UHG Coal Project

South Gobi, Mongolia

Independent Technical Report

Submitted to:
Mongolian Mining Corporation (MMC)

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Norwest Corporation
Suite 2700, 411 – 1st Street, S.E.
Calgary, Alberta
T2G 4Y5
Tel: (403) 237-7763
Fax: (403) 263-4086
Email calgary@norwestcorp.com

www.norwestcorp.com

Author:
Alister D. Horn

NORWEST CORPORATION

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September 28, 2010

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To: The Directors
Mongolian Mining Corporation
Central Tower (15th Floor)
2 Sukhbaatar Square, SBD-8
Ulaanbaatar 210620a
Mongolia

Citigroup Global Markets Asia Limited
50th Floor,
Citibank Plaza, 3 Garden Road,
Central, Hong Kong

J.P. Morgan Securities (Asia Pacific) Limited
28/F, Chater House
8 Connaught Road
Central, Hong Kong

Subject: Cover Letter to UHG Independent Tech nical Report Stating Resources and Reserves

Dear Sirs:

This report summarizes the Norwest Corporation's (Norwest) findings of an updated feasibility level study to determine coal resources and reserves at the Ukhaa Khudag (UHG) Mine, located within the Tavan Tolgoi coal formation in the South Gobi province of Mongolia. Norwest understands that this report will used as the basis of the efforts of Mongolian Mining Corporation (MMC) to place an Initial Public Offering (IPO) with the Honk Kong Exchange (HKEx).

The Independent Technical Report (ITR) *"UHG Coal Project, South Gobi, Mongolia, Independent Technical Report",* currently dated September 28, 2010, is a summary of updated feasibility level study performed on the project. In conducting this work, Norwest has relied upon information gathered through various exploration programs, some of which Norwest was directly involved with. Norwest has also relied upon its prior experience and knowledge of the Project through its work with MMC on compiling a bankable-feasibility level study report in 2009. In addition, Norwest has relied, in part, on work performed by other parties contracted to MMC to work on the UHG Project. In addition, Norwest Competent Persons have both made personal, current, inspections of the project site and have gathered relevant data. Finally, MMC has provided data used in the estimate of resources and reserves. Norwest has not been hindered in any way on gathering the data and information required for its satisfactory completion of this ITR.

Resource and reserve estimates included in this ITR were prepared in accordance with standards set forth by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Yours sincerely,

NORWEST CORPORATION

Alister Horn
Project Manager

Enclosures: None

136 EAST SOUTH TEMPLE, 12TH FLOOR • SALT LAKE CITY, UTAH 84111 USA • TEL 801.539.0044 • USA 800.266.6351 • FAX 801.539.0055 • WWW.NORWESTCORP.COM
Salt Lake City / Calgary / Denver / Golden / Vancouver / Grand Junction / Charleston WV / Pittsburgh

TABLE OF CONTENTS

LIST OF TABLES

LIST OF PHOTOS

LIST OF FIGURES

1. INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Summary of UHG Project

At the outset of the Ukhaa Khudag (UHG) project, ER LLC (ER) made a strategic decision to establish a project that would both meet 'world class' technical standards and establish new standards of performance for Mongolian coal mines. Energy Resources is a wholly-owned subsidiary of the Mongolian Mining Corporation (MMC).

The coal mine is currently in operation using the contract mining company, Leighton Asia Ltd (Leighton), which is one of the largest mining contractors in the world and has a reputation for operating 'world class' mines in terms of safety, productivity and other technical parameters. Leighton was awarded a "relationship style" mining contract with the following key provisions:

- Contract termination after four years at ER's discretion
- Contract to re-set with significant capital expenditure from Leighton
- Equipment buyback mechanism.

The conventional truck/shovel mining method based on large capacity proven equipment will be used. State of art mine planning will also be used and the mine will be operated to the appropriate environmental standards of the World Bank and other international institutions.

As with the mine, the coal handling and preparation plant (CHPP) as designed by Sedgman, will meet 'world class' standards and is expected to be the one of the most advanced in Asia as well as one of the largest coking coal processing plants in the world, with the highest process recovery efficiencies in the industry.

Mining of run-of-mine (ROM) coking coal commenced in April 2009 and a total of 1.8 million tonnes (Mt) of coal was mined in 2009. This is equivalent to an annualized mining rate of 2.4Mt. A total of 3.8 million tonnes per annum (Mtpa) of ROM coking coal is scheduled to be mined in 2010.

The planned project capacity ramp-up, shown in Table 1.1, will result in a 15Mtpa ROM coal mining rate by the start of 2013.

Table 1.1 Projected 'Ramp-Up' Schedules

	2010	2011	2012	2013	2014
ROM Coal Production (Mtpa)	3.8	7.0	10.7	14.7	15.2
Washplant Schedule		5Mtpa (Jan 1), 10Mtpa (Sept 1)	Capacity (10Mtpa)	Rail Integration & 15Mtpa, (Jan 1)	Full Capacity (15Mtpa)
Sales Product	Unwashed ROM Coking	Washed Product	Washed Product	Washed Product	Washed Product
Transport	Road	Road	Road	Rail	Rail

Coal is currently transported to the Chinese border by truck on an unpaved road. To enhance efficiency and capacity, a paved road is currently under construction which is expected to be substantially completed by the start of 2011. This paved road will support UHG's product volumes up to the target plateau capacity of 15Mtpa ROM production. Further, ER is planning to begin the construction of a 236 kilometer (km) railway link from UHG to Gashuun Sukhait in 2011, which will be operational by the beginning of 2013. At that point, ER's coal products will be transported via rail to Gashuun Sukhait, then transferred to the Chinese rail network and moved by Chinese locomotives to their ultimate destinations.

To ensure a reliable source of electric power, electric power will be generated via an on-site power plant with capacity of 3x6MW units. Construction is underway, with the third and final coal-fired unit to be completed by mid-2011. Additional power will be from the Mandalgovi – Tavan Tolgoi – Oyu Tolgoi transmission line, construction of which will begin shortly and is scheduled to be completed in May 2012.

Site infrastructure principally consists of a dedicated airstrip and terminal, and mine-site accommodations for project personnel. A permanent mine camp building has been constructed to accommodate mine project personnel. A 'ger' camp originally built to accommodate the mine project personnel now accommodates road transport and other construction personnel.

1.2 Summary of Geology, Resources and Reserves

1.2.1 Geologic Setting

The UHG coalfield is one of six separate subfields of the greater Tavan Tolgoi deposit, which include the Tsankhi, UHG, Southwest, Borteeg, Eastern and Bortolgoi coalfields.

Seventeen named coal seams (Seams 0 through 16) have been identified in the Tavan Tolgoi coalfield, of which Seams 0 through 12 have been identified at UHG. These seam groups contain numerous splits, or sub-seams, which amount to 35 distinct and individually modeled coal horizons within the property.

Numerous exploration programs have been conducted, primarily during the 1970's and 1980's by Russian-Mongolian scientific teams and lately by ER. Exploration techniques employed by the early investigations employed core hole drilling and extensive trenching to delineate coal seam crop lines and fault boundaries. Recent investigations conducted by ER have utilized rotary (open hole) and both slim gauge and large diameter core drilling to further delineate and characterize the UHG resource.

The UHG coal seams have been extensively sampled from the slim and large diameter drillhole cores during previous Russian and more recent drilling campaigns. The 124-hole ER program in 2008, conducted by Norwest, provided thorough coal quality analysis of coal cores including five bulk sample sites using large diameter cores (6"/150mm) to gather information for detailed studies of coal washability and metallurgical/thermal properties for detailed wash plant design. ER has also conducted more recent infill in-pit sampling and 50m by 50m drilling within the near-term development area.

A detailed geological model for the license area was prepared by Norwest which forms the basis for current resource estimates. The model has been created using state-of-the-art computer software and modeling techniques to most accurately represent the coal resource at UHG.

1.2.2 Coal Resources

The UHG in-place surface-mineable coal resources as of May 31, 2010, have been estimated according to JORC[1] standards by Norwest as indicated in Table 1.2. It is noted that coal mined to date includes coal that was originally identified as weathered, but has since been determined to be saleable.

Table 1.2 Total in Place Resources – 300m Depth Limit, Minimum Apparent Seam Thickness of 0.6m

Category	Resource Volume (m^3) '000	Thickness (m)	In Place Tonnes (Mt*)	Density (ad) (g/cm^3)
Measured	135,430	5.36	206.0	1.52
Indicated	135,718	5.51	205.3	1.51
Inferred	7,692	7.36	11.7	1.52
Total	**278,840**	**5.49**	**423.0**	**1.52**

* *Mt = Million metric tonnes (air dried – ad).*

Table 1.3 shows the ratio of coking versus thermal resource currently defined for UHG. The in-place coal quality results obtained during the 2008 Norwest campaign showed strong indications that additional seams would have promising metallurgical properties given some degree of beneficiation.

[1] Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia

Table 1.3 UHG in-place Coking versus Thermal Resource (May 31, 2010)

Category	Coking Coal (Mt)	Thermal Coal[2] (Mt)	Total (Mt)
Measured	85.8	120.2	206.0
Indicated	153.4	51.9	205.3
Inferred		11.7	11.7
Total	**239.2**	**183.8**	**423.0**

It is noted that there is some indication that some of the coal seams, specifically the 0A/0B group coal, may be blended with hard coking coal without significantly degrading overall coking qualities. This could potentially increase resources of coking coal, and is discussed further in this report.

Underground Resource

Norwest has identified a coal resource at UHG lying between 300m and 800m in depth that is categorized as an "underground" deposit type, meaning that the probable extraction method would be through underground mining techniques. These resources are considered for future rather than immediate exploitation and were not considered in the scope of 2009 Bankable Feasibility Study (BFS) or in this report.

The total in-place resources below 300m are 157.9Mt[3], categorized as 88.6Mt Indicated and 69.3Mt Inferred resources. Combined surface and underground mineable resources is 580.9Mt of in-place resources, comprised of 206.0Mt, 293.9Mt and 81.0Mt of Measured, Indicated and Inferred resources, respectively.

Whilst the coal resources below 300m represent a significant addition to the overall UHG resources it must be noted that a reserve estimate has not been made.

1.2.3 Coal Reserves

As with coal resources, Norwest estimation of coal reserves at UHG are defined by the recent BFS and described in the feasibility study report Ukhaa Khudag Project Bankable Feasibility Study, November 13, 2009. To the best of our understanding this estimate of reserves is compliant with the JORC code. It is estimated that total reserves are comprised of 150Mt of coking coal, and a 136Mt of thermal coal.

2 Includes potential coking coal fractions. See Section 7, Potential for Defining Additional Mineral Resources and Reserves

3 Air dried tonnes

A summary of the reserve estimate is reported in Table 1.4.

Table 1.4 Summary of Coal Reserve Estimate (May 31, 2010)

	Total Reserves*		Marketable Reserves**	
	Proven	**Probable**	**Proven**	**Probable**
Mtonnes (ad)	191	95	122	61
Total* **	**286**		**182**	

* *Excludes 0.4Mt from mine plan within Inferred resource category*

** *Includes primary washed product and secondary thermal product, or 'middlings'*

*** *Rounded*

1.2.4 Potential for Defining Additional Mineral Resources and Reserves

Two Year Drilling Plan

A drilling program is planned by ER over the course of the next two years covering the complete mine area with a 500m by 500m drill pattern. The objective of the program is to confirm that the Russian drill hole data reflects a higher ash content than is actually encountered during mining (to-date, the ash content in the actual coal mined is lower than that assumed by the geological model). Specifically, mining of Seams 3 and 4 ROM coking coal has indicated that the Russian drillhole data reflects a higher ash. This results in as-mined ash levels being consistently lower than indicated by the geological model. This suggests a higher overall coking coal yield after washing than is currently determined using the geological model, as based on current available data. A higher overall coking yield determined as a result of this drilling program would result in additional quantities of higher-value coking coal (see Section 7, Potential for Defining Additional Mineral Resources and Reserves). The drilling plan will also penetrate to a depth of 600m, thus bringing potentially underground mineable resources into a higher level of confidence.

Potential for Additional Coking Coal Resources

The 0A/0B seam group has some indication that it may be possible to blend these with the other hard coking coal prior to washing. If this were successful without significantly degrading the key coking properties of the HCC product, the overall value of this seam group would likely increase.

As with Seams 0A and 0B, areas of Seams 5 and 10 showing positive coking characteristics will be submitted to a similar LD bulk sampling and testing program. A thorough understanding of the sizing, washability and coking properties of these seams may lead to their classification as some level of metallurgical reserve.

1.3 Summary of Coal Quality

Extensive exploration and coal quality assessment indicates that UHG coal compares very favourably with international and Australian quality ranges, with relatively high Crucible Swelling Number (CSN) and Coke Strength after Reaction (CSR) values, matched with relatively low sulphur content.

Based on the typical quality specifications provided it is believed that the UHG coking coal products would be attractive to the market. North Asian markets represent the best opportunity for any UHG metallurgical coal placed into the seaborne market. The thermal coal product is also a high quality product which should receive acceptance in seaborne markets.

Coking coal is produced as the primary product after coal processing, as well as providing a quantity of thermal coal from the remaining secondary product. Thermal coal is also available from seams with poorer metallurgical qualities, and is to be washed to provide a marketable product.

Table 1.5 UHG in-place Resource Coal Quality

Category	Moisture % (ad)	Ash % (dry)	Sulphur % (dry)	Volatile Matter % (dry)	kCal/kg (dry)
Measured	0.54	25.52	0.64	23.39	6,150
Indicated	0.60	24.93	0.69	27.72	6,100
Inferred	0.56	25.45	0.65	26.00	6,050
Total	**0.57**	**25.24**	**0.66**	**25.55**	**6,125**

Overall, average in-place coal quality demonstrates a mature, high-rank coal with low moisture, low to moderate sulphur and volatile content, moderate ash content and relatively high heating value. Average CSN values reflect the large quantity of metallurgical grade coal available within the resource. Overall rank of the UHG coal is estimated to be medium volatile bituminous when weighted on in-place resource tonnes (air dried).

Overall, the resource base contains 580.9Mt (through May 31, 2010) of ROM surface and underground mineable coal.

1.4 Production Schedule Summary

Currently the UHG mine is in the process of a five-year 'ramp-up' to meet a steady-state production of 15Mtpa. The coal production targets and waste stripping requirements are for the first five years are summarized in Table 1.6.

This report will focus on the initial five year ramp-up period.

Seams 3 and 4 are currently being mined, with all waste stored in out-of-pit waste dumps.

Table 1.6 Material Movement Schedule

Total Material Movement Quantities

Period	Thermal Seams 0A, 0B & 0D (Mt ROM)	Coking Seams 0C, 3 & 4 (Mt ROM)	Coking Seams 8 & 9 (Mt ROM)	Total Mined (Mtpa ROM)	Volume Waste (Mbcm)	Destination		S/R (bcm/t ROM)
						Inpit (Mlcm)	Expit (Mlcm)	
2010	–	3.8	–	3.8	20.9	–	26.1	5.5
2011	–	7.0	–	7.0	28.8	–	36.0	4.1
2012	0.8	9.9	–	10.7	58.8	–	73.5	5.5
2013	5.0	9.7	–	14.7	59.0	–	73.7	4.0
2014	5.5	9.7		15.2	63.2	3.9	75.1	4.2
Totals	**11.3**	**40.2**	**NA**	**51.4**	**230.7**	**3.9**	**284.4**	**4.5**

1.5 Summary of Coal Handling and Preparation Plant Facilities

The coal handling and preparation plant (CHPP) is an integral part of the UHG project and will enable the operation to produce high-value saleable coking and thermal coal products. The high efficiency CHPP is now under construction.

The CHPP is being developed in four construction phases to match the expansion of the mine. These include the initial 5Mtpa phase followed by the addition of second coal preparation plant module (CPP) to expand mine operations to 10Mtpa (estimated to be commissioned by September, 2011). The latter also includes the expansion of the ROM coal handling plant (CHP). When the rail line is completed, a rail integration phase will be implemented (estimated by the end of 2012). This will include the product coal handling and train load out elements of the CHP. Finally, a third CPP module will be constructed to allow mine operations to achieve ultimate 15Mtpa ROM capacity (also estimated to be completed by the end of 2012).

1.6 Transportation

Currently, coal is transported from UHG (and another smaller producer in the area) to the Chinese border via an unpaved transportation corridor, constructed in 2008. Construction on a new paved road between UHG and Gashuun Sukhait is to be fully completed by September, 2011, and substantially completed by the start of 2011 with sections to be used as and when they are ready. This will accommodate the increased production from UHG prior to completion of a railway link by the start of 2013.

A feasibility-level study and report on the proposed haulroad has been prepared by Leighton, with assistance from Snowy Mountains Engineering Corporation (SMEC) and others (see *Feasibility Study Report (Draft), M1006 – UHG Coal Haul Road Project: Ukhaa Khudag to Gashuun Sukhait,* May, 2010). Two haul road designs have been proposed. The 'base case' plan features a road pavement design to standards typical of the Mongolian Highway Standards. This design will likely require extensive maintenance in order to withstand the anticipated traffic volume. An alternate design is also proposed that features a more robust pavement surface, assuming that axle loads are reduced to 16t through the use of double trailer 'road train' vehicles. The 'base case' design was assumed for the purposes of this report, subject to enhanced capital estimates.

A railway is the next development stage of the transportation infrastructure, and is essential to further reduction in transportation costs Energy Resources Rail LLC (ERR), a wholly-owned subsidiary of MMC, will construct a single-track railway with a length of 236km to the border with China replacing the current trucking operation. Construction of the rail is currently estimated to be completed by the beginning of 2013.

1.7 Project Operating and Capital Costs

Since publication of the BFS, various operating and capital cost estimates have been revised based on updated planning work to account for the more aggressive schedule. Revised operating cost estimates are summarized in Table 1.7 (does not include road or rail transportation cost or SG&A costs). All cash operating costs are reported in US$, exclusive of VAT, on a 2010 constant-dollar, un-inflated and are un-escalated. ROM tonnes are reported on an air-dried basis (adb).

Table 1.7 Cash Operating Cost Summary (US$000)

	2010	2011	2012	2013	2014
ROM Coal (000 tonnes, adb)	3,782	7,003	10,729	14,722	15,247
Mining & Operations					
Mining	$20.90	$24.85	$ 28.82	$ 21.32	$ 21.28
Coal Processing/Handling*	$ 1.13	$ 3.60	$ 3.74	$ 3.00	$ 3.52
Total ($/ROM t)	**$22.03**	**$28.45**	**$ 32.56**	**$ 24.32**	**$ 24.80**

* *Includes all processing, handing, water and power supply and distribution costs.*

The estimated capital costs for the five year period, 2010 through 2014, are summarized in Table 1.8. These capital estimates exclude the railway which will be a separate profit center. All costs reported here are inclusive of VAT and Mongolian duties, but exclusive of inflation, contingencies, etc. Costs are reported in US$, on a 2010 constant-dollar, un-inflated and un-escalated basis.

Table 1.8 Capital Cost to Reach Full Production (US$000)

	2010	2011	2012	2013	2014
Mining	$ 3,975	$ 8,579	$ 3,760	$ 0	$ 0
CHPP	$101,688	$105,024	$110,278	$ 0	$ 0
Tailings Dam	$ 10,785	$ 0	$ 2,522	$ 3,079	$ 0
3 x 6MW Power Plant	$ 26,729	$ 4,474	$ 0	$ 0	$ 0
Power Distribution	$ 6,400	$ 0	$ 0	$ 0	$ 0
Water Supply/Distribution	$ 23,120	$ 4,136	$ 19,451	$ 1,040	$ 0
Coal Haulage & Transport*	$ 33,140	$ 27,845	$ 0	$ 0	$ 0
Site Infrastructure	$ 6,910	$ 7,387	$ 8,926	$ 9,328	$ 8,926
Other	$ 4,523	$ 5,302	$ 4,951	$17,551	$ 6,211
Total CAPEX	**$217,271**	**$162,748**	**$149,888**	**$30,997**	**$15,136**

* *Includes ER's 50% share of coal haulroad costs, plus $10M for 100 coal haul trucks in 2011.*

In general, geological conditions such as the favorable coking characteristics of much of the UHG coal (in particular, Seam 3A) and the low strip-ratio arising from the thick seams of coal and gentle dip of much of the deposit, contribute to UHG's low cost structure. Other contributing factors include the relatively low degree of in-seam parting and dilution, as well as the friable nature of the coal reducing blasting costs).

1.8 Effective Date of Report

The effective date for the date included in this report is May 31, 2010.

2. QUALIFICATIONS OF NORWEST

Norwest Corporation is a world-recognized international consultant to the mining and energy resources industries. Norwest has over 270 employees and associates based out of offices through Canada and the US, as well as representatives throughout the world.

Norwest's broad range of service professionals often come from extensive careers in industry with a wide variety of expertise in mine planning, resources/reserves reporting, evaluation, due diligence reviews, management, resource optimization, coal processing and handling, hydrology, geotechnical review, environmental management, mine safety, and other related fields.

Norwest has over 30 years of experience in performing mining studies and resource/reserve estimates. With over 10 years of direct experience on the Tavan Tolgoi deposit, its role in preparing the 2009 BFS study of UHG on behalf of ER, as well as its experience with numerous Mongolian clients and mining projects (including a study of the Baganuur mine, SouthGobi Energy Resources' Ovoot Tolgoi mine, and various other projects) Norwest considers itself well qualified to prepare this ITR.

3. DISCLAIMER

3.1 Disclaiming Statement

Norwest has conducted an independent technical review of the UHG coal mining project and related production assets. Site visits were made by Norwest professional involved with preparation of a recent Bankable Feasibility Study, as well as this report. Certain aspects of the study were prepared by parties other than Norwest, and their work independently reviewed by Norwest for inclusion in the BFS and this ITR. Norwest has exercised all due care in reviewing the supplied information and believes that the basic assumptions are factual and correct, and the interpretations reasonable. The accuracy of the conclusions in this report largely relies on the accuracy of the supplied data. Norwest does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from investment or other financial decisions or actions.

4. PROPERTY DESCRIPTION

4.1 Description and Location

Mongolia is a landlocked country in East-Central Asia, encompassed by Russia and China. Ulaanbaatar (UB), the capital and largest city, is home to about 38% of the population.

At 1,564,116 square kilometres and a population of approximately three million people, Mongolia is one of the most sparsely populated countries in the world. It is also the world's second-largest landlocked country after Kazakhstan. Much of Mongolia is covered by steppes, with mountains to the north and west and the Gobi Desert to the south. This results in little arable land, and thus approximately thirty percent of the country's population is nomadic, or semi-nomadic.

Mongolia is divided into 21 provinces (singular, aimag), which are in turn divided into smaller districts. The UHG coal deposit is located in the Omnogovi aimag, located in the south of the country in the Gobi Desert (see Figure 4.1). Omnogovi is Mongolia's largest aimag with a population of 48,000 (2005). The small town of Tsogttsetsii, located approximately 7km from the project site, serves as the soum, or district center, as well as an administrative and logistical hub for the UHG project. The project site itself is located approximately 540km from Ulaanbaatar and 200km from the Chinese border, referred to as Gashuunsukhait and Ganjimadao, on the Mongolian and Chinese sides of the border, respectively.

4.2 UHG Project Description

ER was awarded the UHG lease within the Tavan Tolgoi coalfield located in Ömnögovi Aimag, south-central Mongolia. ER has established an operating coal mine on the UHG lease and intends to expand production through the construction of additional facilities.

Figure 4.1 General Location Map

The project proposes that mining operations expand to produce 15Mtpa at steady-state, through surface mining using truck/shovel applications. By start of 2011, all coal will be washed at site to produce two coal products; hard coking coal (HCC), and a high quality thermal coal. By 2013 a railway link will be completed, reducing the cost to bring UHG coal to the Target Market Area (TMR) identified in China. The secondary product from washing will be used as fuel supply for a mine-mouth 18MW power plant. A supply of process water, essential to the project, has been secured from two nearby locations, and will be pumped via a pipeline to the project site.

4.3 Access & Infrastructure

Currently installed infrastructure at UHG is as follows:

4.3.1 General Access

The Dalanzadgad Airport has one paved runway and is served by regular domestic flights from and to UB by several commercial flyers. The South Gobi has relatively poor road infrastructure which means that it can take 10 hours or more to drive from UB to Dalanzadgad. Once in Dalanzadgad, it takes approximately two hours to make the 90km journey to the project site.

4.3.2 Airstrip

For efficient and safe staff rotations, as well as emergency evacuation, an airstrip has been constructed just north of Tsogttsetsii soum (see Photo 4.1).

Photo 4.1 Plane on Airstrip with Fire Engine in Support

4.3.3 Ger Camp

A temporary camp of approximately 170 'gers' (semi-rigid structures) has already been established at the project site, approximately 1km from the Tsogttsetsii soum, to accommodate about 650 people. The facilities include permanent shower/washing/toilet facility as well as large gers for offices, cooking and eating.

4.3.4 Mine Camp

A self-contained mine camp, located adjacent to the existing ger camp, has been completed. This new facility, to accommodate a total of about 650 persons, and includes 150 rooms, canteen, and a recreation area (see Photo 4.2). The mine camp will serve employees of the entire project (the mine, washing plant, power plants, etc.) with the exception of ERR, which will maintain a separate camp for the railway workers.

Photo 4.2 Mine Camp (Interior)

ER provides bus transportation for employees from camp and Tsogttsetsii soum to the job site.

4.3.5 Water Distribution

The internal water distribution around the mine site will be supplied from Maiga Mountain reservoir, immediately to the east of the mine site. Maiga Mountain reservoir itself will contain the bulk of the water supply to be used for potable water, fire water flows and industrial flows. Potable water treatment will be at the reservoir.

4.3.6 Power Supply & Distribution

Power is to be generated via an on-site power plant with capacity of 3x6MW units. Construction is underway (see Photo 4.3) with the first unit expected to be completed by October, 2010, the second by January, 2011, and the third and final unit completed mid-2011. Additional power will be from the Mandalgovi – Tavan Tolgoi – Oyu Tolgoi transmission line, construction of which will begin shortly by a consortium of Korean, Chinese and Mongolian companies. A contract has been negotiated and signed by the Mongolian Ministry of Mineral Resources and Energy, and is scheduled to be completed in May, 2012.

Power from the generating facilities will be distributed to the via 10kV switchyard to the main sub-station. From this point the power will be distributed at 35kV via an overhead powerline distribution network to the various mine facilities which are based on 24 hours per day, 7 days per week, 365 days per year.

Photo 4.3 Power Plant Construction

4.4 Climate & Physiography

4.4.1 Climate

Mongolia has an extreme continental climate with long, cold winters and short summers, during which most of its annual precipitation falls. Precipitation is highest in the north and lowest in the south, which receives 10 to 20cm annually. The Gobi desert, in which the project is located, has some regions which receive no precipitation at all in most years. Average temperatures in Dalanzadgad range from mild (approximately 15°C) in the summer to extremely cold (-21°C) in the winter. Early spring can bring dust/snow squalls that can greatly impair vision and safe mining operations. This has been accounted for in mine planning. In general, the extreme climatic swings at the minesite do not prohibit safe and efficient mining operations.

4.4.2 Topography

Topography within the Project region features gently rolling desert plains with minor relief (several small hills are located in the surrounding regions). The terrain underlain by coal bearing formations has relief of approximately 45m, from a low of 1,500m in the eastern portion of the project area to a high of 1,545m in the west.

4.5 History

4.5.1 Regional History

The Tavan Tolgoi district has undergone an extensive amount of exploration and related coal testing and reporting. The first systematic exploration of the area commenced in the 1950's with a thorough exploration and quality testing program relying on boreholes, coreholes, trenching and other bulk sampling. This exploration continued through the 1970's.

Several feasibility studies were conducted covering the various coalfields of the Tavan Tolgoi district by private as well as government concerns; Tsankhi and UHG coalfields were identified as primary targets for potential mine development. A 1977 feasibility study prepared by the USSR Ministry of Coal Industry, entitled *Feasibility Study for Detailed Exploration of Tavan Tolgoi Coking Coal Deposit with Emphasis towards Possible Coke-Chemical Production*, recommended continued exploration of the area. In response to this recommendation, the Mongolian Ministry of Geology and Mining Industry initiated a reconnaissance exploration program in 1978 covering an area of $100km^2$ adjacent to areas previously explored, a program that lasted through 1981.

In 1990 a major feasibility study was completed by the Giproshakht Institute entitled, *Feasibility Study of the Mining of the Tavan Tolgoi Coking Coal in the Mongolian Peoples Republic*. In 1998, two confirmation drilling and testing projects were conducted, one by Norwest as part of a preliminary feasibility study for the Mongolia Ministry of Infrastructure Development and the other by BHP as part of their commitment to the Mineral Resource Authority of Mongolia. Norwest drilled five coreholes, whereas BHP drilled six coreholes. Coal from these coreholes was subjected to various coal quality and coking tests. In early 1999 the results from these two projects were reported in separate feasibility studies.

ER conducted a 10 hole exploration project on their former exploration license at Tsankhi during the fall of 2007. Subsequently, Norwest produced a geologic model for the entirety of Tavan Tolgoi coalfield along with resource estimations for the various coalfields, provided to ER on January 23, 2008.

4.5.2 Project Involvement: Leighton Asia, Ltd.

Leighton commenced their relationship with ER in 2008 and was engaged to complete a number of mine planning and cost estimate studies ranging from broad scoping studies to detailed mine planning and cost estimation. Leighton LLC (a subsidiary of Leighton Asia Limited) was awarded a mining contract to excavate and manage the initial box cut for the project. Earthworks began in September, 2008. In February, 2009 Leighton were awarded a 6 year contract to undertake all mining activities at the UHG Project; an arrangement that continues as of publication of this ITR. Leighton was then engaged to complete the mine plan and cost estimate that formed the basis for the BFS.

4.5.3 Project Involvement: Norwest

As described previously, Norwest's involvement in the assessment and development of the greater Tavan Tolgoi coalfield dates to 1998 when it was awarded a World Bank-funded contract to prepare a Preliminary Feasibility Study of the deposit.

This project was followed by an assignment in 2005 for a confidential client to drill 5 holes in the Tsankhi area of Tavan Tolgoi and prepare a report on the findings.

In early 2007, after previous experience in the Tavan Tolgoi region for several clients, Norwest commenced working with ER on projects include preparation of geologic models and resource estimates, assessment of various regions with the deposit, assistance on bid development for coal resources and assistance with securing a bid for coal processing and handling.

More recently, Norwest was involved with the preparation of the UHG BFS report. Norwest's specific responsibilities on the Bankable Feasibility Study (BFS) included reviewing the work of the various other consultants involved, and preparing the BFS document.

4.6 Project Consultants

Table 4.1 summarizes various consultants that were involved in preparation of the BFS, upon which this ITR is based, as well as currently involved with the Project.

Table 4.1 Consultant Companies and Responsibilities

Company	Responsibility
Norwest Corporation (USA)	Resource estimation and Financial Valuation, geologic modeling, geotechnical study
Leighton Asia Limited (Hong Kong) and Leighton LLC	Life-of-Mine mining plan and associated cost estimates, mine operators
Sedgman Consulting (China) and Sedgman Ltd.	Coal Handling & Preparation Plant design and associated cost estimates, contractors
Aquaterra Engineering LLC (Australia)	Water Supply design and associated cost estimates Water Management
DBI GmbH (Germany)	Railway Design and associated cost estimates
Parsons Brinckerhoff Pte Ltd. (China)	Power Plant design
Wood Mackenzie (China)	Coal Marketing studies
Sustainability Consulting (Australia)	Environmental studies
Golder Associates (Australia)	Scoping design of tailings storage facility
Environmental Resources Management (USA)	Socio-Economic studies
SGS Technical Services	Coal analysis and testing
Stewart Laboratories	Coal analysis and testing (post-BFS)
Leighton Asia Limited (Hong Kong) and Snowy Mountains Engineering Corporation (SMEC)	Paved Road Feasibility Study

Norwest has performed comprehensive reviews of the reports prepared by the consultants listed in Table 4.1. The reviews covered all aspects including technical issues and estimated costs. Where necessary, comments and suggestions for improvements were submitted, which, for the most part, were incorporated into the respective reports.

5. GEOLOGY AND DATABASE

5.1 Geology of the UHG Deposit

5.1.1 Geologic Setting

The UHG coalfield is located in south-central Mongolia and covers an area of approximately 10km^2 within the Ulaan Nuur Valley of the Gobi Desert. The coalfield is situated within the Omnogovi Aimag (South Gobi province) about 90km east of Dalanzadgad, the provincial capital, and some 540km south of Ulaanbaatar, the national capital.

The UHG coalfield is part of greater Tavan Tolgoi coalfield. The Tavan Tolgoi coalfield is separated into six separate subfields, namely Tsankhi, Southwest, Borteeg, Ukhaa Khudag, Eastern and Bortolgoi, as shown in Figure 5.1. The coalfields are separated by either seam crop limits or fault block boundaries. The divisions between these six subfields are not well defined, and indeed have migrated somewhat in the Russian reports from the 1970's on. Generally the UHG coalfield represents the north-eastern extension of the greater Tavan Tolgoi deposit and is encompassed by the Energy Resource's mining license.

Figure 5.2 illustrates the location of interpreted regional scale fault block boundaries, fold axes and extent of coal seam development based on historical records. Coal in the basin is faulted and folded from a moderate to intense degree by post-depositional tectonic events. The fault locations defining the northern and southern limits of the UHG coalfield are primarily derived from historic interpretations of the Russian-Mongolian geological teams, validated through recent drilling, field mapping and interpretation of aerial imagery.

Seventeen named coal seams (Seams 0 through 16) have been identified in the Tavan Tolgoi coalfield, of which Seams 0 through 12 have been identified at UHG. All UHG coal seams occur within the Upper Permian age Tavan Tolgoi Group. These seam groups contain numerous splits, or sub-seams, which amount to 35 distinct and individually modeled coal horizons within the property.

The coal seams at Tavan Tolgoi represent one of the few remaining largely unexploited sources of high-value coking coal in the world. Bulk sampling and drillhole sampling programs by Russian-Mongolian teams and later by other international exploration and mining companies have accumulated sufficient data to recognize the value of the Tavan Tolgoi coalfield as a world class resource for coking coal. Of the 17 coal seams, four seams are known to have favourable coking properties. The remaining seams either do not have coking potential or have not been sufficiently tested to ascertain their coking potential. It is possible, based on the indication of preliminary analytical results, that one or more of these seams may be exploitable as a metallurgical product.

Figure 5.1 UHG Location Plan

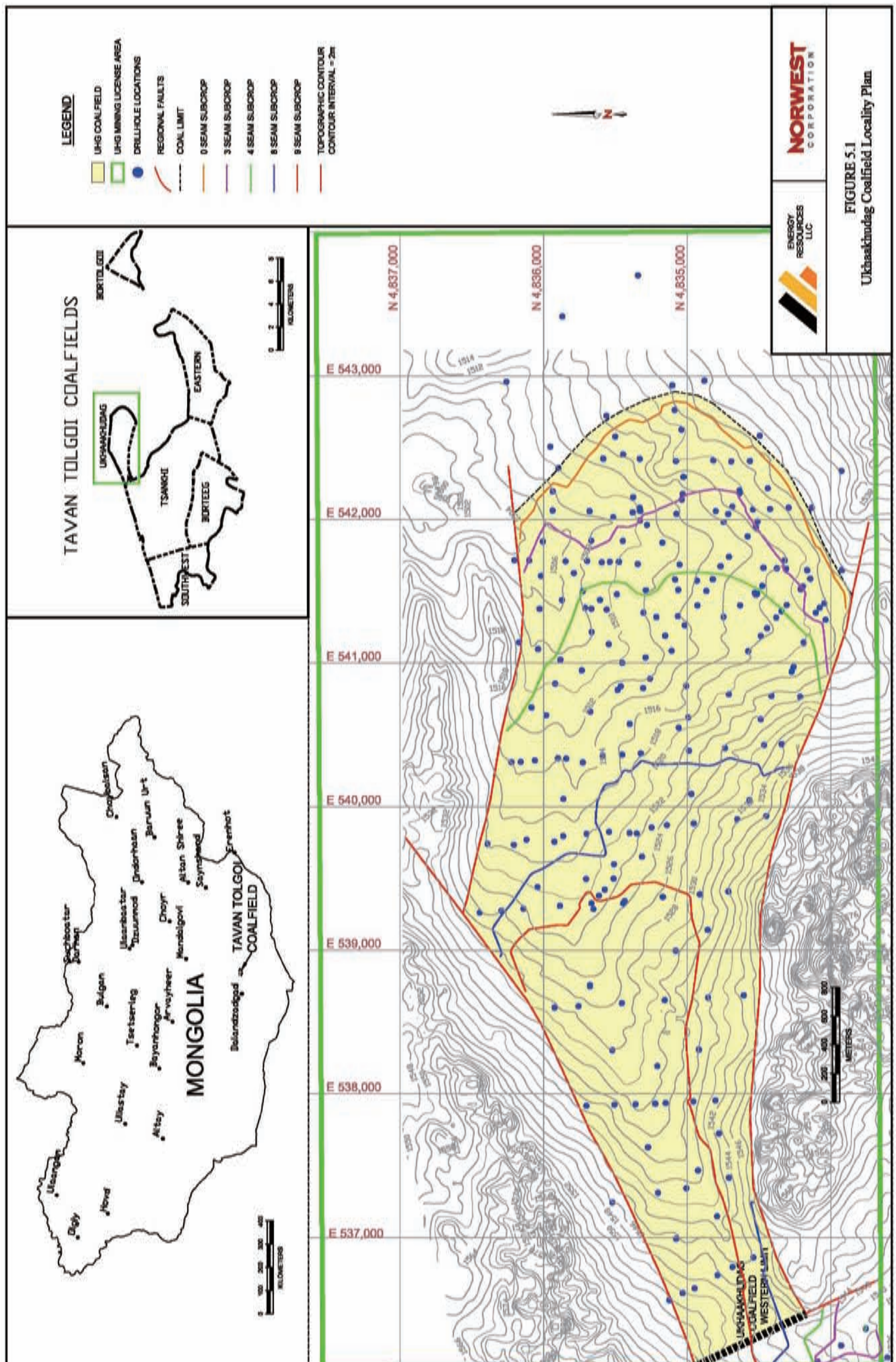
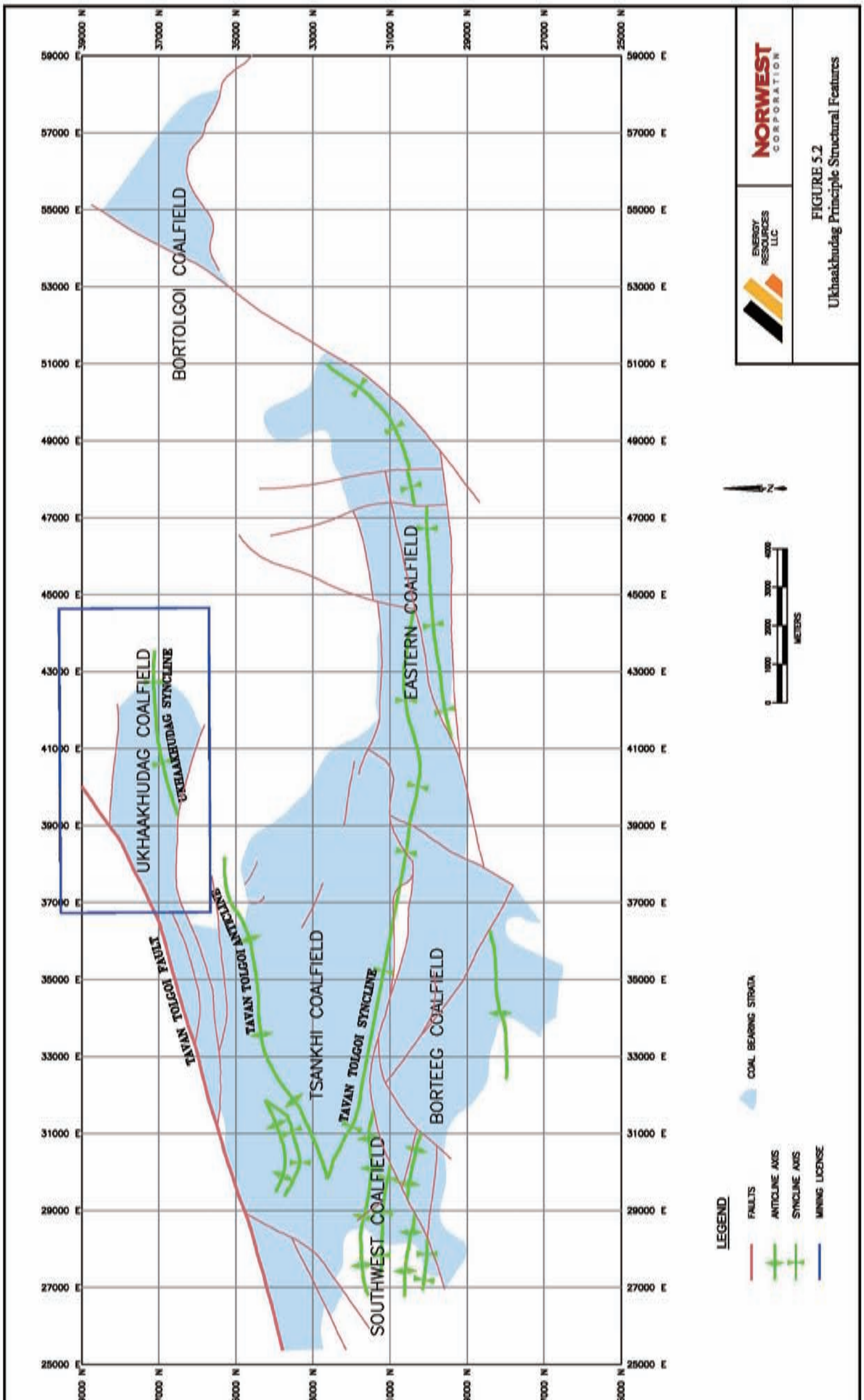


Figure 5.2 Tavan Tolgoi and Ukhaa Khudag Regional Structural Features

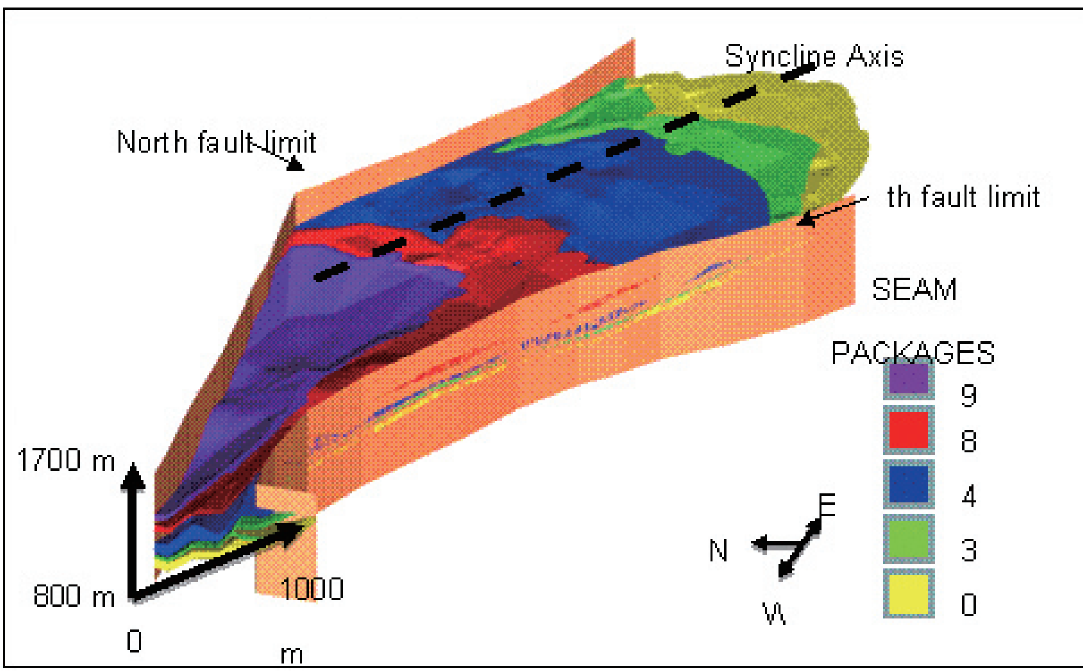


All or most coal seams have market potential. The UHG coalfield is estimated by Norwest to contribute 5% to 10% of the total coal resources at Tavan Tolgoi.

5.1.2 UHG Geologic Structure

The UHG coalfield is a fault-bounded synclinal coal basin developed within an east-west trending graben structure. The syncline axis plunges towards the west resulting in coal seams dipping predominantly to the west and cropping near-surface along the eastern margins of their occurrence. The major structures controlling coal seam distribution and morphology at UHG are illustrated in the perspective view of the main seam packages in Figures 5.3. The deposit structure can also be seen in cross-section in Figures 5.4 and 5.5.

Figure 5.3 Perspective View of Main Coal Seam Packages Looking towards the North-East (as is)



5.1.3 Coal Seam Stratigraphy

The non-coal rocks of the Tavan Tolgoi Group consist of mudstones, siltstones, sandstones, conglomeratic sandstones and conglomerates. The overburden and interburdens are generally competent, ranging from moderately hard to hard, depending on lithology.

Figure 5.6 shows a generalized a stratigraphic column and coal seam geometry within the UHG coalfield. The primary seams considered for mining are Seams 0, 3, 4, 8 and 9. Of these, Seams 3 and 4 are best developed, thickest and most continuous and contain a substantial portion of the coking coal resource within the license. These two seams, particularly Seam 3, are targeted for production early in mine development. Seams 8 and 9 contribute to the majority of the currently defined coking coal resource in the western half of the property, and do not appear in mine plans for the period 2010-2014. The remaining seams contribute in varying degrees to the metallurgical resource and are suitable for thermal power generation as well.

Seam 0 Group

The coal seams of the 0 Seam package are noted for their lower overall coal quality and variability in seam thickness and within-seam partings. The 0A, 0B and 0C Seams are the main seams of interest with the 0C Seam having the most potential to be included as a possible metallurgical product. Both Seams 0C and 0B are relatively thick and show favourable raw CSN[4] values in the eastern half of the property where they are within surface mineable depth.

Despite some variation in coal quality, thickness and partings for the 0 Seam package, there remains some opportunity for selective mining of the 0 Seams either as thermal coal product and potential blend coking coal product given that there appears to be some reasonable coking properties in the 0 Seam package, particularly in Seam 0C. Seam 0B has shown some marginal coking properties and Seam 0A is found to occur with frequent in-seam rock partings and to be an inherently "high-ash" seam that would experience significantly lower yields in wash plant analysis.

Seam 3 Group

The 3 Seam package is comprised of essentially three seam splits, the 3A, 3B, and 3C. The most prominent by far of these seam splits is the 3A Seam, which likely represents the three splits coalesced into one main seam body. The 3A Seam thickness remains reasonably consistent throughout the property.

Seam 3A makes up over 10% of the total UHG coal resource and is one of the target coal seams showing favourable metallurgical properties. It is for the most part devoid of in-seam partings, particularly in the southeast, and has a relatively low in-place ash content. Metallurgical tests of raw samples show good swelling properties and bulk sample testing also shows that it has good coking characteristics. Raw volatile percentages are likely to be in the ranges of about 22 to 24 percent for most areas of the deposit.

4 Crucible Swelling Number (also known as FSI, or Free Swelling Index) is a general indicator of coking potential, demonstrating a coal's ability to swell when heated to a specific temperature.

Figure 5.4 Cross-sections C-C' and D-D'

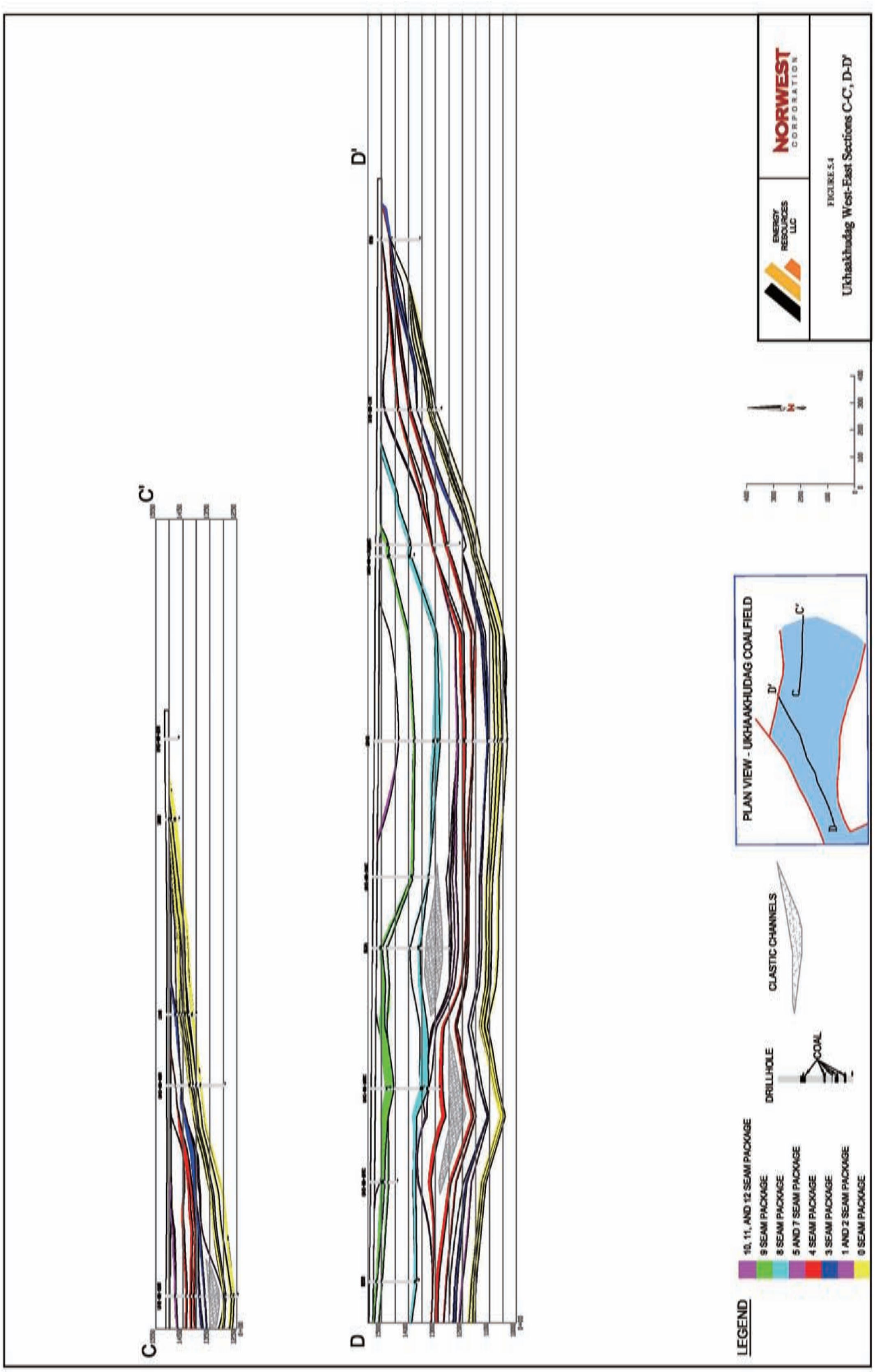


Figure 5.5 Cross-sections G-G' and H-H'

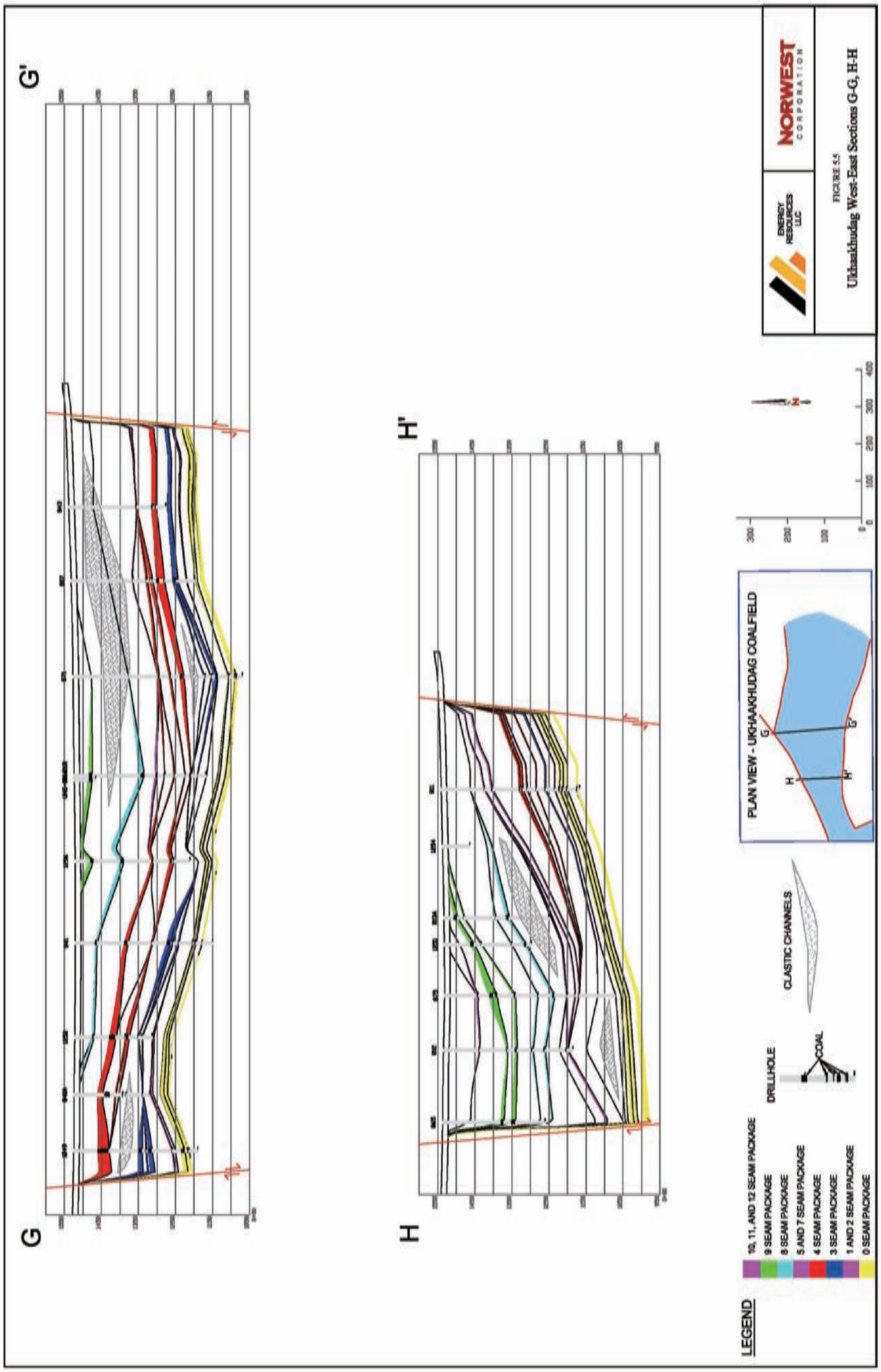
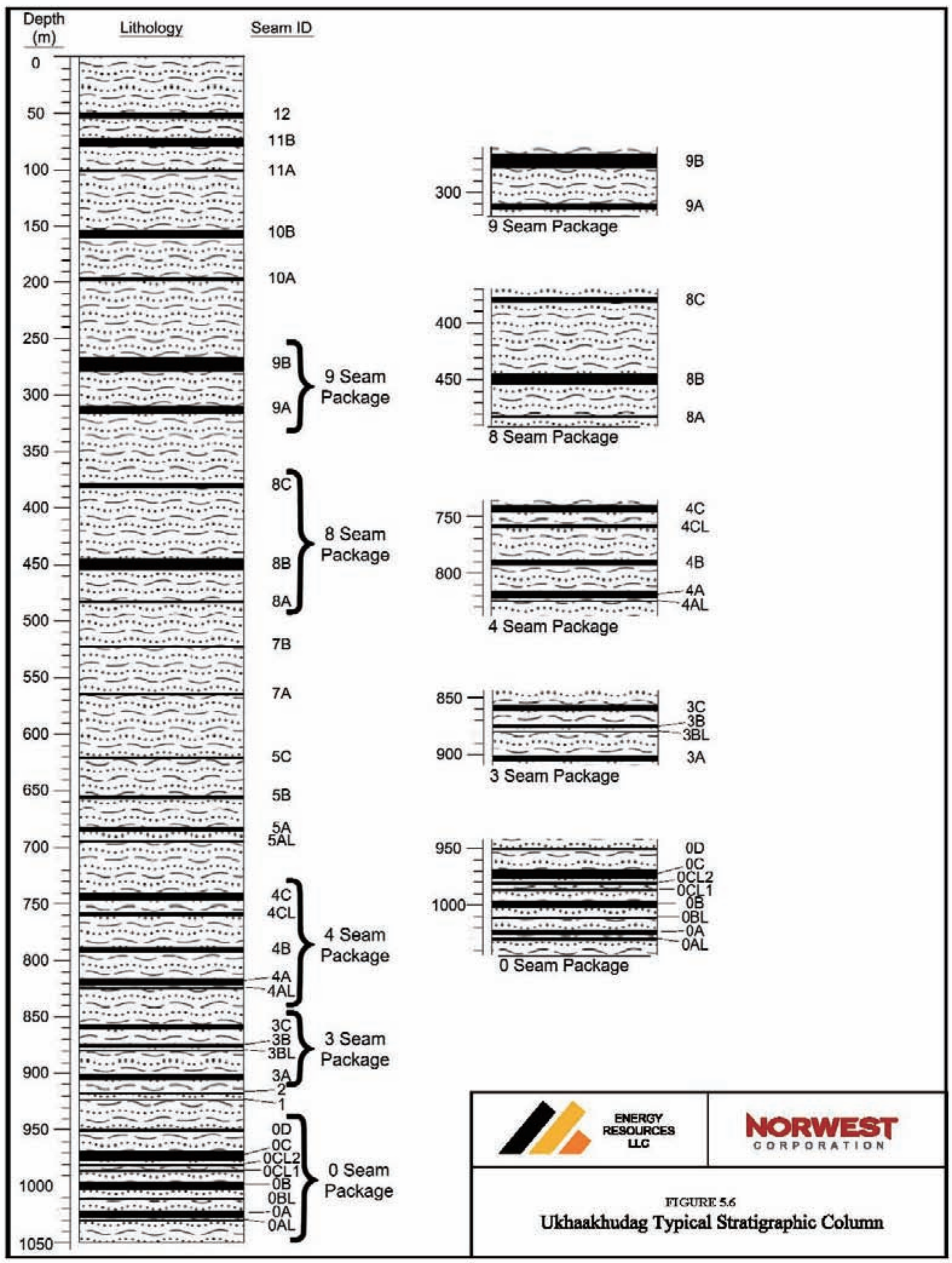


Figure 5.6 Generalized Stratigraphic Column



Seam 4 Group

The 4A and 4C Seams contribute significantly to the UHG metallurgical coal resource, estimated at 9.7% and 10.3% respectively. Metallurgical testing of raw samples, as well as early bulk sample test results, show that Seams 4A and 4C are likely to produce a high quality metallurgical product. Distribution of raw CSN values show both seams, particularly 4C, to average high values over much of the mine area.

In-place ash content is generally quite good for the 4A and 4C Seams. Occasional high ash zones are typically associated with localized zones of in-seam partings that in some instances may be removable. Sulphur content remains low for the 4A and 4C Seams with some isolated high sulphur (>1%) likely to be beneficiated by coal processing and blending to a suitable product.

Seam 8 Group

The 8 Seam package is dominated by the 8B Seam split which represents 7.4% of the total UHG resources. The 8 Seam raw volatiles appear to be higher than the average expected volatile matter content of less than 30% (dry basis) for UHG coal seams. This appears to be a trend observed in Seams 8 and those occurring stratigraphically higher. Seam 8 is not encountered in the five year 2010-2014 period.

Seam 9 Group

The 9 Seam package is split into the 9A and 9B Seams. The 9A Seam has a relatively consistent seam thickness whilst the 9B Seam thickness appears to increase towards the west. Overall volatile content appears to be higher than expectations of less than 30% volatiles (dry basis). Raw sulphur is expected to be less than 1% for most areas of the 9 Seam package, and will be further reduced significantly after coal washing. Seam 9 is not encountered in the five year 2010-2014 period.

Remaining Seams

The remaining allegedly and historically non-coking coal seams (1, 2, 5, 7, 10, 11, and 12) have a contribution of almost 9% to the overall resources at UHG. Seams 1 and 2 are predominantly thin and non-mineable across the property. Seams 5 and 7 occur in localized pods, with the Seam 5 group (5B and 5C) showing some degree of coking potential from raw slim-core analyzes. Seams 10 through 12, due to their relatively high position in the stratigraphic sequence, occur with limited extent predominantly in the northwest portion of the property. Seam 10B shows some coking potential while there is insufficient data to characterize Seams 11 and 12. These seams may be classified as metallurgical coal of some type with further development drilling, and hence may represent some upside for additional coking coal reserves.

5.2 Geological Database

5.2.1 Exploration History

Much of the exploration and development history of the Tavan Tolgoi area has been discussed in a preceding section. Prior to 2008, the UHG coalfield had largely been explored by the Russian-Mongolian teams of the 1980's as part of the larger effort to understand the Tavan Tolgoi deposit. ER conducted an infill drilling and bulk sampling program at UHG in 2008, which was planned and managed by Norwest. The 2008 program sufficiently increased the prior drill hole density and validated the historic Russian data to an extent sufficient for categorizing the UHG mine area as a measured plus indicated resource according to the JORC Code and thereby permitting advanced level mine planning and economic evaluations to be conducted at current international standards. The location of drill holes used in the geologic model and resource estimation is shown in Figure 5.1.

5.2.2 Sampling, Sample Preparation, and Quality Analysis

The entire set of Russian holes used in the UHG database were core holes. However, holes with excessive core loss (<70% recovery) were not used in the geologic modeling.

The 2008 drilling campaign was supervised by Norwest and was done to currently acceptable international standards and best practices. The core holes from the 2008 program had good core recovery, over 93% in coal, and were logged and sampled by a Mongolian field team trained and supervised by Norwest personnel. Proper QA/QC practices were stressed throughout the program.

Analytical work was performed by SGS Laboratories Inc. in Tianjin, China. The Tianjin laboratory currently holds ISO-17025 certification, accredited by the CNAS (China National Accreditation Service for Conformity Assessment). The laboratory is certified to ASTM and ISO standards.

As with other coal work, no special security arrangements were made for the shipping and storage of samples. Additional security methods are not commonly employed, as coal is a relatively low-value bulk commodity.

Cores obtained by the Energy Resources infill development drilling campaign are reported to have been handled following procedures similar to that described above. Analytical work is being performed at Stewart Mongolia, LLC, located in Ulaanbaatar and accredited by the MNSA (Mongolia Accreditation System) in compliance with ISO international standards.

5.2.3 Geologic Modeling and Methodology

Geologic Database

The geological database used to compile the geological model incorporates topographic survey data, previous geological mapping and technical reports, field reconnaissance mapping, and drillhole data. Drillhole data was used from both Russian campaigns and the 2008 drilling program. A total of 111 Russian holes were used in the final model, the majority being core holes. The 2008 program included a total of 124 holes, comprised of 17 slim gauge core holes (PQ/HQ), 99 slim rotary holes (100mm), 5 large diameter core/bulk sample locations and 3 pump test well locations. A grand total of 232 holes were used in the creation of the current geologic model with an average drilled depth of approximately 200m. All drilling was vertically oriented.

Modeling Methodology

Following review and validation of the geological database, a gridded seam modeling approach was selected to complete a digital geological model for UHG. Software utilized in the creation of the UHG model includes the Carlson® suite of mining software (formerly known as SurvCADD) and MineSight3D®. Both software packages are used internationally in the mining and resource evaluation industry. Most of the modeling was completed using Carlson software whilst MineSight3D was used primarily as a 3D visualization aid for seam correlation purposes.

5.3 Additional Ash Modeling

Recent comparisons between coal quality results of the 50m by 50m infill drilling program and the BFS model have shown a consistently lower ash content than originally modeled. These results would seemingly validate the observations that ROM coal quality has been consistently lower in ash than the BFS model predictions, recorded since mining commenced in 2009. The differences in ash content appear to be between 3% and 4% on average across both the 2010 and 2011 mine plan areas.

The most likely explanation for this discrepancy would be a result of the lower core recoveries experienced in the Russian drilling programs and the resulting influence on cumulative seam quality. It is believed that the Russian coring program likely had difficulty in recovering the brittle, friable vitrinite components of a seam in totality, thereby losing some quantity of the low ash fraction of the seam. Even though Russian holes with excessive loss (>30%) were not used in the BFS model, there is still the possibility that loss of some higher quality components of a seam might skew parameters such as ash content in a negative fashion.

The ramifications of this phenomenon are that ROM quality may be better (lower ash) than predicted from the BFS model, and assumed in this study. A decrease in ash content has a positive effect on wash plant yields, which could result in an increase in coking product tonnes, in addition to other parameters affected by ash such as calorific value and CSN.

6. RESOURCE AND RESERVE ESTIMATES

6.1 Resources and Reserve Classification System

Coal resources have been estimated from the UHG geological model and tabulated into Measured, Indicated and Inferred confidence classes in accordance with the guidelines stipulated in the 2004 JORC Code. The resource and reserve numbers are reported using the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code) as a guideline. The code is viewed by Norwest as the most appropriate guideline for the reporting of the UHG coal resources given the wide use of the code in Asia and Australasia.

6.1.1 General Procedure and Parameters for Resource Estimation

The resources are reported from the Norwest gridded seam geologic model previously described. The resources tonnes have been limited following set of criteria, namely:

- Assumed to be surface mineable
- Minimum seam height of 0.6m
- Exclusion of in-seam partings greater than 0.5m thick
- Depth from surface cut-off of 300m
- Surface weathering limit of 15m from surface.

6.2 Coal Resources Statement

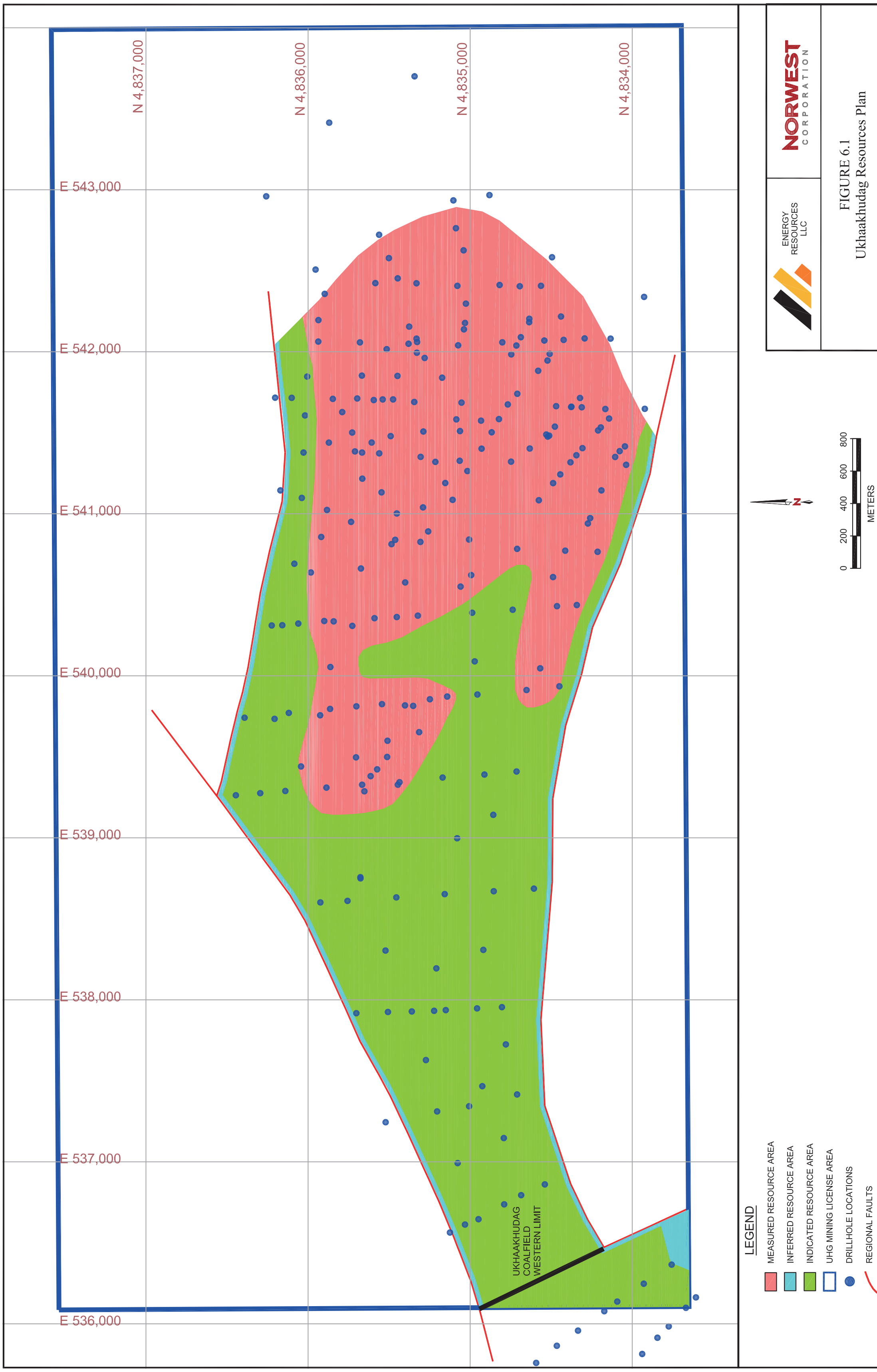
In-place coal resource estimates and associated average raw coal quality derived from the final model are listed in Table 6.1. Figure 6.1 illustrates the distribution on the Measured, Indicated and Inferred resource areas based on distribution of valid points of observation (i.e. drillholes) as described in the JORC code.

Table 6.1 Total in Place Resources by Assurance Category (as of May 31, 2010)

Category	Resource Volume (m^3) '000	Average Thickness (m)	In Place Tonnes (Mt[1])	Density (g/cm^3) (ad)	Moisture % (ad)	Ash % (dry)	Sulphur % (dry)	kCal/kg (dry)	Volatile Matter % (dry)
Measured	135,430	5.36	206.0	1.52	0.55	25.61	0.64	6,145	23.37
Indicated.	135,718	5.51	205.3	1.51	0.60	24.93	0.69	6,103	27.72
Inferred	7,692	7.36	11.7	1.52	0.56	25.45	0.65	6,057	26.00
Total	**278,840**	**5.49**	**423.0**	**1.52**	**0.57**	**25.28**	**0.66**	**6,122**	**25.55**

Notes: 1. Mt = Million metric tonnes (air dried – ad)

Figure 6.1 Ukhaa Khudag Resource Areas



6.3 Product Quality

It has been long known that the Tavan Tolgoi coalfield is a resource potentially rich in premium coking coal. This is the primary attraction to this coalfield. Most seams in the UHG exhibit sought after premium coking attributes that are very amenable to coke making. Seam 0 coal, which has previously been categorised as thermal coal, has potential as a blended coking coal product. There now appears to be some reasonable coking properties in the 0 Seam package, particularly in Seam 0C, whilst Seam 0B has shown some marginal coking properties.

6.3.1 Saleable Products

Based on the data to date, it is anticipated that the following products will be produced from UHG in the five period 2010 through 2014.

- Hard coking coal (HCC).

- Thermal product will be produced from the seams that are unsuitable for the production of coking coal, and from the secondary DMC (dense media cyclone circuit) secondary thermal product (+1.2 mm size fraction). The coal washing process is discussed in Section 5 of this report. Thermal ash (Secondary Product) is assumed to be a minimum of 20% ash (average 11-12% ash), although higher ashes would be considered for local domestic production with commensurate increases in yield.

In general, prices for coking coal prices are driven by on the coking characteristics of the coal. Thermal coal prices are dependent on the heat value and ranking (determined in part by the volatile matter (VM) content) of the coal, with penalties levied for unusually high sulphur content. Due to the wide variation in selling price for different coal types, maximum return for the overall project can only be achieved if the quantity of the higher value product types is maximized subject to meeting the required product specification for all consignments. The main product types that have been determined to date include the following.

Coking Coals

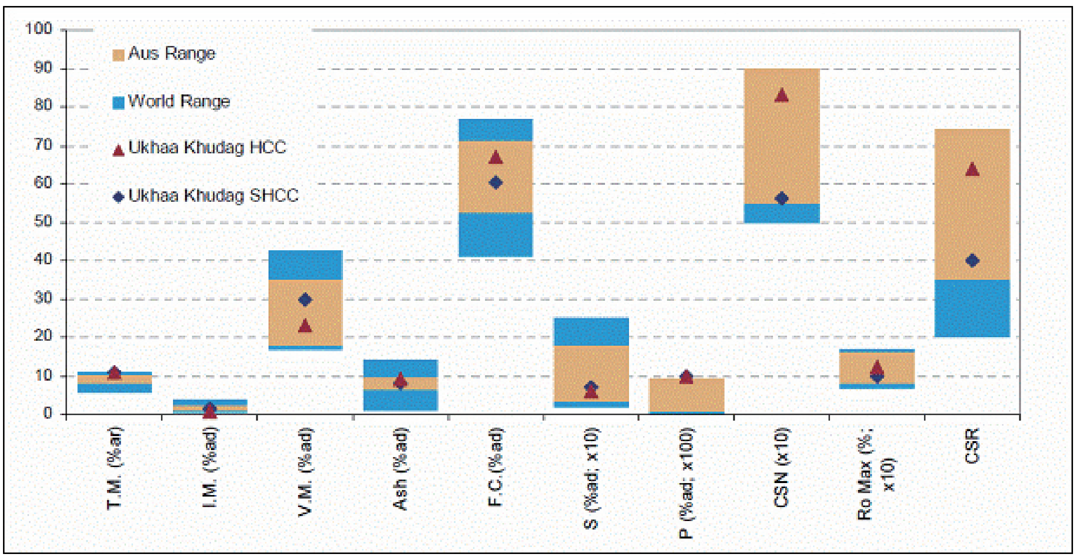
Coking coal are commonly split into two groups, hard coking coal (HCC) and weak or semi-hard coking coal (SHCC) based on value in coke making. HCC is essential for the production of a strong coke. This coal generally has the ability to make a strong (or hard) coke when coked on its own. Semi-hard coking coal (SHCC) is higher ash versions of HCC, which still has good coke making properties. The term semi-hard is more of a commercial classification rather than one which reflects the strength of the resultant coke. The hard (strong) coking coal at UHG is medium volatile coal with mean maximum vitrinite reflectance values in the range of 1.23% to 1.29%. Semi-hard coking coal (SHCC) (alternatively known in Western markets as “soft coking coal”) on the other hand does not produce as strong a coke when coked alone. It tends to be coal with weak coking properties and is commonly added to the coke oven blend to reduce the overall cost of the coal. There is a limit to the proportion of soft and semi-hard coking coal which can be added. Soft coking coal (or SHCC) typically attracts a premium in the market over semi-hard coking coal because of its high fluidity. The softer coking coal at UHG is high volatile coal with mean maximum vitrinite reflectance values in the range of 1.01% to 1.09%. Table 6.2 summarizes the product coking properties of all coking seams, considerable variation in terms of yield and ash, phosphorus, sulphur and coking properties exists between the individual seams.

Table 6.2 Indicative Coal Product Qualities by Seam

Seam	0C	3A	4A	4C	8	9
1.40 Float Ash	12.1	9.4	9.0	7.9	8.2	7.2
1.40 Float Yield	41.0	65.8	66.9	71.7	67.9	66.3
1.45 Float Ash	13.6	10.5	9.8	8.5	9.1	7.7
1.45 Float Yield	54.9	78.7	75.5	78.3	75.5	69.6
Volatiles (ad)	21.3	22.4	22.9	23.9	29.6	31.2
Volatiles (daf)	24.2	24.9	25.4	26.4	32.8	34.1
Inherent Moisture	0.9	0.7	0.8	0.7	1.1	1.6
Phosphorus (ad)	0.075	0.117	0.089	0.134	0.102	0.126
Total Sulphur (ad)	0.4	0.6	0.4	0.7	0.8	0.4
CSN	8½	8½	8	8	6	5
Fluidity ddpm	26	168	435	564	364	1560
Sapozhnikov Y mm	12	13.5	13.5	15	16	15.5
Sapozhnikov X mm	14	18.5	21.0	20.5	27	30.5
G Index	80	85	87	88	92	90
Reactives Vitrinite %	64.1	63.9	55.8	58.2	65.5	60.7
Reflectance %	1.29	1.25	1.23	1.28	1.01	1.09
CSR measured	69.5	64.8	69.4	66.3	39.5	40.4
CRI measured	21.3	28.4	24.1	25.3	40.0	40.0

In Figure 6.2, the key hard and semi-hard coking coal properties of the UHG coal are compared with the world and Australian quality ranges. In the key CSN (crucible swelling) and CSR (coke strength after reaction) parameters, UHG premium HCC rank near the top of the categories. Conversely, UHG is at the low end of sulphur content. With the exception of phosphorus content, the UHG coal mostly falls in the acceptable-to-premium quality parameter ranges.

Figure 6.2 Comparison of Key UHG Coking Coal Properties with World and Australian Ranges[5]



Thermal Coal

The lowest 0A and 0B seams are too low yielding, too high in ash, and contain relatively poor coking properties in the coarsest fractions to produce a hard coking coal, despite being of the appropriate rank. Hence these shall be washed at higher cutpoints to produce a higher yielding, higher ash thermal product[6]. This will be medium volatile rank with an expected specific heat is expected to be approximately 6800kcal/kg (as received). The ash content will be in the 11% to 12% (ad) range. Seams 0C, 3A and 4A will produce a secondary thermal product derived from rewashing the coarse rejects (+1.4mm). This will be medium volatile rank with an expected specific heat is expected to be approximately 6,400 to 6,700kcal/kg (as received). The ash content will be in the 18% to 20% (ad) range. Seams 8 and 9 will similarly produce a secondary thermal product, but in the high volatile range, and are not encountered in the five year 2010-2014 period. The expected specific heat is expected to be approximately 5900kcal/kg (as received). The ash content will be in the range of 21% (ad).

5 Barlow Jonker Pty Ltd. *Ukhaa Khudag Coal Market Report*. Sydney, Australia, August 2008. Figure 57, Page 102.

6 At the time of this writing, further carbonization testing is planned to be performed to determine if Seams 0A and 0B can be blended with the other HCCs to produce an acceptable coking coal.

6.3.2 Fluid and Plastic Properties of UHG Coking Coal

There are several important tests that are used to characterize key coking properties of the candidate coal seams.

In order to successfully produce coke, a given coal must be able to coalesce or melt, giving off volatile gases and vapours. Then it must pass into a fluid stage and finally solidify. This progression of is the plastic range as recorded by change temperature. Two important test are routinely performed help understand the true coking capacity of any given coal and how it fits with other coking coal.

Fluid Properties

The principal test for fluidity is the Gieseler test. Its results are reported in dial-divisions-per-minute (ddpm). The fluidity results are routinely plotted against vitrinite reflectance on the Japanese MOF graph. This graph is very useful in determining how to blend a particular coal with other coal to make a proper coke product.

As can be seen in Figure 6.3 (MOF graph) all of the UHG coal is well positioned, i.e., in close proximity to the field for an ideal coke. It is interesting to note that Seam 0C, which exhibits many premium coking attributes very similar to Seams 3A, 4A and 4C, has a slightly lower fluidity. In the case of Seam 0C, the fluidity is probably slightly depressed due to its higher intrinsic ash content. Nonetheless, it fits very well other HCC of UHG.

Another outcome of the Gieseler fluidity testing is the recording of the temperature range as the heated coal passes from initial melting, fluidization and then to re-solidification. Figure 6.4 in the blending discussion below show the ranges of each UHG coal. Alternatively in the Chinese market, a test called Sapozhnikov is often performed. The Sapozhnikov test will generally have a good correlation with Gieseler. Figure 6.4 depicts this correlation for the UHG seams.

Figure 6.3 Japanese MOF Graph

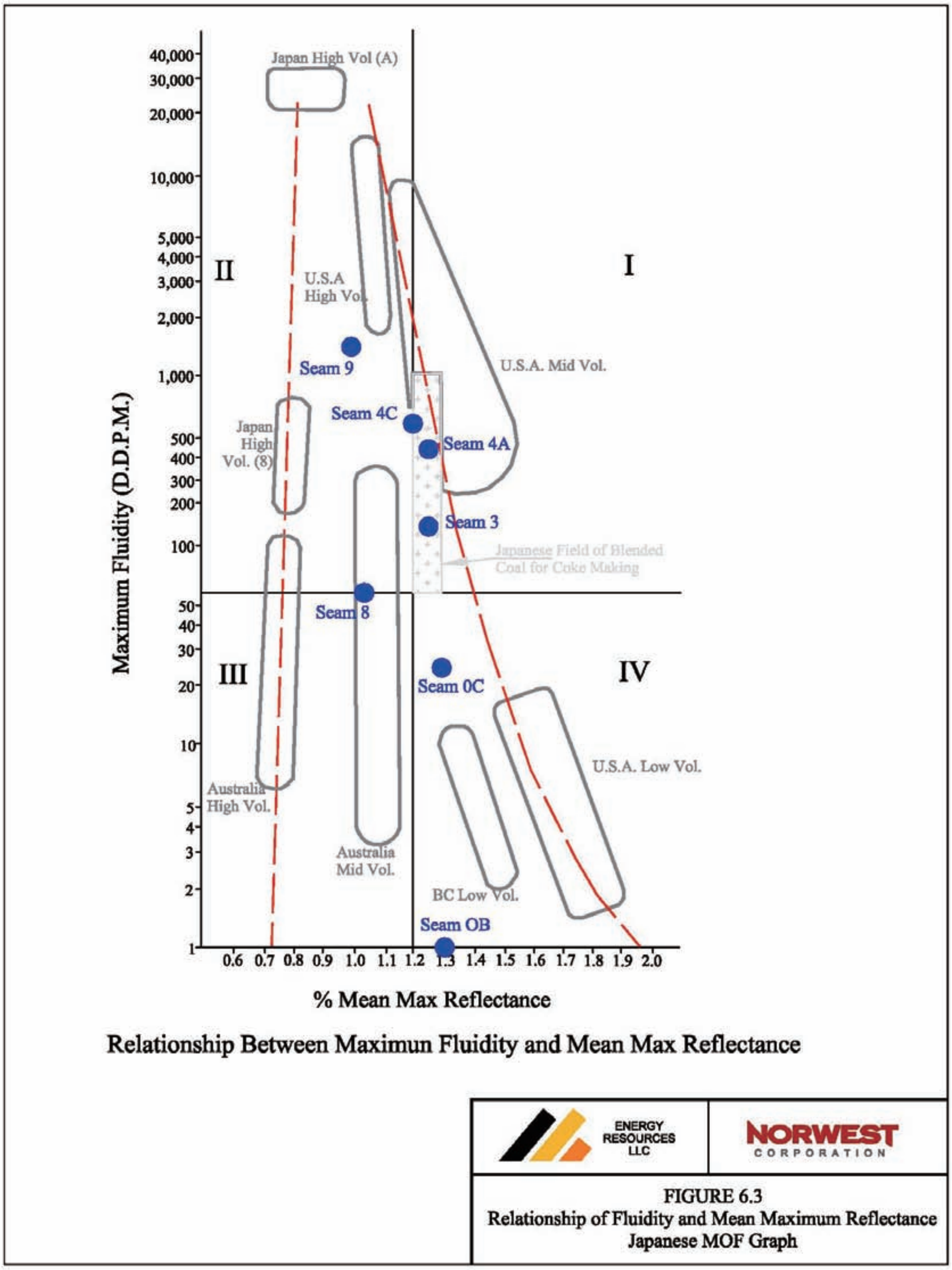
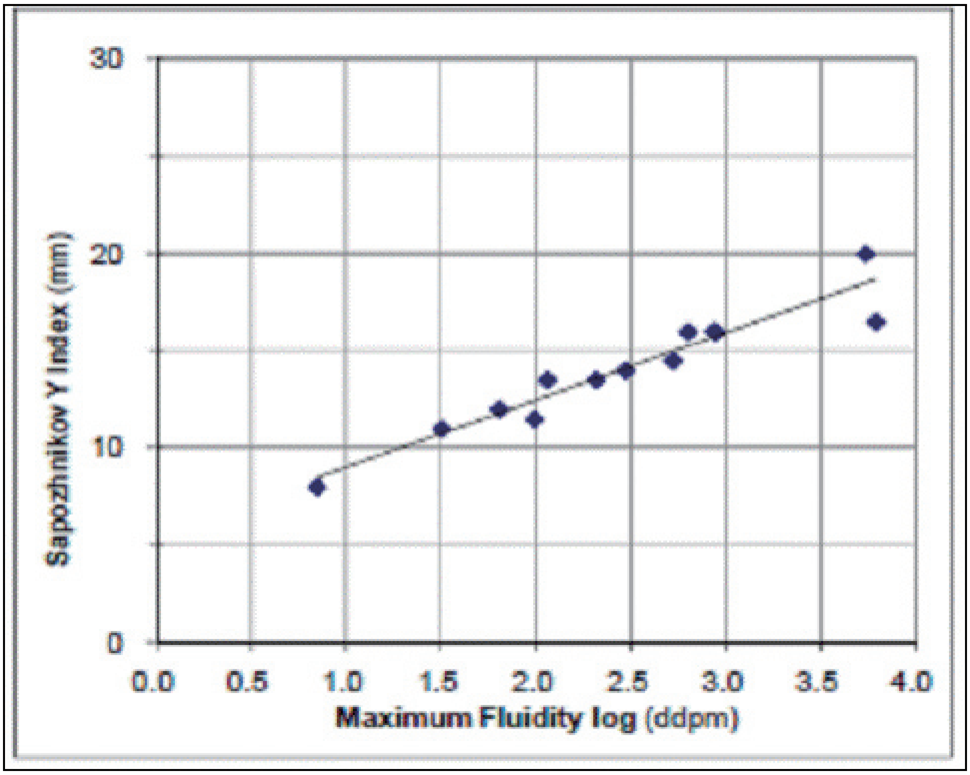


Figure 6.4 Correlation between Sapozhnikov Y Parameter and Gieseler Fluidity



Plastic Properties

Another important test for indicative coking potential of a coal is the measure of its swelling or plastic properties. The dilatation test measures the amount of contraction or shrinkage when the coal begins to melt. As temperature rises and time continues through the plastic phase of heating, the melted coal will often expand (dilatation). Note that the temperature range in the dilatation test is very similar to fluidity phase measured in the Gieseler test. Figures 6.5 and 6.6 indicate dilatation results for a variety of UHG coal. Figure 6.7 plots the UHG dilatation results against VM as well as many well known coking coal products worldwide.

Figure 6.5 Seams 0c, 3A, 4A, and 4C Dilatation

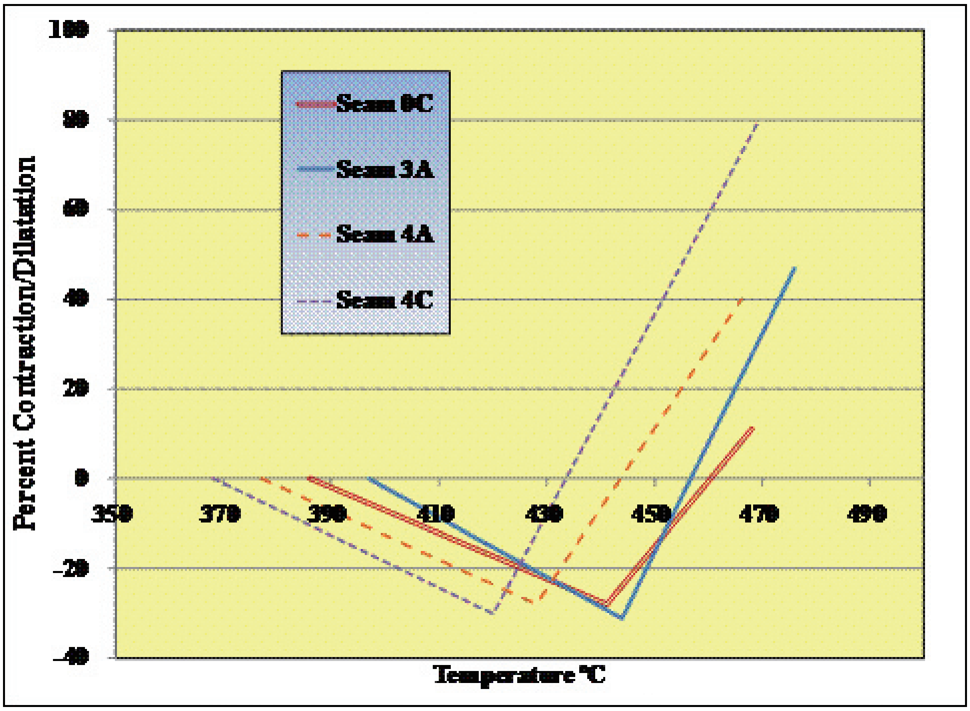


Figure 6.6 Seams 8 and 9 Dilatation

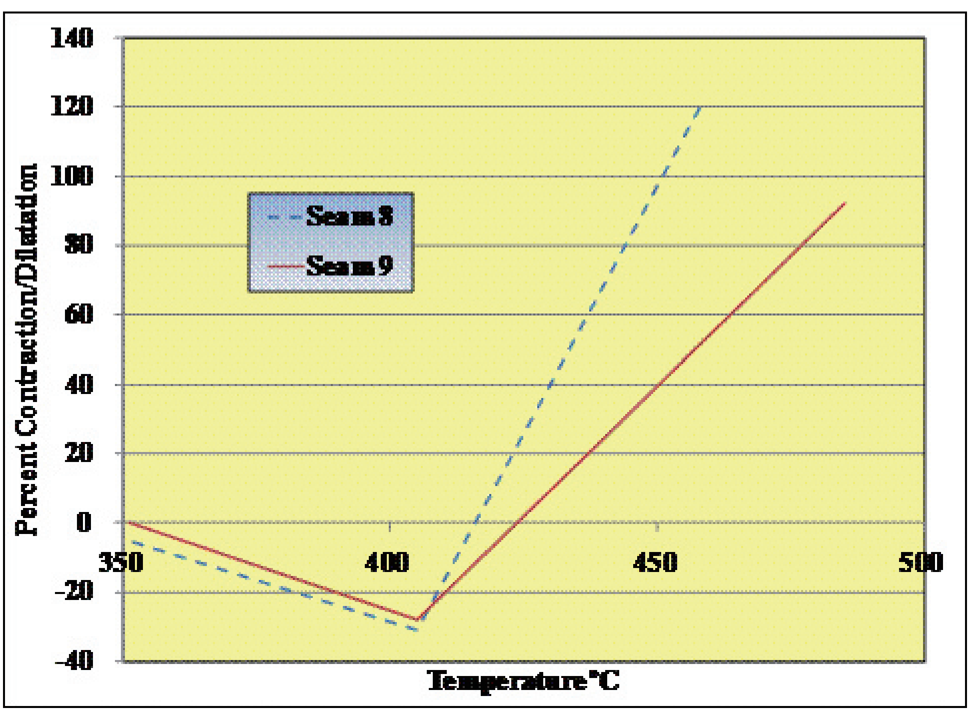
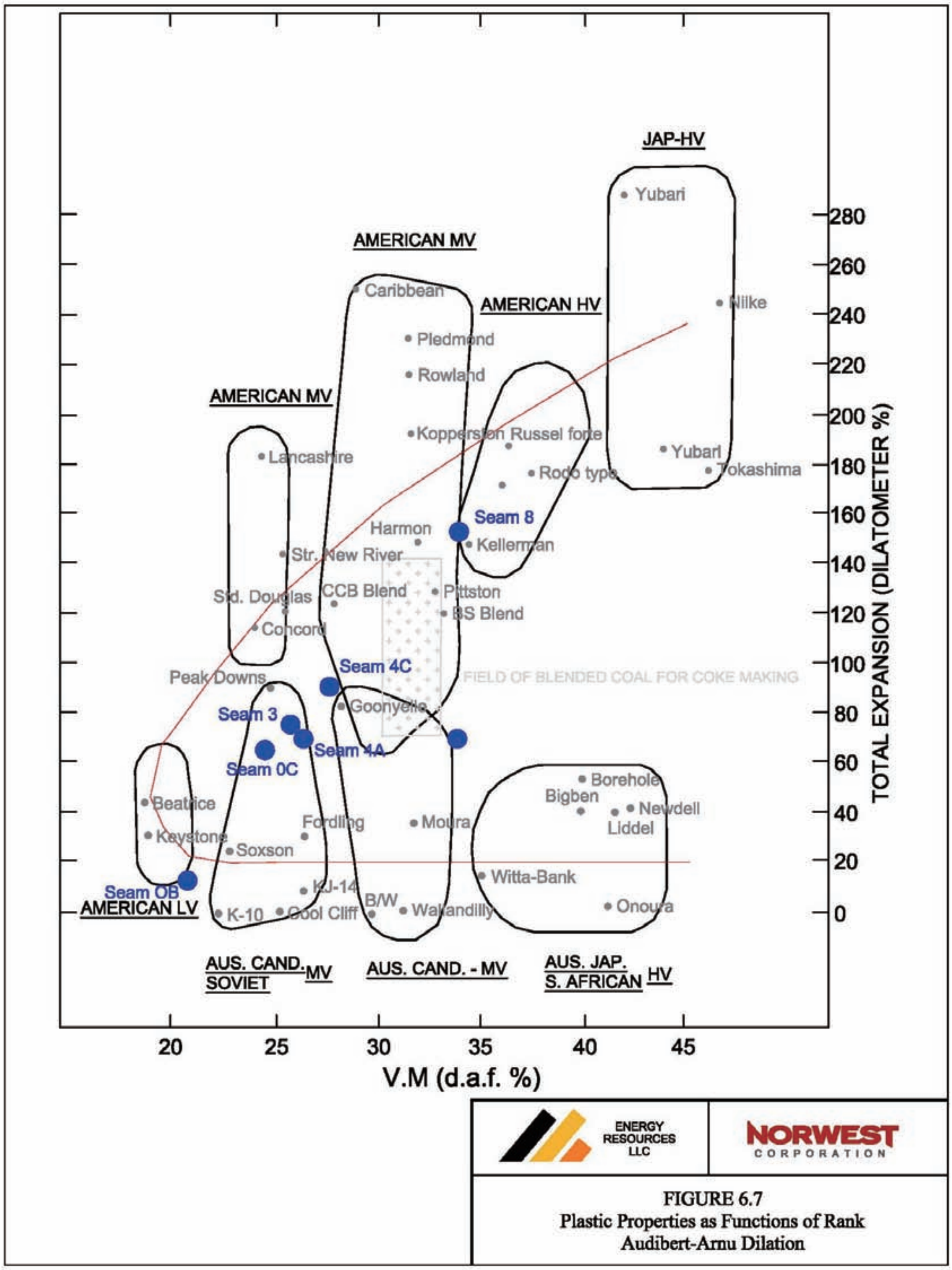


Figure 6.7 International Comparisons of Plastic Properties, by Rank



Coke Strength

In addition to physical testing of coal to determine its coking potential leading candidate coal such as UHG is subjected to small scale oven testing to produce an actual coke sample. After the coke is formed, strength tests on the coke are performed. The importance of strength relates to when coke lumps descend in the blast furnace. They are subjected to reaction with counter-current CO_2 and to abrasion as they rub together and against the walls of the furnace. These concurrent processes physically weaken and chemically react with the coke lumps, producing an excess of fines that can decrease burden permeability and result in increased coke rates and lost hot metal production. Perhaps the key indicator whether the UHG coal is premium hard or semi-hard coking coal is the strength of the derived coke. Several tests related to coke strength were performed to test the physical properties of the coke.

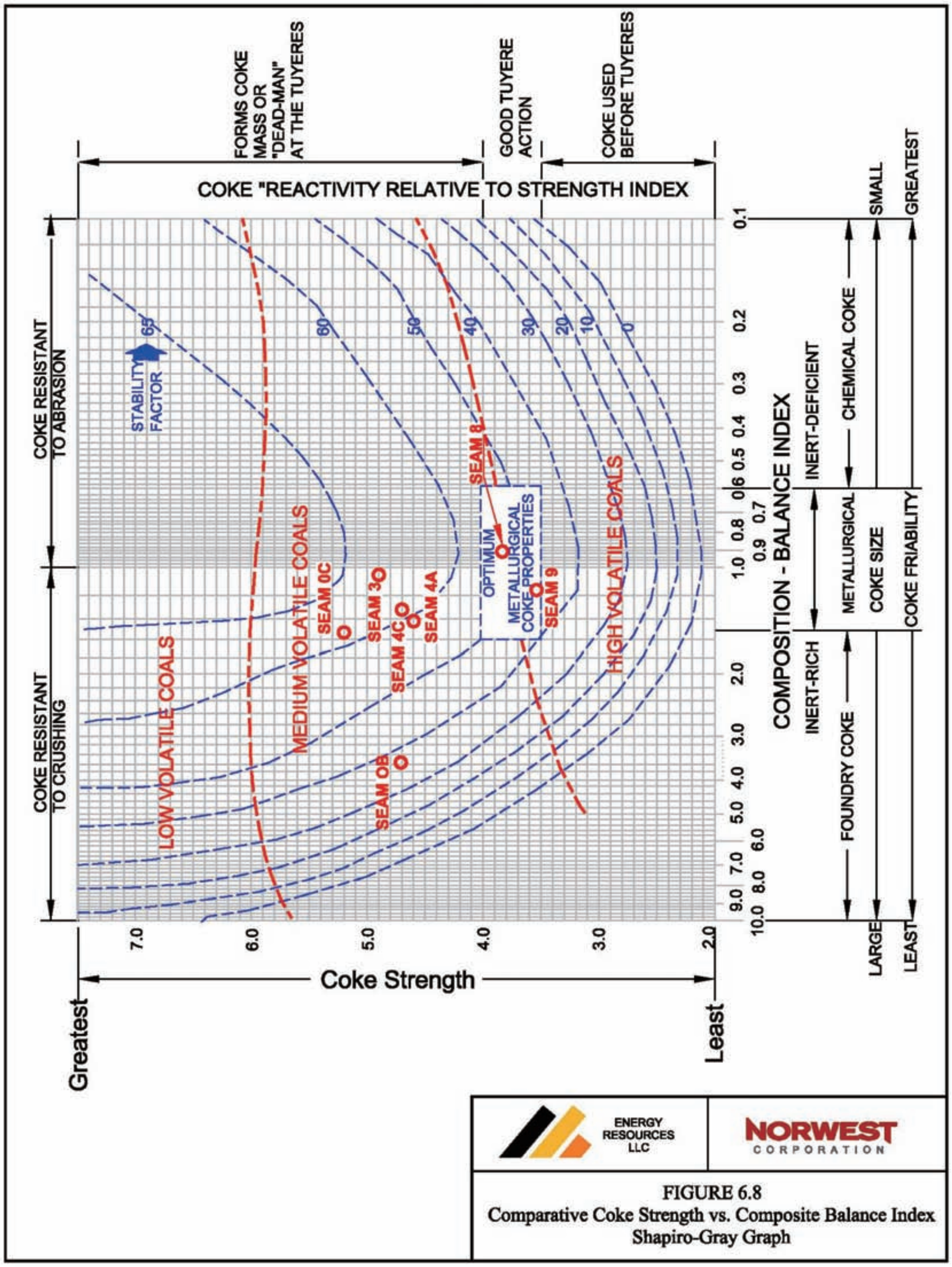
For the UHG coal, ER/Norwest directed SGS to prepare 75 kg clean coking coal samples to be tested in small scale coke ovens. Key coke strength results of those tests are reported in Table 6.3. As can be seen, the CSR results for Seams 0C, 3A, 4A and 4C are remarkably high. Of special note is the Seam 0C, which will likely be classified as a semi-hard coking coal due to higher intrinsic ash, nonetheless produces a very strong coke. As expected, semi-hard Seams 8 and 9 produced lower coke strength and stability values, but are not encountered in the five year 2010-2014 period.

Table 6.3 Indicative Coke Strengths of UHG Coal

Seam	Coke Reactivity Index	Coke Strength after Reaction	Stability Factor	Hardness Factor
0C	21.3	69.5	64.2	67.5
3A	28.4	64.8	67.5	68.8
4A	24.1	69.4	68.2	70.9
4C	25.3	66.3	67.6	71.2
8	40.0	39.5	51.4	64.2
9	40.0	40.4	51.9	63.6

Another means for predicting coke strength is the Shapiro-Gray graph. This is very useful since it uses petrographic data of the coal itself instead of actual oven tests. Figure 6.8 indicates that all of the key UHG coal falls into the metallurgical coal group necessary for blast furnace operations. This graph is also useful for predetermining coal blends for coke making. Note that the stability predictions in the Shapiro-Gray graph closely correlate with the actual coke stability values in Table 6.3.

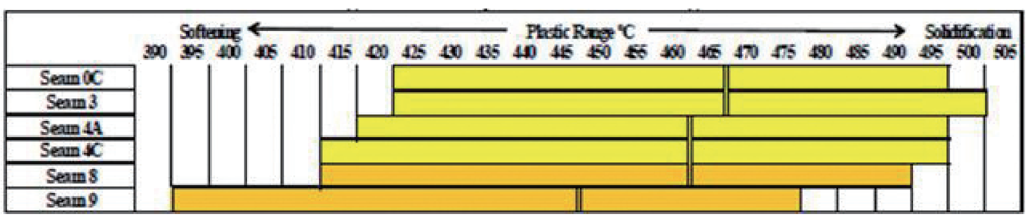
Figure 6.8 Shapiro-Gray Graph



6.3.3 Blending for Product Quality

UHG will produce coal from a total of approximately 8 distinct seams/plies with a wide range of coal quality. The quality can be expected to also vary within the same seam on a regional nature to some degree, but a comprehensive suite of coal quality cores analyzed to standard procedures will be necessary to determine this pattern accurately. This will be determined from the two year slim core exploration program on the UHG deposit to be commenced this year. Figure 6.9 depicts the softening through re-solidification temperature range determined by the Gieseler fluidity test.

Figure 6.9 Comparative Plastic Ranges of UHG Coal



Figures 6.10 and 6.11 show the petrographic groupings of vitrinoid types for hard coking and semi-hard coking coal. Note the close statistical matching of vitrinite maceral-types within each coking coal product type.

Figure 6.10 Vitrinoid Distributions for Hard Coking Coal

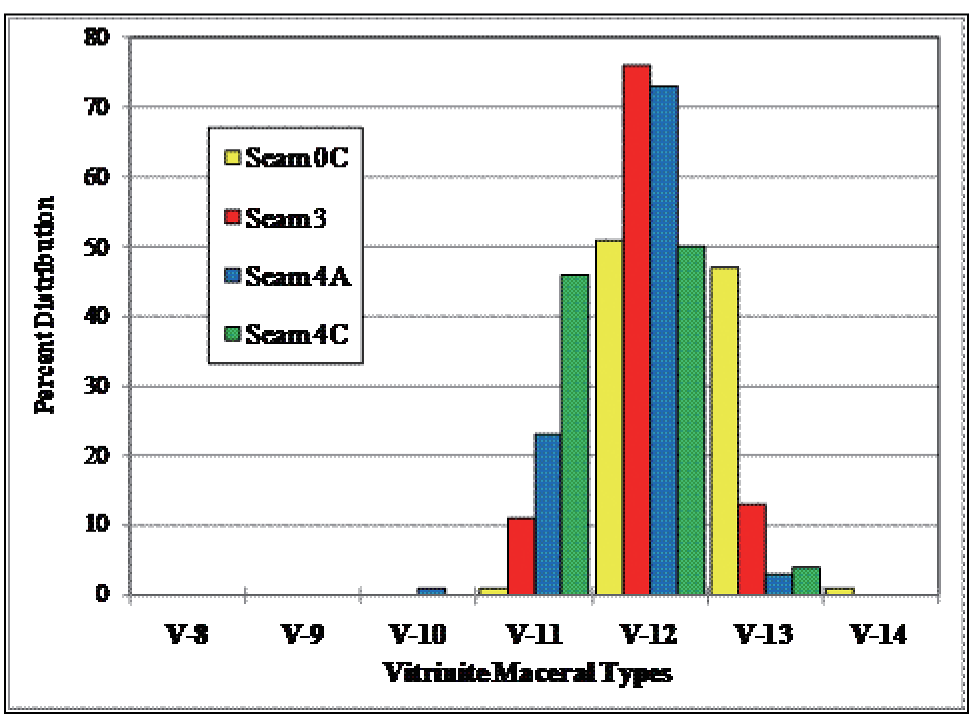
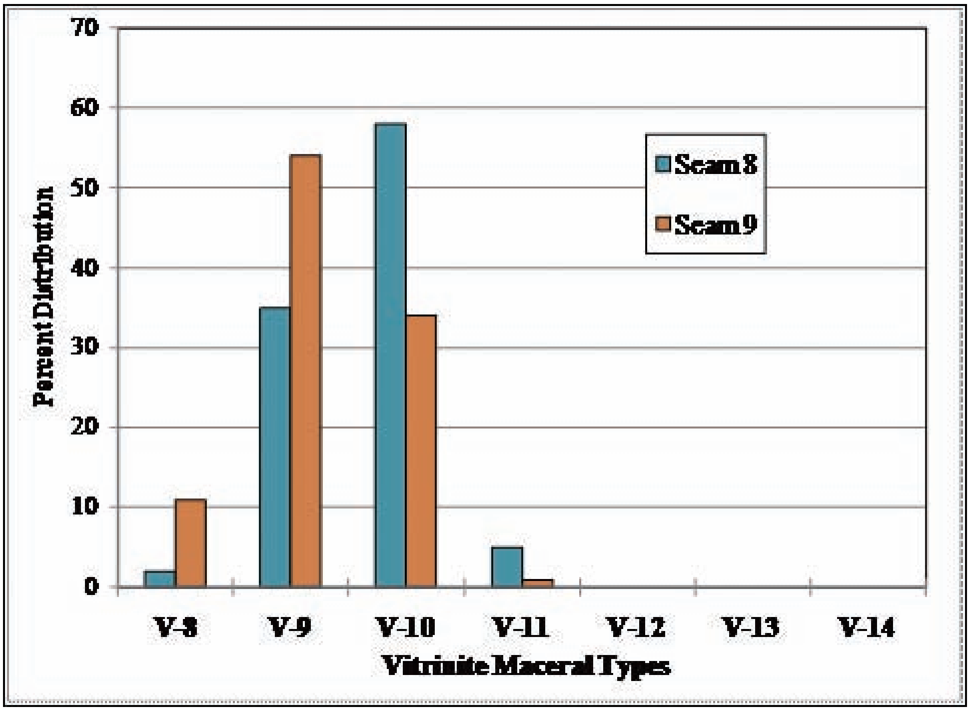


Figure 6.11 Vitrinoid Distribution for Semi-Hard Coking Coal



Hard Coking Coal

Four seam groups are suitable for producing premium hard coking coal: Seams 0C, 3, 4A and 4C. Phosphorus in particular is relatively high overall, and increases for the upper coking coal seams, so coal will be sourced from a combination of seams to meet the average product specification for each shipment. This will be achieved on the stockpiles based on a building up blended stockpiles of perhaps 30,000 tonnes each, scheduled from the appropriate combination of different mining faces. Seam 0C in particular will need to be blended in as a regular component of the blend due to its high intrinsic ash level and as it becomes a major component of the resource after the initial development years. Seam 0C, if marketed as a standalone, would technically be classified as a "semi-hard" coking coal due to its higher ash content.

Thermal Coal

The lowest 0A and 0B seams are too low yielding, too high in ash, and contain relatively poor coking properties in the coarsest fractions to produce a hard coking coal, despite being of the appropriate rank. Hence it is recommended that they be washed at higher cutpoints to produce a higher yielding, higher ash thermal coal product. As discussed in this report, Norwest has recommended that the potential for Seams 0A and 0B to be blended with coking coal (in order to increase the amount of saleable coking coal) be investigated further.

6.4 Estimate of Reserves

Norwest estimation of coal reserves at UHG are defined by the recent BFS and described in the feasibility study report *Ukhaa Khudag Project Bankable Feasibility Study*, November 13, 2009. To the best of our understanding this estimate of reserves is compliant with *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC code).

6.4.1 Procedure and Parameters for Reserve Estimation

A geologic "block" model of the resource base was generated, and portions of the base assigned to Measured, Indicated and (negligible) Inferred resource categories. The BFS then demonstrated the economic viability of portions of that resource base as reserves. Those portions of reserves contained within the Measured and Indicated resources were then classified as Proven and Probable reserves, respectively. In addition, an estimate was made of the quantity of clean, saleable that may be produced from the Proven and Probable coal reserves.

Specifically, the following were considered in Norwest's reserve estimate:

- Geologic model and resource estimate
- Geotechnical considerations
- Hydrological considerations
- Mine planning, including pit and scheduling optimization
- Coal handling, processing, and preparation
- Rail transport
- Water supply
- Mine infrastructure
- Health, safety and environmental considerations
- Socio-Economic considerations
- Assessment of permits, approvals, legal opinion and business position
- Market study
- Financial valuation of the Project.