



Quarterly Report

Period ending 31 March 2009

HIGHLIGHTS

IRON ORE

- Flinders Mines released its maiden resource announcement for the 100% owned Hamersley (E47/882) Project with a inferred resource of 476 Mt @ 55.4 % Fe.
- The resource includes a high quality iron mineralisation style to be targeted in the forthcoming drilling program.
- Additional exploration targets* in close proximity of 217–267 Mt at 50 to 65% iron to be drilled in 2009 campaign.



Hamersley iron ore

DIAMONDS

- Data reinterpretation identifies untested kimberlite targets on Springfield Project.
- 42 holes for 1491 m drilled to test helimag targets on the Gawler Craton Tasman JV.



Eureka diamond

PHOSPHATE

- 50% of soil samples collected over anomalous 66 km long by 10 km wide zone near Orroroo with results expected next quarter.



Tarcowie phosphate

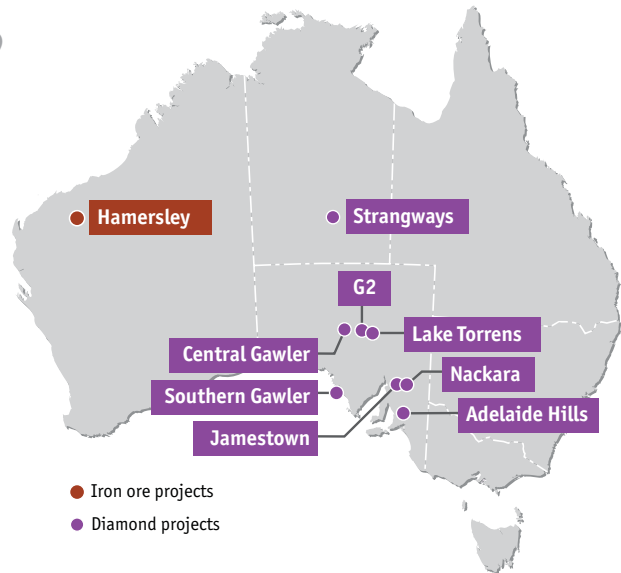


Figure 1 Location of Flinders Mines project areas.

PROJECT REVIEW

IRON ORE

WESTERN AUSTRALIA

Exploration on E47/882 and E47/1560

100% Flinders Mines

During the quarter, Flinders released its maiden JORC compliant Inferred Mineral Resource for its Hamersley project of 476 Mt @ 55.4% Fe, 9.8% SiO₂, 4.6% Al₂O₃, 0.07% P and 5.7% LOI based on a +50% iron cutoff. This includes priority zones amounting to 124 Mt @ 58.3%, 6.9% SiO₂, 3.8% Al₂O₃, 0.08% P, 5.3% LOI based on a +57% iron cut off (Table 1).

The Inferred Resource estimate is based on the results of 301 Reverse Circulation (RC) drill holes in Areas B, C, D and E only (Figure 2) for a total of 15,038 m drilled between August and December 2008. Drilling was completed to JORC compliant Inferred Resource drill spacing of 500 m by 200 m, with infill to 500 m by 100 m in the narrow headwaters or the margins of the channels.

The resource consists of both hematite Channel Iron Deposit (CID) mineralisation and a goethite

* see note on page 10 for a clarification of Exploration Targets.

PROJECT REVIEW continued

Table 1: Hamersley Project resource table

JORC Classification	Iron Grade Cut-off	Tonnage Mt	Fe %	SiO ₂ %	Al ₂ O ₃ %	P %	LOI %
Inferred	+50%	476	55.4	9.8	4.6	0.07	5.7
Inferred	+57%	124	58.3	6.9	3.8	0.08	5.3

The Hamersley Resource Model has been constructed using Ordinary Kriging within geological constraint domains. Drill spacing is 100 m to 300 m along lines spaced 500 m apart. An average density of 2.7 was used for all ore types based on densities measured from diamond core. All material within the resource is classified as Inferred under the JORC Classification.

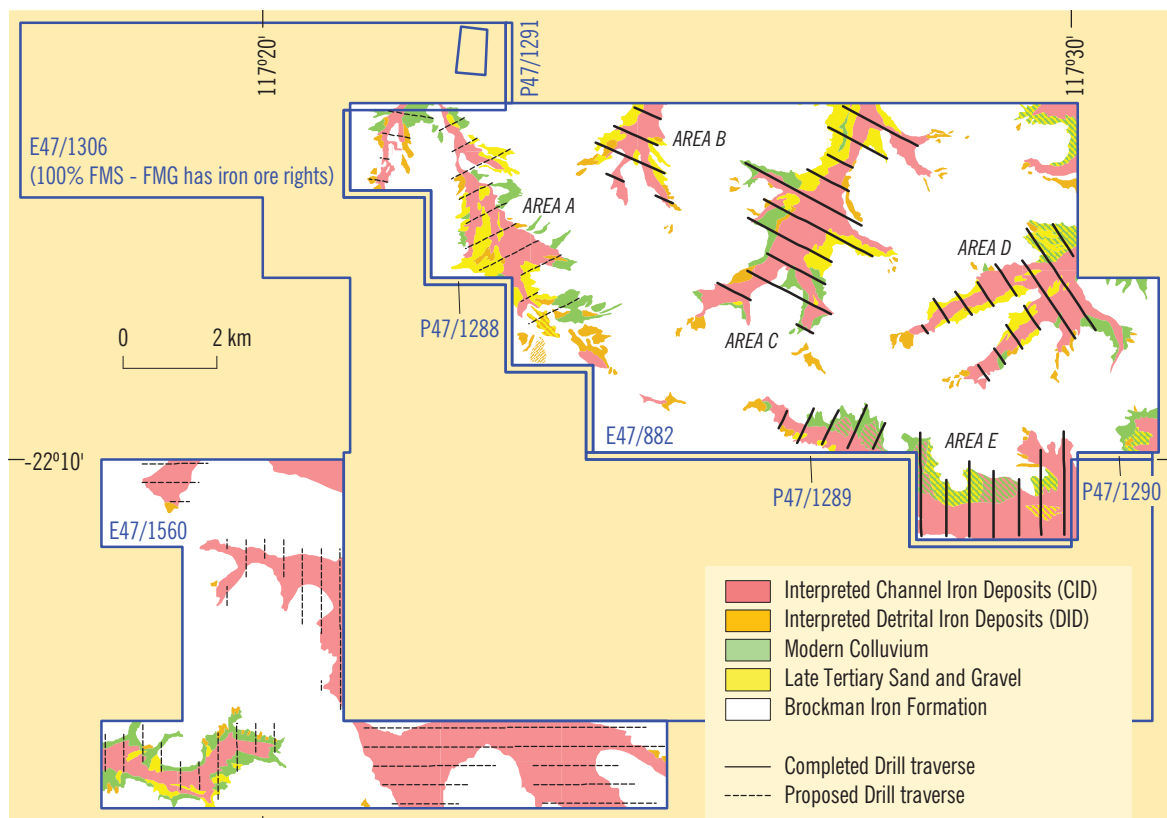


Figure 2 Location of Flinders Mines' Iron ore Project areas.

dominant Bedded Iron Deposit (BED) mineralisation (Figure 3). The CID is primarily composed of detrital material of either pisolitic or fragmental types. The BED material is generally located beneath the CID material although it can be within 10 m of the surface on the margins of the channel.

The discovery of the BED mineralisation was late in the 2008 drilling campaign. It does not appear to be controlled by the channels on which the original drilling program was targeted. The priority zones of BED mineralisation remain open on many margins of the channels with detailed geological mapping and further interpretation of the drilling data currently being undertaken

to determine the controls on the location of the BED mineralisation. This will allow for systematic drill testing of extensions to existing BED mineralised zones as well as new BED targets which may yield additional tonnes of near-surface ore.

The Hamersley Project still has significant upside exploration potential, in addition to the substantial resource already identified. Two Exploration Targets* identified in 2008 are yet to be drilled; Area A on E47/882 and the newly acquired tenement E47/1560. The combined Exploration Target* for these two untested areas is 217 to 267 Mt at 50 to 65% iron (Table 2).

The drilling program is scheduled to recommence in May 2009 in Area A

with sufficient holes to enable this area to be added to the current JORC compliant Inferred Resource. Drilling will then commence on tenement E47/1560 (Figure 2), which is approximately 5 km to the south west of the current activities, to determine the extent and nature of any iron mineralisation. The Department of Mines and Petroleum (previously Department of Industry and Resources) has provided approval of the drilling program at E47/1560 and Area A. Full anthropological and archaeological clearances will be conducted to enable earthworks to commence in readiness for commencement of drilling. Drilling will then concentrate on better defining zones of significant BED mineralisation on the margins of the

* see note on page 10 for a clarification of Exploration Targets.

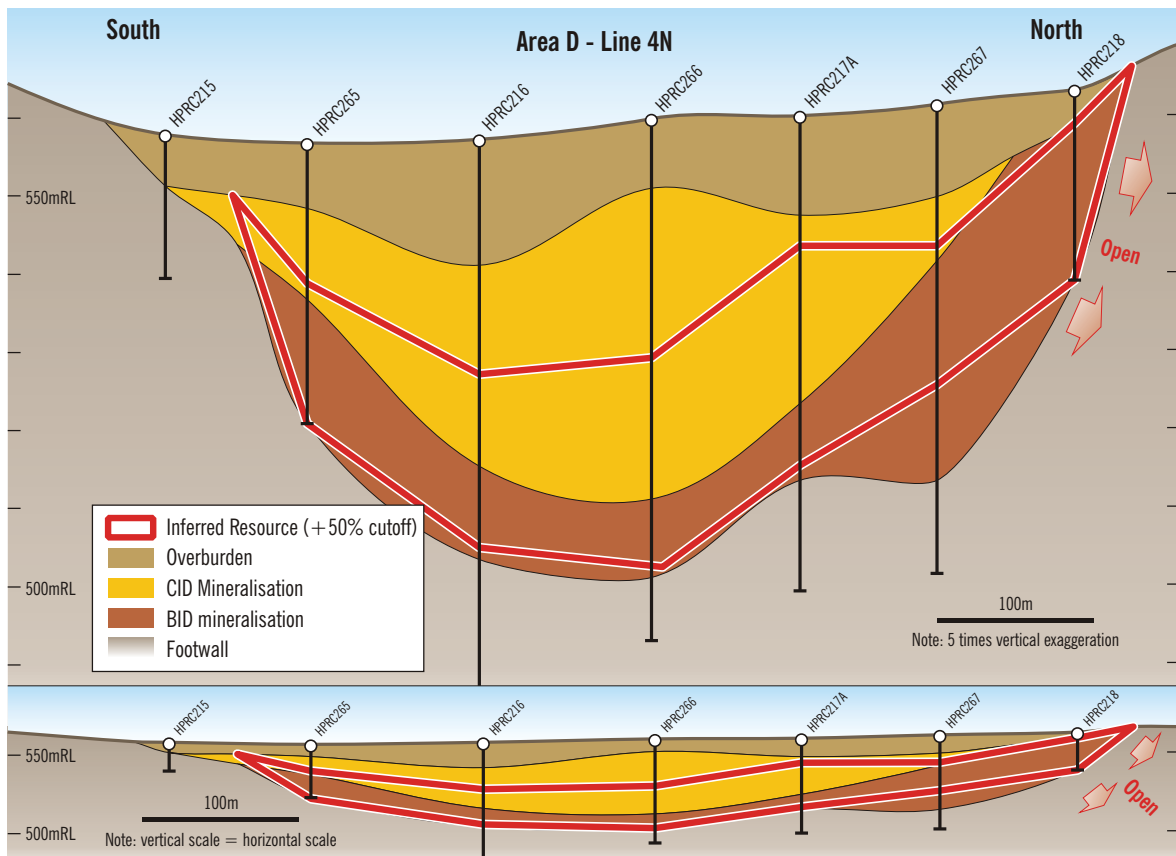


Figure 3 Cross section of Line 4N in Area D.

Table 2: Hamersley Project Exploration Target table

AREA	Area (km ²)	Thickness Estimate (metres)	Volume (million m ³)	Upper Tonnage Estimate (Mt) SG 2.8	Lower Tonnage Estimate (Mt) SG 2.6
E47/882					
Area A	2.45	15	36.75	103	96
E47/1560					
			TOTAL CID/DID	267	217

channels and looking for extensions of this mineralisation.

Flinders has contracted an independent consultant to undertake a Scoping Study to evaluate various options associated with the development of the Hamersley Project as a stand alone mining operation. The Scoping Study will include the results of the ongoing metallurgical test work.

Following commencement of the Prefeasibility Study, infill drilling is planned for the priority zones which will be defined by the Scoping and Prefeasibility work within Areas

A, B, C, D and E to define a JORC compliant Indicated Resource in the fourth quarter of calendar 2009. This phase of drilling will include the drilling of several diamond drill holes to be utilised for further detailed metallurgical test work.

AREA SUMMARIES

Area B

Area B has an average thickness of combined BID/CID mineralisation of 13.4 m. Initial results from Area B included HPRC412 with 28 m @ 61% Fe, 8 m from the surface, also HPRC426, 30 m @ 59.8% Fe, 2.2% Al₂O₃ and 2.6% SiO₂, 10 m from the surface (Table 3). Area B is

considerably smaller than the other targets and further infill drilling during the next stage of drilling will add confidence for the potential in this area.

Area C

The mineralised intersections in Area C are predominantly CID with only minor BID mineralisation. Some of the more significant combined CID/BID intersections include HPRC504A (26 m) and HPRC505 (18 m) at 53.5% and 55.9% iron, respectively. Significant CID intersections include HPRC382 with 16 m at 58.1% iron from 6 m below the surface, and HPRC503 with 34 m at 55.1% iron (Table 3). Geological interpretation for Area C demonstrates good continuity of mineralisation between drill holes on each section.

Area D

Many of the holes drilled in Area D ended in BID mineralisation and had to be extended. The two mineralised zones of CID and BID were partly delineated with infill holes. More

PROJECT REVIEW continued

confidence was added to the geology with two diamond holes completed in November 2008. The diamond holes provided a "twinned" hole for verification of lithology and quality control of sampling.

Initial results from Area D (Table 3) included HPRC0209 from 28–66 m at 57.5% Fe, 3.8% Al₂O₃, 7.4% SiO₂, 0.10% P and 6.4% LOI and also 46–62 m at 61.6% Fe, 1.6% Al₂O₃, 1.6% SiO₂, 0.14% P and 8.8% LOI, HPRC235 with 48 m at 61.5% Fe, 1.3% alumina, 4.7% silica and 5.6% LOI.

There are many open zones of BID in Area D which will be a priority in the 2009 drilling program.

Area E

During the drilling for CID mineralisation several holes were stopped in BID mineralisation, which was not recognised at the time of drilling. Consequently, extensions to these holes were drilled towards the end of the drilling program. The majority of the assays received for the extensions had no or very little effect on the extent of the existing mineralisation. An exception to this

was hole HPRC44 which intersected 20 m of CID mineralisation at 52.8% iron from 80 m below the surface. The extension of HPRC48 intersected a further 8 m of mineralisation which increased the total mineralisation of the hole to 32 m at 53.2% iron from 30 m below the surface. HPRC113 intersected 14 m of BID mineralisation at 56.3% iron, 4.1% alumina and 5.3% silica within a wider 20 m zone at 55.3% iron (Table 3). This confirms the continuity and grade of mineralisation previously intersected in adjacent holes HPRC14 and HPRC15.

Table 3: List of selected RC drillhole intersections

Hole	From	To	Interval	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)	P (%)	LOI (%)	Area
HPRC0044ext	60	68	8	53.1	4.6	7.3	0.11	11.6	Area E
	80	100	20	52.8	3.8	9.2	0.16	10.8	Area E
HPRC0048ext	54	62	8	56.1	3.4	9.7	0.07	5.6	Area E
HPRC0058ext	38	42	4	50.9	3.5	12.5	0.08	10.7	Area E
	44	46	2	50.2	4.4	12.5	0.09	10.9	Area E
HPRC0063	30	62	32	54.4	7.2	10.4	0.04	3.5	Area E
HPRC0064	32	54	22	58.7	4.8	7.1	0.05	3.4	Area E
HPRC0065	2	4	2	50.0	4.6	19.9	0.04	3.0	Area E
HPRC0113	44	64	20	55.3	4.5	7.0	0.05	9.0	Area E
incl	46	60	14	56.3	4.1	5.3	0.05	9.7	Area E
HPRC0208Aext	66	74	8	58.8	2.8	3.1	0.18	9.1	Area D
HPRC0211ext	36	42	6	56.6	4.0	5.9	0.11	8.4	Area D
HPRC0227Aext	60	66	6	53.9	4.5	11.0	0.07	6.4	Area D
HPRC0235ext	42	54	12	61.0	1.0	4.8	0.12	6.6	Area D
HPRC0251ext	30	40	10	56.1	3.6	4.9	0.10	10.7	Area D
HPRC0259ext	24	58	34	60.3	2.4	4.3	0.13	6.1	Area D
HPRC0267ext	36	48	12	61.2	1.9	3.7	0.12	6.7	Area D
HPRC0304	24	36	12	56.4	4.0	9.5	0.12	5.0	Area C
HPRC0305	42	68	26	56.6	3.9	5.7	0.14	8.9	Area C
incl	50	62	12	58.8	2.7	3.4	0.16	9.7	Area C
HPRC0306	34	56	20	57.4	4.9	6.3	0.10	5.7	Area C
HPRC0306ext	54	62	8	54.8	3.5	5.9	0.18	11.7	Area C
HPRC0307	2	4	2	50.2	3.0	22.0	0.07	2.8	Area C
	12	18	6	53.5	5.2	11.6	0.06	6.0	Area C
HPRC0321	24	26	2	52.2	7.2	14.2	0.04	3.0	Area C
HPRC0323	20	46	26	54.5	4.6	11.6	0.08	5.1	Area C
HPRC0324	10	26	16	53.6	3.3	11.4	0.07	8.1	Area C
HPRC0327	26	54	28	54.1	5.7	13.2	0.05	2.8	Area C
HPRC0328	50	56	6	50.7	3.8	12.8	0.13	9.1	Area C
	72	74	2	57.7	0.9	8.6	0.10	2.7	Area C
HPRC0329	56	58	2	51.5	3.3	11.6	0.11	10.7	Area C
HPRC0330	14	36	22	53.5	6.4	13.9	0.03	2.3	Area C
HPRC0331	32	58	24	52.8	7.2	12.3	0.05	3.9	Area C
HPRC0332	12	22	10	54.0	5.5	14.3	0.04	2.2	Area C

Hole	From	To	Interval	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)	P (%)	LOI (%)	Area
	26	48	22	55.3	4.9	9.4	0.08	5.8	Area C
HPRC0333	8	10	2	51.6	5.2	18.1	0.03	2.3	Area C
	14	30	16	53.4	4.3	10.1	0.08	8.4	Area C
	34	42	8	53.3	3.7	10.0	0.09	9.4	Area C
HPRC0334	6	8	2	50.3	5.0	13.1	0.07	9.1	Area C
HPRC0335	6	8	2	54.1	4.0	12.7	0.08	4.4	Area C
HPRC0337	4	24	20	58.2	2.2	3.4	0.15	9.9	Area C
HPRC0339	0	2	2	57.2	4.4	11.3	0.05	2.2	Area C
HPRC0341	44	50	6	52.4	3.8	13.1	0.12	7.1	Area C
HPRC0342	32	48	16	52.9	3.6	11.0	0.11	9.4	Area C
HPRC0344	14	22	8	53.4	6.5	13.6	0.04	2.5	Area C
HPRC0345	2	4	2	52.5	3.8	18.2	0.06	2.5	Area C
	10	14	4	51.8	5.5	16.8	0.04	2.5	Area C
	20	24	4	50.5	5.4	14.1	0.13	7.8	Area C
HPRC0348	16	26	10	58.3	1.6	11.0	0.07	3.1	Area C
HPRC0349	0	4	4	53.8	4.2	16.0	0.06	2.3	Area C
HPRC0350	0	4	4	53.7	4.6	15.7	0.05	2.4	Area C
HPRC0352	22	24	2	50.7	6.0	17.7	0.05	2.7	Area C
	38	44	6	50.9	4.1	14.3	0.14	8.2	Area C
HPRC0353	20	22	2	53.1	6.6	13.9	0.03	2.8	Area C
HPRC0355	8	22	14	52.9	3.5	10.5	0.08	9.8	Area C
HPRC0356	6	8	2	55.2	5.4	11.2	0.05	3.5	Area C
HPRC0357	12	16	4	53.0	2.7	14.9	0.06	6.3	Area C
HPRC0358	16	18	2	50.8	6.5	17.0	0.04	2.7	Area C
	22	26	4	52.3	4.9	14.9	0.05	4.4	Area C
HPRC0360	18	22	4	51.6	5.4	17.6	0.04	2.3	Area C
HPRC0363	6	10	4	51.5	2.8	13.1	0.11	9.7	Area C
	16	18	2	51.4	4.7	11.8	0.11	9.4	Area C
HPRC0364	10	24	14	58.3	3.4	9.6	0.07	2.0	Area C
HPRC0365	10	22	12	58.4	2.6	8.6	0.09	3.6	Area C
incl	12	20	8	60.8	2.3	6.5	0.08	2.4	Area C
HPRC0366	4	6	2	57.1	4.0	9.7	0.08	3.9	Area C
	10	12	2	54.0	2.9	9.6	0.09	9.4	Area C
HPRC0367	8	14	6	56.7	2.87	5.3	0.13	9.5	Area C
HPRC0368	6	14	8	54.1	5.7	13.4	0.05	2.3	Area C
HPRC0369	8	16	8	54.7	6.2	12.0	0.05	2.4	Area C
HPRC0371	10	26	16	57.1	3.7	4.1	0.09	9.8	Area C
HPRC0372	6	14	8	52.4	2.5	12.0	0.09	9.9	Area C
	22	24	2	50.3	2.7	15.7	0.07	9.1	Area C
HPRC0373	18	32	14	51.3	7.4	15.5	0.04	2.4	Area C
HPRC0374	12	26	14	56.2	5.5	9.7	0.06	3.6	Area C
HPRC0375	8	32	24	57.9	3.8	8.8	0.07	4.0	Area C
incl	14	24	10	61.4	4.3	5.6	0.05	1.8	Area C
HPRC0376	8	24	16	55.5	2.3	8.5	0.10	9.3	Area C
incl	8	16	8	59.2	2.3	3.9	0.11	8.6	Area C
HPRC0378	6	10	4	56.7	3.6	11.7	0.08	2.5	Area C
HPRC0379	12	14	2	50.3	9.1	14.2	0.03	3.2	Area C
HPRC0381	10	20	10	51.8	6.4	16.0	0.05	2.6	Area C
HPRC0382	6	22	16	58.1	2.4	9.3	0.14	4.7	Area C
HPRC0383	6	22	16	56.8	3.7	12.0	0.08	2.2	Area C
HPRC0385	10	18	8	53.0	1.8	13.8	0.08	8.5	Area C
	20	22	2	50.5	1.0	21.2	0.07	5.1	Area C

PROJECT REVIEW continued

Hole	From	To	Interval	Fe (%)	Al ₂ O ₃ (%)	SiO ₂ (%)	P (%)	LOI (%)	Area
HPRC0387	26	28	2	53.4	6.7	7.4	0.08	8.5	Area C
	34	36	2	53.5	3.3	12.7	0.13	7.1	Area C
HPRC0388	16	22	6	52.5	3.6	13.5	0.08	7.1	Area C
HPRC0389	8	20	12	55.2	4.0	11.4	0.07	5.1	Area C
HPRC0391	20	22	2	52.1	4.9	9.5	0.13	10.9	Area C
HPRC0394	0	4	4	56.7	2.3	8.3	0.08	8.0	Area C
HPRC0395	22	36	14	54.1	5.2	11.7	0.05	4.9	Area C
HPRC0396	14	16	2	51.2	6.8	16.0	0.03	3.1	Area C
HPRC0397	22	42	20	57.4	3.4	5.9	0.08	7.7	Area C
incl	26	38	12	58.5	2.7	4.4	0.09	8.3	Area C
HPRC0398	28	46	18	56.3	4.6	8.8	0.07	5.3	Area C
incl	32	40	8	59.3	5.4	4.5	0.06	4.4	Area C
HPRC0399	26	54	28	51.5	7.5	14.7	0.04	3.0	Area C
HPRC0407	16	40	24	52.7	5.6	13.8	0.06	4.3	Area B
HPRC0408A	18	50	32	52.7	5.8	14.2	0.06	3.7	Area B
HPRC0409	20	30	10	55.6	4.9	12.6	0.04	2.4	Area B
HPRC0411	6	18	12	55.3	2.3	12.1	0.07	6.0	Area B
HPRC0411ext	18	24	6	54.1	2.2	12.3	0.11	7.5	Area B
HPRC0412	8	30	22	63.1	3.3	4.1	0.06	1.7	Area B
HPRC0412A	8	36	28	61.0	3.0	6.0	0.07	3.2	Area B
incl	14	36	22	62.5	2.6	4.1	0.08	3.4	Area B
HPRC0413	8	14	6	58.3	3.0	4.9	0.08	8.2	Area B
HPRC0414	4	18	14	57.5	2.5	6.5	0.09	8.2	Area B
incl	6	16	10	59.7	2.2	3.0	0.10	8.9	Area B
HPRC0415	8	30	22	57.5	4.2	11.0	0.05	1.8	Area B
HPRC0416	0	6	6	54.9	3.3	15.4	0.06	1.8	Area B
HPRC0417	6	10	4	53.6	4.2	15.9	0.05	2.5	Area B
HPRC0418	14	34	20	56.1	4.5	13.0	0.05	1.6	Area B
HPRC0419	8	32	24	52.1	3.9	19.0	0.05	1.9	Area B
HPRC0420	14	16	2	52.1	3.5	18.7	0.05	2.3	Area B
HPRC0422	6	20	14	56.6	5.4	10.9	0.05	1.8	Area B
HPRC0423	6	24	18	57.7	3.7	11.2	0.05	1.7	Area B
HPRC0424	10	12	2	50.6	3.1	15.9	0.08	8.0	Area B
HPRC0425	8	18	10	54.5	4.2	14.9	0.04	2.3	Area B
HPRC0426	10	40	30	59.8	2.2	2.6	0.12	8.8	Area B
HPRC0427	12	20	8	52.3	6.1	15.9	0.05	2.5	Area B
HPRC0428	10	14	4	51.5	4.6	17.6	0.05	3.5	Area B
HPRC0429	14	30	16	54.0	4.9	12.4	0.06	4.6	Area B
HPRC0430	12	14	2	50.4	4.0	20.8	0.06	2.2	Area B
	22	24	2	53.0	4.3	17.2	0.05	1.9	Area B
HPRC0501	20	40	20	52.0	6.7	15.3	0.04	2.5	Area C
HPRC0502	24	56	32	53.1	6.9	13.0	0.04	2.9	Area C
HPRC0503	14	48	34	55.1	6.2	11.0	0.04	2.8	Area C
HPRC0504	6	14	8	51.7	5.4	17.5	0.04	2.5	Area C
	22	31	9	57.1	3.3	5.2	0.11	9.5	Area C
HPRC0504A	6	14	8	53.7	5.1	15.1	0.04	2.3	Area C
	22	48	26	53.5	3.6	10.1	0.09	9.4	Area C
HPRC0505	12	30	18	55.9	3.5	6.6	0.11	8.8	Area C
HPRC0506	0	8	8	50.3	5.3	12.7	0.07	9.3	Area C

DIAMONDS

SOUTH AUSTRALIA

Flinders Ranges Project

Flinders 100% of diamond rights

Reinterpretation has been undertaken of the diverse kimberlite exploration work carried out by DeBeers, Flinders Mines and others in the Eureka area (Springfield Project, Figure 4) over the last 40 years. This work has identified untested targets in the vicinity of the K2 and K7 kimberlites, which previously have returned the highest diamond grades of any kimberlites tested in the Flinders Ranges.

In the Beatrice area (Nackara Project, Figure 4) a program of geological (regolith) mapping commenced in March and will continue during April. The regolith is the poorly understood layer of cover soils, dune sands, and modern drainage systems which obscure the basement and therefore

conceal kimberlites. FMS believes that the lack of understanding of the regolith has inhibited effective exploration for economic diamond deposits in the Beatrice area.

Trenching in the Beatrice area will assist with interpretation of the evolving regolith. During this regolith trenching, diamond indicator mineral (DIM) samples will be collected from the base of the regolith. Positive DIM samples will allow FMS to focus on prospective areas where cover sediment has hampered exploration.

Adelaide Hills Project

Flinders 100% of diamond rights

No work undertaken.

Gawler Craton Projects

Tawana JV Flinders earning 70%

The main activity during the quarter has been the examination of the electromagnetic, magnetic, and gravity data over the north-western

part of Flinders Island, to pin point specific drilling targets. Final permission for drilling is still being sought from the Department.

No work was carried out on the Venus Bay project.

Tasman JV

Flinders earning 70%

Drilling on the Tasman JV project was completed in March. Following drill testing of the five targets in late 2008, an aircore/RAB drill rig was sourced for the testing of 41 helimag targets. Forty two holes were drilled for a total of 1491 m. Each hole was designed to drill through the cover sequence, and into crystalline basement, identifying the magnetic anomaly.

The majority of holes were drilled into basement. Five targets were not fully tested due to poor ground conditions, notably loose flowing sands. Basement lithologies intersected included granitic gneiss, felsic to mafic volcanics and intrusions, possible ultra-mafics and shear zones.

The surface geology contains sediment (sandstone) with a long and complex depositional history. Thus DIMs (diamond indicator minerals) at the surface cannot be used to vector to a local source/kimberlite. Basal sands and gravels, immediately overlying the weathered basement were sampled for DIM processing. These basal heavy mineral samples can indicate the presence of kimberlite in the local area, and also give insight into diamond potential.

Thirty three heavy mineral samples were collected from FMS drill holes and sent to an external lab for processing. In addition to these samples, ten previously drilled holes located on Tasman JV exploration leases were sampled and sent for analysis. This provides a wide coverage of basal sediment samples across the project area. Figure 5 displays the drill hole collars and drill hole sampling locations.

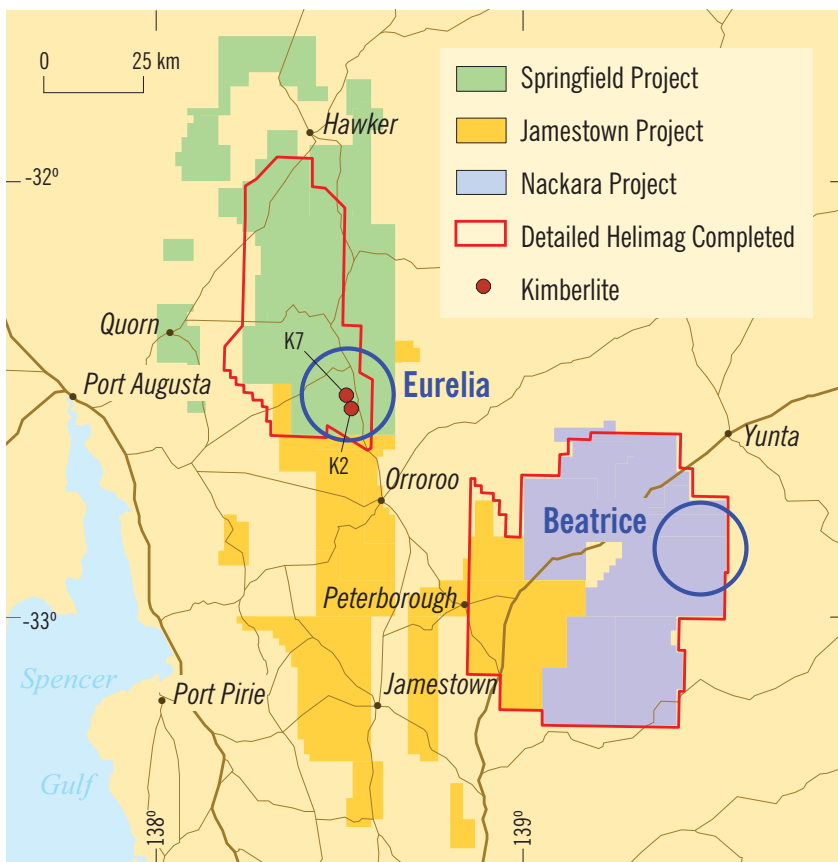


Figure 4 Springfield area.

PROJECT REVIEW continued



Tasman JV drilling, March 2009.

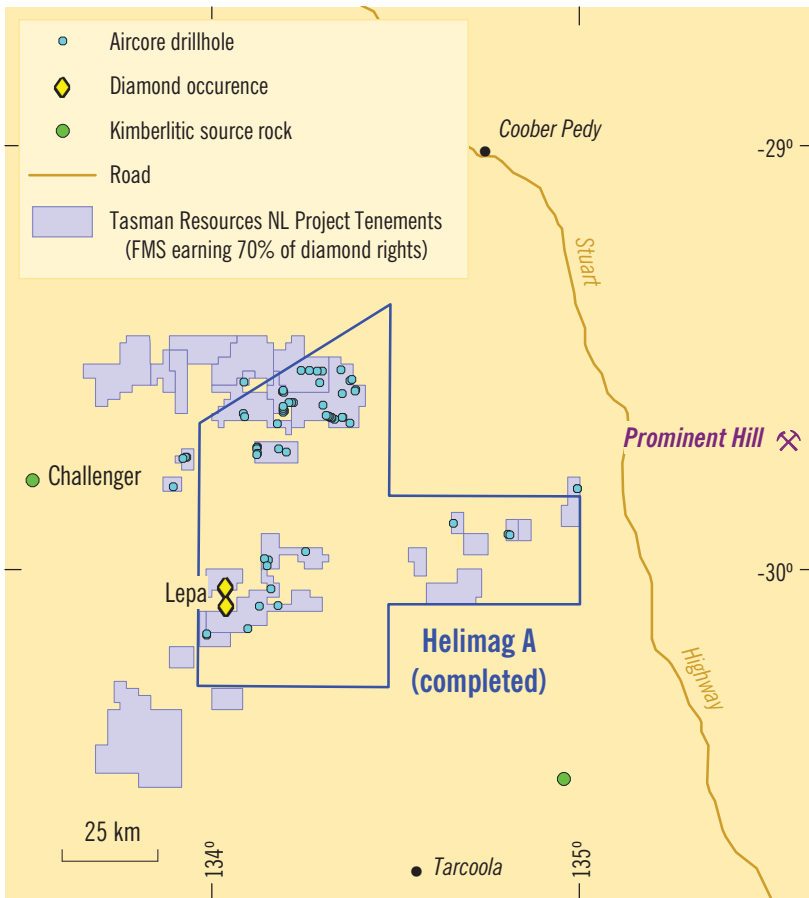


Figure 5 Tasman JV tenements showing location of drilling.

G2 Project

No work undertaken.

WESTERN AUSTRALIA

Hamersley Project

No work undertaken.

NORTHERN TERRITORY

Strangways Project

No work undertaken.

PHOSPHATE

SOUTH AUSTRALIA

Flinders Ranges Project

The first quarter of 2009 has marked the commencement of the reconnaissance soil sampling survey planned as part of Flinders' phosphate exploration program. Geochemical results were received during the quarter for the soil samples collected from around the Tarcowie Phosphate Mine (Figure 6) and also preliminary petrological data became available in relation to a number of rock samples acquired in November and December 2008.

The reconnaissance soil sampling program was launched with the aim of collecting about 1,500 samples from an area approximately 66 km long and up to 10 km wide, located between Orroroo and Caltowie (Figure 6). The sampling commenced from the northern end of the area where all known phosphate occurrences are found. Almost 700 soil samples have been collected to date, with the

whole survey expected to be finalised in the June quarter.

The preliminary petrological data received during the first quarter of 2009 provided useful information regarding the phosphates, their host rocks and the mineral composition. Twelve samples were studied in thin section and eight of them were also analysed by X-ray diffraction (XRD). The results indicate that the phosphates are located in weathered sandstones, siltstones or shales, with the most common minerals identified as apatite, crandallite, wavellite and perhamite. More petrological reports are expected during the next quarter.

The geochemical results for the 48 soil samples collected near the Tarcowie Phosphate Mine show very little variation in phosphorus content between coarser and finer soil fractions (Table 4). The samples were sieved into three size fractions (-2 mm, -0.5 mm and -0.18 mm) that were assayed separately. The phosphorus concentration varies between 280 and 3,150 ppm (the

highest is one sample with more than 1%), with most samples over 600 ppm. Some relevant results are shown in Table 4. Given the similar phosphorus values in different soil size fractions it was decided that all soil samples collected as part of the reconnaissance survey were to be sieved at the finer fraction and analysed for a range of major and trace elements. Results are expected to be available in the June quarter of 2009.



The old Orroroo Phosphate Mine.



Tarcowie Phosphate Mine.

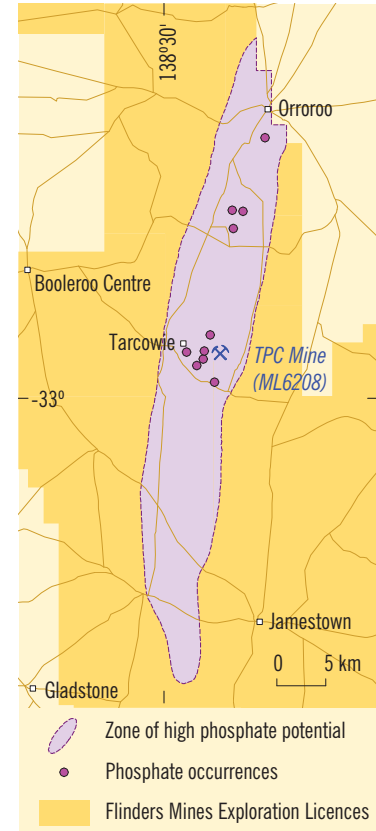


Figure 6 Zone of high phosphate potential, Tarcowie, South Australia.

Table 4:

Sample No.	Fraction Size (mm)	P (ppm)
ORS-11	-2.00	490
ORS-11	-0.50	440
ORS-11	-0.18	450
ORS-22	-2.00	880
ORS-22	-0.50	880
ORS-22	-0.18	900
ORS-31	-2.00	2880
ORS-31	-0.50	3070
ORS-31	-0.18	3150

FUTURE PROGRAM

IRON

Drilling is due to commence in late May 2009, initially in Area A, to complete the Inferred Resource for E47/882. This will be followed by reconnaissance drilling on E47/1560 to determine which channels require follow up drilling to complete an Inferred Resource. Planning is underway to increase the BID resource; this work will entail drilling extensions of known mineralisation on the margins of the channels and drilling new Exploration Targets outside the existing drilling. During the September quarter it is anticipated that drilling will focus on upgrading part of the resource to indicated status. This will lead to an updated resource for the Hamersley project by the end of the fourth quarter.

Scoping studies are underway and will continue throughout the June quarter leading into a Prefeasibility study during the third and fourth quarters of 2009. Metallurgical studies will be ongoing during this time assessing the possible beneficiation of lower grade mineralisation.

DIAMONDS

During the June quarter ongoing identification of kimberlite targets with follow up via ground magnetic surveys and trenching in the Eurelia and Beatrice areas will continue. Heavy mineral results from the Gawler Craton drilling are also expected and will be interpreted.

PHOSPHATE

Soil sampling will continue into the June quarter with the interpretation of initial assay results and planning of follow up to any anomalous zones identified.

FINANCE

On 31 March 2009 the Company had available funds of \$12.85 million. Exploration expenditure in the March Quarter was \$1.5 million compared to a budget of \$1.8 million. Total exploration expenditure forecast for the June 2009 Quarter is \$3.0 million. This consists of \$2.3 million for iron ore, \$590,000 for diamonds and \$80,000 for phosphate.

Dr Kevin J A Wills
Managing Director

29 April 2009

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Dr K J A Wills (who is a Fellow of the Australasian Institute of Mining and Metallurgy) and Mr N Corlis (who is a member of the Australian Institute of Geoscientists). Dr Wills and Mr Corlis are employees of Flinders Mines Limited. Both have sufficient experience that is relevant to the style of mineralisation and types of deposit under consideration and consent to inclusion of the information in this report in the form and context in which it appears. Dr Wills and Mr Corlis qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".

***Note:** *These Exploration Targets are reported according to Clause 18 of the JORC Code. This means that they are partly conceptual in nature and that considerable further exploration, particularly drilling, is necessary before any Identified Mineral Resource can be reported. It is uncertain if further exploration will lead to a larger, smaller or any mineral resource.*

Contact us

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Duncan Gordon – Investor relations on 08 8232 8800 or 0404 006 444

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Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

Flinders Mines Limited

ABN

46 091 118 044

Quarter ended ("current quarter")

31 March 2009

Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (9 months) \$A'000
1.1 Receipts from product sales and related debtors		
1.2 Payments for		
(a) exploration and evaluation	(1,480)	(8,902)
(b) development		
(c) production		
(d) administration	(626)	(1,719)
1.3 Dividends received		
1.4 Interest and other items of a similar nature received	229	834
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Other (provide details if material)		
Net Operating Cash Flows	(1,877)	(9,787)
Cash flows related to investing activities		
1.8 Payment for purchases of:		
(a) prospects	-	(700)
(b) equity investments		
(c) other fixed assets	(152)	(382)
1.9 Proceeds from sale of:		
(a) prospects		
(b) equity investments		
(c) other fixed assets		
1.10 Loans to other entities		
1.11 Loans repaid by other entities		
1.12 Other (provide details if material)		
Net investing cash flows	(152)	(1,082)
1.13 Total operating and investing cash flows (carried forward)	(2,029)	(10,869)

+ See chapter 19 for defined terms.

Appendix 5B
Mining exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(2,029)	(10,869)
	Cash flows related to financing activities		
1.14	Proceeds from issues of shares, options, etc.	2	9,794
1.15	Proceeds from sale of forfeited shares		
1.16	Proceeds from borrowings		
1.17	Repayment of borrowings		
1.18	Dividends paid		
1.19	Other (provide details if material)		
	Net financing cash flows	2	9,794
	Net increase (decrease) in cash held	(2,027)	(1,075)
1.20	Cash at beginning of quarter/year to date	14,877	13,925
1.21	Exchange rate adjustments to item 1.20		
1.22	Cash at end of quarter	12,850	12,850

Payments to directors of the entity and associates of the directors

Payments to related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	72
1.24	Aggregate amount of loans to the parties included in item 1.10	

1.25 Explanation necessary for an understanding of the transactions

Non-cash financing and investing activities

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

+ See chapter 19 for defined terms.

Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities		
3.2 Credit standby arrangements		

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	3,000
4.2 Development	
Total	3,000

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	915	2,942
5.2 Deposits at call	11,935	11,935
5.3 Bank overdraft		
5.4 Other (provide details)		
Total: cash at end of quarter (item 1.22)	12,850	14,877

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed			
6.2	Interests in mining tenements acquired or increased			

+ See chapter 19 for defined terms.

Appendix 5B
Mining exploration entity quarterly report

Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 Preference +securities <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	1,208,214,439	1,208,214,439		
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	150,000	150,000		
7.5 +Convertible debt securities <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 Options <i>(description and conversion factor)</i>	2,800,000 782,500 2,505,000		<i>Exercise price</i> \$0.017 \$0.084 \$0.045	<i>Expiry date</i> 20/03/2012 05/03/2013 03/02/2014
7.8 Issued during quarter	2,505,000		\$0.045	03/02/2014
7.9 Exercised during quarter	150,000		\$0.036	14/03/2009
7.10 Expired during quarter				
7.11 Debentures <i>(totals only)</i>				
7.12 Unsecured notes <i>(totals only)</i>				

+ See chapter 19 for defined terms.

Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does give a true and fair view of the matters disclosed.



Sign here:

(Company Secretary)

Date: 30 April 2009

Print Name: David W Godfrey

Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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