PHOSPHATE AUSTRALIA LIMITED

ABN 51 129 158 550

HIGHLAND PLAINS PROJECT

&

EXPLORATION TARGETS

EXPLORATION LICENCES EL25068, EL25600, 27038 27269 & 28157

GROUP ANNUAL GEOLOGICAL REPORT GR-096/09

FOR THE PERIOD ENDED AUGUST 2012

Report Prepared By:

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Senior Geologist

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SUMMARY

Tenements EL25068, 25600 25972, 27038, 27269 and 28157 occur within the Barkly Tablelands of the Northern Territory on the Mount Drummond, Alroy and Ranken 1:250,000 map sheets. The area experiences a sub-tropical climate with the wet season occurring from November to March. During this time the area can be difficult to traverse by vehicle as access roads become flooded. In the dry season the area is accessible by 4WD vehicle via pastoral tracks from the western and eastern sides of the tenements.

Phosphate Australia Limited pegged the tenements between November 2005 and March 2009 further to a target analysis of the area using publicly available remotely sensed data. The ground was chosen because of its numerous Uranium channel radiometric anomalies coupled with the existence of published phosphate and iron occurrences. All granted tenements are 100% held by Phosphate Australia Limited.

Permit	Area km^2	Application Date	Grant Date	Comments
EL25068	627	24-Nov-05	8-Aug-06	100% POZ
EL25600	240	14-Sep-06	23-Aug-07	100% POZ
EL27038	29	21-Oct-08	16-Oct-09	100% POZ
EL27269	111	31-Mar-09	16-Oct-09	100% POZ
EL28157	19.5	08-June-10	20-Jan-11	100% POZ

During the reporting period metallurgical testwork was completed on a composite one tonne iron ore sample which was collected at the Sticky Fly prospect in the previous reporting period.

The sample returned an average SG of 4.19 and an average Impact Work Index of 8.7 kWh/t, a rod mill work index of 25.3kWh/t, and an abrasion index of 0.0704.

Iron ore was separated by wet gravity process. The -1000 to +34 µm fraction returned a weighted Fe average of 51.1% Fe on a 59% yield, and 59.27% Fe on a 40% yield.

The -212 to +34 µm fraction returned a weighted Fe average of 54.4% Fe on a 61.9% yield, and 60.5% Fe on a 35.8% yield.

1.0 INTRODUCTION

This annual report details all exploration activities carried out on tenements EL25068, 25600 25972, 27038, 27269 and 28157 between 7 September, 2011 and 6 September, 2012. The tenements were pegged by Phosphate Australia between November 2005 and March 2009 as a result of Uranium channel radiometric highs and the presence of known mineral occurrences within the tenements. The tenements are 100% owned by Phosphate Australia Limited.

Tenement EL 25068 was pegged over the historical Highland Plains phosphate occurrence, as well as numerous iron occurrences in the west. The Highland Plains deposit is coincident with a Uranium channel radiometric high and contains a historical ore reserve estimate from previous exploration activities in the 1960s.

Phosphate Australia Limited ("POZ") was listed on the Australian Stock Exchange on July 1st, 2008 and the Highland Plains occurrence was the focus of the Company's Initial Public Offering. Since then exploration has focussed on drilling at Highland Plains to generate a JORC-compliant Inferred Resource of 56 Million Tonnes @ 16% P_2O_5 with a contained Western Mine Target Zone ("WMTZ") from near surface of 14 Million Tonnes @ 20% P_2O_5 using a 15% cutoff.

There are numerous iron occurrences in the west of tenement EL25068. These consist of oolitic Clinton iron style deposits which Phosphate Australia bulk sampled in the current reporting period.

The Company will continue to develop the Highland Plains Phosphate Project and explore other potential opportunities for mineralisation within tenements EL 25068, 25972, 27038, 27269 , 28157 and 25600, the latter of which contains the historical Alexandria, Buchanan Dam and Alroy phosphate occurrences.

2.0 TENURE

The Highland Plains tenement EL25068 was pegged on 24 November 2005 by Nicholson Resources Limited, which later became Phosphate Australia Limited. The tenement was granted on August 8, 2006 and is currently 627 km^2 in extent. Tenement EL 25600 was applied for on 14 September 2006 and granted on 23 August, 2007. Tenement EL 25600 is 240 km^2 in extent. Tenements EL27038 and 27269 were applied for on 21 October 2008 and 31 March 2009, and were both granted on 16 October 2009. Tenement EL 27038 covers 29 km^2 and EL27269 covers 111km^2. Tenement EL 28157 was applied for on 8 June 2010 and granted 20 January 2011. A summary of the tenement details are given in Table 1. All tenements are 100% owned by Phosphate Australia.

TABLE 1: Tenement Details

Permit	Area km^2	Application Date	Grant Date	Comments
EL25068	627	24-Nov-05	8-Aug-06	100% POZ
EL25600	240	14-Sep-06	23-Aug-07	100% POZ
EL27038	29	21-Oct-08	16-Oct-09	100% POZ
EL27269	111	31-Mar-09	16-Oct-09	100% POZ
EL28157	19.5	08-June-10	20-Jan-11	100% POZ

3.0 BACKGROUND INFORMATION

3.1 LOCATION & ACCESS

Tenement EL 25068, known as the Highland Plains Project, is situated around 410 kilometres from Mt Isa in Queensland. Access to the tenement is along the Barkly Highway to Camooweal, and thence via the unsealed gazetted Rocklands Road and station tracks heading north along the Northern Territory Border.

Tenement EL 25600 is around 290 kilometres east of Tennant Creek in the Northern Territory. The tenement is accessed via the sealed Stuart Highway and then east along the Barkly Highway, before heading north along the Tablelands Highway to Alroy Station where there is a track that heads east into the tenement. The area falls within the black soil areas of the Barkly Tablelands and is barren of trees and vegetation over the three exploration targets within this tenement.

Tenement EL 25068 is situated on the Mittiebah Station and EL 25600 on Alexandria Station. Both pastoral leases are held by the North Australian Pastoral Company (NAPCO). Tenement EL 25972 is situated on the Avon Downs Station. Tenement EL27038 is contiguous with and immediately to the south of EL25068.

Figure 1 shows a tenement location map and geology of the Northern Territory Area.

Figure 1: Location Map

3.2 TOPOGRAPHY

The topography of the Highland Plains area consists of hummocky hills in the west, which define the Western Mine Target Zone (“WMTZ”). Here phosphatic siltstone is just below the soil horizon. Heading east from the WMTZ, the central area becomes more subdued, typical of an alluvial washout zone or alluvial fan which has eroded the tops of the hills. As the phosphatic zones dip to the east, weathering has not eroded the ore and it is intersected at depths from 15 metres. The topography over the ore zone to the east is also fairly flat, however the topography over the ore zone to the north and south in these areas consists of prominent hills which separate the Cambrian sequences from the lower lying Proterozoic sequence shales.

In the distance and partly off the tenement, a cliff formation of Proterozoic Sequences bounds the ore zone to the north and west. In the south, a quartzitic promontory has defined the southern part of the zone. These cliffs make up a C-shaped embayment where the sea level once transgressed, providing a trapping environment and quiet conditions with upwelling cold waters suitable for phosphorite deposition

The exploration targets at Alexandria, Alroy and Buchanan Dam on Tenement EL25600 are in featureless terrain. The formation of the phosphate in these areas is influenced by the basement topography, the outline of which can be seen using geophysics. A trapping environment with some topographic influence would have been essential during the inundation of the basin for phosphorite to be accumulated and for the right chemical conditions to occur.

3.3 CLIMATE

The Northern Territory experiences a tropical weather pattern. The dry season occurs from roughly April until November each year. November to March is the wet season when rain and thunderstorms can be significant.

Weather generally reaches the mid 30°C mark by early September and by late October approaches 40°C. In addition the cycles of heat causing cloud buildup followed by rain become more frequent, and by December there can be daily cloudbursts with associated lightning.

Access to Highland Plains is typically across black soil plains and areas of fine red bulldust and hence access to the project can be difficult, particularly after rain.

The Lancewood Creek in the southern part of the Highland Plains project area is prone to flash flooding after a rainy outburst, making the creek impassable for a couple of days.

4.0 GEOLOGY

4.1 REGIONAL GEOLOGY

Highland Plains falls within the Palaeozoic Georgina Basin, an intracratonic sedimentary basin comprised of shallow marine successions up to 450m thick. Typically the successions consist of carbonate and marine clastic rocks, evaporites, fluvial and lacustrine continental sandstones, glaciogenic sediments, shale and siltstone overlain by marine carbonates and clastic rocks of Cambrian to Ordovician age (McCrow, 2008). In parts this is overlain by Silurian to Early Carboniferous terrestrial sediments.

Within the central region, the Platform has been subdivided into an eastern Undilla Sub-basin and a western Barkly Sub-basin, separated by the Alexandria-Wonarah Basement High.

During the early middle Cambrian, a sea level transgression inundated the central Basin depositing sediments within a tectonically quiescent platform. By the middle Cambrian phosphogenesis became widespread as a result of cold water upwelling from deeper marine conditions. Numerous phosphate deposits occur within the Georgina Basin, deposited in restricted marine embayments. These embayments form the basement topography which controlled the phosphorite deposition. Black soil horizons – a weathering product of the dolostones and limestones - have subsequently covered the topography, leaving flat and featureless terrain in parts.

The embayment was bound by land to the North, South and West and had restricted flow out of the Burke River Outlier to the east (McCrow, 2008).

Today the basin is surrounded by the Nicholson and MacArthur Sub-Basins in the North, the Tennant Inlier to the West and the Arunta Province to the South.

Facies changes within the successions make stratigraphic associations between different parts of the Basin difficult.

4.2 LOCAL GEOLOGY

The Highland Plains Phosphate Project consists of siltstones, cherty siltstones, sandy siltstones and ferruginous sandy siltstones overlying banded, alternating dark and creamy claystones that show distinctive leisengang textures and form the basal unit of the economic phosphate horizon. These units are of Cambrian age and belong to the Lower Border Waterhole Formation.

In the Western area, phosphatic siltstones may be found near surface just below the soil horizon, typically associated with manganese, which either appears as a pressure intergrowth or in dendritic growth patterns.

The phosphate occurs in two horizons now defined as the upper and lower zones of the Western Mine Target Zone (“WMTZ”).

In the Central area the topography is mainly flat, compared to the hummocky hills in the west. This central area consists of outcropping barren white siltstones, reddish white sandy siltstones and remnants of black soils eroded from the dolostones/limestones. These overlie phosphatic siltstones and cherty phosphatic siltstones which occur at depth.

To the east the area continues to be flat, but the ore zone is bound by hummocky hills to the north and south, similar to those in the WMTZ.

A conglomerate marker horizon may be intersected in the western edges of the Central Zone, consisting of well-rounded pebbly clasts ranging from millimetres to several centimetres in size.

A large slump block occurring in the Central Zone suggests an alluvial fan grew after the sea level regressed, and was supplied from the Proterozoic cliffs to the North. These cliffs are part of the Bluff Range Formation.

The phosphatic siltstone horizons dip generally to the east at roughly 30^{o}. Variable dips suggest structural activity such as faulting and possibly gentle folding at oblique angles. A graben structure may also have caused the Central Zone structure.

The Lancewood Creek follows a fault line bounding the deposit to the south. This normal fault has dropped the southern block and has subsequently become infilled by dolostones and dolomites of the Camooweal Formation. The younger Bush Limestone conformably overlies the sequence closer to the fault.

Siltstone sequences may in parts underlie this Formation at depth, however drilling to date to the south of the fault has not confirmed this theory and the dolomites may occur to around 100 metre depths.

Barren siltstone sequences and limestone occur to the south of the ore zone. This possibly ties in with the barren siltstones in the central part of the ore zone which could represent another, later, sea level transgression. The conglomerate may represent this sea level stand in the middle of the sequence.

The above allows the phosphate depositional environment to be reconstructed. Proterozoic metasedimentary cliffs to the north and west formed a quiet marine embayment and thus a trapping environment as the sea transgressed to the northwest. This warm embayment had upwelling cold water from the deep ocean creating the right temperature, pH and Eh conditions for phosphorite precipitation.

In the southwest, a quartzitic horizon, probably once a sandbar, controlled sedimentation to an eddying environment within the C-shaped embayment, effectively depositing the phosphorite in northwest-southeast bands.

The phosphorite occurrences at Alexandria, Buchanan Dam and Alroy probably formed under similar conditions as Highland Plains, but are now geomorphologically very different.

The Proterozoic embayment is now a basement feature and the siltstone sequences are covered over by the Camooweal Dolostones which have weathered to flat, barren, black soils plains.

4.3 PREVIOUS EXPLORATION

i) Highland Plains

Australian Geophysical carried out extensive phosphate exploration in 1968 which led to the development of a resource at Highland Plains. This figure was based on 36 holes for 1,184 metres of drilling and work included geological mapping, soil sampling, percussion drilling and some deep rotary percussion drilling. Australian Geophysical defined two zones as the Basal and Upper Phosphate Zones within the Lower Border Water Hole Formation, with the Basal Phosphate Zone occurring as the base of the Cambrian sequence unconformably overlying Proterozoic basement.

The resource of 82.6 Million Tonnes @ 20% P_2O_5 is a historic resource and is not JORC compliant.

ii) Alexandria-Alroy-Buchanan Dam

Previous exploration includes work by IMC Development Corporation ("IMC") in 1967 on the Alexandria and Wonarah prospects. One drillhole at Alexandria averaged 6.1m @ 16.6% P_2O_5 from 48.8m and grades up to 18% P_2O_5.

Pickands Mather and Co International ("PMI") undertook reconnaissance drilling in 1968 in the Alroy area and delineated Area No 1 at Alroy, and Area No 2 which later became Buchanan Dam.

Two holes at Alroy intersected the following:

Hole A2-2A: 6.1m @ 10.0% P_2O_5 from 18.3m, which included 1.8m@14.5% P_2O_5 from 18.3m

Hole A-10-70: 6.4m @ 12.0% P_2O_5 from 16.2m, which included 4.6m@15.5% P_2O_5 from 17.4m

Hole A-12-70 at Buchanan dam intersected 6.1m @ 25% P_2O_5 from 12.2m.

In 1971 Minoil Services Pty Ltd ("Minoil") completed exploration in the Alroy area with a focus on finding phosphatic horizons for sedimentary base metal mineralisation. One hole intersected "dark shale" over 3m with the 5ppm Ag, 700ppm As, 50ppm Cd, 5000ppm Co, 1500ppm Cu, 17% Mn, 8000ppm Pb and 8000ppm Zn. Despite high radioactive content, no phosphate was recorded in this hole; however 800m to the south higher than average base metal levels were recorded in the phosphatic zone. No further work was conducted by Minoil.

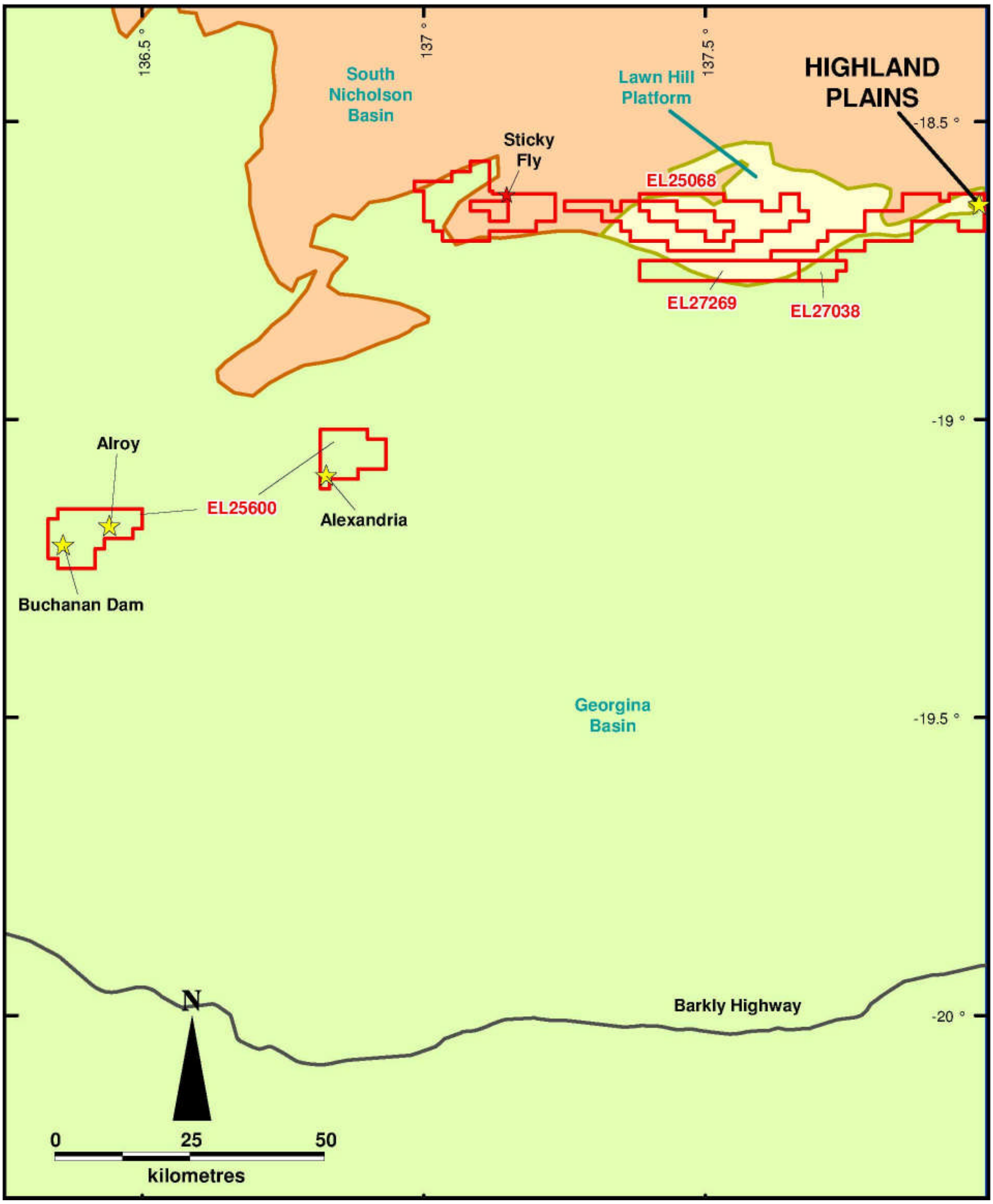
In 1976, ICI Australia Limited ("ICI") drilled 9 percussion holes in the Alroy area over the old PMI Prospecting Authority Lease. These were broadly spaced up to 1km apart and failed to correlate mineralised horizons. This was attributed to:

1) High grade material forming in small depositional basins.
2) High grade material developed in narrow inter-reef channels 500m to 1km wide.
3) High grade patches formed as a result of diagenetic concentrations.

At Alexandria, ICI explored for extensions in the low grade phosphate from 1976-1977 and drilled a total of 7 percussion holes. They intersected very low grade phosphatic horizons and ceased exploration in 1977.

Figure 2 shows the generalised regional geology for the projects and known phosphate and iron mineralisation occurrences on POZ tenements.

Figure 2: Regional Geology Map



5.0 EXPLORATION AND CONSULTANT WORK BY PHOSPHATE AUSTRALIA

During the reporting period metallurgical testwork was completed on a composite one tonne iron ore sample which was collected at the Sticky Fly prospect in the previous reporting period.

The sample returned an average SG of 4.19 and an average Impact Work Index of 8.7 kWh/t, a rod mill work index of 25.3kWh/t, and an abrasion index of 0.0704. Iron ore was separated by wet gravity process. The -1000 to +34 µm fraction returned a weighted Fe average of 51.1% Fe on a 59% yield, and 59.27% Fe on a 40% yield. The -212 to +34 µm fraction returned a weighted Fe average of 54.4% Fe on a 61.9% yield, and 60.5% Fe on a 35.8% yield.

Metallurgical results are given in Appendix 1.

No work has been conducted on EL25600, EL27038, EL27269 or EL28157.

6.0 SUMMARY AND CONCLUSION

Metallurgical testing was completed on a composite one tonne iron ore sample from Sticky Fly. The sample returned an average SG of 4.19 and an average Impact Work Index of 8.7 kWh/t, a rod mill work index of 25.3kWh/t, and an abrasion index of 0.0704.

Iron ore was separated by wet gravity process. The -1000 to +34 µm fraction returned a weighted Fe average of 51.1% Fe on a 59% yield, and 59.27% Fe on a 40% yield. The -212 to +34 µm fraction returned a weighted Fe average of 54.4% Fe on a 61.9% yield, and 60.5% Fe on a 35.8% yield.

Phosphate Australia is continuing its search for a Strategic Partner to assist in developing the Highland Plains phosphate mine and associated infrastructure. This will continue to be a focus of the company in the coming reporting period.

Michael Denny

Senior Geologist

APPENDIX 1

Sticky Fly iron ore bulk sample

Metallurgical testwork

ASSAY RESULTS ON IRON ORE SEPARATED BY WET GRAVITY PROCESS

	XRF101	XRF101	XRF101	XRF101		
Sample	Fe	SiO2	Al2O3	P	percentage	weighted
DESCRIPTION	%	%	%	%	of total	average Fe
DETECTION	0.01	0.001	0.001	0.001	sample	
sizing +34microns -1000 microns						
B3144	49.79	15.694	8.72	0.048	10.1%	
B3145	49.5	15.072	9.016	0.051	6.7%	51.1 on 59% yield
B3146	51.71	13.079	9.217	0.05	16.6%	
B3147	54.2	10.913	7.687	0.044	24.4%	
B3148	58.93	7.652	5.198	0.033	32.3%	59.27 on 40% yield
B3149	60.67	6.752	4.473	0.029	7.8%	
reject material					2.2%	
sizing +34microns -212 microns						
B3151	50.46	15.473	8.488	0.048	13.7%	
B3152	54.56	11.4	7.142	0.043	11.7%	
B3153	54.99	10.644	7.337	0.044	17.3%	54.4 on 61.9% yield
B3154	56.57	8.822	6.277	0.039	19.2%	
B3155	59.34	7.232	5.064	0.034	17.8%	60.5 on 35.8% yield
B3156	61.64	5.984	4.062	0.029	18.0%	
reject material					2.2%	
STD1:SARM11 (1)	66.15	3.108	1.381	0.042		

Bond Impact Crushing Work Index - WORK SHEET

Job Number	A14275: COMMINUTION TESTWORK
Client	ALS AMMTEC NSW
Sample Identity	HAEMATITE ORE SAMPLE
Sample Screen Size (mm)	-75+51mm
Sample SG	4.19
Date	MARCH 2012

Specimen Number	Specimen Thickness (mm)	Specimen Thickness (inch)	Impact Energy (ft-lbs)	Impact Energy (ft-lbs)/inch	Impact Energy (joules)	Impact Energy (joules)/mm	Bond Impact Crushing Work Index (kWh/t_{SHORT})	Bond Impact Crushing Work Index (kWh/t_{METRIC})
1	42.2	1.66	24	14.4	32.5	0.77	8.9	9.9
2	43.1	1.70	20	11.8	27.1	0.63	7.3	8.1
3	32.6	1.28	24	18.7	32.5	1.00	11.6	12.8
4	33.0	1.30	12	9.2	16.3	0.49	5.7	6.3
5	27.9	1.10	12	10.9	16.3	0.58	6.8	7.5
6	30.2	1.19	12	10.1	16.3	0.54	6.2	6.9
7	29.5	1.16	12	10.3	16.3	0.55	6.4	7.1
8	22.8	0.90	8	8.9	10.8	0.48	5.5	6.1
9	19.2	0.76	16	21.2	21.7	1.13	13.1	14.5
10	17.9	0.70	8	11.4	10.8	0.61	7.0	7.8
						Average(1-10) :	7.8	8.7
						Max1-10 :	13.1	14.5
						Min1-10 :	5.5	6.1
						SDev1-10 :	2.6	2.8

ALS Ammtec
World Class Bankable Metallurgy

Mineral SG Determination - Bond Impact Crushability Test

A14275: COMMINUTION TESTWORK

HAEMATITE ORE SAMPLE

Mineral SG Test

1. Recover and crush a portion of the broken samples, ie at least a quarter. Rolls crush to about -2mm. Oven dry the product.
2. Fill a 1000 ml volumetric flask to the mark and note the added water weight.
   M1 = Weight of 1000 mls of water.
3. Add about 100 grams of the dried sample to a partially filled flask.
   M2 = Weight of added test sample.
4. Fill the flask and note the weight, use vacuum to remove all bubbles.
   M3 = Weight of water plus test sample.

$$SG = \frac{M2}{M1-(M3-M2)}$$

M1	=	1000.0	grams
M2	=	300.0	grams
M3	=	1228.4	grams

SG = 4.19

DENSITY VARIATION OF WATER

Water Temperature (C°)	Water ρ (g/ml)
0	0.99987
5	0.99999
10	0.99973
15	0.99913
18	0.99862
20	0.99823
25	0.99707
30	0.99567
35	0.99406
40	0.99224

ALS AMMTEC LTD

BOND IMPACT CRUSHABILITY TEST RESULTS

Sample Identity : *HAEMATITE ORE SAMPLE*
Job Number : A14275: COMMINUTION TESTWORK
client : ALS AMMTEC NSW
Date : MARCH 2012

TEST RESULTS

Impact Work Index (Average)	8.7	kWh/tonne
	7.8	kWh/short ton
Sample SG	4.19	

Specimen Number	Thickness (mm)	Impact Energy (joules)	Work Index (kWh/tonne)
1	42.2	32.5	9.9
2	43.1	27.1	8.1
3	32.6	32.5	12.8
4	33.0	16.3	6.3
5	27.9	16.3	7.5
6	30.2	16.3	6.9
7	29.5	16.3	7.1
8	22.8	10.8	6.1
9	19.2	21.7	14.5
10	17.9	10.8	7.8

Maximum Work Index : 14.5
Minimum Work Index : 6.1
Standard Deviation : 2.8

ALS Ammtec World Class Bankable Metallurgy

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marknewton@iprimus.com.au

INVOICE NUMBER S4907
DATE OF ISSUE 16/03/2012
CONTACT Mark Newton
ORDER NUMBER
OUR REFERENCE M2455
PAGE NUMBER 1 of 1

Item	Description	Unit $	Number	Cost $
	LABORATORY SERVICES			
	2nd & final progress invoice			
1	Sample preparation			
	recovery approx 40kg of lump rock from 1 tonne bin	120.00	1	120.00
	crush to minus 3" and cut out 9kg of -3 + 2" for crushing WI			
	Crush remainder to minus 12.5mm in the process recovering			
	3kg of -19 +12mm for abrasion index			
2	Crushing work index at ALS Ammtec Perth	700.00	1	700.00
	freight 29/2/12	80.00	1	80.00
3	Abrasion index	450.00	1	450.00
	Rod mill work index	1200.00	1	1200.00
4	Supervision, documentation & report	150.00	2	300.00

NETT AMOUNT	2850.00
GST AMOUNT	285.00
BALANCE OWING IN AUSTRALIAN $	3135.00
METCON STATUS	final

ACCOUNTS STRICTLY 30 DAYS FROM INVOICE DATE

Remittance advice to: fax 61 8 93454688 OR email ammtecAR@alsglobal.com
Please send cheque payments to: Ammtec 6 MacAdam Place Balcatta WA 6021 AUSTRALIA
Direct deposits to:

Account name : Ammtec ***Swift code*** : CTBAAU2S
Bank : Commonwealth Bank of Australia ***Address*** : 240 Queen Street, Brisbane, Qld AUSTRALIA
BSB : 064 000 ***Account number*** : 1293 5228

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Website: www.spectrolab.com.au
Email: nigel@spectrolab.com.au

Analysis of Mineral Samples

Report Prepared for

Innovative Shipping

Attention:

Mark Newton

Our Reference:	9254
Date:	Thursday, 22 September 2011
Date Received:	Wednesday, 21 September 2011
Your Reference:	innovative 21-9-11
Samples Analysed:	12

Authorised by : Nigel Dunn
Managing Director
Spectrolab Pty Ltd

SPECTROLAB

Spectrolab Pty Ltd
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Telephone (08) 9964 9961
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Website: www.spectrolab.com.au
Email: nigel@spectrolab.com.au

Your Reference: **innovative 21-9-11**

	Fe	SiO2	Al2O3	P	TiO2	CaO	Mn	S	MgO	K2O	Na2O	V2O5	Cr	Co	Ni	Cu	Zn	Pb	As	Cl	LOI1000
Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit	**0.01**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.001**	**0.01**
B3144	49.79	15.694	8.720	0.048	0.398	0.094	0.057	0.042	0.157	0.277	0.086	0.019	0.007	0.011	0.009	0.049	0.010	0.005	0.013	0.001	4.32
B3145	49.50	15.072	9.016	0.051	0.411	0.074	0.056	0.044	0.153	0.305	0.070	0.019	0.008	0.010	0.022	0.010	0.006	0.005	0.008	X	3.98
B3146	51.71	13.079	9.217	0.050	0.408	0.063	0.057	0.034	0.145	0.322	0.066	0.020	0.005	0.009	0.008	0.007	0.007	0.004	0.012	X	3.94
B3147	54.20	10.913	7.687	0.044	0.362	0.057	0.063	0.037	0.138	0.280	0.068	0.020	0.003	0.009	0.011	0.020	0.007	0.005	0.013	X	3.38
B3148	58.93	7.652	5.198	0.033	0.282	0.052	0.073	0.027	0.111	0.200	0.059	0.021	0.003	0.006	0.008	0.025	0.007	0.005	0.013	X	2.40
B3149	60.67	6.752	4.473	0.029	0.259	0.049	0.079	0.019	0.102	0.176	0.063	0.022	0.012	0.005	0.023	0.008	0.007	0.003	0.015	X	2.12
B3151	50.46	15.473	8.488	0.048	0.401	0.059	0.060	0.026	0.138	0.283	0.070	0.020	0.027	0.010	0.046	0.007	0.006	0.004	0.012	X	3.73
B3152	54.56	11.400	7.142	0.043	0.376	0.055	0.067	0.020	0.128	0.246	0.069	0.022	0.014	0.009	0.023	0.007	0.007	0.005	0.014	X	3.18
B3153	54.99	10.644	7.337	0.044	0.382	0.058	0.067	0.022	0.134	0.259	0.070	0.022	0.010	0.008	0.014	0.007	0.007	0.004	0.014	X	3.24
B3154	56.57	8.822	6.277	0.039	0.345	0.054	0.070	0.019	0.122	0.228	0.062	0.021	0.009	0.007	0.017	0.007	0.007	0.004	0.012	X	2.83
B3155	59.34	7.232	5.064	0.034	0.304	0.052	0.076	0.017	0.113	0.192	0.056	0.022	0.005	0.006	0.006	0.009	0.008	0.004	0.015	X	2.41
B3156	61.64	5.984	4.062	0.029	0.284	0.051	0.087	0.017	0.104	0.162	0.059	0.024	0.004	0.004	0.010	0.009	0.009	0.004	0.018	X	1.95
STD1:SARM11 (1	66.15	3.108	1.381	0.042	0.062	0.045	0.021	0.012	0.021	0.145	0.015	0.007	0.002	0.003	0.002	0.001	0.002	0.001	0.001	0.001	-

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	Fe	SiO2	Al2O3	P	TiO2	CaO	Mn	S	MgO	K2O	Na2O	V2O5	Cr	Co	Ni	Cu	Zn	Pb	As	Cl	LOI1000
Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Detection Limit	0.01	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.01

These results pertain to the samples as received at this laboratory

Sample Preparation:
The samples were crushed to minus 3mm and then split using a riffle splitter to obtain a representative fraction of greater than 500g. This fraction was then dried to constant mass at 105 degrees C.

The representative fraction was then ground to 90% passing 100 micron using a laboratory mill.

The samples have been weighed and mixed with a 12:22 Lithium Metaborate/Lithium Tetraborate Flux containing 4% Lithium Nitrate as an oxidising agent.

The flux/sample mixture was then fused at 1050 degrees C .

All elements have been determined by X-ray Fluorescence Spectrometry (XRF).

LOI Has been determined gravimetrically in a muffle furnace at 1000 degrees C.

NEW SOUTH WALES - SYDNEY

TESTING OF A BULK HEMATITE SAMPLE

FOR

JIMPEC RESOURCES PTY LTD

REPORT M2455
MARCH 2012
STEVE RAYNER

Use of the enclosed results is restricted to material truly represented by the sample tested

(Formerly known as Metcon Laboratories)

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1. SCOPE OF WORK

Previous testing of a hematite sample by the University of Newcastle has been followed up with the supply of ~2 tonne lump rock sample on 16/8/11 in order to have sufficient sample for a continuous test should that eventuate. Preparation for the University of Newcastle testing was carried out by Metcon (now ALS Ammtec – Sydney) and is described in report M2213.

This report covers the initial testing and preparation of a bulk sample of lump hematite ore submitted by Jimpec Resources Pty Ltd under the direction of Mark Newton (Director). The second stage of work involved obtaining comminution properties of the sample by carrying out crushing, abrasion and rod mill work index tests.

2. PREPARATION OF SAMPLE FOR THE UNIVERSITY OF NEWCASTLE

2.1 Preparation

A 100kg portion of ore was randomly selected from the bulk and crushed to minus 2mm and riffled into 20kg portions.

As shown in Figure 1 one portion was further screened and crushed to pass a 1mm screen and the dry screened at 38µm to remove the slimes, supplying 8kg of a -1000 + 38µm fraction for supply to the University on 19/8/11.

Another portion was wet ground in a rod mill and 2 batches with the product wet screened at 212µm, returning the oversize to the mill until all of the samples was minus 212µm. The product was first wet screened with the oversize dried and then dry screened at 38µm, supplying 8kg of -212 + 38µm fraction to the University on 24/8/11.

Figure 1 Preparation of test portions for the University of Newcastle

2 x bulki bags of lump rock on 16/8/11
say 2 tonnes

select ~100kg at random
for initial use

crush 100kg to minus 2mm and divide into
20kg batch samples

preparation of bulk sam

dry 20kg and
screen/crush to minus 1mm
dry screen at 38µm
supply 8kg of -1mm + 38µm?
supplied to Uni Newcastle on 19/8/11
PORTION 1

	kg
-1mm + 38µm	19
-38µm	0.69
total	19.7

dry 20kg and
screen/crush to minus 2mm
wet grind in 2kg batches screening at 500µm
and return oversize to next grind
dry screen at 38µm
supply 8kg of -1mm + 38µm?

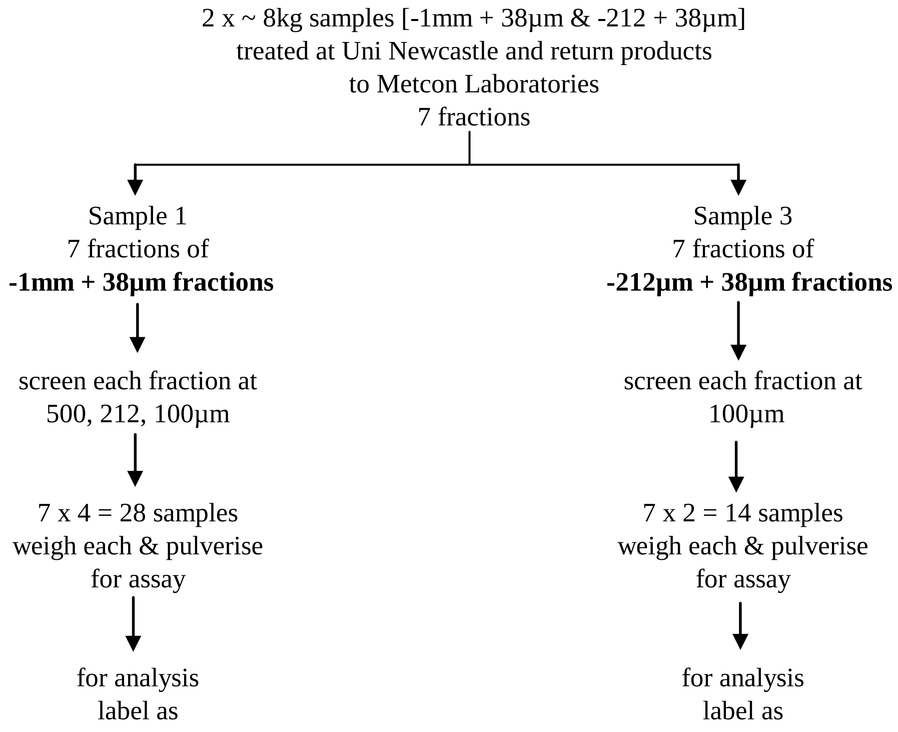
dry 20kg and
screen/crush to minus 2mm
wet grind in 2kg batches screening at 212µm
and return oversize to next grind
dry screen at 38µm
supply 8kg of -1mm + 38µm?
supplied to Uni Newcastle on 24/8/11
PORTION 2

	kg
-1mm + 38µm	10.6
-38µm	9.45
total	20.0

2.2 Handling of Products

It was proposed that the products from the University tests be returned to Metcon and treated according to the schematic in Figure 2 before being sent for analysis. However we have no record of the samples actually being returned.

Figure 2 Product handling



3. COMMINUTION TESTS

Approximately 30kg of lump rock selected at random was taken and coarse crushed, removing about 10kg of pieces between 50 and 75mm (2 to 3”) which were sent to ALS Ammtec Perth for crushing work index determination. Their report is attached. The remaining sample was then stage crushed to minus 12.5mm, removing 3kg of material between 19 and 12.5mm for an abrasion index test in the process. Both the abrasion index test and rod mill work index test were carried out by ALS Ammtec Sydney (Metcon).

Data sheets for the comminution tests are attached with the summarized results below;

Crushing work index = 8.7 kWh/t
Abrasion index = 0.0704
Rod mill work index = 25.3 kWh/t

ALS AMMTEC LTD

BOND IMPACT CRUSHABILITY TEST RESULTS

Sample Identity : *HAEMATITE ORE SAMPLE*
Job Number : A14275: COMMINUTION TESTWORK
client : ALS AMMTEC NSW
Date : MARCH 2012

TEST RESULTS

Impact Work Index (Average)	8.7	kWh/tonne
	7.8	kWh/short ton
Sample SG	4.19	

Specimen Number	Thickness (mm)	Impact Energy (joules)	Work Index (kWh/tonne)
1	42.2	32.5	9.9
2	43.1	27.1	8.1
3	32.6	32.5	12.8
4	33.0	16.3	6.3
5	27.9	16.3	7.5
6	30.2	16.3	6.9
7	29.5	16.3	7.1
8	22.8	10.8	6.1
9	19.2	21.7	14.5
10	17.9	10.8	7.8

Maximum Work Index :	14.5
Minimum Work Index :	6.1
Standard Deviation :	2.8

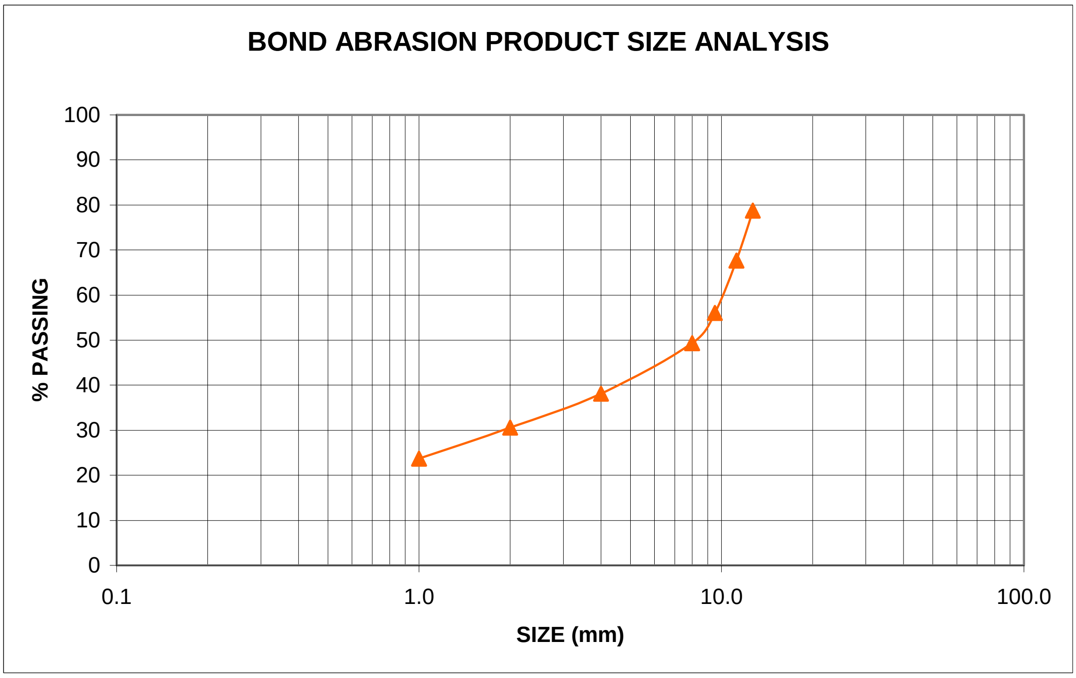
BOND ABRASION INDEX DETERMINATION

SAMPLE IDENTITY :	Haematite
CLIENT :	Innovative Shipping
PROJECT NUMBER :	M2455
DATE :	February 29, 2012

SIZING ANALYSIS : ABRASION INDEX PRODUCT

Operation	Size (mm)	Weight (g)	Weight (%)	Weight % Passing
Screening	12.7	340.1	21.2	78.8
	11.2	177.2	11.1	67.7
	9.5	186.9	11.7	56.0
	8.0	106.7	6.7	49.4
	4.0	179.4	11.2	38.1
	2.0	121.2	7.6	30.6
	1.0	110.4	6.9	23.7
	-1.0	379.1	23.7	
Total		1601.0	100.0	

PADDLE WEIGHT BEFORE TEST (g) :	89.1559
PADDLE WEIGHT AFTER TEST (g) :	89.0855
BOND ABRASION INDEX (Ai) :	0.0704



BOND ROD MILL CLOSED CIRCUIT GRINDABILITY

SAMPLE	Haematite
CLIENT	Innovative Shipping
REPORT No	M2455
DATE	March 1, 2012
TEST APERTURE (µm)	1180 ⇦⇦⇦⇦ (must have aperture here to calc rbwi)

PERIOD	REVS OF Mill	WT OF 1250 mls (g)	WT OF NEW FEED (g)	WT OF O/SIZE (g)	WT OF U/SIZE (g)	NET WT OF U/SIZE (g)	NET WT OF U/SIZE PER REV (g)	CIRC'TING LOAD (%)	WT OF FRESH FEED ADDED TO NEXT CYCLE (g)	WT OF U/SIZE IN FEED TO NEXT CYCLE (g)
1	100	3164.1	3164.1	2461.8	702.3	418.4	4.184	350.5	702.3	63.0
2	363	3164.1	702.3	1885.0	1279.1	1216.1	3.350	147.4	1279.1	114.8
3	438	3164.1	1279.1	1571.9	1592.2	1477.4	3.373	98.7	1592.2	142.9
4	427	3164.1	1592.2	1583.1	1581.0	1438.1	3.368	100.1	1581.0	141.9
5	428	3164.1	1581.0	1547.4	1616.7	1474.8	3.446	95.7	1616.7	145.1
6	417	3164.1	1616.7	1589.4	1574.7	1429.6	3.428	100.9	1574.7	141.3

% PRODUCT IN THE FEED	9.0	%
IDEAL POTENTIAL PRODUCT	1582.1	(g)
BULK DENSITY	2.531	(t/m3)
AVG % CIR LOAD	98.9	%
AVG PRODUCT	3.414	(g/rev)
80% PASSING FEED SIZE	10282	(µm)
80% PASSING PROD'T SIZE	842	(µm)

BOND ROD MILL WORK INDEX (Kilowatt hours/dry tonne) : 25.3

BOND ROD MILL GRINDABILITY TEST FEED AND PRODUCTS SIZINGS

FEED TO PERIOD No. 1

Size (µm)	Weight (g)	Retained (%)	Passing (%)
11200	163.5	9.8	90.2
9500	307.7	18.5	71.6
8000	311.2	18.7	52.9
6700	161.7	9.7	43.1
5600	143.9	8.7	34.5
3350	236.0	14.2	20.3
2360	86.5	5.2	15.1
1400	83.6	5.0	10.0
1180	17.3	1.0	9.0
-1180	149.0	9.0	
TOTAL	1660.4	100.0	
	F 80 (µm)	10282	

EQUILIBRIUM PRODUCT

Size (µm)	Weight (g)	Retained (%)	Passing (%)
1000	42.2	10.8	89.2
850	34.5	8.8	80.5
600	65.5	16.7	63.8
425	41.4	10.6	53.2
300	34.4	8.8	44.4
-300	174.4	44.4	
TOTAL	392.4	100.0	
	P 80 (µm) :	842	

FEED SIZING CALCULATION

	SIZE (µm)	Wt. PASSING (%)
HIGH	11200	90.2
LOW	9500	71.6
P80 µm =		10281.7

PRODUCT SIZING CALCULATION

	SIZE (µm)	Wt. PASSING (%)
HIGH	850	80.5
LOW	600	63.8
P80 µm =		842.1