

HDR Report

Updated Resource & Reserve Report

PT Borneo Indobara Project

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PT Borneo Indobara

PT Borneo Indobara Concession

Updated Independent Resource & Reserve 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
Ar	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
PT. BIB	PT Golden Energy Mines Tbk
gm	Gram
h	Hour
ha	Hectare(s)

HDR	Salva Resources 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
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 (%)
PT. BIB	PT. BIB System Limited
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

PT Borneo Indobara (“PT BIB” or “”Client”) commissioned Salva Resources Pty Ltd (“HDR”) to prepare an updated estimate of Open Cut Coal Resource and Reserves for the Kusan Girimulya Pit in the Borneo Indobara (“BIB” or “BIB Mine”) coal concession area. 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 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”).

Borneo Indobara Coal Concession (BIB) in Indonesia

The BIB Mine 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 Pits 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 three blocks – Kusan (KG), Batulaki (BS) and Sebamban South (SS). Currently mining in SS block is under care and maintenance since January 2014 due to land compensation agreement which is under progress. PT. BIB is proposing to open up the SS Pit again in 2015 along with new open cut mine over the SN Block during the first quarter of 2016. Mining activity in PP block is proposed to commence in 2017. 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 by PT. Borneo Indobara. The first phase involved generally shallow drilling and field mapping. In-fill drilling and deeper stratigraphic drilling to depths of up to 200 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 2,099 drill holes were used by HDR to construct five geological models in the BIB coal concession area comprising KG Block - 994 drill holes, BS Block - 552 drill holes, SS Block – 212 drill holes, SN Block - 168 drill holes and PP Block - 173 drill holes.

Coal Resource

HDR have estimated total Coal Resources of 1,740 million tonnes (Mt) on an in situ air dried moisture basis, to a maximum depth of 250 m. The total tonnes are comprised of 857 Mt of Measured, 353 Mt of Indicated and 530 Mt of Inferred category Resources.

Coal Resources Estimate – BIB Mine

KG Block as at 27 Nov 2014

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	798	5.38	5,332	294	5.96	5,304	325	6.31	5,286	1,417

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)*

Other Blocks as at 31 July 2014

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
BS	22	4.71	5,567	27	5.61	5,560	155	5.94	5,563	204
SS	18	6.22	5,510	10	6.29	5,559	15	5.59	5,570	42
SN	9	4.71	5,395	12	6.24	5,281	25	8.4	5,248	46
PP	10	7.48	6,146	10	8.87	6,275	10	9.72	6,460	31

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 till January 2014 and is currently under care and maintenance. The Kusan pit (KG) was started in 2011. 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 HDR. 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 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 2.4Mt in year 1 (2015), 13Mt by year 3 (2016), 23Mt by year 5 and ramping up to an average 40 Mt from year 9 (2022) onwards. The study identified that a large amount of palm oil plantation area currently outside of the acquired IPPKH boundary will be required for implementation of this mine plan.

The coal price estimate was based on HDR'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 HDR for the BIB project based on a combination of existing contracts and HDR 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 up-gradation of this project.

The BIB mine has been operating since 2005 (Kusan-Girimulya Pit started from 2011). It has produced 4.0 Mt in 2013 and 4.7Mt in 2014.

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. HDR 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 HDR'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.

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 final coal Reserve for PT Borneo Indobara coal deposit ("BIB Mine") is 508.9 Mt comprising of 434.8 Mt Proved and 74.1 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

KG Block as at 27 Nov 2014

Block	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV adb kcal/kg	TS adb %
	Proved	Probable	Total						
KG	434.8	74.1	508.9	1.51	35.6	15.0	15.6	4,708	0.31

Other Blocks as at 31 July 2014

Block	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV arb Kcal/kg	TS adb %
	Proved	Probable	Total						
BS	13.5	6.1	19.6	1.37	33.3	13.4	6.4	4,213	0.16
SS	11.7	4.1	15.8	1.47	38.3	12.6	6.0	3,875	0.17
SN	3.2	4.5	7.7	1.38	38.4	16.4	4.8	3,944	0.16
PP	2.4	0.9	3.3	1.33	12.5	5.9	9.1	6,663	1.36

**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.

There are a number of planning & operational issues which may impact on the stated mining reserves. 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 issues may cause the pit shell and mining quantities to change in future JORC statements. Changes to the Optimised Pit Shell limits and subsequent changes in the Coal quantities within the Optimised Pit Shells and Coal Reserves are sensitive to minor changes in the economics.

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 and the signatories of this report.

1 Introduction

PT Borneo Indobara ("PT BIB" or ""Client") commissioned Salva Resources Pty Ltd ("HDR") to prepare an updated estimate of Open Cut Coal Resource and Reserves for the Kusan Girimulya Pit in the Borneo Indobara ("BIB" or "BIB Mine") coal concession area. 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 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") 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.

1.1 Approach

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

- A JORC Resource & Reserve Report titled "JORC Resource Statement, PT Borneo Indobara, 23 August 2014, Prepared for: United Fibre System Limited" by Salva Resources Pty Ltd;
- A JORC Resource Report titled "JORC Resource Statement, PT Borneo Indobara, 21st October 2013, Prepared for: United Fibre System Limited" 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 GEMS and also derived from HDR'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".

The following approach was undertaken by HDR to estimate Coal Reserves:

- HDR has reviewed the geological data set provided by PT. BIB for the coal block covered under scope of report;
- Using the existing bore hole information provided to HDR by PT. BIB, 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 HDR's team of geologists headed by Mr Williams;
- 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. BIB and checked for reasonableness by HDR. 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. BIB, the technical reports of consultants and previous explorers, as well as other published and unpublished data relevant to the area. HDR 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 investigated by an independent solicitor Lasutlay& Pane Advocates as a legal specialist.

In developing our assumptions for this Statement, HDR 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. HDR has accepted all information supplied to it in good faith as being true, accurate and complete, after having made due enquiry as of November 2014.

1.3 Limitations

After due enquiry in accordance with the scope of work and subject to the limitations of the Report hereunder, HDR 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, HDR 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, HDR 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 HDR'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 HDR have had no prior knowledge nor had the opportunity to evaluate.

1.4 Disclaimer and Warranty

This Report was commissioned by PT. BIB on a fee-for-service basis according to HDR's schedule of rates. HDR'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. Craig Williams, Mr. Sunil Kumar nor any of the HDR's Directors have (or had) a pecuniary or beneficial interest in/or association with PT. BIB, or their directors prior to or during the preparation of this report.

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

- Results from HDR's reliance on information provided by PT. BIB 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 November 2014. 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. HDR 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, HDR) 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. Craig Williams (Principal Consultant, HDR) 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, HDR) who is a subject specialist and a Competent Person as defined by the JORC Code.

This report was prepared on behalf of HDR 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
HDR

2.1 Statement of Independence

This Report was commissioned by PT. BIB on a fee-for-service basis according to HDR's schedule of rates. HDR'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. Craig Williams, Mr. Sunil Kumar and HDR's Directors are independent of PT. BIB and its Directors.

3 Project Description

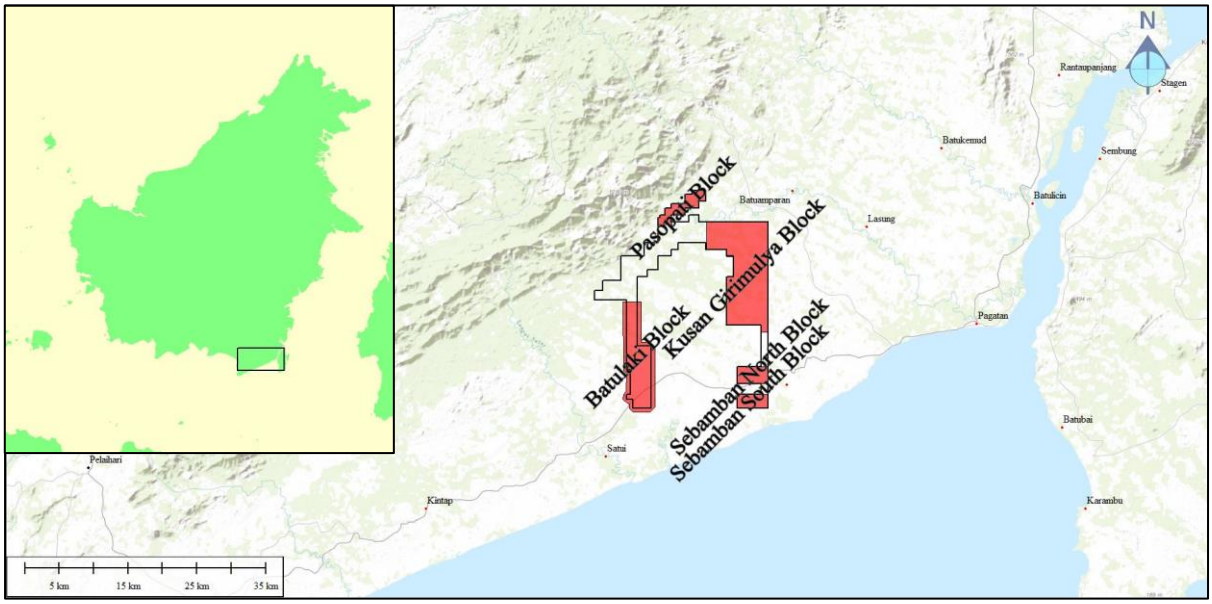
3.1 Property Description and Access

The BIB Mine is located in the Tanah Bumbu Regency of the South Kalimantan Province of Indonesia. The BIB concession is a second generation 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 Pits:

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

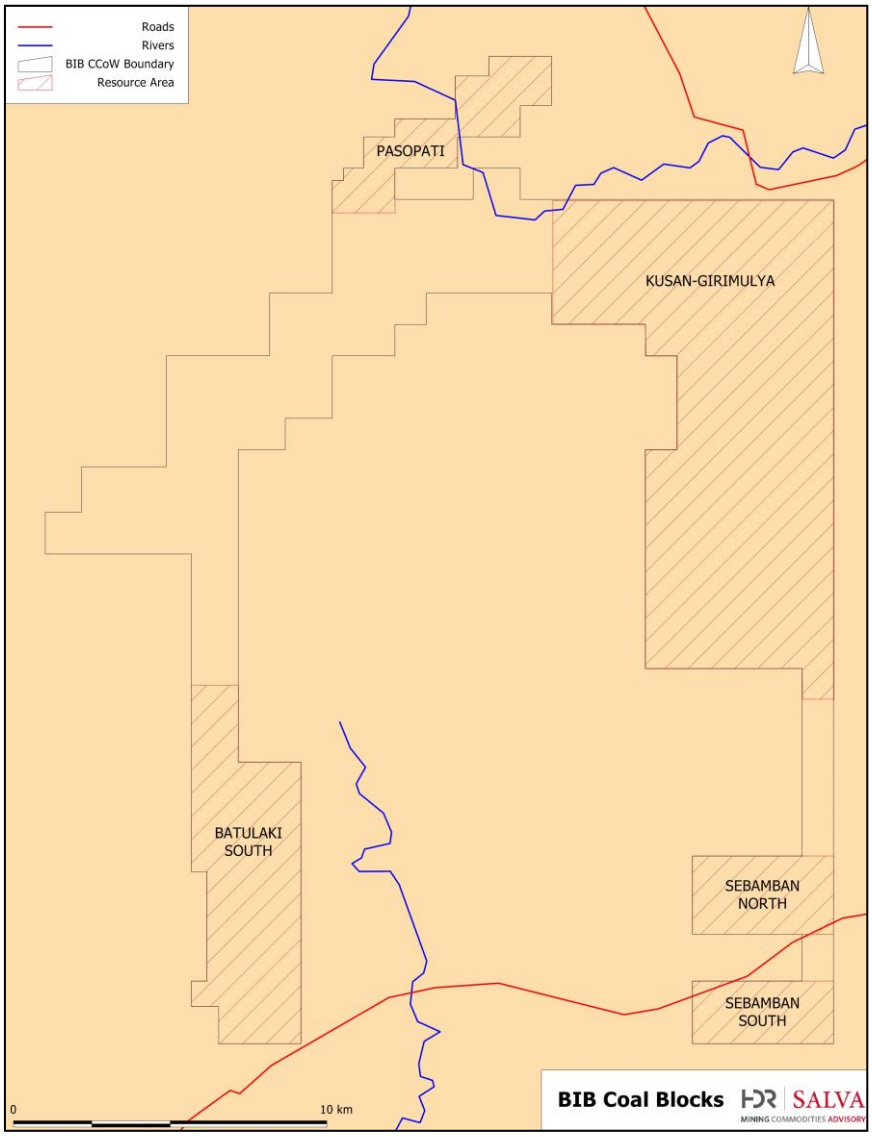
Conventional open-pit coal mining operations was commenced in the SS and BS blocks in 2005 and in the KG block in 2011. At the time of writing of this report, the mining operations are continuing at the BIB Mine. Various mining blocks are located between 6 km to 30 km to the South Kalimantan coastline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

LasutLay& Pane Advocates (“LLP”) has advised HDR that PT Borneo Indobara (PT. BIB) holds the mining rights to the BIB concession (Net 98.0951%). Tenure at the BIB concession is held under the second generation Perjanjian Kerjasama Pengusahaan Pertambangan Batubara (“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

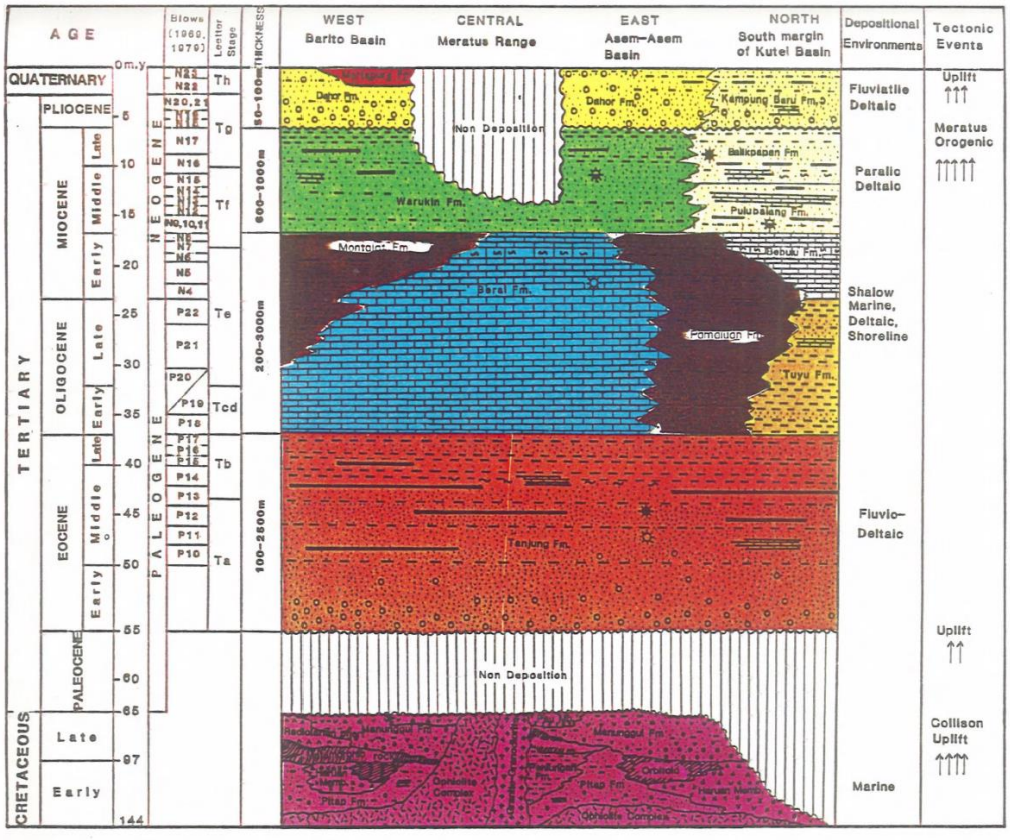
4 Geology

4.1 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 Generalized Stratigraphy of South-east Kalimantan



From Panggabean (1991)

Figure 4:2 Regional Geological Setting

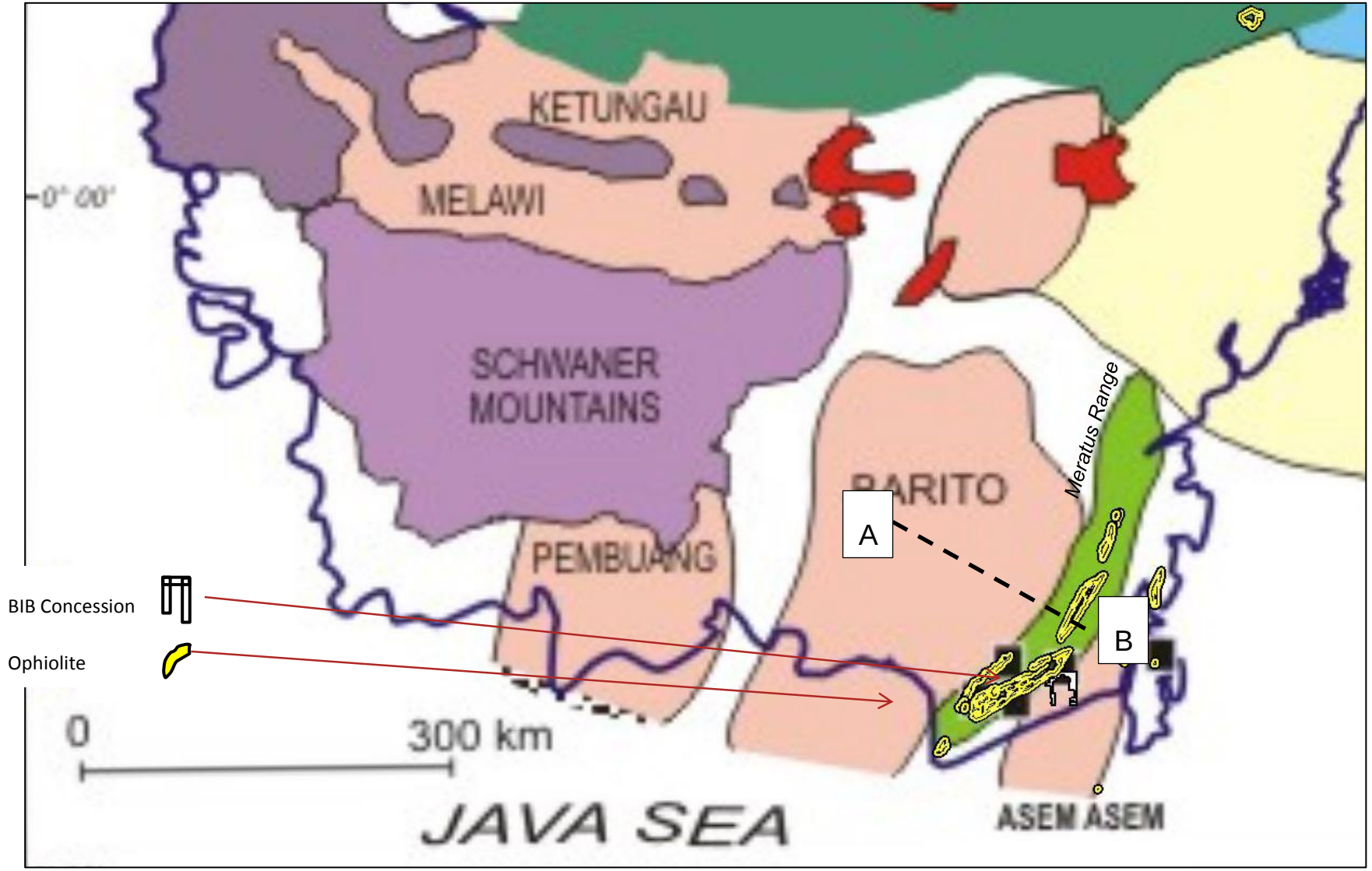
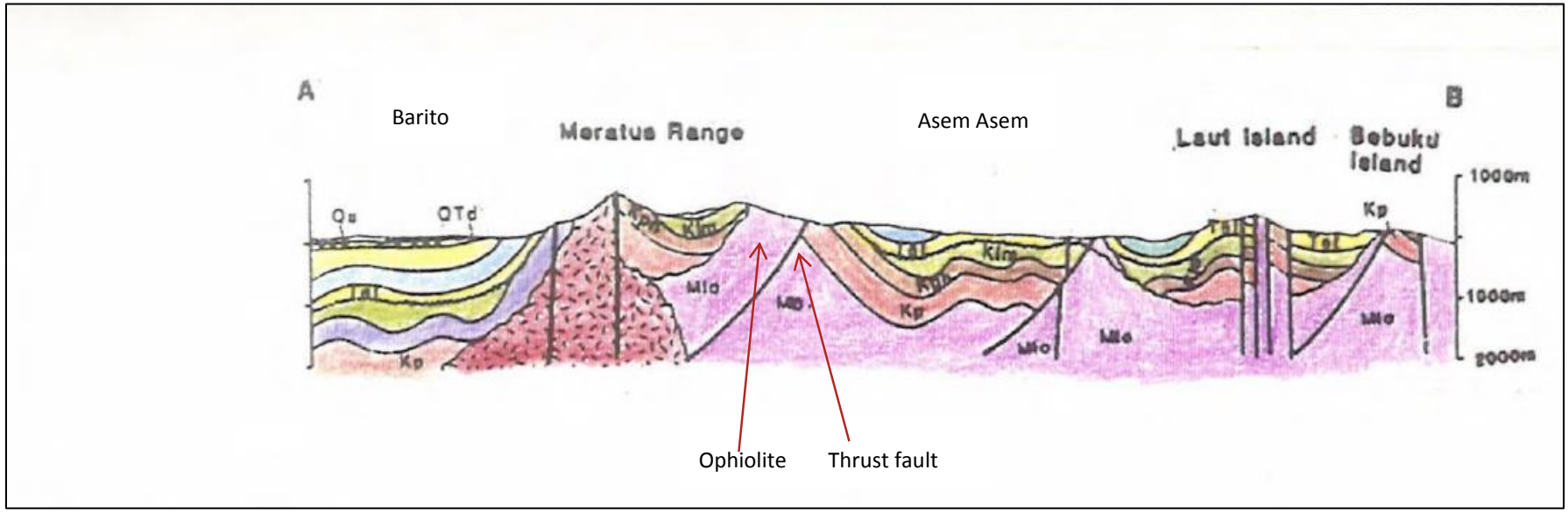
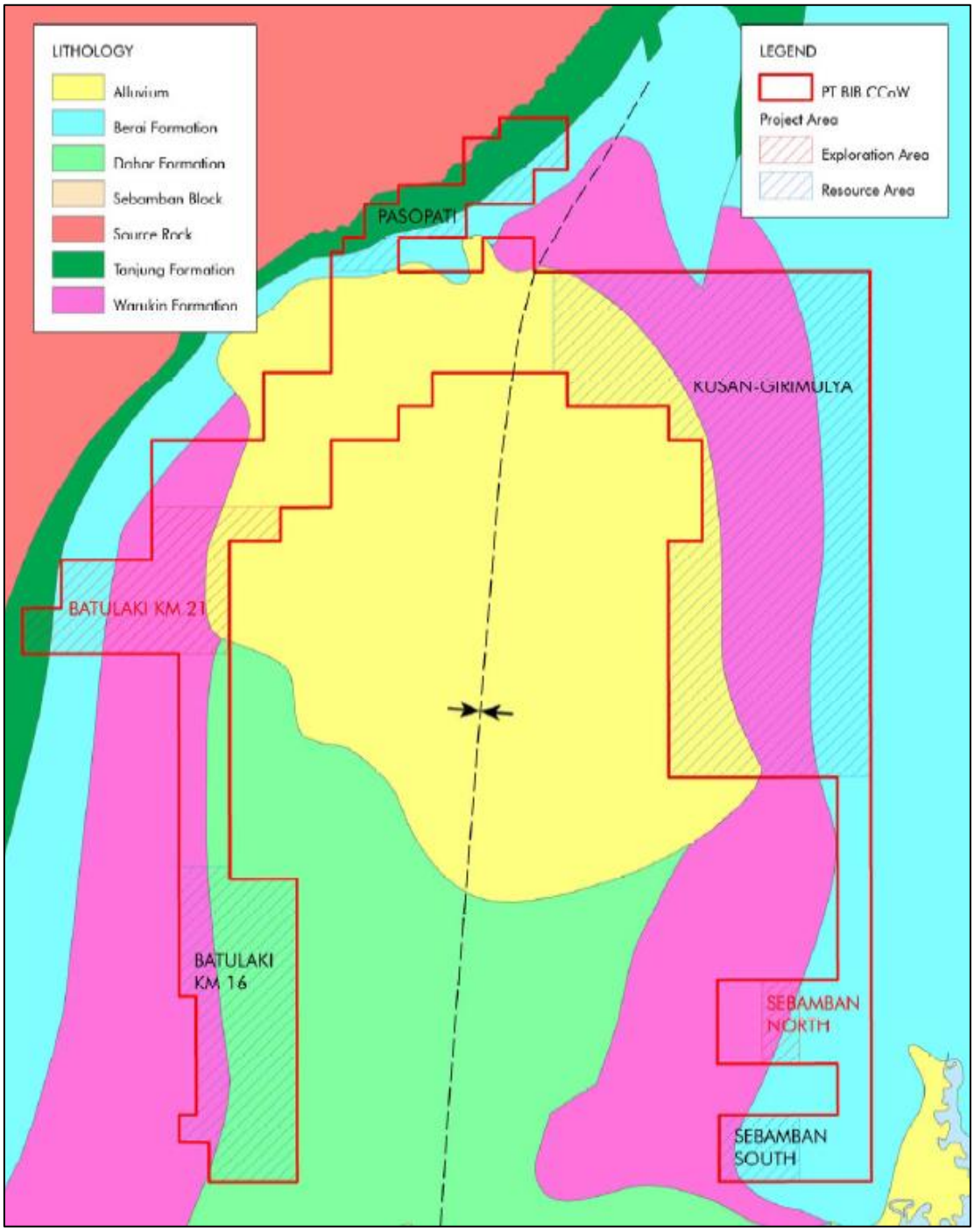


Figure 4:3 Cross-Section A-B showing Barito and Asem Asem sedimentary basins



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 but is currently on care and maintenance.

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. This area has not been mined to date but is scheduled for mining in 2015.

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.

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

Master Seam	1st Phase Splitting	2nd Phase Splitting	3rd Phase Splitting
			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	
		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		
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
G		
F	F2	
	F1	
FL		
E	E2	E2U
		E2L
	E1	
D3		
D2	D2U	
	D2L	
D1		
D	DU	
	DL	DL2
		DL1
C	CU	
	CL	
BU		

Master Seam	1st Phase Splitting	2nd Phase Splitting
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. BIB. The first phase involved generally shallow drilling and field mapping. In-fill drilling and deeper stratigraphic drilling to depths of up to 200 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 BIB concession have involved the following:

- In fill pre-production drilling;
- Dump and infrastructure sterilization drilling;
- Resource upgrade drilling;
- Deep stratigraphic drilling; and
- Resource expansion drilling

The results of the various phases of drilling have been assessed and geological models have been updated on a regular basis by PT. BIB staff and by PT SMG Consultants. 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).

Salva Resources Pty Ltd (HDR Salva) prepared an Resource and Reserve statement as at 31 July 2014 reported in accordance with JORC Code (2012) which was subsequently updated in November 2014.

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 PT. BIB for the BIB concession was independently reviewed by HDR's geologists and is considered appropriate and reasonable for the purpose of estimating Coal Resources.

This data, used by HDR 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;
- Minex geological models for the KB Block, BS Block, PP Block and SS Block areas constructed by PT SMG Consultants in mid - 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 PT. BIB 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; and
- 5 Minescape geological model for various resource area constructed during July 2014 and reported 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 surfaces.
- An updated geological model for KG Block was prepared using Minescape software in November 2014 and accordingly coal resource has been updated.

6.2 Lithological Data

A total of 2,092 drill holes were used to construct five geological models in the BIB coal concession area comprising:

- KG Block - 987 drill holes;
- BS Block - 552 drill holes;
- SS Block - 212 drill holes;
- SN Block - 168 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 PT. BIB 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 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	1.148	0.526	0.394
H1	12	DHKS09078	0.075	CPSMG_094	7.7	1.72	2.819
G2U	98	CSMGC063	0.078	CPSMG_056	2.6	0.342	0.358
G2L	100	KS_INF09145CR	0.162	CPSMG_106R	2.45	0.662	0.574
G1	103	CSMGC063	0.06	CPSMG_097A	6.75	0.533	1.159
F2	227	CPSMG_014	0.07	CPSMG_107	5.3	1.044	0.687
F1	226	CPSMG_014	0.05	CPSMG_106R	4	0.476	0.379
FL2	101	GM06014	0.1	CPSMG_095	4.3	0.764	0.819
FL1	99	CSMGC044	0.06	CPSMG_106R	3	0.546	0.614
E2U	405	CSMGC044	0.02	CPSMG_092	5.96	0.762	0.731
E2L2	405	CSMGC044	0.014	GM09405A	9.34	0.585	0.784
E2L1	405	DHKS09077	0.006	GM09405A	3.56	0.234	0.305
E1U2	430	CSMGC044	0.02	CPSMG_065	12.86	1.611	1.972
E1U1	430	CSMGC044	0.04	CSMGC075	10.64	1.221	1.011
E1L2	436	CSMGC044	0.04	CPSMG_034	11.45	1.543	1.296
E1L1	436	CPSMG_112	0.03	CSMGC074	10.51	1.916	1.481
EL2U	322	CPSMG_032	0.09	CSMGC064	5.86	1.11	0.947
EL2L	322	CPSMG_012	0.07	CSMGC068	4.75	0.898	0.772
EL1U	249	CSMGC051	0.1	CSMGC056	6.13	1.21	1.173
EL1L	249	CSMGC051	0.01	GM06045R	2	0.139	0.236
D1U2	141	KS_0843	0.02	GM09411	1.92	0.299	0.256
D1U1	140	KS_0843	0.03	GM09411	1.66	0.405	0.313
D1L2	149	KS_08258	0.01	CPSMG_041	2.5	0.421	0.47
D1L1	144	KS_08258	0.01	GM06042	1.9	0.419	0.39
DU2U	366	KS_08258	0.01	CPSMG_065	6.66	0.662	0.753
DU2L	366	KS_08258	0.01	CPSMG_044	10.4	0.595	0.73

DU1U	353	KS_08258	0.02	CPSMG_043	6.46	0.635	0.799
DU1L	354	KS_08258	0.01	CPSMG_043	6.14	0.754	0.789
DL2U	365	CPSMG_097A	0.05	DHKS09045	5.35	1.802	1.329
DL2L	364	CPSMG_097A	0.05	CSMGC036	5.3	1.505	1.114
DL1U	358	KS_08290	0.04	CPSMG_038	8.65	1.321	1.179
DL1L	358	KS_08290	0.02	CPSMG_037	5.25	0.639	0.67
CR2U	118	DHKS09120	0.08	GM06008R	3.193	0.484	0.471
CR2L	118	DHKS09120	0.04	GM06008R	1.957	0.291	0.288
CR1U	116	GM09003	0.087	GM10034	1.7	0.427	0.337
CR1L	116	DHKS09120	0.04	GM10034	0.85	0.216	0.168
CU2	171	DHKS09054	0.12	DHKS09004	4.65	0.539	0.551
CU1	169	DHKS09029	0.13	CSMGC003	2.7	0.519	0.408
CL2U	188	DHKS09052C	0.077	GM10028	6.52	1.016	1.187
CL2L	187	DHKS09052C	0.023	CPSMG_016	2.4	0.292	0.333
CL1U	187	CSMGC004	0.046	CPSMG_037	1.92	0.277	0.252
CL1L	188	CSMGC004	0.054	CPSMG_037	2.28	0.331	0.302
BU2U	171	DHKS09025	0.04	DHKS09104	2.463	0.564	0.413
BU2L	166	DHKS09025	0.03	DHKS09104	1.877	0.42	0.304
BU1U	172	DHKS09025	0.06	DHKS09116	4.083	0.762	0.621
BU1L	173	DHKS09025	0.04	DHKS09116	2.667	0.493	0.406
BL2U	204	DHKS09025	0.056	CPSMG_034	10.27	2.291	2.395
BL2L	205	DHKS09025	0.044	CPSMG_034	8.13	1.82	1.892
BL1U	188	DHKS09025	0.035	CPSMG_063	1.8	0.592	0.339
BL1L	188	DHKS09025	0.045	GM09029	2.75	0.719	0.418
B1	30	KS_08195	0.3	KS_08161	1.7	0.745	0.33
AU	80	DHKS09123	0.3	DHKS09034	0.95	0.553	0.15
AL2	49	DHKS09084	0.25	DHKS09024	1	0.623	0.167

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

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
D	6	BL_F709	0.35	B_09020A	1.15	0.64	0.315
CU	22	BL_F858	0.20	BL_0611	0.63	0.40	0.129
CL	27	BL_0631	0.20	BL_0678	0.96	0.50	0.203
BU	39	BL_0675	0.22	BL_F701	3.85	1.63	1.037
B	185	B_F9007	0.80	BL_F842	17.1	9.35	4.495
BL2	28	BL_0613C	0.18	BL_0682	4.47	1.61	1.265
BL1	24	BL_0613C	0.16	BL_F864	2.90	1.08	0.880
A5	22	BL_0607	0.20	B_F9020C	1.10	0.44	0.206

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
A4U2B	4	BL_F836	0.30	BL_F716	0.50	0.41	0.095
A4U2A	4	BL_F716	0.95	BL_0622C	2.45	1.78	0.724
A4U1	54	BL_F840C	0.34	BL_F859C	2.30	1.20	0.444
A4L	61	BL_0601A	0.21	BLK13033	1.95	0.71	0.318
A3U2	18	BLK_11026	0.30	BL_0608	2.08	0.79	0.444
A3U1	16	BL_F714C	0.75	B_10028	4.92	3.49	1.400
A3L	79	BLK_11019	0.20	B_09012	1.25	0.43	0.137
A2U2	21	BLK_11059	0.35	B_10032	2.18	1.38	0.626
A2U1	20	BL_0625	0.28	BLK_12009	4.70	1.05	1.022
A2L	73	B_09023	0.35	B_F9031	2.33	1.04	0.361
A1U2	17	B_F9055	0.20	B_10032	4.76	2.56	1.788
A1U1	17	B_09028	0.10	BLK_12012	0.95	0.45	0.228
A1L2	8	BL_0625	0.32	BLK_12009	1.20	0.70	0.274
A1L1	8	BL_0625	0.28	BLK_12009	3.30	0.81	1.012
AL2	22	B_09145	0.10	BS_13027	1.65	0.68	0.405
AL1	12	B_09144	0.20	B_F9032	1.50	0.80	0.357
S1	5	B_F9032	0.25	B_F9043	0.60	0.41	0.156
S2U	5	B_F9050	0.45	B_F9044	0.90	0.67	0.168
S2L	5	B_09017	0.30	B_09036	0.80	0.44	0.203
S3	26	B_09032	0.15	B_F9029	1.20	0.50	0.228
S4U	10	BLK_11045E	0.40	B_F9044	1.90	0.97	0.562
S4L	10	BLK_11045E	0.35	B_09017	0.85	0.57	0.193
S5	15	B_F9063	0.15	B_10035	0.67	0.28	0.135
S6	24	BLK_12006B	0.15	B_F9045	1.90	0.52	0.514
S7U	32	BLK_12005	0.25	B_F9062	5.45	0.94	1.028
S7L	32	BLK_12004B	1.95	B_09016	6.25	3.90	1.373
S8U	25	B_F9063	1.65	BLK_12007	3.90	2.98	0.576
S8L	16	B_09140	0.20	BLK_11045D	0.70	0.43	0.158
S9	14	B_F9059	0.20	B_09141	1.10	0.57	0.293
S10U	5	B_09021	0.25	B_09026	0.40	0.33	0.057
S10L	5	B_09016	0.32	B_09026	0.50	0.39	0.077
S11	10	B_09016	0.25	B_F9068	4.30	2.52	1.637
S12	9	B_F9047	2.30	B_F9061	6.10	4.99	1.060
C	90	BL_F879C	0.10	B_F9XX09	2.25	0.84	0.345
BL	76	B_09033	0.25	BL_F811	3.10	0.66	0.484
A4U2	49	BL_0611	0.32	B_10016	4.90	1.97	1.058
A4U	37	B_F9074	0.30	B_09002A	7.35	2.46	1.717
A3U	83	B_F9XX07	0.50	BL_F719	5.85	3.64	1.128
A2U	57	B_F9015A	0.20	B_F9XX07	4.45	2.42	1.000

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
A1U	45	BLK_12018	0.20	BL_F702C	5.00	1.84	1.503
A1L	42	BLK_12025	0.15	B_F9071	1.10	0.57	0.247
S2	6	B_F9064	0.25	B_F9071	1.30	0.52	0.390
S4	22	BLK_11056	0.30	BLK_12006	3.25	1.89	1.256
S10	3	B_F9047	0.35	B_F9069	0.75	0.58	0.208

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

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
F2	56	SB-INF813C	0.85	SB-INF815	2.78	1.92	0.503
F1	56	SBM0806	0.42	SB-INF803C	1.45	0.91	0.237
E2U	86	DUMMY2	1.10	SB-INF807C	5.64	2.74	0.844
E2L	87	SB-0630	0.50	SB-INF807C	5.22	2.53	0.812
E1U	70	SB-0616	0.15	SB-INF810	3.59	0.77	0.544
E1L	70	SB-0616	0.15	SB-INF810	3.66	0.78	0.555
EL	49	SB-INF837	0.25	SB-INF805	4.00	2.10	0.863
D1U	57	SB-0642	0.22	DHSB9057	1.60	0.84	0.405
D1L	56	SB-0642	0.12	CHKSB907TC	1.00	0.45	0.205
DU2	82	DHSB9001C	0.25	DHSB9005C	5.99	2.19	0.979
DU1	78	SB-INF812	0.12	DHSB9005C	2.06	0.76	0.373
DL2U	2	SB-0650	0.36	SB-0659	0.43	0.40	0.049
DL2L	2	SB-0650	0.44	SB-0659	0.80	0.62	0.255
DL2	72	SB-INF808	0.20	SB-0643	3.54	1.58	0.820
DL1	78	SB-INF808	0.30	DCSB814	4.01	2.40	1.103
C	42	SB-0605C	0.30	DHSB9003C	1.25	0.67	0.196
B1	9	CHKSB914	0.40	DHSB9081C	1.20	0.66	0.274
BU2	29	CHKSB915A	0.14	DHSB9003C	0.98	0.43	0.238
BU1	28	CHKSB915A	0.16	DHSB9003C	1.13	0.49	0.276
BL2	33	DCSB809	0.40	DHSB9003C	2.99	1.31	0.637
BL1	34	DCSB809	0.31	DHSB9003C	2.30	0.99	0.491
A2	5	SB-0636	0.70	DCSB813	0.80	0.77	0.045

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

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
G	4	SBA_13016	0.3	SBA_13037	0.5	0.413	0.085
F2	13	SBA_13064	0.2	DH_SB09029	0.9	0.546	0.257
F1	13	SBA_14073	0.25	DH_SB09027	0.6	0.367	0.096
FL	6	DH_SB09011	0.25	SBA_13026	0.5	0.433	0.108
E2U	1	DH_SB09026	1.29	DH_SB09026	1.29	1.29	-
E2L	1	DH_SB09026	3.45	DH_SB09026	3.45	3.45	-
E1	21	DH_SB09021C	0.2	SBA_14086	3.65	0.931	0.949
D3	4	DH_SB09021C	0.35	SBA_13006	0.8	0.637	0.214
D2U	10	DH_SB09024	0.35	SBA_13023	4.2	1.815	1.209
D2L	9	GT_SBA_06	0.2	SBA_13016	0.7	0.328	0.152
D1	13	SBA_13005	0.2	SBA_13008	0.8	0.392	0.205
DU	22	DH_SB09005	0.25	SBA_13011	2.3	0.725	0.462
DL2	7	SBA_13049	0.8	SBA_13020	6.6	2.95	2.109
DL1	6	SBA_13021	0.2	SBA_14016	1.1	0.483	0.331
CU	10	SBA_13003	0.3	GT_SBA_04	1.04	0.679	0.227
CL	9	GT_SBA_04	0.1	SBA_13068	0.8	0.444	0.23
BU	18	GT_SBA_06	0.3	SBA_13053	2	0.739	0.406
BL2	6	SBA_13055C	0.33	SBA_13055	0.7	0.505	0.147
BL1	7	SBA_14096	1.2	SBA_13056	3.7	2.343	0.945
A2	23	SBA_13062	0.2	SBA_13036	1.3	0.606	0.306
A1	13	SBA_13036C	0.1	SBA_13055C	0.6	0.398	0.14
AL	8	SBA_13049	0.22	GT_SBA_09	0.8	0.47	0.279
F	8	GT_SBA_01	0.222	SBA_13029C	2.6	0.64	0.796
E2	17	SBA_14086	0.45	SBA_13016	5.6	2.741	1.705
E	52	SBA_13066	0.2	SBA_13006	6.5	4.198	1.657
D2	48	DH_SB09006	0.25	GT_SBA_08	2.8	1.095	0.598
DL	37	SBA_14023	0.1	GT_SBA_06	6.2	3.52	1.499
D	34	SBA_14023A	1.8	SBA_13058	8.3	6.643	1.534
C	34	SBA_13004	0.2	SBA_13062	1.6	0.754	0.317
BL	21	SBA_13022	0.222	SBA_13049	4.9	2.54	1.476

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

Seam	Intersections	Hole no.	Min Thickness	Hole no.	Max Thickness	Mean Thickness	S.D.
SU1U	1	CPS11029E	1.95	CPS11029E	1.95	1.95	-
SU1L	1	CPS11029E	3.45	CPS11029E	3.45	3.45	-
SU2	10	CPS11025	0.5	CPS11042F	6.15	4.01	2.392
SM1	23	PS11042E	0.9	CPS11043A	4	1.916	0.748
SM2U	3	CPS11095B	1.1	CPS11094B	1.25	1.2	0.087
SM2L	3	CPS11095B	0.9	CPS11094B	0.95	0.933	0.029
SL1U	3	CPS11091B	0.85	CPS11026C	2.2	1.683	0.729
SL1L	3	CPS11026C	1	CPS11092B	1.9	1.583	0.506
SL2U	3	CPS11029F	1.1	CPS11006H	8.15	3.75	3.837
SL2L	4	PS11038B	1	CPS11006C	12	4.65	5.152
SL3U	2	PS11033	0.9	CPS11032B	5	2.95	2.899
SL3L	2	PS11033	1.2	CPS11032B	2.1	1.65	0.636
SB	33	CPS11034	0.35	CPS11006D	3.8	1.088	0.665
SU1	6	CPS11025	0.4	CPS11041	3	2.233	1.203
SM2	36	CPS11011B	0.8	CPS11034X	5.35	2.371	1.508
SL1	40	CPS11096B	0.9	CPS11012	6	2.871	1.425
SL2	50	CPS11026D	0.55	CPS11012	9	3.257	1.749
SL3	54	CPS11036C	1.25	PS11006B	12.7	4.437	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 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.

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 HDR 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, HDR 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 PT. BIB 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 HDR prior to geological model construction

Prior to using the lithological (seam pick) and coal quality data for geological model construction purposes, HDR 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 were 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. No instances of this were identified as core recovery was observed to be generally good within the sampled seams (coal samples with less than 90% core recovery had previously been removed from the data by PT. BIB staff prior to being forwarded to HDR)
- 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 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. 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	5188	35.85	12.36	1.27	35.96	0.13	40.06
	Max Value	7.41	5590.14	41.38	16.04	1.36	37.5	0.16	44.38
	Mean	4.75	5397.38	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	4.3	4933.85	36.48	13.1	1.24	35.73	0.08	37.57
	Max Value	11.73	5615	38.74	16.04	1.43	40.33	0.16	46.04
	Mean	6.4	5304.46	37.2	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	4180	29.56	12.92	1.29	32.78	0.13	33.68
	Max Value	22.39	5433	39.38	15.79	1.5	38	0.2	41.31
	Mean	10.88	4981	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	4180	29.56	12.92	1.3	32.78	0.14	33.68
	Max Value	22.39	5425.25	39.36	15.88	1.5	38	0.2	41.26
	Mean	11.98	4938.81	34.46	14.37	1.4	35.1	0.16	39.19
G1	Number of Values	9	9	9	9	9	9	9	9
	Min Value	3.64	4180	29.56	12.87	1.27	32.78	0.1	33.68
	Max Value	22.39	5548	40.49	16.81	1.5	38.21	0.29	43.74
	Mean	7.73	5171.44	36.93	14.85	1.35	35.37	0.17	40.49
F2	Number of Values	26	26	26	26	26	26	26	26
	Min Value	1.3	4875	33.99	10.38	1.27	33.43	0.13	36.53
	Max Value	11.67	5890	42.22	24.72	1.42	39.08	0.54	45.77
	Mean	4.59	5443.12	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	2172.3	16.02	7.53	1.26	25.24	0.11	19.38
	Max Value	58.21	5757	41.18	20.01	1.9	41.16	0.54	45.24
	Mean	9.67	5164.75	36.21	14.45	1.4	35.22	0.22	39.76
FL2	Number of Values	13	13	13	13	13	13	13	13
	Min Value	2.39	4118	28.93	13.42	1.27	32.57	0.09	32.84
	Max Value	24.74	5566	40.15	18.28	1.42	39.43	0.26	43.32
	Mean	6.8	5133.08	37.8	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	4118	28.93	12.42	1.27	32.32	0.1	32.84
	Max Value	24.74	5566	40.15	17.79	1.45	39.43	0.26	43.32
	Mean	7.01	5204.82	37.32	14.87	1.35	35.52	0.18	40.79
E2U	Number of Values	101	101	101	101	102	101	101	101

	Min Value	1.99	4234	30.22	10.47	1.26	27.59	0.08	34.87
	Max Value	23.56	5811	42.05	19.26	1.56	39.15	0.34	45.3
	Mean	5.14	5364.77	38.75	15.25	1.37	35.48	0.16	40.86
E2L2	Number of Values	105	105	105	105	106	105	105	105
	Min Value	2.34	3479.23	25.85	11.5	1.25	27.59	0.08	28.08
	Max Value	32.66	5772.6	42.47	19.26	1.61	39.9	0.34	44.97
	Mean	5.6	5336.32	38.6	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	2903	19.28	10.03	1.25	26.48	0.08	24.96
	Max Value	45.73	5729	42.47	19.83	1.71	39.9	0.34	44.97
	Mean	6.16	5293.79	38.35	15.2	1.38	35.34	0.16	40.29
E1U2	Number of Values	120	120	120	120	121	120	120	120
	Min Value	2.46	3858	23.32	10.68	1.23	26.71	0.08	33.96
	Max Value	29.83	5729	42.47	23.89	1.55	40.99	0.34	46.05
	Mean	4.94	5347.64	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	3274.79	21.57	11.52	1.23	28.43	0.07	27.09
	Max Value	37.79	5729	46.36	27.29	1.66	42.07	0.34	46.05
	Mean	4.66	5367.36	39.14	15.43	1.37	35.58	0.14	40.77
E1L2	Number of Values	123	123	123	123	124	123	123	123
	Min Value	2.53	4619	29.71	4.33	1.24	30.14	0.08	36.54
	Max Value	23.42	5734	43.58	18.96	1.51	41.59	0.34	50.53
	Mean	4.6	5400.93	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	2746.8	20.11	4.33	1.24	30.14	0.08	25.29
	Max Value	42.5	5731.5	42.05	18.96	1.72	40.99	0.59	50.53
	Mean	5.21	5367.77	38.75	15.14	1.37	35.37	0.15	40.92
EL2U	Number of Values	81	81	81	81	81	81	81	81
	Min Value	1.84	4142	22.73	10.96	1.26	25.97	0.08	34.72
	Max Value	25.57	5975.29	41.48	20.13	1.56	38.23	0.94	46.7
	Mean	6.68	5283.08	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	4142	22.73	11.15	1.26	25.97	0.08	34.72
	Max Value	25.57	6112	41.48	23.02	1.56	38.23	0.65	47.87
	Mean	6.56	5295.44	37.46	15.18	1.38	35.02	0.18	40.82
EL1U	Number of Values	56	56	56	56	56	56	56	56
	Min Value	2.6	4181	24	10.54	1.3	26.75	0.09	33.55
	Max Value	27.26	5827.39	41.48	21.56	1.58	38.32	0.5	45.12
	Mean	6.7	5326.54	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	2.6	1565	13.04	8.05	1.32	22.91	0.09	15.68

	Max Value	62.58	5803	41.48	20.18	1.97	39.2	0.37	49.16
	Mean	12.71	5006.43	34.92	14.44	1.43	33.67	0.18	38.62
EL2U	Number of Values	81	81	81	81	81	81	81	81
	Min Value	1.84	4142	22.73	10.96	1.26	25.97	0.08	34.72
	Max Value	25.57	5975.29	41.48	20.13	1.56	38.23	0.94	46.7
	Mean	6.68	5283.08	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	4142	22.73	11.15	1.26	25.97	0.08	34.72
	Max Value	25.57	6112	41.48	23.02	1.56	38.23	0.65	47.87
	Mean	6.56	5295.44	37.46	15.18	1.38	35.02	0.18	40.82
EL1U	Number of Values	56	56	56	56	56	56	56	56
	Min Value	2.6	4181	24	10.54	1.3	26.75	0.09	33.55
	Max Value	27.26	5827.39	41.48	21.56	1.58	38.32	0.5	45.12
	Mean	6.7	5326.54	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	2.6	1565	13.04	8.05	1.32	22.91	0.09	15.68
	Max Value	62.58	5803	41.48	20.18	1.97	39.2	0.37	49.16
	Mean	12.71	5006.43	34.92	14.44	1.43	33.67	0.18	38.62
D1U2	Number of Values	11	11	11	11	11	11	11	11
	Min Value	3.02	3566	24.5	10.4	1.28	31.06	0.14	31.32
	Max Value	33.78	5728.61	41.21	17.35	1.62	39.36	0.34	43.93
	Mean	10.13	5100.15	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	3566	24.5	9.77	1.25	31.06	0.14	31.32
	Max Value	33.78	5625	40.97	16.49	1.62	39.36	0.34	44.55
	Mean	9.74	5120.45	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	3566	24.5	9.77	1.26	31.06	0.02	31.32
	Max Value	33.78	5625	40.97	16.79	1.62	39.36	0.34	44.55
	Mean	8.49	5214.94	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	3498.43	24.21	9.12	1.3	28.89	0.14	29.36
	Max Value	36.2	5625	40.97	16.79	1.63	39.36	0.35	43.14
	Mean	9.6	5162.28	36.29	14.05	1.41	34.8	0.22	40.07
DU2U	Number of Values	72	72	72	72	72	72	72	72
	Min Value	2.24	1871	13.32	6.85	1.27	22.75	0.09	18.11
	Max Value	61.72	5677	41.29	19	1.99	39.42	1.07	44.96
	Mean	7.61	5200.7	37.4	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	1871	13.32	6.85	1.27	22.75	0.09	18.11
	Max Value	61.72	5677	41.29	19	1.99	39.42	1.07	44.96

	Mean	7.72	5197.26	37.36	14.95	1.39	35.14	0.22	39.98
DU1U	Number of Values	74	74	74	74	74	74	74	74
	Min Value	2.24	3665	27.45	11.45	1.27	28.17	0.09	29.87
	Max Value	30.85	5677	41.29	19	1.47	40.46	1.07	44.92
	Mean	6.57	5258.86	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	3665	27.45	10.95	1.27	28.17	0.09	29.87
	Max Value	30.85	5677	42.2	19	1.51	40.46	1.07	44.08
	Mean	6.84	5243.84	37.94	15.21	1.39	35.48	0.22	40.02
DL2U	Number of Values	73	73	73	73	73	73	72	73
	Min Value	2.43	4630.71	31.48	11.15	1.3	30.69	0.09	35.41
	Max Value	18.87	5796	43.08	22.98	1.51	40.81	1.96	46.5
	Mean	5.54	5312.76	38.67	15.29	1.39	35.8	0.2	40.49
DL2L	Number of Values	76	76	76	76	76	76	75	76
	Min Value	2.43	3848	26.37	11.15	1.3	30.69	0.09	30.71
	Max Value	30.79	5796	43.08	22.98	1.57	39.67	1.07	46.5
	Mean	6.07	5281.54	38.35	15.31	1.39	35.56	0.18	40.26
DL1U	Number of Values	71	71	71	71	71	71	70	71
	Min Value	2.43	3234	21.46	9.67	1.28	26.26	0.09	28.02
	Max Value	40.85	5796	43.08	22.98	1.72	38.94	1.07	46.5
	Mean	6.84	5249.53	38.05	15.17	1.4	35.23	0.19	39.94
DL1L	Number of Values	70	70	70	70	70	70	69	70
	Min Value	2.43	3234	21.46	9.67	1.28	26.26	0.09	28.02
	Max Value	40.85	5796	43.08	22.98	1.72	38.94	1.07	46.5
	Mean	7.65	5205.12	37.59	15.11	1.4	35.01	0.21	39.67
CR2U	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.7	4038	26.87	11.42	1.28	29.29	0.09	34.24
	Max Value	27.47	6318	41.44	19.57	1.54	38.22	2.42	47.47
	Mean	7.86	5362.37	36.44	14.5	1.39	34.28	0.36	41.08
CR2L	Number of Values	26	26	26	26	26	26	26	26
	Min Value	3.7	4038	26.87	11.42	1.28	29.29	0.09	34.24
	Max Value	27.47	6318	41.44	19.57	1.54	38.22	2.42	47.47
	Mean	8.05	5349.69	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	3.7	4676	32.16	11.8	1.28	29.55	0.09	34.96
	Max Value	17.8	6318	41.44	19.38	1.47	38.22	2.42	47.47
	Mean	7.81	5386.41	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	3.7	4326	24.84	11.6	1.28	29.55	0.09	34.96
	Max Value	24.4	6318	41.44	19.38	1.54	38.22	2.42	47.47
	Mean	8.06	5368.46	36.26	14.32	1.39	34.3	0.38	41.23

CU2	Number of Values	23	23	23	23	23	23	23	23
	Min Value	3.56	3311.8	22.09	10.09	1.29	28.36	0.15	31.84
	Max Value	36.06	5656	41.69	18.32	1.72	40.07	2.12	42.86
	Mean	9.92	5134.64	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	2864.49	19.07	9.34	1.29	27.67	0.15	29.2
	Max Value	42.46	5656	41.69	17.82	1.81	38.75	2.21	42.86
	Mean	10.9	5119.71	35.81	14.03	1.43	34.58	0.92	39.29
CL2U	Number of Values	36	36	36	36	36	36	36	36
	Min Value	2.13	4806	33.78	12.17	1.29	30.85	0.11	36.63
	Max Value	14.46	5838.66	41.91	20.55	1.49	42.6	1.96	45.99
	Mean	6.42	5320.69	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	4806	31.8	12.11	1.29	30.85	0.11	36.63
	Max Value	14.75	5875	42.26	20.55	1.49	40.63	1.96	44.37
	Mean	6.47	5323.17	37.89	15.16	1.39	35.58	0.5	40.48
CL1U	Number of Values	35	35	35	35	35	35	35	35
	Min Value	3.43	3987	27.74	9.89	1.29	29.55	0.12	32.63
	Max Value	29.71	5862.69	39.91	20.55	1.65	39.17	1.96	44.24
	Mean	8.48	5206.07	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	4042	28.99	11.66	1.29	29.55	0.12	32.63
	Max Value	24.78	5747.95	41.44	20.55	1.54	39.17	1.96	42.7
	Mean	7.66	5260.37	36.97	15.24	1.39	35.22	0.54	40.12
BU2U	Number of Values	41	41	41	41	41	41	41	41
	Min Value	2.7	3617	26.71	10.58	1.31	26.23	0.16	27.64
	Max Value	35.07	5687.38	42.17	19.51	1.68	41.49	1.6	43.49
	Mean	7.52	5253.17	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	3617	26.46	10.58	1.33	20.26	0.16	27.64
	Max Value	35.07	5698	42.42	19.51	1.68	41.49	1.89	43.49
	Mean	8.26	5197.17	37.92	14.46	1.42	35.5	0.56	39.35
BU1U	Number of Values	42	42	42	42	42	42	42	42
	Min Value	2.61	4049	24.88	11.49	1.28	29.41	0.16	32.73
	Max Value	26.56	5641.34	42.05	19.51	1.57	41.49	1.6	47.35
	Mean	6.86	5289.02	38.13	14.8	1.4	35.96	0.52	40.21
BU1L	Number of Values	42	42	42	42	42	42	42	42
	Min Value	2.73	4049	29.22	10.8	1.3	29.41	0.16	32.73
	Max Value	26.56	5656.25	42.29	19.51	1.57	41.49	1.6	43.49
	Mean	7.37	5248.12	38.16	14.79	1.41	35.74	0.51	39.68
BL2U	Number of Values	69	69	69	69	69	69	69	69

	Min Value	2.76	4752	35.35	11.72	1.28	31.76	0.14	35
	Max Value	15.1	5695	42.11	19.29	1.48	41.49	3.98	43.59
	Mean	4.78	5358.76	39.59	15.29	1.39	36.3	0.49	40.34
BL2L	Number of Values	70	70	70	70	70	70	70	70
	Min Value	2.89	4613	34.41	11.72	1.28	31.76	0.14	35
	Max Value	16.75	5695	42.32	19.29	1.5	41.49	3.98	44.2
	Mean	4.94	5350.22	39.52	15.33	1.39	36.49	0.49	40.21
BL1U	Number of Values	52	52	52	52	52	52	52	52
	Min Value	2.9	3650.76	24.3	10.79	1.27	26.64	0.16	31.42
	Max Value	33.52	5754	42.18	19.22	1.62	41.49	4.12	45.15
	Mean	7.07	5280.98	38.27	14.77	1.4	36.19	0.68	39.89
BL1L	Number of Values	51	51	51	51	51	51	51	51
	Min Value	2.9	3414.3	23.95	10.47	1.27	26.39	0.16	29.11
	Max Value	36.47	5754	42.35	19.22	1.66	41.49	4.12	45.15
	Mean	6.86	5298.04	38.43	14.81	1.4	36.25	0.71	39.89
B1	Number of Values	4	4	4	3	4	4	4	4
	Min Value	5.11	5107	35.99	11.62	1.38	34.33	1.8	38.54
	Max Value	11.37	5575	38.32	15.35	1.43	37.87	2.35	42.36
	Mean	8.19	5361.71	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	35.4	3554	22.81	11.25	1.64	29.47	0.36	30.54
	Max Value	35.4	3554	22.81	11.25	1.64	29.47	0.36	30.54
	Mean	35.4	3554	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	5173.62	36.11	12.15	1.46	36.9	2.2	38.32
	Max Value	13.43	5173.62	36.11	12.15	1.46	36.9	2.2	38.32
	Mean	13.43	5173.62	36.11	12.15	1.46	36.9	2.2	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	3725.12	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	5239.64	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
	Max Value	19.13	5811	40.4	16.06	1.48	36.49	0.19	42.55

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Mean	11.61	5314.6	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	4295.21	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	4957.24	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	5142.13	35.48	8.31	1.33	26.82	0.08	37.71
	Max Value	10.04	6006.85	43.76	15.87	1.62	41.79	0.54	44.16
	Mean	3.93	5605.16	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	6197.48	43.68	14.28	1.39	35.92	0.2	45.64
	Mean	6.03	5787.57	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	4977.56	34.11	9.46	1.37	29.62	0.17	37.84
	Max Value	13.04	6202.31	42.26	16.02	1.42	35.82	0.38	46.52
	Mean	7.48	5460.79	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	5006.52	28.66	7.03	1.35	23.59	0.15	39.06
	Max Value	13.87	6221.22	44.99	13.84	1.44	36.93	0.26	45.72
	Mean	8.81	5673.38	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	4553.75	32.33	12.35	1.42	31.22	0.32	35.13
	Max Value	20.2	4939.78	35.12	13.04	1.45	32.55	0.4	37.8
	Mean	17.11	4746.77	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	5391.19	35.68	11.96	1.32	32.53	0.14	41.76
	Max Value	7.23	6060.1	39.23	15.34	1.38	35.98	0.52	47.4
	Mean	4.36	5707.17	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	5453.95	37.23	8.11	1.34	26.95	0.13	41.36
	Max Value	6.02	5953.63	43.48	15.79	1.41	35.26	0.23	44.95
	Mean	4.34	5777.98	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	5406.93	36.57	10.56	1.3	29.18	0.12	40.19
	Max Value	7.78	6048	40.28	16.81	1.37	34.77	0.2	45.64

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
	Mean	4.99	5698.94	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	5131.54	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	6247.11	44.25	16.45	1.78	34.43	0.39	46.19
	Mean	9.37	5387.99	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	4847.88	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	5085.94	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	5526.18	40.04	11.03	1.44	34.12	0.15	41.34
	Max Value	7.58	5526.18	40.04	11.03	1.44	34.12	0.15	41.34
	Mean	7.58	5526.18	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	5265.94	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	5318.31	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	5720.22	38.42	12.68	1.57	32.93	0.19	43.8
	Mean	16.49	4989.11	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	5628.61	43.22	12	1.4	34.42	0.13	40.74
	Max Value	4.04	5628.61	43.22	12	1.4	34.42	0.13	40.74
	Mean	4.04	5628.61	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	4184.16	29.42	9.58	1.36	35.93	0.08	33.94
	Max Value	25.18	5656.01	42.83	19.86	1.81	40.71	0.17	42.72
	Mean	6.85	5274.17	38.88	13.99	1.44	38.18	0.14	40.29
F1	Number of Values	11	11	11	11	11	11	11	11
	Min Value	3.29	3106.58	23.06	7.08	1.37	33.58	0.09	27.94
	Max Value	39.48	5650.2	45.99	16.63	1.78	40.26	0.17	42.27
	Mean	13.05	4993.76	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	4567.25	30.12	8.96	1.36	32.29	0.09	37.3
	Max Value	18.89	5915.96	41.93	17.14	1.79	39.25	0.24	44.94
	Mean	5.97	5507.13	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	4370.66	29.87	8.7	1.32	32.83	0.09	35.27
	Max Value	19.5	5891.58	42.35	16.45	1.81	40.86	0.17	45.91
	Mean	6.63	5415.52	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	4846.2	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	5535.85	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	2917.27	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	5283.72	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	4638.68	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	5496.97	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	5799.44	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	6054.79	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	5960.67	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	5113.09	36.9	8.57	1.39	37.68	0.09	38.55
	Max Value	8.43	5971.52	43.73	16.12	1.81	42.45	0.24	44.27
	Mean	4.94	5637.29	41.21	11.5	1.45	39.51	0.18	42.35

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
DU1	Number of Values	6	6	6	6	6	6	6	6
	Min Value	1.7	5474.61	41.09	9.25	1.37	39.18	0.1	40.71
	Max Value	4.36	5836.32	44.4	14.38	1.81	41.02	0.18	42.85
	Mean	3.33	5678.77	42.83	11.41	1.47	39.97	0.14	42.07
DL2	Number of Values	6	6	6	6	6	6	6	6
	Min Value	2.63	5471.17	40.57	8.9	1.37	38.16	0.12	40.47
	Max Value	5.9	5859.98	43.43	14.62	1.82	40.03	0.22	44.49
	Mean	4.48	5646.03	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	5859.34	43.07	13.98	1.82	40.58	0.32	44.59
	Mean	5.34	5665.56	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	4764.57	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	5047.14	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	5464.99	39.99	9.41	1.39	38.44	0.3	40.88
	Max Value	5.72	5813.58	42.93	14.43	1.84	41.55	0.65	43.12
	Mean	4.89	5616.96	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	5677.27	43.76	14.31	1.85	42.45	0.5	40.98
	Mean	5.3	5550.81	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
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	11	11	11	11	11	11	11	11
	Min Value	1.68	5098	35.67	11.54	1.3	35.16	0.1	39.54
	Max Value	6.31	5680	41.37	21.19	1.44	42.48	0.2	42.74
	Mean	4.17	5401.86	38.64	16.09	1.37	39.61	0.17	41.09
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	9	9	9	9	9	9	9	9
	Min Value	3.44	5155	34.93	13.4	1.34	34.22	0.16	39.41
	Max Value	10.34	5641	38.97	19.92	1.42	41.71	0.35	43.98
	Mean	5.49	5428.11	37.29	16.05	1.37	38.1	0.23	41.17
DU	Number of Values	2	2	2	2	2	2	2	2
	Min Value	3.19	4637	29.31	17.11	1.34	34.51	0.11	34.5
	Max Value	18.77	5493	37.55	17.42	1.44	37.67	0.26	42.15
	Mean	10.98	5065	33.43	17.27	1.39	36.09	0.18	38.33

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
DL2	Number of Values	1	1	1	1	1	1	1	1
	Min Value	4.56	5532	39.27	14.12	1.39	38.3	0.12	42.05
	Max Value	4.56	5532	39.27	14.12	1.39	38.3	0.12	42.05
	Mean	4.56	5532	39.27	14.12	1.39	38.3	0.12	42.05
D	Number of Values	10	10	10	10	10	10	10	10
	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	0.17	41.96
	Mean	3.75	5421.37	39.62	16.23	1.37	38.09	0.11	40.4
DL	Number of Values	5	5	5	5	5	5	5	5
	Min Value	3.2	5056	36.6	13.4	1.35	35.55	0.09	38.1
	Max Value	6.5	5498	40.43	19.81	1.39	41.78	0.2	42.26
	Mean	5	5283.6	38.23	16.81	1.37	38.85	0.13	39.97
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	2	2	2	2	2	2	2	2
	Min Value	5.26	4992	31.93	14.95	1.34	36.38	0.56	39.6
	Max Value	13.52	5481	37.02	17.08	1.41	39.11	1.72	40.64
	Mean	9.39	5236.5	34.48	16.01	1.38	37.75	1.14	40.12
BL	Number of Values	3	3	3	3	3	3	3	3
	Min Value	4.27	5246	37.15	12.94	1.36	37.42	0.38	38.74
	Max Value	8.37	5549	39.28	17.71	1.42	39.36	2.17	41.61
	Mean	6.07	5403	38.56	14.75	1.39	38.57	0.98	40.63
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

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
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	6497.66	43.23	7.12	1.31	9.27	0.66	43.49
	Max Value	10.1	6497.66	43.23	7.12	1.31	9.27	0.66	43.49
	Mean	10.1	6497.66	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	6503.63	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	6756.21	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	6359.38	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	6406.5	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
	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

SEAM		ASH % adb	CV adb	FC % adb	IM % adb	RD adb	TM % ar	TS % adb	VM % adb
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	6875.31	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	6601.5	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	6698.33	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 (Version 5.7.85.0) 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 Minex topography grid models for each area used previously by PT SMG Consultants. These topography models describe both virgin topography and mined voids within the concession as at 28th July 2013.

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	kg2015,pp2014,km16,sbs14,sbnorth
Topography Model	Topotmo_1212 (KG), Tops (PP, SS, 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
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, HDR 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, HDR 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, HDR 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 radius of influence of between 250 m and 375 m for various blocks
- Indicated radius of influence of between 500 m and 650m for various blocks; and
- Inferred radius of influence of 2,000 m.

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. Therefore, given the average coal quality attributes of the coal seams considered, which makes it amenable to be marketed as a thermal coal for power generation purposes, HDR considers that it is reasonable to define all coal seams within the classification distances discussed above, to a depth of 250 m 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 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) are detailed in Table 8:1 below.

Topographic surfaces valid as at 28 July 2013 were used in all resource models. As no more current mined void information was available at the time of model construction, adjustments for mining between 28 July 2013 and the date of this resource statement have been made.

Table 8:1 Coal Resource Estimate

KG Block as at 27 Nov 2014

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	798	5.38	5,332	294	5.96	5,304	325	6.31	5,286	1,417

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)*

Other Blocks as at 31 July 2014

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
BS	22	4.71	5,567	27	5.61	5,560	155	5.94	5,563	204
SS	18	6.22	5,510	10	6.29	5,559	15	5.59	5,570	42
SN	9	4.71	5,395	12	6.24	5,281	25	8.4	5,248	46
PP	10	7.48	6,146	10	8.87	6,275	10	9.72	6,460	31

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

In October 2013, PT SMG Consultants estimated a total resource of 1.84 Bt. This estimate was reported under JORC 2004 code.

HDR Salva prepared and reported JORC 2012 complaint Resource estimate in August 2014 of 1.78 Bt. This represents a 3.3% drop in total tonnage for a number of reasons, namely;

- A 22% drop in Measured and Indicated tonnes in this latest estimate resulting from modelling of seams as pinched (not present) if not logged in the hole. Previously seams were taken through the hole even if not logged as present.
- A 44% increase in Inferred tonnes due to an increase in the classification distance for Inferred from 2000 m to 4000 m between holes.

HDR updated the Resource estimate in November 2014 for the KG pit incorporating additional coal quality data and using new Coal Guidelines of 2014. The new Resource estimate of 1.74 Bt is similar to the last reported Resources estimate of August 2014.

While the total Resource is similar to the previous estimate, there is an improvement in Resource Classification, namely;

- A 17% increase in Measured and Indicated tonnes in this latest estimate resulting from remodelling of seams based on additional coal quality information and use of Geo-statistical tools to determine radius of influence around points of observation.

Table 8:2 below shows a breakdown of the difference in resource tonnes for the entire BIB concession between this and the previous estimate.

Table 8:2 Coal Resource - Comparison with Previous Estimate

Resource Category	HDR Nov 2014 (Mt)	HDR July 2014 (Mt)	PT SMGC 2013 (Mt)
Measured	857	414	583
Indicated	353	623	742
Total M&I	**1,210**	**1,038**	**1,324**
Inferred	530	740	512
Total	**1,740**	**1,777**	**1,836**

9 Reserves Estimation

9.1 Estimation Methodology

HDR prepared the Coal Resource estimate for BIB Concession coal deposit 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 HDR. The mining schedule for the BIB concession blocks includes 3 existing open cut mines, Kusan Girimulya (KG), Batulaki South (BS) and Sebamban South (SS) and 2 proposed open cut mines Sebamban North (SN) and Pasopati (PP) which targets total coal requirement of 40 Mtpa from all the pits from the year 2022 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 4.0 Mt in 2013 and expected to produce 4.7Mt in 2014.

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. HDR 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 HDR'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	2.5% - 5%
Minimum mining thickness minable coal seam	0.3m

Factor	Chosen Criteria
Dilution default density	2.2 bcm/t to 2.4 bcm/t
Dilution default calorific value	500Kcal/kg
Dilution default ash	75% to 80%
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
Offset from the river edge	300m
Mining , Coal handling and Transport Cost	Available and Used
Coal Selling Price for Break-even Stripping Ratio calculation	Nov 2014: US$ 35.57/t for KG Block July 2014: US$41.4/t for all except Pasopati Block, Pasopati- US$ 88.4/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 HDR 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 HDR 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	2.40
Waste Mining	$/bcm	2.40
Waste Haulage	$/bcm/km	0.30
Coal Mining	$/t	1.40
Haul to ROM Stockpile	$/t km	0.15
Haul to Port Stockpile – Road	$/t km	0.13
Barging	$/t km	0.05
Transhipment	$/t	2.10

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	0.50
Haul to Port Stockpile – Conveyor	$/t km	0.05
Port Stockpile and Barge Loading	$/bcm	1.00
Mine Closure	$/ha	8,500
Environmental and Rehabilitation	$/t	0.15
Miscellaneous Operations	$/t	0.15
Water Treatment	$/t	0.05
Salary and Wages	$/t	0.30
Camp and Accommodation	$/t	0.05
Medical & Community Development	$/t	0.15
Land Use Payment	$/t	0.25
Corporate Overheads	$/t	0.50
Contingency	$/t	1.12

Royalty was estimated 13.5% based on the respective sale prices of the coal for each block. A 10% VAT and 15% operating contingency was also considered.

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 PT. BIB technical team and verified by HDR. 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. HDR 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

PT. BIB is proposing to mine 40 Mtpa of coal from BIB coal concession blocks from 2022 onwards and as such would need 600 Mt of mineable ROM coal to achieve this target for a 15 year mine life. 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.

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)

Estimation of Break Even Stripping Ratio	Nov-14	Jul-14	
	KG Block	BS, SS & SN Blocks	PP Block
Coal Price, US$/t FOB Basis	$35.57	$41.40	$88.40
Total of Road haulage, Port, Barging & Royalty, US$/t	$16.57	$16.57	$24.00
Price at Mine Head, US$/t	$19.00	$24.83	$64.40
Other mine related cost, US$/t	$5.90	$5.90	$8.00
Price ex mine, US$/t	$13.10	$18.93	$56.40
Cost of coal mining incl. haulage, US$/t	$1.70	$1.70	$1.70
Cost of waste mining incl. top soil & haulage, US$/bcm	$2.70	$2.70	$2.70
Break-even stripping ratio, bcm/t	4.2	6.4	20.3

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. HDR has assumed that no moisture reduction takes place for the determination of product quality.

Reserve Estimate for KG pit was estimated on adb basis. The price for this coal was adjusted downwards to account for inherent moisture.

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 the BIB Mine 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 (SB) and Batulaki South (BS) Blocks. Sebamban south pit was mined till January 2014 and is currently under care and maintenance. The Kusan pit (KG) was started in 2011. 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 group. In the second quarter of 2015, it is proposed to open up the seam B group in the lower ratio zones in Kusan pit. Girimulya pit will be opened in the first quarter of 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 PT. BIB) 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.

Coal mining operations at Batulaki pit (BS Pit) are being carried out by another contractor deploying similar size equipment. Waste removal is being carried out by higher size hydraulic excavators (200t excavators) and 100 T trucks. Coal is being 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).

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

HDR 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 is currently 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 third party haul road. At the time of writing of this report, BIB is constructing two dedicated haul roads of higher capacity. Once the road is constructed, BIB will use its own haul road for the purpose of coal hauling. This haul road is being constructed in two phases, phase 1 of 16-18 Mtpa capacity is almost complete and coal hauling will start from the beginning of 2015 while works on phase 2 is 60% completed to target haul up to 25 Mtpa of coal from KG Block area. Sebamban North and Sebamban South pits will also use the newly built haul road (phase-I initially) to transport coal from the pit head to the Bunati port as they are being proposed to be opened up from 2015.

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 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:

- Run of Mine Coal handling facilities, crushing circuits and stockpiles at both Kusan and Girimulya mine sites for receiving coal from the mine, stockpiling and loading onto trucks and/or overland conveyor for transport to the port;
- A new haul road joining Kusan and Girimulya to the port including an underpass of the main highway (which is under construction) to replace the 3rd party owned haul road currently in use;

- Overland conveyors from Kusan and Girimulya directly to the port, anticipated to be in operation from 2019 onwards; and
- 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 2016. BIB existing coal logistics, proposed infrastructure and new haul roads are shown in Figure 9:1 and Figure 9:2.

Figure 9:1 BIB Coal Logistics

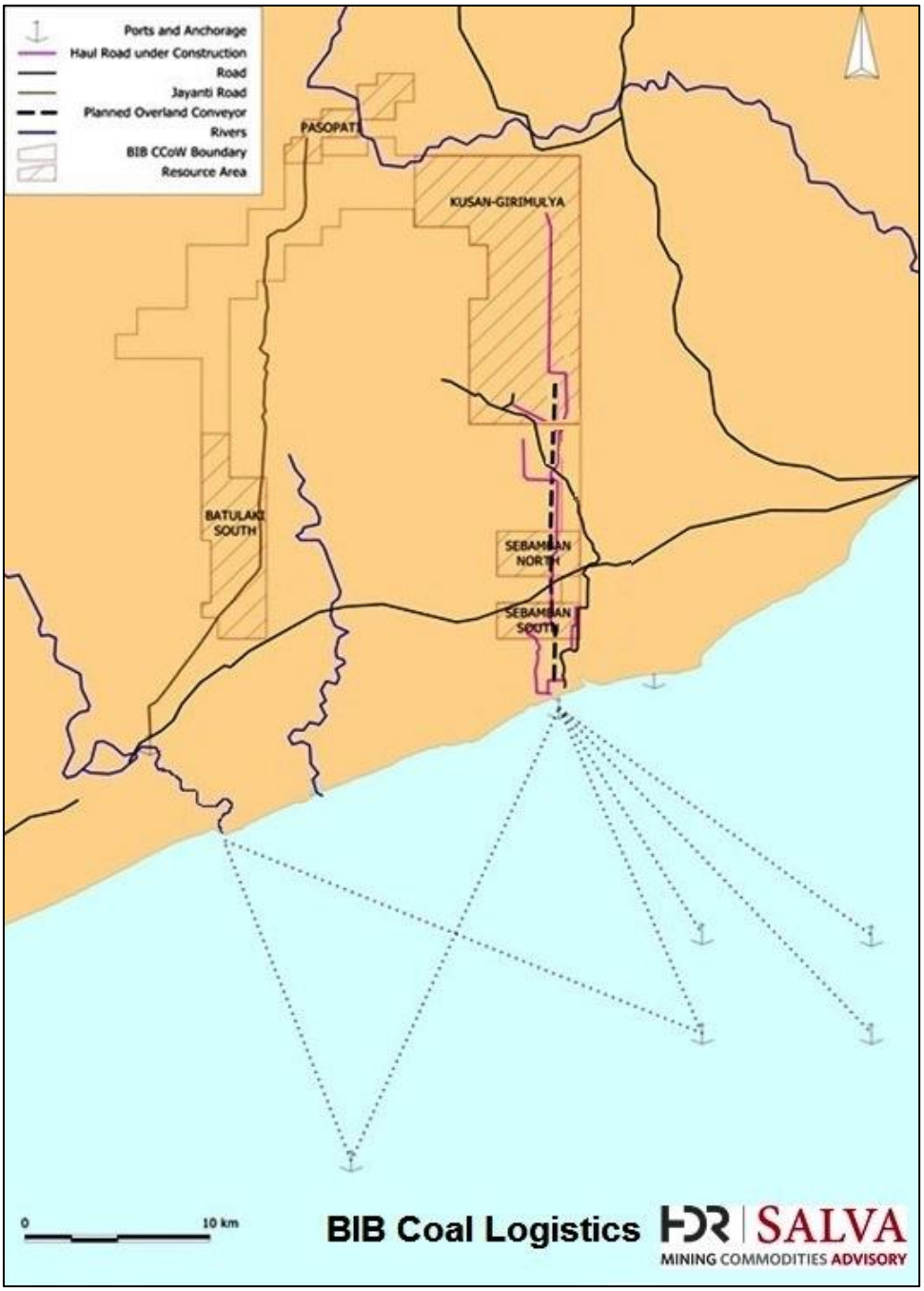


Figure 9:2 New Haul Road under construction



9.3.9 Permits and Approvals

From discussions with PT. BIB, HDR understands that the majority of permits and approvals with regard to further mining activities in BIB Coal Concession deposits have been obtained.

9.3.10 Cost and Revenue Factors

General

PT. BIB provided a “data sheet” of indicative unit costs and revenues relevant for this project which was subject to review and agreement with PT. BIB. HDR did an independent coal marketing study to review the coal prices forecast for reasonableness. HDR 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;
- Royalties of 13.5% of revenue less marketing, costs have been allowed along with VAT of 10% and Contingency of 15%;
- Allowances were made for hauling, crushing, quality control, stockpiling, barge loading, barging and ship loading which totalled approximately $17 (all except Pasopati) to $24 (Pasopati) per tonne;
- Coal mining rate is considered as US$1.40 per tonne; and

- Waste mining rate considered as US$2.40 per bank cubic metre.

Operating Cost

PT. BIB provided the operating costs for mining and other activities including coal hauling, barging and port handling charges, which Salva checked for reasonableness. Total operating costs per tonne of coal product including royalty for the BIB Project has been estimated as US $29.41 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

Cost Item	$/t
Land Clearing	$0.01
Topsoil Removal	$0.05
Waste Mining	$10.17
Waste Overhaul	$1.21
Coal Mining	$1.40
Haul to ROM stockpile	$0.30
ROM Coal Handling	$0.50
Haul to Port Stockpile	$1.36
Port Stockpile and Barge loading	$1.00
Barging	$1.28
Transhipment	$2.10
Mine Closure	$0.05
Environmental and Rehabilitation	$0.15
Miscellaneous Operations	$0.15
Dewatering and Water Treatment	$0.05
Salary and Wages	$0.30
Camp and Accommodation	$0.05
Medical & Community Development	$0.15
Land Use Payment	$0.15
Corporate Overheads	$0.50
Local Government Fees	$0.50
VAT	$1.69
Contingency	$1.16
Operating Cost Excl. Royalty	**$24.28**
Royalty	$5.13
Operating Cost incl. Royalty	**$29.41**

Capital Cost

As PT. BIB 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.

HDR estimates total capital expenditure of US$ 408M which includes a contingency of US$ 53M. 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$ 408M, HDR has factored 3% of the invested capital as sustaining capital per annum for asset maintenance over the life of mine. While preparing these estimates, HDR has relied on industry benchmarks, its internal database and expertise and internal studies on the BIB concessions.

HDR notes that use of an overland conveyor is not very widespread in Indonesia. However HDR 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 and a proposed 43 km long overland conveyor by Barau Coal. 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 Q4 2014 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	78.4	11.8	90.2
1	**Land Compensation**	**78.4**	**11.8**	**90.2**
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	45.0	6.8	51.8
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	10.0	1.5	11.5
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

Sr. No.	Particulars	Direct Cost ($M)	Contingency ($M)	Total Cost ($M)
2	**Mine Infrastructure**	**116.3**	**17.4**	**133.7**
3.1	Haul Road Construction	11.0	1.7	12.7
3.2	Overland Conveyor	85.0	12.8	97.8
3	**Hauling to Jetty**	**96.0**	**14.4**	**110.4**
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	**354.7**	**53.2**	**407.9**

HDR 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, HDR has adopted the latest Consensus brokers forecast for thermal coal prices ex Australia (USD/t, FOB) as a benchmark price. These data which was collected by Consensus Economics in January 2015 included forecasts of future prices for coal over a 10 year horizon from each expert. HDR 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, HDR has discounted long term benchmark price to accommodate low rank sub bituminous (higher moisture) coal based on the historical discount. HDR has checked the actual price realised for the BIB coal product. The BIB Mine is currently achieving US$38-39/t of coal which is in line with the forecast used for 2015. This was verified by cross checking actual invoices during the visit to the BIB offices.

The following Table 9:8 summarises long term price forecast used to estimate Reserves.

Table 9:8 Coal Price Estimates for Reserving

Mining Pit	GCV, kcal/kg (Adb)	Long term Price FOB (US $/t)
KG	4,702	35.57
Mining Pit	**GCV, kcal/kg (gar)**	**Long term Price FOB (US $/t)**
BS, SS and SN	4,100	41.4
PP	6,663	88.4

9.3.12 Product Quality

As previously stated, HDR 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 adb kcal/Kg	TS adb %
KG	1.51	35.60	15.00	51.60	4,708	0.31
Block	**RD adb t/m3**	**TM arb %**	**IM adb %**	**Ash adb %**	**CV arb kcal/Kg**	**TS adb %**
BS	1.37	33.31	13.37	6.36	4,213	0.16
SS	1.47	38.32	12.58	6.04	3,875	0.17
SN	1.38	38.40	16.40	4.80	3,944	0.16
PP	1.33	12.47	5.90	9.06	6,663	1.36

9.3.13 Other Relevant Factors

Approximately 2,000 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.

There are a number of planning & operational issues which may impact on the stated mining reserves. 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 issues may cause the pit shell and mining quantities to change in future JORC code compliant Reserve Statements.

HDR 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 HDR 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. HDR 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, HDR 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	32 deg based on actual operations	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 9:3 to Figure 9:7).

Pits for various blocks have been designed within the limits as defined by the pit optimisation analysis. Table 9:11 exhibits the optimser output for the KG Block. These limits are rationalised to ensure access between floor benches and walls were straightened to generate mineable pits.

Table 9:11 Optimser Output – KG Blocks

OPT_PIT_GRID	Waste Volume (Mbcm)	Insitu Coal (Mt)	RD	Ash (%)	ASR (bcm/t)
OPF050	128.0	50.0	1.45	4.8	2.6
OPF040	349.0	139.9	1.45	5.2	2.5
OPF030	1409.3	475.2	1.44	5.2	3.0
OPF028	1658.6	545.4	1.44	5.3	3.0
OPF025	1935.3	620.3	1.44	5.3	3.1
OPF024	2016.7	643.4	1.45	5.3	3.1
OPF023	2518.6	771.0	1.45	5.3	3.3
OPF022	2571.8	784.0	1.45	5.3	3.3
OPF020	2747.1	828.0	1.45	5.3	3.3
OPF019	2841.2	852.5	1.45	5.3	3.3
OPF018	2922.6	873.9	1.45	5.3	3.3
OPF017	2976.6	887.0	1.45	5.3	3.4
OPF016	3025.8	898.7	1.45	5.4	3.4
OPF010	3523.8	1002.2	1.45	5.4	3.5
OPF008	3598.2	1016.6	1.45	5.4	3.5
OPF007	3675.5	1031.4	1.45	5.4	3.6
OPF006	3820.0	1058.9	1.45	5.4	3.6
OPF004	3966.3	1084.5	1.45	5.5	3.7
OPF002	4058.5	1101.4	1.45	5.5	3.7
OPF000	4601.9	1197.8	1.45	5.5	3.8
OPF-010	5136.6	1284.8	1.45	5.5	4.0
OPF-020	5478.5	1336.3	1.46	5.6	4.1

Figure 9:3 Pit shell selection & Final Pit Design – KG Block

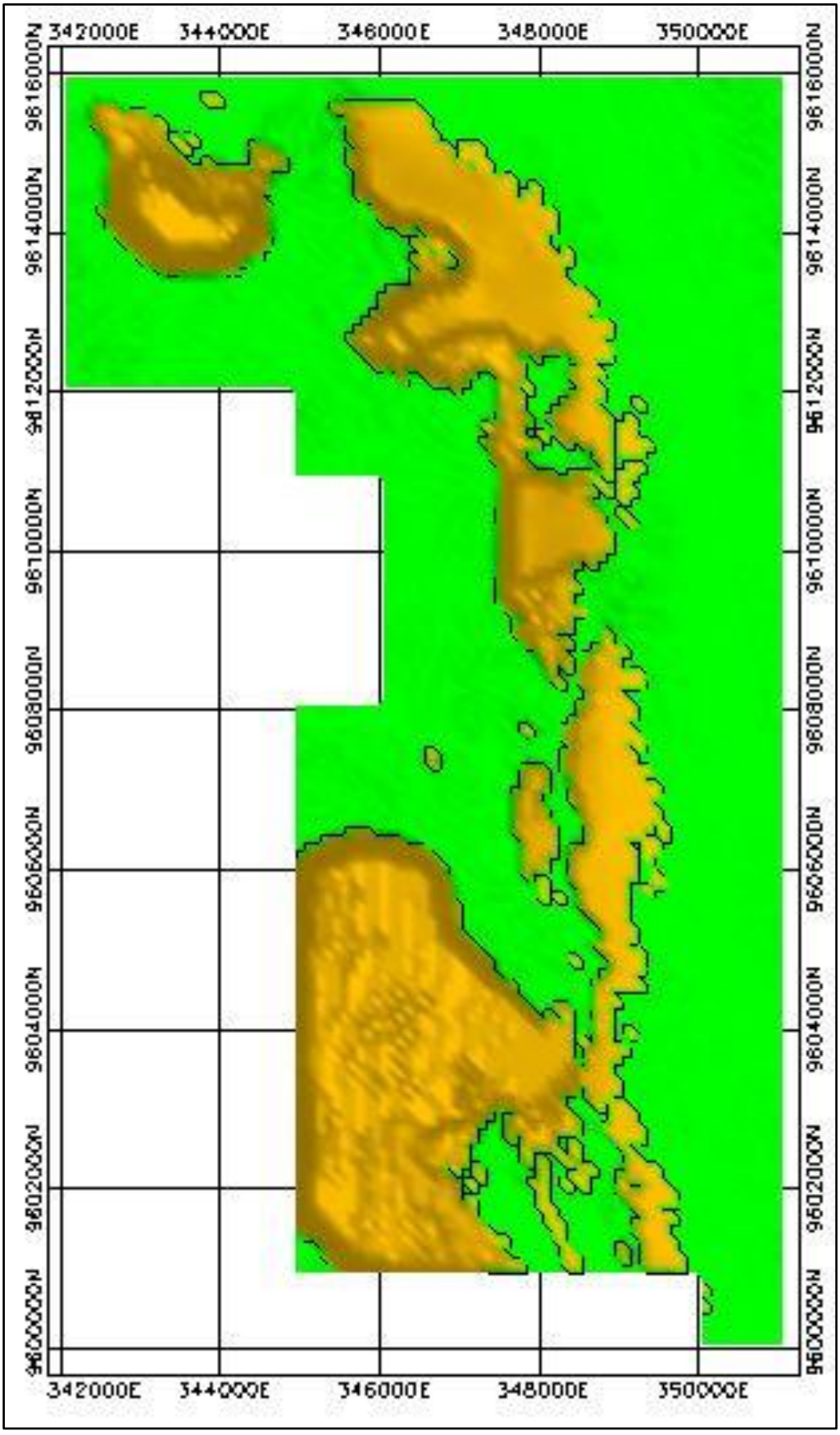


Figure 9:4 Pit shell selection & Final Pit Design – BS Block

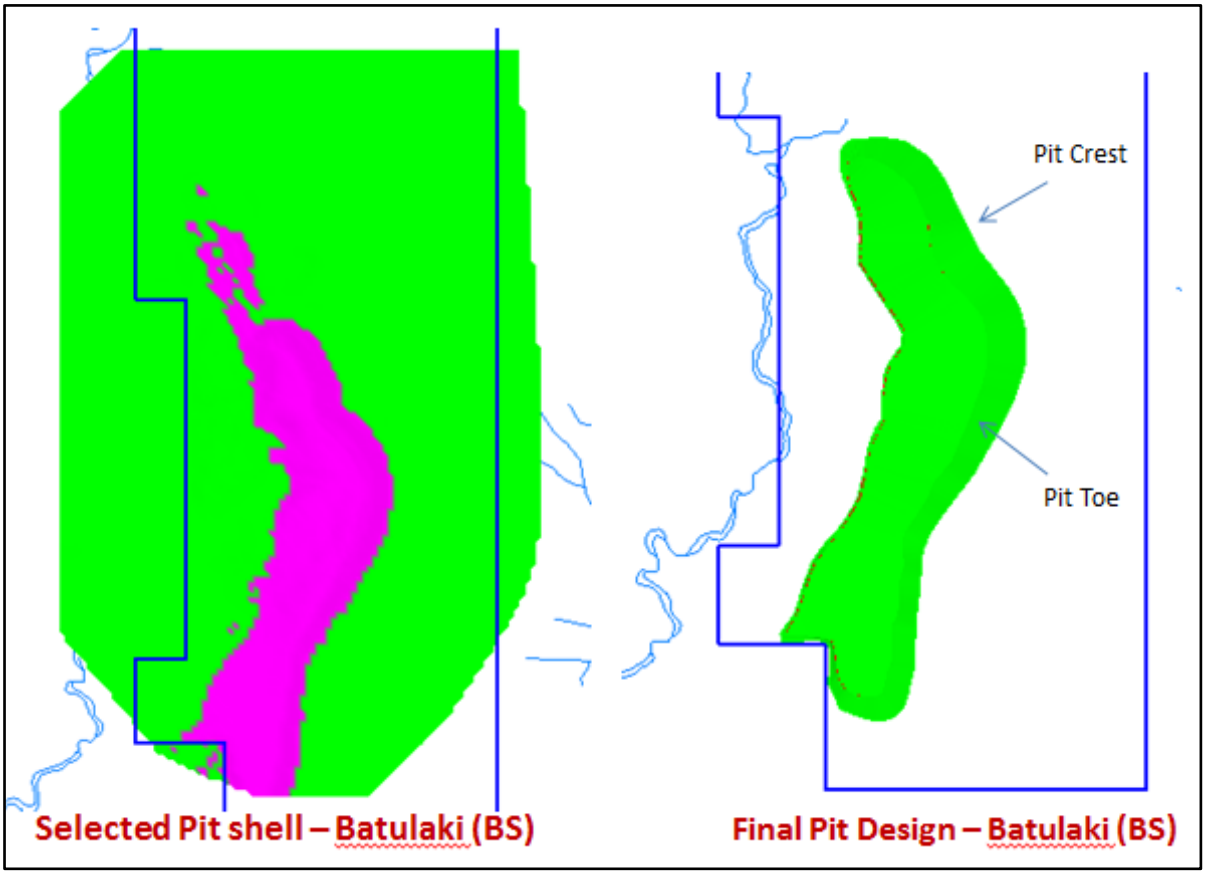


Figure 9:5 Pit shell selection & Final Pit Design – SS Block

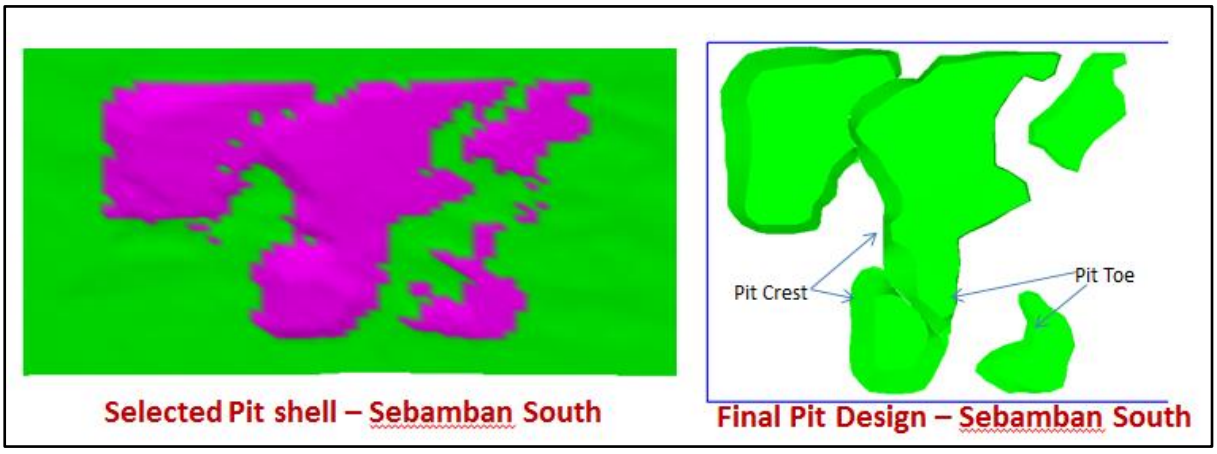


Figure 9:6 Pit shell selection & Final Pit Design – SN Block

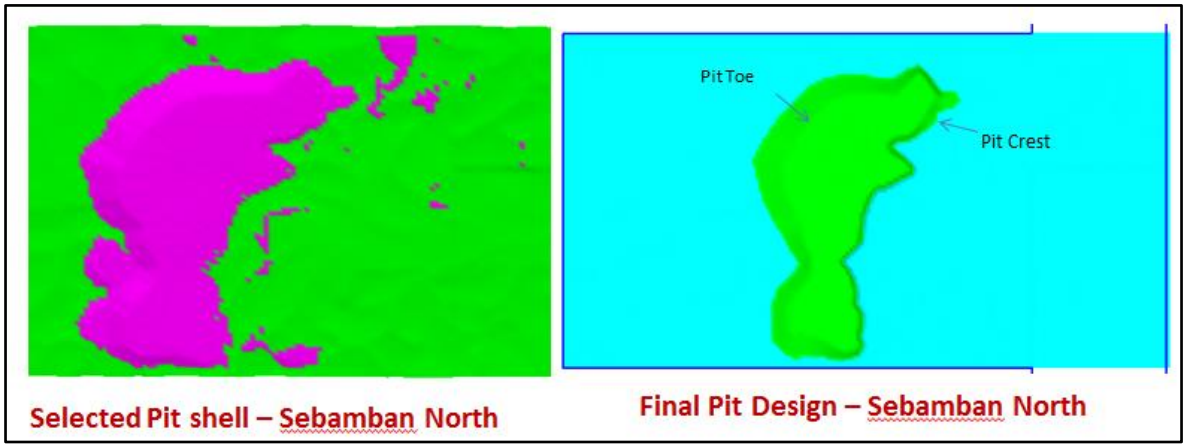
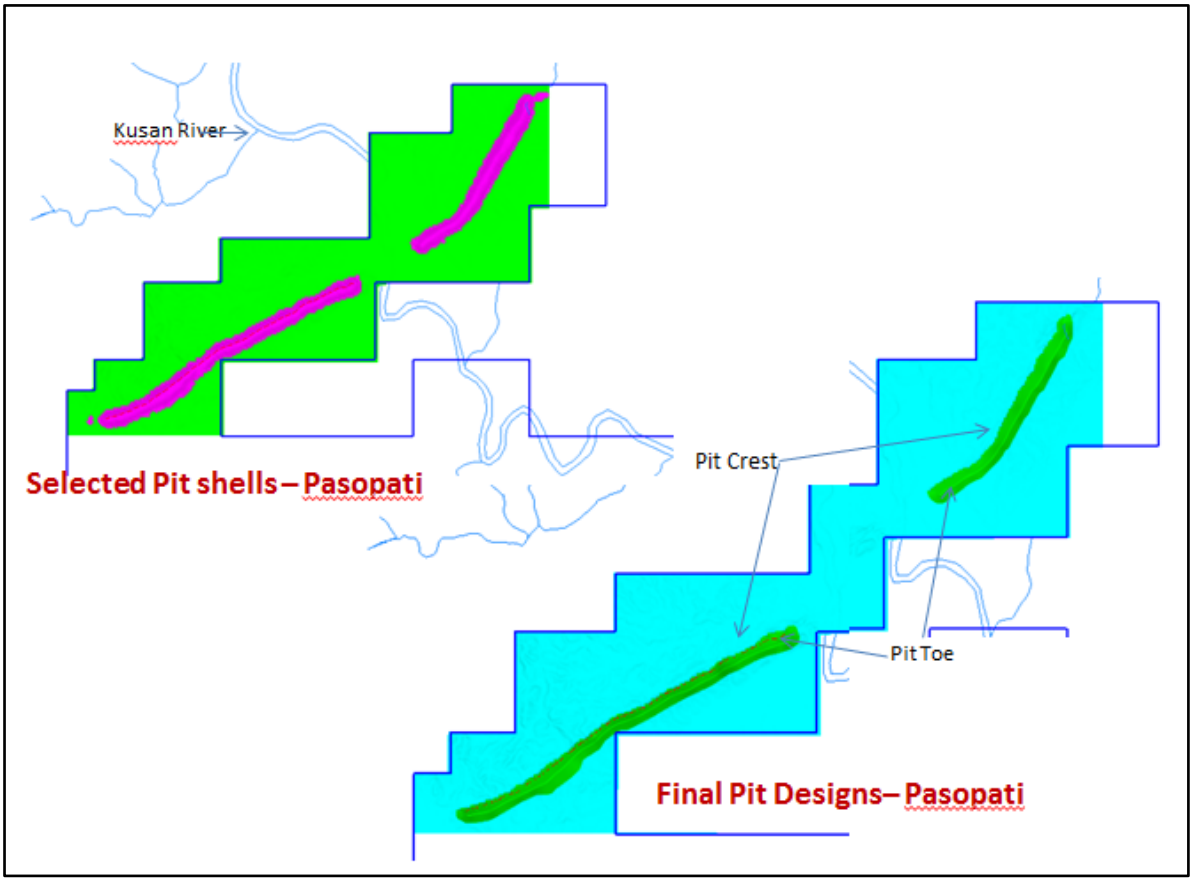


Figure 9:7 Pit shell selection & Final Pit Design – PP Block



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 Kusan 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 9:8 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 of 4.8Mt in year 1 (2015), 13Mt by year 3 (2016), 23Mt by year 5 and ramping up to an average 40 Mt from year 9 (2022) onwards.

Currently BIB coal mining blocks (KG and Batulaki) are scheduled to produce 4.6Mt in 2014. Historical production from BIB mines have shown below in Table 9:12.

The study identified that a large amount of palm plantation area currently outside of the acquired IPPKH boundary will be required for implementation of this mine plan.

Table 9:12 Historical Production – BIB Mine (Mt, Coal)

Mines	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Kusan Girimulya	-	-	-	-	-	-	0.6	2.1	2.2	3.1
Batulaki	0.1	0.2	0.5	0.8	0.9	0.8	0.9	1.2	1.1	1.1
Sebamban	0.1	0.3	0.8	0.4	0.3	0.3	1.2	0.5	0.7	0.4
BIB Mines (Total)	**0.2**	**0.5**	**1.3**	**1.3**	**1.2**	**1.1**	**2.8**	**3.8**	**4.1**	**4.6**

Figure 9:8 Final Pit Design – Kusan Girimulya Pits

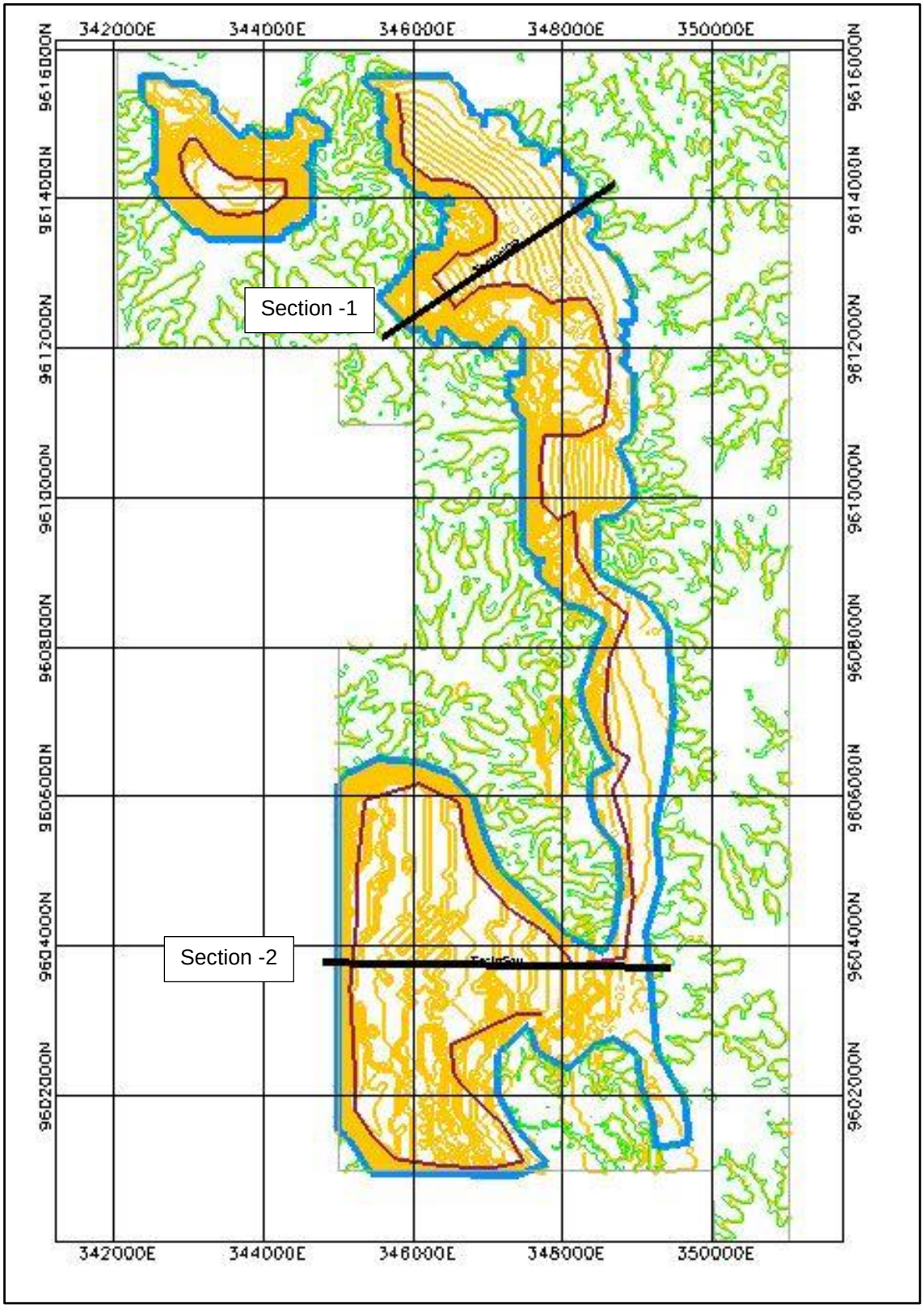


Figure 9:9 Representative Cross Section 1 – KG Pit

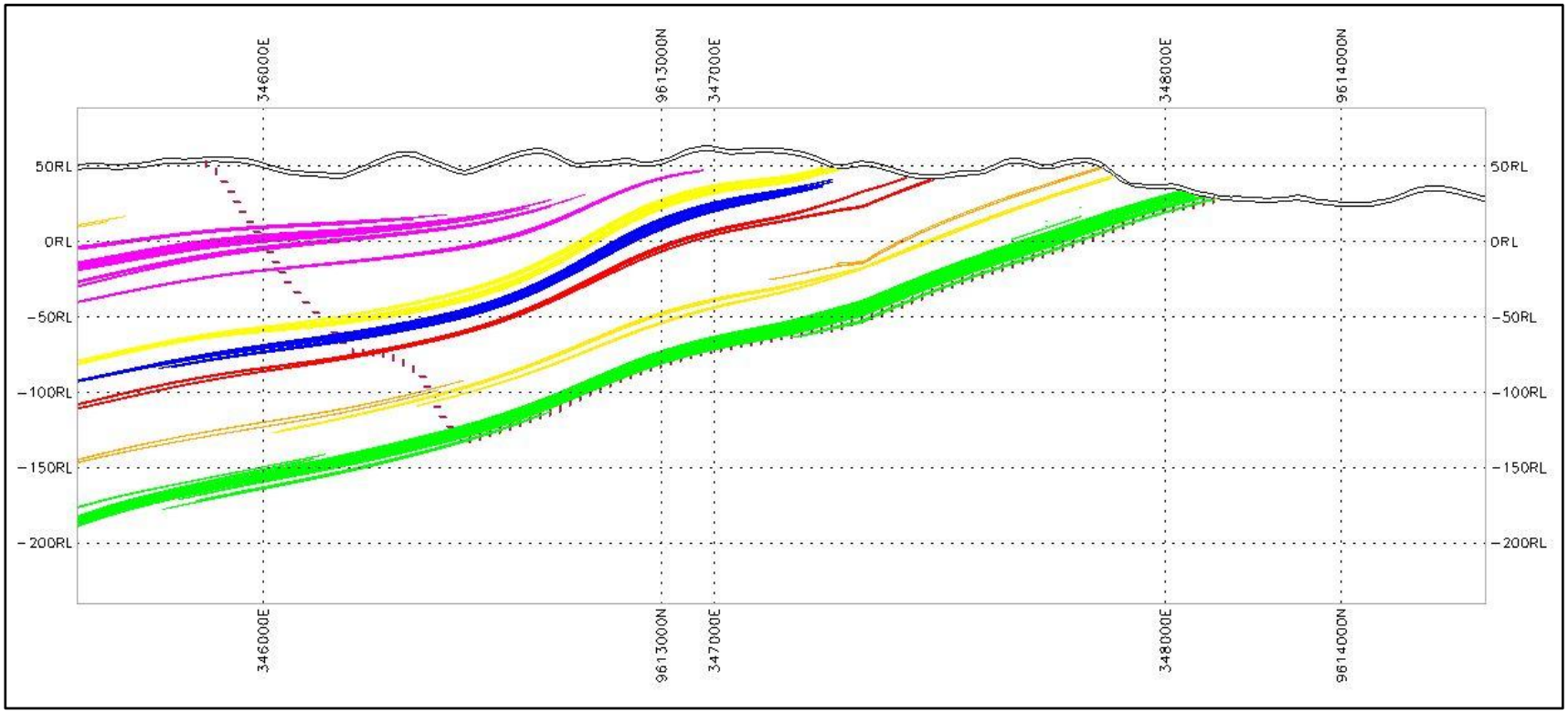


Figure 9:10 Representative Cross Section 2– KG Pit

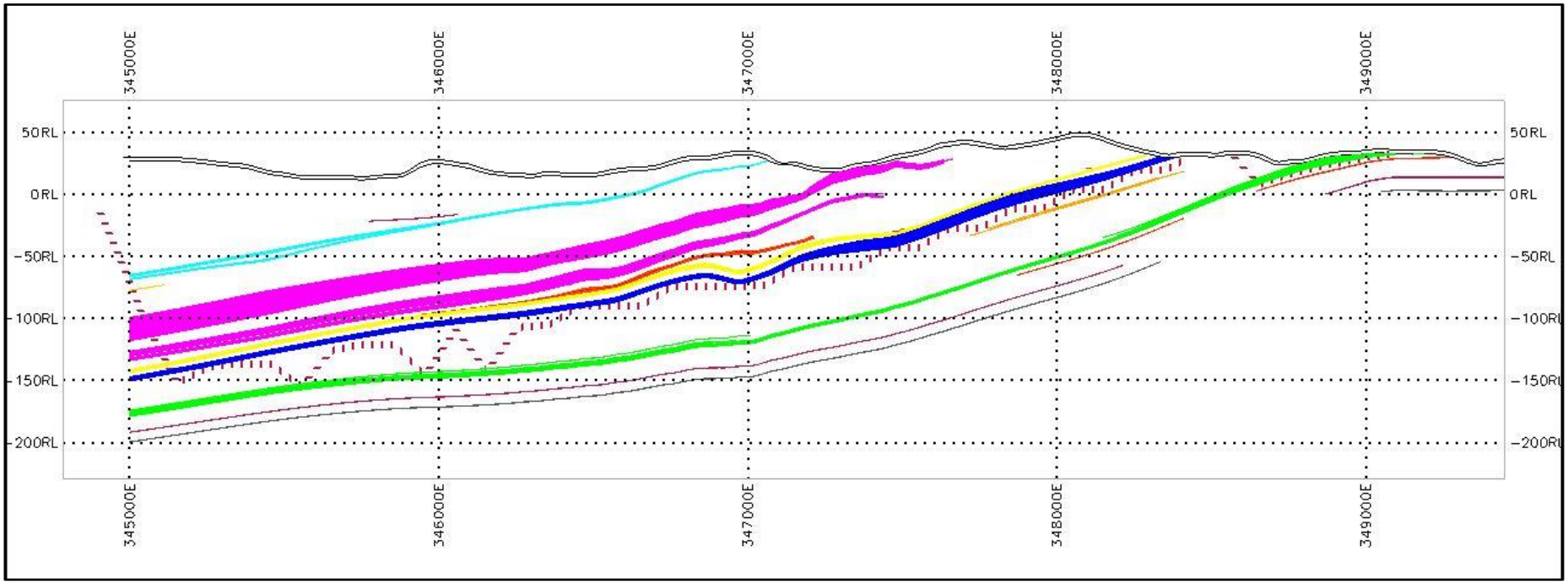


Figure 9:11 Final Pit Design – Batulaki Pit (BS Pit)

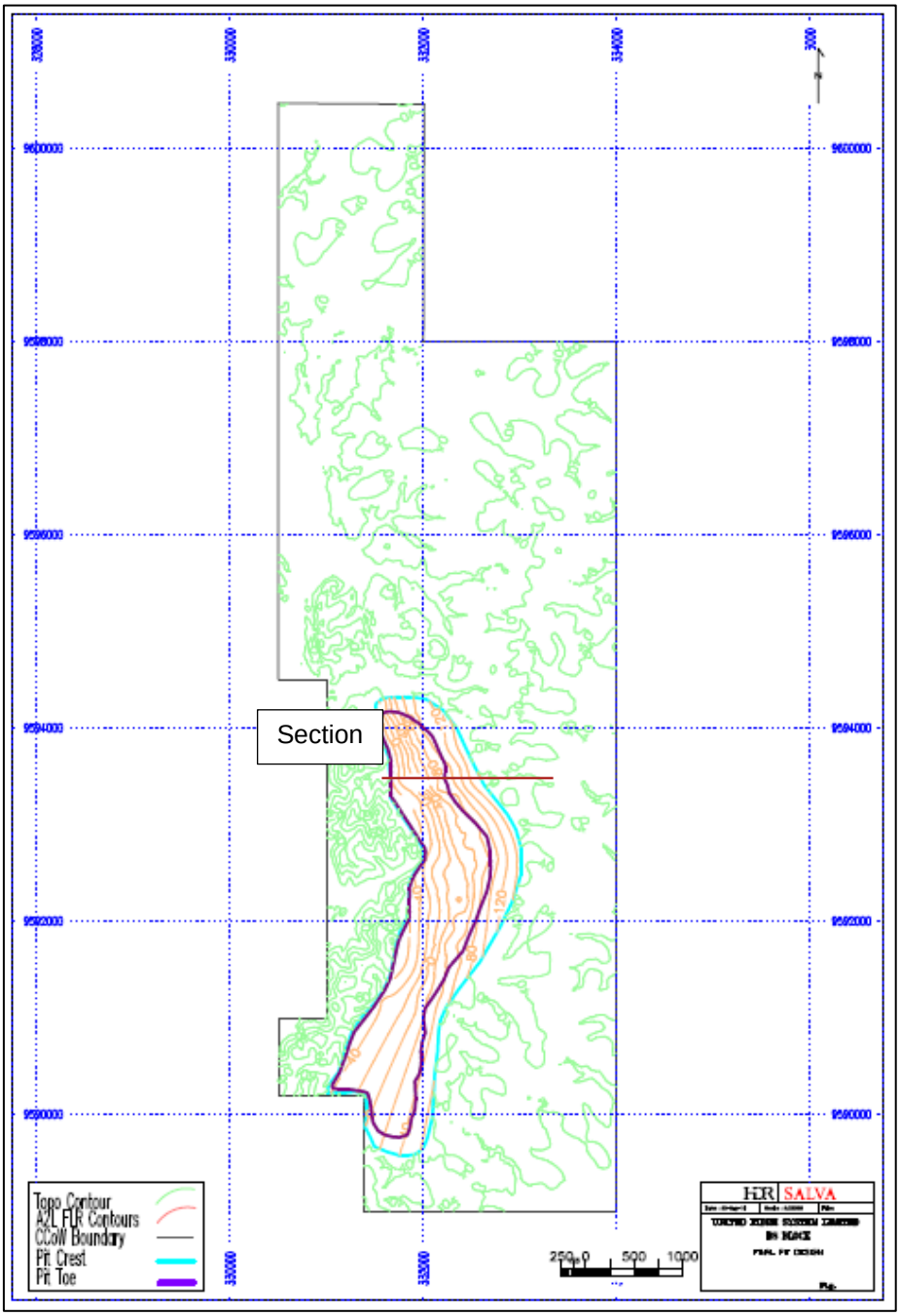


Figure 9:12 Representative Cross Section – Batulaki Pit

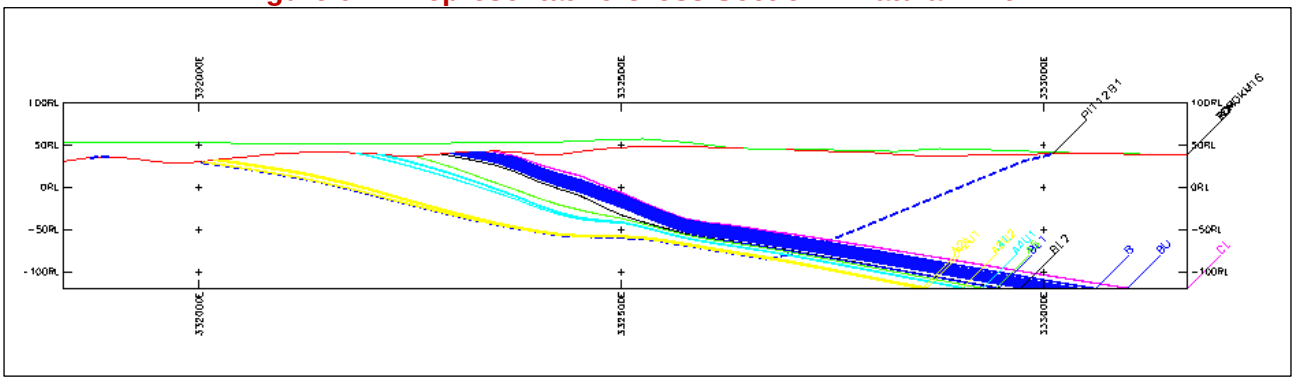


Figure 9:13 Final Pit Design – Sebamban South (SS Pits)

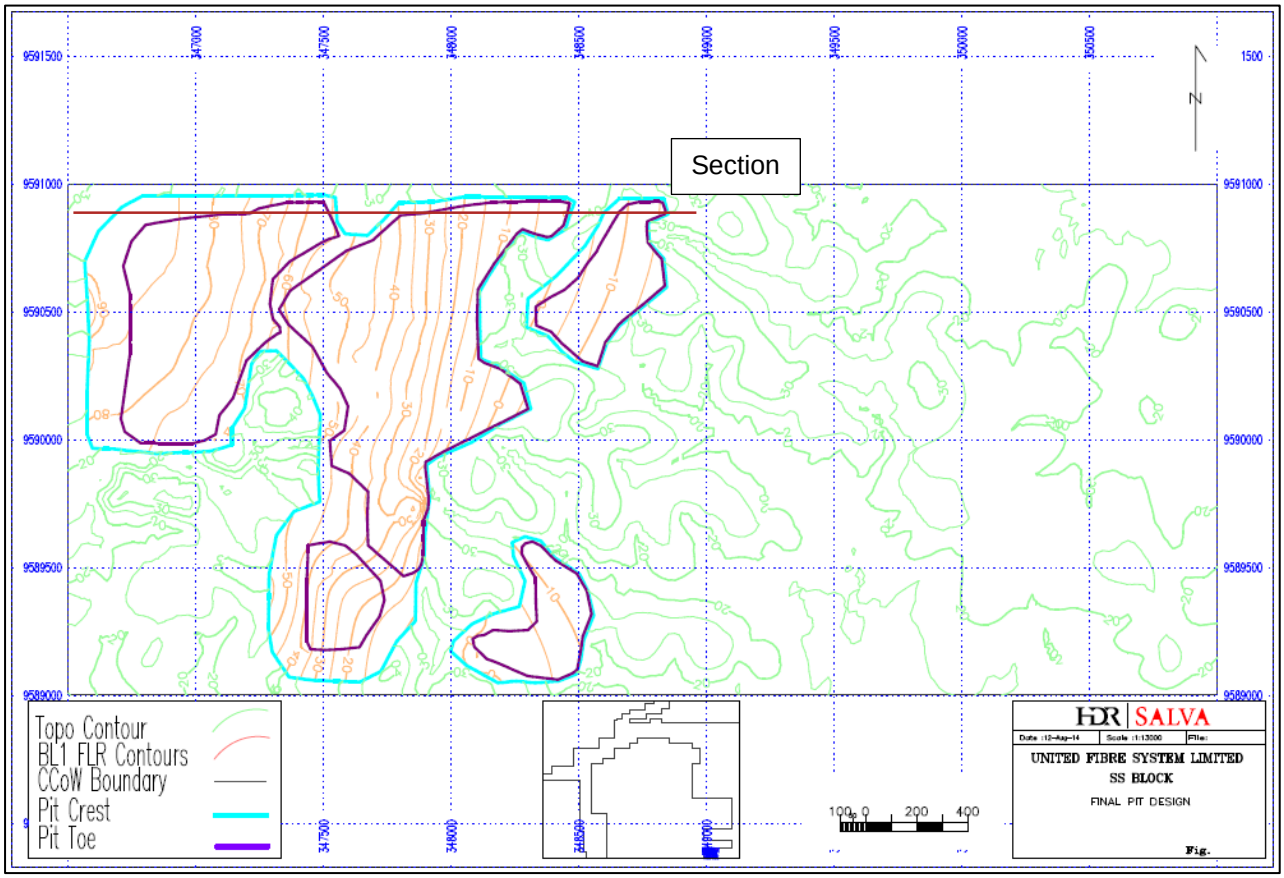


Figure 9:14 Representative Cross Section – Sebamban South Pit

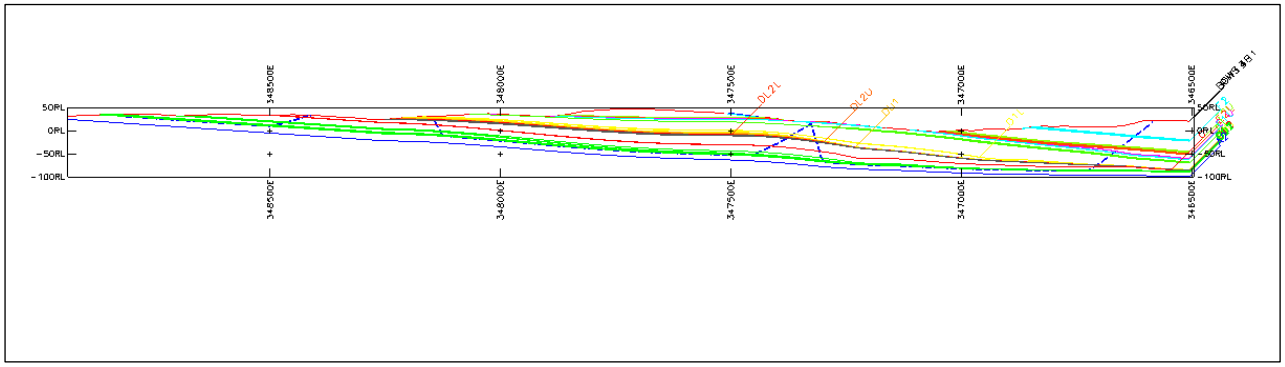


Figure 9:15 Final Pit Design – Sebamban North (SN Pit)

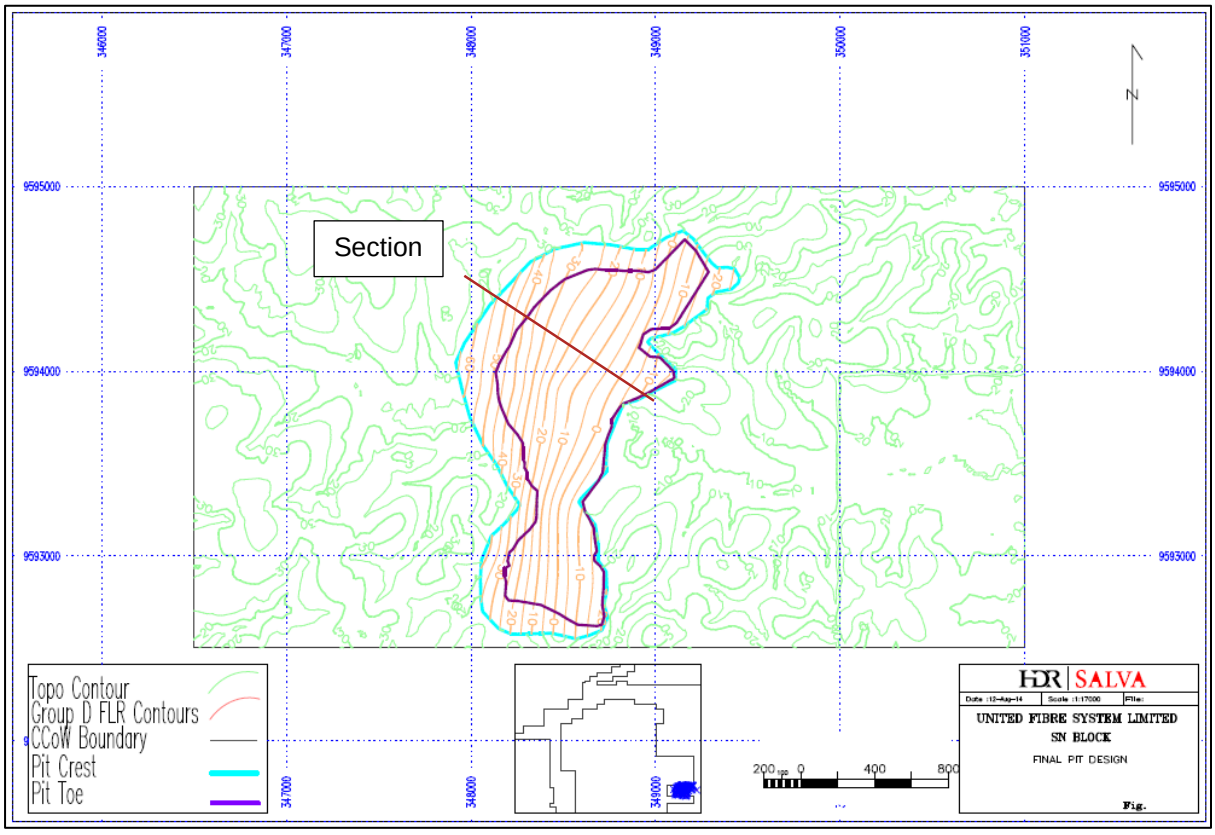


Figure 9:16 Representative Cross Section – Sebamban North Pit

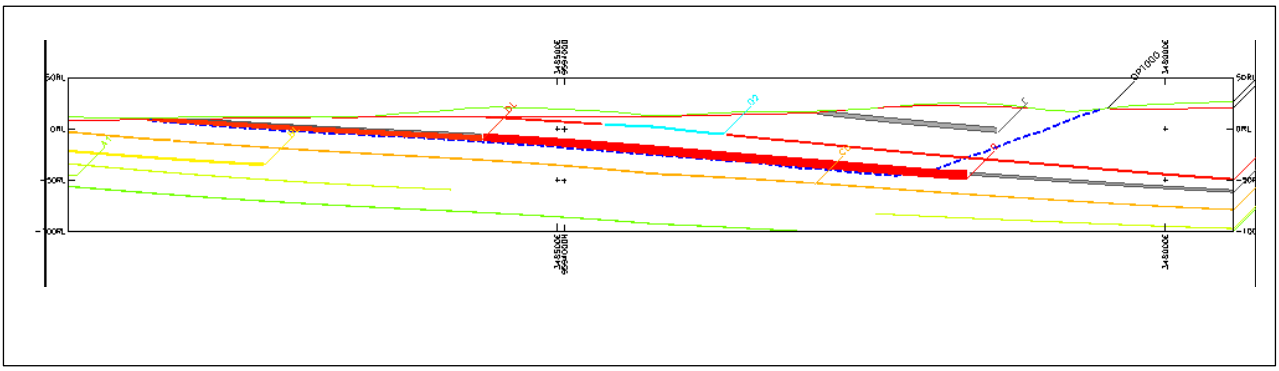


Figure 9:17 Final Pit Design – Pasopati Pits (PP Pits)

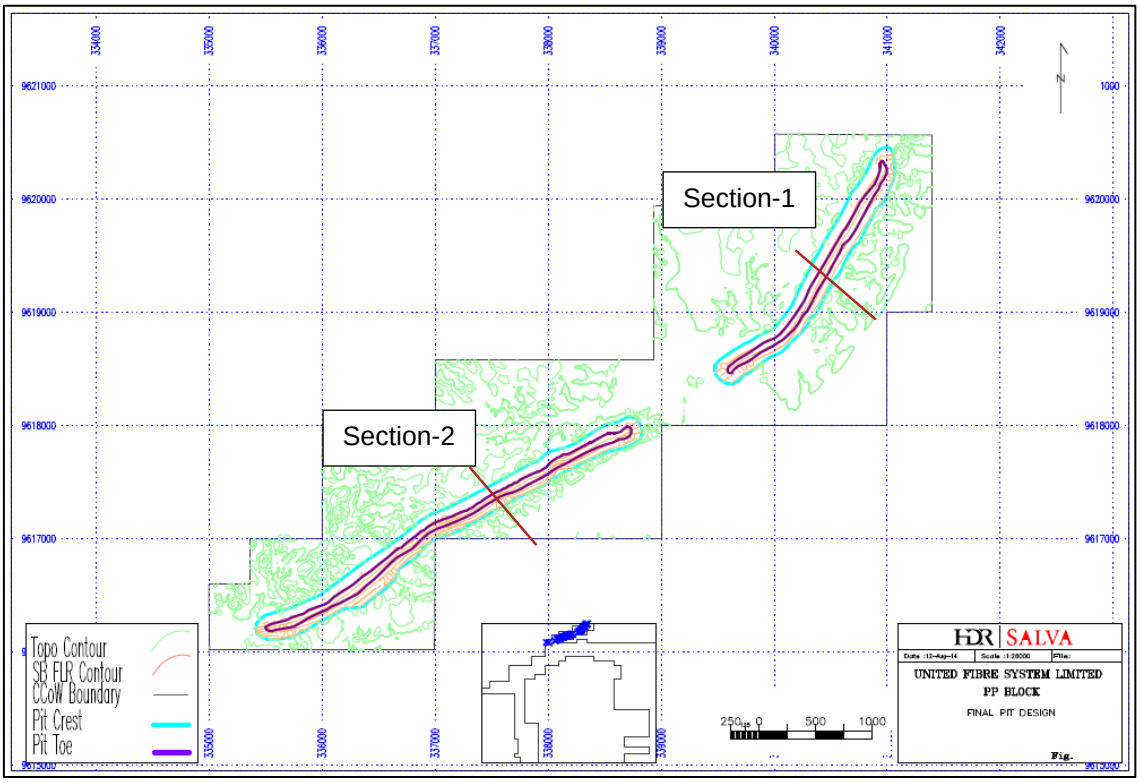


Figure 9:18 Representative Cross Section (Upper Pit) – Pasopati Pit

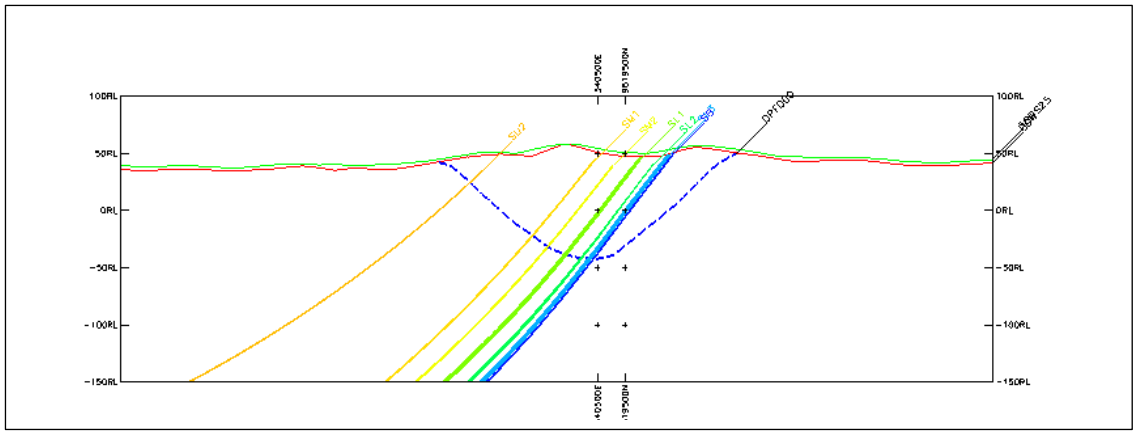
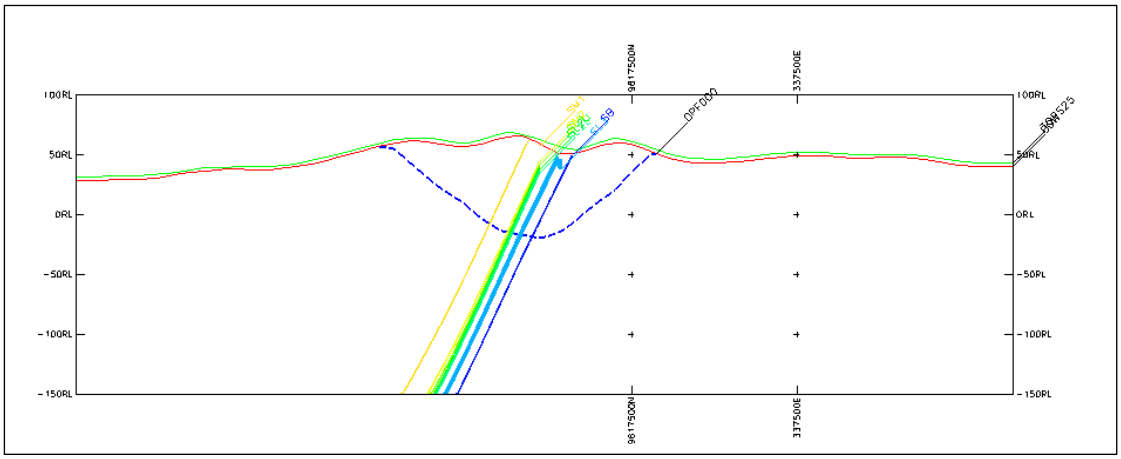


Figure 9:19 Representative Cross Section (Lower Pit) – Pasopati Pit



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 2014 and it shows an overall 85% recovery for the said period as shown in Table 9:13. The Ply-by-Ply in-situ Geo Model was used for generating the model predicted number.

Table 9:13 Production Reconciliation

Actual Coal Tonnes, Mt	Geo-Model Coal Tonnes (Mt)	Difference in Percentage (%)
6.25	7.35	85

9.7 Reserves Classification

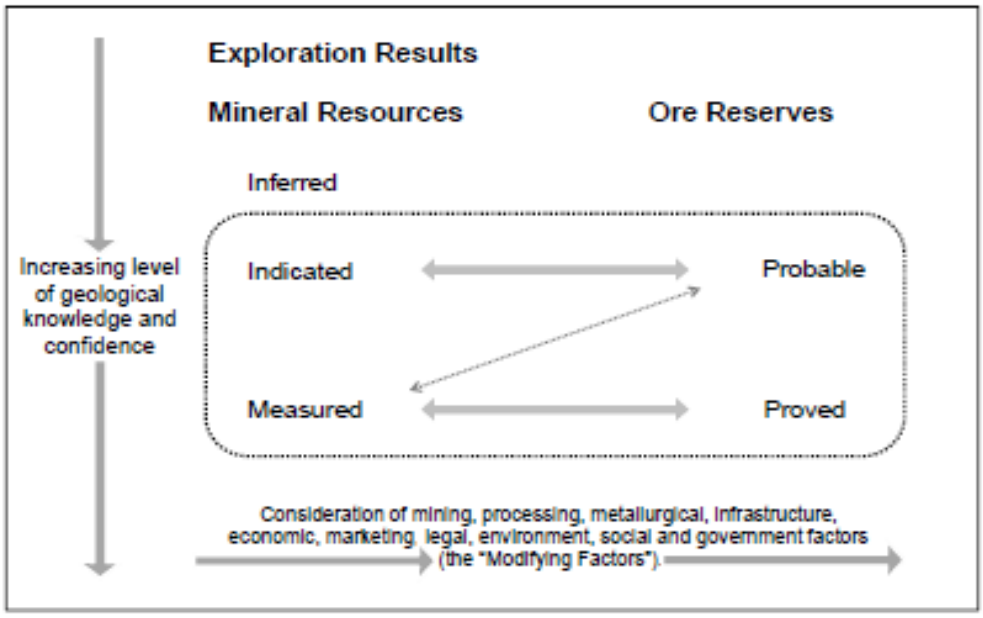
Under the JORC Code as shown below only Measured and Indicated Coal Resources can be considered for conversion to Coal Reserves after consideration of the “Modifying Factors” including mining, processing, economic, environmental, and social and government factors.

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 HDR, 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 9:14 General relationships between Mineral Resources & Ore Reserves



Source: JORC Code 2012

10 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 10:1. Total ROM coal reserves are same as total marketable coal reserves.

Table 10:1 Coal Reserves Estimates

KG Block as at 27 Nov 2014

Block	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV adb kcal/kg	TS adb %
	Proved	Probable	Total						
KG	434.8	74.1	508.9	1.51	35.6	15.0	15.6	4,708	0.31

Other Blocks as at 31 July 2014

Block	Reserve (Mt)			RD adb t/m3	TM arb %	IM adb %	Ash adb %	CV arb Kcal/kg	TS adb %
	Proved	Probable	Total						
BS	13.5	6.1	19.6	1.37	33.3	13.4	6.4	4,213	0.16
SS	11.7	4.1	15.8	1.47	38.3	12.6	6.0	3,875	0.17
SN	3.2	4.5	7.7	1.38	38.4	16.4	4.8	3,944	0.16
PP	2.4	0.9	3.3	1.33	12.5	5.9	9.1	6,663	1.36

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

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

10.1 Seam by Seam Coal Reserve

Total ROM Coal Reserves for each of BIB coal concessions are reported by seam and are presented in Table 10:2 to Table 10:6.

Table 10:2 Coal Reserves for Kusan – Girimulya (KG) as at 27 November 2014

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	Ash, %	IM, %	TM, %	CV (adb), kcal/kg	TS, %
B1	0.0	0.0	0.0	1.40	7.0	14.4	36.3	5,438	0.21
F1	1.2	1.0	2.2	1.61	24.5	14.3	35.1	4,189	0.21
F2	2.4	1.7	4.1	1.37	4.5	14.8	36.2	5,468	0.21
G1	0.2	0.0	0.2	1.41	9.9	15.1	35.9	4,957	0.16
CU1	0.2	0.4	0.7	1.75	34.1	13.7	35.6	3,601	1.13
CU2	0.2	0.0	0.3	1.41	8.1	14.6	36.5	5,270	0.72
E2U	14.8	1.8	16.6	1.36	5.1	15.6	35.1	5,310	0.15
FL1	1.2	0.1	1.2	1.56	20.5	14.6	35.5	4,334	0.18
FL2	1.2	0.2	1.4	1.37	6.9	15.5	35.6	5,075	0.16
BL1L	4.2	1.5	5.7	1.48	12.6	14.8	36.6	4,929	0.68
BL1U	3.5	1.0	4.5	1.51	14.5	14.7	36.6	4,788	0.66
BL2L	21.7	4.3	26.0	1.50	13.1	15.2	36.4	4,824	0.63
BL2U	19.1	9.3	28.4	1.42	7.1	15.3	36.1	5,201	0.54
BU1L	2.9	0.8	3.7	1.56	17.1	14.9	36.8	4,606	0.49

BU1U	4.8	1.0	5.8	1.55	17.0	14.8	36.8	4,620	0.52
BU2L	2.8	0.5	3.3	1.63	22.3	14.7	36.7	4,274	0.53
BU2U	3.0	0.5	3.4	1.41	6.3	14.7	36.9	5,323	0.57
CL1L	1.3	1.0	2.3	1.73	31.3	15.2	35.7	3,724	0.50
CL1U	1.0	1.2	2.1	1.79	36.4	15.2	35.5	3,374	0.46
CL2L	2.1	0.5	2.6	1.61	22.7	15.3	36.1	4,269	0.52
CL2U	3.5	0.9	4.4	1.40	7.3	15.3	36.3	5,284	0.50
CR1L	0.6	0.3	0.9	1.80	36.4	14.9	35.9	3,431	0.19
CR1U	0.9	0.2	1.1	1.47	12.9	15.0	36.0	5,003	0.19
CR2L	0.9	0.2	1.2	1.66	25.9	14.6	35.9	4,127	0.17
CR2U	1.2	0.3	1.4	1.39	6.0	14.6	35.9	5,453	0.17
D1L1	0.0	1.3	1.3	1.59	22.4	13.9	34.9	4,321	0.23
D1L2	0.5	0.6	1.1	1.48	14.5	14.3	35.2	4,811	0.22
D1U1	0.4	0.6	1.1	1.60	23.3	14.4	35.8	4,204	0.24
D1U2	0.0	0.2	0.2	1.41	8.1	13.6	35.6	5,299	0.21
DL1L	7.1	1.3	8.4	1.55	18.0	15.1	35.0	4,542	0.19
DL1U	12.9	2.5	15.3	1.51	15.7	15.5	35.1	4,661	0.17
DL2L	16.1	2.9	19.0	1.54	16.4	15.8	35.4	4,597	0.16
DL2U	17.7	2.6	20.2	1.39	5.6	15.8	35.6	5,286	0.18
DU1L	8.4	2.7	11.1	1.56	19.0	15.3	35.4	4,463	0.20
DU1U	8.3	2.1	10.3	1.60	21.4	15.4	35.5	4,295	0.20
DU2L	8.9	1.8	10.7	1.58	20.0	15.2	35.5	4,410	0.22
DU2U	7.8	1.8	9.6	1.40	7.9	15.0	35.1	5,195	0.21
E1L1	51.9	2.0	54.0	1.43	9.1	15.2	35.3	5,115	0.14
E1L2	36.9	1.5	38.5	1.39	5.9	15.1	35.5	5,303	0.13
E1U1	36.2	1.7	37.9	1.41	6.8	15.5	35.8	5,219	0.13
E1U2	40.4	2.3	42.8	1.46	10.3	15.5	35.6	4,971	0.14
E2L1	3.4	0.8	4.2	1.56	19.3	15.6	34.9	4,393	0.13
E2L2	11.9	1.9	13.8	1.45	11.1	15.5	35.0	4,923	0.14
EL1L	2.4	1.2	3.7	1.82	39.7	14.5	32.8	3,230	0.17
EL1U	22.2	5.3	27.5	1.42	9.4	15.5	34.1	5,140	0.17
EL2L	23.2	4.1	27.4	1.47	12.5	15.8	34.8	4,905	0.17
EL2U	23.2	4.4	27.6	1.37	5.3	15.6	34.9	5,369	0.19
Total	**434.8**	**74.1**	**508.9**	**1.51**	**15.6**	**15.0**	**35.6**	**4,708**	**0.31**

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

Table 10:3 Coal Reserves for Batulaki (BS) as at 31 July 2014

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	4103	0.17
BU	0.1	0.0	0.1	1.39	9.68	15.61	32.82	4204	0.15
B	9.7	0.4	10.2	1.37	3.54	13.90	33.75	4342	0.15
BL2	0.0	0.6	0.6	1.38	3.25	7.99	35.33	4346	0.20
BL1	0.0	0.3	0.3	1.40	4.03	7.37	36.93	4619	0.20
A4U2B	0.3	0.1	0.4	1.39	-	13.00	33.00	-	-
A4U2A	0.5	0.2	0.8	1.39	-	13.00	33.00	-	-
A4U1	0.5	0.2	0.7	1.35	5.15	13.97	32.08	4499	0.17
A4L	0.1	0.1	0.2	1.41	12.22	11.74	31.37	4230	0.18
A3U2	0.4	1.3	1.8	1.39	-	-	-	-	-
A3U1	0.9	1.7	2.7	1.39	-	-	-	-	-
A2U2	0.3	0.2	0.4	1.34	10.26	16.19	30.68	4045	0.16
A2U1	0.2	0.4	0.6	1.34	8.08	14.79	32.11	4172	0.19
A2L	0.2	0.3	0.5	1.45	15.30	11.15	31.71	3836	0.19
Total (BS)	**13.5**	**6.1**	**19.6**	**1.39**	**6.36**	**13.37**	**33.31**	**4213**	**0.16**

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

Table 10:4 Coal Reserves for Sebamban South (SS) as at 31 July 2014

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	Ash, %	IM, %	TM, %	CV (Gar), kcal/kg	TS, %
F2	0.3	0.5	0.8	1.43	6.38	13.94	38.10	3815	0.14
F1	0.4	-	0.4	1.49	14.62	12.06	35.91	3526	0.14
E2U	1.9	0.2	2.1	1.45	5.31	13.35	37.47	3987	0.14
E2L	1.9	0.1	1.9	1.44	6.47	13.67	37.47	3910	0.12
E1U	0.5	0.1	0.5	1.49	5.35	13.48	37.68	3985	0.15
E1L	0.4	0.1	0.5	1.55	9.89	13.01	37.03	3767	0.13
EL	1.1	0.2	1.4	1.52	8.84	12.99	37.25	3829	0.18
D1U	0.3	0.0	0.3	1.37	2.94	10.76	38.16	4150	0.27
D1L	0.1	0.0	0.1	1.57	3.38	10.80	38.12	4057	0.22
DU2	1.5	0.9	2.5	1.46	4.67	11.53	39.27	3863	0.18
DU1	0.5	0.3	0.8	1.47	3.24	11.62	39.93	3847	0.14
DL2	0.9	0.4	1.3	1.51	4.29	11.72	39.54	3853	0.15
DL1	1.5	0.6	2.1	1.46	5.34	11.59	39.50	3858	0.20
C	0.0	0.1	0.1	1.50	17.21	11.06	36.69	3526	2.41
BL2	0.3	0.3	0.6	1.56	4.89	11.65	40.78	3792	0.48
BL1	0.2	0.2	0.4	1.56	5.43	12.58	41.26	3729	0.40
Total (SS)	**11.7**	**4.1**	**15.8**	**1.48**	**6.04**	**12.58**	**38.32**	**3875**	**0.17**

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

Table 10:5 Coal Reserves for Sebamban North (SN) Block as at 31 July 2014

Seams	Proved Reserves, Mt	Probable Reserves, Mt	Total Reserves, Mt	RD, adb	Ash, %	IM, %	TM, %	CV (Gar), kcal/kg	TS, %
E	0.6	0.0	0.6	1.38	3.61	15.29	40.87	3,839	0.17
D2U	-	0.4	0.4	1.38	5.15	16.10	39.41	3,908	0.20
D2	0.1	0.5	0.5	1.38	4.62	15.66	39.42	3,950	0.21
D	1.7	-	1.7	1.37	3.37	17.64	37.30	4,082	0.08
DL	0.9	3.7	4.6	1.38	5.19	16.27	38.53	3,898	0.14
CU	-	0.0	0.0	1.38	7.29	14.52	40.49	3,801	2.16
C	-	0.0	0.0	1.41	11.86	14.58	39.92	3,593	1.99
A2	0.0	-	0.0	1.36	8.05	14.04	38.11	4,052	0.26
Total (SN)	**3.2**	**4.5**	**7.7**	**1.38**	**4.80**	**16.40**	**38.40**	**3,944**	**0.16**

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

Table 10:6 Coal Reserves for Pasopati (PP) as at 31 July 2014

Seams	Proved Reserves Mt	Probable Reserves Mt	Total Reserves Mt	RD adb	ASH %	IM, %	TM, %	CV (Gar) kcal/kg	TS, %
SU1	0.0	0.0	0.0	1.30		6.2	15.4		
SU2	0.0	0.0	0.0		7.06	5.9	17.2	6,864	1.51
SM1	0.0	0.0	0.0	1.35	7.53	6.2	12.4	6,748	0.74
SM2U	0.0	0.0	0.0	1.31	9.35	6.0	19.0	6,552	2.75
SM2	0.3	0.2	0.4	1.33	13.23	5.8	11.3	6,275	1.19
SM2L	0.0	0.0	0.0	1.39	10.80	4.8	17.9	6,575	2.6
SL1U	0.1	0.0	0.1	1.29	9.21	6.3	12.5	6,558	1.13
SL1	0.4	0.1	0.5	1.33	5.00	6.7	12.3	6,881	1.02
SL1L	0.1	0.0	0.1	1.31	18.84	4.4	10.1	6,437	3.63
SL2U	0.2	0.0	0.2	1.42	7.10	5.4	14.3	7,005	0.76
SL2	0.1	0.3	0.4	1.32	5.44	7.2	11.9	6,822	1.41
SL2L	0.2	0.0	0.2	1.29	12.77	4.3	11.0	6,603	1.68
SL3U	0.1	0.0	0.1	1.35		11.7	40.8		
SL3	0.8	0.1	0.9	1.30	7.27	5.5	10.7	6,849	1.51
SL3L	0.1	0.0	0.1	1.31		6.2	15.4		
SB	0.2	0.1	0.3	1.30	9.09	6.7	14.0	6,531	1.01
Total (PP)	**2.4**	**0.9**	**3.3**	**1.33**	**9.06**	**5.9**	**12.5**	**6,663**	**1.36**

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

11 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 HDR 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 HDR 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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Salva Resources Pty Ltd - JORC Resource Statement BIB Project 26th August 2014

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.
Craig Williams (Principal Consultant - Geology)	
Qualification	B. Sc. (Hons), M.Sc. (Geology)
Prof. Membership	MAusIMM
Contribution	Geology, Resource (JORC 2012)
Experience	Craig is a geologist with 19 years' experience in the mining industry. He has worked at De Beers, Anglo Coal and Vale along with significant consulting experience. Craig's experience covers mineral exploration, underground coal mine production, technical management, and resource estimation, together with due diligence, mineral audits and review, coal quality and exploration. To date, Craig has worked on over 30 coal projects around the world, inclusive of both thermal and coking coal, in the Bowen, Hunter, Surat, Galilee and Collie Basins of Australia, as well as in Africa, Madagascar, Mongolia and Indonesia.
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 HDR, 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: 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 PT. BIB. Visual inspection on site. Twinned holes checked for agreement of seam intersection depths and in almost all 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 PT. BIB 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 geological	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
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. Standard database checks also performed by HDR as outlined on Section 6.4.4 prior to resource modelling.
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.
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.

Criteria	Explanation	Comment
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 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). 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 BIB geological models created by HDR are considered to accurately represent the deposits. No major faults have been reported within the tenements concerned although major faulting exists outside the tenements. HDR has employed a more conservative approach to the structural modelling of coal seams which involves pinching seams out if they are not logged as present in a particular

Criteria	Explanation	Comment
		hole. This has resulted in an overall 22% reduction in tonnes as compared to the previous model constructed by PTSMGC who did not pinch seams out.
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.
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.

Criteria	Explanation	Comment
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 BS blocks are currently being mined as open pit excavations by truck and shovel method. SS block has been mined till Jan 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.	N/A
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 Indicated: 500m 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. Significant local variation to estimated values may arise which should be addressed by adequate grade control procedures.
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 27 Nov 2014. 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 during July 2014.
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 & BT) within BIB Coal concession blocks are being currently mined. It is proposed to one up two more blocks (SS & SN) in 2015.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied	Refer Table 9:5, Break even Stripping Ratio analysis

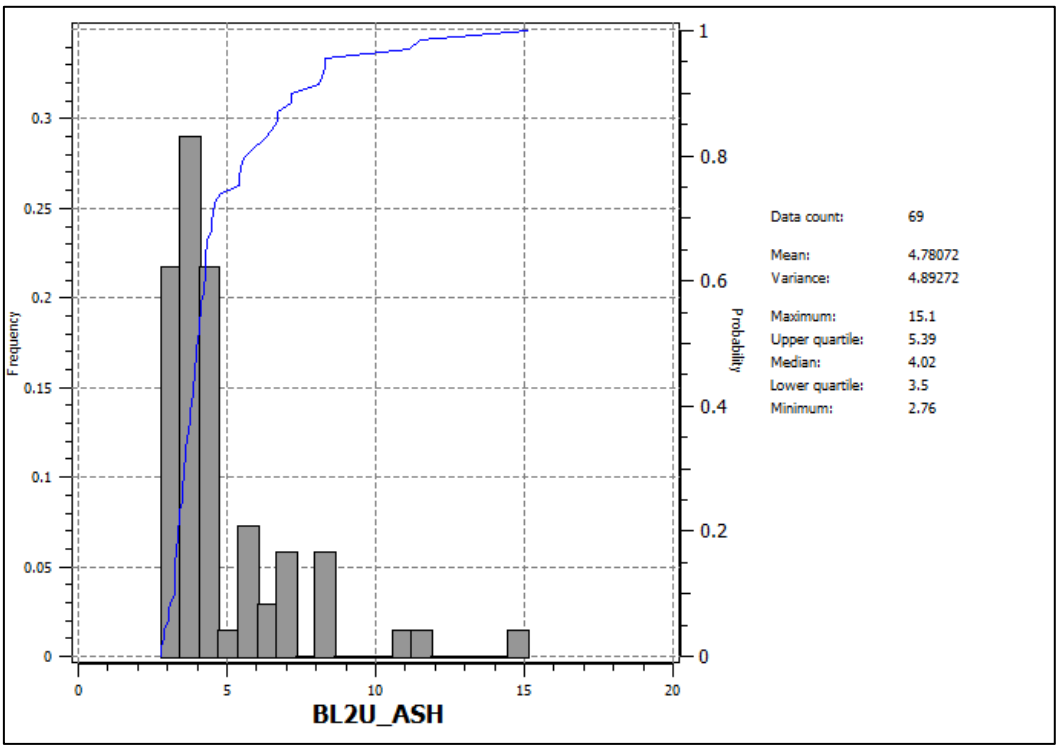
Criteria	Explanation	Comment
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). 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 4.0 Mt in 2013 and produced 4.7Mt in 2014. 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. HDR 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 HDR'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

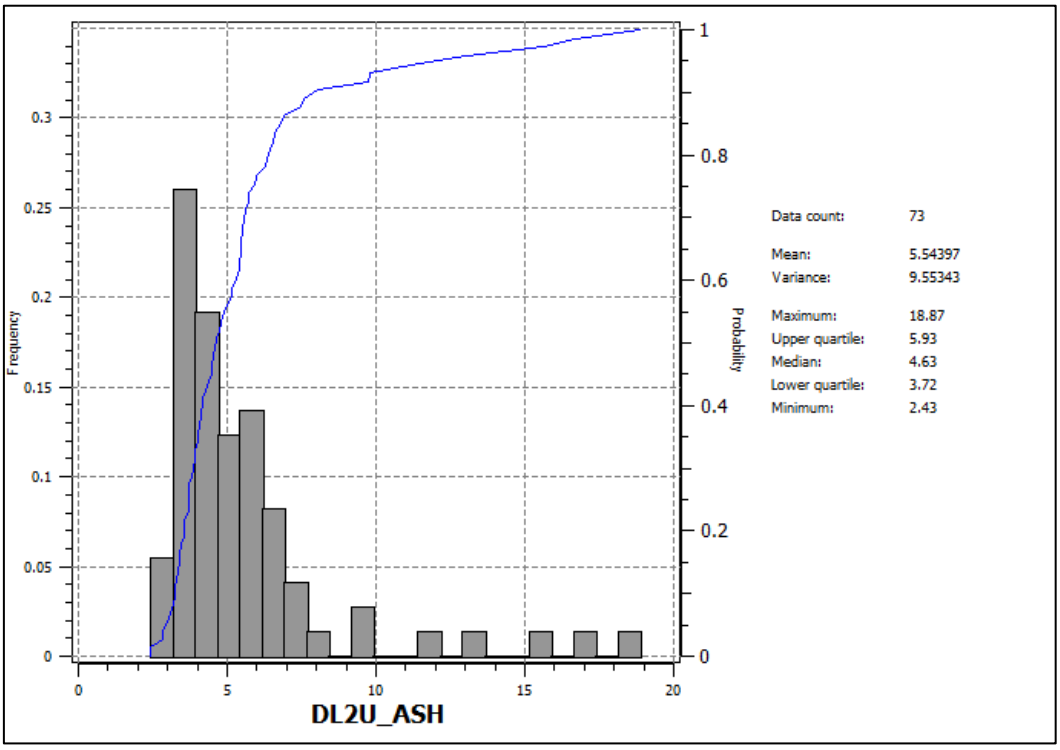
Criteria	Explanation	Comment
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Discussed 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

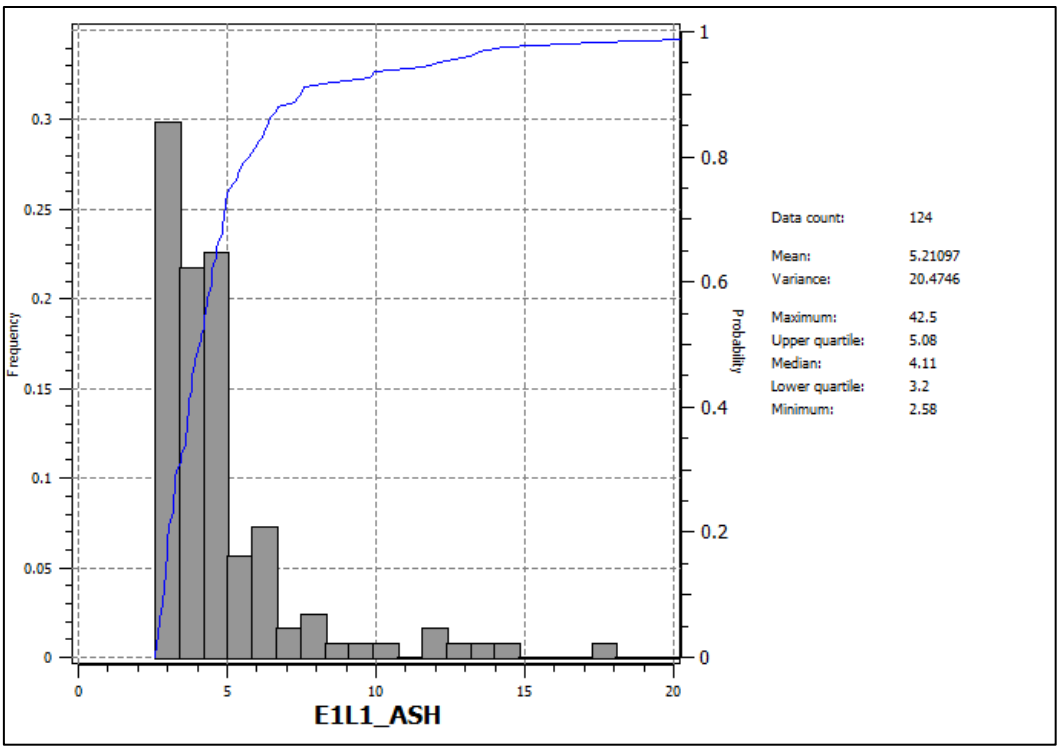
Criteria	Explanation	Comment
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental 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.

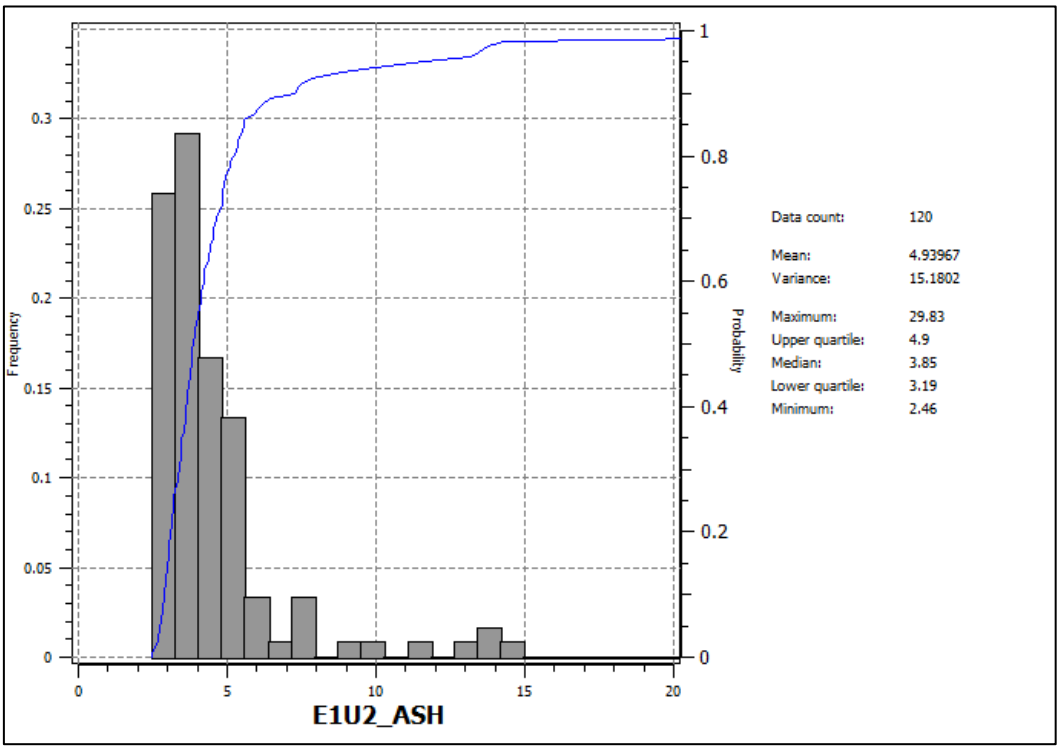
Appendix C: Raw coal quality histograms per seam

KG Block

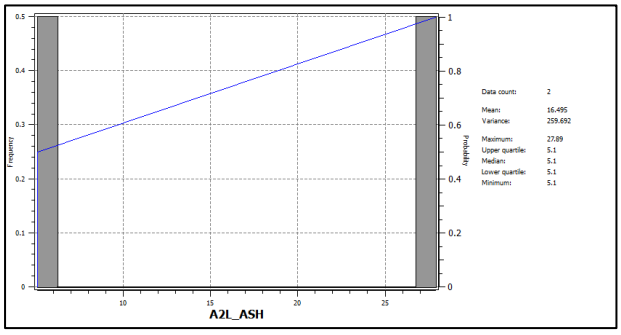


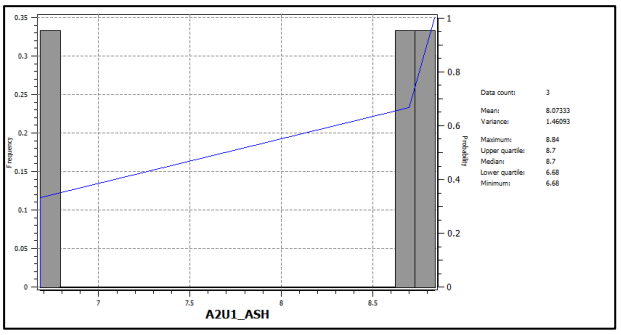


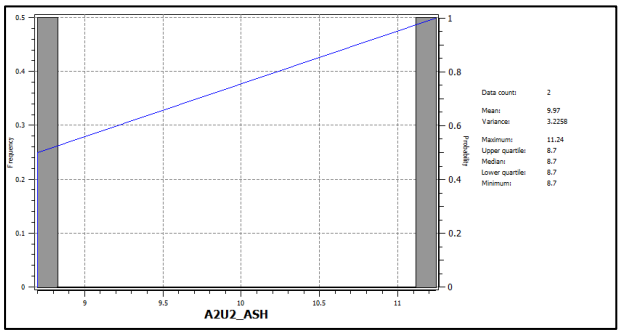

Frequency
Probability
0
0.05
0.1
0.15
0.2
0.25
0.3
0.2
0.4
0.6
0.8
1
0
5
10
15
20
E1L1_ASH
Data count: 124
Mean: 5.21097
Variance: 20.4746
Maximum: 42.5
Upper quartile: 5.08
Median: 4.11
Lower quartile: 3.2
Minimum: 2.58

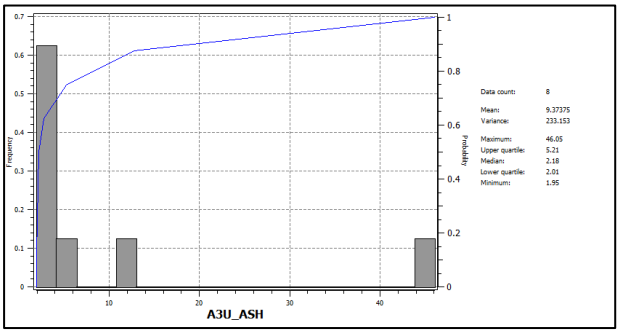

Frequency
Probability
0
0.05
0.1
0.15
0.2
0.25
0.3
0.2
0.4
0.6
0.8
1
0
5
10
15
20
E1U2_ASH
Data count: 120
Mean: 4.93967
Variance: 15.1802
Maximum: 29.83
Upper quartile: 4.9
Median: 3.85
Lower quartile: 3.19
Minimum: 2.46

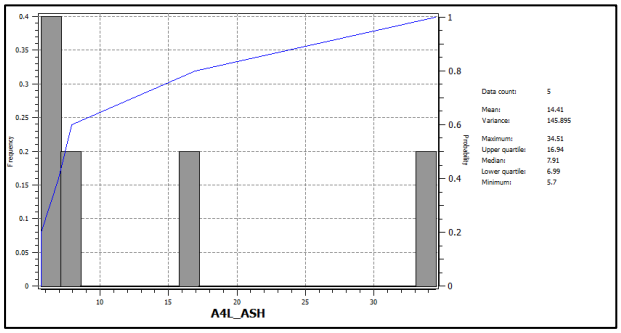
BS Block

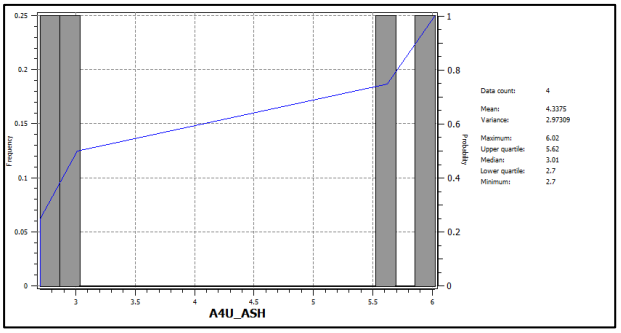

A2L_ASH
Data count: 2
Mean: 16.495
Variance: 259.692
Maximum: 27.89
Upper quartile: 5.1
Median: 5.1
Lower quartile: 5.1
Minimum: 5.1

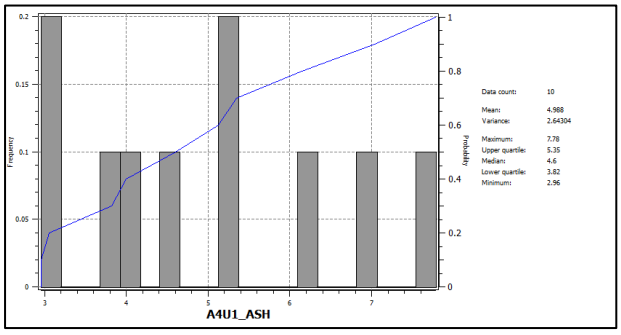

A2U1_ASH
Data count: 3
Mean: 8.07333
Variance: 1.46093
Maximum: 8.84
Upper quartile: 8.7
Median: 8.7
Lower quartile: 6.68
Minimum: 6.68

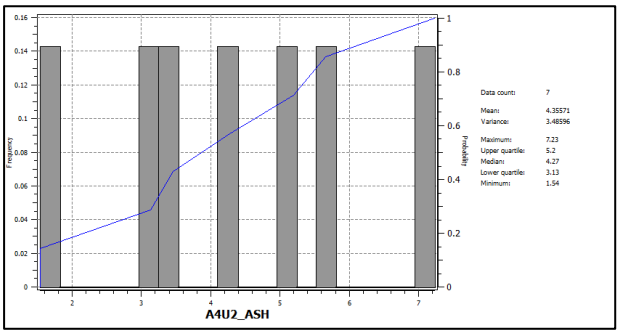

A2U2_ASH
Data count: 2
Mean: 9.97
Variance: 3.2258
Maximum: 11.24
Upper quartile: 8.7
Median: 8.7
Lower quartile: 8.7
Minimum: 8.7

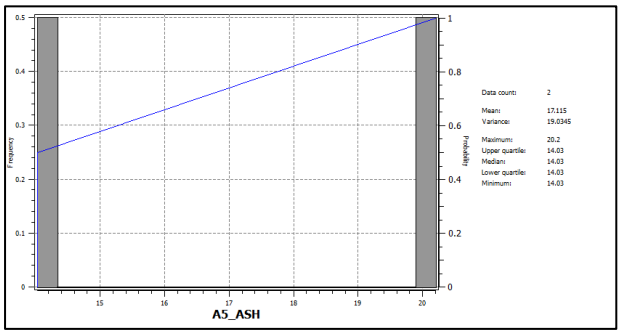

A3U_ASH
Data count: 8
Mean: 9.37375
Variance: 233.153
Maximum: 46.05
Upper quartile: 5.21
Median: 2.18
Lower quartile: 2.01
Minimum: 1.95

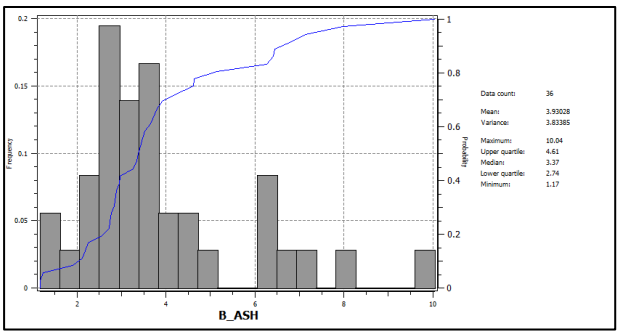

A4L_ASH
Data count: 5
Mean: 14.41
Variance: 145.895
Maximum: 34.51
Upper quartile: 16.94
Median: 7.91
Lower quartile: 6.99
Minimum: 5.7

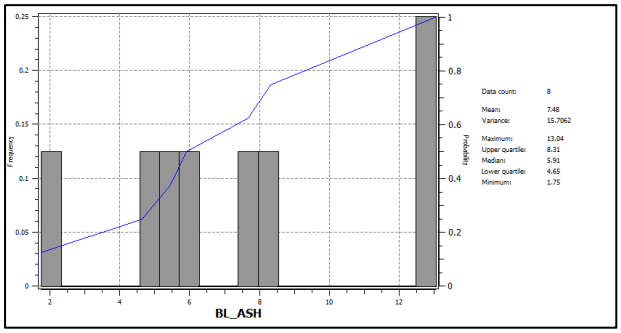

A4U_ASH
Data count: 4
Mean: 4.3375
Variance: 2.97309
Maximum: 6.02
Upper quartile: 5.62
Median: 3.01
Lower quartile: 2.7
Minimum: 2.7

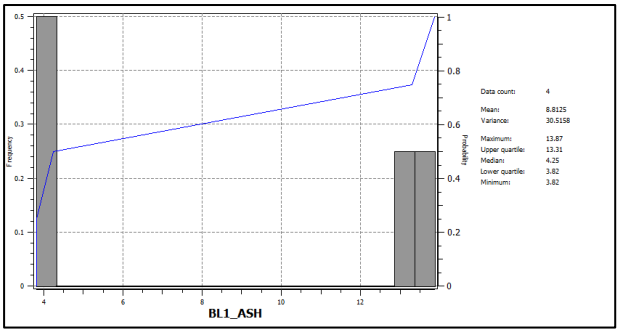

A4U1_ASH
Data count: 10
Mean: 4.988
Variance: 2.64304
Maximum: 7.78
Upper quartile: 5.35
Median: 4.6
Lower quartile: 3.82
Minimum: 2.96

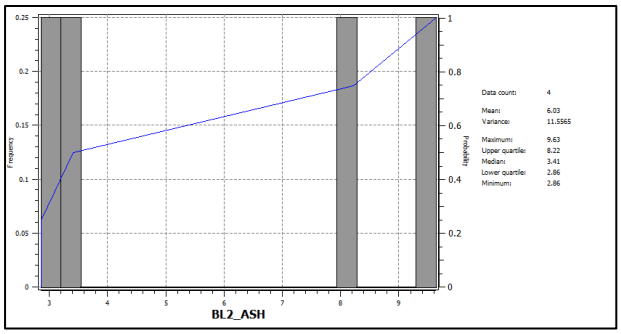

A4U2_ASH
Data count: 7
Mean: 4.35571
Variance: 3.48596
Maximum: 7.23
Upper quartile: 5.2
Median: 4.27
Lower quartile: 3.13
Minimum: 1.54

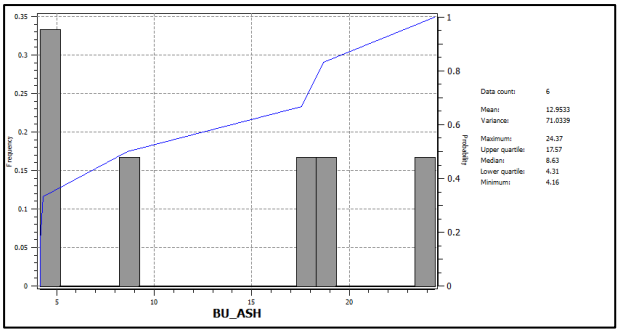

A5_ASH
Data count: 2
Mean: 17.115
Variance: 19.0345
Maximum: 20.2
Upper quartile: 14.03
Median: 14.03
Lower quartile: 14.03
Minimum: 14.03

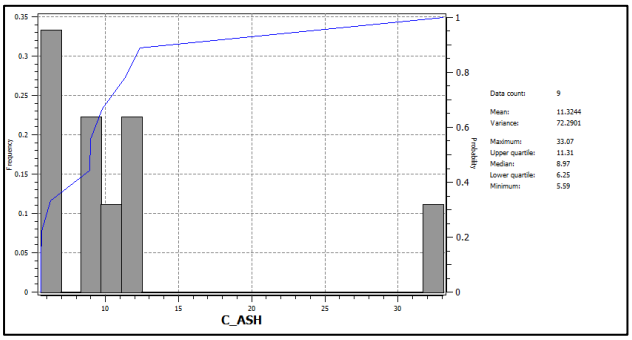

B_ASH
Data count: 36
Mean: 3.93028
Variance: 3.83385
Maximum: 10.04
Upper quartile: 4.61
Median: 3.37
Lower quartile: 2.74
Minimum: 1.17

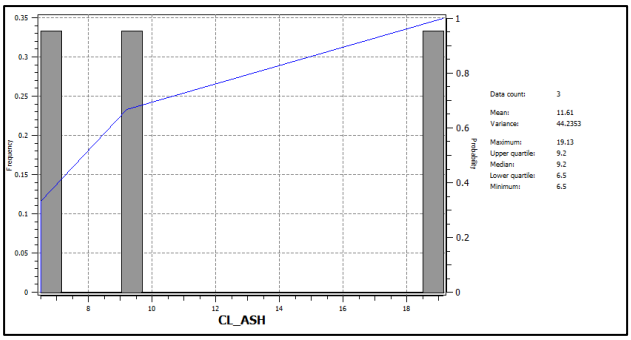

BL_ASH
Data count: 8
Mean: 7.48
Variance: 15.7062
Maximum: 13.04
Upper quartile: 8.31
Median: 5.91
Lower quartile: 4.65
Minimum: 1.75


BL1_ASH
Data count: 4
Mean: 8.8125
Variance: 30.5158
Maximum: 13.87
Upper quartile: 13.31
Median: 4.25
Lower quartile: 3.82
Minimum: 3.82

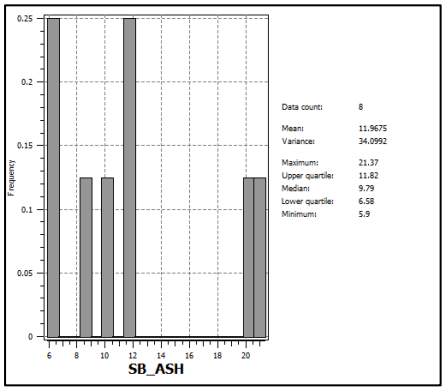

BL2_ASH
Data count: 4
Mean: 6.03
Variance: 11.5565
Maximum: 9.63
Upper quartile: 8.22
Median: 3.41
Lower quartile: 2.86
Minimum: 2.86

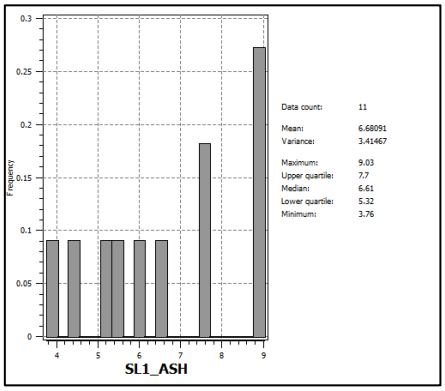

BU_ASH
Data count: 6
Mean: 12.9533
Variance: 71.0339
Maximum: 24.37
Upper quartile: 17.57
Median: 8.63
Lower quartile: 4.31
Minimum: 4.16

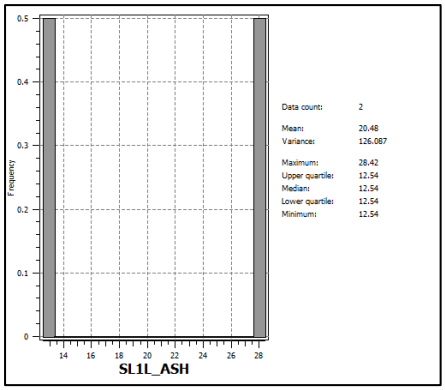

C_ASH
Data count: 9
Mean: 11.3244
Variance: 72.2901
Maximum: 33.07
Upper quartile: 11.31
Median: 8.97
Lower quartile: 6.25
Minimum: 5.59

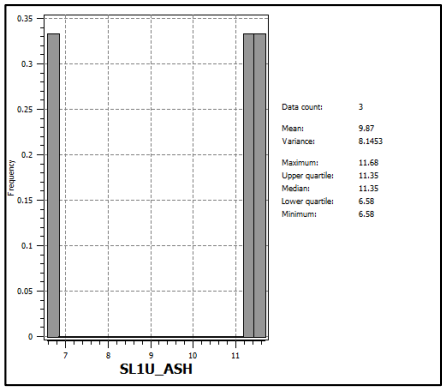

CL_ASH
Data count: 3
Mean: 11.61
Variance: 44.2353
Maximum: 19.13
Upper quartile: 9.2
Median: 9.2
Lower quartile: 6.5
Minimum: 6.5

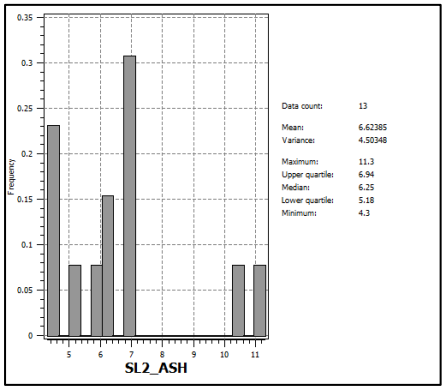
PP Block

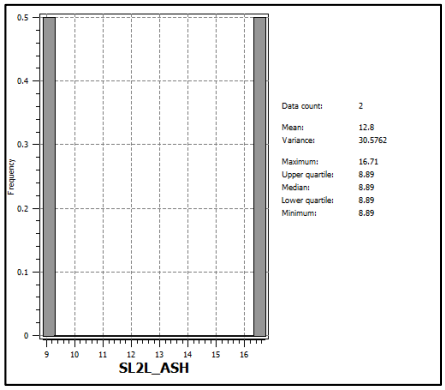

Frequency
SB_ASH
Data count: 8
Mean: 11.9675
Variance: 34.0992
Maximum: 21.37
Upper quartile: 11.82
Median: 9.79
Lower quartile: 6.58
Minimum: 5.9

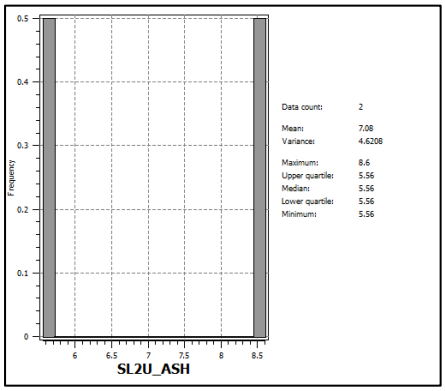

Frequency
SL1_ASH
Data count: 11
Mean: 6.68091
Variance: 3.41467
Maximum: 9.03
Upper quartile: 7.7
Median: 6.61
Lower quartile: 5.32
Minimum: 3.76

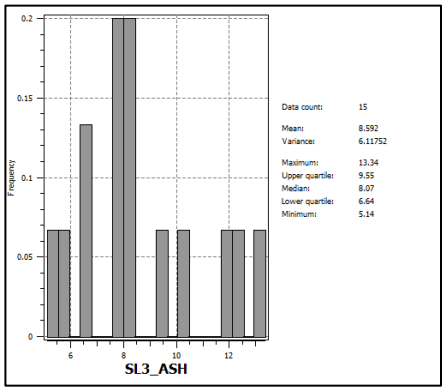

Frequency
SL1L_ASH
Data count: 2
Mean: 20.48
Variance: 126.087
Maximum: 28.42
Upper quartile: 12.54
Median: 12.54
Lower quartile: 12.54
Minimum: 12.54

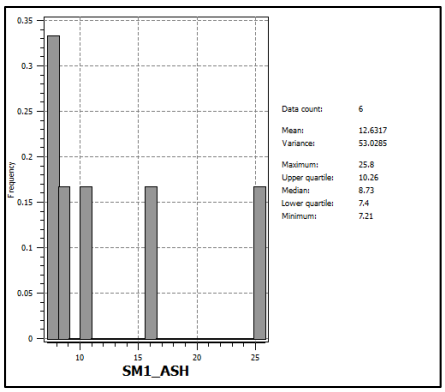

Frequency
SL1U_ASH
Data count: 3
Mean: 9.87
Variance: 8.1453
Maximum: 11.68
Upper quartile: 11.35
Median: 11.35
Lower quartile: 6.58
Minimum: 6.58

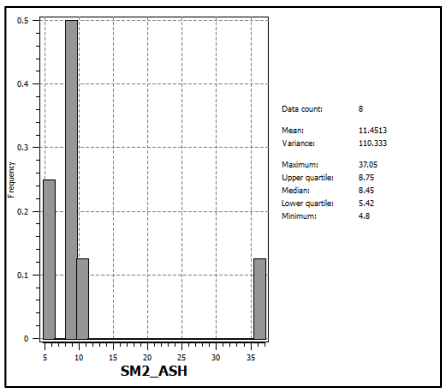

Frequency
SL2_ASH
Data count: 13
Mean: 6.62385
Variance: 4.50348
Maximum: 11.3
Upper quartile: 6.94
Median: 6.25
Lower quartile: 5.18
Minimum: 4.3

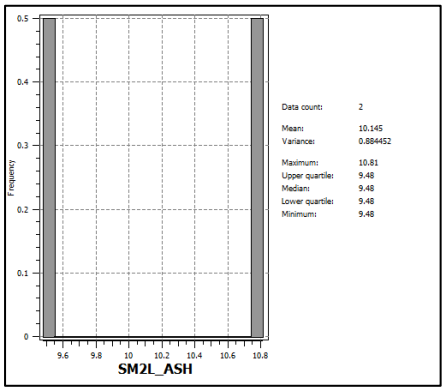

Frequency
SL2L_ASH
Data count: 2
Mean: 12.8
Variance: 30.5762
Maximum: 16.71
Upper quartile: 8.89
Median: 8.89
Lower quartile: 8.89
Minimum: 8.89

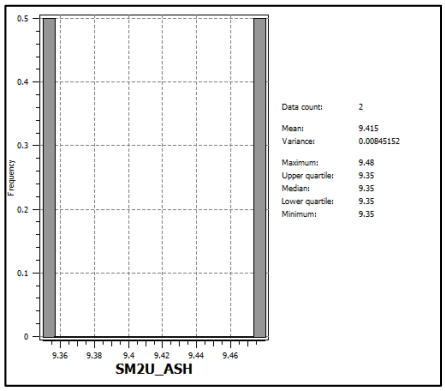

Frequency
SL2U_ASH
Data count: 2
Mean: 7.08
Variance: 4.6208
Maximum: 8.6
Upper quartile: 5.56
Median: 5.56
Lower quartile: 5.56
Minimum: 5.56

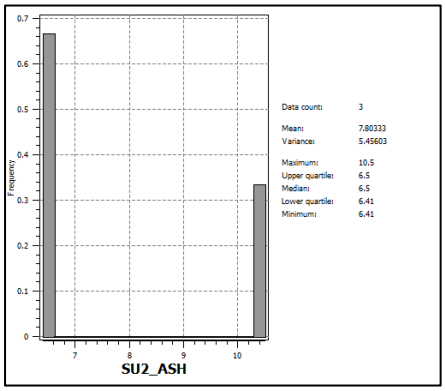

Frequency
SL3_ASH
Data count: 15
Mean: 8.592
Variance: 6.11752
Maximum: 13.34
Upper quartile: 9.55
Median: 8.07
Lower quartile: 6.64
Minimum: 5.14


Frequency
SM1_ASH
Data count: 6
Mean: 12.6317
Variance: 53.0285
Maximum: 25.8
Upper quartile: 10.26
Median: 8.73
Lower quartile: 7.4
Minimum: 7.21

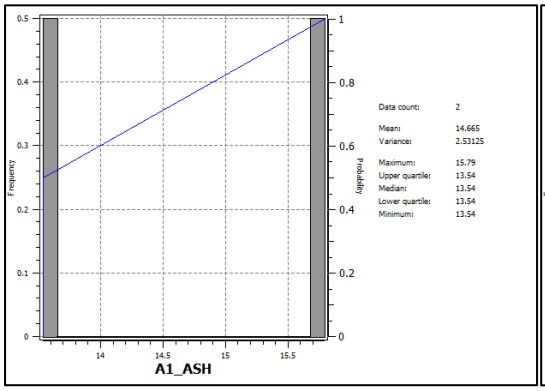

Frequency
SM2_ASH
Data count: 8
Mean: 11.4513
Variance: 110.333
Maximum: 37.05
Upper quartile: 8.75
Median: 8.45
Lower quartile: 5.42
Minimum: 4.8

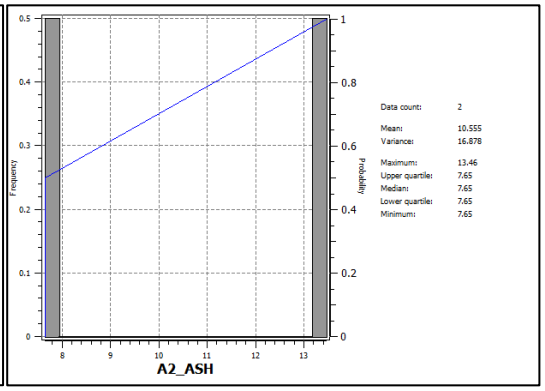

Frequency
SM2L_ASH
Data count: 2
Mean: 10.145
Variance: 0.884452
Maximum: 10.81
Upper quartile: 9.48
Median: 9.48
Lower quartile: 9.48
Minimum: 9.48

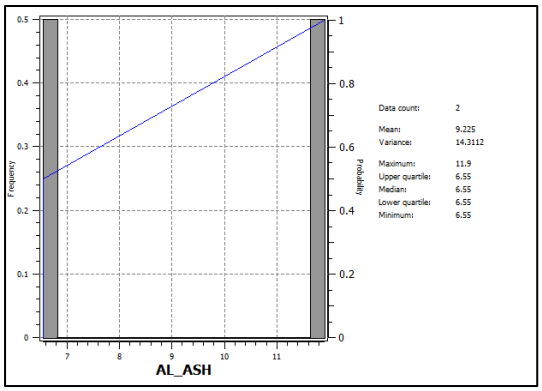

Frequency
SM2U_ASH
Data count: 2
Mean: 9.415
Variance: 0.00845152
Maximum: 9.48
Upper quartile: 9.35
Median: 9.35
Lower quartile: 9.35
Minimum: 9.35

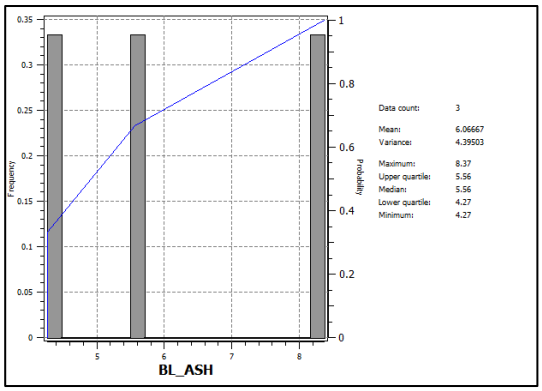

Frequency
SU2_ASH
Data count: 3
Mean: 7.80333
Variance: 5.45603
Maximum: 10.5
Upper quartile: 6.5
Median: 6.5
Lower quartile: 6.41
Minimum: 6.41

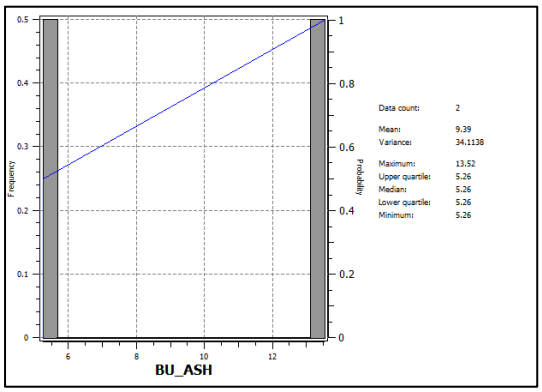
SN Block

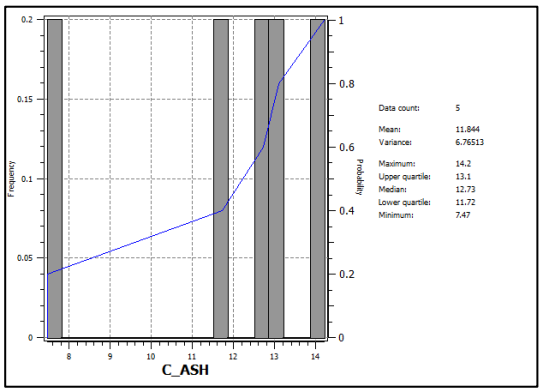

A1_ASH
Data count: 2
Mean: 14.665
Variance: 2.53125
Maximum: 15.79
Upper quartile: 13.54
Median: 13.54
Lower quartile: 13.54
Minimum: 13.54

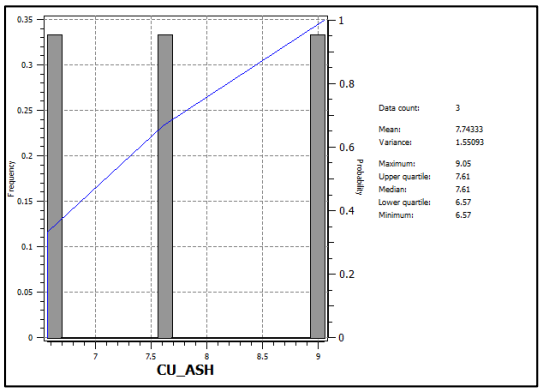

A2_ASH
Data count: 2
Mean: 10.555
Variance: 16.878
Maximum: 13.46
Upper quartile: 7.65
Median: 7.65
Lower quartile: 7.65
Minimum: 7.65

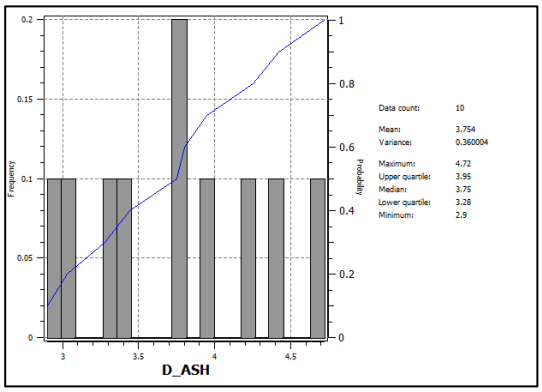

AL_ASH
Data count: 2
Mean: 9.225
Variance: 14.3112
Maximum: 11.9
Upper quartile: 6.55
Median: 6.55
Lower quartile: 6.55
Minimum: 6.55

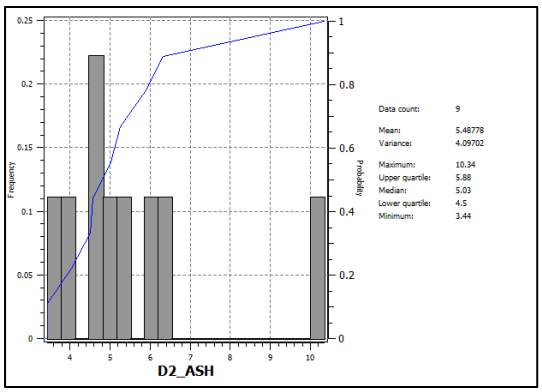

BL_ASH
Data count: 3
Mean: 6.06667
Variance: 4.39503
Maximum: 8.37
Upper quartile: 5.56
Median: 5.56
Lower quartile: 4.27
Minimum: 4.27

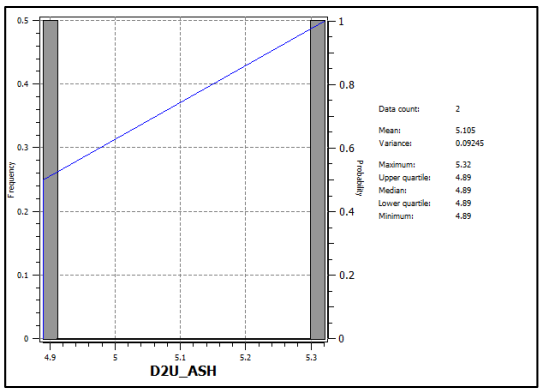

BU_ASH
Data count: 2
Mean: 9.39
Variance: 34.1138
Maximum: 13.52
Upper quartile: 5.26
Median: 5.26
Lower quartile: 5.26
Minimum: 5.26

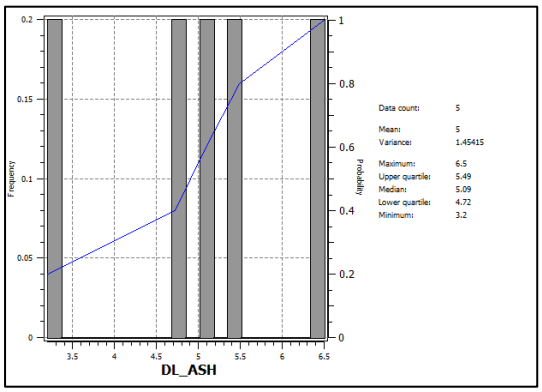

C_ASH
Data count: 5
Mean: 11.844
Variance: 6.76513
Maximum: 14.2
Upper quartile: 13.1
Median: 12.73
Lower quartile: 11.72
Minimum: 7.47

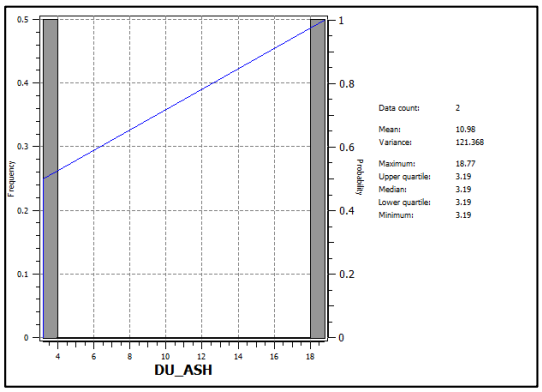

CU_ASH
Data count: 3
Mean: 7.74333
Variance: 1.55093
Maximum: 9.05
Upper quartile: 7.61
Median: 7.61
Lower quartile: 6.57
Minimum: 6.57

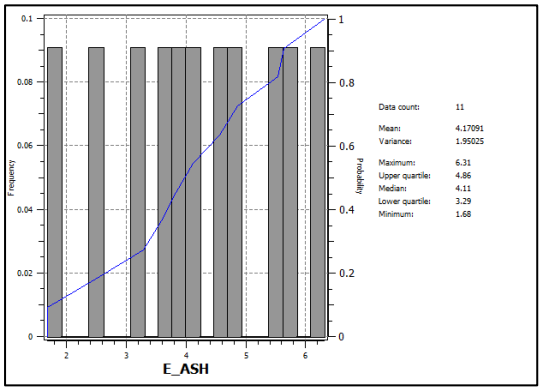

D_ASH
Data count: 10
Mean: 3.754
Variance: 0.360004
Maximum: 4.72
Upper quartile: 3.95
Median: 3.75
Lower quartile: 3.28
Minimum: 2.9


Frequency
Probability
Data count: 9
Mean: 5.48778
Variance: 4.09702
Maximum: 10.34
Upper quartile: 5.88
Median: 5.03
Lower quartile: 4.5
Minimum: 3.44
D2_ASH

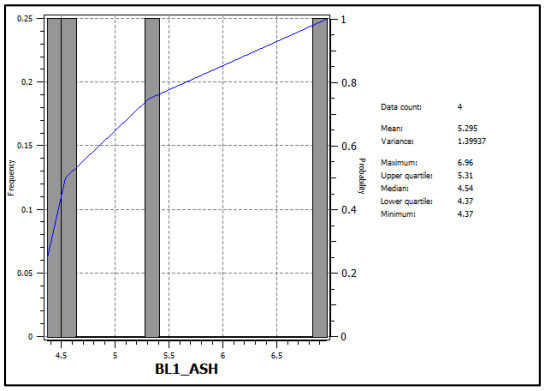

Frequency
Probability
Data count: 2
Mean: 5.105
Variance: 0.09245
Maximum: 5.32
Upper quartile: 4.89
Median: 4.89
Lower quartile: 4.89
Minimum: 4.89
D2U_ASH

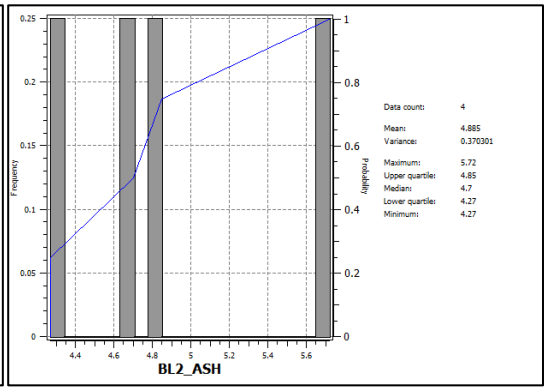

Frequency
Probability
Data count: 5
Mean: 5
Variance: 1.45415
Maximum: 6.5
Upper quartile: 5.49
Median: 5.09
Lower quartile: 4.72
Minimum: 3.2
DL_ASH

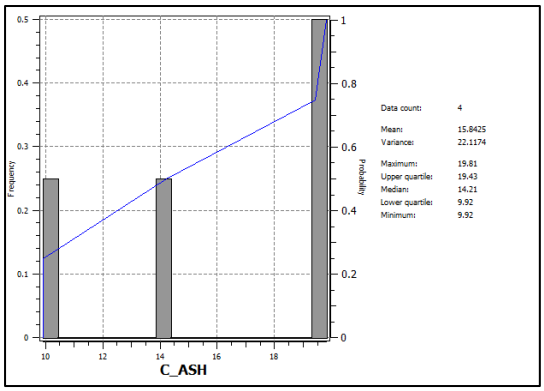

Frequency
Probability
Data count: 2
Mean: 10.98
Variance: 121.368
Maximum: 18.77
Upper quartile: 3.19
Median: 3.19
Lower quartile: 3.19
Minimum: 3.19
DU_ASH

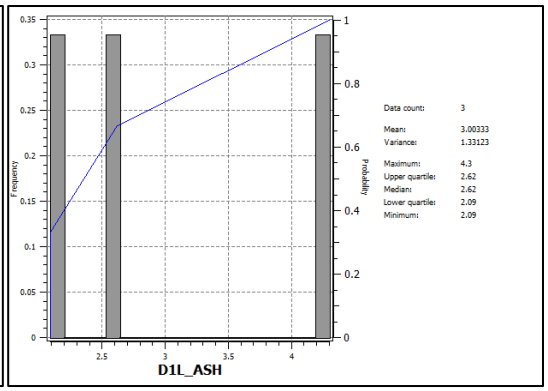

Frequency
Probability
Data count: 11
Mean: 4.17091
Variance: 1.95025
Maximum: 6.31
Upper quartile: 4.86
Median: 4.11
Lower quartile: 3.29
Minimum: 1.68
E_ASH

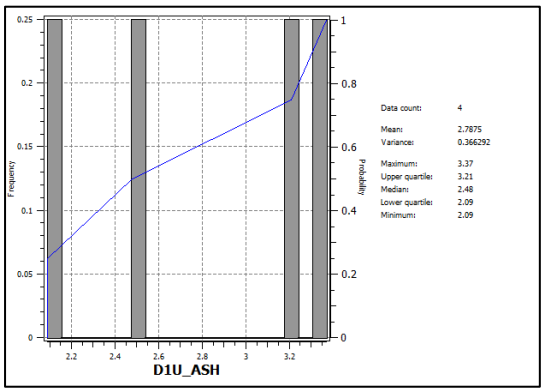
SS Block

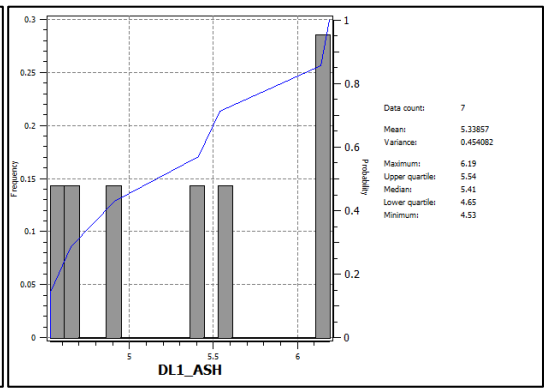

Frequency
Probability
Data count: 4
Mean: 5.295
Variance: 1.39937
Maximum: 6.96
Upper quartile: 5.31
Median: 4.54
Lower quartile: 4.37
Minimum: 4.37
BL1_ASH

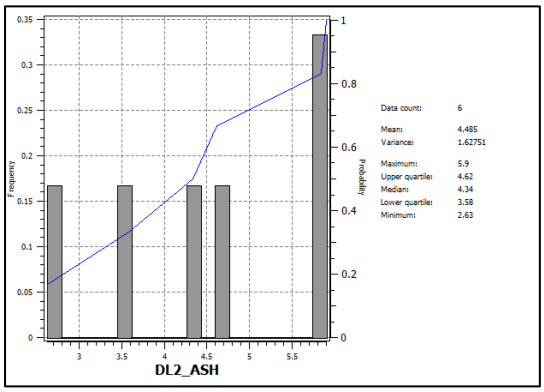

Frequency
Probability
Data count: 4
Mean: 4.885
Variance: 0.370301
Maximum: 5.72
Upper quartile: 4.85
Median: 4.7
Lower quartile: 4.27
Minimum: 4.27
BL2_ASH

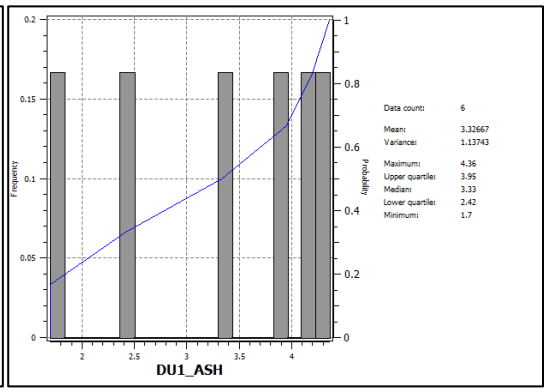

Frequency
Probability
Data count: 4
Mean: 15.8425
Variance: 22.1174
Maximum: 19.81
Upper quartile: 19.43
Median: 14.21
Lower quartile: 9.92
Minimum: 9.92
C_ASH

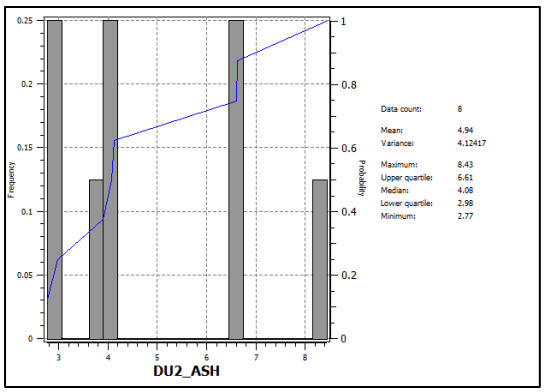

Frequency
Probability
Data count: 3
Mean: 3.00333
Variance: 1.33123
Maximum: 4.3
Upper quartile: 2.62
Median: 2.62
Lower quartile: 2.09
Minimum: 2.09
D1L_ASH

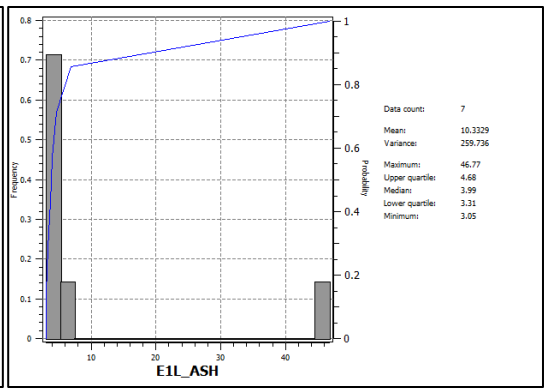

Frequency
Probability
Data count: 4
Mean: 2.7875
Variance: 0.366292
Maximum: 3.37
Upper quartile: 3.21
Median: 2.48
Lower quartile: 2.09
Minimum: 2.09
D1U_ASH

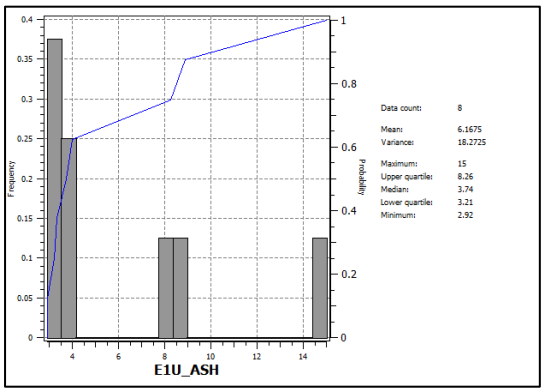

Frequency
Probability
Data count: 7
Mean: 5.33857
Variance: 0.454082
Maximum: 6.19
Upper quartile: 5.54
Median: 5.41
Lower quartile: 4.65
Minimum: 4.53
DL1_ASH

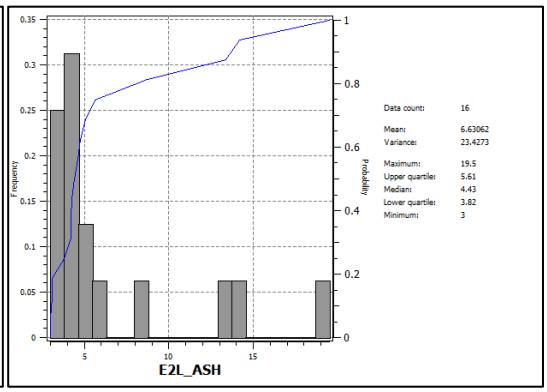

Frequency
Probability
Data count: 6
Mean: 4.485
Variance: 1.62751
Maximum: 5.9
Upper quartile: 4.62
Median: 4.34
Lower quartile: 3.58
Minimum: 2.63
DL2_ASH

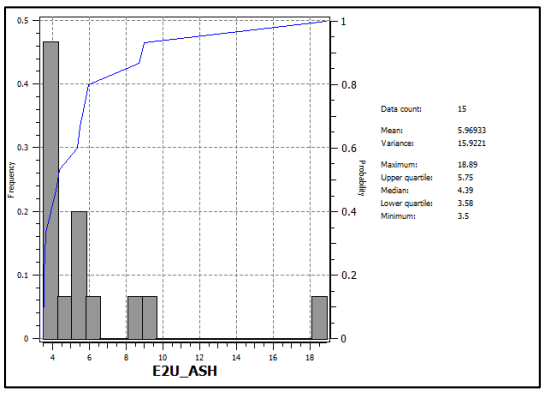

Frequency
Probability
Data count: 6
Mean: 3.32667
Variance: 1.13743
Maximum: 4.36
Upper quartile: 3.95
Median: 3.33
Lower quartile: 2.42
Minimum: 1.7
DU1_ASH

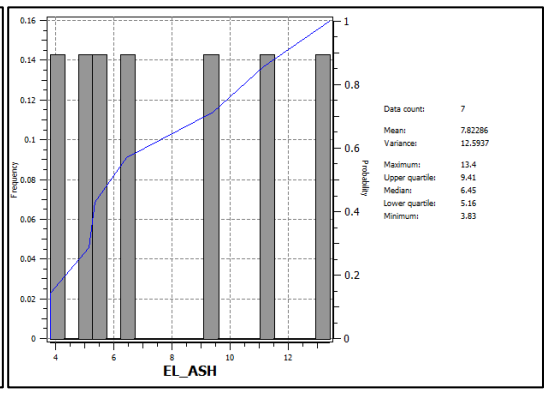

Frequency
Probability
Data count: 8
Mean: 4.94
Variance: 4.12417
Maximum: 8.43
Upper quartile: 6.61
Median: 4.08
Lower quartile: 2.98
Minimum: 2.77
DU2_ASH

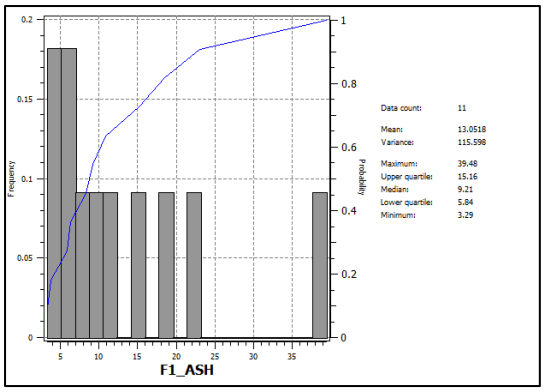

Frequency
Probability
Data count: 7
Mean: 10.3329
Variance: 259.736
Maximum: 46.77
Upper quartile: 4.68
Median: 3.99
Lower quartile: 3.31
Minimum: 3.05
E1L_ASH

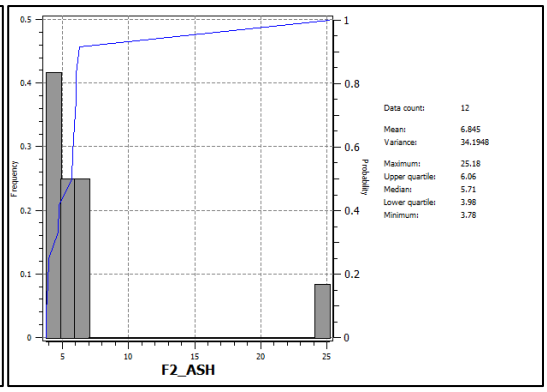

Frequency
Probability
Data count: 8
Mean: 6.1675
Variance: 18.2725
Maximum: 15
Upper quartile: 8.26
Median: 3.74
Lower quartile: 3.21
Minimum: 2.92
E1U_ASH


Frequency
Probability
Data count: 16
Mean: 6.63062
Variance: 23.4273
Maximum: 19.5
Upper quartile: 5.61
Median: 4.43
Lower quartile: 3.82
Minimum: 3
E2L_ASH


Frequency
Probability
Data count: 15
Mean: 5.96933
Variance: 15.9221
Maximum: 18.89
Upper quartile: 5.75
Median: 4.39
Lower quartile: 3.58
Minimum: 3.5
E2U_ASH

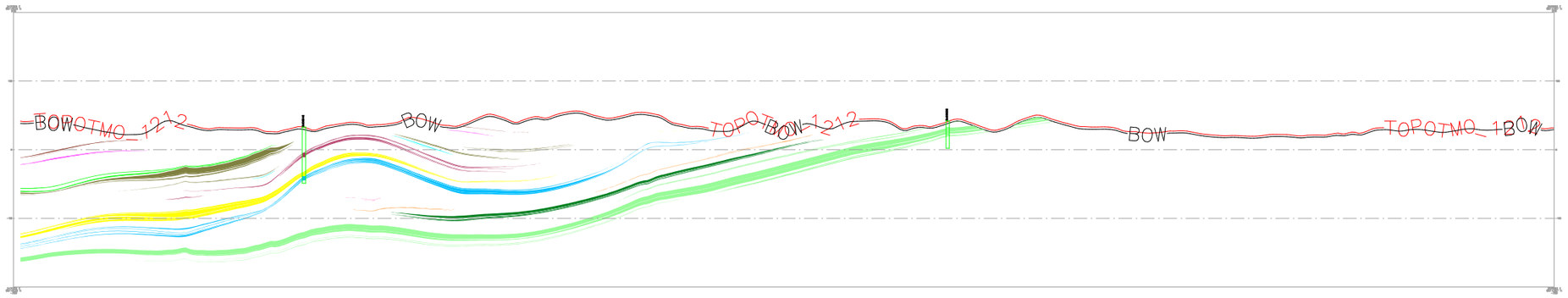

Frequency
Probability
Data count: 7
Mean: 7.82286
Variance: 12.5937
Maximum: 13.4
Upper quartile: 9.41
Median: 6.45
Lower quartile: 5.16
Minimum: 3.83
EL_ASH

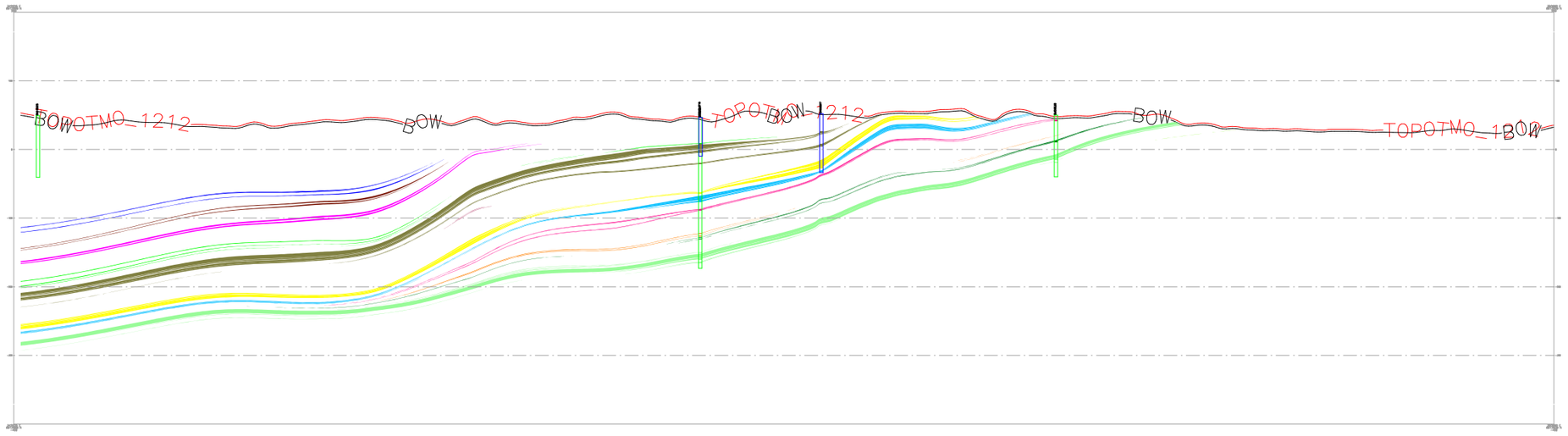

Frequency
Probability
Data count: 11
Mean: 13.0518
Variance: 115.598
Maximum: 39.48
Upper quartile: 15.16
Median: 9.21
Lower quartile: 5.84
Minimum: 3.29
F1_ASH


Frequency
Probability
Data count: 12
Mean: 6.845
Variance: 34.1948
Maximum: 25.18
Upper quartile: 6.06
Median: 5.71
Lower quartile: 3.98
Minimum: 3.78
F2_ASH

Appendix D: Cross-Sections







SEAM H2, SEAM H1, SEAM G2U, SEAM G2L, SEAM G1, SEAM F2, SEAM F1, SEAM FL2, SEAM FL1, SEAM E2U, SEAM E2L2, SEAM E2L1, SEAM E1U2, SEAM E1U1, SEAM E1L2, SEAM E1L1, SEAM EL2U, SEAM EL2L, SEAM EL1U, SEAM EL1L, SEAM D1U2, SEAM D1U1, SEAM D1L2, SEAM D1L1, SEAM DU2U, SEAM DU2L, SEAM DU1U, SEAM DU1L, SEAM DL2U, SEAM DL2L, SEAM DL1U, SEAM DL1L, SEAM CR2U, SEAM CR2L, SEAM CR1U, SEAM CR1L, SEAM CU2, SEAM CU1, SEAM CL2U, SEAM CL2L, SEAM CL1U, SEAM CL1L, SEAM BU2U, SEAM BU2L, SEAM BU1U, SEAM BU1L, SEAM BL2U, SEAM BL2L, SEAM BL1U, SEAM BL1L, SEAM B1, SEAM AU, SEAM AL2

500 250 0 500 1000 1500 2000

HDR | SALVA

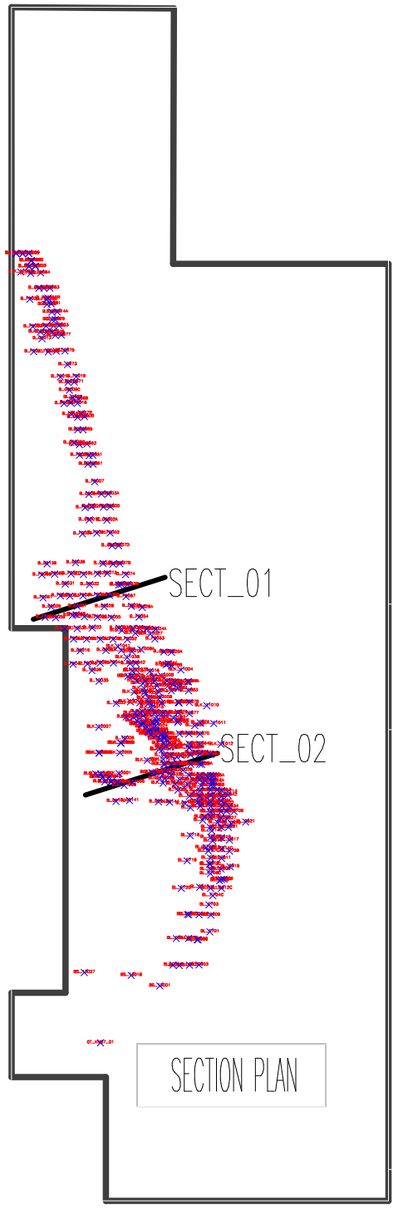
Date :18-Dec-14	Scale :1:31000	File:

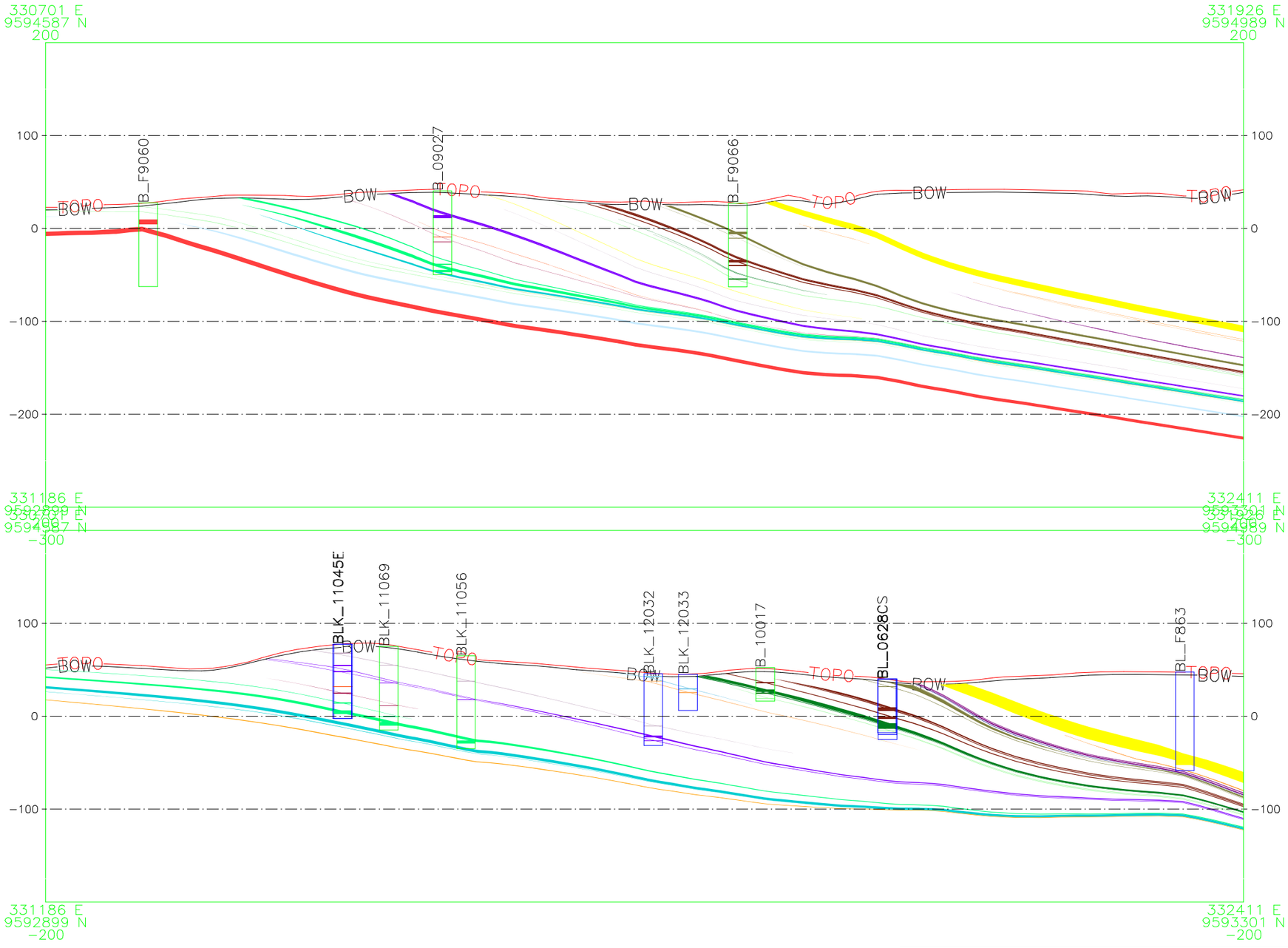
P T BORNEO INDOBARA

KG BLOCK

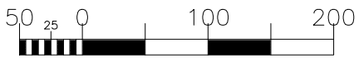
CROSS SECTIONS

Fig.





SEAM D, SEAM CU, SEAM C, SEAM CL, SEAM BU, SEAM B, SEAM BL2, SEAM BL, SEAM BL1, SEAM A5, SEAM A4U2B, SEAM A4U2, SEAM A4U2A, SEAM A4U, SEAM A4U1, SEAM A4L, SEAM A3U2, SEAM A3U, SEAM A3U1, SEAM A3L, SEAM A2U2, SEAM A2U, SEAM A2U1, SEAM A2L, SEAM A1U2, SEAM A1U, SEAM A1U1, SEAM A1L2, SEAM A1L, SEAM A1L1, SEAM AL2, SEAM AL1, SEAM S1, SEAM S2U, SEAM S2, SEAM S2L, SEAM S3, SEAM S4U, SEAM S4, SEAM S4L, SEAM S5, SEAM S6, SEAM S7U, SEAM S7L, SEAM S8U, SEAM S8L, SEAM S9, SEAM S10U, SEAM S10, SEAM S10L, SEAM S11, SEAM S12



HDR | SALVA

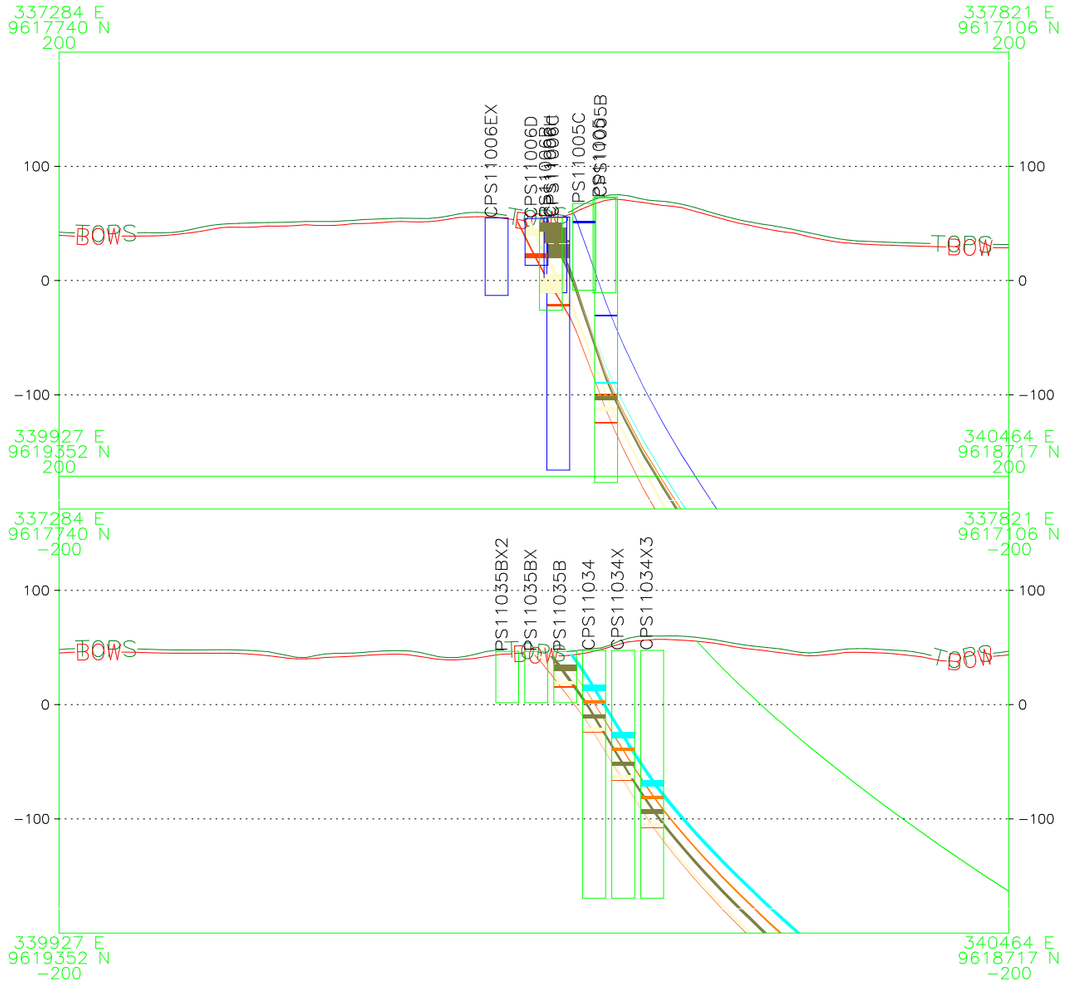
Date :04-Aug-14	Scale :1:5000	File:

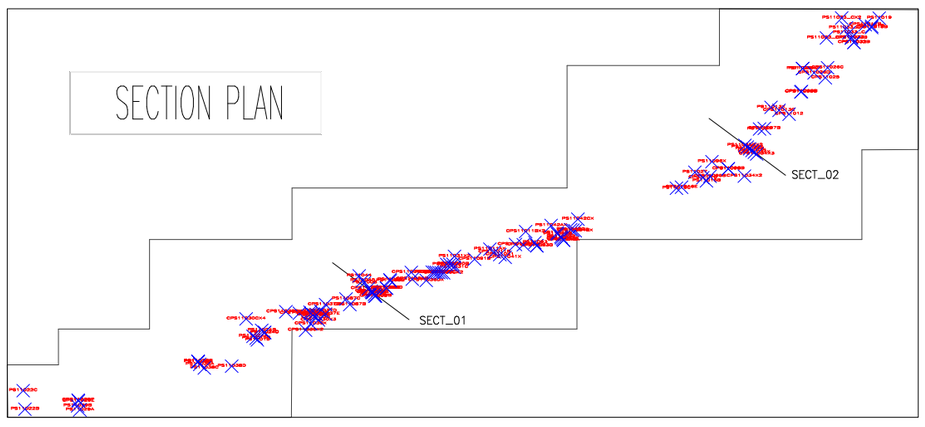
UNITED FIBRE SYSTEM LIMITED

BS BLOCK

CROSS SECTION 1 & 2

Fig.





SEAM SU1U
SEAM SU1
SEAM SU1L
SEAM SU2
SEAM SM1
SEAM SM2U
SEAM SM2
SEAM SM2L
SEAM SL1U
SEAM SL1
SEAM SL1L
SEAM SL2U
SEAM SL2
SEAM SL2L
SEAM SL3U
SEAM SL3
SEAM SL3L
SEAM SB

100 50 0 100 200 300 400

HDR | SALVA

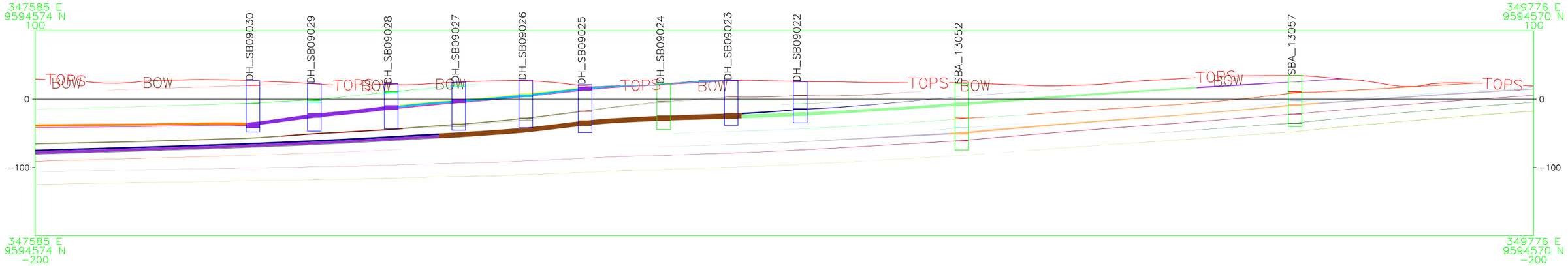
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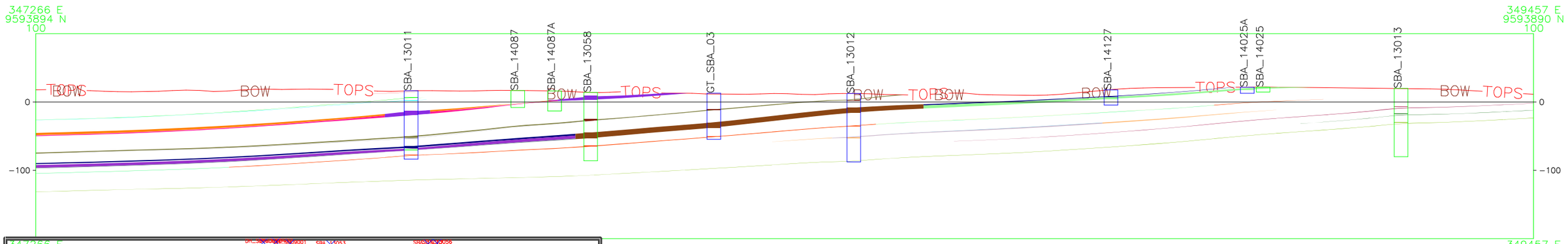
UNITED FIBRE SYSTEM LIMITED

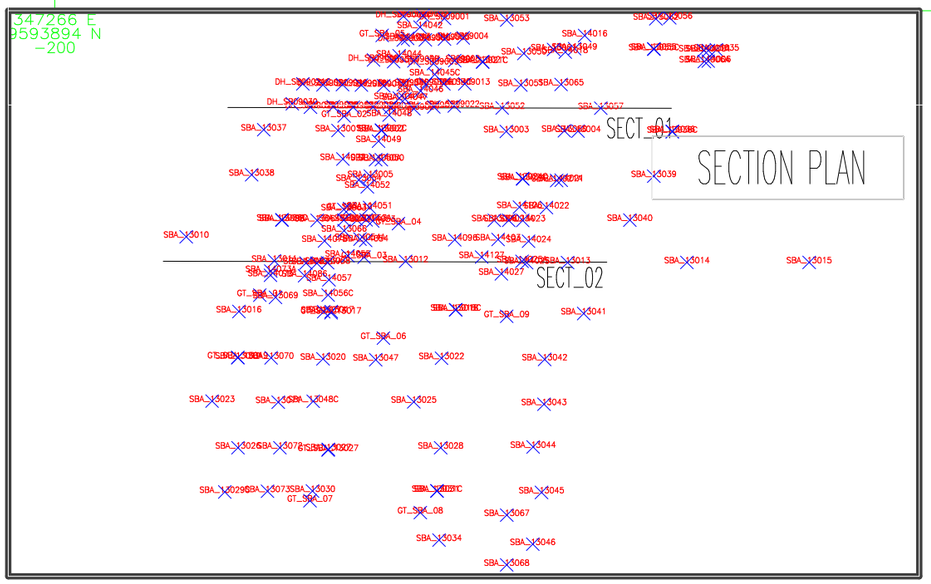
PP BLOCK

CROSS SECTION 1 & 2

Fig.







SEAM G
SEAM F2
SEAM F
SEAM F1
SEAM FL
SEAM E2U
SEAM E2
SEAM E2L
SEAM E
SEAM E1
SEAM D3
SEAM D2U
SEAM D2
SEAM D2L
SEAM D1
SEAM DU
SEAM DL2
SEAM D
SEAM DL
SEAM DL1
SEAM CU
SEAM C
SEAM CL
SEAM BU
SEAM BL2
SEAM BL
SEAM BL1
SEAM A2
SEAM A1
SEAM AL

100 50 0 100 200 300 400

HDR | SALVA

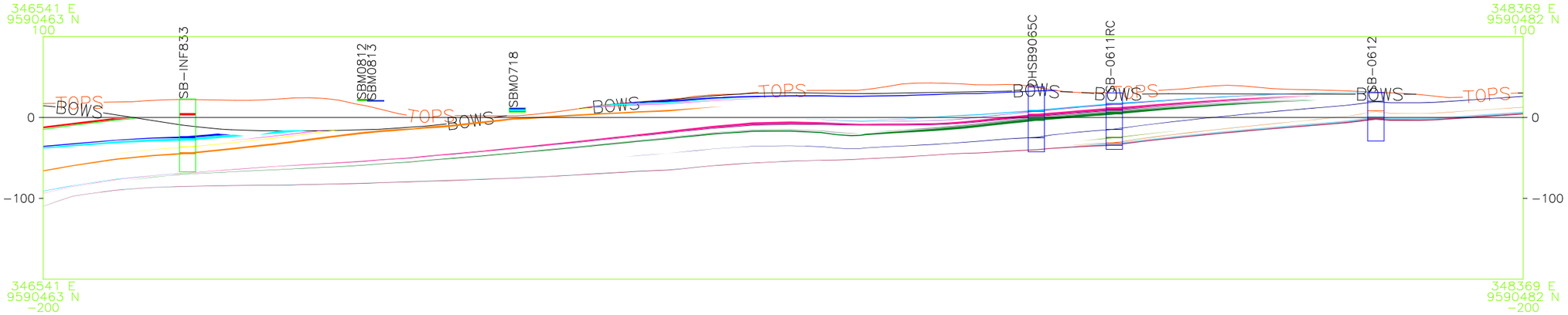
Date :04-Aug-14	Scale :1:6000	File:

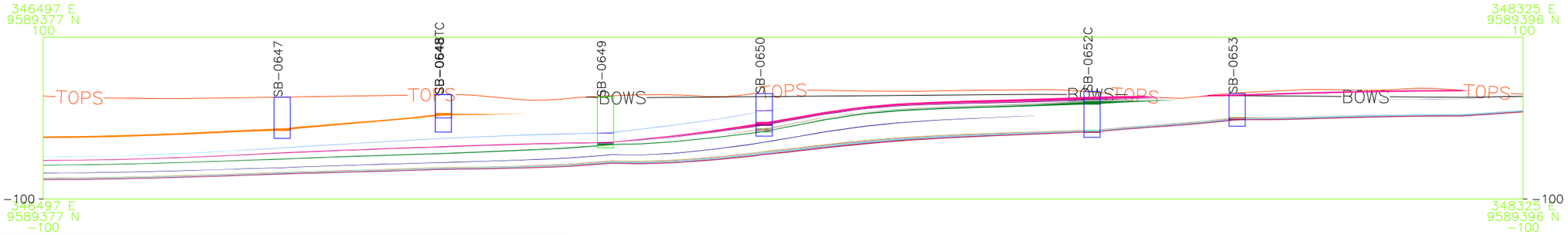
UNITED FIBRE SYSTEM LIMITED

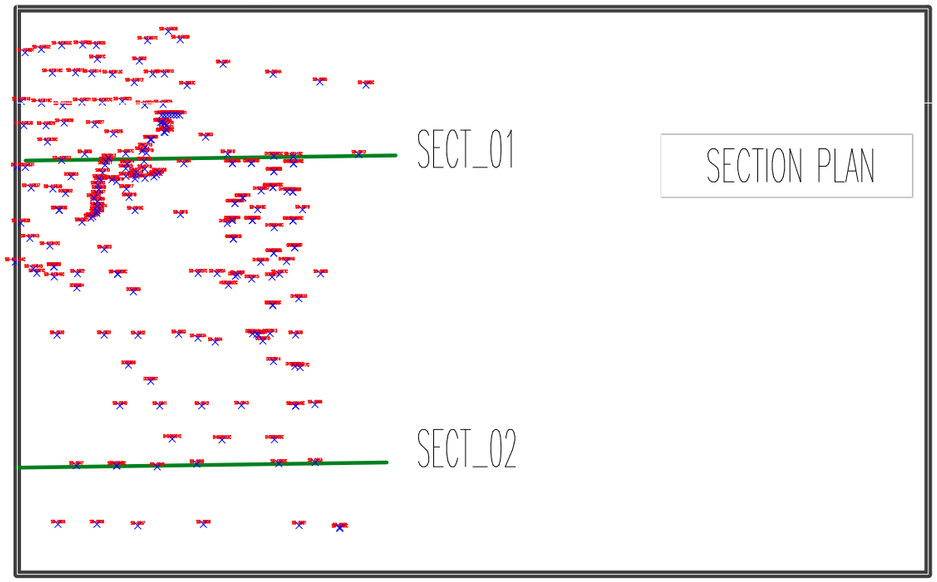
SN BLOCK

CROSS SECTION 1 & 2

Fig.







SEAM F2
SEAM F1
SEAM E2U
SEAM E2L
SEAM E1U
SEAM E1L
SEAM EL
SEAM D1U
SEAM D1L
SEAM DU2
SEAM DU1
SEAM DL2U
SEAM DL2L
SEAM DL2
SEAM DL1
SEAM C
SEAM B1
SEAM BU2
SEAM BU1
SEAM BL2
SEAM BL1
SEAM A2

100 50 0 100 200 300 400

HDR | SALVA

Date :05-Aug-14	Scale :1:6000	File:

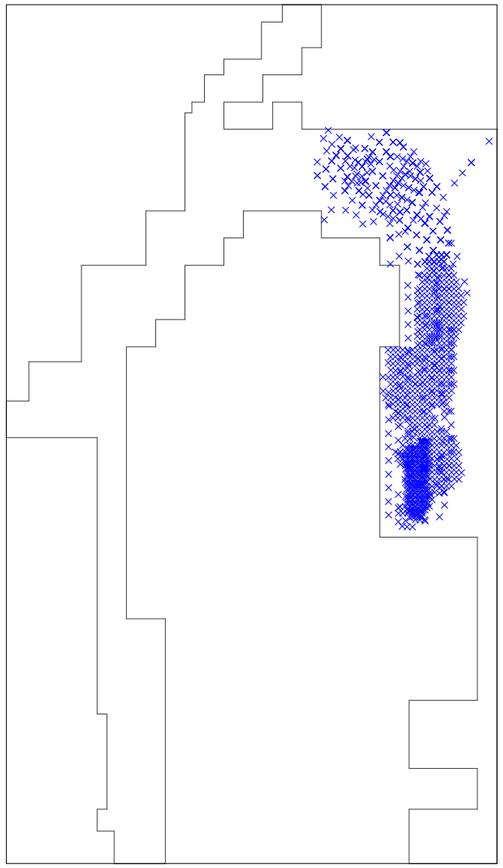
UNITED FIBRE SYSTEM LIMITED

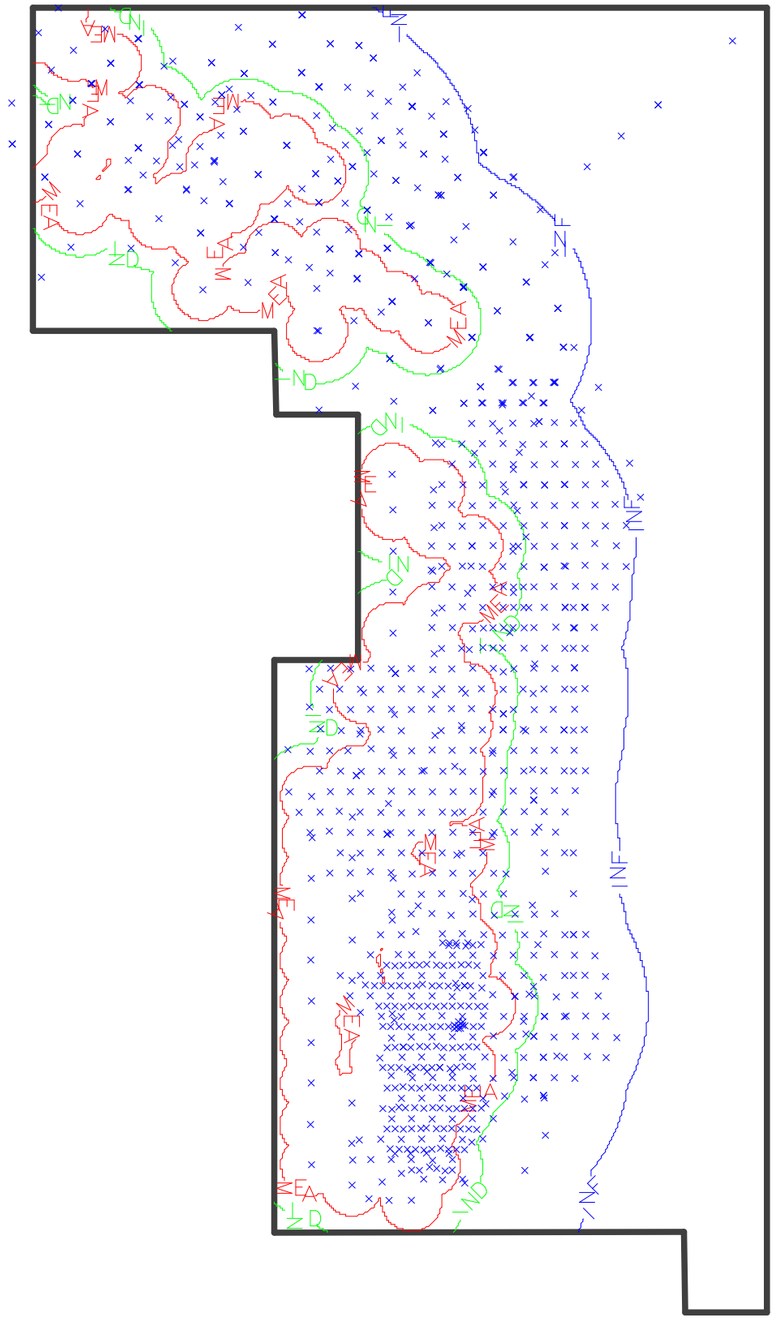
SS BLOCK

CROSS SECTION 1 & 2

Fig.

Appendix E: Resource Polygons for selected seams





LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 0 250 1000 2000

HDR | SALVA

Date :19-Dec-14	Scale :1:75000	File:

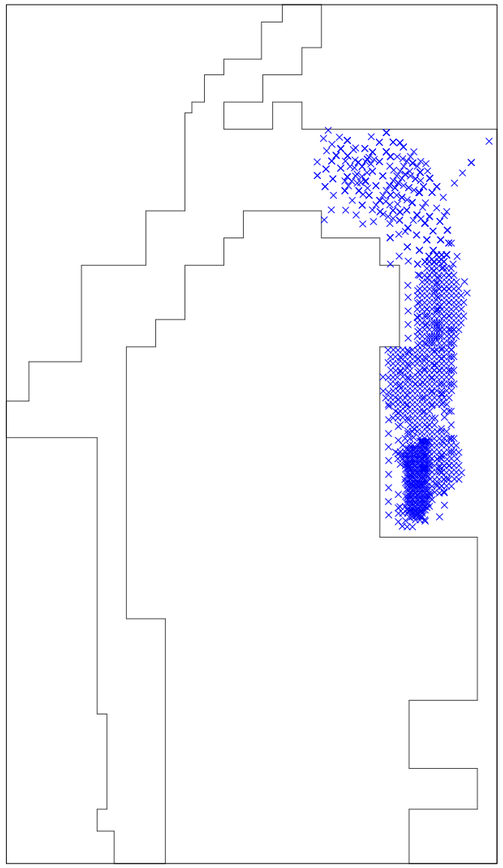
P T BORNEO INDOBARA

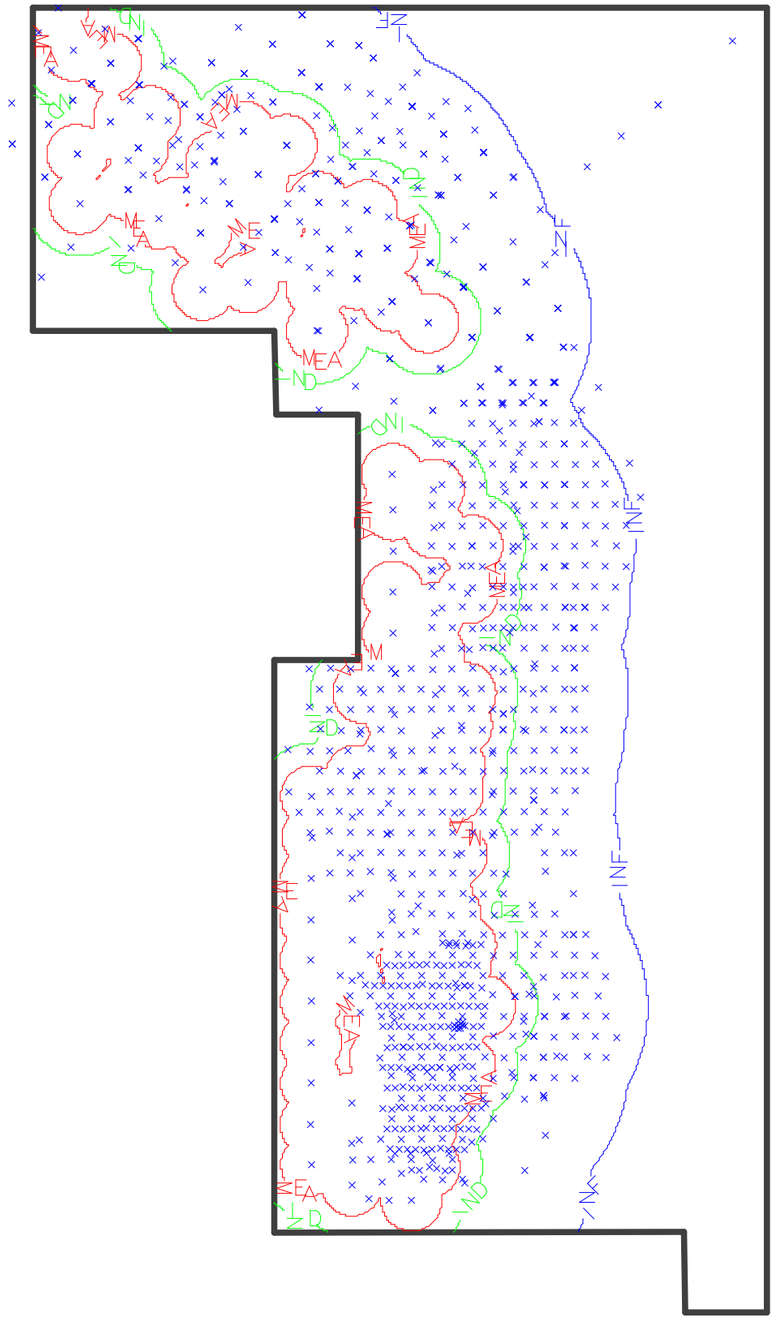
KG BLOCK

RESOURCE POLYGONS

SEAM E1U2

Fig.





LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 0 250 1000 2000

HDR | SALVA

Date :19-Dec-14	Scale :1:75000	File:

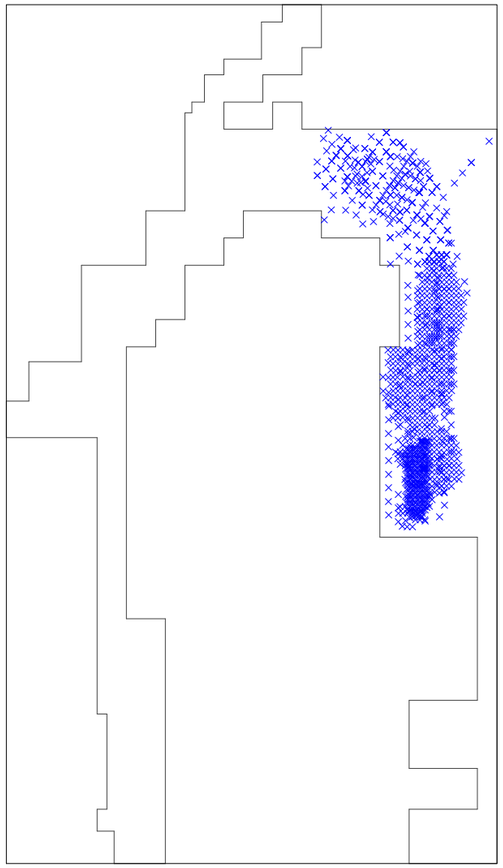
P T BORNEO INDOBARA

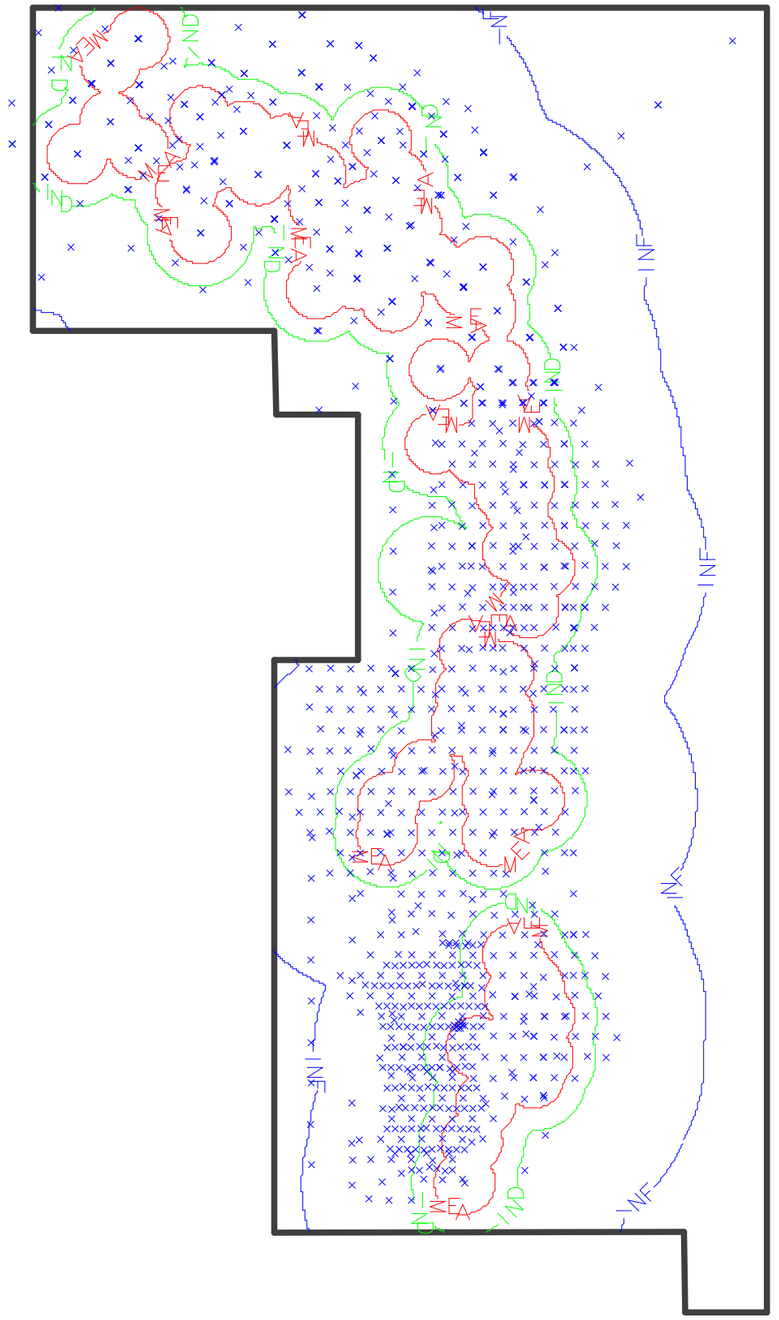
KG BLOCK

RESOURCE POLYGONS

SEAM E1L1

Fig.





N

LEGEND
Drillholes
Measured Resource
Indicated Resource
Inferred Resource
CCoW Boundary

500 0 250 1000 2000

HDR | SALVA

Date :19-Dec-14	Scale :1:75000	File:

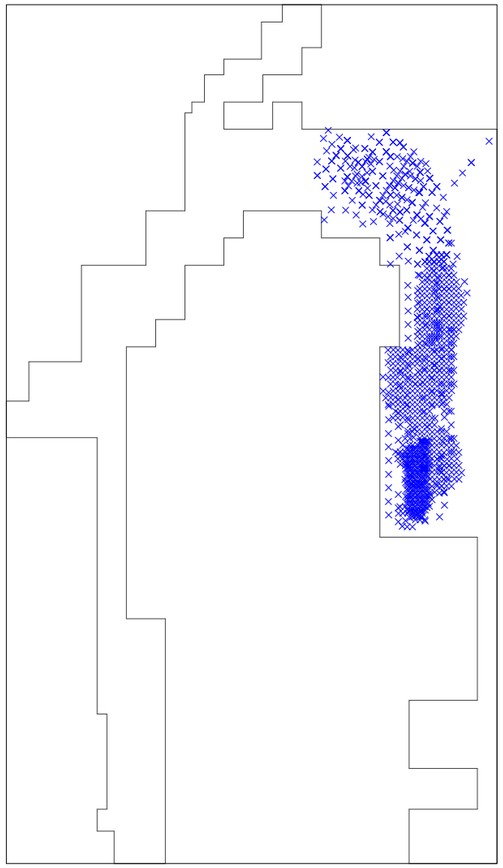
P T BORNEO INDOBARA

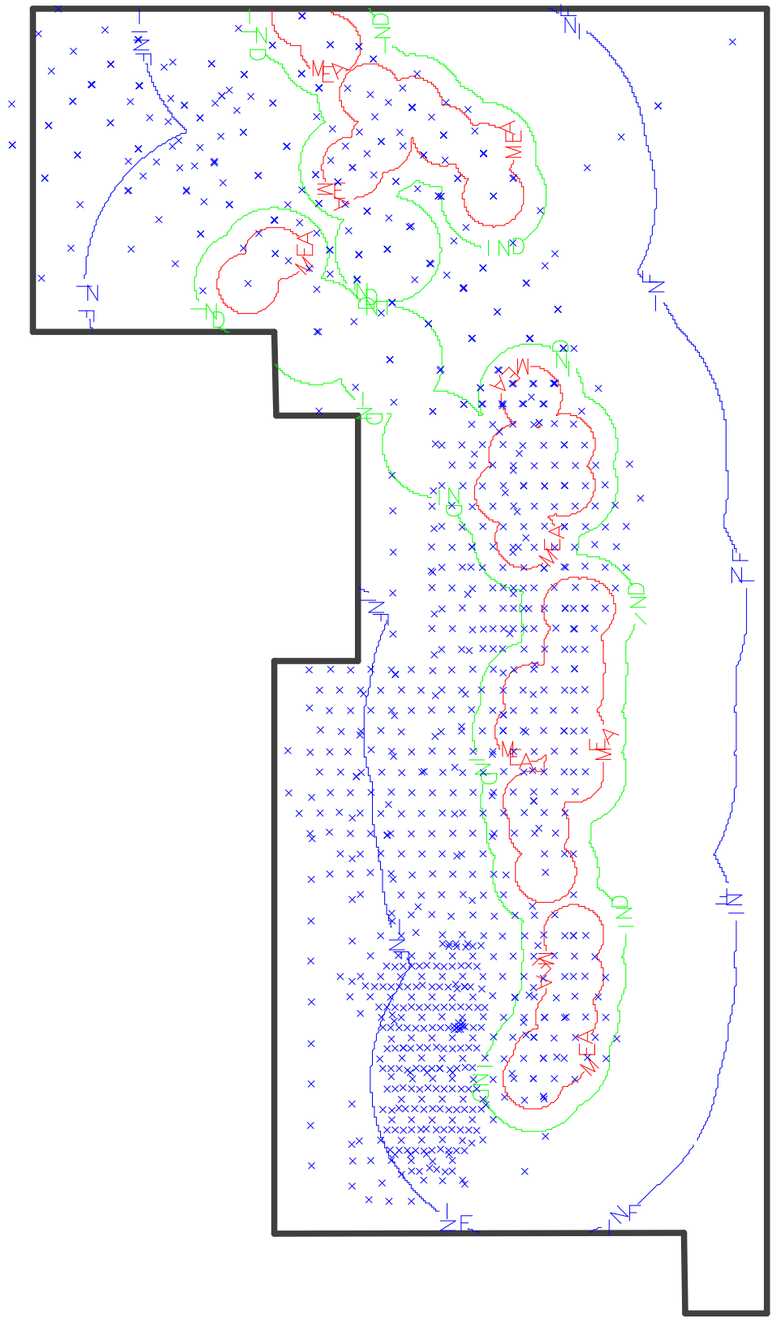
KG BLOCK

RESOURCE POLYGONS

SEAM DL2U

Fig.





N

LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 0 250 1000 2000

HDR | SALVA

Date :19-Dec-14	Scale :1:75000	File:

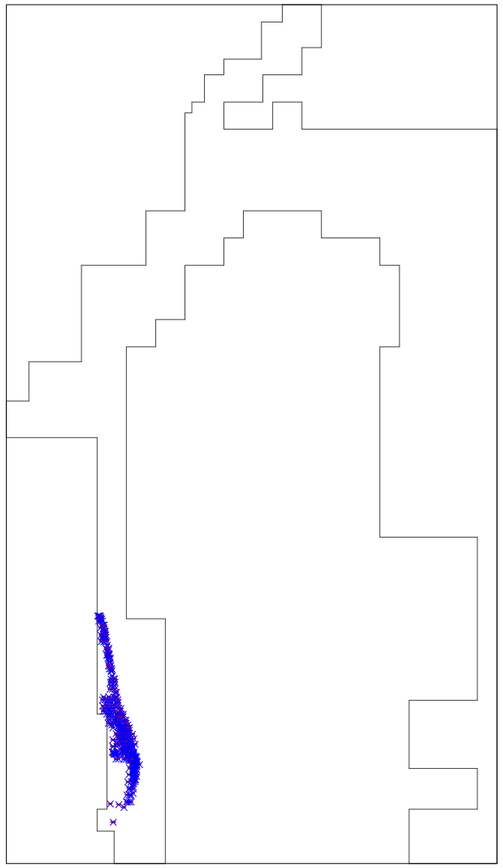
P T BORNEO INDOBARA

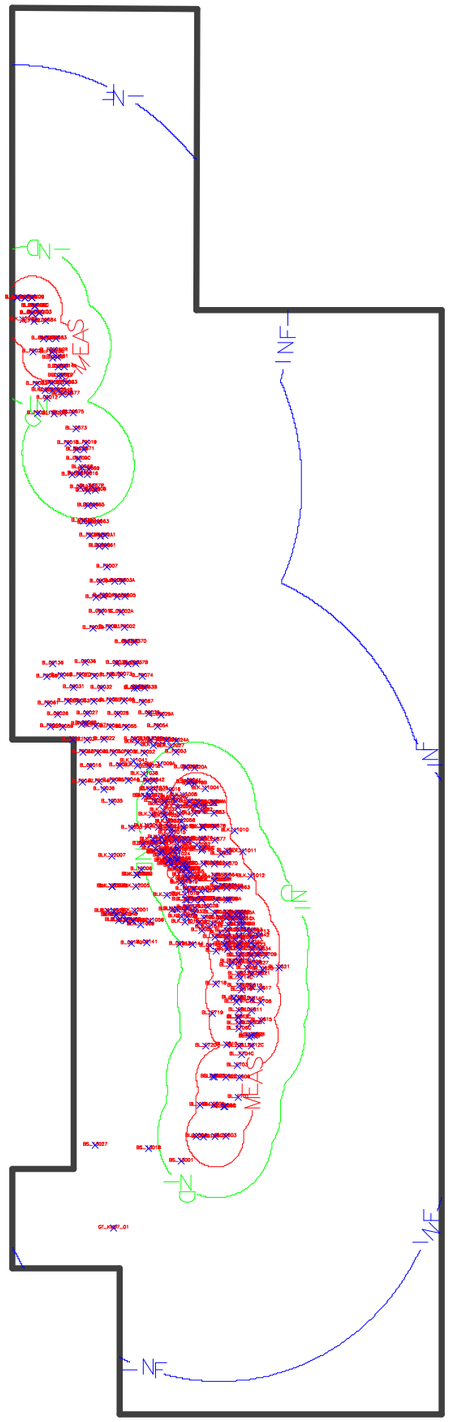
KG BLOCK

RESOURCE POLYGONS

SEAM BL2U

Fig.





N

LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 250 0 1000 2000

HDR | SALVA

Date :29-Jul-14	Scale :1:50000	File:

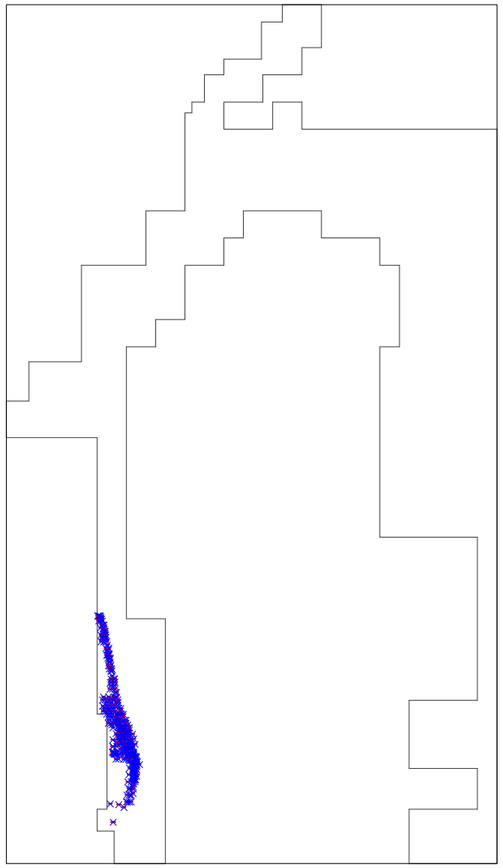
UNITED FIBRE SYSTEM LIMITED

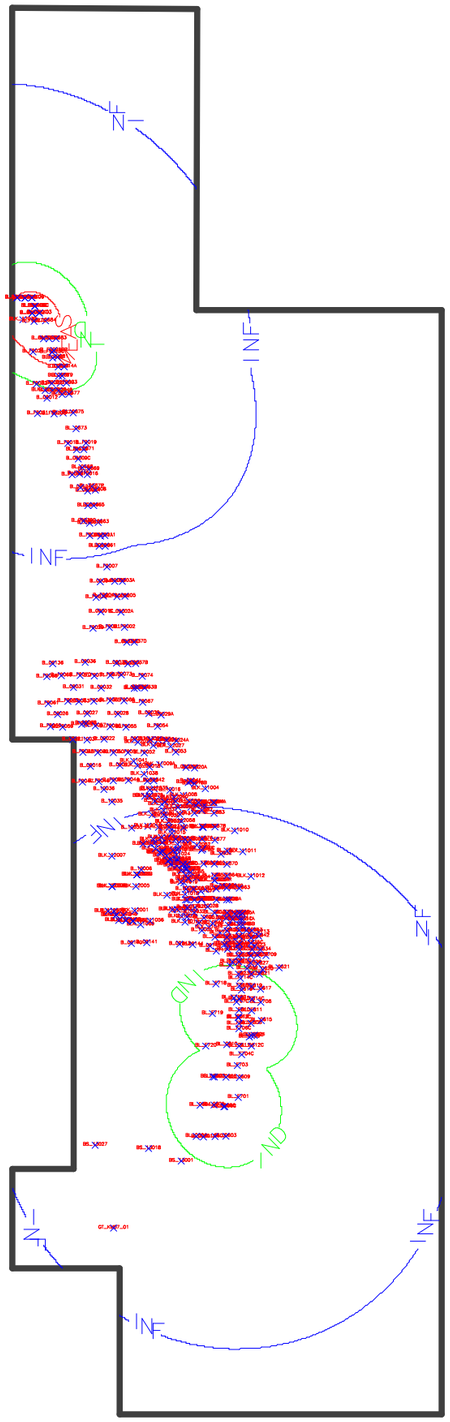
BS BLOCK

RESOURCE POLYGONS

SEAM B

Fig.





N

LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 250 0 1000 2000

HDR | SALVA

Date :29-Jul-14	Scale :1:50000	File:

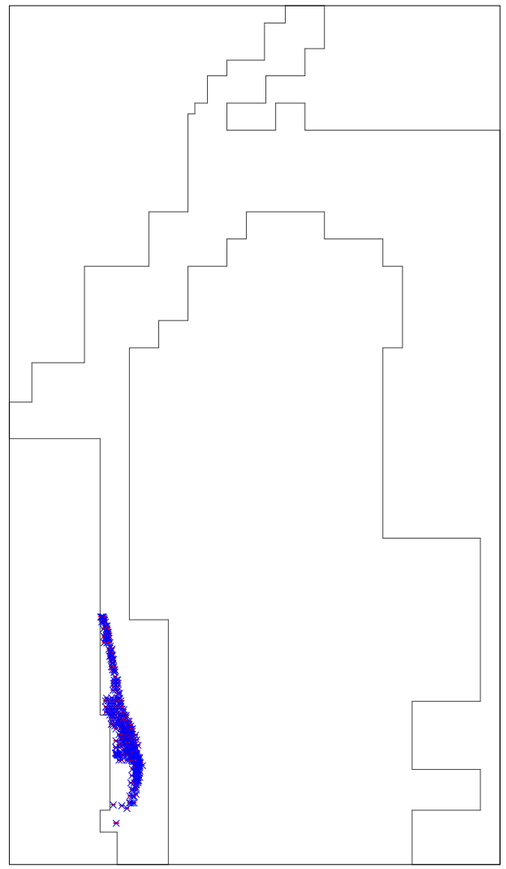
UNITED FIBRE SYSTEM LIMITED

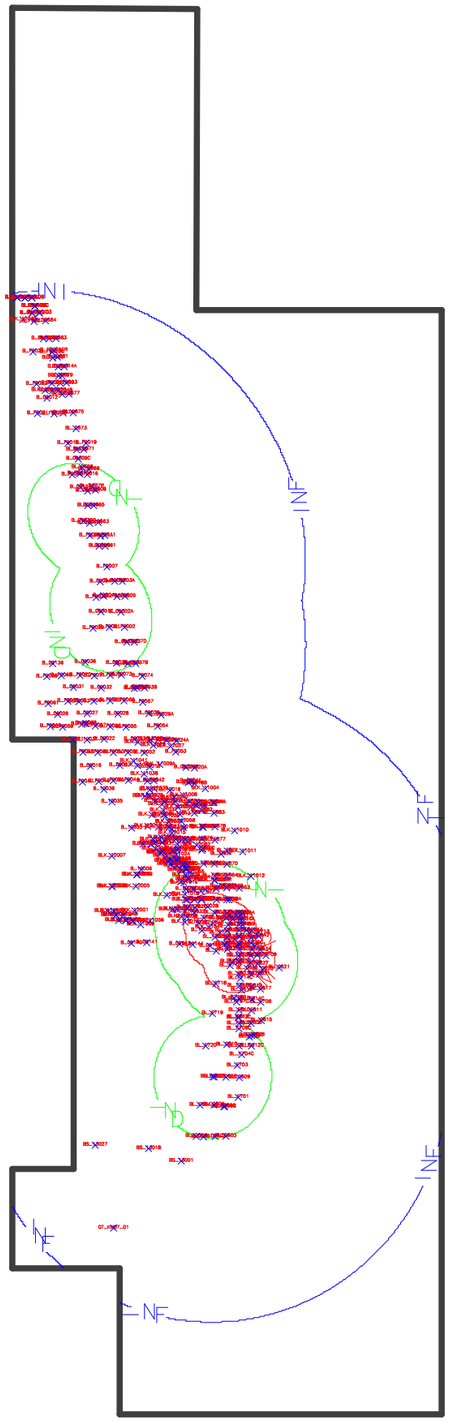
BS BLOCK

RESOURCE POLYGONS

SEAM BL2

Fig.





N

LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 250 0 1000 2000

HDR | SALVA

Date :29-Jul-14	Scale :1:50000	File:

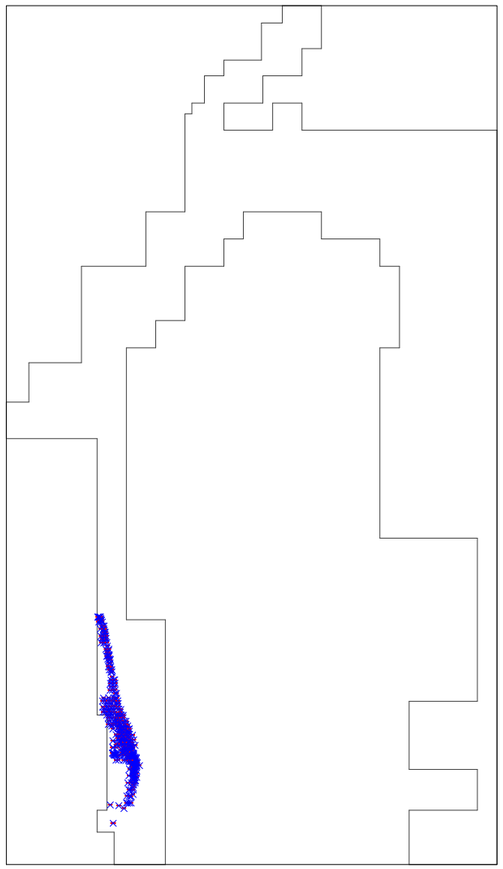
UNITED FIBRE SYSTEM LIMITED

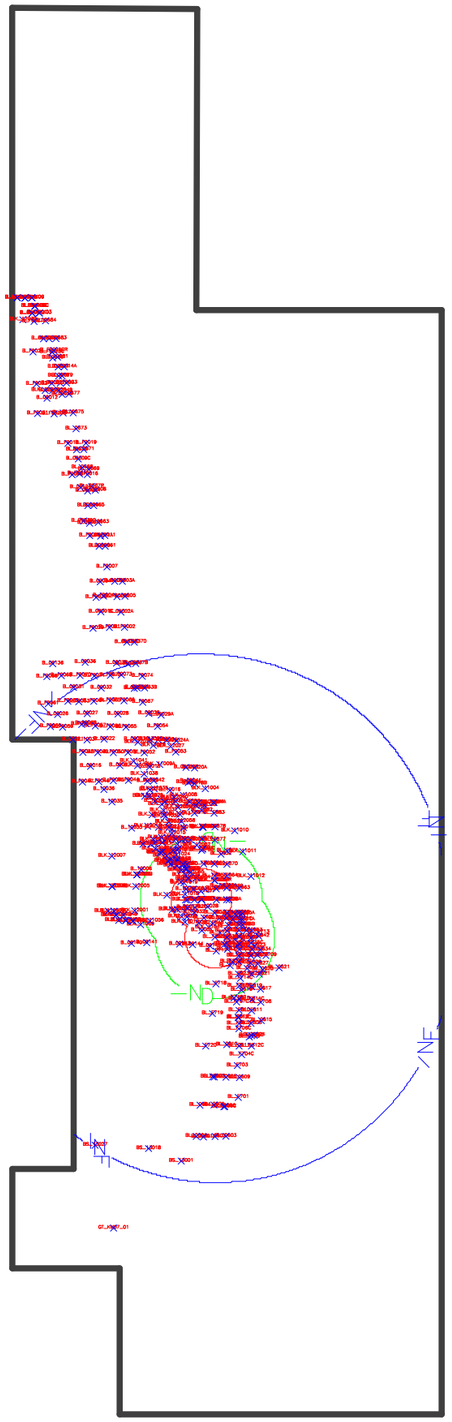
BS BLOCK

RESOURCE POLYGONS

SEAM A3U

Fig.





N

LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

500 250 0 1000 2000

HDR | SALVA

Date :29-Jul-14	Scale :1:50000	File:

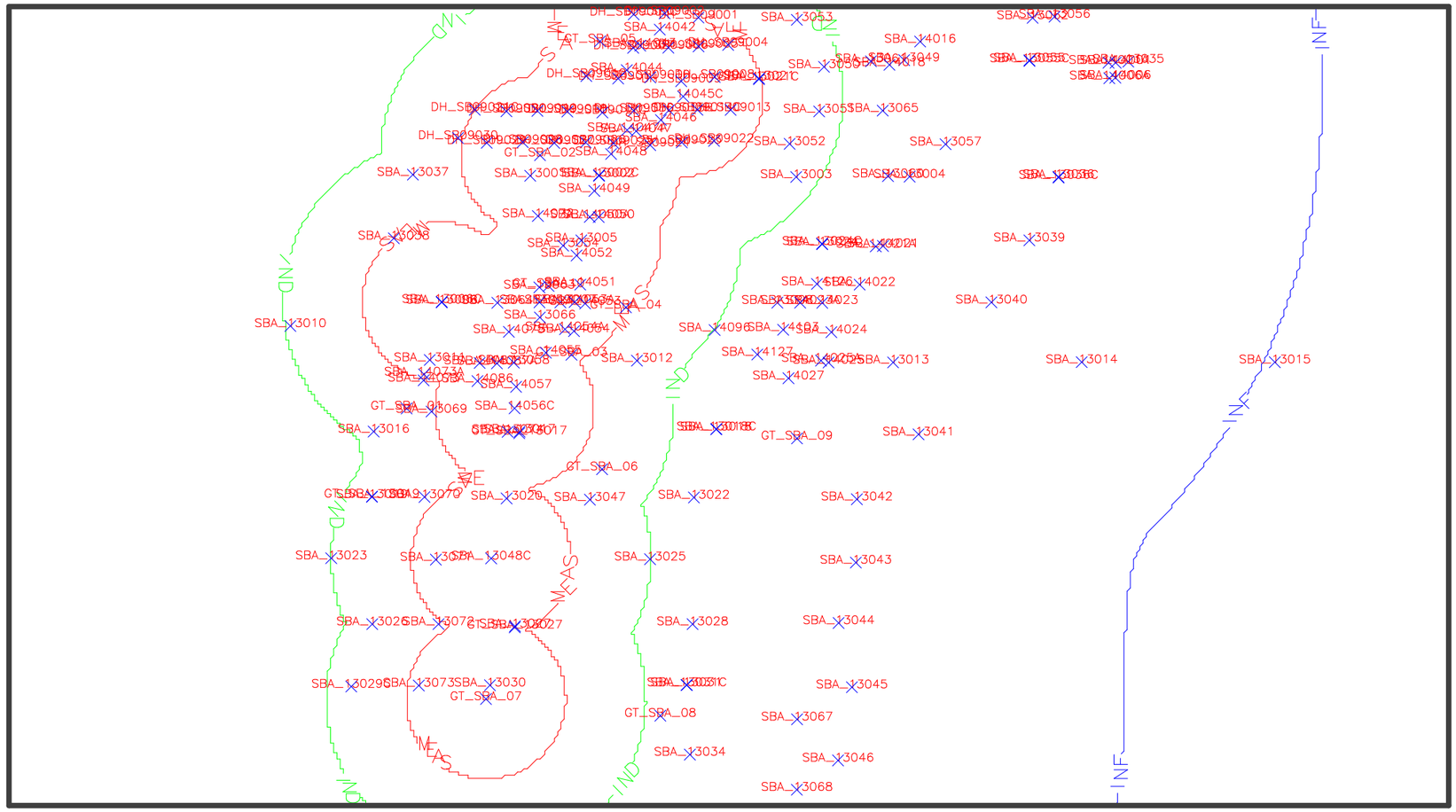
UNITED FIBRE SYSTEM LIMITED

BS BLOCK

RESOURCE POLYGONS

SEAM A2L

Fig.



LEGEND

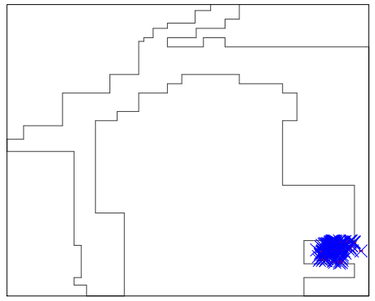
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



200 100 0 400 800

HDR | SALVA

Date :04-Aug-14	Scale :1:17000	File:

UNITED FIBRE SYSTEM LIMITED

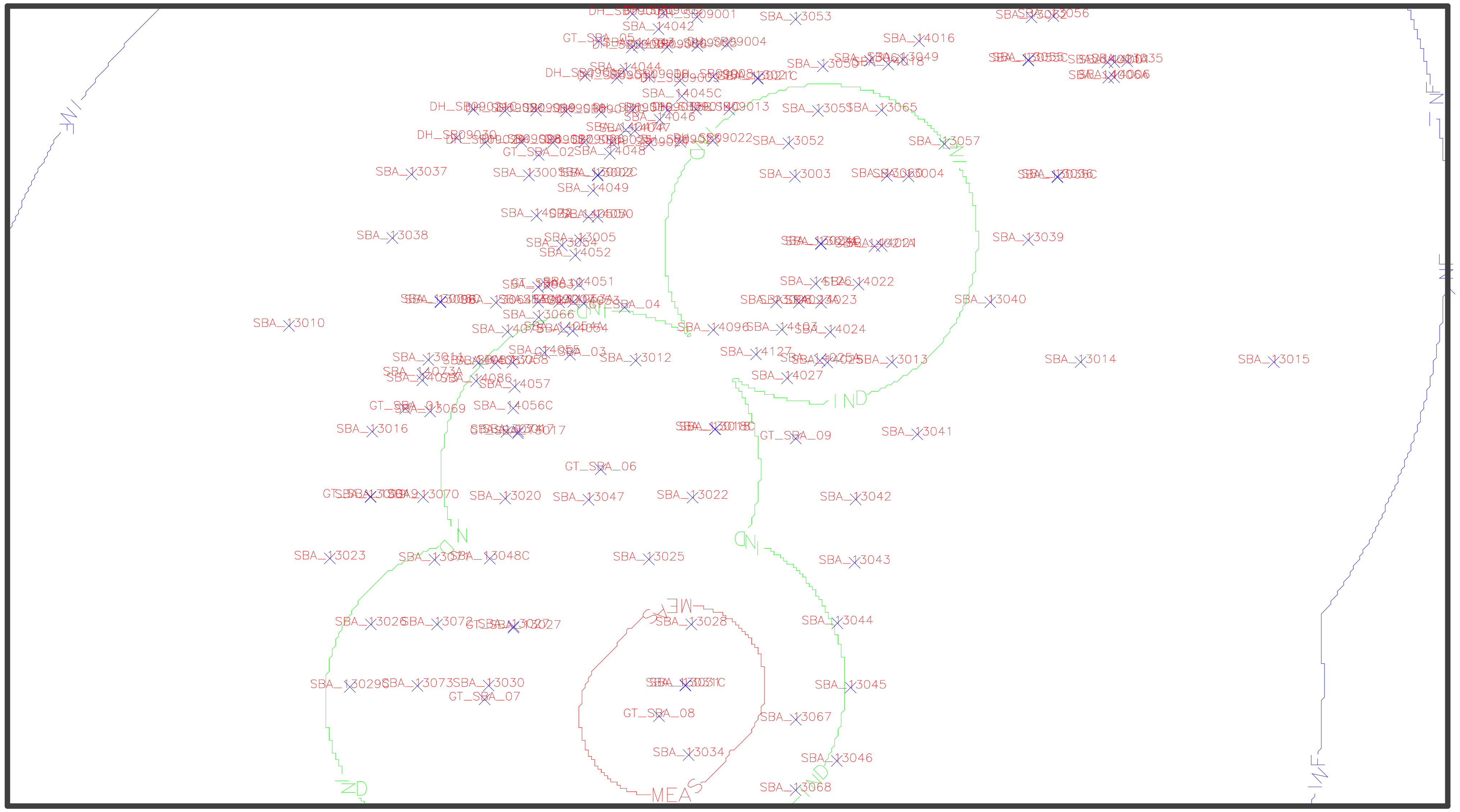
SN BLOCK

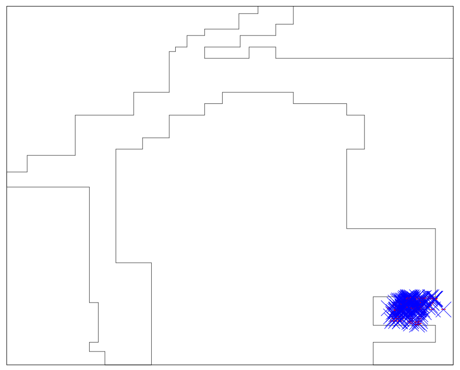
RESOURCE POLYGONS

SEAM E

Fig.

N





LEGEND

Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary

200 100 0 400 800

HDR | SALVA

Date :04-Aug-14 | Scale :1:17000 | File:

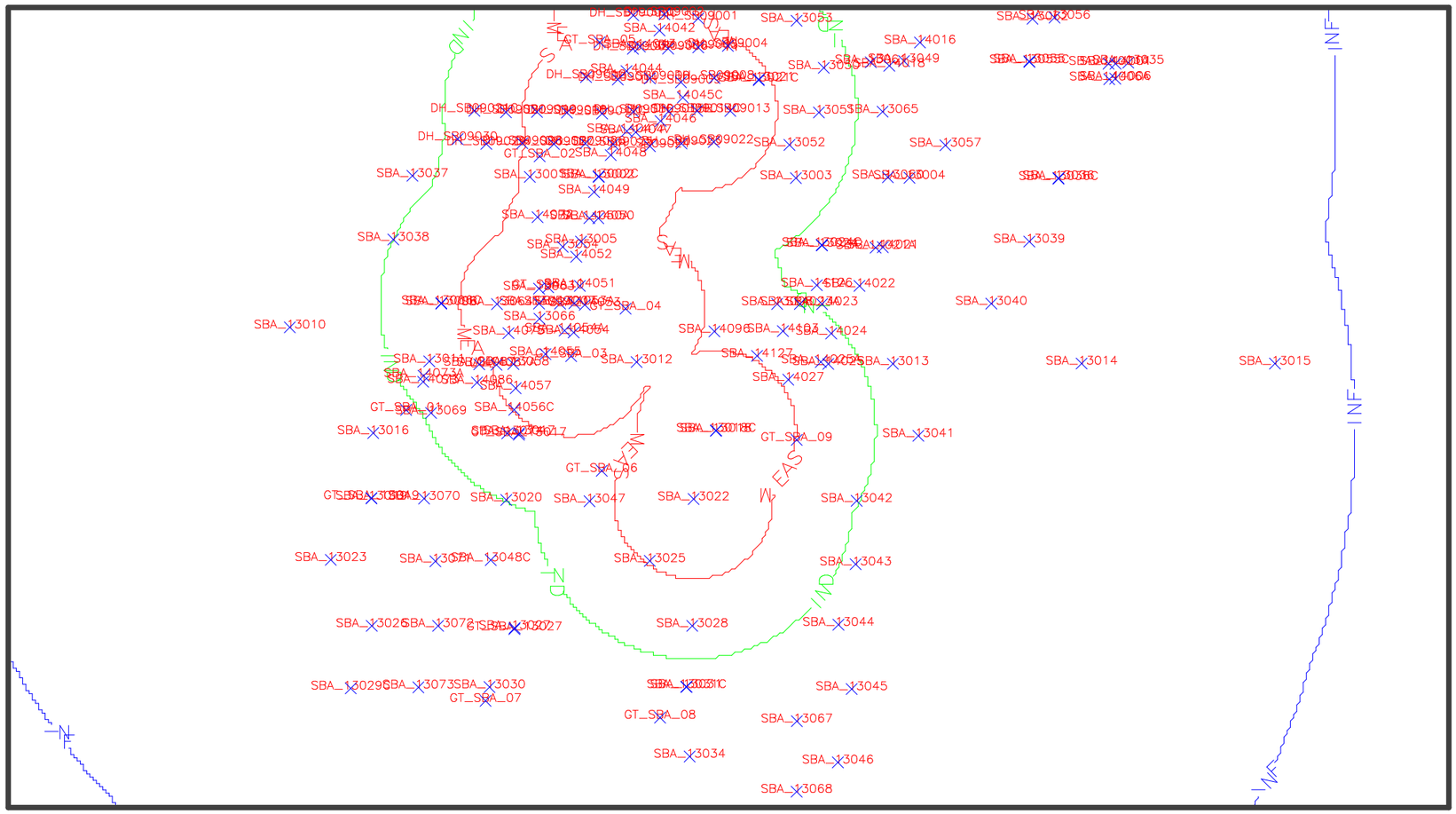
UNITED FIBRE SYSTEM LIMITED

SN BLOCK

RESOURCE POLYGONS

SEAM DL

Fig.



LEGEND

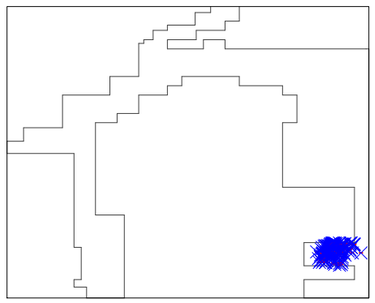
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



200 100 0 400 800

HDR | SALVA

Date :04-Aug-14	Scale :1:17000	File:

UNITED FIBRE SYSTEM LIMITED

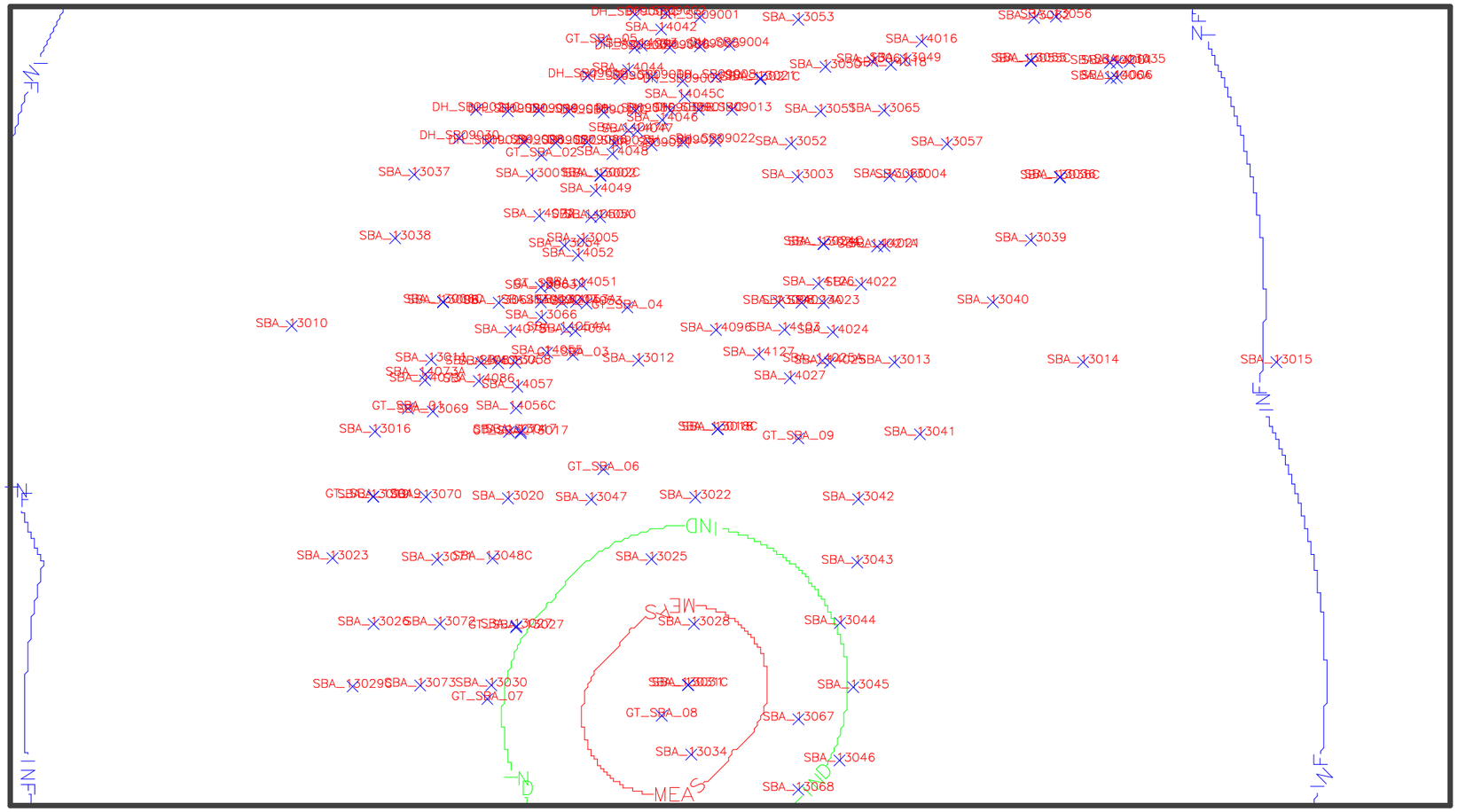
SN BLOCK

RESOURCE POLYGONS

SEAM D

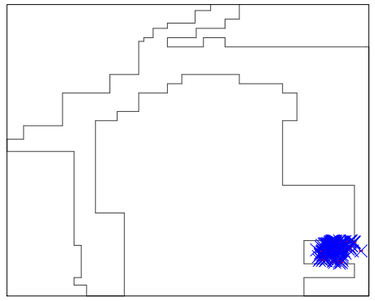
Fig.

N



LEGEND

- Drillholes
- Measured Resource
- Indicated Resource
- Inferred Resource
- CCoW Boundary



200 100 0 400 800

HDR | SALVA

Date :04-Aug-14	Scale :1:17000	File:

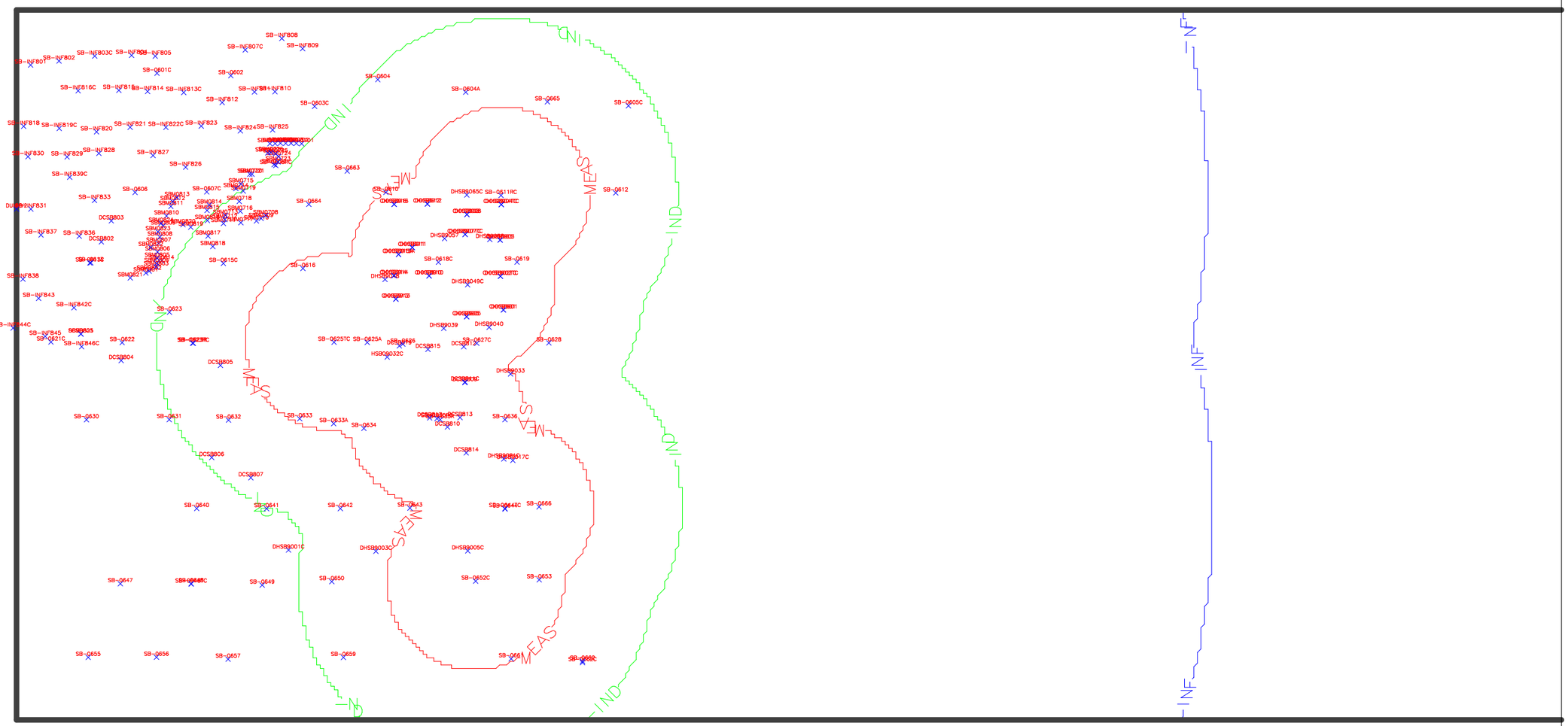
UNITED FIBRE SYSTEM LIMITED

SN BLOCK

RESOURCE POLYGONS

SEAM CU

Fig.



LEGEND

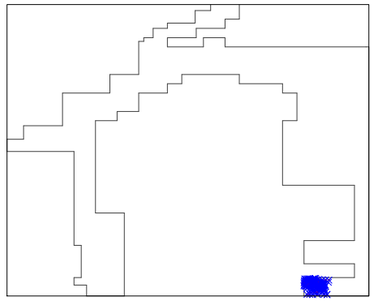
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



100 50 0 200 400

HDR | SALVA

Date :28-Jul-14	Scale :1:13000	File:

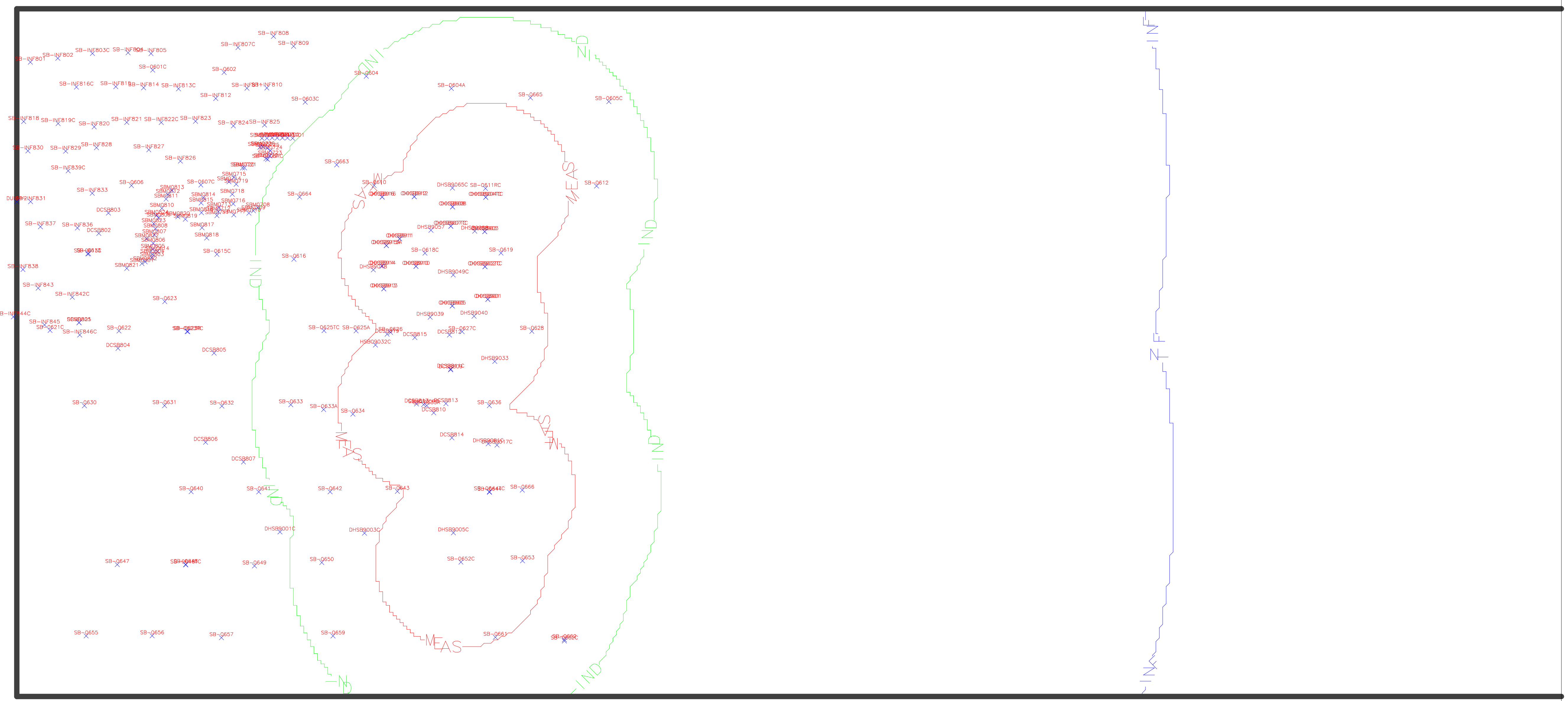
UNITED FIBRE SYSTEM LIMITED

SS BLOCK

RESOURCE POLYGONS

SEAM DU2

Fig.



LEGEND

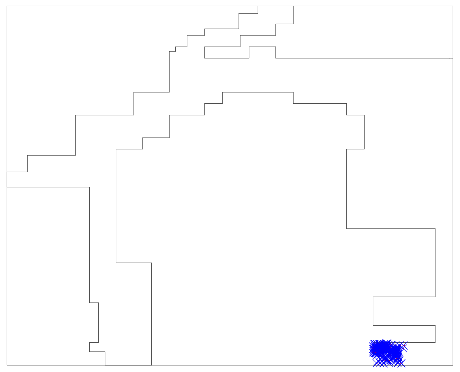
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



100 50 0 200 400

HDR | SALVA

Date :28-Jul-14 | Scale :1:13000 | File:

UNITED FIBRE SYSTEM LIMITED

SS BLOCK

RESOURCE POLYGONS

SEAM DL1

Fig.

N

LEGEND

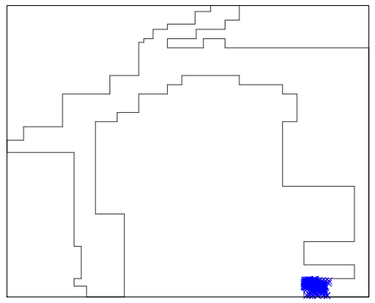
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



100 50 0 200 400

HDR | SALVA

Date :28-Jul-14	Scale :1:13000	File:

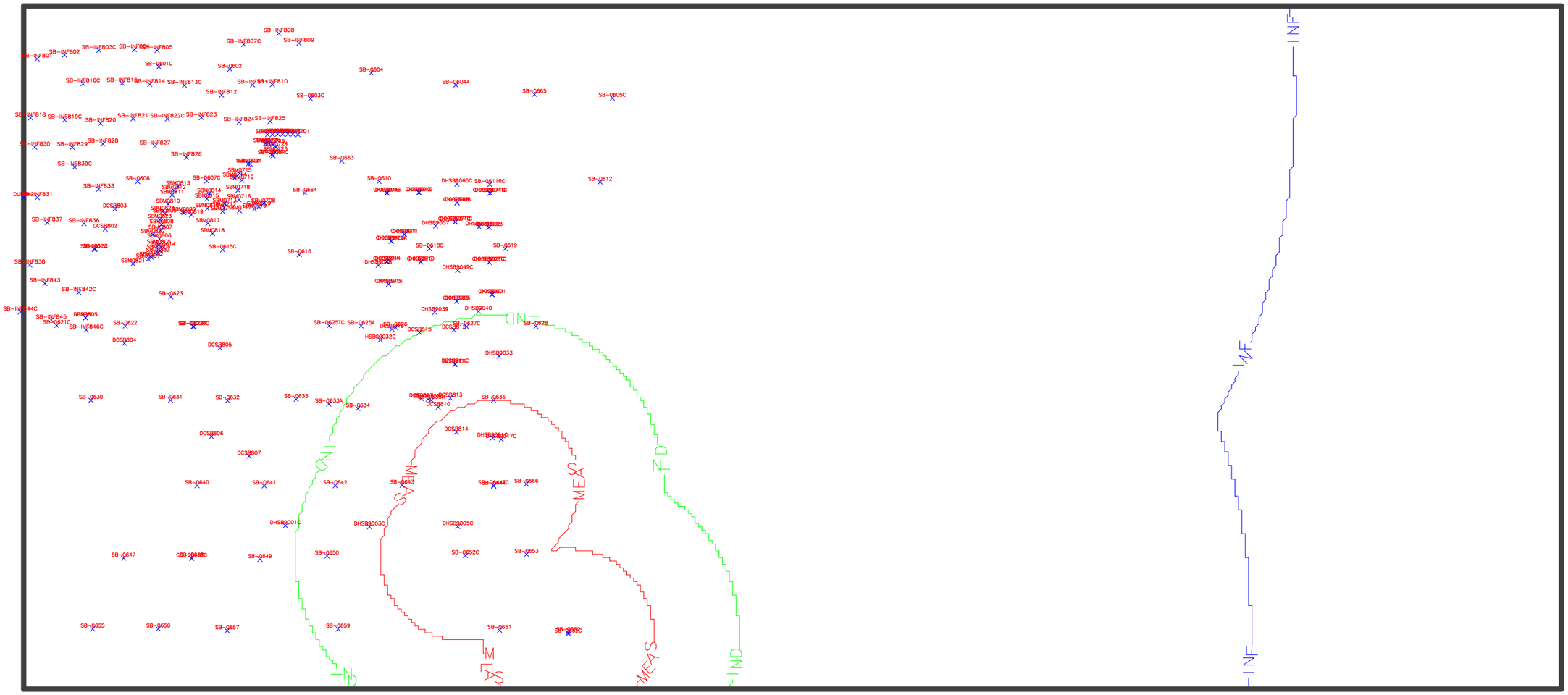
UNITED FIBRE SYSTEM LIMITED

SS BLOCK

RESOURCE POLYGONS

SEAM BL2

Fig.



LEGEND

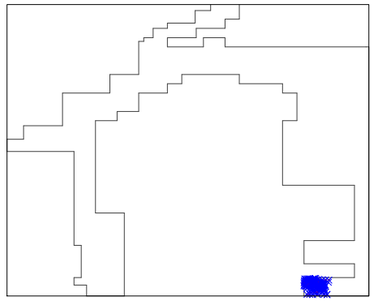
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



100 50 0 200 400

HDR | SALVA

Date :28-Jul-14	Scale :1:13000	File:

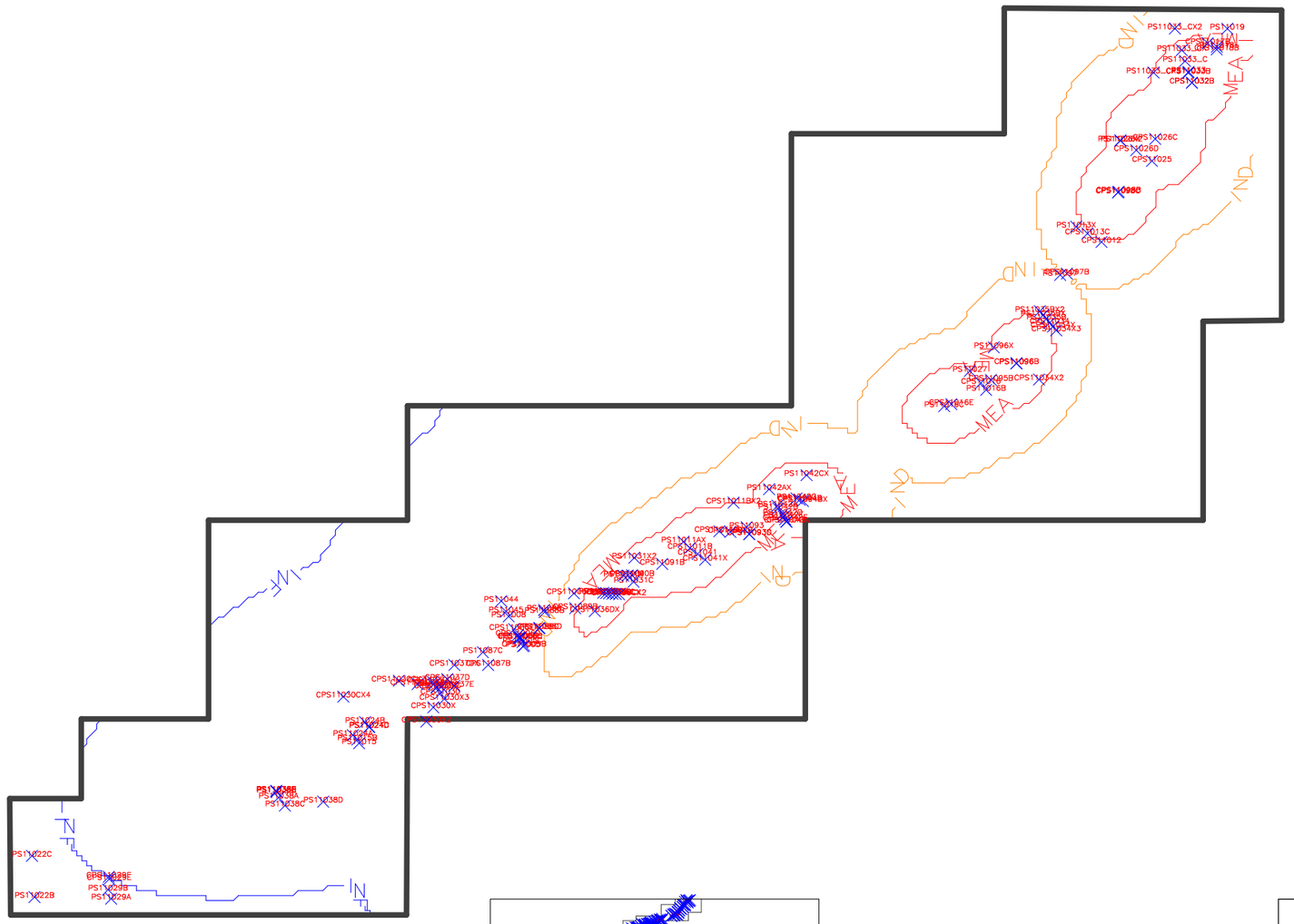
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SS BLOCK

RESOURCE POLYGONS

SEAM BL1

Fig.



LEGEND

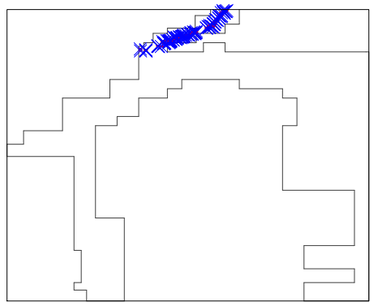
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



250 0 500 1000

HDR | SALVA

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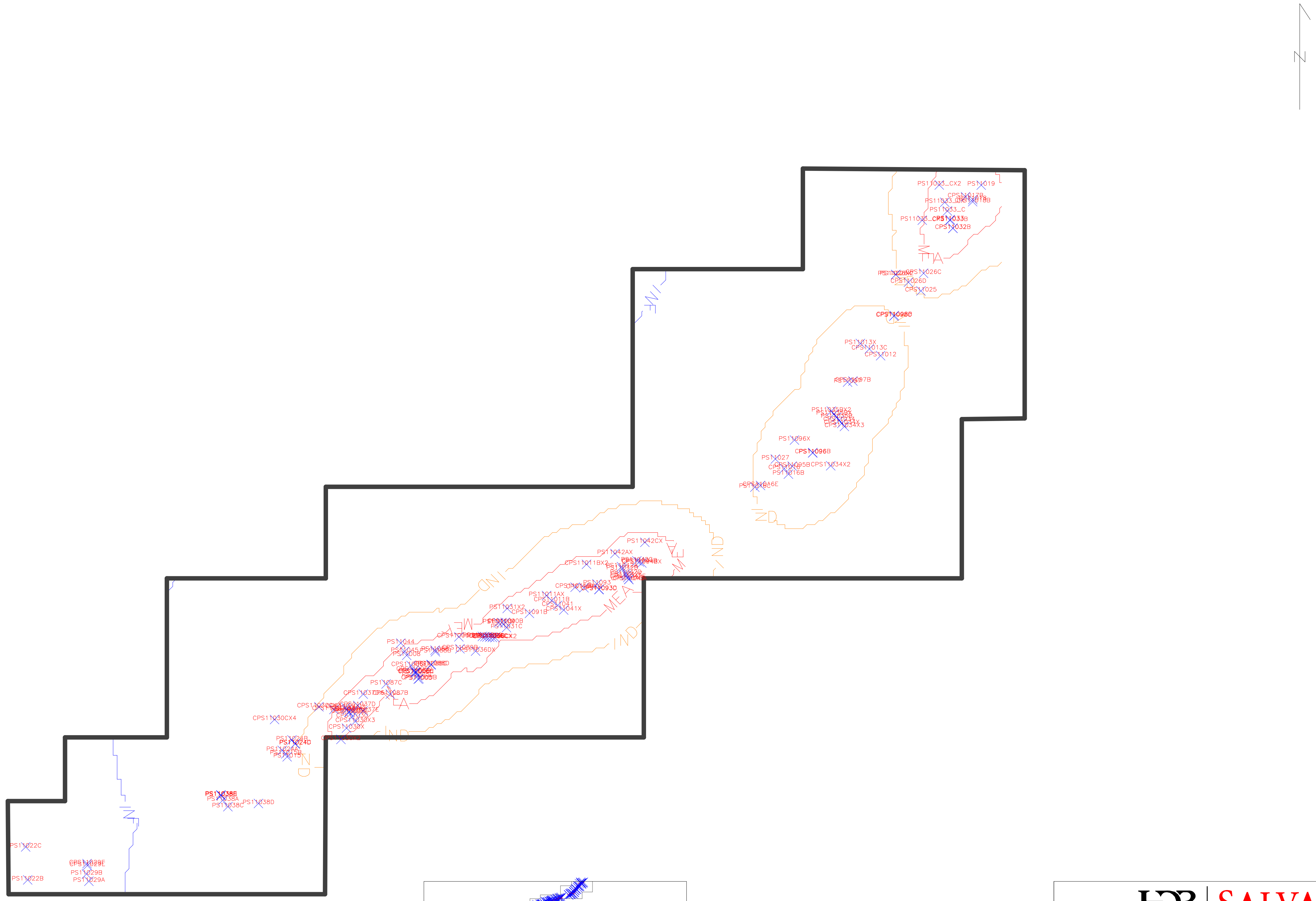
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PP BLOCK

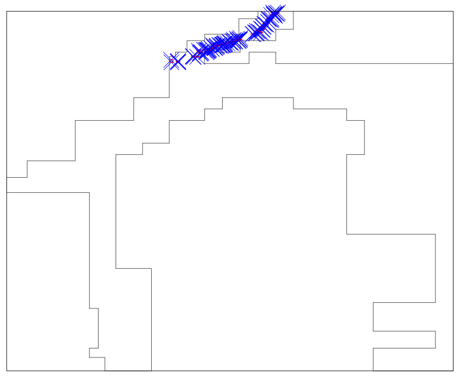
RESOURCE POLYGONS

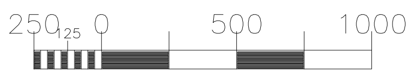
SEAM SL1

Fig.



LEGEND
Drillholes
Measured Resource
Indicated Resource
Inferred Resource
CCoW Boundary





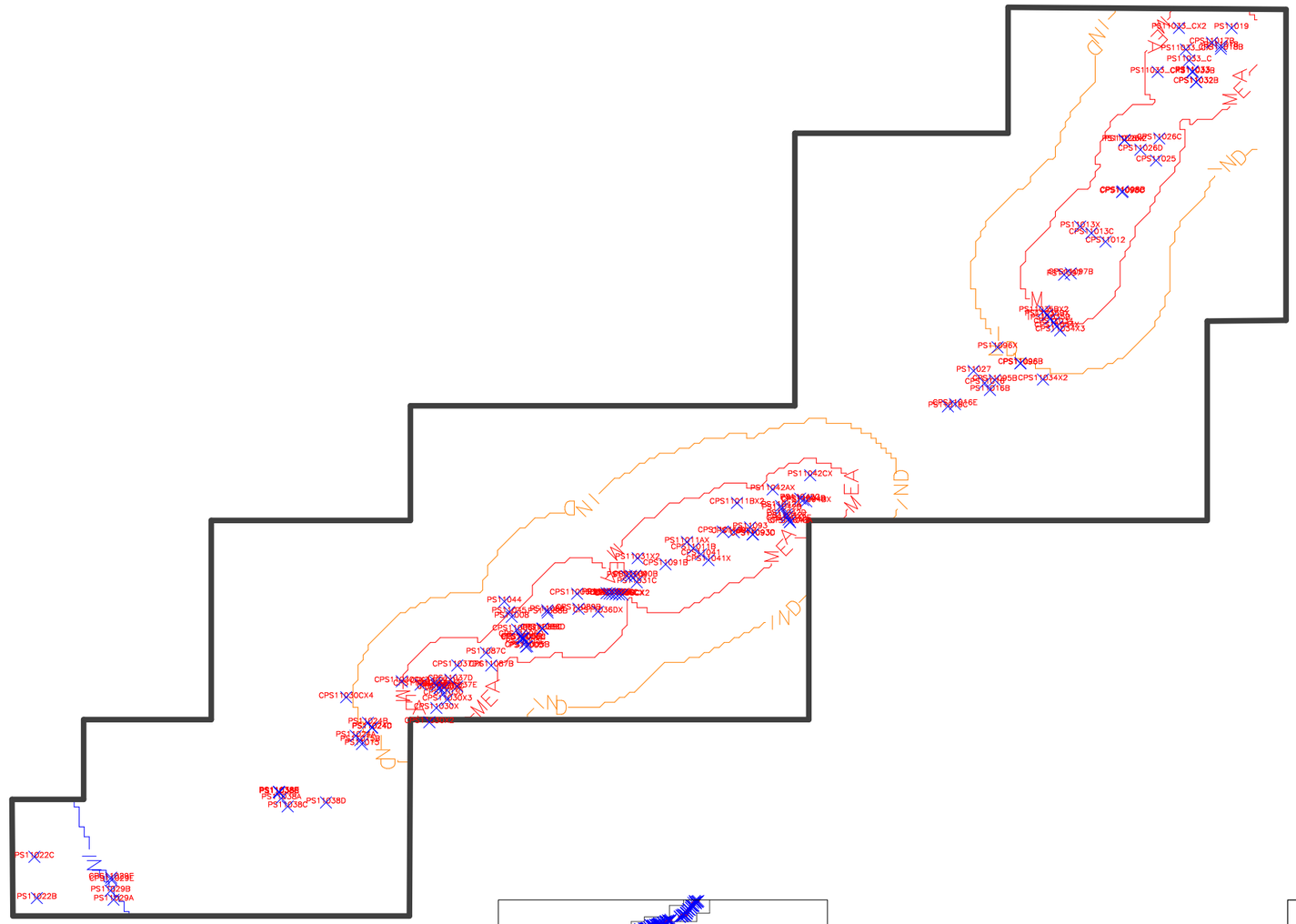
HDR | SALVA

Date :28-Jul-14 | Scale :1:28000 | File:

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PP BLOCK

RESOURCE POLYGONS
SEAM SL2

Fig.



LEGEND

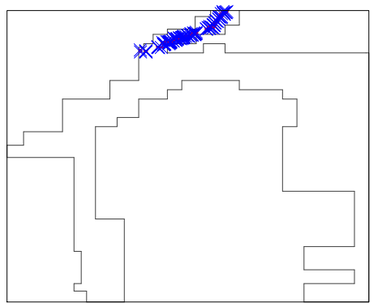
Drillholes

Measured Resource

Indicated Resource

Inferred Resource

CCoW Boundary



250 25 0 500 1000

HDR | SALVA

Date :28-Jul-14	Scale :1:28000	File:

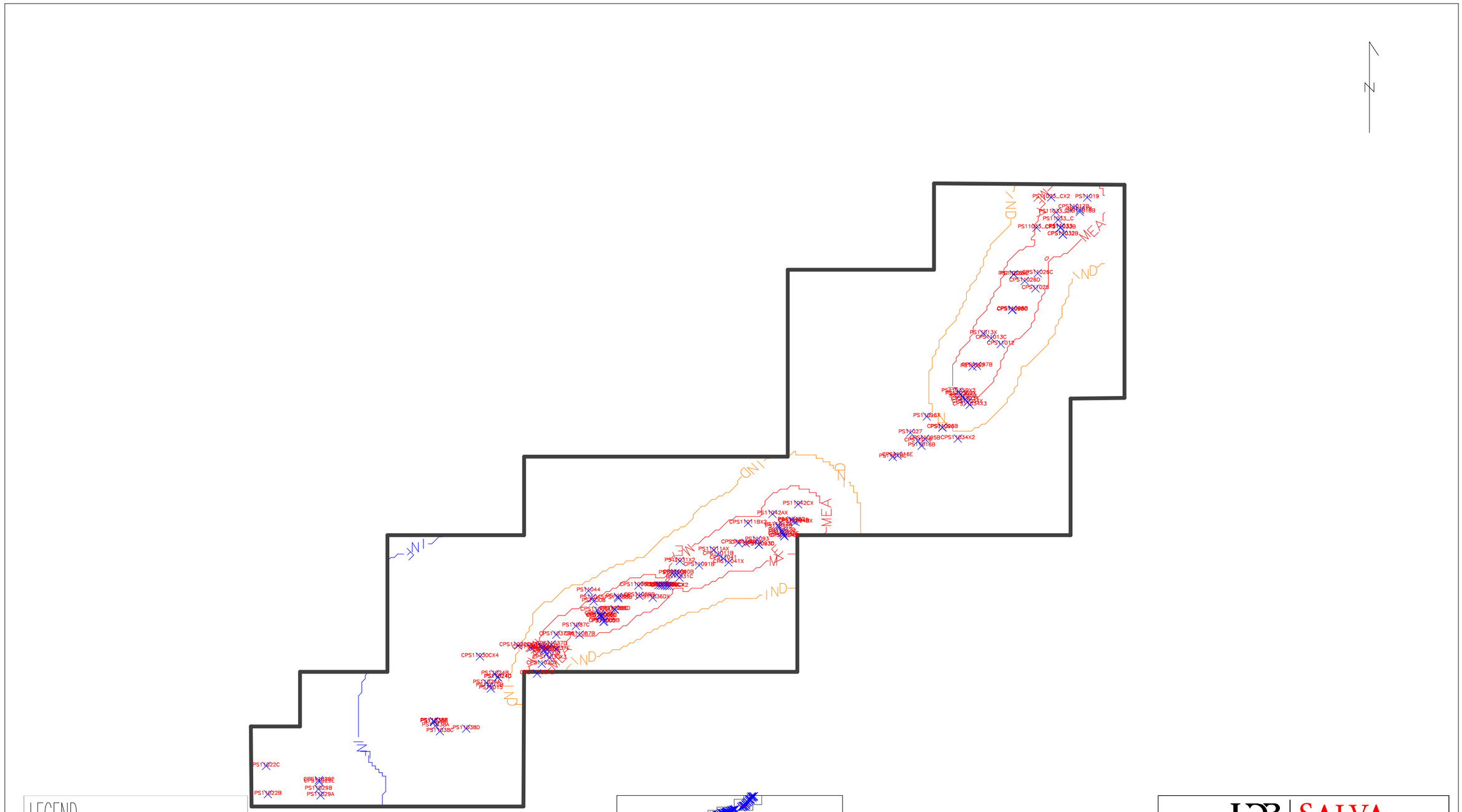
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PP BLOCK

RESOURCE POLYGONS

SEAM SL3U

Fig.



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Date :28-Jul-14	Scale :1:28000	File:

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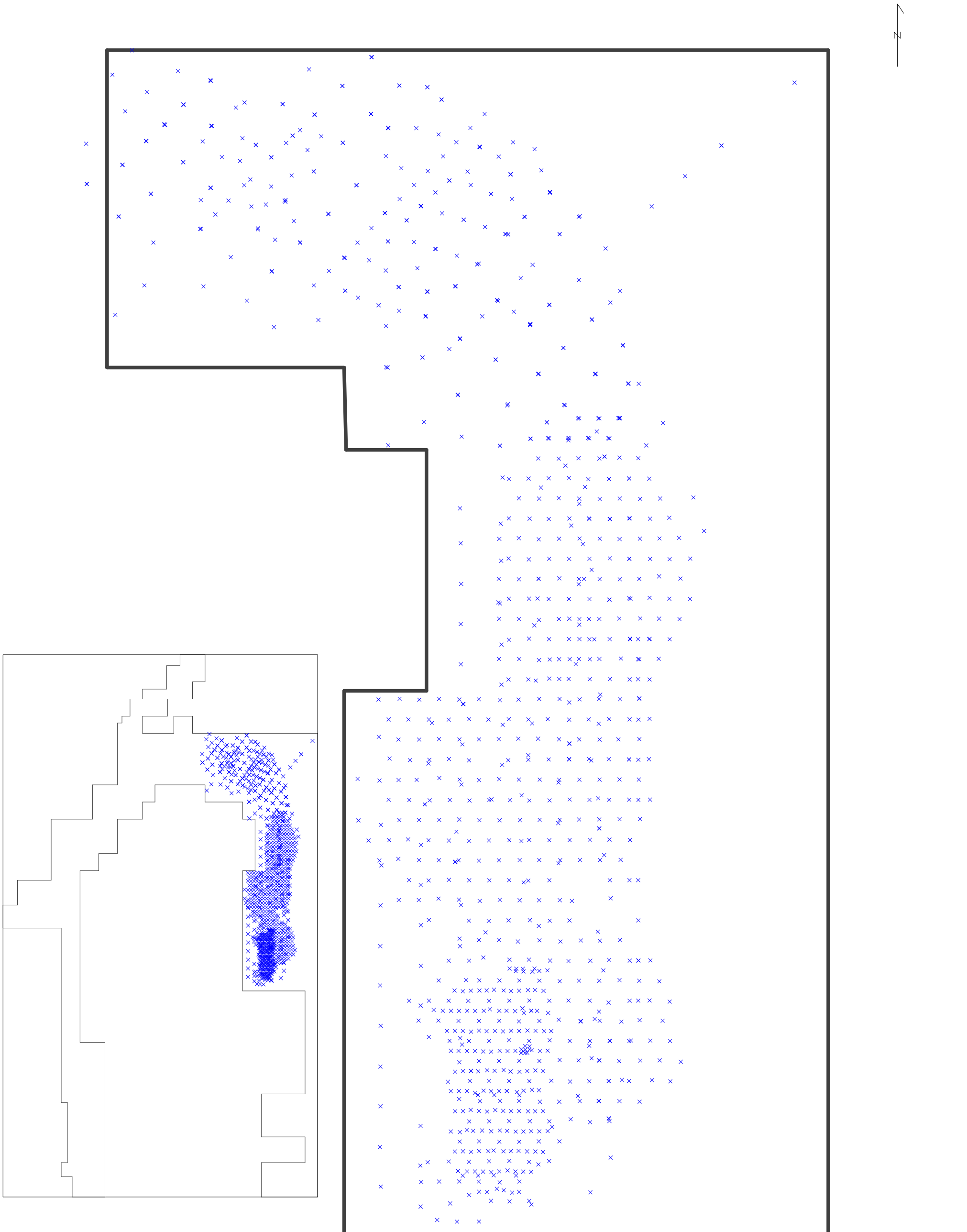
PP BLOCK

RESOURCE POLYGONS

SEAM SL3

Fig.

Appendix F: Drill Hole Location Plans



LEGEND

Drillholes

CCoW Boundary

250 0 500 1000

125

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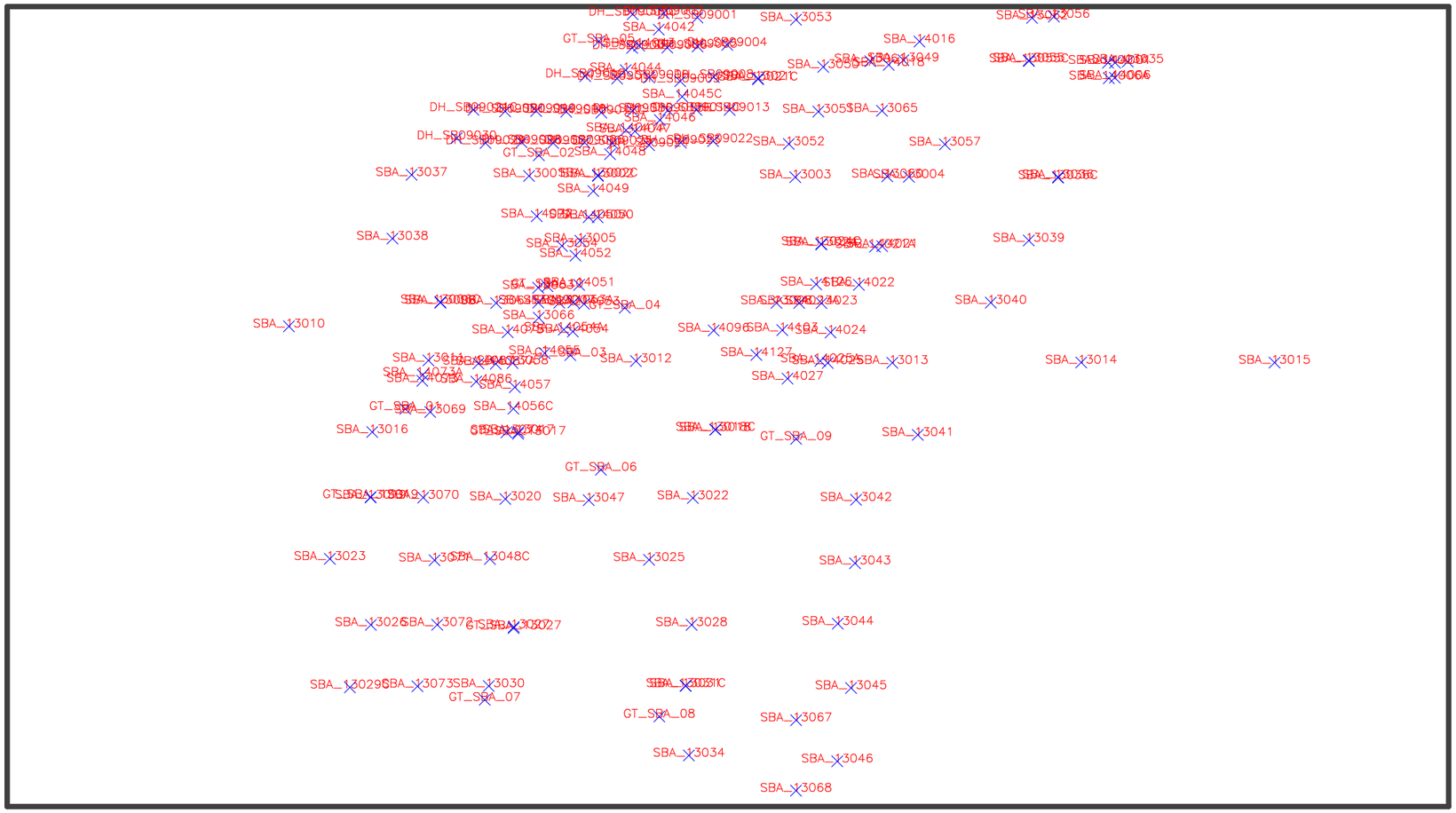
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P T BORNEO INDOBARA

KG BLOCK

BOREHOLE LOCATION PLAN

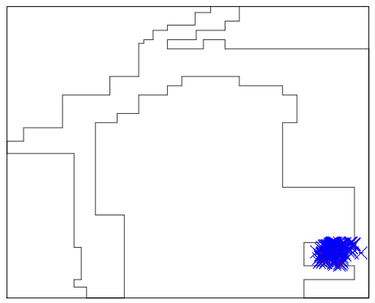
Fig.



LEGEND

Drillholes X

CCoW Boundary



200 100 0 400 800

HDR | SALVA

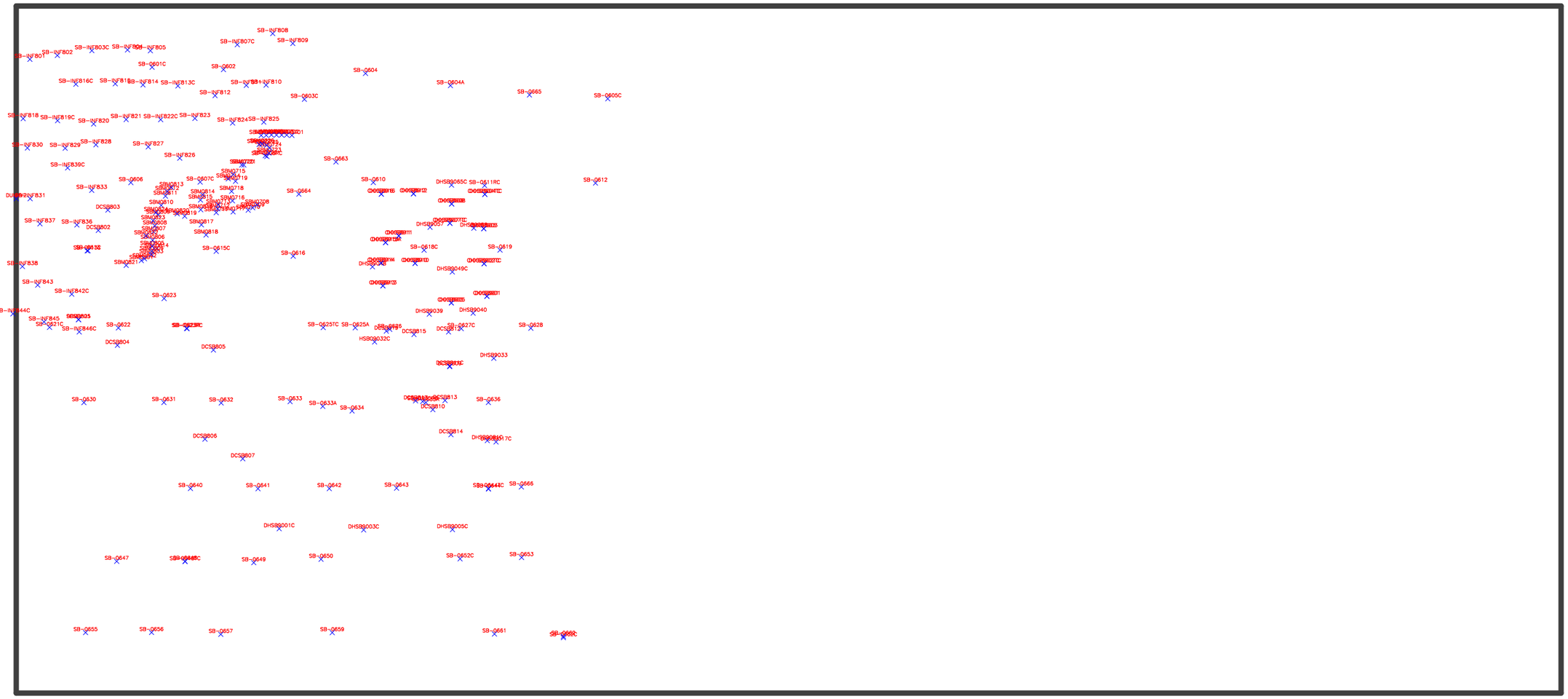
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SN BLOCK

BOREHOLE LOCATION PLAN

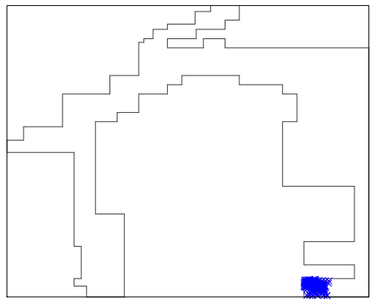
Fig.



LEGEND

Drillholes X

CCoW Boundary



100 50 0 200 400

HDR | SALVA

Date :30-Jul-14	Scale :1:13000	File:

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SS BLOCK

BOREHOLE LOCATION PLAN

Fig.

N

LEGEND

Drillholes

CCoW Boundary

250 125 0 500 1000

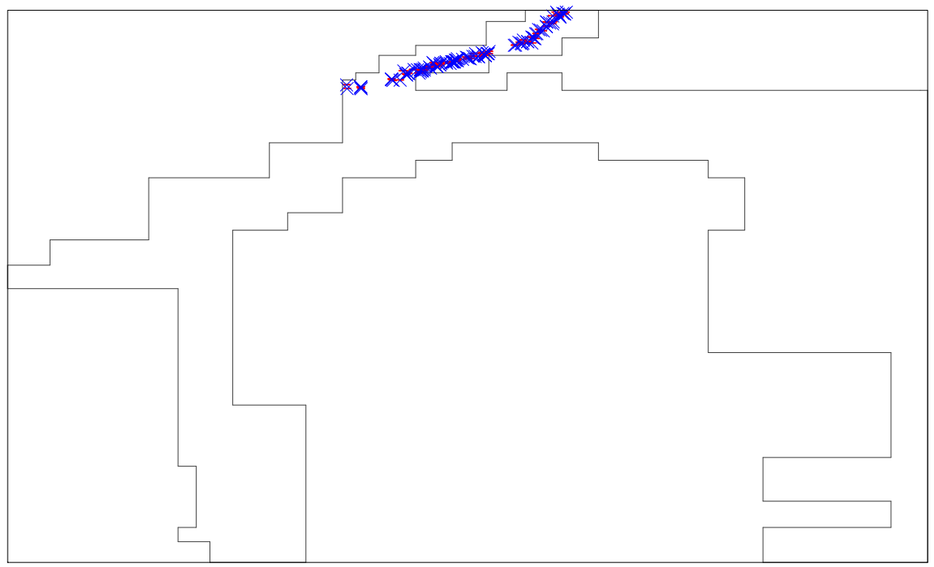
HDR | SALVA		
Date :30-Jul-14	Scale :1:30000	File:

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BS BLOCK

BOREHOLE LOCATION PLAN

Fig.



LEGEND

Drillholes

CCoW Boundary

1000 200 400

50

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Date :30-Jul-14	Scale :1:22000	File:

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PP BLOCK

BOREHOLE LOCATION PLAN

Fig.



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