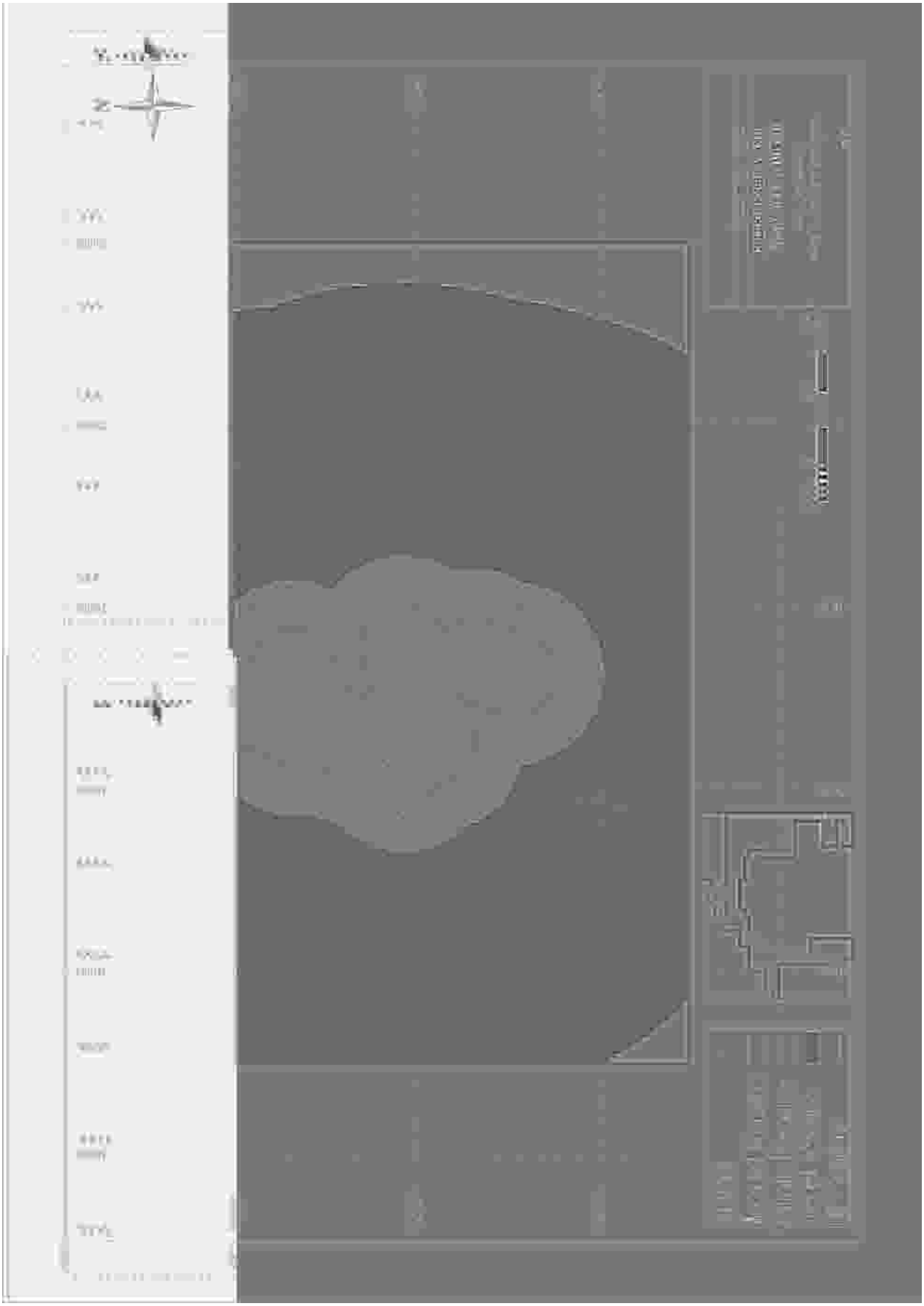


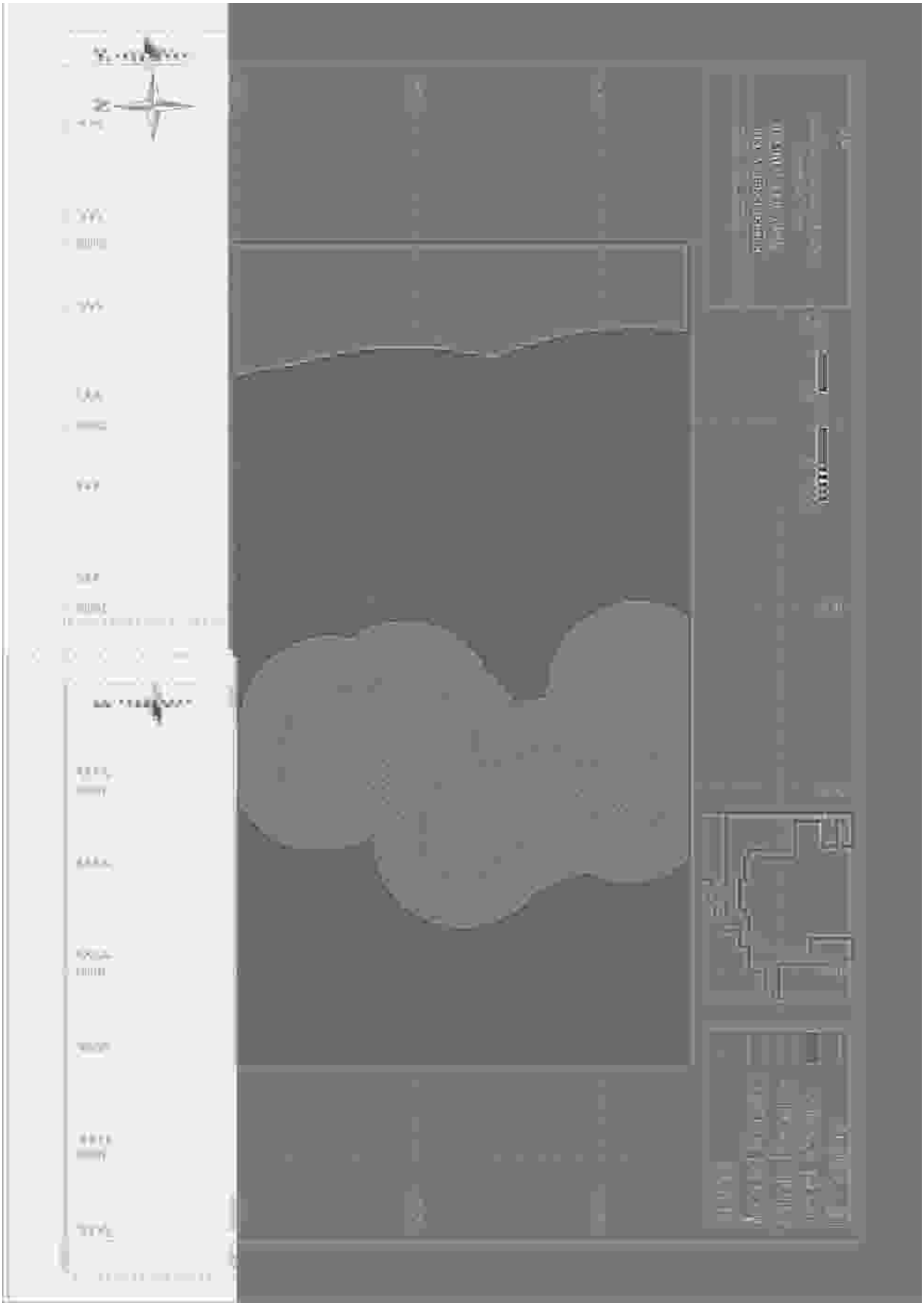


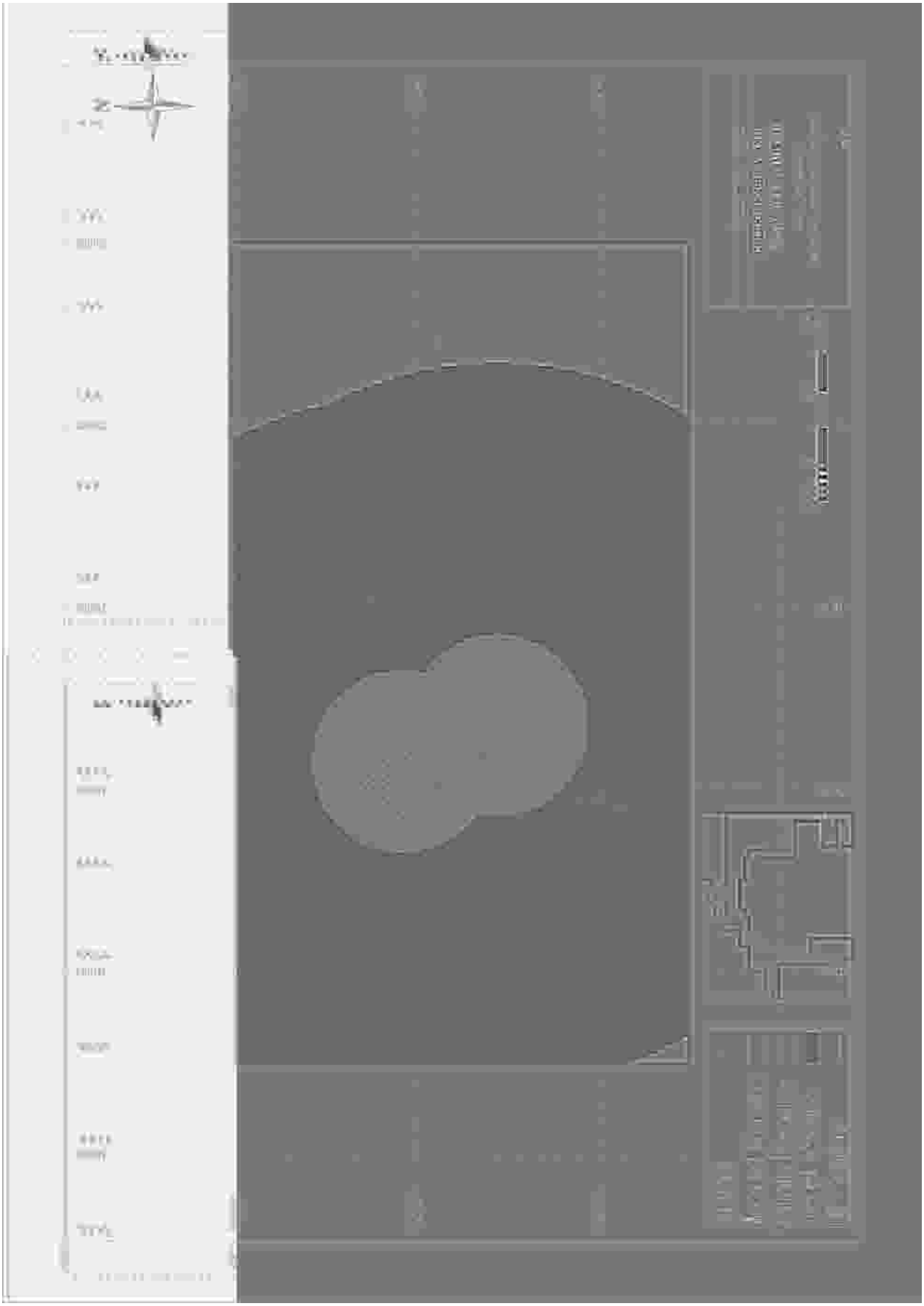


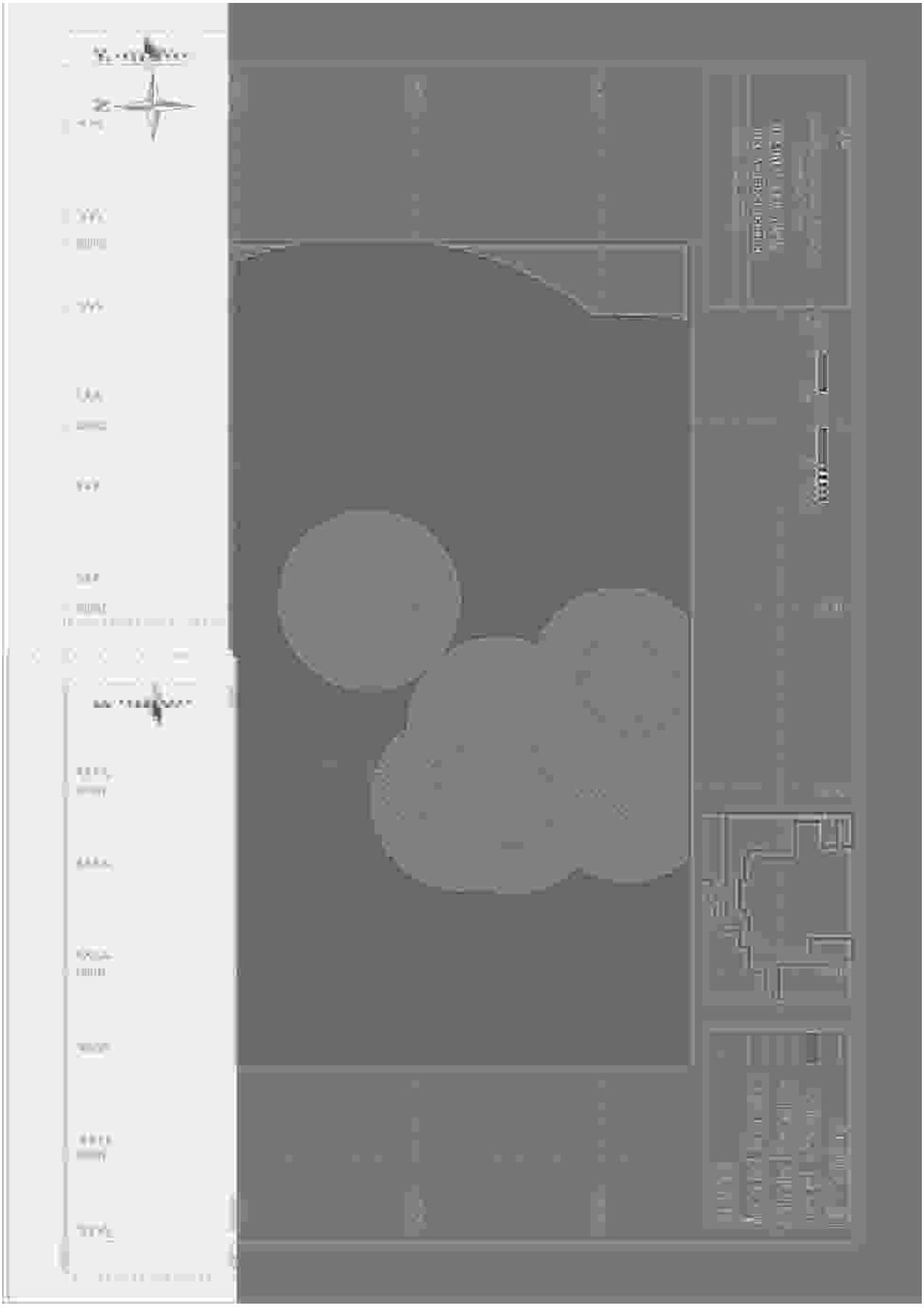


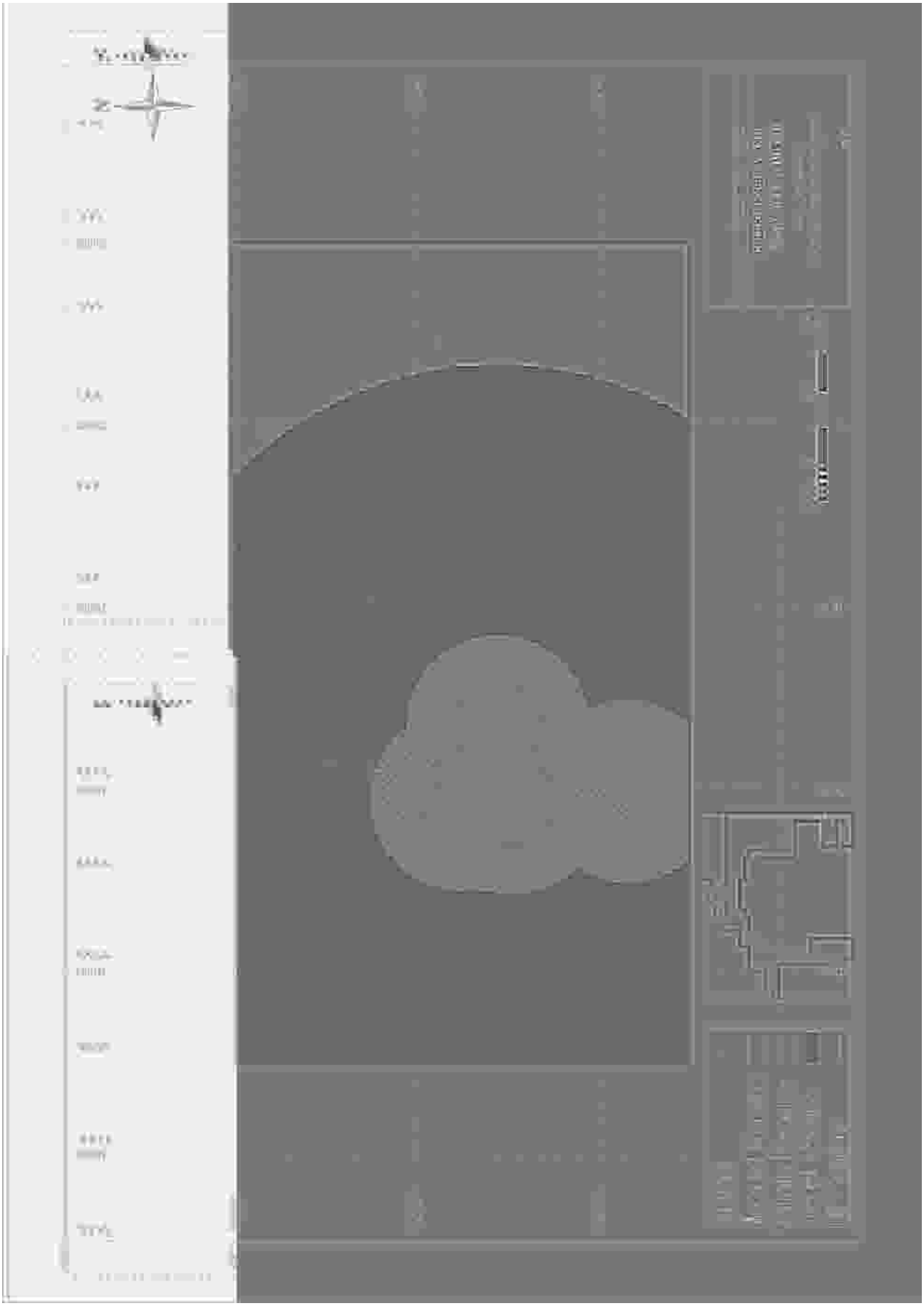


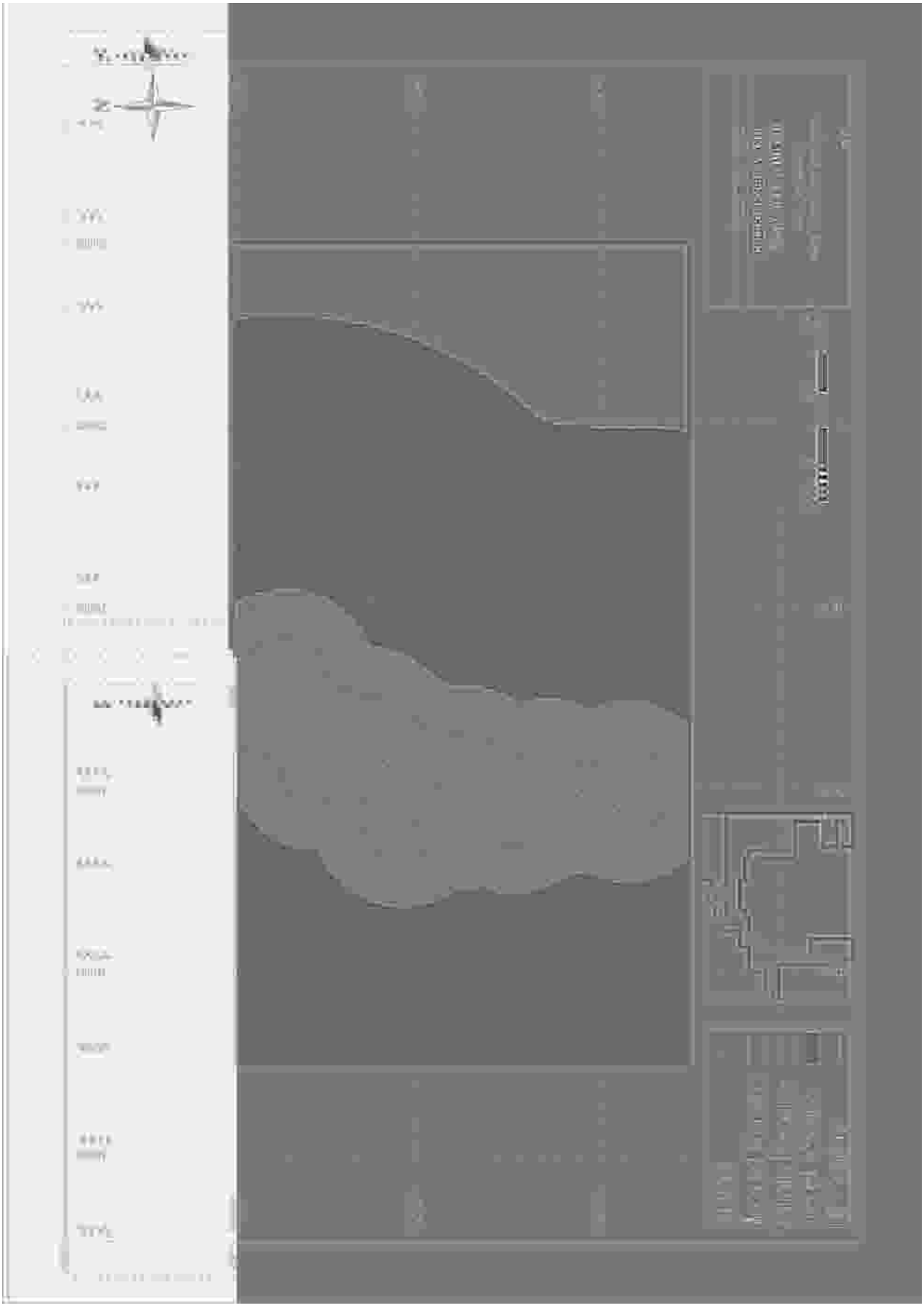


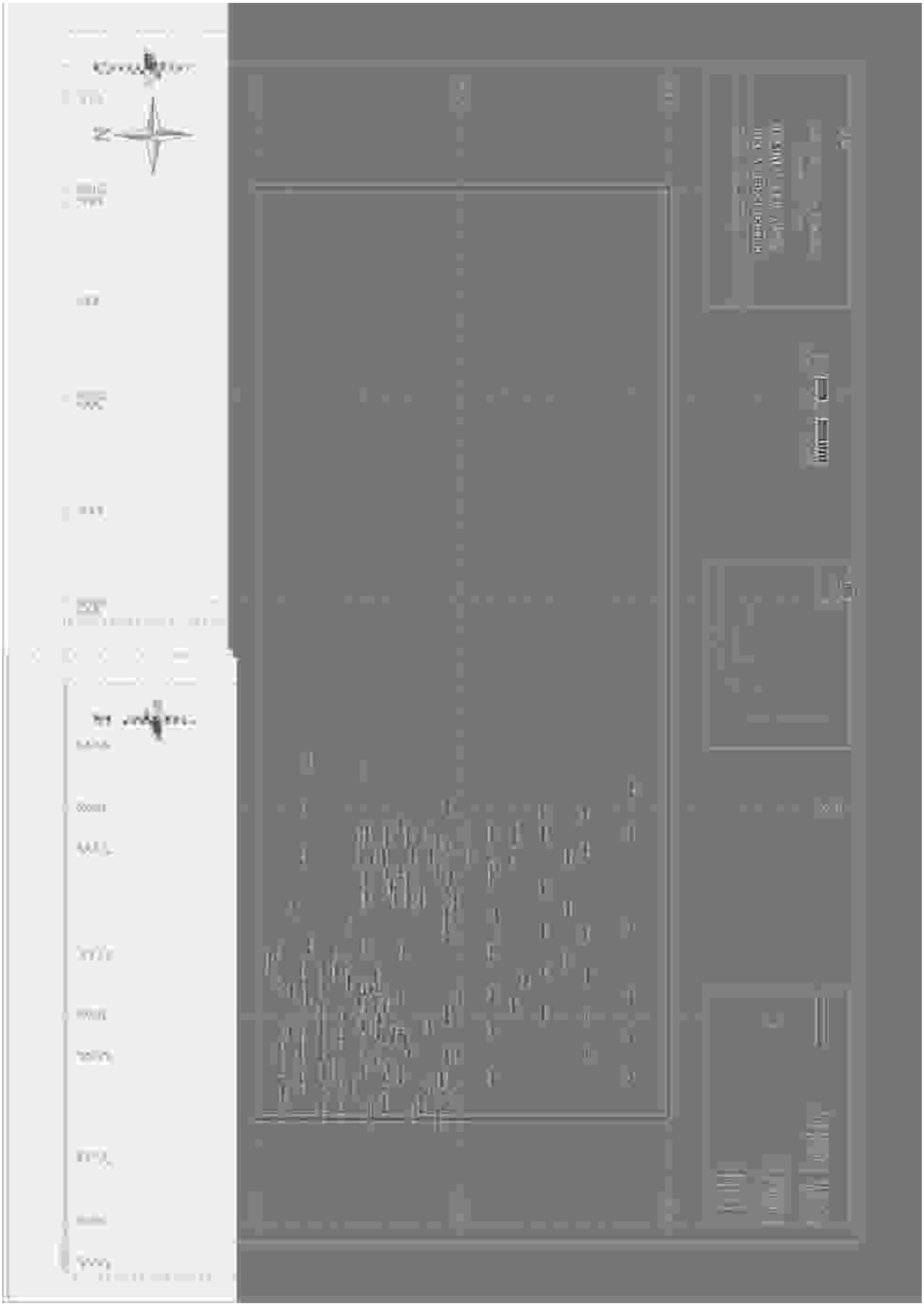


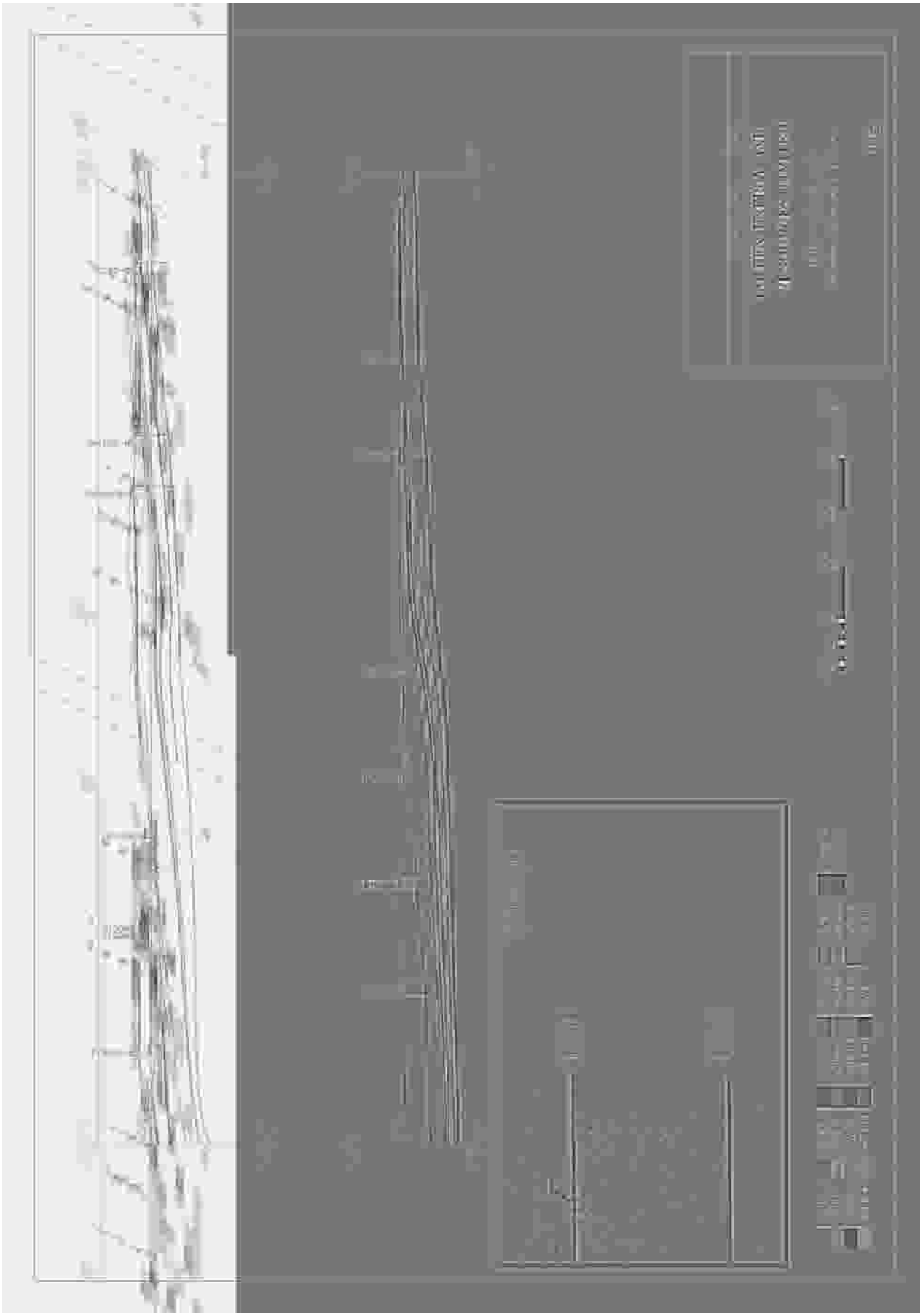


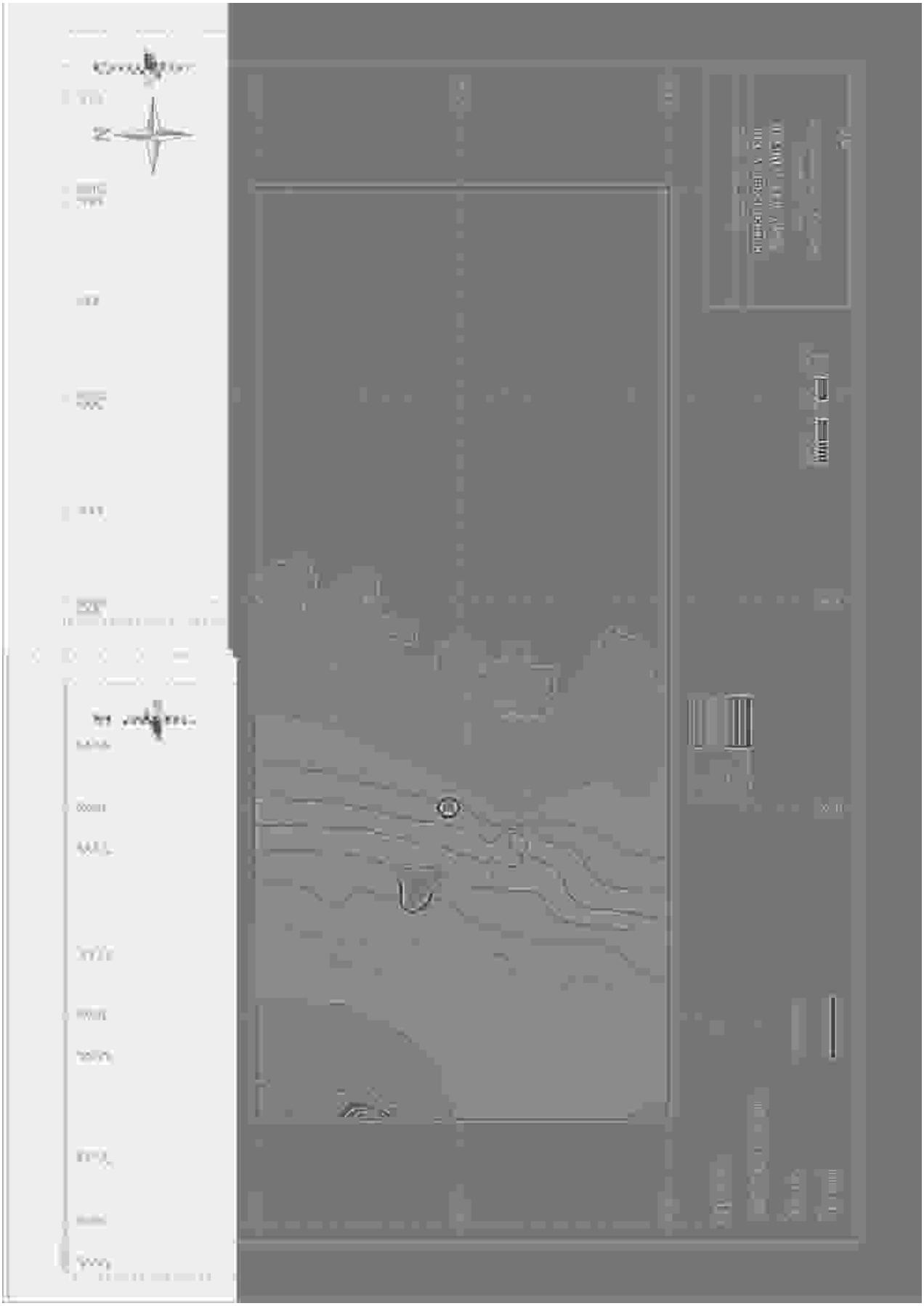


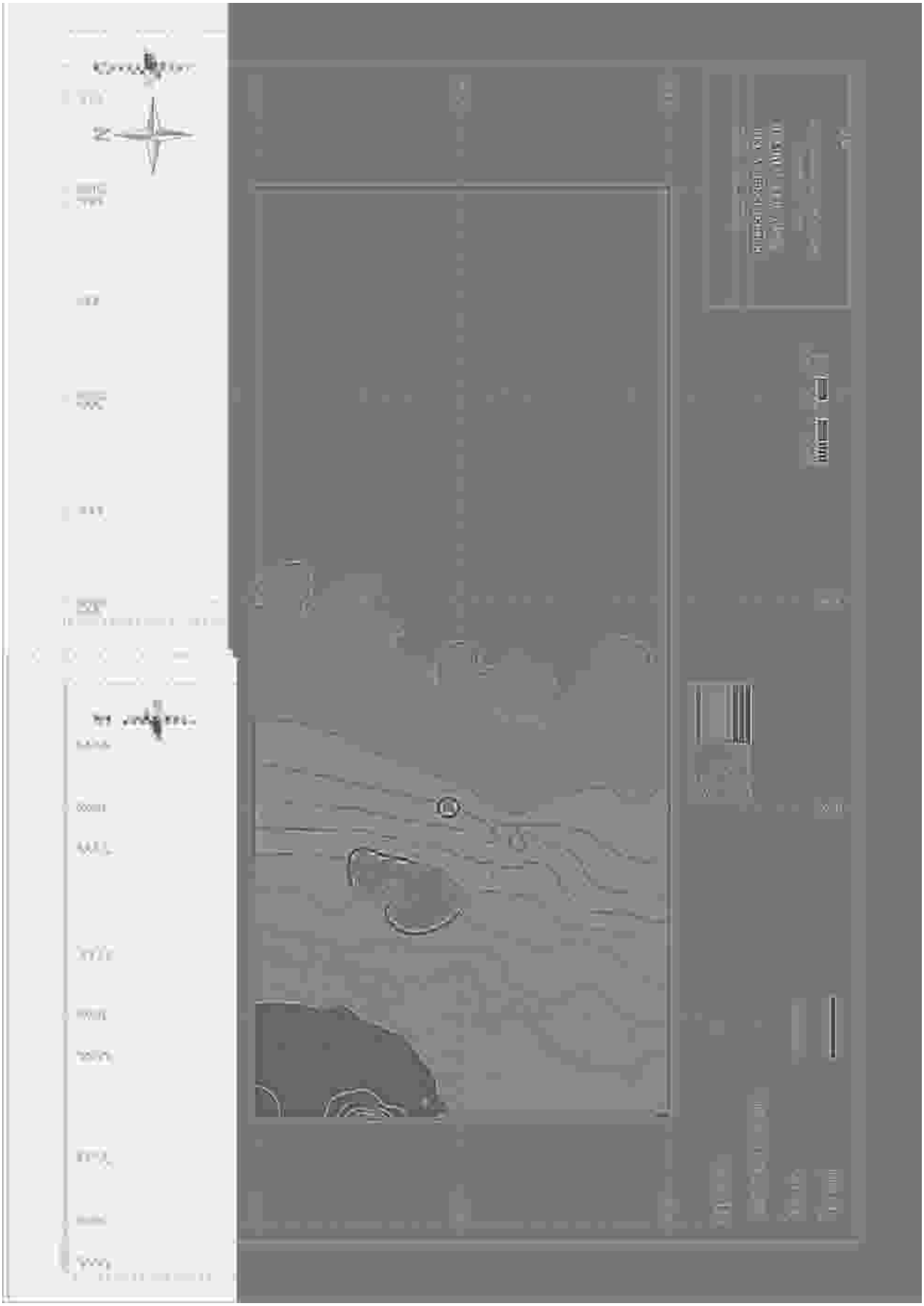


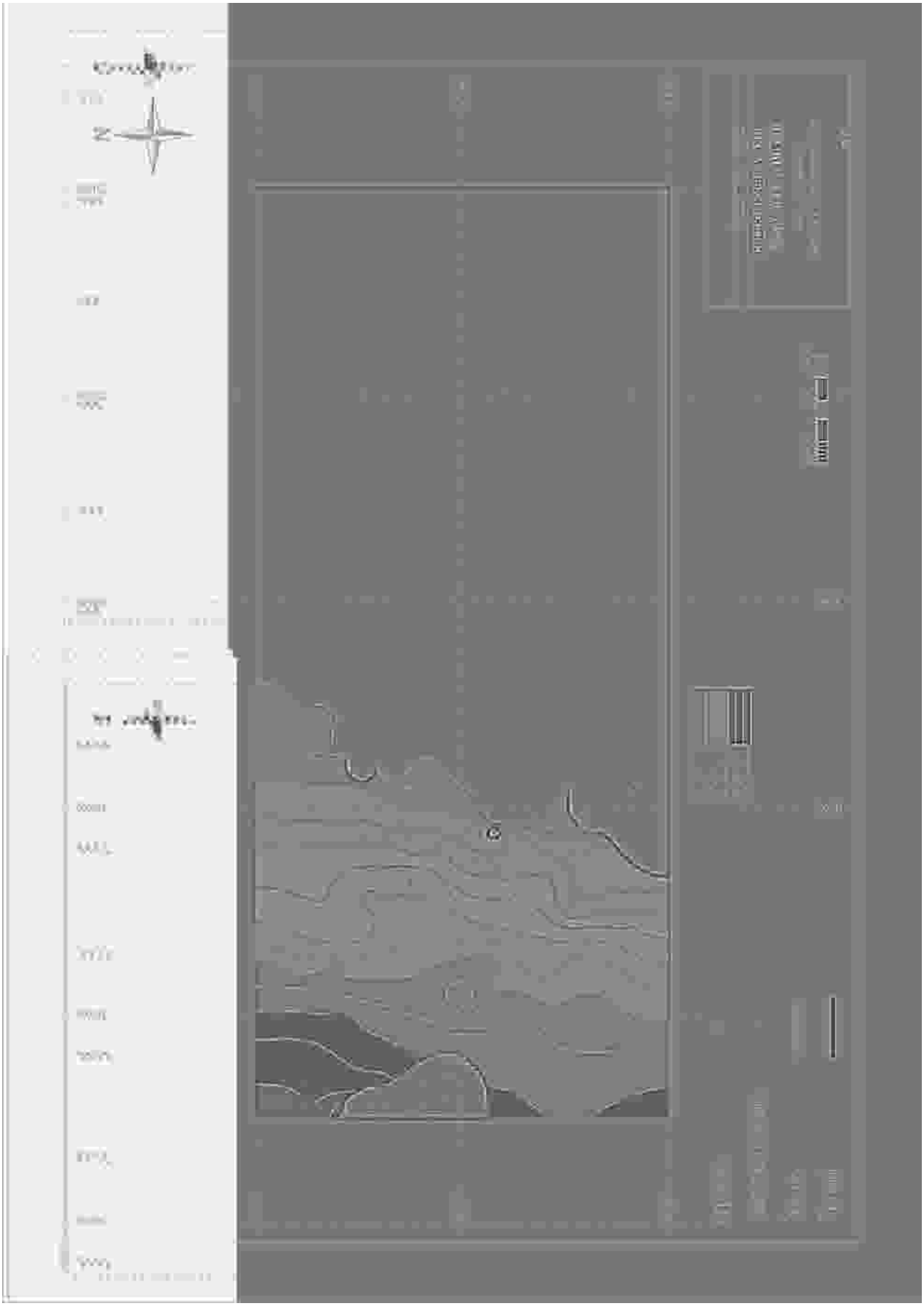


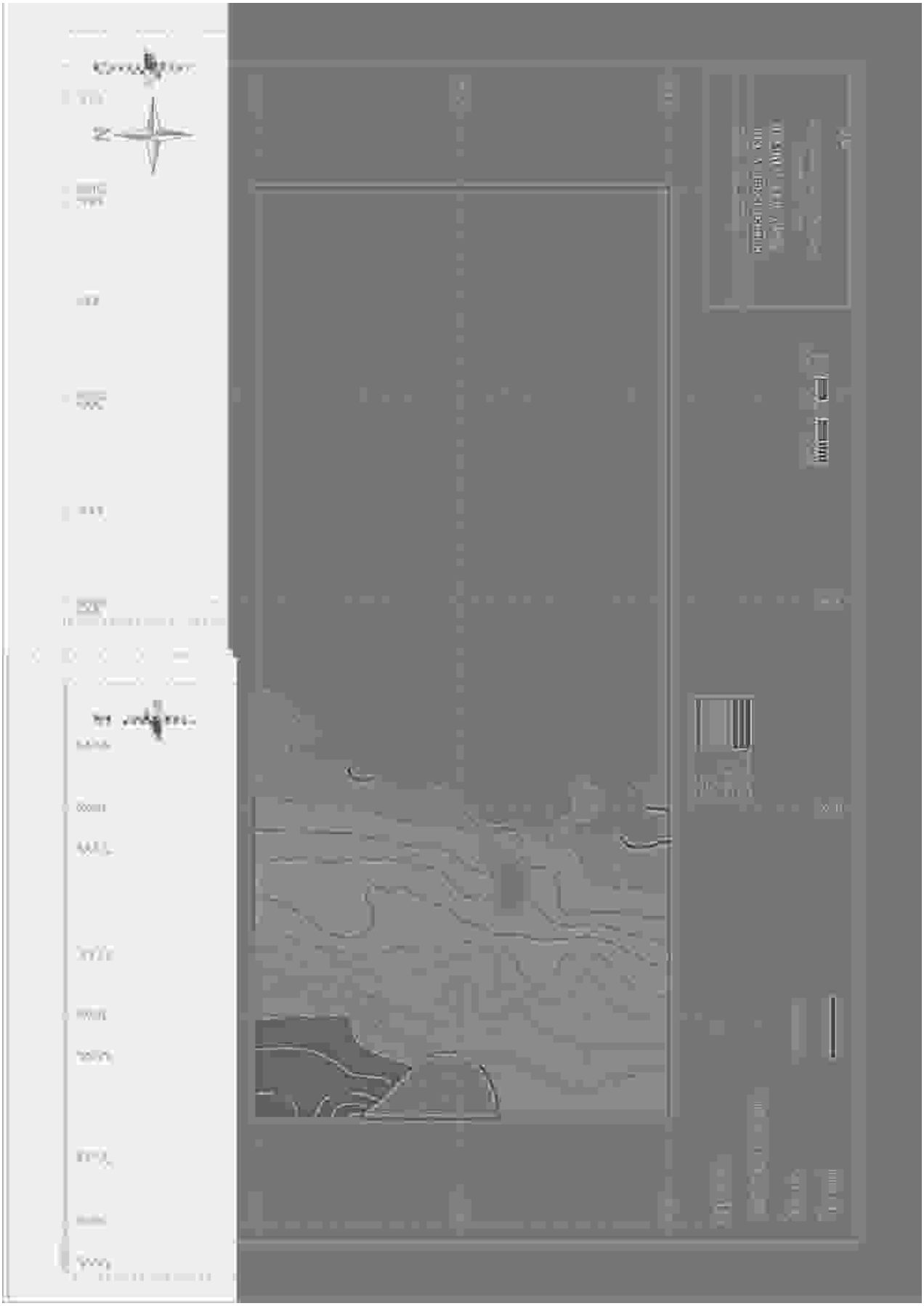


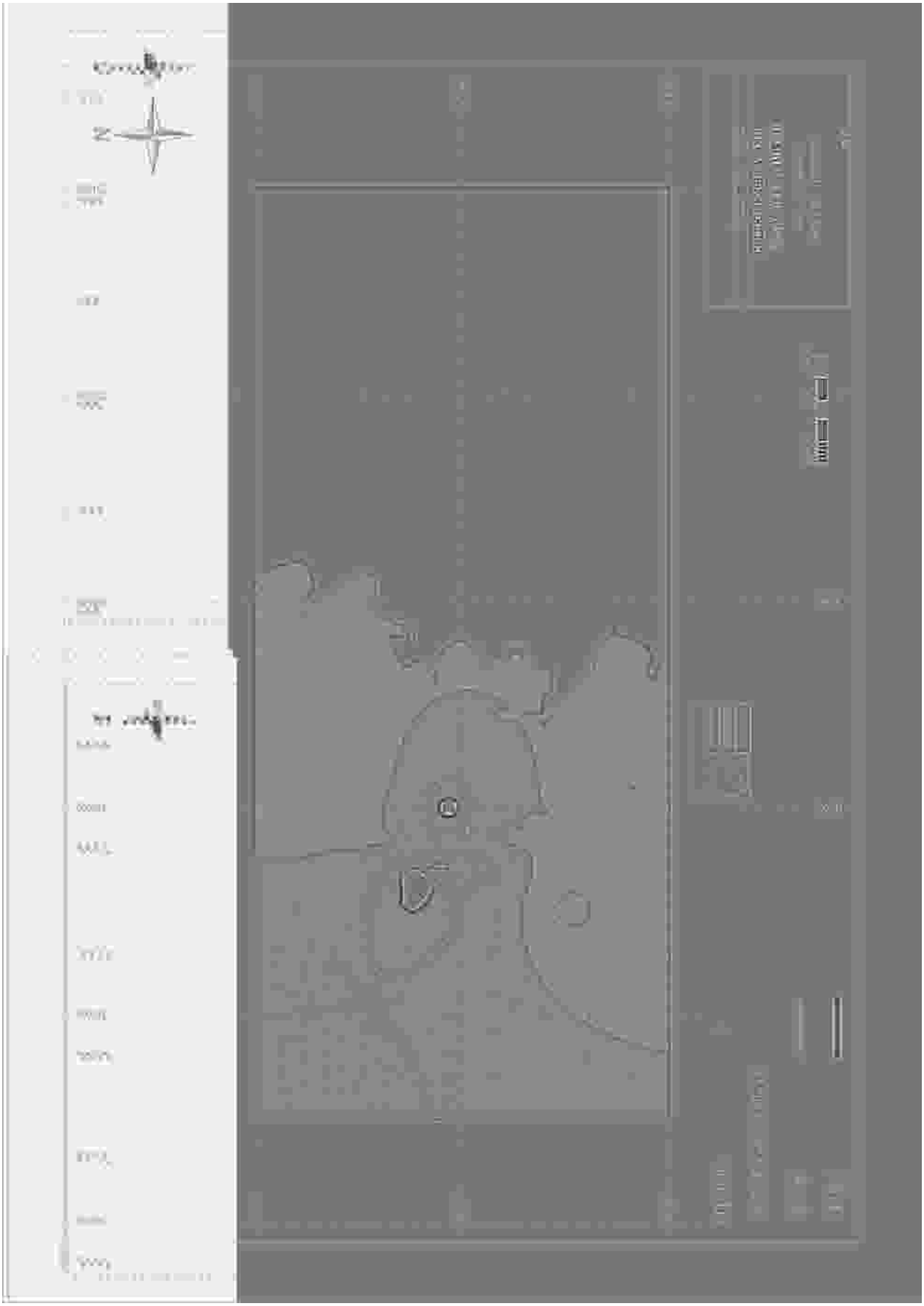


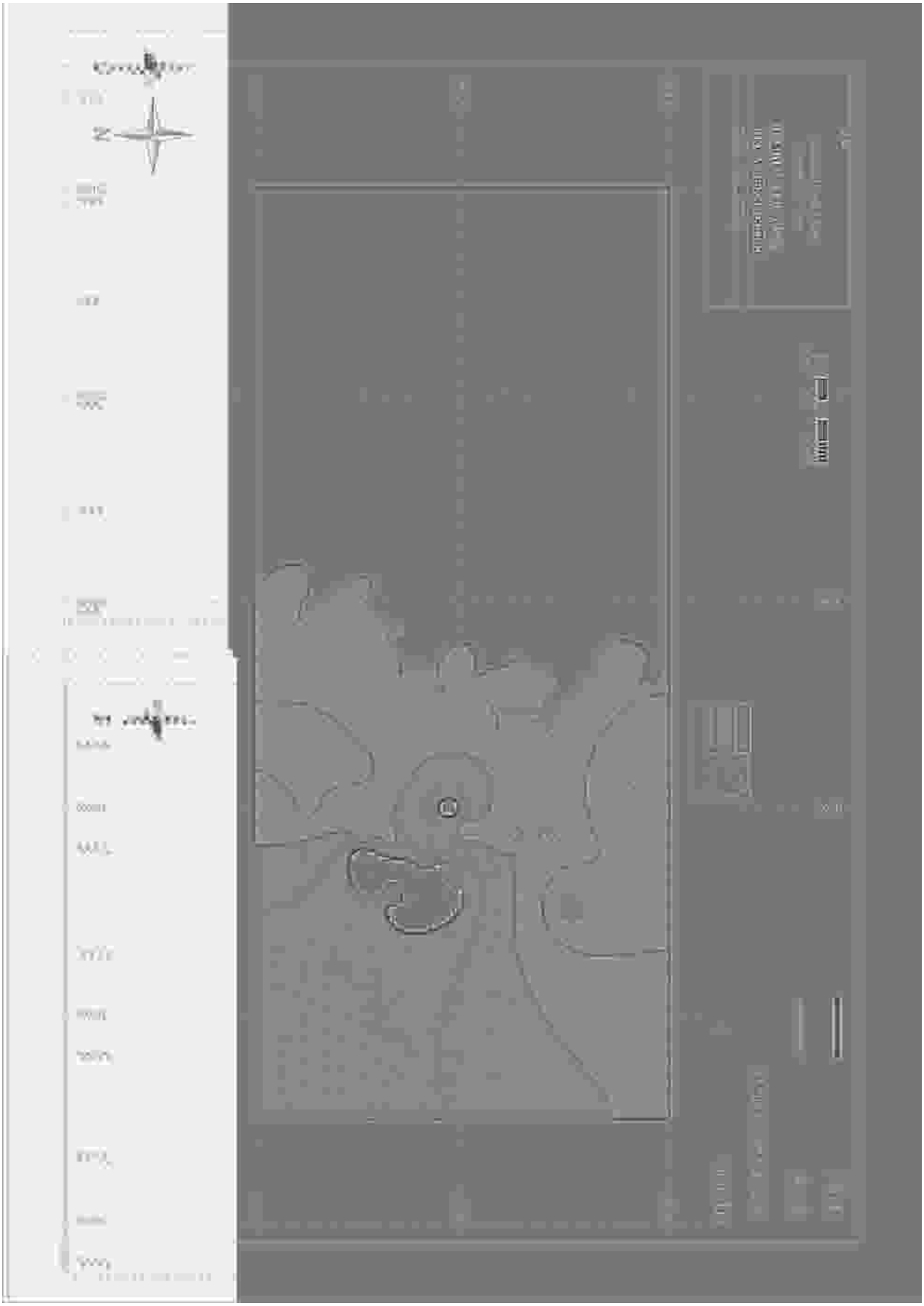


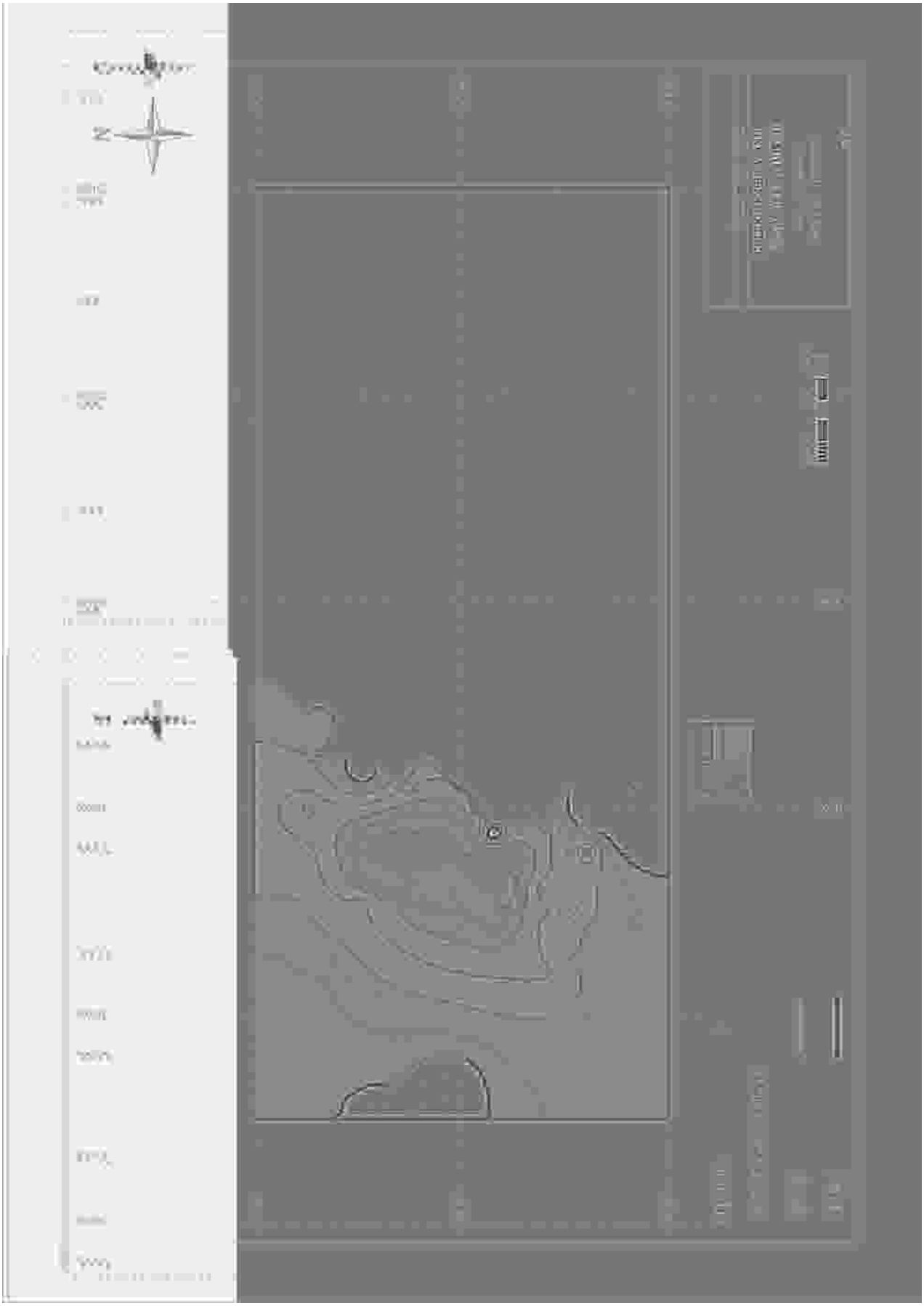


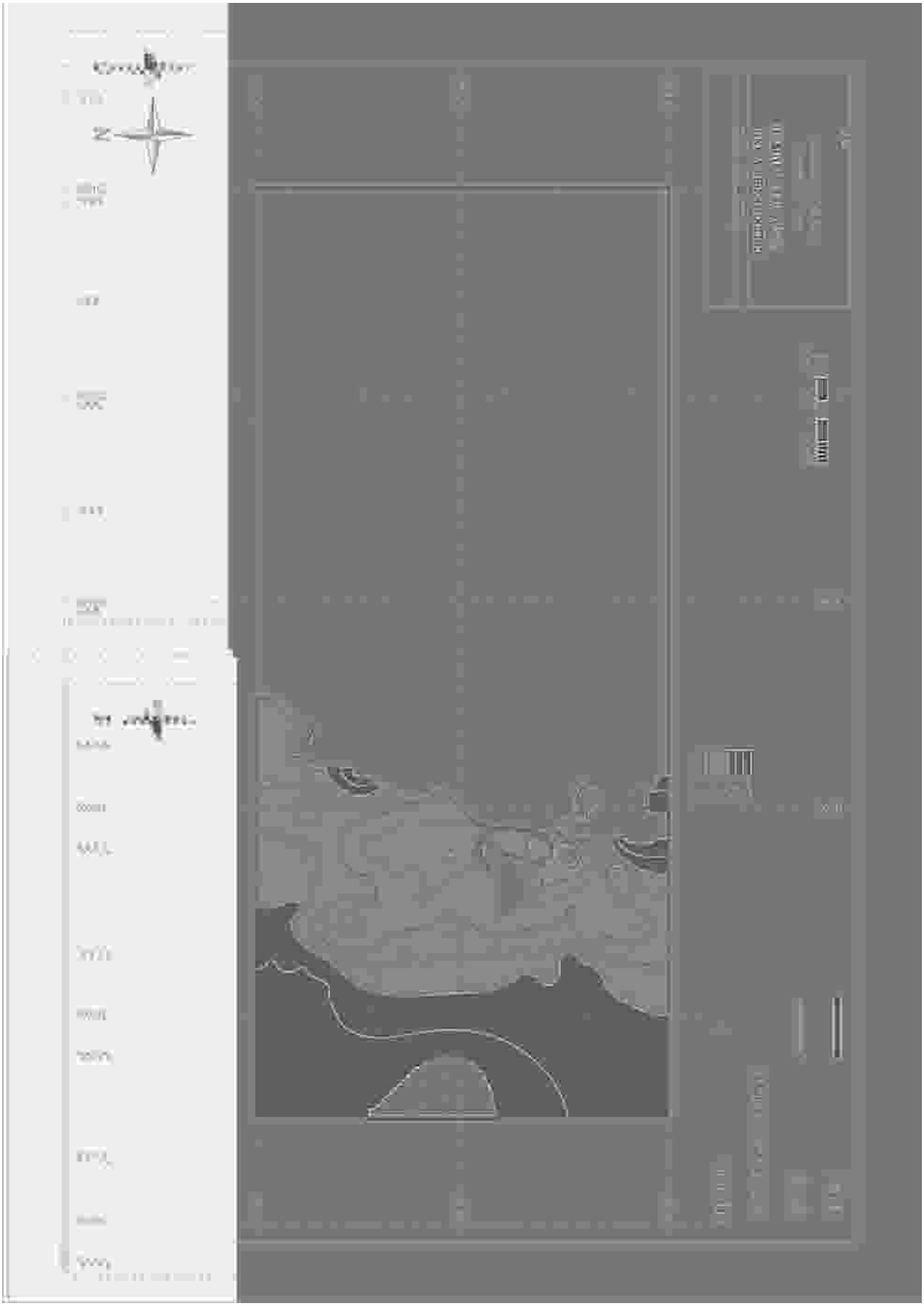


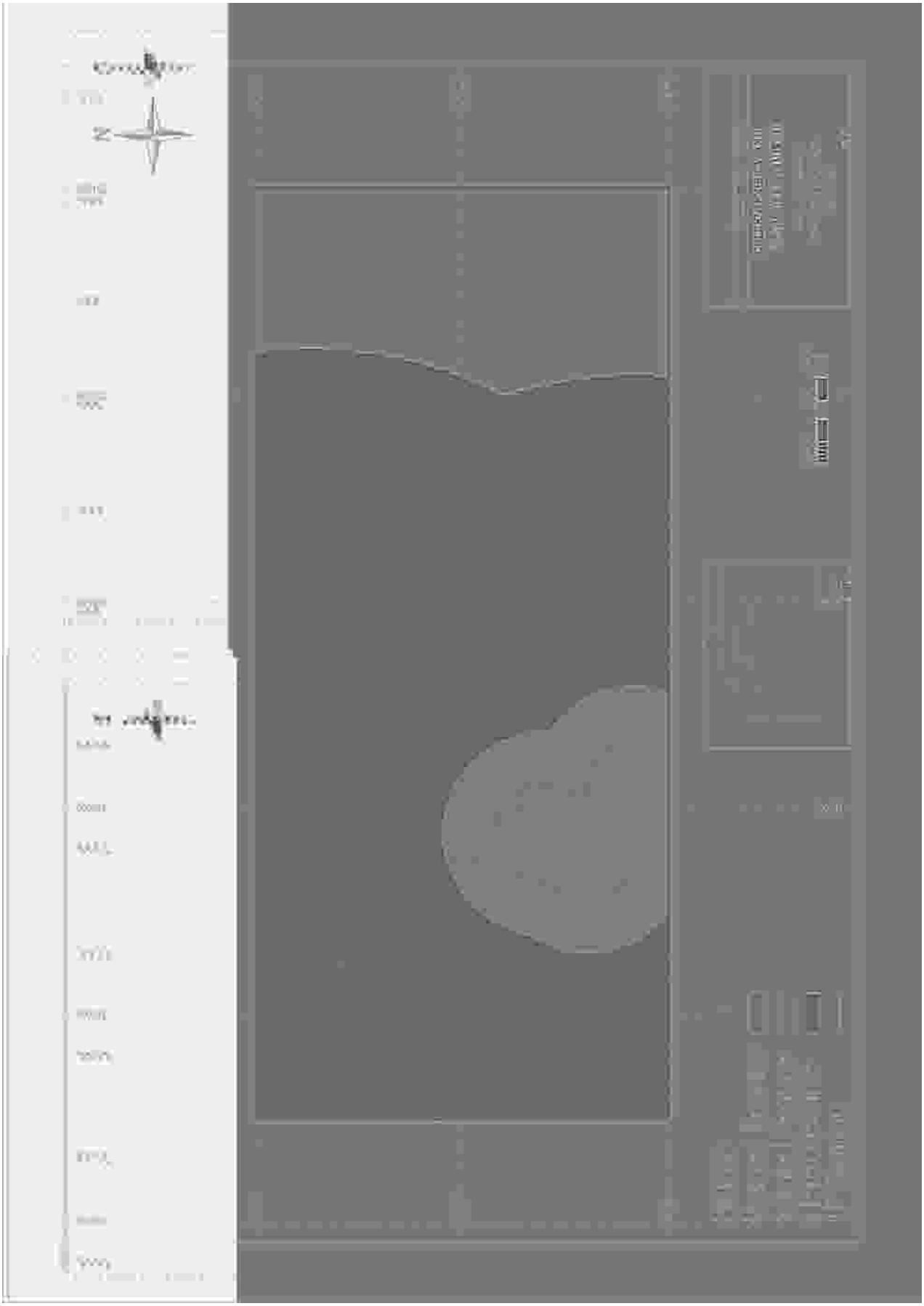


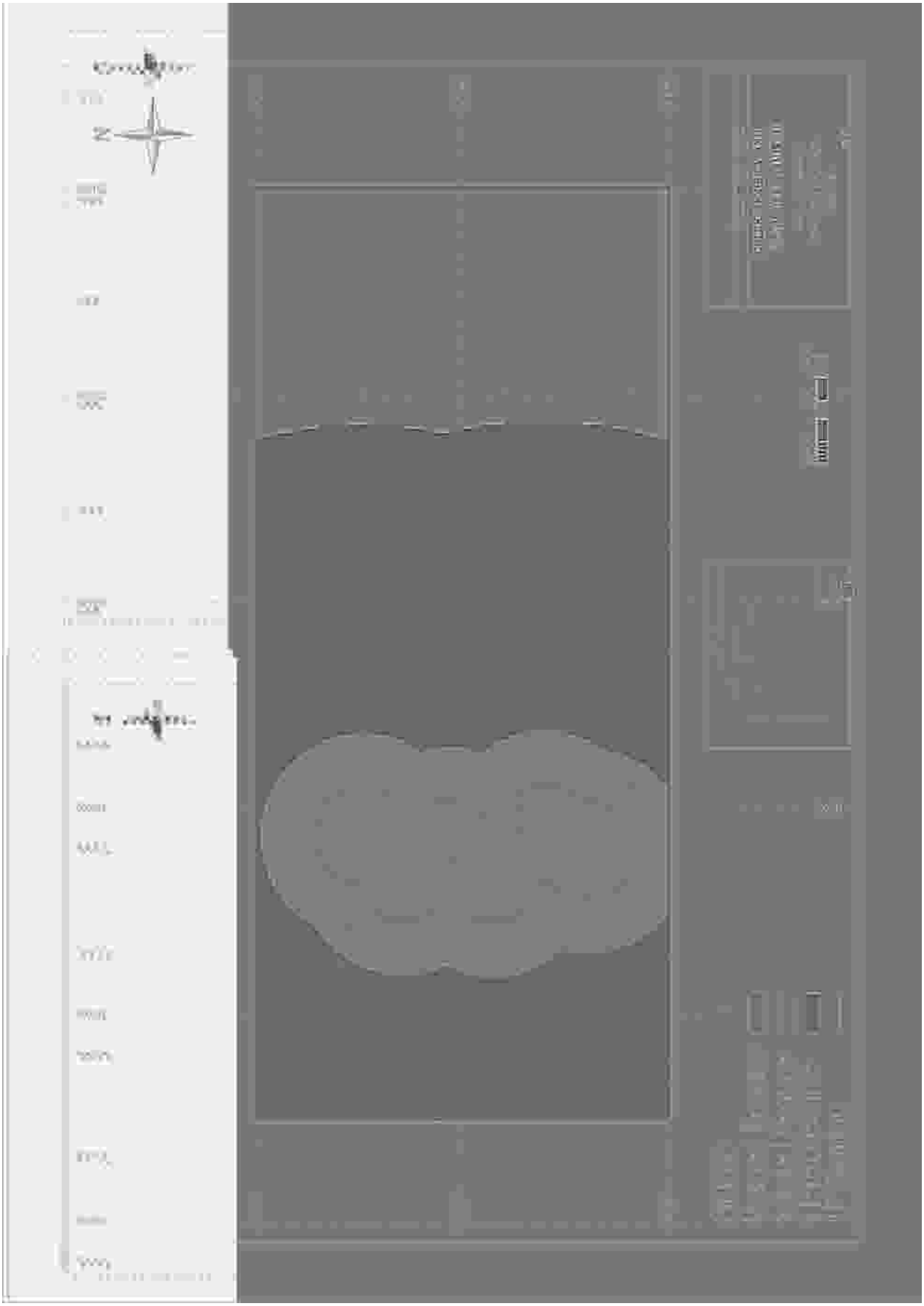


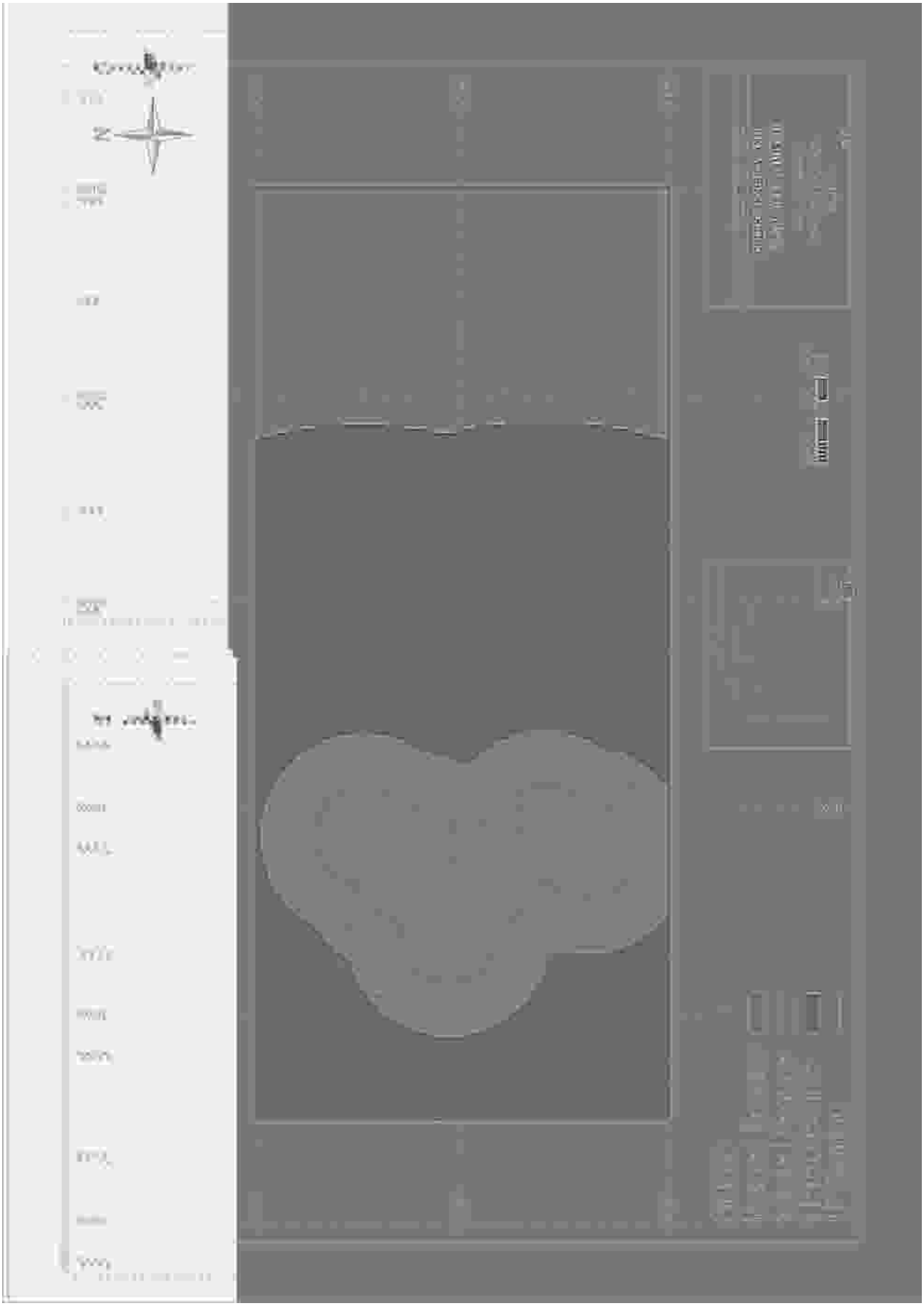


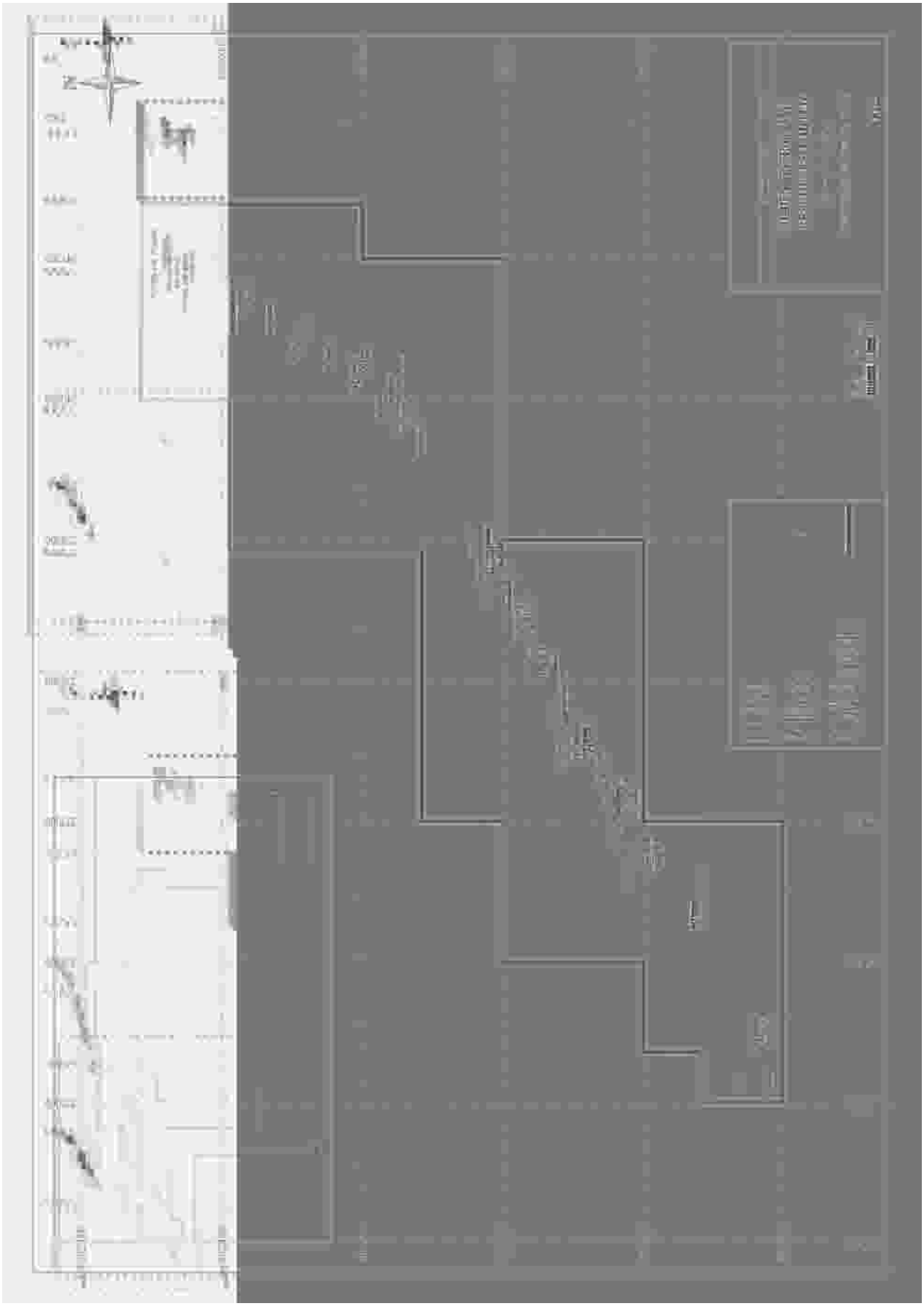


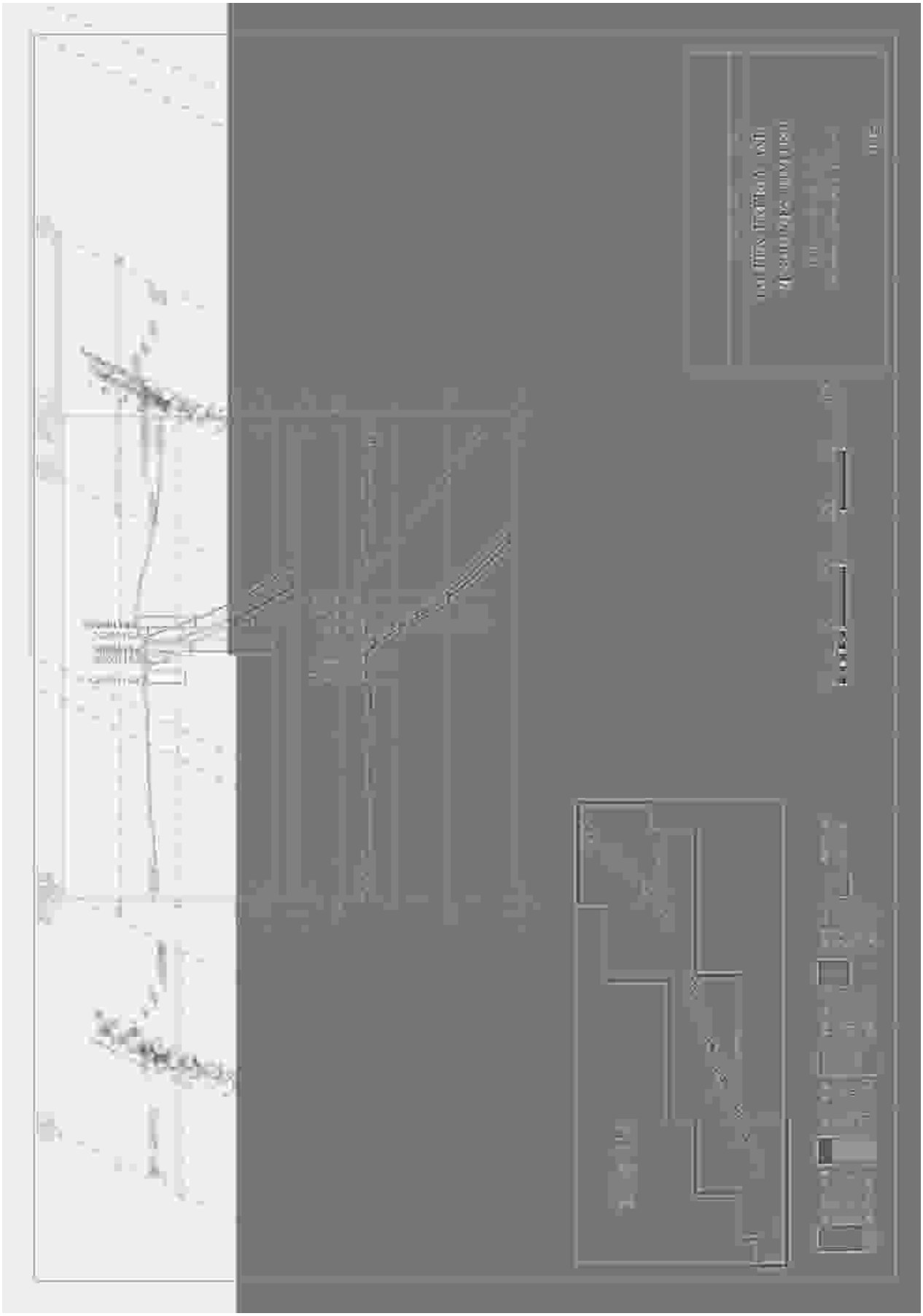




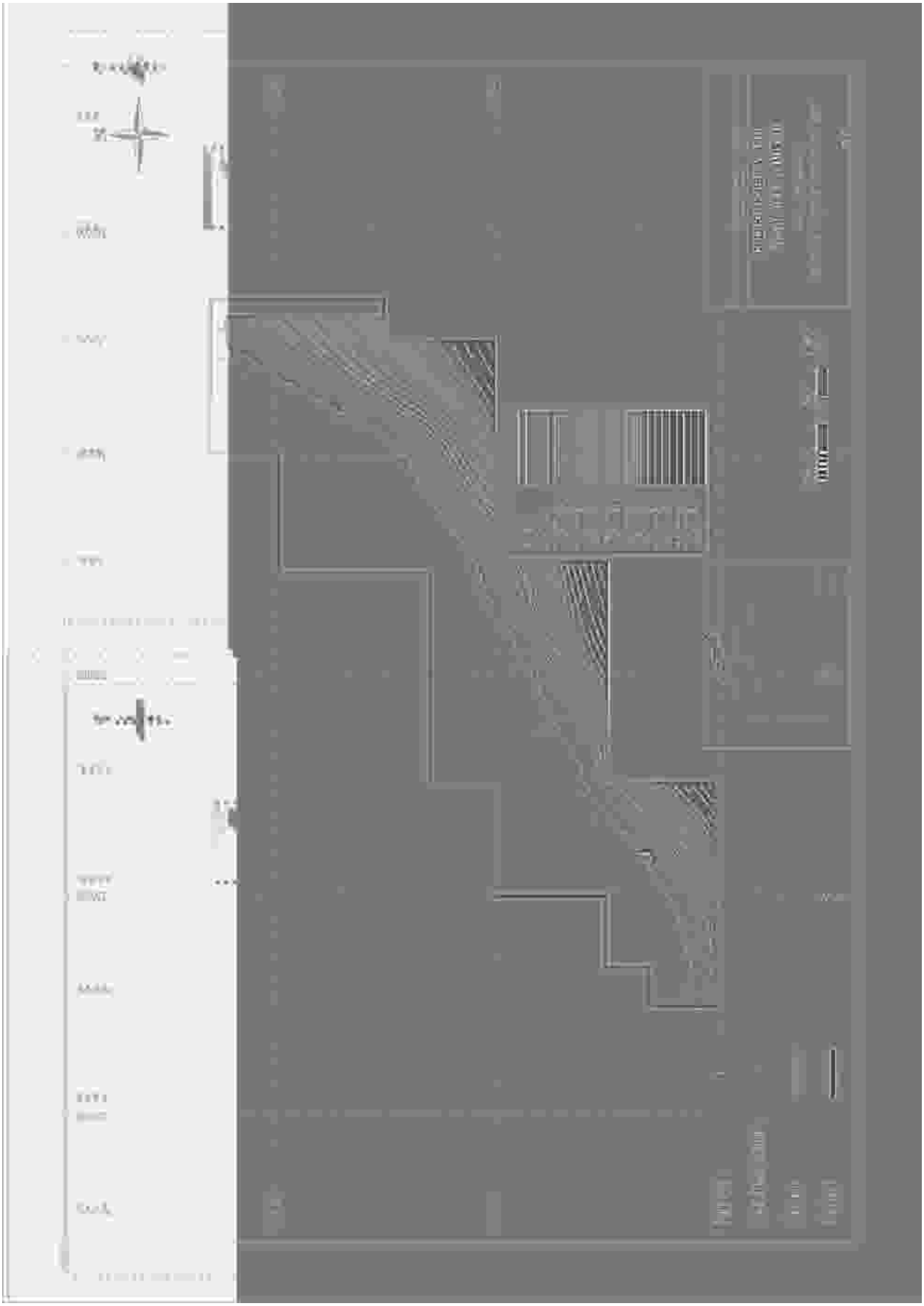




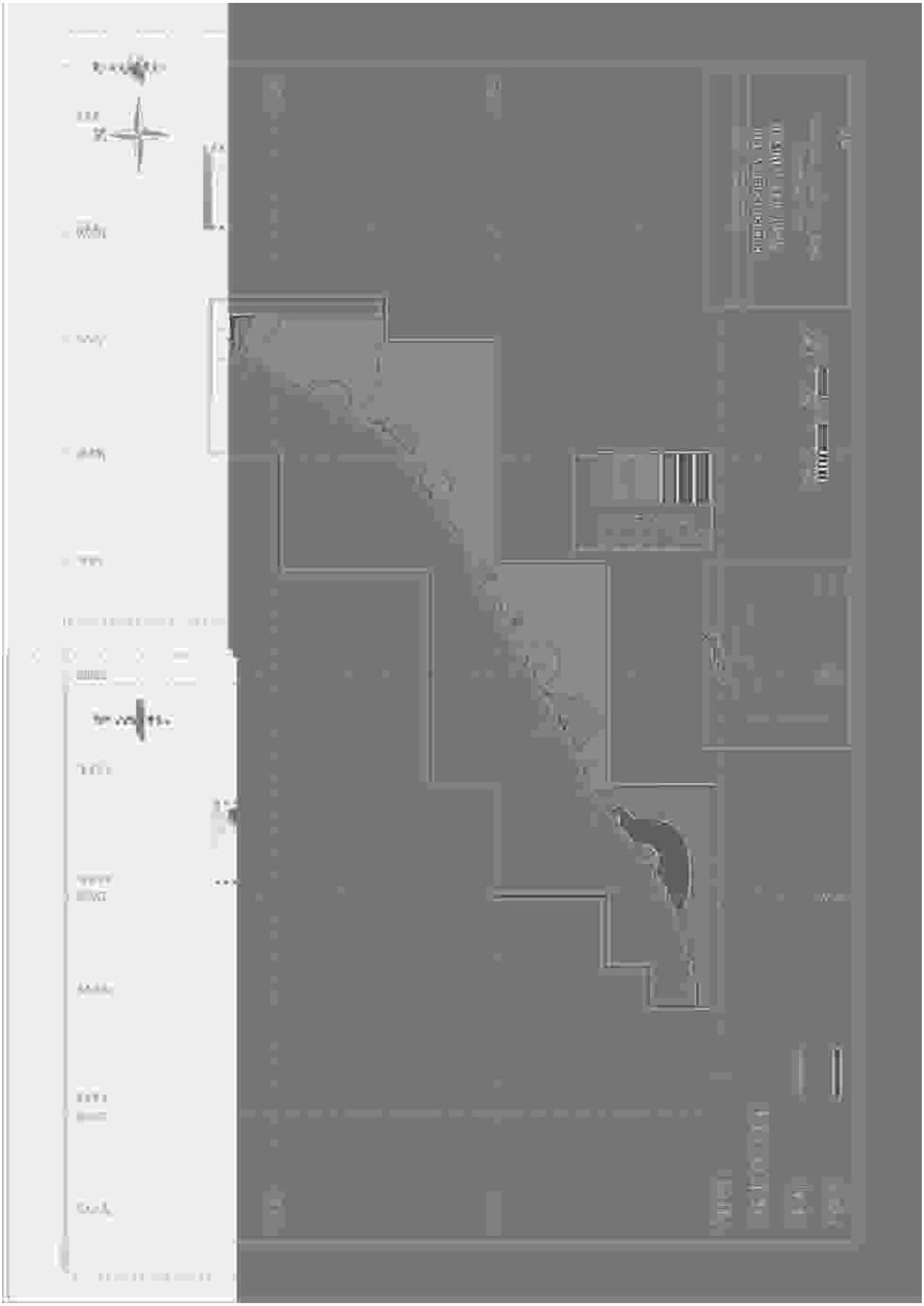


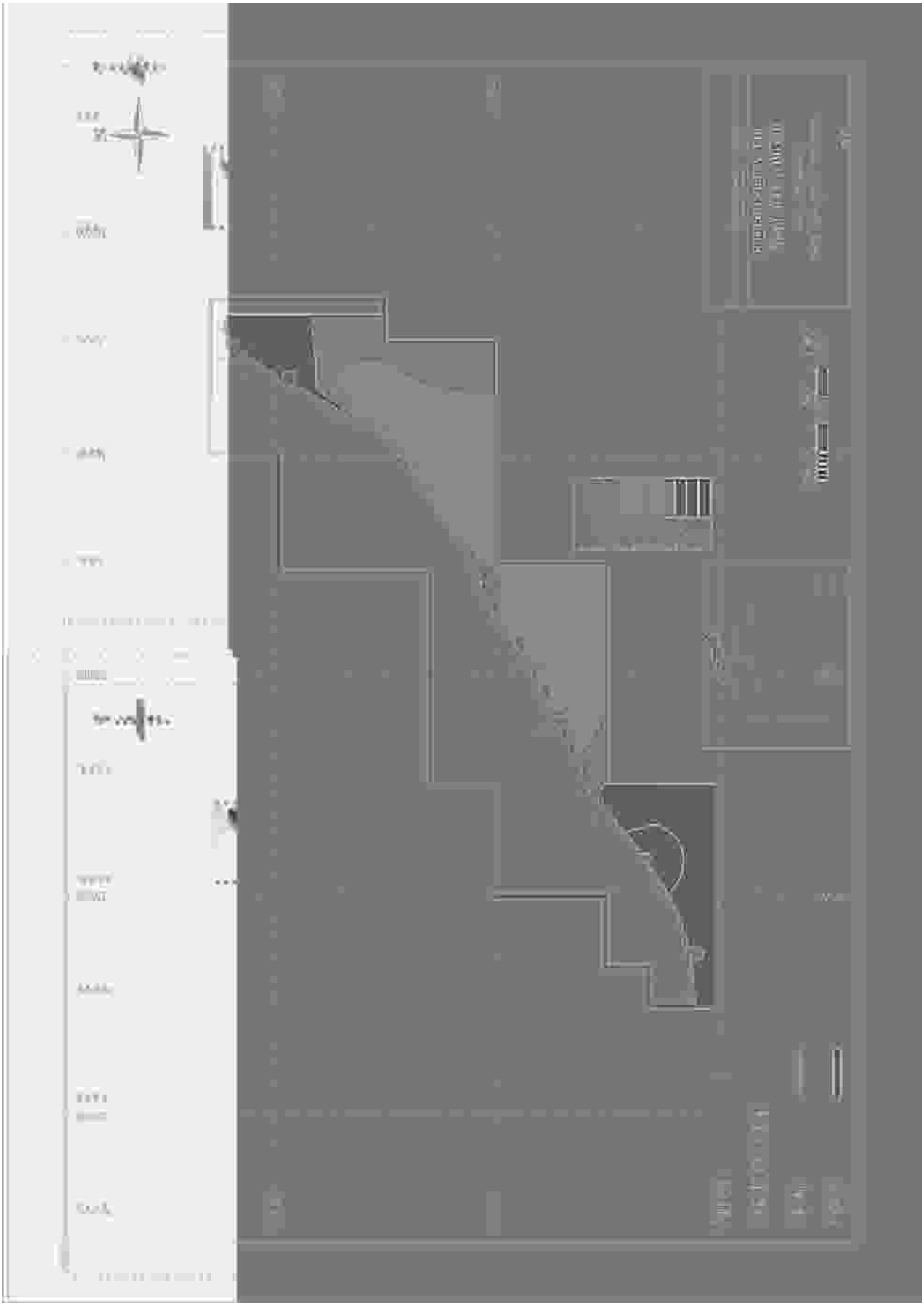


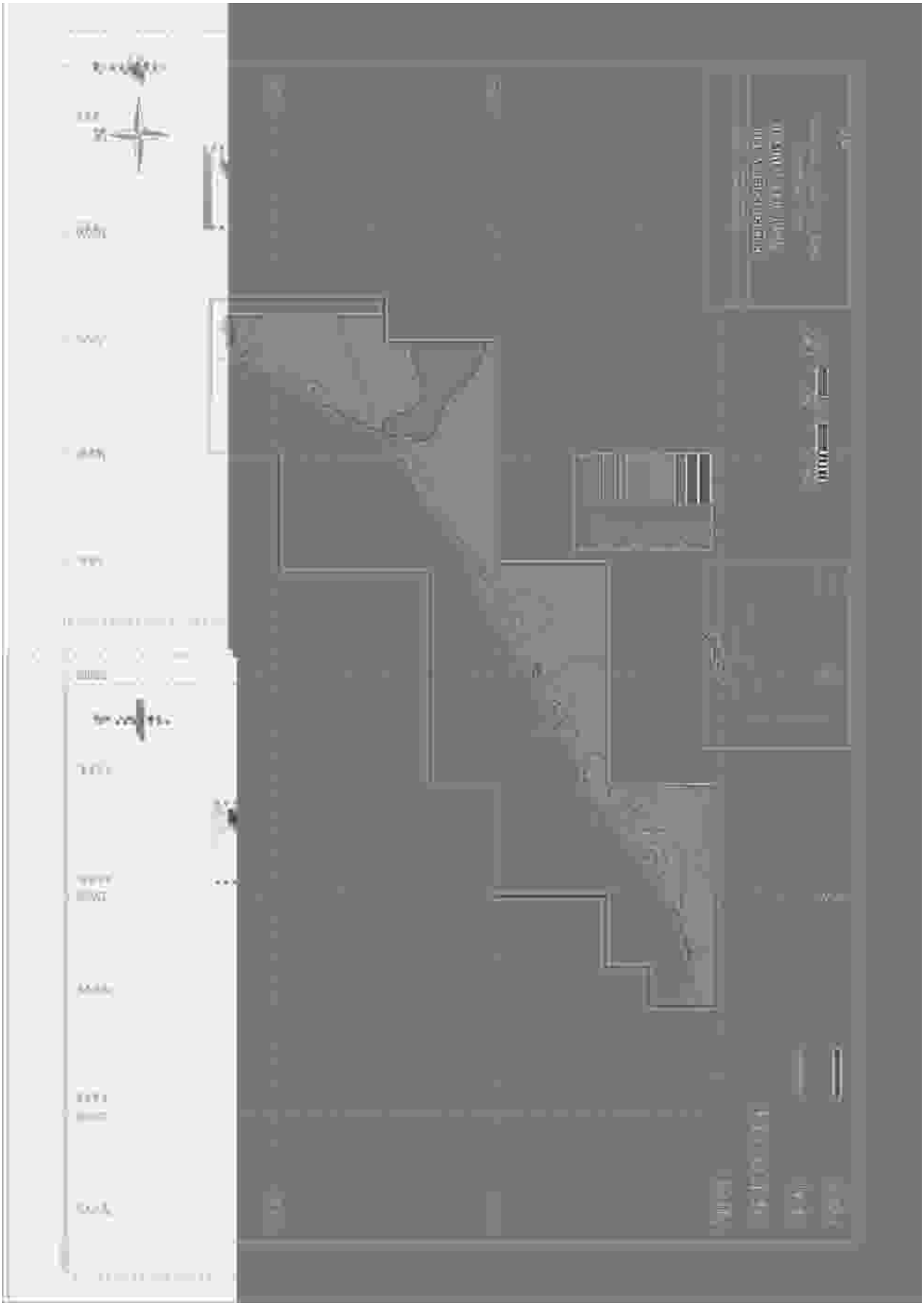




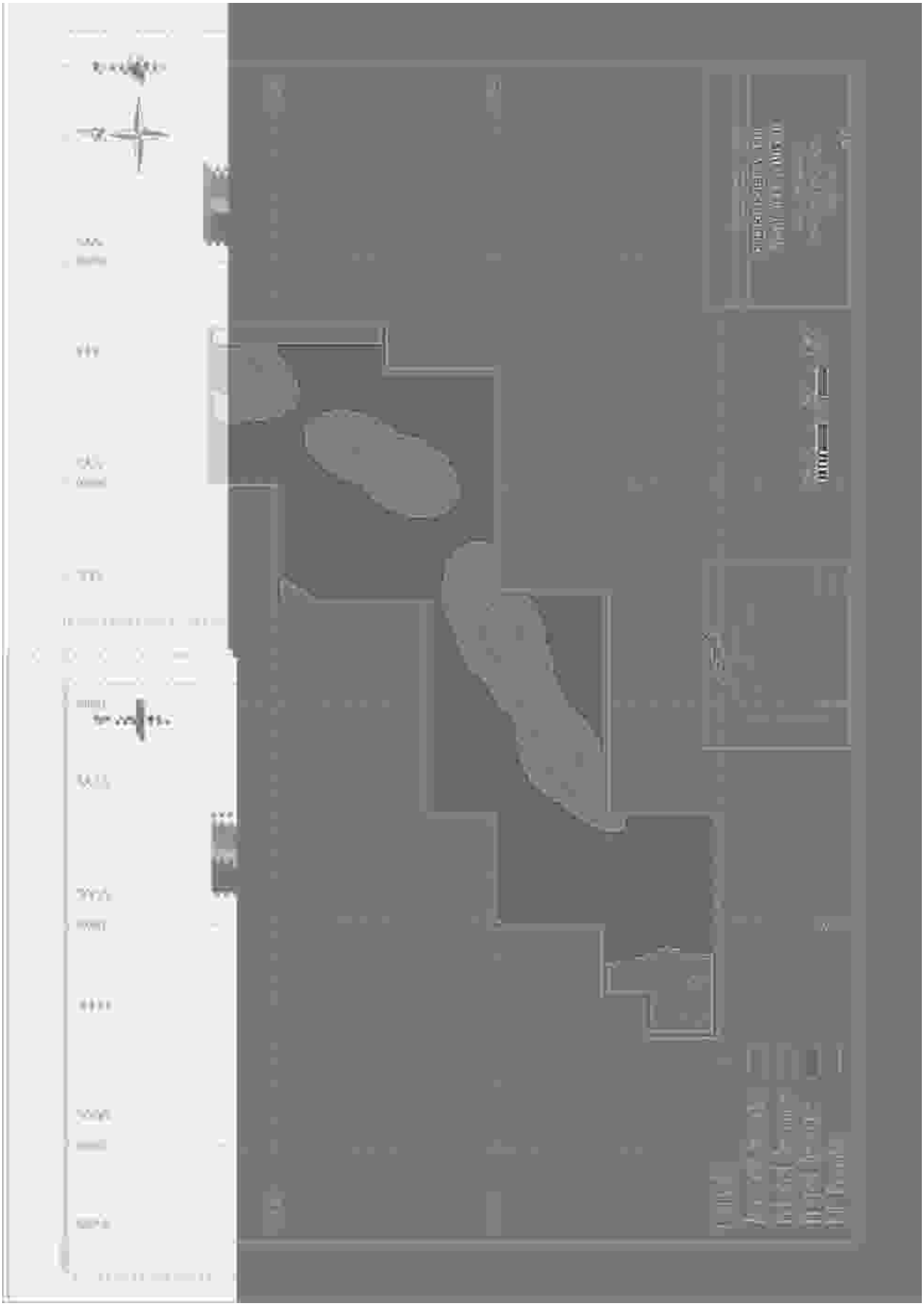
















SALVA
Mining Consultants



Golden Energy and Resources Ltd

PT Kuansing Inti Makmur Concession

Independent Qualified Person Report

February 2017

Golden Energy and Resources Limited

PT Kuansing Inti Makmur Concession

Independent Qualified Person Report

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Key Abbreviations

$ or USD	United States Dollar
adb	Air dried basis, a basis on which coal quality is measured
AMSL	Above Mean Sea Level
AMDAL	Analisis Mengenai Dampak Lingkungan Hidup- Environmental Impact Assessment (EIA), which contains three sections, the ANDAL, the RKL and the RPL
ANDAL	Analisis Dampak Lingkungan Hidup, component of the AMDAL that reports the significant environmental impacts of the proposed mining activity
arb	As received basis
AS	Australian Standards
ASR	Average stripping ratio
AusIMM	Australasian Institute of Mining and Metallurgy
Batter	Slope of Advancing Mine Strip
bcm	bank cubic meter
BD	Bulk density
bbl	Barrels
CCoW	Coal Contract of Work
CHPP	Coal Handling and Processing Plant
CV	Calorific value
Capex	Capital Expenditure
Coal Resource	A 'Coal Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, quality, and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, quality, continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
Coal Reserve	A 'Coal Reserve' is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Reserves are defined, usually the point where the Coal is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
DGMC	Directorate General of Minerals and Coal within the Ministry of Energy and Mineral Resources
FC	Fixed Carbon
GEAR or Client	Golden Energy and Resources Limited
GEMS	Pt. Golden Energy and Mines Tbk.
gar	gross as received, a basis on which coal quality is measured

gm	Gram
h	Hour
ha	Hectare(s)
IM	Inherent Moisture
IPPKH	'Izin Pinjam Pakai Kawasan Hutan' which translates to a borrow to use permit in a production forest
IUP	'Izin Usaha Pertambangan' which translates to 'Mining Business License'
JORC	2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia
k	Thousand
kcal/kg	Unit of energy (kilocalorie) per kilogram
kg	Kilogram
KIM	PT Kuansing Inti Makmur Concession
km	Kilometres(s)
km^2	Square kilometre(s)
kt	kilo tonne (one thousand tonne)
L	Litre
m	Meter
lcm	loose cubic metre
LOM	Life of Mine
M	Million
Mbcm	Million bank cubic metres
Mbcmpa	Million bank cubic metres per annum
MEMR	Ministry of Energy and Mineral Resources within the central government
m RL	metres reduced level
m^3	cubic metre
m/s	metres per second
Mt	Millions of tonnes
Mtpa	Millions of tonnes per annum
MW	Megawatt
NAR	Net as received
Opex	operating expenditure
PKP2B	'Perjanjian Kerjasama Pengusahaan Pertambangan Batubara' – same as CCoW
RD	Relative density
RKL	'Rencana Pengelolaan Lingkungan' - environmental management plan
ROM	Run of Mine
RKL	Relative Level - survey reference for height of landforms above a datum level
RPL	'Rencana Pemantauan Lingkungan' - environmental monitoring plan
Salva Mining	Salva Mining Pty Ltd.

SE	Specific Energy
SMGC	PT SMGC Consultants
SR	Strip ratio (of waste to ROM coal) expressed as bcm per tonne
t	Tonne
tkm	Tonne kilometre
tpa	Tonnes per annum
TM	Total Moisture (%)
TS	Total Sulphur (%)
VALMIN	2005 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
VM	VM Volatile Matter (%)

Executive Summary

Golden Energy and Resources Limited ("GEAR") commissioned Salva Mining Pty Ltd ("Salva Mining") to prepare an independent qualified person report ("Report") which includes estimate ("Statement") of the Coal Resources and Reserves for the Kuansing Inti Makmur coal deposit ("KIM") located in the Bungo Regency of Jambi Province, Indonesia.

The estimate of Coal Resources and Reserves within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Edition of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

KIM (PT Kuansing Inti Makmur) Projects in Indonesia

The KIM Project is located in the Bungo Regency of Jambi Province on Sumatra Island, Indonesia. KIM concession is located nearly equidistant from the Padang coast on the west (250 km) and the Jambi coast on the east (300 km). The KIM Project consists of 2 coal pits namely, KIM East Pit ("KIM East") and KIM West Pit ("KIM West"). Conventional open-pit coal mining operations was commenced in the KIM East pit in 2007, which was followed by opening of the KIM West pit in 2010. Approximately 14 Mt of coal has already been mined from these pits until 31 December 2016.

Geology

The KIM concession area is found on the northern edge of the South Sumatra Basin. This basin was formed by back-arc extension and is filled with Eocene to Pliocene aged terrestrial and marine sediments. Two phases of coal seam accumulation are found within this sequence, the first is an older Oligocene phase related to fluvio-deltaic sedimentation (Talang Akar Formation) during initial rifting and deposition of a transgressive sedimentary sequence. After the mid-Miocene plate collision and commencement of subduction off the west Sumatra coast, a regressive sedimentary sequence commenced from mid-Miocene to Pliocene times. This resulted in a return to a fluvio-deltaic environment, from the previously dominant deep marine sedimentation. This gave rise to the Muara Enim Formation, the dominant coal bearing unit within the South Sumatra Basin.

Coals found within the KIM concession are however of Oligocene age and hence form part of the older phase of coal accumulation within the South Sumatra Basin. Seams within the concession are generally shallow to moderate dipping (less than 10 degrees in most of the area) to the north-northeast. The Oligocene coal bearing unit is unconformably overlain by ignimbrites of Miocene age, related to vulcanism within the basin, associated with the onset of subduction.

Resource

Coal Resources have been estimated, classified and reported according to the JORC Code (2012) and the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) as at 31 December 2016 and are detailed in the Table below. The topographic surface is valid as at 31 December 2016 and was used in both resource models.

Salva Mining have estimated total Coal Resources of 257 million tonnes ("Mt") on an in situ air dried moisture ("adb") basis, to a maximum depth of 250 m. The total tonnes are comprised of 113 Mt of Measured, 59 Mt of Indicated and 85 Mt of Inferred category Resources.

Coal Resource Estimate for KIM Coal concession as at 31 December 2016

Pit	Measured Resource			Indicated Resource			Inferred Resource			Total Mt
	Mass Mt	Ash adb %	CV adb kcal/kg	Mass Mt	Ash adb %	CV adb kcal/kg	Mass Mt	Ash adb %	CV adb kcal/kg	
KIM East	55	18.1	5,279	36	18.9	5,183	75	18.7	5,192	166
KIM West	58	16.7	5,445	23	17.5	5,340	10	15.7	5,228	91
Total	**113**			**59**			**85**			**257**

Mineral Resources are reported inclusive of the Mineral Reserves
Final Inferred Resource rounded to nearest 5 Mt

Mining Method

Mining operation commenced on KIM East in 2007 while and in 2010 on KIM West. Currently the mining operations are concentrated in KIM East. The mining operation in KIM Pits is an open pit mine using standard truck and excavator methods which are common practice in Indonesia. The mining method can be described as a multi seam, moderate dip, open cut coal mine using truck and shovel equipment in a combination of strip and haul back operations. Waste material is mined using hydraulic excavators and loaded into standard rear tipping off-highway trucks and hauled to dumps in close proximity to the pits or to in-pit dumps where possible. For the purpose of this Reserve Statement, it is proposed that contractors will continue to be used for mining and haulage operations over the life of mine, and the unit costs used for the Reserve estimate reflect this style of mining.

Mining Modification factors – Resource to Reserve

This Coal Reserve estimate uses the most recent geological model and Coal Resources estimate prepared by Salva Mining as of 31 December 2016.

Potential open cut reserves inside different blocks of the Project Area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. By generating the financial value (positive or negative) for each mining block within a deposit and then applying the physical relationship between the blocks, the optimal economic pit can be determined. The optimiser was run across a wide range of coal prices using a set of site specific costs (waste removal, land compensation, coal removal, haulage costs, etc.). These costs were adjusted to suit the conditions for this project.

An economic model was prepared for the mining operation from each of the KIM coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal.

An independent life of mine plan was prepared based on the final pit design. This was developed to ensure that the proposed mining method would be practical and achievable and that the proposed dumping strategy would be able to contain the waste mined in the final pit design. The mining schedule targets production of 2.5 Mt in year 2017 and ramping up to 3 Mt by the year 2019 onwards.

The coal price estimate was based on Salva Mining's view on the outlook for global thermal coal fundamentals and including the demand and supply outlook for the sector. Capital and operating costs were estimated by Salva Mining for the KIM project based on the existing contracts and Salva

Mining in house knowledge database about Indonesian operations. These are considered to be reasonable and suitable for the purpose of this study. Capital requirement have been identified for the 90km dedicated haul road and land development for this project.

The KIM Mine is an operating mine since 2007 (KIM East pit commenced production in 2007 while the KIM West pit started in 2010). The KIM Mine is operated as single mining operation; even though the production from the Kim West pit has been temporarily suspended as part of normal operation control.

Salva Mining considers the Modifying Factors to be valid for both pits. The Modifying Factors used are based on actual operations at the KIM Mine which were independently verified by the Salva Mining's subject specialist during the site visit.

Therefore, it is considered valid to use Modifying Factors from the operating KIM mine to satisfy clause 29 of the JORC Code. While JORC 2012 in not explicit with reference to operating mines, the guidance given in ASX FAQ no. 9 is considered relevant in this regard.

Further, Salva Mining has carried out independent life of Mine (LOM) Study to develop the mining schedule and its economic evaluation of the Mine.

Optimised Pit Shell

The optimised pitshells for KIM blocks as delineated in the final pit design do contain Inferred Resources which are excluded from the Coal Reserves reported for the KIM IUPs. Under the JORC Code, Inferred Resources cannot be converted to Reserves due to poor confidence in structural continuity and quality variables. Insitu quantities and mine scheduled tonnes within optimized pitshell along with Reserves are shown in Table below.

Insitu & Scheduled Quantities & Reserves

IUPs	In-situ			Mine Scheduled Tonnes within Optimised Pit shell			Coal Reserves, Mt
	Waste, Mbcm	Coal, Mt	SR, bcm/t	Waste, Mbcm	Coal, Mt	SR, bcm/t	
KIM West	266	41	6.4	252	33	7.6	32.2
KIM East	424	46	9.4	360	31	11.4	24.2
Total, KIM	**690**	**87**	**8.0**	**612**	**64**	**9.5**	**56.4**

Coal Reserves

Coal Reserves were calculated by applying appropriate modifying factors and exclusion criteria to the Coal Resources. Surface water management, infrastructure and the location of the concession boundary were considered when determining the surface constraints for the mining operation. Coal Reserves were calculated by applying appropriate density adjustment and mining loss and dilution parameters to the Measured and Indicated Coal Resources inside the final pit design. All the final pits used for the Reserve estimate were designed following the existing geotechnical recommendations for the KIM Expansion area. In opinion of Salva Mining, the current geotechnical study for KIM Pits adequately covers for the type of lithology and hydrogeological issues.

Coal Reserves have been reported in Proved and Probable categories to reflect the reliability of the estimate. No Inferred Coal Resources are included in the reported Coal Reserves. The Total Coal Reserve for PT Kuansing Inti Makmur coal deposit ("KIM") as of 31 December 2016 is 56.4 Mt comprising of 42.3 Mt Proved and 14.1 Mt Probable categories. No beneficiation of coal product is planned other than crushing to a nominal top size (50 mm). ROM Coal Reserves for KIM coal deposit is presented along with the estimated quality in Table below.

Coal Reserves Estimate for KIM Coal concession as at 31 December 2016

Pit	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV arb Kcal/kg	TS Adb %
	Proved	Probable	Total						
KIM West	24.6	7.6	32.2	1.4	22.6	11.9	16.6	4,980	1.14
KIM East	17.7	6.5	24.2	1.41	24.9	12.1	18.4	4,828	1.32
Total	**42.3**	**14.1**	**56.4**						

**This table must be presented with the entire JORC Reserve Statement of PT Kuansing Inti Makmur*

Coal Resources are reported inclusive of Coal Reserves (that is, Coal Reserves are not additional to Coal Resources). The coal will be sold as a run of mine (ROM) product; hence Marketable Reserves will be equal to Coal Reserves.

Salva Mining is not aware of any other environmental, legal, marketing, social or government factors which may hinder the economic extraction of the Coal Reserves other than those disclosed in this report.

This Report may only be presented in its entirety. Parties wishing to publish or edit selected parts of the text, or use the Statement for public reporting, must obtain prior written approval from Salva Mining.

1 Introduction

Golden Energy and Resources Limited ("GEAR") commissioned Salva Mining Pty Ltd ("Salva Mining") to prepare an independent qualified person report ("Report") which includes estimate ("Statement") of the Coal Resources and Reserves for the Kuansing Inti Makmur coal deposit ("KIM") located in the Bungo Regency of Jambi Province, Indonesia.

The purpose of this report is to provide an assessment of the updated Coal Resources and Reserves and report these in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", (the "JORC Code") December 2012, prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy ("AusIMM"), the Australasian Institute of Geoscientists ("AIG") and Minerals Council of Australia. Salva understands that this report will be shared with the GEAR's shareholders as part of continuous disclosure requirements of the company.

1.1 Approach

The principal data sources used in the preparation of this Report included:

- Collar, down hole logging, seam pick and coal quality information, provided by PT. KIM;
- Updated mined out surface DTM , provided by GEAR, showing the extent of mine face positions as at the end of December 2016;
- PT Ground Risk management (GRM), "Engineering Report for KIM Mine Geo-technical Work East and West Expansion areas, Sumatera, Indonesia"; 28 February 2011;
- Historical production from KIM East and KIM West pit as provided by GEAR;
- A JORC Resource and Reserve Report (JORC 2012 code) titled "Independent Qualified Persons Report", October 2016 prepared for GEAR by Manish Garg of Salva Mining;
- A JORC Resource and Reserve Report (JORC 2012 code) titled "Independent Qualified Persons Report", February 2016 prepared for GEAR by Manish Garg of HDR;
- Capex and Opex data supplied by GEAR and also derived from Salva Mining 's cost database of typical Indonesian operations;
- Resource Management International Pty Ltd (RMI), "Independent Coal Price Forecast Report", 10 September 2013;
- Coal price outlook by Salva Mining's in-house study on Indonesian thermal coal;

The following approach was undertaken by Salva Mining to estimate Coal Resource and Reserves:

- Salva Mining has reviewed the geological data set provided by GEAR for the coal block covered under scope of report;
- Using the existing bore hole information provided to Salva by GEAR, a geological model was created using Minescape stratigraphic modelling software. While creating the model, a thickness cut off limit of 0.1m was applied and is termed as an "in situ" model;
- This model and the underlying raw data such as Drill hole logs, coal quality reports and geophysical logs were reviewed by Salva's team of geologists;
- On the basis of confidence limits (as described in the Resource Classification Section), the in-situ geological model was then categorised into Measured, Indicated and Inferred categories according to the JORC Code (2012). Once these categories were ascertained, coal volume, tonnage and qualities were estimated;
- Cross sections, plans and deposit characteristics such as structure, number and thickness of seams were examined in conjunction with the proposed equipment and mining method

to decide on minimum mining thickness, coal losses and dilution factors. These factors were then used to convert the in situ geological model to a ROM model;

- Physical surface constraints were studied and consideration was made for surface water runoff and management, as well as the location of significant infrastructure and communities inside the potential mining area. Appropriate mining limits were then determined based on this data;
- Indicative cost and revenue factors were reviewed with GEAR and checked for reasonableness by Salva. Optimiser software was used to incorporate other criteria such as depth constraints, geotechnical criteria and minimum mining thickness. In this way a series of different pit shells were derived for varying cost and revenue inputs;
- Optimised pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal and then practical pit designs were made (Mineable Pit Shell). This pit shell formed the basis of the subsequent reserves estimate;
- The Measured and Indicated confidence limits were overlaid on the main pit shell and any Inferred tonnes were excluded from the estimate;
- The overall economic viability of the results was tested by creating an economic model which included provision for capital and operating cost;
- Based on Resource confidence and present mine planning detail, the reserves were categorised into Proved and Probable categories;
- All of the modifying factors and checks adopted to ascertain the estimate have been provided in the respective section of this report.

1.2 Data sources

This review is based on the information provided by GEAR, the technical reports of consultants and previous explorers, as well as other published and unpublished data relevant to the area. Salva has carried out, to a limited extent, its own independent assessment of the quality of the geological data. The status of agreements, royalties or concession standing pertaining to the assets was provided by GEAR.

In developing our assumptions for this Statement, Salva Mining has relied upon information provided by the company and information available in the public domain. Key sources are outlined in this Report and all data included in the preparation of this Report has been detailed in the references section of this report. Salva Mining has accepted all information supplied to it in good faith as being true, accurate and complete, after having made due enquiry as of 31 December 2016.

1.3 Limitations

After due enquiry in accordance with the scope of work and subject to the limitations of the Report hereunder, Salva Mining confirms that:

- The input, handling, computation and output of the geological data and Coal Resource and Reserve information has been conducted in a professional and accurate manner, to the high standards commonly expected within the mining professions;
- The interpretation, estimation and reporting of the Coal Reserve Statement has been conducted in a professional and competent manner, to the high standards commonly expected within the Geosciences and mining professions, and in accordance with the principles and definitions of the JORC Code (2012);

- In conducting this assessment, Salva Mining has addressed and assessed all activities and technical matters that might reasonably be considered relevant and material to such an assessment conducted to internationally accepted standards. Based on observations and a review of available documentation, Salva Mining has, after reasonable enquiry, been satisfied that there are no other relevant material issues outstanding;
- The conclusions presented in this report are professional opinions based solely upon Salva Mining's interpretations of the documentation received and other available information, as referenced in this Report. These conclusions are intended exclusively for the purposes stated herein;
- For these reasons, prospective investors must make their own assumptions and their own assessments of the subject matter of this Report.

Opinions presented in this report apply to the conditions and features as noted in the documentation, and those reasonably foreseeable. These opinions cannot necessarily apply to conditions and features that may arise after the date of this report, about which Salva Mining have had no prior knowledge nor had the opportunity to evaluate.

1.4 Disclaimer and warranty

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of its Statement or the success or failure for the purpose for which the report was prepared. Neither Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining 's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

A draft version of this Statement was provided to the directors of GEAR for comment in respect of omissions and factual accuracy. As recommended in Section 39 of the VALMIN Code, GEAR has provided Salva Mining with an indemnity under which Salva Mining is to be compensated for any liability and/or any additional work or expenditure, which:

- Results from Salva Mining 's reliance on information provided by GEAR and/or Independent consultants that is materially inaccurate or incomplete, or
- Relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

The conclusions expressed in this Statement are appropriate as at 31 December 2016. The report is only appropriate for this date and may change in time in response to variations in economic, market, legal or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in United States dollars ("$") unless otherwise stated. Salva Mining services exclude any commentary on the fairness or reasonableness of any consideration in relation to this acquisition.

2 Independent Competent Persons and Experts Statement

This Resource and Reserve report has been written following the guidelines contained within the 2015 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Experts Reports ("the VALMIN Code") and the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("the JORC Code"). It has been prepared under the supervision of Mr Manish Garg (Director – Consulting / Partner, Salva Mining) who takes overall responsibility for the report and is an Independent Expert as defined by the VALMIN Code.

Sections of the report which pertain to Coal Resources have been prepared by Mr. Grenville Davies (Principal Consultant, Salva Mining) who is a subject specialist and a Competent Person as defined by the JORC Code. Sections of the report which pertain to Coal Reserves have been prepared by Mr Sunil Kumar (Principal Consultant, Salva Mining) who is a subject specialist and a Competent Person as defined by the JORC Code.

This report was prepared on behalf of Salva Mining by the signatory to this report, assisted by the subject specialists' competent persons whose qualifications and experience are set out in Appendix A of this report.



Mr. Manish Garg
Director – Consulting / Partner
Salva Mining Pty Ltd.

2.1 Statement of Independence

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of this report. The above mentioned person(s) have no interest whatsoever in the mining assets reviewed and will gain no reward for the provision of this report.

Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

Neither Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining 's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with GEAR or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

3 Project Description

3.1 Property Description and Access

The KIM Project is located in the Bungo Regency of Jambi Province on Sumatra Island, Indonesia (Figure 3:1, Figure 3:2 and Figure 3:3). KIM concession is located nearly equidistant from the Padang coast on the west (250 km) and the Jambi coast on the east (300 km)

Access to the site is via a 2 hour plane flight from Jakarta to Padang followed by a either an 6 hour car journey or via a 1.5 hour plane flight from Jakarta to Jambi followed by a 7 hour car trip.

The tenure for the KIM Project is covered by 8 Izin Usaha Pertambangan Produksi ("IUP Production") and covers a 2,610 ha area of coal concession. The KIM project consists of following 2 coal Pits:

- KIM East Pit ("KIM East Pit" or "KIM East Block");
- KIM West Pit ("KIM West Pit" or KIM West Block").

Conventional open-pit coal mining operation was commenced in the KIM East pit in 2007, which was followed by opening of the KIM West pit in 2010. Approximately 12 Mt of coal has already been mined from these pits until 31 December 2016. Only KIM East is being mined currently.

Figure 3:1 General Location Plan

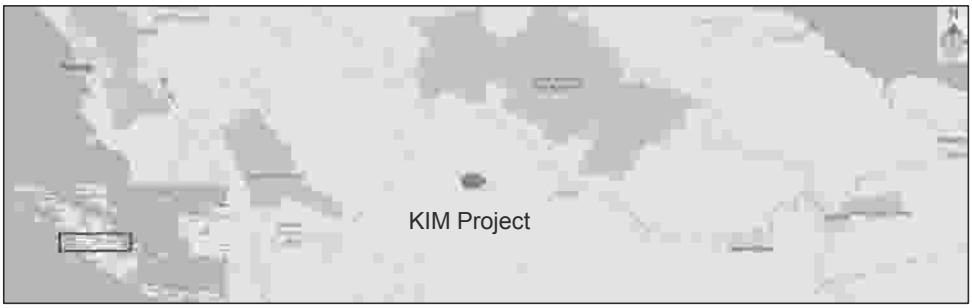


Figure 3:2 General Location Plan – Satellite Image

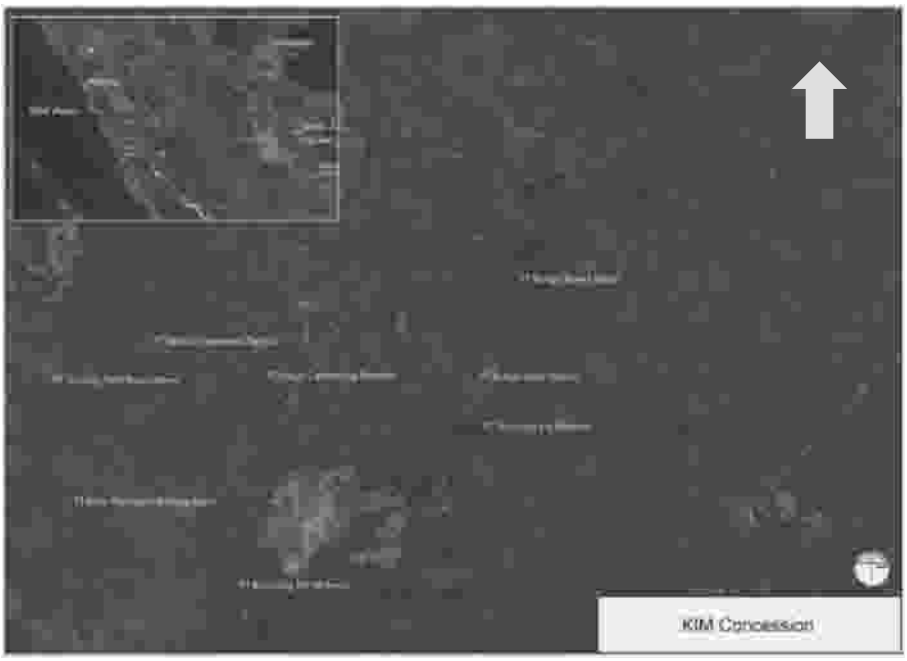


Figure 3:3 IUP Boundary and Location of Individual Coal Blocks



3.2 Ownership and Concession

Golden Energy and Resources Ltd (GEAR) holds the mining rights to the KIM concession directly and indirectly. Eight (8) IUPs with a total area of 2,610 ha are owned directly and in-directly by subsidiaries of GEAR. Tenure at the KIM concession is held under the 'Izin Usaha Pertambangan' which translates to 'Mining Business License' (IUP) system of ownership. The ownership details of these IUPs are given in Table 3:1 below.

Table 3:1 KIM Concession Details

Company	IUP Number	Area (ha)	Granted	Expiry
PT Bungo Bara Utama	341/DESDMTAHUN 2009	1,301	9-Jul-09	20 years
PT Bungo Bara Utama	250/DESDM TAHUN 2010	199	23-Apr-10	8 years
PT Bara Barmonis Batang Asam	247/DESDM TAHUN 2014	172	18-Dec-14	10 years
PT Karya Cemerlang Persada	350/DESDM TAHUN 2009	143	22-Jul-09	10 years
PT Tanjung Belit Bara Utama	249/DESDM TAHUN 2010	198	23-Apr-10	8 years
PT Kuansing Inti Makmur	252/DESDM TAHUN 2010	199	23-Apr-10	8 years
PT Kuansing Inti Makmur	166/DESDM TAHUN 2012	199	5-Apr-12	10 years
PT Berkat usantara Permai	545/DESDM TAHUN 2010	199	15-Dec-10	9 years

All IUP's have a provision for 2 x 10 years extensions.

A possible issue with tenure for the project is that there are a number of gaps between the IUPs that cover the project area. The gaps are for a maximum of 150 m in width (Figure 3:3). Salva Mining has been informed that no other party holds tenure over the land in these gaps and that application is currently underway to change the coordinates of the current IUPs to ensure that there is no gap between them. This type of issue is not uncommon in Indonesia and there is no known reason why it could not be resolved. Salva Mining is not aware of any disruptions to operations at the KIM project that have occurred due to this issue. All of the land inside the KIM project area is designated 'Area Pengunaan Lain' (Other Purpose) by the Forestry Department, and thus no borrow to use permit (Izin Pinjam Pakai Kawasan Hutan) is required for mining operations in this area. GEAR informed Salva Mining that permits are in place for the current operation. These permits will need to be maintained in order to continue mining operations within the KIM project. Salva Mining is not aware of any reason why it will not be possible to maintain these permits.

Salva Mining makes no warranty or representation to GEAR or third parties (express or implied) in regard to the validity of the IUP and documentation and this Resource and Reserve Statement does not constitute a legal due diligence of the concession.

4 Geology

4.1 Regional Geology

The KIM concession area is found on the northern edge of the South Sumatra Basin (Figure 4:2). The South Sumatra Basin was formed due to back-arc extension which began in the late Palaeocene. This extension resulted in an approximately north trending graben structure which is filled with an Eocene to mid-Miocene age transgressive sedimentary sequence culminating in the deep water sediments of the Gumai Shales in the mid-Miocene. This was followed by the mid-Miocene orogenic event, resulting from the collision of the Sunda Shelf plate with the Indo-Australian plate, which resulted in a subduction zone forming off the west coast of Sumatra and gave rise to the orogenic uplift of older pre-tertiary rocks to form the Barisan Mountains during late Miocene time. This mid-Miocene plate collision marked the transition from extension tectonics and a transgressive sedimentary sequence to compression tectonics and a transition back to shallow water terrestrial sedimentation (regressive sequence). The onset of the regressive phase of sedimentation is marked by the Air Benekat Formation (Figure 4:1)

The following is a general description of the main Eocene to Pliocene age sedimentary units recognised across the South Sumatra basin, from oldest to youngest;

The Lahat Formation is comprised of brown to grey shales interbedded with tuffaceous shales and siltstones. These sediments rest unconformably on the pre-Tertiary basement. The thickness of this formation is strongly controlled by the basement topography and this formation is not developed around some pre-Tertiary basement highs.

The Oligocene age Talang Akar Formation is comprised of thickly bedded sandstones alternating with thin shale bands and coal seams in places. This sedimentary unit is of terrestrial fluviatile origin, grading into a deltaic environment.

The Baturaja Formation is only locally developed and consists of a lower bedded unit and an upper massive unit. The bedded unit consists of lime mudstones and lime wackstones, intercalated with marls, whilst the massive unit consists of mudstones, wackstones/packstones and boundstones.

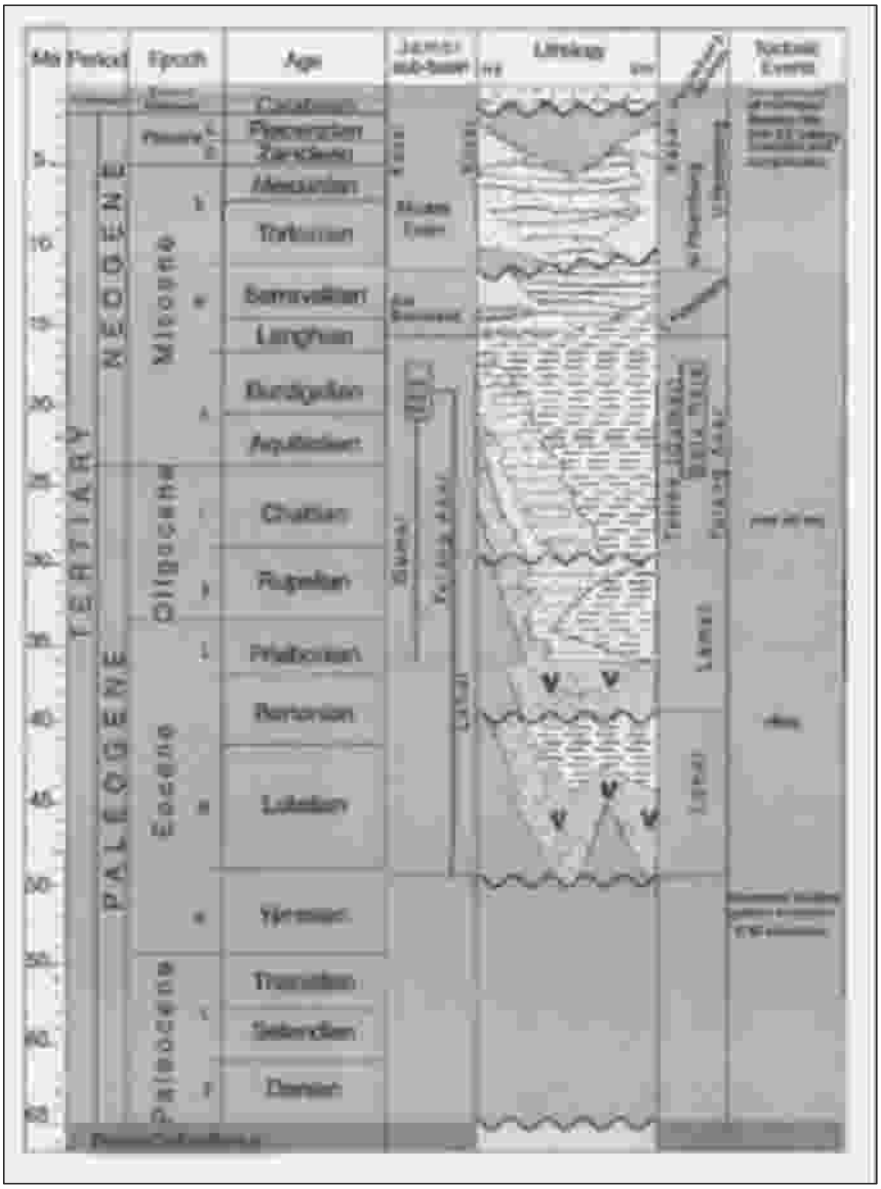
The Gumai Formation is one of the most widely occurring units seen in the basin and is comprised of deep water marine shales with minor interbeds of limestone and sandstone.

The transition from deep water marine sedimentation to a regressive sequence is marked by the Air Benekat Formation which consists of shales and glauconitic sandstones.

The middle to late Miocene aged Muara Enim Formation conformably overlies the Gumai Formation, the transition marked by the top of the last marine shale layer. The Muara Enim Formation consists of interbedded sandstones, claystones and coal seams. The majority of the coal mined from the South Sumatra Basin is derived from this unit; however these coals are younger than the Oligocene aged coal seams seen within the KIM concession area.

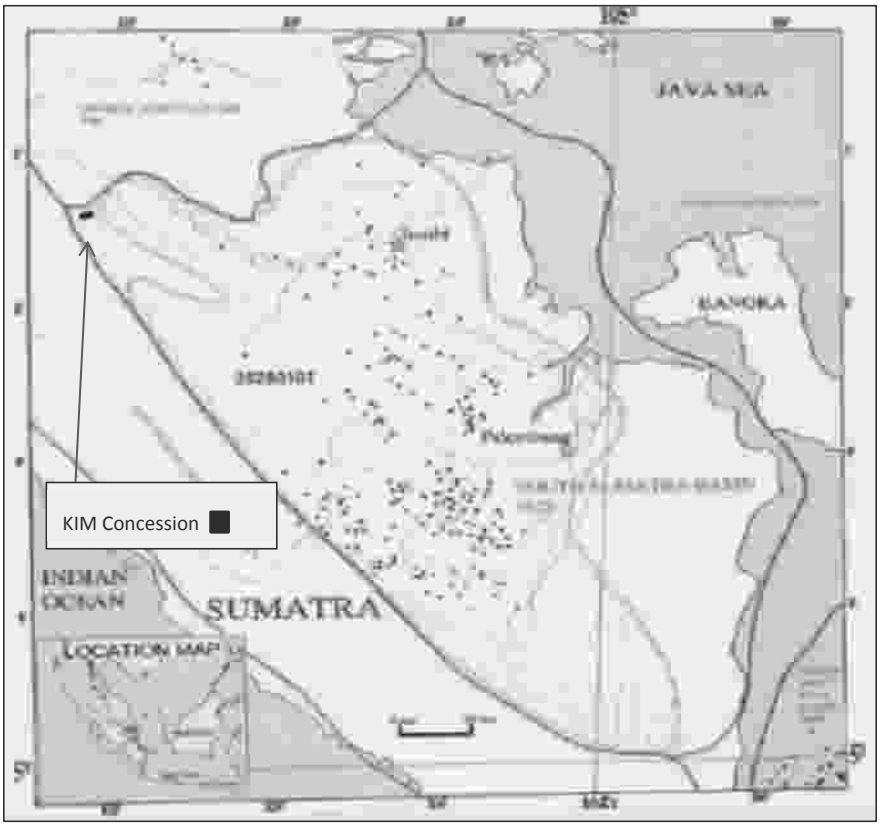
The Kasai Formation conformably overlies the Muara Enim Formation and consists of bedded tuffaceous sands and gravels, occasionally interbedded with minor coal seams.

Figure 4:1 Generalised Stratigraphy of the South Sumatra Basin



After Tamtomo (1997)

Figure 4:2 Regional Geological Setting

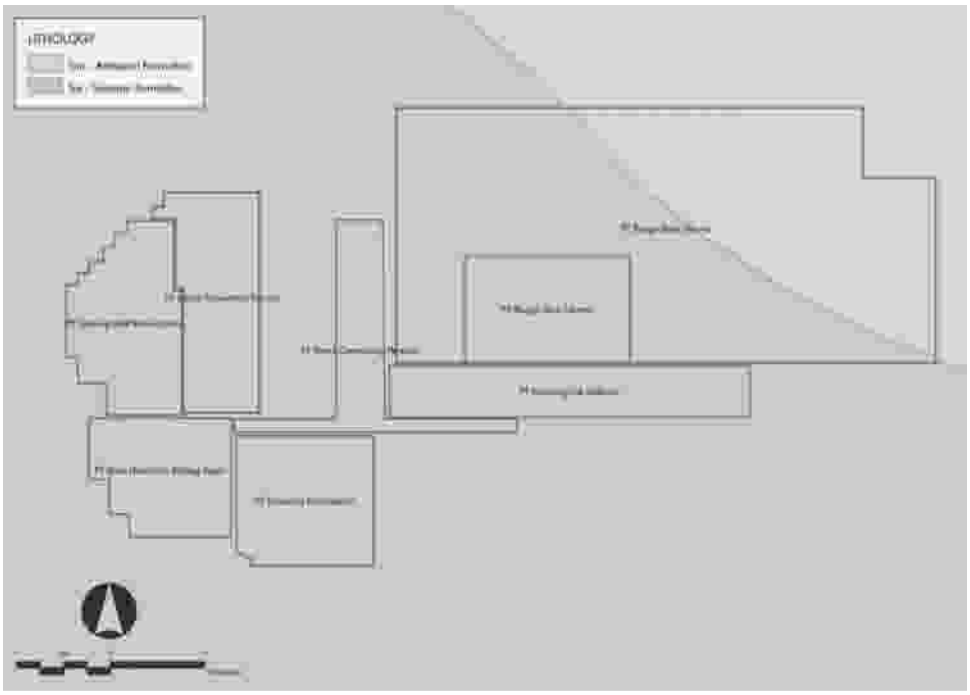


(After Bishop, 2001)

4.2 Local Geology

The local geology of the area is comprised of a Miocene aged ignimbrite unit (Tmr) which unconformably overlies the Oligocene aged coal bearing sediments belonging to the Sinamar Formation (Tos) (Figure 4:3). The Sinamar Formation is of equivalent age and sedimentary setting to the Oligocene Talang Akar Formation, seen elsewhere in the basin. The ignimbrite unit varies in thickness between 50 m and 60 m and appears to have been deposited on an erosive paleo-surface which has been incised into the coal bearing sediments of the Sinamar Formation

Figure 4:3 Local geological map of the KIM concession area



4.2.1 Coal Seams

The coal bearing sediments dip gently (less than 10 degrees) to the north-northeast. The area appears to be structurally relatively benign, with no evidence of significant displacement of the coal seams in the area. The splitting relationships for the coal seams identified within the concession are shown below in Table 4:1 and Table 4:2.

The S100U and S100L seams are present throughout and the parent seam (S100) has not been logged in any of the drill holes in the KIM concession. The interburden between these seams ranges from 0.1 to 0.9 m and averages 0.5 m. The S100U seam ranges from 0.03 to 2.9 m and S100L seam ranges from 0.20 to 2.0 m in thickness. The S200U and S200L seams exist at 1.7 to 17.4 m (mean interburden – 5.6 m) below the overlying S100L seam. The S200U seam ranges from 0.09 to 2.35 m and the S200L seam ranges from 0.2 to 2.9 m in thickness. The parent seam (S200) is present in places, where it ranges in thickness from 0.38 to 4.6m in thickness.

The S300 seam exists approximately 14 m below the S200L seam. The S300 parent seam has not been modelled in the KIM concession, only it's two recognised plies the S300U and the S300L seams, however there are areas where the interburden between these two plies is zero, which effectively means that this is the parent seam in such instances. The interburden between the two S300 plies ranges from 0.0 to 6.9 m with an average interburden of 0.9 m at KIM East and 1.3 m at KIM West.

The S300 plies mean thickness varies between the KIM East and KIM West concession areas. In KIM East S300U has a mean thickness of 5.0 m and up to 9.0 m in the KIM West concession. The S300L has a mean thickness of 1.1 m at KIM East and 2.1 m at KIM West.

Table 4:1 KIM East - Seam Splitting Relationships

Master Seam	1st phase Splitting
S100	S100U
	S100L
S200	S200U
	S200L
S300	S300U
	S300L

Table 4:2 KIM West - Seam Splitting Relationships

Master Seam	1st phase Splitting
S100	S100U
	S100L
S200	S200U
	S200L
S300	S300U
	S300L

4.3 Exploration

4.3.1 Exploration History

The geology of South Sumatra has been studied by various authors, particularly deep stratigraphic profiles in the search for oil reservoirs. In the local area there are no documented records of previous exploration for coal. There are previous unpublished reports that have been viewed. This area was reviewed by PT SMG Consultants in October 2010 - October 2012 and by HDR from January 2013 – December 2015 to determine what Resources may be contained in the area and what additional drilling was necessary to raise the Resource confidence.

5 Geological Data and QAQC

5.1 Data Supplied

The geological data provided by GEAR for the KIM concession area was independently reviewed by Salva Mining's geologists and is considered appropriate and reasonable for the purpose of estimating Coal Resources.

This data, used by Salva Mining for the purpose of resource estimation, includes but is not limited to:

- Drill hole collar information inclusive of total depth drilled per hole;
- Drill hole lithological data inclusive of seam picks identified and correlated on the basis of down-hole geophysics;
- Coal sample table and associated raw coal qualities per sample;
- Drill hole completion reports for most of the holes drilled containing details of core recoveries achieved;
- Scanned copies of original laboratory analysis reports of coal quality for samples analysed;
- Down-hole geophysical data in the form of both LAS files and Minex drill hole databases;
- Previous geological models for the KIM EAST, and KIM WEST areas constructed by PT SMG Consultants and HDR, which contains a complete drill hole database as well has grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface.

5.2 Lithological Data

A total of 368 drill holes were used to construct geological models in the KIM East and KIM West coal concession area comprising:

• KIM East 273 drill holes;

• KIM West 95 drill holes.

Of these holes, a small percentage are barren, i.e. no coal intersected; this is due to drill-rig limitations (maximum 60 m depth). Barren holes are never the less useful for geological modelling purposes as they prevent coal from being modelled where it is not present. In other cases no seam picks were supplied for a number of holes. In these instances the hole is marked as 'not logged' and the model is allowed to project seams through these holes if warranted by surrounding holes.

Approximately 80% of the drill holes used in the structural model have been logged using down-hole geophysics. Down-hole geophysical data acquired by GEAR is predominantly comprised of gamma, density and calliper logs and has allowed for accurate identification of coal seams in each hole (seam picks) and the correlation of coal seams between holes.

Drill hole locations for the two resource areas can be seen in Appendix E and coal intercept statistics for the two resource areas can be seen in Table 5:1 and Table 5:2.

Table 5:1 KIM East - Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
S100U	89	KEN_81	0.03	CW_A06	2.90	0.76	0.36
S100L	87	GAD_025	0.20	BBU_10	1.50	0.82	0.28
S200U	70	KEN_85	0.09	KECS_44	2.10	0.87	0.50
S200L	72	CW_08R	0.20	CW_E03R	1.30	0.58	0.22
S300U	189	KEN_68R	0.42	KEN_08	8.95	5.02	1.58
S300L	157	CW_06R	0.40	CW_K01R	3.30	1.15	0.29
S200	43	KEN_28	0.38	CW_A10	2.40	1.64	0.53

Table 5:2 KIM West - Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean	S.D.
		Hole no.	Thickness	Hole no.	Thickness	Thickness	
S100U	46	KWN_29	0.16	KWN_28	1.97	0.84	0.32
S100L	47	KWN_20	0.31	KWN_24	2.03	1.31	0.42
S200U	24	KWN_50R	0.19	CTBBU_21RR	2.35	1.51	0.52
S200L	25	CTB_05	0.46	KWN_18	2.88	1.17	0.73
S300U	77	CTB_18	2.90	GT_06	11.45	9.01	1.44
S300L	78	CTB_18	0.40	RTB_03	3.50	2.12	0.69
S200	28	CTBBU_09	1.50	CTBBU_20R	4.60	2.84	0.73

5.3 Topographic Survey and base of weathering (BOW)

Topography data used in the two KIM geological models has been derived from Light Detecting and Ranging (LiDAR) remote sensing surveys conducted. During this survey GPS ground control points were combined with flight trajectories and LiDAR scanning equipment to produce an accurate dataset of XYZ topographic coordinate points for the KIM East and KIM West area. The topography within the mining area is surveyed on a daily basis by the mine site surveyors and "as mined" and "as dumped" surfaces are updated regularly.

For the purpose of resource estimation the LiDAR DTM's have been merged with surveyed current pit voids for the areas mined to date. Mined out areas reflect mined out voids up to 31 December 2016.

A 'non-conformable' base of weathering (BOW) surface was generated for the geological models by translating the topographic surface down by 4 m in the Z direction. This is based on the observation that the average weathered horizon thickness, where it has been logged, is approximately 4 m.

5.4 Data Quality Assurance and Quality Control (QAQC) Measures

5.4.1 Core Sampling

At the completion of each run, core lengths were checked in the splits for recovery to ensure coal seams have been recovered as required. A target core recovery of 90% has been applied throughout all drilling phases. If core recovery was found to be less than 90% within the coal seam, the hole was re-drilled to collect a sample with ≥ 90% recovery. The core was also photographed routinely and logged in the splits by a geologist before being sampled. For open holes, chip samples were collected at 1 m intervals for lithological logging purposes.

Sampling of the coal seams was conducted by the rig geologist on duty and was conducted in accordance with the following sampling procedure supplied to rig geologists:

- Open core barrel inner split tube and remove sample from the barrel;
- Transfer the core to the PVC split or core box;
- Determine the core depth ("From" and "To") from the drill depth;
- Reconstruct the core in the split to allow for any gaps;
- Determine the core recovery;
- Wash down using water and a cloth and/or brush prior to logging if covered by mud or oil;
- Complete geological logging and photograph structure or any abnormal features. The photograph should show information of drill hole number and from and to depths;
- The division of samples follows the simple scheme of sample all coal, sample separately any contained bands (plies) and take 10 cm roof and floor non-coal samples;
- Place samples into plastic bags which should be doubled to minimise moisture loss. Insert one bag inside another so that they are doubled;
- Label the sample by ID card, the label should give information about the sample number, hole number, from/to depth, and Project Code. Place the label ID card inside the small re-sealable plastic bag before putting it into the sample bag;
- Seal the sample bag with tape and write the sample number on the plastic bag; and
- Dispatch sample to an accredited laboratory.

The coal quality sampling technique detailed above is considered by Salva Mining to adequately address the QAQC requirements of coal sampling. As a further coal quality validation step prior to importing coal quality sample results for coal quality modelling purposes, Salva Mining constructed spreadsheets which compare the sampled intervals against the logged seam intervals in order to ensure that sampled intervals match the seam pick intervals.

5.4.2 Down-hole Geophysics and Seam Picks

Down-hole geophysical logs were completed during each drilling program by PT Surtech Indonesia. Geophysical logging was conducted following the completion of a drill hole. After drilling is complete the logging unit deploys down-hole geophysical sondes, including gamma ray, calliper and density tools to assist with characterising the down-hole formation and its geological properties. Stratigraphic information, intercepted along the entire length of the drill hole (collar to total depth), is recorded and plotted in acrobat pdf format. A digital copy of the data is stored in LAS file format.

Logging was performed on the majority of drill holes (including cored and open holes) and all these holes have geophysical data. Seam picks and lithologies have all been corrected for geophysics.

Geophysical logging provides information on the coal seams intersected and aids in the definition of horizon boundaries and marker horizons, used to correlate the subsurface geology. The presence or absence of geophysical logging is one of the criteria used in the determination of points of observation for resource classification purposes. Under normal conditions coal-bearing sections of each drill hole were geophysically logged at the completion of drilling. In some instances, poor ground conditions restricted the ability to geophysically log the entire hole upon completion. In these cases, collapsed portions of holes were re-drilled in order to allow for density and gamma logging to be accomplished by lowering the geophysical probe through the drill string.

5.4.3 Coal Quality

Coal quality sampling was undertaken by GEAR and contract geologists, with the analysis testing being completed by PT Geoservices Coal Laboratories in Padang. PT Geoservices laboratories are accredited to ISO 17025 standards and quality control is maintained by daily analysis of standard samples and by participation in regular "round robin" testing programs.

American Society for Testing and Materials (ASTM) methods has been used for all quality variables. Reporting was done on an air dried and as received basis

The following tests were undertaken as standard on all coal samples:

- Total Moisture (as received basis only);
- Inherent Moisture (IM);
- Ash Content (Ash);
- Volatile Matter (VM);
- Fixed Carbon (FC);
- Total Sulphur (TS);
- Calorific Value-air dried basis (CV adb); and
- Relative Density (RD).

5.4.4 Data validation by Salva Mining prior to geological model construction

Prior to using the lithological (seam pick) and coal quality data for geological model construction purposes, Salva Mining performed the following data validation and verification checks on the data;

- Checking of seam picks against the down-hole geophysics in selected instances in order to validate seam pinch outs or correlations during structural model construction;
- Validation of coal quality sample intervals against seam pick intervals;
- Scatter plots of raw coal quality data pairs were constructed in order to determine outliers. In a few cases spurious data values were identified and removed from the quality data set prior to importing the data into Minescape;
- In cases where RD (adb) data was not determined for a sample, linear regression equations determined from the RD-ash scatter plot constructed from the rest of the raw coal quality data set were used to determine the RD value for the sample concerned from the ash value for that sample;
- Core recovery percentages per core run were compiled and merged with the coal quality sample data set in order to determine if any samples in the coal quality data set are from coal seam intersections with less than 90% core recovery over the seam width. Core recovery was observed to be satisfactory with over 90% recovery within the coal horizon

although less than 90% recovery is often seen in the immediate roof or floor to the coal seam (coal samples with less than 90% core recovery were previously rejected by GEAR staff prior to being forwarded data to Salva Mining).

- After compositing the coal quality samples over the seam width on a seam by seam basis, histograms were constructed of the composited raw coal quality for each seam, in each of the two resource areas (Appendix D). Analysis of these histograms shows that in a few instances, raw ash% outliers are present as a result of excessive overlap of the coal quality sample into the seam roof or floor. In all but one such instance, the proportion of outlier composite samples is very small compared to the total number of samples per seam and hence the presence of these outliers has no material impact on the modelled raw coal quality for affected seams. In the case of S200U for KIM West, the low number of samples for this minor seam has resulted in the fact that the single outlier sample has affected the overall coal quality estimate for this seam (biased to the high ash side). However this seam represents around 5% of the total resource, of which the majority is inferred. Therefore this is not considered to have a material impact on the coal quality of the KIM West resource as a whole.

5.5 Coal Density

No information on in situ moisture was requested or obtained from the laboratory, resulting in the Preston and Sanders equation not being applied to obtain in situ relative densities. As a result all resource tonnages are quoted on an air dried density basis as volumes are calculated on an in situ basis and density on an air dried basis. However the density of in situ coal is in reality not on an air dried basis but at a higher in situ moisture basis. The estimate of resources on an air dried basis will therefore result in a higher tonnage as compared to the equivalent in situ moisture basis calculation. This effect has been accounted for to a large extent in the reserving process, where the total moisture has been used as proxy for the in-situ moisture and a Preston Sanders calculation has been made on this basis. However, given the unknown accuracy of this approximation, this calculation was not done at the resource stage, preferring rather to use the more accurately known air dried density and state the moisture basis used in the resource.

5.6 Coal Quality Data

Raw coal quality composite sample statistics for all seams in each resource area are given in Table 5:3 and Table 5:4. The coal quality in the KIM concession area can be summarised as moderate total moisture and moderate ash.

Table 5:3 KIM East - Summary of Drill Hole Raw Coal Quality by Seam

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
S100U	Number of Values	11	11	11	11	11	11	11	11
	Min Value	15.44	2,353	13.0	6.9	1.4	14.8	1.3	27.5
	Max Value	46.97	5,628	35.1	14.9	1.9	28.0	3.8	39.4
	Mean	25.63	4,568	28.5	11.3	1.5	22.5	2.5	34.6
S100L	Number of Values	20	20	20	20	20	20	20	20
	Min Value	13.2	2,943	16.4	5.9	1.4	10.1	0.8	25.0
	Max Value	48.03	5,535	34.6	16.0	1.7	32.7	3.6	45.9
	Mean	27.25	4,684	25.8	11.1	1.5	21.6	2.3	35.8
S200U	Number of Values	20	22	20	22	22	20	20	20
	Min Value	6.94	4,334	16.1	9.5	1.3	18.6	1.1	30.7
	Max Value	34.11	5,948	40.5	20.5	1.5	37.2	3.5	44.0
	Mean	17.73	5,104	34.1	13.3	1.4	28.1	2.1	35.2
S200	Number of Values	22	22	22	22	22	22	22	22
	Min Value	6.72	3,746	26.4	9.2	1.3	19.5	0.5	25.6
	Max Value	38.81	5,622	41.5	18.6	1.5	32.0	2.7	38.7
	Mean	17.01	5,036	35.2	13.8	1.4	26.3	1.8	33.9
S200L	Number of Values	20	22	20	22	22	20	20	20
	Min Value	5.66	4,007	16.1	10.0	1.3	18.6	0.5	30.6
	Max Value	34.11	5,978	45.3	18.8	1.5	35.8	2.8	39.8
	Mean	15.64	5,142	35.0	14.2	1.4	28.9	1.7	35.2
S300U	Number of Values	118	118	118	118	118	118	118	118
	Min Value	6.02	4,369	19.4	7.5	1.3	15.6	0.6	27.2
	Max Value	30.38	6,398	43.2	18.4	1.5	32.3	2.1	51.1
	Mean	15.91	5,554	31.1	11.7	1.4	23.4	1.2	41.4
S300L	Number of Values	99	99	99	99	99	99	99	99
	Min Value	9.02	1,680	8.2	7.2	1.3	15.4	0.3	27.0
	Max Value	57.79	5,932	43.7	20.5	2.0	34.0	1.8	47.3
	Mean	21.98	4,759	33.0	12.8	1.5	26.2	0.5	32.3

Table 5:4 KIM West - Summary of Drill hole raw coal quality by seam

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
S100U	Number of Values	10	10	10	10	10	10	10	10
	Min Value	11	3,230	21.5	8.6	1.4	17.1	2.0	21.6
	Max Value	45.8	5,694	39.6	15.1	1.7	28.7	3.8	37.9
	Mean	21.4	4,939	33.0	11.6	1.5	21.6	2.9	34.0
S100L	Number of Values	17	17	17	17	17	17	17	17
	Min Value	15.5	3,607	15.6	5.8	1.4	7.8	1.1	32.4
	Max Value	35.2	5,551	38.5	13.3	1.6	24.9	3.0	46.6
	Mean	27.3	4,807	26.5	9.4	1.5	18.5	2.0	36.7
S200U	Number of Values	9	9	9	9	9	9	9	9

	Min Value	6	4,306	11.2	10.6	1.3	13.9	1.1	17.1
	Max Value	65.5	5,903	45.3	18.7	1.6	28.8	2.8	38.2
	Mean	16.8	5,282	36.3	14.7	1.4	24.6	1.7	32.7
S200	Number of Values	20	20	20	20	20	20	20	20
	Min Value	7.1	4,588	33.2	9.7	1.3	22.4	1.0	30.0
	Max Value	25.1	5,741	42.1	18.5	1.5	31.0	1.7	37.6
	Mean	13.9	5,337	38.3	13.4	1.4	27.0	1.3	34.4
S200L	Number of Values	9	10	9	10	10	9	9	9
	Min Value	2.8	4,902	33.0	11.3	1.3	22.1	0.6	31.5
	Max Value	19.9	5,798	46.5	18.7	1.4	28.5	1.7	35.8
	Mean	11.4	5,350	39.2	15.2	1.4	25.4	1.1	33.8
S300U	Number of Values	55	55	55	55	55	55	55	55
	Min Value	9.7	5,303	29.3	9.6	1.3	18.3	0.4	36.0
	Max Value	18.1	6,016	40.9	14.9	1.4	27.8	1.8	43.7
	Mean	13.1	5,760	33.5	12.1	1.4	21.8	1.0	41.3
S300L	Number of Values	53	53	53	53	53	53	53	53
	Min Value	11	3,692	23.4	7.9	1.4	18.8	0.3	27.1
	Max Value	38	5,780	41.3	16.6	1.6	25.9	3.8	40.7
	Mean	24.9	4,654	31.4	11.7	1.5	22.5	0.5	32.1

6 Resource Model Construction

6.1 Structural Model

After completion of the previously detailed QA/QC processes, the available valid lithological and coal quality data was then imported into the MineScape software (Version 5.7) to generate both a structural model and a coal quality model for each of the two resource areas.

The lithological data was then modelled to create structural grids. The schema, stored within the Stratmodel module of the MineScape software controls the modelling of seam elements and their structural relationships, grid model cell size, interpolators and other parameters. The details of these parameters stored in the applied schemas used in the structural modelling process are listed in Table 6:1.

Within the modelling schema, all of the stratigraphic intervals were modelled with pinched continuity. This is applied in areas where intervals are missing in a drill hole. In this situation, the modelling algorithm stops the interpolation of the missing interval halfway between the two drill holes between which it ceases to be present.

6.2 Structural Model Validation

Structural and thickness contours were generated and inspected to identify any irregularities, bulls-eyes, unexpected discontinuities etc. Cross-sections were also generated to identify any further structures such as faulting and any areas where seams were modelled as being discontinuous due to short drilling. Selected cross-sections from each resource area are shown in Appendix E.

Table 6:1 Model Schema Settings and Parameters

Model Component	Details
Modelling Software	Ventyx MineScape - Stratmodel module
Schema	kime016,kimw2014
Topography Model	TOP16 (KIM East), TOPW (KIM West)
Topography Model Cell Size	20 m
Structural Model Cell Size	20 m
Interpolator (thickness)/order	Finite Element Method (FEM)/0
Interpolator (surface)/order	Finite Element Method (FEM)/1
Interpolator (trend)/order	Finite Element Method (FEM)/0
Extrapolation Distance	2500 m
Parting Modelled	No
Minimum Ply Thickness	10 cm
Maximum Coal Parting	30 cm
Conformable Sequences	Weathered, Fresh
Upper Limit for Seams	Base of Weathering (BOW)
Control Points	Yes
Constraint File	No
Penetration File	Yes
Model Faults	No
Maximum Strip Ratio	-

Model Component	Details
Maximum Resource Depth	250 m
Tonnage Calculations	Based on volumes using relative density on an air dried basis

6.3 Coal Quality Model

Coal quality data has been composited on a seam basis. The Inverse distance interpolator was selected for modelling coal quality as it has been shown to perform adequately for most coal quality attributes and it is also less likely to introduce spurious trends into the data. Testing indicated that a power value of two and a search radius of 2500 metres are the most suitable inverse distance interpolation parameters for modelling of the KIM coal deposits. Parameters used for quality modelling are summarized in Table 6:2.

Table 6:2 Quality Model Parameters

Model Component	Details
Coal Quality Data Type	Raw
Model Type	MineScape Table
Interpolator	Inverse distance
Power	2
Search Radius	2500 metres

6.3.1 Quality Model Validation

After the completion of quality model gridding, selected qualities for selected seams were contoured and contours inspected to ensure that quality models had been gridded correctly. As a second validation measure, average qualities reported during resource reporting for all seams were compared against the average qualities of the input data to ensure consistency between input and output data sets.

7 Coal Resources

7.1 Prospects for Eventual Economic Extraction and Resource Classification

Coal Resources present in the KIM concession have been reported in accordance with the JORC Code, 2012. The JORC Code identifies three levels of confidence in the reporting of resource categories. These categories are briefly explained below.

Measured – "…*That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors to support detailed mine planning and financial evaluation*";

Indicated – *"…That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors in sufficient detail to support mine planning and evaluation"; and*

Inferred – *"…That part of a Mineral Resources for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling.".*

For the purpose of coal resource classification according to JORC Code (2012) , Salva Mining has considered a drill hole with a coal quality sample intersection and core recovery above 90% over the sampled interval as a valid point of observation.

In terms of Coal Resource classification, Salva Mining is also guided by the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) (The Coal Guidelines) specifically referred to under clause 37 of the JORC Code (2012). According to the Coal Guidelines, maximum spacing's between points of observation for both structural and coal quality points of observation for Measured, Indicated and Inferred resources are 500 m, 1000 m and 4000 m respectively.

Based on due consideration of the continuity of the coal seams as observed in the geological models for each of the two resource areas, the relative lack of evidence for significant faulting and the population statistics of the coal quality composites per seam, Salva Mining has sub-divided Coal Resources within the KIM concession into resource classification categories based on the following spacing's (expressed as a radius of influence around points of observation which is half of the spacing between points of observation):

- Measured 250m radius of influence;
- Indicated 500m radius of influence; and
- Inferred 2000m radius of influence

Resource polygons for the main seams from each resource area are shown in Appendix E. It is furthermore a requirement of the JORC Code (2012) that the likelihood of eventual economic extraction be considered prior to the classification of coal resources. The average coal quality attributes of the coal seams considered is sufficient to be marketed as a mid CV thermal coal for power generation purposes. Therefore, Salva Mining considers that it is reasonable to define all

coal seams within the classification distances discussed above, to a depth of 250m below the topographic surface, as potential open cut coal resources.

7.2 Coal Resource Statement

Coal Resources have been estimated, classified and reported according to the JORC Code (2012) and the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) as at 31 December 2016 and are detailed in Table 7:1.

Table 7:1 Coal Resource Estimate for KIM as at 31 December 2016

Pit	Measured Resource			Indicated Resource			Inferred Resource			Total Mt
	Mass Mt	Ash adb %	CV adb kcal/kg	Mass Mt	Ash adb %	CV adb kcal/kg	Mass Mt	Ash adb %	CV adb kcal/kg	
KIM East	55	18.1	5,279	36	18.9	5,183	75	18.7	5,192	166
KIM West	58	16.7	5,445	23	17.5	5,340	10	15.7	5,228	91
Total	**113**			**59**			**85**			**257**

Mineral Resources are reported inclusive of the Mineral Reserves.
(Note: Final Inferred Resource rounded to nearest 5 Mt. Individual totals may differ due to rounding)

7.3 Comparison with Previous Estimates

Previous Resource was reported at end of August 2016. The Another difference between the current and previous models is the use of the new topographic surface which takes into account actual mining at KIM East from September 2016 up until December 2016.

The August 2016 KIM resource estimate incorporates an additional 3 drill holes for KIM East resource model. KIM West has had no additional information since the last estimate and hence remain unchanged from the previous estimate of this block done by HDR in January 2016.

The use of the updated topographic surface has resulted in an decrease of total coal resources by 1 Mt mainly in the measured resource category in the Kim East Block.

Table 7:2 Coal Resources - Comparison with Previous Estimate

Resource Category	Salva Mining Dec 2016 (Mt)	Salva Mining Aug 2016 (Mt)	HDR Jan 2016 (Mt)	HDR 2014 (Mt)
Measured	113	114	112	115
Indicated	59	59	60	60
Total (Measured & Indicated)	**172**	**173**	**172**	**175**
Inferred	85	85	85	85
Total	**257**	**258**	**256**	**260**

Note: Individual totals may differ due to rounding

8 Reserve Estimation

8.1 Estimation Methodology

Salva Mining prepared the Coal Resource estimate for KIM Concession coal deposit as at 31 December 2016 which is used as a basis for the Coal Reserve estimate.

The Coal reserves estimates presented in this Report are based on the outcome of pit optimisation results and the Techno-economics study carried out by Salva Mining. The mining schedule for the KIM concession blocks includes two operating open cut mines (KIM East and KIM West) which targets total coal requirement of 3 Mtpa from both the pits from 2019 onwards.

The subject specialist for Coal Reserves considers the proposed mine plan and mining schedule is techno-economically viable and achievable. This has been done by reviewing all the modifying factors, estimating reserves in the pit shell and doing a strategic production schedule and economic model which confirms a positive cash margin using the cost and revenue factors as described below in this Report.

The KIM Mine is an operating mine since 2007 (KIM East pit commenced production in 2007 while the KIM West pit started in 2010). The KIM Mine is operated as single mining operation; even though the production from the Kim West pit has been temporarily suspended as part of normal operation control. It is planned to resume production from the KIM West pit by end of 2018.

Salva Mining considers the Modifying Factors to be valid for both pits. The Modifying Factors used are based on actual operations at the KIM Mine which were independently verified by the Salva Mining's subject specialist during the site visit. Therefore, it is considered valid to use Modifying Factors from the operating KIM mine to satisfy clause 29 of the JORC Code. Further, Salva Mining has carried out independent life of Mine (LOM) Study to develop the mining schedule and its economic evaluation of the Mine.

8.2 Modifying Factors

The following Table (Table 8:1) outlines the factors used to run the mine optimisation and estimate the Coal Reserve Tonnage.

Table 8:1 Modifying & Mine Optimisation Factors

Factor	Chosen Criteria
Seam roof & floor coal loss of 0.05 m each	0.10m
Seam roof & floor dilution 0.02 m each	0.04m
Geological & Mining loss including loss in transportation and handling at port	5%
Minimum mining thickness minable coal seam	0.3m
Dilution default density	2.2bcm/t
Dilution default calorific value	500Kcal/kg
Dilution default ash	75%
Overall Highwall and Endwall slope	25 deg to 40 deg
Maximum Pit depth	Varies from 90-150m max.
Minimum Mining width at Pit bottom	50m
Exclusion of Mining lease (IUP) and offset from Pit crest	50m

Factor	Chosen Criteria
Mining , Coal handling and Transport Cost – supplied by client and validated by Salva Mining	Available & Used
Long term Coal Selling Price for Break-even Stripping Ratio calculation	US$ 46.2/t
Government Documents / approvals - supplied by client	Available & Used
Environment Report	Available & Used
Geotechnical Report	Available& Used
Hydrogeology Report	Available & Used

Notes on the modifying factors discussed below include mining, geotechnical, hydrogeological, environmental, mine logistics, safety, cost and revenue, marketing and other relevant factors for estimating the Coal Reserves within the KIM mine.

8.3 Notes on Modifying Factors

8.3.1 Mining Factors

General

The mining limits are determined by considering physical limitations, mining parameters, economic factors and general modifying factors as above (Table 8:1). The mining factors applied to the Coal Resource model for deriving mining quantities were selected based on the use of suitably sized excavators and trucks. The assumptions are that due to the shallow to moderate dip of the coal, mining will need to occur in benches.

The mining factors (such as recovery and dilution) were defined based on the proposed open cut mining method and the coal seam characteristics. The exclusion criteria included the lease boundary and a minimum working section thickness.

Determination of Open Cut Limits

The geological models that were used as the basis for the estimation of the Coal Reserves are the MineScape geological models prepared by Salva Mining to compute the Coal Resources.

Potential open cut reserves inside different blocks of the Project Area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. By generating the financial value (positive or negative) for each mining block within a deposit and then applying the physical relationship between the blocks, the optimal economic pit can be determined.

This method is widely accepted in the mining industry and is a suitable method for determining economic mining limits in this type of deposit. The optimiser was run across a wide range of coal prices using a standard set of costs that was developed by Salva Mining and based on typical industry costs in similar operations. These costs were adjusted to suit the conditions for this project.

Unit Costs

The Contractor and Owner unit costs used in the Lerchs Grossman optimiser for both Pits are detailed in Table 8:2 and Table 8:3.

Table 8:2 Contractor Unit Rates (Real Terms)

Cost Item	Unit	Rate
Land Clearing	$/ha	1400
Topsoil Removal	$/bcm	1.40
Waste Mining	$/bcm	1.40
Waste Haulage	$/bcm/km	0.30
Coal Mining	$/t	0.70
Haul to ROM Stockpile	$/t km	0.10
Haul to Customer – Road	$/t km	0.06

All quoted cost in local currency is adjusted for fuel price and exchange rate.

Table 8:3 Owner Unit Costs (Real Terms)

Cost Item	Unit	Rate
ROM Coal Handling	$/t	0.30
Mine Closure	$/ha	4,200
Environmental and Rehabilitation	$/t	0.05
Salary and Wages	$/t	0.25
Medical & Community Development	$/t	0.05
Corporate Overheads	$/t	0.25

Royalty was estimated 5% based on the respective sale prices of the coal. A 10% VAT was also considered. These costs were used to create a series of waste and coal cost grids which were used to generate the optimiser nested pit shells.

Base Pit for Optimiser

In addition to these constraints, the optimisers were mostly limited by a 3 dimensional shell which was built for each block following either a surface constraint or geological model extent. These constraints are detailed in Table 8:4. This pit shell effectively represented the maximum pit possible in the deposit that was reasonable for the estimation of Coal Reserves.

Table 8:4 Block wise Optimiser Base Pit limits

Pit	North	South	East	West
KIM West	IUP & Geomodel	Subcrop & River	IUP & Geomodel	IUP, Geomodel & River
KIM East	Geomodel	IUP, subcrop & Mined out area	IUP and Geomodel	IUP, River & Mined out area

Past Mining in KIM East and KIM West

Mining is being carried out in KIM East at present. The last surveyed topography as at 31 December 2016 for has been used as the surface for the optimisation for these Pits to exclude mined out tonnage from the current reserve estimate.

8.3.2 Optimisation Result

The optimiser produced a series of nested pit shells using same cost parameters with varying sale price of coal. The method starts with a very low discounted sale price following a high discount factor and moves toward higher sale prices by decreasing the discount on sale price. It estimates the net margin by subtracting the total cost from the revenue within a particular shell at a particular discount factor using the cost-revenue parameters and the physical quantities within the pit shell. As the method progresses, the incremental margin per ton of coal slowly drops down to zero at "zero" discount factor. Salva mining has selected optimised pits at 38% discount to the zero margin.

8.3.3 Selection of Pit Shell

GEAR is proposing to continue to mine 2.5 Mtpa of coal from KIM coal concession blocks and targeted to increase to 3 Mtpa from 2019 onwards. An economic model was prepared for the mining operation from each of the KIM coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal.

Break Even Stripping Ratio

Table 8:5 summarises the calculation of the Break Even Stripping Ratio. The methodology adopted involves taking the cost to mine a tonne of coal to the point of sale.

Table 8:5 Break-even Stripping Ratio (BESR)

Estimation of Break Even Stripping Ratio	KIM West & KIM East
Coal Price, US$/t	46.2
Total of Road haulage & Royalty, US$/t	18.7
Price at Mine Head, US$/t	27.5
Other mine related cost, US$/t	6.7
Price ex mine, US$/t	20.8
Cost of Coal Mining, US$/t	0.7
Cost of Waste Mining, US$/bcm	1.6
Break-even stripping ratio bcm/t	13.0

Total mineable quantities have been estimated based on the in-situ density of coal. The in-situ density of the coal has been estimated using the Preston-Sanders method to account for the difference between air-dried density and in-situ density. The formula and inputs were as follows:

$$RD2 = RD1 \times (100 - M1) / (100 + RD1 \times (M2 - M1) - M2)$$

Where

- RD2 = In-situ Relative Density (arb);
- RD1 = Relative density (adb);
- M1 = Inherent Moisture (adb); and
- M2 = Total Moisture (arb).

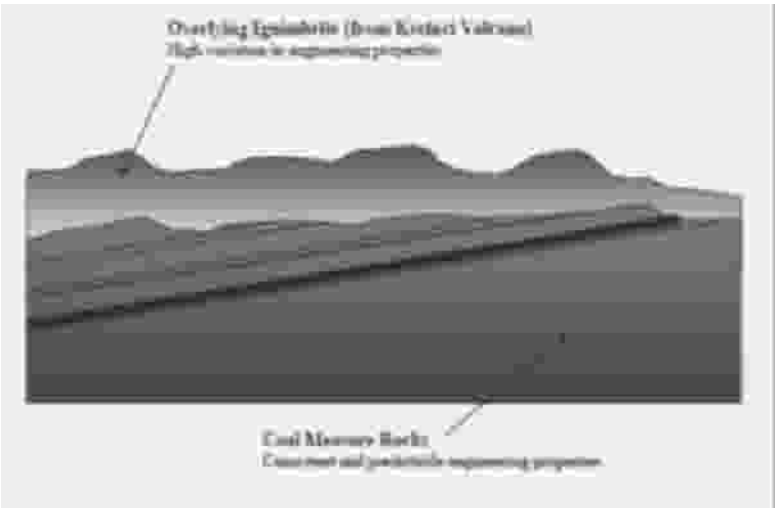
It should be noted that while the total moisture from laboratory measurements may not necessarily equal the in-situ moisture, this is considered to be a best estimate given the limited amount of data. Salva Mining has assumed that no moisture reduction takes place for the determination of product quality.

8.3.4 Geotechnical Factors

The KIM East and KIM West Pits occupy areas that comprise relatively flat topped plateaus at around RL 150 m that have been dissected to depths of 20 to 30 m by mainly south to north aligned creeks. The Batang Asam river runs from south to north in a highly meandering path between the two existing mine areas.

In general, the mining areas are being developed into coal measure rocks that are overlain by ignimbrite, as shown below in Figure 8:1.

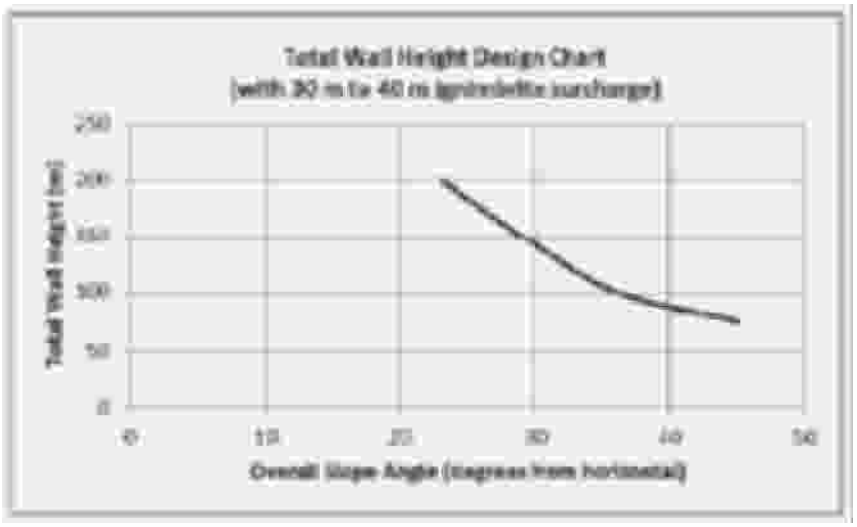
Figure 8:1 Soil & Rock lithology – KIM Project



The thickness of the ignimbrite has quite a big variation in KIM East Pit varying from 5 m in the SW corner of the pit but it goes up to 55 m on the western side, 40 m on the eastern side and approximately 22 m in the central north side.

There have been wall and in-pit dump failures reported due to excessive tuff, undercut bedding and structure and internal dump developments in the existing mining areas in KIM pits. The current geotechnical study for the KIM area recommends a high wall slope which is depicted in the Figure 8:2 below.

Figure 8:2 Geo-tech Recommendations



8.3.5 Surface Water Management

Pit water management is of critical importance for the effective operation of the mine. Dewatering operations observed during the site visit were considered to be of a high standard with well-constructed pit sumps and efficient drainage from operating areas into the sump. The overall strategy for water management over the life of mine will be to:

- Minimise surface water entering the pit by:
  - Building dams and drains to divert water from external catchments away from pits; an
  - Profiling dumps so that water is diverted away from the pits.
- Removing water from excavations by:
  - Constructing a main sump at the deepest point of each pit and draining all in pit water to that sump; and
  - Installing sufficient pumps and pipes of suitable size to pump water from the pit. Two stages pumping will be required in deeper areas in the later years of the mine life.

8.3.6 Mining Method and Operations

Mining operation commenced in 2007 in KIM East and in 2010 in KIM West Pits. The KIM Mine is an open pit mine using standard truck and excavator methods which are a common practice in Indonesia.

The mining method can be described as a multi seam, moderate dip, open cut coal mine using truck and shovel equipment in a combination of strip and haulback operations.

Waste material is mined using hydraulic excavators and loaded into standard rear tipping off-highway trucks and hauled to dumps in close proximity to the pits or to in-pit dumps where possible. For the purpose of this Reserve Statement, it is proposed that contractors will continue to be used

for mining and haulage operations over the life of mine, and the unit costs used for the Reserve estimate reflect this style of mining.

Figure 8:3 shows the existing mining condition at the KIM West Pit as there is no mining operations are being carried out currently. Mining activities are being carried out at the KIM East Pit which is shown in 8:4.

Figure 8:3 KIM West Pit



Figure 8:4 KIM East Pit



8.3.7 Processing Factors & Product Quality

The coal is to be sold unwashed so no processing factors have been applied. Other than crushing to a 50 mm top size no other beneficiation will be applied.

8.3.8 Mine Logistics Factors

Salva Mining has carried out a high level review of logistic options to access the KIM Project economics. Based on assessment of available information, data gathered during the site visit and at GEAR office in Jakarta, following logistic chain for coal blocks comprising the KIM project is considered appropriate.

Coal Logistics

The mined out coal from KIM project is currently being sold to domestic customers. The mine to end user plant supply chain involves hauling of coal to the ROM stockpile, followed by transportation using public road to the domestic customers. Till recent past, the mined out coal from the KIM project had been sold to export customers as well. At present, domestic sales have better margin compared to exporting the product. However, an option to export coal to overseas customers still exists if margin improves in the future.

Mined out coal is hauled to the ROM stockpile, located at an approximate distance of 10 km from the KIM pits, using rigid body coal haulage trucks. Although facilities for crushing and screening exist at ROM stockpile area, crushing is not required for sales to most domestic customers. Coal from the ROM stockpile is hauled (262km) along public roads to customers. It is anticipated that most of the coal will be sold to the Lontar Papyrus pulp and paper plant in the near term. However, in medium term, some of the coal produced from the KIM Project may go into to nearby power plants under construction including one at Jambi and Teluk Sirih.

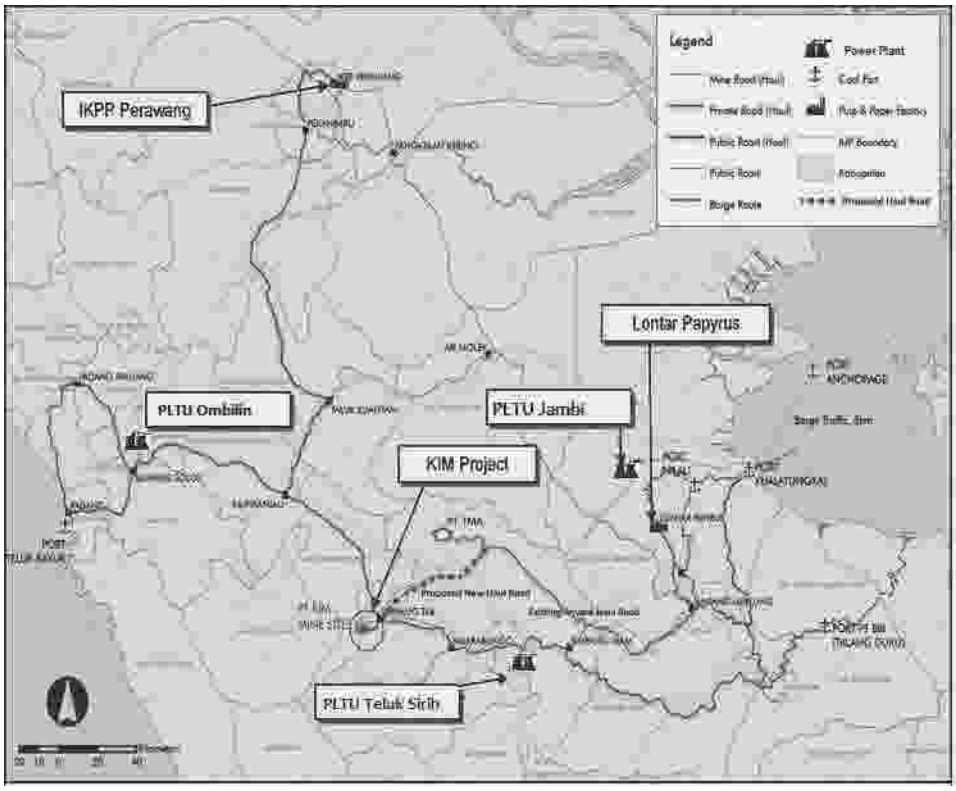
Haulage on Public Roads

The Jambi provincial government in conjunction with regency governments from Jambi's major coal producing regions have agreed on a suspension of coal trucks using public roads, starting from 31 December 2012 (Jambi Province Regulation No 13 Year 2012). The provincial government is planning to construct an alternative route for coal trucks, in order to avoid resistance from local public and minimise the loss of royalty from coal producers in the area.

Presently, GEAR have developed plans to build a new haul road which will connect the KIM Pits to the existing special road leading to Port Nilau (owned by GEAR) via Lontar Pypras Pulp and Paper Plant. This dedicated connecting road is expected to be completed in in 2018.

Although the interpretation of this regulation is somewhat ambiguous, Salva Mining is in opinion that the government is likely to continue to allow coal haulage by public road where a coal company is developing its own dedicated haul road. The current and proposed logistic map for KIM project is shown in Figure 8:5.

Figure 8:5 Current and Proposed Coal Logistics, KIM Project



8.3.9 Permits and Approvals

Salva Mining understands that the permits and approvals with regard to further mining activities in the KIM Coal Concession deposits are in good standing. This was independently verified by Lasutlay & Pane Advocates in Indonesia stating that tenements are in good standing. Salva Mining has relied on this report.

The KIM concession area is located in the "Other Use area" which requires no permit from the forestry department. There are no known significant environmental factors that influence the estimation of Reserves within the KIM project area as the environmental management includes the development of waste management facilities and monitoring activities ongoing.

The western IUPs of KIM are located adjacent to the border of the Jambi province and West Sumatra province of which some are cultural land. As a positive note, till recently cultural land owners have requested to get overburden materials from KIM to fill their land as they are less productive areas in the steep hills for cultivation. A small road crossing the coal haul road from west area to Batang Asam river has also been provided as a shortcut for few local residents.

8.3.10 Environment and Community Relations

A preliminary assessment of potential issues pertaining to environment and community relations who may impact the Reserves estimation was carried out by Salva Mining. These included following activities:

- Review of environment management procedure at site;
- Visit to GEAR Jakarta office and inspection of environmental management plans;
- Review of the Analisis Mengenai Dampak Lingkungan Hidup (AMDAL) - environment impact assessment and management plans; and
- Review of Corporate Social Responsibility Reports.

Salva Mining's preliminary assessment did not reveal any issues related to environment and community relations that will adversely impact project valuation. However, it should be noted that Salva Mining's assessment was only preliminary in nature and Salva Mining cannot provide any guarantee or warranty that significant environmental or community issues will not affect the operation. Key environmental and community relations issues are discussed below.

Environmental Aspects

Key issues which can have potential impact on project valuations are: Water Run-off, noise, dust and rehabilitation.

Water Run-off from site

If sediment loads are high or if water is acidic, water run-off from dumps, stockpiles, roads and water pumped from pits has the potential to pollute local rivers, creeks and vegetation. This is managed through the use of bunds, drains and sediment ponds of sufficient size to allow small particles to settle out of the water. Regular monitoring of water discharge points is required under government regulations.

Noise and Dust

Noise and Dust originating from mine operations haulage and coal handling have the potential to impact the local environment, particularly if villages and local communities are located within close proximity to mining and coal handling operations. Dust is generally managed by using water trucks on haul roads, and by spraying water or dust suppressant chemicals to minimise dust being airborne and suppressing it.

Rehabilitation

A large area of land will be cleared as part of the KIM mining operation, although much of this area is not covered by any forest land. The disturbed area is generally rehabilitated by removing the topsoil prior to mining, storing the topsoil onsite during mining and covering the final landform with topsoil at the completion of mining. The area to be rehabilitated is then panted with suitable vegetation.

Management at the KIM Project have established procedures and a nursery in place to prepare for revegetation to take place. To prevent the dust hazard, the company is currently using dust suppressant and water sprinkling system. Salva Mining notes that the current approved AMDAL for the KIM concessions allows the company to mine in excess of the proposed throughput.

Mine closure plans for the updated mine plan have yet to be completed; however Salva Mining does not foresee any significant issues with this aspect of the operation. A reasonable allowance has been made in for environmental management, rehabilitation and mine closure.

8.3.11 Social Aspects

Maintaining a good relationship with local communities is a key requirement for the success of the KIM operation. Efforts must be made to continue the ongoing community development programs in coordination with the local government. Salva Mining reviewed KIM's Corporate Social Responsibility programs which include the following aspects:

Economy

Economic development of the local community is set to include activities to assist with the economic development of the community by providing employment and business opportunities once mining operations have finished.

Current programs include training in sewing skills and establishing aquaculture infrastructure.

Health

It includes programs to improve health in the local communities and to increase people's knowledge through education in health issues.

8.3.12 Cost and Revenue Factors

General

GEAR provided a "data sheet" of indicative unit costs and revenues relevant for this project which was subject to review and agreement with Salva Mining.

Salva Mining did an independent coal marketing study to review the coal prices forecast for reasonableness. Salva Mining also reviewed the costs for reasonableness against known current mining costs for similar mining conditions within Indonesia. Salva Mining developed a NPV based economic model was developed to show that the project and reserves are "economic". The model produced a positive NPV of $64.7 Million at 10.5% discount rate. These unit rates were then used to estimate the cost to deliver coal to the domestic consumers. This allowed a break even strip ratio to be estimated and the rates were also used to calibrate the optimiser software.

The following points summarise the cost and revenue factors used for the estimate:

- All costs are in US dollars;
- Long term coal price of $46.2 per tonne;
- Royalties of 5% of revenue less marketing costs have been allowed along with VAT of 10% and Contingency of 5%;
- Coal mining rate considered is $0.70 per tonne; and
- Waste mining rate considered is $1.40 per bank cubic metre.

Operating Cost

Total operating costs per tonne of coal product including royalty for the KIM Project has been estimated as $40.90 per tonne over the life of the mine. The cost components for the different heads have been given in Table 8:6 below.

Table 8:6 Average Unit Operating Cost (Real Terms) over Life of Mine

Cost Item	$/t
Land Clearing	$0.01
Topsoil Removal	$0.03
Waste Mining	$13.24
Waste Overhaul	$1.55
Coal Mining	$0.70
Haul to ROM Stockpile	$0.37
ROM Coal Handling	$0.30
Haul to Customer	$16.43
Mine Closure	$0.04
Environmental and Rehabilitation	$0.05
Salary and Wages	$0.25
Medical & Community Development	$0.05
Corporate Overheads	$0.25
Local Government Fees	$0.25
VAT	$3.23
Operating Cost Excl. Royalty	$38.59
Royalty	$2.31
Operating Cost incl. Royalty	**$40.90**

Capital Cost

Salva Mining estimates total capital expenditure of $ 38M which includes a contingency of $ 5M. A contingency of 15% has been applied to the capital cost estimate. These estimated are considered to have an accuracy of ± 15%. In addition to the expansion capital of $ 38M, Salva Mining has factored 2.5% of the invested capital as sustaining capital per annum for asset maintenance over the life of mine. While preparing these estimates, Salva Mining has relied on industry benchmarks, its internal database and expertise and internal studies on the KIM concessions. The Capital Cost estimates and the basis of its estimation are shown in Table 8:7. The cost estimate was prepared at end of 2016 in US dollars ($).

Table 8:7 Capital Cost (Real Terms)

Sr. No.	Particulars	Direct Cost ($M)	Contingency ($M)	Total Cost ($M)
1.1	Land Compensation	13.5	2.0	15.5
1	**Land Compensation**	**13.5**	**2.0**	**15.5**
2.1	Haul Road Construction	19.5	2.9	22.4
2	**Hauling to Customers**	**19.5**	**2.9**	**22.4**
3	**Total Project Capital**	**33.0**	**5.0**	**38.0**

Salva Mining has compared these against the industry benchmarks and estimated these to be reasonable.

8.3.13 Marketing Factors

The KIM Project produces coal which is sold in the domestic market. The sales price assumptions used in this study are based on domestic coal prices received for coal sold from the KIM project in the current market. The coal price used for the KIM coal is based on the Independent report on coal demand supply assessment and coal price forecast prepared by Salva Mining.

Salva Mining does not see any difficulties marketing the coal from the KIM project as a domestic thermal coal. At Present, the primary markets for this coal are paper and pulp mills located in Sumatra. But in future, some of the coal produced from the KIM Project may go into nearby power plants which are currently under construction.

Salva Mining also reviewed the economics for export sales from the concession. It was found that with the current mining costs for the operation, the margins for export sales were lower than domestic sales for current and forecast coal prices. In future, this situation may change with the increase in coal prices.

Considering the present uncertainty with the global export market, and to be on conservative side, Salva Mining has opted to use domestic price forecast only which has been estimated to be $46.2/t in the real term.

8.3.14 Product Quality

As previously stated, Salva Mining have assumed no moisture change in the product coal chain. Therefore it is assumed that the final product will have the same quality of ROM coal which is summarised in the Table 8:8.

Table 8:8 Product Coal Quality

Pits	RD (adb t/m^3)	TM (arb %)	IM (adb)	Ash (adb %)	CV arb,(kcal/kg)	TS (adb %)
KIM West	1.40	22.6	11.9	16.6	4,980	1.14
KIM East	1.41	24.9	12.1	18.4	4,828	1.32

8.3.15 Other Relevant Factors

Surface constraints to the mining operations at KIM projects are limited to the concession boundary and seam sub crops. Other constraints that were used to define the project were limits of exploration drilling, constraints due to river and variable land compensation rates. No significant surface features exist that would further constrains mining activities.

There are a number of planning issues which can impact on the future mining reserves. These include:

- updated geotechnical studies to confirm the overall slope angles and other parameters;
- ongoing coal quality data as well as detailed infill drilling and updates to the geological model;
- any land compensation issues; and
- any changes in life of mine schedule, infrastructure constraints, coal transportation issues and due to changes in marketing and costing during the mining operation.

These issues can cause the pit shell and mining quantities to change in future Reserve Statements.

Salva Mining is not aware of any other environmental, legal, marketing, social or government factors which may hinder the economic extraction of the Coal Reserves other than those disclosed in this report. In the opinion of Salva Mining, the uncertainties in areas discussed in the report such as in structural and geotechnical area, use of public haul road for coal hauling etc. are not sufficiently material to prevent the classification of areas deemed Measured Resources to be areas of Proved Reserves for the purpose of this report. Salva Mining also believes that the uncertainties in each of these areas also not sufficiently material to prevent the classification of areas deemed Indicated Resources to be areas of Probable Reserve.

Key project risk for the KIM Project emanates from the following factors in order of importance:

- Lower long term coal prices or domestic coal demand;
- Higher life of mine operating costs and logistics issues: and
- Higher Capital costs

Any downside to these factors will likely have a significant impact on the economic feasibility of this project.

8.4 Final Pit Design

8.4.1 Pit Design Criteria

For the purposes of this report, Salva Mining has limited the pit depth to the limit of exploration drilling within the limit applied to the Resource estimates. Other factors considered in the final optimum pit designs included:

- The location and proximity of coal to exploration data;
- Proximity to the concession boundary;
- Out of pit dumping room;
- Geotechnical parameters; and
- Surface water management considerations.

The final pit designs closely followed the selected pit shell in most locations (Figure 8:6 and Figure 8:9).

8.4.2 Cut-off Parameters and Pit Limit

Overall low-wall slopes as per the basal seam dip, endwall slopes and highwall slopes for the final pit design were considered as per Table 8:9 given below. The slope parameters are based on the geotechnical study carried out for KIM project.

Table 8:9 Pit Design Parameters for KIM Project

Pit Design Parameters	KIM Pits
Overall Highwall Slope	40 deg up to 90 m depth, 20 deg for depth up-to 200m depth
Bench Slope	70 deg
Bench Height	10 m
Highwall berm	10 m
Low wall slope	12 deg
Ramp Width	30 m

Pit Design Parameters	KIM Pits
Maximum Ramp Grade	8%

8.4.3 Final Pit Design

The coal seam distribution within the KIM Concession deposits resulted in the Optimiser identifying pits with the 300L basal seam (Figure 9:3 and Figure 9:5). The pits were subjected to adjustments to form a practical pit design, which lead to the exclusion of the minor narrow pit shells and the resultant formation of Mineable Pit Shells, which formed the basis of the subsequent reserves estimate. The final pit design along with representative cross sections for KIM west and KIM East are shown in Figures 8:6 to 8:13.

Optimised Pits for various blocks have been designed within the limits as defined by the pit optimisation analysis. These limits are rationalised to ensure access between floor benches and walls were straightened to generate mineable pits.

The overall highwall batter angle approximately varies from 20 to 40 degrees as the ultimate pit depth ranges from a little more than 80 m to 150 m. This was done in accordance with the geotechnical study done on KIM projects.

Figure 8:6 Selected Optimiser Pit shell - KIM West



Figure 8:7 Final Pit Design - KIM West

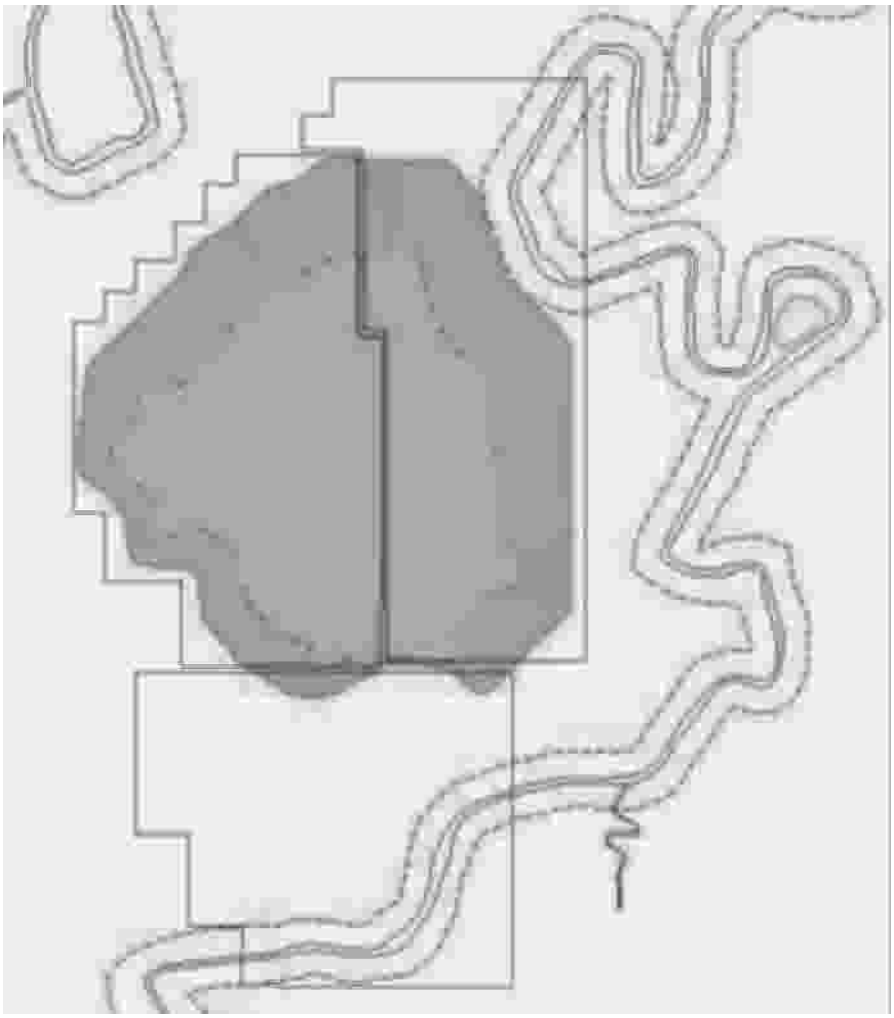


Figure 8:8 Selected Optimiser Pit shell - KIM East

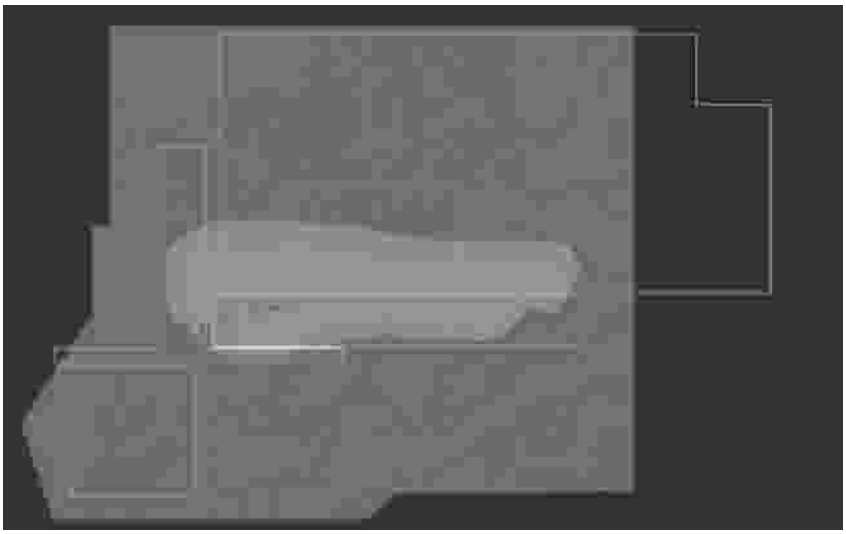


Figure 8:9 Final Pit Design with Resource Polygons - KIM West

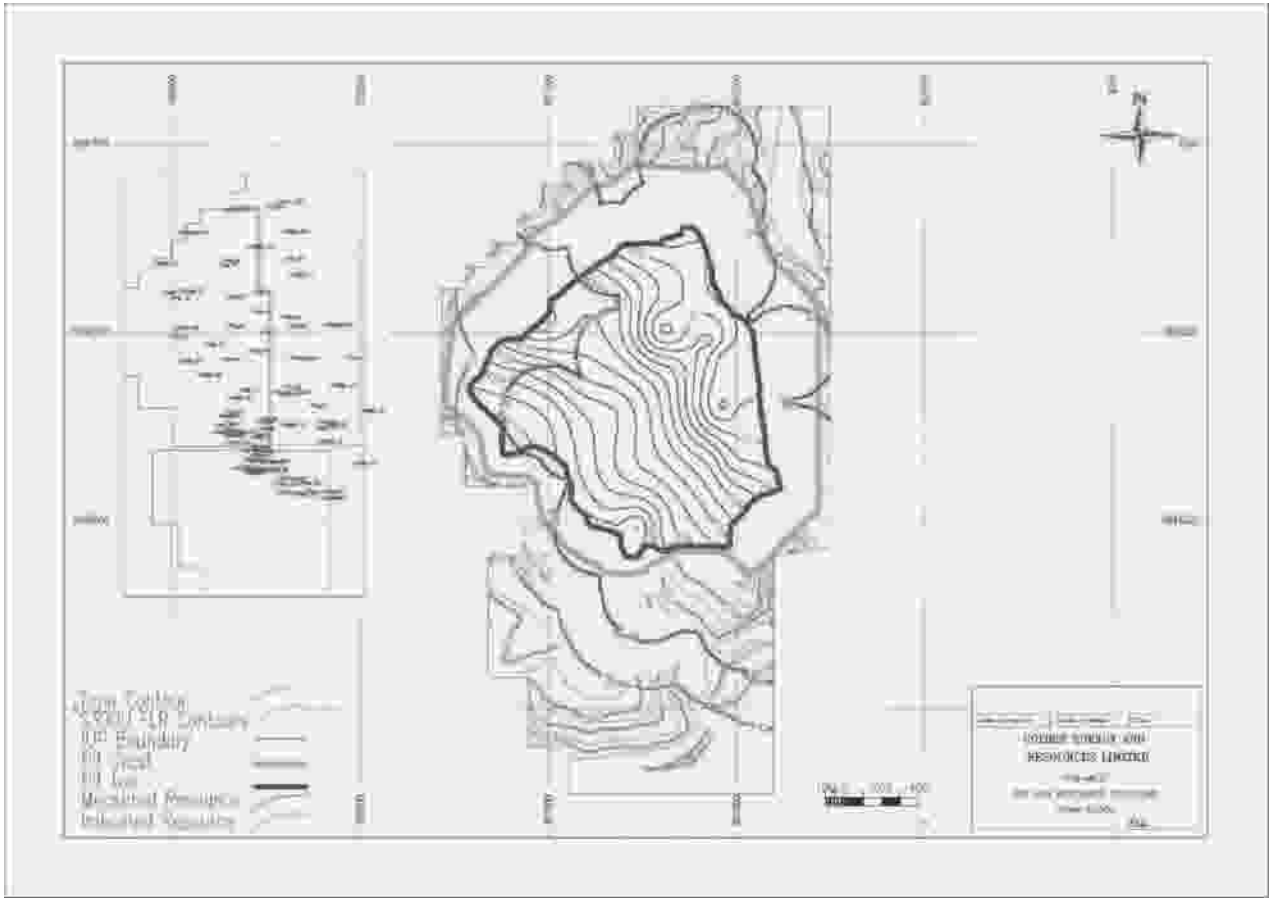


Figure 8:10 Representative Cross Section- KIM West

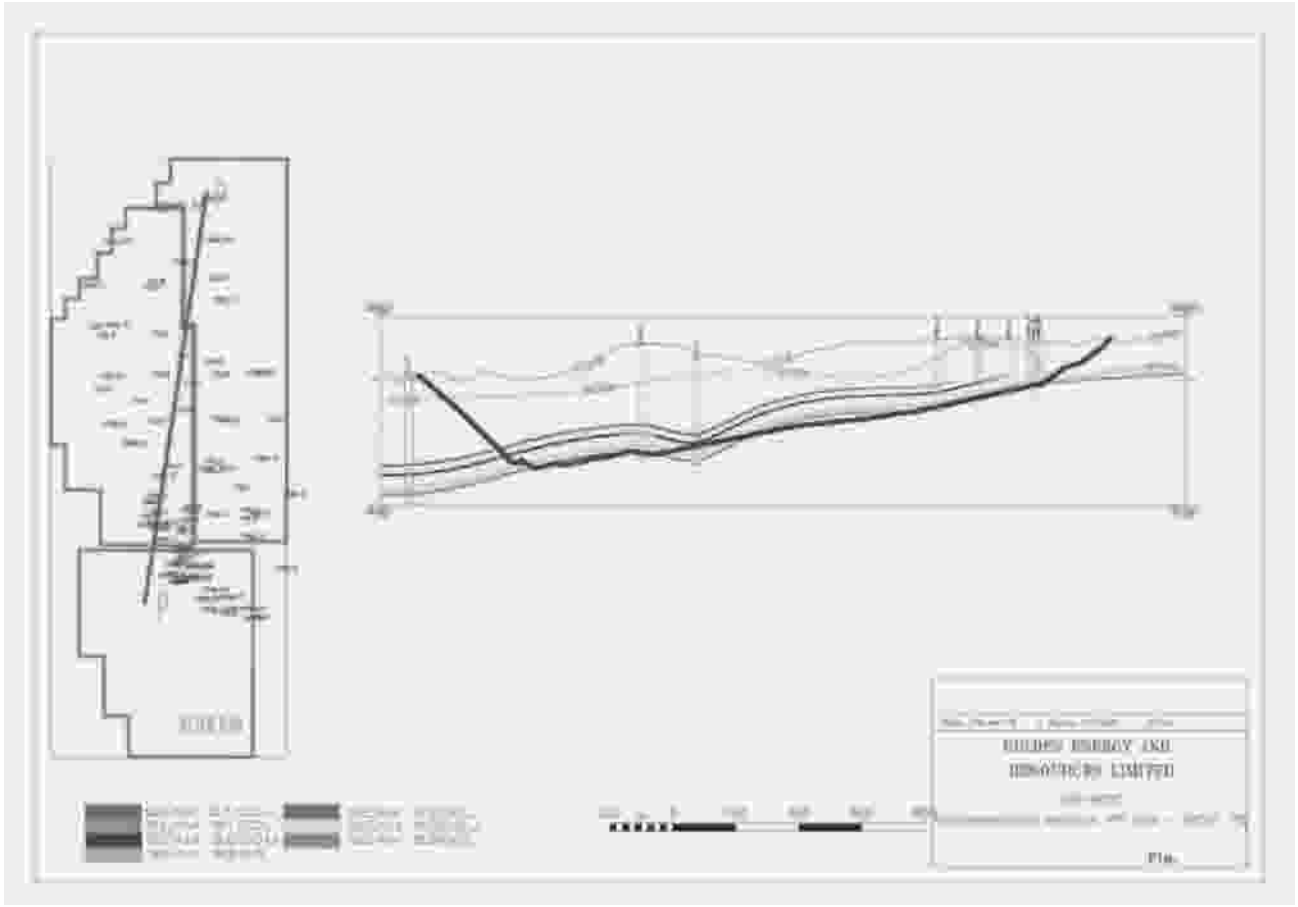


Figure 8:11 Final Pit Design with Resource Polygons - KIM East

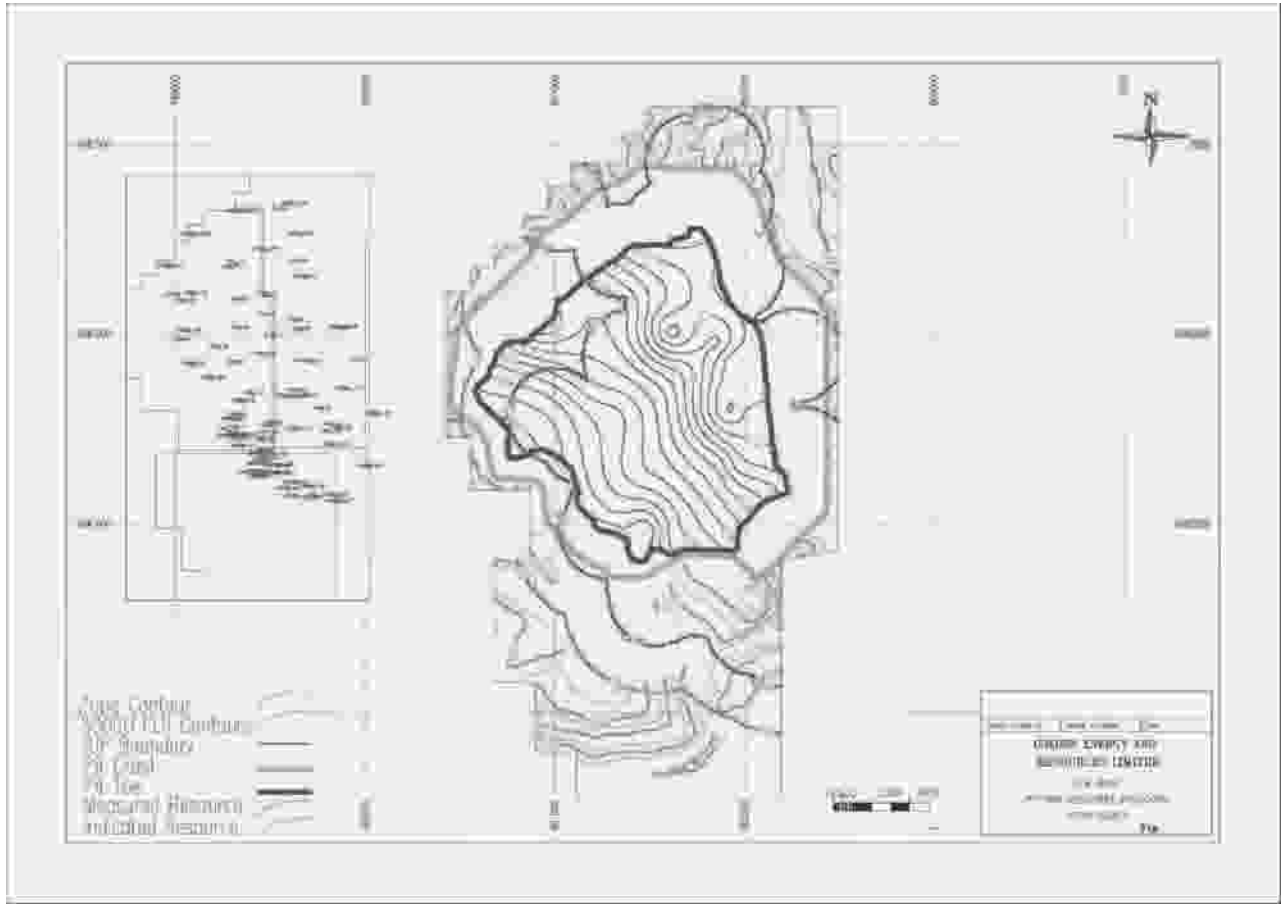


Figure 8:12 Representative Cross Section - 1 - KIM East

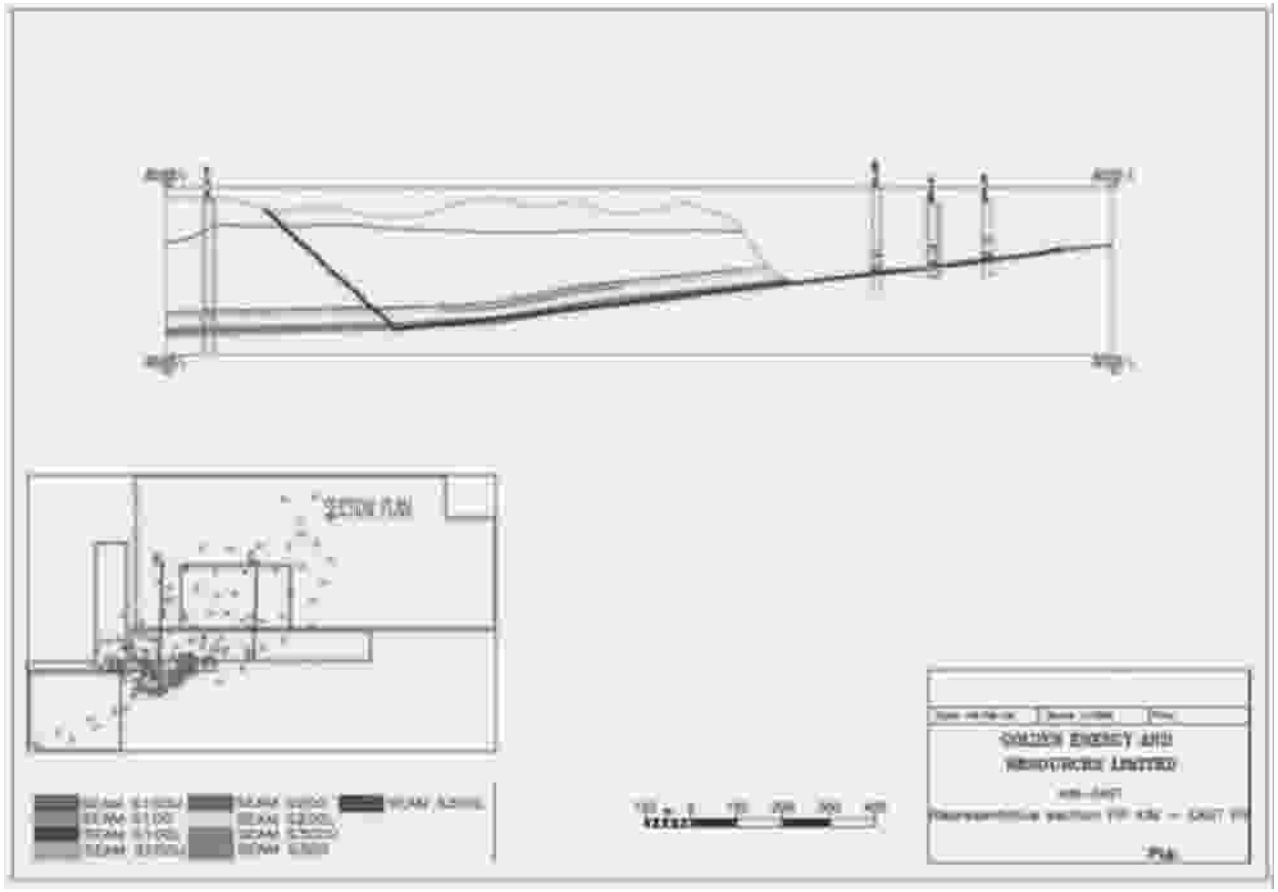
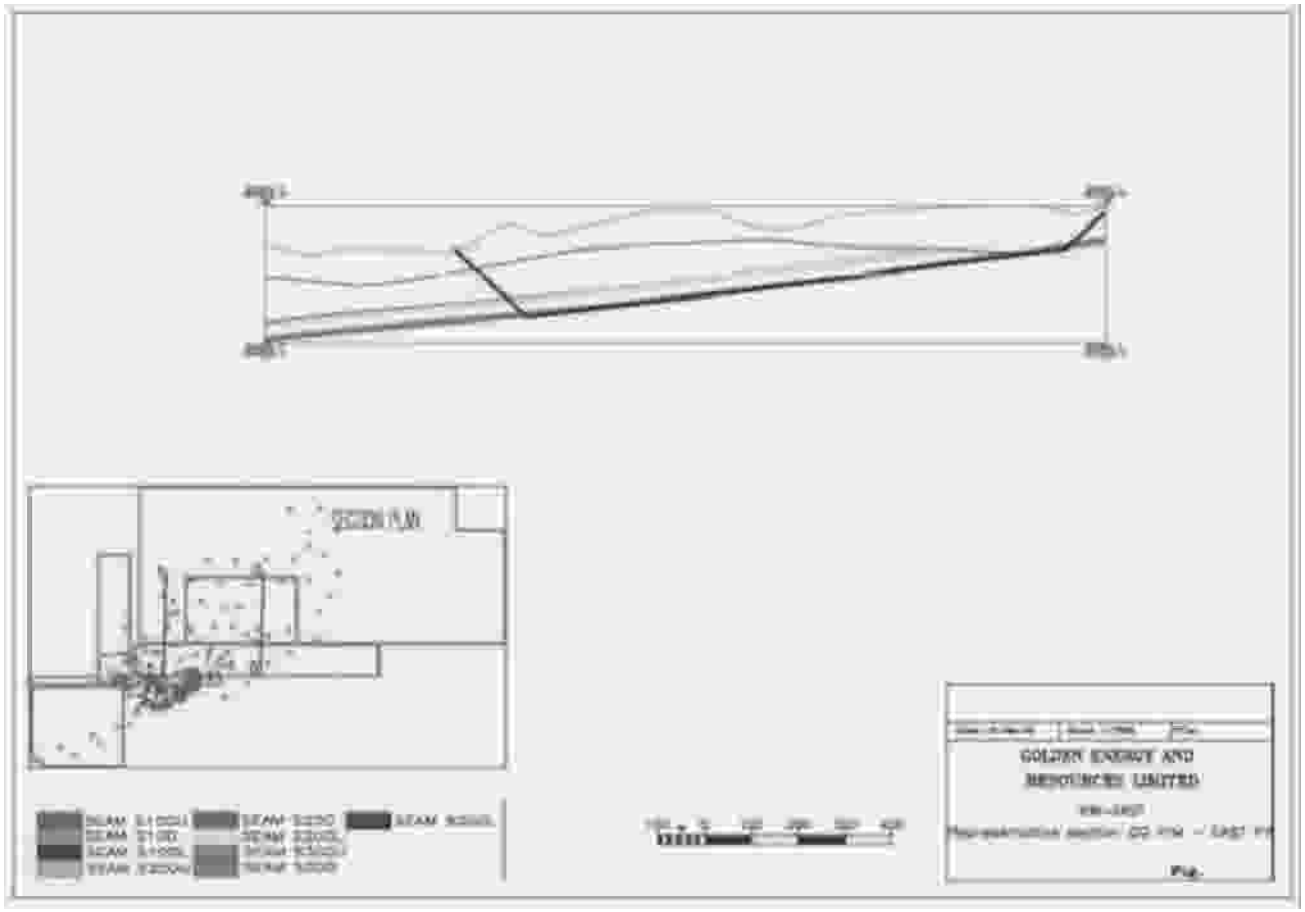


Figure 8:13 Representative Cross Section - 2 - KIM East



8.4.4 Mining Schedule

A life of mine plan was completed based on the final pit design. This was done to ensure that the proposed mining method would be practical and achievable and that the proposed dumping strategy would be able to contain the waste mined in the final pit design. This provides a check on the reasonableness of the assumed waste mining costs and estimates the average waste haul per period. The schedule targets production of 2.5 Mt in year 2017 and continuing with the same production with a ramp up to 3 Mtpa from Year 2019 onwards. In 2016, KIM produced 2.05 Mt from KIM East to supply for the domestic consumers in Sumatra. There is no coal being produced from KIM West since 2014. GEAR is proposing to restart the mining operations in KIM West from 2019 onwards.

The production history from KIM mines as shown in Table 8:10.

Table 8:10 Historical Production from KIM Mines

Pits	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
KIM East	0.51	0.88	0.58	0.87	1.26	0.65	0.81	2.27	2.31	2.05
KIM West	-	-	-	0.25	0.96	1.01	0.26	-	-	-
Total	**0.51**	**0.88**	**0.58**	**1.12**	**2.22**	**1.66**	**1.07**	**2.27**	**2.31**	**2.05**

The optimised pitshells for KIM blocks as delineated in the final pit design do contain Inferred Resources which are excluded from the Coal Reserves reported for the KIM IUPs. Under the JORC Code, Inferred Resources cannot be converted to Reserves due to poor confidence in structural continuity and quality variables.

Insitu quantities and mine scheduled tonnes within optimized pitshell along with Reserves are shown in Table 8:11.

Table 8:11 In-situ & Scheduled Quantities & Reserves

IUPs	In-situ			Mine Scheduled Tonnes within Optimised Pit shell			Coal Reserves, Mt
	Waste, Mbcm	Coal, Mt	SR, bcm/t	Waste, Mbcm	Coal, Mt	SR, bcm/t	
KIM West	266	41	6.4	252	33	7.6	32.2
KIM East	424	46	9.4	360	31	11.4	24.2
Total, KIM	**690**	**87**	**8.0**	**612**	**64**	**9.5**	**56.4**

In the process of Reserve Estimation, Salva Mining has followed the process which aimed to minimize the quantity of Inferred Resources within the selected optimized pit shell included in the final pit designs. However, under certain circumstances, it was considered necessary to include this coal in mine plan as exclusion of it would result in an impractical pit design. Typical situations where inclusions of Inferred Resources within the optimized pit shell were:

- Inferred Resources within optimized pit shell located at the sub-crop but with Measured and Indicated coal located down dip;
- Small areas of Inferred Resources within optimized pit shell located close to the high-wall where exclusion would result in unrealistic high-wall shapes; and

- Thin seams in the stratigraphy where it is difficult to achieve sufficient core recovery or sufficient core for analysis to classify the coal as Measured or Indicated, but which are underlain or overlain by thicker seams with Measured and Indicated Resources.

Table 8:12 exhibits the percentage of Inferred Resource included in the optimized pitshell.

Table 8:12 Inferred Resource within Optimised Pit Shell

IUPs	Scheduled Tonnes within Optimised Pit shell, Mt	Coal Reserves, Mt	Inferred Resource within Optimised Pit shell, Mt
KIM West	33	32.2	1
KIM East	31	24.2	7
Total, KIM	**64**	**56.4**	**8**

For the purpose of project valuation, coal tonnes planned to be produced form KIM Project is restricted to the tonnage of Coal Reserves only.

8.5 Audits and Reviews

Checks were done to validate the Minex Coal Resources to Coal Reserves estimation by repeating it manually in an Excel spread sheet. Other validation work included estimating the total volume of coal and waste in the pit shells using the separate industry standard computer programs MineScape. As MineScape structure and quality grids were imported into Minex for optimisation work, volume and area checks were also carried out in Minex within the pit shells.

8.6 Discussion of Relative Accuracy and Confidence

A comparison between the actual coal mined and geo model predicted coal tonnages have been done in the KIM East Pit since commencement of mining in 2007 until December 2016 and it shows an overall 93% recovery for the said period as shown in Table 8:13. The Ply-by-Ply in-situ Geo Model was used for generating the model predicted number.

Table 8:13 Production Reconciliation

Actual Coal Tonnes, Mt	Geo-Model Coal Tonnes (Mt)	Difference in Percentage (%)
11.9	12.8	93

8.7 Coal Reserves Classification

The mineable coal quantities within the final pit designs of the Mineable Pit Shells were then tested so that only Measured and Indicated Coal Resources were classified as Coal Reserves. Coal Reserves within the seams having Measured Resources are reported as Proved Reserves whereas seams having Indicated Resources are reported as Probable Reserves.

In the opinion of Salva Mining, the uncertainties in areas discussed in the report are not sufficiently material to prevent the classification of areas deemed Measured Resources to be areas of Proved Reserves for the purpose of this report. Salva Mining also believes that the uncertainties in each of these areas discussed under modifying factors also not sufficiently material to prevent the classification of areas deemed Indicated Resources to be areas of Probable Reserve.

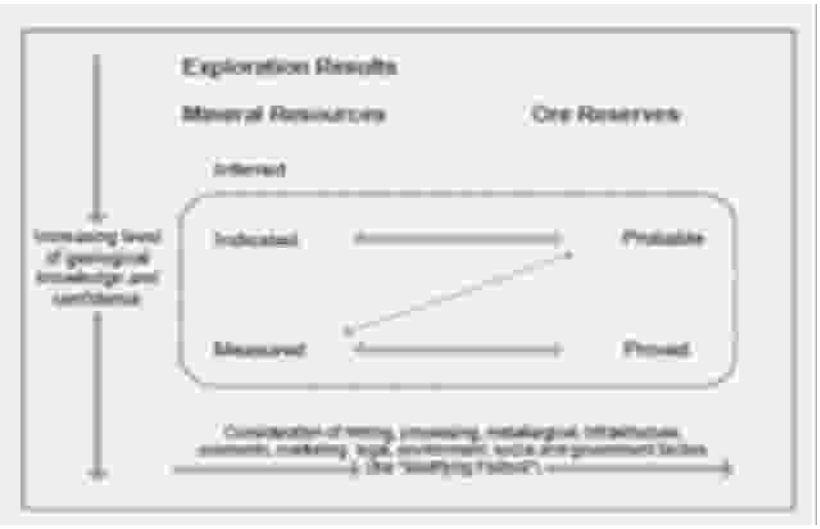
The difference between the Proved and Probable Reserves with respect to Measured and Indicated Resources respectively is explained by the following:

- The Measured and Indicated Resource polygons extend beyond the Mineable Pit Shells;
- There are some Inferred tonnes in the pit shell which cannot be counted as Coal Reserves; and
- There are geological and mining losses and dilution gains in the coal reserve estimation.

8.8 Reserves Classification

Under the JORC Code as shown below only Measured and Indicated Coal Resources can be considered for conversion to Coal Reserves after consideration of the "Modifying Factors" including mining, processing, infrastructure, economic, marketing, legal, environmental, and social and government factors. (Figure 8:14).

Figure 8:14 Relationship between Mineral Resources & Ore Reserves



Source: JORC Code 2012

To convert Resources to Reserves it must be demonstrated that extraction could be justified after applying reasonable investment assumptions. The highest confidence level establishes Proved Reserves from Measured Resources and a lesser confidence level establishes Probable Reserves from Indicated Resources. A level of uncertainty in any one or more of the Modifying Factors may result in Measured Resources converting to Probable Reserves depending on materiality. A high level of uncertainty in any one or more of the Modifying Factors may preclude the conversion of the affected Resources to Reserves.

This classification is also consistent with the level of detail in the mine planning completed for KIM Coal concession deposits. Inferred Coal Resources in the mineable pit shell have been excluded from the Reserve Statement.

In the opinion of Salva Mining, the uncertainties in most of these are not sufficiently material to prevent the classifications of areas deemed Measured Resources to be areas of Proved Reserves and areas deemed Indicated Resources to be the areas of Probable Reserves.

8.9 Statement of Coal Reserves

The Statement of Coal Reserves has been prepared in accordance with the 2012 Edition of the JORC Code. Total ROM Coal Reserves for PT Kuansing Inti Makmur coal deposit ("KIM") are summarised in Table 8:14 as of 31 December 2016. ROM coal reserves are same as Marketable coal reserves.

Table 8:14 ROM Coal Reserves for KIM as at 31 December 2016

Pit	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV arb Kcal/kg	TS Adb %
	Proved	Probable	Total						
KIM West	24.6	7.6	32.2	1.4	22.6	11.9	16.6	4,980	1.14
KIM East	17.7	6.5	24.2	1.41	24.9	12.1	18.4	4,828	1.32
Total	**42.3**	**14.1**	**56.4**						

Total ROM Coal Reserves for each of KIM coal concessions are reported by seam and are presented in Table 8:15 and Table 8:16.

Table 8:15 ROM Coal Reserves for KIM West as at 31 December 2016

Seams	Reserve (Mt)			RD	TM	IM	Ash	CV	TS
	Proved	Probable	Total	adb, t/m3	arb, (%)	adb, (%)	adb, (%)	arb, (kcal/kg)	adb, (%)
100U	0.6	0.8	1.4	1.47	22.67	11.55	21.40	4,195	2.80
100L	1.8	0.6	2.3	1.49	19.75	9.34	26.88	4,394	2.25
200U	0.5	0.6	1.1	1.38	25.20	14.92	12.50	4,908	1.66
200	0.1	0.0	0.2	1.41	1.30	26.56	13.09		
200L	0.5	0.3	0.8	1.38	25.39	15.63	11.22	4,704	0.98
300U	16.9	4.1	21.0	1.36	22.31	11.60	13.27	5,306	1.00
300L	4.1	1.3	5.4	1.51	22.08	10.78	27.69	4,383	0.42
Total	**24.6**	**7.6**	**32.2**	**1.40**	**22.58**	**11.85**	**16.62**	**4,980**	**1.14**

Table 8:16 ROM Coal Reserves for KIM East as at 31 December 2016

Seams	Reserve (Mt)			RD	TM	IM	Ash	CV	TS
	Proved	Probable	Total	adb, t/m3	arb, (%)	adb, (%)	adb, (%)	arb, (kcal/kg)	adb, (%)
100U	0.1	0.6	0.7	1.45	23.74	11.22	24.4	4,061	2.68
100L	0.4	0.6	1.0	1.49	23.16	11.38	27.54	3,771	2.37
200U	0.0	0.5	0.5	1.43	27.35	12.68	19.02	4,432	2.02
200	0.8	0.1	0.9	1.42	27.47	13.92	17.69		
200L	0.3	0.7	1.0	1.4	29.03	14.35	16.17	4,890	1.81
300U	13.2	2.6	15.8	1.38	24.09	11.79	16.27	5,251	1.17
300L	3.3	1.0	4.3	1.46	26.77	12.69	22.64	3,845	0.48
Total	**18.1**	**6.1**	**24.2**	**1.40**	**24.91**	**12.12**	**18.21**	**4,830**	**1.32**

9 JORC Table 1

This Coal Reserve Report has been carried out in recognition of The 2012 JORC Code published by the Joint Ore Reserves Committee ("JORC") in 2012. Under the report guidelines all geological and other relevant factors for this deposit are considered in sufficient detail to serve as a guide to on-going development and mining.

In the context of complying with the Principles of the Code, Table 1 of the JORC code (Appendix C) has been used as a checklist by Salva Mining in the preparation of this report and any comments made on the relevant sections of Table 1 have been provided on an 'if not, why not' basis. This has been done to ensure that it is clear to an investor whether items have been considered and deemed of low consequence or have yet to be addressed or resolved.

The order and grouping of criteria in Table 1 reflects the normal systematic approach to exploration and evaluation. Relevance and Materiality are the overriding principles which determine what information should be publicly reported and Salva Mining has attempted to provide sufficient comment on all matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. It is important to note that the relative importance of the criteria will vary with the particular project and the legal and economic conditions pertaining at the time of determination.

In some cases it may be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision for the company issuing the Public Report, and such a decision should be made in accordance with any relevant corporation regulations in that jurisdiction.

In cases where commercially sensitive information is excluded from a Public Report, the report should provide summary information (for example the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for the purpose of informing investors or potential investors and their advisers.

10 References

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PT Ground Risk management (GRM), "Engineering Report for KIM Mine Geo-technical Work East and West Expansion areas, Sumatera, Indonesia"; 28 February 2011;

PT SMG Consultants – JORC Resource Statement KIM Project 21st October 2013.

HDR – JORC Resource Statement KIM Project 5th February 2016.

Appendix C to the Independent Qualified Persons Report, Independent Resources and Reserve Report, August 2014" prepared for United Fibre System Limited by HDR;

Tamtomo, Budi, Yuswar, Irzan, and Widianto, Eko, 1997, Transgressive Talang Akar sands of the Duang area, south Sumatra basin: origin, distribution and implication for exploration play concept, in Howes, J. V. G, and Noble, R. A., eds., Proceedings of the Petroleum Systems of Se Asia and Australasia: Indonesian Petroleum Association Conference, May 1997, p. 699-708.

Appendix A: CVs

Person	Role
Manish Garg (Director - Consulting)	
Qualification	B. Eng. (Hons), MAppFin
Prof. Membership	MAusIMM; MAICD
Contribution	Overall Supervision, Economic Assessment (VALMIN 2005)
Experience	Manish has more than 25 years' experience in mining Industry. Manish have worked for mining majors including Vedanta, Pasminco, WMC Resources, Oceanagold, BHP Billiton - Illawarra Coal and Rio Tinto Coal. Manish has been in consulting roles for past 5 years predominately focusing on due diligence, valuations and M&A area. A trusted advisor, Manish has qualifications and wide experience in delivering due diligences, feasibility studies and project valuations for banks, financial investors and mining companies on global projects, some of these deals are valued at over US$5 billion.
Grenville Davies (Principal Consultant - Geology)	
Qualification	B. Sc. (Hons)
Prof. Membership	MAusIMM
Contribution	Geology, Resource (JORC 2012)
Experience	Grenville has more than 35 years of experience in most aspects of coal geology; including exploration, geological modelling, resource estimation, open cut and underground mine geology. He has worked for two of the major Australian software houses responsible for developing both Minex and Minescape as well as working for mining majors like BHP Billiton and consulting to major mining companies for both geological modelling. As a consultant he has worked on audits and due diligence for companies within Australia and overseas. He has strong expertise in data management, QA/QC and interpretation; reviews/audits of data sets, models and resource estimates.
Sunil Kumar (Principal Consultant - Mining)	
Qualification	B. Engg. (Mining)
Prof. Membership	MAusIMM
Contribution	Mine Scheduling, Reserve (JORC 2012)
Experience	Sunil is a mining engineer with 27 years' experience in the mining industry across operations and consulting. His career spans 4 years in working in mining operations and about 21 years as a mining consultant primarily in the mine planning & design role which included estimation of coal reserves, DFS/FS, due diligence studies, techno-commercial evaluations and technical inputs for mining contracts. Prior to joining Salva Mining , Sunil was working as Principal Mining Engineer at Xstrata Coal. To date Sunil has worked on over 25 coal projects around the world, inclusive of thermal and coking coal projects in Australia, as well as in major coalfields in India, Indonesia, Mongolia and Mozambique.

Appendix B: SGX Mainboard Appendix 7.5

Cross-referenced from Rules 705(7), 1207(21) and Practice Note 6.3

Summary of Mineral Reserves and Resources

Name of Asset / Country: Kuansing Inti Makmur / Indonesia

Category	Mineral Type	Gross (100% Project)		Net Attributable to GEMS		Remarks
		Tonnes (millions)	Grade	Tonnes (millions)	Grade	
Reserves						
Proved	Coal	32	Subbituminous B	32	Subbituminous B	
Probable	Coal	14	Subbituminous B	14	Subbituminous B	
Total	Coal	56	Subbituminous B	56	Subbituminous B	
Resources*						
Measured	Coal	113	Subbituminous B	113	Subbituminous B	
Indicated	Coal	59	Subbituminous B	59	Subbituminous B	
Inferred	Coal	85	Subbituminous B	85	Subbituminous B	
Total	Coal	257	Subbituminous B	257	Subbituminous B	

** Mineral Resources are reported inclusive of the Mineral Reserves.*

GEAR holds 99.996% of asset directly and indirectly.

Appendix C: JORC Table 1

Criteria	Explanation	Comment
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips etc.) and measures taken to ensure sample representivity. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Chip samples were collected at every 1m for lithology logging. Sampled all cored coal, sampled separately any bands and taken 10cm of roof and floor for non-coal samples.
Drilling techniques	Drill type (e.g.. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka etc.) and details (e.g.. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Man-portable top drive hydraulic rigs, capable of HQ3 coring used for all coal quality. Open hole pilot hole drilled to ascertain coal seams and then drilled a cored drill hole for coal quality (coal quality point of observation). Geophysically logged open holes (percussion drilling) used for non-coal quality structural data points (structural points of observation).
Drill sample recovery	Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	After the completion of each core run, core loss is determined by the on-site geologist and recorded in the drill hole completion sheet. If recovery is found to be less than 90% within a coal seam intersection, the hole is re-drilled in order to re-sample this seam with greater than 90% core recovery. All samples with less than 90% core recovery over the width of the seam intersection were excluded from the coal quality database. Followed drilling SOP's for loose and carbonaceous formations to achieve full sample recovery.
Logging	Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography.	Detailed logging of chips and core. Core photographs were taken.

Criteria	Explanation	Comment
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected. Whether sample sizes are appropriate to the grainsize of the material being sampled.	No sub-sampling of the core.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	PT Geoservices laboratories are accredited to ISO 17025 standards. Coal quality laboratory adheres to internal QAQC and inter-laboratory QAQC checks. ISO methods have been used for MHC tests. Australian Standards have been used for RD and American Society for testing and materials (ASTM) methods have been used for all other quality variables. Geophysical traces were observed to be generally of good quality.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Coal quality sampling undertaken by GEAR and is in-line with the coal quality being achieved during the actual mining operations. Twinned holes checked for agreement of seam intersection depths and in most of the cases there was good agreement.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	Borehole collars have been surveyed using standard total station techniques employed by the survey contractors. Surveys have been validated by GEAR survey staff. The surveyed borehole locations for KIM match well with topographic data. The topography was generated by PT Surtech Utama across KIM project

Criteria	Explanation	Comment
		area using LIDAR remote sensing data.
Data spacing and Distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Data spacing sufficient to establish continuity in both thickness and coal quality. Data sets include topography and base of weathering as well as seam structure and coal quality. Ply sampling methodology use. Sample compositing has been applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Ply by Ply sampling used therefore orientation of sampling not seen to introduce bias as all drilling is vertical.
Sample Security	The measures taken to ensure sample security.	Proper measures for sample security were taken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	PTSMGC conducted a review of the drill hole database in 2013 for historical data set and found it to be satisfactory. Standard database checks also performed by Salva Mining as outlined on Section 5.4.4 prior to resource modelling and found it to be satisfactory.
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenure is secured and currently available. .
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No exploration by other parties.
Geology	Deposit type, geological setting and style of mineralisation.	See Section 4 of the Resource and Reserve Report.

Criteria	Explanation	Comment
Drill hole information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	This report pertains to resource estimation not exploration results. As such the details of the drill holes used in the estimate are too numerous to list in this Table.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	All samples have been composited over full seam thickness and reported using Minescape modelling software. No metal equivalents used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Ply sampling methodology prevents samples from crossing ply boundaries. Therefore orientation of sampling not seen to introduce bias as all drilling is vertical and seams mostly gently dipping..
Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.	See figures in the Report and Appendices.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.	No reporting of exploration results.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical	Geophysical survey results available for majority of the holes.

Criteria	Explanation	Comment
	and rock characteristics; potential deleterious or contaminating substances.	
Further work	The nature and scale of planned further work (e.g.. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further work will be necessary to improve the confidence levels of the deposits and understanding of the full seam stratigraphy. No proposed exploration plan has been proposed in this report.
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	The database for all blocks is considered of an acceptable standard to report a Coal Resource. Drill hole data used to construct Minescape model. Checks against original down hole geophysics (LAS) files used to verify data during modelling.
Site Visits	Site Visits undertaken by the Competent Person and the outcome of these visits. If no site visits have been undertaken, indicate why this is the case	Site visit by Mining Engineer (CP for Reserving) between 2014 and 2016 on regular basis. Geological site visit not conducted due to the fact that the geology had been well documented by previous workers.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	High degree of confidence in seam picks made using down hole geophysical data. The KIM geological models created by Salva Mining are considered to accurately represent the deposits. No major faults have been reported . Current Minescape model tonnes agree with previous model by developed by HDR to within 5% error margin range.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	See figures in the Report and Appendices.

Criteria	Explanation	Comment
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	FEM interpolator used for surface elevation, thickness and trend. Inverse distance squared used for coal quality throughout. Based on experience gained in the modelling of over 40 coal deposits around the world, the FEM interpolator is considered to be the most appropriate for structure and inverse distance the most appropriate for coal quality. Grid cell size of 25m for the topographic model, 25m for the structural model. Visual validation of all model grids performed. Sulphur is below 1% on average for most seams. Reconciliation of mine production against the initial 2014 estimate shows agreement to within 10%. Geological control based on correlation of seams, this is considered to be accurate as it is based on down hole geophysical logging. No cutting or capping used Visual validation of modelled grids against input points as well as comparison of reported qualities against input composites per seam.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All tonnages estimated on air dried basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The coal resources contained in this report are confined within the concession boundary. The resources were limited to 250m below topography. A minimum ply thickness of 10cm and maximum thickness of 30cm was used for coal partings.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	The KIM East area is currently being mined as open pit excavations by truck and shovel method.

Criteria	Explanation	Comment
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	N/A in situ air dried tonnes quoted
Environmental Factors	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Portions of deposit are currently being mined with dedicated waste dumps and water management system. The company is progressively rehabilitating the waste dumps. Salva Mining is not aware of any environmental factors that may impact on eventual economic extraction.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	N/A as in situ air dried tonnes quoted.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. Whether the result appropriately reflects the Competent Person(s)' view of the deposit.	Classification distances based on an assessment of the variability of critical variables through statistical analysis and by an assessment of the degree of geological complexity. Classification radii for the three resource categories are: Measured:250m Indicated:500m Inferred:2000m
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	None
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation.	Spacing ranges for the three resource categories are considered to adequately reflect the degree of confidence in the underlying estimate on a global basis. Local variation to estimated values may arise and will be addressed by adequate grade control procedures during mining operations. Reconciliation of estimate vs actual mined tonnes for mining since 2013 is within 10% difference.

Criteria	Explanation	Comment
	Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Basis of the estimates is "KIM JORC Resource Statement as at 31 December 2016. Coal resources is inclusive of Coal reserves.
Site Visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	Mr Sunil Kumar, Mining Engineer, CP, made the site visit and held discussions at mine site and corporate office during July 2014 during initial model construction.
Study Status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	The Kim Mine is an operating mine. KIM East Pit is being currently mined. KIM West Pit was mined till the end of 2013 and is proposed to be mined after the KIM East exhausts its reserves.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied	Refer Section 8:6:1, Break even Stripping Ratio analysis
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Refer Table 8:1 Modifying Factors and Pit Optimisation Parameters and Section 8:3 on Notes on Modifying Factors. The KIM Mine is an operating mine since 2007 (KIM East pit commenced production in 2007 while the KIM West pit started in 2010). The KIM Mine is operated as single mining operation; even though the production from the Kim West pit has been temporarily suspended as part of normal operation control. It is planned to resume production from the KIM West pit by Q1, 2016. Salva Mining considers the Modifying Factors to be valid for both pits. The Modifying Factors used are based on actual operations at the KIM Mine which were independently verified by the Salva Mining's subject specialist during the site visit. Therefore it is considered valid to use Modifying Factors from the operating KIM mine to satisfy clause 29 of the

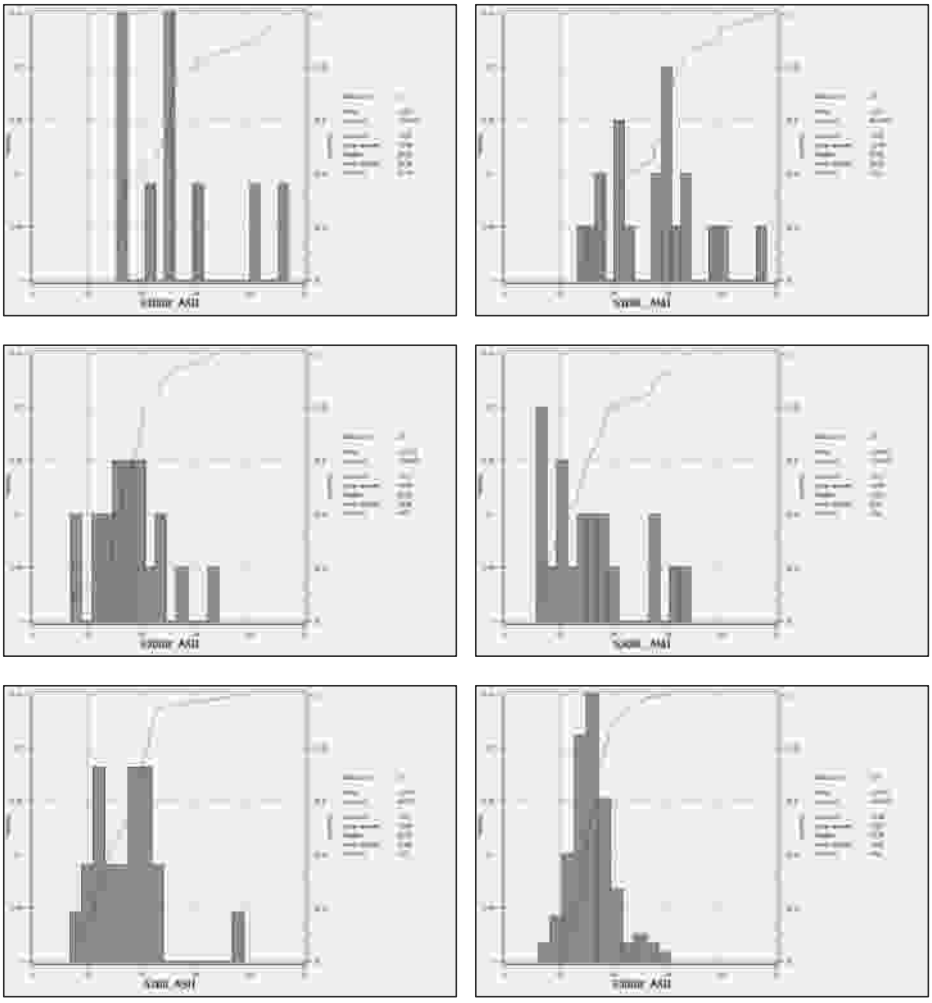
Criteria	Explanation	Comment
	The infrastructure requirements of the selected mining methods.	JORC Code. While JORC 2012 in not explicit with reference to operating mines, the guidance given in ASX FAQ no. 9 is considered relevant in this regard. Further, Salva Mining has carried out independent life of Mine (LOM) Study to develop the mining schedule and its economic evaluation of the Mine.
Metallurgical Factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications.	The coal is to be sold unwashed so no processing factors have been applied. Other than crushing to a 50mm top size no other beneficiation will be applied.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Refer Section 8.11, Permits and approvals & 8.12 Environmental Factors
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Discussed in Section 8.10Mine Logistic Factors
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products. The source of exchange rates used in the study. Derivation of transportation charges.	Discussed in Section 8.14 Cost and Revenue factors.

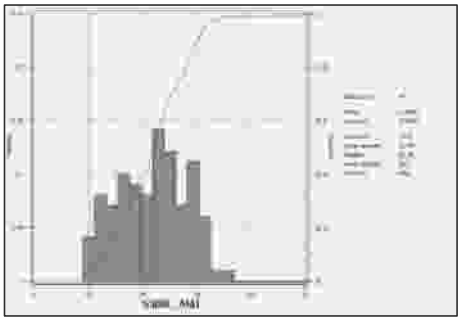
Criteria	Explanation	Comment
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	
Revenue Factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products	Discussed in Section 8.15 Cost and Revenue factors & Appendix B
Market Assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Discussed in Section 8.16 Marketing Factors & Appendix B
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs	Economic analysis (NPV) done based on long term price outlook and the cost estimates (Contractor mining operation)
Social	The status of agreements with key stakeholders and matters leading to social licence to operate	Refer to Section 8:12 of this report
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingency.	Discussed under Section 8:17, Other Factors

Criteria	Explanation	Comment
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Discussed under Section 10.1, Reserve Classification
Audit & Reviews	The results of any audits or reviews of Ore Reserve estimates.	Discussed under Section 10.2, Audits & Reviews
Discussion of Relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Discussed under Section 10.3, Relative Accuracy and confidence

Appendix D: Raw Coal Quality Histograms per Seam

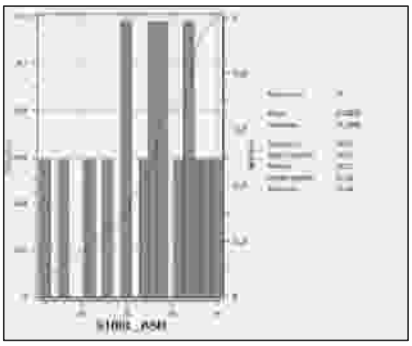
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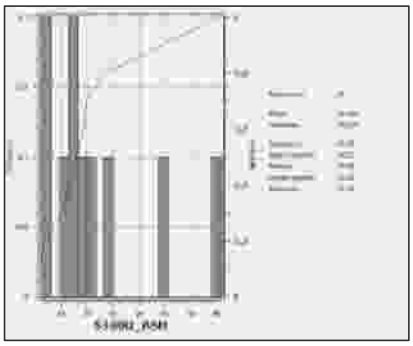


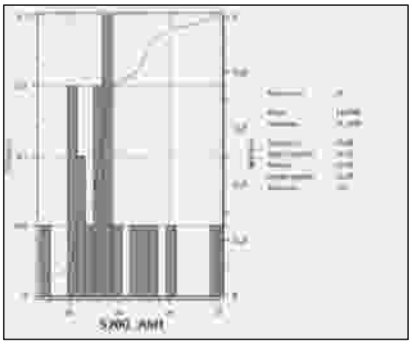


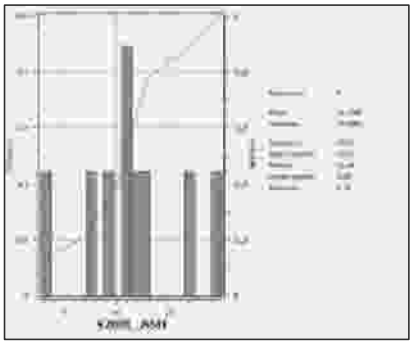
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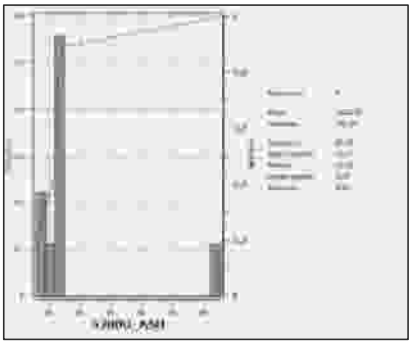
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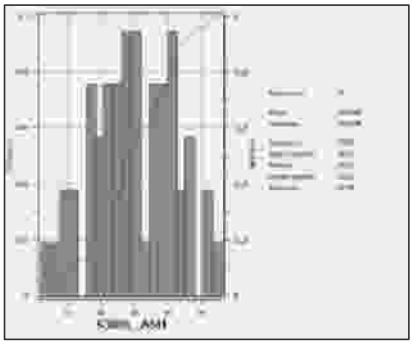


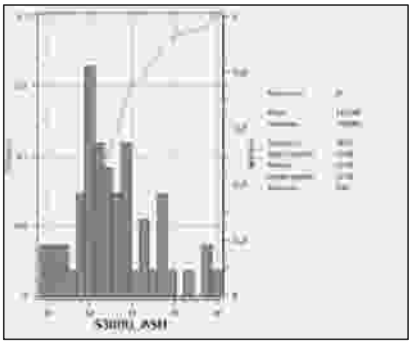




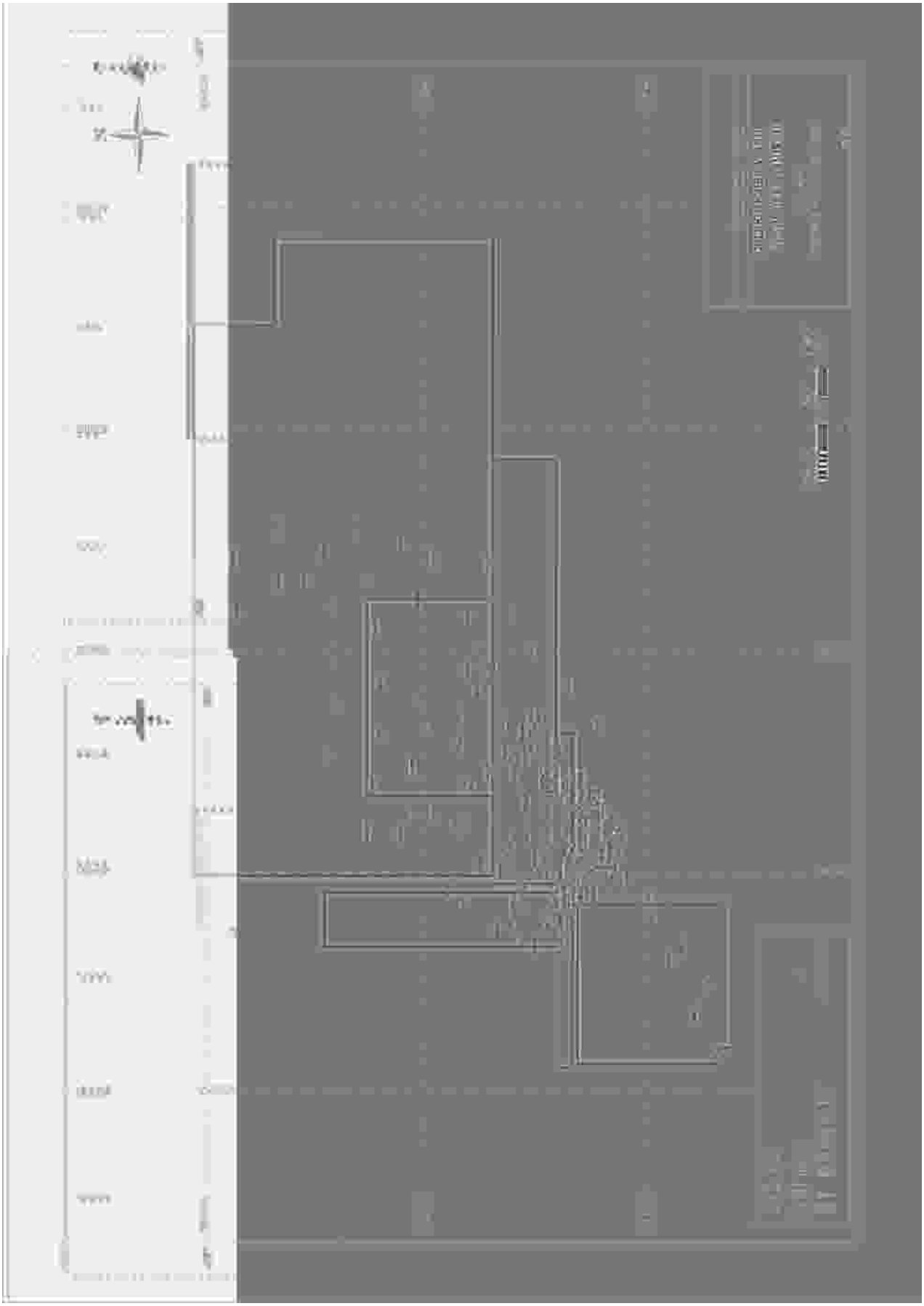


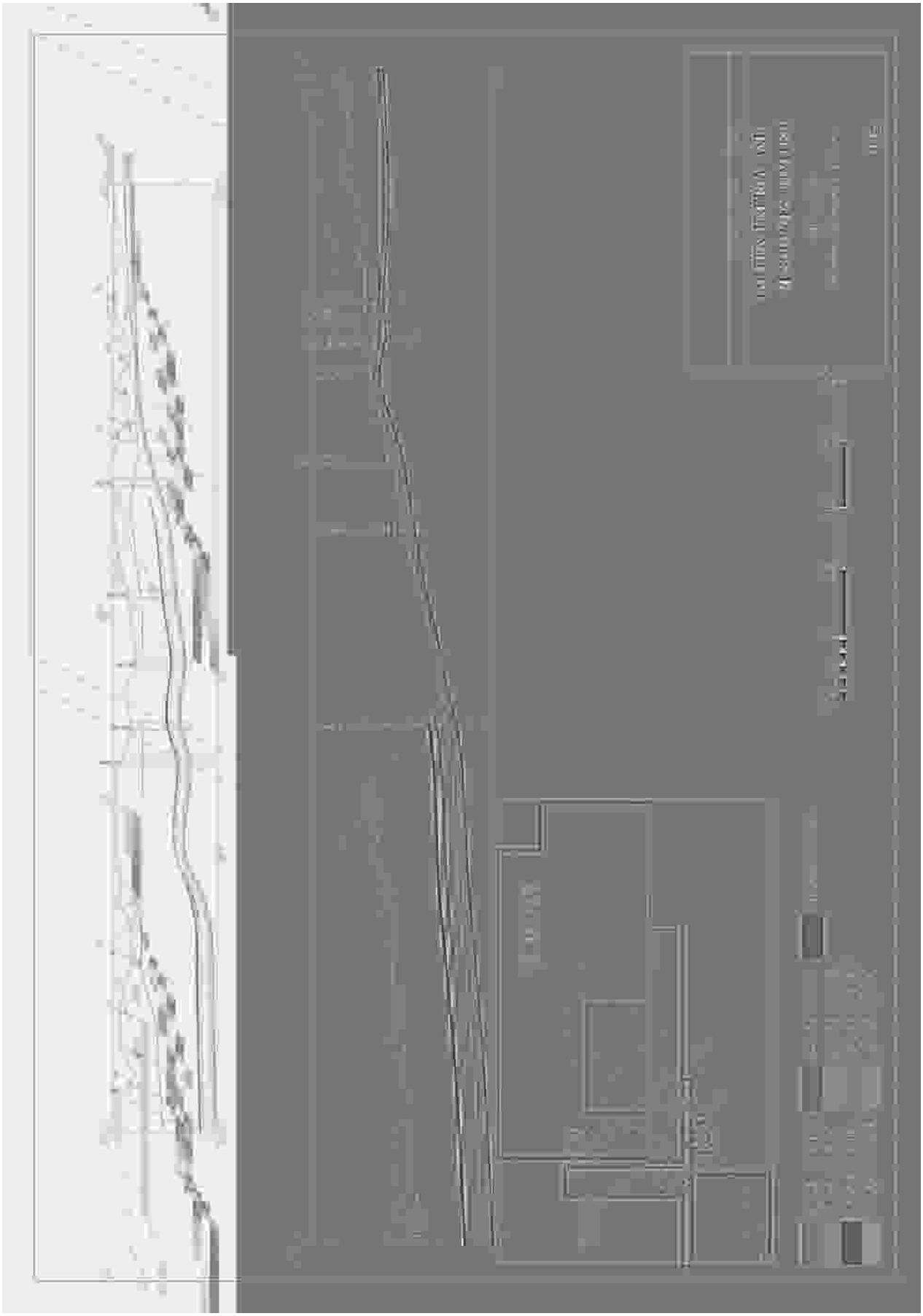






Appendix E: Cross-Sections and Plans





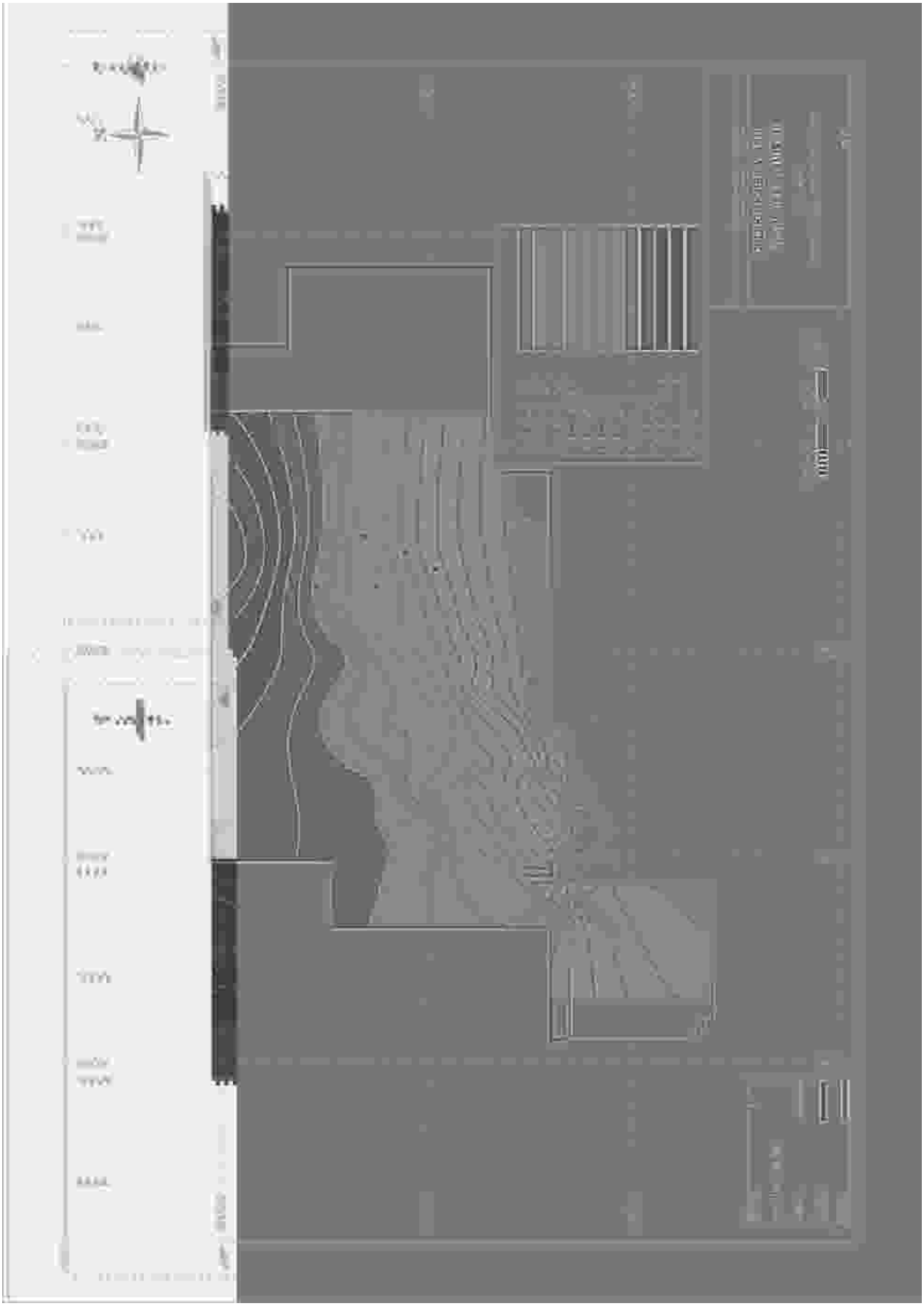




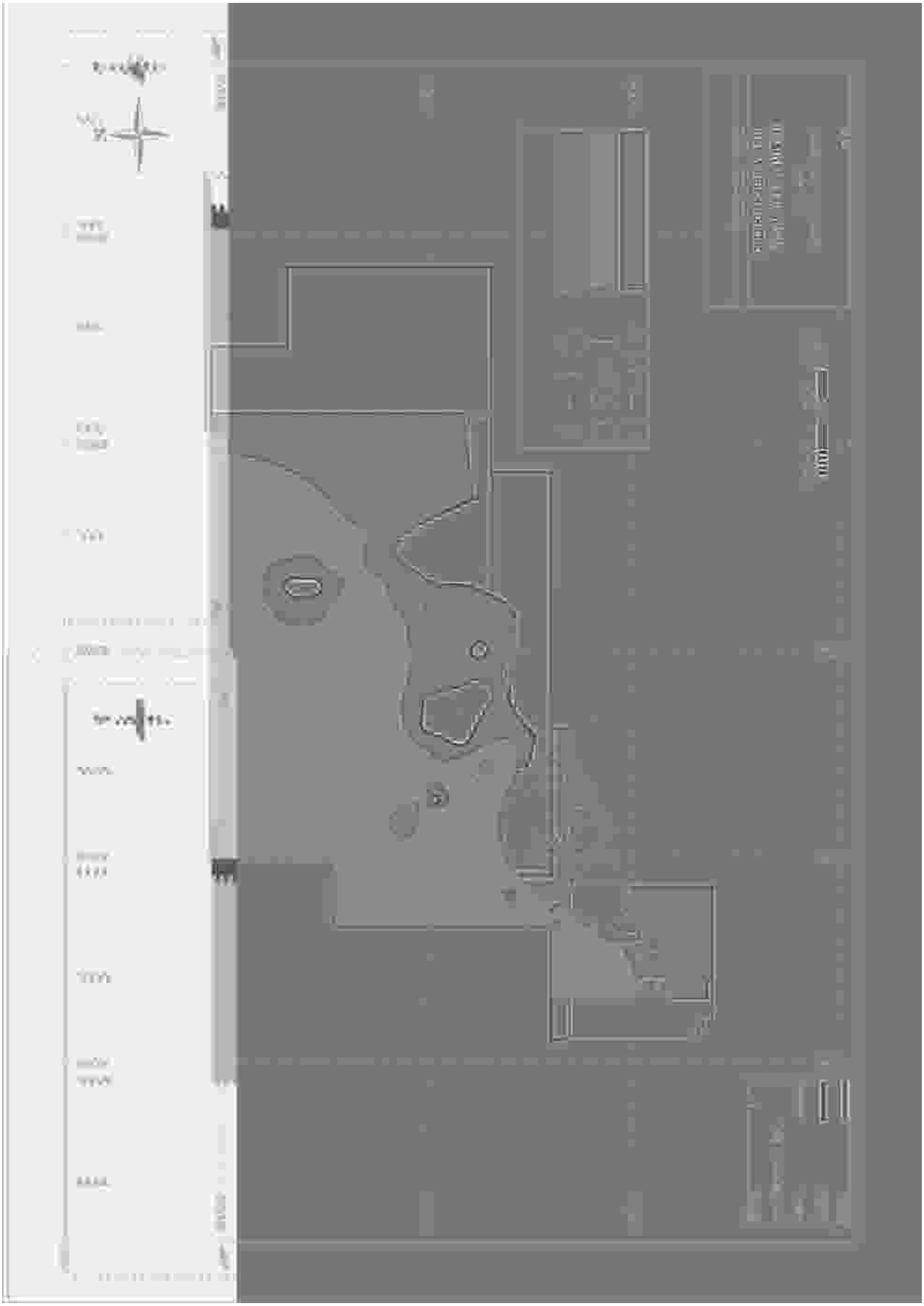




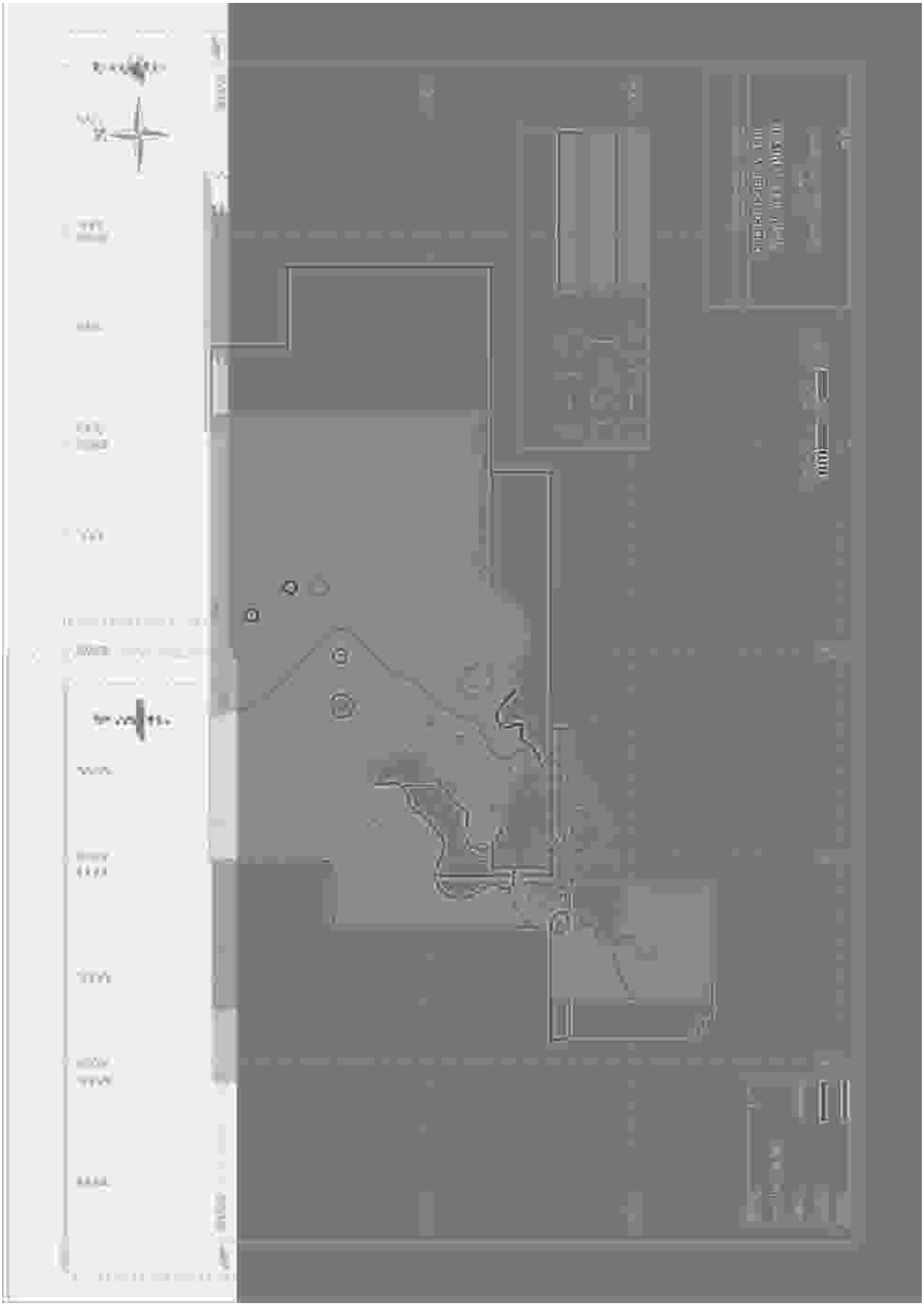


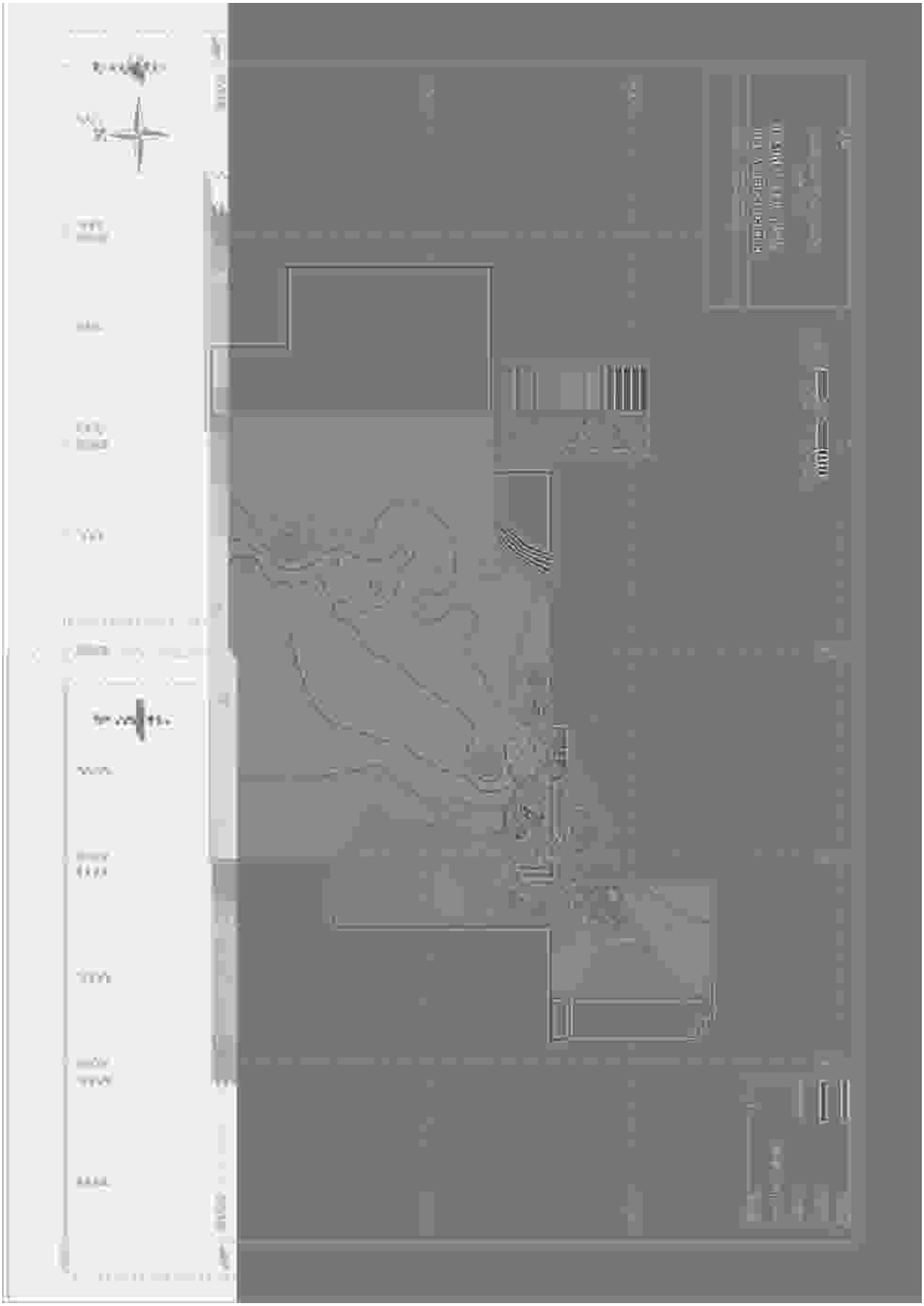


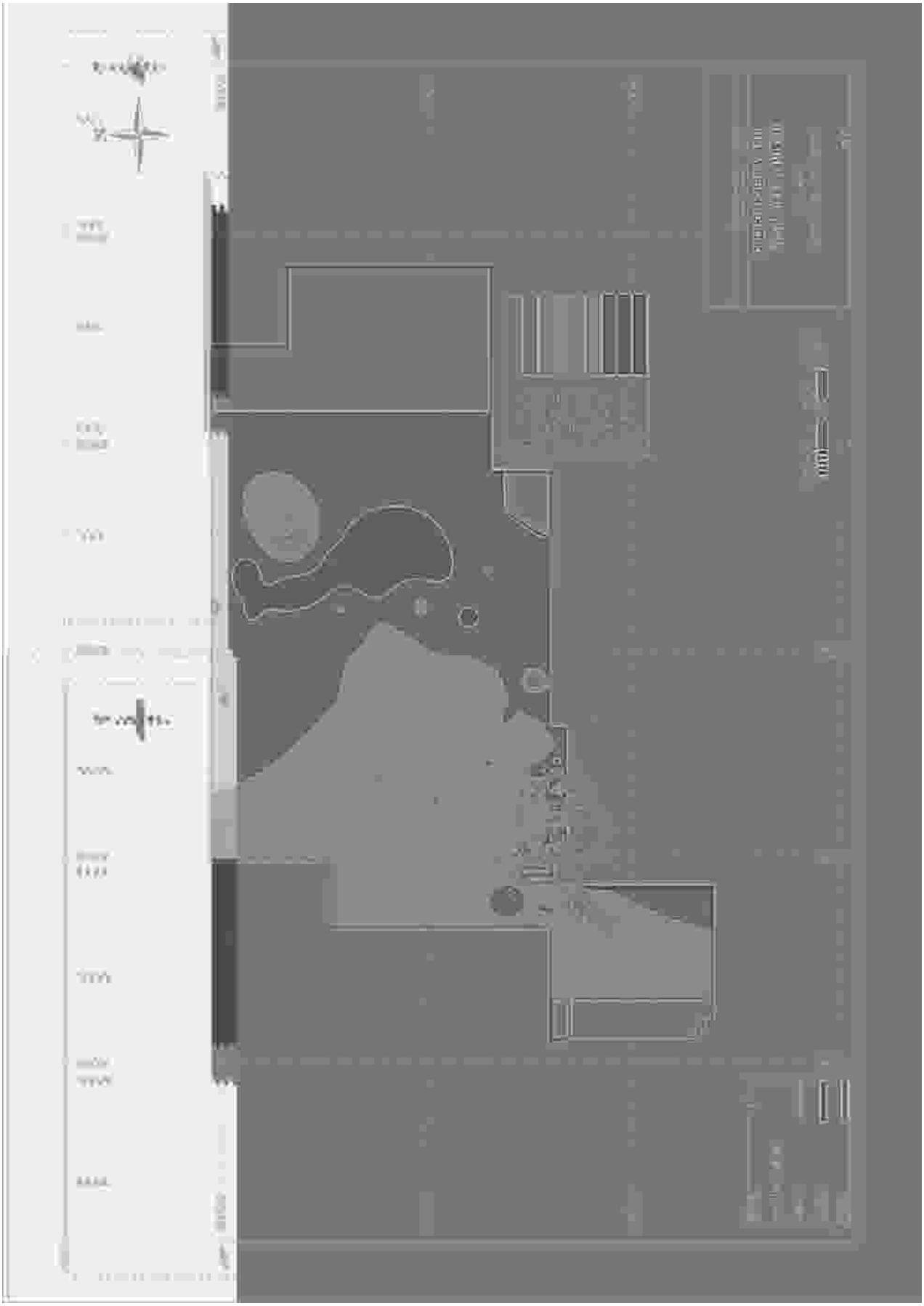




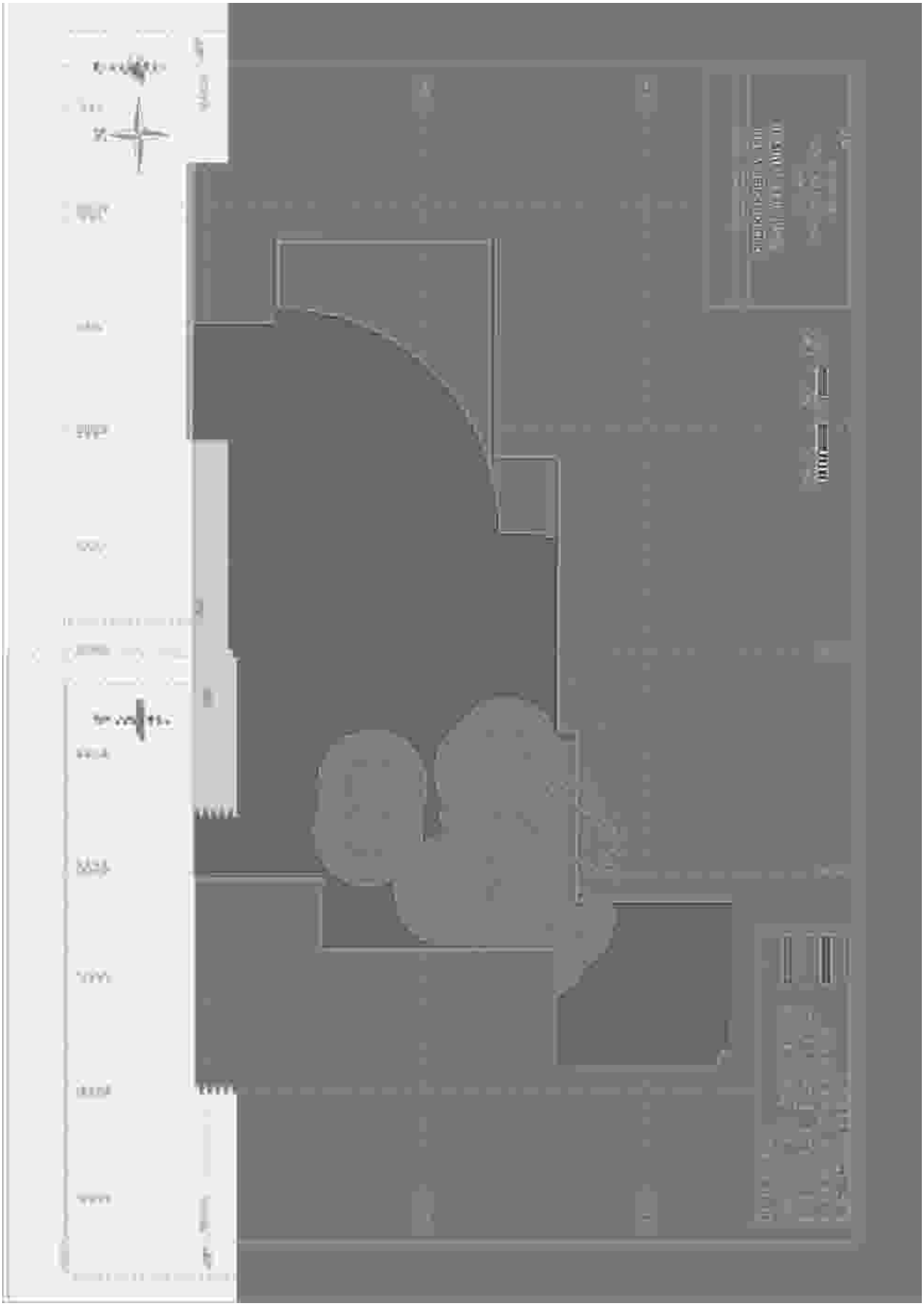




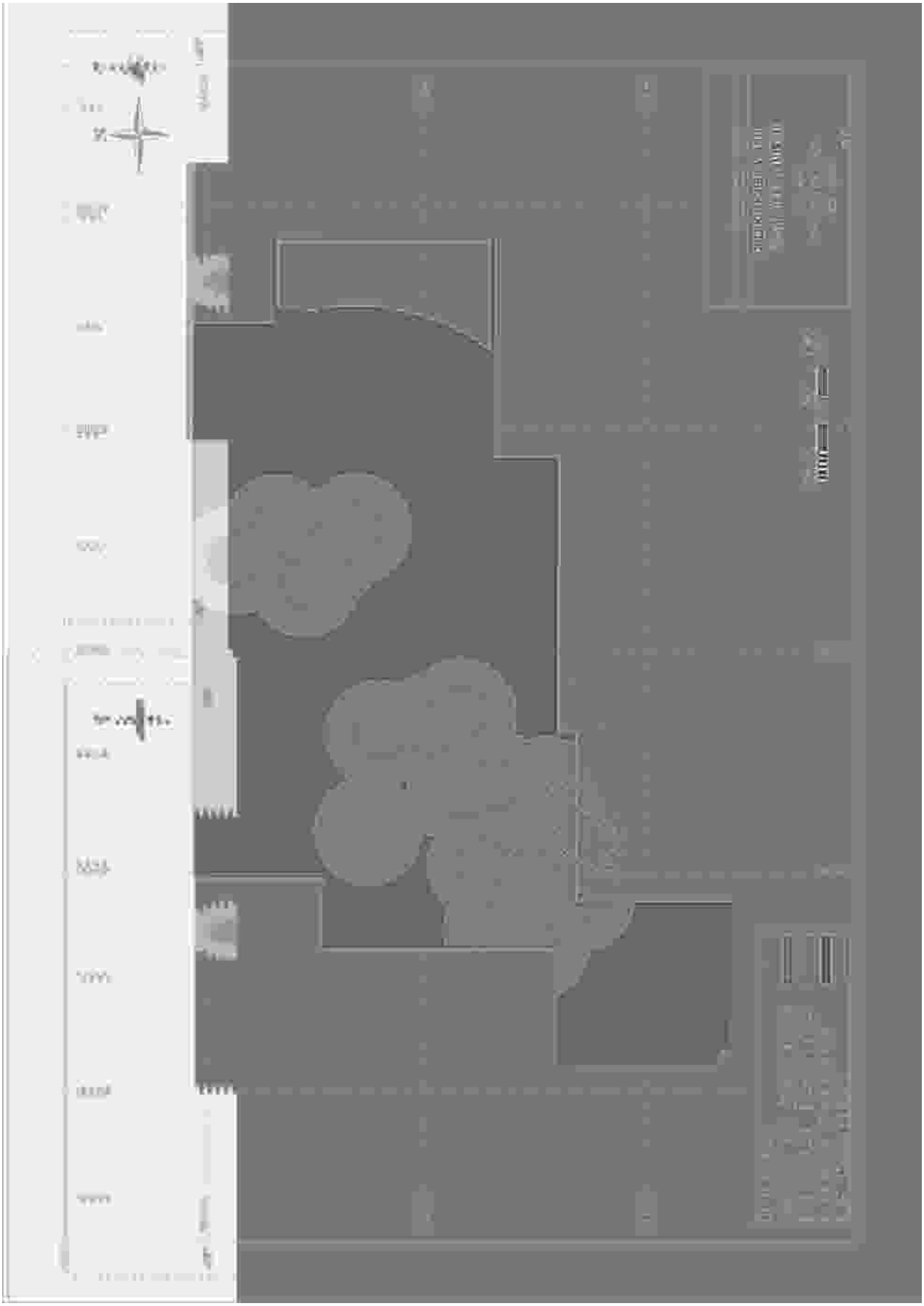


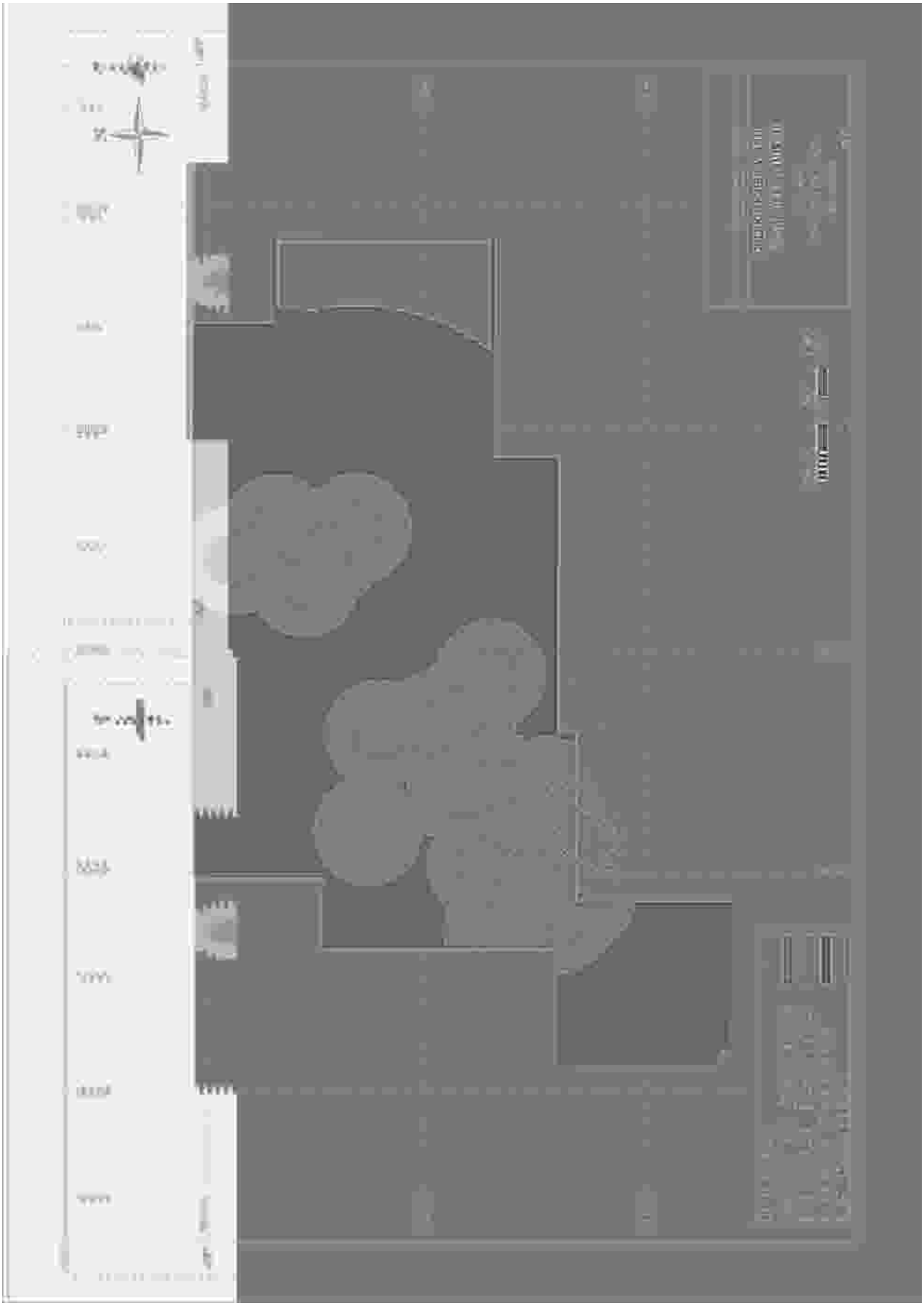


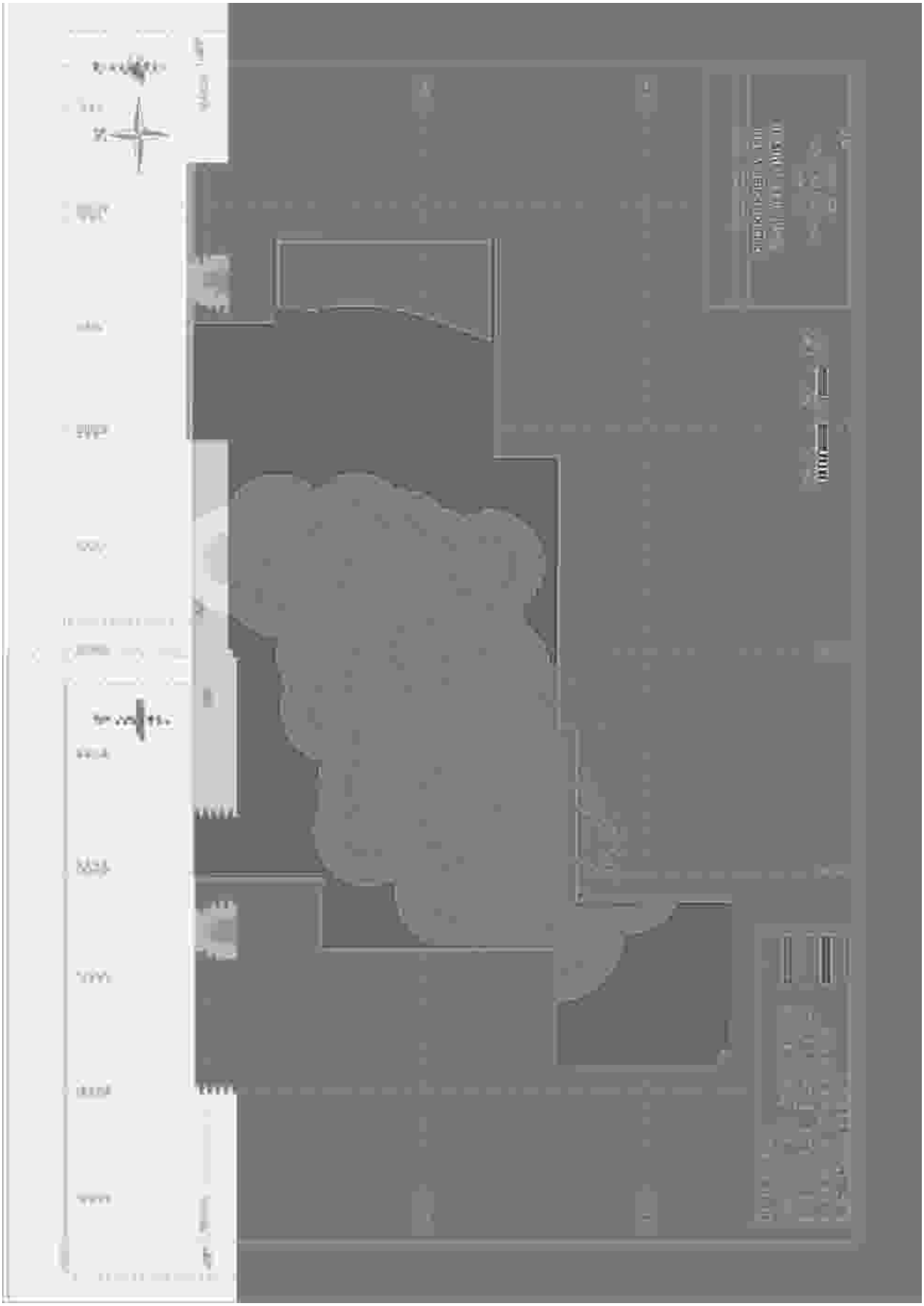


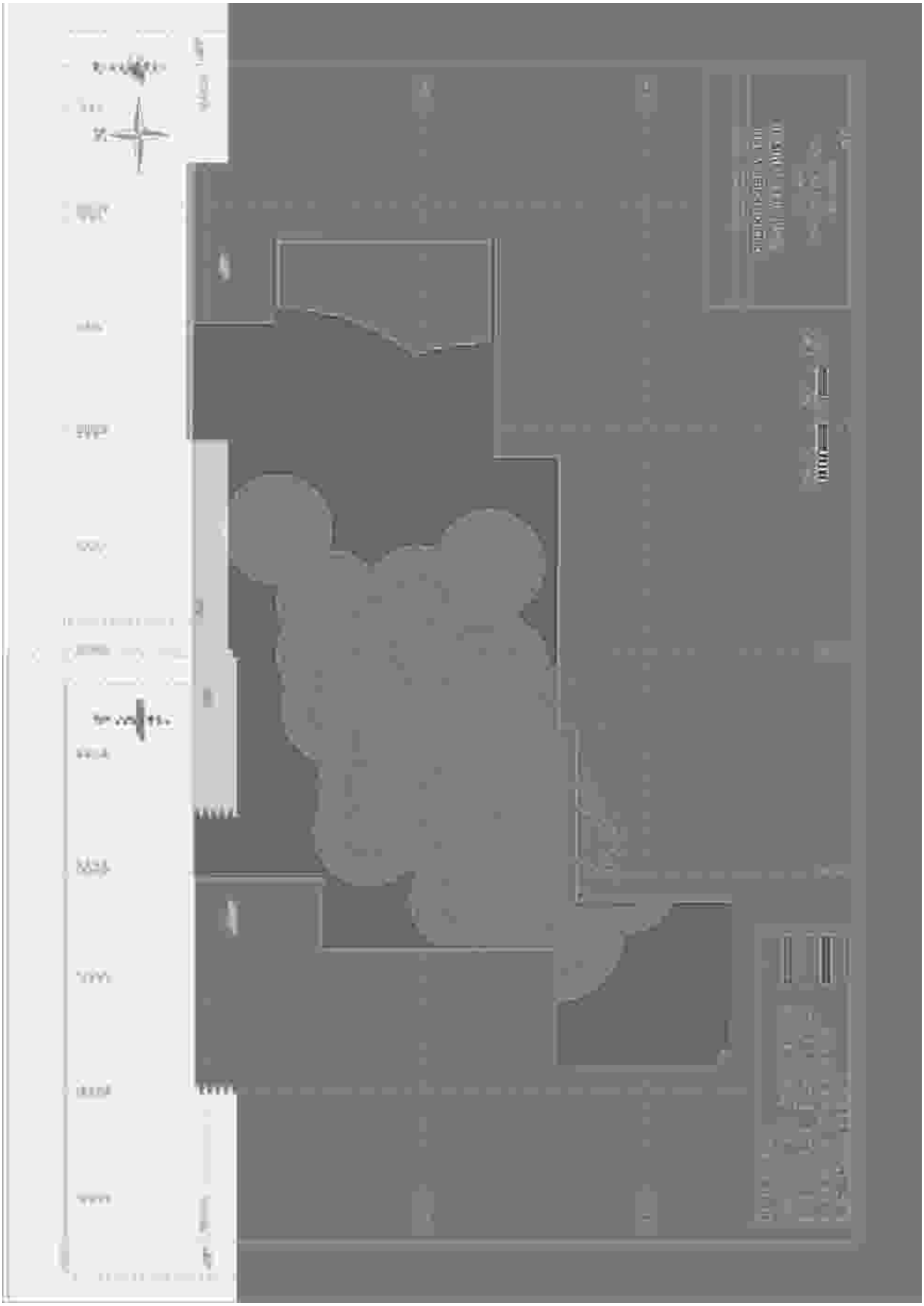


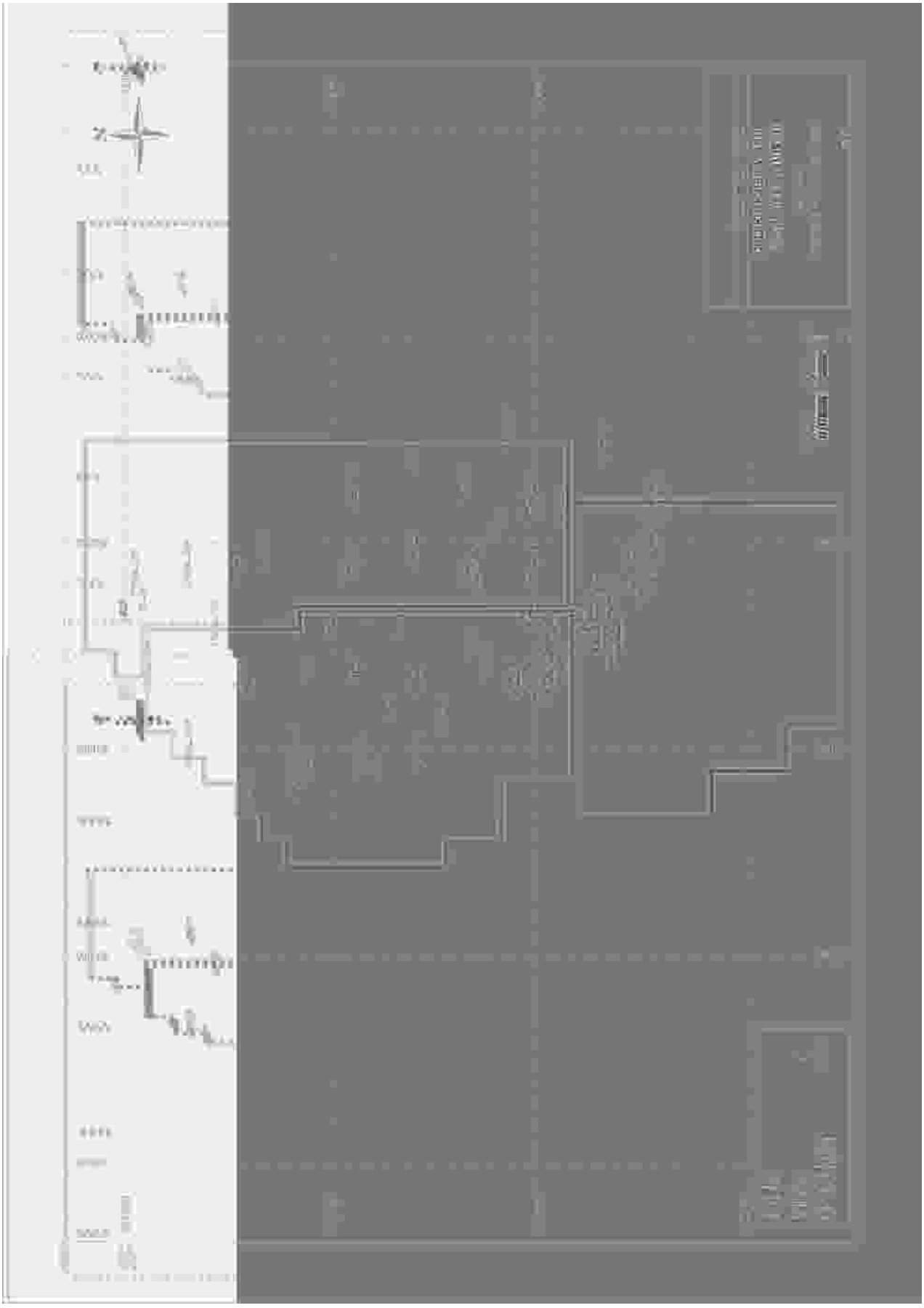


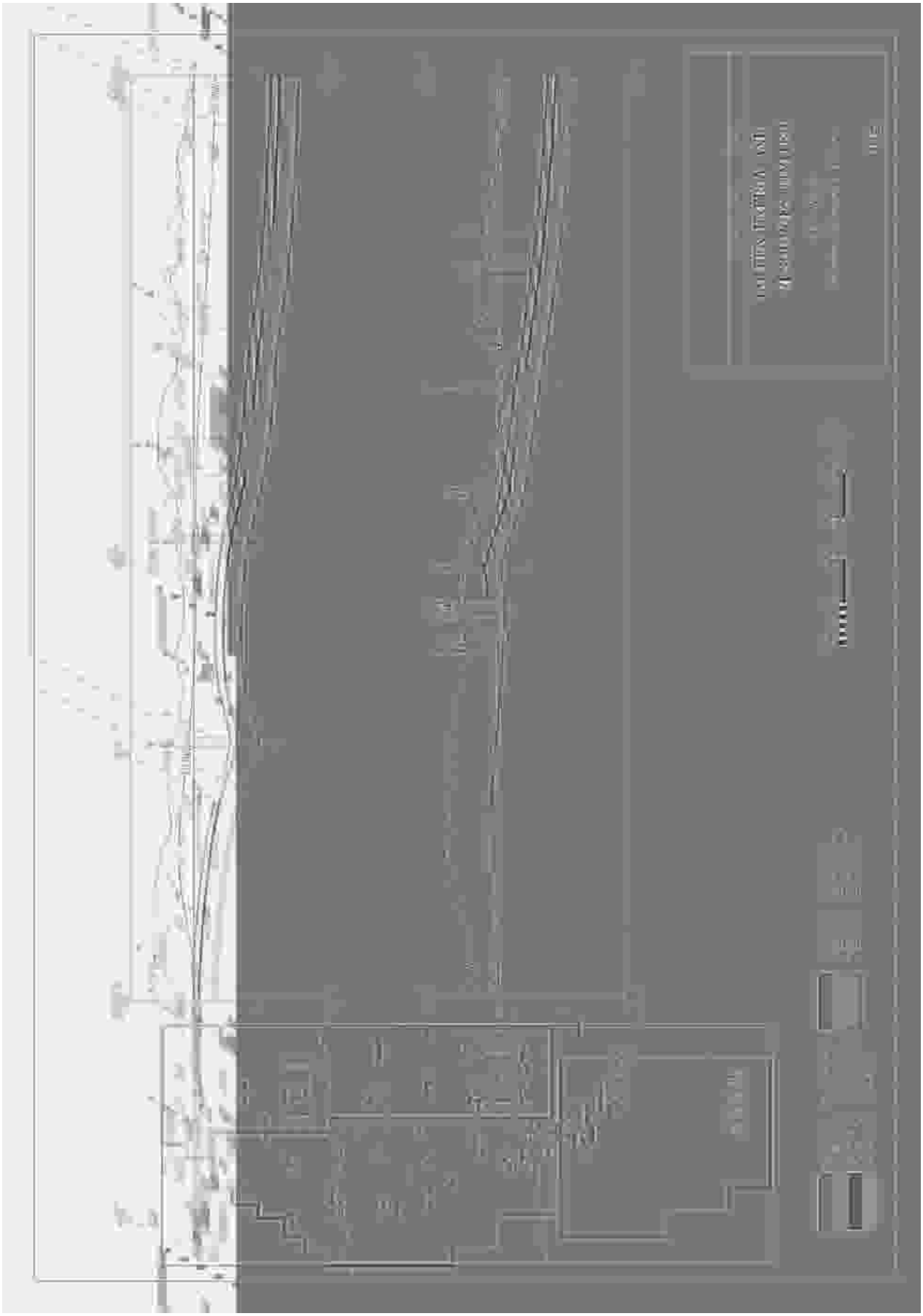


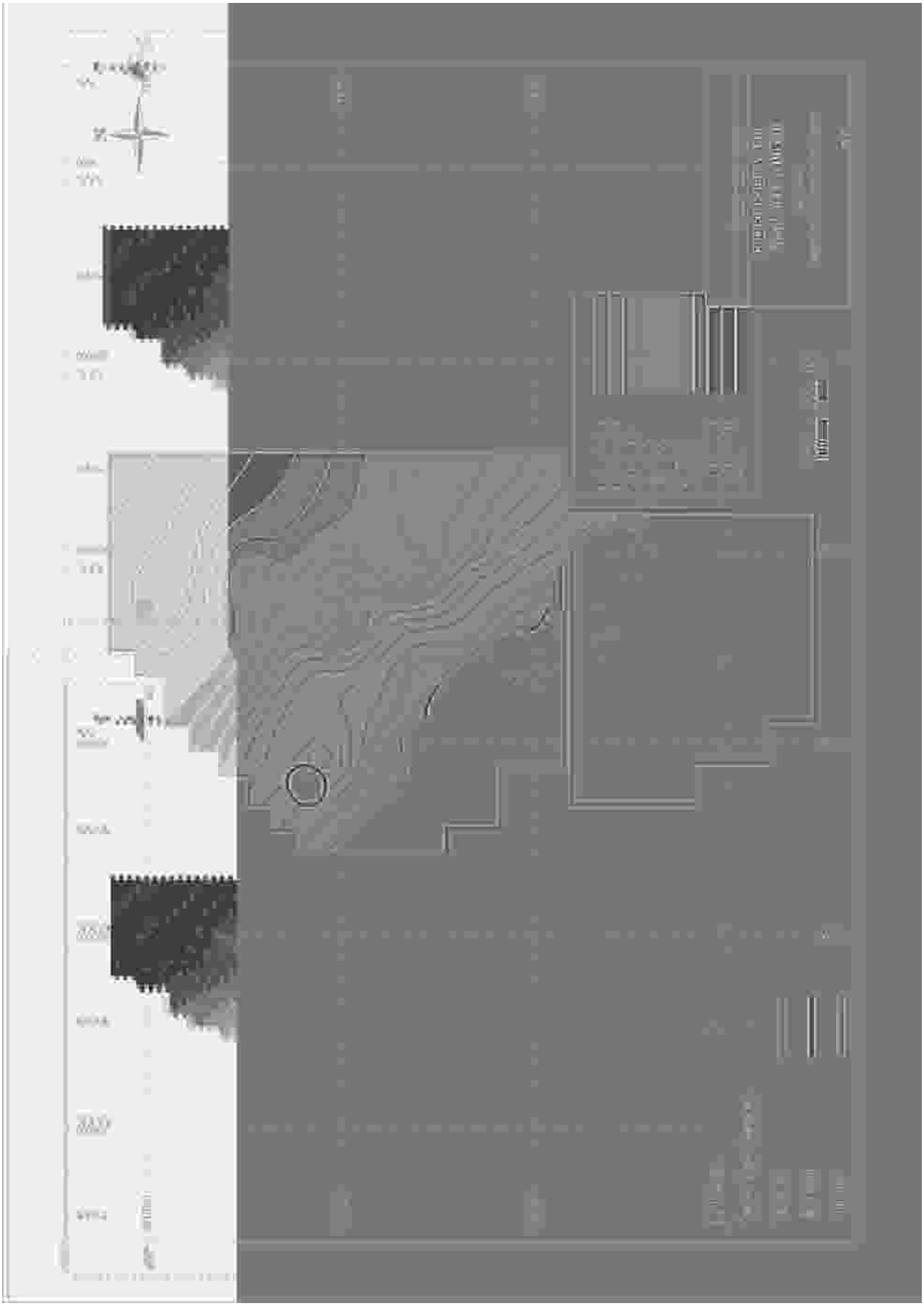


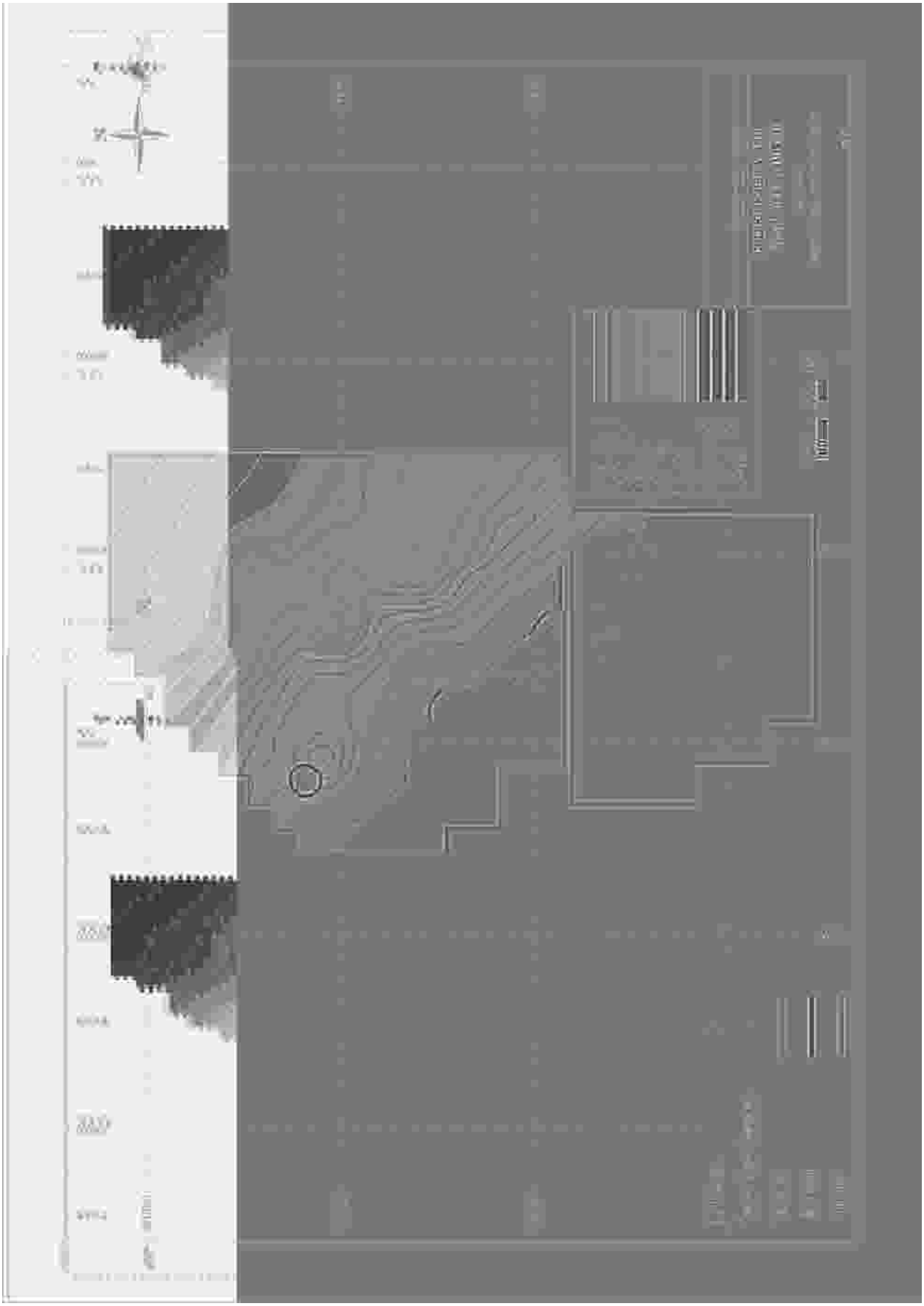


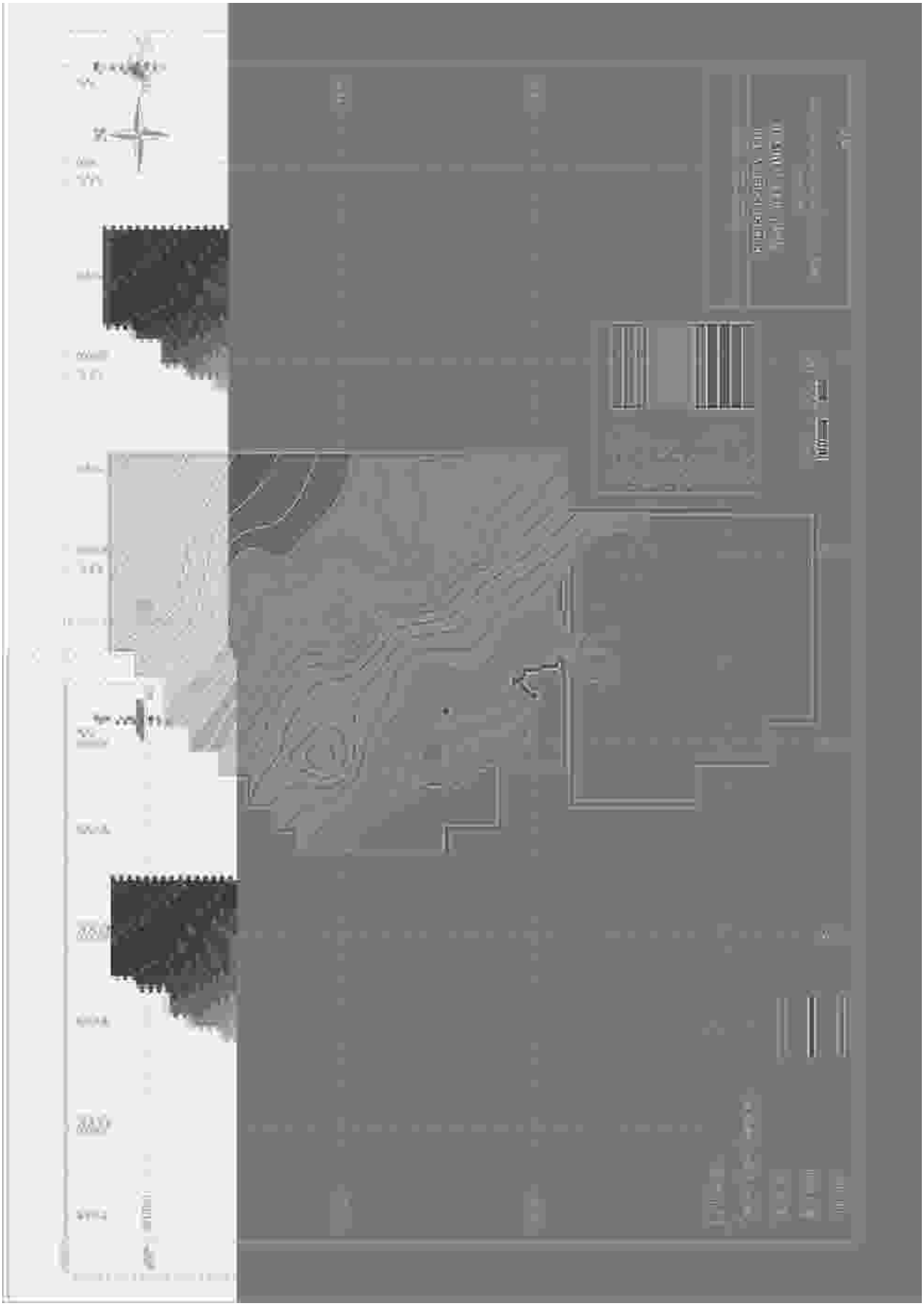


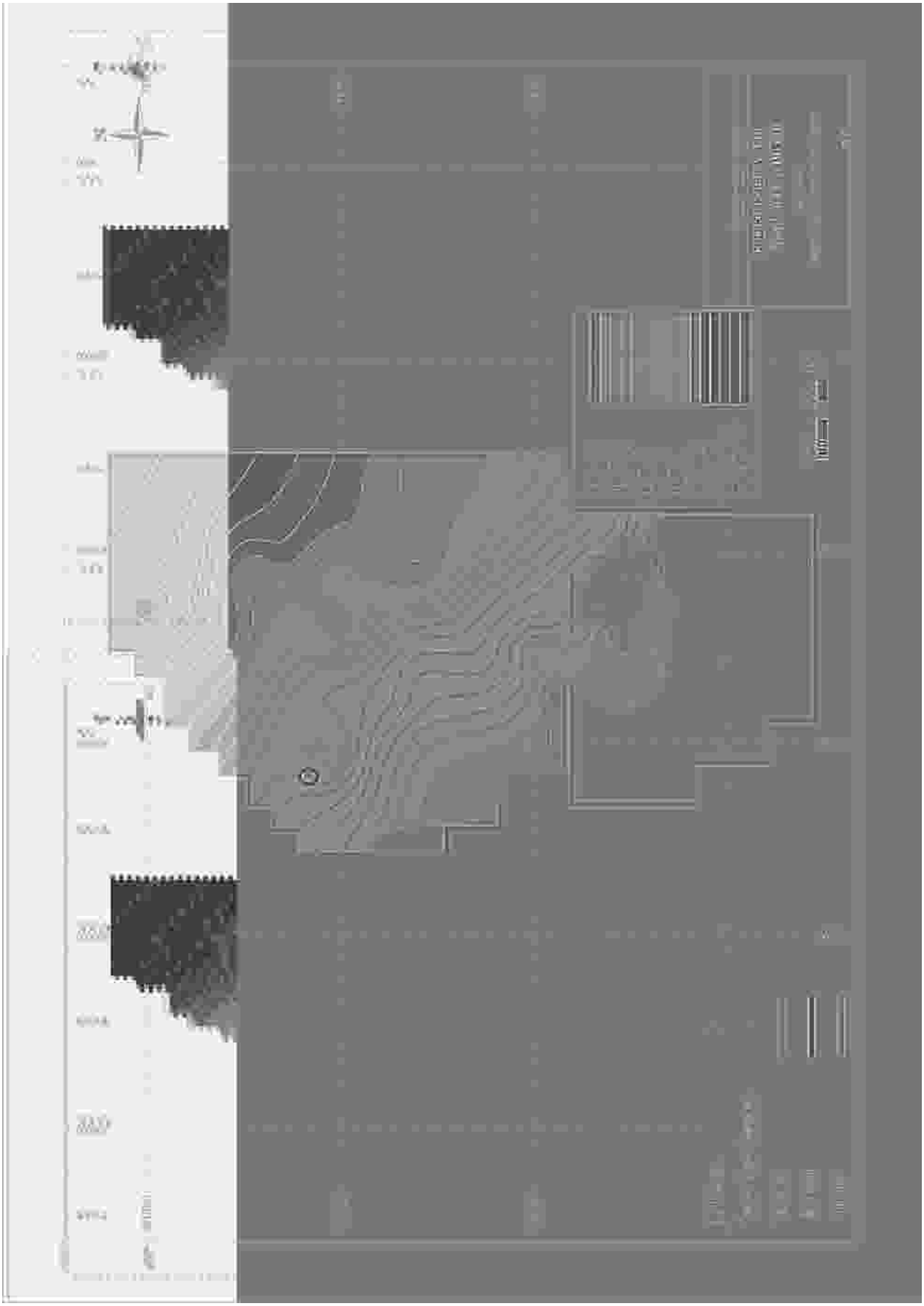


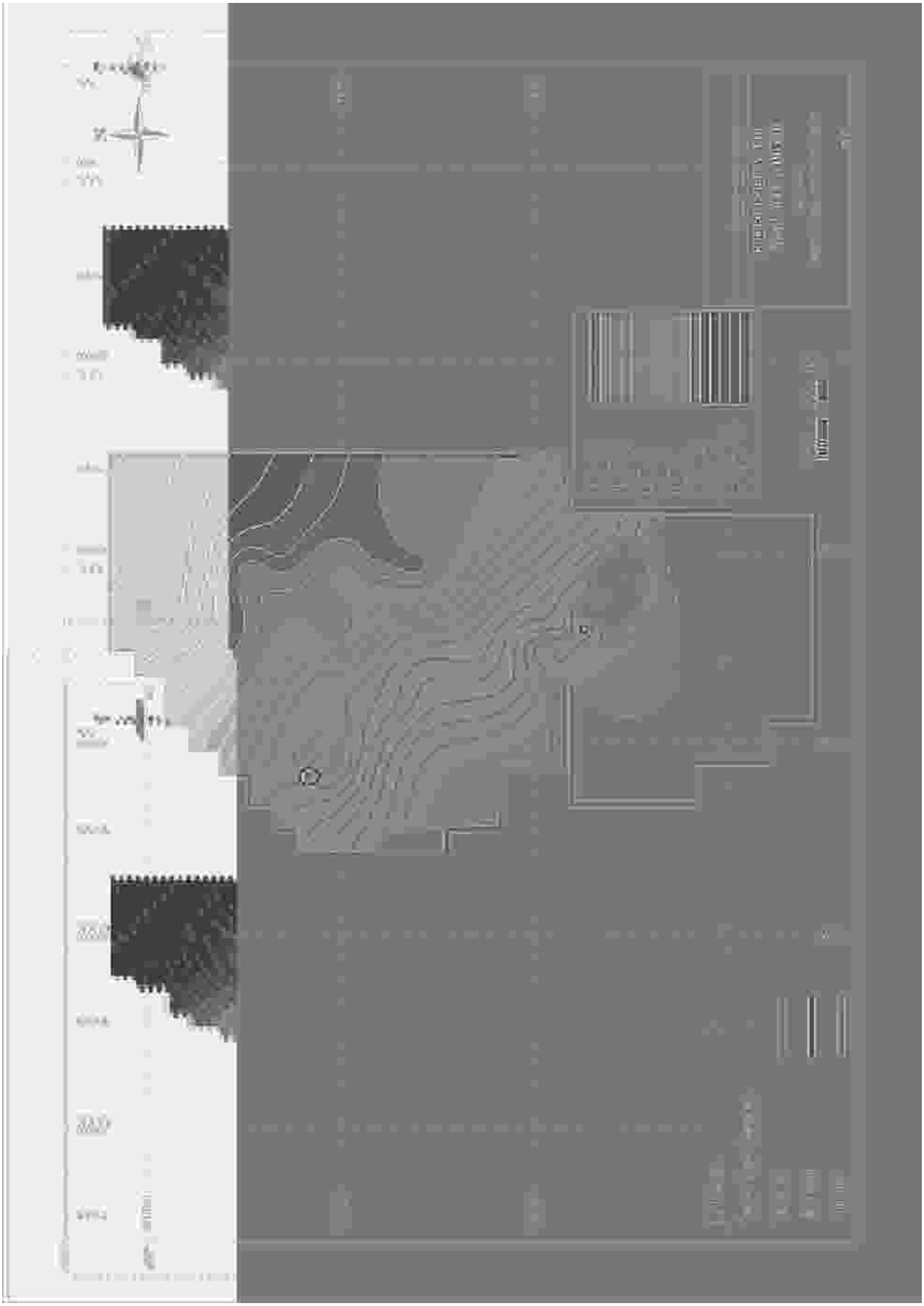


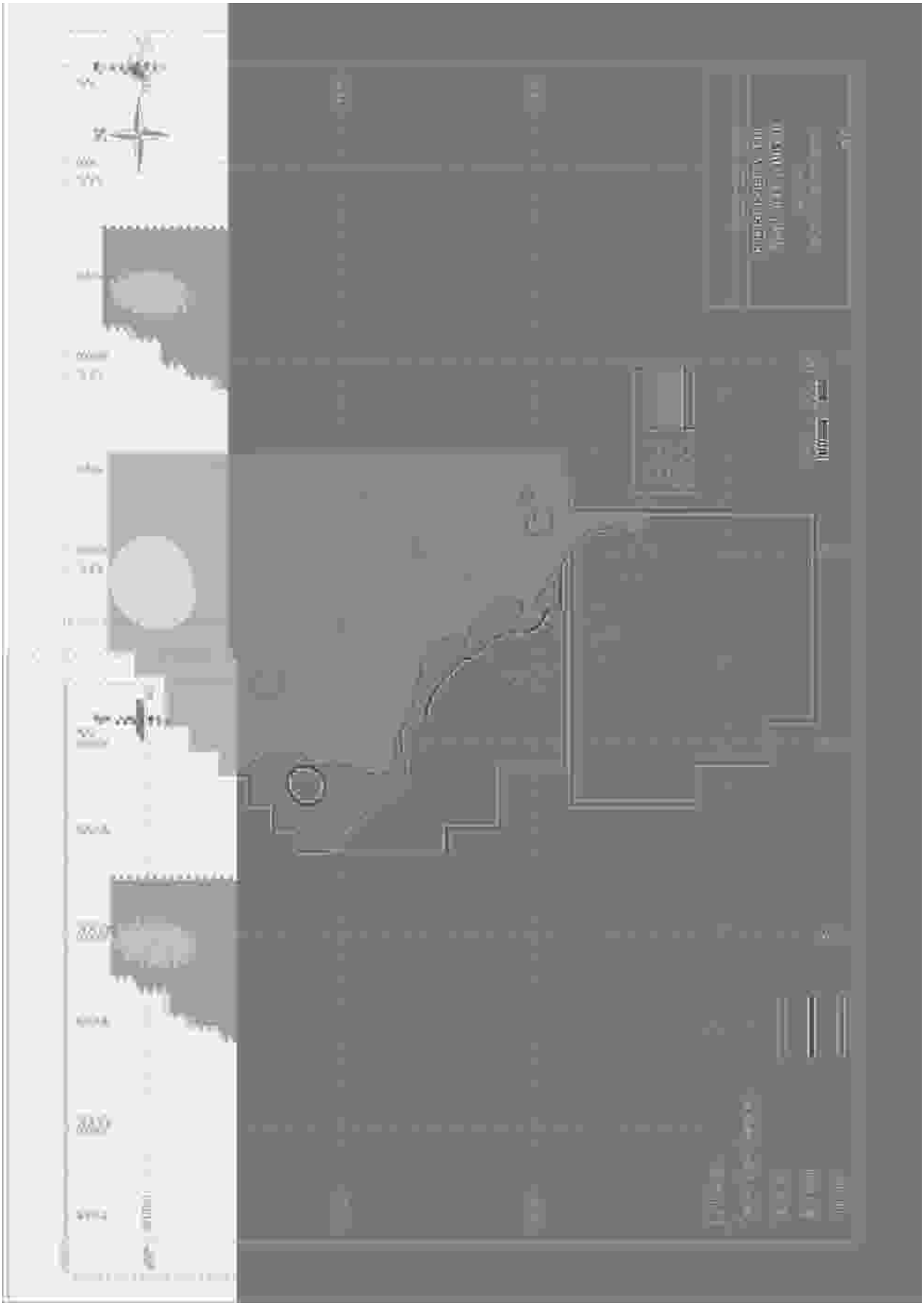




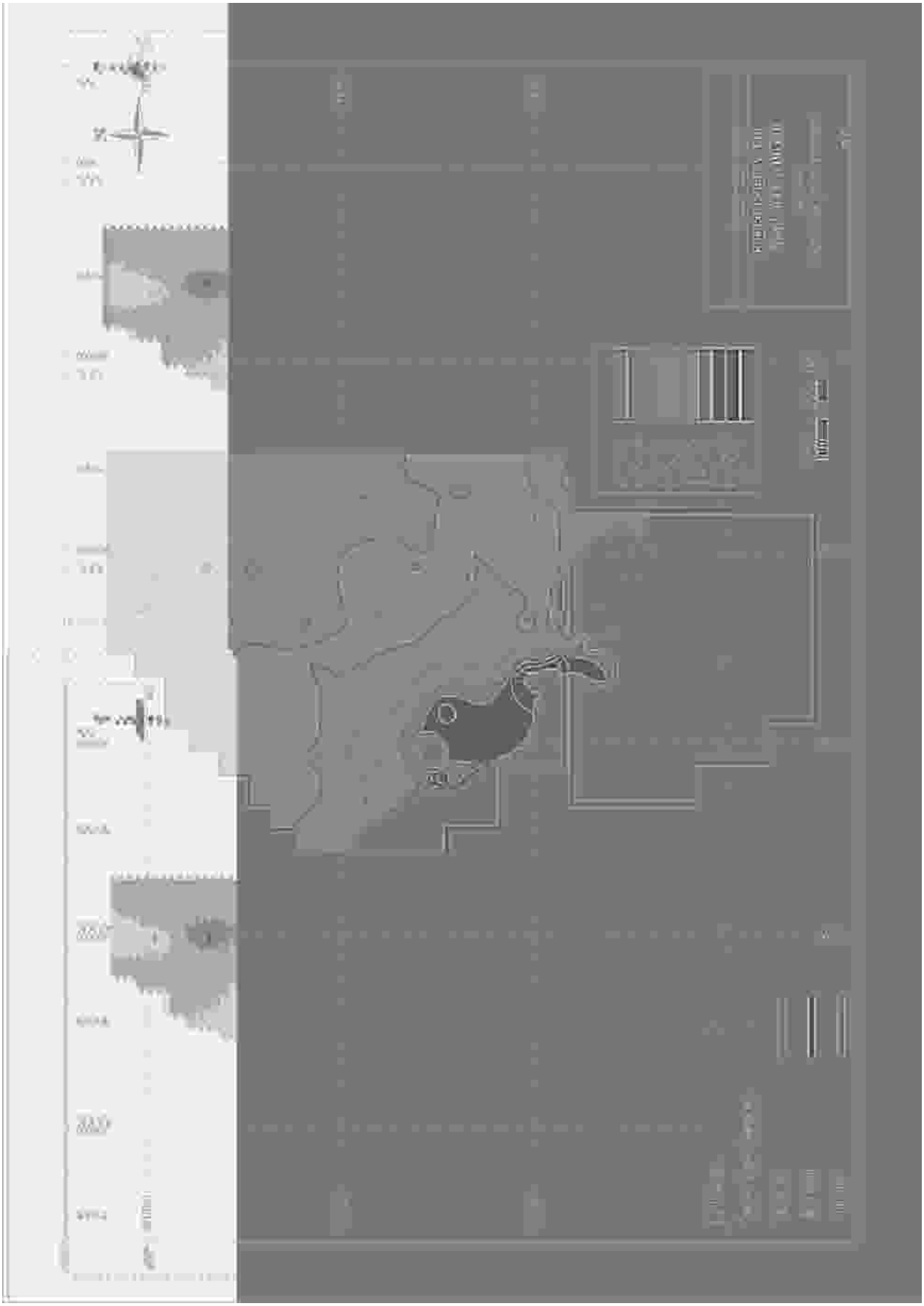


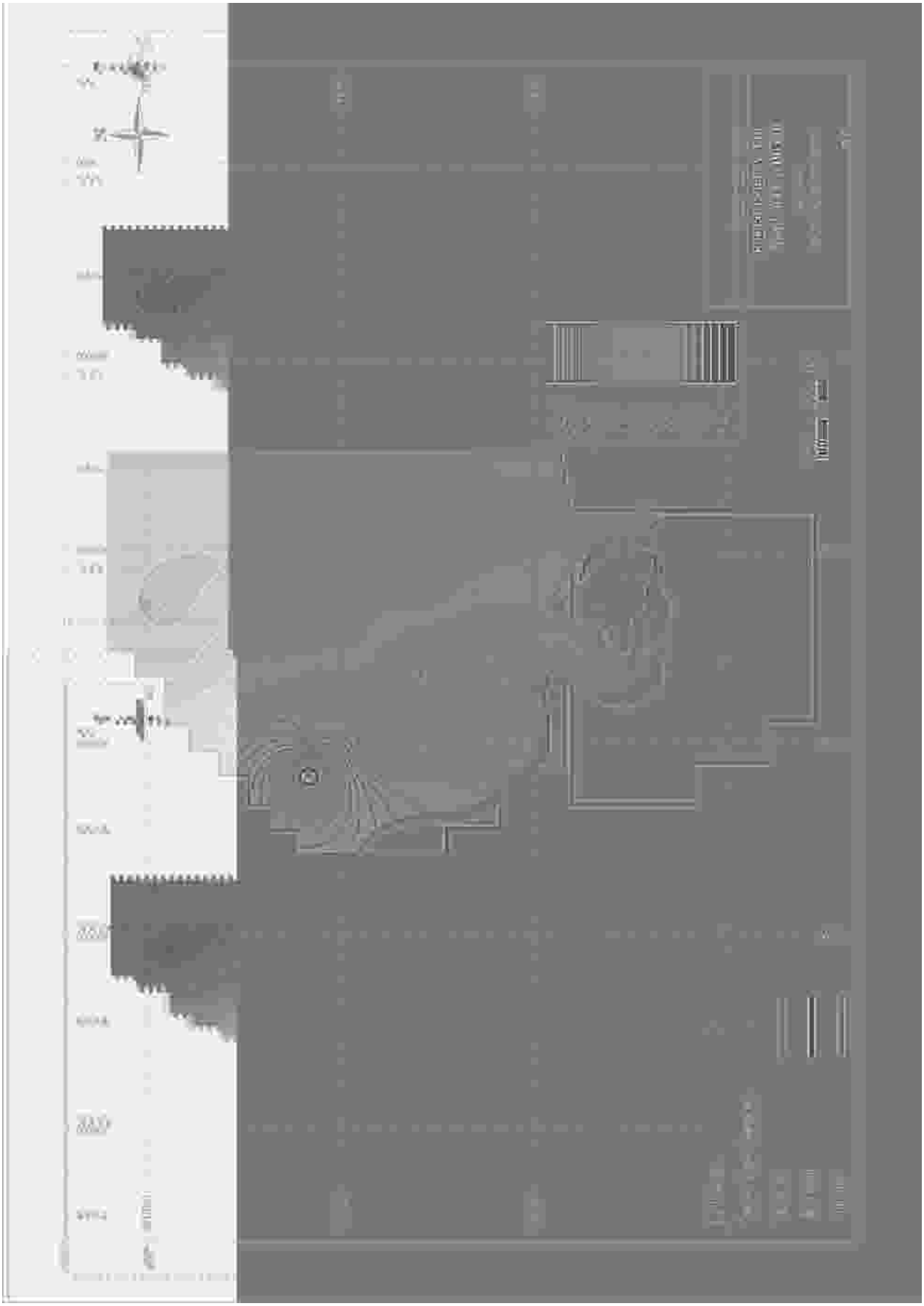


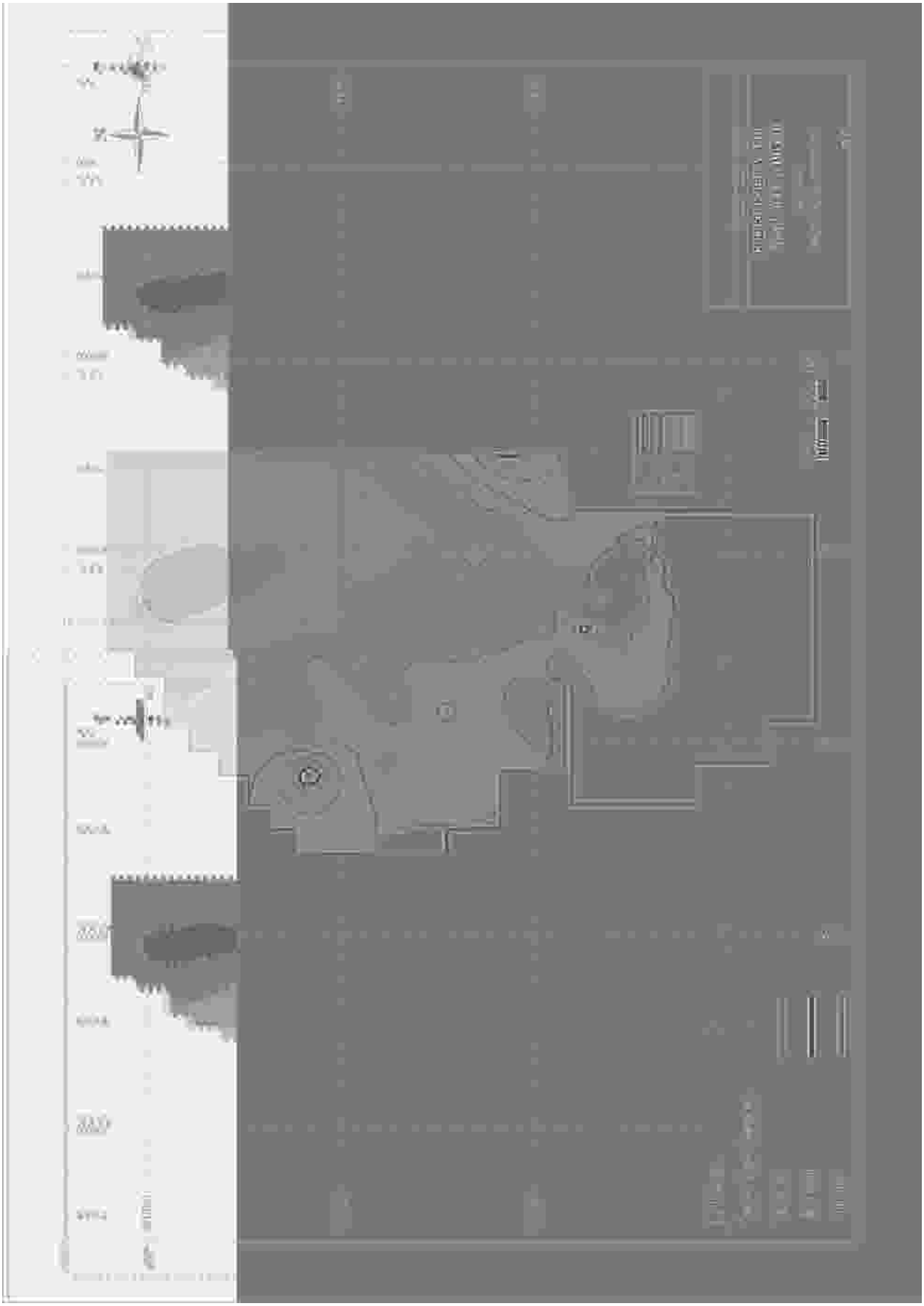


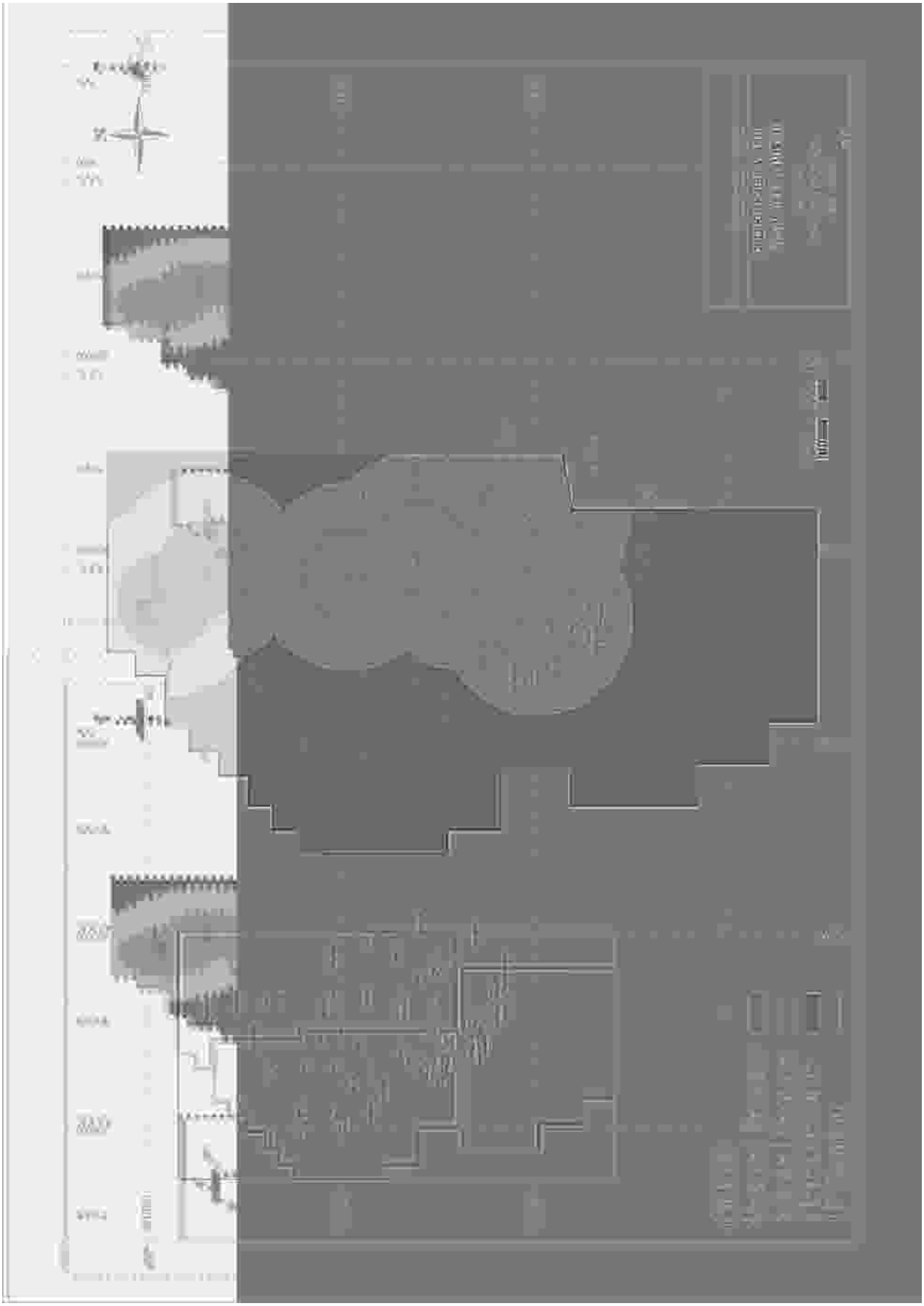












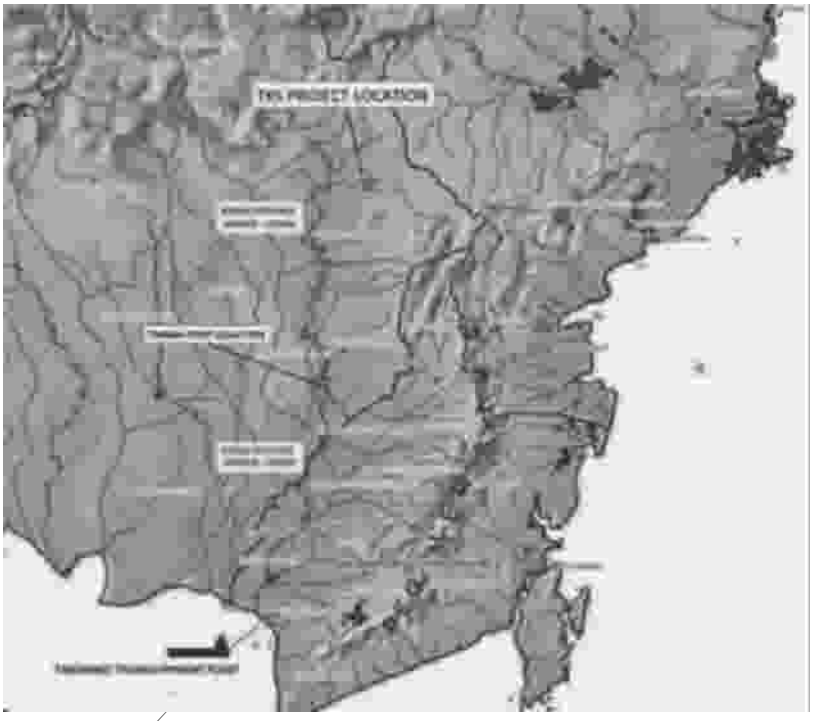








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Golden Energy and Resources Ltd

PT Trisula Kencana Sakti Concession

Independent Qualified Person's Report

6 February 2017

Golden Energy and Resources Ltd

PT Trisula Kencana Sakti Concession

Independent Resource Report

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Email: info@salvamining.com.au
Phone: +61 (0) 407 771 528

6 February 2017

Effective Date: 31 December 2016

Independent Qualified Person:



Manish Garg
Director
Salva Mining Pty Ltd.

Subject Specialist:



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Salva Mining- Brisbane Office

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Key Abbreviations

$ or USD	United States Dollar
adb	Air dried basis, a basis on which coal quality is measured
AMSL	Above Mean Sea Level
AMDAL	Analisis Mengenai Dampak Lingkungan Hidup- Environmental Impact Assessment (EIA), which contains three sections, the ANDAL, the RKL and the RPL
ANDAL	Analisis Dampak Lingkungan Hidup, component of the AMDAL that reports the significant environmental impacts of the proposed mining activity
arb	As received basis
AS	Australian Standards
ASR	Average stripping ratio
AusIMM	Australasian Institute of Mining and Metallurgy
bcm	bank cubic meter
BD	Bulk density
CCoW	Coal Contract of Work
CV	Calorific value
Capex	Capital Expenditure
Coal Resource	A 'Coal Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, quality, and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, quality, continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
DGMC	Directorate General of Minerals and Coal within the Ministry of Energy and Mineral Resources
Danmar	PT Danmar Exploroindo
FC	Fixed Carbon
gar	gross as received, a basis on which coal quality is measured
GEAR	Golden Energy and Resource Ltd
gm	Gram
h	Hour
ha	Hectare(s)
HDR	HDR Pty Ltd
IM	Inherent Moisture
IPPKH	'Izin Pinjam Pakai Kawasan Hutan' which translates to a borrow to use permit in a production forest
IUP or IUPOP	'Izin Usaha Pertambangan' which translates to 'Mining Business Licence'
JORC	2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia

k	Thousand
kcal/kg	Unit of energy (kilocalorie) per kilogram
kg	kilogram
km	Kilometers(s)
km2	Square kilometre(s)
kt	kilo tonne (one thousand tonne)
L	Litre
m	Meter
lcm	loose cubic metre
lcm	lcm loose cubic metre
M	Million
Mbcm	Million bank cubic metres
Mbcmpa	Million bank cubic metres per annum
MEMR	Ministry of Energy and Mineral Resources within the central government
m RL	metres reduced level
m^3	cubic metre
m/s	metres per second
Mt	Millions of tonnes
NAR	Net as received
Opex	operating expenditure
PKP2B	'Perjanjian Kerjasama Pengusahaan Pertambangan Batubara' – same as CCoW
RD	Relative density
RKL	'Rencana Pengelolaan Lingkungan' - environmental management plan
ROM	Run of Mine
RKL	Relative Level - survey reference for height of landforms above a datum level
RPL	'Rencana Pemantauan Lingkungan' - environmental monitoring plan
Salva Mining	Salva Mining Pty Ltd
SE	Specific Energy
SR	Strip ratio (of waste to ROM coal) expressed as bcm per tonne
t	Tonne
tkm	Tonne kilometer
tpa	Tonnes per annum
TKS	PT Trisula Kencana Sakti
TM	Total Moisture (%)
TS	Total Sulphur (%)
VALMIN	2015 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
VM	VM Volatile Matter (%)

Executive Summary

Golden Energy and Resources Limited ("GEAR" or "" Client") has engaged Salva Mining Pty Ltd ("Salva Mining") to prepare an Independent Qualified Persons Report ("Report") to estimate Open Cut Coal Resources for the Trisula Kencana Sakti coal concession ("TKS Mine" or "TKS Concession") located in the North Barito Regency of the Central Kalimantan Province, Indonesia.

Salva Mining understands that this report will be shared with the GEAR's shareholders a part of continuous disclosure requirements of the company. The estimate of Coal Resources as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Edition of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

The TKS concession is beneficially owned and controlled by GEAR. The effective date of this Report is 31 December 2016, the date on which the Resource was estimated.

PT Trisula Kencana Sakti(TKS) Project in Indonesia

The TKS project is comprised on two contiguous IUPs. These IUPs are located at 58 km east of the town of Muara Teweh in the Central Kalimantan province of Indonesia. The nearest village close to the project area are Malateken, Gandring and Panaendan Liang Buah.

Access to the project area from the city of Muara Teweh is mainly via public regency roads, heading east and then via a private logging road owned by PT Austral Byna, and is of 1.5 hrs to 2 hours' drive.

The nearest town Muara Teweh is serviced by light commercial aircraft both form Balikpapan and from Banjarmasin (capital city of East and South Kalimantan, respectively). A sealed provincial road connects Muara Teweh with the city of Banjarmasin, a 220km road journey of approximately eight hours. Banjarmasin has regular commercial flights to Jakarta and other Indonesian centers.

Golden Energy and Mines (GEAR) holds the mining rights of the TKS concession through its subsidiary PT Trisula Kencana Sakti. TKS is the beneficial holder of three Operation and Production IUPs, two of which are the subject of this Report.

The concession tenure is held under a IUP-Operation and Production granted on 26 April 2010 and valid until 26 April 2026.

Geology

The TKS coal concession area lies in the Barito Basin of Central Kalimanatan, one of the largest coal producing regions of Indonesia. According to the published geology, the lease is within an anticlinal structure containing the Tanjung and Montelat formations and Warukin Formations. These rocks are Eocene to Middle Miocene in age and are well known to contain extensive seams of thermal coal. Based on the work to date, a more likely interpretation of the regional geology is that the deposit area is in a syncline where relatively thick seams of Warukin age coal, are surrounded by hills containing older coal seams of the Montelat Formation. This would better explain why the coal in the central part of the deposit is relatively lower grade and these coal seams are surrounded by higher grade coal, around the edges of the basin.

The main features in the concession is a syncline structure over the main deposit area with relatively flat dips and younger sediments in the central part of the deposit and steeper dips in relatively older sediments, around the outer edges.

Previous Exploration

The TKS concession has been subject to detailed exploration since 2005 onwards. In total, 605 vertical drill hole have been drilled within the concession. Other exploration activities conducted on TKS concession include, Topographic Mapping (2010 and 2011), Core and Outcrop Sampling (2010 and 2011) and Geological Mapping (March 2011).

Resource Model Construction

Out of 605 drill holes, 111 holes from the historical exploration programs were excluded as there was insufficient information to validate these drill holes. Remaining, 494 holes have been validated and information from 492 holes was used (2 holes rejected due to insufficient data) to prepare the geological model. Total cumulative depth of the drilling (494 validated drill-holes) is 40,168m with average depth of 80m for each hole.

After completion of the previously detailed QA/QC processes, the available valid lithological and coal quality data was then imported into the MineScape software (Version 5.15) to generate both a structural model and a coal quality models for each of the resource areas.

Coal quality data has been composited on a seam basis. The Inverse distance interpolator was selected for modelling coal quality as it has been shown to perform adequately for most coal quality attributes.

Coal Resource

Salva Mining have estimated total Coal Resources of 75 million tonnes (Mt) on an in-situ air dried moisture basis (adb), to a maximum depth of 100 m. The total tonnes are comprised of 25 Mt of Measured, 26 Mt of Indicated and 24 Mt of Inferred Resources.

Coal Resources Estimate as at 31 December2016

Resource Classification	Mass (Mt)	TM (arb) (%)	IM (adb) %	Ash (adb) (%)	Volatile Matter (adb) %	Total Sulphur (adb) %	GCV (adb) kcal/kg	Relative Density (adb)
Measured	24.7	21.9	13.7	11.0	38.4	2.0	5,726	1.38
Indicated	26.0	20.4	13.1	12.4	38.5	1.8	5,714	1.39
Inferred	24.0	21.9	13.7	11.0	38.4	2.0	5,726	1.38
TOTAL	**74.7**	**21.4**	**13.5**	**11.5**	**38.4**	**2.0**	**5,726**	**1.39**

(*Note: individual totals may differ due to rounding, final Inferred Resource rounded to nearest 1 Mt)*

1 Introduction

Golden Energy and Resources Limited ("GEAR" or "" Client") has engaged Salva Mining Pty Ltd ("Salva Mining") to prepare an Independent Qualified Persons Report ("Report") to estimate Open Cut Coal Resources for the Trisula Kencana Sakti coal concession ("TKS Mine" or "TKS Concession") located in the North Barito Regency of the Central Kalimantan Province, Indonesia.

Salva Mining understands that this report will be shared with the GEAR's shareholders a part of continuous disclosure requirements of the company. The estimate of Coal Resources as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Edition of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

The TKS concession is beneficially owned and controlled by GEAR. The effective date of this Report is 31 December 2016, the date on which the Resource was estimated.

1.1 Approach

The principal data used in the preparation of this report included:

- A JORC Resource Report titled "Qualified Person's Report of Coal Resources, "dated 15 January 2015, Prepared by PT Denmar Exloroindo;
- Collar, down hole logging, seam pick and coal quality information, provided by PT. TKS; and
- Latest Topographic data including any mined-out area.

The following approach was undertaken by Salva Mining to estimate Coal Resources.

- Salva Mining has reviewed the geological data set provided by PT TKS for the coal block covered under scope of report;
- Using the existing bore hole information provided to Salva Mining by PT TKS, a geological model was created using MineScape stratigraphic modelling software. While creating the model, a thickness cut off limit of 0.1m was applied and is termed as an "in situ" model;
- This model and the underlying raw data such as Drill hole logs, coal quality reports and geophysical logs were reviewed by Salva Mining's team of geologists headed by Mr Davies.
- On the basis of confidence limits (as described in the Resource Classification Section), the in-situ geological model was then categorised into Measured, Indicated and Inferred categories according to the JORC Code (2012). Once these categories were ascertained, coal volume, tonnage and qualities were estimated;

1.2 Data sources

This review is based on the information provided by GEAR and PT TKS, the technical reports of consultants and previous explorers, as well as other published and unpublished data relevant to the area. Salva Mining has carried out, to a limited extent, its own independent assessment of the quality of the geological data. The status of agreements, royalties or concession standing pertaining to the assets was advised by GEAR to be in good standing and was relied by Salva Mining.

In developing our assumptions for this Statement, Salva Mining has relied upon information provided by the company and information available in the public domain. Key sources are outlined in this Report and all data included in the preparation of this Report has been detailed in the references section of this report. Salva Mining has accepted all information supplied to it in good faith as being true, accurate and complete, after having made due enquiry as of 31 December 2016.

1.3 Limitations

After due enquiry in accordance with the scope of work and subject to the limitations of the Report hereunder, Salva Mining confirms that:

- The input, handling, computation and output of the geological data and Coal Resource information has been conducted in a professional and accurate manner, to the high standards commonly expected within the mining professions;
- The interpretation, estimation and reporting of the Coal Resource Statement has been conducted in a professional and competent manner, to the high standards commonly expected within the Geosciences and mining professions, and in accordance with the principles and definitions of the JORC Code (2012);
- In conducting this assessment, Salva Mining has addressed and assessed all activities and technical matters that might reasonably be considered relevant and material to such an assessment conducted to internationally accepted standards. Based on observations and a review of available documentation, Salva Mining has, after reasonable enquiry, been satisfied that there are no other relevant material issues outstanding;
- The conclusions presented in this report are professional opinions based solely upon Salva Mining's interpretations of the documentation received and other available information, as referenced in this Report. These conclusions are intended exclusively for the purposes stated herein;
- For these reasons, prospective investors must make their own assumptions and their own assessments of the subject matter of this Report.

Opinions presented in this report apply to the conditions and features as noted in the documentation, and those reasonably foreseeable. These opinions cannot necessarily apply to conditions and features that may arise after the date of this report, about which Salva Mining have had no prior knowledge nor had the opportunity to evaluate.

1.4 Disclaimer and warranty

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of its Statement or the success or failure for the purpose for which the report was prepared. Neither Mr. Manish Garg, Mr. Grenville Davies nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

Mr. Manish Garg, Mr. Grenville Davies, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

A draft version of this Statement was provided to the directors of GEAR for comment in respect of omissions and factual accuracy. As recommended in Section 39 of the VALMIN Code, GEAR has provided Salva Mining with an indemnity under which Salva Mining is to be compensated for any liability and/or any additional work or expenditure, which:

- Results from Salva Mining's reliance on information provided by GEAR and/or Independent consultants that is materially inaccurate or incomplete, or
- Relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

The conclusions expressed in this Statement are appropriate as at 31 December 2016. The report is only appropriate for this date and may change in time in response to variations in economic, market, legal or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in United States dollars ($) unless otherwise stated. Salva Mining services exclude any commentary on the fairness or reasonableness of any consideration in relation to this acquisition.

2 Independent Qualified Persons Statement

This Resource and Reserve report has been written following the guidelines contained within the 2005 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Experts Reports ("the VALMIN Code") and the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("the JORC Code"). It has been prepared under the supervision of Mr Manish Garg (Director – Consulting / Partner, Salva Mining) who takes overall responsibility for the report and is an Independent Expert as defined by the VALMIN Code.

Sections of the report which pertain to Coal Resources have been prepared by Mr. Grenville Davies (Principal Consultant, Geology) who is a subject specialist and a Competent Person as defined by the JORC Code.

This report was prepared on behalf of Salva Mining by the signatory to this report, assisted by the subject specialists' competent persons whose qualifications and experience are set out in Appendix A of this report.



Mr. Manish Garg
Director
Salva Mining Pty Ltd



Grenville Davies
Principal Consultant – Geology
Salva Mining Pty Ltd

2.1 Statement of Independence

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of this report. The above mentioned person(s) have no interest whatsoever in the mining assets reviewed and will gain no reward for the provision of this report.

Mr. Manish Garg, Mr. Grenville Davies, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

Neither Mr. Manish Garg, Mr. Grenville Davies nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR, or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

3 Project Description

3.1 Location and Access

The TKS project is comprised on two contiguous IUPs. These IUPs are located at 58km east of the town of Muara Teweh in the Central Kalimantan province of Indonesia. The nearest village close to the project area are Malateken, Gandring and Panaendan Liang Buah.

Access to the project area from the city of Muara Teweh is mainly via public regency roads, heading east and then via a private logging road owned by PT Austral Byna, and is of 1.5 hrs to 2 hours' drive.

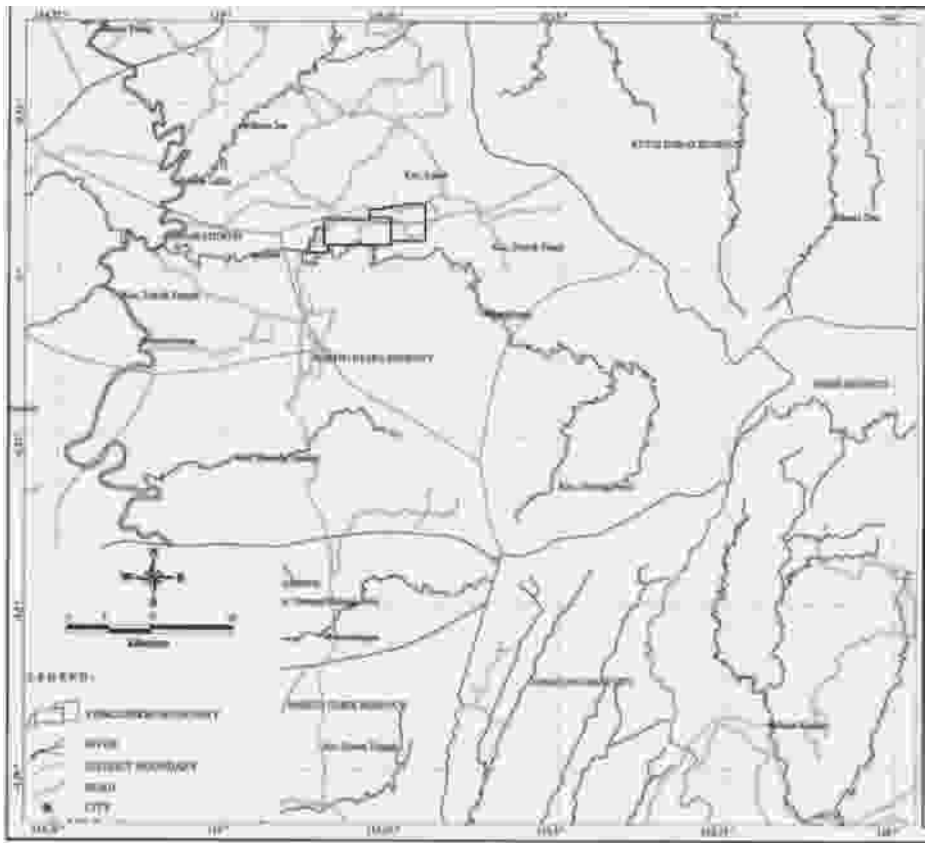
The nearest town Muara Teweh is serviced by light commercial aircraft both form Balikpapan and from Banjarmasin (capital city of East and South Kalimantan, respectively). A sealed provincial road connects Muara Teweh with the city of Banjarmasin, a 220km road journey of approximately eight hours. Banjarmasin has regular commercial flights to Jakarta and other Indonesian centers. The project location and concession plan have been shown in Figure 3:1 and Figure 3:2 respectively.

Figure 3:1 Location of TKS Project



Source: Modified after Bing maps

Figure 3:2 TKS Concessions



Source: Modified after PT Danmar Explorindo, Qualified Persons Report, January 2015

3.2 Ownership and Tenure

Golden Energy and Mines (GEAR) holds the mining rights to the TKS concession through its subsidiary PT Trisula Kencana Sakti. The detail of the coal concession is given in Table 3:1.

TKS is the beneficial holder of three Operation and Production IUPs, two of which are the subject of this Report. The two IUPs of interest are:

- 188.45/207/2010 tenting Penyesuaian Izin KP Eksploitasi Menjadi Izin Usaha Pertambangan Operasi Produksi a/n PT Trisula Kencana Sakti / concerning the Adjustment of Mining Exploitation Permit to Production Operation Mining Permit. Issued by North Barito Regent, Kalimantan Tengah province and valid from 26 April 2010 until 26 April 2026, covering an area of 4,748ha, located at North Barito Regency, Central Kalimantan Province.
- 188.45/208/2010 tentang Penyesuaian Izin KP Eksploitasi menjadi IUP Operasi Produksi a/n PT Trisula Kencana Sakti / concerning the Adjustment of Exploitation Permit to Production Operation Mining Permit. Issued by North Barito Regent, Kalimantan Tengah

Sulawesi, Indonesia

province and valid from 26 April 2010 until 26 April 2028, covering an area of 4,959ha, located at North Barito Regency, Central Kalimantan Province.

Table 3:1 TKS Concession Details

Concession Number	Concession Type	Area (ha)	Status	Granted	Expiry Date	GEAR Net Holding*
TKS Coal Indonesia – 188.45/207/2010	IUP- Operation and Production	4,748	Granted	26 April 2010	26 April 2026	46.899%
TKS Coal Indonesia – 188.45/208/2010	IUP- Operation and Production	4,959	Granted	26 April 2010	26 April 2028	46.899%

*GEMS have 70% shares in TKS and GEAR has 66.9998% shares in GEMS

TKS has complied with all applicable environmental regulations and there are no pending investigations by government agencies on environmental issues. Both IUP's were granted "Clean and Clear" status by the General Director of Mineral and Coal on the 28 February 2012.

Majority of lease area is dominated by secondary forest with some rubber plantations and farm land. Approximately 30% of the lease area is covered by the rubber plantations and farm lands. The concession area is sparsely populated and there are villages in the southern central part of the lease.

3.3 Clean and Clear - Forestry Status

Both the IUPs for the TKS concession are within a designated Production Forest, and therefore a Forestry Borrow and Use Permit (IPPKH) is required for mining report. As pre-the information provided by TKS to Salva Mining, following Borrow and Use Permit which is of relevance to this Report:

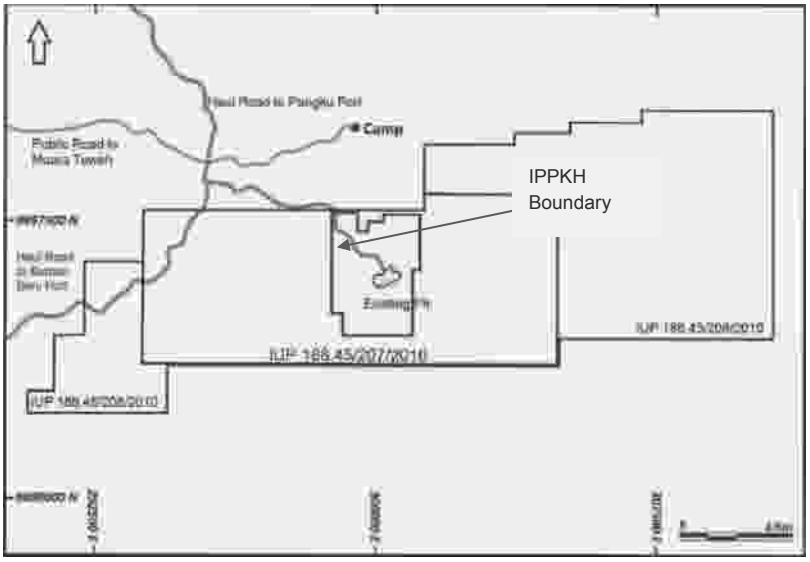
SK.319/MENHUT-II/2010 *tentang Izin Pinjam Pakai Kawasan Hutan untuk Eksploitasi Batu Bara dan Sarana Penunjangnya pada Kawasan Hutan Produksi Terbatas dan Kawasan Hutan Produksi yang dapat Dikonversi a/n PT Trisula Kencana Sakti seluas 698.58 Ha* / concerning borrow and use permit for Coal Exploitation and its Infrastructure in Limited Production Forest Area and Production Forest which can be converted to PT Trisula Kencana Sakti with an Area of 698.58 Ha. Issued by the Minister of Forestry and valid from 19 May 2010 until 19 May 2020. Table 3:2 details the IPPKH permits held by TKS and same has been depicted in Figure 3:3.

Table 3:2 Details of Forestry Area Borrow and Use Permit

Concession Number	Permit Type	Area (ha)	Granted	Expiry	Period
TKS Coal Indonesia – 188.45/207/2010	IPPKH (Forestry Area Borrow and Use Permit)	699	19 May 2010	19 May 2020	10 years

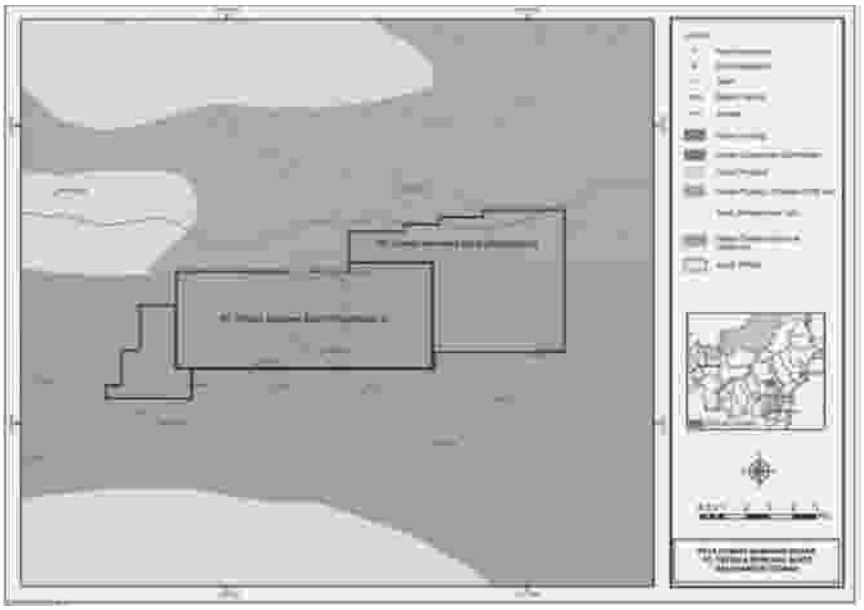
As per the regulatory requirement, the mining activities can only be carried out within the this IPPKH permit however, in line with the industry practice, the IPPKH area can be progressively adjusted as mining operation progresses.

Figure 3:3 TKS concessions with IPPKH Boundary



Source: Modified after CSA Global, Qualified Persons Report, January 2015

Figure 3:4 Forestry Status, TKS Concession



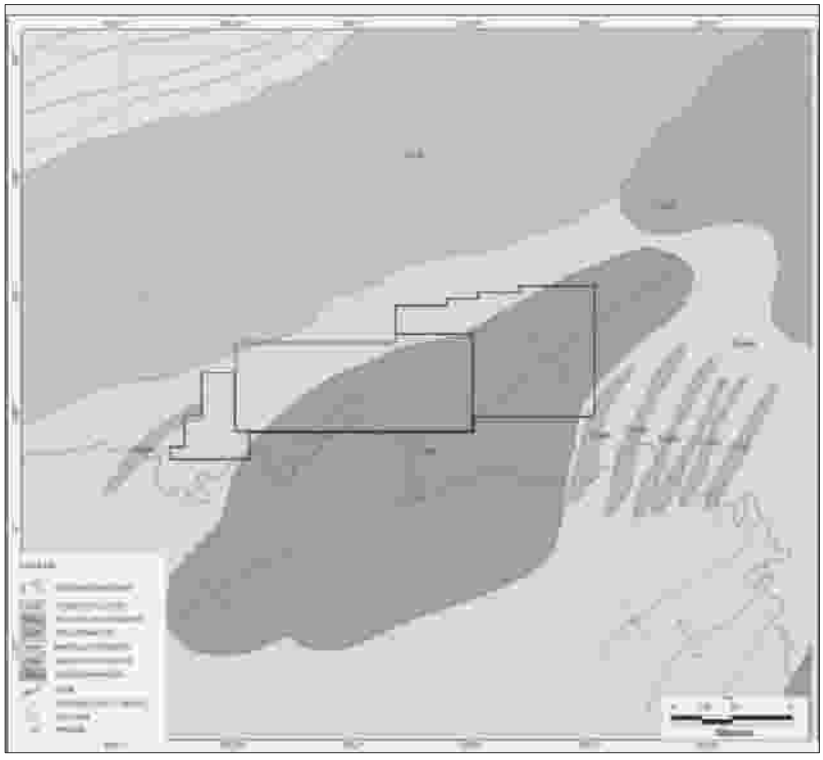
4 Geology

4.1 Regional Geology

The concessions lie in the Barito Basin of Central Kalimantan. The Barito Basin is defined by the Meratus Mountains to the east and separated from the Kutai Basin to the north by a flexure parallel to the WNW-ESE orientated Adang Fault. The Barito Basin began to develop in the Late Cretaceous following a micro-continental collision between the Paternoster and the SW Borneo micro continents (Darman and Sidi, 2000). Early Tertiary extensional deformation occurred as a tectonic consequence of that oblique convergence, producing a series of NW-SE trending rifts (Figure 4:1).

According to the published geology, the lease is within an anticlinal structure containing the Tanjung and Montelat formations These rocks are Eocene to Middle Miocene in age and are well known to contain extensive seams of thermal coal. Based on the work to date, a more likely interpretation of the regional geology is that the deposit area is in a syncline where relatively thick seams of Warukin age coal, are surrounded by hills containing older coal seams of the Montelat Formation. This would better explain why the coal in the central part of the deposit is relatively lower grade and these coal seams are surrounded by higher grade coal, around the edges of the basin.

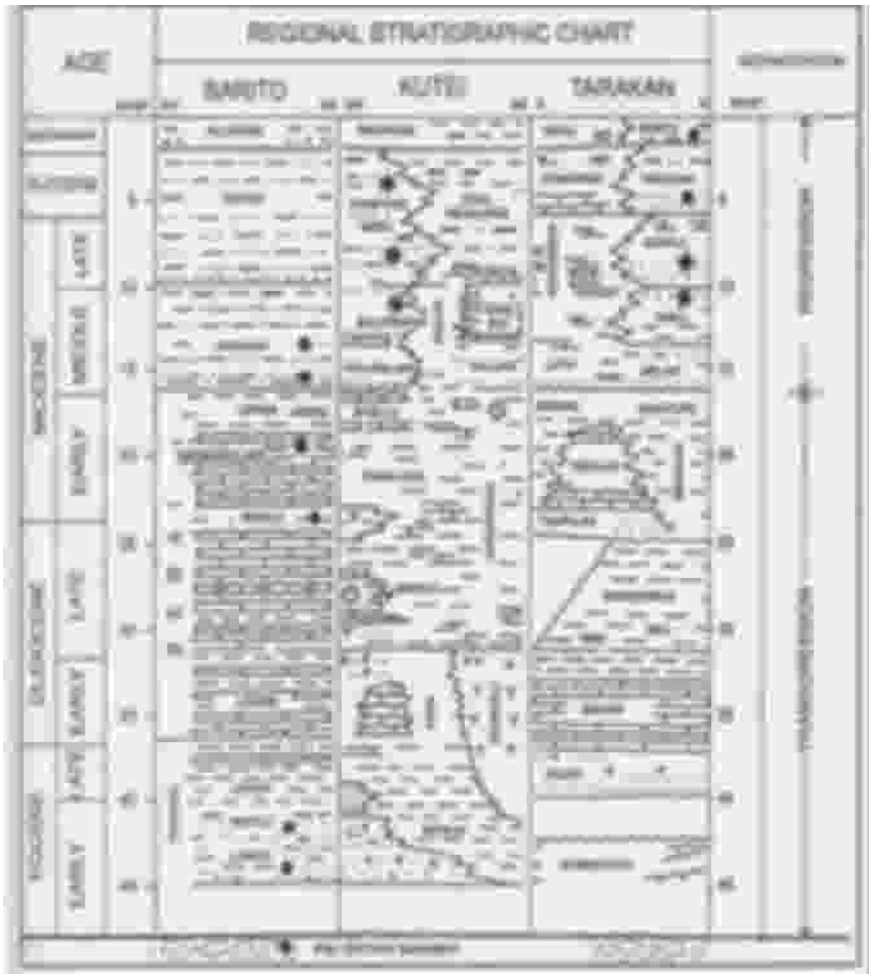
Figure 4:1 Regional Geology- TKS Concessions



Source: Modified after PT Danmar Explorindo, Qualified Persons Report, January 2015

Accordingly, based on the field exploration, the regional stratigraphy of Tarakan, Kutai and Barito Basins has been modified in the Danmar Resource Report to include Monelat Formation.

Figure 4:2 Generalised Stratigraphy of the South Sumatra Basin



4.2 Local Geology

Published 1:250,000 scale geological maps identify coal outcrops of the Tanjung Formation, Montalat Formation and Warukin Formation within the TKS IUPs., however, whilst TKS's mapping and drilling have confirmed that these coal seams are present, Danmar in in the opinion of the published geological maps for the area are inaccurate. Danmar's interpretation, based upon 1,361 points of observation, describes lower quality Warukin coal seams in the core of a syncline, grading to higher quality Montalat coal seams toward the outer edges of the structure.

The Warukin-Montalat boundary is important in the geologic record as it approximates the change in sedimentation from a transgressive to regressive regime. The Tanjung Formation geology within the TKS project is less well understood because exploration has been limited to coal outcrop mapping. It is expected that coal seams discovered in the older Tanjung Formation will have a higher calorific value and generally better quality

characteristics than the younger Warukin and Montalat coal seams. It is inferred that the 12-million-year unconformity between the Tanjung Formation and the Montalat Formation has been the loci for regional scale shearing/faulting.

The main features in the concession is a syncline structure over the main deposit area with relatively flat dips and younger sediments in the central part of the deposit and steeper dips in relatively older sediments, around the outer edges. Major faults are interpreted surrounding the deposit and controlling the boundaries of the coal to the north, south and east.

5 Exploration

5.1 Previous Exploration

The TKS concession has been subject to detailed exploration since 2005 onwards. The exploration activities were targeted to confirm the occurrences of coal seams found by initial exploration campaigns. Following sections details the previous exploration activities conducted on the concessions.

5.1.1 Exploration Drilling (2005 and 2010)

In total, 605 vertical drill hole have been drilled within the concession. Out of 605 drill holes, 111 holes from the historical exploration programs were excluded as there was insufficient information to validate the holes. Remaining, 494 holes have been validated and information from 492 holes was used (2 holes rejected due to insufficient data) to prepare the geological model.

Total cumulative depth of the drilling (494 validated drill-holes) is 40,168m with average depth of 80m for each hole. To ensure the most accurate and reliable results from the drilling down hole geophysical logging was used. The tool measures gamma ray and density and produces an electronic signature of the geology intersected in each drill hole (Figure 5:1).

Figure 5:1 Exploration drilling and down the hole geophysical logging



Source: PT Danmar Explorindo, Qualified Persons Report, January 2015

5.1.2 Topographic Mapping (2010 and 2011)

Detailed topographic mapping using airborne LiDAR survey method to a 1:1000 scale was carried out over the entire 9,711 Ha which completely covers the area of coal potential delineated in the initial drilling area.

All drillhole collars were also picked up by ground survey using total station survey equipment. To tie the survey into the Indonesian national, grid a geodetic survey including 21 permanent benchmarks were established for survey reference. The overall topography in the main coal deposit area is characterized by relatively low relief.

5.1.3 Core and Outcrop Sampling (2010 and 2011)

709 samples from drill holes were analysed to determine the coal quality at the TKS concession. In addition, 30 outcrop samples were also tested during the mapping program. The drill hole and coal outcrop locations have been shown in Figure 5:3.

5.1.4 Geological Mapping (March 2011)

Geological mapping within the concession was carried out targeting areas where there was no previous exploration work done. The mapping work was used to determine the overall geological structure of the concession and to optimise the positioning of potential future drill holes. The coal outcrop mapping included 200 observations and analysis of 30 samples (Figure 5:2).

Figure 5:2 Geological Mapping



Source: PT Danmar Explorindo, Qualified Persons Report, January 2015

Figure 5:3 Drill hole and coal outcrop locations



Source: Modified after CSA Global, Qualified Persons Report, January 2015

5.2 Historical Mining

5.2.1 Coal production

TKS has been also a subject to previous mining operations targeting production from seams S100, S200 and S300. Mining at TKS pit was commenced in August 2010 and was continued until mine was kept under care and maintenance mainly due to decline in coal prices in March 2012. The mining equipment fleet included 4 excavators, 12 trucks and 2 dozers. During this period 218,522 tonnes were mined (Table 5:1)

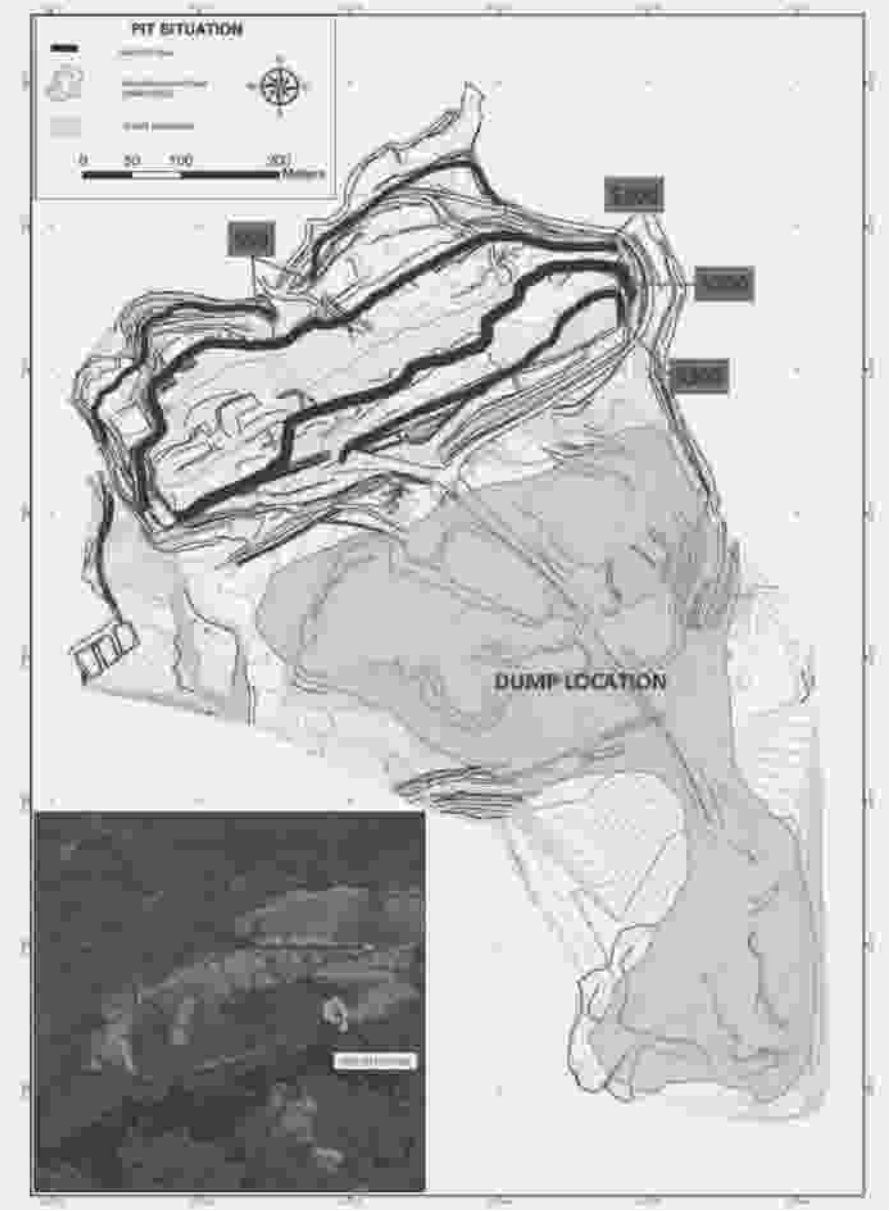
Table 5:1 Previous Mining, TKS Concession

Period	OB (bcm)	Coal (tonnes)	SR
Aug- Dec 2010	491,011	9,156	53.6
Jan- Dec 2011	1,392,413	158,729	8.8
Jan- Mar 2012	214,989	50,637	4.2

Source: PT Danmar Explorindo, Qualified Persons Report, January 2015

Figure 5:4 shows the situation of pit at the time of cessation of mining.

Figure 5:4 TKS – Historical Pit



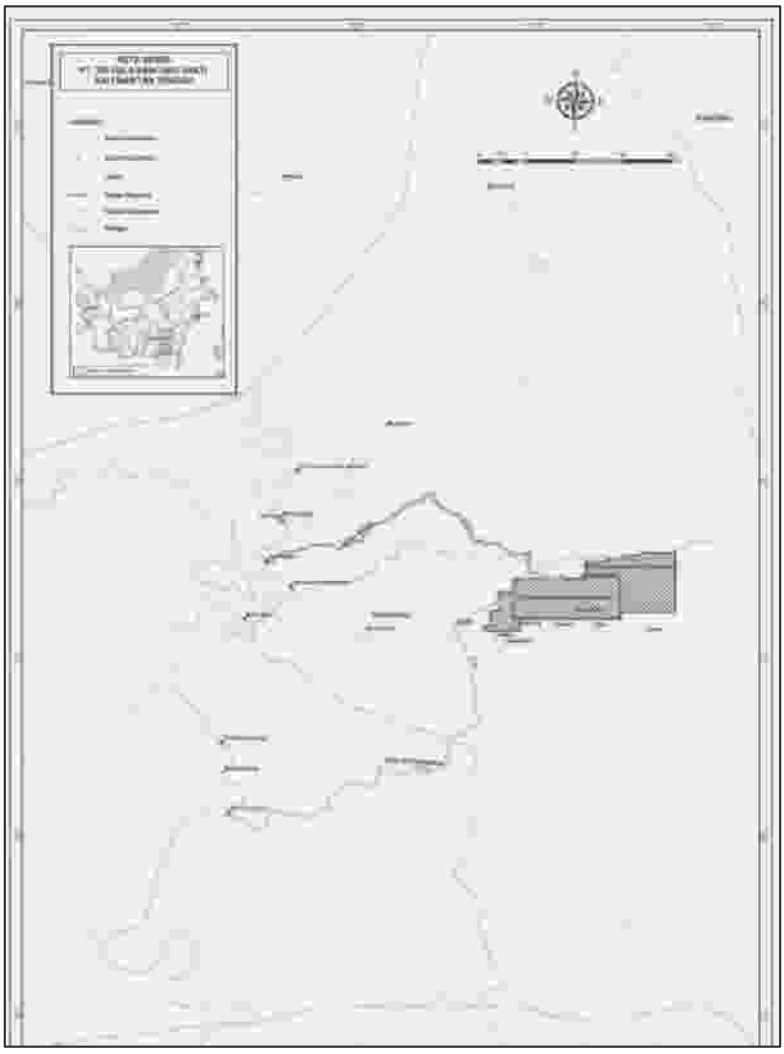
Source: PT Danmar Explorindo, Qualified Persons Report, January 2015

5.2.2 Coal Transport and Logistics

The mine out coal was hauled by Jalan Noble to the Jetty facility at Port Pangku located at distance of 39 km from the concession. Alternatively, the mined out coal was transported to Jetty facility at Port Buntok Baru. The coal was loaded into barges and barged to Taborneo Transhipment point. Barging distance from port to transhipment point is as follows:

- Port Pangku to Taborneo –approximately 235 km;
- Port Buntok Baru to – approximately 200 km.

Figure 5:5 Coal Transport and Logistics



Source: PT Danmar Explorindo, Qualified Persons Report, January 2015

5.3 Coal Seam Occurrences

Drilling has confirmed that there are twenty-three (23) coal seams within the Warukin and Montalat Formations within the TKS IUPs. Seam S400 is the basal seam of the Warukin Formation and S1200 the basal seam of the Montalat Formation. The S100, S200, S300 and S400 seams are the most significant economic grouping with an average of 5m of combined coal thickness. The main seam is S200 with an average thickness of 1.80m. Interburden sediments are generally mudstone. A massive 37m thick sandstone unit marks the end of Montalat sedimentation period.

The deposit at TKS contains approximately 19 modelled coal seams (Table 5:2) of which 4 have been split into upper and lower plies. The cumulative coal average thickness is 14.85 m in 19 seams.

Appendix E shows the diagrammatic cross-sections constructed from the geological model to demonstrate the geological structure. The coal seams dip shallowly in the centre of the syncline to 5 degrees and up to 20 degrees around the edges. Steeper old sediments, containing higher grade coal seams occur around the edges of the deposit where the geological structure is complicated by possible faulting.

Table 5:2 Seam Splitting Relationships

Master Seam	1st Phase Splitting
S10	
S20	
S30	
S40	
S50	
S100	S100U
	S100L
S200	S200U
	S200L
S300	
S400	
S500	
S550	
S600	S600U
	S600L
S700	S700U
	S700L
S800	
S850	
S900	
S1000	
S1100	
S1200	

6 Geological Data and QAQC

6.1 Data Supplied

The geological data provided by PT TKS for the TKS concession was independently reviewed by Salva Mining's geologists and is considered appropriate and reasonable for the purpose of estimating Coal Resources.

This data, used by Salva Mining for the purpose of resource estimation, includes but is not limited to:

- Drill hole collar information inclusive of total depth drilled per hole;
- Drill hole lithological data inclusive of seam picks identified and correlated on the basis of down-hole geophysics;
- Coal sample table and associated raw coal qualities per sample;
- Drill hole completion reports for most of the holes drilled containing details of core recoveries achieved;
- Down-hole geophysical data in the form of both LAS files and drill hole databases;
- Complete drill hole database including grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface.

6.2 Lithological Data

In total, 494 holes have been validated but 492 drill holes and used in this report after rejecting 2 drill holes due to lack of complete information. Total cumulative depth of the validated drilling for these 494 drill holes is 40,168m with average depth of 80m.

230 holes were interpreted from softcopy geophysical logs (LAS) while 241 holes were interpreted manually from hardcopy of the geophysics. 21 holes had no geophysical logs and these holes were only used as reference points for coal in the model but no thickness or other dimensions were used from these holes.

96% of the holes have been logged using down-hole geophysics. Down-hole geophysical data acquired by PT TKS is predominantly comprised of gamma, density and calliper logs and has allowed for accurate identification of coal seams in each hole (seam picks) and the correlation of coal seams between holes.

Drill hole locations for the resource areas can be seen in Appendix E and coal intercept statistics can be seen in Table 6:1.

Table 6:1 Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum		Maximum		Mean Thickness	S.D.
		Hole no.	Thickness	Hole no.	Thickness		
S10	8	CPDH63	0.12	DEV1039	0.54	0.29	0.14
S20	42	DEV1004	0.15	DEV1048	1.52	0.73	0.28
S30	71	DEV1018	0.10	DEV1025	1.30	0.48	0.21
S40	93	TH05R6Y	0.05	CPDH58	1.16	0.47	0.23
S50	73	THO5R6X	0.01	DEV1026	0.70	0.35	0.18
S100U	19	CPDH72	0.26	TH04R7	1.20	0.78	0.26
S100L	19	DEV1022	0.35	TH05R7	1.00	0.58	0.21
S200U	39	SE02_IF	0.40	SE_12C	1.80	0.89	0.34
S200L	39	SE_12CX	0.30	DEV1014	1.40	0.84	0.24
S300	170	TH04R6X	0.20	SE_15	1.88	0.87	0.27
S400	137	DEV1010	0.10	CPDH26B	1.49	0.76	0.29
S500	40	RTKSW0019	0.15	PDH55A	2.06	0.83	0.49
S550	33	CTKSW0034	0.20	RTKSW0014	1.55	0.65	0.34
S600U	34	NPDH07	0.14	RTKSW0040	1.40	0.57	0.34
S600L	35	NPDH05	0.24	PDH11	2.60	0.75	0.42
S700U	62	NPDH25	0.14	PDH44A	2.02	0.89	0.36
S700L	57	NPDH06	0.14	SE_26	3.35	0.78	0.46
S800	17	CTKSW0001	0.20	RTKSW0022	0.95	0.51	0.24
S850	23	CTKSW0005	0.15	RTKSW0018	1.10	0.44	0.23
S900	25	CTKSW0003	0.15	CTKSW0018	1.10	0.53	0.24
S1000	35	CTKSW_104	0.15	RTKSW0018	1.45	0.75	0.29
S1100	20	CTKSW0004	0.30	TKSW_1021	1.00	0.58	0.20
S1200	13	TKSW_1008	0.20	CTKSW0007	1.20	0.55	0.32
S100	148	RTKSW0015	0.30	TH04R6X	2.70	1.65	0.38
S200	143	RTKSW0024	0.20	SE_08CX	3.38	1.85	0.55
S600	9	SE_22	0.50	TG006	9.30	2.09	2.77
S700	11	CPDH61	0.24	TG009	1.64	0.98	0.43

6.3 Topographic Survey and base of weathering (BOW)

Topographic survey was carried out using both Total Station and Airborne Lidar. The survey details have been summarised in Table 6:2.

Table 6:2 Topographic Survey Details

Agency	Scale	Year	Topo (Ha)	Type	Collar (%)
Piramindo Tekno Sakti	1000	2006	968	Total Station	n/a
Sinar Mas Mining	n/a	2006-2011	n/a	Total Station	86
Surtech Utama	1000	2010	9,711	Air borne Lidar	n/a

The drill collar survey and the LiDAR showed some difference which was adjusted to match the LiDAR which meant an overall average adjustment of approximately +1m in elevation. The overall topography in the main coal deposit area is characterised by relatively low relief. some low-lying areas in the central part of the lease, and a series of linear ridges (interpreted as bedding lineaments) surrounding the outer edges of the main deposit. Relatively higher grade coal occurs in this area.

The resulting topographic map, which was mainly done by air-borne laser scanning from 21 benchmark locations covers approximately 9,711 Ha and is of sufficient detail and accuracy for estimating coal Resources.

A 'non-conformable' base of weathering (W_S) surface was supplied by GEAR along with the drill hole data. This surface was imported into MineScape and incorporated into the tks_2017 schema and thus used in the resource model.

6.4 Data Quality Assurance and Quality Control (QAQC) Measures

6.4.1 Core Sampling

At the completion of each run, core lengths were checked in the splits for recovery to ensure coal seams have been recovered as required. A target core recovery of 90% has been applied throughout all drilling phases. The core was also photographed routinely and logged in the splits by a geologist before being sampled. For open holes, chip samples were collected at 1 m intervals for lithological logging purposes.

All the drill rigs used during each phase of exploration were operated by experienced personnel and drilling was supervised by fully qualified geologists working in shifts.

Sampling of the coal seams was conducted by the rig geologist on duty and was conducted in accordance with the following sampling procedure supplied to rig geologists;

- Open core barrel inner split tube and remove sample from the barrel;
- Transfer the core to the PVC split or core box;
- Determine the core depth ("From" and "To") from the drill depth; and
- Reconstruct the core in the split to allow for any gaps;
- Determine the core recovery;
- Wash down using water and a cloth and/or brush prior to logging if covered by mud or oil;
- Complete geological logging and photograph structure or any abnormal features. The photograph should show information of drill hole number and from and to depths;
- The division of samples follows the simple scheme of sample all coal, sample separately any contained bands (plies) and take 10 cm roof and floor non-coal samples;
- Place samples into plastic bags which should be doubled to minimise moisture loss. Insert one bag inside another so that they are doubled;
- Label the sample by ID card, the label should give information about the sample number, hole number, from/to depth, and Project Code. Place the label ID card inside the small re-sealable plastic bag before putting it into the sample bag;
- Seal the sample bag with tape and write the sample number on the plastic bag;
- Dispatch sample to an accredited laboratory

The coal quality sampling technique detailed above is considered by Salva Mining to adequately address the QAQC requirements of coal sampling. As a further coal quality validation step prior to importing coal quality sample results for coal quality modelling purposes, Salva Mining constructed spreadsheets which compare the sampled intervals against the logged seam intervals in order to ensure that sampled intervals match the seam pick intervals.

6.4.2 Down-hole Geophysics and Seam Picks

Down-hole geophysical logs were completed during each drilling program by PT Surtec Indonesia. Geophysical logging was conducted following the completion of a drill hole. After drilling is complete the logging unit deploys down-hole geophysical sondes, including gamma ray, calliper and density tools to assist with characterising the down-hole formation and its geological properties. Stratigraphic information, intercepted along the entire length of the drill hole (collar to total depth), is recorded and plotted in acrobat pdf format. A digital copy of the data is stored in LAS file format.

Logging was performed on the majority of drill holes (including cored and open holes) and 100% of drill holes have geophysical data. Seam picks and lithologies have all been corrected for geophysics.

Geophysical logging provides information on the coal seams intersected and aids in the definition of horizon boundaries and marker horizons, used to correlate the subsurface geology. The presence or absence of geophysical logging is one of the criteria used in the determination of points of observation for resource classification purposes. Under normal conditions coal-bearing sections of each drill hole were geophysically logged at the completion of drilling. In some instances, poor ground conditions restricted the ability to geophysically log the entire hole upon completion. In these cases, collapsed portions of holes were re-drilled in order to allow for density and gamma logging to be accomplished by lowering the geophysical probe through the drill string.

6.4.3 Coal Quality

Coal quality sampling was undertaken by PT TKS and contract geologists, with the analysis testing being completed by PT Geoservices laboratories in Banjarbaru near Banjarmasin. PT Geoservices laboratories are accredited to ISO 17025 standards and quality control is maintained by daily analysis of standard samples and by participation in regular "round robin" testing programs.

International Standards Organisation (ISO) methods have been used for Moisture Holding Capacity tests; Australian Standards (AS) have been used for Relative Density and American Society for Testing and Materials (ASTM) methods have been used for all other quality variables.

The following tests were undertaken as standard on all coal samples:

- Total Moisture (TM);
- Inherent Moisture (IM);
- Ash Content (Ash);
- Volatile Matter (VM);
- Fixed Carbon (FC);
- Total Sulphur (TS);
- Calorific Value-air dried basis (CV adb) – selected samples only;
- Relative Density (RD);
- HGI – Selected samples only.

6.4.4 Data validation by Salva Mining prior to geological model construction

Prior to using the lithological (seam pick) and coal quality data for geological model construction purposes, Salva Mining performed the following data validation and verification checks on the data;

- Checking of seam picks against the down-hole geophysics in selected instances in order to validate seam pinch outs or correlations during structural model construction.
- Validation of coal quality sample intervals against seam pick intervals
- Scatter plots of raw coal quality data pairs were constructed in order to determine outliers. In a few cases, spurious data values were identified and removed from the quality data set prior to importing the data into MineScape.
- In cases where RD (adb) data was not determined for a sample, linear regression equations determined from the RD-ash scatter plot constructed from the rest of the raw coal quality data set were used to determine the RD value for the sample concerned from the ash value for that sample.
- Core recovery percentages per core run were compiled and merged with the coal quality sample data set in order to determine if any samples in the coal quality data set are from coal seam intersections with less than 90% core recovery over the seam width. Core recovery was observed to be satisfactory with over 90% recovery within the coal horizon although less than 90% recovery is often seen in the immediate roof or floor to the coal seam.
- During the importation of coal quality samples and associated raw coal quality data into the geological modelling software, a few instances of overlapping samples were identified and these were corrected and the samples re-imported
- After compositing the coal quality samples over the seam width on a seam by seam basis, histograms were constructed of the composited raw coal quality for each seam. (Appendix D). Analysis of these histograms shows that in a few instances, raw ash% outliers are present as a result of excessive overlap of the coal quality sample into the seam roof or floor. In the majority of such instances, the proportion of outlier composite samples is very small compared to the total number of samples per seam and hence the presence of these outliers has no material impact on the modelled raw coal quality for affected seams.

6.5 Coal Density

No information on in situ moisture was obtained from the laboratory, resulting in the fact that the Preston and Sanders equation could not be applied to obtain in situ relative densities. As a result, all resource tonnages are quoted on an in-situ air dried density basis, as volumes are calculated on an in-situ basis and density on an air-dried basis. However, the density of in situ coal is in reality not at an air-dried basis but at a higher moisture in situ moisture basis. The estimate of resources on an air-dried basis will therefore result in a higher tonnage as compared to the equivalent in situ moisture basis calculation. This effect has been accounted for to a large extent in the reserving process, where the total moisture has been used as proxy for the in-situ moisture and a Preston Sanders calculation has been made on this basis. However, given the unknown accuracy of this approximation, this calculation was not done at the resource stage, preferring rather to use the more accurately known air dried density and state the moisture basis used in the resource.

6.6 Coal Quality Data

Within the TKS concession, Warukin and Montelat Formation coals are classified as a high energy bituminous class A coal (ASTM – Guidebook of Thermal Coal page 35). Raw coal quality composite sample statistics for all seams in each resource area are given in Table 6:3.

Table 6:3 Summary of Drill hole raw coal quality by seam

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
S20	Number of Values	3	3	3	3	3	3	3	3
	Min Value	7.6	5111	37.2	14.7	1.36	23.5	0.4	34.1
	Max Value	17.6	5610	38.4	16.8	1.42	24.7	0.7	38.7
	Mean	12.4	5406	38.0	16.0	1.4	24.1	0.6	36.7
S30	Number of Values	8	8	8	8	8	8	8	8
	Min Value	3.2	5645	30.5	7.3	1.32	17.2	0.3	36.5
	Max Value	12.4	6708	41.5	18.0	1.4	25.8	0.5	53.6
	Mean	5.5	6250	36.7	12.6	1.35	20.8	0.3	45.2
S40	Number of Values	4	4	4	4	4	4	4	4
	Min Value	4.4	4184	30.4	8.2	1.34	23.1	0.3	29.4
	Max Value	24.4	5850	40.7	17.1	1.51	24.4	3.2	40.6
	Mean	11.8	5344	37.7	13.9	1.41	23.6	1.3	36.6
S50	Number of Values	4	4	4	4	4	4	4	4
	Min Value	16.2	4547	25.0	7.5	1.41	16.6	0.5	31.9
	Max Value	28.0	5651	34.7	17.3	1.52	22.4	0.7	46.8
	Mean	20.4	5046	28.8	11.8	1.45	19.8	0.6	39.0
S100U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	6.2	5476	39.5	15.0	1.34	22.6	1.7	36.5
	Max Value	7.8	5612	40.7	16.8	1.39	22.8	3.6	37.5
	Mean	7.0	5544	40.1	15.9	1.37	22.7	2.6	37.0
S100	Number of Values	25	25	25	25	25	25	25	25
	Min Value	2.1	2907	11.2	11.0	1.28	16.3	0.3	36.2
	Max Value	25.2	10070	44.4	17.2	1.47	27.9	2.9	43.0
	Mean	7.7	5948	40.8	14.0	1.36	22.1	1.3	39.0
S100L	Number of Values	3	3	3	3	3	3	3	3
	Min Value	5.3	5459	39.6	14.4	1.34	21.7	2.4	37.1
	Max Value	9.1	5740	39.7	16.5	1.41	22.4	5.0	38.8
	Mean	7.7	5610	39.7	15.1	1.37	22.1	3.4	38.2
S200U	Number of Values	3	3	3	3	3	3	3	3
	Min Value	3.7	4253	29.9	10.5	1.35	24.2	2.3	30.1
	Max Value	41.8	5793	43.9	17.1	1.64	27.3	3.7	37.7
	Mean	17.4	5202	38.0	14.1	1.45	25.9	2.8	34.7
S200	Number of Values	27	27	27	27	27	27	27	27
	Min Value	3.2	4099	33.4	8.8	1.32	20.2	2.0	29.3
	Max Value	26.8	6132	45.3	18.5	1.51	27.5	3.8	41.0

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Mean	10.6	5604	41.3	14.0	1.39	22.8	3.0	37.5
S200L	Number of Values	2	2	2	2	2	2	2	2
	Min Value	5.8	5490	40.5	16.0	1.34	24.1	2.3	35.5
	Max Value	6.0	5584	42.7	17.3	1.36	27.5	2.4	36.2
	Mean	5.9	5537	41.6	16.6	1.35	25.8	2.3	35.8
S300	Number of Values	28	28	28	28	28	28	28	28
	Min Value	3.9	4577	26.4	8.3	1.32	16.0	0.4	33.6
	Max Value	43.2	6178	44.6	16.4	1.63	27.0	1.5	45.2
	Mean	17.9	5716	37.9	12.2	1.43	21.6	0.6	39.3
S400	Number of Values	15	15	15	15	15	15	15	15
	Min Value	7.0	4027	24.4	6.1	1.33	13.8	2.2	33.0
	Max Value	36.0	6482	40.5	15.9	1.64	27.3	7.9	52.6
	Mean	16.8	5433	34.3	11.8	1.43	20.3	4.0	39.6
S500	Number of Values	2	2	2	2	2	2	2	2
	Min Value	5.9	5698	39.3	10.6	1.32	20.6	1.2	37.8
	Max Value	29.3	6147	41.0	17.1	1.51	20.7	1.7	41.3
	Mean	17.6	5922	40.2	13.8	1.41	20.7	1.4	39.5
S550	Number of Values	1	1	1	1	1	1	1	1
	Min Value	6.1	5749	39.2	16.5	1.33	19.0	0.4	38.2
	Max Value	6.1	5749	39.2	16.5	1.33	19.0	0.4	38.2
	Mean	6.1	5749	39.2	16.5	1.33	19.0	0.4	38.2
S600U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	7.0	5983	35.3	10.2	1.36	12.9	0.4	39.4
	Max Value	11.6	6561	39.7	10.8	1.4	16.7	1.8	47.5
	Mean	9.3	6272	37.5	10.5	1.38	14.8	1.1	43.5
S600L	Number of Values	1	1	1	1	1	1	1	1
	Min Value	3.4	6193	44.1	13.6	1.32	18.7	0.4	38.8
	Max Value	3.4	6193	44.1	13.6	1.32	18.7	0.4	38.8
	Mean	3.4	6193	44.1	13.6	1.32	18.7	0.4	38.8
S700U	Number of Values	6	6	6	6	6	6	6	6
	Min Value	4.1	5568	35.5	9.6	1.33	13.7	2.0	38.8
	Max Value	27.4	6605	41.9	13.1	1.49	18.7	4.0	46.1
	Mean	12.3	6269	39.3	11.3	1.38	15.7	2.8	42.8
S700L	Number of Values	8	8	8	8	8	8	8	8
	Min Value	1.3	5827	40.0	9.7	1.3	14.5	0.5	37.6
	Max Value	14.8	6529	45.8	15.0	1.38	23.4	1.5	42.0
	Mean	6.2	6315	43.2	12.6	1.34	17.6	0.9	40.1
S800	Number of Values	1	1	1	1	1	1	1	1
	Min Value	14.7	6418	44.1	11.2	1.39	15.1	1.2	40.8
	Max Value	14.7	6418	44.1	11.2	1.39	15.1	1.2	40.8
	Mean	14.7	6418	44.1	11.2	1.39	15.1	1.2	40.8

Seam		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
S850	Number of Values	2	2	2	2	2	2	2	2
	Min Value	6.1	5055	36.3	10.9	1.33	15.0	0.5	32.3
	Max Value	23.8	6325	40.3	11.6	1.48	15.0	0.6	42.0
	Mean	14.9	5690	38.3	11.3	1.4	15.0	0.6	37.2
S900	Number of Values	4	4	4	4	4	4	4	4
	Min Value	3.0	5955	41.8	10.4	1.28	11.9	0.3	37.3
	Max Value	39.6	6594	44.4	13.6	1.56	15.9	1.8	40.4
	Mean	16.3	6305	43.1	12.0	1.4	14.1	1.0	39.3
S1000	Number of Values	2	2	2	2	2	2	2	2
	Min Value	2.8	6408	43.5	10.0	1.31	12.8	0.6	42.7
	Max Value	18.1	6632	43.5	11.0	1.5	15.4	2.6	42.9
	Mean	10.4	6520	43.5	10.5	1.4	14.1	1.6	42.8
S1100	Number of Values	2	2	2	2	2	2	2	2
	Min Value	3.9	6604	43.8	9.6	1.32	12.1	1.4	41.6
	Max Value	19.9	6732	44.3	10.3	1.41	12.4	3.3	43.2
	Mean	11.9	6668	44.0	9.9	1.37	12.3	2.3	42.4
S1200	Number of Values	1	1	1	1	1	1	1	1
	Min Value	5.2	6553	43.8	9.3	1.34	11.7	4.1	41.8
	Max Value	5.2	6553	43.8	9.3	1.34	11.7	4.1	41.8
	Mean	5.2	6553	43.8	9.3	1.34	11.7	4.1	41.8

7 Resource Model Construction

7.1 Structural Model

After completion of the previously detailed QA/QC processes, the available valid lithological and coal quality data was then imported into the MineScape software (Version 5.15) to generate both a structural model and a coal quality models for each of the five resource areas.

The topographic model for each deposit was constructed by importing the cap topography grid models for each area. These topography models describe both virgin topography.

The lithological data was then modelled to create structural grids. The schema, stored within the Stratmodel module of the MineScape software controls the modelling of seam elements and their structural relationships, grid model cell size, interpolators and other parameters. The details of these parameters stored in the applied schemas used in the structural modelling process are listed in Table 7:1.

Within the modelling schema, all of the stratigraphic intervals were modelled with pinched continuity. This is applied in areas where intervals are missing in a drill hole. In this situation, the modelling algorithm stops the interpolation of the missing interval halfway between the two drill holes between which it ceases to be present.

7.1.1 Structural Model Validation

Structural and thickness contours were generated and inspected to identify any irregularities, bulls-eyes, unexpected discontinuities etc. Cross-sections were also generated to identify any further structures such as faulting and any areas where seams were modelled as being discontinuous due to short drilling. Selected cross-sections from each resource area are shown in Appendix E.

Table 7:1 Model Schema Settings and Parameters

Model Component	Details
Modelling Software	Ventyx MineScape - Stratmodel module
Schema	Tks_2017
Topography Model	Topo_Sv
Topography Model Cell Size	50 m
Structural Model Cell Size	50 m
Interpolator (thickness)/order	Finite Element Method (FEM)/0
Interpolator (surface)/order	Finite Element Method (FEM)/1
Interpolator (trend)/order	Finite Element Method (FEM)/0
Seam Continuity	Continuous
Extrapolation Distance	5000 m
Parting Modelled	No
Minimum Ply Thickness	10 cm
Minimum Coal Parting	30 cm or otherwise not defined
Conformable Sequences	Weathered, Fresh
Upper Limit for Seams	Base of Weathering (W_S)
Control Points	Yes
Constraint File	No

Model Component	Details
Penetration File	Yes
Model Faults	No
Maximum Strip Ratio	-
Maximum Resource Depth	100 m
Tonnage Calculations	Based on volumes using relative density on an air-dried basis

7.2 Coal Quality Model

Coal quality data has been composited on a seam basis. The Inverse distance interpolator was selected for modelling coal quality as it has been shown to perform adequately for most coal quality attributes and it is also less likely to introduce spurious trends into the data. Testing indicated that a power value of two and a search radius of 2500 metres are the most suitable inverse distance interpolation parameters for modelling of the TKS coal deposits. Parameters used for quality modelling are summarized in Table 7:2.

Table 7:2 Quality Model Parameters

Model Component	Details
Coal Quality Data Type	Raw
Model Type	MineScape Table
Interpolator	Inverse distance
Power	2
Search Radius	7500 metres

7.3 Quality Model Validation

After the completion of quality model gridding, selected qualities for selected seams were contoured and contours inspected to ensure that quality models had been gridded correctly. As a second validation measure, average qualities reported during resource reporting for all seams were compared against the average qualities of the input data to ensure consistency between input and output data sets.

8 Coal Resources

8.1 Prospects for Eventual Economic Extraction and Resource Classification

Coal Resources present in the TKS concession have been reported in accordance with the JORC Code, 2012. The JORC Code identifies three levels of confidence in the reporting of resource categories. These categories are briefly explained below.

Measured – "*...That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors to support detailed mine planning and financial evaluation*";

Indicated – *"…That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors in sufficient detail to support mine planning and evaluation"; and*

Inferred – *"…That part of a Mineral Resources for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling.".*

In terms of Coal Resource classification, Salva Mining is also guided by the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) (The Coal Guidelines) specifically referred to under clause 37 of the JORC Code (2012).

Resource classification is based on an assessment of the variability of critical variables (raw ash% and seam thickness) through statistical analysis and by an assessment of the geological continuity and input data quality.

Consequently Salva Mining has sub-divided Coal Resources within the WRL concession into resource classification categories based on the following spacing's (expressed as a radius of influence around points of observation which is half of the spacing between points of observation):

- Measured radius of influence of 250 m;
- Indicated radius of influence of 450 m;
- Inferred radius of influence of 850 m.

Resource polygons for the main seams from each resource area are shown in Appendix E.

8.1.1 Assessing Confidence

Several factors outlined in Section 5 of the Coal Guidelines (2014), were considered when assessing confidence in the estimate and classifying the Coal Resource in accordance with the JORC Code (2012). A summary of factors considered is shown below in Table 8:1.

A qualitative review of modelled seam floor elevation and thickness contours, statistical analysis of thickness and coal quality attributes, domaining and general geological setting all show that the seams within the TKS deposit appear to display a relatively high degree of continuity, allowing for a lower level of drilling density for the same level of confidence as compared to a more complex/less continuous coal deposits. The main risk factor in terms of confidence in the resource estimate is

considered to be coal quality. There is an estimated 15% overestimation of tonnes due to the use of an air dried density instead of an in-situ density as discussed in section 6.5.

Table 8:1 Criteria considered to assess confidence in the Resource Estimate

Assessing Confidence	Comment	Assessment Summary	Risk Rating (H,M,L)
Critical assessment of local, geographical and geological settings	*In general the coal seams within the WRL deposit are characterised by a high degree of lateral continuity, allowing for confidence in correlation between holes. There is no evidence of major faulting in the tenement.*	High continuity, benign structure.	L
Identifying critical data	*Seam thickness and raw ash are seen as critical data, thickness being the main factor determining coal volume and raw ash being directly related to both relative density and product coal yield.*	Raw ash seen as more variable than thickness and hence determining factor for classification.	M
Data Analysis, error and verification	*Internal standards and procedures used for drilling logging and sampling. Lab uses internal QAQC standards and is ISO 17025 accredited.*	Salva Mining used internal checks to data (histograms, global statistics, scatter plots) during modelling to verify data. Apart from some low core recoveries which were evaluated and found to be a true reflection of the input data and no evidence of coal quality bias resulting from poor core recovery was observed.	L
Domaining	*Raw ash% histograms, floor and thickness contours used to investigate domaining*	Domains adequately addressed by modelling parent and daughter seams where present and assigning coal quality accordingly.	L
Statistical Analysis	*Global statistics for thickness and all raw coal quality attributes generated as well as raw ash histograms*	Global statistics was prepared and reviewed. It show values in expected normal ranges. Classification spacings used for this estimate are in line with those used previously by Salva Mining for other coal deposits elsewhere in the Central Kalimantan basin.	L

Assessing Confidence	Comment	Assessment Summary	Risk Rating (H,M,L)
Geological Modelling	*3D geological model constructed using Minescape dedicated stratigraphic modelling software*	Geological model appears to be a good representation of the input drill hole intercept data.	L

8.1.2 Eventual Economic Extraction

It is furthermore a requirement of the JORC Code (2012) that the likelihood of eventual economic extraction be considered prior to the classification of coal resources.

The average coal quality attributes of the coal seams considered is sufficient to be marketed as a midium CV thermal coal for domestic power generation purposes. Therefore, Salva Mining considers that it is reasonable to define all coal seams within the classification distances discussed above, to a depth of 100m below the topographic surface, as potential open cut coal resources.

8.2 Coal Resource Statement

The Coal Resources which have been estimated, have been classified and reported according to the JORC Code (2012) and the Australian Guidelines for Estimating and Reporting of Inventory Coal Resources as at 31 December 2016 are detailed in Table 8:2 and Table 8:3.

Table 8:2 Coal Resources as at 31 December 2016

Resource Classification	Mass (Mt)	TM (arb) (%)	IM (adb) %	Ash (adb) (%)	Volatile Matter (adb) %	Total Sulphur (adb) %	GCV (adb) kcal/kg	Relative Density (adb)
Measured	24.7	21.9	13.7	11.0	38.4	2.0	5,726	1.38
Indicated	26.0	20.4	13.1	12.4	38.5	1.8	5,714	1.39
Inferred	24.0	21.9	13.7	11.0	38.4	2.0	5,726	1.38
TOTAL	**74.7**	**21.4**	**13.5**	**11.5**	**38.4**	**2.0**	**5,726**	**1.39**

(*Note: individual totals may differ due to rounding*)
Final Inferred Resource rounded to nearest 1 Mt.

Table 8:3 Coal Resource by Seam as at 31 December 2016

Seam	Resource (Mt)			
	Measured	Indicated	Inferred	Total
S20	0.1	0.5	0.6	1.2
S30	0.6	0.7	0.6	1.9
S40	0.2	0.7	1.4	2.2
S50	0.0	0.8	0.7	1.5
S100U	0.8	0.3	0.0	1.2
S100	5.6	5.5	4.6	15.8
S100L	0.7	0.3	0.0	1.0
S200U	1.3	1.3	1.1	3.7
S200	6.5	3.8	1.9	12.1
S200L	1.2	1.3	1.2	3.6
S300	3.8	3.2	2.7	9.8
S400	1.3	2.2	3.3	6.9
S600U	0.1	0.2	0.4	0.7
S600L	0.1	0.2	0.5	0.8
S700U	1.2	2.0	2.1	5.3
S700	0.0	0.0	0.0	0.0
S700L	1.0	1.6	1.9	4.4
S900	0.0	0.8	0.5	1.3
S1000	0.0	0.5	0.3	0.8
S1100	0.2	0.1	0.2	0.6
TOTAL	**24.7**	**26.0**	**24.0**	**74.7**

(*Note: individual totals may differ due to rounding*)

Final Inferred Resource rounded to nearest 1 Mt.

8.3 Comparison with Previous Estimates

The total estimated resource tonnes for the TKS Project in the current report is similar to the one completed by PT Danmar in 2015.

The amount of Measured plus Indicated Resource is similar to the previous reported number. However, the amount of Measured Resource is less than previously reported – Salva Mining has adopted the guidelines from both JORC 2012 and Coal Guidelines 2014 and the point of observation for each seam is defined to have both structure and coal quality associated with that point of observation.

The Table 8:4 below shows a breakdown of the difference in resource tonnes for the TKS concession between this (Feb 2017) and the previous estimates (Jan 2015).

Table 8:4 Coal Resources - Comparison with Previous Estimate

Resource Category	Salva Mining Jan 2017 (Mt)	PT Danmar Explained Jan 2015 (Mt)
Measured	25	40
Indicated	26	12
Total M&I	**51**	**52**
Inferred	24	25
Total	**75**	**77**

9 JORC Table 1

This Coal Reserve Report has been carried out in recognition of the 2012 JORC Code published by the Joint Ore Reserves Committee ("JORC") of the Australasian Institute of Mining and Metallurgy, the AIG and the Minerals Council of Australia in 2012. Under the report guidelines all geological and other relevant factors for this deposit are considered in sufficient detail to serve as a guide to on-going development and mining.

In the context of complying with the Principles of the Code, Table 1 of the JORC code (Appendix B) has been used as a checklist by Salva Mining in the preparation of this report and any comments made on the relevant sections of Table 1 have been provided on an 'if not, why not' basis. This has been done to ensure that it is clear to an investor whether items have been considered and deemed of low consequence or have yet to be addressed or resolved.

The order and grouping of criteria in Table 1 reflects the normal systematic approach to exploration and evaluation. Relevance and Materiality are the overriding principles which determine what information should be publicly reported and Salva Mining has attempted to provide sufficient comment on all matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. It is important to note that the relative importance of the criteria will vary with the particular project and the legal and economic conditions pertaining at the time of determination.

In some cases, it may be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision for the company issuing the Public Report, and such a decision should be made in accordance with any relevant corporation regulations in that jurisdiction.

In cases where commercially sensitive information is excluded from a Public Report, the report should provide summary information (for example the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for the purpose of informing investors or potential investors and their advisers.

References

JORC, 2012. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code – 2012 Edition [online], The Australian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia.

Panggabean, Hermes, (1991) Tertiary source rocks, coals and reservoir potential in the Asem Asem and Barito Basins, South-eastern Kalimantan, Indonesia, Doctor of Philosophy thesis, Department of Geology – Faculty of Science, University of Wollongong, http://ro.uow.edu.au/theses/2113.

PT. Danmar Explorindo, "Qualified Person's Report of Coal Resources", 15 January 2015.

Appendix A: CVs

Person	Manish Garg (Director)
Qualification	B. Eng. (Hons), MAppFin
Prof. Membership	MAusIMM; GAICD
Contribution	Overall Supervision, Economic Assessment (VALMIN 2015)
Experience	Manish has more than 25 years' experience in mining Industry. Manish have worked for mining majors including Vedanta, Pasminco, WMC Resources, Oceanagold, BHP Billiton - Illawarra Coal and Rio Tinto Coal. Manish has been in consulting roles for past 5 years predominately focusing on due diligence, valuations and M&A area. A trusted advisor, Manish has qualifications and wide experience in delivering due diligences, feasibility studies and project valuations for banks, financial investors and mining companies on global projects, some of these deals are valued at over US$5 billion.
Grenville Davies (Principal Consultant - Geology)	
Qualification	B. Sc. (Geology)
Prof. Membership	MAusIMM
Contribution	Geology, Resource (JORC 2012)
Experience	Grenville has more than 35 years of experience in most aspects of coal geology; including exploration, geological modelling, resource estimation, open cut and underground mine geology. He has worked for two of the major Australian software houses responsible for developing both Minex and MineScape as well as working for mining majors like BHP Billiton and consulting to major mining companies for both geological modelling. As a consultant, he has worked on audits and due diligence for companies within Australia and overseas. He has strong expertise in data management, QA/QC and interpretation; reviews/audits of data sets, models and resource estimates.

Appendix B: SGX Mainboard Appendix 7.5

Cross-referenced from Rules 705(7), 1207(21) and Practice Note 6.3

Summary of Mineral Reserves and Resources

Name of Asset / Country: PT TKS / Indonesia

Category	Mineral Type	Gross (100% Project)		Net Attributable to GEAR**		Remarks
		Tonnes (millions)	Grade	Tonnes (millions)	Grade	
Reserves						
Proved	Coal	0	Subbituminous B	0	Subbituminous B	
Probable	Coal	0	Subbituminous B	0	Subbituminous B	
Total	Coal	0	Subbituminous B	0	Subbituminous B	
Resources						
Measured	Coal	24.7	Subbituminous B	11.6	Subbituminous B	
Indicated	Coal	26.0	Subbituminous B	12.2	Subbituminous B	
Inferred	Coal	24.0	Subbituminous B	11.3	Subbituminous B	
Total	Coal	74.7	Subbituminous B	35.0	Subbituminous B	

*** GEAR holds 46.899% of PT TKS directly & Indirectly.*

Appendix C: JORC Table 1

Criteria	Explanation	Comment
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips etc.) and measures taken to ensure sample representivity. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• Wire-line touch core drilling, in a systematic drill grid and coring of coal seams with geophysical logging • Properly calibrated downhole logging tools • Seam thickness were determined by geophysical logs and coal quality assests by certified lab using ASTM methods • Process of sampling included sample from roof sediments, main seam body, roof coal, floor coal and floor sediment for a very detailed coverage of coal quality within each seam • Samples collected were sealed in plastic bag and stored appropriately before sending to lab
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• Drilled pilot hole to ascertain coal seams and then drilled a cored drill hole.
Drill sample recovery	Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• After the completion of each core run, core loss is determined by the on-site geologist and recorded in the drill hole completion sheet. If recovery is found to be less than 90% within a coal seam intersection, the hole is re-drilled in order to re-sample this seam with greater than 90% core recovery. All samples with less than 90% core recovery over the width of the seam intersection were excluded from the coal quality database. • Followed drilling SOP's for loose and carbonaceous formations to achieve full sample recovery.
Logging	Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography. The total length and percentage of the relevant intersections logged.	• Logging by geologists is appropriate for resource estimation • Geotechnical report documented for 5 holes (GT) by Soilens and analysed approx. 25 other drill holes • Graphic logs are recorded after reconciliation with geophysical logs • Logging was adequately recorded but lacking detail indicating quantitative work by good site geologists, adequate for coal work • Cores were apparently photographed but not seen by the CP as they have not yet been provided by the client • 40,168m drilled and 96% of relevant intersections were logged by geologists & down-hole geophysics.

Criteria	Explanation	Comment
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected. Whether sample sizes are appropriate to the grainsize of the material being sampled.	• No sub sampling of Core was done
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• PT Geoservices laboratories are accredited to ISO 17025 standards. Coal quality laboratory adheres to internal QAQC and inter-laboratory QAQC checks. ISO methods have been used for MHC tests. Australian Standards have been used for RD and American Society for testing and materials (ASTM) methods have been used for all other quality variables. • Geophysical traces were observed to be generally of good quality.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	• Coal quality sampling undertaken by GEAR and is in-line with the coal quality being achieved during the actual trial mining operations. • No twin holes drilled
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	• Borehole collars have been surveyed using standard total station techniques employed by the survey contractors. • Surveys have been validated by GEAR survey staff. The surveyed borehole locations for TKS match well with topographic data. (+/- 1m mis-close between survey & LiDAR considered acceptable) • The topography was generated by PT Surtech Utama across TKS project area using LiDAR remote sensing data. •
Data spacing and Distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	• 250 x250 m grid for exploration results at most of the places. • Data spacing sufficient to establish continuity in both thickness and coal quality. Data sets include topography and base of weathering as well as seam structure and coal quality. Ply sampling methodology use. • Sample compositing has been applied. Composite samples were taken for each

Criteria	Explanation	Comment
		coal seam from roof, floor and body coal samples.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Ply by Ply sampling used therefore orientation of sampling not seen to introduce bias as all drilling is vertical. • Drill line were oriented perpendicular to the strike of coal
Sample Security	The measures taken to ensure sample security.	• Proper measures for sample security was taken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	• Salva Mining conducted a review of the drill hole database and found it to be satisfactory. • Standard database checks also performed by Salva Mining as outlined on Section 5.4.4 prior to resource modelling and found it to be satisfactory.
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• All tenure is secured and currently available. • Two mining licenses (IUP's) for operation and production valid till 2026 & 2028. .
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• 5 contractors for drilling, exploration, Geotech & 5 previous studies including JORC 2012 Resources Estimate.
Geology	Deposit type, geological setting and style of mineralisation.	• The main features in the concession is a syncline structure over the main deposit area with relatively flat dips and younger sediments in the central part of the deposit and steeper dips in relatively older sediments, around the outer edges. Major faults are interpreted surrounding the deposit and controlling the boundaries of the coal to the north, south and east. • Sub-bituminous Coal
Drill hole	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length.	• Relatively good drill database • This report pertains to resource estimation not exploration results. As such the details of the drill holes used in the estimate are too numerous to list in this Table.

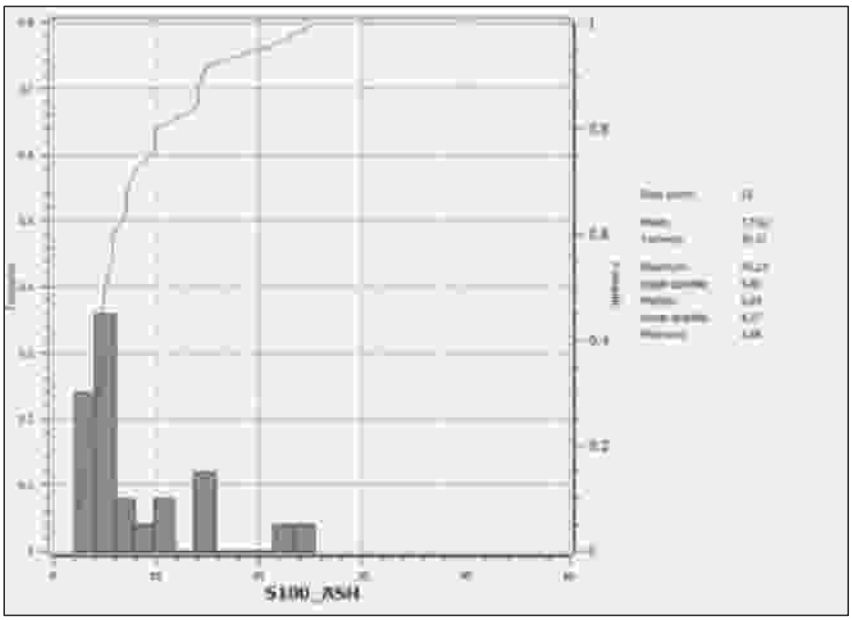
Criteria	Explanation	Comment
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	• All samples have been composited over full seam thickness and reported using MineScape modelling software. • No metal equivalents used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	• Ply sampling methodology prevents samples from crossing ply boundaries. Therefore, orientation of sampling not seen to introduce bias as all drilling is vertical and seams mostly gently dipping. • Coal thickness intercepts in the data appear to support this and consistent coal seam thickness is normal in this area. Steeper dips (up to 20degrees) are assumed to occur near the edge of the basin and dummy points in the model have used true thickness of the coal in this area
Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.	• See figures in the Report and Appendices.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.	• No reporting of exploration results.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• 471 drill holes were geophysically logged. • Other data is listed in the report, the data where appropriate has been used but often the older data was less well recorded and not complete and for this reason was not used in the geological model.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	• Further work will be necessary to improve the confidence levels of the deposits further and understanding of the full seam stratigraphy as part of on-going mining activity.

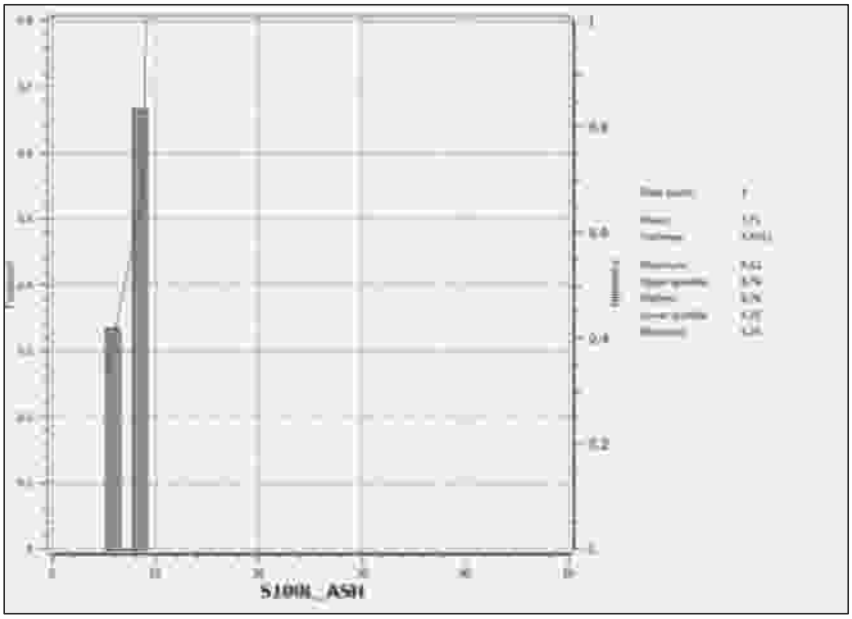
Criteria	Explanation	Comment
		• No proposed exploration plan has been proposed in this report.
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	• The database for all blocks is considered of an acceptable standard to report a Coal Resource. • Checks against original down hole geophysics (las) files used to verify data during modelling.
Site Visits	Site Visits undertaken by the Competent Person and the outcome of these visits. If no site visits have been undertaken, indicate why this is the case	• No Geological site visit not conducted due to the fact that the geology had been well documented by previous consultants. Salva Mining's geologist has reviewed and discussed the available geological data in company's office in Jakarta.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	• High degree of confidence in seam picks made using down hole geophysical data. • The TKS geological models created by Salva Mining are considered to accurately represent the deposits. No major faults have been reported within the tenements concerned • Current MineScape model tonnes agree with previous model by developed by Danmar to within 5% error margin range.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• See figures in the Report and Appendices.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates.	• FEM interpolator used for surface elevation, thickness and trend. Inverse distance squared used for coal quality throughout. • Based on experienced gained in the modelling of over 40 coal deposits around the world, the FEM interpolator is considered to be the most appropriate for structure and inverse distance the most appropriate for coal quality. • Grid cell size of 50m for the topographic model, 50 m for the structural model. • Table 7:1 contains additional model construction parameters. Visual validation of all model grids performed. • TKS has some high sulphur seams (>2%) coal product quality will have to be managed to maintain saleable products.

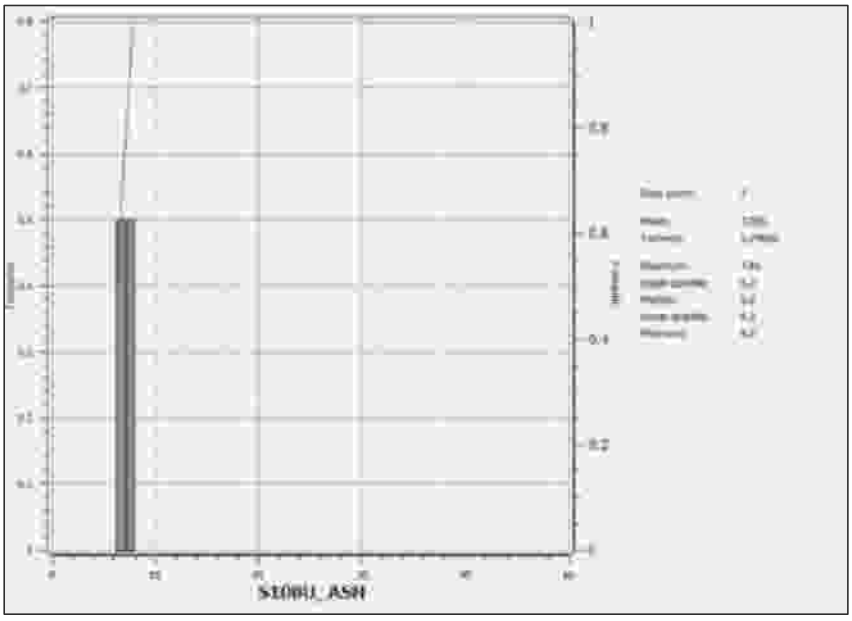
Criteria	Explanation	Comment
	Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• All tonnages estimated on air dried basis, Total moisture has been measured by weight under laboratory conditions
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	• The coal resources contained in this report are confined within the concession boundary. The resources were limited to 100m below topography • A minimum ply thickness of 10cm and maximum parting thickness of 30cm was used.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	• The TKS block is proposed to be mined as open pit excavations by truck and shovel method by contractors.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	• N/A in situ air dried tonnes quoted
Environmental	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Salva Mining is not aware of any environmental factors that may impact on eventual economic extraction.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	• See discussion on density with regard to moisture basis.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors i.e. relative confidence in tonnage/grade computations, confidence in continuity	• Classification distances based on an assessment of the variability of critical variables through statistical analysis and by an assessment of the degree of geological complexity. Classification radii for the three resource categories are:

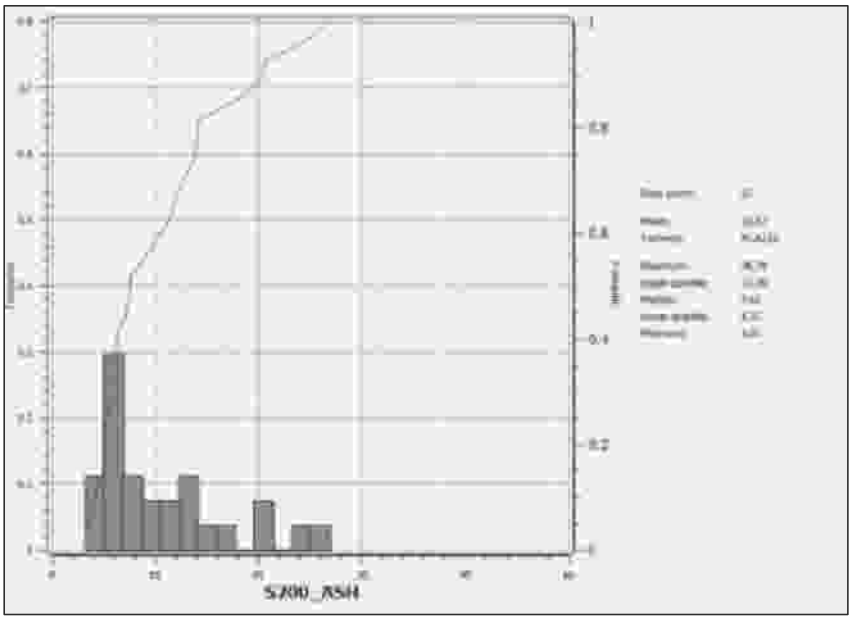
Criteria	Explanation	Comment
	of geology and metal values, quality, quantity and distribution of the data. Whether the result appropriately reflects the Competent Person(s)' view of the deposit.	Measured: 225m Indicated: 450m Inferred: 850m
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	• Check between current MineScape and previous surpac model shows high agreement.
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• Spacing ranges for the three resource categories are considered to adequately reflect the degree of confidence in the underlying estimate on a global basis. • Local variation to estimated values may arise and will be addressed by adequate grade control procedures during mining operations.

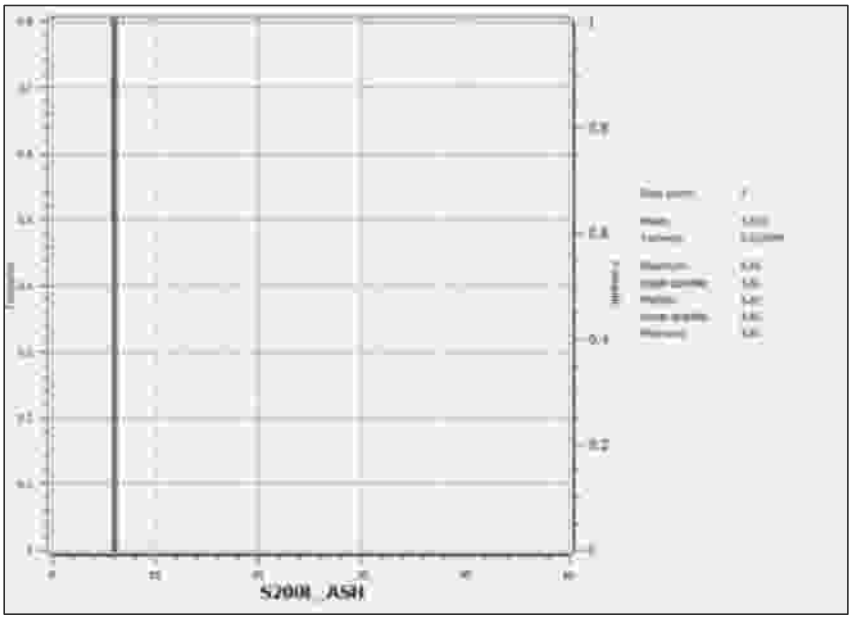
Appendix D: Raw coal quality histograms per seam

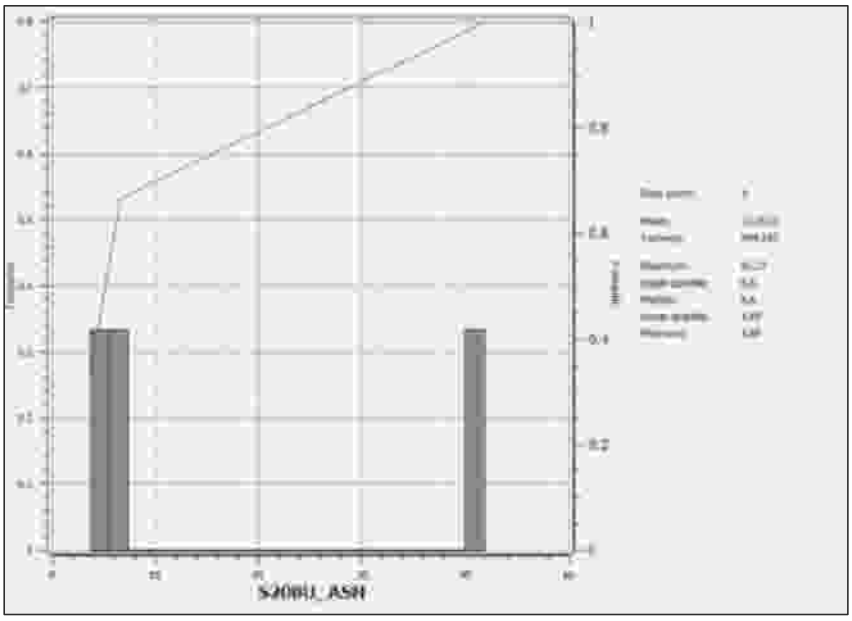


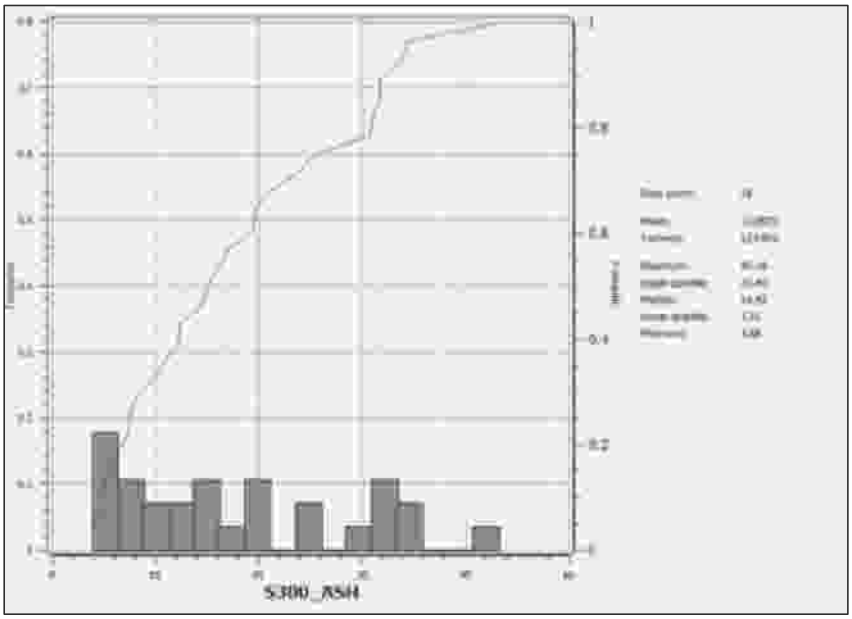


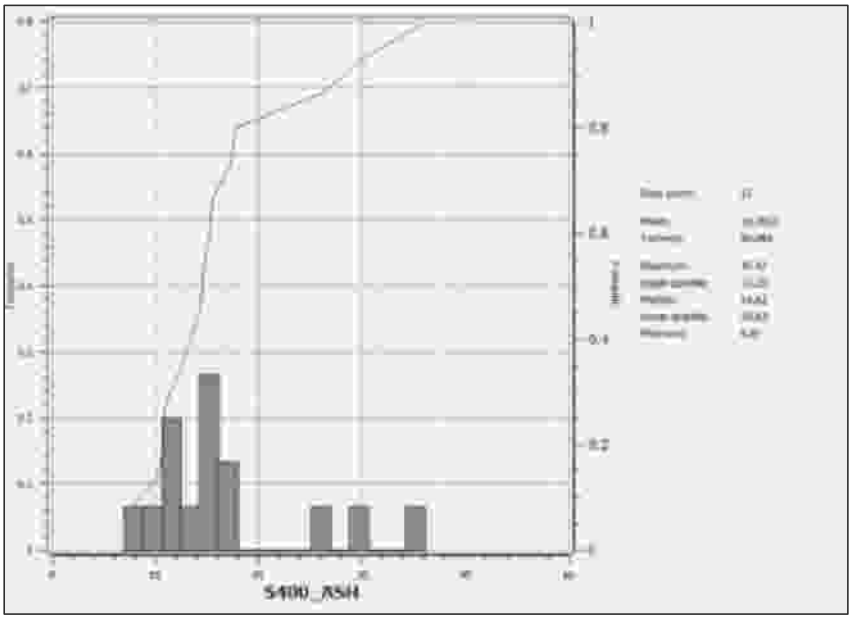

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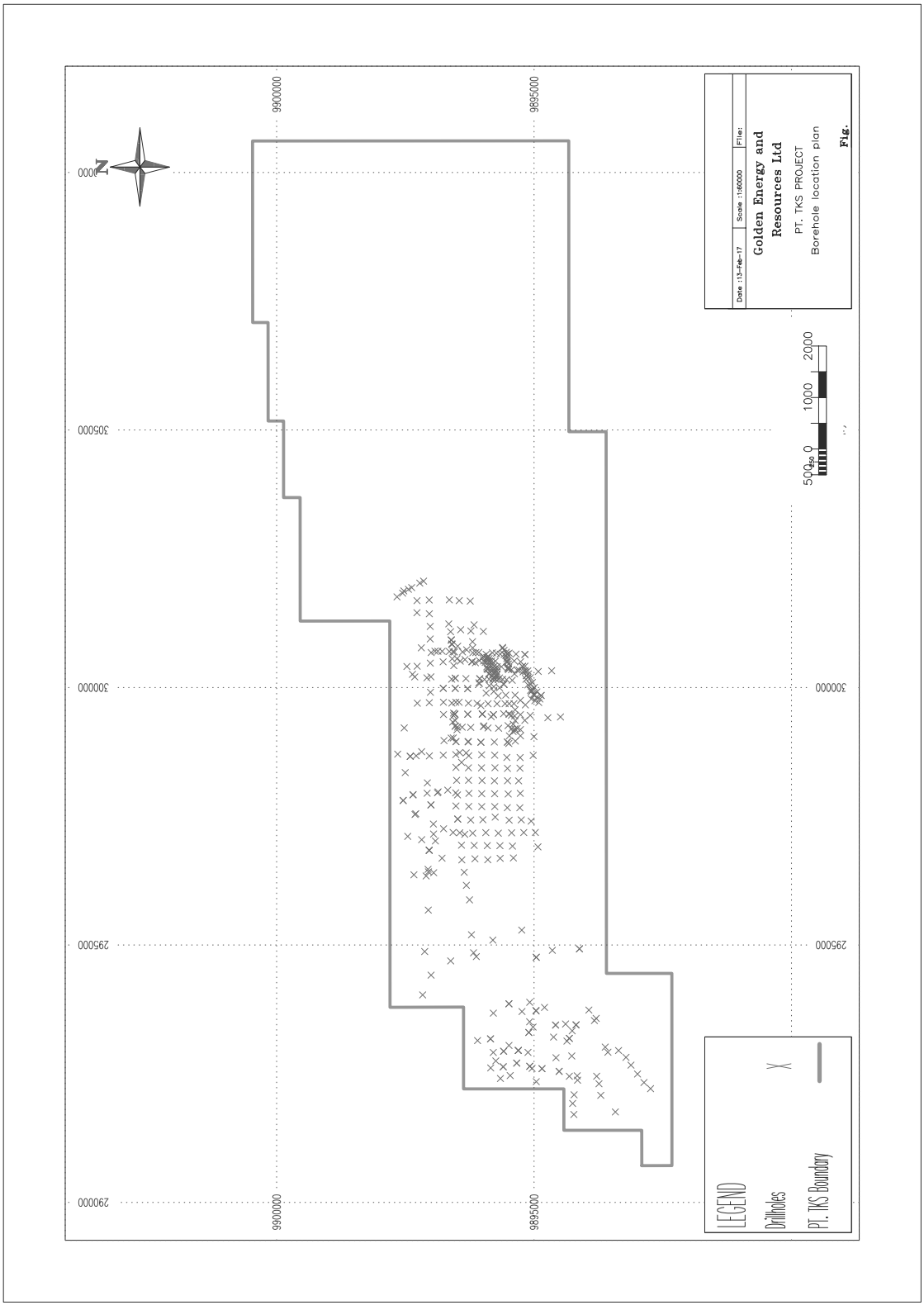

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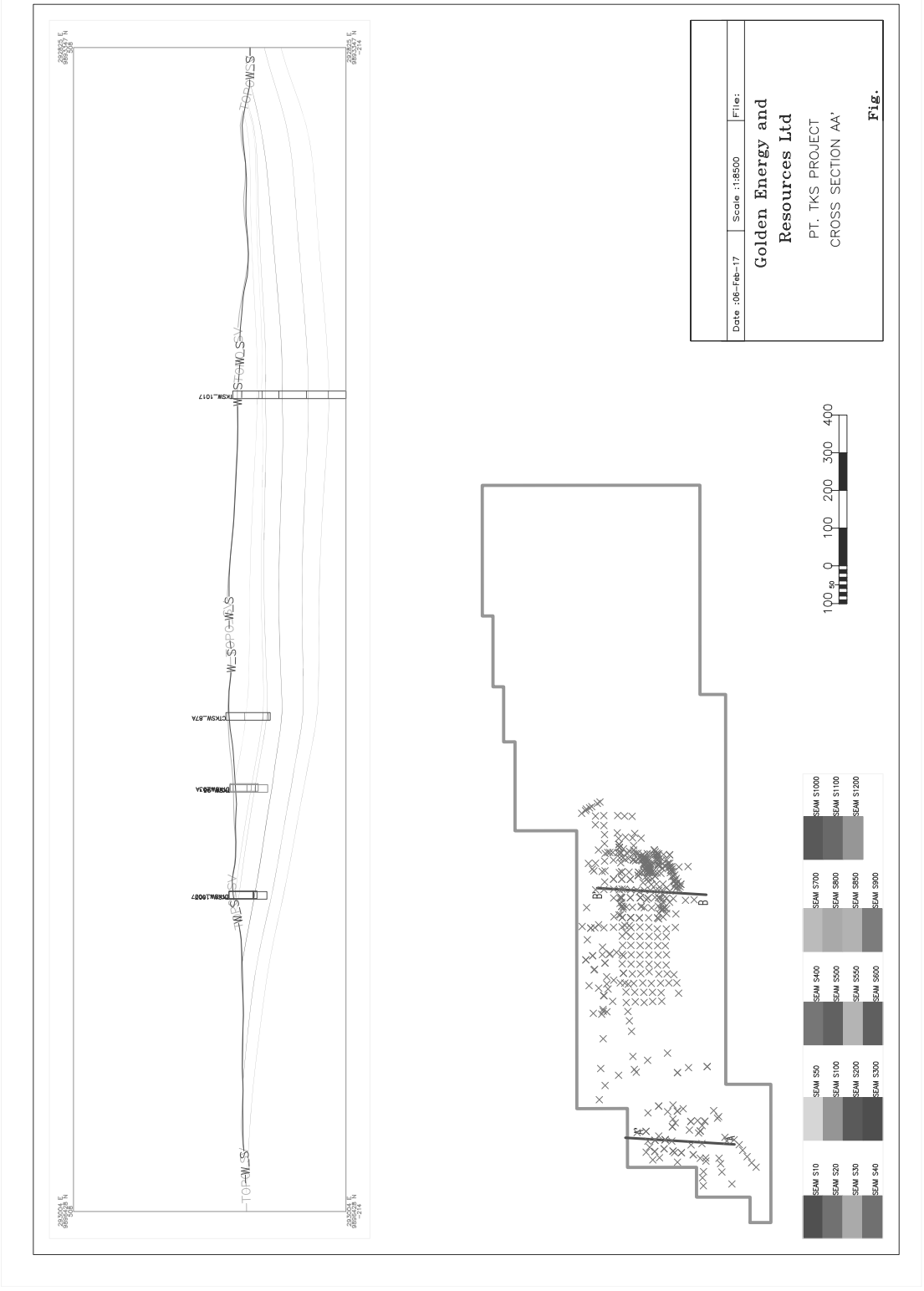

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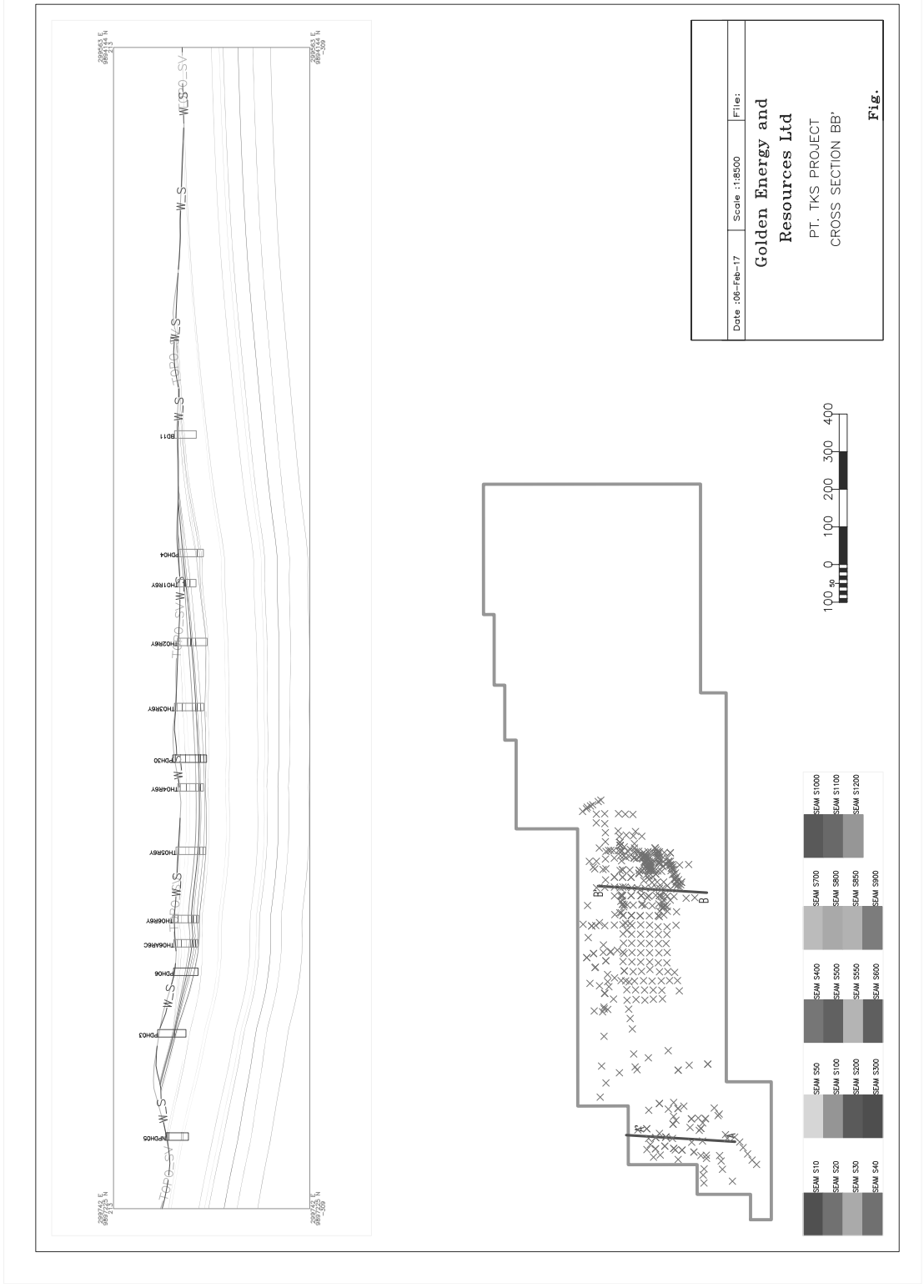

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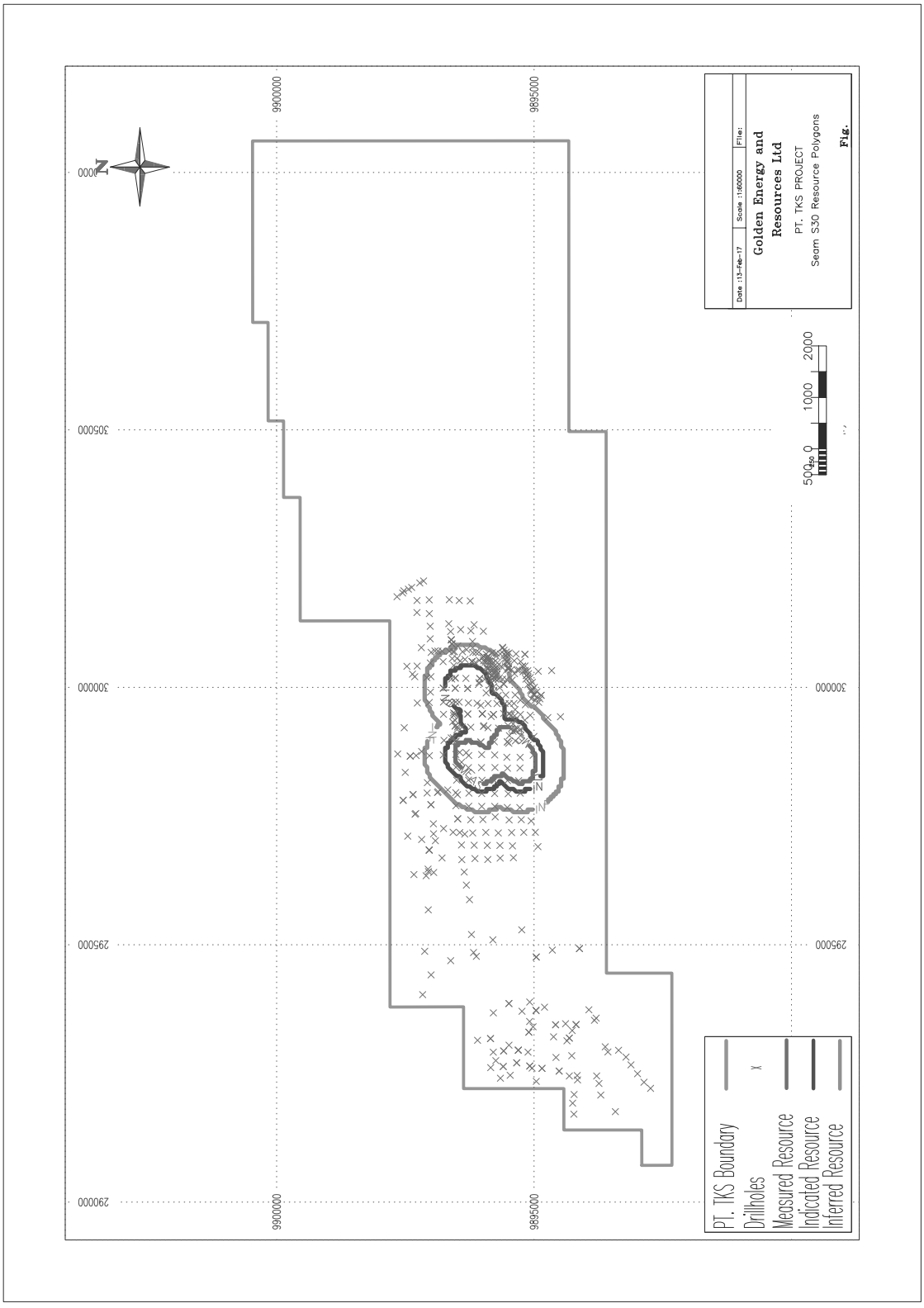

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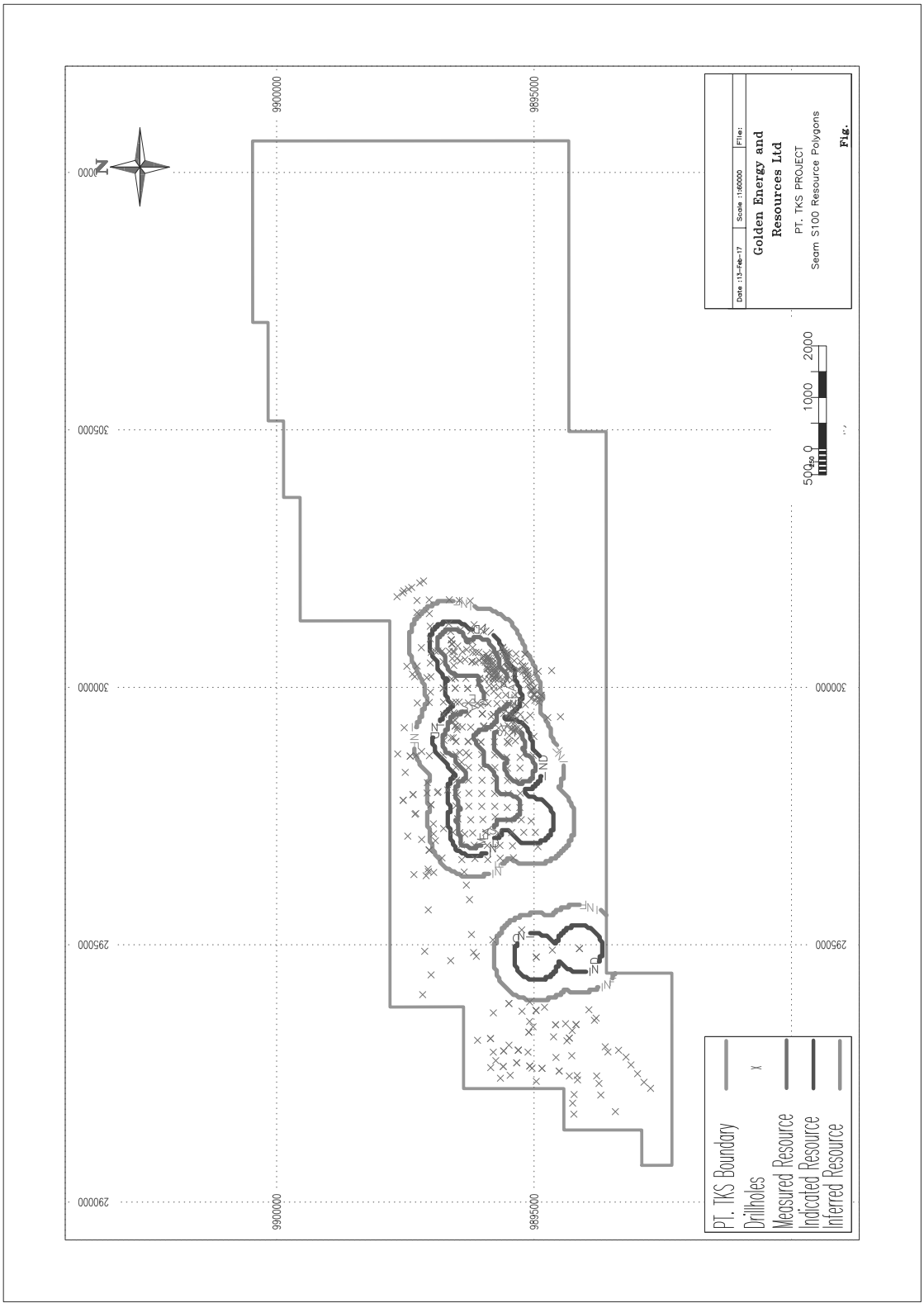
Appendix E: Cross-Sections and Plans

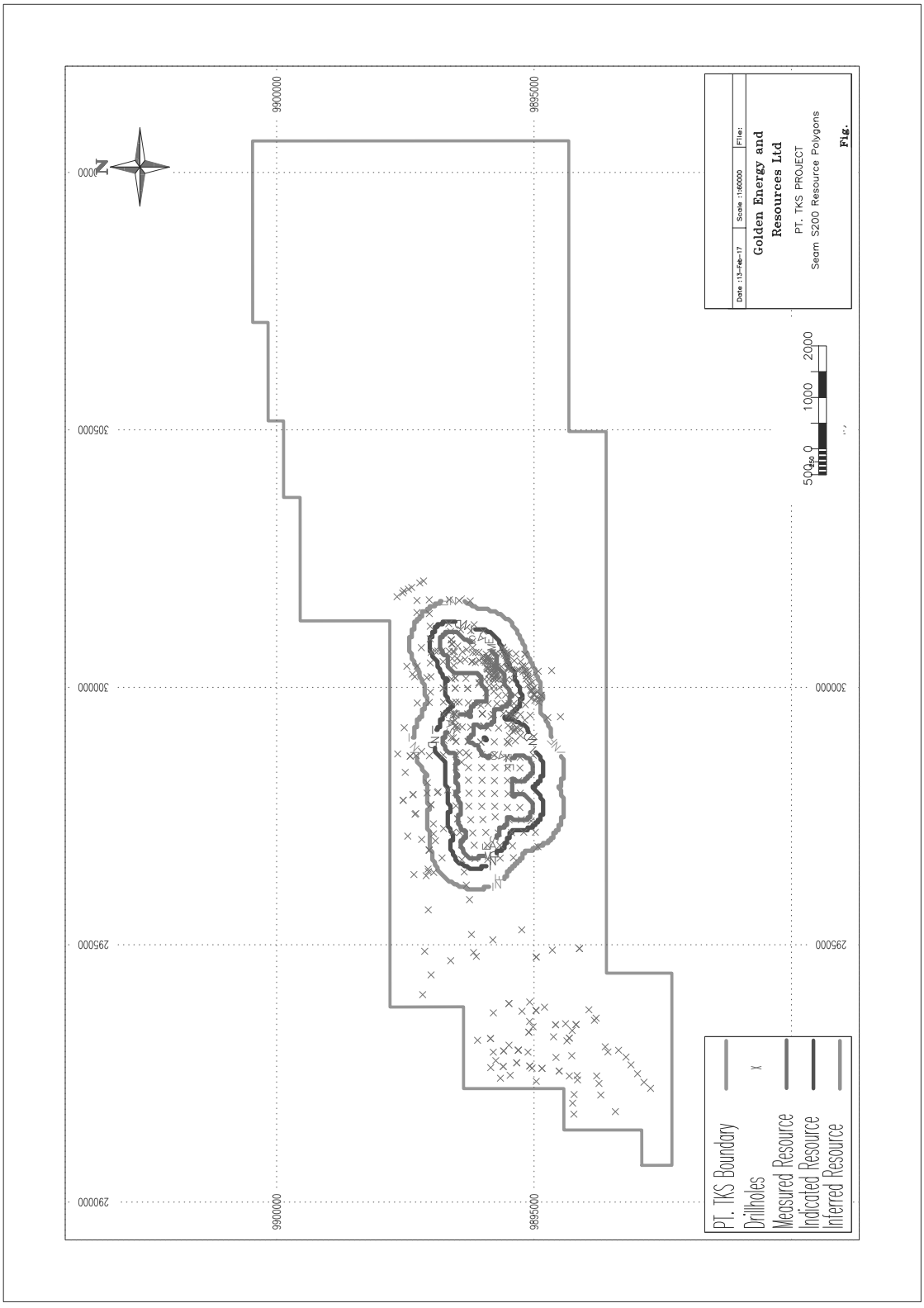

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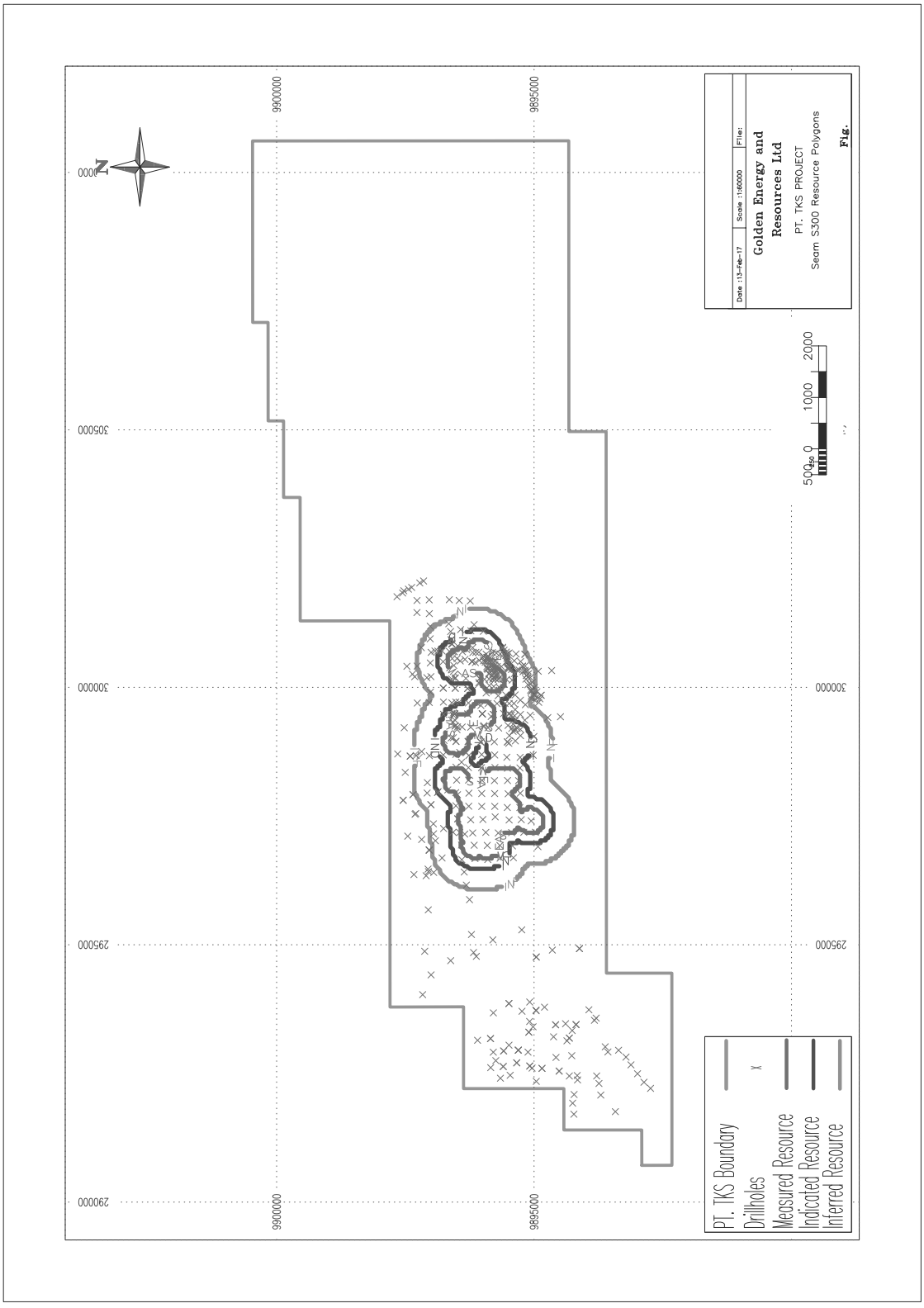

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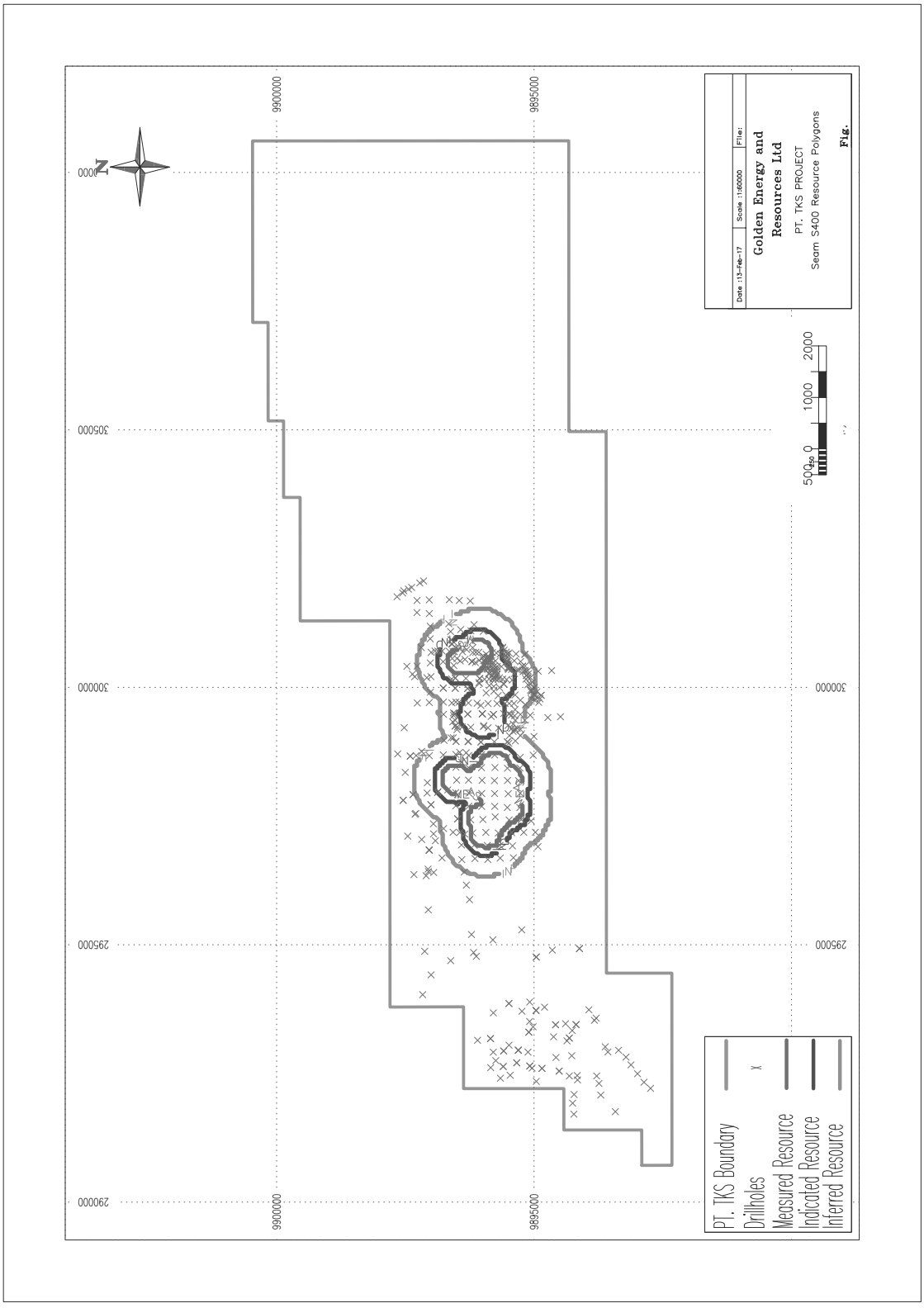

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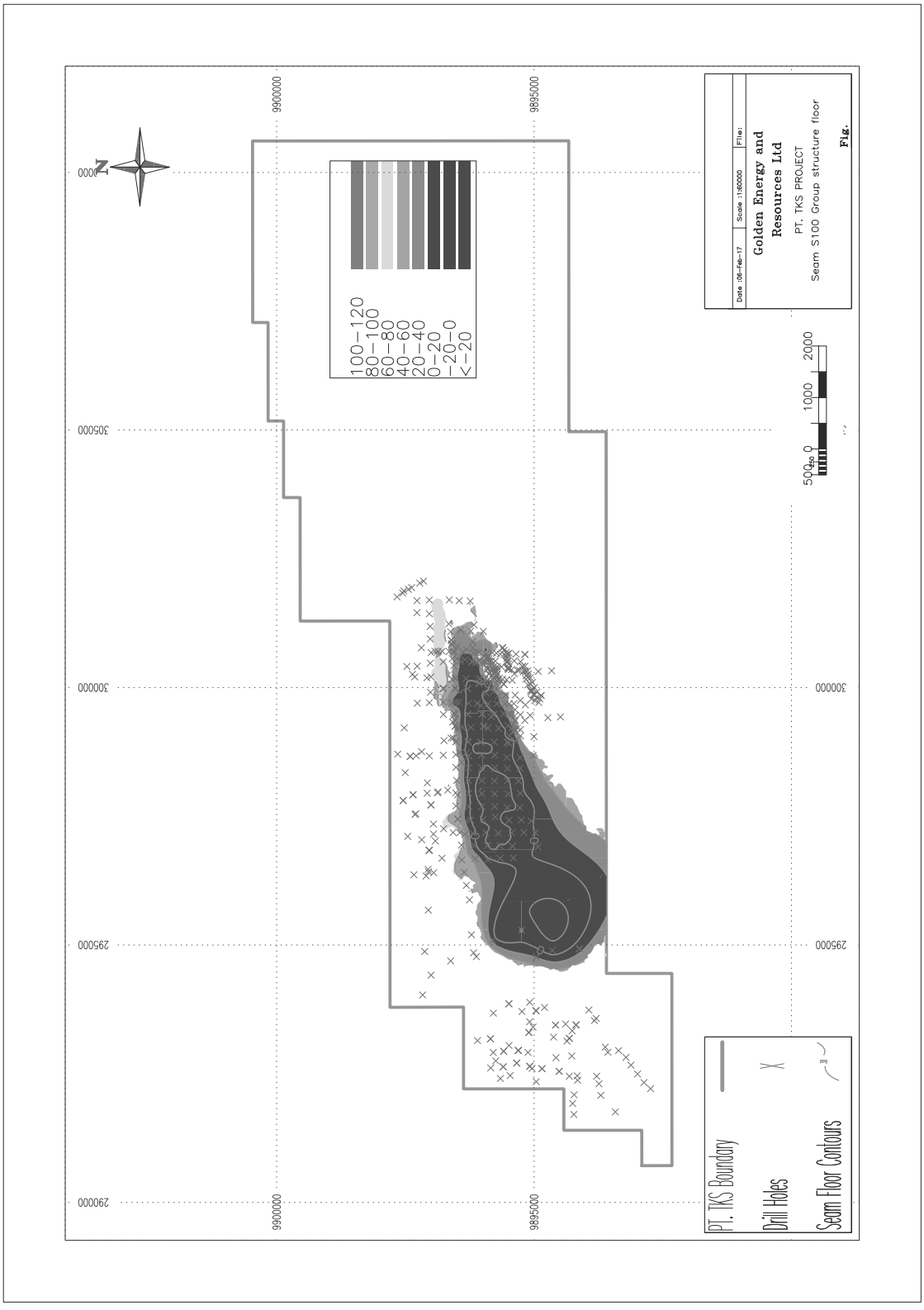

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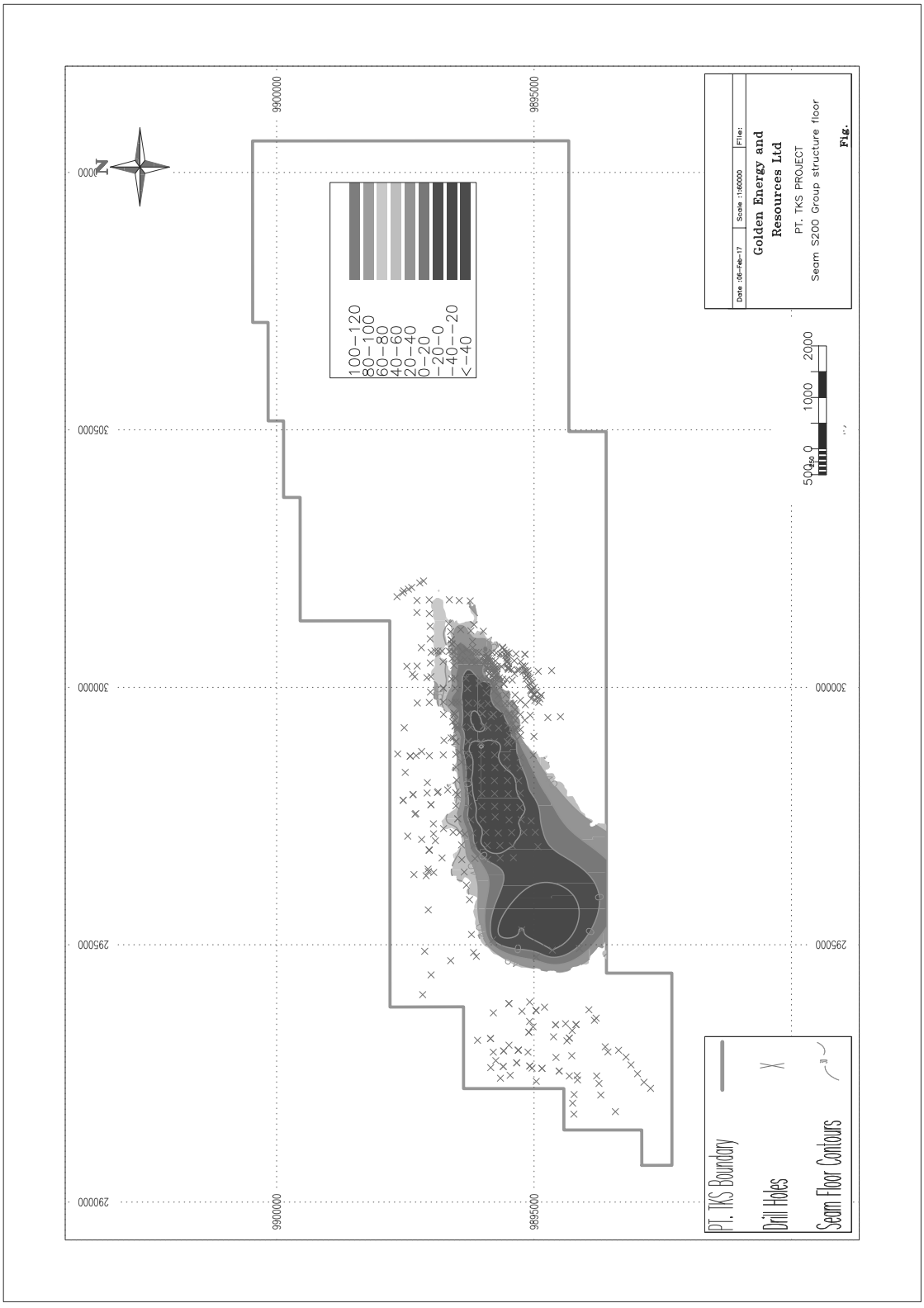

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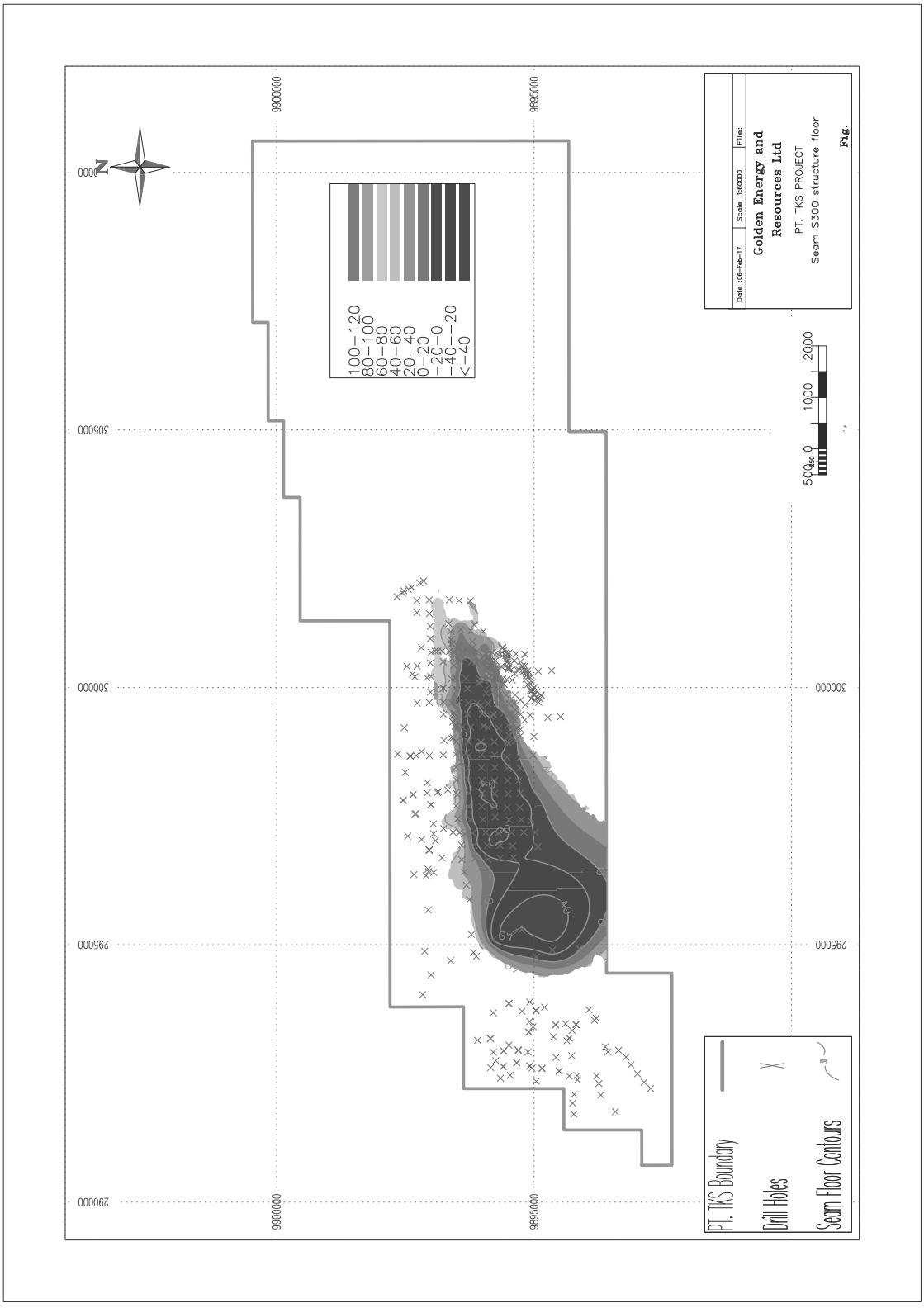

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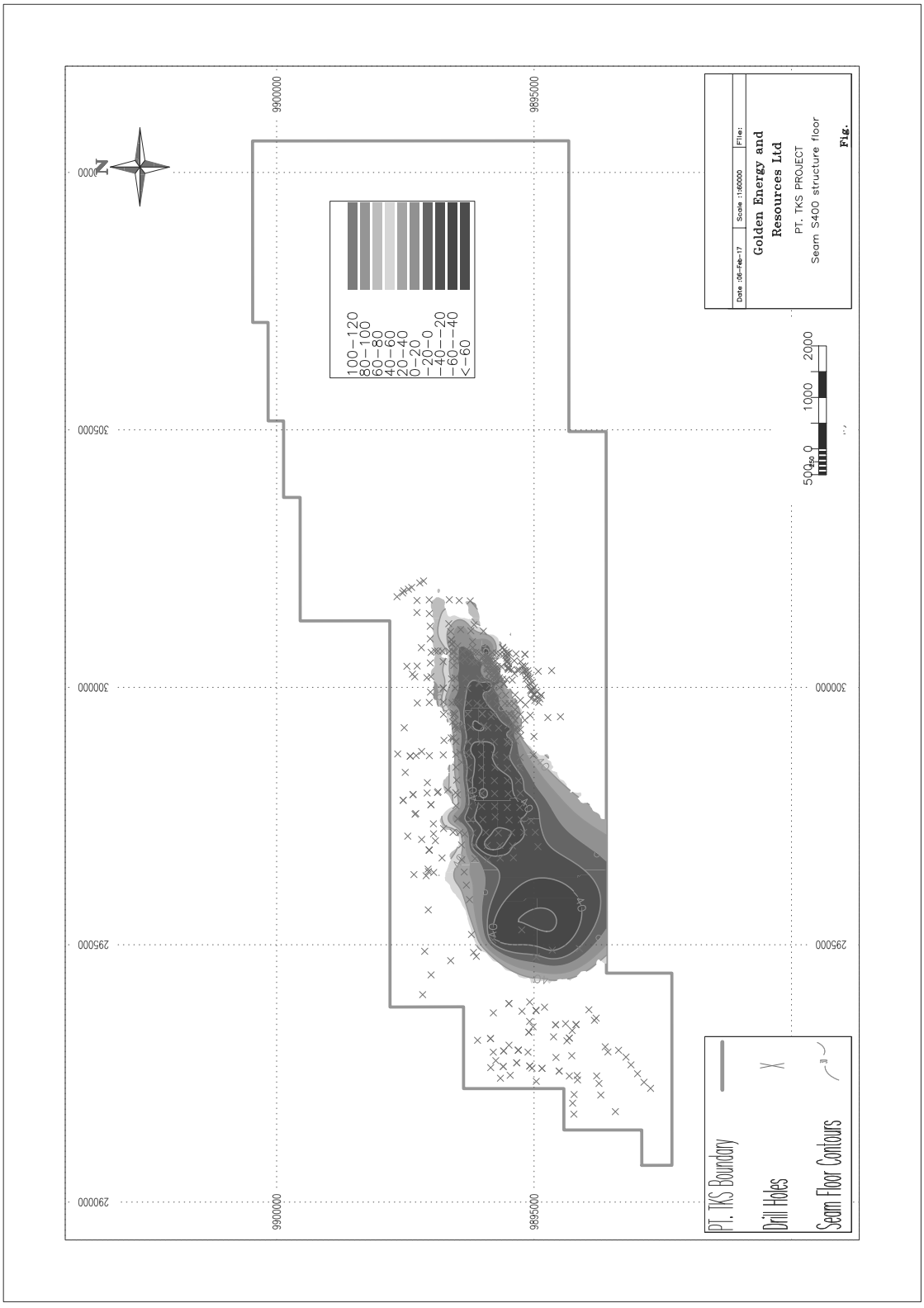

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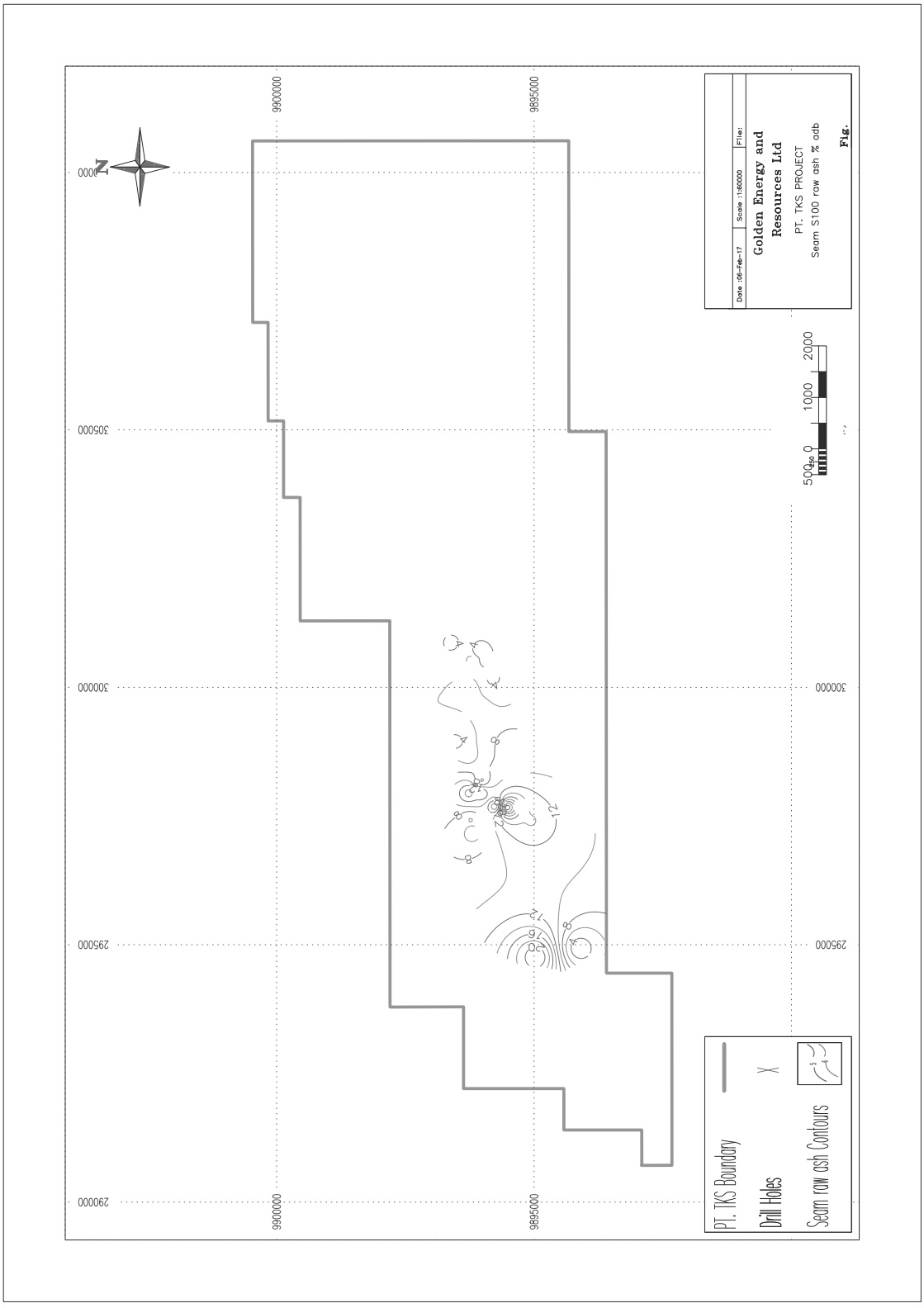

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Seam S400 Resource Polygons
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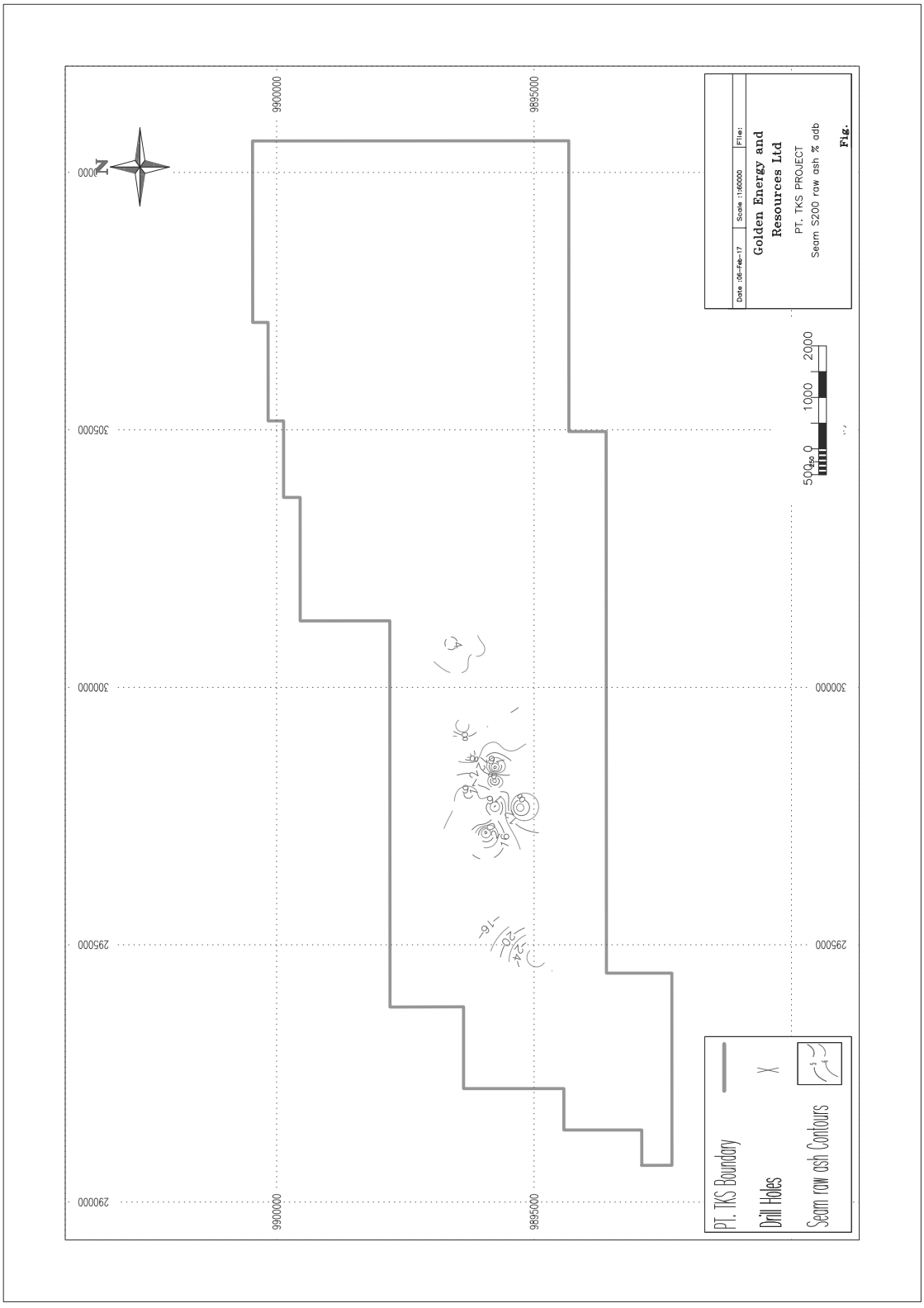

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PT. TKS PROJECT
Seam S100 Group structure floor
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PT. TKS Boundary
Drill Holes
Seam Floor Contours

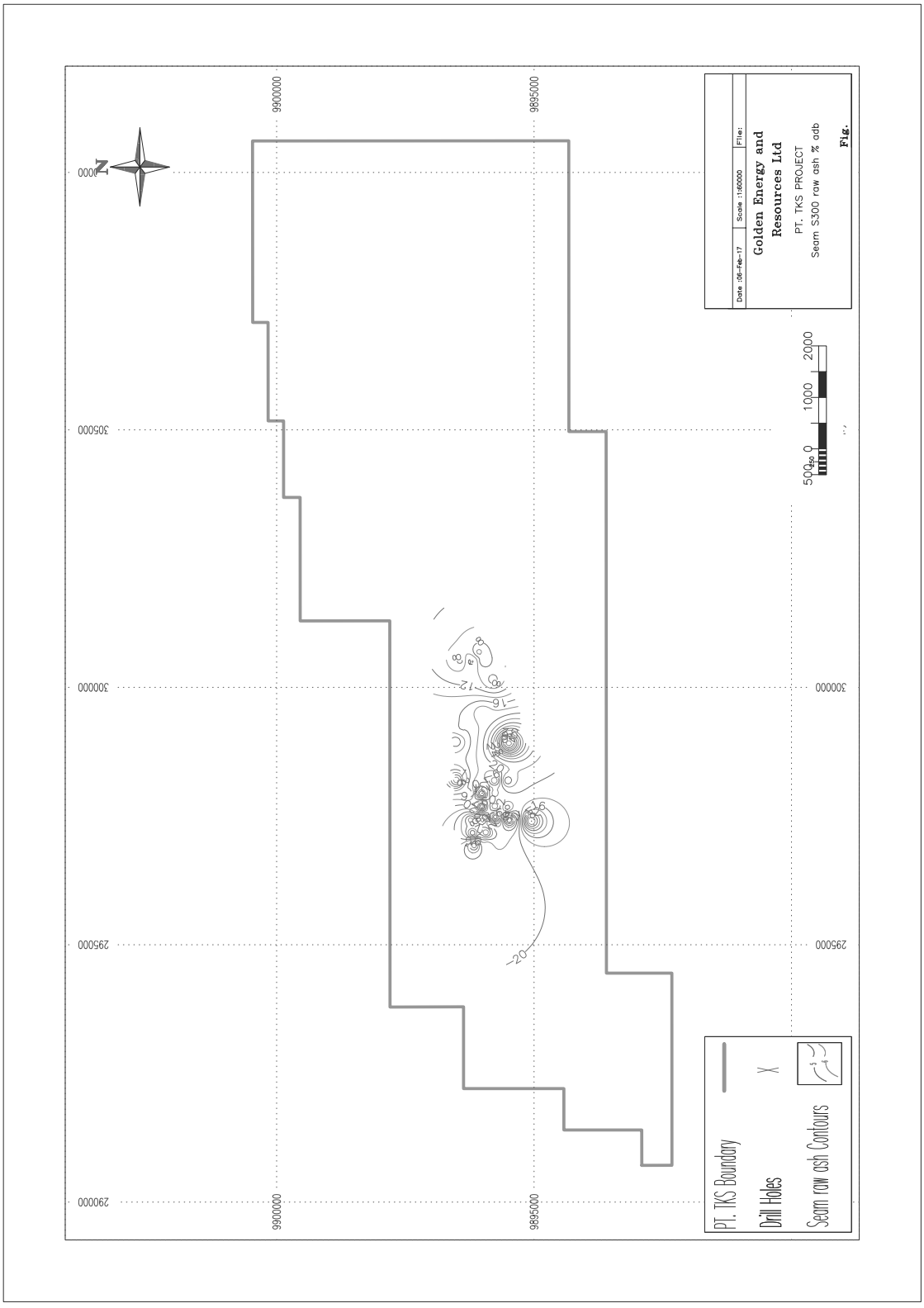

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Seam Floor Contours

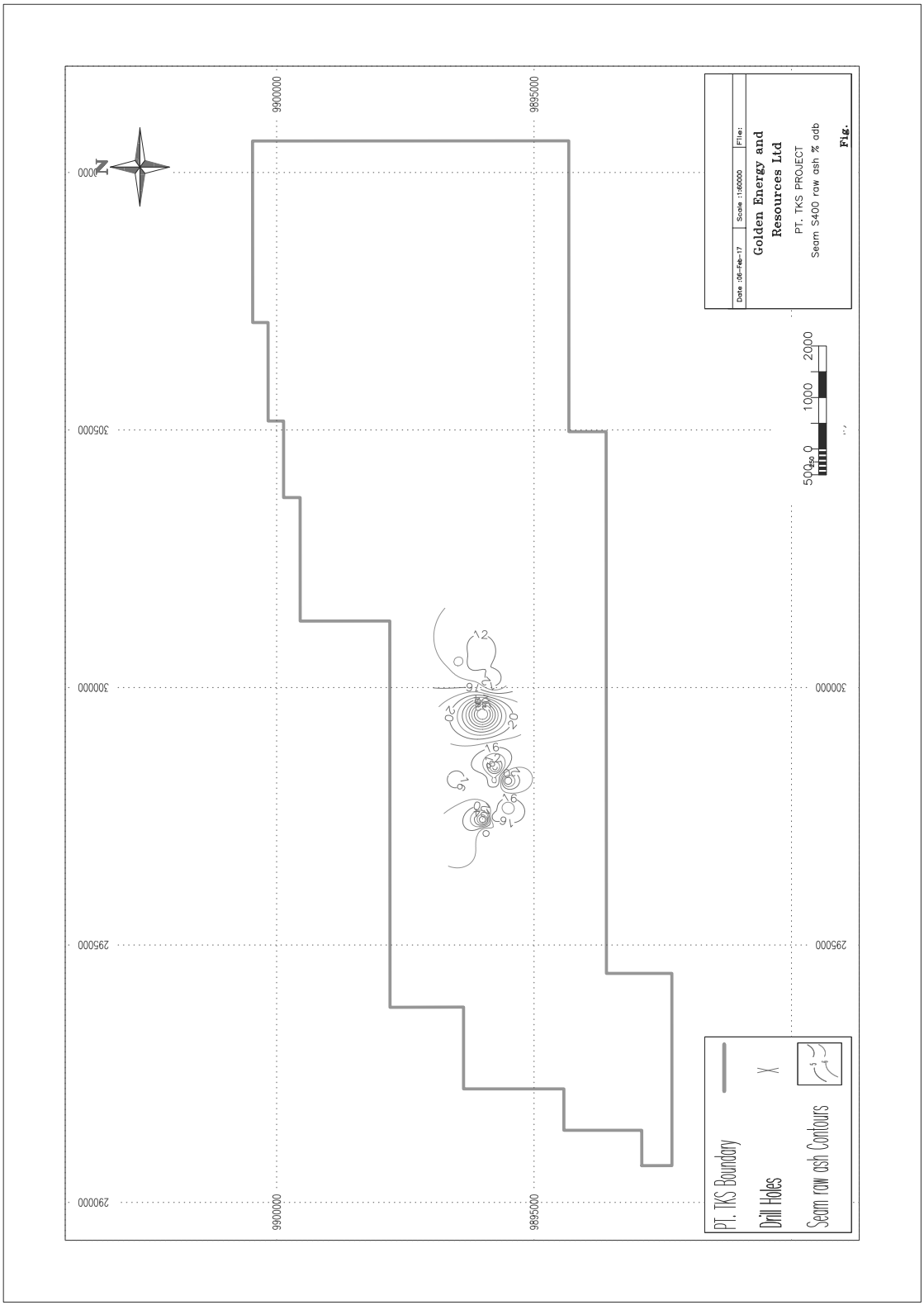

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Seam S300 structure floor
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Drill Holes
Seam Floor Contours


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Seam S400 structure floor
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PT. TKS Boundary
Drill Holes
Seam Floor Contours


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Seam S100 raw ash % adb
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PT. TKS Boundary
Drill Holes
Seam raw ash Contours


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Seam S200 raw ash % adb
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Drill Holes
Seam raw ash Contours


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Golden Energy and Resources Ltd
PT. TKS PROJECT
Seam S300 raw ash % adb
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PT. TKS Boundary
Drill Holes
Seam raw ash Contours


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Golden Energy and Resources Ltd
PT. TKS PROJECT
Seam S400 raw ash % adb
Fig.
Date :06-Feb-17
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PT. TKS Boundary
Drill Holes
Seam raw ash Contours

SALVA
Mining Consultants



Golden Energy and Resources Ltd.

PT Wahana Rimba Lestari Concession ("WRL")

Independent Qualified Person's Report

6 February 2017

Golden Energy and Resources Ltd

PT Wahana Rimba Lestari Concession

Independent Qualified Person's Report

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Email: info@salvamining.com.au
Phone: +61 (0) 407 771 528

6 February 2017

Effective Date: 31 December 2016

Independent Qualified Person:



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Director
Salva Mining Pty Ltd.

Subject Specialists:



Grenville Davies
Principal Consultant – Geology
Salva Mining - Brisbane Office



Sunil Kumar
Principal Consultant – Mining
Salva Mining - Brisbane Office

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Key Abbreviations

$ or USD	United States Dollar
adb	Air dried basis, a basis on which coal quality is measured
AMSL	Above Mean Sea Level
AMDAL	Analisis Mengenai Dampak Lingkungan Hidup- Environmental Impact Assessment (EIA), which contains three sections, the ANDAL, the RKL and the RPL
ANDAL	Analisis Dampak Lingkungan Hidup, component of the AMDAL that reports the significant environmental impacts of the proposed mining activity
arb	As received basis
AS	Australian Standards
ASR	Average stripping ratio
AusIMM	Australasian Institute of Mining and Metallurgy
Batter	Slope of Advancing Mine Strip
bcm	bank cubic meter
BD	Bulk density
CCoW	Coal Contract of Work
CHPP	Coal Handling and Processing Plant
CV	Calorific value
Capex	Capital Expenditure
Coal Resource	A 'Coal Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, quality, and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, quality, continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
Coal Reserve	A 'Coal Reserve' is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Reserves are defined, usually the point where the Coal is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
DGMC	Directorate General of Minerals and Coal within the Ministry of Energy and Mineral Resources
FC	Fixed Carbon
gar	gross as received, a basis on which coal quality is measured
GEAR	Golden Energy and Resource Ltd
GEMS	PT. Golden Energy Mines Tbk
gm	Gram
h	Hour

ha	Hectare(s)
HDR	HDR Pty Ltd
IM	Inherent Moisture
IPPKH	'Izin Pinjam Pakai Kawasan Hutan' which translates to a borrow to use permit in a production forest
IUP or IUPOP	'Izin Usaha Pertambangan' which translates to 'Mining Business Licence'
JORC	2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia
k	Thousand
kcal/kg	Unit of energy (kilocalorie) per kilogram
kg	kilogram
km	Kilometers(s)
km2	Square kilometre(s)
kt	kilo tonne (one thousand tonne)
L	Litre
m	Meter
lcm	loose cubic metre
LOM	Life of Mine
lcm	lcm loose cubic metre
M	Million
Mbcm	Million bank cubic metres
Mbcmpa	Million bank cubic metres per annum
MEMR	Ministry of Energy and Mineral Resources within the central government
m RL	metres reduced level
m^3	cubic metre
m/s	metres per second
Mt	Millions of tonnes
Mtpa	Millions of tonnes per annum
MW	Megawatt
NAR	Net as received
Opex	operating expenditure
PKP2B	'Perjanjian Kerjasama Pengusahaan Pertambangan Batubara' – same as CCoW
RD	Relative density
RKL	'Rencana Pengelolaan Lingkungan' - environmental management plan
ROM	Run of Mine
RKL	Relative Level - survey reference for height of landforms above a datum level
RPL	'Rencana Pemantauan Lingkungan' - environmental monitoring plan
Salva Mining	Salva Mining Pty Ltd
SE	Specific Energy
SR	Strip ratio (of waste to ROM coal) expressed as bcm per tonne

t	Tonne
tkm	Tonne kilometer
tpa	Tonnes per annum
TM	Total Moisture (%)
TS	Total Sulphur (%)
VALMIN	2015 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
VM	VM Volatile Matter (%)

Executive Summary

Golden Energy and Resources Limited ("GEAR" or ""Client") commissioned Salva Mining Pty Ltd (Salva Mining) to prepare an Independent Qualified Person's Report ("Report") covering an estimate of Coal Resources and Reserves for the PT Wahana Rimba Lestari (WRL) coal concession area located in Sumatra, Indonesia.

Salva Mining understands that this report will be shared with the GEAR's shareholders as a part of continuous disclosure requirements of the company. The estimate of Coal Resources and Reserves as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Editon of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

PT Wahana Rimba Lestari (WRL) Projects in Indonesia

The WRL concession is located in the Kecamatan (Sub District) of Sungai Kanuh, Sanga Desa and Sekayu in the Regency (Kabupaten) of Musi Banyuasin, in the Province of South Sumatra, Indonesia.

Mining rights for the concession are held under an Izin Usaha Pertambangan Operation and Production ("IUPOP") license covering a total area of 4,739 ha with area location number 24 Pemb 12.

The concession is listed in the official list of clean and clear concessions.The "Clean and Clear" Certificate is listed in the official list with recommendation letter no. 540/543/DISPERTAMBEN/2014 from the provincial government of South Sumatra. There are no protected forests or nature reserves within the project area boundaries that prohibit surface mining. The area is classified as non-forest and available for other uses.

Geology

The WRL concession area is found within the South Sumatra Basin. The WRL concession area is found in the Sumatra back-arc basin located along the island of Sumatra. This basin was formed by back-arc extension and is filled with Eocene to Pliocene aged terrestrial and marine sediments. Two phases of coal seam accumulation are found within this sequence, the first is an older Oligocene phase related to fluvio-deltaic sedimentation (Talang Akar Formation) during initial rifting and deposition of a transgressive sedimentary sequence. After the mid-Miocene plate collision and commencement of subduction off the west Sumatra coast, a regressive sedimentary sequence commenced from mid-Miocene to Pliocene times. This resulted in a return to a fluvio-deltaic environment, from the previously dominant deep marine sedimentation. This gave rise to the Muara Enim Formation, the dominant coal bearing unit within the South Sumtra Basin.

Coals found within the WRL concession occur in the Miocene age Muara Enim Formation. The late Miocene to Pliocene Muara Enim Formation ("Muara Enim Fm") is the main coal bearing formation present in the South Sumatra basin. Seams within the WRL concession area are generally fairly shallow dipping (less than 10 degrees) to the north- east.

There have been a number of phases of exploration completed in the WRL coal concession area over the past 10 years. The first phase involved generally shallow drilling and field mapping. In-fill

drilling and deeper stratigraphic drilling to depths of up to 150 m followed in phase two, in order to allow for more accurate definition of the structural geology and coal quality characteristics of the deposit.

A total of 44 drill holes were used by Salva Mining to construct a geological model for estimate of Coal Resource within the WRL concession area.

Coal Resource

Salva Mining have estimated total Coal Resources of 183 million tonnes (Mt) on an in situ air dried moisture basis (adb), to a maximum depth of 100 m. The total tonnes are comprised of 40 Mt of Measured, 58 Mt of Indicated and 85 Mt of Inferred Resources.

Coal Resources Estimate as at 31 December 2016

Resource Classification	Mass (Mt)	TM (arb) (%)	IM (adb) %	Ash (adb) (%)	Volatile Matter (adb) %	Total Sulphur (adb) %	GCV (adb) kcal/kg	Relative Density (adb)
Measured	40	53.3	15.9	5.6	41.8	0.2	5,106	1.38
Indicated	58	51.3	15.3	5.4	40.8	0.2	4,996	1.39
Inferred	85	51.6	15.9	6.4	40.4	0.2	4,997	1.39
TOTAL	183							

Mineral Resources are reported inclusive of the Mineral Reserves

(*Note: individual totals may differ due to rounding, final Inferred Resource rounded to nearest 1 Mt)*

Mining Operations

The mining operation at WRL will use standard truck and excavator methods which are a common practice in Indonesia. Waste material is mined using hydraulic excavators and loaded into standard rear tipping off-highway trucks and hauled to dumps in close proximity to the pits or to in-pit dumps where possible. For the purpose of this Reserve Statement, it is proposed that contractors will continue to be used for mining and haulage operations over the life of mine, and the unit costs used for the Reserve estimate reflect this style of mining.

Mining Modification factors – Resource to Reserve

This Coal Reserve estimate uses the most recent geological model and the Coal Resources estimate prepared by Salva Mining as of 31 December 2016. Potential open cut reserves inside different blocks of the project area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. The optimiser was run across a wide range of coal prices using a set of site specific costs (waste removal, land compensation, coal removal, haulage costs, etc.). These costs were adjusted to suit the conditions for this project.

An economic model was prepared for the mining operation from each of the WRL coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal.

A life of mine plan was completed based on the final pit design. This was done to ensure that the proposed mining method would be practical and achievable and that the proposed dumping

strategy would be able to contain the waste mined in the final pit design. The mining schedule targeted production of 3Mt in year 3 and ramping up to a target production of 6 Mt from year 16 onwards.

Pre-feasibility studies were completed prior to applying for the mining operations permit. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being granted mining operations approval (CCoW). This study was further updated in May 2016. Salva Mining has used modifying factors based on the latest pre-feasibility study which were independently validated for reasonableness by Salva Mining's subject specialist.

The coal price estimate was based on Salva Mining's view on the outlook for global thermal coal fundamentals and including the demand and supply outlook for the sector.

Optimised Pit Shell

The optimised pitshells for WRL blocks as delineated in the final pit design do contain Inferred Resources which are excluded from the Coal Reserves reported for the WRL concession. Under the JORC Code, Inferred Resources cannot be converted to Reserves due to poor confidence in structural continuity and quality variables. Insitu quantities and mine scheduled tonnes within optimized pitshell along with Reserves are shown in Table below.

Insitu & Scheduled Quantities & Reserves, WRL Concession

Concession	Insitu			Mine Scheduled Tonnes within Optimised Pit shell			Coal Reserves Mt
	Waste, Mbcm	Coal, Mt	SR, bcm/t	Waste, Mbcm	Coal, Mt	SR, bcm/t	
North Pit	55	27	2.01	58	26	2.23	25.8
South Pit	102	49	2.10	107	44	2.42	44.1
Total	**157**	**76**	**2.07**	**164**	**70**	**2.35**	**69.9**

Coal Reserves

Coal Reserves were estimated by applying appropriate modifying factors and exclusion criteria to the Coal Resources. Surface water management, infrastructure and the location of the IUP boundary were considered when determining the surface constraints for the mining operation. Coal Reserves were estimated by applying appropriate density adjustment and mining loss and dilution parameters to the Measured and Indicated Coal Resources inside the final pit design. All the final pits used for the Reserve estimate were designed following the existing geotechnical recommendations and operating practices.

Coal Reserves have been reported in Proved and Probable categories to reflect the reliability of the estimate. No Inferred Coal Resources are included in the reported Coal Reserves. The total Coal Reserve for WRL coal deposit as of 31 December 2016 is estimated as 69.9 Mt comprising of 23.9 Mt Proved and 45.9 Mt Probable categories. No beneficiation of coal product is planned as such marketable coal is same as the Run off Mine (ROM) coal. ROM Coal Reserves for WRL coal concession along with the estimated quality are presented in Table below.

Coal Reserves Estimate as at 31 December 2016

WRL Pits	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD Insitu	Ash adb%	IM adb%	TM ar%	CV (gar) Kcal/kg	TS adb%
North Pit	3.9	21.9	25.8	1.19	5.9	15.6	51.2	2,912	0.20
South Pit	20.0	24.0	44.1	1.18	5.4	16.3	54.5	2,834	0.21
WRL	**23.9**	**45.9**	**69.9**	**1.18**	**5.6**	**16.0**	**53.3**	**2,863**	**0.20**

Note: individual total may differ due to rounding
This table must be presented with the entire JORC Reserve Statement

The coal will be sold as a ROM product; hence Marketable Reserves will equal ROM Coal Reserves.

This report may only be presented in its entirety. Parties wishing to publish or edit selected parts of the text, or use the Statement for public reporting, must obtain prior written approval from Salva Mining and the signatories of this report.

1 Introduction

Golden Energy and Resources Limited ("GEAR" or ""Client") commissioned Salva Mining Pty Ltd (Salva Mining) to prepare an Independent Qualified Person's Report ("Report") covering an estimate of Coal Resources and Reserves for the PT Wahana Rimba Lestari (WRL) coal concession area located in Sumatra, Indonesia.

Salva Mining understands that this report will be shared with the GEAR's shareholders as a part of continuous disclosure requirements of the company. The estimate of Coal Resources and Reserves as at the 31 December 2016 contained within this Report has been reported in compliance with the requirements of the reporting guidelines of the 2012 Editon of the Australasian Code for the Reporting of exploration results, Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists and Minerals Council of Australia ("The JORC Code").

1.1 Approach

The principal data used in the preparation of this report included:

- A JORC Resource and Reserve Report titled "Independent Resource & Reserve Report, PT Wahana Rimba Lestari", 16 May 2016, Prepared by PT. Geo Search;
- Collar, down hole logging, seam pick and coal quality information, provided by PT. WRL;
- Latest Topogarphic data including any mined out area;
- PT Prasetya Abdi Persada, "Geotechnical And Hydrology-Hydrogeology Study Final Report of PT Wahana Rimba Lestari", May 2016;
- PT Wahana Rimba Lestari, "Studi Kelayakan Eksplorasi Batubara Plakat Tinggi dan Sundai Keruh, Kabupaten Musi Banyuasin Sumatra Selatan", September 2007;
- PT Wahana Rimba Lestari, "Analisa Dampak Lingkungan Hidup (ANDAL) Pertambangan Batubara PT Wahana Rimba Lestari di Kabupaten Musi Banyuasin Provinsi Sumatera Selatan", January 2010;
- PT Airborne Informatics, "Final Report – South Sumatra Aerial Mapping by Lidar Survey Systems", May 2013;
- PT Prasetya Abdi Persada, "Mining Preliminary Feasibility study of Pt Wahana Rimba Lestari Coal Project final report", May 2016; and
- Capex and Opex data supplied by PT WRL and also derived from Salva Mining's cost database of typical Indonesian operations.

The following approach was undertaken by Salva Mining to estimate Coal Resource and Reserves:

- Salva Mining has reviewed the geological data set provided by PT WRL for the coal block covered under scope of report;
- Using the existing bore hole information provided to Salva Mining by PT WRL, a geological model was created using Minescape stratigraphic modelling software. While creating the model, a thickness cut off limit of 0.1m was applied and is termed as an "in situ" model;
- This model and the underlying raw data such as Drill hole logs, coal quality reports and geophysical logs were reviewed by Salva Mining's team of geologists headed by Mr Davies.
- On the basis of confidence limits (as described in the Resource Classification Section), the in-situ geological model was then categorised into Measured, Indicated and Inferred

categories according to the JORC Code (2012). Once these categories were ascertained, coal volume, tonnage and qualities were estimated;

- Cross sections, plans and deposit characteristics such as structure, number and thickness of seams were examined in conjunction with the proposed equipment and mining method to decide on minimum mining thickness, coal losses and dilution factors. These factors were then used to convert the in situ geological model to a ROM model;
- Physical surface constraints were studied and consideration was made for surface water runoff and management, as well as the location of significant infrastructure and communities inside the potential mining area. Appropriate mining limits were then determined based on this data;
- Indicative cost and revenue factors were reviewed with PT WRL and checked for reasonableness by Salva Mining. Optimiser software was used to incorporate other criteria such as depth constraints, geotechnical criteria and minimum mining thickness. In this way a series of different pit shells were derived for varying cost and revenue inputs;
- Optimised pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal and then practical pit design were made (Mineable Pit Shell). This pit shell formed the basis of the subsequent reserves estimate;
- The Measured and Indicated confidence limits were overlaid on the main pit shell and any Inferred tonnes were excluded from the estimate;
- The overall economic viability of the results was tested by creating an economic model which included provision for capital and operating cost;
- Based on Resource confidence and present mine planning detail, the reserves were categorised into Proved and Probable categories;
- All of the modifying factors and checks adopted to ascertain the estimate have been provided in the respective section of this report.

1.2 Data sources

This review is based on the information provided by PT WRL, the technical reports of consultants and previous explorers, as well as other published and unpublished data relevant to the area. Salva Mining has carried out, to a limited extent, its own independent assessment of the quality of the geological data. The status of agreements, royalties or concession standing pertaining to the assets was provided by the company.

In developing our assumptions for this Statement, Salva Mining has relied upon information provided by the company and information available in the public domain. Key sources are outlined in this Report and all data included in the preparation of this Report has been detailed in the references section of this report. Salva Mining has accepted all information supplied to it in good faith as being true, accurate and complete, after having made due enquiry as of 31 December 2016.

1.3 Limitations

After due enquiry in accordance with the scope of work and subject to the limitations of the Report hereunder, Salva Mining confirms that:

- The input, handling, computation and output of the geological data and Coal Resource and Reserve information has been conducted in a professional and accurate manner, to the high standards commonly expected within the mining professions;
- The interpretation, estimation and reporting of the Coal Reserve Statement has been conducted in a professional and competent manner, to the high standards commonly expected within the Geosciences and mining professions, and in accordance with the principles and definitions of the JORC Code (2012);
- In conducting this assessment, Salva Mining has addressed and assessed all activities and technical matters that might reasonably be considered relevant and material to such an assessment conducted to internationally accepted standards. Based on observations and a review of available documentation, Salva Mining has, after reasonable enquiry, been satisfied that there are no other relevant material issues outstanding;
- The conclusions presented in this report are professional opinions based solely upon Salva Mining's interpretations of the documentation received and other available information, as referenced in this Report. These conclusions are intended exclusively for the purposes stated herein;
- For these reasons, prospective investors must make their own assumptions and their own assessments of the subject matter of this Report.

Opinions presented in this report apply to the conditions and features as noted in the documentation, and those reasonably foreseeable. These opinions cannot necessarily apply to conditions and features that may arise after the date of this report, about which Salva Mining have had no prior knowledge nor had the opportunity to evaluate.

1.4 Disclaimer and warranty

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of its Statement or the success or failure for the purpose for which the report was prepared. Neither Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

A draft version of this Statement was provided to the directors of GEAR for comment in respect of omissions and factual accuracy. As recommended in Section 39 of the VALMIN Code, GEAR has provided Salva Mining with an indemnity under which Salva Mining is to be compensated for any liability and/or any additional work or expenditure, which:

- Results from Salva Mining's reliance on information provided by GEAR and/or Independent consultants that is materially inaccurate or incomplete, or
- Relates to any consequential extension of workload through queries, questions or public hearings arising from this report.

The conclusions expressed in this Statement are appropriate as at 31 December 2016. The report is only appropriate for this date and may change in time in response to variations in economic, market, legal or political factors, in addition to ongoing exploration results. All monetary values outlined in this report are expressed in United States dollars ($) unless otherwise stated. Salva Mining services exclude any commentary on the fairness or reasonableness of any consideration in relation to this acquisition.

2 Independent Competent Persons and Experts Statement

This Resource and Reserve report has been written following the guidelines contained within the 2005 Edition of the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Experts Reports ("the VALMIN Code") and the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("the JORC Code"). It has been prepared under the supervision of Mr Manish Garg (Director – Consulting / Partner, Salva Mining) who takes overall responsibility for the report and is an Independent Expert as defined by the VALMIN Code.

Sections of the report which pertain to Coal Resources have been prepared by Mr. Grenville Davies (Principal Consultant, Geology) who is a subject specialist and a Competent Person as defined by the JORC Code. Sections of the report which pertain to Coal Reserves have been prepared by Mr. Sunil Kumar (Principal Consultant, Mining) who is a subject specialist and a Competent Person as defined by the JORC Code.

This report was prepared on behalf of Salva Mining by the signatory to this report, assisted by the subject specialists' competent persons whose qualifications and experience are set out in Appendix A of this report.



Mr. Manish Garg
Director
Salva Mining Pty Ltd

2.1 Statement of Independence

This Report was commissioned by GEAR on a fee-for-service basis according to Salva Mining's schedule of rates. Salva Mining's fee is not contingent on the outcome of this report. The above mentioned person(s) have no interest whatsoever in the mining assets reviewed and will gain no reward for the provision of this report.

Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar, Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates are independent of GEAR, its directors, substantial shareholders, advisers and their associates.

Neither Mr. Manish Garg, Mr. Grenville Davies, Mr. Sunil Kumar nor any of the Salva Mining's partners (including Mr. Garg), directors, substantial shareholders and their associates have (or had) a pecuniary or beneficial interest in/or association with any of the GEAR, or their directors, substantial shareholders, subsidiaries, associated companies, advisors and their associates prior to or during the preparation of this report.

3 Project Description

3.1 Property Description and Access

The WRL concession is located in the Kecamatan (Sub District) of Sungai Kanuh, Sanga Desa and Sekayu in the Regency (Kabupaten) of Musi Banyuasin, in the Province of South Sumatra, Indonesia (Figure 3:1).

Figure 3:1 General Location Plan



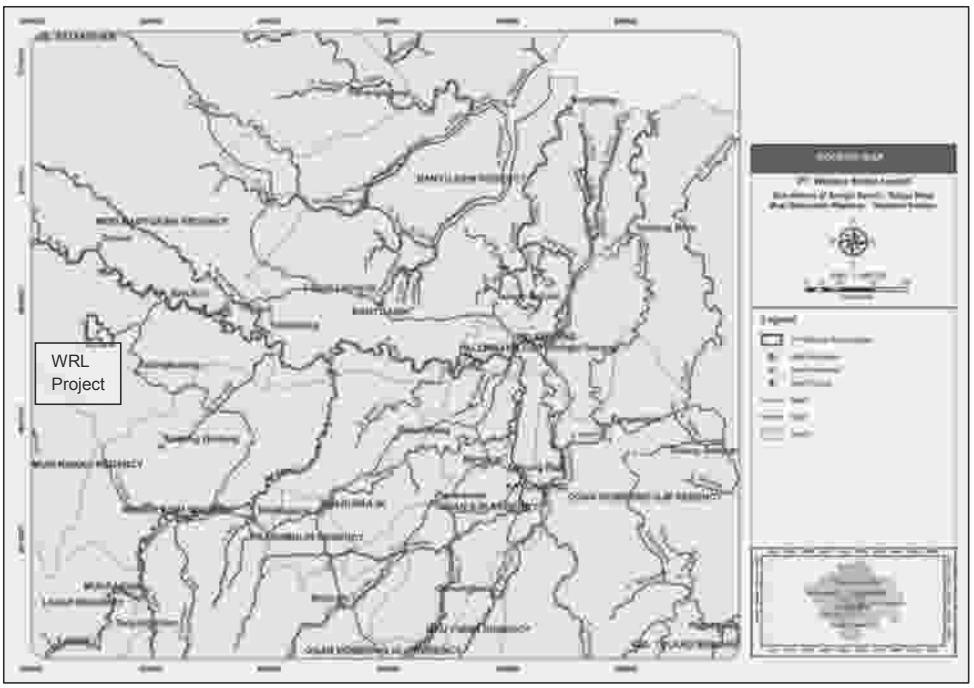
Mining rights for the concession are held under an Izin Usaha Pertambangan Operation and Production ("IUPOP") license covering a total area of 4,739 ha with area location number 24 Pemb 12.

The WRL concession can be approached from the regional city of Palembang, which is well commected with Jakarta . The approach from Jakarta is as follows;

- Jakarta to Palembang by plane (approximately 1 hour)
- Drive from Palembang to Sekayu on the Trans Sumatra Highway (2 hrs by car)
- Drive on the Regency road from Sekayu to Lestari (45 minutes by car).

Figure 3:2 shows the location of the project area.

Figure 3:2 Concession Boundary and Regional Location



(After PT. Geo Search, 2016).

3.2 Ownership

Tenure at the WRL concession is held under the an Izin Usaha Pertambangan Operation and Production (IUPOP) license. The IUPOP was originally executed on 21 November 2008 and the extension was granted in 2016. The detail of the coal concession is given in Table 3.1.

Table 3.1 WRL Concession Details

License Holder	Concession Type	Area (ha)	Status	Granted	Duration
PT Wahana Rimba Lestari	IUPOP	4,739 ha	Granted	21-Nov-2008	10 Yr
			1st Extension	31-Mar-2016	10 Yr

The "Clean and Clear" Certificate is listed in the official list of Clean & Clear concessions with recommendation letter no. 540/543/DISPERTAMBEN/2014 from the provincial government of South Sumatra.

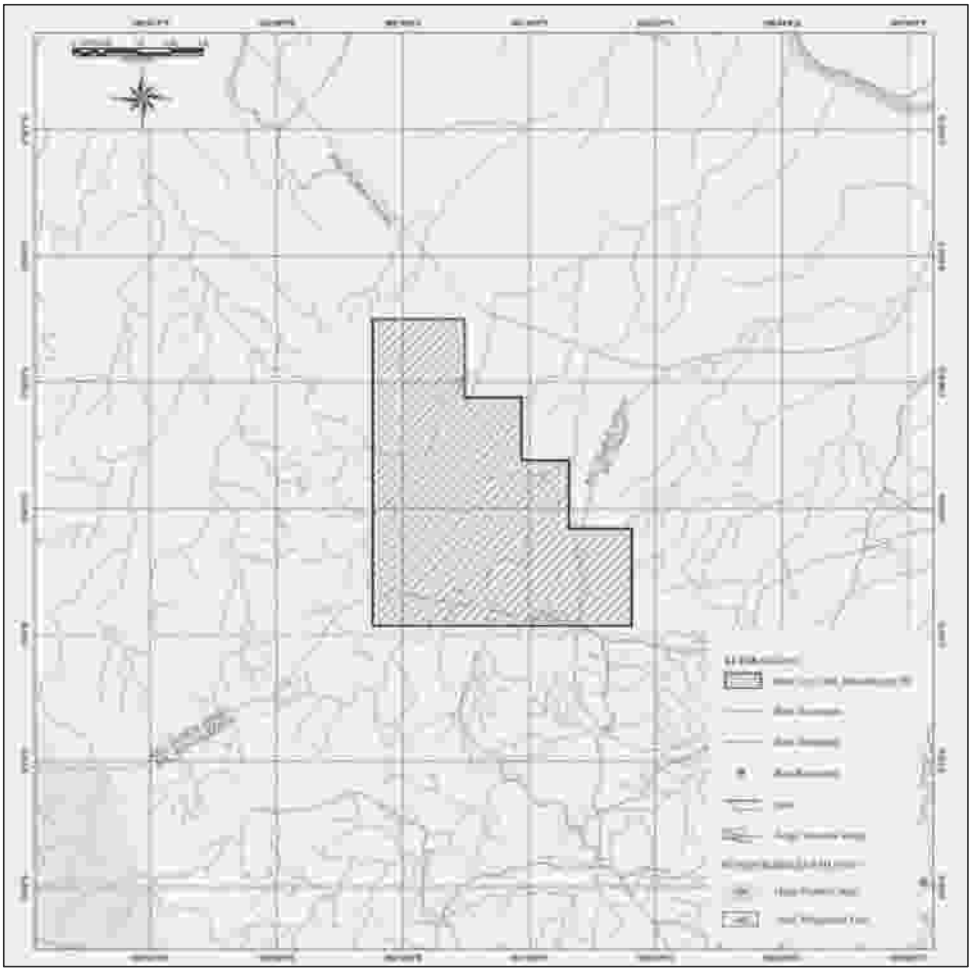
Legal due diligence was not part of the scope of work for this report and no legal due diligence was carried out. GEAR has 69.9998% ownership of WRL (directly or indirectly).

3.3 Forestry & 'Clear and Clear'

The concession is listed in the official list of clean and clear concessions. The "Clean and Clear" Certificate is listed in the official list with recommendation letter no. 540/543/DISPERTAMBEN/2014 from the provincial government of South Sumatra.

There are no protected forests or nature reserves within the project area boundaries that prohibit surface mining. The map shows that the area is classified as non-forest and available for other uses (Figure 3:3).

Figure 3:3 Land Usage and Forest Clearance



No major commercial plantations occur within the project area. Six small villages occur within the IUP and approximately 50% of the area cultivated with mostly small ageing rubber & palm oil farms while the remaining area is covered in secondary re-growth.

4 Geology

4.1 Regional Geology

The WRL concession area is found within the South Sumatra Basin (Figure 4:2). The South Sumatra Basin was formed due to back-arc extension which began in the late Palaeocene. This extension resulted in an approximately north trending graben structure which is filled with an Eocene to mid-Miocene age transgressive sedimentary sequence culminating in the deep-water sediments of the Gumai Shales in the mid-Miocene. This was followed by the mid- Miocene orogenic event, resulting from the collision of the Sunda Shelf plate with the Indo-Australian plate, which resulted in a subduction zone forming off the west coast of Sumatra and gave raise to the orogenic uplift of older pre-tertiary rocks to form the Barisan Mountains during late Miocene time. This mid-Miocene plate collision marked the transition from extension tectonics and a transgressive sedimentary sequence to compression tectonics and a transition back to shallow water terrestrial sedimentation (regressive sequence). The onset of the regressive phase of sedimentation is marked by the Air Benekat Formation (Figure 4:1).

The following is a general description of the main Eocene to Pliocene age sedimentary units recognised across the South Sumatra basin, from oldest to youngest;

The **Lahat Formation** is comprised of brown to grey shales interbedded with tuffaceous shales and siltstones. These sediments rest unconformably on the pre-Tertiary basement. The thickness of this formation is strongly controlled by the basement topography and this formation is not developed around some pre-Tertiary basement highs.

The Oligocene age **Talang Akar Formation** is comprised of thickly bedded sandstones alternating with thin shale bands and coal seams in places. This sedimentary unit is of terrestrial fluviatile origin, grading into a deltaic environment.

The **Baturaja Formation** is only locally developed and consists of a lower bedded unit and an upper massive unit. The bedded unit consists of lime mudstones and lime wackstones, intercalated with marls, whilst the massive unit consists of mudstones, wackstones/packstones and boundstnes.

The **Gumai Formation** is one of the most widely occurring units seen in the basin and is comprised of deep water marine shales with minor interbeds of limestone and sandstone.

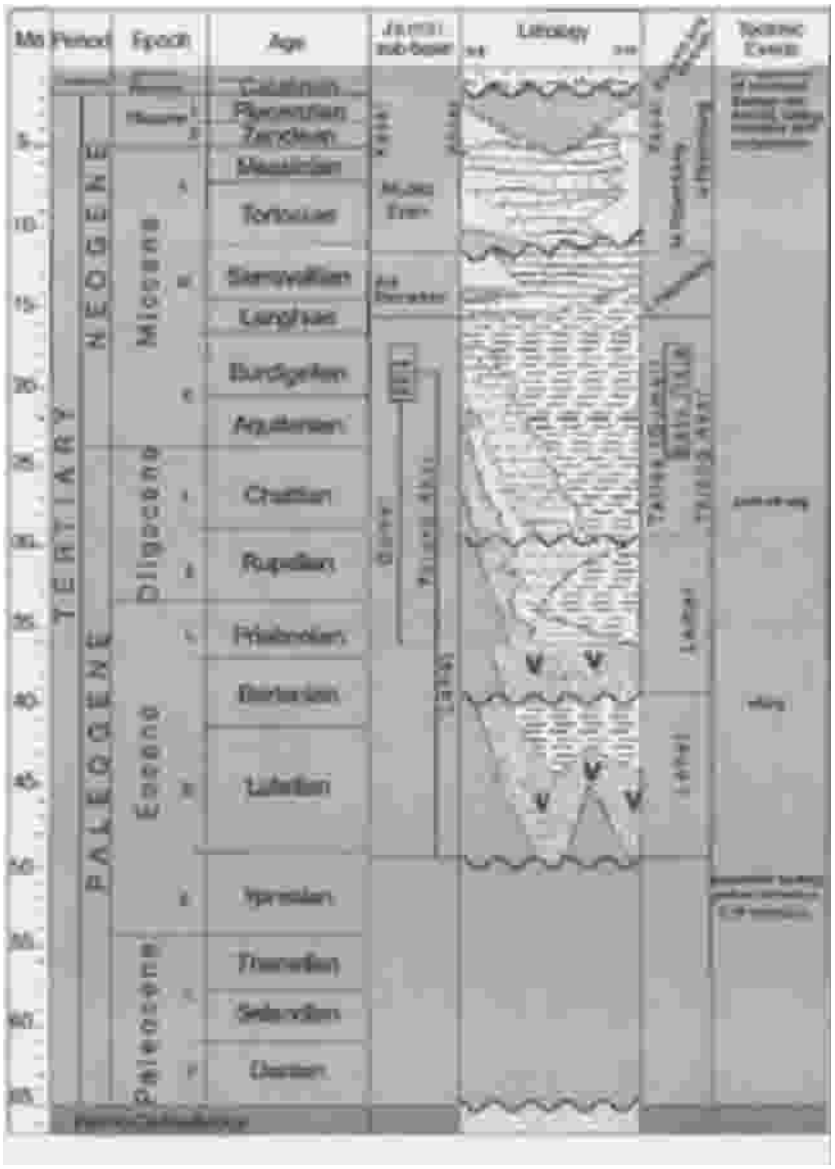
The transition from deep water marine sedimentation to a regressive sequence is marked by the **Air Benekat Formation** which consists of shales and glauconitic sandstones.

The middle to late Miocene aged **Muara Enim Formation** conformably overlies the Gumai Formation, the transition marked by the top of the last marine shale layer. The Muara Enim Formation consists of interbedded sandstones, claystones and coal seams. The majority of the coal mined from the South Sumatra Basin, including within the NIP concession area, is derived from this unit.

The **Kasai Formation** conformably overlies the Muara Enim Formation and consists of bedded tuffaceous sands and gravels, occasionally interbedded with minor coal seams.

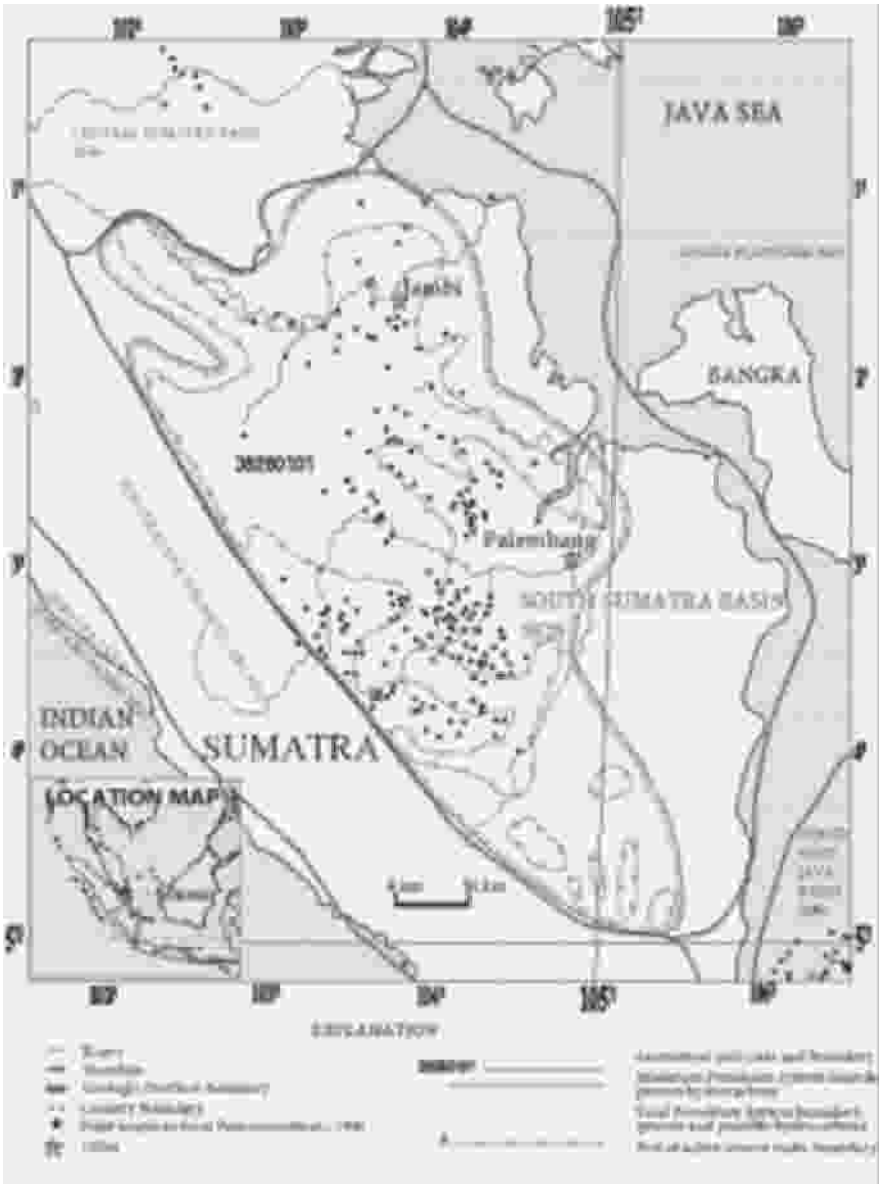
SALVA
Mining Consultants

Figure 4:1 Generalised Stratigraphy of the South Sumatra Basin



(After Bishop ,2001)

Figure 4:2 Regional Geological Setting



(After Bishop, 2001)

4.2 Local Geology

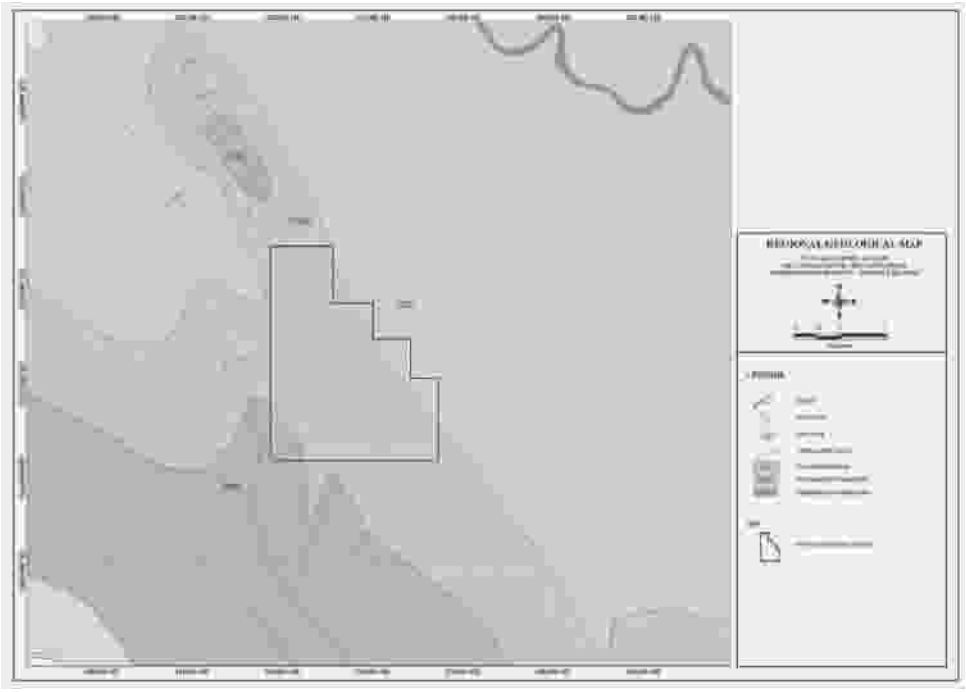
The local geology of the concession is comprised mainly of the late Miocene to Pliocene age Muara Enim Formation which is conformably overlain by the Kasai Formation to the south (Figure 4:3).

The Muara Enim Formation is the major coal bearing formation within the South Sumatra region. The top and bottom of the Muara Enim Formation are defined by the upper and lower occurrence of laterally continuous coal beds. The formation itself is comprised of several stacked parasequences which vary from 0 m to 30 m in thickness, with shallow marine or bay clays at the base and shoreline and delta plain facies (sand, clay, coal) at the top. The Muara Enim Formation has been divided into 4 sub-formations (M-1 to M-4) and contains up to12 different coal seams, which can reach a maximum total thickness of around 30- 35 metres.

The Kasai Formation is often marked by a distinct pumice or lapilli horizon containing rounded pumice fragments of about 1 cm in diameter. This formation is generally dominated by light coloured, poorly bedded tuffaceous sands and gravels. Often the Kasai formation also contains thin coal seams.

The concession is located in an area of relatively simple geology with undulating coal seams with low dip angles and no major structural features recognized. The coal dips at less than 10 degrees. Figure 4:3 shows the naming and correlation of rock units in the South Sumatra Basin.

Figure 4:3 Local geological map of the WRL concession area



(After PT. Geo Search, 2016).

4.3 Coal Seams

WRL Coal Block lies in the Muara Enim formation coals and seams dip shallowly approximately 10 degrees to the north east. The coal quality is low rank with high inherent moisture and low ash and sulphur contents.

The deposit at WRL coal block contains 10 modelled coal seams (Figure 4:4) of which 4 have been split into upper and lower plies. Some seams are less continuous than others and have been modelled to pinch out where not present in a particular drill hole. In particular of the seams contributing towards coal resource the seam P15 seam has a limited extent through the deposit and is present diagonaly in the middle of the tenement. In contrast, the seam P14 seam is one of the most continuous seams contributing towards the coal resource and is present along the eastern part of the tenement. It subcrops in the middle of the tenement running from NW to SE throughout the deposit.

The main seams which are widely present in the modelled area are P14, P15, P16, and P17. The lowest seam, P10, is present throughout the tenement except the SW corner of the concession boundary with an average thickness of 1.85 m. The seam P12 is present in a similar setting to seam P10 but is missing in the upper NW part of the concession.

The seam P13 is split into P13U and P13L with an average thickness of 1.58m. The seams P13U and P13L are present only in a small central eastern part of the tenenment. The seams P13U and P13L reach a maximum thickness of 1.35 m.

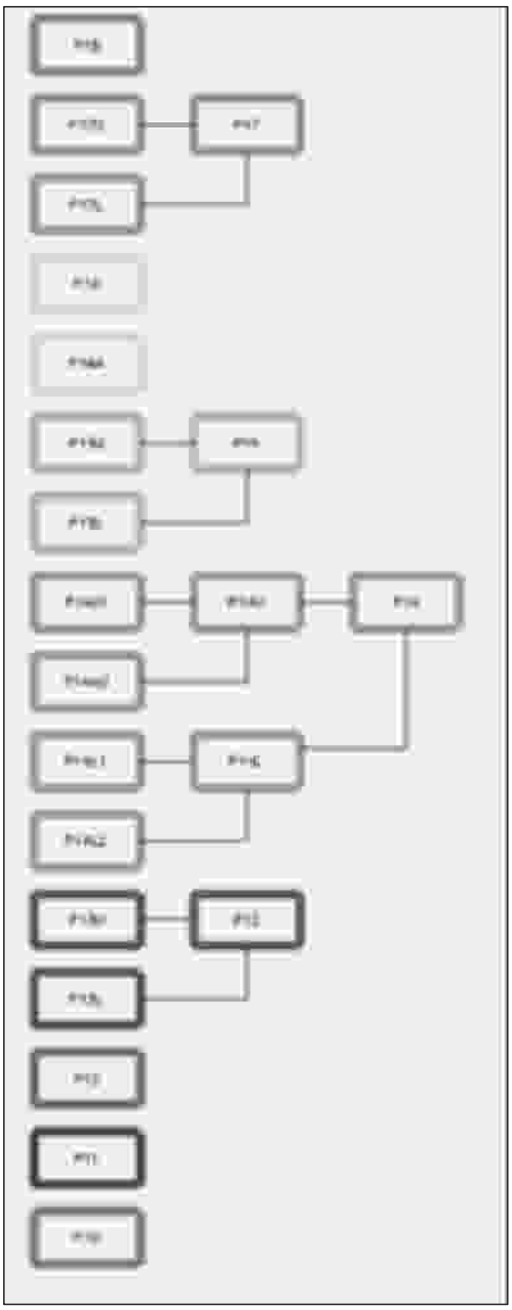
The seam P14 is most important seam contributing to the coal resource as some of its daughter plys reach to a maximum thickness around 8 m. The seam P14 is split into P14U and P14L and these are further split into P14U1 and P14U2 and P14L1 and P14L2. The seam P14U1 sits below P15 at a interburden thickness of 7.54 m from P15L.

The seam P15 is split into P15U and P15L with an average thickness of 2.42 m. It sits below P16A with an average interburden of 34 m.

The seam P17 sits above P16 with a mean thickness of 1.54 m. It splits into P17U and P17L.

The top most seam in the resource area is P18. This seam seems to be less developed or mostly eroded, sitting in a small area in the south eastern corner of the WRL concession.

Figure 4:4 WRL Block Seam Splitting Relationships



5 Exploration

5.1 Exploration History

There have been a number of phases of exploration completed in the WRL coal concession area over the past 10 years. The first phase involved generally shallow drilling and field mapping. In-fill drilling and deeper stratigraphic drilling to depths of up to 150 m followed in phase two, in order to allow for more accurate definition of the structural geology and coal quality characteristics of the deposit.

Successive phases of exploration drilling in the WRL concession have involved the following:

- Resource expansion drilling;
- Resource upgrade drilling;
- In fill pre-production drilling; and
- Dump and infrastructure sterilization drilling.

The results of the various phases of drilling have been assessed and geological models have been reported in details in the previous Resource report by PT Geo Search in May 2016.

5.1.1 Drilling

In 2006, WRL began exploration by stratigraphic drilling of the concession. The main objective of the work was to confirm the occurrence of coal and determine the areas of potential Coal Resource. Open Hole and Touch Coring method was used during this program.

During 2016, WRL commenced detailed drilling program using Jarco 175/200 drilling machines. Core was of size HQ and was partially cored. Data from only this 2016 drilling program has been used in preparation of this resource estimate. Figure 5:1 exhibits the recent drilling opertaions using Jakro 175 & 200 machines.

Figure 5:1 WRL Drilling Operations, 2016



(Source: GEAR

5.1.2 Downhole Geophysical Logging

All drill holes during the 2016 drilling program were geophysically logged using gamma ray and density to ensure the accuracy and reliability of results (Figure 5:2).

Figure 5:2 WRL Down-hole Geophyscial Logging Operations, 2016



(Source: GEAR)

5.1.3 Topographic Survey

Surface topography was measured by an aerial LiDAR survey. A geodetic survey was also completed and 2 permanent survey station, bench marks tied into the Indonesian national grid were established. Drill collars were surveyed using total stations (Figure 5:3).

Figure 5:3 WRL Down-hole Geophyscial Logging Operations, 2016



(Source: GEAR)

5.1.4 Geotechnical and Hydrological Survey

In 2016, 3 fully cored, HQ size holes were drilled as part of a Geotechnical Survey of the WRL concession by geotechnical consultant Mr Hendrawan Agni Wicaksono. The following tests were performed;

- Physical properties – including wet density, natural density & dry density
- Uniaxial compressive strength
- Direct shear test
- Excavatability analysis
- Geo-mechanical tests – including point load, ultrasonic velocity
- Hydrological & geo-hydrological analysis

5.1.5 Outcrop Mapping

Mapping of the coal and other rock occurrences was undertaken throughout the concession area by WRL. A total of 6 coal outcrops were observed within the WRL concession. Due to the relatively flat topography and low dip most of the outcrops of coal were heavily weathered and / or eroded to a certain extent (Figure 5:4).

Figure 5:4 Typical Outcrop



(Source: GEAR)

5.1.6 Coal Sampling

Coal cores were sampled on a ply by ply basis. If non-coal partings more than 10cm thick were encountered the parting was excluded and the sample was divided into 2 parts. Partings 10cm thick or less were included in the analysis sample. Roof and floor samples were taken and analysed separately in many instances (Figure 5:5).

Figure 5:5 Coal Box Samples, WRL 2016



(Source: GEAR)

Coal samples from the core drilling were analysed at international accredited laboratory PT Geoservices laboratories. Total moisture, proximate analysis and calorific value were measured using ASTM standard. Additional analyses on some samples include;

- Hargrove Grindability Index (HGI), and
- Lab density.

6 Geological Data and QAQC

6.1 Data Supplied

The geological data provided by PT WRL for the WRL concession was independently reviewed by Salva Mining's geologists and is considered appropriate and reasonable for the purpose of estimating Coal Resources.This data, used by Salva Mining for the purpose of resource estimation, includes but is not limited to:

- Drill hole collar information inclusive of total depth drilled per hole;
- Drill hole lithological data inclusive of seam picks identified and correlated on the basis of down-hole geophysics;
- Coal sample table and associated raw coal qualities per sample;
- Drill hole completion reports for most of the holes drilled containing details of core recoveries achieved;
- Down-hole geophysical data in the form of both LAS files and drill hole databases;
- Surpac geological models by PT Geo Search in May 2016, which contains a complete drill hole database as well has grids of seam roofs, floors, the topographic surface and the base of the weathered horizon surface;

6.2 Lithological Data

A total of 44 drill holes were used to construct the geological model in the WRL coal concession area.

Of these holes, 7 drill holes were barren, i.e. no coal intersected; this is due to drill-rig limitations (maximum 60 m depth in earlier campaigns). Barren holes are never the less useful for geological modelling purposes as they prevent coal from being modelled where it is not present. In other cases no seam picks were supplied for a number of holes. In these instances the hole is marked as 'not logged' and the model is allowed to project seams though these holes if warranted by surrounding holes.

100% of the holes have been logged using down-hole geophysics. Down-hole geophysical data acquired by PT WRL is predominantly comprised of gamma, density and calliper logs and has allowed for accurate identification of coal seams in each hole (seam picks) and the correlation of coal seams between holes.

Drill hole locations for the five resource areas can be seen in Appendix D and coal intercept statistics for the five resource areas can be seen in Table 6:1.

Table 6:1 Drill hole Coal Seam Intercept Statistics

Interval	Number	Minimum (m)		Maximum (m)		Mean Thickness (m)	S.D.
		Hole no.	Thickness	Hole no.	Thickness		
P18	1	WRL_006R	0.27	WRL_006R	0.27	0.27	-
P17	5	WRL_009	1.17	WRL_017	1.78	1.54	0.24
P17U	2	WRL_008	1.06	WRL_013	1.38	1.22	0.23
P17L	2	WRL_008	0.09	WRL_013	3.13	1.61	2.15
P16	9	WRL_006R	0.28	WRL_023	2.26	1.11	0.8
P16A	2	WRL_014	0.1	WRL_013	0.94	0.52	0.59
P15	14	WRL_011R	0.2	WRL_013	4.62	2.42	1.58
P15U	5	WRL_003	0.64	WRL_012A	2.2	1.53	0.69
P15L	5	WRL_003	1.6	WRL_025	3.56	2.44	0.86
P14U	12	WRL_001	5.17	WRL_014A	12.8	9.17	2.53
P14U2	15	WRL_004A	1.3	WRL_007	8.89	3.15	2.13
P14U1	15	WRL_025	1.05	WRL_009	6.4	3.74	1.73
P14L	19	WRL_007	2.3	WRL_001	7.63	3.73	1.42
P14L2	11	WRL_ID_001	1.2	WRL_023	5.29	2.56	1.45
P14L1	11	WRL_021A	1	WRL_ID_002	7.75	2.98	2.19
P13	14	WRL_009	0.45	WRL_021A	2.95	1.59	0.73
P13U	2	WRL_015A	0.65	WRL_014A	1	0.83	0.25
P13L	2	WRL_014A	0.4	WRL_015A	1.35	0.88	0.67
P12	4	WRL_015A	0.73	WRL_024	1.6	1.12	0.4
P11	1	WRL_004	1	WRL_004	1	1	-
P10	1	WRL_004	1.85	WRL_004	1.85	1.85	-

6.3 Topographic Survey and base of weathering (BOW)

Topography data used in the WRL geological models has been derived from Light Detecting and Ranging (LIDAR) remote sensing surveys conducted by PT Airbourne Infomatics. During this survey GPS ground control points were combined with flight trajectories and LIDAR scanning equipment to produce an accurate dataset of XYZ topographic coordinate points for the entire concession area.

A 'non-conformable' base of weathering (BOW) surface was generated for the geological models by translating the topographic surface down by 3 m in the Z direction. This is based on the observation that the average weathered horizon thickness, where it has been logged, is approximately 3 m.

6.4 Data Quality Assurance and Quality Control (QAQC) Measures

6.4.1 Core Sampling

At the completion of each run, core lengths were checked in the splits for recovery to ensure coal seams have been recovered as required. A target core recovery of 90% has been applied throughout all drilling phases. If core recovery was found to be less than 90% within the coal seam, the hole was re-drilled to collect a sample with ≥ 90% recovery. The core was also photographed routinely and logged in the splits by a geologist before being sampled. For open holes, chip samples were collected at 1 m intervals for lithological logging purposes.

All the drill rigs used during each phase of exploration were operated by experienced personnel and drilling was supervised by fully qualified geologists working in shifts.

Sampling of the coal seams was conducted by the rig geologist on duty and was conducted in accordance with the following sampling procedure supplied to rig geologists;

- Open core barrel inner split tube and remove sample from the barrel;
- Transfer the core to the PVC split or core box;
- Determine the core depth ("From" and "To") from the drill depth; and
- Reconstruct the core in the split to allow for any gaps;
- Determine the core recovery;
- Wash down using water and a cloth and/or brush prior to logging if covered by mud or oil;
- Complete geological logging and photograph structure or any abnormal features. The photograph should show information of drill hole number and from and to depths;
- The division of samples follows the simple scheme of sample all coal, sample separately any contained bands (plies) and take 10 cm roof and floor non-coal samples;
- Place samples into plastic bags which should be doubled to minimise moisture loss. Insert one bag inside another so that they are doubled;
- Label the sample by ID card, the label should give information about the sample number, hole number, from/to depth, and Project Code. Place the label ID card inside the small re-sealable plastic bag before putting it into the sample bag;
- Seal the sample bag with tape and write the sample number on the plastic bag;
- Dispatch sample to an accredited laboratory.

The coal quality sampling technique detailed above is considered by Salva Mining to adequately address the QAQC requirements of coal sampling. As a further coal quality validation step prior to importing coal quality sample results for coal quality modelling purposes, Salva Mining constructed spreadsheets which compare the sampled intervals against the logged seam intervals in order to ensure that sampled intervals match the seam pick intervals.

6.4.2 Down-hole Geophysics and Seam Picks

Down-hole geophysical logs were completed during each drilling program by PT Surtec Indonesia. Geophysical logging was conducted following the completion of a drill hole. After drilling is complete the logging unit deploys down-hole geophysical sondes, including gamma ray, calliper and density tools to assist with characterising the down-hole formation and its geological properties. Stratigraphic information, intercepted along the entire length of the drill hole (collar to total depth), is recorded and plotted in acrobat pdf format. A digital copy of the data is stored in LAS file format.

Logging was performed on all of drill holes (including cored and open holes) and all of the holes were geophysically logged. Seam picks and lithologies have all been corrected for geophysics.

Geophysical logging provides information on the coal seams intersected and aids in the definition of horizon boundaries and marker horizons, used to correlate the subsurface geology. The presence or absence of geophysical logging is one of the criteria used in the determination of points of observation for resource classification purposes. Under normal conditions coal-bearing sections of each drill hole were geophysically logged at the completion of drilling. In some instances, poor ground conditions restricted the ability to geophysically log the entire hole upon completion. In these cases, collapsed portions of holes were re-drilled in order to allow for density and gamma logging to be accomplished by lowering the geophysical probe through the drill string.

6.4.3 Coal Quality

Coal quality sampling was undertaken by PT WRL and contract geologists, with the analysis testing being completed by PT Geoservices Coal Laboratories at Padang. PT Geoservices laboratories are accredited to ISO 17025 standards and quality control is maintained by daily analysis of standard samples and by participation in regular "round robin" testing programs.

International Standards Organisation (ISO) methods have been used for Moisture Holding Capacity tests; Australian Standards (AS) have been used for Relative Density and American Society for Testing and Materials (ASTM) methods have been used for all other quality variables.

The following tests were undertaken as standard on all coal samples:

- Total Mosisture (TM);
- Inherent Moisture (IM);
- Ash Content (Ash);
- Volatile Matter (VM);
- Fixed Carbon (FC);
- Total Sulphur (TS);
- Calorific Value-air dried basis (CV adb) – selected samples only;
- Relative Density (RD);
- HGI – Selected samples only.

6.4.4 Data validation by Salva Mining prior to geological model construction

Prior to using the lithological (seam pick) and coal quality data for geological model construction purposes, Salva performed the following data validation and verification checks on the data;

- Checking of seam picks against the down-hole geophysics in selected instances in order to validate seam pinch outs or correlations during structural model construction;
- Validation of coal quality sample intervals against seam pick intervals;
- Scatter plots of raw coal quality data pairs were constructed in order to determine outliers. In a few cases spurious data values were identified and removed from the quality data set prior to importing the data into Minescape;
- In cases where RD (adb) data was not determined for a sample, linear regression equations determined from the RD-ash scatter plot constructed from the rest of the raw coal quality data set were used to determine the RD value for the sample concerned from the ash value for that sample;

- Core recovery percentages per core run were compiled and merged with the coal quality sample data set in order to determine if any samples in the coal quality data set are from coal seam intersections with less than 90% core recovery over the seam width. Core recovery was observed to be satisfactory with over 90% recovery within the coal horizon although less than 90% recovery is often seen in the immediate roof or floor to the coal seam (coal samples with less than 90% core recovery were previously rejected by PT WRL staff prior to being forwarded data to Salva Mining);
- During the importation of coal quality samples and associated raw coal quality data into the geological modelling software, a few instances of overlapping samples were identified and these were corrected and the samples re-imported;
- After compositing the coal quality samples over the seam width on a seam by seam basis, histograms were constructed of the composited raw coal quality for each seam. (Appendix C). Analysis of these histograms shows that in a few instances, raw ash% outliers are present as a result of excessive overlap of the coal quality sample into the seam roof or floor. In the majority of such instances, the proportion of outlier composite samples is very small compared to the total number of samples per seam and hence the presence of these outliers has no material impact on the modelled raw coal quality for affected seams.

6.5 Coal Density

No information on in situ moisture was obtained from the laboratory, resulting in the fact that the Preston and Sanders equation could not be applied to obtain in situ relative densities. As a result all resource tonnages are quoted on an in situ air dried density basis, as volumes are calculated on an in situ basis and density on an air dried basis. However the density of in situ coal is in reality not at an air dried basis but at a higher moisture in situ moisture basis. The estimate of resources on an air dried basis will therefore result in a higher tonnage as compared to the equivalent in situ moisture basis calculation. This effect has been accounted for to a large extent in the reserving process, where the total moisture as been used as proxy for the in-situ moisture and a Preston Sanders calculation has been made on this basis. However, given the unknown accuracy of this approximation, this calculation was not done at the resource stage, preferring rather to use the more accurately known air dried density and state the moisture basis used in the resource.

6.6 Coal Quality Data

Within the WRL concession, Muara Enim Formation coals are classified as a low energy sub-bituminous class B coal (ASTM – Guidebook of Thermal Coal page 35). Raw coal quality composite sample statistics for all seams in each resource area are given in Table 6:2.

Table 6:2 Summary of Drill hole raw coal quality by seam

Seam		ASH adb %	CV adb	FC adb %	IM adb %	RD adb	TM ar %	TS adb %	VM adb %
P17U	Number of Values	2	2	2	2	2	2	2	2
	Min Value	3.1	5,164	30.8	14.8	1.36	51.0	0.18	44.3
	Max Value	9.6	5,372	36.5	16.5	1.4	55.6	0.37	45.9
	Mean	6.4	5,268	33.7	15.7	1.38	53.3	0.28	45.1
P17	Number of Values	4	4	4	4	4	4	4	4
	Min Value	6.8	4,770	30.1	14.2	1.31	56.5	0.26	42.4
	Max Value	9.2	5,318	34.9	19.3	1.41	57.6	0.37	46.1

Seam		ASH adb %	CV adb	FC adb %	IM adb %	RD adb	TM ar %	TS adb %	VM adb %
	Mean	7.8	5,069	32.6	16.4	1.37	56.9	0.3	44.1
P17L	Number of Values	1	1	1	1	1	1	1	1
	Min Value	4.2	5,484	36.3	14.7	1.38	55.5	0.17	45.3
	Max Value	4.2	5,484	36.3	14.7	1.38	55.5	0.17	45.3
	Mean	4.2	5,484	36.3	14.7	1.38	55.5	0.17	45.3
P16	Number of Values	2	2	2	2	2	2	2	2
	Min Value	2.5	5,409	36.8	14.6	1.36	44.9	0.31	44.1
	Max Value	3.8	5,571	38.4	15.7	1.37	55.0	0.32	45.1
	Mean	3.1	5,490	37.6	15.1	1.37	49.9	0.31	44.6
P16A	Number of Values	1	1	1	1	1	1	1	1
	Min Value	7.0	5,132	36.5	16.3	1.4	56.7	0.32	42.6
	Max Value	7.0	5,132	36.5	16.3	1.4	56.7	0.32	42.6
	Mean	7.0	5,132	36.5	16.3	1.4	56.7	0.32	42.6
P15U	Number of Values	3	3	3	3	3	3	3	3
	Min Value	4.4	5,165	37.1	15.2	1.38	44.3	0.15	42.0
	Max Value	5.4	5,320	37.9	16.0	1.4	52.4	0.33	42.9
	Mean	4.9	5,256	37.6	15.5	1.39	49.7	0.23	42.5
P15	Number of Values	7	7	7	7	7	7	7	7
	Min Value	3.3	4,172	25.6	14.2	1.38	50.7	0.24	36.2
	Max Value	21.7	5,275	37.8	16.7	1.51	56.3	0.35	42.9
	Mean	9.1	4,952	34.9	15.7	1.43	53.8	0.27	40.3
P15L	Number of Values	3	3	3	3	3	3	3	3
	Min Value	2.7	4,814	35.3	14.6	1.36	44.9	0.19	38.8
	Max Value	10.6	5,602	36.8	16.2	1.43	53.2	0.33	46.2
	Mean	7.5	5,103	36.1	15.2	1.41	49.9	0.25	41.9
P14U1	Number of Values	9	9	9	9	9	9	9	9
	Min Value	3.1	4,193	28.2	14.0	1.37	49.9	0.14	35.4
	Max Value	21.0	5,451	38.0	19.1	1.5	56.4	0.33	44.3
	Mean	7.3	5,126	35.3	15.8	1.4	52.9	0.21	41.9
P14U	Number of Values	7	7	7	7	7	7	7	7
	Min Value	3.0	4,846	32.2	14.4	1.36	52.7	0.14	39.4
	Max Value	8.7	5,469	38.9	19.7	1.41	56.4	0.28	44.1
	Mean	4.9	5,204	35.8	17.0	1.38	54.6	0.19	42.3
P14U2	Number of Values	9	9	9	9	9	9	9	9
	Min Value	3.9	4,814	33.7	14.4	1.37	50.9	0.13	39.2
	Max Value	9.9	5,374	38.6	18.7	1.43	56.3	0.26	44.8
	Mean	6.5	5,133	35.9	16.3	1.4	53.6	0.19	41.6
P14L1	Number of Values	4	4	3	4	4	4	4	4
	Min Value	5.5	5,087	34.9	15.5	1.37	52.7	0.15	40.4
	Max Value	7.3	5,302	35.8	17.5	1.41	53.8	0.23	43.8
	Mean	6.3	5,166	35.3	16.4	1.4	53.4	0.2	41.6

Seam		ASH adb %	CV adb	FC adb %	IM adb %	RD adb	TM ar %	TS adb %	VM adb %
P14L	Number of Values	12	12	12	12	12	12	12	12
	Min Value	2.3	4,264	30.3	13.3	1.34	46.7	0.14	35.3
	Max Value	22.2	5,823	37.5	19.3	1.53	57.7	0.25	48.9
	Mean	6.5	5,234	35.1	15.8	1.39	53.9	0.19	42.9
P14L2	Number of Values	4	4	4	4	4	4	4	4
	Min Value	6.2	4,810	34.8	15.8	1.38	52.7	0.19	38.0
	Max Value	9.1	5,211	36.8	17.9	1.42	54.1	0.22	41.1
	Mean	7.3	5,044	35.5	16.9	1.4	53.4	0.21	40.2
P13	Number of Values	2	2	2	2	2	2	2	2
	Min Value	6.1	4,694	34.1	15.9	1.39	53.9	0.22	40.2
	Max Value	12.6	5,259	35.6	16.4	1.44	55.4	0.24	43.0
	Mean	9.4	4,977	34.9	16.1	1.41	54.7	0.23	41.6

7 Resource Model Construction

7.1 Structural Model

After completion of the previously detailed QA/QC processes, the available valid lithological and coal quality data was then imported into the MineScape software (Version 5.15) to generate both a structural model and a coal quality models for each of the five resource areas.

The topographic model for the each deposit was constructed by importing the Minescape topography grid models for each area. These topography models describe both virgin topography.

The lithological data was then modelled to create structural grids. The schema, stored within the Stratmodel module of the MineScape software controls the modelling of seam elements and their structural relationships, grid model cell size, interpolators and other parameters. The details of these parameters stored in the applied schemas used in the structural modelling process are listed in Table 7:1.

Within the modelling schema, all of the stratigraphic intervals were modelled with pinched continuity. This is applied in areas where intervals are missing in a drill hole. In this situation, the modelling algorithm stops the interpolation of the missing interval halfway between the two drill holes between which it ceases to be present.

7.1.1 Structural Model Validation

Structural and thickness contours were generated and inspected to identify any irregularities, bulls-eyes, unexpected discontinuities etc. Cross-sections were also generated to identify any further structures such as faulting and any areas where seams were modelled as being discontinuous due to short drilling. Selected cross-sections from each resource area are shown in Appendix D.

Table 7:1 Model Schema Settings and Parameters

Model Component	Details
Modelling Software	Ventyx MineScape - Stratmodel module
Schema	Wrl_2017
Topography Model	Topo_rigv
Topography Model Cell Size	50 m
Structural Model Cell Size	50 m
Interpolator (thickness)/order	Planar 0
Interpolator (surface)/order	Finite Element Method (FEM)/1
Interpolator (trend)/order	Planar 0
Extrapolation Distance	3000m
Parting Modelled	No
Minimum Ply Thickness	10 cm
Minimum Coal Parting	30 cm (PP) otherwise not defined
Conformable Sequences	Weathered, Fresh
Upper Limit for Seams	Base of Weathering (W)
Control Points	No
Constraint File	No

Model Component	Details
Penetration File	Yes
Model Faults	No
Maximum Strip Ratio	-
Maximum Resource Depth	100 m
Tonnage Calculations	Based on volumes using relative density on an air dried basis

7.2 Coal Quality Model

Coal quality data has been composited on a seam basis. The Inverse distance interpolator was selected for modelling coal quality as it has been shown to perform adequately for most coal quality attributes and it is also less likely to introduce spurious trends into the data. Testing indicated that a power value of two and a search radius of 2500 metres are the most suitable inverse distance interpolation parameters for modelling of the WRL coal deposits. Parameters used for quality modelling are summarized in Table 7:2.

Table 7:2 Quality Model Parameters

Model Component	Details
Coal Quality Data Type	Raw
Model Type	MineScape Table
Interpolator	Inverse distance
Power	2
Search Radius	7000 metres

7.3 Quality Model Validation

After the completion of quality model gridding, selected qualities for selected seams were contoured and contours inspected to ensure that quality models had been gridded correctly. As a second validation measure, average qualities reported during resource reporting for all seams were compared against the average qualities of the input data to ensure consistency between input and output data sets.

8 Coal Resources

8.1 Resource Classification and Prospects for Eventual Economic Extraction

Coal Resources present in the WRL concession have been reported in accordance with the JORC Code, 2012. The JORC Code identifies three levels of confidence in the reporting of resource categories. These categories are briefly explained below.

Measured – "*...That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors to support detailed mine planning and financial evaluation*";

Indicated – *"…That part of a Mineral Resources for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with confidence sufficient to allow for the application of Modifying Factors in sufficient detail to support mine planning and evaluation"; and*

Inferred – *"…That part of a Mineral Resources for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling.".*

For the purpose of coal resource classification according to JORC Code (2012) Code, Salva Mining has considered a drill hole with a coal quality sample intersection and core recovery above 90% over the sampled interval as a valid point of observation.

In terms of Coal Resource classification, Salva Mining is also guided by the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) (The Coal Guidelines) specifically referred to under clause 37 of the JORC Code (2012).

Resource classification is based on an assessment of the variability of critical variables (raw ash% and seam thickness) through statistical analysis and by an assessment of the geological continuity and input data quality.

Consequently Salva Mining has sub-divided Coal Resources within the WRL concession into resource classification categories based on the following spacing's (expressed as a radius of influence around points of observation which is half of the spacing between points of observation):

- Measured radius of influence of 350m;
- Indicated radius of influence of 700m;
- Inferred radius of influence of 1500m.

Resource polygons for the main seams from each resource area are shown in Appendix E.

8.1.1 Assessing Confidence

Several factors outlined in Section 5 of the Coal Guidelines (2014), were considered when assessing confidence in the estimate and classifying the Coal Resource in accordance with the JORC Code (2012). A summary of factors considered is shown below in Table 8:1.

A qualitative review of modelled seam floor elevation and thickness contours, statistical analysis of thickness and coal quality attributes, domaining and general geological setting all show that the seams within the WRL deposit appear to display a relatively high degree of continuity, allowing for a lower level of drilling density for the same level of confidence as compared to a more complex/less continuous coal deposits. The main risk factor in terms of confidence in the resource estimate is considered to be coal quality. There is an estimated 15% overestimation of tonnes due to the use of an air dried density instead of an in-situ density as discussed in section 6.5.

Table 8:1 Criteria considered to assess confidence in the Resource Estimate

Assessing Confidence	Comment	Assessment Summary	Risk Rating (H,M,L)
Critical assessment of local, geographical and geological settings	*In general the coal seams within the WRL deposit are characterised by a high degree of lateral continuity, allowing for confidence in correlation between holes. There is no evidence of major faulting in the tenement.*	High continuity, benign structure.	L
Identifying critical data	*Seam thickness and raw ash are seen as critical data, thickness being the main factor determining coal volume and raw ash being directly related to both relative density and product coal yield.*	Raw ash seen as more variable than thickness and hence determining factor for classification.	M
Data Analysis, error and verification	*Internal standards and procedures used for drilling logging and sampling. Lab uses internal QAQC standards and is ISO 17025 accredited.*	Salva Mining used internal checks to data (histograms, global statistics, scatter plots) during modelling to verify data. Apart from some low core recoveries which were evaluated and found to be a true reflection of the input data and no evidence of coal quality bias resulting from poor core recovery was observed.	L
Domaining	*Raw ash% histograms, floor and thickness contours used to investigate domaining*	Domains adequately addressed by modelling parent and daughter seams where present and	L

Assessing Confidence	Comment	Assessment Summary	Risk Rating (H,M,L)
		assigning coal quality accordingly.	
Statistical Analysis	*Global statistics for thickness and all raw coal quality attributes generated as well as raw ash histograms*	Global statistics was prepared and reviewed. It show values in expected normal ranges. Classification spacings used for this estimate are in line with those used previously by Salva Mining for other Muara Enim coal deposits elsewhere in the South Sumatra Coal basin.	L
Geological Modelling	*3D geological model constructed using Minescape dedicated stratigraphic modelling software*	Geological model appears to be a good representation of the input drill hole intercept data.	L

8.1.2 Eventual Economic Extraction

It is furthermore a requirement of the JORC Code (2012) that the likelihood of eventual economic extraction be considered prior to the classification of coal resources.

The average coal quality attributes of the coal seams considered is sufficient to be marketed as a low CV thermal coal for domestic power generation purposes. Therefore, Salva Mining considers that it is reasonable to define all coal seams within the classification distances discussed above, to a depth of 100m below the topographic surface, as potential open cut coal resources.

8.2 Coal Resource Statement

The Coal Resources which have been estimated, have been classified and reported according to the JORC Code (2012) and the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (2014) as at 31 December 2016 are detailed in Table 8:2.

Table 8:2 Coal Resource Estimate as at 31 December 2016

Resource Classification	Mass (Mt)	TM (arb) (%)	IM (adb) %	Ash (adb) (%)	Volatile Matter (adb) %	Total Sulphur (adb) %	GCV (adb) kcal/kg	Relative Density (adb)
Measured	40	53.3	15.9	5.6	41.8	0.2	5,106	1.38
Indicated	58	51.3	15.3	5.4	40.8	0.2	4,996	1.39
Inferred	85	51.6	15.9	6.4	40.4	0.2	4,997	1.39
TOTAL	183							

Mineral Resources are reported inclusive of the Mineral Reserves

(*Note: individual totals may differ due to rounding, final Inferred Resource rounded to nearest 1 Mt)*

Coal Resource on seam by seam basis is shown in Table 8:3.

Table 8:3 Coal Resource Estimate as at 31 December 2016

Seam	Resource (Mt)			
	Measured	Indicated	Inferred	Total
P17U	0.9	1.5	1.2	3.6
P17	0.5	0.4	0.7	1.6
P17L	0.7	2.5	2.4	5.6
P16	0.8	0.5	1.5	2.8
P15U	0.0	0.9	1.9	2.8
P15	2.7	1.3	0.4	4.4
P15L	0.0	3.4	4.1	7.5
P14U1	8.3	10.6	6.8	25.6
P14U	8.5	20.1	18.1	46.7
P14U2	9.3	8.8	4.7	22.8
P14L1			17.5	17.5
P14L	8.1	7.8	4.6	20.4
P14L2			20.6	20.6
TOTAL	40	58	85	183

Coal Resources are reported inclusive of the Coal Reserves

(*Note: individual totals may differ due to rounding*)

Final Inferred Resource rounded to nearest 1 Mt.

8.3 Comparison with Previous Estimates

The total Coal Resource in current estimate (January 2017) of 183 Mt is similar to the previous estimate reported by Pt Geo Search in May 2016.

The Measured + Indicated Resources of 98 Mt is slightly more than previously reported (95 Mt). This is potential due some differences in model interpretation. Current geological model was constructed in latest Minescape 5.15 verison (for both structure and coal quality) whereas Pt Geo Search model used Surpac software for structure and Minex software for estimating volumes.

Table 8:4 below shows a breakdown of the difference in resource tonnes for the WRL concession between this (Jan 2017) and the previous estimates.

Table 8:4 Coal Resources - Comparison with Previous Estimate

Resource Category	Salva Mining Jan 2017 (Mt)	PT Geo Search May 2016 (Mt)
Measured	40	35
Indicated	58	60
Total M&I	98	95
Inferred	85	89
Total	183	183

9 Reserves Estimation

9.1 Estimation Methodology

Salva Mining prepared the Coal Resource estimate for WRL Concession coal deposit as at 31 Decemeber 2016 which is used as a basis for the Coal Reserve estimate.

The Coal Reserves estimates presented in this report are based on the outcome of pit optimisation results and the Techno-economics study carried out by Salva Mining. The mining schedule for the WRL concession blocks includes a proposed open cut mine with a target coal production of 3 Mtpa from all the pits from the year 3 onwards and expanding to 6 Mtpa from year 16 onwards.

The subject specialist for Coal Reserves considers the proposed mine plan and mining schedule is techno-economically viable and achievable. This has been done by reviewing all the modifying factors, estimating reserves in the pit shell and doing a strategic production schedule and economic model which confirms a positive cash margin using the cost and revenue factors as described below in this report.

9.2 Proposed Mine

The WRL Project is designed as a source to suppying coal to the domestic power plants. Mine is planned to be a 3Mtpa operations with 3 yrs ramp up period.

The purpose of the mine plan was to create a mining sequence that ensures reliable delivery of the coal product to the ROM stockpile. The mine plan scenario has targeted ramping up production rates for 20 years of mining operation based on the direct input from WRL. The annual coal supply was optimised based on the minimum required energy of 2,800 kcal/kg (gar) within the mined Coal Reserve tonnage. This plan had to be accounting for the practical mining constraints to ensure the sufficient working room and the dump capacity to accomodate all waste material mined at each stage plan. Monthly and quarterly fluctuations in waste removal, coal exposure and inventory levels will need to be managed through short term planning process.

Mine is proposed to be expanded to 6 Mtpa operation from Year 16 onwards. Coal is proposed to be sold to the Power Plant on the ROM stockpile uncrushed.

9.3 Proposed Mining Method

Based on the observations made on the characteristic of the WRL coal deposit in previous section, it is assumed that an "open cut, multi seams and low degree dips with a standard truck and excavator in a haul back operational system" will be most appropriate and selected for WRL coal project. This method is well proven and has become a common mining practice in Indonesia.

Initial boxcut will be developed by mining the waste material using relatively small to medium sized (100t operating weight) hydraulic excavators, loaded onto standard rear tipping off-highway trucks then hauled to ex-pit dumps in close proximity to the pits. After sufficient mined out space created, the mined waste will be subsequently dumped in-pit using haulback methodology and the ex-pit dump area is then rehabilitated. Coal mining will be undertaken by small sized (34 – 40t) excavators with flatbladed buckets to ensure the minimum dilution and greater mining recovery.

Given the shallow nature of the deposit, underground mining method is not considered for the purpose of this study, hence the term "Open Cut" Coal Reserve Statement. The contractor is

proposed to be used for carrying out the mining operations over the life of mine. The unit costs assumption used for the Reserve estimate reflect this style of mining.

Alternative mining methods such as continuous miner and in-pit crushing and conveyor systems may have potential application in this project. However, for the purpose of this study, the conservative approach of using conventional truck and excavator system has been proposed.

9.4 Previous Studies

Various studies has been completed at the WRL project including a Pre-feasibility study and a previous Coal Reserve Statement. Table 9:1 outlines the previuous studies completed.

Table 9:1 Previous Studies

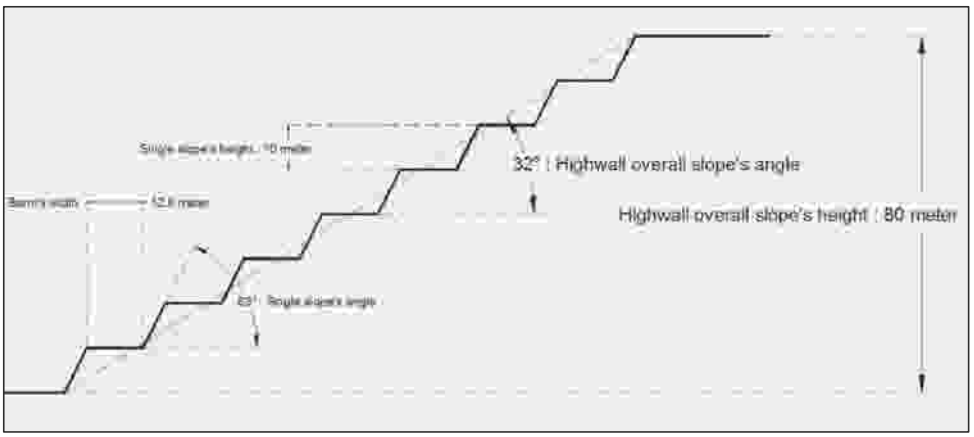
Studies / Factors	Year
Feasibility Study for award of IUPOP	2006
Environmental Impact Study	2010
Topographical Survey Study	2013
Geotechnical Study for Pit Design	2016
Hydrology & Hydro-geological Study	2016
Updated Pre-feasibility Studies	2016
Reserve Estimate	2016

9.4.1 Geotechnical Studies

Hendrawan Agni Wicaksono of PT. Prasetya Abdi Persada (PAP) completed the detailed geotechnical studies for the deposit.

Figure 9:1 and Table 9:2 below describes the summary of the pit and disposal geometry recommendation based on the geotechnical study result, and for more detailed information.

Figure 9:1 Pit Geometry Recommendation, Geotechnical Study



(Hendrawan Agni Wicaksono 2016)

Table 9:2 Disposal Design Parameters

No	Slope's height	Recommeded Angle (Degrees)	Safety Factor	Probability of Failure
1	5m	63.4	3.75	0%
2	10 m	63.4	1.87	0%
3	20 m	34.0	1.5	6.5%
4	30 m	20.0	1.52	2.6%

An adjustment to the original single slope and berm width was made during the Pre-feasibility Study by PAP for anticipating the operational constraints. Table 9:3 summarises the geotechnical parameters that have been used to generate the practical pit design.

Table 9:3 Practical Design Parameters

Design Parameters	WRL North & South Pits
Pit Overall High Wall Slope	30 degrees
Pit Single bench Slope	40 degrees
Bench Height	10 m
Pit High Wall Berm	5 m
Dump Overall Slope Angle	14 degrees
Spoil Swell Factor	20%

9.4.2 Hydrological Studies and Surface Water Management

Mr Hendrawan Agni Wicaksono of PT. Prasetya Abdi Persada completed the detailed Hydrological and geohydrological studies for the deposit.

In that study, rainfall data was analysed on monthly and seasonal basis and wet season at the site was identified to occur between November and April with Medium Intensity (100 mm – 300 mm

per month). Catchment areas were identified across the concession including North and South Pits (Figure 9:2).

Figure 9:2 Catchment Area from Hydrology Study



(Hendrawan Agni Wicaksono 2016)

Based on the hydrological modelling, a total discharge of 300,059 m3/day was identified in the study. (Table 9:4).

Table 9:4 Storm Water Modelling

Design Parameters	Run off Coefficient	Rainfall Intensity (mm/day)	Area (km2)	Total Discharge (m3/day)
N-1	0.2	27	11.56	63,051
N-2a	0.14	27	0.19	738
N-2b	0.14	27	0.17	635
North Pit	0.75	27	2.16	43,726
Entire North Pit			14.08	108,150
S-1	0.28	27	15.43	116,225
S-2a	0.18	27	0.13	638
S-2b	0.18	27	0.11	537
South Pit	0.75	27	3.68	84,443
Entire South Pit			19.35	191,909

Based on the ground water modelling and geo-hydrological studies, Mr Hendrawan Agni Wicaksono of PT. Prasetya Abdi Persada identified that the maximum discharge of 552,709 m3/day is the maximum during the flood event.

Pit water management is of critical importance to the effective operation of the mine. Dewatering will require well constructed pit sumps and efficient drainage from operating areas into the sump. The overall strategy for water management over the life of mine will be to:

1. Minimise surface water entering the pit by:
   - Building dams and drains to divert water from external catchments away from pits; and
   - Profiling dumps so that water is diverted away from the pits.
2. Removing water from excavations by:
   - Constructing a main sump at the deepest point of each pit and draining all in pit water to that sump; and
   - Installing sufficient pumps and pipes of suitable size to pump water from the pit. Two stage pumping will be required in deeper areas in the later years of the mine life.

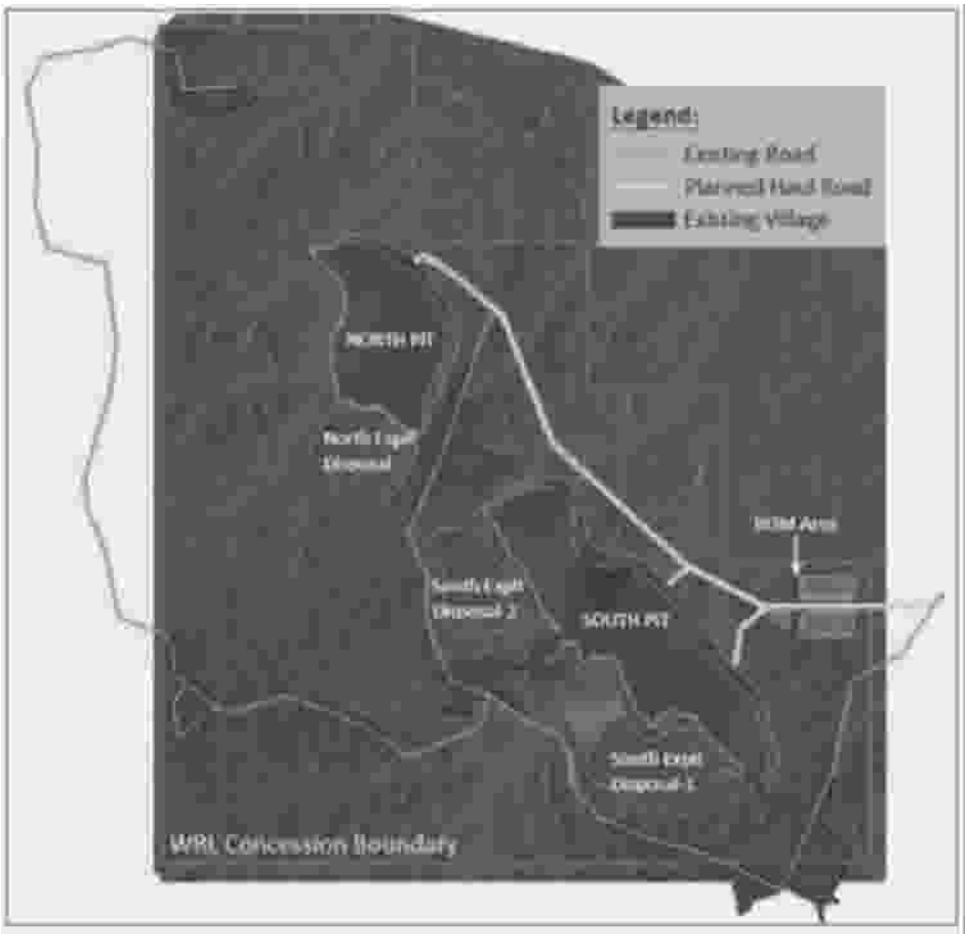
It is planned that the dewatering pumps will be designed to handle the peak dewatering requirements.

9.4.3 Pre-feasibility Study – Mining Fleet, Site Infrastructure & Logistics

Pre-feasibility study was completed by Mr Dwi Prasetya, president Direcxtor of PT Prasetya Abdi Persada. Proposed site infrastructure was studied in detail in that report.

The mining operation is planned to be contractual and thus most of the mine infrastructure would be established by the mining contractor. Figure 9:3 describes the mining layout, including the relative location of the mining infrastructure and facilities to one another.

Figure 9:3 Proposed Mining Infrastructure and Facilities



*(*Dwi Prasetya *2016)*

Following is the general description of the major infrastructures and facilities required to be constructed prior to and during the mining operations.

Mining Fleet

It is proposed to employ an experienced mining contractors to carry out removal of topsoil, overburden and coal. Labour can be sourced locally including some skilled labour for heavy equipment operation.

The mining will be 'free dig' with D8 or equivalent size dozers supporting an excavator fleet by ripping the overburden and preparing it for removal. It is proposed that 80 t class excavators be used for overburden removal and 20-40 t excavators are used for coal mining. 40 t load articulated dump trucks should be used to remove the overburden. Waste, which is mainly claystone, sandstone and siltstone, will initially be stored in out of pit dumps until sufficient space is available for in-pit dumping to back-filling the pits.

It is proposed that coal is hauled to ROM stockpile using 6X4 rigid trucks with 20 t capacity. Haul distances will vary from less than 1 km to a few kilometers as the pit is a laterally extensive strip mine.

Overall batter slope angles used in the design are less than 30o and individual bench slopes up to 37o. Bench heights of 10 m and berm widths of 5 m but can also be varied to coincide with maximizing coal seam recovery and maintaining safe overall batter slope angle. The mining sequence will consider drainage in its design so that working faces can be free draining where ever possible and the need for pumping can be minimised. Table 9:5 exhibits proposed mining fleet.

Table 9:5 Proposed Mining Fleet

Machine Type	Capacity	Potential Item	No. of Units
Excavator	80 t	EC700	3
Excavator	40 t	SK480/ DX500	1
Excavator	20 t	PC200/DX225	2
Bulldozer		D8R	2
Bulldozer		D8E	4
Grader		GD705	1
Compactor		BW216	1
Dump Trucks	20 t	Fuso / Hino	5
Articulated Truck	40 t	A40E	12
Dewatering Pump		CF48	2
Fuel Truck			1
Water Truck			1
Lub truck			1
Lighting Tower			8
Genset	60 KVA		2

Office, Accommodation and Associated Facilities

The facilities are planned to be built in the ROM area and are required to accommodate all employees working on site. The facilities would comprise 5 main zones; a recreation facility, a dining mess, office buildings, a dedicated building for training exercises and a dedicated emergency or first-aid building with supporting ambulance.

Workshops and Stores

These facilities are also proposed to built in the ROM area. A workshop would need to be built and operated by PT WRL together with the mining contractor. The workshop is required for major maintenance of heavy equipment. Appropriate storage would need to be maintained for spare parts and materials on site.

Waste Facilities

These facilities would also be part of the ROM area. A building for the storage of hazardous waste ("Limbah B3") as well as oil products would need to be constructed to handle potential hazardous material on site.

Water Supply

Water supply pipelines would need to be built to supply water to the camp, stockpiles and other infrastructure facilities. The water will be sourced from the river near by or from local water supply dam that exists in the North Block of the WRL concession under mutual agreement with local provider. The water might need treated on the water treatment facility that also needs to be built on site before being supplied to the mine site.

Design of Inpit Ramp Access

Waste and coal haul roads at the mine would be designed and constructed to be three times wider of the largest size haul truck planned to be used on site. It is proposed to use HD465 (Komatsu Brand) or equivalent for this project. This truck has overall width of 5.4 m and typically requires 30 m haul road width (including the ditches and safety berms on each side of the road) for operating safely. The in-pit ramp would be constructed to a maximum gradient of 8%, although 10% is reasonably acceptable for short term ramps or short sections of the ramp.

Pit to ROM Coal Haulage Road

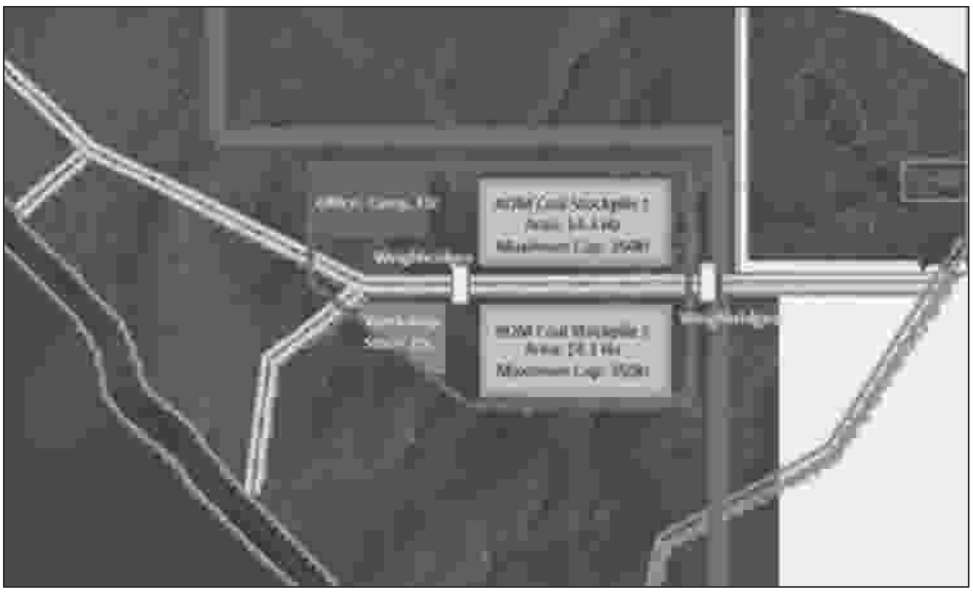
Coal haulage roads would be constructed from pit to the ROM stockpile. The maximum road length is estimated to be 6.9 km from the North Pit to the ROM stockpile location. The construction will be undertaken to the appropriate grades, radius of curvature and formation camber appropriate to the haulage equipment and haulage velocities selected.

The biggest truck proposed to be used for coal hauling operation is P124CB (Scania Brand) tipper trucks. This truck typically requires a haul road of 12 m width in total for operating safely.

ROM Area and Stockpile

The ROM area proposed to be constructed for this project will include coal stockpile, office and accomodation, workshop and stores, waste facilities, water supply and other related facilities. This area is estimated to occupy around 76.3 ha and is located in the eastern corner of southern mining concession. Figure 9:4 exhibits the detailed ROM area proposed for WRL coal project.

Figure 9:4 Proposed ROM Layout



*(*Dwi Prasetya *2016)*

The two coal stockpiles have been designed with maximum capacity of 700 kt or equates to 6 and a half week of coal supply, accounting for the top production level of WRL (5.6 Mtpa). The stockpiles area are planned to be covered to optimize the moisture levels in the coal and maintain the product quality.

Coal will be sold from the stockpile area in an uncrushed form (as mined), hence no crushing facilities planned to be constructed for WRL project. The stockpiles will be the coal selling point where the ownership of the coal transfers from WRL to customer.

Weighbridges are planned to be installed at the entrance to ROM stockpiles to weigh coal trucks coming from the pit and at the exit point of the ROM area. These weighbridge readings will be reconciled and used as the basis for contractor payments calculation and for invoicing the customer.

Coal Logistics

PT WRL project has very simple coal production chain where coal is cleaned and mined at the pit using small sized excavators (combination of PC300 and PC400 classes or equivalent) and hauled by combination of P124CB and CWB520 classes or equivalent (rigid body offhighway) coal trucks to ROM stockpiles. The average haul distance from the coal face to the ROM is approximately 4.6 km over the mine life.

9.5 Modifying Factors

Pre-feasibility studies have been completed to commence mining operations. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being given mining operations approval (IUPOP).

WRL concession is a greenfield project which is proposed to support the coal supply for the power plant. Pre-feasibility study has been carried out for WRL block detailing its mining method, mining strategy, logistic requirement along with the financial modelling. Where an entity is a greenfield project, its Pre-Feasibility or Feasibility level study is required for the whole range of inputs to meet the requirement in Clause 29 for the Ore Reserve to continue that classification. Salva Mining has used modifying factors based on Pre-feasibility study carried out for WRL concession. In Salva's opinion, the modifying factors discussed in detail for WRL block at Pre-Feasibility stage.

Table 9:6 outlines the factors used to run the mine optimisation and estimate the Coal Reserve Tonnage.

Table 9:6 Modifying & Mine Optimisation Factors

Factor	Chosen Criteria
Seam roof & floor coal loss of 0.025 m each	0.05m
Seam roof & floor dilution 0.02 m each	0.04m
Geological & Mining loss including loss in transportation and handling at port	2%
Minimum mining thickness minable coal seam	0.3m
Dilution default density	2.2bcm/t
Dilution default calorific value	500Kcal/kg
Dilution default ash	75%
Overall Highwall and Endwall slope	30 deg
Maximum Pit depth	100m
Minimum Mining width at Pit bottom	50m
Exclusion of Mining lease (CCOW) and offset from Pit crest	50m
Offset from the village/road	150m
Mining, Coal handling and Transport Cost	Available and Used
Coal Selling Price for Break-even Stripping Ratio calculation	US$ 12.30/t ex ROM Stockpile
Government Documents / approvals	Available and Used
Environment Report	Available and Used
Geotechnical Report	Available and Used
Hydrogeology Report	Available & Used

9.6 Notes on Modifying Factors

9.6.1 Mining Factors

General

The mining limits are determined by considering physical limitations, mining parameters, economic factors and general modifying factors as above (See Table 9:6). The mining factors applied to the Coal Resource model for deriving mining quantities were selected based on the use of suitably sized excavators and trucks. The assumptions are that due to the shallow to moderate dip of the coal, mining will need to occur in strips and benches.

The mining factors (such as recovery and dilution) were defined based on the proposed open cut mining method and the coal seam characteristics. The exclusion criteria included the lease boundary, safe buffer zone from the village and road and a minimum working section thickness.

Determination of Open Cut Limits

The geological models that were used as the basis for the estimation of the Reserves are the MineScape geological models prepared by Salva Mining to compute the Resources.

Potential open cut reserves inside different blocks of the Project Area were identified with pit optimisation software utilising the Lerchs Grossman algorithm. By generating the financial value (positive or negative) for each mining block within a deposit and then applying the physical relationship between the blocks, the optimal economic pit can be determined.

This method is widely accepted in the mining industry and is a suitable method for determining economic mining limits in this type of deposit. The optimiser was run across a wide range of coal prices using a standard set of costs that was developed by Salva Mining and based on typical industry costs in similar operations. These costs were adjusted to suit the conditions for this project.

Physical Limits for Optimiser

In addition to the mining and economic constraints, the optimisers were mostly limited by a 3 dimensional shell which was built for each block following either a surface constraint or geological model extent. These constraints are detailed in Table 9:7. This pit shell effectively represented the maximum pit possible in the deposit that was reasonable for the estimation of Coal Reserves.

Table 9:7 Block wise Optimiser Base Pit limits

Block Name	North	South	East	West
North Pit	Indicated Resource Boundary	Village/Road	IUP Lease	Sub-crop
South Pit	Village/Road	Village/Road	Optimised Pit shell	Sub-crop

9.6.2 Permits and Approvals

Salva Mining understands that the permits and approvals with regard to further mining activities in the WRL Coal Concession deposits are in good standing.

9.6.3 Cost and Revenue Factors

General

PT WRL provided a "data sheet" of indicative unit costs and revenues relevant for this project. Salva Mining also reviewed the costs for reasonableness against known current mining costs for similar mining conditions within Indonesia.

Salva Mining did an independent coal marketing study to review the coal prices forecast for reasonableness

An in-house NPV based economic model was developed to show that the project and reserves are "economic". These unit rates were then used to estimate the cost to deliver coal to ROM Stockpile. This allowed a break even strip ratio to be estimated and the rates were also used to calibrate the Optimiser software.

The following points summarise the cost and revenue factors used for the estimate:

- All costs are in US dollars;
- Long term coal price of US$12.30 per tonne (ex mine ROM stoickpile for domestic power plant);
- Royalties of 5% of revenue less any barging and marketing cost;
- Coal mining rate is taken as US$0.75 per tonne;
- Waste mining rate (excluding waste overhaul) has been taken as US$1.75 per bank cubic metre;
- Allowances were made for coal hauling, quality control, stockpile and environmental and rehabilitaion cost which totalled approximately $2.72 per tonne;
- Costs have been allowed along with VAT of 10%;

Unit Costs

The Contractor and Owner unit costs used in the Lerchs Grossman optimiser are detailed in Table 9:8 and Table 9:9. These costs were used to create a series of waste and coal cost grids which were used to generate the optimiser nested pit shells.

Table 9:8 Contractor Unit Rates (Real Terms)

Cost Item	Unit	Rate
Land Clearing	$/ha	1,700
Waste Mining	$/bcm	1.75
Waste Haulage (above 1 km)	$/bcm/km	0.20
Coal Mining	$/t	0.75
Coal Haul to ROM Stockpile	$/t km	0.10

Note: All quoted cost in local currency is adjusted for fuel price and exchange rate

Table 9:9 Variable Owner Unit Costs (Real Terms)

Cost Item	Unit	Rate
Stockpile Management	$/t	0.30
Environmental and Rehabilitation	$/t	0.20
Salary and Wages	$/t	0.10
Local Government Fees	$/t	0.20
Corporate Overheads	$/t	0.25

Royalty was estimated 5% based on the respective sale prices of the coal. A 10% VAT has been applied to all services purchased.

9.6.4 Operating Cost & Capital Expenditure

PT WRL and the previous pre-feasibility study provided the operating costs estimates for mining and other activities including coal hauling, barging and port handling charges, which Salva Mining checked for reasonableness.

Total operating costs per tonne of coal product including royalty for the WRL Project has been estimated as US $8.81 per tonne over the life of the mine. The updated operating cost for the WRL projects has been summarised in Table 9:10.

Table 9:10 Average Unit Operating Cost (Real Terms) over Life of Mine

Operating Cost Elements	US $/t
Land Clearing	0.03
Topsoil Removal	0.45
Waste Mining	4.11
Waste Haulage	0.01
Coal Mining	0.75
Haul to ROM Stockpile	0.60
ROM Coal Handling	0.30
Environmental and Rehabilitation	0.20
Salary and Wages	0.10
Corporate Overheads	0.25
Local Government Fees	0.20
VAT	0.59
Operating Cost Excl. Royalty	7.59
Royalty	0.62
Operating Cost incl. Royalty	8.21

Capital Cost

As PT WRL is engaging contractors for mining operations at WRL concession blocks, it is envisaged that no major capital expenditure shall be incurred towards the mining equipment. But major capital will be required for infrastructure upgrades for initial development.

Salva Mining estimates total capital expenditure of US$ 6.0M which includes a contingency of US$ 0.8M. A contingency of 15% has been applied to the capital cost estimate. These estimated are considered to have an accuracy of ± 15%.

In addition to the expansion capital of US$ 6M, Salva Mining has factored 2.5% of the invested capital as sustaining capital per annum for asset maintenance over the life of mine. While preparing these estimates, Salva Mining has relied on industry benchmarks, its internal database and expertise and internal studies on the WRL concessions.

The Capital Cost estimates and the basis of its estimation are shown in Table 9:11. The cost estimate was prepared at end of Q4 2016 in US dollars ($).

Table 9:11 Capital Cost (Real Terms)

Sr. No.	Particulars	Direct Cost ($M)	Contingency ($M)	Total Cost ($M)
1.1	Land Compensation	2.66	0.40	3.06
1	Land Compensation	2.66	0.40	3.06
2.1	Road From Pit to ROM Stockpile	1.40	0.21	1.61
2.2	Workshop, Office and Laboratory	0.40	0.06	0.46
2.3	Backup Power Generation	0.20	0.03	0.23
2.4	Accommodation Camp	0.10	0.02	0.12
2.5	Fuel Storage	0.25	0.04	0.29
2.6	Water supply and Sewage System	0.10	0.02	0.12
2.7	Communications	0.10	0.02	0.12
2	Mine Infrastructure	2.55	0.38	2.93
	Total Project Capital	5.21	0.78	6.00

Salva Mining has compared these against the industry benchmarks and estimated these to be reasonable.

9.6.5 Processing Factors

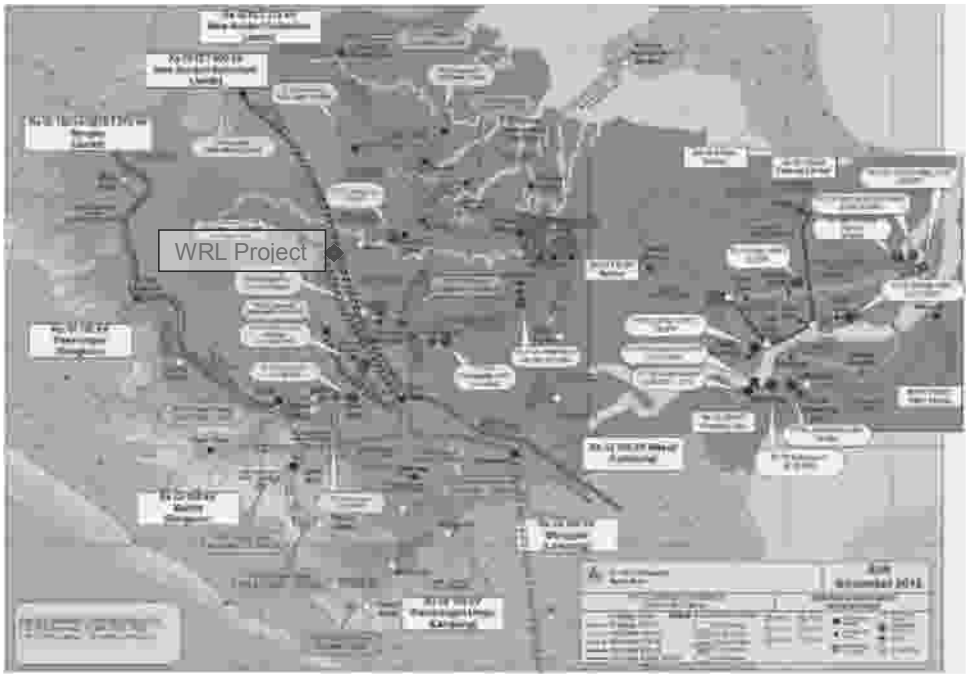
The coal is to be sold unwashed so no processing factors have been applied.

9.6.6 Marketing & Pricing Factors

It is proposed that PT WRL will sell coal from the concession to the power plant on ROM Basis.

Potential for eventual economic extraction of this Coal Resource has been significantly enhanced by the proposed point of sale of the coal from the mine ROM stockpile and the opportunity to sell this coal into the South Sumatra power industry. Figure 9:5 shows the location of the WRL project in relation to the planned coal fired power stations and high voltage transmission lines.

Figure 9:5 Planned Electricity Network, South Sumatra



(Source: PLN 2015)

To estimate the long term price for project coals, Salva Mining has adopted the latest Consensus brokers forecast for the Newcastle thermal coal prices ex Australia (USD/t, FOB) as a benchmark price. These data which was collected by Consensus Economics in December 2016 included forecasts of future prices for coal over a 10 year horizon from each expert. The averge forecast long term price by various Brokers/Analyst that were collected by Concensus Economics in Dec 2016 was $61.50/t (Newcastle Benchmark Coal).

Salva Mining has adopted average of this forecast prices as a reasonable benchmark price. Utilising the historical price differential for this type of Indonesian coal ex ROM Pit over benchmark price, Salva Mining has discounted long term benchmark price to accommodate low rank sub bituminous (higher moisture) coal based on the historical discount and further discounted it for the Ex-Pit location. In Salva Mining's opionion, this WRL Coal should sell at a discount of 70% to 80% to the Newcastle Benchmark. For the purpose of this report, Salva Mining has taken cautionary approach and discounted Newcastle Index by 80% to arrive at the long term price of $12.30/t Ex-ROM Pit.

The following Table 9:12 summarises long term price forecast taken to estimate reserves.

Table 9:12 Long Term Price Estimate

Mining Blocks	GCV, kcal/kg (gar)	Long term Price Ex ROM Stockpile (US $/t)
North	2,800	12.30
South	2,800	12.30

9.6.7 Other Relevant Factors

Limitations to Drilling

41 boreholes located and drilled in 2016 within the WRL Project Area have been used for Resource modelling. 100% of boreholes have been logged using down-hole geophysics. Geophysical data is predominantly comprised of gamma, density and calliper logs and has allowed for accurate seam definition. The Resource is limited to 100 m depth below topography in all the WRL concession coal blocks.

Risks to Future Coal Reserves

Continuation of work will be required to support future update of Reserve Estimates and Mine Plans. These include:

- detailed geotechnical studies to confirm the overall slope angles and other parameters in deeper pit area;
- detailed hydrogeological studies to know the water flow gradient and dewatering arrangement;
- more quality data as well as detailed drilling and updates to the geological model;
- land compensation issues; and
- changes in life of mine schedule, infrastructure constraints, coal transportation issues and due to changes in marketing and costing during the mining operation.

These items may cause the pit shell and mining quantities to change in future Reserve Statements.

Salva Mining is not aware of any other environmental, legal, marketing, social or government factors which may hinder the economic extraction of the Coal Reserves other than those disclosed in this report.

In the opinion of Salva Mining the uncertainties in areas discussed in the report are not sufficiently material to prevent the classification of areas deemed Measured Resources to be areas of Proved Reserves for the purpose of this report. Salva Mining also believes that the uncertainties in each of these areas also not sufficiently material to prevent the classification of areas deemed Indicated Resources to be areas of Probable Reserve.

Key project risk for the WRL Project emanates from the following factors in order of importance.

- Lower long term coal prices or domestic coal demand;
- Higher life of mine operating costs and logistics issues;
- Higher levels of capital costs.

Any downside to these factors will likely have a significant impact on the economic feasibility of this project. However the projected cash flows in the financial analysis currently show a healthy margin.

9.7 Optimisation Result

The optimiser produced a series of nested pit shells using same cost parameters with varying sale price of coal. The method starts with a very low discounted sale price following a high discount factor and moves toward higher sale prices by decreasing the discount on sale price. It estimates the net margin by subtracting the total cost from the revenue within a particular shell at a particular discount factor using the cost-revenue parameters and the physical quantities within the pit shell. As the method progresses, the incremental margin per tonne of coal slowly drops down to zero at

"zero" discount factor and then goes negative as the pit shells go deeper following higher sale prices. As a result the cumulative margin slowly rises up to a maximum level at "zero" discount factor and then starts dropping off. Thus the pit shell (OPT000) which represents the "zero" discount factor is called the optimum pit shell as any smaller or bigger shell will have a lower cumulative margin ("value"). The goal in this process is intended to have economic pit sensitivity.

9.7.1 Selection of Pit Shell

PT WRL is proposing to mine 3 Mtpa of coal from WRL coal concession blocks expanding to 6 Mtpa from Yr 16 onwards, and as such would need around 65-70Mt of mineable ROM coal to achieve this target for the 20 years of mine operation. An economic model was prepared for the mining operation the WRL coal concessions to determine the project breakeven or incremental stripping ratio. The pit optimisation results were examined and pit shells selected where the incremental stripping ratios were less than or equal to break even strip ratio determined at a point where the costs for mining and handling the coal equalled the revenue generated by the coal.

Break Even Stripping Ratio

Table 9:13 summarises the calculation of the Break Even Stripping Ratio for WRL Blocks. The methodology adopted involves taking the cost to mine a tonne of coal and adding all the costs associated with getting the coal to the point of sale.

Table 9:13 Break-even Stripping Ratio (BESR)

	WPL
Coal Price, US$/t, Ex Mine ROM Stockpile	$12.30
Royalty, US $/t	$0.62
Overheads, US $/t	$2.20
Offsite Cost, US $/t	$0.30
Coal Mining, US $/t	$0.75
Waste Mining (US$/bcm)	$1.75
Break Even Strip Ratio	4.5

For the purpose of reserve estimation, total moisture was considered to be equal to in-situ moisture for determination of in-situ relative density as in-situ moisture values were not available. The in-situ density of the coal has been estimated using the Preston-Sanders method to account for the difference between air-dried density and in-situ density. The formula and inputs were as follows:

$$RD2 = RD1 \times (100 - M1) / (100 + RD1 \times (M2 - M1) - M2)$$

Where

- RD2 = In-situ Relative Density (arb)
- RD1 = Relative density (adb)
- M1 = Inherent Moisture (adb)
- M2 = Total Moisture (arb)

It should be noted that while the total moisture from laboratory measurements may not necessarily equal the in-situ moisture, this is considered to be a best estimate given the limited amount of data.

Salva Mining has assumed that no moisture reduction takes place for the determination of product quality.

9.7.2 Coal Product Quality

As previously stated, Salva Mining have assumed no moisture change in the product coal chain. Therefore it is assumed that the final product will have the same quality of ROM coal which is summarised in the Table 9:14 below.

Table 9:14 Product Coal Quality

Block	RD insitu t/m3	TM arb %	IM adb %	Ash adb %	CV (GAR) Kcal/Kg	TS adb %
North	1.19	51.16	15.58	5.90	2,912	0.20
South	1.18	54.54	16.31	5.39	2,834	0.21
Total	1.18	53.29	16.04	5.57	2,863	0.20

9.8 Final Pit Design

For the purposes of this report, Salva Mining has limited the pit depth to the limit of exploration drilling within the limit applied to the Resource estimates. Other factors considered in the final optimum pit designs included:

- The location and proximity of coal to exploration data;
- Proximity to the concession boundary;
- Out of pit dumping room;
- Geotechnical parameters; and
- Surface water management considerations.

The final pit designs closely followed the selected pit shell in most locations (Figure 9:6).

9.8.1 Cut-off Parameters and Pit Limit

Overall low-wall slopes as per the basal seam dip, endwall slopes and highwall slopes for the final pit design were considered as per Table 9:15. The slope parameters are based on the geotechnical study carried out for Kusan block.

Table 9:15 Pit Design Parameters for WRL blocks

Pit Design Parameters	North	South
Overall Highwall Slope	30 deg up to 100m depth	30 deg up to 100m depth
Bench Slope	40 deg	40 deg
Bench Height	10 m	10 m
Highwall berm	5 m	5 m
Low wall slope	5-7 deg	5-10 deg
Ramp Width	30 m	30 m
Maximum Ramp Grade	8-10%	8-10%

9.8.2 Pit Designs

The coal seam distribution within the WRL Concession deposits resulted in the Optimiser identifying several pits with the different basal seams. The pits were subjected to adjustments to form a practical pit design, which lead to the exclusion of the minor narrow pit shells and the resultant formation of Mineable Pit Shells, which formed the basis of the subsequent reserves estimate (Figure 9:6).

Pits for various blocks have been designed within the limits as defined by the pit optimisation analysis. These limits are rationalised to ensure access between floor benches and walls were straightened to generate mineable pits.

Figure 9:6 Pit Selection – WRL Block



Both pits have been designed such that low walls commenced at the subcrops and followed the coal floors. The overall highwall batter angle is 30 degrees as the ultimate pit depth ranges from a little more than 60 m to 100 m. This was done in accordance with the geotechnical study which was completed in May 2016.

Optimised Pit Shell

The optimised pitshells for WRL blocks as delineated in the final pit design do contain Inferred Resources which are excluded from the Coal Reserves reported for the WRL concession. Under the JORC Code, Inferred Resources cannot be converted to Reserves due to poor confidence in structural continuity and quality variables. Insitu quantities and mine scheduled tonnes within optimized pitshell along with Reserves are shown in Table 9:16.

Table 9:16 Insitu & Scheduled Quantities & Reserves, WRL Concession

Concession	Insitu			Mine Scheduled Tonnes within Optimised Pit shell			Coal Reserves Mt
	Waste Mbcm	Coal Mt	SR bcm/t	Waste Mbcm	Coal Mt	SR bcm/t	
North Pit	55	27	2.01	58	26	2.23	25.8
South Pit	102	48	2.10	107	44	2.42	44.1
Total	157	76	2.07	164	70	2.35	69.9

The ROM coal quantities within the Mineable Pit Shells were then tested so that only Measured and Indicated Coal Resources were classified as Coal Reserves. Coal Reserves within the seams having Measured Resources are reported as Proved Reserves whereas seams having Indicated Resources are reported as Probable Reserves. The final pit designs and associated cross sections for estimating Coal Reserves for WRL Coal concession deposits are shown on Figure 9:7 to Figure 9:10.

9.8.3 Mining Schedule

A life of mine plan was plan was completed based on the final pit design. This was done to ensure that the proposed mining method would be practical and achievable and that the proposed dumping strategy would be able to contain the waste mined in the final pit design. This provides a check on the reasonableness of the assumed waste mining costs and estimates the average waste haul per period.

The final pit designs and representative cross section of mining blocks at WRL concessions have been shown from Figure 9:7 to 9:10.

Figure 9:7 Final Pit Design

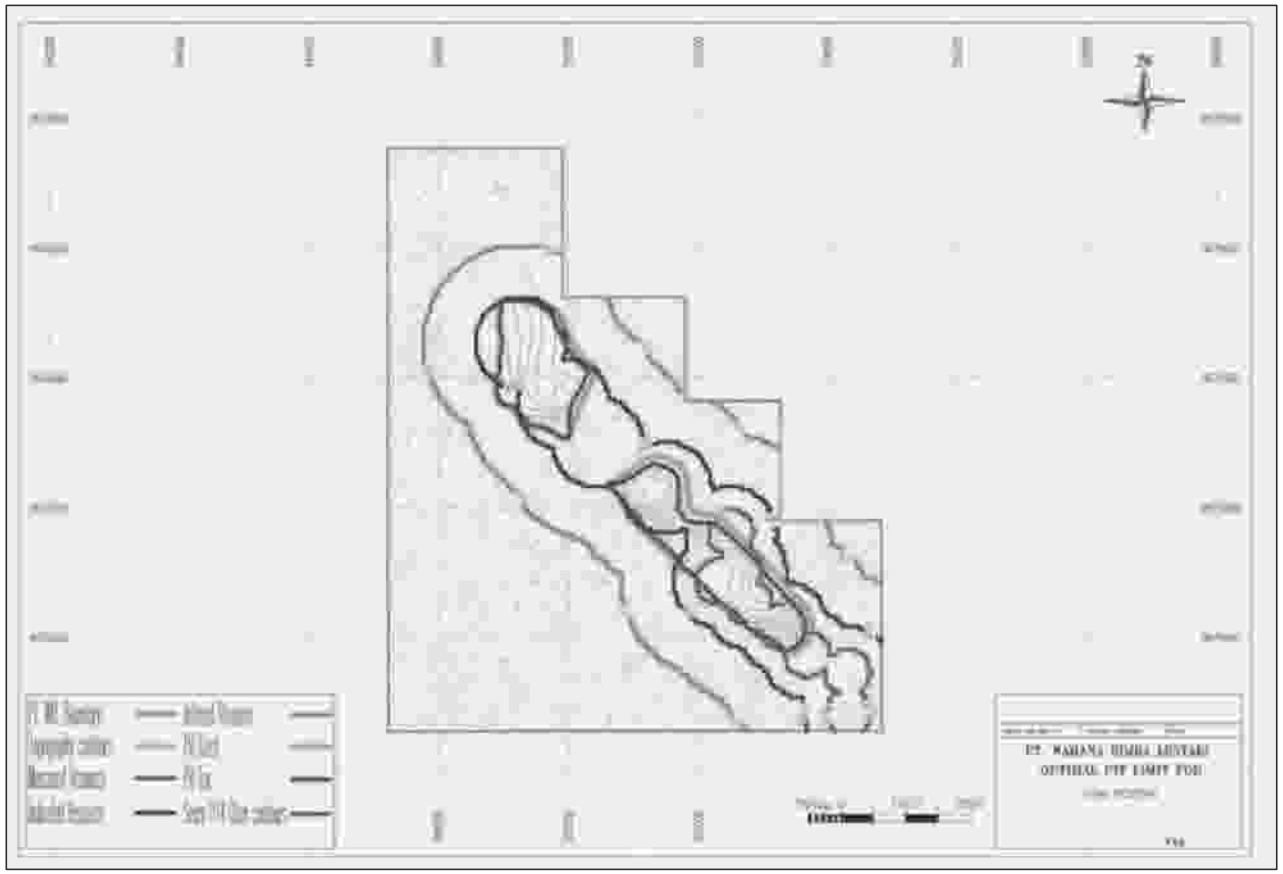


Figure 9:8 Representative Cross Section AA

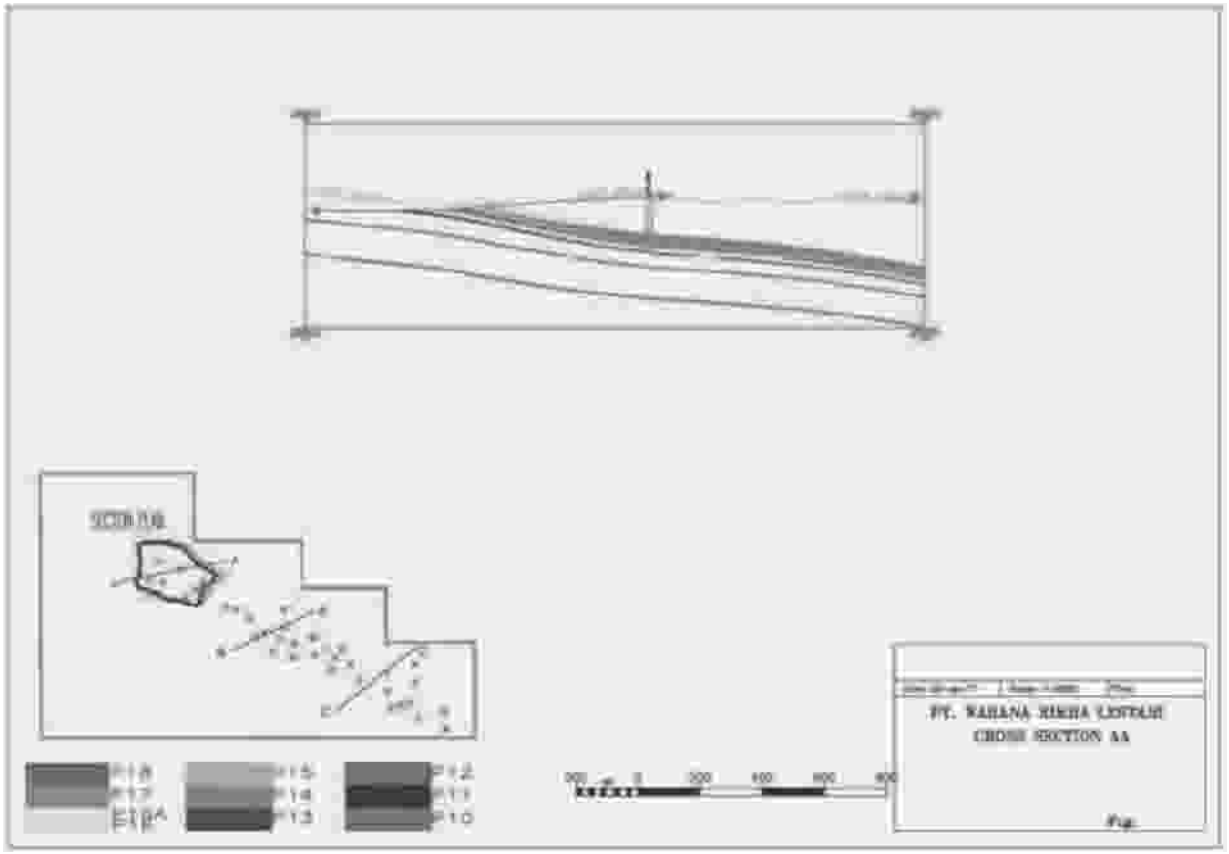


Figure 9:9 Representative Cross Section BB

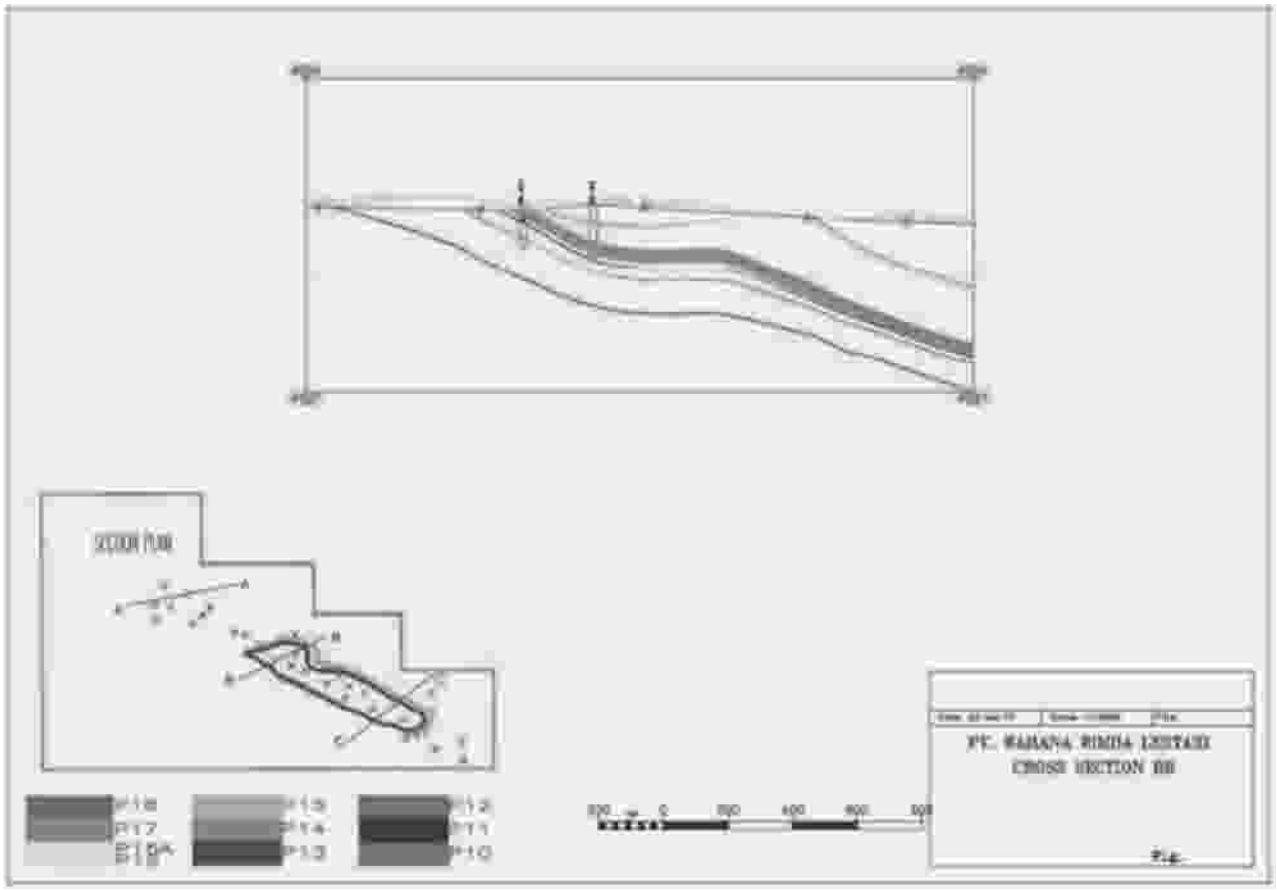
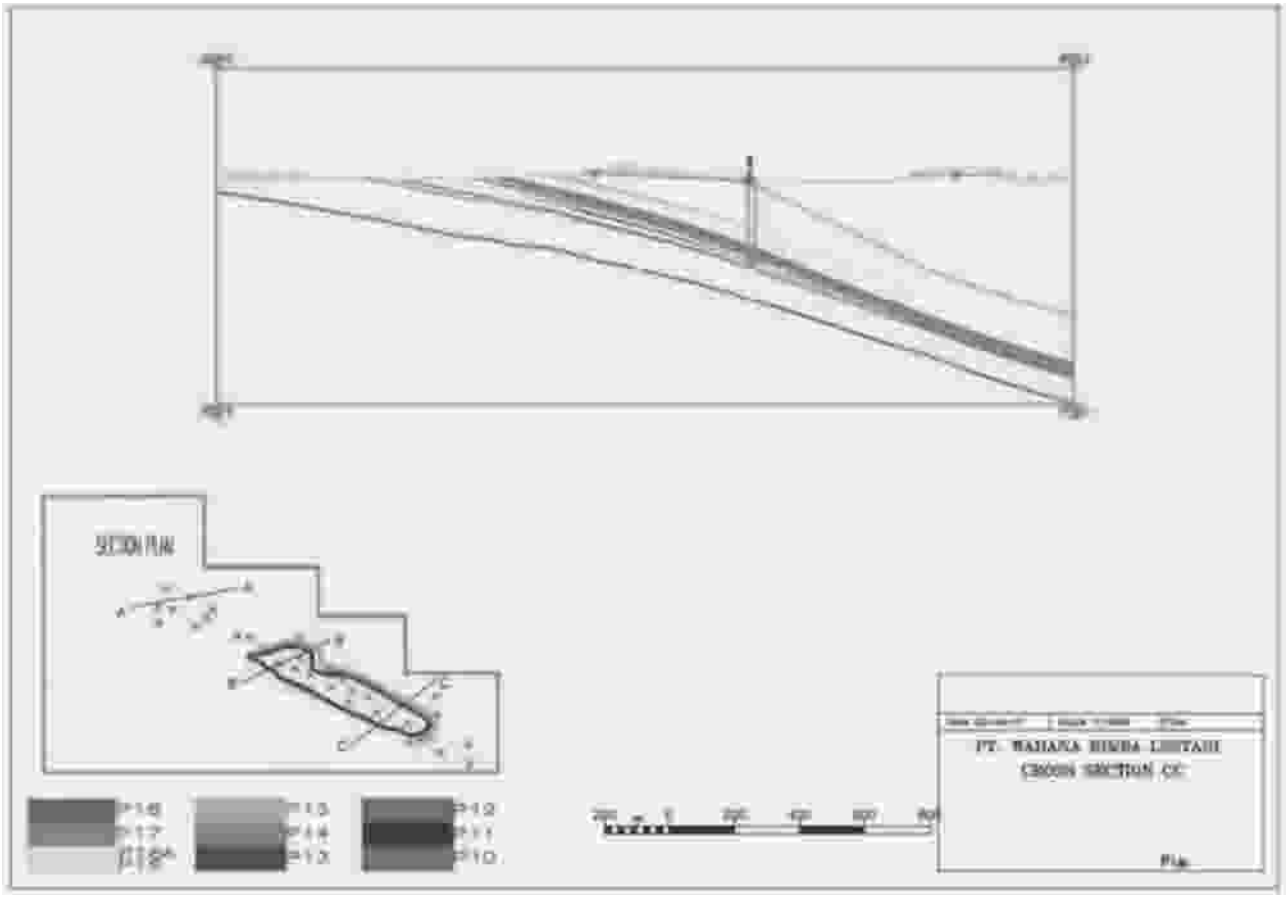


Figure 9:10 Representative Cross Section CC



9.9 Audits and Reviews

Checks were done to validate the Minex Coal Resources to Coal Reserves estimation by repeating it manually in an Excel spread sheet. Other validation work included estimating the total volume of coal and waste in the pit shells using the separate industry standard computer programs MineScape. As MineScape structure and quality grids were imported into Minex for optimisation work, volume and area checks were also carried out in Minex within the pit shells.

The difference between the Proved and Probable Reserves with respect to Measured and Indicated Resources respectively is explained by the following:

- The Measured and Indicated Resource polygons extend beyond the Mineable Pit Shells;
- There are some Inferred tonnes in the pit shell which cannot be counted as Coal Reserves; and
- There are geological and mining losses and dilution gains in the coal reserve estimation.

9.10 Reserves Classification

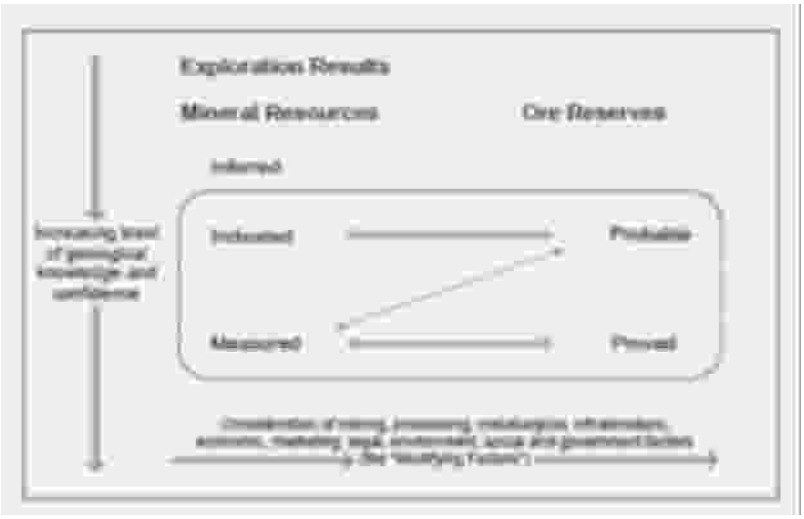
Under the JORC Code as shown below only Measured and Indicated Coal Resources can be considered for conversion to Coal Reserves after consideration of the "Modifying Factors" including mining, processing, economic, environmental, and social and government factors.

To convert Resources to Reserves it must be demonstrated that extraction could be justified after applying reasonable investment assumptions. The highest confidence level establishes Proved Reserves from Measured Resources and a lesser confidence level establishes Probable Reserves from Indicated Resources. A level of uncertainty in any one or more of the Modifying Factors may result in Measured Resources converting to Probable Reserves depending on materiality. A high level of uncertainty in any one or more of the Modifying Factors may preclude the conversion of the affected Resources to Reserves.

This classification is also consistent with the level of detail in the mine planning completed for WRL Coal concession deposits. Inferred Coal Resources in the mineable pit shell have been excluded from the Reserve Statement.

In the opinion of Salva Mining, the uncertainties in most of these are not sufficiently material to prevent the classifications of areas deemed Measured Resources to be areas of Proved Reserves and areas deemed Indicated Resources to be the areas of Probable Reserves.

Table 9:17 General relationships between Mineral Resources & Ore Reserves



Source: JORC Code 2012

9.11 Statement of Coal Reserves

The Statement of Coal Reserves has been prepared in accordance with the 2012 Edition of the JORC Code. Total ROM Coal Reserves for PT Wahana Rimba Lestari coal deposit ("WRL") are summarised in Table 9:18 as of 31 December 2016. ROM Coal Reserves are same as total Marketable Coal Reserves.

Table 9:18 WRL Coal Concession - Coal Reserves as at 31 December 2016

WRL Pits	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD Insitu	Ash adb%	IM adb%	TM ar%	CV (gar) Kcal/kg	TS adb%
North Pit	3.9	21.9	25.8	1.19	5.9	15.6	51.2	2,912	0.20
South Pit	20.0	24.0	44.1	1.18	5.4	16.3	54.5	2,834	0.21
WRL	**23.9**	**45.9**	**69.9**	**1.18**	**5.6**	**16.0**	**53.3**	**2,863**	**0.20**

(*Note: individual totals may differ due to rounding*)

9.12 Seam by Seam Coal Reserve

Total ROM Coal Reserves for each of WRL coal concession is reported by seam and is presented in Table 9:19 to 9:21.

Table 9:19 Coal Reserves – North Pit (Seam by Seam) as at 31 December 2016

Seams	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD Insitu	Ash adb%	IM adb%	TM ar%	CV (gar) Kcal/kg	TS adb%
P16	0.7	0.3	1.0	1.19	3.18	15.18	49.53	3,263	0.31
P15U	-	0.7	0.7	1.20	5.20	15.74	49.50	3,173	0.17
P15	-	-	-	1.19	8.80	15.84	54.42	2,673	0.26
P15L	-	2.6	2.6	1.20	5.16	15.21	50.00	3,141	0.20
P14U1	1.7	0.4	2.1	1.19	5.83	15.59	51.28	3,065	0.17
P14U2	1.6	4.1	5.7	1.20	6.93	15.85	51.80	2,972	0.17
P14U	-	10.1	10.1	1.17	4.71	17.12	54.46	2,864	0.17
P14L	-	3.7	3.7	1.19	7.12	15.88	52.90	2,912	0.20
Total	**3.9**	**21.9**	**25.8**	**1.19**	**5.90**	**15.58**	**51.16**	**2,912**	**0.20**

(*Note: individual totals may differ due to rounding*)

Table 9:20 Coal Reserves – South Pit (Seam by Seam) as at 31 December 2016

Seams	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD Insitu	Ash adb%	IM adb%	TM ar%	CV (gar), Kcal/kg	TS adb%
P17U	0.2	0.0	0.2	1.17	4.24	16.23	54.80	2,879	0.21
P17	0.1	-	0.1	1.15	8.40	17.53	57.29	2,568	0.30
P17L	0.4	0.0	0.5	1.15	8.52	18.11	57.31	2,562	0.29
P16	0.3	0.1	0.4	1.19	3.18	15.19	49.50	3,265	0.31
P15U	-	-	-	1.20	5.19	15.73	49.47	3,175	0.17
P15	2.5	2.8	5.3	1.19	8.76	15.84	54.42	2,674	0.26
P15L	-	-	-	1.20	5.16	15.20	50.01	3,141	0.20
P14U1	2.7	4.1	6.8	1.18	5.37	16.09	54.91	2,795	0.23
P14U2	7.3	3.7	10.9	1.17	5.09	15.81	55.56	2,773	0.19
P14U	3.1	10.0	13.1	1.17	4.70	16.96	54.44	2,865	0.18
P14L	3.5	3.2	6.7	1.17	4.83	15.71	54.44	2,921	0.19
Total	**20.0**	**24.0**	**44.1**	**1.18**	**5.39**	**16.31**	**54.54**	**2,834**	**0.21**

(*Note: individual totals may differ due to rounding*)

Table 9:21 Coal Reserves – PT WRL (Seam by Seam) as at 31 December 2016

Seams	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD, Insitu	Ash, adb%	IM adb%	TM ar%	CV(gar) Kcal/kg	TS adb%
P17U	0.2	0.0	0.2	1.17	4.24	16.23	54.80	2,879	0.21
P17	0.1	-	0.1	1.15	8.40	17.53	57.29	2,568	0.30
P17L	0.4	0.0	0.5	1.15	8.52	18.11	57.31	2,562	0.29
P16	0.9	0.5	1.4	1.19	3.18	15.18	49.52	3,264	0.31
P15U	-	0.7	0.7	1.20	5.20	15.74	49.50	3,173	0.17
P15	2.5	2.8	5.3	1.19	8.76	15.84	54.42	2,674	0.26
P15L	-	2.6	2.6	1.20	5.16	15.21	50.00	3,141	0.20
P14U1	4.3	4.6	8.9	1.18	5.48	15.97	54.05	2,859	0.22
P14U2	8.9	7.8	16.7	1.18	5.72	15.82	54.27	2,841	0.18
P14U	3.1	20.2	23.3	1.17	4.70	17.03	54.45	2,864	0.18
P14L	3.5	6.9	10.4	1.18	5.64	15.77	53.89	2,918	0.19
Total	**23.9**	**45.9**	**69.9**	**1.18**	**5.57**	**16.04**	**53.29**	**2,863**	**0.20**

10 JORC Table 1

This Coal Reserve Report has been carried out in recognition of the 2012 JORC Code published by the Joint Ore Reserves Committee ("JORC") of the Australasian Institute of Mining and Metallurgy, the AIG and the Minerals Council of Australia in 2012. Under the report guidelines all geological and other relevant factors for this deposit are considered in sufficient detail to serve as a guide to on-going development and mining.

In the context of complying with the Principles of the Code, Table 1 of the JORC code (Appendix B) has been used as a checklist by Salva Mining in the preparation of this report and any comments made on the relevant sections of Table 1 have been provided on an 'if not, why not' basis. This has been done to ensure that it is clear to an investor whether items have been considered and deemed of low consequence or have yet to be addressed or resolved.

The order and grouping of criteria in Table 1 reflects the normal systematic approach to exploration and evaluation. Relevance and Materiality are the overriding principles which determine what information should be publicly reported and Salva Mining has attempted to provide sufficient comment on all matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. It is important to note that the relative importance of the criteria will vary with the particular project and the legal and economic conditions pertaining at the time of determination.

In some cases, it may be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision for the company issuing the Public Report, and such a decision should be made in accordance with any relevant corporation regulations in that jurisdiction.

In cases where commercially sensitive information is excluded from a Public Report, the report should provide summary information (for example the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for the purpose of informing investors or potential investors and their advisers.

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PT Prasetya Abdi Persada, "Mining Preliminary Feasibility study of Pt Wahana Rimba Lestari Coal Project final report", May 2016; and

PT. Geo Search, "Independent Resource & Reserve Report, PT Wahana Rimba Lestari", 16 May 2016.

Appendix A: CVs

Person	Role
Manish Garg (Director)	
Qualification	B. Eng. (Hons), MAppFin
Prof. Membership	MAusIMM; GAICD
Contribution	Overall Supervision, Economic Assessment (VALMIN 2015)
Experience	Manish has more than 25 years' experience in mining Industry. Manish have worked for mining majors including Vedanta, Pasminco, WMC Resources, Oceanagold, BHP Billiton - Illawarra Coal and Rio Tinto Coal. Manish has been in consulting roles for past 5 years predominately focusing on due diligence, valuations and M&A area. A trusted advisor, Manish has qualifications and wide experience in delivering due diligences, feasibility studies and project valuations for banks, financial investors and mining companies on global projects, some of these deals are valued at over US$5 billion.
Grenville Davies (Principal Consultant - Geology)	
Qualification	B. Sc. (Geology)
Prof. Membership	MAusIMM
Contribution	Geology, Resource (JORC 2012)
Experience	Grenville has more than 35 years of experience in most aspects of coal geology; including exploration, geological modelling, resource estimation, open cut and underground mine geology. He has worked for two of the major Australian software houses responsible for developing both Minex and Minescape as well as working for mining majors like BHP Billiton and consulting to major mining companies for both geological modelling. As a consultant he has worked on audits and due diligence for companies within Australia and overseas. He has strong expertise in data management, QA/QC and interpretation; reviews/audits of data sets, models and resource estimates.
Sunil Kumar (Principal Consultant - Mining)	
Qualification	B. Engg. (Mining)
Prof. Membership	MAusIMM
Contribution	Mine Scheduling, Reserve (JORC 2012)
Experience	Sunil is a mining engineer with 25 years' experience in the mining industry across operations and consulting. His career spans 4 years in working in mining operations and about 21 years as a mining consultant primarily in the mine planning & design role which included estimation of coal reserves, DFS/FS, due diligence studies, techno-commercial evaluations and technical inputs for mining contracts. Prior to joining Salva Mining, Sunil was working as Principal Mining Engineer at Xstrata Coal. To date Sunil has worked on over 25 coal projects around the world, inclusive of thermal and coking coal projects in Australia, as well as in major coalfields in India, Indonesia, Mongolia and Mozambique.

Appendix B: SGX Mainboard Appendix 7.5

Cross-referenced from Rules 705(7), 1207(21) and Practice Note 6.3

Summary of Mineral Reserves and Resources

Name of Asset / Country: PT WRL / Indonesia

Category	Mineral Type	Gross (100% Project)		Net Attributable to GEAR**		Remarks
		Tonnes (millions)	Grade	Tonnes (millions)	Grade	
Reserves						
Proved	Coal	23.9	Subbituminous B	16.7	Subbituminous B	
Probable	Coal	45.9	Subbituminous B	32.1	Subbituminous B	
Total	Coal	69.9	Subbituminous B	48.9	Subbituminous B	
Resources*						
Measured	Coal	40	Subbituminous B	28	Subbituminous B	
Indicated	Coal	58	Subbituminous B	41	Subbituminous B	
Inferred	Coal	85	Subbituminous B	59	Subbituminous B	
Total	Coal	183	Subbituminous B	128	Subbituminous B	

** Mineral Resources are reported inclusive of the Mineral Reserves.*

*** GEAR holds 69.9998% of PT WRL directly & Indirectly.*

Appendix C: JORC Table 1

Criteria	Explanation	Comment
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips etc.) and measures taken to ensure sample representivity. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Chip samples were collected at every 1m for lithology logging. Sampled all cored coal, sampled separately any bands, and taken 10cm of roof and floor for non-coal samples.
Drilling techniques	Drill type (e.g.. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka etc.) and details (e.g.. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Drilled pilot hole to ascertain coal seams and then drilled a cored drill hole.
Drill sample recovery	Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	After the completion of each core run, core loss is determined by the on-site geologist and recorded in the drill hole completion sheet. If recovery is found to be less than 90% within a coal seam intersection, the hole is re-drilled in order to re-sample this seam with greater than 90% core recovery. All samples with less than 90% core recovery over the width of the seam intersection were excluded from the coal quality database. Followed drilling SOP's for loose and carbonaceous formations to achieve full sample recovery.
Logging	Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography. The total length and percentage of the relevant intersections logged.	Detailed logging of chips and core. Core photographs were taken.

Criteria	Explanation	Comment
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected. Whether sample sizes are appropriate to the grainsize of the material being sampled.	No sub-sampling of the core
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	PT Geoservices laboratories are accredited to ISO 17025 standards. Coal quality laboratory adheres to internal QAQC and inter-laboratory QAQC checks. Australian Standards have been used for RD and American Society for testing and materials (ASTM) methods have been used for all other quality variables. Geophysical traces were observed to be generally of good quality.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Coal quality sampling undertaken by PT. WRL No twin hole hole sampling was used, only pilot holes with partial coring zones where coal seam depth was predicted. Checked for agreement of seam intersection depths and in most of the cases there was good agreement.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.	Borehole collars have been surveyed using standard total station techniques employed by the survey contractors. PT. WRL survey staff has validated surveys. The surveyed borehole locations for WRL match well with topographic data. The topography was generated by PT Airborne informatics across WRL project area using LIDAR remote sensing data.
Data spacing and Distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Data spacing sufficient to establish continuity in both thickness and coal quality. Data sets include topography and base of weathering as well as seam structure and coal quality. Ply sampling methodology use. Sample compositing has been applied.
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Ply by Ply sampling used therefore orientation of sampling not seen to introduce bias as all drilling is vertical.

Criteria	Explanation	Comment
geological structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample Security	The measures taken to ensure sample security.	Proper measures for sample security was taken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	PT Geo Search conducted a review of the drill hole database in 2016 for historical data set and found it to be satisfactory. Standard database checks also performed by Salva Mining as outlined on Section 5.4.4 prior to resource modelling and found it to be satisfactory.
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenure are secured and currently available. .
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No exploration by other parties.
Geology	Deposit type, geological setting and style of mineralisation.	See Section 4 of this Report.
Drill hole	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	This report pertains to resource estimation not exploration results. As such the details of the drill holes used in the estimate are too numerous to list in this Table.

Criteria	Explanation	Comment
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	All samples have been composited over full seam thickness and reported using Minescape modelling software. No metal equivalents used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Ply sampling methodology prevents samples from crossing ply boundaries. Therefore, orientation of sampling not seen to introduce bias as all drilling is vertical and seams mostly gently dipping.
Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.	See figures in the Report and Appendices.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.	No reporting of exploration results.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Geotechnical and Hydrogeological aspects to the IUP area will help find the best mine plan and design options.
Further work	The nature and scale of planned further work (e.g.. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further work will be necessary to improve the confidence in the continuity of both seam thickness and key coal quality attributes. In addition to this information the insitu moisture content of the seams needs to be collected in order to allow for a Preston Sanders conversion of air dried density to insitu density. Further work will be necessary to improve the confidence in the coal quality estimate if Indicated and Inferred resources are present in areas planned for mining. No proposed exploration plan has been proposed in this report.

Criteria	Explanation	Comment
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	The database for WRL block is considered of an acceptable standard to report a Coal Resource. Drill hole data used to construct Minescape model. Checks against original down hole geophysics (las) files used to verify data during modelling.
Site Visits	Site Visits undertaken by the Competent Person and the outcome of these visits. If no site visits have been undertaken, indicate why this is the case	Geological site visit was not conducted since the geology had been well documented by previous consultants. Salva Mining's geologist are well versed in the local & regional geology and has reviewed and discussed the available geological data in company's office in Jakarta.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	High degree of confidence in seam picks made using down hole geophysical data. The WRL geological model created by Salva Mining are considered to accurately represent the deposits. No major faults have been reported within the tenement concerned. Current Minescape model tonnes agree with previous model developed by PT. Geo Search to within 5% error margin range.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	See figures in the Report and Appendices.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping.	Planar interpolator used for thickness and trend. FEM interpolator used for surface elevation. Inverse distance squared used for coal quality throughout. Based on experienced gained in the modelling of over 40 coal deposits around the world, inverse distance is the most appropriate for coal quality. Grid cell size of 50 m for the topographic model and for the structural model. Table 7:1 contains additional model construction parameters. Visual validation of all model grids performed. Sulphur is below 1% on average for all seams.

Criteria	Explanation	Comment
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All Resource tonnages estimated on air dried basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The coal resources contained in this report are confined within the concession boundary. The resources were limited to 100m below topography. A minimum ply thickness of 30cm and maximum thickness of 30cm was used for coal partings.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	The WRL block is proposed to be mined as open pit excavations by truck and shovel method by contractors.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	N/A in situ air dried tonnes quoted.
Environmental	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Salva Mining is not aware of any environmental factors that may impact on eventual economic extraction.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	See discussion on density with regard to moisture basis.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. Whether the result appropriately reflects the Competent Person(s)' view of the deposit.	Classification distances based on an assessment of the variability of critical variables through statistical analysis and by an assessment of the degree of geological complexity. Classification radii for the three resource categories are: Measured: 350m Indicated: 700m

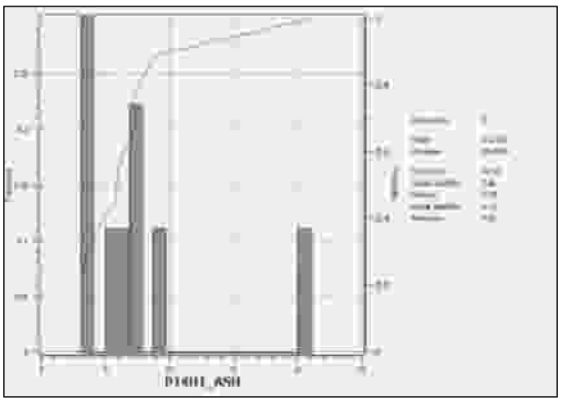
Criteria	Explanation	Comment
		Inferred: 1500m
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Check between Minescape and surpac model shows high agreement.
Discussion of relative accuracy/confidence	Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Spacing ranges for the three resource categories are considered to adequately reflect the degree of confidence in the underlying estimate on a global basis. Local variation to estimated values may arise and will be addressed by adequate grade control procedures during mining operations.
Mineral Resource Estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Basis of the estimates is "WRL JORC Resource Statement as at 31 December 2016. Coal resources is inclusive of Coal reserves
Site Visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case.	Site visit was not conducted since the geology and mining factors had been well documented by previous consultants. Salva Mining's consultants are well versed in the localised mining settings and has reviewed and discussed the available data in company's office in Jakarta.
Study Status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	Pre-Feasibility Study for WRL has been carried out by Pt Prasetya Abdi Persada (PAP) in May 2016. The PFS study has dealt in detail with mining method, geo-technical investigations, hydrology & hydro-geological, logistics and economical issues for the WRL pits.Environmental Study (AMDAL) has been completed in 2010.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied	Refer Table 9:1 – Modifying factors for pit optimisation and Table 9:12, Break even Stripping Ratio analysis.

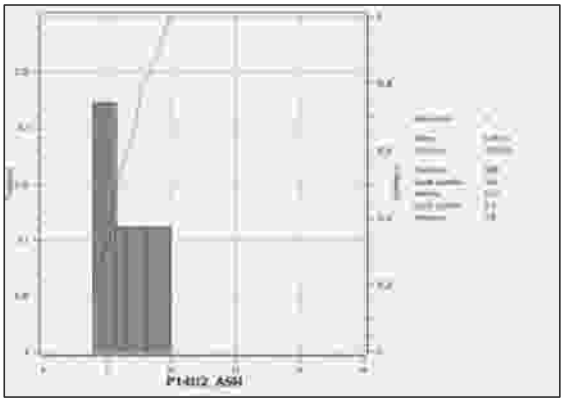
Criteria	Explanation	Comment
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.	Refer Table 9:1 Modifying Factors and Pit Optimisation Parameters and Section 9:3 on Notes on Modifying Factors. Pre-feasibility studies have been completed for WRL concession in May 2016. These studies were accepted as part of the AMDAL approval process from the Govt. of Indonesia prior to being given mining operations approval (IUPOP). For the greenfield project like WRL block, modifying factors at Pre-Feasibility study level is expected to contain information appropriate for the whole range of inputs to meet the requirement in Clause 29 for the Ore Reserve to continue that classification. Salva Mining has used the modifying factors based on the Pre-Feasibility study level for the WRL Mine which were independently verified by the Salva Mining's subject specialist. In Salva Mining's opinion, the Modifying Factors at WRL concession are appropriately defined at WRL.
Metallurgical Factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications.	The coal is to be sold unwashed so no processing factors have been applied. Other than crushing to a 50 mm top size no other beneficiation will be applied.
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	Amdal (EIS) in place with a rehabilitation program and environmental monitoring program in place -Mining approval is in place -Land acquisition not yet finalized covering the pit, dump and other mine infrastructure,
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities),	The area is very accessible from the provincial highway from Palembang and the nearby Musi River -Water is available in abundance

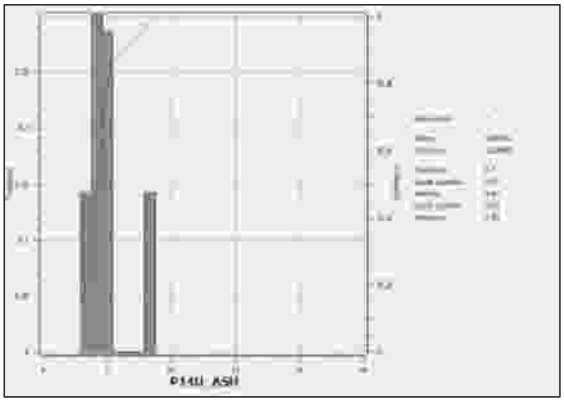
Criteria	Explanation	Comment
	labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	-Labour can be sourced locally including some skilled labour for machine operation
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	Discussed in Section 9:6:3 Cost and Revenue factors.
Revenue Factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products	Discussed in Section 9:6:3 Cost and Revenue factors
Market Assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Discussed in Section 9.6:6 Marketing & Pricing Factors
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs	Economic analysis (NPV) done based on long term price outlook and the cost estimates (Contractor mining operation)
Social	The status of agreements with key stakeholders and matters leading to social licence to operate	Land acquisition has not yet commenced covering the pit, dump and other mine infrastructure. The total area required would be approx 900Ha. Most of this land is covered by small local rubber and palm oil farmers which will require compensation.

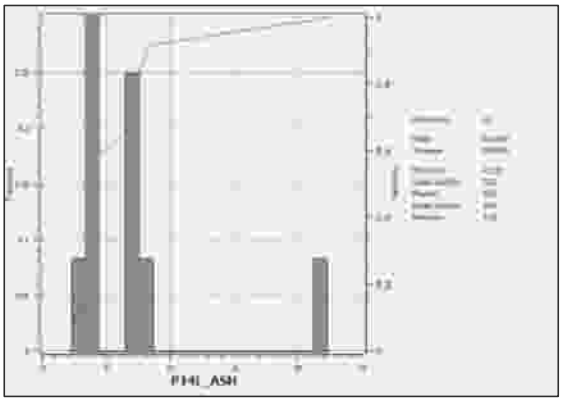
Criteria	Explanation	Comment
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingency.	Discussed under Section 9:6:7 Other Factors
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Discussed under Section 9:10, Reserve Classification
Audit & Reviews	The results of any audits or reviews of Ore Reserve estimates.	Discussed under Section 9:9, Audits & Reviews.
Discussion of Relative accuracy/confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Sufficient points of observation and sampling distribution to assess coal resource and reserves with a high level of confidence. Statistical analysis were carried out for observations, sampling, core recovery & survey accuracy were assessed including geostatisitcal assessment over the deposit which further increased the confidence level of the estimate.

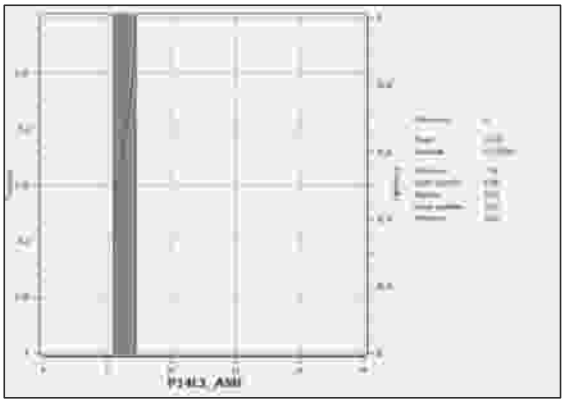
Appendix D: Raw Ash Histograms per Seam

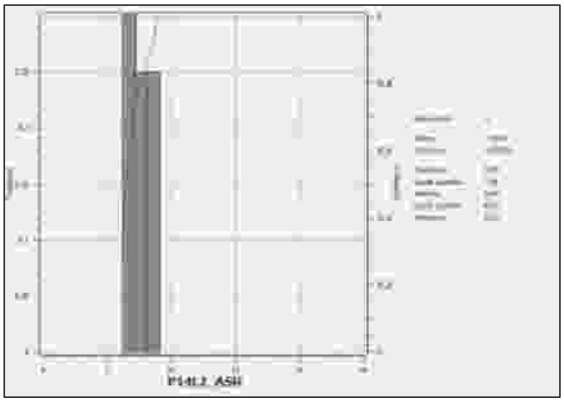


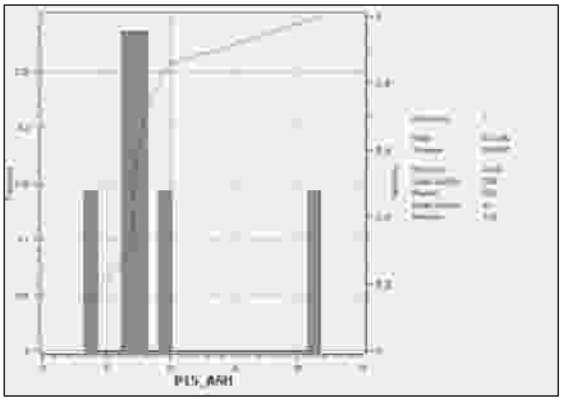


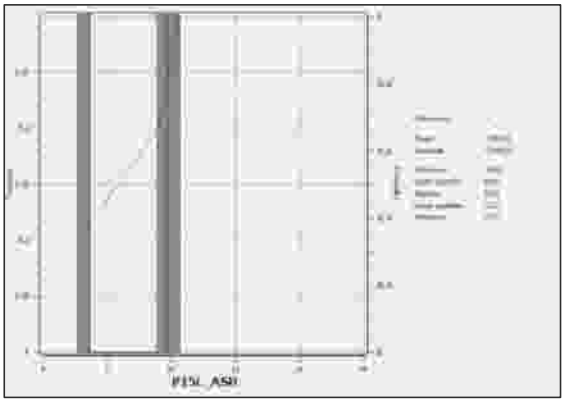


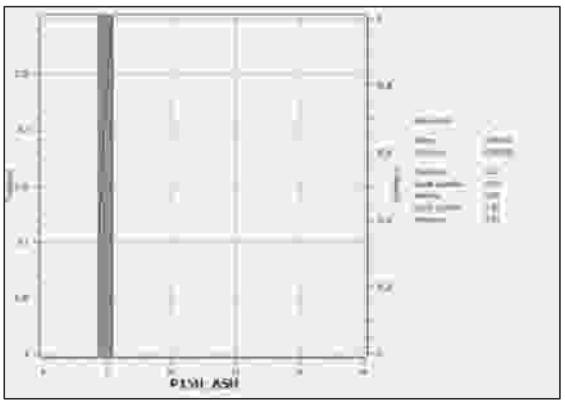

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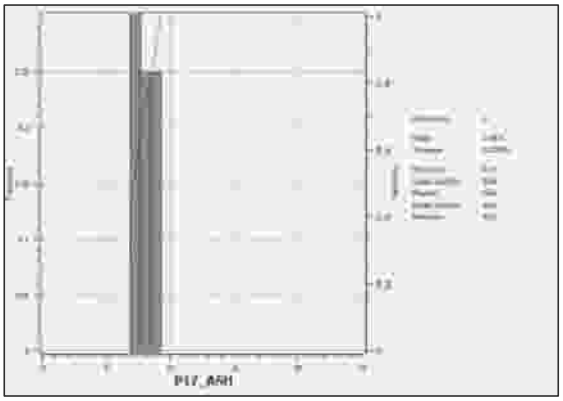

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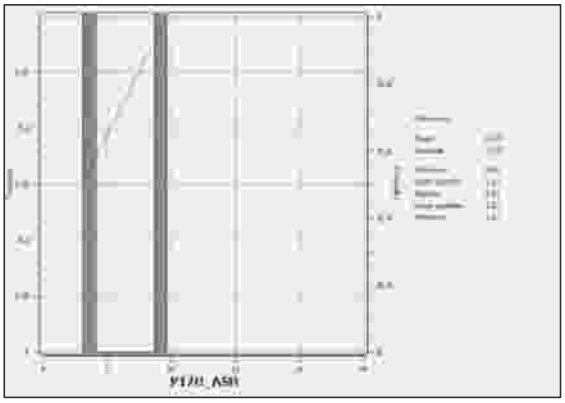

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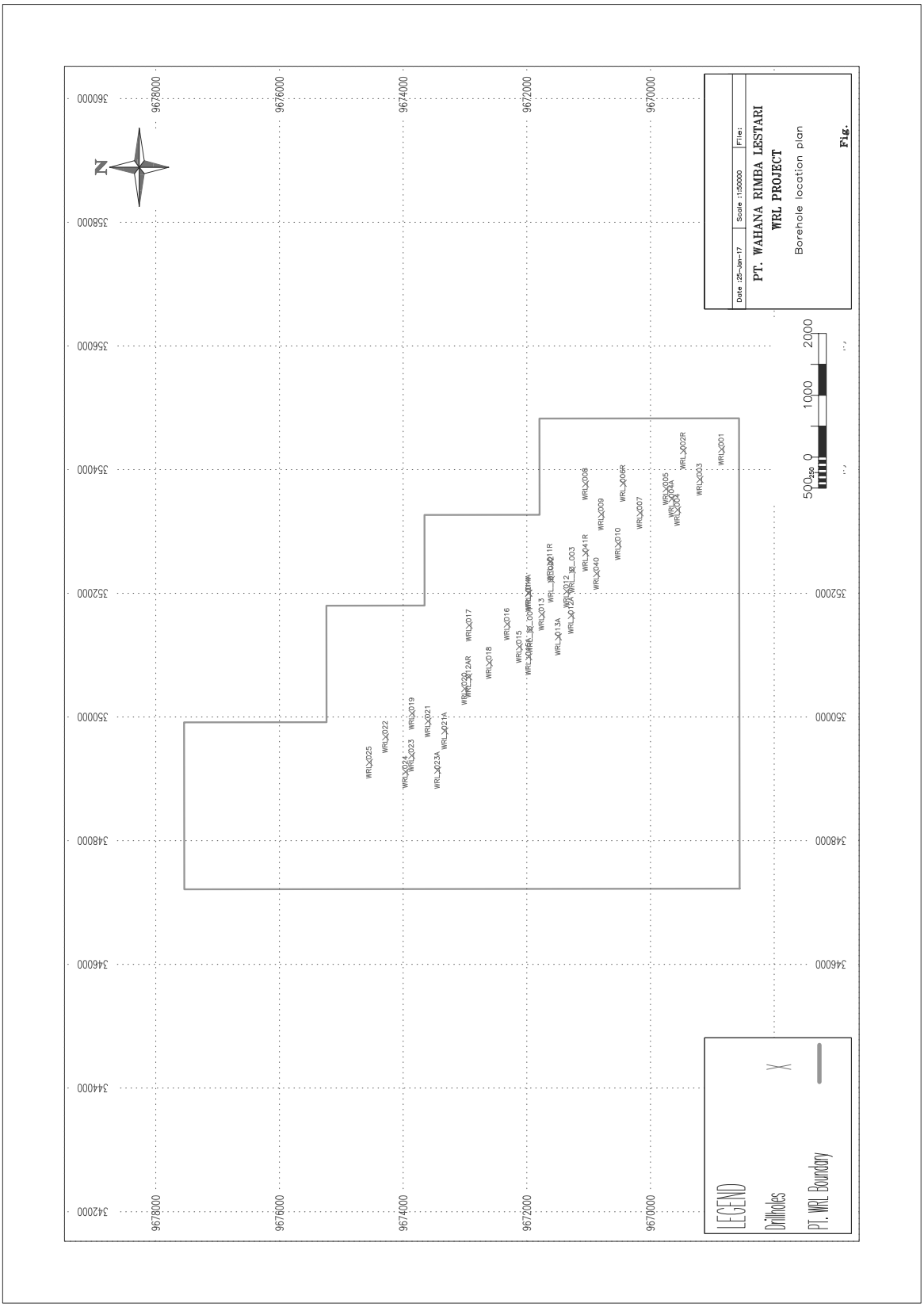

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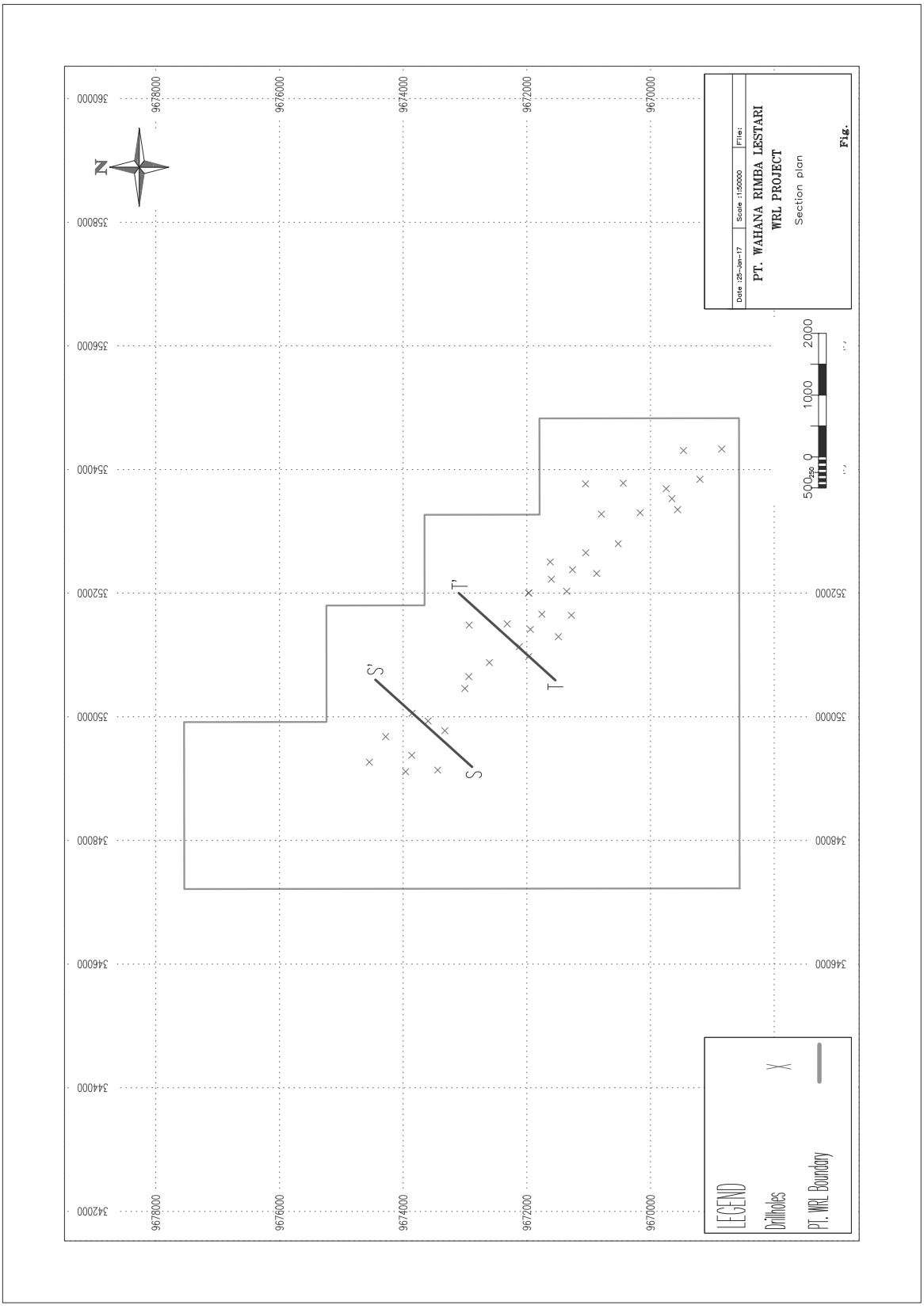

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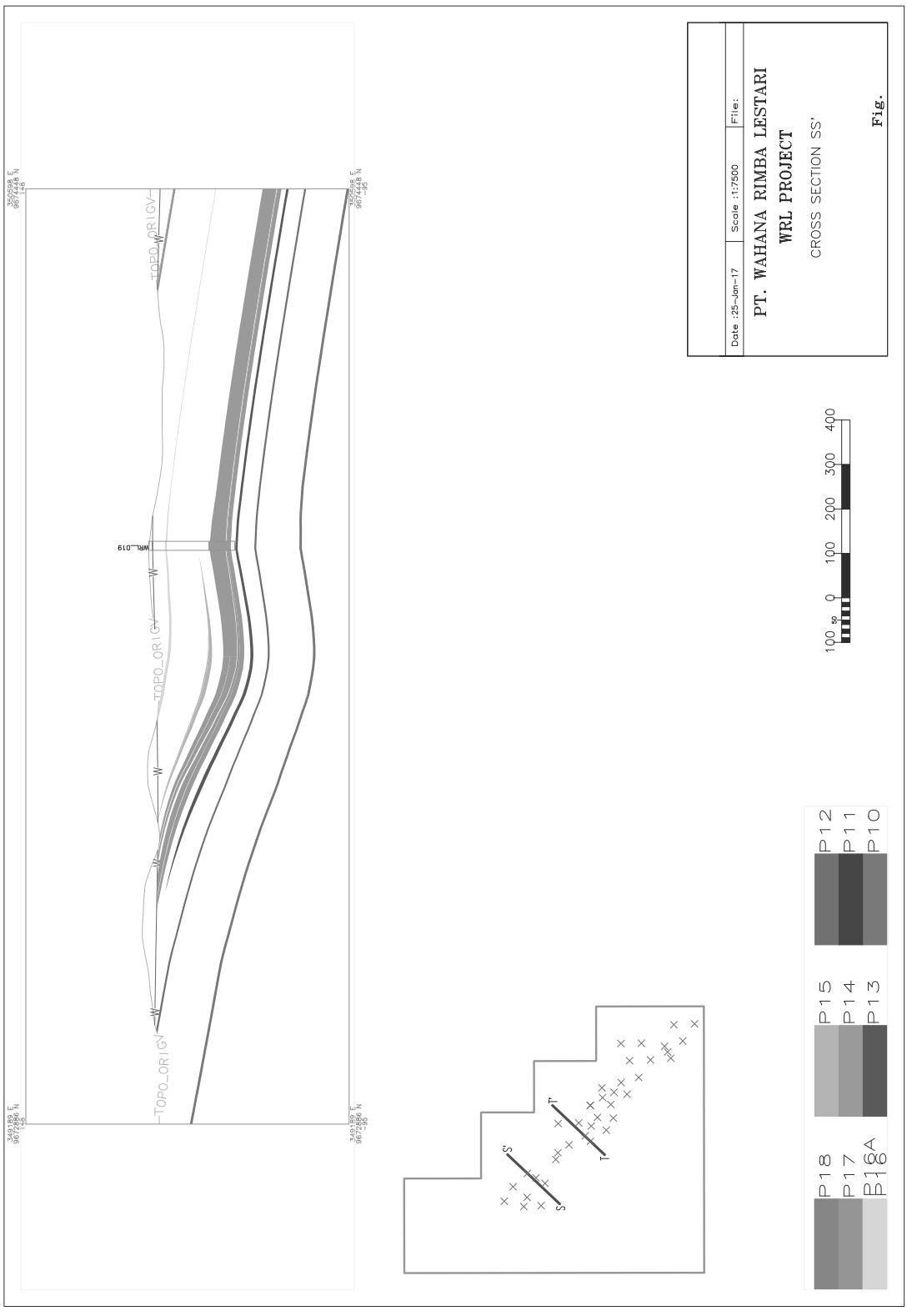


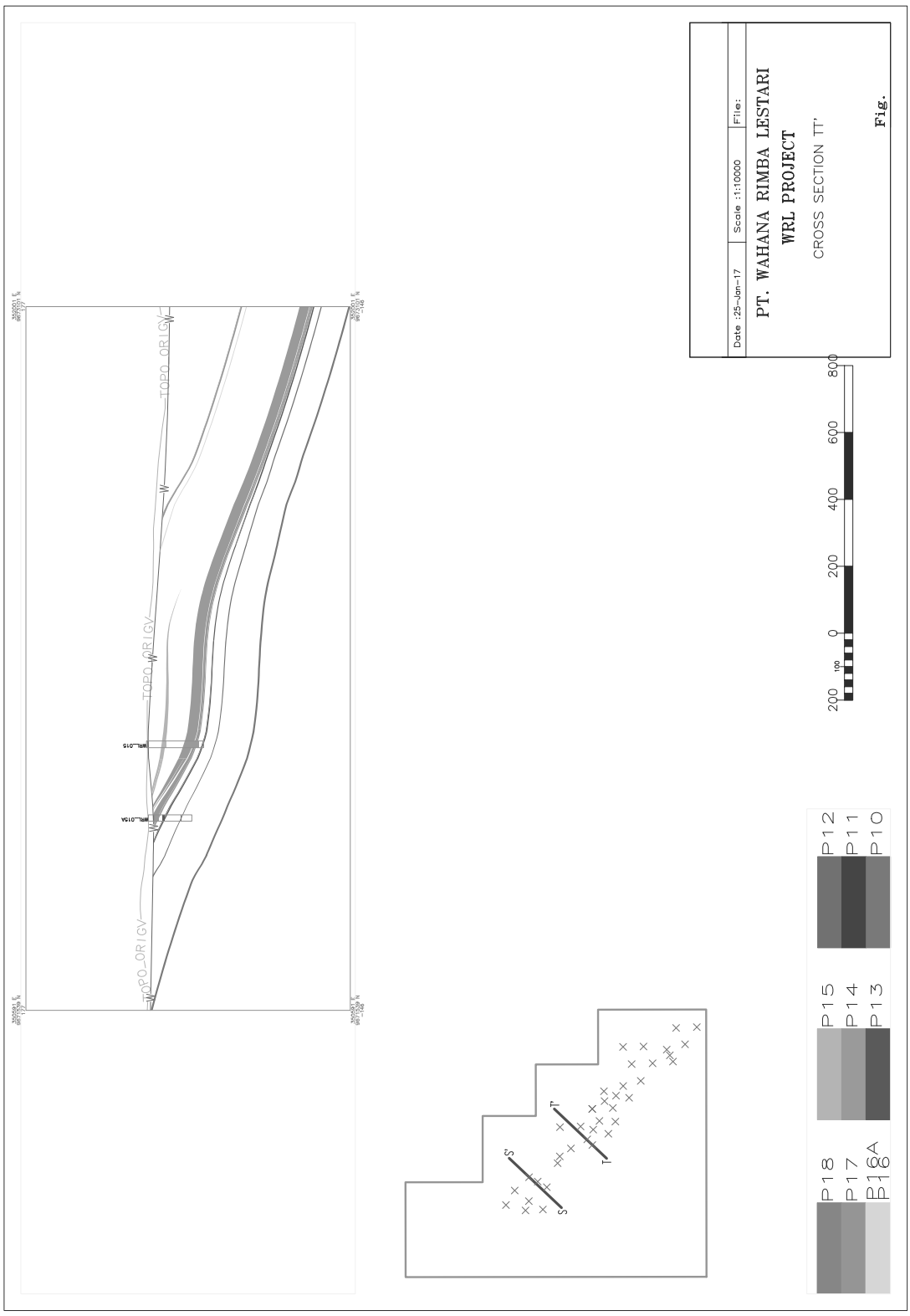


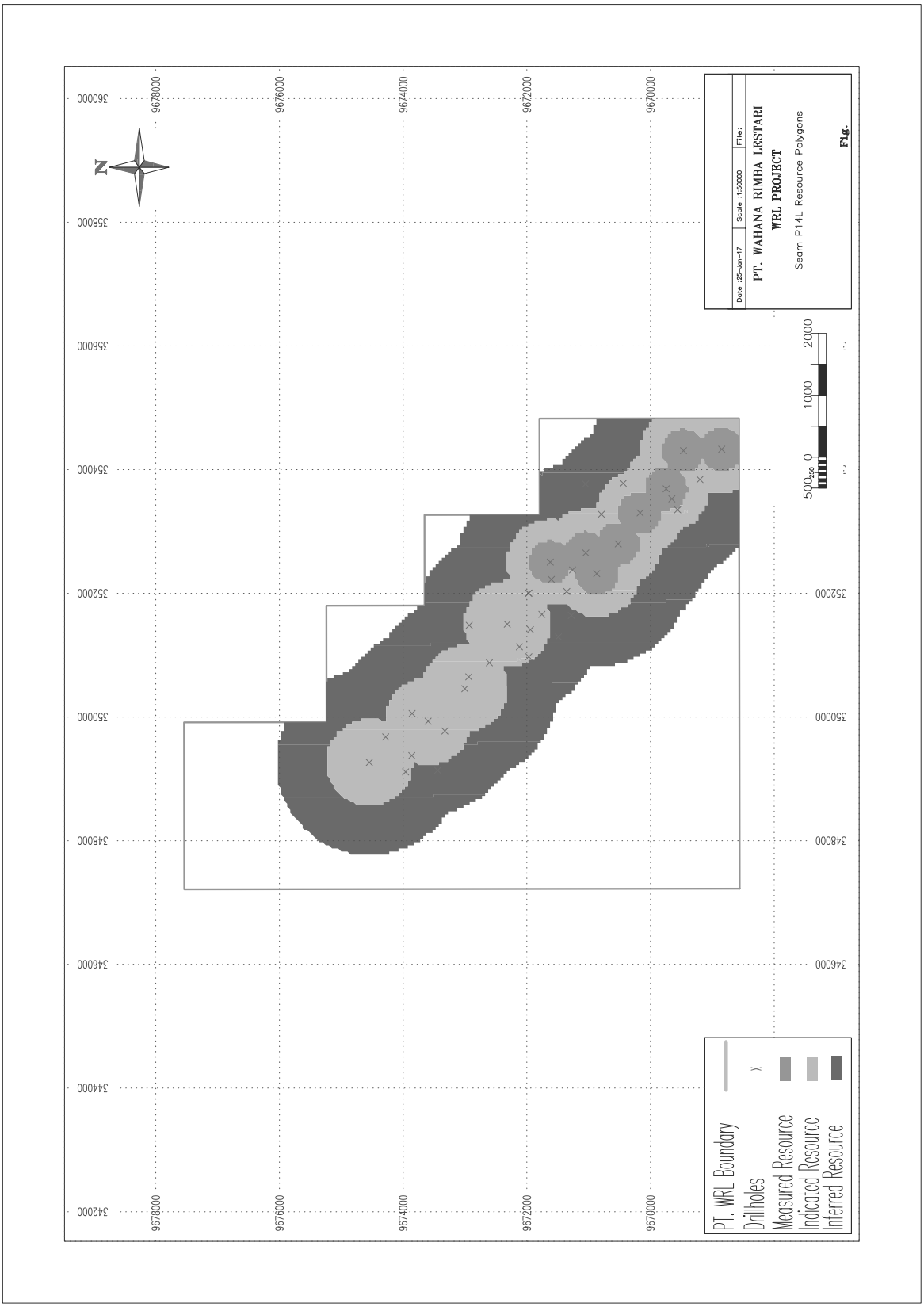
Appendix E: Resource Polygons, Cross-Sections

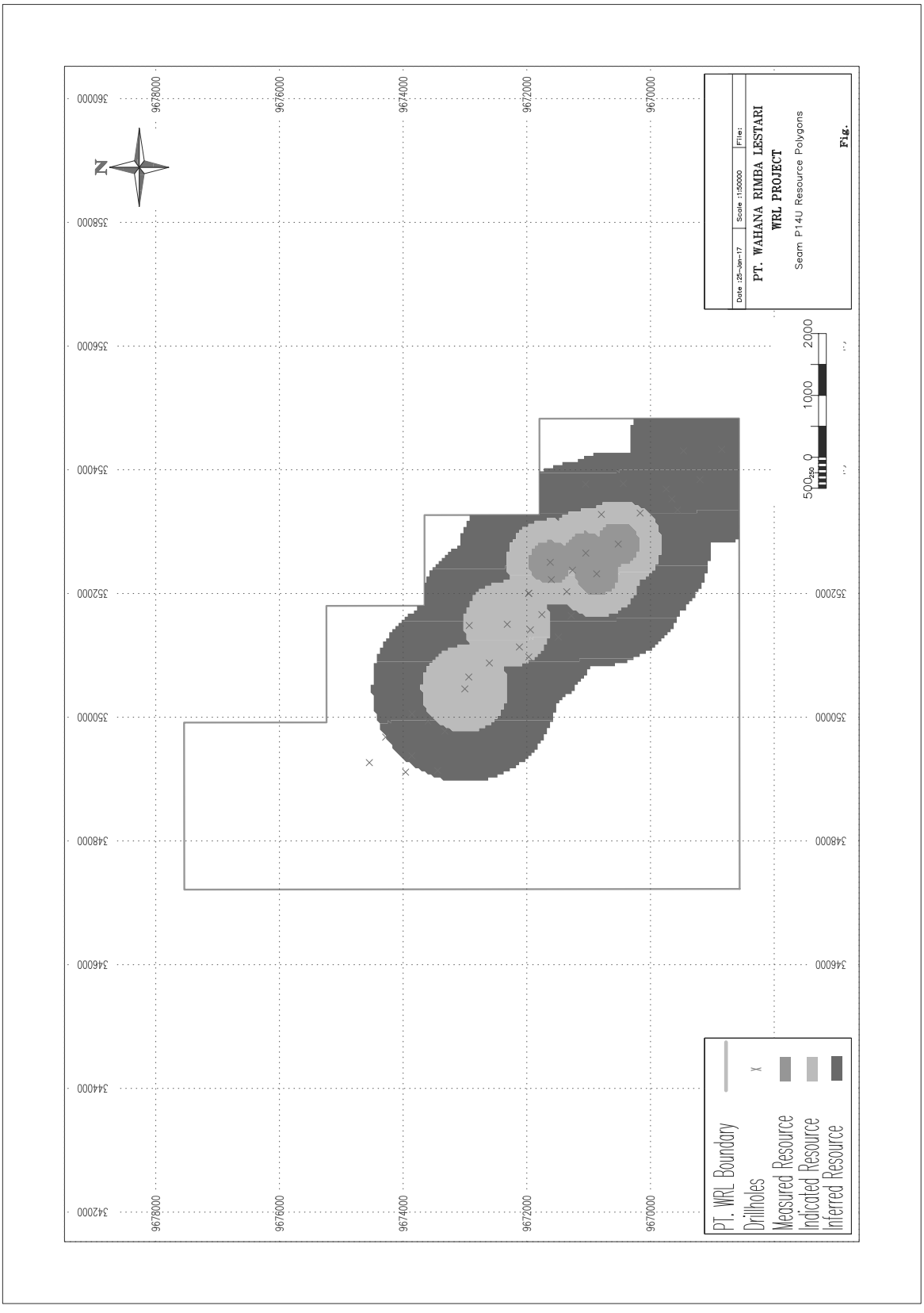

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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Borehole location plan
Fig.
LEGEND
Drillholes
PT. WRL Boundary

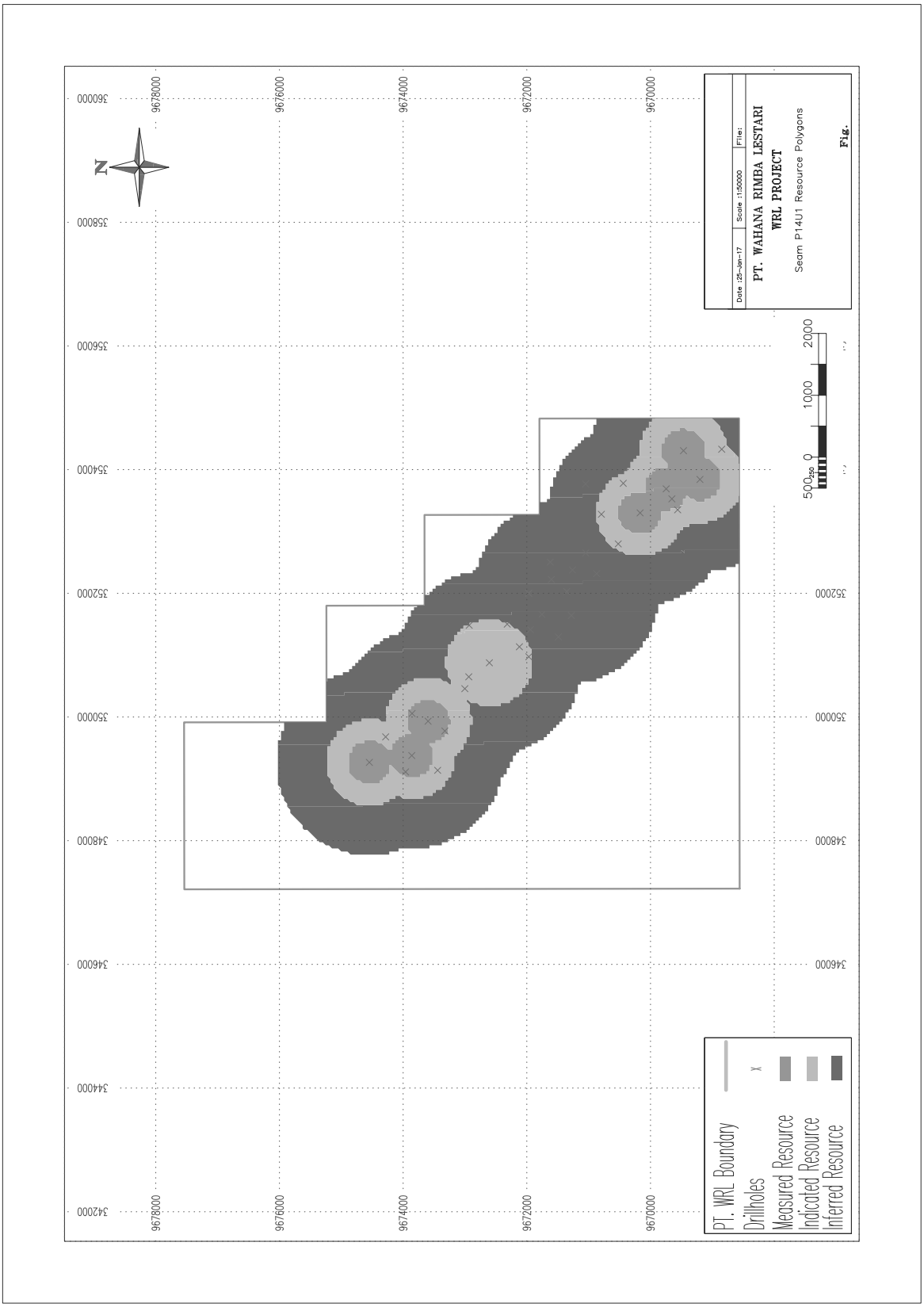

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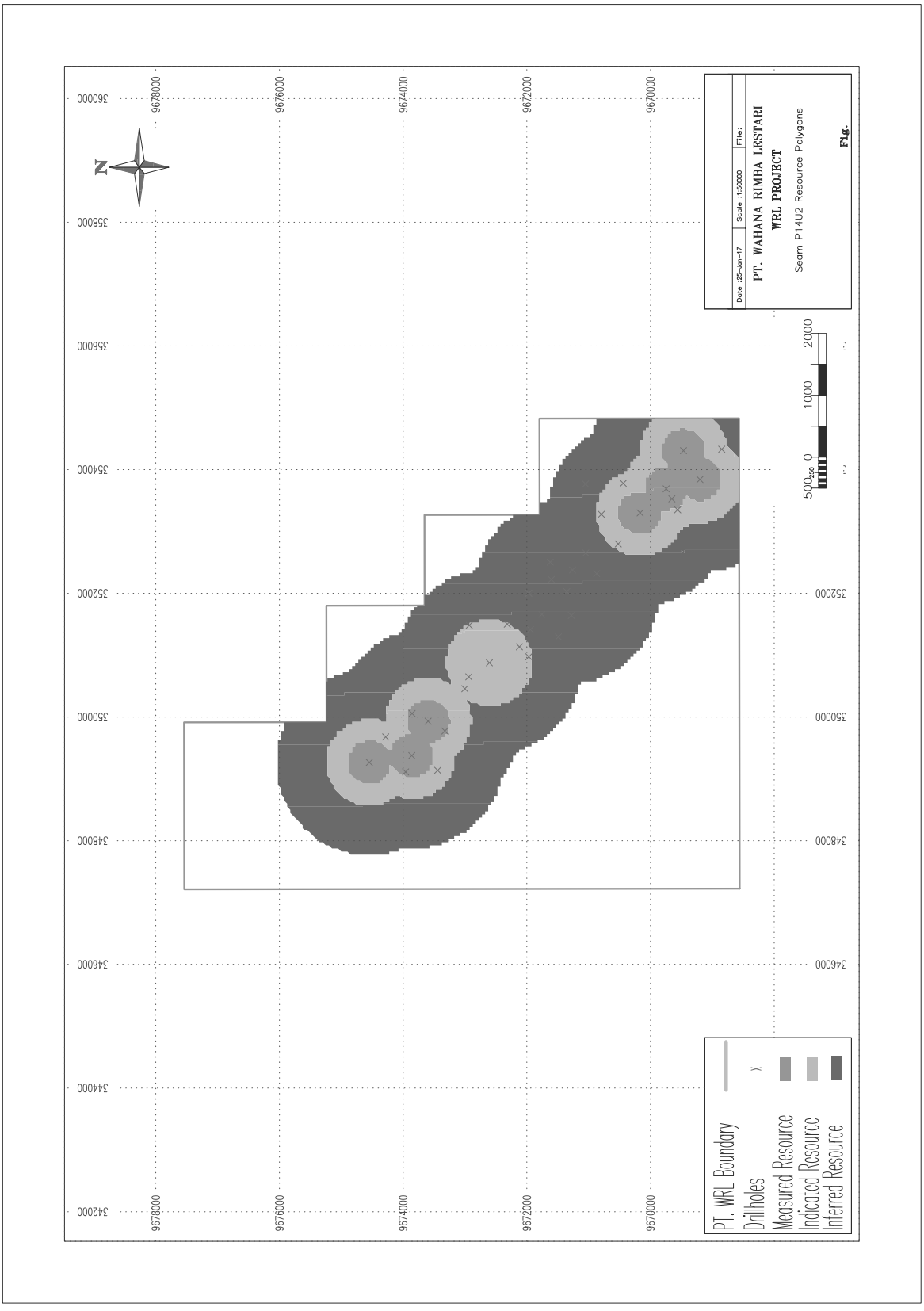

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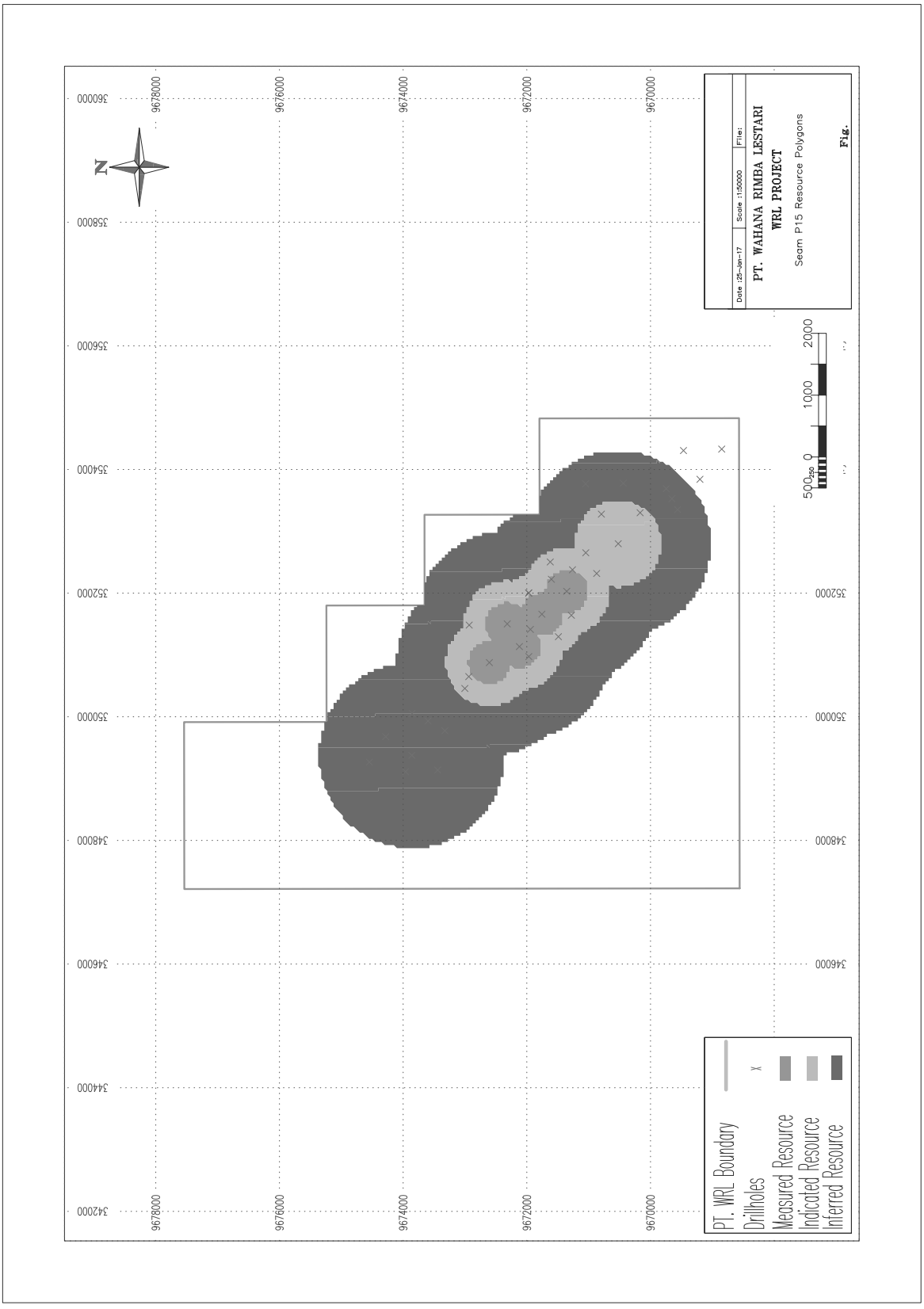

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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14L Resource Polygons
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PT. WRL Boundary
Drillholes
Measured Resource
Indicated Resource
Inferred Resource


PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14U Resource Polygons
Fig.
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250
PT. WRL Boundary
Drillholes
Measured Resource
Indicated Resource
Inferred Resource

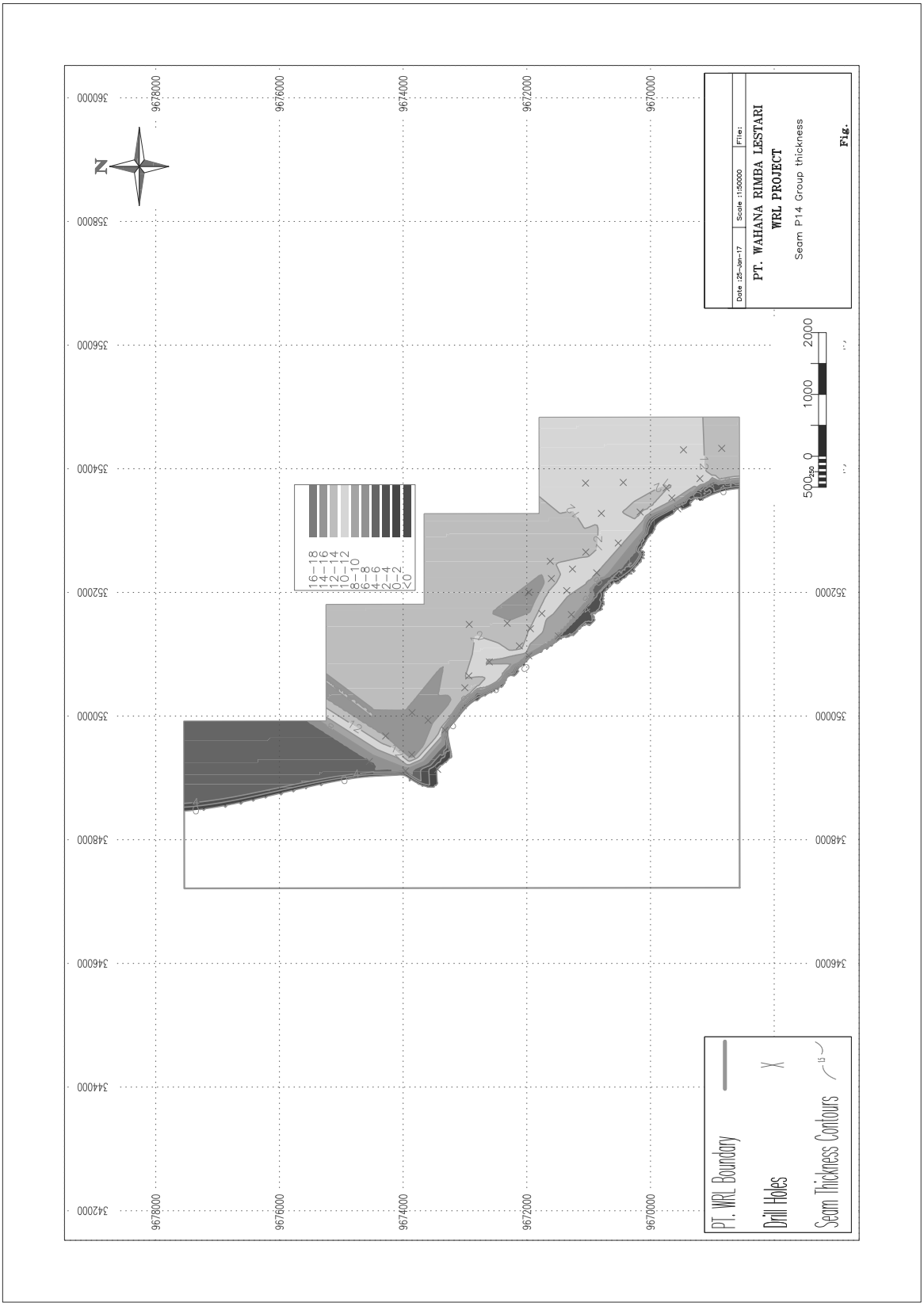

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14U1 Resource Polygons
Fig.
Date :25-Jan-17
Scale :1:50000
File:
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PT. WRL Boundary
Drillholes
Measured Resource
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Inferred Resource

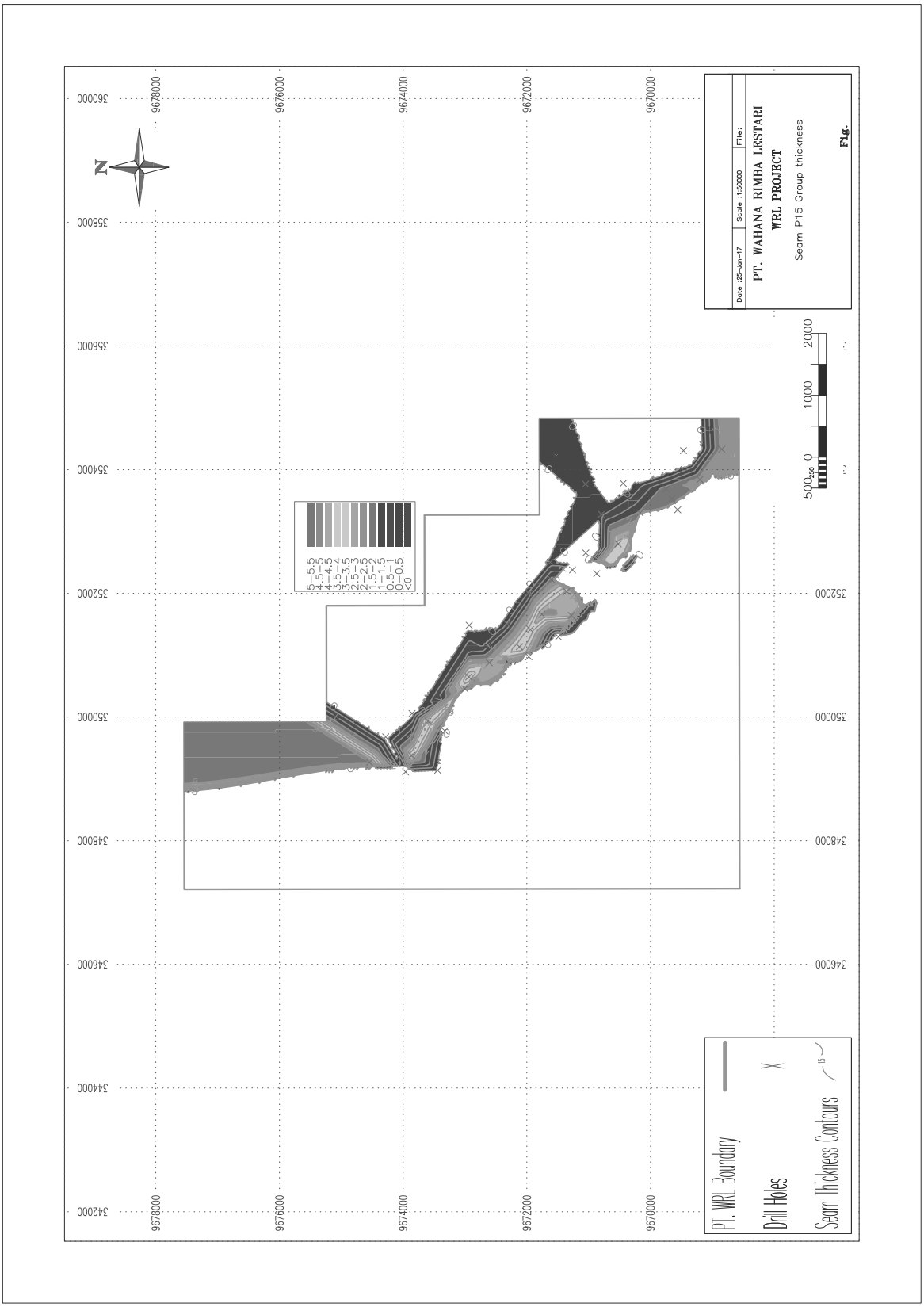

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14U2 Resource Polygons
Fig.
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PT. WRL Boundary
Drillholes
Measured Resource
Indicated Resource
Inferred Resource

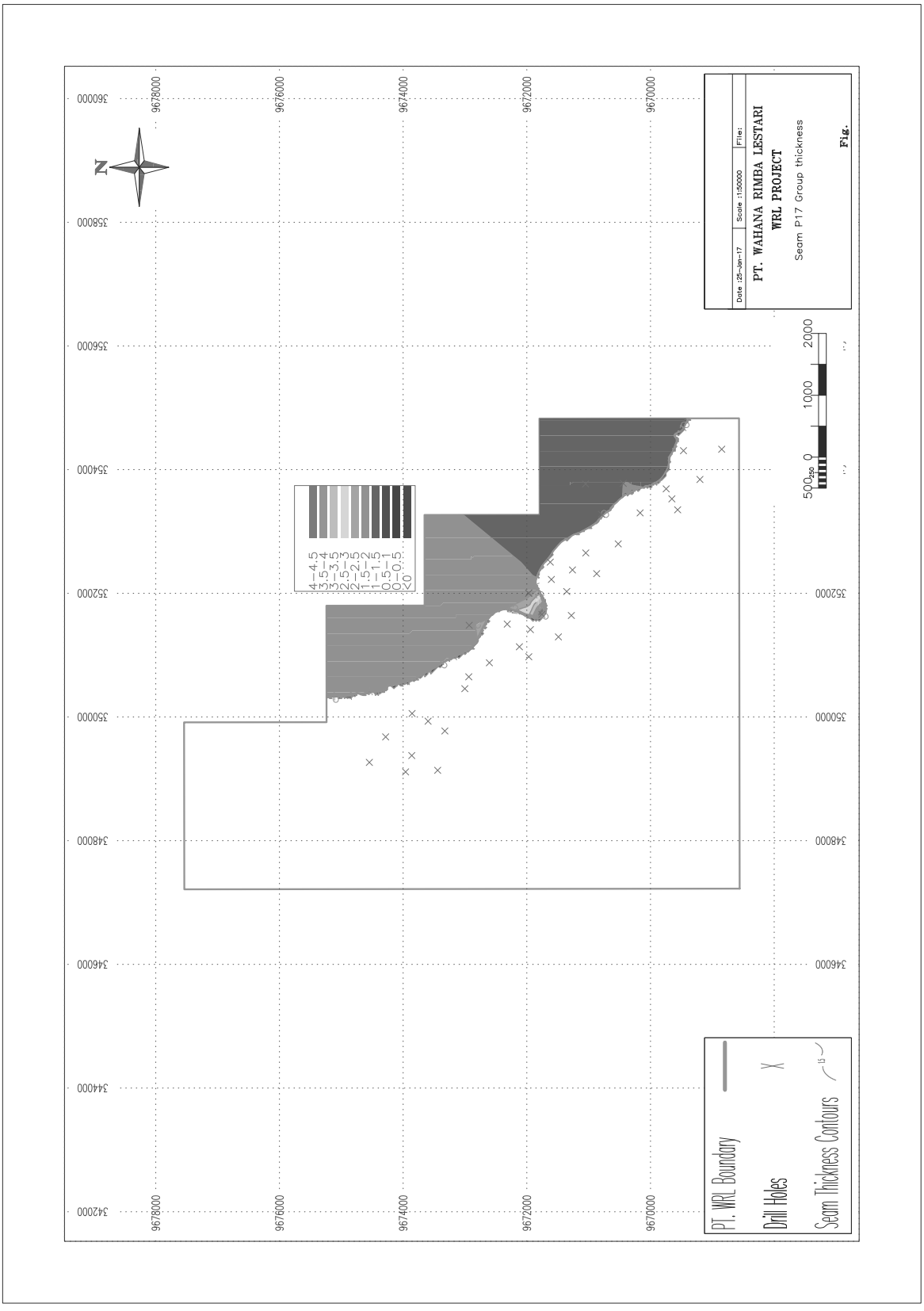

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P15 Resource Polygons
Fig.
Date :25-Jan-17
Scale :1:50000
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Drillholes
Measured Resource
Indicated Resource
Inferred Resource

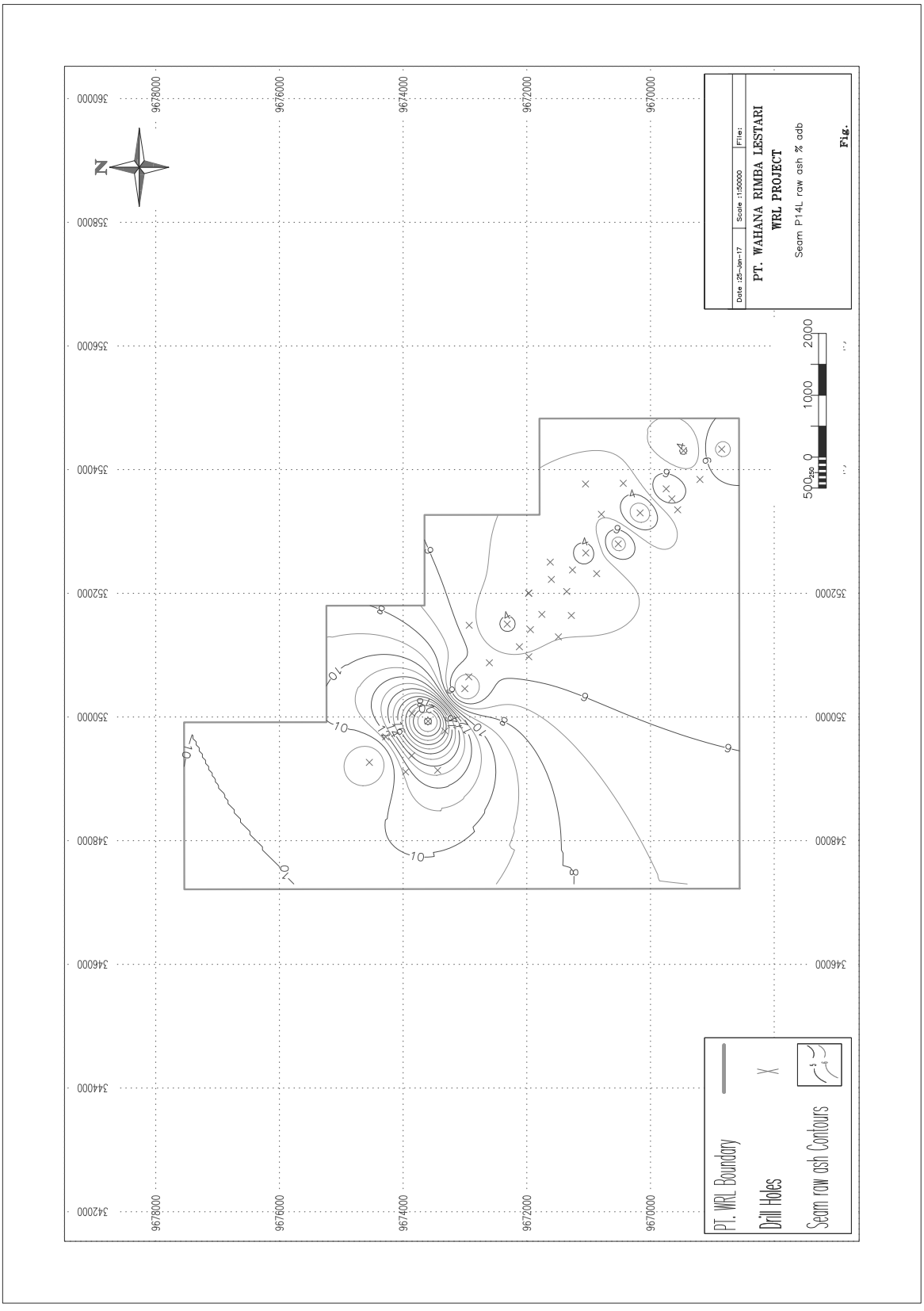

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P16 Resource Polygons
Fig.
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PT. WRL Boundary
Drillholes
Measured Resource
Indicated Resource
Inferred Resource

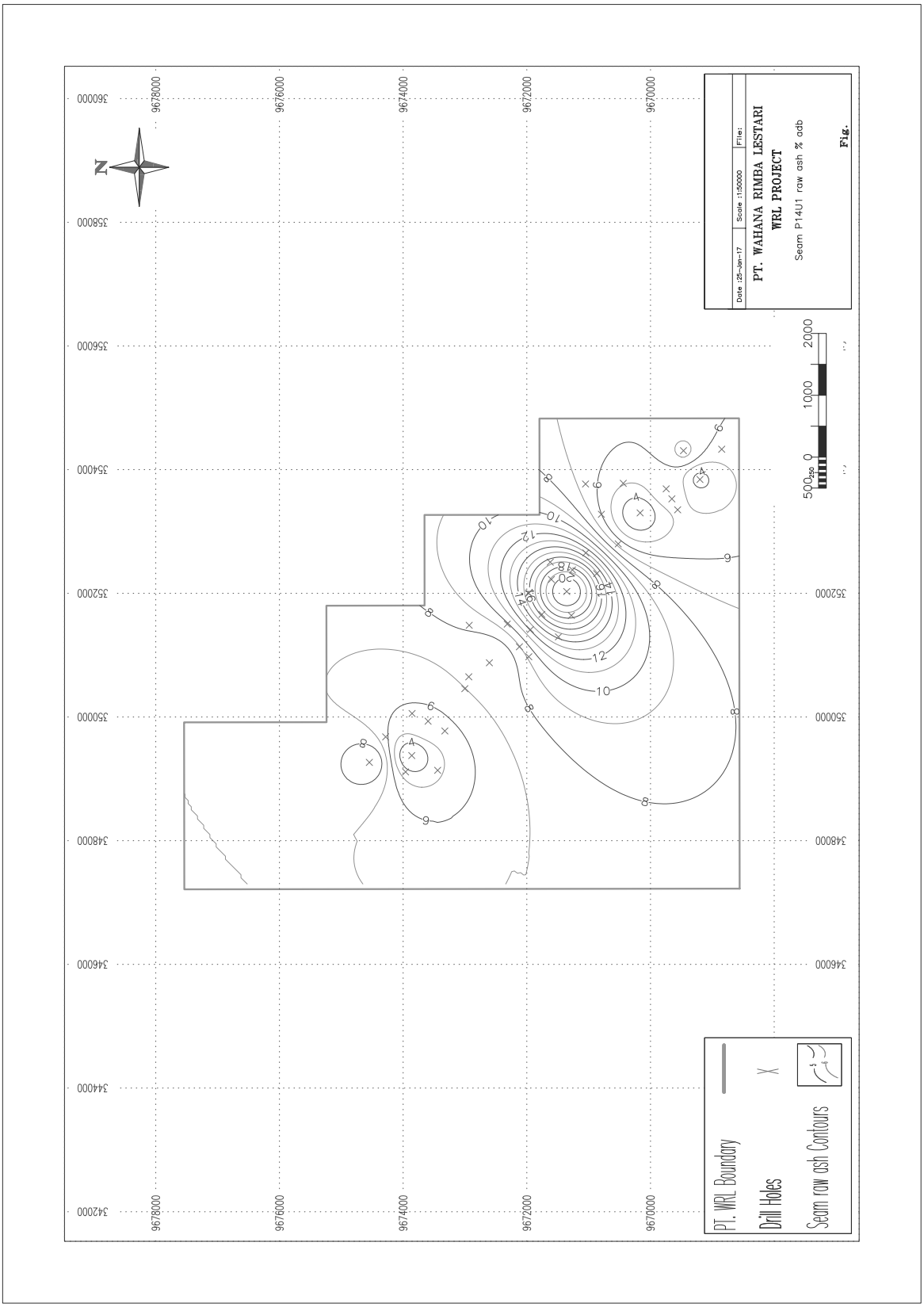

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P17 Resource Polygons
Fig.
Date :25-Jan-17
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PT. WRL Boundary
Drillholes
Measured Resource
Indicated Resource
Inferred Resource
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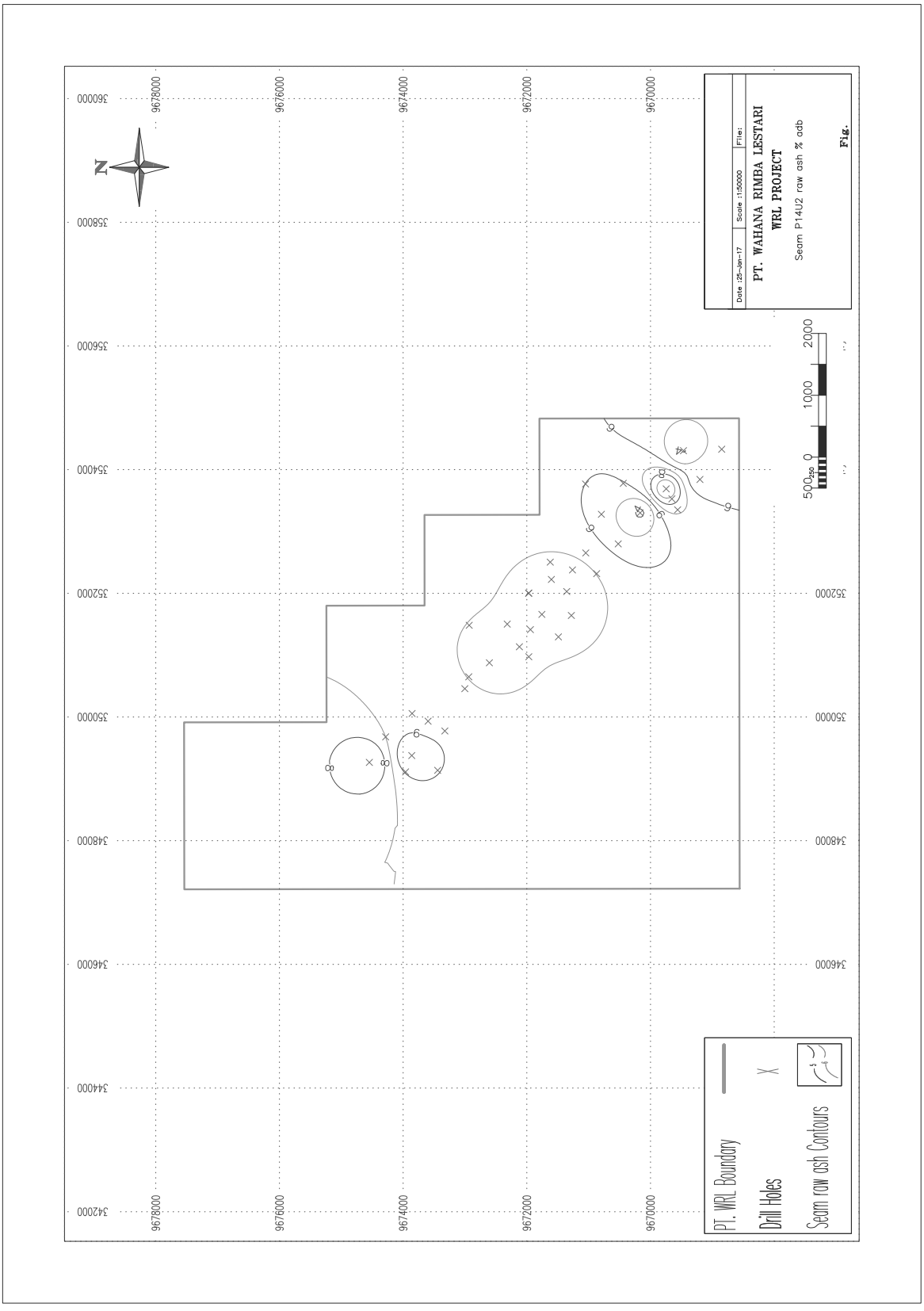

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14 Group thickness
Fig.
Date :25-Jan-17
Scale :1:50000
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16-18
14-16
12-14
10-12
8-10
6-8
4-6
2-4
0-2
PT. WRL Boundary
Drill Holes
Seam Thickness Contours

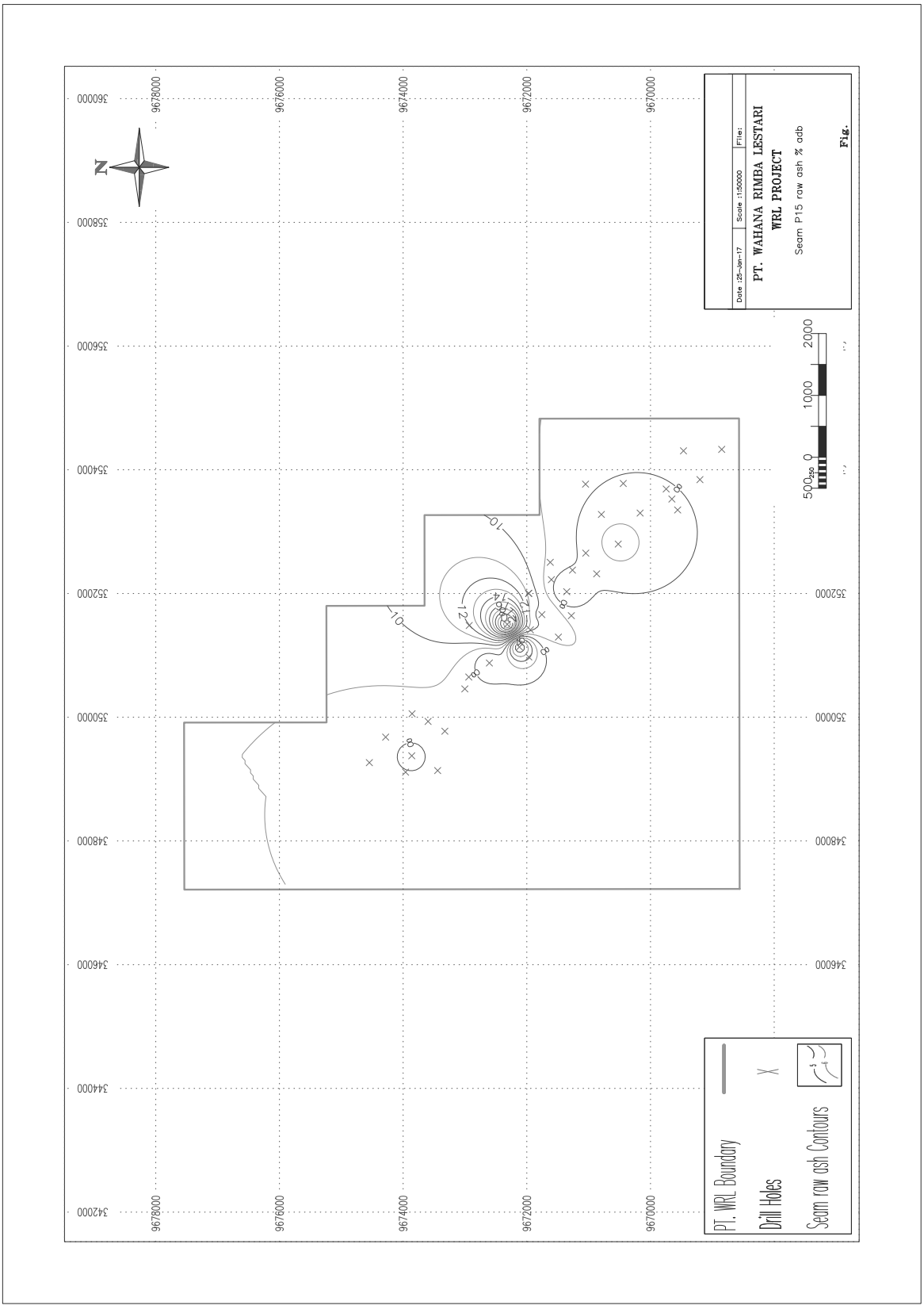

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P15 Group thickness
Date :25-Jan-17
Scale :1:50000
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Fig.
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5-5.5
4.5-5
4-4.5
3.5-4
3-3.5
2.5-3
2-2.5
1.5-2
1-1.5
0.5-1
0-0.5
PT. WRL Boundary
Drill Holes
Seam Thickness Contours
15

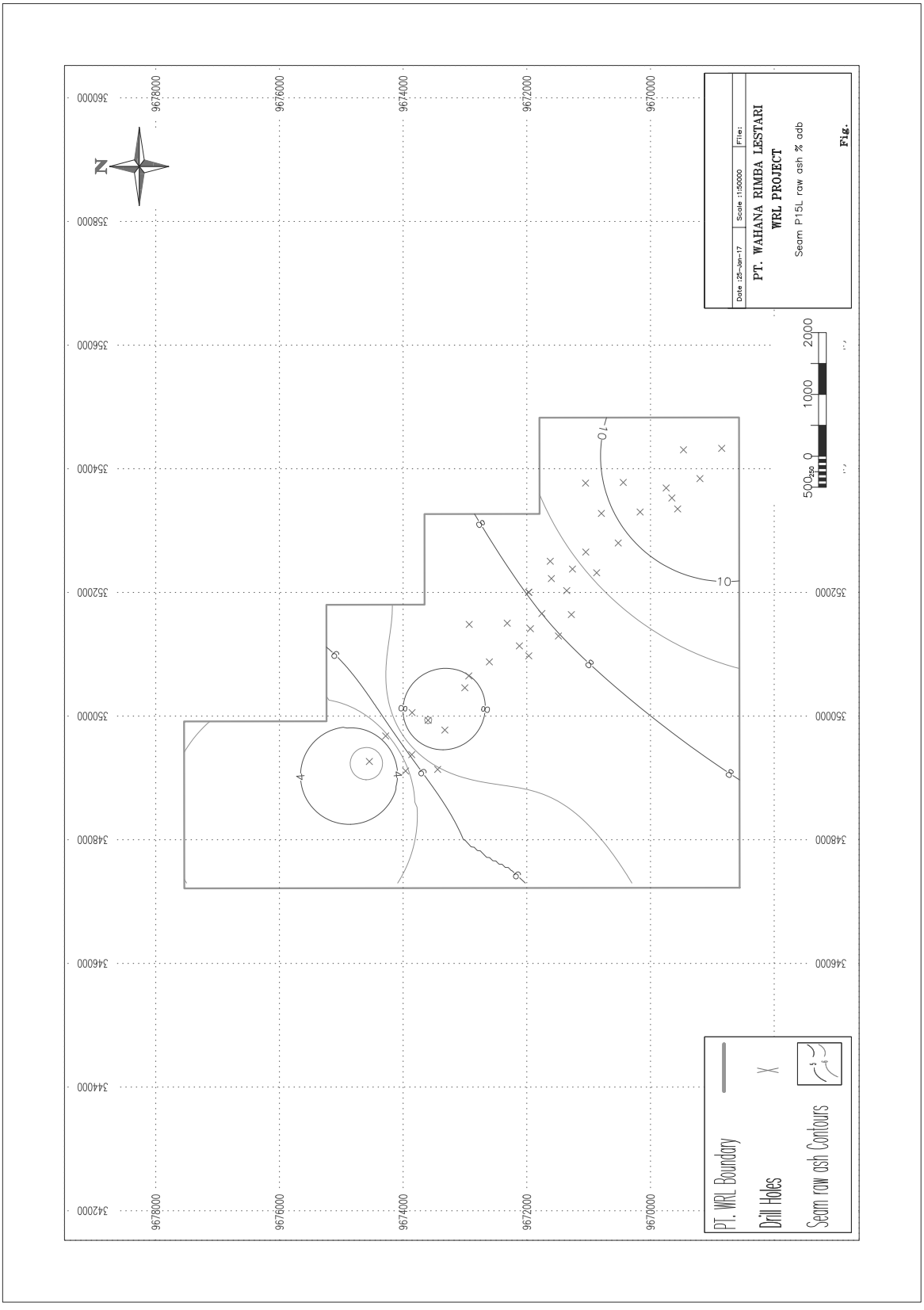

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P17 Group thickness
Fig.
Date :25-Jan-17
Scale :1:50000
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342000
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PT. WRL Boundary
Drill Holes
Seam Thickness Contours
15

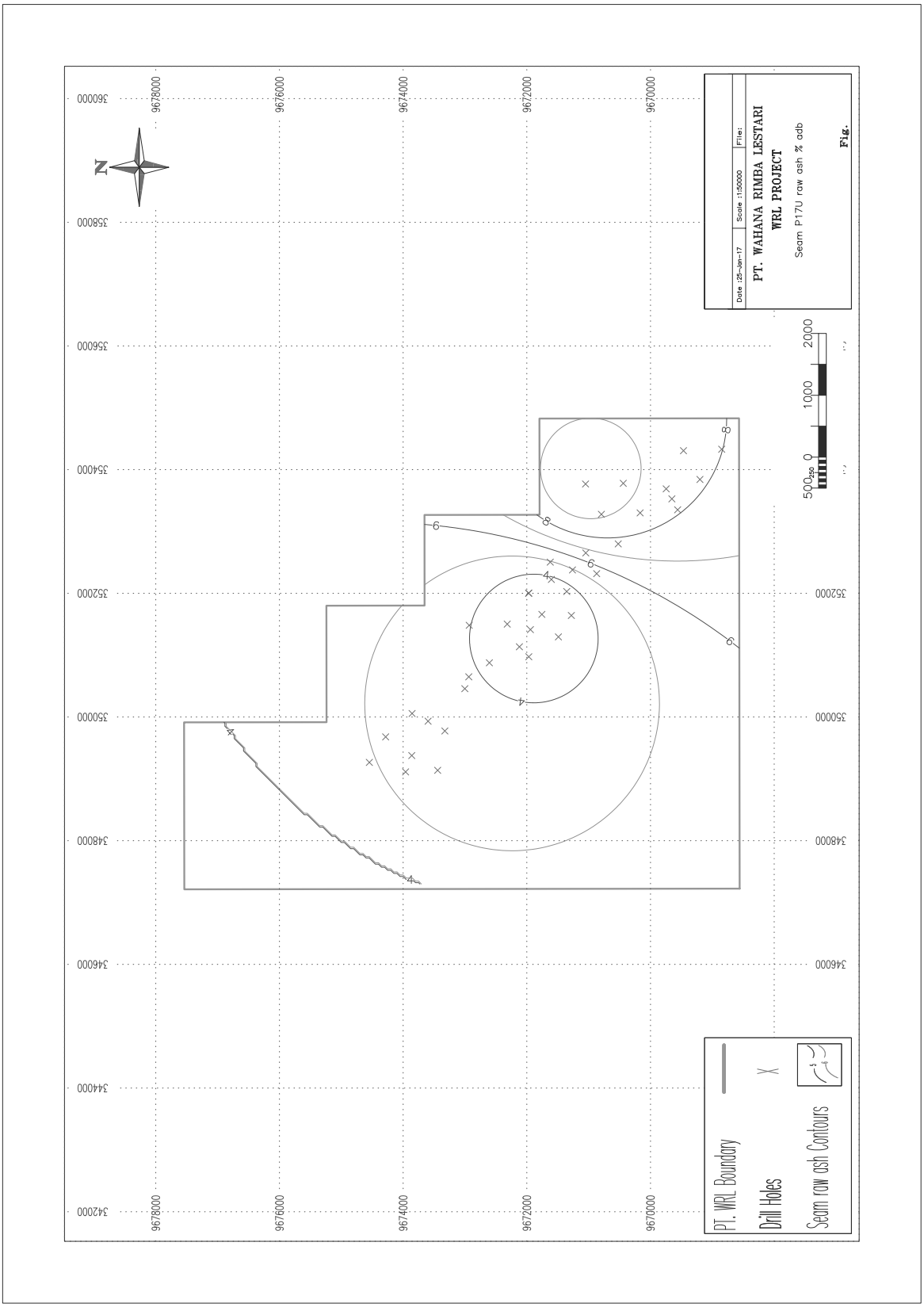

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14L raw ash % adb
Fig.
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Scale :1:50000
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PT. WRL Boundary
Drill Holes
Seam raw ash Contours

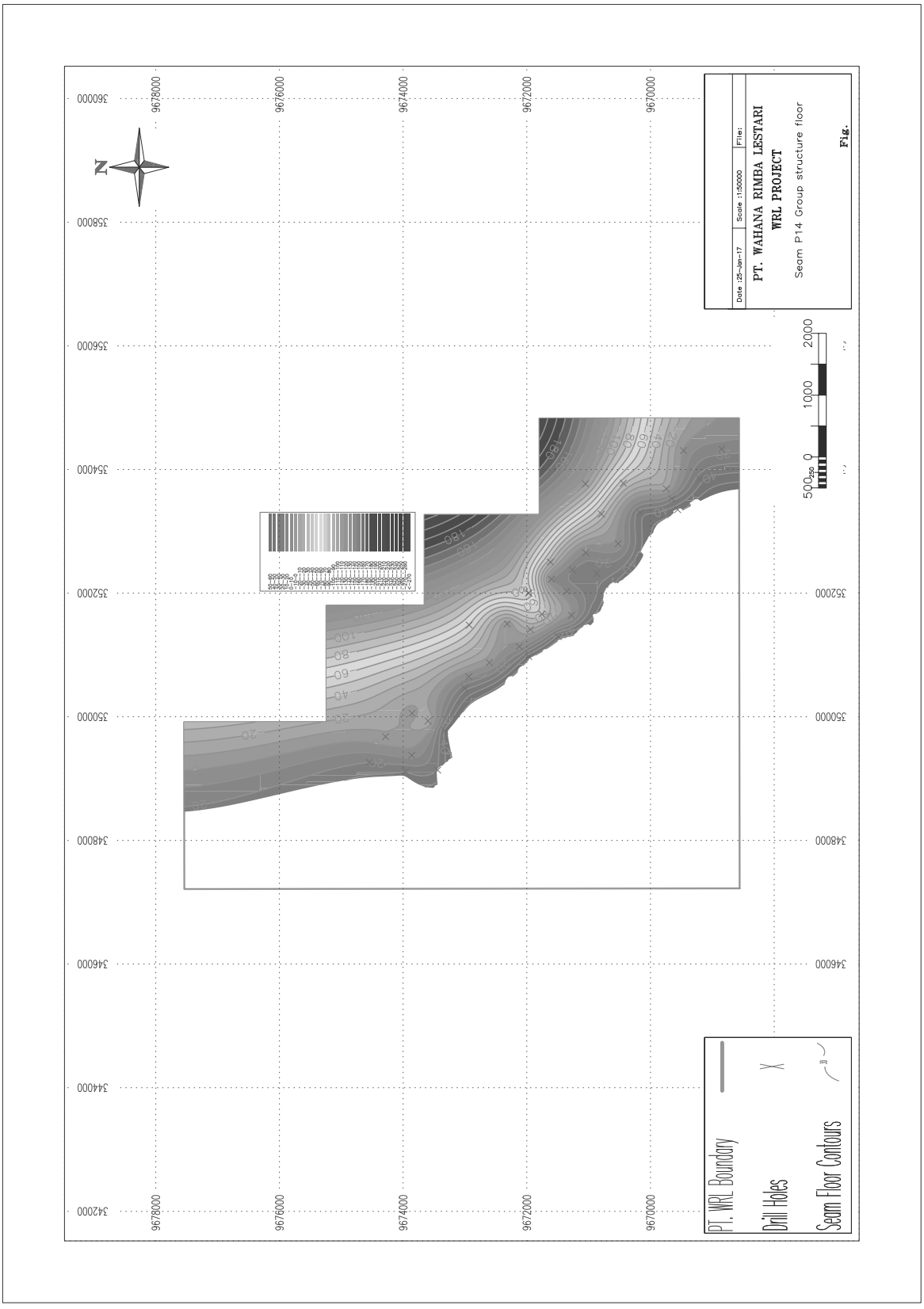

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14U1 raw ash % adb
Fig.
Date :25-Jan-17
Scale :1:50000
File:
PT. WRL Boundary
Drill Holes
Seam raw ash Contours
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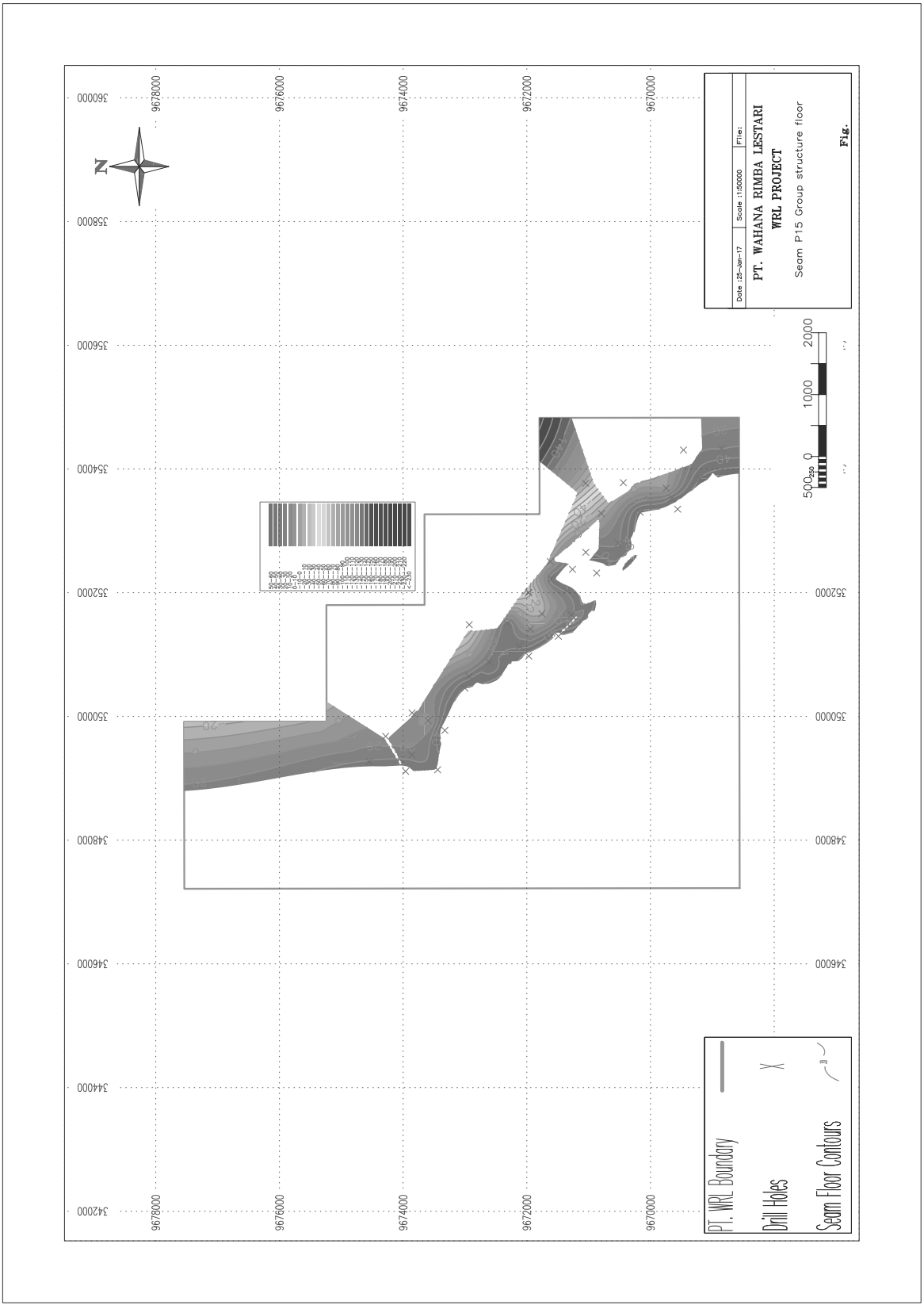

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14U2 raw ash % adb
Fig.
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Scale :1:50000
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PT. WRL Boundary
Drill Holes
Seam raw ash Contours

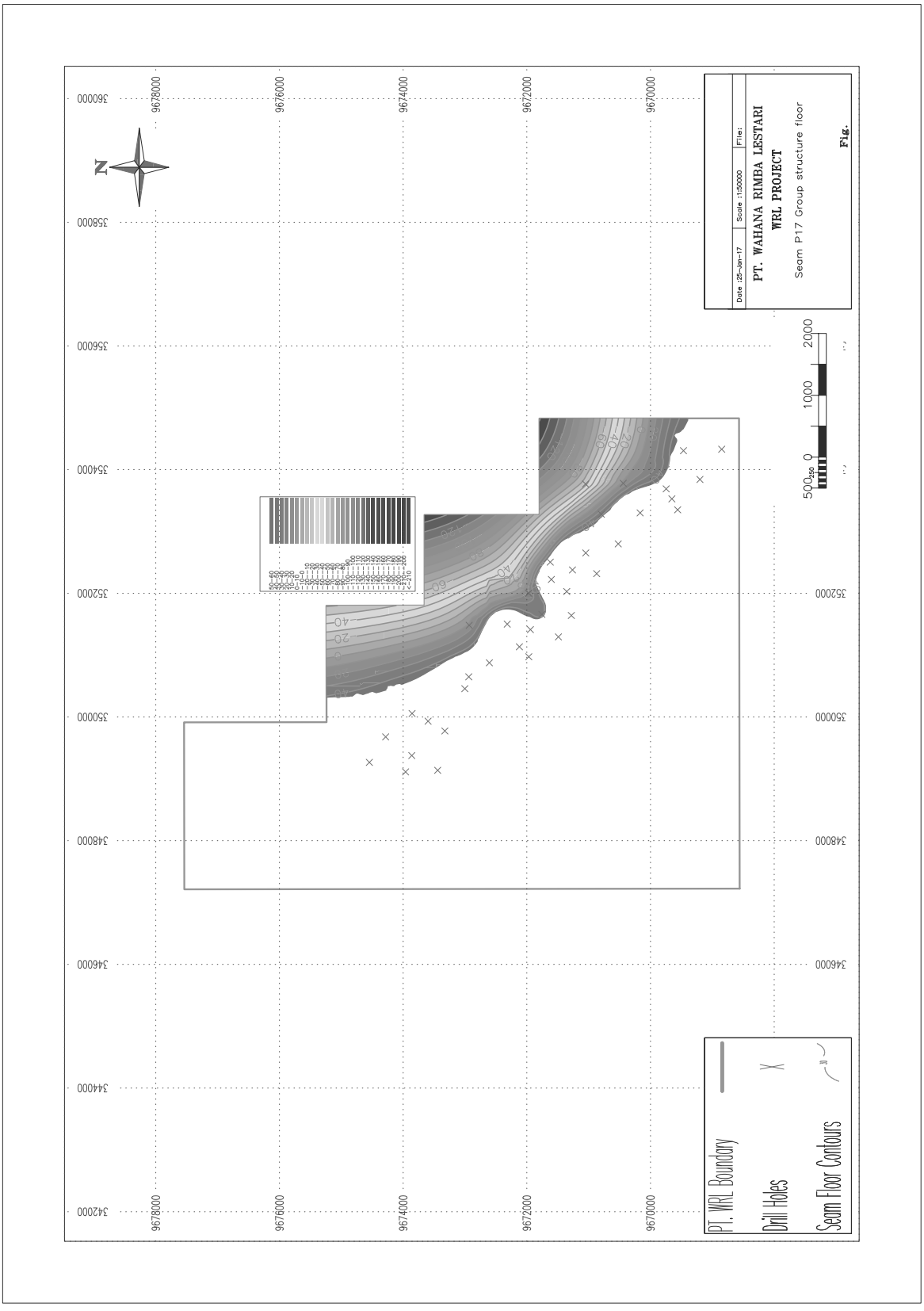

PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P15 raw ash % adb
Fig.
Date :25-Jan-17
Scale :1:50000
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PT. WRL Boundary
Drill Holes
Seam raw ash Contours
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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P15L raw ash % adb
Fig.
Date :25-Jan-17
Scale :1:50000
Files:
PT. WRL Boundary
Drill Holes
Seam raw ash Contours
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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P17U raw ash % adb
Fig.
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PT. WRL Boundary
Drill Holes
Seam raw ash Contours


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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P14 Group structure floor
Fig.
Date :25-Jan-17
Scale :1:50000
File:
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PT. WRL Boundary
Drill Holes
Seam Floor Contours


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PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P15 Group structure floor
Fig.
Date :25-Jan-17
Scale :1:50000
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PT. WRL Boundary
Drill Holes
Seam Floor Contours


PT. WAHANA RIMBA LESTARI
WRL PROJECT
Seam P17 Group structure floor
Fig.
Date :25-Jan-17
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PT. WRL Boundary
Drill Holes
Seam Floor Contours

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