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ASX Release **9 September 2013**

Successful Washability Test for Newera's Shanagan Coal Project Bulk Sample

Newera Resources Limited (ASX: NRU) is pleased to advise that it has received the results of coal washability tests conducted on its Shanagan East Project ("Shanagan Project") coal bulk sample.

ALS Group LLC Laboratories in Mongolia have successfully concluded the detailed washability tests under a coal quality and test work plan supplied and overseen by Sedgman Limited ("Sedgman").

Sedgman is a leading provider of mineral processing and associated infrastructure solutions to the global resources industry. Specialising in the design, construction and operation of coal handling and preparation plants, Sedgman is recognised internationally for its mineral processing and materials handling technologies.

HIGHLIGHTS

- Coal from the Shanagan Project coal bulk sample confirmed to be readily washable.

  Sizing and washability test work on the Shanagan Project coal bulk sample extracted from adjacent to drill hole SHDH14, has confirmed the coal was able to be washed through a standard and common coal handling and processing plant ("CHPP").

- Coal quality analysis confirms previous results indicating a semi-anthracite/low-vol bituminous type coal, low in moisture, high calorific value and high ash.

- Shanagan coal could potentially be mined to produce a lower energy product without washing.

- If used for power generation, the low volatile contents would mean lower quantities of flue gas would be generated, meaning less pollutants being released into the atmosphere (a clean coal).

- High ash deformation temperatures (>1400°C) allowing high temperature boiler operation, delivering greater efficiency and lower capital cost on any power plant construction.

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- Normal sulphur (0.54% adb) and nitrogen (1.72% adb) levels.
- High hardgrove grindability index (>100) lowering power station pulverising requirements.
- Sedgman consider the range of potential specifications of both as-mined and washed products should allow flexibility going forward in the development of the resource as different potential customers and end users are considered.
- The Shanagan Coal Quality Report by Sedgman, is attached as an addendum to this ASX Release.

Washability test results

A summary of the washability test results are set out in the table below and suggests that if the Shanagan Project coal is passed through a common CHPP, on balance, the washing process could be optimised to produce a yield in the region of 50% with a contained 30% ash. The full report is included as an addendum to this release.

Washed/Raw	Ash % (adb)	Yield % (arb)	Total Moisture % (arb)	Fixed Carbon % (arb)	Vols % (arb)	Gross Calorific Value kcal/kg (arb)	Net Calorific Value kcal/kg (arb)
Raw	43.5	100	7.9	44.0	7.9	4430	4274
Washed	31.9	54.4	9.4	52.0	9.4	5230	5056
Washed	30.0	49.3	9.6	53.3	9.6	5365	5188
Washed	25.0	35.5	10.1	56.8	10.2	5716	5532
Washed	20.0	23.0	11.0	60.0	10.8	6037	5845
Washed	18.0	18.6	11.5	61.1	11.0	6150	5953

Table 1. Shanagan Project – Summary of washability test results

Background

Since entering into an option agreement over the Shanagan Project licence in late May 2012, Newera has rapidly and systematically progressed the project through several phases of exploration; an initial desk top study, field mapping, a phase one drilling program (drill holes SHDH1 to SHDH24), a geophysical program (a Dipole Dipole resistivity survey), analysis and modelling of the geophysical survey results, a phase two drilling program (drill holes SHDH25 to SHDH28) and following the phase 1 and phase 2 drilling, a determination that **an Exploration Target of 64 to 111 million tonnes of coal*** can currently be attributed to Newera's Shanagan Project, based on phase 1 and 2 exploration to 31 December 2012 (See ASX Released dated 18 March 2013)

A subsequent phase 3 drilling program produced the following coal intercept results which have not as yet been incorporated into the calculation of the Exploration Target as stated above.

Hole #	Total Depth	Total Net Coal (m)	Within Width (m)	Easting	Northing	RL (m)	Dip	Geophysically logged
Phase 3 Drilling Results								
SHDH29	150.0	0.00	0.00	297720	5231800	1510	-90	Yes
SHDH30	50.0	6.10	16.00 to 39.70	299238	5231939	1426	-90	Yes
SHDH31	50.0	14.50	8.00 to 37.00	299324	5231787	1420	-90	Yes
SHDH32	58.0	7.60	11.70 to 22.80	299081	5231623	1404	-90	Yes
SHDH33	50.0	7.20	5.70 to 44.50	299246	5231313	1410	-90	Yes
SHDH34	200.0	8.40	57.20 to 144.80	297520	5228525	1432	-90	Yes
SHDH35	35.0	5.60	10.90 to 27.60	299332	5231796	1419	-90	Yes

Table 2. Shanagan Project – Phase 3 drilling drill hole summary table including geophysically logged coal intercepts and net coal intercepts. (Grid co-ordinates refer to UTM Zone 49 North).

Following the phase 3 drilling program, a decline access shaft was constructed to access a three tonne bulk sample of Shanagan coal from adjacent to Newera drill hole SHDH14, for the purpose of conducting a definitive washability test on the Shanagan Project type coal.

The shaft was completed, the bulk sample extracted and transported to ALS Laboratories in Ulaanbaatar Mongolia for quality analysis and washability test work.

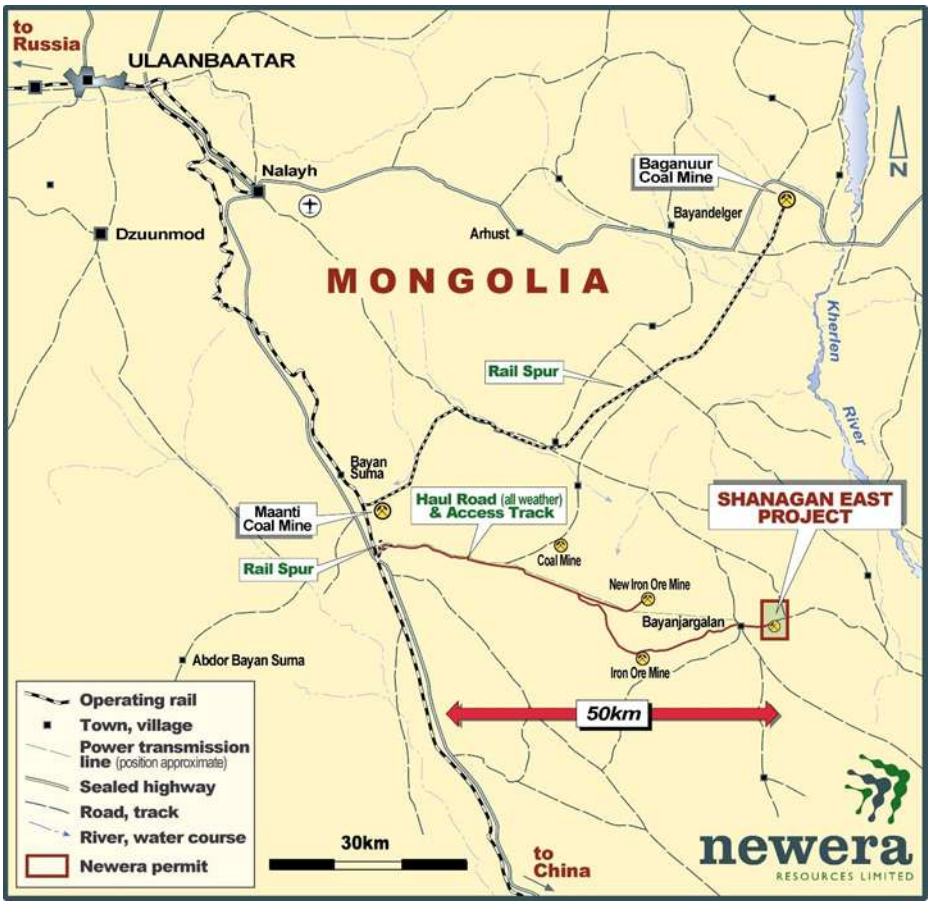

Figure 1: Newera's Shanagan East Project location plan with infrastructure.

Figure 2: Shanagan bulk sample shaft at Newera drill hold location SHDH14

Chairman's Comments

Newera Executive Chairman Mr Martin Blakeman offered the following comments:

"The patient and very efficient work by Sedgman and ALS Laboratories has produced an outstanding result for Newera given the previously indicated coal quality parameters of the Shanagan coal project.

The coal quality analysis results through the ALS Group's Ulaanbaatar laboratory confirmed previous coal analysis results and the coal handling and preparation plant simulation proved that Shanagan type coal can be readily washed through standard and common coal handling and preparation plant technology.

These results will allow Newera to consider a range of development, end user and marketing options when considering the potential future development of the Shanagan coal deposit.

Those options could conceptually include; bulk mining and direct shipment without processing, bulk mining and direct shipment to a boutique mine mouth power station and delivering clean power to Ulaanbaatar and the surrounding region, washing the coal through a suitable coal handling and preparation plant to produce a product stream for either on-shipment for power generation or a range of other uses including briquetting.

The results have vindicated the Newera Board's decision to employ Sedgman as specialist coal preparation and process advisors to oversee the washability testing of the Shanagan Project bulk sample. Their experience, methodical and detailed approach has produced very positive results for us. The Board feels confident that it can now rely on these results in planning a future for the Shanagan coal project."

Coal Beneficiation (washing) – a definition:

Coal beneficiation (commonly referred to as "coal washing") refers to mined coal being subjected to various separation processes to upgrade product coal quality specifications. Coal beneficiation typically includes sizing, density and flotation based separation processes. Different coal quality properties are considered when washing coal for different end user purposes but often include ash, moisture, energy content and various properties favourable to steel making processes. Other advantages of coal beneficiation can include increases in coal handle-ability and reduction of transport costs through removal of clay and rock and improved consistency of coal sizing.

Concept Illustrations of a Coal Handling and Processing Plant

The following figures are for illustrative purposes only and do not represent assets of the Company.

The following figures depict concept images of a Sedgman designed modular (transportable in pre-constructed modules) coal handling and processing (washing) plant which Sedgman suggest may be suitable for medium scale projects such as Newera's Shanagan Project.

Further Information;
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***Exploration Targets**

This announcement refers to Exploration Target as defined under Section 17 of the updated JORC Code. Newera Resources Ltd cautions that the Exploration Target quantity and quality is conceptual in nature. There has been insufficient exploration at Shanagan East to define a mineral resource and it is uncertain if further exploration will result in the Exploration Target being delineated as a mineral resource. Nordic Geological Solutions considers that Newera's phased exploration strategy is justified, and that further work is warranted before a mineral resource (under sections 20-23 of the JORC Code) can be determined at Shanagan.

Competent Person Statement

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Per Michaelsen, Consultant Geologist to Newera Resources Ltd who is a member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Dr Michaelsen has sufficient experience, which is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Michaelsen consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

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Addendum: Shanagan Coal Quality Report – Sedgman Limited.

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Shanagan Coal Quality Report

Newera Resources Limited

Document #: A295-S01-04010-RT-001 Shanagan Coal Quality Report – KPM/ajw
Revision: 0

Disclaimer

This report was prepared by Sedgman Limited ("Sedgman") solely for use by Newera Resources Limited ("Newera") in support of Newera's own consideration of whether and how to proceed with the subject of this report. Except where specifically stated otherwise in this report, any information contained herein provided to Sedgman by or on behalf of Newera has not been independently verified or otherwise examined to determine its accuracy, completeness or financial feasibility.

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Revision Status

Revision Number	Author	Description	Date	Approved By
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B	KPM	Updated Draft	27-Aug-2013	LBM
0	KPM	Issued to Client		LBM

Distribution

Company Name	Contact Name	Revision	Date
Newera Resources Ltd	Martin Blakeman	A	16-Aug-2013
Newera Resources Ltd	Martin Blakeman	B	27-Aug-2013
Newera Resources Ltd	Martin Blakeman	0	

Nomenclature

Measurement Units

The International System of Units (SI) is used exclusively in accordance with AS 1000-1998, including the following compound units.

Mass and mass flow rate

kt	thousand tonnes
Mt	Million tonnes
Mt/a	Million tonnes per annum
t/h	Tonnes per hour

Density

Kg/m^3	Kilograms per cubic metre

Velocity

m/s	Metres per second

Time

h/a	Hours per annum

Other

c/t	Cents per tonne
MJ/kg	Megajoules per kilogram

Key Terms, Symbols and Abbreviations

The following terms and abbreviations are used:

CAPEX	Capital expenditure
CCTV	Closed circuit television
CHP	Coal handling plant
CHPP	Coal handling and preparation plant
CPP	Coal preparation plant
CSN	Crucible swelling number
CSR	Coke strength after reaction
D&C	Design and construct
DMC	Dense medium cyclone
EA	Environmental assessment
EIS	Environmental impact study
EOI	Expression of interest
EPCM	Engineering, procurement and construction management
FS	Feasibility study
FSI	Free swelling index
GST	Goods and services tax
HazAn	Hazard analysis
HazID	Hazard identification study
HazOp	Hazard and operability study
HGI	Hardgrove Grindability Index
JSA	Job safety analysis
JSO	Job safety observation
LD	Large diameter
Limn	Proprietary plant simulation software package
LOM	Life of mine
MCC	Motor control centre
NPV	Net present value
OPEX	Operations expenditure
PDS	Project definition statement
PFS	Pre-feasibility study
PLC	Programmable logic controller
RAMBO	Reliability, availability, maintainability, buildability and operability
RD	Relative density
ROM	Run of mine
RX	Reflux classifier
SCADA	Supervisory control and data acquisition
SE	Specific energy
SOP	Standard operating procedure
TBS	Teetered bed separator
TLO	Train load out
UCS	Ultimate compressive strength
UDL	Ultimate distributed load
WAP	Work area pack
WBS	Work breakdown structure
ww	Wedge wire screen mesh (parallel aperture)

Moisture Terms (as defined by AS 1038)

(as)	As sampled (equivalent to “as mined” or “as received”)
(ad)	Air dry
(d)	Dry
(daf)	Dry, ash free
TM or M_{as}	Total moisture or moisture as sampled

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Executive Summary

Sedgman were commissioned by Newera Resources to create a coal quality test plan for a bulk sample from the Shanagan resource and oversee the sample analysis test work completed by ALS at their laboratory in Ulaanbaatar. The sample was taken from an inclined, bulk extraction shaft, sunk at the site of the previously sampled drill hole SHDH14.

Raw head results of the bulk sample reflected previous drilling results of a semi-anthracite/low-vol bituminous type coal which was low in air dried moisture and had a high calorific value but was also high in ash.

Despite being high in ash, sizing and washability testwork confirmed that the coal could be washed to a range of high and low energy product specifications through simulation work with standard and common CHPP technology. The coal could also be potentially mined to produce a low energy product without washing.

The CHPP simulation results are shown in the table below. The simulation results do not take into account any effects of dilution or coal loss.

Shanagan Bulk Sample CHPP Simulation Results

Washed/ Raw	Ash % (ad)	Yield % (as)	Total Moisture % (as)	Fixed Carbon % (as)	Vols % (as)	Gross Calorific Value kcal/kg (as)	Net Calorific Value kcal/kg (as)
Raw	43.5	100	7.9	44.0	7.9	4430	4274
Washed	31.9	54.4	9.4	52.0	9.4	5230	5056
Washed	30.0	49.3	9.6	53.3	9.6	5365	5188
Washed	25.0	35.5	10.1	56.8	10.2	5716	5532
Washed	20.0	23.0	11.0	60.0	10.8	6037	5845
Washed	18.0	18.6	11.5	61.1	11.0	6150	5953

One of the features of the testwork results, typical of higher rank coals, was the high carbon and low volatile contents of products resulting in high net calorific values when compared to gross values.

Other testwork results showing favourable energy coal characteristics included:

- Low volatile contents which would lower quantities of flue gas generated;
- High ash deformation temperatures (>1400 ^{O}C) allowing high temperature boiler operation;
- Normal sulphur (0.54% (ad)) and nitrogen (1.72% (ad)) levels;
- High hardgrove grindability index (>100) lowering power station pulveriser requirements.

The range of potential specifications of both as-mined and washed products should allow flexibility going forward in the development of the resource as different potential customers and end users are considered.

1 Introduction

Sedgman were commissioned by Newera Resources to create a coal quality test plan for a bulk sample from the Shanagan resource and oversee the sample analysis test work completed by ALS at their laboratory in Ulaanbaatar.

The following report provides some background to the project and a discussion on the coal quality test work and analysis results including the potential to process through a coal handling and process plant (CHPP) and produce different product specifications.

The Shanagan project site is located approximately 155 kilometres south of Ulaanbaatar, Mongolia.

Drilling results to date indicate the resource to be predominantly a high rank, low-volatile bituminous/semi-anthracite type coal suited towards an energy product. A number of drill results showed high raw crucible swelling number (CSN) values for specific plies indicating there may be potential to produce small amounts of metallurgical product from the resource as well.

Newera selected an inclined, bulk extraction shaft to be sunk at the site of drill hole SHDH14 to amass a bulk sample suitable for detailed washability analysis to provide insight into the product specifications and yields that could potentially be achievable through washing of the coal.

2 Shanagan Bulk Sample Test Plan

A coal quality test work and analysis plan was developed for the Shanagan bulk sample for the dual purposes of:

1. Investigating the suitability of the coal to be effectively washed;
2. Understanding the quality specifications of both raw and washed products.

2.1 Sizing Issues

Newera had indicated that previous attempts to extract sample had resulted in extremely fine sizings being reported from the laboratory. This was thought to be mainly due to the sample freezing during transit resulting in size degradation. As this bulk sample was being extracted during the Mongolian summer the potential for the sample to freeze was not an issue.

Communication and photographs from the on-site geologist suggested that the methods used to extract the sample involving small picks and shovels would result in a sizing reporting to the lab finer than what would be expected from a full scale mining operation. A photo of the shaft can be seen below in Figure 2-1.

Figure 2-1 - Shanagan Shaft at Drill Hole Location SHDH14

This was confirmed by ALS when the sample reached Ulaanbaatar and noted that the topsize before any attrition work had taken place was already -50mm. For this reason the test work plan was adjusted and did not include and drop shatter or dry tumbling steps to avoid further excess size degradation. Wet tumbling was still incorporated into the plan to account for any breakdown of the coal in water.

2.2 Coking Properties

The raw drilling results from hole SHDH14 only reported CSN (also known as FSI, free swelling index) values of 0 – 0.5 however it was considered that the high raw ash values may have masked any potential coking coal qualities in the drilling results. This theory was supported by other drilling results recording higher CSN values at lower raw ash results. For this reason CSN testing was carried out on all float sink components and also the product composite sample with further detailed coking property test work able to be carried out if any coking coal was identified. Initial float sink and composite results showed only minimal CSN values of 0.5 – 1.5 so further coking properties test work was not carried out.

3 Laboratory Results

The laboratory results from the bulk sample analysis are discussed below. A copy of the raw lab results can be found in Appendix A.

3.1 Raw Head Results

The raw head results from the bulk sample test work aligned well with corresponding SHDH14 drill results as shown in Table 3-1 below.

Table 3-1 - Bulk Sample and Drill Hole SHDH14 Raw Head Results

Coal Sample	Moisture % (ad)	Ash % (ad)	Vols % (ad)	Fixed Carbon % (ad)	Gross Calorific Value kcal/kg (daf)	Sulphur % (ad)
SHDH14 – 1	6.31	39.23	18.21	42.56	6911	0.27
SHDH14 – 2	3.39	43.49	13.07	43.45	7409	0.24
SHDH14 – 3	1.07	56.84	7.19	35.97	7373	0.28
SHDH14 – 4	1.62	36.45	8.59	54.96	8558	0.79
SHDH14 – 5	0.91	57.81	6.62	35.57	7598	0.41
SHDH14 – 6	0.55	52.47	7.68	39.85	8328	0.51
SHDH14 – 7	0.88	50.02	8.68	41.3	8229	0.67
SHDH14 – 8	0.90	39.44	9.26	51.3	8599	0.51
Bulk Sample	0.73	43.45	8.52	47.3	8527	0.48

Some features of the raw head results are noted below:

- The coal is high in ash;
- The low inherent moisture and volatile matter of the coal would seem to classify the sample as a semi-anthracite or low-vol bituminous type;
- The coal has a very high gross calorific value (daf);

3.2 Sizing Results

The sizing results of the Shanagan bulk sample analysis are shown below

Table 3-2 and Table 3-3 and a rosin rammler plot of the two sizings is shown in Figure 3-1. The sizings indicate that this particular sample was a relatively fine coal, although would still able to be effectively processed in a washplant with no major issues.

Table 3-2 - Bulk Sample Plant Feed Sizing

Size Fraction	Plant Feed Sizing Mass %
+32mm	1.28
-32mm +16mm	4.68
-16mm +8mm	12.01
-8mm +4mm	16.00
-4mm +2mm	13.64
-2mm	52.39

Table 3-3 - Bulk Sample Process Sizing

Size Fraction	Process Sizing Mass %
+32mm	0.23
-32mm +16mm	0.77
-16mm +8mm	4.55
-8mm +4mm	12.08
-4mm +2mm	13.92
-2mm +1mm	16.42
-1mm +0.5mm	12.82
-0.5mm +0.25mm	10.77
-0.25mm +0.125mm	9.75
-0.125mm +0.063mm	7.56
-0.063mm +0.038mm	3.00
-0.038mm	8.13

The level of sizing degradation recorded during the wet attrition process was considered typical.

Actual run of mine (ROM) coal produced by a mining operation and fed to a CHPP could be expected to be coarser than this individual sample although it is difficult to quantify how much with the information available to date. The high hardgrove grindability index (HGI) of 108 suggests that the sizing of the ROM coal would still be relatively fine.

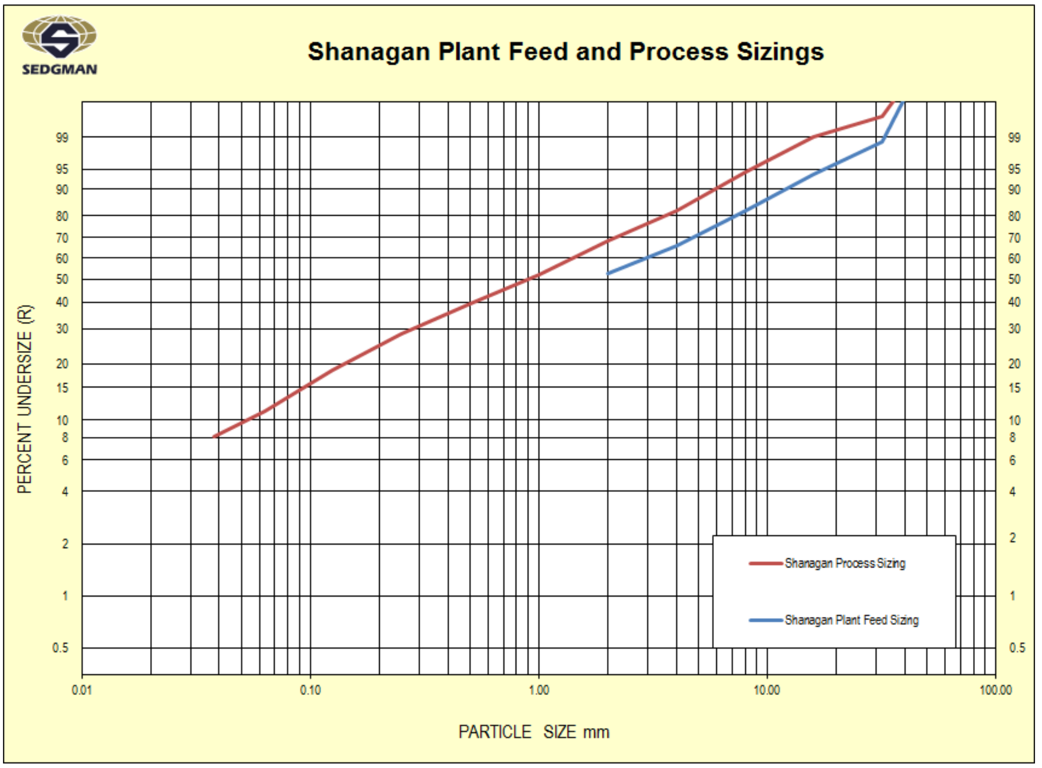

Figure 3-1 - Shanagan Rosin Rammler Plot

3.3 Washability Results

The charted washability results for the bulk Shanagan sample can be seen below in Figure 3-2 and Figure 3-3. These charts do not take into account the inefficiencies of processing through a CHPP which is discussed in Section 4.

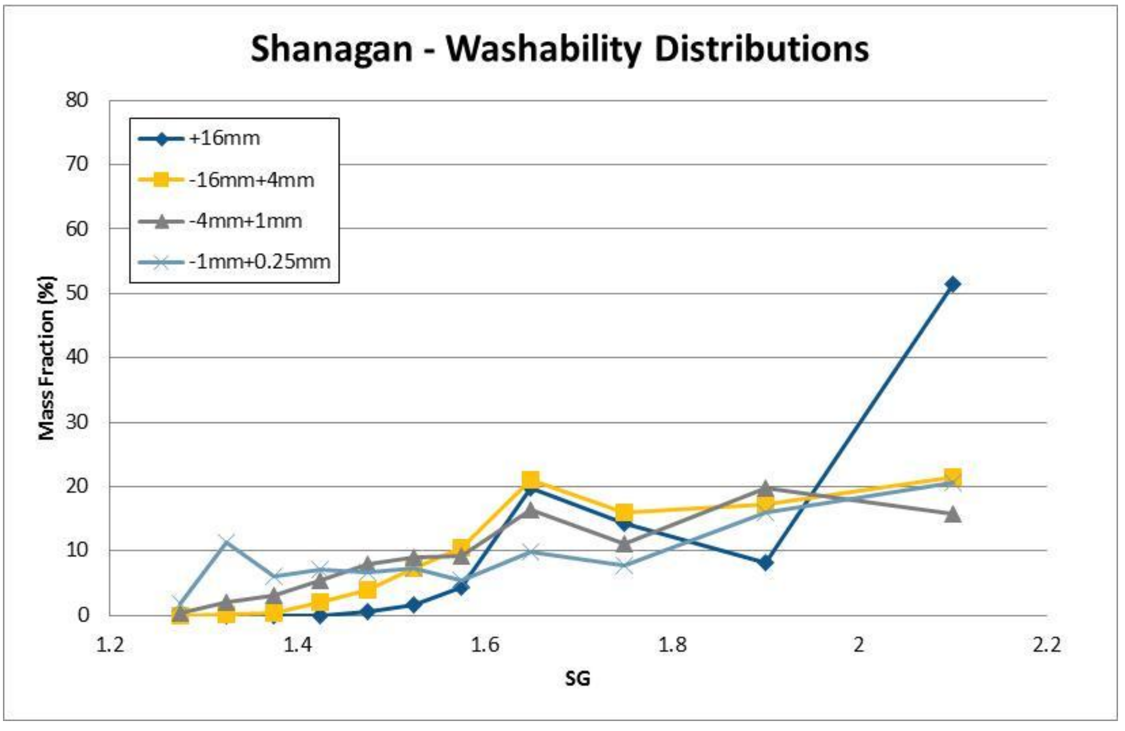

Figure 3-2 - Shanagan Washability Distributions

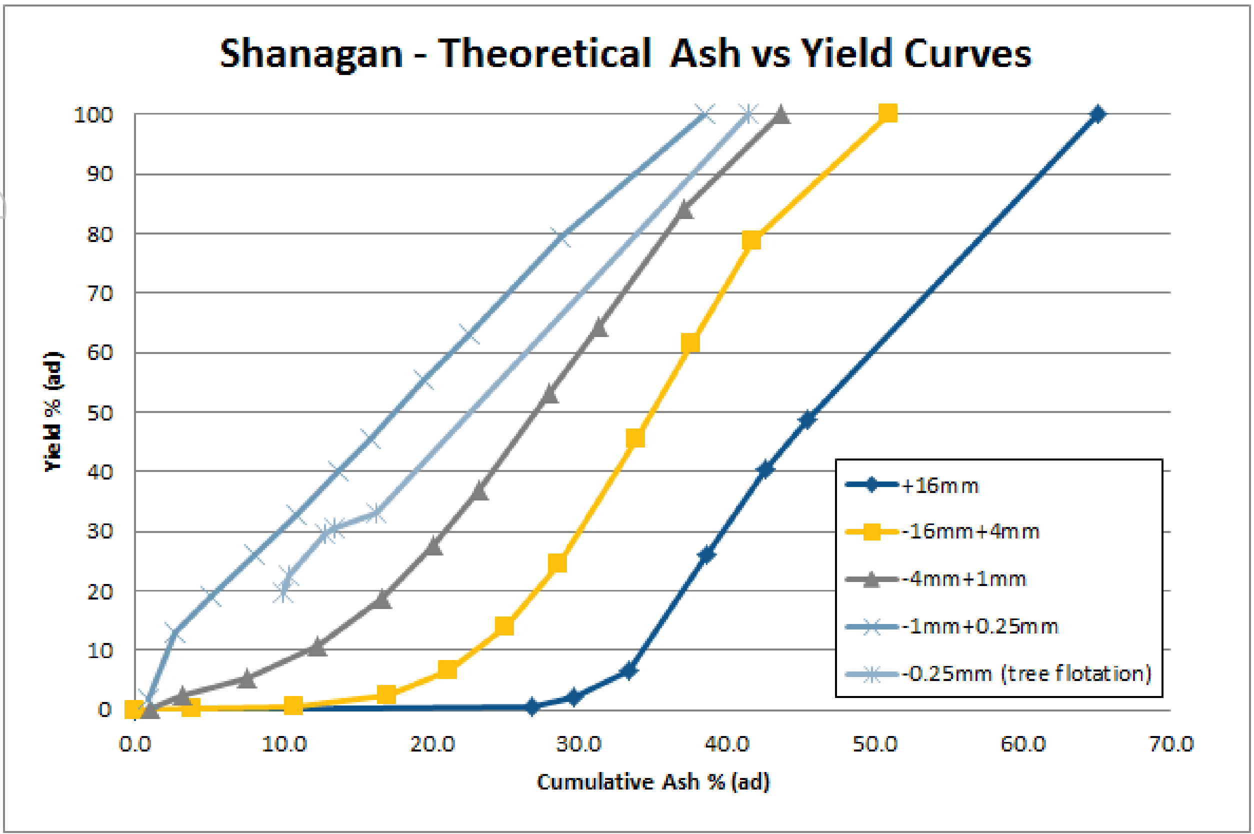

Figure 3-3 - Shanagan Theoretical Ash vs Yield Curves

Although all size fractions of the bulk sample contained coal (generally regarded as floats 1.8) material, the finer size fractions tended to have higher amounts. The main reason for the +16mm size fraction reporting a significantly higher total ash than the other size fractions is the higher amount of non-coal material (generally regarded as sinks 1.8).

Flotation test results on the -0.25mm size fraction proved to be successful however typically when washing an energy type coal flotation would not be included in the process due to the high amounts of moisture contained in the dewatered flotation product. The flotation test work was mainly included in the test plant in case the potential to produce a coking coal product was identified.

3.4 Product Composite Results

A product composite was artificially created from the Shanagan bulk sample for further detailed testwork. The purpose of this testwork was to help characterise the product properties of the coal which are discussed below.

While the product composite ash results (11.9% (ad)) was lower than the simulated product ashes in Section 4, the results can still be used to provide indicative product characteristics.

3.4.1 Ultimate Analysis Results

Ultimate analysis testing was to determine the carbon and volatile components of the coal. The results are shown in Table 3-4.

Table 3-4 - Product Composite Ultimate Analysis Results

Carbon % (daf)	Hydrogen % (daf)	Nitrogen % (daf)	Sulphur % (daf)	Oxygen % (daf)
91.1	4.4	2.0	0.6	1.9

Due to the coal being of high rank, the measured carbon content was high, which is one of the reasons behind the high gross calorific value. The low hydrogen content and air dried moisture also results in high net calorific values when compared to gross values.

The high carbon / low volatile content also has other benefits for combustion purposes such as lower flue gas production resulting in smaller boiler requirements for power stations and less release to atmosphere.

Nitrogen and sulphur contents of 2.0% and 0.6% respectively were in the normal range indicating that no special requirements would need to be considered for SO_X and NO_X control.

3.4.2 Ash Analysis and Fusion Results

Ash analysis and fusion results can be found in Table 3-5 and Table 3-6 below.

Table 3-5 - Product Composite Ash Analysis Results

Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	SrO	TiO2
14.05	0.04	0.73	0.01	1.35	4.34	0.30	0.01	0.22	0.04	77.00	0.01	0.71

Table 3-6 - Product Composite Ash Fusion Results

Reducing Atmosphere				Oxidizing Atmosphere			
Deformation Temp. (DT)	Softening Temp. (ST)	Hemisphere Temp. (HT)	Fluid Temp. (FT)	Deformation Temp. (DT)	Softening Temp. (ST)	Hemisphere Temp. (HT)	Fluid Temp. (FT)
1431	1459	1488	>1500	1461	1488	>1500	>1500

It can be seen in Table 3-5 that the ferrous oxide (Fe_2O_3) only makes up a small component of the ash with the majority being silica (SiO_2) and alumina (Al_2O_3). The low ferrous oxide content is typical of ashes with high deformation temperatures (>1400 ^{O}C) which can be seen in Table 3-6.

These results indicate that the coal could be combusted in high temperature boilers without issues arising from ash fusibility.

3.4.3 Hardgrove Grindability Index

The product composite measure hardgrove grindability index was 108. This result indicates that the product would be reasonable easy to grind which is favourable for pulveriser capacity and operation on power stations. It is worth noting that the index result may drop slightly (become harder to grind) with the higher ash products simulated in Section 4.

4 CHPP Simulation

Washability data from the bulk sample test work was simulated using LIMN modelling software to analyse potential product yields and qualities able to be processed by a CHPP.

4.1 Flowsheet

For the purposes of this investigation a standard energy coal type flowsheet was selected for modelling.

The flowsheet consisted of

- +1.2mm w/w processed by a dense medium cyclone (DMC) circuit;
- -1.2mm w/w +0.125mm processed by a reflux classifier circuit;
- -0.125mm bypassed to tailings.

This style of flowsheet is commonly used to process energy coals and is suitable for both low annual throughput operations such as a re-locatable modular plant (RMP) style CHPPs or high annual throughput, permanent facilities.

4.2 Simulation Results

Simulation results are shown in Table 4-1 and Figure 4-1 and Figure 4-2 below. Simulation results do not take into account any effects of mining dilution or coal loss.

Table 4-1 - Shanagan CHPP Simulation Results

Washed/ Raw	Ash % (ad)	Yield % (as)	Total Moisture % (as)	Fixed Carbon % (as)	Vols % (as)	Gross Calorific Value kcal/kg (as)	Net Calorific Value kcal/kg (as)
Raw	43.5	100	7.9	44.0	7.9	4430	4274
Washed	31.9	54.4	9.4	52.0	9.4	5230	5056
Washed	30.0	49.3	9.6	53.3	9.6	5365	5188
Washed	25.0	35.5	10.1	56.8	10.2	5716	5532
Washed	20.0	23.0	11.0	60.0	10.8	6037	5845
Washed	18.0	18.6	11.5	61.1	11.0	6150	5953

Table 4-1 shows that a numerous products of varying ash and energy content could be produced by washing the coal through the described CHPP.

High gross energy content (6000+ kcal/kg (as)) products are achievable although at lower yields less than 35% from the resource. Higher yields of up to approximately 55% could be attained although at the expense of gross energy content which would be in the range of 5000 – 5300 kcal/kg (as).

The as received Shanagan bulk sample recorded a total moisture of 7.9% (as) which has been assumed to represent the as received moisture if the resource was mined to produce a product without any washing. For the washed CHPP simulation results, total moisture decreases for higher ash products as more coarse coal is present in the product which carries less surface moisture.

Processing limitations of the CHPP would restrict product ashes higher or lower than the simulated 31.9% and 18.0% respectively shown in Table 4-1.

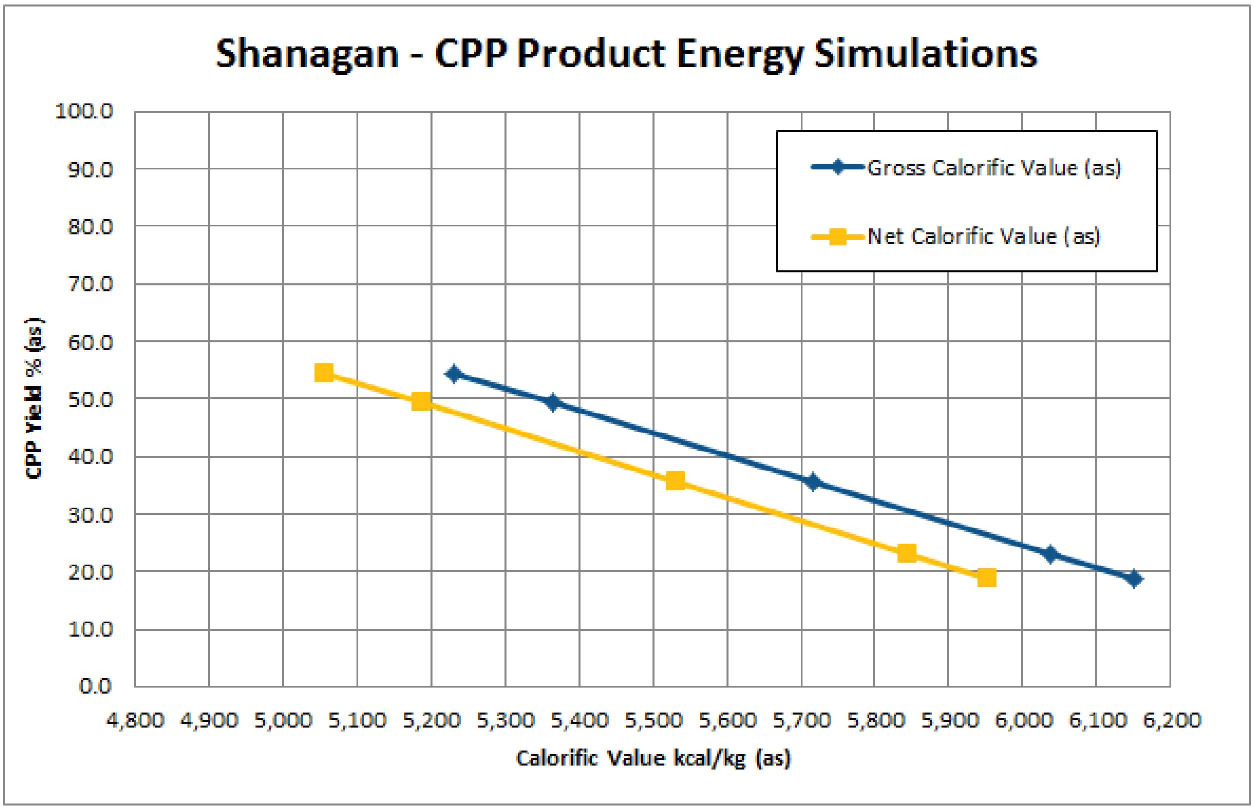

Figure 4-1 - Shanagan CPP Product Energy Simulations

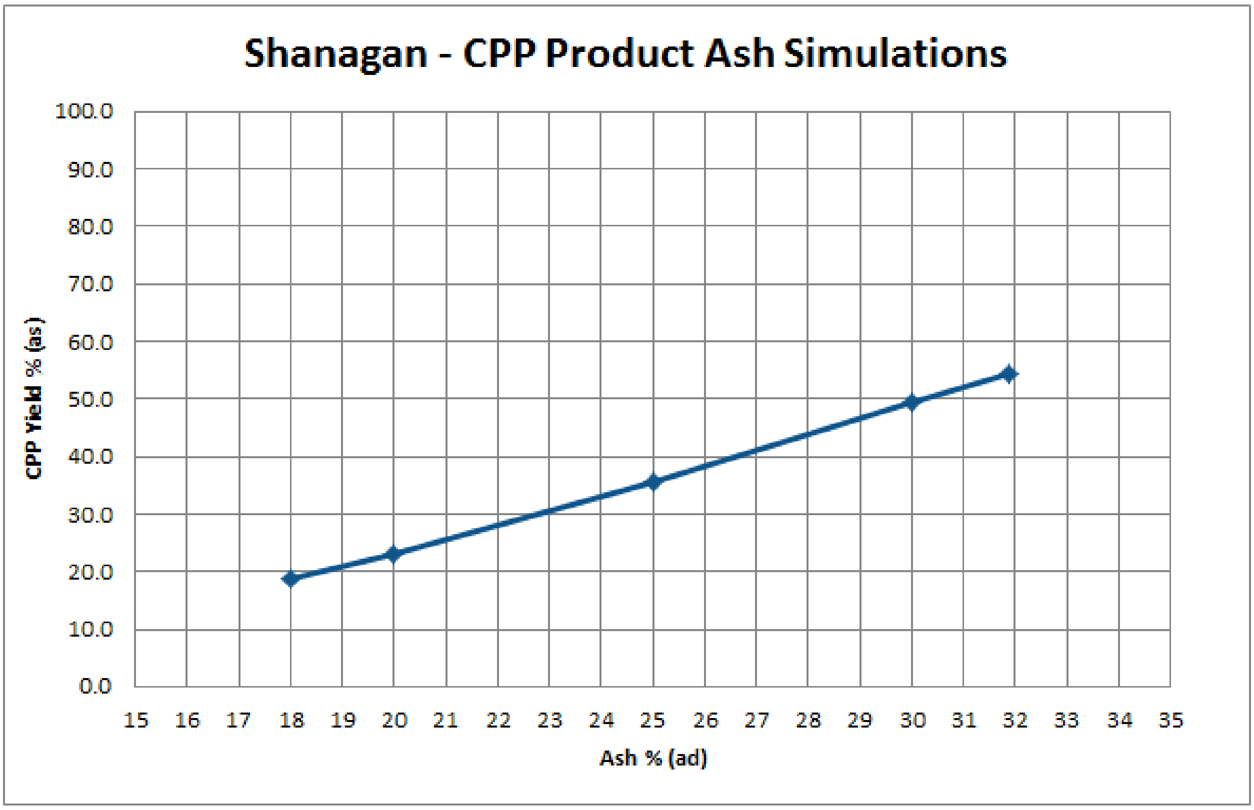

Figure 4-2 - Shanagan CPP Product Ash Simulations

4.3 Processing Concept Considerations

4.3.1 Bypass of Specific Size Fractions

Due to the similar head ashes of the size fractions, concepts such as dry screening and scalping would provide limited value. The only size fraction that potentially could be dry screened and bypassed to reject to increase product energy content without a wet CHPP would be the +16mm fraction however, this represents such a small amount of the plant that the value it could add would be negligible.

4.3.2 Briquetting

The features of the Shanagan sample discussed previously in the report are not what would be regarded as a typical application for briquetting.

Typical briquetting applications involve taking low ash, low-rank coal and applying a mix of heat and mechanical energy to remove moisture and increase the gross energy content.

The bulk sample and drilling results indicate that Shanagan is a high rank type coal with very low inherent moisture which results in the energy increase of briquetting raw Shanagan coal being quite small and probably not worth the capital or operating cost of a briquetting plant.

A potential application for a briquetting plant would be to treat product coal processed by a flotation circuit on the fines component of the feed coal. This could allow high energy, fine coal to be captured by the CPP but ensure that the moisture content and handle-ability of the coal was still acceptable for use as an energy type product.

Briquette testing would need to be completed to confirm if the process would be suitable for this application.

END