Matilda Zircon Limited

Resource Estimate for Lethbridge South Heavy Mineral Deposit Tiwi Islands Northern Territory

May, 2011

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Executive Summary

In April, 2011 the drilling and mapping was revisited to confirm the resource described at Lethbridge South in Coxhell and Baxter (2009b). The estimation is based on newly constructed wireframes using a 1% cut-off of the deposit. This correlates well with the geological boundaries defined by mapping and logging.

It is concluded that the Lethbridge South Deposit contains measured resources of 1.40Mt of sand containing 2.36% heavy mineral 0.3% oversize and 2% slimes to a cut-off of 1%HM. This compares with 1.12Mt of sand containing 2.78%HM estimated by Coxhell and Baxter (2009b).

The average of modals tested in 2010 sampling all panels is the heavy mineral fraction containing 92.2% valuable heavy mineral with 49.5% zircon, 18.4% rutile, 15.7% leucoxene and 8.9% ilmenite.. However the result indicate there will be variability in the heavy mineral composition in different parts of the deposit.

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Lorne McCrum an employee of Matilda Zircon Ltd. The resource estimation has been completed by John Baxter RPGeo (Member of The Australian Institute of Geoscientists) who is a consultant to Matilda Zircon Ltd. Mr Baxter has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they have undertaken to qualify as Competent People as defined in the 2004 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

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Introduction

There have been several previous estimations of the resource at Lethbridge South, some have been compiled into reports that are listed in the Bibliography at the end of this report.

Most of the drilling and sampling has been supervised by Simon Coxhell who supervised the mining of the Andranangoo Deposit west of Lethbridge South. The data has been audited prior to this investigation.

This resource model has been derived from the raw data. The strings on each drill section were compiled by Lorne McCrum using Surpac. The subsequent solids were constructed by Lorne McCrum also in Surpac. The Ore block Model and the assign of the wireframe was created in Micromine by John Baxter

The report has been developed by John Baxter who is a Registered Practising Geologist with the Australian Institute of Geoscientists has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they have undertaken to qualify as Competent People as defined in the 2004 Edition of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Location and Setting

Melville Island is located in the Timor Sea approximately 100 km NW of Darwin (Figure 1). Lethbridge South is on the northern coast of Melville Island. The deposit is on the western side of Aliu (Jessie) Creek Inlet in an area characterised by swamp in the wet season.

Lethbridge South is accessible by roads from towns on Melville Island during the dry season, but can be isolated in the wet season. The Lethbridge West (Bay) deposit was mined in 2010 and the product shipped by barge from the shore of Aliu (Jessie) Creek. It is intended that the same process will be adopted for Lethbridge South.

Figure 1 The Tiwi Islands

Previous Exploration

An aircore drilling program was completed at Lethbridge South in 2004-05. It was focussed in areas up near the north south trending “scarp” as the geological model experienced at both the Andranangoo and Lethbridge Bay deposits had found the better grades were located up against the scarp. The record of this programme is 139 aircore holes (LS001-139) for 447 metres drilled. In 2005 19 shell auger holes (LSA001-019) were drilled along the “scarp” to follow up this programme.

In 2006 a systematic, 1.1m sample depth, spiral auger drilling program was completed throughout the entire Lethbridge South area with a total of 455 spiral augers (Holes 13***, 14*** and 17***) are recorded in the database on a nominal 200 metre by 30 metre spacing. This was successful at outlining a number of anomalous zones at Lethbridge South, away from the scarp in a widespread area.   Out of the 455 spiral auger holes, 16 returned values >4% HM, 67 returned values 2-4%HM, 110 returned values1-2%, with the rest <1% HM.

Two programs of shell auger have been completed over the dune systems at Lethbridge South with a total of 89 holes (LSA020-111) for 174 metres drilled. Average depth was 1.95 metres, with basement not always intersected due to the water table preventing further penetration with the shell auger. A number of encouraging results were returned , with modal analysis suggesting that the deeper material (1-2metres) may have a slightly better mineral assemblage.

A programme of aircore drilling consisting of 228 holes for 1,026m (LSAC01-228) was drilled with depth ranging from 3-36m with an average of 4.5m to further define the resource.

All drilling is shown in Figure 2.

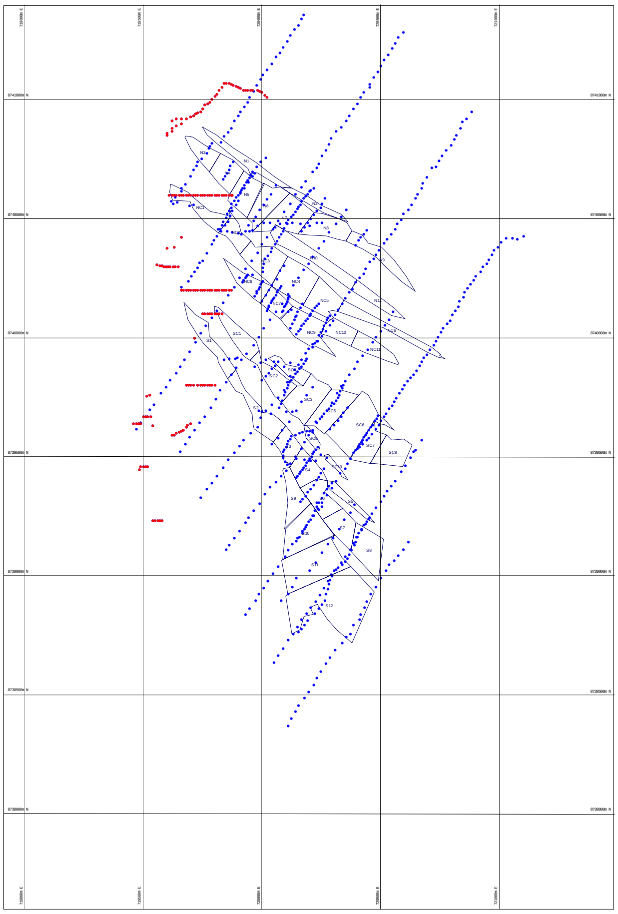

Figure 2 Map showing drill holes at Lethbridge South in blue and the holes omitted by Simon Coxhell in red

Details of the drilling methods are reported in Coxhell and Baxter (2009). The early aircore programme was undertaken by Wallis Drilling of Midvale WA, the second aircore programme was completed by Johansenn Drilling of Darwin. The spiral and shell augering was undertaken with geological supervision. All drill samples were logged simultaneously with drilling by Simon Coxhell.

Sampling was done on site and samples were dispatched to commercial laboratories, either Western Geolabs of Diamantina Laboratories in Perth for standard heavy mineral analysis. No standards were used but 9 duplicates were examined and gave acceptable results.

Sample	HM%	Sample	HM%	Sample	HM%
OLY 20	0.80%	OLY 30	0.85%	OLY 40	1.39%
OLY 20A	0.80%	OLY 30A	0.85%	OLY 40A	1.53%
OLY 50	3.37%	OLY 60	1.66%	OLY 70	4.25%
OLY 50A	3.51%	OLY 60A	1.74%	OLY 70A	4.36%
OLY 80	3.52%	OLY 90	1.04%	OLY 100	1.27%
OLY 80A	3.53%	OLY 90A	1.04%	OLY 100A	1.25%

Table 1 2009 Shell Auger Field Duplicates reported by Simon Coxhell

All holes were located by hand held Garmin GPS providing an accuracy of +/- 5 metres. Most Holes were drilled on lines nearly perpendicular to the lenses of mineralisation.

An audit of the data revealed that data from 139 aircore holes (LS001-139) had been omitted from the analysis. These data included 446 heavy mineral analyses with an average of 0.38%HM and a highest of 3.5%HM. There are 28 samples with >1%HM. The highest value (3.5%HM) is northwest of panel SC1 (719700E, 8740200N), the second highest (2.5%HM) is 300m SW of S2 (719650E, 8739606N). There is no explanation for this omission, but the decision was made by Simon Coxhell who supervised the drilling and consequently it has been left as he presented it.

Estimation of Mineral Resources

Sectional reviews of the data identified that the RL of the drill holes was inconsistent and consequently in this analysis all collars were assigned to 2m RL. All sections were reviewed to identify geological continuity.

The resource estimation process then consisted of:

1. Strings were interpreted in SURPAC around the mineralisation based on a 1%HM cut-off.
2. The strings were compared to the geological logging for confirmation
3. The strings were used to construct wireframes over the deposit, this required 5 individual wireframes to be made (Figure 3).

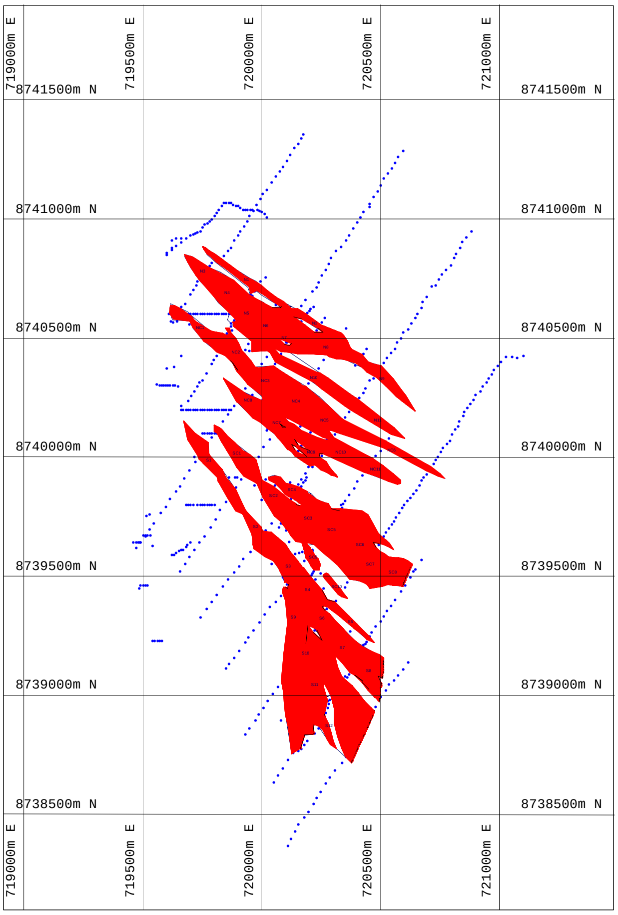

Figure 3 Five wireframes (red) and drillholes (blue) at Lethbridge South

4. The wireframes were transferred to MICROMINE
5. The assay file LethAllAssaysLorne was 3D generated Drillhole→Generate→Downhole Coordinates using file LethSthAllCollars_Simon
6. Ore Block Modelling in MICROMINE was completed using Modelling→3D Block Estimate→Inverse Distance Weighting.
7. Input file LethAllAssaysLorne with input fields HM%, OS% and Slimes% with the minimum 0.1%HM being written to file
8. The block definitions were set as shown in Table 2.

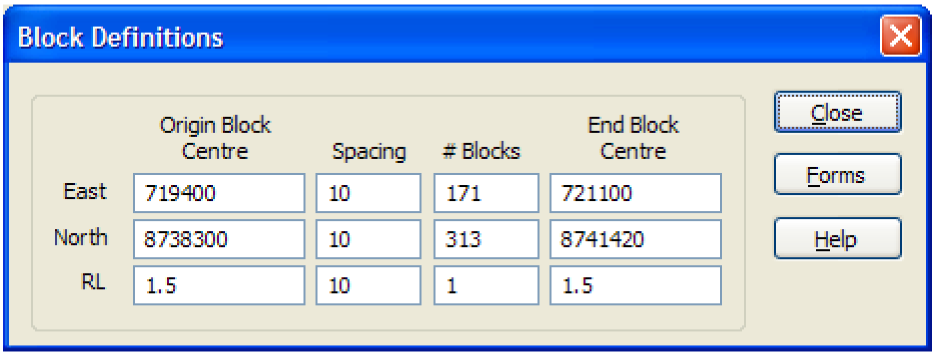

Table 2 Block Definitions for Lethbridge South

9. No Discretisation was employed.
10. Numeric exceptions were made to ignore characters and blanks and <x=0.5x
11. Inverse Distance squared with a minimum distance of 0.5m was set.

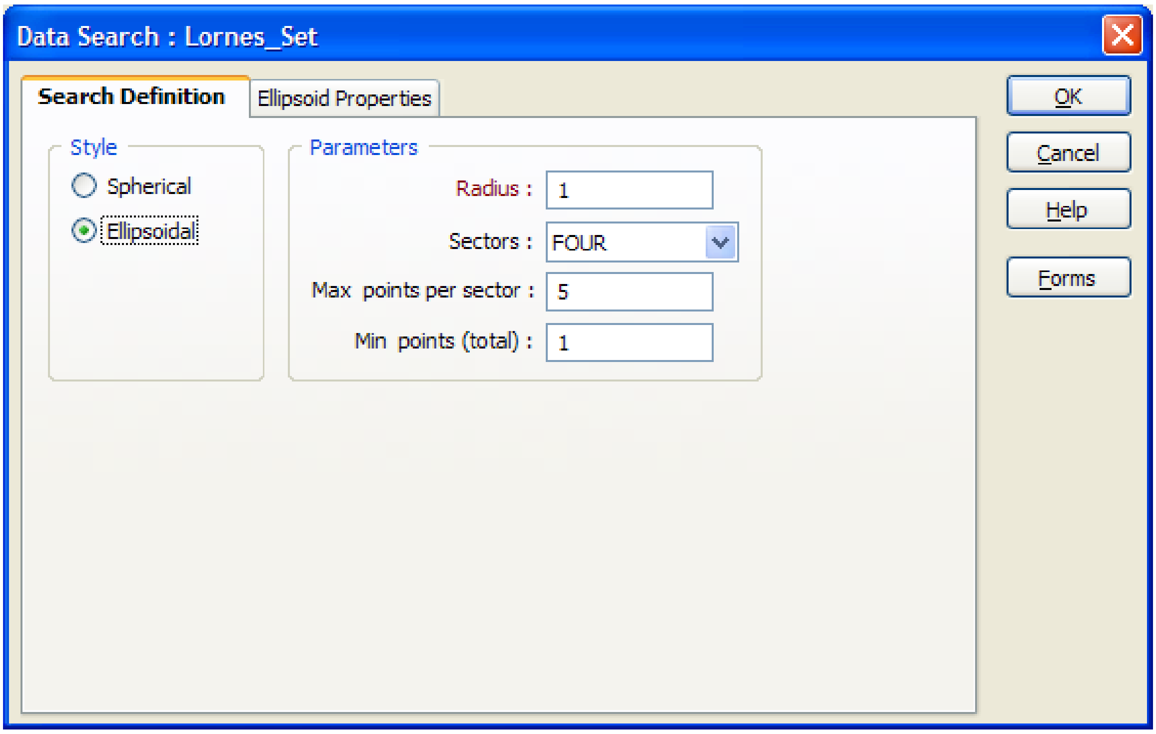

Table 3 Search Definition for Interpolation

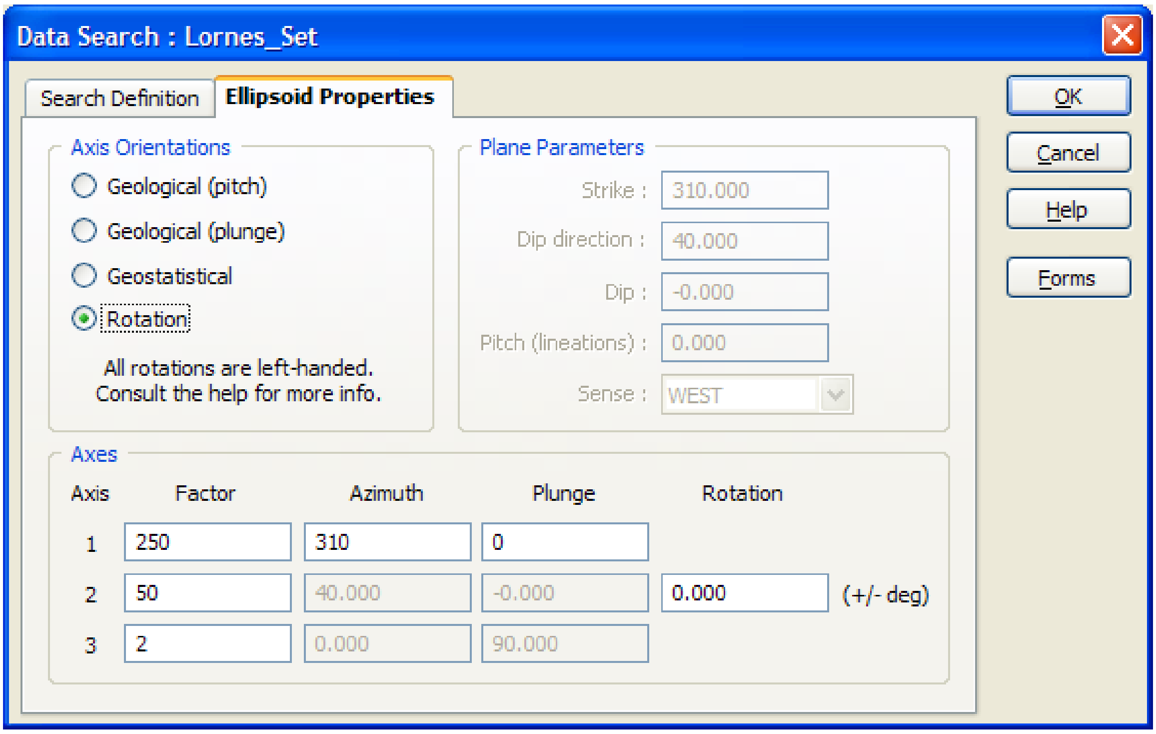

Table 4 Ellipsoid Properties for Interpolation

12. Data Search Parameters shown in Table 3 and Table 4 were set.
13. A field for Block Factor was added to the output file Lornes_OBM
14. The wireframes were assigned to the Ore Block Model reporting to BlockFac using Wireframe→Assign (Table 5) assigning Name→ Panelcode attributes to partial blocks

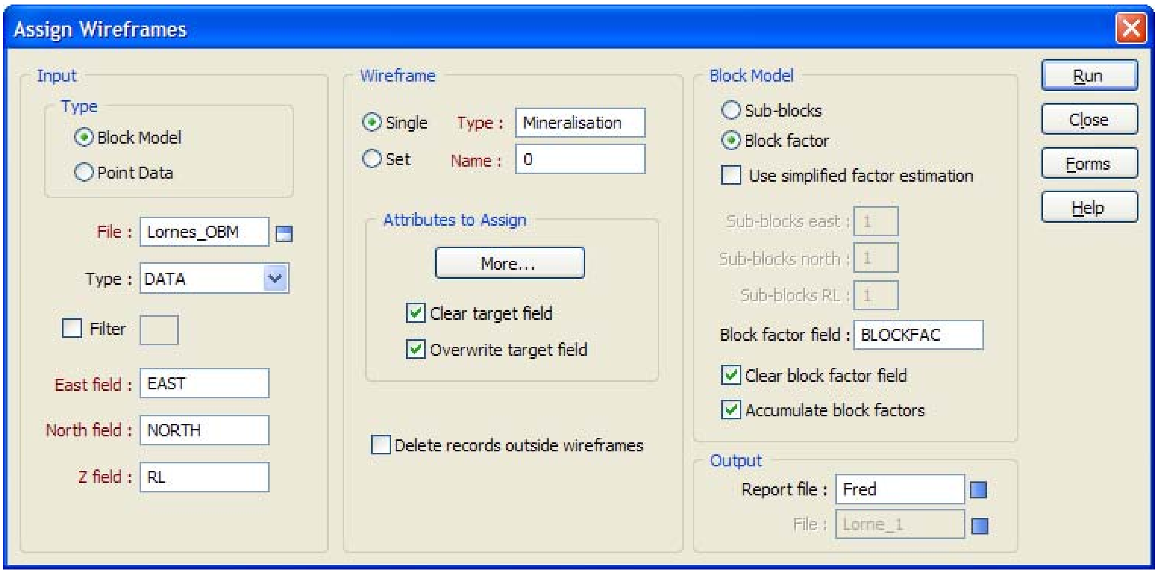

Table 5 Parameters for Assign Wireframe to Lethbridge South

15. Assign a bulk density (1.6t/m^3), in this case based on the experience from Lethbridge West.
16. Reporting results from Modelling→Model Report→Block Model Report using Block Factors from the Wireframe Assign (Table 6)

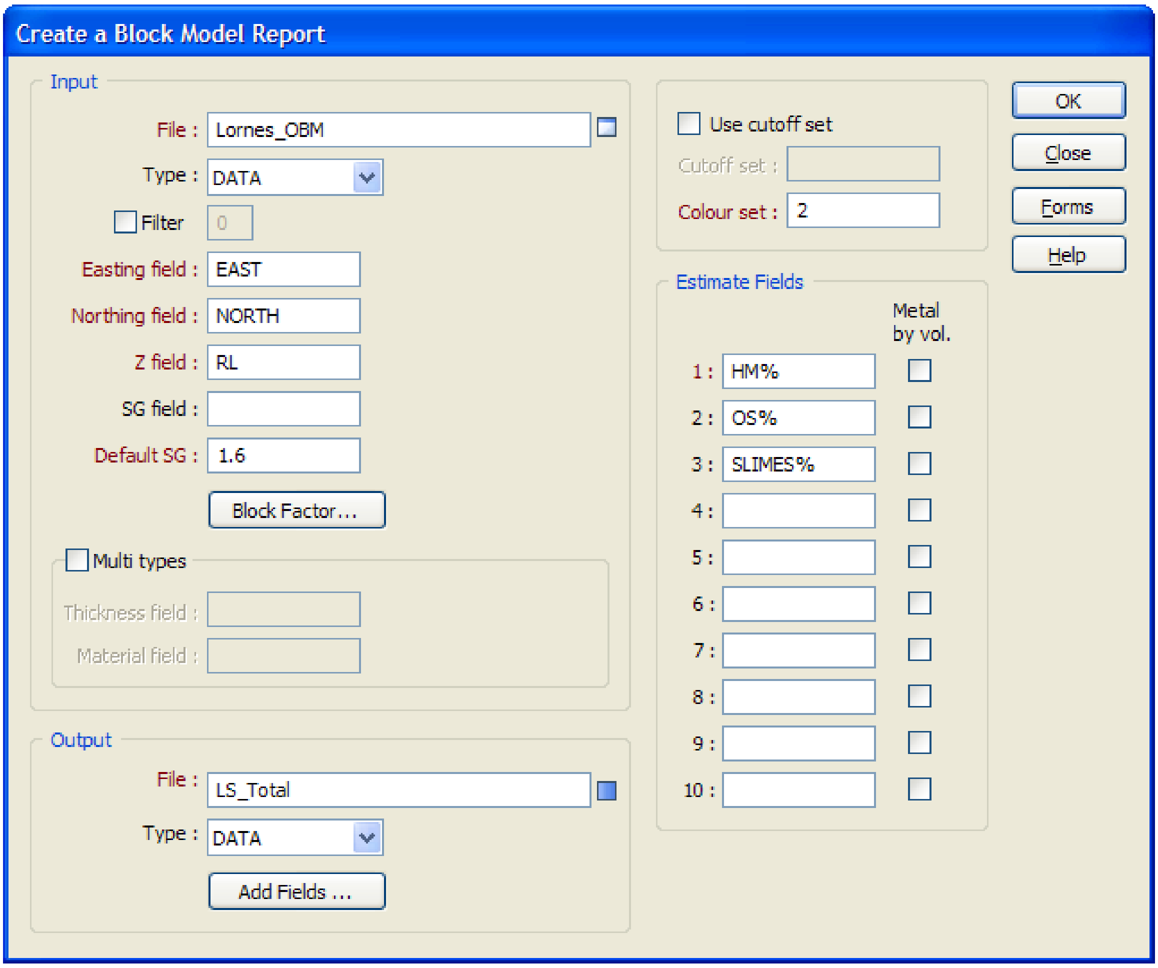

Table 6 Creation of Lethbridge South Block Model Report

17. Report the tonnes and grade as in Table 7.

From OBM as estimated to 1%	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes
>10		510	816	1.6	10.57	0.24	1.56	510	816	10.57	0.24	1.5
8	10	380	608	1.6	8.14	1.13	1.61	890	1,424	9.53	0.62	1.5
6	8	5,180	8,288	1.6	6.76	0.44	2.93	6,070	9,712	7.17	0.46	2.7
4	6	71,250	114,000	1.6	4.63	0.35	2.79	77,320	123,712	4.83	0.36	2.7
3	4	118,970	190,352	1.6	3.44	0.30	2.25	196,290	314,064	3.99	0.32	2.4
2	3	267,180	427,488	1.6	2.43	0.29	1.93	463,470	741,552	3.09	0.30	2.1
1.5	2	233,000	372,800	1.6	1.73	0.23	1.85	696,470	1,114,352	2.64	0.28	2.0
1	1.5	177,930	284,688	1.6	1.28	0.29	1.61	874,400	1,399,040	2.36	0.28	1.9

Table 7 Indicated Resources Lethbridge South

Modal Analysis

In the early 2006 drilling some modal analysis of the Lethbridge South deposit were undertaken and the results are reported in

Sample Number	LSO300	LBS-C1	LBS-B1	Comp(01)	Comp(02)	Average
HS Ilmenite	0.1	0.1	0.1	0.0	0.0	0.1
Ilmenite Mag 1	0.7	1.4	0.8	0.6	0.9	0.9
Ilmenite Mag 2	5.8	12.0	12.9	6.8	10.0	9.5
Mag Leucoxene	12.6	16.1	11.6	10.1	10.2	12.1
Rutile	26.9	14.5	15.7	19.1	21.2	19.5
Non Mag Leucoxene	6.3	6.8	8.9	6.7	11.0	7.9
Zircon	36.80	33.0	33.3	45.8	35.8	36.9
Total VHM	89.2	83.9	83.3	89.1	89.1	86.9

Table 8 Modal Analyses from Lethbridge South June, 2009

In January, 2010 a further four bulk samples were prepared from the heavy mineral sinks The composites were made up as shown in

2009 Zone	2011 Zone	No Samples	Average Grade
Zone D	Zone S	40	3.92
Zone C	Zone SC	8	3.31
Zone B	Zone NC	25	3.97
Zone A	Zone N	16	4.12

Table 9 Modal Analyses 2010 Lethbridge South

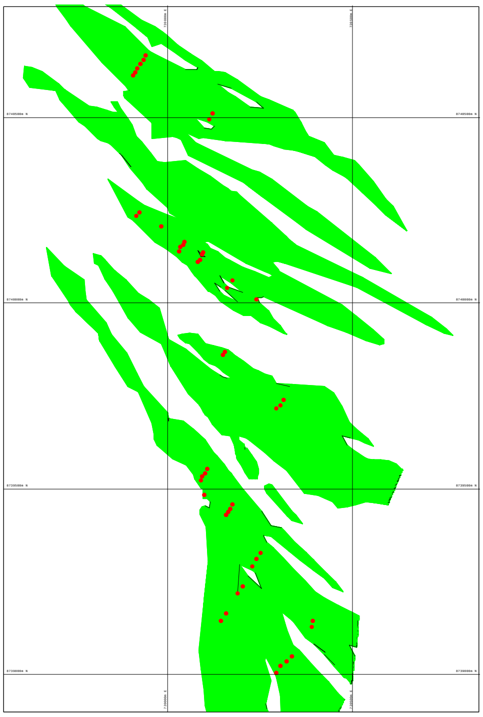

Figure 4 Location of samples used in composites Lethbridge South

These samples were distributed in the deposit with reasonable spread. However the southern portion of Lens SC and the northern portion of Lens NC are not represented as shown in red in Figure 4.

The results of this analysis are reported in Table 10. The average of all modals is 92.2% valuable heavy mineral containing 49.5% zircon, 18.4% rutile, 15.7% leucoxene and 8.9% ilmenite. This more comprehensive sampling programme has resulted in identification of higher zircon, lower rutile and leucoxene with similar results for ilmenite. Clearly there will be some variability of mineral proportions in the individual panels.

	Panel				
HEAD	**N**	**NC**	**SC**	**S**	**Average**
Magnetite	0.0	0.0	0.0	0.0	
Ilmenite Mag 1	0.5	0.7	0.8	0.8	0.7
Ilmenite Mag 2	9.3	5.4	10.5	7.4	8.2
Mag Leucoxene	0.7	1.1	0.6	0.4	0.7
Rutile	20.5	18.9	18.6	15.6	18.4
Non Mag Leucoxene	12.7	18.0	12.9	15.3	14.7
Zircon	47.2	48.6	48.6	53.6	49.5
Total VHM	90.9	92.7	92.0	93.1	92.2

Table 10 Lethbridge South Modals 2010

Further Considerations

In order to provide Matilda Zircon with more information to assess the deposit for mining the thickness of the deposit was reported (Figure 5). This was achieved by taking the block factor and assuming it to be the remnant of the 10m thick block. This technique is an approximation.

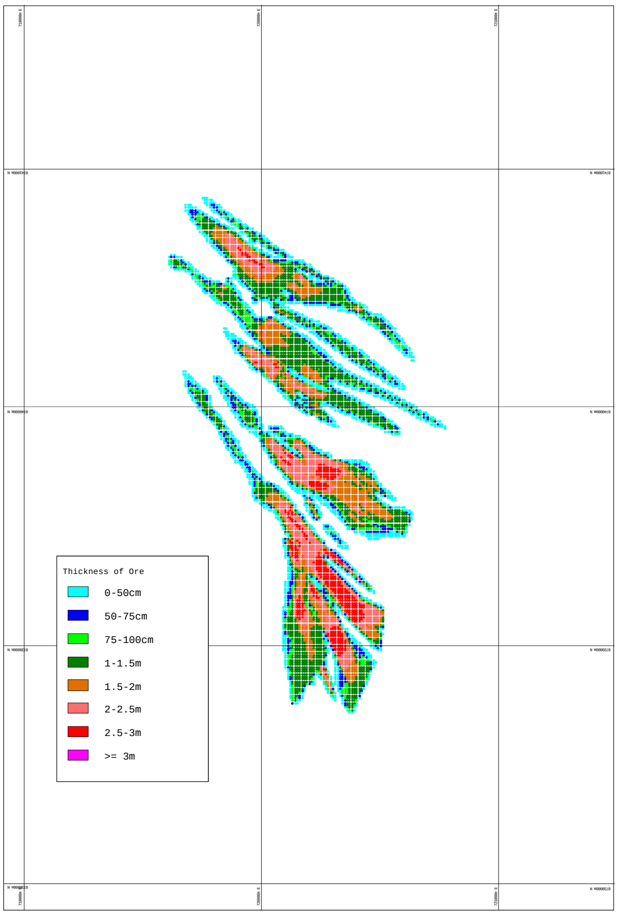

Figure 5 Lethbridge South - distribution of ore thickness

Because the deposit is at the surface and there will need to be 10cm removed from the deposit prior to mining and it was considered that the deposit must be thicker than 50cm a report of the resource was made to meet these criteria. This was made by subtracting 0.01 from the Block Factor and the reporting the resource using the same parameters but using the BF-10CM as the block factor. The 50cm was estimated where BF-10CM was greater than 0.05. The result of this estimation is reported in Table 11.

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
OBM>50cm-10cm												
10	>10	490	784	1.6	10.57	0.24	1.56	490	784	10.57	0.24	1.56
8	10	360	576	1.6	8.14	1.13	1.61	850	1,360	9.54	0.62	1.58
6	8	4,950	7,920	1.6	6.77	0.44	2.92	5,800	9,280	7.17	0.47	2.73
4	6	67,200	107,520	1.6	4.63	0.35	2.79	73,000	116,800	4.83	0.36	2.78
3	4	111,520	178,432	1.6	3.44	0.30	2.23	184,520	295,232	3.99	0.32	2.45
2	3	247,470	395,952	1.6	2.44	0.29	1.93	431,990	691,184	3.10	0.30	2.15
1.5	2	206,730	330,768	1.6	1.74	0.23	1.86	638,720	1,021,952	2.66	0.28	2.06
1	1.5	146,830	234,928	1.6	1.28	0.30	1.61	785,550	1,256,880	2.40	0.29	1.98

Table 11 Resources with thickness >50cm and with 10cm removed

To allow a mining assessment and conversion of the resource to a reserve the deposit was divided into panels as shown in

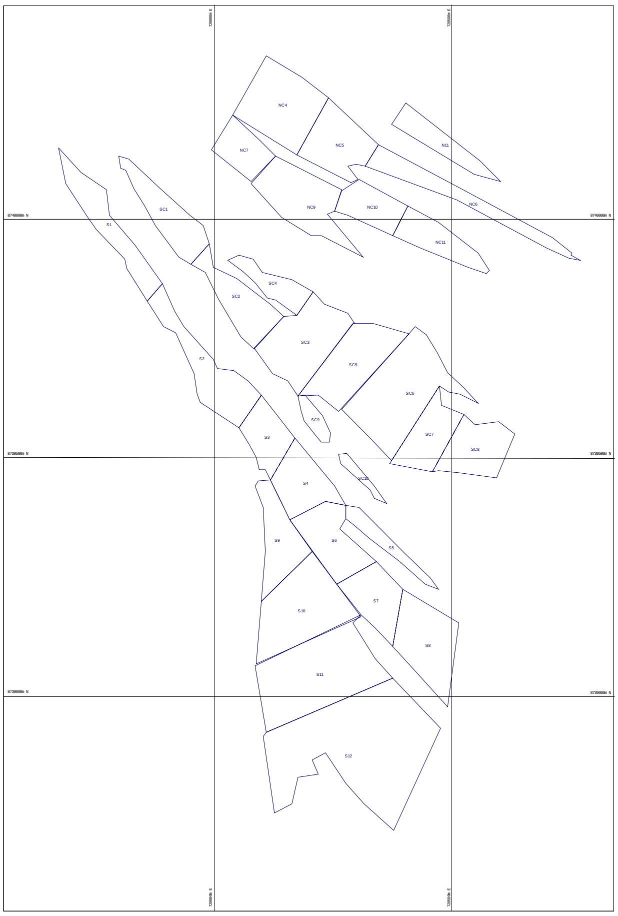

Figure 6 Panels for Mining Assessment

The amount of resource within each of these panels was estimated by using the Modelling→ Assign Outlines feature in MICROMINE and the results are reported in the following pages.

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel N1												
1.5	2	0	0	0	0	0	0	0	0	0	0	0
1	1.5	1340	2144	1.6	1.138	0.141	1.0673	1340	2144	1.138	0.141	1.0673
Panel N2												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	290	464	1.6	2.375	0.048	3.3317	290	464	2.375	0.048	3.3317
1.5	2	860	1376	1.6	1.641	0.045	1.7552	1150	1840	1.826	0.046	2.1527
1	1.5	2730	4368	1.6	1.248	0.037	2.8934	3880	6208	1.42	0.039	2.6739
Panel N3												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	270	432	1.6	3.321	0.258	1.1239	270	432	3.321	0.258	1.1239
2	3	780	1248	1.6	2.302	0.256	1.3036	1050	1680	2.564	0.256	1.2574
1.5	2	4080	6528	1.6	1.727	0.23	1.4002	5130	8208	1.899	0.235	1.371
1	1.5	990	1584	1.6	1.316	0.191	1.5183	6120	9792	1.804	0.228	1.3948
Panel N4												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	850	1360	1.6	4.465	0.033	3.0601	850	1360	4.465	0.033	3.0601
3	4	940	1504	1.6	3.587	0.042	3.1046	1790	2864	4.004	0.038	3.0835
2	3	5960	9536	1.6	2.232	0.073	2.6706	7750	12400	2.641	0.065	2.766
1.5	2	8780	14048	1.6	1.742	0.138	2.1841	16530	26448	2.164	0.103	2.4569
1	1.5	1100	1760	1.6	1.253	0.382	2.5531	17630	28208	2.107	0.121	2.4629
Panel N5												
8	10	0	0	0	0	0	0	0	0	0	0	0
6	8	530	848	1.6	6.847	0.019	3.5485	530	848	6.847	0.019	3.5485
4	6	7610	12176	1.6	4.491	0.05	2.9423	8140	13024	4.644	0.048	2.9817
3	4	6030	9648	1.6	3.528	0.101	2.5364	14170	22672	4.169	0.07	2.7922
2	3	5000	8000	1.6	2.504	0.212	1.9897	19170	30672	3.735	0.107	2.5829
1.5	2	2160	3456	1.6	1.72	0.316	1.5706	21330	34128	3.531	0.128	2.4804
1	1.5	1790	2864	1.6	1.32	0.391	1.5173	23120	36992	3.36	0.149	2.4058
Panel N6												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	550	880	1.6	4.089	0.143	0.9057	550	880	4.089	0.143	0.9057
3	4	3090	4944	1.6	3.39	0.186	0.9229	3640	5824	3.495	0.18	0.9203
2	3	8390	13424	1.6	2.502	0.239	0.9521	12030	19248	2.803	0.221	0.9425
1.5	2	4870	7792	1.6	1.692	0.424	0.8885	16900	27040	2.483	0.28	0.9269
1	1.5	3920	6272	1.6	1.316	0.466	0.7133	20820	33312	2.263	0.315	0.8867
Panel N7												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	150	240	1.6	4.252	0.07	2.3645	150	240	4.252	0.07	2.3645
3	4	1820	2912	1.6	3.285	0.06	1.2781	1970	3152	3.359	0.06	1.3608
2	3	10330	16528	1.6	2.512	0.054	1.8076	12300	19680	2.647	0.055	1.7361
1.5	2	8020	12832	1.6	1.738	0.045	2.2291	20320	32512	2.288	0.051	1.9307
1	1.5	3050	4880	1.6	1.313	0.043	1.9417	23370	37392	2.161	0.05	1.9321
Panel N8												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	1770	2832	1.6	3.216	0.055	1.2154	1770	2832	3.216	0.055	1.2154
2	3	8010	12816	1.6	2.457	0.053	0.9611	9780	15648	2.594	0.054	1.0071
1.5	2	3820	6112	1.6	1.813	0.066	1.0244	13600	21760	2.375	0.057	1.012
1	1.5	880	1408	1.6	1.433	0.062	1.0509	14480	23168	2.318	0.057	1.0143
From	To	Volume	Tonnes	BD	HM%	OS%	Slime%	Cum_Vol	Cum_Tonne	_HM%	_OS%	_Slime%
Panel N9												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	380	608	1.6	3.263	0.012	0.1492	380	608	3.263	0.012	0.1492

2	3	1400	2240	1.6	2.338	0.038	0.402	1780	2848	2.536	0.032	0.348
1.5	2	4820	7712	1.6	1.753	0.017	0.1843	6600	10560	1.964	0.021	0.2284
1	1.5	680	1088	1.6	1.444	0.022	0.2007	7280	11648	1.916	0.021	0.2258
Panel N10												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	670	1072	1.6	2.318	0.054	0.5342	670	1072	2.318	0.054	0.5342
1.5	2	2060	3296	1.6	1.711	0.053	0.5874	2730	4368	1.86	0.053	0.5743
1	1.5	6930	11088	1.6	1.141	0.059	1.2474	9660	15456	1.344	0.057	1.0572
Panel N11												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	660	1056	1.6	2.179	0.059	0.5472	660	1056	2.179	0.059	0.5472
1.5	2	1530	2448	1.6	1.643	0.06	0.5509	2190	3504	1.804	0.06	0.5497
1	1.5	2180	3488	1.6	1.219	0.051	0.4688	4370	6992	1.512	0.055	0.5094

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel NC1												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	510	816	1.6	2.31	0.278	2.2611	510	816	2.31	0.278	2.2611
1.5	2	3280	5248	1.6	1.689	0.178	2.0264	3790	6064	1.772	0.192	2.058
1	1.5	4340	6944	1.6	1.313	0.104	1.8217	8130	13008	1.527	0.145	1.9319
Panel NC2												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	400	640	1.6	2.14	0.149	1.4155	400	640	2.14	0.149	1.4155
1.5	2	3760	6016	1.6	1.66	0.142	1.3817	4160	6656	1.706	0.142	1.385
1	1.5	2270	3632	1.6	1.351	0.143	1.3502	6430	10288	1.581	0.143	1.3727
Panel NC3												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	860	1376	1.6	2.224	0.037	1.4733	860	1376	2.224	0.037	1.4733
1.5	2	9400	15040	1.6	1.657	0.064	1.1392	10260	16416	1.705	0.062	1.1672
1	1.5	12030	19248	1.6	1.355	0.103	1.194	22290	35664	1.516	0.084	1.1817
Panel NC4												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	5390	8624	1.6	2.156	0.089	0.9551	5390	8624	2.156	0.089	0.9551
1.5	2	11540	18464	1.6	1.766	0.089	1.1628	16930	27088	1.891	0.089	1.0966
1	1.5	5830	9328	1.6	1.349	0.098	0.9013	22760	36416	1.752	0.091	1.0466
Panel NC5												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	1620	2592	1.6	2.186	0.012	1.6615	1620	2592	2.186	0.012	1.6615
1.5	2	8660	13856	1.6	1.757	0.024	1.8538	10280	16448	1.825	0.022	1.8235
1	1.5	4110	6576	1.6	1.303	0.077	1.3887	14390	23024	1.676	0.038	1.6993

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel NC6												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	200	320	1.6	2.523	0.066	0.6815	200	320	2.523	0.066	0.6815
1.5	2	150	240	1.6	1.685	0.072	0.747	350	560	2.164	0.069	0.7095
1	1.5	3970	6352	1.6	1.167	0.108	0.8202	4320	6912	1.248	0.104	0.8112
Panel NC7												
6	8	0	0	0	0	0	0	0	0	0	0	0

4	6	3260	5216	1.6	4.606	0.066	1.8645	3260	5216	4.606	0.066	1.8645
3	4	4880	7808	1.6	3.466	0.116	1.4995	8140	13024	3.923	0.096	1.6457
2	3	2970	4752	1.6	2.617	0.146	1.4892	11110	17776	3.574	0.109	1.6038
1.5	2	1290	2064	1.6	1.758	0.11	1.849	12400	19840	3.385	0.109	1.6293
1	1.5	1860	2976	1.6	1.262	0.1	1.5969	14260	22816	3.108	0.108	1.6251
Panel NC8												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	560	896	1.6	4.216	0.081	1.8626	560	896	4.216	0.081	1.8626
3	4	1660	2656	1.6	3.298	0.28	2.0787	2220	3552	3.529	0.23	2.0242
2	3	6530	10448	1.6	2.462	0.178	2.0331	8750	14000	2.733	0.191	2.0308
1.5	2	3310	5296	1.6	1.797	0.099	1.9009	12060	19296	2.476	0.166	1.9952
1	1.5	1110	1776	1.6	1.334	0.165	1.8701	13170	21072	2.38	0.166	1.9846
Panel NC9												
8	10	0	0	0	0	0	0	0	0	0	0	0
6	8	930	1488	1.6	6.776	0.059	2.1878	930	1488	6.776	0.059	2.1878
4	6	2480	3968	1.6	4.945	0.192	2.1511	3410	5456	5.444	0.156	2.1611
3	4	3280	5248	1.6	3.462	0.129	1.7909	6690	10704	4.472	0.143	1.9796
2	3	7990	12784	1.6	2.503	0.131	1.7967	14680	23488	3.4	0.136	1.88
1.5	2	5100	8160	1.6	1.755	0.127	2.0527	19780	31648	2.976	0.134	1.9245
1	1.5	2490	3984	1.6	1.354	0.125	2.2414	22270	35632	2.795	0.133	1.96
Panel NC10												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	90	144	1.6	3.467	0.156	2.4573	90	144	3.467	0.156	2.4573
2	3	870	1392	1.6	2.163	0.099	2.4164	960	1536	2.286	0.104	2.4203
1.5	2	5840	9344	1.6	1.787	0.04	2.0379	6800	10880	1.858	0.049	2.0919
1	1.5	710	1136	1.6	1.442	0.043	1.2184	7510	12016	1.818	0.048	2.0093
Panel NC11												
1.5	2	0	0	0	0	0	0	0	0	0	0	0
1	1.5	5480	8768	1.6	1.194	0.055	0.4974	5480	8768	1.194	0.055	0.4974

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel SC1												
1.5	2	0	0	0	0	0	0	0	0	0	0	0
1	1.5	5290	8464	1.6	1.183	0.072	1.138	5290	8464	1.183	0.072	1.138
Panel SC2												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	250	400	1.6	3.158	0.022	1.9236	250	400	3.158	0.022	1.9236
2	3	7870	12592	1.6	2.21	0.042	2.1226	8120	12992	2.239	0.041	2.1164
1.5	2	10910	17456	1.6	1.744	0.061	1.923	19030	30448	1.955	0.053	2.0055
1	1.5	480	768	1.6	1.404	0.035	2.083	19510	31216	1.942	0.052	2.0074
Panel SC3												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	740	1184	1.6	4.025	0.254	0.4843	740	1184	4.025	0.254	0.4843
3	4	8390	13424	1.6	3.491	0.234	0.8414	9130	14608	3.535	0.236	0.8124
2	3	19880	31808	1.6	2.428	0.278	1.1325	29010	46416	2.776	0.264	1.0318
1.5	2	7200	11520	1.6	1.777	0.159	1.6782	36210	57936	2.578	0.243	1.1603
1	1.5	2460	3936	1.6	1.3	0.043	1.519	38670	61872	2.496	0.231	1.1831
Panel SC4												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	210	336	1.6	4.886	0.127	3.1797	210	336	4.886	0.127	3.1797
3	4	1440	2304	1.6	3.189	0.104	2.6092	1650	2640	3.405	0.107	2.6818
2	3	5210	8336	1.6	2.571	0.074	2.8497	6860	10976	2.772	0.082	2.8093
1.5	2	480	768	1.6	1.874	0.049	3.014	7340	11744	2.713	0.08	2.8227
1	1.5	90	144	1.6	1.303	0.018	3.11	7430	11888	2.696	0.079	2.8262
Panel SC5												
8	10	0	0	0	0	0	0	0	0	0	0	0
6	8	180	288	1.6	6.107	0.973	1.7769	180	288	6.107	0.973	1.7769
4	6	710	1136	1.6	4.891	0.607	1.3278	890	1424	5.137	0.681	1.4186
3	4	3120	4992	1.6	3.502	0.48	1.3651	4010	6416	3.865	0.525	1.377
2	3	21570	34512	1.6	2.424	0.455	1.8127	25580	40928	2.65	0.466	1.7444
1.5	2	7080	11328	1.6	1.792	0.395	2.2834	32660	52256	2.464	0.45	1.8612
1	1.5	1240	1984	1.6	1.335	0.251	3.1192	33900	54240	2.423	0.443	1.9072
Panel SC6												
>10		0	0	0	0	0	0	0	0	0	0	0
8	10	150	240	1.6	8.001	0.919	1.831	150	240	8.001	0.919	1.831
6	8	150	240	1.6	6.362	0.027	1.4203	300	480	7.182	0.473	1.6257
4	6	2240	3584	1.6	4.556	0.508	1.7523	2540	4064	4.866	0.504	1.7373
3	4	5280	8448	1.6	3.575	0.197	2.1056	7820	12512	3.994	0.297	1.986
2	3	6670	10672	1.6	2.421	0.129	2.3059	14490	23184	3.27	0.219	2.1332
1.5	2	12980	20768	1.6	1.665	0.079	2.177	27470	43952	2.512	0.153	2.1539
1	1.5	9590	15344	1.6	1.23	0.034	1.8908	37060	59296	2.18	0.122	2.0858
Panel SC7												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	1200	1920	1.6	2.21	0.076	2.1152	1200	1920	2.21	0.076	2.1152
1.5	2	11230	17968	1.6	1.728	0.092	2.1786	12430	19888	1.775	0.09	2.1725
1	1.5	1960	3136	1.6	1.31	0.069	2.2842	14390	23024	1.712	0.087	2.1877

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel SC8												
3	4	0	0	0	0	0	0	0	0	0	0	0

2	3	110	176	1.6	2.012	0.006	2.88	110	176	2.012	0.006	2.88
1.5	2	4320	6912	1.6	1.643	0.06	1.9165	4430	7088	1.652	0.058	1.9404
1	1.5	8410	13456	1.6	1.299	0.079	1.0484	12840	20544	1.421	0.072	1.3561
Panel SC9												
2	3	0	0	0	0	0	0	0	0	0	0	0
1.5	2	1070	1712	1.6	1.707	0.188	1.2138	1070	1712	1.707	0.188	1.2138
1	1.5	1630	2608	1.6	1.343	0.337	1.939	2700	4320	1.488	0.278	1.6516
Panel SC10												
2	3	0	0	0	0	0	0	0	0	0	0	0
1.5	2	130	208	1.6	1.696	0.07	1.0874	130	208	1.696	0.07	1.0874
1	1.5	310	496	1.6	1.095	0.059	1.3823	440	704	1.272	0.062	1.2952

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel S1												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	90	144	1.6	3.451	0.11	1.8546	90	144	3.451	0.11	1.8546
2	3	2760	4416	1.6	2.332	0.058	1.567	2850	4560	2.367	0.059	1.576
1.5	2	1870	2992	1.6	1.754	0.067	1.4746	4720	7552	2.124	0.062	1.5359
1	1.5	2910	4656	1.6	1.223	0.087	2.8709	7630	12208	1.78	0.072	2.045
Panel S2												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	400	640	1.6	4.727	0.051	0.9872	400	640	4.727	0.051	0.9872
3	4	930	1488	1.6	3.402	0.069	1.5783	1330	2128	3.8	0.063	1.4006
2	3	2570	4112	1.6	2.311	0.069	1.9319	3900	6240	2.819	0.067	1.7507
1.5	2	4580	7328	1.6	1.696	0.077	1.9696	8480	13568	2.212	0.072	1.8689
1	1.5	4860	7776	1.6	1.327	0.082	1.5455	13340	21344	1.89	0.076	1.7511
Panel S3												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	520	832	1.6	4.957	0.117	2.9922	520	832	4.957	0.117	2.9922
3	4	5980	9568	1.6	3.298	0.048	2.9536	6500	10400	3.431	0.054	2.9567
2	3	5480	8768	1.6	2.483	0.071	2.5436	11980	19168	2.997	0.062	2.7677
1.5	2	3120	4992	1.6	1.717	0.062	2.5669	15100	24160	2.733	0.062	2.7262
1	1.5	2430	3888	1.6	1.308	0.077	2.0698	17530	28048	2.535	0.064	2.6352
Panel S4												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	950	1520	1.6	4.733	0.099	2.0286	950	1520	4.733	0.099	2.0286
3	4	9280	14848	1.6	3.38	0.102	2.1894	10230	16368	3.506	0.102	2.1745
2	3	13270	21232	1.6	2.545	0.111	2.3832	23500	37600	2.963	0.107	2.2924
1.5	2	980	1568	1.6	1.763	0.087	2.1852	24480	39168	2.915	0.106	2.2881
1	1.5	290	464	1.6	1.389	0.104	2.0056	24770	39632	2.897	0.106	2.2848
Panel S5												
3	4	0	0	0	0	0	0	0	0	0	0	0
2	3	380	608	1.6	2.494	0.021	3.0728	380	608	2.494	0.021	3.0728
1.5	2	4890	7824	1.6	1.677	0.4	2.577	5270	8432	1.736	0.373	2.6127
1	1.5	3420	5472	1.6	1.277	0.313	1.7704	8690	13904	1.556	0.349	2.2812
Panel S6												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	2580	4128	1.6	4.424	0.251	1.9354	2580	4128	4.424	0.251	1.9354
3	4	16470	26352	1.6	3.433	0.459	2.2587	19050	30480	3.567	0.431	2.2149
2	3	11390	18224	1.6	2.588	0.704	2.6781	30440	48704	3.201	0.533	2.3882
1.5	2	7270	11632	1.6	1.724	0.396	2.6937	37710	60336	2.916	0.507	2.4471
1	1.5	3650	5840	1.6	1.289	0.309	1.8266	41360	66176	2.772	0.489	2.3923
Panel S7												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	7950	12720	1.6	4.523	0.093	0.741	7950	12720	4.523	0.093	0.741
3	4	10720	17152	1.6	3.55	0.094	0.7985	18670	29872	3.964	0.093	0.774
2	3	9600	15360	1.6	2.637	0.177	1.2031	28270	45232	3.514	0.122	0.9198
1.5	2	480	768	1.6	1.92	0.111	1.2868	28750	46000	3.487	0.122	0.9259
1	1.5	0	0	0	0	0	0	28750	46000	3.487	0.122	0.9259

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
Panel S8												
4	6	0	0	0	0	0	0	0	0	0	0	0
3	4	860	1376	1.6	3.201	0.382	1.1561	860	1376	3.201	0.382	1.1561

2	3	24410	39056	1.6	2.339	0.185	1.4202	25270	40432	2.368	0.192	1.4112
1.5	2	9100	14560	1.6	1.755	0.201	1.6357	34370	54992	2.206	0.194	1.4707
1	1.5	1610	2576	1.6	1.409	0.137	1.732	35980	57568	2.17	0.192	1.4823
Panel S9												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	1680	2688	1.6	4.335	0.452	8.5863	1680	2688	4.335	0.452	8.5863
3	4	1750	2800	1.6	3.527	0.55	4.1594	3430	5488	3.923	0.502	6.3277
2	3	9190	14704	1.6	2.347	0.148	2.0469	12620	20192	2.775	0.244	3.2104
1.5	2	4780	7648	1.6	1.824	0.115	2.1691	17400	27840	2.514	0.209	2.9243
1	1.5	390	624	1.6	1.366	0.1	1.5108	17790	28464	2.489	0.206	2.8934
Panel S10												
>10		490	784	1.6	10.57	0.238	1.5563	490	784	10.57	0.238	1.5563
8	10	210	336	1.6	8.246	1.278	1.4577	700	1120	9.874	0.55	1.5267
6	8	2020	3232	1.6	6.799	0.682	3.5816	2720	4352	7.591	0.648	3.0528
4	6	17250	27600	1.6	4.831	0.464	3.8552	19970	31952	5.207	0.489	3.7459
3	4	9200	14720	1.6	3.514	0.42	5.6398	29170	46672	4.673	0.467	4.3432
2	3	5720	9152	1.6	2.597	0.358	4.0926	34890	55824	4.333	0.449	4.3021
1.5	2	1250	2000	1.6	1.776	0.38	10.0175	36140	57824	4.244	0.447	4.4998
1	1.5	1290	2064	1.6	1.266	0.248	2.8975	37430	59888	4.142	0.44	4.4446
Panel S11												
8	10	0	0	0	0	0	0	0	0	0	0	0
6	8	850	1360	1.6	6.847	0.644	2.7308	850	1360	6.847	0.644	2.7308
4	6	9480	15168	1.6	4.687	0.532	2.7265	10330	16528	4.865	0.541	2.7268
3	4	9160	14656	1.6	3.366	0.529	2.1116	19490	31184	4.161	0.535	2.4377
2	3	14290	22864	1.6	2.534	0.692	2.1636	33780	54048	3.472	0.601	2.3217
1.5	2	8570	13712	1.6	1.737	0.491	1.3812	42350	67760	3.121	0.579	2.1314
1	1.5	7560	12096	1.6	1.252	0.909	1.9505	49910	79856	2.838	0.629	2.104
Panel S12												
6	8	0	0	0	0	0	0	0	0	0	0	0
4	6	7030	11248	1.6	4.493	0.729	3.0547	7030	11248	4.493	0.729	3.0547
3	4	4210	6736	1.6	3.4	1.304	3.4256	11240	17984	4.084	0.945	3.1936
2	3	16360	26176	1.6	2.386	1.027	3.1929	27600	44160	3.077	0.994	3.1932
1.5	2	14390	23024	1.6	1.743	1.389	2.4175	41990	67184	2.62	1.129	2.9274
1	1.5	18290	29264	1.6	1.286	1.294	2.2772	60280	96448	2.215	1.179	2.7301

As a final assessment of the deposit the process was repeated using a 2% cut-off to estimate the resource. The results are shown in Table 12. Note that there is about 486,000 tonnes of resource below 2% within the 2% cut-off boundary.

From	To	Volume	Tonnes	BD	HM%	OS%	Slimes%	Cum_Vol	Cum_Ton	_HM%	_OS%	_Slimes%
OBM as estimated to 2%												
>10		490	784	1.6	10.57	0.24	1.56	490	784	10.57	0.24	1.56
8	10	360	576	1.6	8.14	1.13	1.61	850	1,360	9.54	0.62	1.58
6	8	4,950	7,920	1.6	6.77	0.44	2.92	5,800	9,280	7.17	0.47	2.73
4	6	67,060	107,296	1.6	4.63	0.35	2.81	72,860	116,576	4.83	0.36	2.80
3	4	110,900	177,440	1.6	3.44	0.30	2.26	183,760	294,016	3.99	0.32	2.48
2	3	239,920	383,872	1.6	2.44	0.30	1.98	423,680	677,888	3.11	0.31	2.20
1.5	2	198,760	318,016	1.6	1.74	0.24	1.92	622,440	995,904	2.67	0.29	2.11
1	1.5	104,910	167,856	1.6	1.32	0.38	1.94	727,350	1,163,760	2.48	0.30	2.08

Table 12 Indicated Resources at 2% cut-off, Lethbridge South

Conclusions

The Lethbridge South deposit contains measured resources of 1.40Mt of sand containing 2.36% heavy mineral 0.3% oversize and 2% slimes to a cut-off of 1%HM.

The average of modals tested in 2010 sampling all panels is the heavy mineral fraction containing 92.2% valuable heavy mineral with 49.5% zircon, 18.4% rutile, 15.7% leucoxene and 8.9% ilmenite.. However the result indicate there will be variability in the heavy mineral composition in different parts of the deposit.

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