Report to:

PROPHECY RESOURCE CORPORATION

Ulaan Ovoo – Pre-Feasibility Study

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ULAAN OVOO – PRE-FEASIBILITY STUDY

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1.0 EXECUTIVE SUMMARY

1.1 PROPERTY LOCATION, OWNERSHIP

The Ulaan Ovoo coal deposit is located in the territory of Tushig soum (sub province) of Selenge aimag (province) in Northern Mongolia. It is 8 kilometres (**km**) west of the central village of Tushig soum and 17 km away from Mongolian-Russian border port Zelter.`

Ulaan Ovoo coal deposit is situated in the Zelter River valley, which runs between the Zed and Buteel Mountain Ranges in Northern Mongolia. The river flows from southwest to northeast and exits northward into Russia at the Zheltura Border Crossing, 17 km northeast of the project area. Geographically, the district is included in a region having medium-sized mountains, the highest altitude being 1,800 metres (**m**). The south half of the deposit underlies the flood plain of the Zelter River and the north half lies on the southern flank of a low hill to the north of and topographically above the flood plain. Surface elevations at the project site range from 764 m to 820 m above sea level.

The deposit area covers an area of approximately 790 hectares (**ha**). Red Hill Energy Inc. (**Red Hill**) (now 100 percent (**%**) owned and controlled by Prophecy Resource Corp. [**Prophecy**]) holds Ulaan Ovoo Property under mining license No 1231A, which covers an area of 213 ha and exploration license No 5895X with an area of 254 ha. The licences are for a term of 30 years with a 40-year extension option. In November 2006 Red Hill purchased 100% of the title and interest in six exploration licences - 6830, 6831, 6832, 6834, 6837 and 12170 - surrounding 1231A and 5895X.

1.2 GEOLOGY

The Ulaan Ovoo project site is in the Orkhon-Selenge coal district and the Zelter coal basin and is the middle deposit of a series of five coal deposits that trend northeast to southwest and parallel the Zelter River. It is part of the Sharyn Gol formation which is composed of continentally derived tuffaceous-sandstone, tuffaceous-conglomerate, conglomerate, sandstone, siltstone, mudstone and coal.

Sediments in the Sharyn Gol formation are thought to be about 500 m thick and are subdivided into:

- **Upper Member**: 130 m of shale with ash grey colour, medium-grained grey sandstone and a low hydrocarbon content oil shale.
- **Middle Member**: 170 m of shale, conglomerate, coal and carbonaceous coal.
- **Lower Member**: 200 m of tuffaceous conglomerate and sandstone, andesite basalt, schist and conglomerate.

The northeast outcrop of the coal has burned at the north end of the deposit forming red clinker material. A hill is formed over this more resistant clinker. The Mongolian language words for this red hill are Ulaan Ovoo. It is thought that the coal was set on fire by lightning or some other natural cause.

The structure at the site consists of a gentle to moderate-dipping basin or syncline within the fault blocks. The syncline is 1.5 km wide and 2 km long.

There are high angle normal faults on the east, south and west sides.

The fault on the east side trends roughly North (**N**) 10 degrees (**º**) West (**W**) and the downthrown side is the coal-bearing west side; the fault on the south side is also a high angle normal fault trending N 70º East (**E**) with the downthrown side being to the north and the west fault is a normal fault trending N 10º W with the downthrown side being the east side.

A high angle reverse fault trends northwest-southeast through the centre of the deposit and divides it into north and south (**S**) blocks. Throw on the fault is 10 m - 20 m and the downthrown side is the north.

A moderate (20º - 30º), southward dipping coal subcrop on the north side of the deposit.

Igneous activity is evidenced by the 137 m of horizontally-bedded basalt.

Eleven holes were drilled by Red Hill in 2006. Mining

The recommendation is for the coal deposit to be mined by open pit methods.

A mining contractor is to mine 250,000 tonnes (**t**) of product coal in 2011 and 1.1 million (**M**) t of product coal in 2011. It is assumed that the contractor will operate the owner's mining equipment in year 2011 on a fee basis. Mining is to be done by an owner-operated mining team starting in year 2012.

Contract mining will be completed using an 85 t backhoe loading 50 t capacity haul trucks. As this portion of mining will be near-surface the use of drilling and blasting is not anticipated. Use of the contractor will allow sufficient time to purchase, manufacture and ship the owner-operated mining fleet to site in 2011 for operation in 2012.

The proposed "owner-operated" mining methodology is to employ conventional drill and blast techniques, using a rotary drill capable of drilling the blast holes in a single pass. A high mining recovery is anticipated. Dilution and losses of 0.10 m and 0.25 m per contact or parting respectively have been factored into the recovered tonnage figures. Loading and hauling will use 11.5 cubic metre (**m^3**) front end loaders, with 90.9 t rigid frame dump trucks. Track dozers will be used to clean coal-waste interfaces and thus minimise the losses and dilution.

A fleet of support equipment has been included for dump and loading area maintenance, as well as considerable emphasis placed on the good construction and maintenance of the mine haul roads to ensure high productivity and equipment availability.

Emphasis will have to be placed on training of the local labour force for the unskilled and semi-skilled jobs. It is anticipated that the majority of the managerial, technical and skilled staff will be either ex-patriots or from other regions of Mongolia.

Sites adequate for the disposal of waste rock and a suitable stockpile area for the high ash coal exist within the property in the immediate area of the planned open pit.

The estimated reserve is shown in Table 1.1.

Table 1.1 Estimated Reserve Tonnages

Description	Amount
Low Ash Coal (kt) Product	20,724
High Ash Coal (kt) Stockpiled	720
Waste (BCM)	37,268
Stripping Ratio (BCM:t)	1.8
Ash Content (%)	11.3
Calorific Value (kcal/kg)	5,040
Moisture (%)	21.7
Mine Life (years)	10.7
Process Rate (kt/a)	2,000

Coal product tonnages and qualities stated in table 1.1 are stated on a Run-of-Mine (**ROM**) basis and take into account mining loss and rock dilution at coal/rock interfaces.

The total Mineral Reserve Estimate is 20.7 M proven t (**Mt**) of Product (Low Ash) Coal.

As there is no coal beneficiation to be undertaken, any high ash coal is to be stockpiled so that it will be available if a washplant is built in the future. In general the product coal is G3, G2, G1a, G1b, G1c and G1d. The “Mod” or M series of seams are high ash and are not recovered. Opportunity exists to recover these seams if a washplant is constructed at some point in the future.

The southern edge of the pit is defined by the location of the Zelter River plain. Construction of a capital intensive river diversion, water cut-off wall and flood containment berm will be required to prevent water inflow into the pit if the river valley is encroached by the pit limit.

1.3 ENVIRONMENTAL

Wardrop has not been requested to perform any evaluation or review of the environmental assessments or permits as part of this report.

However a detailed Environmental Impact Assessment has been completed and approved by the Mongolian Government in 2008 and an Annual Environmental Protection Plan for 2010 has also been approved by the Mongolian Ministry of Environmental Protection.

Prophecy has supplied Wardrop with details of additional environmental and mining permits approved by the Mongolian authorities. These include the Mine Plan Approval, Land Use Permission, Water Utilisation Permission, Emergency Response Plan, Border Zone Permission and Road Repair Permit.

An amount of US $2 M has been included in the financial evaluation for mine reclamation.

1.4 Cost Estimate

1.4.1 *Operating Cost*

The operating cost estimate is summarised in Table 1.2.

Table 1.2 Operating Cost Estimate

Area	Unit Cost (US $/ Product Coal)
Coal Mining	9.40
On-Site Coal Handling	0.35
Administration & Overhead	0.48
Total 10	**.23**

The above unit operating cost is the average for Life-of-Mine including contractor and owner-operated mining. Contractor costs include equipment lease costs.

1.4.2 *Capital*

Table 1.3 outlines the estimated initial project capital Cost by category. Mobile equipment fleet includes the main production equipment such as Loaders, Blasthole drills and Haulage trucks as well as support ancillary equipment. Site infrastructure costs include site earthworks, buildings, and services such as Water, electrical and sewage. Road transport includes road and bridge refurbishment and road haulage fleet. Project indirect cost includes EPCM, freight, equipment spares and first fills. Owners cost include land acquisition and head office costs.

Table 1.3 Capital; Initial Capital Summary

Area	Unit Cost (US $ M)
Mobile Equipment Fleet	32.3
Site Infrastructure	7.0
Project Indirect	6.4
Owners Cost	0.3
Road Transport	15.5
Reclamation	0.3
Subtotal	61.8
Working Capital	4.0
Contingency	3.9
Total	69.7

Sustaining capital is listed in table 1.4. Sustaining capital is for replacement of major mining equipment at the end of life. This includes Loaders, Haul Trucks, Dozers and Graders. An annual value of American Dollars (**US $**) 500,000 per year is applied for sustaining capital site infrastructure.

Table 1.4 Capital; Sustaining Capital Summary

Area	Unit Cost (US $ M)
Mobile Equipment Fleet	14.0
Site Infrastructure	4.5
Total 18	**.5**

1.5 FINANCIAL ANALYSIS

A financial evaluation of the Ulaan Ovoo Project was prepared by Wardrop based on a post-tax financial model. For the 10.7 year mine life the following pre-tax financial parameters were calculated:

- 25.5% Internal Rate of Return (**IRR**).
- 4.5 Years payback on US $ 85.9 M capital.
- US $ 71.0 M Net Present Value (**NPV**) at 10% discount value.

Sensitivity analyses were carried out to evaluate the project economics with plus 30%, minus 30% the base case coal price.

Table 1.5 Coal Price Scenarios

Scenario	Coal (US $ /t)
Minus 30%	28.0
Minus 20%	32.0
Minus 10%	36.0
Base Case	**40.0**
Plus 10%	44.0
Plus 20%	48.0
Plus 30%	52.0

The post-tax financial model was established on a 100% equity basis, excluding debt financing and loan interest charges. The financial outcomes have been tabulated for NPV, IRR and Payback of Capital. Discount rates of 10% were applied to all cases identified by coal price scenario. The results are presented in Table 1.6.

Table 1.6 Summary of Post-Tax NPV, IRR, and Payback

Scenario	NPV 10 (US $ M)	IRR (%)	Payback (Yrs)
Minus 30%	-62.28	-4.4	13.1
Minus 20%	-17.82	6.1	10.7
Minus 10%	26.58	15.8	7.0
Base Case	70.98	25.5	4.5
Plus 10%	115.38	35.7	3.6
Plus 20%	159.77	46.8	3.1
Plus 30%	204.17	59.2	2.7

1.6 CONCLUSIONS AND RECOMMENDATIONS

The financial evaluation indicates that the project is economically viable given the coal pricing assumption of US $ 40 per product tonne sold at the Russia/Mongolia border port of Naushki. The following actions are recommended as part of a Feasibility Study (**FS**):

- Sign coal contracts with end users or agents.
- Continue with additional coal marketing studies to determine alternate opportunities.
- Complete detailed engineering to prepare specifications for mobile equipment and site infrastructure
- Determine if the operation is to be owner operated or contract operated for life-of-mine

1.6.1 PROJECT RISKS AND MITIGATION

Coal contracts have not yet been signed for the project. Base coal pricing for this project reflects a realistic view of long term coal pricing. Major economic factors that impact long term thermal coal prices are difficult to predict accurately and may have a future negative impact.

The south edge of the final pit is adjacent to the Zelter River flood plain. Ground water flow in this region may or may not become problematic during the mining of the third phase of the pit. Contingency funding has been included in the capital to mitigate any future problems that may occur.

The project does not include a preparation plant. For this reason, high ash coal and partings will need to be separated in-pit. In order to meet product coal ash specifications care will need to be taken to identify and separate high ash units at an operational level. This activity can be enhanced through operator experience and training, daylight partings removal, constant sample collection and assaying and continuous supervision by the owner’s resource geologist/technician.

1.6.2 PROJECT OPPORTUNITIES

The focus of this study was for development of the low ash coal reserves in the form of a starter pit. Considerable work has been completed on identification of market opportunities and transportation costs since the Pre Feasibility Study was issued by Minarco in May 2009. Opportunity exists for extension of additional low ash reserves to the south with an expanded pit and a higher throughput rate. The larger pit will extend into the Zelter River flood plain and will require diversion of the north meander of the Zelter River. A river diversion, alluvial cut-off structure and flood plain berm will be required to prevent water inflow into this pit. It is recommended that a Preliminary Economic Analysis (**PEA**) be initiated to determine economic viability.

Opportunity exists to expand coal marketing opportunities into the eastern seaboard of Russia due to proximity of the project to the Trans-Siberian railway. Further study is required to determine if there is opportunity to increase coal demand, thereby creating the opportunity to reduce unit mining costs with higher mining throughput rates.

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GLOSSARY

Units of Measure

Above mean sea level ... amsl
Bank Cubic Metre ... BCM
British thermal unit ... BTU
British Thermal Units per pound ... BTU/lb
Centimetre ... cm
Cubic centimetre ... cm^3
Cubic metre ... m^3
Dead weight tonnes ... DWT
Degree ... °
Degrees Celsius ... °C
Dollar (American) ... US$

Dollar (American) per tonne .... US $/t
Dry metric ton .... dmt
Foot .... ft or '
Gram .... g
Grams per centimetre .... g/cm
Grams per cubic centimetre .... g/cm^3
Hectare (10,000 m^2) .... ha
Hour .... h
Inch .... "
Kilo (thousand) .... k
Kilocalories .... kcal
Kilocalories per kilogram .... kcal/kg
Kilogram .... kg
Kilograms per cubic metre .... kg/m^3
Kilograms per hour .... kg/h
Kilograms per square metre .... kg/m^2
Kilolitre .... kl
Kilometre .... km
Kilometre per hour .... km/h
Kilotonne .... kt
Kilotonne per year .... kt/a
Kilowatt .... kW
Kilowatt hour .... kWh
Litre L
Metre .... m
Metres per hour .... m/h
Metric ton (tonne) .... t
Microns .... µm
Millimetre .... mm
Million .... M
Million per year .... M/a
Million tonnes .... Mt
Million tonnes per year .... Mt/a
Minus .... -
Minute (plane angle) .... '
Minute (time) .... min
Mongolian Tugrik .... MNT
Number .... №
Per annum .... /a
Per Litre .... /L
Per tonne .... /t
Percent .... %
Pound(s) .... lb
Second (plane angle) .... "
Second (time) .... s
Specific gravity .... SG
Square centimetre .... cm^2
Square kilometre .... km^2
Square metre .... m^2
Thousand tonnes .... kt
Three Dimensional 3D
Three Dimensional Model 3DM
Tonne (1,000 kg) .... t
Tonnes per cubic metres .... t/m^3
Tonnes per day .... t/d
Tonnes per hour .... t/h
Tonnes per year .... t/a
Wet metric ton .... wmt
Year (annum) .... a

ABBREVIATIONS AND ACRONYMS

American Society for Testing and Materials	ASTM
Ammonium Nitrate and Fuel Oil	ANFO
And	&
Annual Environmental Protection Plan	AEPP
Ash	A
As received	ar
Behre Dolbear and Company Inc.	Behre Dolbear
Calorific Value	CV
Canadian Institute of Mining	CIM
Capital Costs	CAPEX
Coal Handling and Preparation Plant	CHPP
Company	Co.
Consensus Economic Energy and Metal Forecast Group	CEEMFG
Corporation	Corp.
East	E
Energy Metals Consensus Forecast	EMCF
Environmental Impact Assessment	EIA
Feasibility Study	FS
Fixed Carbon	FC
Free Swelling Index	FSI
Front End Loader	FEL
Geological Survey of Canada	GSC
Incorporated	Inc.
Internal Rate of Return	IRR
Joint Ore Resource Committee	JORC
Laboratory	Lab
Limited	Ltd.
Load-Haul-Dump	LHD
Log ASCII standard	LIS
Minarco-MineConsult	Minarco
Moisture and Ash Free	MAF
Mongolia Mid Asia International	MMAI
Mongolian University of Science and Technology, Mining Engineering School	MUST
National Instrument 43-101	NI 43-101
Net Present Value	NPV
Non-Acid Generating	NAG
North	N
Operation Costs	OPEX
Personal Protective Equipment	PPE
Polycrystalline Diamond	PCD
Pre-Feasibility Study	PFS
Preliminary Economic Assessment	PEA
Prophecy Resource Corp.	Prophecy
Red Hill Energy Inc.	Red Hill
Run-of-Mine	ROM
South	S
Specific Gravity	SG
Surface Moisture	SM
Total Moisture	TM
Total Sulphur	TS
Universal Transverse Mercator Coordinate System	UTM
Value Added Tax	VAT
Versus	vs.
Volatile Matter	VM
Wardrop Engineering Inc.	Wardrop
West	W

2.0 INTRODUCTION AND TERMS OF REFERENCE

Prophecy have retained Wardrop Engineering Inc. (**Wardrop**) to produce a National Instrument 43-101 (**NI 43-101**) Pre-Feasibility Study (**PFS**) Report of the resource estimate produced by Minarco-MineConsult (**Minarco**) in 2009 and to revise the economic assessment with the aim of issuing a reserve statement for the Ulaan Ovoo Property, an open pit coal mine, located in northern Mongolia.

The Property contains four coal seams located in a syncline, outcropping in the northern extent of the deposit and dipping towards the south. The property is located in the north of Mongolia, about 420 km north northwest of the capital city of Ulaanbaatar.

The review of the Ulaan Ovoo property was based on data and observations made during the site visit together with data from previous studies by Behre Dolbear and Company Inc. (**Behre Dolbear**) and Minarco and discussions with the geological staff from Red Hill, who were the previous owners of the Ulaan Ovoo property.

Wardrop is pleased to acknowledge the helpful cooperation of both Prophecy and Red Hill's management and personnel, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

The qualified persons responsible for the preparation of this NI 43-101 Technical Report and PFS are Brian Saul, P. Eng. (Mining) and Dr. Steve Krajewski, P. Geo., MSME (Resource Estimate Review). Dr. Krajewski visited the Ulaan Ovoo property on 21st to 27th March 2007 to review the site and hold meetings with Red Hill geological personnel to review historical data.

3.0 RELIANCE ON OTHER EXPERTS

3.1 BASIS OF REPORT – SECTIONS 4.0 TO 15.0

This report draws heavily on information contained in prior NI-43-101 reports prepared by Behre Dolbear (2006) and Minarco (2009) and on information conveyed at meetings with Mr. Urtnasan Dorling and Mr. Eric Robeck, Red Hill while making the site visit.

Information provided by Red Hill staff includes:

- Assumptions, conditions and qualifications as set forth in the report.
- Land (surface and mineral) ownership and exploration and mining licences.
- Drill hole records.
- Property history details.
- Sampling protocol details.
- Geological and mineralisation setting.
- Data, reports and opinions from prior owners and third-party entities.
- Coal and other assays from original assay records and reports.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Ulaan Ovoo coal deposit is located in the territory of Tushig soum (sub province) of Selenge aimag (province) in Northern Mongolia. It is 8 km W of the central village of Tushig soum and 17 km away from Mongolian-Russian border port Zelter (Figure 4.1).

Figure 4.1 Location of Ulaan Ovoo Coal Project

Figure courtesy of Minarco MineConsult

The deposit area covers an area of approximately 790 ha. Red Hill holds Ulaan Ovoo Property under mining license No 1231A, which covers an area of 213 ha and mining license 14657A (formerly exploration license No 5895X) with an area of 354 ha. The licences are for a term of 30 years with a 40-year extension option. In November 2006 Red Hill purchased 100% of the title and interest in six exploration licences – 6830X, 6831X, 6832X, 6834X, 6837X and 12170 - surrounding 1231A and 14657A (Figure 4.2).

Exploration licenses 6830X, 6834X and 6837X have been revoked.

Figure 4.2 Ulaan Ovoo Mining Licence, Exploration Licence Areas and Option Areas

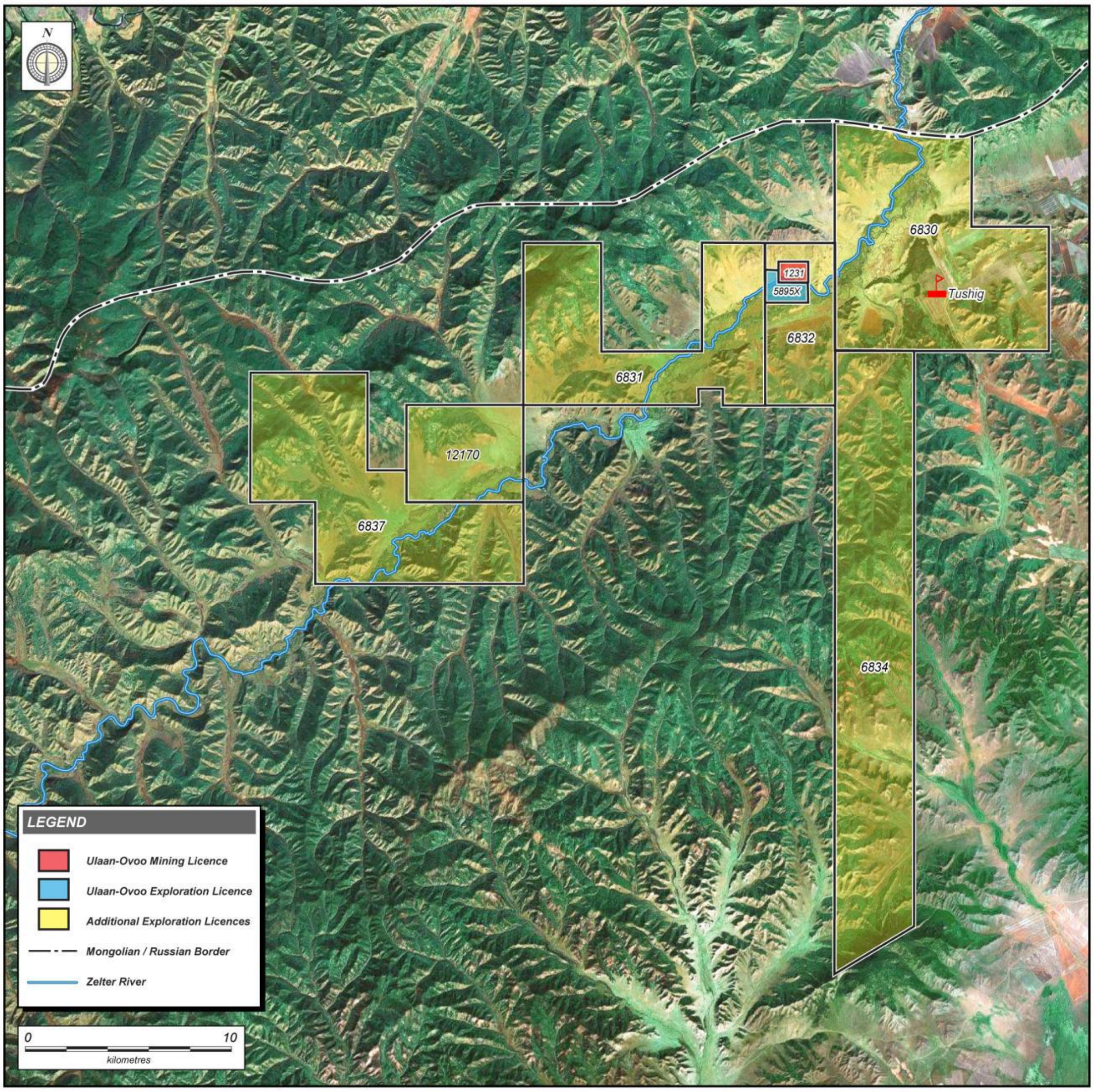


Figure courtesy of Minarco MineConsult

The Ulaan Ovoo licences have the following geographic coordinates (Table 4.1 and Table 4.2 Coordinates of Exploration Licence).

Table 4.1 Coordinates of Mining Licences

#	Licence №	Name of land	Size, hectare	Date of issue	Valid until/Expiry date	Coordinates of the corners of the licence area, UTM WGS-84
1	1231A	Ulaan-Ovoo	213.50	30/05/ 1998	30/05/2028 (for 30 years)	1. 104°58'38.04" 50°18'48.95" 2. 104°57' 6.05" 50°18'48.96" 3. 104°57' 6.05" 50°19'26.96" 4. 104°58'38.05" 50°19'26.95"
2	14657A	Ulaan-Ovoo	354.51	24/04/ 2009	24/04/2039 (for 30 years)	1. 104°57' 6.05" 50°19'11.96" 2. 104°57' 6.05" 50°18'48.96" 3. 104°58'38.04" 50°18'48.95" 4. 104°58'38.04" 50°18'11.97" 5. 104°56'26.03" 50°18'11.97" 6. 104°56'26.05" 50°19'11.96"

Table 4.2 Coordinates of Exploration Licence

#	License №	Name of land	Size, hectare	Date of issue	Valid until/Expiry date	Coordinates of the corners of the license area, UTM WGS-84
3	6831X	Tumurtei BH-13	2382.81	27/01/ 2004	27/01/2013	1. 104°56'26.03" 50°16'41.96" 2. 104°53'11.04" 50°16'41.96" 3. 104°53'11.04" 50°20' 1.97" 4. 104°56'26.03" 50°20' 1.97"
4	6832X	Tumurtei BH-17	2060.76	27/01/ 2004	27/01/2013	1. 105° 0' 1.11" 50°20' 1.99" 2. 105° 0' 1.09" 50°16'41.99" 3. 104°56'26.03" 50°16'41.96" 4. 104°56'26.03" 50°18'11.97" 5. 104°58'38.04" 50°18'11.97" 6. 104°58'38.05" 50°19'26.95" 7. 104°57' 6.05" 50°19'26.96" 8. 104°57' 6.05" 50°19'11.96" 9. 104°56'26.05" 50°19'11.96" 10. 104°56'26.05" 50°20' 1.97"

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 PROPERTY ACCESS

The Project site is accessible via paved highway, maintained double lane dirt road and then unmaintained road; or by railway followed by unmaintained road as shown in Figure 5.1. The various means of access are:

- **Access by road from Ulaanbaatar** (427 km) – Proceed northward from Ulaanbaatar via Altanbulag-Ulaanbaatar highway AO401 to the central village of Shaamar soum (sub-province) (300 km). Then, via a maintained dirt road, which connects Shaamar, Zuunburen, Tsagaannuur and Tushig soums (119 km). This segment of the trip includes crossings of the Orkhon, Selenge and Zelter Rivers by concrete bridges. The last segment of the trip is via a maintained dirt road from the central village of Tushig soum, to the deposit (8 km).
- **Access by railway** (498 km) – Take the Trans-Mongolian railroad to Shaamar Soum station from Ulaanbaatar (384 km) and travel by maintained dirt road to the deposit area as described above (114 km).
- **Access by road from Russia** (162 km) – Access to the project is via a 120 km concrete road from Galuutnuur village to Petropavlovsk village, then another 25 km on maintained dirt road to the border village of Zheltura port, then another 17 km on dirt road to the project site.
- **Access to market –** Ulaan Ovoo is 137 km from year-round Naushki border port and 12 km from Zeltura border port which is in the process of being reopened.

Figure 5.1 Access to Ulaan Ovoo Coal Deposit

Figure courtesy of Minarco MineConsult

Figure 5.2 Proposed Site Access

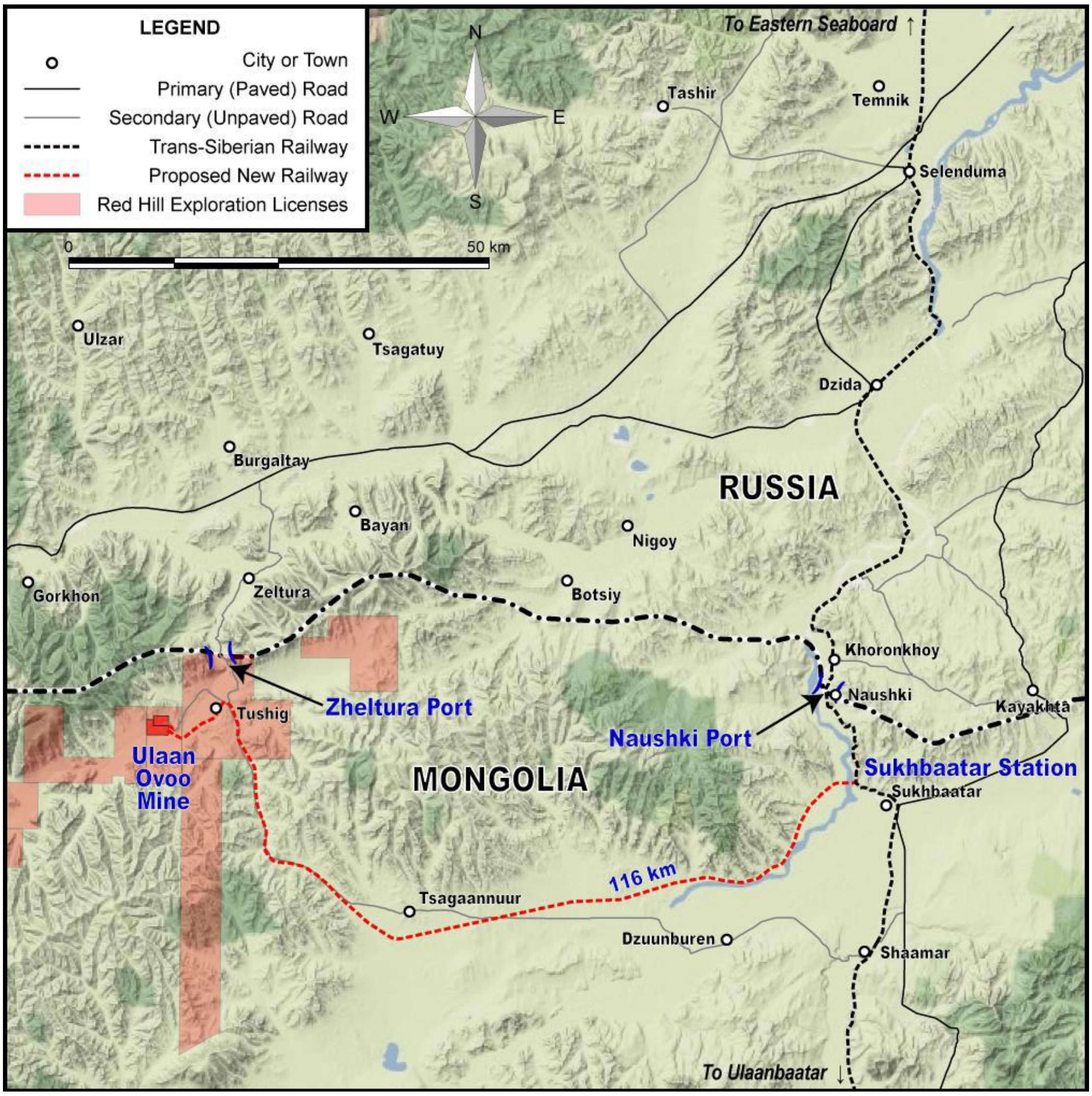


Figure courtesy of Minarco MineConsult

5.2 CLIMATE

The project has a sharply continental climate with predominately hot summers and cold winters. The area is hot and relatively rainy in summer, with highest temperatures of 35° to 40 degrees Celsius (°**C**) in June and July and cold in the winter, with lowest temperatures in the range of minus (-)35° to -40°C in December and January. Annual precipitation fluctuates between 100 millimetres (**mm**) and 500 mm and most (60% to 70%) of it falls as rain in August. Maximum snow depths may reach up to 2 m where drifted but averages 10 centimetres (**cm**) to 20 cm where not drifted. Wind usually blows from northwest to southeast with an average speed of 14 kilometres per hour (**km/h**) to 24 km/h.

5.3 LOCAL RESOURCES & REGIONAL INFRASTRUCTURE

Ulaan Ovoo deposit is located within the territory of Tushig soum (sub-province) of Selenge aimag (province) and the nearest settlement to the deposit is the soum's central village, also called Tushig, located approximately 7 km to the southeast of the project area. The soum borders the state of Buryatia of Russia to the N, Bugat soum of Bulgan aimag to the W and Tsagaannuur soum of Selenge aimag to the E and S. Tushig soum has a territory of 276 square kilometres (**km^2**) and a population of 7,500.

The central village of the sub-province is considered as remote and rural, but it is included in the central power distribution system, has an elementary, secondary and high school, a hospital, a non-permanent border port and relatively good infrastructure. The area supports cell phone-based communications. The nearest neighbouring soum centre is Tsagaannuur at a distance of 49 km and the nearest village is Petropavlovsk in Buryat state of Russia, located 42 km northeast of the project site. Residents of Tushig soum are mainly engaged in animal husbandry as well as wheat and vegetable farming. Future mining efforts can look to this community as a support centre, potential source of workers for the mine and a place to build housing for the workforce.

5.4 PHYSIOGRAPHY

Ulaan Ovoo coal deposit is situated in the Zelter River valley, which runs between the Zed and Buteel Mountain Ranges in Northern Mongolia. The river flows from southwest to northeast and exits northward into Russia at the Zheltura Border Crossing, 17 km northeast of the project area. Geographically, the district is included in a region having medium-sized mountains, the highest altitude being 1,800 m. The south half of the deposit underlies the flood plain of the Zelter River and the north half lies on the southern flank of a low hill to the north of and topographically above the flood plain. Surface elevations at the project site range from 764 m to 820 m above sea level.

Mountainous parts of the region have taiga-like forests of conifer and deciduous trees. The southern aspects of the hills in the area tend to be relatively treeless. Braided stream deposits covered with a mixture of small trees and bushes form the Zelter River valley flood plain. The north half of the coal deposit area is treeless and the south half is covered by willows and birch. Fertile soil is up to 4 m thick at the flood plain of the river valley and 20 cm to 30 cm on the adjacent hillsides (Figure 5.3).

Figure 5.3 Topographic Map of the Ulaan Ovoo Area

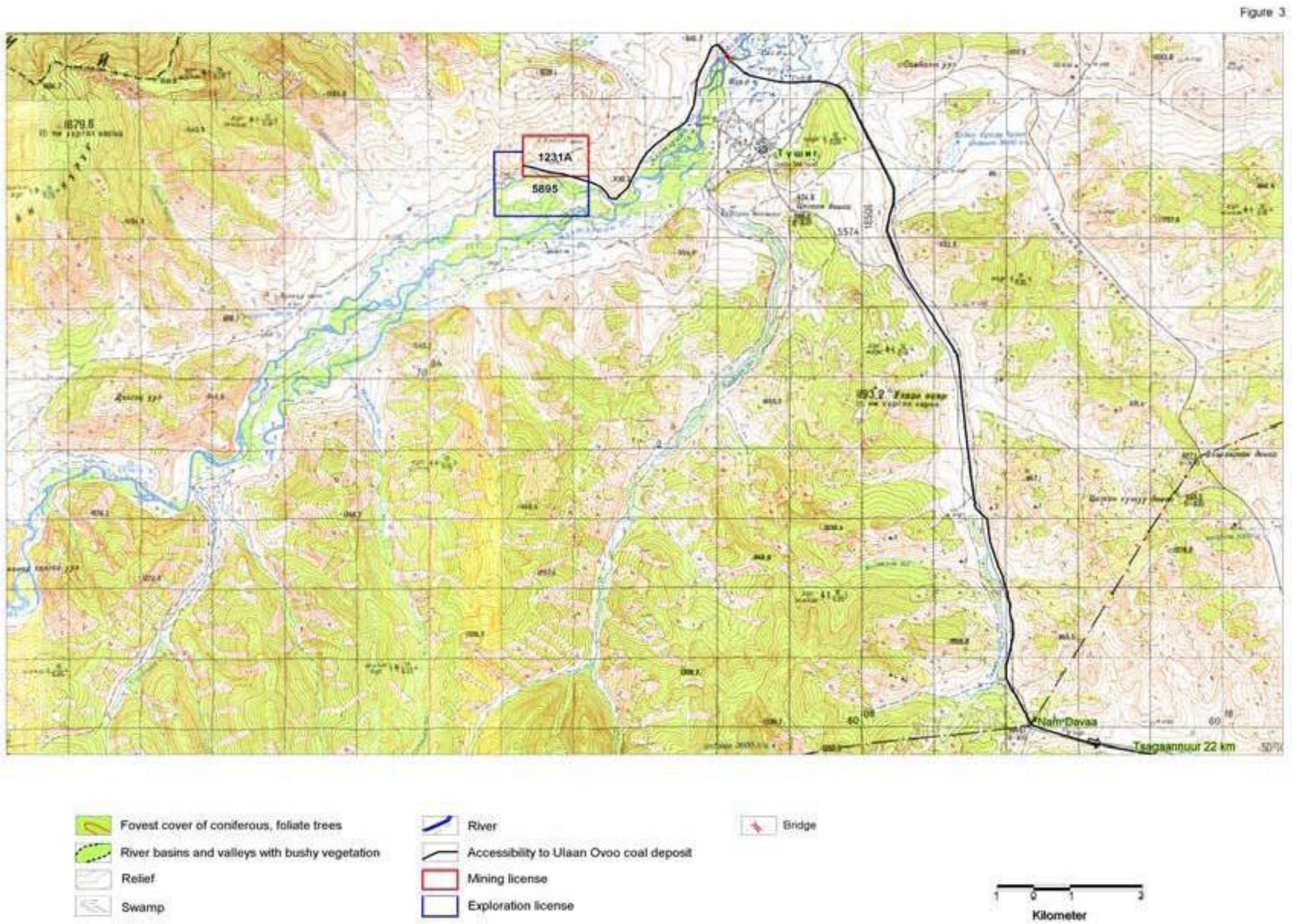


Figure courtesy of Minarco MineConsult

6.0 HISTORY

6.1 HISTORY OF PRIOR OWNERSHIP OF THE PROPERTY

Under the Mining law of Mongolia approved in 1994, Erdenet, a Mongolian-Russian state-owned joint venture, was granted Mining License Number (**№**) 166 for the Ulaan Ovoo Property in Tushig soum, Selenge aimag, on 2nd November 1995, by the Ministry of Energy, Geology and Mining, for a term of 10 years. The Russian metric coordinates are listed in Table 6.1 Russian Mining Licence 166 Co-ordinates

Table 6.1 Russian Mining Licence 166 Co-ordinates

	X	Y
1	518500	498900
2	498900	499000
3	512485	492000
4	576345	491900

After the enactment of the new Minerals Law of Mongolia in July 1997, the Director of the office of Geological and Mining Cadastre granted a revised mining licence certificate No 1231A to the Ulaan Ovoo Property to Erdenet, the Mongolian-Russian joint venture.

Under a decision № 880 (2002) the director of the Office of Geological and Mining Cadastre and with accordance to Minerals law of Mongolia, the Mining Licence № 1231A was then transferred to a Mongolian-Chinese joint venture company called Mongolia Mid Asia International (**MMAI**) on 14th December 2002.

MMAI was restructured into a 100% Mongolian-owned Company in 2005. The State Registration Office registered the company and the mining licence of the Ulaan Ovoo Property was renewed and granted to the newly restructured MMAI in compliance with the Minerals Law of Mongolia on 5th June 2005, for a term of 55 years.

Exploration Licence № 5895X, covering an area adjacent to the licence № 1231A, was granted by the director of the Office of Geological and Mining Cadastre to MMAI to be an additional portion of Ulaan-Ovoo Property on 6th June 2003.

An option to purchase these properties was entered into between UGL Enterprises LLC, a fully-owned Mongolian subsidiary company of Red Hill, and Ochir LLC, the parent company of Mongolian MMAI, in November 2005.

In November 2005, Red Hill purchased both licences and in November 2006, purchased the 6 exploration licence areas surrounding the deposit.

In May 2010 Red Hill merged with Prophecy who assumed 100% control of the Ulaan Ovoo Coal Deposit and any directly linked assets previously owned and controlled by Red Hill.

6.2 History of Geological Exploration Work

The first official geological survey work was undertaken by the Russians in 1974-1975. The fact that the Ulaan Ovoo deposit had coal was known before this survey because a ravine adjacent to the deposit had been traditionally called the 'coaly ravine', this study recommended further coal exploration work and drilling.

Between 1979 and 1982, the Russians conducted geological mapping studies in the Selenge and Bulgan aimags. This work integrated stratigraphic, magmatic and regional tectonic data around the Ulaan Ovoo deposit and resulted in the first 1:200,000-scale geological map of the area. The exploration work included mapping, trenching and drilling undertaken in 1979.

In-fill drilling and coring was conducted in 1993 through to 1995.

The results of this Exploration Work are more fully described in Section 10, Exploration.

In April 2006, a programme to confirm previous exploration was undertaken by Red Hill. The previous drilling was conducted under the Russian system and there was some question as to whether or not the drilling adequately portrayed the deposit. In all, 11 holes were drilled under the aegis of this new programme.

6.3 History of Production

At the request of the authorities of Tushig and Tsagaannuur soums, a small open pit in the sooty (weathered) coal has been exploited since 1998. The open pit or strip mine is 70 m long, 30 m to 35 m wide. The highwall is 5.3 m to 5.6 m high, average mining output 1,500 tonnes per year (**t/a**) to 2,000 t/a. The mining is extremely simple as the sooty coal is loaded by hand shovel onto the consumer's truck and hauled from the site.

The combined consumption of the two soum centres is 1,500 t/a to 2,000 t/a, judging by the extent of the current exploitation. At the beginning of October 2005, the current licence holder, MMAI, signed a contract with the local authority providing that the payment for the coal mined be credited to an environmental protection fund in an account created by the Governor of the Tushig soum. In accordance with the Mineral Law of Mongolia, MMAI prepared a mine plan. Red Hill has paid the Mongolian Government the corresponding mining licence fees since 2006.

In August 2008, approximately 25,000 t of partially oxidised coal were removed from the open pit to a maximum depth of 15 m, as part of the preparation work required to take a bulk sample. The coal was separated from the overburden and stockpiled south of the pit for easy access. The now much larger pit has been closed to vehicle access and it is expected that the local consumers will have enough stockpiled coal to supply them for several years.

6.4 Pre - 2010 Resource Estimates

Historically the following six resource estimates have been completed on the Ulaan Ovoo coal deposit:

6.4.1 RUSSIAN ESTIMATE

A Russian estimate completed in 1979. This study reported that the inferred coal resource was 42.4 Mt which included Russian resource categories A+B+C1+C2 and 23.6 Mt in categories A+B+C1.

In the Russian system, "mineable reserves" are considered explored well enough to begin mining and are classified as:

- Explored (classes A, B, and C1).
- Evaluated (class C2).
- Prognostic (classes P1, P2 and P3) or potential reserves.

It should be emphasised that the reported resource numbers are of limited use since economic considerations were rarely examined under the communist system and considered non-compliant under current NI-43-101 guidelines. This historic estimate has not been verified by a Competent Person familiar with older Russian resource classification systems.

Table 6.2 Summary of 1979, 1992-5 and 2006 Coal Chemical Analysis Data for Samples from All Drill Holes

A – All Holes

Seam	Specific gravity g/cc				Moisture % ad				Residual moisture %				Total moisture %				Ash % (as received)			
	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean
G3	36	1.31	1.47	1.36	7	6.38	15.18	10.02	7	7.85	14.9	11.78	36	4.25	26.97	10.49	36	6.11	32.7	12.33
G2	40	1.31	1.48	1.36	7	4.31	15.24	8.75	7	7.85	13.45	11.64	40	3.42	26.64	9.45	40	6.45	33.9	13.18
G1D	15	1.33	1.64	1.4	5	4.79	13.45	7.83	5	7.71	12.05	9.79	15	3.9	21.96	10.44	15	8.59	46.78	20.12
G1C	18	1.33	1.61	1.38	6	3.5	10.6	7.2	6	9.13	12.98	10.71	18	2.7	18.75	9.79	18	9.44	37	17.25
G1B	11	1.36	1.58	1.4	3	4.45	10.34	7.17	3	8.52	12.59	9.93	11	2.6	21.64	9.85	11	5	36	18.77
G	11	1.27	1.38	1.35	3	7.55	16.54	11.68	3	6.93	12.49	9.75	11	3.61	26.96	9.76	11	4.26	14.46	9.04
G1	0	-	-	-	0	-	-	-	0	-	-	-	14	3.2	11.88	6.36	14	4.8	26.63	12.58
G1A	11	1.36	1.65	1.43	5	3.9	8.2	6.24	5	9.22	11.31	10.58	11	2.4	18.57	10.94	11	9	39.64	22.48
M4	6	1.3	1.74	1.43	3	5.85	10.03	7.69	3	5.67	9.66	7.87	6	3.76	17.48	10.13	6	6.51	51.63	21.52
M3	7	1.36	1.5	1.41	4	6.24	9.11	7.67	4	6.13	10.73	8.39	6	6.16	17.3	12.69	6	10.16	25.29	19.18
M2	8	1.31	1.46	1.37	5	3.78	10.35	7.72	5	5.42	12.58	9.87	7	3.39	18.73	13.29	7	7.45	34.63	16.3
M	8	1.36	1.44	1.37	2	6.95	13.85	10.4	2	6.52	11.88	9.2	8	1.41	19.46	9.25	8	6.11	35.67	17.36
M1	6	1.36	1.89	1.53	5	3.27	9.35	6.74	5	3.46	11.27	6.93	6	2.38	14.64	11.45	6	15.87	65.6	37.62
ERT	4	1.36	1.48	1.44	3	4.91	7.12	5.92	3	7.87	10.61	9.18	4	6.2	14.99	12.47	4	19.66	32.14	26.08
GUN	2	1.36	1.38	1.37	1	14.04	14.04	14.04	1	5.88	5.88	5.88	2	1.95	19.1	10.53	2	21.95	74.24	48.09

Seam	Volatile matter % (as received)				Fixed carbon % (as received)				Total Sulphur % (as received)				Calorific value BTU/lb (as received)				Calorific value BTU/lb (MAF)				Free Swell index			
	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean
G3	30	26.76	56.44	40.33	30	9	49.12	36.12	30	0.13	0.71	0.31	30	7469	14385	11363	30	10972	18915	14823	7	0.1	1.1	0.5
G2	36	24.6	62.53	40.08	36	8.56	50.76	36.63	34	0.12	0.62	0.34	36	7563	14500	11569	36	10675	22252	15067	7	0	1.3	0.5
G1D	15	18.08	58.67	38.32	15	16.34	43.4	31.12	15	0.18	0.62	0.36	15	5162	14373	11437	15	13063	20093	16262	5	0	1.3	0.4
G1C	16	24.41	58.13	38.46	16	16.18	44.1	33.6	16	0.22	0.58	0.36	16	6301	14187	11288	16	12704	18331	15505	6	0	1.5	0.7
G1B	11	22.29	55.9	37.99	11	21.68	47.3	33.39	11	0.22	0.65	0.43	11	6672	14490	11755	11	13024	19671	16271	3	0	0.5	0.2
G	11	29.05	44.09	38.36	11	36.39	50.8	43.32	11	0.18	0.5	0.31	11	9405	14718	12209	11	13380	16502	15031	3	0.6	1.3	1
G1	12	35.13	59.02	45.34	12	10.25	52.44	35.55	12	0.16	0.65	0.34	12	7452	14135	12548	12	10787	18521	15519	0	-	-	-
G1A	11	22.21	56.68	34.04	11	22.59	44.4	32.53	11	0.23	0.6	0.38	11	5803	14724	10833	11	12411	21221	15901	5	0	1.5	0.5
M4	6	17.65	54.61	33.28	6	18.28	46.4	35.08	6	0.21	1.03	0.56	6	4546	13666	10474	6	12651	18538	15044	3	0	2	0.8
M3	6	26.15	55.27	33.11	6	21.54	46.98	35.02	6	0.16	1.12	0.49	6	8028	12704	9810	6	13181	15835	14253	4	0.3	1.1	0.7
M2	7	26.65	34.09	29.06	7	35.29	53.16	41.35	7	0.23	0.62	0.42	7	8807	12859	10280	7	12824	20732	14717	5	0.4	1.5	1
M	8	25.47	77.86	45.3	8	11.51	41.1	28.09	7	0.22	1.07	0.58	8	7752	14094	11802	8	12179	17905	15547	2	0.8	1.5	1.2
M1	5	17.57	28.42	24.01	5	12.55	41.54	30.71	5	0.23	0.44	0.36	5	3456	9728	7384	5	11513	13905	13238	5	0	1	0.6
ERT	4	23.23	46.4	31.28	4	17.1	37.14	30.17	4	0.4	0.56	0.49	4	7329	14215	9730	4	13142	22386	15773	3	0.5	1	0.7
GUN	2	26.22	59.52	42.87	2	-35.71*	32.73	-1.49	1	0.39	0.39	0.39	1	8298	8298	8298	1	14075	14075	14075	1	1	1	1

Table 6.3 Summary of Coal Chemical Analysis Data for Samples from 2006 Drill Holes

B – 2006 Holes

Seam	Specific gravity g/cc				Moisture % ad				Residual moisture %				Total moisture %				Ash % (as received)			
	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean
G3	7	1.31	1.47	1.37	7	6.38	15.18	10.02	7	7.85	14.9	11.78	7	16.58	26.97	20.62	7	6.9	23.26	12.34
G2	7	1.31	1.48	1.38	7	4.31	15.24	8.75	7	7.85	13.45	11.64	7	15.24	26.64	19.37	7	7.57	27.91	15.75
G1D	5	1.33	1.64	1.47	5	4.79	13.45	7.83	5	7.71	12.05	9.79	5	14.59	21.96	16.86	5	9.46	46.78	26.56
G1C	6	1.33	1.61	1.42	6	3.5	10.6	7.2	6	9.13	12.98	10.71	6	13.67	18.75	17.16	6	9.44	37	19.74
G1B	3	1.36	1.58	1.49	3	4.45	10.34	7.17	3	8.52	12.59	9.93	3	12.75	21.64	16.35	3	14.72	36	27.79
G	3	1.27	1.38	1.32	3	7.55	16.54	11.68	3	6.93	12.49	9.75	3	13.96	26.96	20.2	3	4.26	11.2	7.54
G1	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
G1A	5	1.39	1.65	1.51	5	3.9	8.2	6.24	5	9.22	11.31	10.58	5	14.1	18.57	16.17	5	19.11	39.64	28.28
M4	3	1.3	1.74	1.5	3	5.85	10.03	7.69	3	5.67	9.66	7.87	3	12.44	17.48	14.95	3	6.51	51.63	27.69
M3	4	1.4	1.5	1.45	4	6.24	9.11	7.67	4	6.13	10.73	8.39	4	14.22	17.3	15.43	4	20.5	25.29	22.5
M2	5	1.31	1.46	1.38	5	3.78	10.35	7.72	5	5.42	12.58	9.87	5	14.41	18.73	16.87	5	8.45	21.25	14.4
M	2	1.38	1.44	1.41	2	6.95	13.85	10.4	2	6.52	11.88	9.2	2	18.01	19.46	18.73	2	15.1	24.11	19.6
M1	5	1.38	1.89	1.56	5	3.27	9.35	6.74	5	3.46	11.27	6.93	5	10.89	14.64	13.26	5	15.87	58.99	32.02
ERT	3	1.45	1.48	1.46	3	4.91	7.12	5.92	3	7.87	10.61	9.18	3	14.27	14.99	14.56	3	19.66	32.14	24.68
GUN	1	1.38	1.38	1.38	1	14.04	14.04	14.04	1	5.88	5.88	5.88	1	19.1	19.1	19.1	1	21.95	21.95	21.95

Seam	Volatile matter % (as received)				Fixed carbon % (as received)				Total Sulphur % (as received)				Calorific value BTU/lb (as received)				Calorific value BTU/lb (MAF)				Free Swell index			
	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean	No.	Min	Max	Mean
G3	7	26.76	33.89	29.76	7	29.73	42.62	37.28	7	0.23	0.71	0.34	7	7469	10460	9037	7	12934	13678	13373	7	0.1	1.1	0.5
G2	7	24.6	34.33	27.55	7	32.25	41.81	37.32	7	0.26	0.59	0.39	7	7668	10337	8835	7	13366	13872	13591	7	0	1.3	0.5
G1D	5	18.08	31.13	24.78	5	20.43	43.14	31.79	5	0.28	0.48	0.39	5	5162	10311	7669	5	13063	13879	13509	5	0	1.3	0.4
G1C	6	24.41	31.39	27.49	6	24.91	43.33	35.6	6	0.33	0.58	0.43	6	6301	10398	8571	6	12704	13916	13506	6	0	1.5	0.7
G1B	3	22.29	26.83	25.09	3	27.05	37.5	30.77	3	0.22	0.63	0.47	3	6672	8711	7498	3	13024	13671	13405	3	0	0.5	0.2
G	3	29.05	32.09	30.73	3	39.73	42.75	41.53	3	0.25	0.5	0.41	3	9405	10229	9894	3	13665	13716	13685	3	0.6	1.3	1
G1	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
G1A	5	22.21	28.16	25.21	5	22.84	37.96	30.34	5	0.23	0.6	0.39	5	5803	9173	7353	5	12411	13874	13147	5	0	1.5	0.5
M4	3	17.65	30.24	24.63	3	18.28	45.77	32.73	3	0.21	1.02	0.6	3	4546	10710	7830	3	12651	14091	13479	3	0	2	0.8
M3	4	26.15	27.3	26.67	4	33.2	38.59	35.41	4	0.38	0.44	0.41	4	8028	9008	8497	4	13181	13819	13627	4	0.3	1.1	0.7
M2	5	26.65	30.58	28.53	5	37.2	42.73	40.2	5	0.36	0.51	0.42	5	8807	10321	9583	5	13604	14078	13892	5	0.4	1.5	1
M	2	25.47	27.84	26.65	2	30.96	39.06	35.01	2	0.73	1.07	0.9	2	7752	9201	8476	2	13740	13747	13743	2	0.8	1.5	1.2
M1	5	17.57	28.42	24.01	5	12.55	41.54	30.71	5	0.23	0.44	0.36	5	3456	9728	7384	5	11513	13905	13238	5	0	1	0.6
ERT	3	23.23	29.83	26.23	3	30.2	37.14	34.53	3	0.4	0.56	0.48	3	7329	8696	8236	3	13142	13846	13568	3	0.5	1	0.7
GUN	1	26.22	26.22	26.22	1	32.73	32.73	32.73	1	0.39	0.39	0.39	1	8298	8298	8298	1	14075	14075	14075	1	1	1	1

Coal analyses completed by Russian and Mongolian laboratories resulted in the coal being classified as:

- Hard coal class D.
- An average ash (**A**) content of 11.2%.
- A produced moisture content of 13.4%.
- A calorific value of 7,370 kilocalories per kilogram (**kcal/kg**).
- A sulphur content of 0.29%.

Coal-bearing strata were reported to occur at depths between 26 m and 115 m.

6.4.2 JOINT RUSSIAN-MONGOLIAN ESTIMATE

A joint Russian-Mongolian estimate, completed in 1995. This study reported 78.2 Mt in Russian resource categories A+B+C1+C2, 50.2 Mt in categories A+B+C1 and 0.81 Mt of sooty coal in resource categories A+B. The study also reported that another 51.8 Mt of coal was present in the southern part of the deposit. The resource numbers increased due to additional infill drilling that occurred between 1992 and 1995. It should again be emphasised that these numbers are non-compliant under current NI 43-101 criteria.

6.4.3 MONGOLROSTSVETMET CORPORATION ESTIMATE

A study completed by Mongolrostsvetmet Corporation in 2001. This study focused on evaluating whether 0.6 Mt to 1.0 Mt of coal per year could be produced from the deposit and results showed that the production could be implemented. This study would be the equivalent of today's "Pre-Feasibility Study" but, it should be again noted that the results are non-compliant under current NI 43-101 criteria.

6.4.4 MONGOLIAN UNIVERSITY ESTIMATE

A study completed by the Mongolian University of Science and Technology, Mining Engineering School (**MUST**) in 2004. This study evaluated the possibility of producing 6 Million tonnes per year (**Mt/a**) and concluded that the northern part of the deposit had a 13 year mine life. The study also identified groundwater problems in the southern part of the deposit, but reported that the problems could be overcome and that part of the deposit could add an additional 22 years of mine life. Calorific values of the coal were reported to exceed those of other coal suppliers in Mongolia and identified potential markets for the coal in the Russian Federation, Republic of Korea, People's Republic of China, Japan and Mongolia. The report also included capital and operating costs for a 6 Mt/a mine, but property owners were not financially able to fund the development and sold the property. This study would be the equivalent of today's "Feasibility Study"; but, it would not meet the criteria standards set by world financial institutions and did not evaluate current environmental issues.

6.4.5 BEHRE DOLBEAR SCOPING STUDY

A Scoping Study completed by Behre Dolbear in 2006. This study consisted of:

- Using a computer and software to evaluate reserves. Software used for this study was Golden Software's Surfer 8.
- The deposit was modelled by developing grids for:
    - Ground surface topography. Contours from topographic maps developed in the 1979 and 1992-95 exploration programmes were digitised.
    - Bottom structure grid of the bottom of the stratigraphically lowest coal seam.
    - Projected outcrop from the intersection of the surface topography and seam bottom structure.
    - Drill hole locations from field surveyed collar locations.
    - Thickness grid of total coal thickness. The thickness grid was converted to in-place tonnage using a bulk density of 1.46 grams per cubic centimetre (**g/cm^3**).

A set of classification polygons were overlain over the grid to classify the resource as follows:

- Measured coal resources were within polygons within 500 m of a measurement point.
- Indicated coal resources were within polygons between 500 m and 1,000 m of a measurement point.

Behre Dolbear reported that their methodology was compliant with the Joint Ore Resource Committee (**JORC**) method of coal resource as stipulated in the Australian Code for Reporting Mineral Resources and Ore Reserves of September 1999 and the Proposed Revisions dated June 2004.

Behre Dolbear's reported Ulaan Ovoo coal resource is shown in Table 6.4

Table 6.4 Behre Dolbear Reported Coal Resource for Ulaan Ovoo

Coal Resource by Category	Mt
Measured Coal Resource	174.5
Indicated Coal Resource	34.3
Total Demonstrated Coal Resource	208.8

Behre Dolbear noted that the deposit's projected inferred resource was 35.9 Mt.

Data used to develop the gridded resource model included using the 66 drill holes from the 1979 and 1992-1995 exploration programmes and the 11 drill holes from the 2006 drilling programme.

The report did not include information about the setup of the gridded model, i.e., grid origin coordinates, grid cell size and number of grid cells in X and Y.

The report included the following set of isopleth maps:

- Surface topography.
- Depth to base of coal.
- Total coal thickness.
- Overburden Thickness.
- Overburden and parting thickness.
- In-situ stripping ratio.

Digital grid and graphic files were not available for reported data.

Finally, the resource data was used to develop a mine plan at scoping study level.

6.4.6 MINARCO PRE-FEASIBILITY STUDY

A PFS completed by Minarco in 2009. This study consisted of:

- Calculating coal resource data using software designed to geologically model stratigraphic deposits.
- Developing a Preliminary Mine Plan and corresponding economics for developing a 6 Mt/a surface coal mine.

Steps in modelling the coal resource included loading the following data into Mincom's Minescape Stratmodel software:

- Drill hole location data from Excel spreadsheets, AutoCAD drawing and Minex ASCII files. Drill hole data used included data for 66 holes from historic exploration and in-fill drilling programmes, 8 holes which did not contain coal intersections and 10 of the 11 drill holes in the 2006 drilling programme.
- Lithological data from Excel spreadsheets and Minex ASCII files. The data was derived from core description logs.
- Alluvium/colluvium data from Excel spreadsheets. The data was derived from core description logs.
- Coal seam lab analysis data from Excel spreadsheets. From discussions with Red Hill's staff, it was concluded that only chemical analysis data from the 2006 drill holes would be used. More specifically, Red Hill's staff recommended that only the ash, sulphur and specific gravity (density) data were reliable and that calorific value data were not reliable. The reason given was the low core recovery in the 1979 and 1992-1995 drilling programmes.

To test the reliability of the lab data, two cross plots (Figure 6.1and Figure 6.2) of ash content (% as received) verses calorific value (kcal/kg) were constructed. Cross Plot A showed the distribution for samples from all historic drill holes and Cross Plot B showed only the distribution for samples from the 2006 drill holes.

Cross Plot A shows a scattered data distribution whereas Cross Plot B shows the expected correlation between graphed variables, i.e., as ash content increases calorific value decreases. Because of the scattered relationship in Cross Plot A, it was decided to only use analysis data from the 2006 drill hole samples.

Table 6.2 and Table 6.3 summarise chemical analysis data from the 1979, 1992-1995 and 2006 drilling programmes.

- Topography data supplied by Red Hill's staff in an ASCII grid file and as an AutoCAD drawing file. The cell size for the grid was 5 m. Comparison of the maps from both sets of data showed no difference.
- Coal seam nomenclature classification data from Excel spreadsheets. Table 11.1 summarises the coal seam nomenclature used and also presents a thickness summary for coal seams and partings from the 2006 drill holes.

Figure 6.1 Cross Plot of Ash Content versus Calorific Value for All Drill Hole Coal Samples

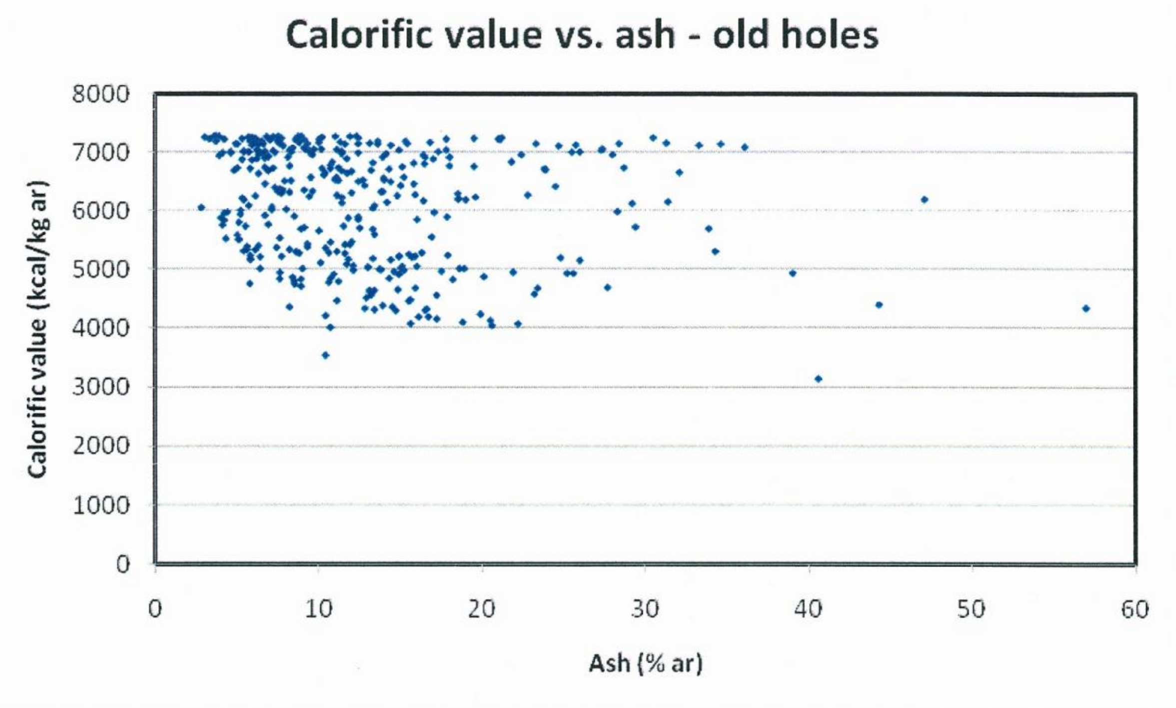
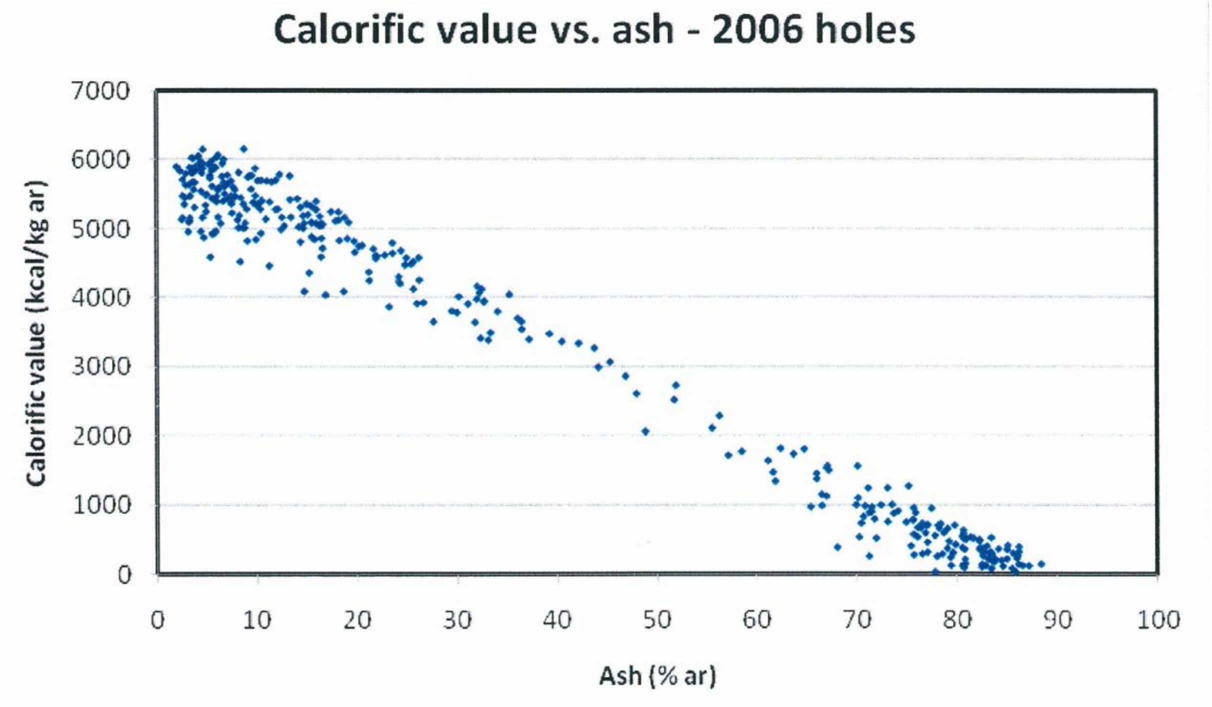


Figure 6.2 **Cross plot of Ash Content versus Calorific Value for Coal Samples from the 2006 Drill Holes**



The following parameters were adopted as modelling rules:

Data schema	Redhill
Topography model	topo
Topographic model cell size	5 m
Geology model cell size	25 m
Thickness interpolator	planar
Surface interpolator	FEM
Parting modelled	yes
Conformable sequences	Weathered, fresh
Upper mining limit	alluvium
Control points	to control subcrop
Constraint file	no
Mask polygons	burn zones, eastern margin limit
Faults	central, east, south and west faults
Modelling method	parent/child
Quality models	raw
Quality interpolator	inverse distance squared
Model type	table

Note: Oxidised coal depth data, i.e., depth of weathering, was not recorded when drill core was being logged.

- Establishing resource classification guidelines as follows:
  - **Deposit type** – Moderate geology which means that the coal deposit:
    - Has experienced some extent by tectonic deformation.
    - Is characterised by broad open folds.
    - Has bedding dips less than 30º.
    - Is faulted with displacements less than 10 m.
  - **Measured resource –** Distance from nearest data point 0 m to 450 m. This category is used to estimate coal quality and quantity variables with a high degree of confidence. The high confidence level means that the data can be used to develop detailed mine plans. Also the data can be used to generate mining and beneficiation costs and develop wash plant yields and quality specifications can be defined.
  - **Indicated resource –** Distance from nearest data point 450 m to 900 m. This category of coal resource is used to estimate coal quality and quantity variables with a reasonable degree of confidence. This level of confidence allows for the generation of mine plans, but not economic cost parameters.
  - **Inferred resource** – Distance from nearest data point 900 m to 2,400 m. This category of coal resource cannot be used to generate mine plans.
  - **Data point** – Points of data observation which can include: surface or underground exposures; drill hole core; e-logs and drill hole cuttings in non-cored holes.

These guidelines were derived from the Canadian Institute of Mining (**CIM**) as detailed in the Geological Survey of Canada Paper 88-21 and the Australian JORC Code and the Australian Guidelines for Estimating and Reporting of Inventory Coal: Coal Resources and Reserves. These guidelines reflect best industry practices.

Minarco reported Ulaan Ovoo coal resource consisted of 193.6 Mt. This number includes measured and indicated resource and is 7% less than that reported in Behre Dolbear 2006 report. It was concluded that the difference is not significant and is due to differences in the geology model and modelling methods used.

Wardrop agrees with this conclusion.

7.0 GEOLOGICAL SETTING

7.1 REGIONAL GEOLOGY

The stratigraphy in the area consists of basement rocks of mid Cambrian to lower Ordovician greenstone altered metamorphic schist. These are, in turn, overlain by lower Permian-aged volcanogenic rock of the Hanui series and mid to upper Jurassic coal-bearing sediments of the Sharyn Gol formation. Quaternary alluvial and colluvial sediments cover the river bottom and hillsides.

The Ulaan Ovoo coal deposit belongs to the Orkhon-Selenge coal-bearing district and is situated in the mid to upper Jurassic-age Zelter coal basin. Exploration between 1995 and 1997 suggested that the Zelter coal basin hosts five small synclines that have the potential to host coal-bearing sediments; Guramsan, Huldaa River, Ulaan Ovoo, Tushig and Hujir (Figure 7.1). These sedimentary basins are estimated to cover a total of 170 km^2.

A preliminary geological analysis of these basins was made in 2006. Field reconnaissance demonstrated that three of the five potential coal basins show potential for hosting coal. However, mapping and drilling to date is insufficient to quantify any coal resources in these areas. Figure 7.1 shows the approximate location of these five small basins and identifies the ones with potential for coal-bearing sediments.

Figure 7.1 Coal basins in the Ulaan Ovoo area

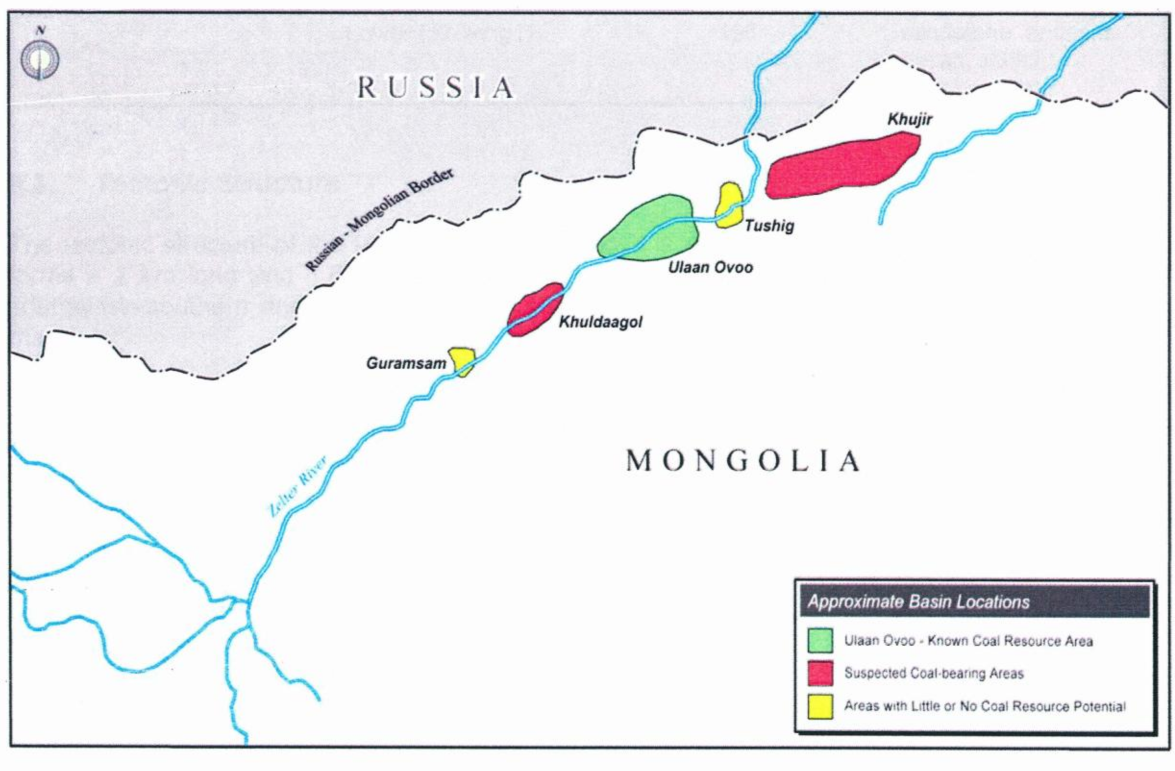


Figure courtesy of Minarco MineConsult

7.2 LOCAL GEOLOGY

Strata within the Ulaan Ovoo coal deposit comprise mid and upper Jurassic coal-bearing sediments of the Sharyn Gol Formation. This Formation is composed of continentally derived tuffaceous-sandstone, tuffaceous-conglomerate, conglomerate, sandstone, siltstone, mudstone and coal. The coal has burned at its northern margin to form a basalt-like red clinker, hence the name Ulaan Ovoo or "Red Hill".

Sediments of the Sharyn Gol Formation are not well exposed and the stratigraphic section is based on drill core materials from Ulaan Ovoo deposit. The thickness of the formation is estimated to be 520 m.

In terms of its lithological characteristics, this formation is divided into three structural members: upper, mid and lower, of which only the middle member contains coal (

Table 7.1).

Table 7.1 Stratigraphy of Sharyn Gol Formation at Ulaan Ovoo Coal Deposit

Formation	Member	Member Thickness (m)	Rock Description
Sharyn Gol	Upper (J2-3chg3)	140	Shale with ash-like grey colour, low grade oil shale, medium grained sandstone.
	Mid (J2-3chg2)	185	Sediments ranging from shale through conglomerate, coal and carbonaceous shale.
	Lower (J2-3chg1)	195	Tuffaceous conglomerate, tuffaceous sandstone, andesite-basalt, schist, conglomerate.

Figure 7.2 General Geological Map of the Ulaan Ovoo Coal Deposit Area

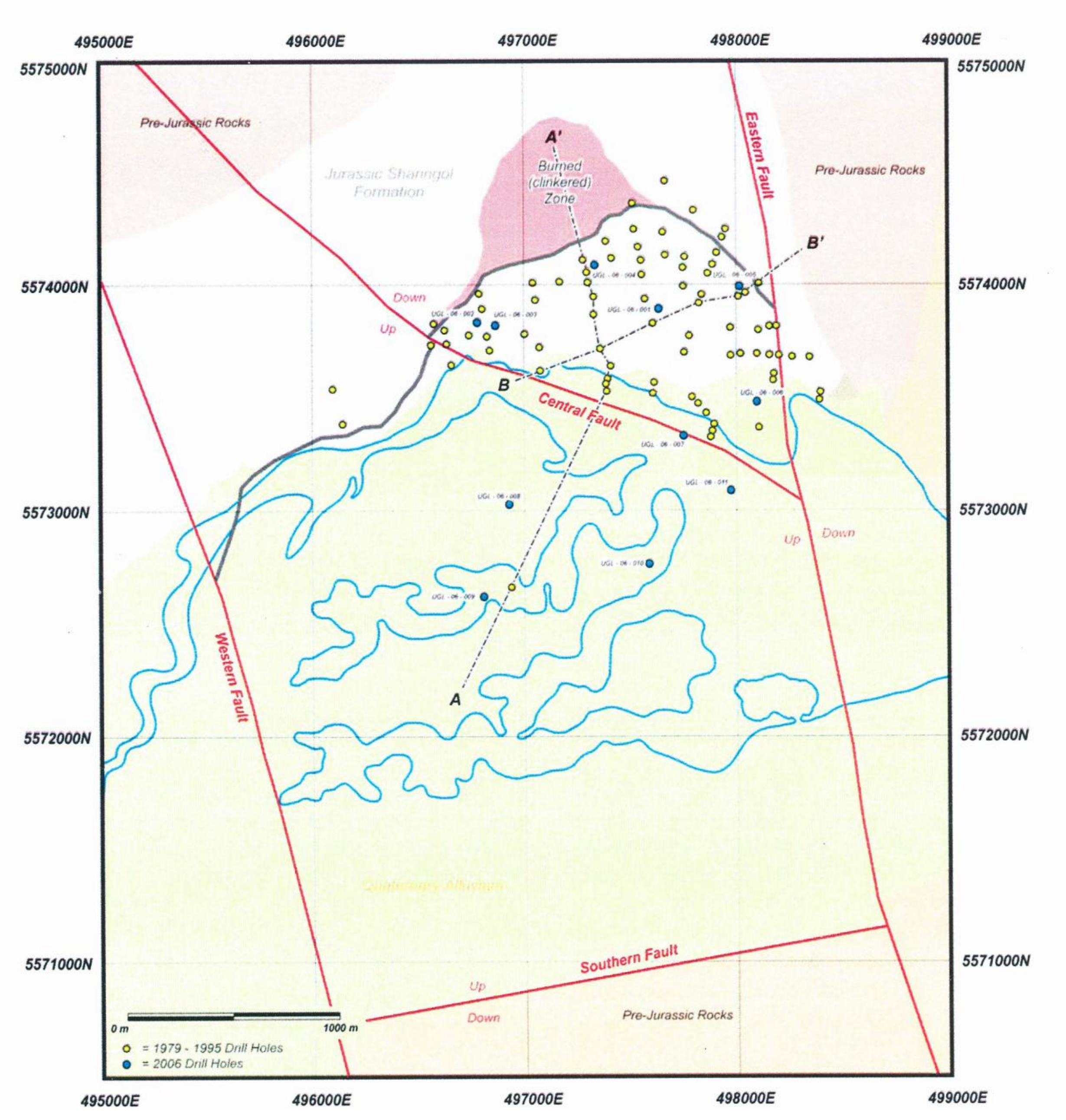


Figure courtesy of Minarco MineConsult

Figure 7.3 Geological Cross Sections at the Ulaan Ovoo Coal Deposit

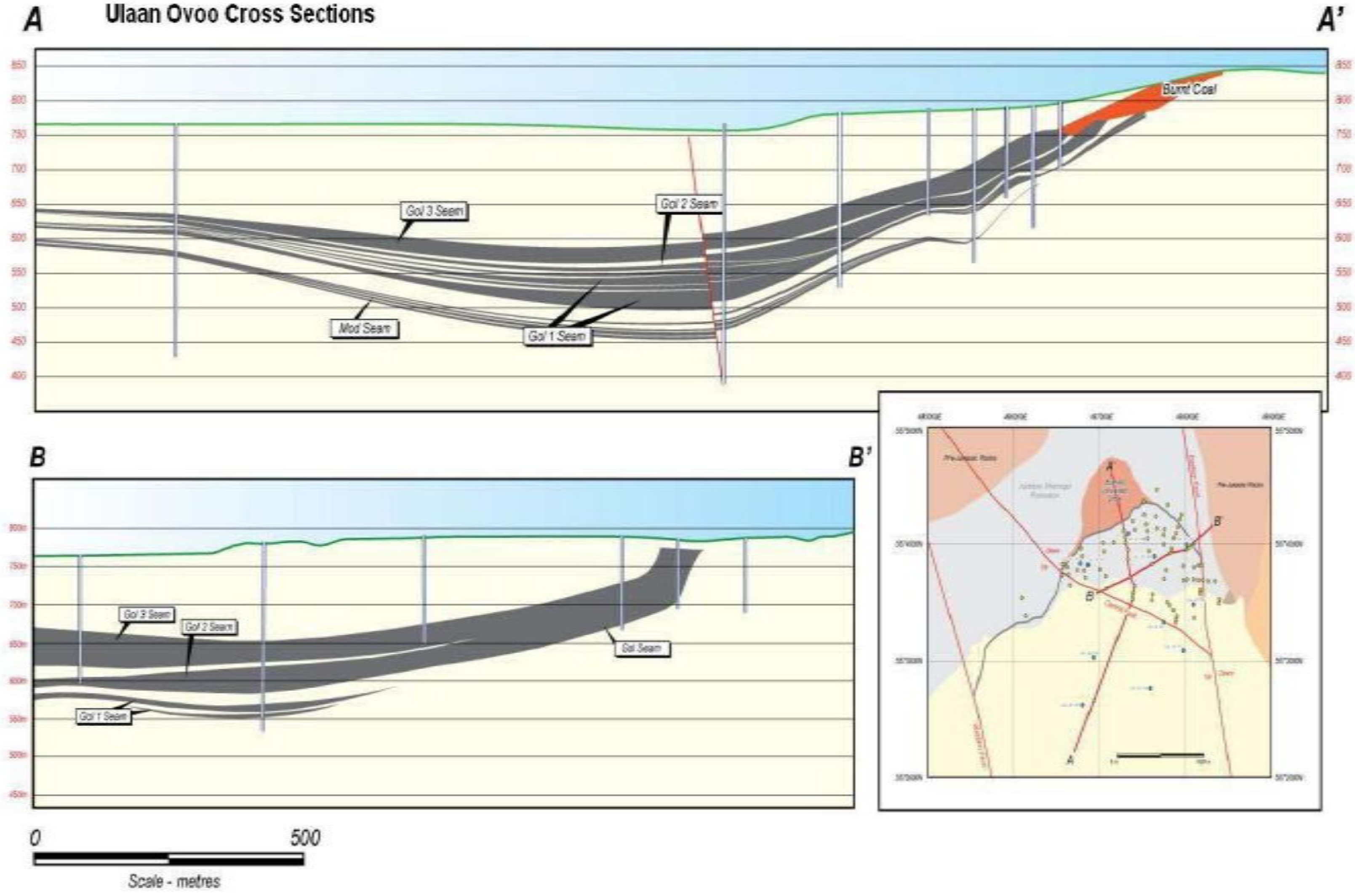


Figure courtesy of Minarco MineConsult

7.3 STRUCTURE

The tectonic structure of the Ulaan Ovoo coal deposit is relatively simple. The coal-bearing basin forms a 2 km long and 1.6 km wide closed synclinal fold. The basin is fault bounded on the southwest, southern and eastern margins. Coal crops out along the northern and north-western margins.

The structure is divided into northern and southern blocks by a reverse fault, which is oriented at N65W. The central reverse fault has a throw of 9 m to 18 m with the north side being the downthrown side. The eastern part of the coal basin is abruptly terminated by a nearly vertical normal fault, oriented approximately N10W with the downthrown side of the fault containing the coal-bearing strata. The coal crops out in the north-western side of the deposit and the dip angles of the rocks along this margin range from 10° to 15° toward the east. The northern flank of the fold dips at 20° to 30° toward the south. The south-western and southern margins of the basins are inferred to be defined by steep normal faults oriented N10W and N70E, respectively.

The only evidence of igneous activity is a thick sill (137 m thick) intersected in hole UGL-06-010. It appears the sill may have replaced the upper part of the Gol Seam. The sill probably originated in the central part of the basin, south of the Central Fault and migrated tube-like up the steeply dipping south-east flank of the syncline to the outcrop in the east, about 400 m away. It probably resembles a flattened volcanic neck 200 m to 500 m in width. An earlier interpretation of a NNW-SSE trending dyke south of the Central Fault has been proven to be incorrect.

8.0 DEPOSIT TYPE

Coal deposits in Mongolia were formed during the Carboniferous, Permian, Jurassic and Cretaceous periods (Jargalsaihan et al., 1996, Reference 4). Permian coal deposits, such as those at Baruun Naran, Tavan Tolgoi and Nariin Sukhait occur in the southern part of the country and contain the highest quality coal. Younger deposits generally consist of lower rank lignitic coals.

The Ulaan-Ovoo coal deposit is Jurassic in age and is typical of the Sharyn Gol type of coal deposit in Mongolia. The coal comprises a single seam in the north-western part of the syncline and splits to the southwest forming two thick coal sequences (seams) which are relatively thick and flat lying. These seams host thick groupings of coal plies separated by thick clastic layers derived from flood events and ash falls which occurred during the time of coal deposition. The primary source of the flood induced sediments was to the south and southwest and the parting thicknesses increase in that direction. Although the overall geometry is typical of coal mining deposits, the seams are generally thicker than usually encountered, ranging from a total of 15 m to over 85 m in thickness, and averaging 45 m throughout the deposit area.

Minarco has applied the widely-used Geological Survey of Canada (**GSC**) Paper 88-21 classification to Ulaan Ovoo and believes that this deposit falls into the "Moderate" category. Deposits in this category are generally understood to have been affected by tectonic deformation, characterised by homoclines or broad open folds (wavelength greater than 1.5 km) with bedding inclinations of generally less than 30°. Faults may be present, but are relatively uncommon and generally have displacements of less than 10 m.

The Ulaan Ovoo deposit is gently folded. Only one fault has been identified within the basin and major faults appear to be confined to the deposit margins.

9.0 MINERALISATION

9.1 COAL SEAMS

The Ulaan Ovoo coal deposit, which is part of the 520 m thick Sharyn Gol Formation, has two main coal seams that contain five sub-units of coal.

Mod Coal Seam (formerly Coal Seam I): This seam is the lower of the two main coal sequences. It merges with the upper and thicker Gol Coal Seam in the north-eastern part of the area and splits to the southwest. It is well developed in the western part of the syncline. Its thickness ranges from 2.0 m to 7.5 m and thins in the south-western part of the deposit. The seam contains up to three partings with thicknesses of 0.56 m to 0.77 m. In the area where it is best developed, the Mod Coal seam is separated from the Gol Coal Seam by a sandstone parting which may exceed 30 m in thickness.

Gol Coal Seam (formerly Coal Seam II): This is the uppermost of the two main coal seams. Because of limited drilling south of the Central fault, it had previously only been clearly defined in the northern half of the syncline. It has relatively consistent thickness in the northern half of the deposit, ranging from 29.8 m to 63.9 m. In the west, the Gol Seam splits into two major sub-seams and its aggregate thickness diminishes where it splits. Further to the west sub-seam the lower split further subdivides into two smaller sub-seams. The Gol seam may contain as many as 11 partings. These partings consist mainly of clayey rocks and coal-bearing mudstone with a thickness of 0.15 m to 1.0 m. With proper design, the thickest of these partings can be removed during the mining process. Consequently, the partings will not represent a serious diminution of coal quality if properly handled.

Several thin coal beds are encountered to the west of the syncline, in the lower part of the middle member of the Sharyn Gol formation (J2-3 chg). Their thickness ranges between 0.9 m and 2.0 m. The extent of these thin seams is not known at this time, but they do not add materially to the coal resource base of the deposit. The cross sections shown in Section 7.0 show the style of splitting of the coal seams across the deposit area.

To date, the following four studies have been completed on the Ulaan Ovoo coal deposit:

- Russian study completed in 1995.
- Mongolian University study completed in 1992-1995.
- Behre Dolbear study completed in 2006.
- Minarco study completed in 2009.

Each of these studies has produced its own coal seam nomenclature system, as well as criteria for applying nomenclature criteria. In order to not further confuse this issue, it was decided to use the nomenclature developed by Minarco in their 2009 NI-43-101 report. Thus the coal seam nomenclature adopted for this review is presented in Table 9.1.

Table 9.1 Coal seam stratigraphy and nomenclature

Age	Coal Seam	Coal Member	Subunit
Youngest	Gol	Upper	G3
		Middle	G2
			G1D
			G1C
			G1B
		Lower	G1A
	Mod	Upper	M4
			M3
			M2
		Lower	M1
	Ert		
Oldest	Gun		

10.0 EXPLORATION

Prophecy has conducted no exploration on the Ulaan Ovoo project.

10.1 RED HILL

During 2006 Red Hill, the 100% owners of the Ulaan Ovoo Coal Deposit conducted an exploration drill programme which undertook the drilling of 11 drill holes from surface identifying the presence and delineation of the coal seams present at the site. This exploration programme formed the basis of the Behre Dolbear report supported by non-compliant data gathered during the period from the early 1970's up to 1992. This data was collected by a Russian entity in control of the project at that time.

In April 2010 Prophecy merged with Red Hill and therefore assumed control of the permits and licences under the auspices of Red Hill. From the period of 2006 up to the merger with Prophecy no further exploration had taken place on the site.

11.0 DRILLING

11.1 PROPHECY

The Company has not conducted any drilling on the property to date.

11.2 RED HILL

11 holes were drilled by Red Hill in 2006. Average core recovery was reported at over 90% for 10 of the holes and over 98% for 6 of the holes. Core recovery for hole UGL-06-002 was less than 35% and the hole was re-drilled as hole UGL-06-003.

Table 11.1 Summary of Coal Seam Nomenclature for 2006 Drill Holes at the Ulaan Ovoo Coal Deposit

Seam / Horizon	№	Thickness (m)			Interburden (m)
		Mean	Minimum	Maximum	Mean
ALV	71	8.3	0.4	32.1	
G3	46	21.2	1.3	54.2	
G2	49	14.9	0.8	39.8	2.5
G1D	26	3.0	0.5	11.0	3.3
G1C	26	2.6	0.4	14.0	1.9
G1B	21	3.1	0.5	17.2	2.3
G1A	18	3.8	0.8	29.1	1.9
G1	18	8.8	1.0	18.7	
Total G Seam	**13**	**54.5**	**3.0**	**77.9**	
M4	15	1.7	0.2	4.7	19.1
M3	15	2.2	0.2	5.5	2.6
M2	11	3.8	0.3	13.3	1.6
M1	9	2.7	0.8	4.5	1.7
M	12	3.9	0.7	9.2	
ERT	13	2.3	0.1	7.4	20.7
GUN	8	2.7	1.0	11.4	57.3

The Minarco 2009 NI-43-101 report describes the 2006 drilling protocol as follows:

- Landdrill International Inc., located in Ulaan Bataar, drilled the 2006 holes using a skid-mounted Longyear Model 44 rig as follows:
  - Hole was started using a 132 mm full face Polycrystalline Diamond (**PCD**) bit and surface casing was set in the hole.
  - HQ core, 61.1 mm, was drilled from the bottom of casing to total depth using a triple tube core drilling string.

Coring was done using 3 m HQ rods behind a 96 mm core bit and inert polymer as a drilling medium. Wireline coring methods were used with a sleeved 3 m core barrel assembly and drilling was completed on a 24 hour (**h**) schedule.

The drill core was described in white light and occasionally ultraviolet light was used. Information was logged on paper forms at a scale of 3 cm to 0.5 m and core was photographed using a digital camera. Logged core information included: lithology, fracturing and sampled intervals. Other noted information included water and gas encountered during drilling and any unusual drilling conditions. After description tasks were completed, core was sampled and placed in plastic sleeves.

After reaching total depth, the drill holes were geophysically logged and the log suite included: gamma, spontaneous potential, gamma-gamma, density, single point resistivity and calliper logs. Field copies of the e-logs were printed at a scale of 1 cm to 2 m and Log ASCII standard (**LIS**) digital files of the logs were generated and delivered to Red Hill.

All of these steps are standard field operations for coal drilling programmes. Review of Red Hill's data files at their Ulaan Bataar office showed that the above detailed protocol was followed and that the digital data was consistent with paper data generated during drilling operations.

11.3 Previous Operators

35 holes were drilled by the Russians in 1979. Average core recovery was reported at 53%. In addition, there were 21 holes drilled by MUST. Average core recovery was reported at just below 60%.

12.0 SAMPLING METHOD AND APPROACH

12.1 PROPHECY

The Company has not conducted any sampling to date.

12.2 PREVIOUS OPERATORS

Sampling during the 1979 and 1992-1995 programmes focused on determining the quality and calorific value of the coal, its petrography and composition and strength properties of the confining sediments and partings. Coal seams were sampled separately from over, inter and under-burden material. Different tests were run on different coal samples depending upon visual features in the coal.

The 2006 Ulaan Ovoo sampling, Coal samples were taken at constant intervals and thicknesses to allow for comparison of coal quality. Samples were taken every 0.9 m to 1.2 m for oxidised coal and every 3 m to 5 m for non-oxidised coal. When partings were greater than 0.1 m in thickness, they were separated and analysed individually.

13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

13.1 PROPHECY

The Company has not conducted any sampling on the property to date.

13.2 RED HILL

The Coal sampling undertaken for the 2006 drilling programme followed the American Society for Testing and Materials (**ASTM**) D5192 procedure. Sampling was conducted in 1 m intervals and at the start and stop of core runs and in a timely fashion after all necessary core descriptions and photography tasks had been completed. The core was then washed to remove contaminants and allowed to drain away from the core. The core was then placed in plastic sleeves (15 micron [**µm**]) and into wooden core boxes for protection.

The criteria used for selecting sample intervals included:

- Bone coal was sampled in the same way as coal.
- Partings that were less than 0.3 m thick were included with coal.
- Where partings were encountered between 0.3 m and 1.0 m in thickness they were split into three, the upper and lower splits were sent to the lab and the middle split was archived.
- For partings over 1.0 m thick, the lower and upper 0.5 m were sampled separately and sent to the lab and the middle split was archived.
- Where the coal seam is flanked by rock then samples were taken from above and below the coal seam and are referred to as the roof and floor materials.
- Stray Coal seams greater than or equal to 0.5 m were sampled.
- Maximum sample intervals were limited to the core barrel length (3.05 m) where coal was not interrupted by partings greater than 0.3 m thickness.

All lab analysis was conducted following ASTM standard procedures by SGS Laboratories in Denver, Colorado and all lab duplicate samples are stored there. All non-lab core is stored in wooden boxes in a secure warehouse on site.

All sampling handling used chains of custody to monitor the distribution of the samples.

13.3 PREVIOUS OPERATORS

The following summarises lab testing following the 1979 drilling programme conducted by the Russians:

- Analysis of coking coal 10
- Physical-mechanical analysis of coal 2
- Physical-mechanical analysis of rock 5
- Chemical analysis of water 2
- Compositional analysis of coal elements 12

The following summarises lab testing following the 1992-1995 drilling programme:

- Analysis of coking coal 10
- Radioactive analysis of coal 29
- Paleontological analysis of the flora 20
- Chemical analysis of water 80
- Compositional analysis of coal elements 80

Finally, core samples were checked against geophysical logs to determine core losses and as noted earlier, core recovery was determined to be about 53% in the 1979 programme and about 63% in the 1992-1995 programme.

No anomalous results were found in the lab analyses results; however, the following deficiencies were noted:

- Core recoveries were low, averaging 54%.
- Sample locations were not identified on either geological or geophysical logs in a systematic way.
- No standard lab analysis ASTM procedures were cited.
- Independent audits of sampling and testing were not completed.
- Coal samples are not available for resampling and retesting.

Minarco concluded that there are severe deficiencies, but none of them, either singularly or collectively are of sufficient significance to devalue the overall merit of the older exploration programmes. The author agrees with this conclusion.

14.0 DATA VERIFICATION

14.1 WARDROP RESOURCE MODEL VALIDATION

In March 2010, Wardrop was tasked with:

- Completing a due diligence evaluation of the Ulaan Ovoo coal deposit.
- Developing a Three Dimensional (**3D**) geologic model for Ulaan Ovoo.
- Determining whether reported coal resource in the Behre Dolbear 2006 and Minarco 2009 reports were valid.

After reviewing the available Ulaan Ovoo digital data, visiting the Ulaan Ovoo deposit and conducting meetings with Red Hill's geological staff, it was decided that the following data would be used from the Minarco 2009 study:

- Drill hole data from the 2006 programme.
- Coal seam nomenclature and correlations.
- Gridded surfaces for coal seams and partings.
- Central, east, south and west faults.
- Coal outcrop.
- Burned coal (clinker) area.
- Coal resource classification criteria.
- Coal resource area.

The following should be noted:

- After loading and viewing drill hole data in the Red Hill Excel file, it was found that coal seam miscorrelations were present in the data.
- The miscorrelations were reviewed with Red Hill's geologic staff while in Ulaan Bataar.
- Time was not allocated in the current scope of work for examining core and e-logs to recorrelate coal seam stratigraphy.
- The coal seam correlations developed by the Minarco 2009 study were correct.

After returning from Ulaan Bataar to Denver, Colorado, USA:

- Mincom's Denver office was contacted and tasked with converting the coal seam binary grid files to AutoCAD drawing files.
- The drawing files were imported into Gemcom's GEMS software.

- A 3D geologic model was set up as follows:
  - Block model origin (southwest, top corner of southwest block):
    - X: 494945
    - Y: 5570595
    - X: 802.5
  - Block model X axis rotation:
    - 0 º
  - Block size:
    - X: 10 m
    - Y: 10 m
    - Z: 5 m
  - Number of block:
    - Columns: 383
    - Rows: 431
    - Levels: 101
  - Total number of blocks:
    - 16,672,373

  Note: Block size was specified by Wardrop's mining engineers working on the project and the model was spatially positioned to cover the area defined by projected faults.

- The seam surfaces were used to code a 3D geological block model. Blocks were considered to be "in" the seam if more than 51% of the block volume was between the coal seam top and bottom grids.

It should be noted that the percentage of block in the seam can also be used to indicate the minimum thickness of a seam that will be counted in the resource inventory. For example for a 5 m block height it is counted in the following way:

(block height) * (% of block volume in) = minimum seam thickness counted

(5 m) * (.51) = 2.55 m

At 10% block volume in the seam, this number would decrease to 0.5 m for the minimum seam thickness counted in the coal resource.

Blocks were coded with integer numbers as shown in Table 14.1:

Table 14.1 Wardrop Block Model Integer Numbers

Stratigraphic Position	Member Name	Seam Number
Top	Alluvium/colluvium	14
	Oxidised Coal	13
	G3	12
	G2	11
	G1D	10
	G1C	9
	G1B	8
	G1A	7
	M4	6
	M3	5
	M2	4
	M1	3
	Ert	2
Bottom	Gun	1

- Densities were input for each coal seam.
- Resource classification polygons were developed as follows:
  - **Measured**: 0 m to 450 m from a data point.
  - **Indicated**: 450 m to 900 m from a data point.
  - **Inferred**: 900 m to 2,400 m from a data point.
- Mining area polygons were developed as follows:
  - **North Area**: Area south of coal outcrop, west of the East Fault, north of the Central Fault and east of the West fault.
  - **South Area**: Area west of the East Fault, south of the Central Fault, north of the South Fault and east of the West fault.

Coal resource numbers generated in this report are shown in Table 14.2

Table 14.2 Coal Resource Numbers

Coal Seam	Resource Area	Resource Class	% Block Volume In Seam 51% Tonnes
Gol	N+S	M+I+F	170,597,996
Mod	N+S	M+I+F	191,714,068
Ert	N+S	M+I+F	3,877,759
Gun	N+S	M+I+F	13,585,891
ALL	**N+S**	**M+I+F**	**209,177,718**

Notes: N+S: North + South and M+I+F: Measured + Indicated + Inferred

A further breakdown by resource class is presented in Table 14.3

The Ulaan Ovoo coal resource as computed using a 3D block model (209 Mt) compares well with that presented in the Behre Dolbear 2006 (208 Mt) and the Minarco 2009 (197 Mt) NI 43-101 reports. As noted in the Minarco 2009 report, the difference between their resource number and that reported in the Behre Dolbear 2006 report was not material, i.e., less than 7% and the same can be said for the Behre Dolbear 2006 number (207

Mt) and the Wardrop number (209 Mt), less than 1% difference. The difference between the Minarco 2009 resource number (197 Mt) and the Wardrop number (209 Mt) is less than 6%. As also noted in the Minarco 2009 report, differences in the three numbers are "due entirely to differences in the geologic modelling software". The author agrees with this statement.

Coal resource numbers generated in this report are presented in Table 14.3.

Table 14.3 Wardrop Resource Figures: Gol Seam

Seam	Class	Area	Volume m^3 x 1000	Density t/m^3	Tonnage t x 1000	Area Number	Seam Number
GOL	MEASURED	NORTH	48,115.136	1.393	67,004.530	1	7-12
		Total	**48,116.651**	**1.393**	**67,006.643**	**1**	**7-12**
	INDICATED	NORTH	0.000	0.000	0.000	0	7-12
		Total	**0.000**	**0.000**	**0.000**	**0**	**7-12**
	INFERRED	NORTH	0.000	0.000	0.000	0	7-12
		Total	**0.000**	**0.000**	**0.000**	**0**	**7-12**
	MEASURED	SOUTH	51,201.036	1.412	72,273.037	2	7-12
		Total	**51,201.992**	**1.412**	**72,274.358**	**2**	**7-12**
	INDICATED	SOUTH	19,423.996	1.393	27,055.469	2	7-12
		Total	**19,423.996**	**1.393**	**27,055.469**	**2**	**7-12**
	INFERRED	SOUTH	3,054.486	1.396	4,264.960	2	7-12
		Total	**3,054.486**	**1.396**	**4,264.960**	**2**	**7-12**
	Total		**121,797.124**	**1.401**	**170,601.430**	**2**	**7-12**
Total			**121,797.124**	**1.401**	**170,601.430**	**2**	**7-12**

Table 14.4 Wardrop Resource Figures: Mod Seam

Seam	Class	Area	Volume m³ x 1000	Density t/m³	Tonnage t x 1000	Area Number	Seam Number
		Total	**1,981.999**	**1.461**	**2,895.954**	**1**	**3-6**
	INDICATED	NORTH	0.000	0.000	0.000	0	3-6
		Total	**0.000**	**0.000**	**0.000**	**0**	**3-6**
	INFERRED	NORTH	0.000	0.000	0.000	0	3-6
		Total	**0.000**	**0.000**	**0.000**	**0**	**3-6**
	MEASURED	SOUTH	5,565.998	1.444	8,039.622	2	3-6
		Total	**5,565.998**	**1.444**	**8,039.622**	**2**	**3-6**
	INDICATED	SOUTH	1,410.999	1.517	2,140.874	2	3-6
		Total	**1,410.999**	**1.517**	**2,140.874**	**2**	**3-6**
	INFERRED	SOUTH	139.500	1.548	215.915	2	3-6
		Total	**139.500**	**1.548**	**215.915**	**2**	**3-6**
	Total		**9,098.497**	**1.461**	**13,292.366**	**2**	**3-6**
Total			**9,098.497**	**1.461**	**13,292.366**	**2**	**3-6**
	Total		**51,398.900**	**1.474**	**75,768.744**	**2**	**3-6**
Total			**3,936,628.379**	**0.117**	**460,158.595**	**2**	**3-6**

Table 14.5 Wardrop Resource Figures: Ert Seam

Seam	Area	Volume m³ x 1000	Density t/m³	Tonnage t x 1000	Area Number	Seam Number
ERT		1,897.000	1.460	2,769.619	2	2
		759.000	1.460	1,108.140	1	2
		2,655.999	**1.460**	**3,877.759**	**2**	**2**
Total		**2,655.999**	**1.460**	**3,877.759**	**2**	**2**

Table 14.6 Wardrop Resource Figures: Gun Seam

Seam	Area	Volume m³ x 1000	Density t/m³	Tonnage t x 1000	Area Number	Seam Number
GUN	SOUTH	99.000	1.380	136.620	2	1
	NORTH	4.500	1.380	1,108.140	1	1
	Total	**103.5000**	**1.380**	**3,877.759**	**2**	**1**
Total		**103.500**			**2**	**1**

15.0 ADJACENT PROPERTIES

No adjacent properties have been identified at the Ulaan Ovoo region and deposit area.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

16.1 COAL TYPE

As described in Behre Dolbear and Minarco reports, the Deposit belongs to Sharyn Gol coal formation type in Mongolia. The deposit consists of two major coal seams Mod coal seam and Gol coal seam, each with a few sub-seams.

Three coal types were identified in 1992-1995 testing which consisted of non-oxidised coal, oxidised coal and sooty coal. The non-oxidised coal belongs to class D or long flame, equivalent to high volatile C bituminous coal. Behre Dolbear claimed that the amount of sooty coal was minimal and can be blended with the saleable coal. The oxidised coal volume was not available and blending was also expected.

16.2 PETROGRAPHIC COMPONENTS

The coal petrographic components were briefed in the Minarco report based on 52 core sample observations with vitrinite reflectance technology. Most coal samples were clarian type. The micro components included 78% to 83% vitrinite group, 3.2% to 5.2% liptinite group and 3% to 4% fusinite group. Sulphide (pyrite and marcasite) and carbonate minerals (calcite and gypsum) were distributed in even particle size.

16.3 IN-SITU COAL QUALITY

16.3.1 PROXIMATE ANALYSES

The proximate analyses were conducted in the 1992-1995 and 2006 testing programmes. The results from year 2006 are considered more reliable than year 1992-1995 testing. The representativeness of the 1992-1995 core samples was low due to the low core recovery as mentioned in Section 11.3. This also led to unreliable test results as determined by correlation graphs. A linear relationship between heating values and ash contents observed in year 2006 samples was insignificant for the 1992-1995 samples.

The proximate test results from the 2006 drilled samples were presented in detail in the Minarco report, including specific gravity (**SG**), surface moisture (**SM**), total moisture (**TM**), ash (**A**), volatile matter (**VM**), fixed carbon (**FC**), total sulphur (**TS**) and calorific value (**CV**). The mean values of the data are listed in Table 16.1.

Table 16.1 Proximate Analysis Results of Year 2006 Samples

Seam	Drill	SG	SM	RM	TM	A^{ar}	VM^{ar}	FC	TS^{ar}	CV^{ar}	CV^{MAF}
	№		%	%	%	%	%	%	%	BTU/lb	BTU/lb
G3	7	1.37	10.02	11.78	20.62	12.34	29.76	37.28	0.34	9037	13373
G2	7	1.38	8.75	11.64	19.37	15.75	27.55	37.32	0.39	8835	13591
G1D	5	1.47	7.83	9.79	16.86	26.56	24.78	31.79	0.39	7669	13509
G1C	6	1.42	7.2	10.71	17.16	19.74	27.49	35.6	0.43	8571	13506
G1B	3	1.49	7.17	9.93	16.35	27.79	25.09	30.77	0.47	7498	13405
G	3	1.32	11.68	9.75	20.2	7.54	30.73	41.53	0.41	9894	13685
G1A	5	1.51	6.24	10.58	16.17	28.28	25.21	30.34	0.39	7353	13147
M4	3	1.5	7.69	7.87	14.95	27.69	24.63	32.73	0.6	7830	13479
M3	4	1.45	7.67	8.39	15.43	22.5	26.67	35.41	0.41	8497	13627
M2	5	1.38	7.72	9.87	16.87	14.4	28.53	40.2	0.42	9583	13892
M	2	1.41	10.4	9.2	18.73	19.6	26.65	35.01	0.9	8476	13743
M1	5	1.56	6.74	6.93	13.26	32.02	24.01	30.71	0.36	7384	13238
ERT	3	1.46	5.92	9.18	14.56	24.68	26.23	34.53	0.48	8236	13568
GUN	1	1.38	14.04	5.88	19.1	21.95	26.22	32.73	0.39	8298	14075

Notes: ar - As received, MAF - Moisture and Ash Free

The test results indicate that the core samples had low sulphur contents, relatively high heating values with varied ash contents. Specifically, the ash contents from seam G3, G2, G and M2 were below 16% as received, significantly lower than the samples from the remaining seams. The minimum heating value of these low ash samples was 8,835 British Thermal Units per pound (**BTU/lb**) or 4908 kilocalories per kilogram (**kCal/kg**) as received. Considering the high total moisture between 16.8% and 20.6%, these coal samples meet or exceed the quality requirements of some heating coal product. The sulphur concentration was not higher than 0.6%, as received for all the tested samples.

16.3.2 FREE SWELLING INDEX

The free swelling index (**FSI**) was between 0.2 and 1.2 for year 2006 core samples. This indicates a marginal caking property of the coal samples.

16.3.3 TRACE ELEMENTS

The Minarco report indicates the trace element concentrations of germanium, mercury and arsenic were at permissible levels. This conclusion was obtained from coal ash chemical analyses results on core samples before year 2006.

16.3.4 OTHER MINERALS

A thin oil shear zone was discovered in the 1992-1995 drilling programme. The subsequent tests indicated that resin content in coal was low, ranging from 1% to 3%.

16.4 CONCLUSIONS

16.4.1 COAL TYPE

The existence of sooty coal and oxidized coal could require the potential blending with clean coal. The volume and quality of the sooty coal and oxidised coal need to be estimated.

16.4.2 COAL TESTING

The proximate analysis results of the year 2006 cores samples are considered more reliable than the results from the 1992-1995 testing. The year 2006 results should be used to describe in-situ coal quality. Some observations in 1992-1995, however, are informative in terms of coal type, mineral type and other non quality information.

16.4.3 COAL PROCESSING

The Minarco report proposed coal preparation plant was based on the reference coal production. This is acceptable for Scoping and PEA stage studies, since no washability testing had been performed. However, preliminary bench testing work on the samples representing the major coal seams will be beneficial for the PEA study.

Minarco proposed the clean coal quality from the resource model. It is recommended to obtain the product requirements from the potential market.

16.4.4 COAL PROCESSING CAPITAL/OPERATION COST

Minarco capital/operation cost estimates covered the proposed coal handling and wash plant. Behre Dolbear did not include the wash plant facility in the capital/operation cost estimates. Therefore the Minarco estimates are reasonable for a PEA study including the coal washing stage.

Process rate optimisation of both the coal handling plant and coal preparation plant is recommended. The feed rate for both plants proposed by Minarco is 1,000 tonnes per hour (**t/h**). Assume 365 operation days per year and 92% operation availability, this rate is equivalent to 8 Mt/a, higher than the maximum washed coal rate of 5 Mt/a and the maximum total coal rate of 6 Mt/a. The coal handling plant capacity should allow both the bypassed and washed coal material processing. The preparation plant development can be only based on the washed coal feed rate.

16.5 RECOMMENDATIONS

The following recommendations concerning coal quality are listed:

- Oxidised and sooty coal volumes and qualities require more study. Opportunity exists to blend these coal types into a marketable product.

- Subsequent design of a Coal Handling and Preparation Plant (**CHPP**) will require conduct on the fresh core samples, including clean coal ultimate analyses. This information will be critical to design of a plant for the phase 2 portion of this project.
- As thermal coal markets are established, product coal specifications will need to be verified against the assumptions used in this report.

17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

17.1 WARDROP MINERAL RESOURCE ESTIMATE

Wardrop has not made a resource estimate for the Ulaan Ovoo deposit but rather has validated the work completed by Minarco. As a result of that work Wardrop is satisfied with the estimate made by Minarco.

Minarco's resource estimate is detailed in the Historical section of this report (Section 6.0) and forms the basis of the Data used to complete the Reserve Estimation.

17.2 WARDROP RESOURCE MODEL VALIDATION

Please refer to Section 14.0 of this report.

17.3 MINERAL RESERVE STATEMENT

The mineral reserve estimation considers only material that has been categorised as Measured and/or Indicated in accordance with the NI 43-101 Reporting Code guidelines.

The software systems used in the consideration and estimation of the Mineral Reserve were Whittle 4.1.3, SURPAC 6.1.4 and GEMS.

The material captured within the Mineral Reserve has been categorised as 100% Measured material.

The reserve estimation only includes Coal contained within the G3, G2, G1a, G1b, G1c, G1d coal seams as set out as the nomenclature for the Gol Coal seam (see Section 9.0).

The other seams present at Ulaan Ovoo do not fall within the pit design and are therefore excluded from the Mineral Reserve estimate. Further exclusions from the Mineral Reserve estimation are **any coal occurrences to the south of a 200 m "No Mining Limit"** from the northern banks of the Zelter River. Therefore it could be said that the Mineral Reserve estimate considers only the first phase of the project development of the Mineral resources contained in the Ulaan Ovoo project.

Losses and Dilution factors have been applied globally to the partings and the separate coal seams to derive a final Mineral Reserve.

The block model created in SURPAC was prepared and exported for use with the Whittle Optimiser software. The resultant pit shells that were created in Whittle formed the basis of the pit design which was conducted using the GEMS software package. The pit design took account of the assumed slope angles and ramp angles as recommended by the MUST "Summary of Feasibility Study for the Development of Ulaan Ovoo Bituminous Coal Deposit" (2004) conducted on behalf of Red Hill.

Once completed, the phased pit designs were imported into SURPAC and reported from the original block model to derive the in-situ reserves by seam. This data was then compiled in Microsoft Excel to derive a total in-situ reserve estimate.

The losses and dilution parameters as outlined in section 19.0 in table 19.5 were applied to the in-situ reserves and the resultant changes can be seen in Table 17.1.

Table 17.1 Coal Reserve Statement

Coal Reserve Statement Description	Amount
Low Ash Coal (kt)	20,724
High Ash Coal (kt)	720
Waste (kt)	83,854
Waste (BCM)	37,268
Total (kt)	105,298
Stripping Ratio (BCM:t)	1.7
Ash Content (%)	11.3
Calorific Value (kcal/kg)	5,040
Moisture (%)	21.7
Mine Life (years)	10.7
Process Rate (kt/a)	2,000

Note: BCM = Bank Cubic Metre

The reserve extraction is considered to be 98.6% as a ratio of In-situ reserve to Saleable Product.

The In-situ Reserve calculations were validated by internal checks as part of the Wardrop internal quality control system.

A further 720,000 t of High Ash coal will be stockpiled and washed at a later time but cannot be considered within this reserve estimate because it has been assumed that there are no wash plant facilities available on site.

The Resource extraction is considered to be 10.7% as a ratio of Saleable Product to Measured & Indicated Mineral Resource. This illustrates the phased approach of Resource Development that has been considered in this study. It is recommended for further project development that more drilling is carried out North and South of the river Zelter and a separate more detailed analysis is carried out to include the engineering and costs to divert the river in order to include more of the Mineral Resource in a more detailed reserve estimate.

18.0 OTHER RELEVANT DATA AND INFORMATION

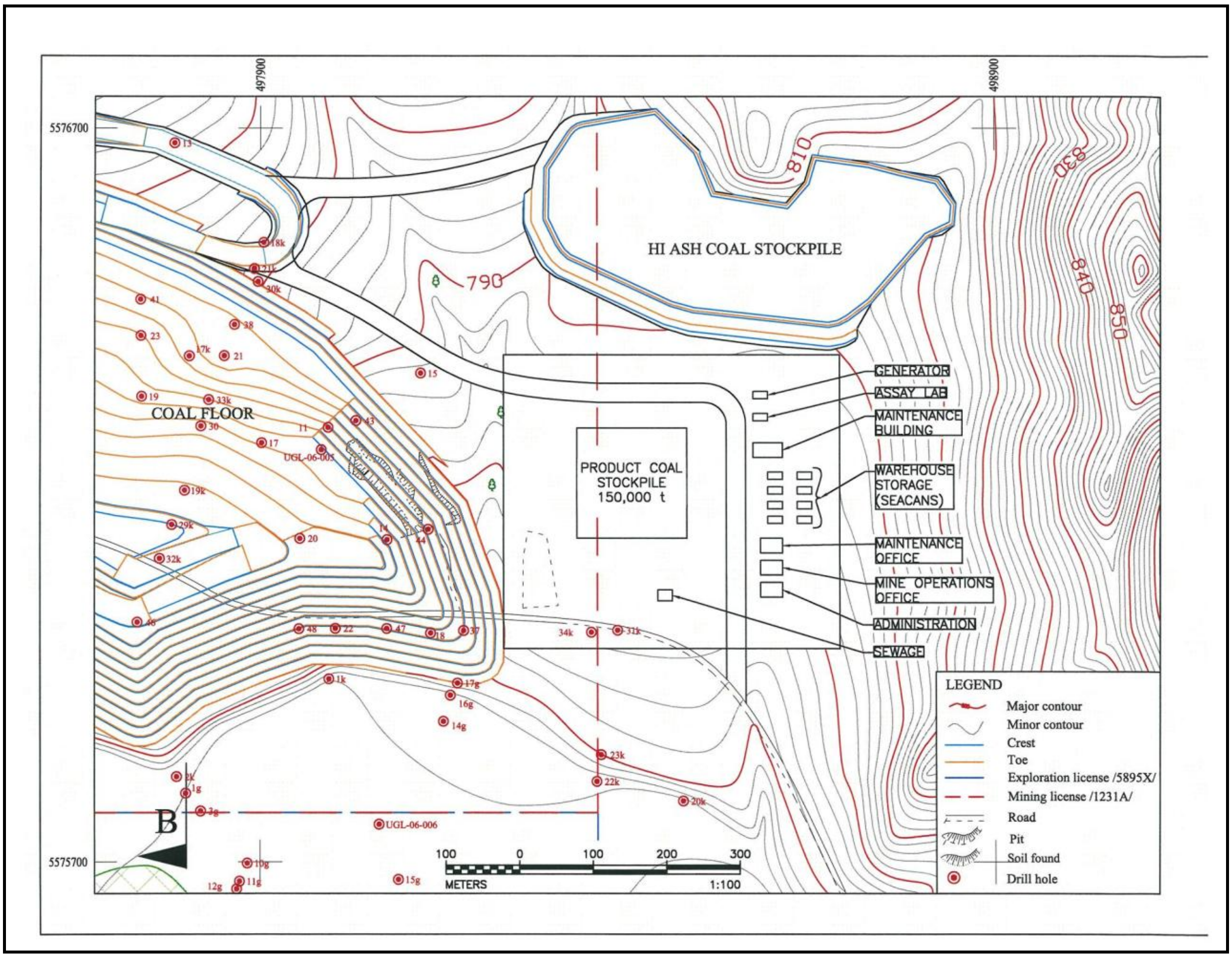
18.1 INFRASTRUCTURE

The proposed infrastructure for the project is illustrated in Figure 18.1 and is comprised of the following:

- Site Haul and Access Roads.
- It has been assumed that select fill from mine development work will be suitable for ROM dump pad and Office Complex pad construction.
- A fuel/oil storage and dispensing facility for mobile equipment.
- Modular facilities, including mine site staff dormitories, wash/laundry facilities, staff kitchen/cafeteria and a recreational facility.
- Generator Building.
- Data and Communications Infrastructure.
- Waste Disposal.
- Assay Laboratory (**Lab**).
- Maintenance Building for Servicing Mine Mobile Equipment.
- Maintenance Office Building.
- Warehouse Storage (Seacans).
- Mine Operations Office Building.
- First Aid and Ambulance Facilities Including Helicopter Pad.
- Administration Building.
- Explosive Storage Area.
- Sewage System.
- Hi Ash Coal Stockpile.
- 150,000 t Live Low Ash Product Coal Stockpile/Load Out facilities.

The modular camp, which is designed to accommodate 200 people, will form the basis of the accommodation for the mining workforce.

Figure 18.1 Ulaan Ovoo – Office Complex



18.2 MINE CAMP

The mining camp will be situated off-site, away from operations and outside the blasting radius. The mining camp selected in this study is a Chinese camp sized to accommodate 200 personnel.

The following buildings will be part of the modular building complex:

- Potable Water.
- Sewage System.
- Mine Site Staff Dormitories.
- Mine Staff Kitchen/Cafeteria.
- Recreational Facilities.
- Laundry Facilities.

18.3 POWER

The primary source of electrical power will be a 320 kilowatt (**kW**) generator. Another 90 kW generator will be available as a backup.

18.4 WATER

Potable water supply will be drawn from ground water wells with a filtration system. Potable water will be used for safety/eye wash stations, personal consumption and washrooms.

19.0 MINING OPERATIONS

19.1 INTRODUCTION

Previous studies completed for the Ulaan Ovoo coal deposit, include; a 2004 FS completed by MUST, a 2006 Scoping Study by Behre Dolbear and a 2009 PFS by Minarco. These previous studies considered an open pit operation, selling 6 Mt of coal per year, including a coal washing plant, rail link, power line and a power generation plant.

The objective of this study is to evaluate the potential of a low throughput operation, selling 2 Mt of coal per year. The objective was to design a mine with considerably lower capital requirements through elimination of a rail link and a coal washing plant.

The pit design identified in the Minarco 2009 PFS is larger and extends further to the south. The pit for this design ensures that a future phased expansion can be undertaken without re-handling waste. Future phases of mine development will require diversion of a portion of the Zelter River and potentially a coal washing plant.

19.2 SUMMARY

The project is located 430 km north of Ulaanbaatar in the Selenge aimag province in north-central Mongolia and is 17 km south of the Mongolian-Russian border. A small open pit has previously been mined, with approximate dimensions 75 m long, 35 m wide and 15 m deep. Coal has been mined from this pit since 1998 to supply local heating and cooking requirements.

The Ulaan Ovoo site consists of a gentle southward sloping surface on the northern half of the property leading to the floodplain of the Zelter River in the southern half of the property. The Zelter River is a perennial river, flowing from the southwest to the northeast across the project site.

Temperatures range from a maximum of about 35° to 40º C during the summer months to a minimum of -40º C in the winter. The annual precipitation is between 400 mm and 500 mm, of which 60% to 70% falls during June to August. Snow cover is expected from October to April with a maximum depth of 300 mm to 400 mm.

Surface elevations at site range from approximately 760 m to 820 m above mean sea level (**amsl**).

Access to the site is by approximately 120 km of unpaved road from the main Altan Bulag - Ulaanbaatar highway to the east. The nearest Mongolian rail link is at Suhbaatar, 137 km to the east of the property. The town of Tushig south, approximately 10 km from the site, has social and administration amenities, including a school and hospital.

19.2.1 GEOLOGY

The structure of the Ulaan Ovoo coal deposit is a gentle to moderate-dipping coal-bearing basin or syncline, 1.6 km wide and 2 km long, contained by faults to the east, west and south sides. Coal outcrops along the northern and northwest margins of the basin.

There are two main seams, the Gol and Mod seams, overlying two additional seams, the Ert and Gun seams. The Gol seam ranges in thickness from 30 m to 64 m, while the Mod seam has a thickness between 2 m and 7.5 m. The Gol seam is generally low ash, so has been the primary focus of this study.

19.2.2 OPEN PIT PROJECT HIGHLIGHTS

A Lerchs-Grossmann Open Pit Optimisation routine was used to determine the economically defined pit limits based on maximising Net Present Value (**NPV**). This exercise indicated that the pit limits are defined by physical, rather than economic constraints. For this reason the pit limits defined by the pit optimisation routine was not used.

The detailed pit design identified a pit with 20.7 Million tonnes of 11.3% ash (**A**) coal at a strip ratio of 1.8 BCM waste/tonne of product coal. All coal production is classified in the "proven category". Mine life is 10.7 years.

19.3 OPEN PIT OPTIMISATION

19.3.1 LERCHS-GROSSMAN PIT OPTIMISATION

A Lerchs-Grossman pit optimisation process was used to determine the pit highwall positions that would generate the greatest NPV. The results of this process indicate that the pit limits are physically constrained by boundary limits. These boundary limits included the subcrop/Burn Zone to the north and the 200 m exclusion zone adjacent to the north fork of the Zelter River to the south. The east edge of the pit is constrained by the lease boundary. The west edge of the pit is defined by the intersection of the coal seam subcrop with the 200 m exclusion zone north of the river.

Since the pit is defined by physical constraints rather than economically defined, the results of the pit optimisation routine were not used.

19.4 OPEN PIT DESIGN

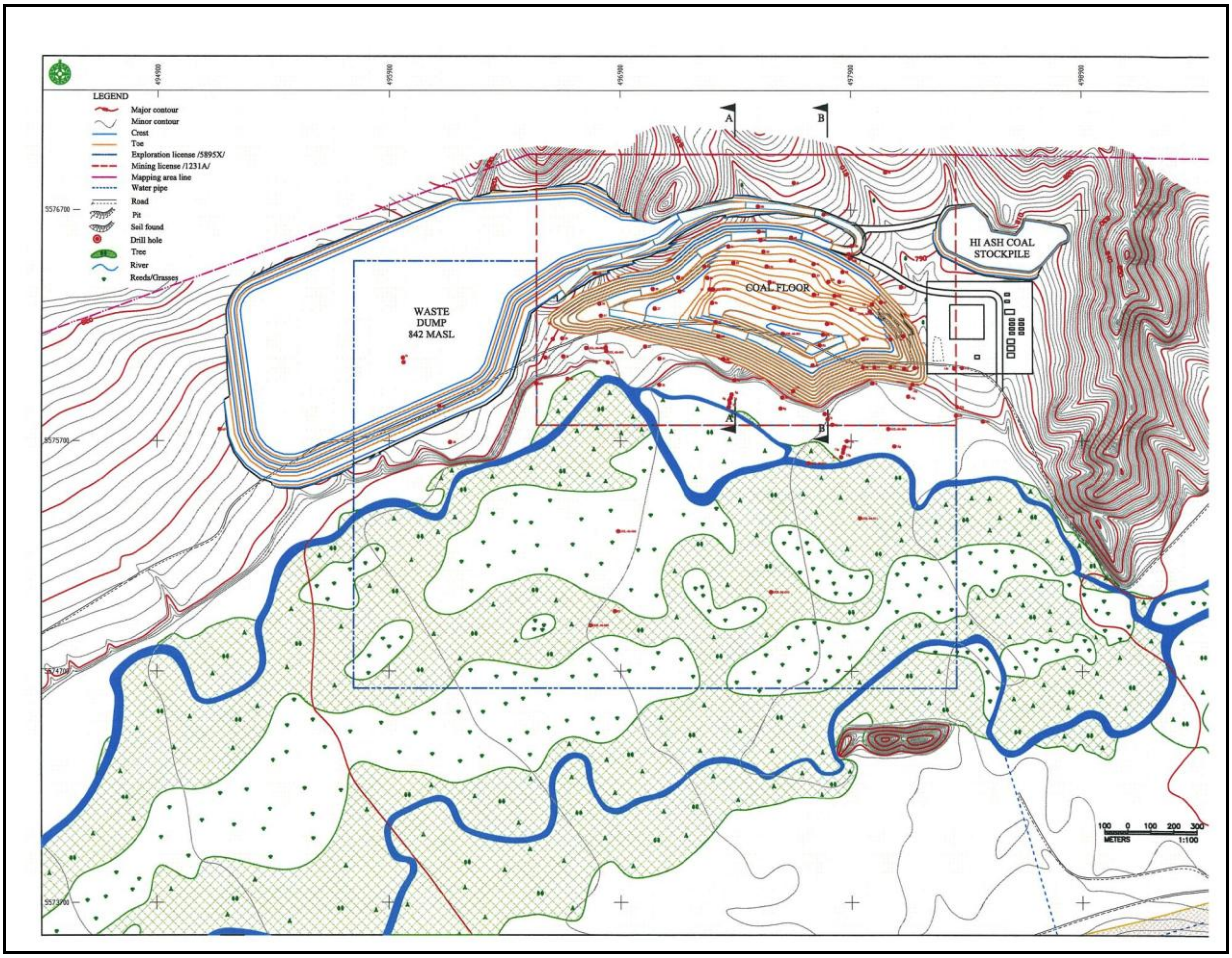
Mine design was based on the following design parameters:

Table 19.1 Ramp and Slope Design Parameters

Slope Parameters		Comments
Bench Height	12 m	
Catch Bench Width	12 m	
Benches Between Catch Benches	1	
Overall Slope	42º	
Ramp Width	26 m	Two-way traffic, Safety Berm and Drain.
Ramp Gradient	8%	

The proposed pit is shown in plan view in Figure 19.1.

Figure 19.1 Plan View of Open Pit



19.4.1 PIT SHAPE DIMENSIONS

The general dimensions of the Ulaan Ovoo pit are listed in Table 19.2.

Table 19.2 Pit Dimensions

Design	Pit
Surface Dimensions	1,6 km E-W
	0.8 km N-S
Surface Area	720,500 m²
Volume of Pit	53.5 M m³
Pit Top Elevation	Approx. 815 m amsl
Pit Bottom Elevation	626 m amsl
Depth	190 m
Benches	16

19.4.2 ILLUSTRATION OF RESOURCE AND PIT SHAPES

Figure 19.2 and Figure 19.3 are two section views showing the coal reserve and suggested pit design.

Figure 19.2 Section A through the Ulaan Ovoo Pit

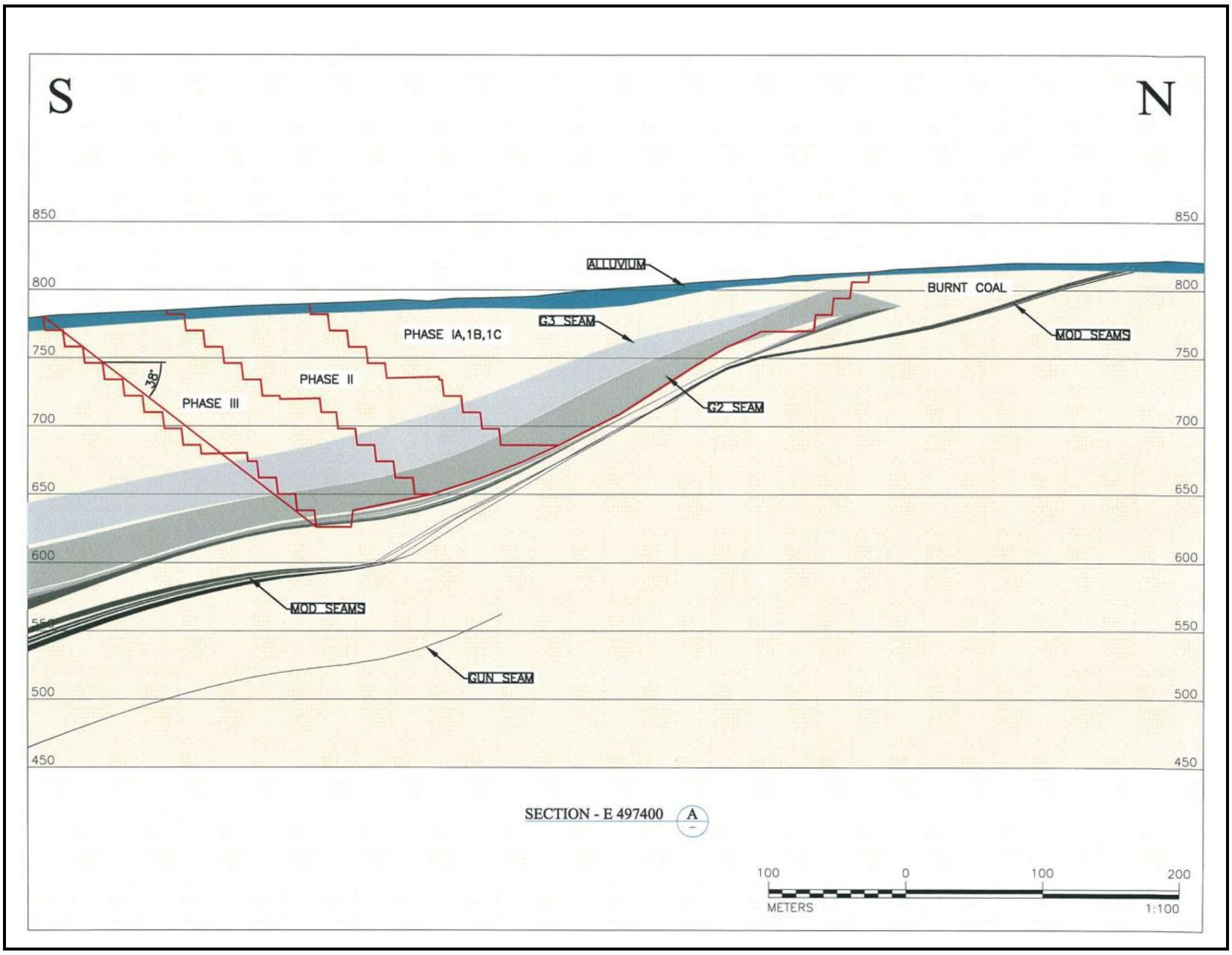
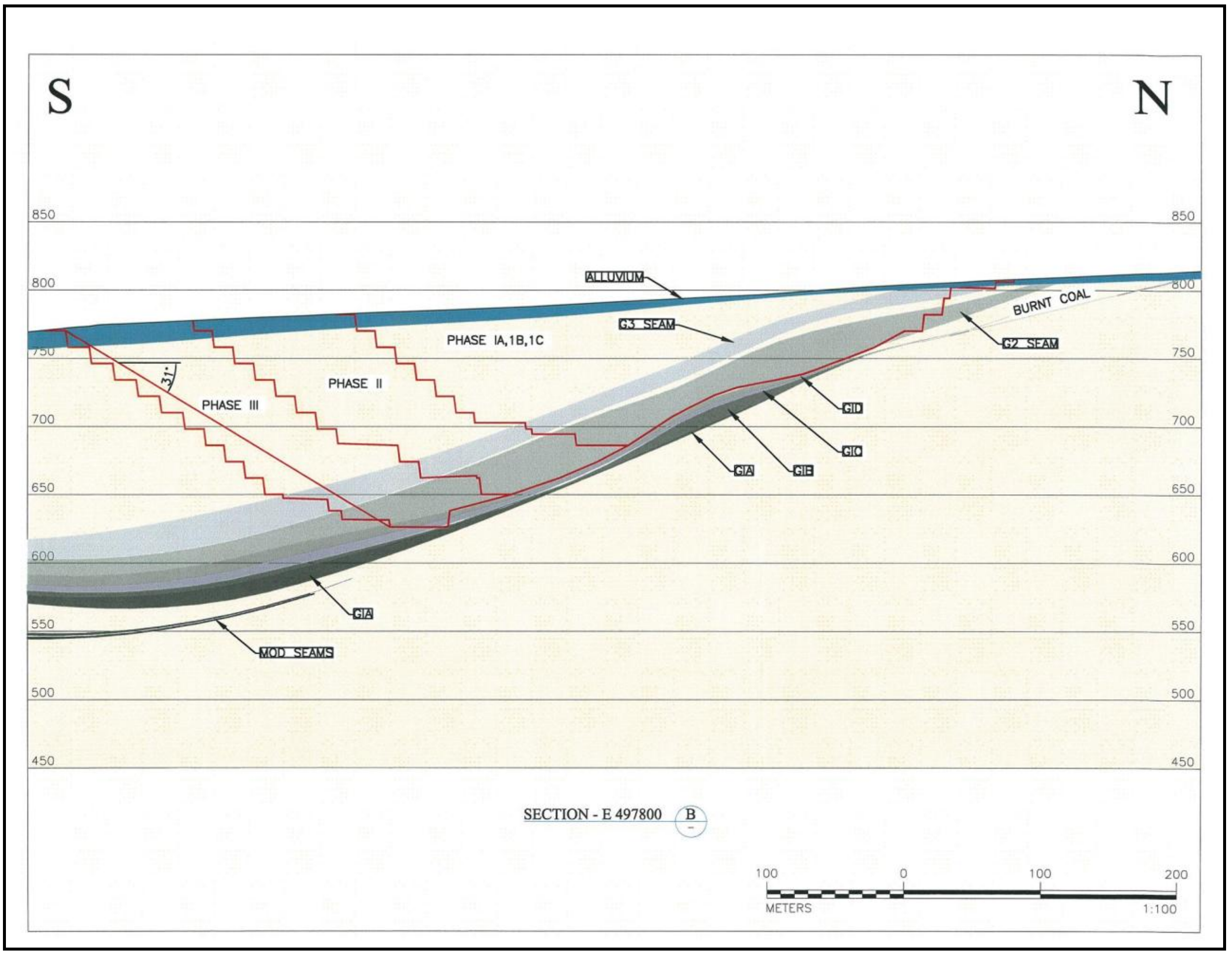


Figure 19.3 Section B through the Ulaan Ovoo Pit



19.4.3 Loss and Dilution

The following Loss and Dilution factors (see Table 19.3) have been applied to the in-situ resources to obtain the ROM resource.

Table 19.3 Loss and Dilution Factors

Coal Qualities	Factor
Coal Loss (per interface)	0.25 m
Parting Dilution (per interface)	0.10 m
Coal loss Ash	In-situ ash by seam by bench from model
Coal loss CV	In-situ CV by seam by bench from model
Coal loss Moisture (ar)	In-situ Moisture by seam by bench from model
Coal loss Sulphur (ar)	In-situ Sulphur by seam by bench from model
Coal loss SG	In-situ SG by seam by bench from model
Parting dilution Ash	77%
Parting dilution CV	560 Kcal/kg
Parting dilution Moisture	7%
Parting dilution Sulphur	0.1%
Parting dilution SG	1.8

The parting dilution parameters were estimated from parting assays done for the 2006 exploration programme.

Loss and dilution tonnage and coal quality adjustments were done by seam/seam split by bench by pit phase relative to parting area for each seam.

19.4.4 Mine Plan Tonnage

Table 19.4 Mine Plan Tonnages

Measured Material	Amount
Product Coal (kt)	20,724
Total Coal (kt)	21,444
Stripping Ratio (BCM:t)	1.8
Ash Content (%)	11.3
Calorific Value (kcal/kg)	5,040
Moisture (%)	21.7%
Sulphur (%)	0.33%
Mine Life (years)	10.7
Coal Production Rate (kt/a)	2,000

The total Mineral Reserve Estimate is 20.7 Mt of Product Coal. All coal tonnage and qualities are stated as "as received".

19.5 Mine Production Schedule

19.5.1 Mine Planning

A coal mining rate of 5,715 tonnes per day (**t/d**) allows for an annual production of 2,000 kt. This results in a mine life of 10.7 years.

Prophecy have contracted Leighton LLC to mine 250 kt of low ash coal in 2010. From 2012 onwards the objective is to sell 2,000 kt of low ash coal per year and to stockpile any high ash coal removed from the open pit during normal mining operations for future processing if/when the decision is made to build a coal washing plant at a later date.

19.5.2 MINING SCHEDULE

The life of mine waste to coal ratio is 1.8:1 (BCM/tonne of product coal).

Table 19.5 details the annual production for low ash coal production of 5,715 t/d.

Table 19.5 Coal production and Waste Mining Production Schedule

Period	Low Ash Coal (kt)	Waste (kBCM)	Strip Ratio
2010	250	222	
2011	1,129	5,368	
2012	2,000	4,979	
2013	2,000	4,957	
2014	2,000	4,966	
2015	2,000	4,369	
2016	2,000	3,500	
2017	2,000	3,443	
2018	2,000	2,580	
2019	2,000	1,875	
2020	2,000	876	
2021	1,344	135	
TOTAL	**20,724**	**37,268**	**1.8**

The mining schedule shown below in Figure 19.4 is a very prelimenary schedule which mines the waste on a bench by bench basis. A more detailed schedule, to reduce the initial waste movement as much as possible, is recommended for the next phase of the project.

The mine has been scheduled using three pushbacks or stages.

Figure 19.4 Ulaan Ovoo Pit Schedule

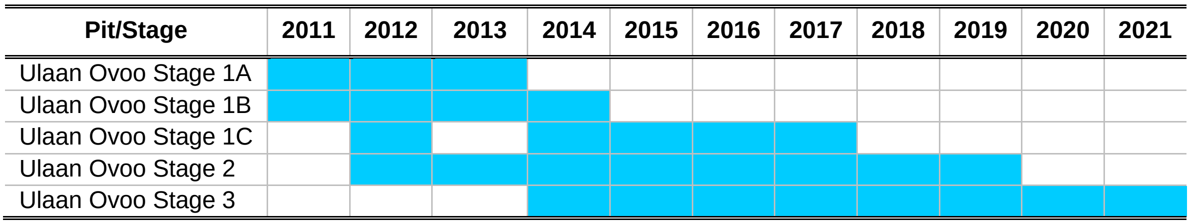
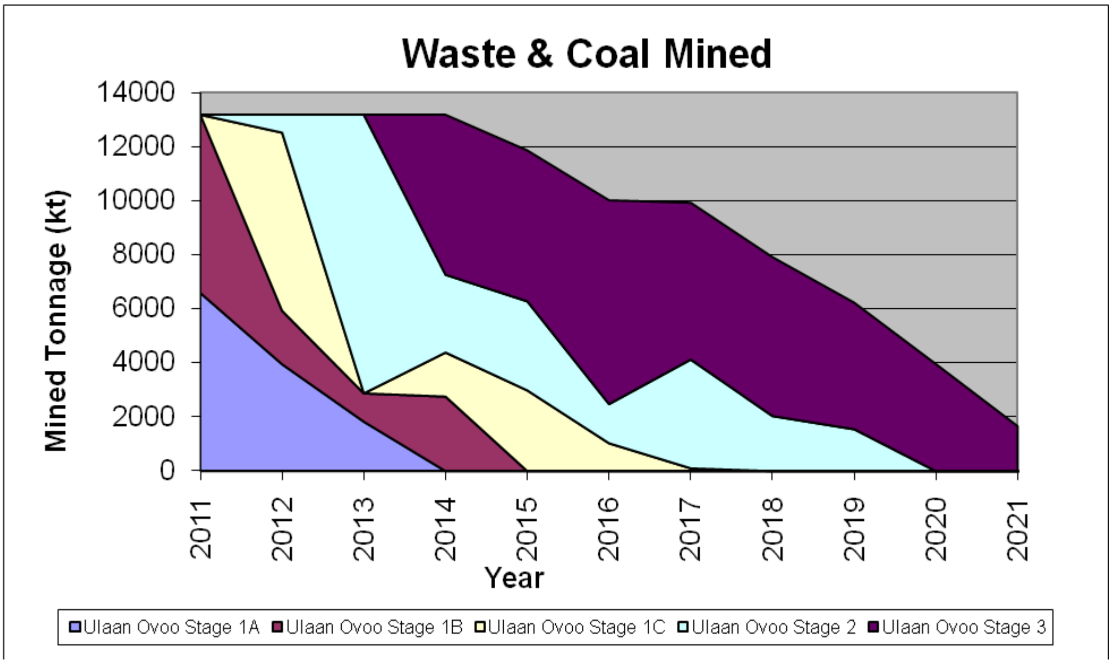


Figure 19.5 Ulaan Ovoo Tonnes Mined



19.5.3 MATERIAL CLASSIFICATION

For the purpose of this study, it is assumed that the waste rock will be non-acid generating (**NAG**) as it is predominately alluvium and shales. Further testwork to confirm the chemical characteristics of the waste rock is recommended for the next phase of the project.

As high ash coal is left in the footwall during this phase of mining, the waste dumps have been designed outside the pit area to allow for removal of the high ash coal at a later date if required. High ash coal removed from the pit during this phase of the mining operations is stockpiled separately for processing later in the mine life through a coal washing plant if economically viable. The high ash coal stockpile will be compacted and sealed from the atmosphere to prevent spontaneous combustion.

19.5.4 WASTE DUMP DESIGN

The waste dump has been designed using the following parameters.

Table 19.6 Waste Dump Design Parameters

Item	Size
Overall Slope Angle	24.8°
Bench Face Angle	37°
Lift Height	12 m
Number of lifts	5
Catch Bench Width	10 m
Ramp Grade	8%
Ramp Width	26 m
Dump Top Elevation	842 m
Dump Height	Approx. 60 m
Swell Factor	30%
Volume of Dump	48.5 M m^3
Dump Footprint	1,480,000 m^2

19.5.5 PREPRODUCTION STRIPPING & INITIAL DEVELOPMENT

The north-eastern portion of the Gol seam outcrops to surface and has already been exposed by a small test pit. As a result, minimal pre-stripping is required before production commences. Any topsoil removed as the pit advances will be stockpiled for future reclamation on the waste rock dump and mined out areas as required.

12.2 Mt of overburden will be stockpiled and used for rehabilitation work at the end of the economic life of the mine. Progressive reclamation will be implemented to minimize the disturbed footprint.

The waste rock will be used as necessary for construction of site access roads and associated infrastructure such as workshops, offices, fuel stores and explosive magazines.

19.6 MINE ACCESS

Road access to the site from Ulaanbaatar is via the main Altanbulag-Ulaanbaatar two-lane macadam highway to Shaamar (300 km), then westwards for 117 km to Tushig soums on a single lane improved dirt road. The final 8 km to site is by an unimproved single lane dirt road. There are three river crossings, via concrete bridges, on the Shaamar to Tushig soums portion of the route.

The local topography is gentle so access road construction around the mine site is not considered to be onerous.

It is envisaged that the internal roads, designed for haul truck traffic will have a minimum running surface of 19 m, with the ramps having a width of 26 m. The additional 7 m are for a safety berm and drainage ditch. The running surface of the roadways will allow for two-way tramming, with an additional truck width allowance for truck separation. The maximum haul ramp gradient is planned at 8%.

The haul roads will be maintained to a high standard with a road maintenance and repair fleet of equipment dedicated to that task. This will maximise safe haulage speeds and production and reduce maintenance costs.

19.7 Mining Method

The mining method selected for the Ulaan Ovoo open pit is suitable for a small to medium size tonnage operation. It is based on the conventional approach of drilling and blasting to break up the rock, with loading and hauling to the crusher, stockpile area and dumps using front end loaders and rigid dump trucks.

This study assumes that the mining will be performed by an experienced mining contractor for 2010 and 2011, but with owner management and technical support. From 2012 until the end of the life of the mine, the mine will be owner operated.

19.7.1 Drilling

The drilling parameters were based on the predominant rock type of coal and shale, using an estimated penetration rate of 39-60 metres per hour (**m/h**).

A rotary single pass track mounted dill rig was chosen to provide good productivity and to suit the bench height of 12 m.

Surface alluvium will not require blasting, but will be removed by free-digging or ripping and digging.

The drill requirements will consist of one blasthole drill for coal and waste rock drilling, capable of drilling 251 mm diameter blast holes. The primary production drills should be capable of single-pass drilling to 17.0 m. Detail is represented in Table 19.7.

Table 19.7 Blasthole Drill Productivity

Item	Units	Waste	Coal
Hole Diameter	mm	251	251
Bench Height	m	12.0	12.0
Sub-drill	m	1.6	1.6
Bank Density	t/m^3	2.25	1.51
Powder Factor	kg/m^3	0.3	0.15
Yield Per Hole	t	1,728	1,160
Burden	m	8.0	8.0
Spacing	m	8.0	8.0
Drilling Rate	m/h	39	60

19.7.2 Blasting

Mine explosives will be supplied by an explosives supply contractor and stored in two separate areas close to the open pit. The ammonium nitrate silos and emulsion tanks will be enclosed within a fenced compound to be located with official requirements.

Overall explosive consumption has been based on 5% wet holes using ammonium nitrate and fuel oil (**ANFO**) as the bulk explosive and emulsion in the wet holes. If possible, sleeves will be used in the wet holes to eliminate the need for emulsion and keep the blasting operation as simple and easy as possible.

No allowance has been included for secondary blasting other than pillow blasting.

It is planned that ammonium nitrate is imported in bulk and then mixed with diesel on site.

Blasting parameters are set out in Table 19.8.

Table 19.8 Blasting Parameters for Production Blast Holes

Blasting Parameters	Unit	Waste	Coal
Explosive Density	g/cm³	1.05	1.05
Powder Factor	kg/t	0.3	0.15
Powder Height	m	10.0	3.4
Powder per Hole	kg	518	174
Stemming Height	m	3.6	10.2

19.7.3 LOADING

Mining of the open pit will generally require just two active work areas. The loading fleet will consist of two 11.5 m^3 front end loader, with a back up loader used for the stockpile loading of the road trucks. The loader size has been matched with the 90.9 t trucks and requires 4 passes to fill a truck. The fleet will be used for both waste and ore loading. Coal buckets will be used to increase loading efficiency in coal.

19.7.4 HAULING

The 90.9 t mining truck was selected to match the 11.5 m^3 front end loaders. Haulage profiles are designed with a haul ramp grade of a maximum of 8%.

The haul trucks will be used for both low ash coal to the surface active stockpile area and waste and high ash coal to their respective dump areas.

Combination truck boxes are specified for the trucks. Use of these boxes will ensure that the truck load capacity is fully utilised for coal haulage due to a lower bulk density compared to waste.

Table 19.9 shows the number of mining trucks required per year for the life of the mine.

Table 19.9 Mining Trucks Required per Year for the Life of the Mine

Year	Mine Waste (kt)	High Ash Coal (kt)	Low Ash Coal (kt)	Total (kt)	No. of Trucks
2010	500		250	750	Contractor
2011	12,078	4	1,129	13,211	12
2012	11,203	8	2,000	13,211	13
2013	11,153	59	2,000	13,211	13
2014	11,174	38	2,000	13,211	13
2015	9,830	61	2,000	11,890	13
2016	7,875	168	2,000	10,043	10
2017	7,747	205	2,000	9,952	10
2018	5,804	129	2,000	7,933	8
2019	4,218	29	2,000	6,247	7
2020	1,970	0	2,000	3,970	5
2021	303	19	1,344	1,667	2

19.7.5 STOCKPILES

A low ash stockpile of approximately three weeks supply (150,000 t) will be maintained adjacent to the exit ramp from the pit. The coal hauled from the pit will be tipped over a grizzly and then stockpiled for loading into the 50 t road trucks. A track mounted hydraulic rock breaker will be provided to handle the grizzly oversize material.

19.7.6 ANCILLARIES

MINE DRAINAGE

Control of any surface run-off is essential; therefore drainage ditches must be established and maintained as the open pit develops to ensure that rain water is contained and removed from the operations.

Based on hydro-geological data from the MUST report, an allowance has been included for 4 * 90 kW submersible pumps which are calculated to handle the pit dewatering down to the sandstone below the coal seams.

Table 19.10 Mine Water Inflows

Strata	m^3/day	m^3/day Cum. Flow Rate	kW Cum. Power
Alluvial Sediments	286	286	
Alluvial Sediments	710	996	14.48
Mudstone	3,493	4,489	79.38
Coal	505	4,994	91.97
Sandstone	3,912	8,906	233.8

Mine drainage water will be delivered to the surface and then passed through a triple-stage settling process before being discharged into the Zelter River.

Dust Suppression

One 50 cubic meter (**m^3**) water tanker has been selected for dust suppression duties. The majority of the water will be used for dust allaying purposes on the haul roads, at the loading areas and the dumps will be obtained from ground water from the open pit. Water refilling stations/goosenecks will be situated at the sump in the open pit and on surface at a take-off point from the pit dewatering pipeline.

19.7.7 Mine Equipment Fleet

The mining equipment was selected to match the mine production schedule, which is based on 350 days per year, with crews working 12-hour shifts on a rotation to be determined (e.g. 4 days on/4 days off). Equipment selection, sizing and fleet requirements were based on expected operating conditions, haulage profiles, production cycle times, mechanical availability and overall utilisation. To determine the number of units for each equipment type (drills, loaders, trucks, etc.), annual operating hours were calculated and compared to the available annual equipment hours.

Mobile support equipment such as auxiliary front-end loaders, dozers, graders, water, lube and fuel trucks are matched with the major mining units. Emphasis has also been placed on road construction and maintenance. Auxiliary equipment is also included for the mechanical and electrical servicing of the mining fleet.

The proposed mine equipment fleet is listed in Table 19.11.

Table 19.11 Mine Equipment

Item	Quantity
Load and Haul	
11.5 m^3 Wheel Loader	3
90.9 t Haul Truck	13
Drilling	
251 mm Rotary Drill	1
Ancillary	
Track Dozer	4
Excavator & Hammer	1
Utility Wheel Loader/Tyre Handler	1
Grader	2
Fuel/Lube Truck	1
Water Truck	1
Flatbed truck	1
Flatbed truck (with crane)	1
Rough Terrain Crane	1
Welding/Service Truck	1
Bus	2
Pick-up trucks	15
Lighting Towers	8
Gen Set	1
Back-up Gen Set	1

19.8 LABOUR

The mine will be operated for 24 hours per day, 365 days per year, excluding 15 national holidays and bad weather days. An 18.75% adjustment has also been built in for shift change, meal times and scheduled downtimes, resulting in 6,825 annual available operating hours, or 9 h 45 per shift, for 2 x 12 hour shifts per day. In order to have full coverage, 4 crews have been planned.

The mine will provide transport to bus the workforce to and from site.

Table 19.12 lists the proposed manpower for the open pit operations and maintenance.

Table 19.12 Proposed Manpower for Open Pit Operations & Maintenance

Job Title	Peak Labour Requirements
Mine Manager	1
Mine Superintendent	1
Admin Assistant	1
Mine General Foreman	1
Senior Mine Foreman	2
Mine Foreman	4
Loader Operator	12
Dump Truck Driver	45
Support Equipment Operator	28
Labourer	4
Drill & Blast Foreman	1
Driller	4
Blaster	1
Blaster Helper	1
Lube/Fuel Operator	4
Tech Services Superintendent	1
Admin Assistant	1
Chief Mining Engineer	1
Senior Mining Engineer	1
Mine Planning Engineer	1
Ore Control Engineer	1
Geotechnical Engineer	1
Mining Technologist	1
Chief Geologist	1
Geologist	1
Geology Technician	2
Chief Surveyor	1
Surveyor	2
Survey Assistant	2
Environmental Engineer	1
Environmental Technologist	2
Mine Maintenance Superintendent	1
Mine Maintenance Foremen	4
Mine Maintenance Planner	2
Light Vehicle Mechanic	4
Mine Maintenance Mechanic	12
Welder	12
Washbay Attendant	4
Total Labour	**169**

20.0 PROCESS METAL RECOVERIES

This current PFS considers the Low Ash coal only as the product, no coal washing plant is included.

This section is therefore not relevant to the project.

21.0 MARKETS

21.1 INTRODUCTION

The primary options for the sale of the coal from Ulaan Ovoo are either using the coal at site in a thermal power generation plant or by transporting the coal to the domestic or international market by road or rail, or a combination of the two transport methods.

Previous studies have considered either supplying coal to a power plant adjacent to the project site or building a rail spur, either westwards from Sukhbaatar station to the mine site, or from the mine site north to Zheltura Port at the Russian border and then east to join the existing rail line in Russia at Dzida station and selling coal to the domestic or international markets.

Results from previous financial evaluations have indicated that the project is very sensitive to capital costs (**CAPEX**). As a result, this PEA considers a much smaller operation, selling 2 Mt of low ash thermal coal per year, with a low initial CAPEX. There is no plan to build a coal washing plant, no plan to build a thermal coal power plant and no plan to build a rail connection, either east to Sukhbaatar, or north to Dzida via Zheltura Port.

The remote location of the Ulaan Ovoo coal deposit in the north of Mongolia makes the transport and market component of the project one of the key financial drivers.

21.2 TRANSPORT

The Ulaan Ovoo project site is located 137 km to the west of Sukhbaatar station on the existing rail line running from Ulaanbaatar to the Russian border port of Naushki and 17 km south of Zheltura Port on the Russian border. The nearest rail link in Russia is a further 145 km to the east at Dzida station. (See Figure 21.1)

Figure 21.1 Ulaan Ovoo Infrastructure Map

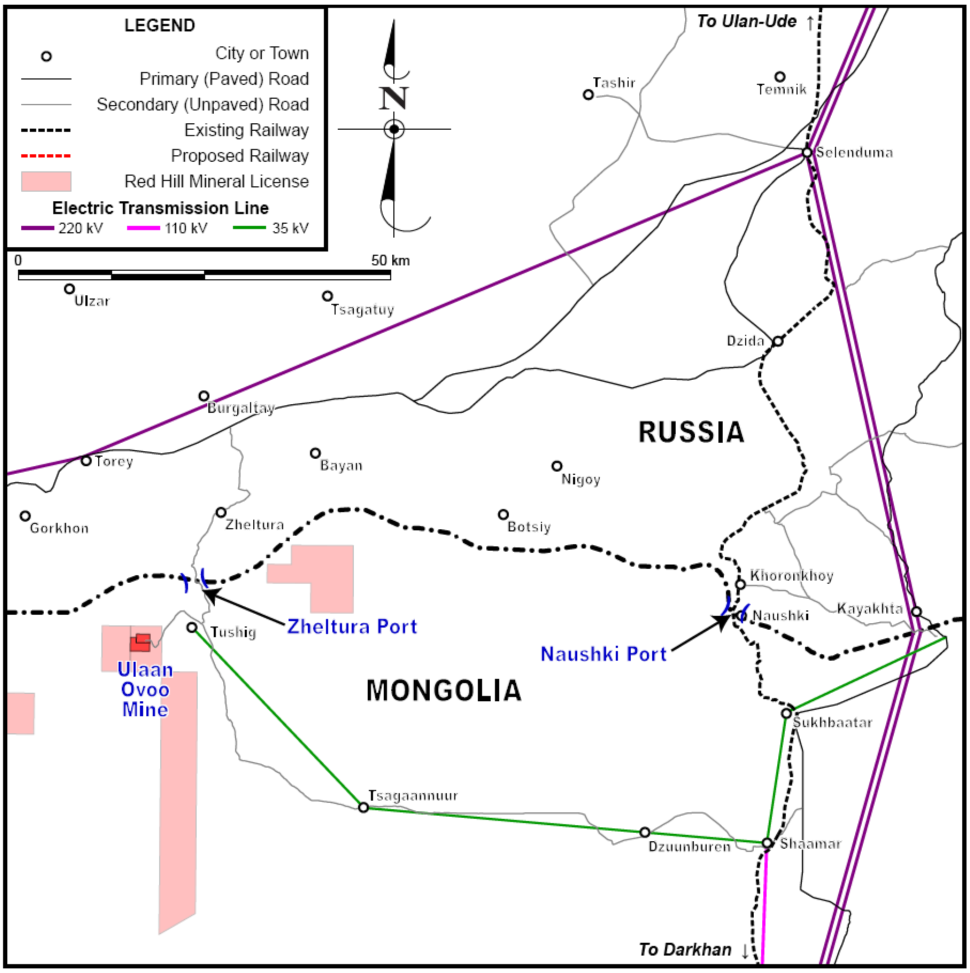


Figure courtesy of Prophecy

Prophecy have negotiated a haulage contract to transport the coal by road from the Ulaan Ovoo mine site to Sukhbaatar rail siding and have secured loading facilities at Sukhbaatar to transfer the coal from the road trucks to the rail wagons. Sukhbaatar station is located on the Trans-Mongolian railway which links to the Trans-Siberian railway. Both the Mongolian and Russian rail networks share the same track gauge.

Prophecy is currently in negotiations to supply coal to either the Russian domestic market, or as export from the Russian East Coast ports.

The base case for this study is therefore road haulage to Sukhbaatar Station and rail haulage to Naushki Port at the Russian border.

An alternative transport route, which has the potential to provide savings in both operating cost (**OPEX**) per tonne, road re-refurbishment CAPEX and road truck purchase, is via the border port of Zheltura. This route is currently being investigated, but has not been used for this study.

The costs for this option are listed in Table 21.1.

Table 21.1 Transport Costs

Location	Cost /t
Road Haulage from Ulaan Ovoo to Sukhbaatar (Offsite Charge)	US $8.00
Loading of Rail Wagons at Sukhbaatar Station (Offsite Charge)	US $1.50
Rail Haulage from Sukhbaatar Station to Naushki Port (Offsite Charge)	US $0.90
TOTAL	**US $10.40**

21.2.1 MARKETS

Figure 21.2 indicates a breakdown of costs to reach various market options, both in Mongolia and Russia.

The marketing option used in this study is to sell the Ulaan Ovoo coal at the Russian border port of Naushki, for ongoing transportation to either the Russian domestic market or for export via a Russian East Coast port. The cost incurred to reach the point of sale at Naushki Port, including mining and transportation costs, are US $20.63 /t.

The coal selling price used in the pit optimisation work and the financial evaluation is US$ 40 /t of thermal coal sold at the Russian border port of Naushki. This is a price agreed to by Prophecy and is less than the pricing in current negotiations, it also allows for a level of conservatism to the financial analysis results.

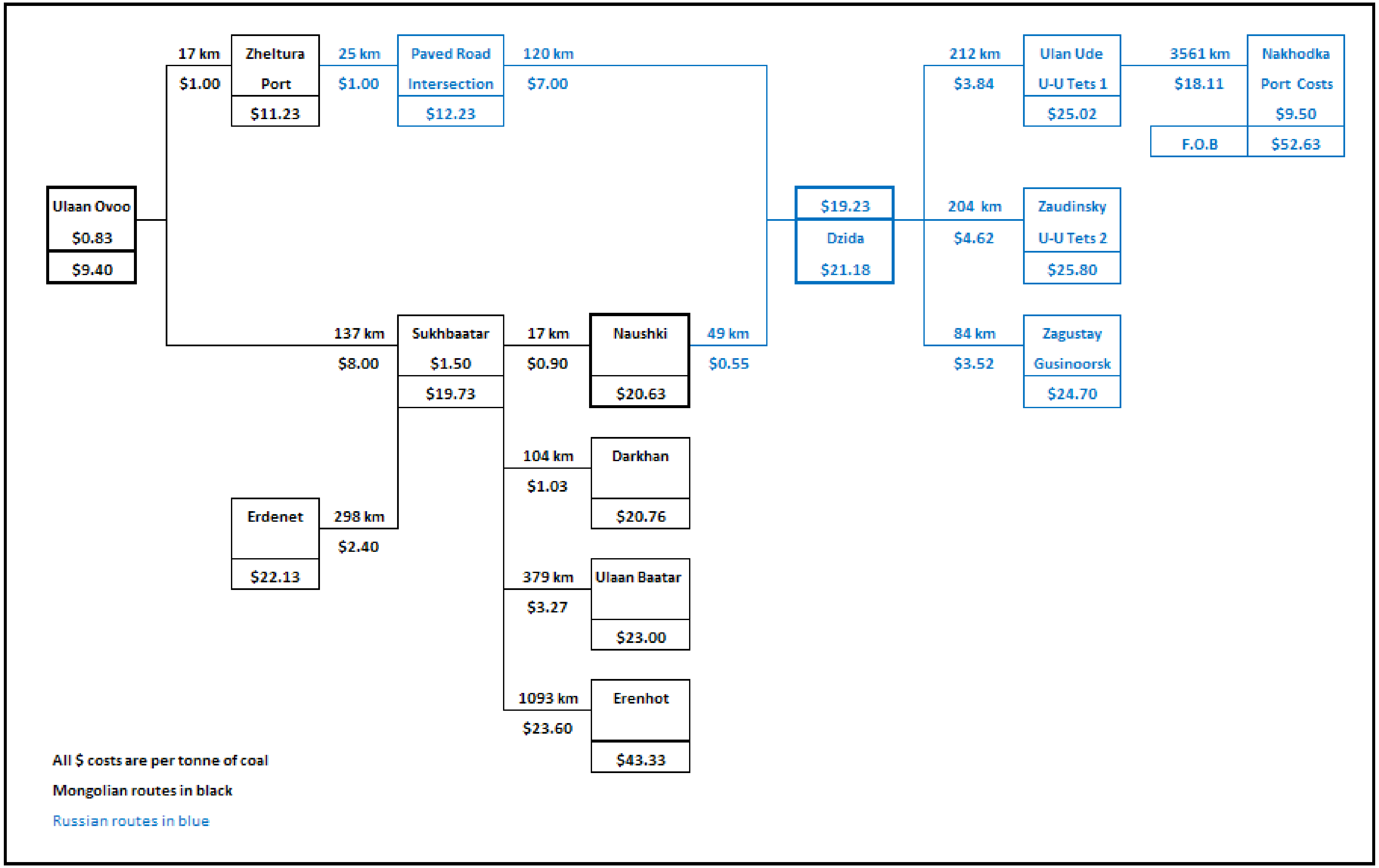
Export thermal coal through Russian East Coast ports is currently realising US $88 to US $90 /t, providing confidence to the US $40 /t price at the Russian border.

Prophecy is researching export markets in Russia, South Korea and India, as well as the internal Mongolian market.

WARDROP A TETRA TECH COMPANY

Prophecy Resource Corp.

Figure 21.2 Transport and Marketing Map



22.0 CONTRACTS

22.1 CONTRACTS

Prophecy is presently negotiating the following contracts having secured some contracts at the time of writing:

22.1.1 ROAD HAULAGE

Quotations have been received from independent contractors for the road haulage of 250,000 t in 2010 of thermal coal from the mine site at Ulaan Ovoo to the railway station at Sukhbaatar.

22.1.2 RAIL WAGON LOADING

Agreement has been reached for the loading of 250,000 t of coal at the railway station from stockpile onto rail wagons.

22.1.3 SALES CONTRACTS

Negotiations are in progress, but no contracts signed for the sale of thermal coal from Ulaan Ovoo.

Markets considered are the internal Mongolian power generation market, or export to Russia, South Korea and India.

23.0 ENVIRONMENTAL CONSIDERATIONS

Wardrop has not been requested to perform any evaluation or review of the environmental assessments or permits as part of this report.

Listed below are details of the permits and approvals that have been applied for the Ulaan Ovoo project:

- A detailed Environmental Impact Assessment (**EIA**) was completed by ECOS LLC, a licensed Mongolian environmental assessment and consulting company, for Redhill Mongolia LLC for the Ulaan Ovoo coal project. This report was approved by the Mongolian Government in 2008.

The primary impacts of the Project on the environment were identified as:

- Substantial alteration of the current, natural landscape through open cut development and all waste rock placed on the surface.
- As with all such operations, mining may have an impact on air quality through dust generation.
- Water usage may impact on groundwater currently used by local inhabitants.
- Socio-economic impact of the development.
- Diversion of the Zelter River could cause adverse changes to the surface hydrology and flood plain.

Though many of the impacts can be mitigated through diligent environmental management, further data and analysis is required to better understand the risk to local communities associated with any planned diversion of the Zelter River; the hydrological risks to the region including local groundwater levels following mine pumping and the impact of the mine and mining activities upon the social and economic condition of the local communities.

An Annual Environmental Protection Plan (**AEPP**) for 2010 was approved by the Mongolian Ministry of Environmental Protection for the Ulaan Ovoo coal mining operation. This plan is set up in accordance with the Environmental Protection law of Mongolia and basic requirements developed under detailed EIA for the Ulaan Ovoo coal mining operations. The plan contains the following information:

- Identification of any risks and harmful effects from the mining operations to the surrounding environment and conducting of monitoring activities while mining.
- Mitigation and protection measures against any harmful operations from mining, if any are identified, in accordance to the Mongolian applicable standards.
- Dust and noise suppression measures from mining and heavy machinery operations to be applied to the applicable industrial standards.
- Reclamation and restoration activities for disturbed land and areas from mining.

- Cost estimation for all activities and measures under the AEPP.

By accepting the approved AEPP for 2010, the license holder has an obligation to the following duties and responsibilities in terms of reclamation and environmental protection:

- To take necessary action against dust from mining operation if required.
- Protect the surface water from contamination from mining areas by precipitation or floods if required.
- Identify any affects to surface water or rivers from mine dewatering and take necessary actions if required.
- Minimise areas under mining to avoid disturbance to the natural ground and vegetation.
- To perform any necessary reclamation on ground disturbed by waste dumps, pit, road etc once mining activities have finished in these areas.
- To reserve all top soil by storing separately from subsoil for future biological reclamation.
- To reclamation and re-vegetate the areas disturbed by exploration activities in the past where no mining is planned.
- To conduct effective environmental monitoring activities by the mine environmental unit on air and water qualities, dust and noise control effectiveness, vegetation and animal habitat changes etc.
- To spend MNT 10 M to keep this plan at good standing according to the budget estimation approved in the plan.

In addition to the EIA and AEPP, the following permissions for the Ulaan Ovoo project have been submitted to the Mongolian authorities.

Table 23.1 Ulaan Ovoo Project Permissions Submitted to the Mongolian Authorities

Permission	Status
Approval of Technical and Economic Study by Government	In progress
Mine plan approval from Local and Central Government	Approved
Land use permission from Local Government for mine operation	Approved
Water utilisation permission from Local Government	Approved
Emergency response plan for Ulaan Ovoo mine operations for 2010	Approved
Border zone permissions for employees and visitors	Granted and ongoing
Inspections and permissions for camp and mine infrastructure	Under approval
Permits for road repair and maintenance between Ulaan Ovoo and Shaamar for coal transport	Permits issued

An amount of US $2 M has been included in the financial evaluation for mine reclamation. This amount has been reduced from the US $8 M included in the Minarco PFS which was for a 100 Mt mine.

24.0 TAXES

Wardrop completed a post-tax financial evaluation as part of this study. Taxes were provided and by Prophecy / UB Audit, and also reviewed by Wardrop.

24.1 CORPORATION TAXES

The annual corporation tax is as follows:

- Up to Mongolian Tugrik (**MNT**) 3 billion at 10%.
- Above MNT 3 billion – MNT 300 M and 25% of the amount exceeding MNT 3 billion.

UB Audit has applied the requisite taxes to the Wardrop pre-tax model and has also audited the final post-tax financial analysis. Wardrop has reviewed these taxes and has applied them to their own post-tax financial model.

24.2 EXTRACTION COAL ROYALTIES

Coal will attract a 5% royalty per tonne of coal at a sales value set monthly by the Ministry of Mineral Resources and Energy . The December 2010 value of US $ 51.4 /t has been used in the financial model.

Coal extracted for domestic sale will attract a 2.5% royalty plus 10% Value Added Tax (**VAT**). This rate has not been used in the current evaluation.

An export duty of MNT 2,000 per tonne coal sold has also been included in the financial model.

24.3 MISCELLANEOUS TAXES

Miscellaneous taxes applied to the tax model are:

- Real Estate tax
- Land fee
- Licence fee for exploitation and exploration of mineral resources
- Customs Tax
- VAT

24.4 DEPRECIATION AND AMORTISATION

Depreciation and amortisation was developed in conjunction with UB Audit to ensure rules conformed to Mongolian regulations.

25.0 CAPITAL AND OPERATING COST ESTIMATES

25.1 OPERATING COST ESTIMATE

The operating cost estimate for the life of the project is summarised in Table 25.1

Table 25.1 Operating Cost Estimate by Area

Area	Unit Cost (US $ /t coal)
Coal Mining	9.40
On-Site Coal Handling	0.35
Administration & Overhead	0.48
Total	**10.23**

25.1.1 MINE OPERATING COST – CONTRACTOR

A mining contractor will run a reduced operation for 2010 and provide ramp up production during 2011.

Leighton LLC provided a quote for the 2010 coal and overburden production. The total cost for 2010 is US $3.9 M to produce 250 kt of coal and relocate 500 kt of overburden. This equates to US $5.00 /t material mined.

In 2011 the unit cost per tonne mined is estimated at US $4.00 /t mined (excluding the site establishment cost included in the 2010 quote above).

25.1.2 MINE OPERATING COST– OWNER

The Owner is expected to run the operation from the start of 2012 onwards.

The following cost inputs were used to calculate the mine operating cost:

- Lube Cost – US $1.13 per Litre (**/L**).
- Regular Fuel Price – US $1.10 /L.
- Diesel Fuel Price – US $0.90 /L.

The total mine operating cost, for the owner operated mine fleet, is US $1.48 /t mined. Table 25.2 shows the breakdown of this cost in US $ /t mined.

Table 25.2 Total Mine Operating Cost

Cost Component	US $ /t mined	% Cost
Fuel	0.58	39.2
Lube	0.02	1.4
Tires	0.14	9.5
Equipment Maintenance	0.16	10.8
Drilling	0.01	0.7
Explosives	0.33	22.3
Dewatering	0.1	0.7
Labour Requirements	0.21	14.2
Miscellaneous	0.02	1.4
Total Mine Operating Cost	1.48	-

25.1.3 *On-site Coal Handling Cost*

The on-site coal handling cost is estimated at US $0.35 /t coal which is the cost of re-handle from the ROM stockpile to the road transport.

25.1.4 *Administration and Overhead Cost*

The general and administrative cost is estimated at US $0.48 /t coal and listed in Table 25.3.

Table 25.3 General and Administrative Cost

Expense	US $ /t
Salaries	0.22
Social and Health Insurance tax	0.04
Utilities	0.04
Rent	0.05
Office Admin	0.03
Travel	0.10
Total	**0.48**

25.2 Capital Cost Estimate

25.2.1 *Initial Capital Cost Estimate*

The initial capital cost of US $65.67 M (including contingency) is summarised in Table 25.4.

Table 25.4 Summary of Capital Cost

Area	Items Included	Cost (US $ M)
Mining	Owner Mobile and Fixed Ancillary Equipment, Technical Equipment and Software.	32.2
Processing	Plant not included.	0.0
Waste Dump	Pre-Strip, Drainage, Tailings Lining.	0.12
Infrastructure	Power Supply and Distribution, Services and Plant-site Roads, Communication, Water, Fuel, Sewage, Workshop, Warehouse, Buildings, Explosive Storage.	7.0
Transport	Road and bridge upgrade and coal haulage fleet	15.5
Project Indirects	25% of Direct Costs including Spares, First Fills, EPCM, Freight, Vendors, Equipment Commissioning.	6.4
Owners Cost	Allowance for Land Acquisition and Head Office Costs.	0.25
Working Capital	First year's operating cost	4.0
Contingency	25% of Direct Mining Cost, 10% of Other Direct Costs.	3.9
Reclamation Cost	Initial payment of the Reclamation bond required for every year of production whole or part.	0.3
TOTAL	**Including Contingency**	**69.7**

25.2.2 Sustaining Capital Cost Estimate

Mining

The total sustaining mine capital cost is US $14 M (including contingency). The sustaining mine capital cost estimate includes replacement equipment costs for the life of mine.

Infrastructure

An allowance of US $0.5 M/a (including contingency) is included in the financial model, totalling US $4.5 M for the life of mine.

25.2.3 Project Capital Costs

Working Capital

Working capital is estimated as the first five (5) months of the contractor cost and owner cost during 2010, totalling US $4.0 M.

The working capital is recovered at the end of the mine life and applied towards reclamation during closure.

Salvage Value

No salvage value has been included.

RECLAMATION COST

The reclamation bonding is US $2.0 M for the life of the mine. This equates to US $0.10 /t coal produced or an average of US $190,000 per year (**/a**) at full production.

26.0 ECONOMIC ANALYSIS

26.1 INTRODUCTION

A financial evaluation of the Ulaan Ovoo Project was prepared by Wardrop based on a post-tax financial model. For the 11 year mine life the following pre-tax financial parameters were calculated:

- 25.5 % IRR.
- 4.5 years payback on US $85.9 M capital, including sustaining capital.
- US $71.0 M NPV at 10% discount value.

The base case coal selling price is quoted as US $40.00 /t product (low ash) coal sold at the rail port of Naushki on the Russian/Mongolian border. Prophecy is in possession of documentation that supports this sale price.

Sensitivity analyses were carried out to evaluate the project economics with plus 30%, minus 30% the base case coal price.

An exchange rate of MNT 1,355 to US $ 1 was used in the project financial calculations where necessary.

26.2 POST-TAX MODEL

26.2.1 FINANCIAL EVALUATIONS – NPV AND IRR

The production schedule has been incorporated into the 100% equity post-tax financial model to develop annual coal and overburden production. Market prices for coal have been adjusted by applying coal transportation charges from mine site to the point of sale to determine the Net Revenue.

Unit operating costs for mining, on-site coal handling, administration and overhead areas were applied to annual product coal tonnages to determine the overall mine site operating cost which has been deducted from the Net Revenue to derive annual Operating Cash Flows.

Initial and sustaining capital costs have been incorporated on a year-by-year basis over the mine life and deducted from the Operating Cash Flows to determine the Net Cash Flow before taxes. Initial capital expenditures include the purchase of owner mining equipment; sustaining capital includes expenditures for mining and infrastructure additions, replacement of equipment and stockpile construction and maintenance.

Mongolian taxes have been incorporated into the model, including Export Duty, Royalty for Extracted Products, Real Estate tax, Land fee, Licence fee, Customs Tax, VAT and Corporate Tax.

Depreciation has also been calculated for inclusion into the gross taxable income.

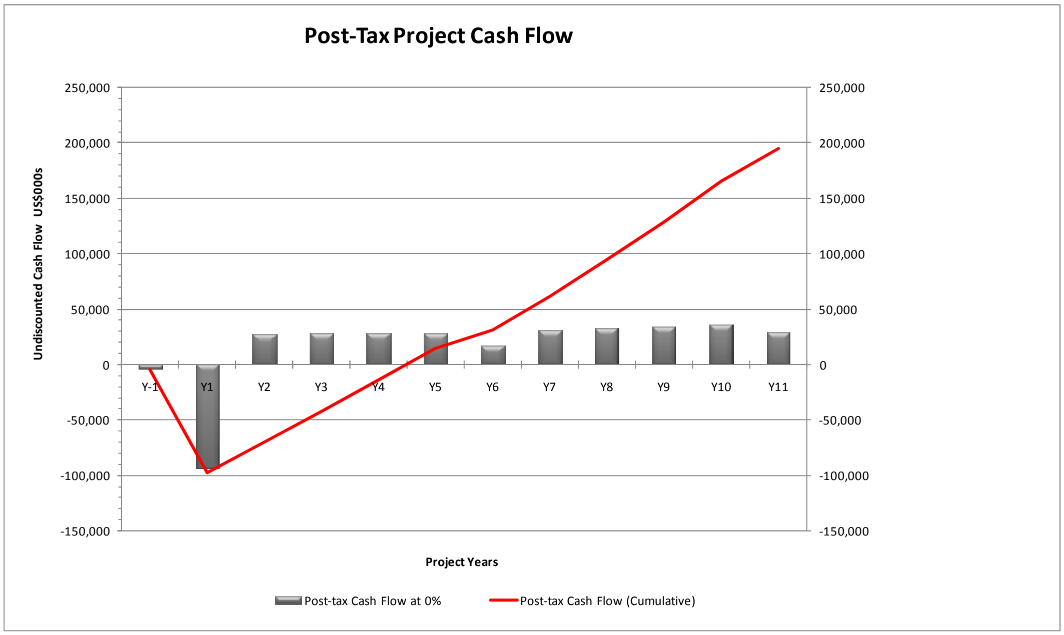
All tax rates have been supplied by Prophecy / UB Audit, who have also reviewed and approved the calculations. Wardrop has also reviewed the tax calculations.

Working capital is estimated as the cost of the initial contractor cost during 2010. The working capital is recovered at the end of the mine life.

The post-tax financial model is included as Appendix A.

The undiscounted annual cash flows are illustrated in Figure 26.1

Figure 26.1 Undiscounted Annual and Cumulative Cash Flow



26.2.2 Metal Price Scenarios

The coal selling price base case, plus 30%, minus 30% for the financial evaluations are summarised in Table 26.1

Table 26.1 Coal Price Scenarios

Scenario	Coal (US $ /t)
Minus 30%	28.0
Minus 20%	32.0
Minus 10%	36.0
Base Case	40.00
Plus 10%	44.0
Plus 20%	48.0
Plus 30%	52.0

The post-tax financial model was established on a 100% equity basis, excluding debt financing and loan interest charges. The financial outcomes have been tabulated for NPV, IRR and Payback of Capital. Discount rates of 10% and 8% were applied to all cases identified by metal price scenario. The results are presented in Table 26.2 .

Table 26.2 Summary of Pre-Tax NPV, IRR, and Payback

Scenario	NPV 10 (US $ M)	NPV 8 (US $ M)	IRR (%)	Payback (Yrs)
Minus 30%	-62.28	-58.44	-4.4	13.1
Minus 20%	-17.82	-9.58	6.1	10.7
Minus 10%	26.58	39.23	15.8	7.0
Base Case	70.98	88.03	25.5	4.5
Plus 10%	115.38	136.84	35.7	3.6
Plus 20%	159.77	185.64	46.8	3.1
Plus 30%	204.17	234.45	59.2	2.7

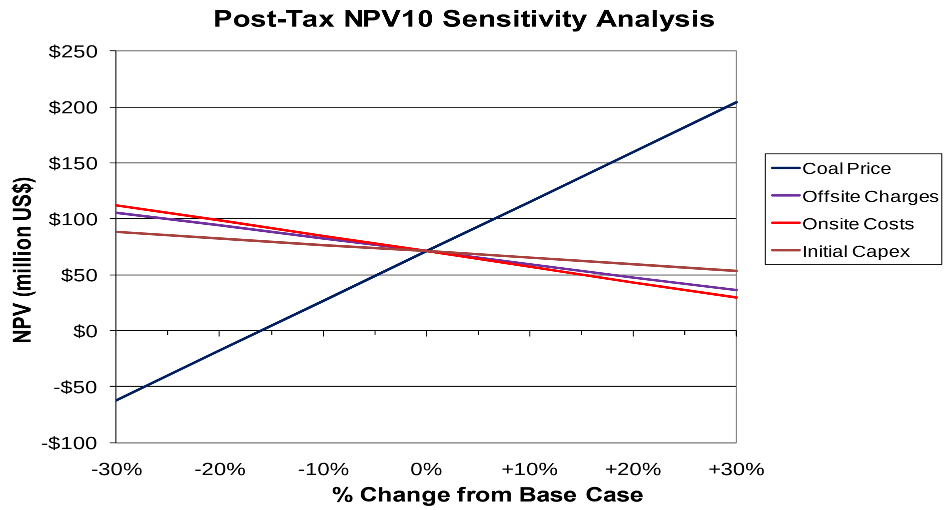
26.2.3 SENSITIVITY ANALYSIS

Sensitivity analyses were carried out on the following parameters:

- Coal selling price.
- Offsite charges.
- Total on-site operating costs.
- Initial capital expenditure.

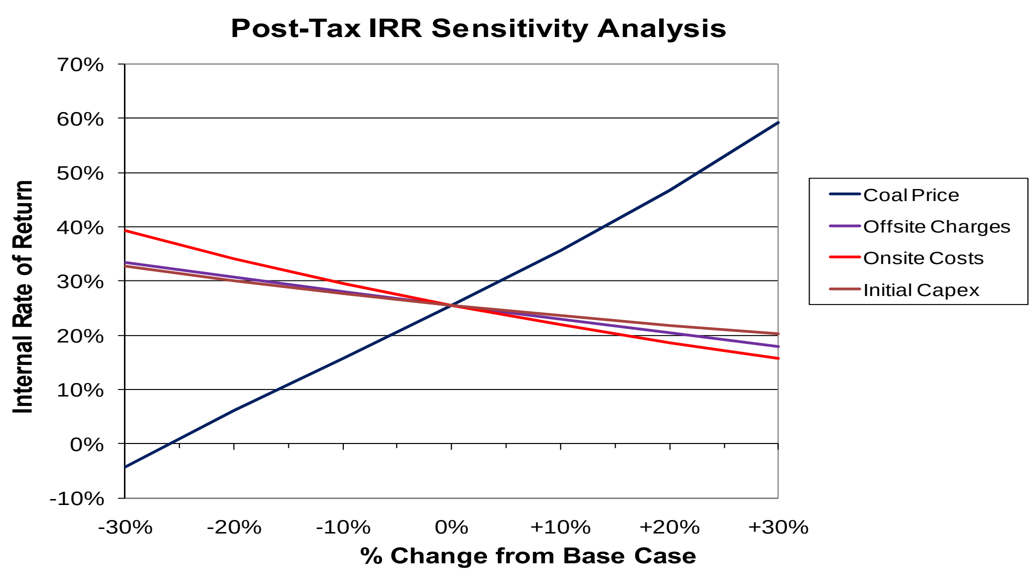
The analyses are presented graphically as financial outcomes in terms of NPV and IRR. The Project NPV (10% discount) is most sensitive to the coal selling price and in decreasing order: Offsite charges, On-site OPEX and Initial CAPEX.

Figure 26.2 NPV Sensitivity Analysis



The Project IRR is also most sensitive to coal selling price.

Figure 26.3 IRR Sensitivity Analysis



26.2.4 Royalties

An export royalty of 5% has been applied to the Grosst Revenue based on a coal sales value of US $ 51.4 /t. This value is set monthly by the Ministry of Mineral Resources and Energy.

26.3 Coal Transport Logistics

The product coal will be trucked from the mine site to a local point of sale, at an estimated cost of US $10.40 /t coal. This includes:

- (Road) Mine - Sukhbaatar Station: US $8.00 /t coal.
- (Rail) Sukhbaatar Station - Naushki Port: US $0.90 /t coal.
- Rail Wagon Loading at Sukhbaatar: US $1.50 /t coal.

27.0 PAYBACK

The payback on the project capital is estimated at 4.5 years based on the cumulative post-tax undiscounted cash flow.

28.0 MINE LIFE

The operating mine life is estimated at 10.7 years with an additional 6 months of pre-production mine development in 2010. A ramp up period is also included in 2011.

29.0 INTERPRETATION AND CONCLUSIONS

29.1 CONCLUSIONS FROM THE ULAAN OVOO COAL DEPOSIT PRE-FEASIBILITY REPORT

- There is sufficient information to classify the resources as reserves.
- The project demonstrates economic viability at US $40 /t selling prices (sold at Naushki Port on the Russian/Mongolian border).
- The current project site layout represents the first phase and the waste dump and mine building locations allow for future mine expansions.

29.2 PROJECT RISKS

- The project is very sensitive to coal pricing.
- There is potential for water inflow into the south boundary of the pit from the alluvial plane of the Zelter River. This is not a concern until the mining of the phase 3 pit is mined to the ground water elevation after several years of operation. Additional testwork and study will be required to determine the alluvial thickness and hydro conductivity in this area.

29.3 CONCLUSIONS FROM THE ULAAN OVOO COAL DEPOSIT DUE DILIGENCE REPORT

After completion of the Ulaan Ovoo coal resource due diligence study, it can be concluded that:

- A 3D geological block model can be developed for the Ulaan Ovoo coal deposit.
- The Behre Dolbear 2006 coal resource estimate is 208 Mt. Behre Dolbear used a simple grid and contour model method and the vertical (total) thickness of the coal seams.
- The Minarco 2009 coal resource estimate is 197 Mt. Minarco used a stratigraphic grid modelling system, the thickness of coal seams and took into account the stone partings.
- The Wardrop 2010 coal resource check estimate is 209 Mt. Wardrop applied roof and seam surface models derived from Minarco's grid models and applied these to a conventional block model to validate coal tonnages.
- Differences between the three estimates are due to modelling methods and software used and not significant.
- Coal resources from the 3D block model compare well with those reported in the Behre Dolbear 2006 and Minarco 2009 NI 43-101 reports.

- Coal quality as reported in the Behre Dolbear 2006 and Minarco 2009 reports are representative of the Ulaan Ovoo coal deposit.
- Further drilling is needed to:
  - Characterise coal deposit parameters in areas between the 2006 holes.
  - Determine the spatial extent of the basalt encountered in drill hole UGL-06-010.
  - Further work is needed to establish coal seam correlations between the 2006 drill holes and to add this data to Red Hill's drill hole database.

30.0 RECOMMENDATIONS

30.1 FEASIBILITY STUDY RECOMMENDATIONS

The current Pre-Feasibility Study considers an open pit operation designed using the consideration to minimise the initial capital cost requirement. This has resulted in a design philosophy based around these criteria. The study identified the following:

- Low tonnage, Phase 1 Starter open pit.
- No mining to the south of the Zelter River.
- No sales of high- ash coal.
- No requirement for a coal washing plant.
- Contractor mining until 2012.
- Coal sales at the Mongolian Russian border port of Naushki.

Wardrop's estimation of the cost of the recommended next phase of study, a Feasibility Study, is presented in Table 30.1. The cost breakdown with an approximate accuracy of -15% +30% is Wardrop's opinion based on the current information available and understanding of the project.

Table 30.1 Estimated cost of the Feasibility Study (Phase 1 only)

Activity C	ost
Hydrology and geotechnical engineering	$100,000
Mine engineering	$130,000
Infrastructure engineering	$120,000
Capital and operating cost estimate	$30,000
Marketing and transport study	$30,000
Project management and disbursements	$90,000
FS (Phase 1) Estimated Cost	**$500,000**
Geotechnical and hydrology drilling, data capture and analysis	$345,000
Total $84	**5,000**

The costs in Table 30.1 apply only to development of the phase 1 portion of the entire resource. An expanded pit was not included as part of the scope of this report.

There are a number of potential options to be considered during the next phase (Phase 2) of project study:

- Extend the open pit further south into the Zelter River flood Plain.
- Mine and then wash the High- Ash coal for sale.
- Review alternative markets.
- Review alternative transport options and routes.

- Study the potential for higher throughput rates to increase project value.
- Study the potential for use of larger mining equipment to increase project value.

The following studies are required to evaluate the potential of these options:

- Zelter River diversion.
- Water control cut-off wall in the river sediments.
- Water diversion berm.
- Assessment of coal quality design parameters for coal Preparation Plant design.

Wardrop recommends that the study for the Phase 2 portion of the Ulaan Ovoo project be a Pre-Feasibility Study due to the trade-off work required to evaluate the economic viability of mining south of the current route of the Zelter River.

It is anticipated that there will be considerable investment required to divert the river. The overburden to coal stripping ratio will also increase as the coal seams dip towards the south.

The estimate, Table 30.2, includes the following:

- Further hydrology and geotechnical work associated with a river diversion.
- A coal quality and processing testwork programme.
- Coal processing plant design.
- Review of the impact of annual throughput rate and mining equipment size on project economic viability.
- Mine design and schedule.
- Stockpile philosophy and schedule.
- Overburden Dump design.
- Tailings facility design.
- Infrastructure engineering.
- Operating and capital costing.
- Marketing and transport.
- Project Management and administration.

Table 30.2 Estimated cost of the Pre-Feasibility Study (Phase 2 only)

Activity C	ost
Pre-Feasibility Study (PFS) (Phase 2) Estimated Cost	**$1,000,000**
Geotechnical and hydrology drilling, data capture and analysis	$500,000
Coal quality assaying and testwork	$350,000
Total $	**1,850,000**

The Geotechnical, hydrogeologic and coal quality field testwork would need to be completed and evaluated prior to initiation of the Pre-Feasibility Study.

31.0 REFERENCES

Behre Dolbear and Company Inc., *Scoping Study - Ulaan Ovoo Coal Deposit*, October 2006.

Minarco MineConsult, *NI 43-101 Pre Feasibility Study Report - Ulaan Ovoo Coal Project, Mongolia,* May 2009.

Mongolian University of Science and Technology Mining Engineering School, *Summary of Feasibility Study for the Development of Ulaan Ovoo Bituminous Coal Deposit,* 2004.

Mineral Law of Mongolia (Amended Law) Official Translation, 30th October 2006.

32.0 CERTIFICATE OF QP

32.1 CERTIFICATE FOR BRIAN SAUL

I, Brian Saul, of Sudbury, Ontario, do hereby certify:

- I am a Manager – Mining with Wardrop Engineering Inc. with a business address at 957 Cambrian Heights, Sudbury, Ontario, Canada.
- This certificate applies to the technical report entitled Ulaan-Ovoo – Prefeasibility Study, dated December 13, 2010 (the "Technical Report").
- I am a graduate of Queen's University, (B.Sc. [Mining Engineering], 1976, M.Sc. [Mining Engineering] 1978).
- I am a member in good standing of the Association of Professional Engineers and Geoscientists of Ontario (License 100143403).
- My relevant experience with respect to the mine design and proposed development includes approximately 30 years of open pit operations and consulting experience. Approximately 20 years of this period were the coal mining and consulting industry.
- I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- I am responsible for all Section of the Technical Report.
- I am independent of Prophecy Resources Corp. as defined by Section 1.4 of the Instrument.
- I have no prior involvement with the Property that is the subject of the Technical Report.
- I have read the Instrument and the technical report has been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Signed and dated this 13th day of December, 2010 at Sudbury, Ontario

"Original document signed and sealed by Brian Saul, P. Eng."

Brian Saul, P.Eng.
Manager – Mining
Wardrop Engineering Inc.

32.2 CERTIFICATE FOR STEPHEN A. KRAJEWSKI

I, Stephen A. Krajewski, of Golden, Colorado, USA, do hereby certify:

- I am a Senior Geologist – Modeling and GIS with Tetra Tech with a business address at 350 South Indiana Street, Suite 500, Golden, Colorado, USA 80401.
- This certificate applies to the technical report entitled Ulaan-Ovoo – Prefeasibility Study, dated December 13, 2010 (the "Technical Report").
- I am a graduate of The Pennsylvania State University (B.S. degree in geography (1968), M.S. in geology (1971) and Ed.D. in earth science education (1977)).
- I am a member in good standing of the American Institute of Professional Geologists (Cert. No. 04739) since June, 1980; and, a member in good standing of the Society of Mining and Metallurgical Engineers, the American Association of Petroleum Geologists, and the Rocky Mountain Association of Geologists.
- My relevant experience includes modeling geology and mineral resource data for energy minerals (coal, uranium, petroleum, gas, tar sand and oil shale), precious metals (gold, silver, platinum), base metals (copper, zinc, molybedum, iron and nickel), and industrial minerals (aggregates and dimension stone) on an international basis.
- I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- My most recent personal inspection of the Property was March, 2010 for four days.
- I am responsible for Sections 1-14 and the Executive Summary of the Technical Report.
- I am independent of Prophecy Resources Corp. as defined by Section 1.4 of the Instrument.
- I have no prior involvement with the Property that is the subject of the Technical Report.
- I have read the Instrument and the technical report has been prepared in compliance with the Instrument.
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Signed and dated this 13th day of December, 2010 at Golden, Colorado, USA.

"Original document signed and sealed by Stephen A. Krajewski, Ed.D, P.G."

Stephen A. Krajewski, Ed. D., P.G.
Senior Geologist – Modelling and GIS
Tetra Tech

APPENDIX A

Post-tax Base Case

Ulaanbaatar audit corporation LLC

TAX CALCULATION

Discount Period		Y-1 2010 0	Y1 2011 1	Y2 2012 2	Y3 2013 3	Y4 2014 4	Y5 2015 5	Y6 2016 6	Y7 2017 7	Y8 2018 8	Y9 2019 9	Y10 2020 10	Y11 2021 11	Subtotal
CASH FLOW														
Total Product Coal	kt	250	1,129	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,344	20,724
Gross Revenue/coal price	000's US$/t	10,000	45,179	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	53,776	828,956
Offsite Charges	000's US$	2,600	11,747	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	13,982	215,528
Net Revenue	000's US$	7,400	33,433	59,200	59,200	59,200	59,200	59,200	59,200	59,200	59,200	59,200	39,795	613,427
Onsite Operating Cost	000's US$	3,968	53,783	18,843	19,516	19,409	18,857	16,870	16,719	14,723	12,600	10,179	6,563	212,029
Export duty	000's US$	369	1,667	2,952	2,952	2,952	2,952	2,952	2,952	2,952	2,952	2,952	1,984	**30,589**
Royalty Payment	000's US$	643	2,903	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	3,455	53,260
Operating Cash Flow	000's US$	2,421	-24,920	32,265	31,592	31,699	32,251	34,238	34,389	36,385	38,508	40,929	27,792	317,549
TAX CALCULATION														
Real estate tax	000's US$		24	24	24	24	24	24	24	24	24	24	24	**262**
Land fee	000's US$	1	3	3	3	3	3	3	3	3	3	3	3	**34**
Licence fee for exploitation and exploration of mineral resources	000's US$	3	3	3	3	3	3	3	3	3	3	3	3	**40**
Amount of Misc tax and fee	000's US$	**5**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**	**335**
Depreciation	000's US$	0	4,147	4,621	4,633	4,455	4,514	5,856	5,878	5,887	5,897	5,891	2,223	54,003
Amount of gross taxable income (Cash Flow - Misc, Tax- Depr)	000's US$	**2,416**	**-29,097**	**27,614**	**26,929**	**27,214**	**27,707**	**28,352**	**28,480**	**30,468**	**32,581**	**35,007**	**25,540**	**317,214**
Tax Corporate	000's US$	**242**	**0**	**2,761**	**2,693**	**2,721**	**2,771**	**2,835**	**2,848**	**3,047**	**3,258**	**3,501**	**2,554**	**28,989**
Customs tax and VAT	000's US$		4,990	186			84	1,844	12	12	12	12		**7,154**
Post-tax Operating Cash Flow	000's US$	**2,175**	**-29,940**	**29,287**	**28,869**	**28,948**	**29,366**	**29,529**	**31,498**	**33,296**	**35,207**	**37,385**	**25,208**	
DISCOUNTED CASH FLOW														
Total Capital Costs	000's US$	6,448	63,239	1,951	751	751	1,268	12,589	769	731	699	655	-3,936	85,914
Post-tax Cash Flow at 0%	000's US$	-4,273	-93,179	27,336	28,118	28,197	28,098	16,940	30,729	32,566	34,509	36,730	29,144	194,915
Post-tax Cash Flow (Cumulative)	000's US$	-4,273	-97,452	-70,116	-41,997	-13,800	14,298	31,238	61,967	94,532	129,041	165,771	194,915	
Post-tax Discounted at 5%	000's US$	-4,273	-88,742	24,795	24,290	23,198	22,016	12,641	21,839	22,042	22,245	22,549	17,040	119,638
Post-tax Discounted at 8%	000's US$	-4,273	-86,277	23,437	22,321	20,726	19,123	10,675	17,930	17,594	17,263	17,013	12,500	88,031
Post-tax Discounted at 10%	000's US$	-4,273	-84,708	22,592	21,126	19,259	17,447	9,562	15,769	15,192	14,635	14,161	10,215	70,976
Post-tax Discounted at 12%	000's US$	-4,273	-83,196	21,792	20,014	17,920	15,944	8,582	13,900	13,153	12,444	11,826	8,378	56,485

Economic Returns

Project NPV (Post Tax)				
	12.0%	discount rate	million US$	**56.49**
	10.0%	discount rate	million US$	**70.98**
	8.0%	discount rate	million US$	**88.03**
	5.0%	discount rate	million US$	**119.64**
Project IRR (Post Tax)				**25.5%**
Payback (Post Tax)			years	**4.5**
Mine Life (Post Tax)			years	**10.7**

Prophecy Resource Corp.

WARDROP A TETRA TECH COMPANY