

Boss Resources Limited

ABN 38 116 834 336

Annual report for Year Ending 26th November 2012

Latrobe Oil Shale Project
EL 20/2004

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Leigh Ryan, December 2012

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Annual Report for the Latrobe Oil Shale Project (EL 20/2004)

Boss Resources Limited

Summary

Exploration activities for the year to 26 November 2012 included the drilling of fourteen diamond holes at the China Bush prospect for a total of 318m. Oil shale was intercepted in 8 of the 14 holes returning an average width of 1.54m from an average depth of 14m.

The drilling has enabled the oil shale thickness to be determined more accurately and has increased the drill-hole density enough to allow an indicated inventory resource estimation to be reported for the prospect. The diamond core will undergo density determination, rock eval pyrolysis, C-H-N-S analysis and ignition loss. This analysis work is currently underway with all results pending.

Rehabilitation and disposal of bulk sample material was completed and water quality monitoring continued.

Joint Venture negotiations with the Fushun Mining Group continued throughout the quarter.

Introduction and Tenement Information

EL 20/2004 is a 61 square kilometre tenement encompassing an area to the east and west of the Mersey River between Railton and Latrobe in North Western Tasmania (Fig 1). The tenement was acquired from Daley Resources Pty. Ltd. in July 2007. Tenure consists of low density residential areas, freehold agricultural land, forest plantation and forest reserves. Access across the tenement is good with all year round access via established vehicular roads, tracks and short distance walking. The tenement covers the largest area of known shallow oil shale occurrences in Tasmania

Geology Overview

The Tasmanite oil shale occurs in Tasmania within the Parmeener Supergroup, which includes marine and freshwater sedimentary sequences of Upper Carboniferous to Early Triassic age (Burrett and Martin, 1989). The sequence was deposited in the Tasmania basin which has a broad axis stretching from Cygnet in southern Tasmania, to Latrobe in northern Tasmania. The Tasmanite horizon is located within Upper Carboniferous to Early Permian Lower Parmeener Supergroup rocks just above the boundary between basal tillites and overlying glacio-marine pebbly mudstones of the Quamby Formation and correlates (Bacon Et al, 2000). At Latrobe, the formation is known locally as the Spreyton Beds. The Quamby Formation is overlain by a sequence of richly fossiliferous siltstone, sandstone and minor

limestone known as the Bundella Formation, which is in turn succeeded by a freshwater sequence known locally near Latrobe as the Mersey Coal Measures (Bacon et al, 2000).

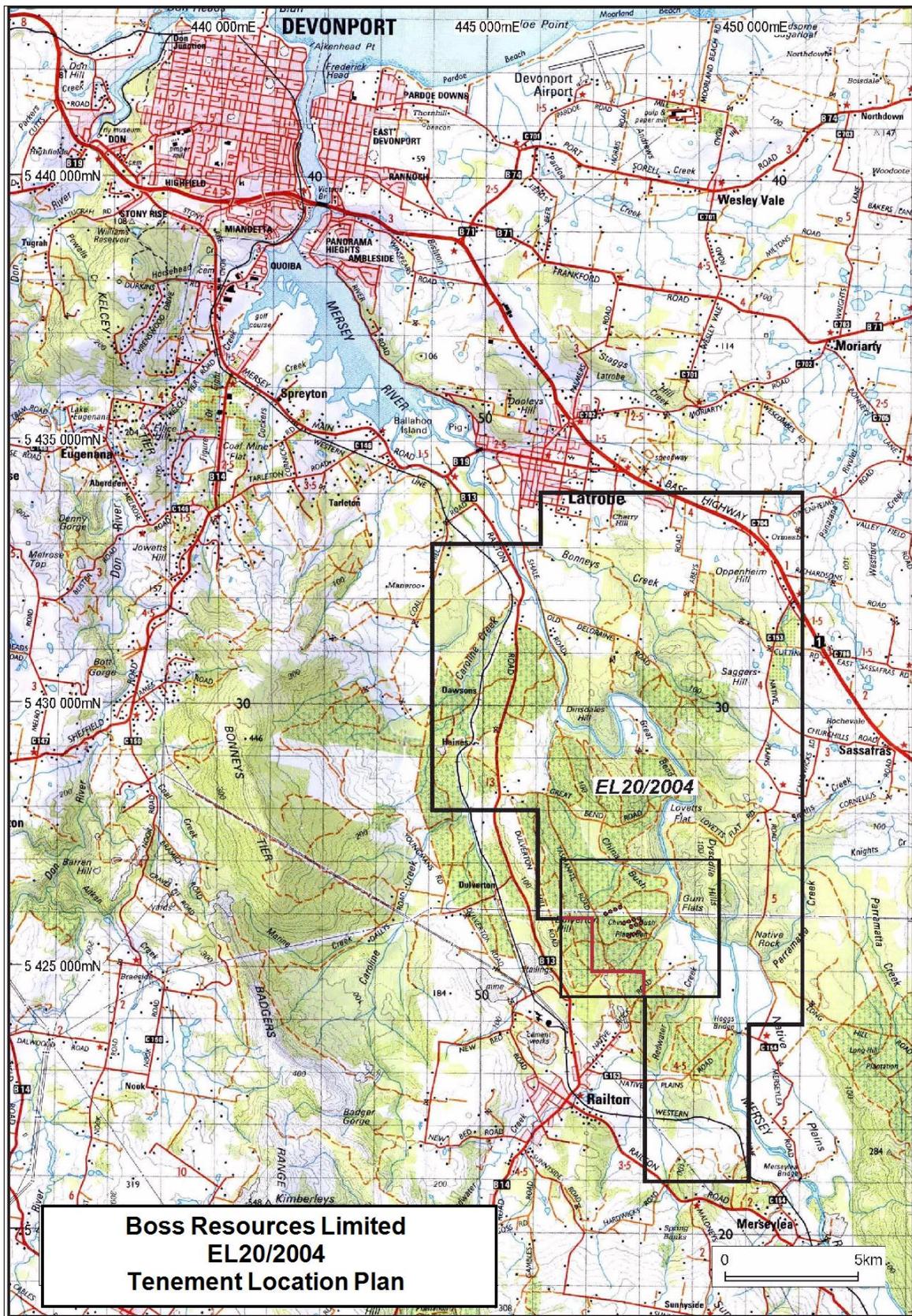


Figure 1: Latrobe EL20/2004 Tenement Location Plan

The Tasmanite Oil Shale, comprising accumulations of likely algal spore casings, known as Tasmanites Punctatus, occurs in the Latrobe district as a horizon of ~1.5m average thickness, including two to three distinct Tasmanite rich horizons. Tasmanite rich horizons (up to 45% kerogen) are separated by silt rich beds (around 5% kerogen) of 10-20cm thickness (Clementson, 1981).

The oil shale horizon is known to be generally flat lying to gently dipping at 5-6 degrees. At tenement scale the position of the shale horizon is affected by block faulting resulting in displacements of over 75m, and at local scale over tens of meters is commonly displaced 0.3- 6m (Bujtor and Waldrum, 1982). Distribution of the shale may be affected by depositional basin morphology, erosion, gentle folding, and local dolerite intrusions. Permian Shale bearing lithologies may be concealed locally by Tertiary basalt flows, and Quaternary cover.

Previous Work

There is an extensive history of early work conducted on the Tasmanite oil shale, including historical production of 1.13 ML of oil from mines near the Mersey River's Great Bend. Bacon, 1986, and Bacon et al, 2000, should be referenced for an analysis of early work. Relatively recent exploration work is detailed in Table 1 below.

In 1987 the Tasmanian Hydro Electric Commission conducted extensive research and reported on the production of liquid fuels from oil shale in Tasmania. Their study concluded that it is technically feasible to produce a full range of transport fuels at a production rate of 2MT of shale/year over 20 years, yielding 286 megalitres of shale oil per year.

Table 1: Exploration summary

Company	Year	Report	Authors	Work completed	Results/Conclusions
Endeavour Oil Co	1975	EL 4/74	Hunt, F.L.	Feasibility study oil shale as a bitumen resource	Uneconomic at time Recommend further development work for hot mix usage
Endeavour Oil CO	1975	EL 4/74	Nixon, L.G.	drilled 38 holes	possible indication of 42MT of shale
Endeavour Oil CO/CRAE	1981-82	EL 4/74	Clementson, I.M.	drilled 135 holes	42MT of shale indicated
CRAE	1982	EL 4/74	Bujtor and Waldrum	Project evaluation mining and bitumen production	Uneconomic Market penetration issues product acceptance time lag 3 years
Endeavour Oil CO/CRAE	1983	EL 4/74	Clementson et al	Investigation of Tasmanite as Anode Carbon source Investigated use as Bitumen binder	Further work recommendation only if economics improve
Boss Energy Pty Ltd	2008	EL 20/2004	Blake, M.D.	14 RC and 2 Diamond holes drilled at China Bush April 2007	Identification of 968,000 tonnes of shale at depth <20m
Boss Energy Pty Ltd	2008	EL 20/2004	Blake, M.D.	1000T Bulk sample of shale extracted At China Bush Plantation	Test work in progress: Dalmat Engineering- South Africa, Fushun Mining-China.
Boss Energy Pty Ltd	2010	EL 20/2004	Blake, M.D.	Test work by Dalmat Engineering- Sth Africa, Fushun Mining-China.	Fushun results: 93kg/dry T oil Product directly suitable as fuel oil.
Boss Energy Pty Ltd	2011	EL 20/2004	Blake, M.D.	Re-sampling, water sampling, Phytopthora testing and rehabilitation	Avg seam yield of 150 L/T, No hydrocarbons present in runoff, positive identification of Phytopthora fungus, 900T bulk sample removed to landfill

Work Completed for the Year to 26 November 2012

Fourteen diamond holes for a total of 318m were completed at the China Bush prospect in April 2012. Oil shale was intercepted in 8 of the 14 holes returning an average width of 1.54m from an average depth of 14m (Fig 2).

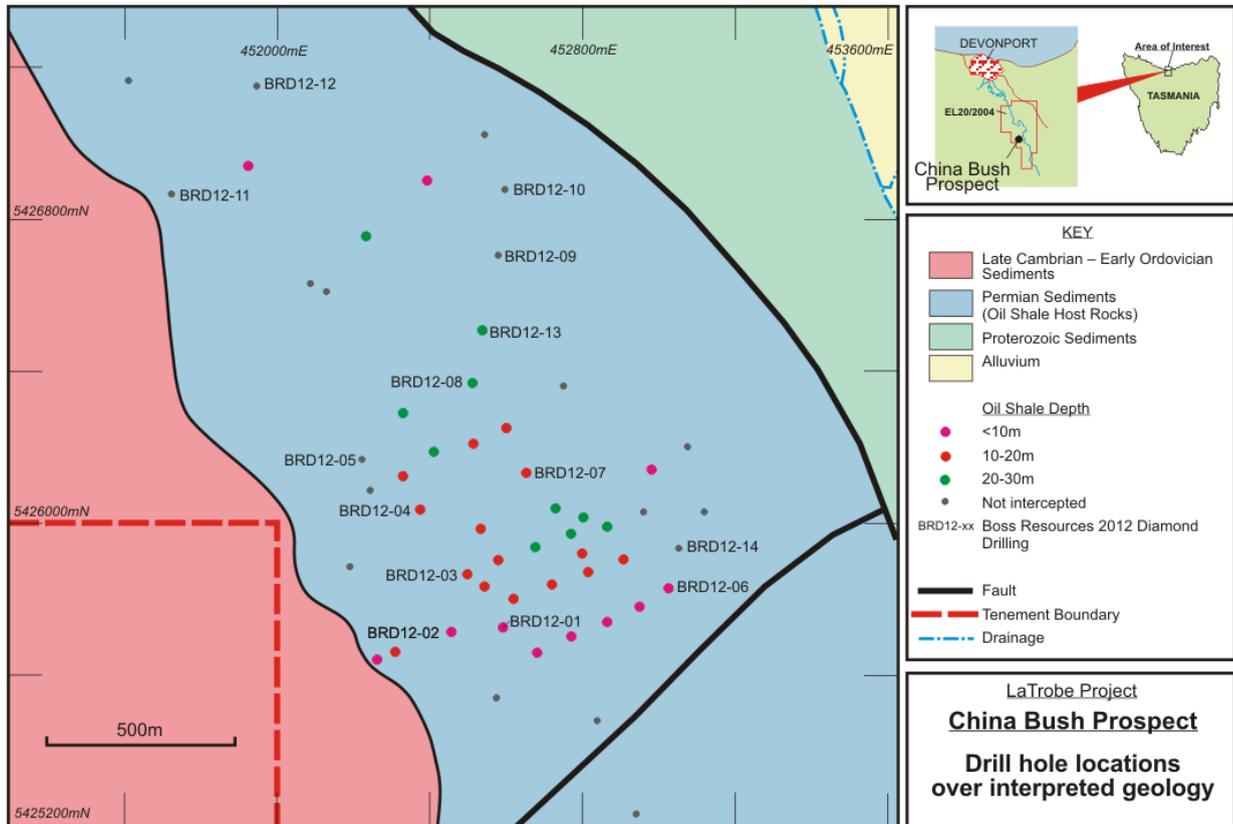


Figure 2: China Bush diamond drilling collar locations over interpreted geology.

The drilling has enabled the oil shale thickness to be determined more accurately and has increased the drill-hole density enough to allow an indicated inventory resource estimation to be reported for the prospect. The diamond core will undergo density determination, rock eval pyrolysis, C-H-N-S analysis and ignition loss. This analysis work is currently underway with all results pending.

Resource estimation work was initiated at the China Bush prospect using all available drilling information including both recent and historic data. Contours from the 25,000 scale topographic map were digitised into Micromine and a DTM for the prospect created. This was used to check the accuracy and continuity between the historic and recent drill collar RL's, to predict where the oil shale unit had been eroded away by the current day drainage system, and also to determine a more accurate below surface depth of the unit (Fig. 3).

Joint Venture negotiations with the Fushun Mining Group also continued throughout the quarter.

Rehabilitation and Disposal of Bulk Sample Material

Under instruction, the stockpile of approximately 900 tonnes of Bulk testing ore material at the China Bush Plantation site was removed to landfill, and the storage area rehabilitated to the satisfaction of the minerals exploration code of practice, and the plantation managers.

Water quality monitoring

A water quality monitoring program was conducted on drainage from the China Bush shale stockpile. Data did not suggest that there was an issue with combined discharged water quality at the bulk-sample site. Further monitoring across the EL may be conducted for a baseline study.

Expenditure

The breakdown of expenditure for EL 20/2004 in the report year 1 July 2011 to 30 June 2012 is shown in Table 2 below.

Table 2: Expenditure.

Category	Expenditure
Geology	\$23,182
Feasibility/Process Testing/Geochemistry	\$27,500
Drilling and Gridding	\$64,583
Administration	\$7,971
Other (Rehabilitation)	\$25,356
Total	\$148,592

Proposed Forward Exploration Program

A drilling program is planned for the China Bush, China Flat and Area 5 prospects to expand on and increase the confidence level of the resource areas in preparation for JORC compliance. The proposed program comprises 7 RC holes for 365m and 14 diamond holes for 265m. Details are included in Table 3 below and drill hole locations are indicated in Figures 5 and 6. This drilling will further enhance the drilling information from the diamond drilling completed during 2012. It is envisaged that the drilling program will be carried out in the first half of 2013.

The proposed drilling program was submitted to Mineral Resources Tasmania as part of the licence renewal application in September 2012.

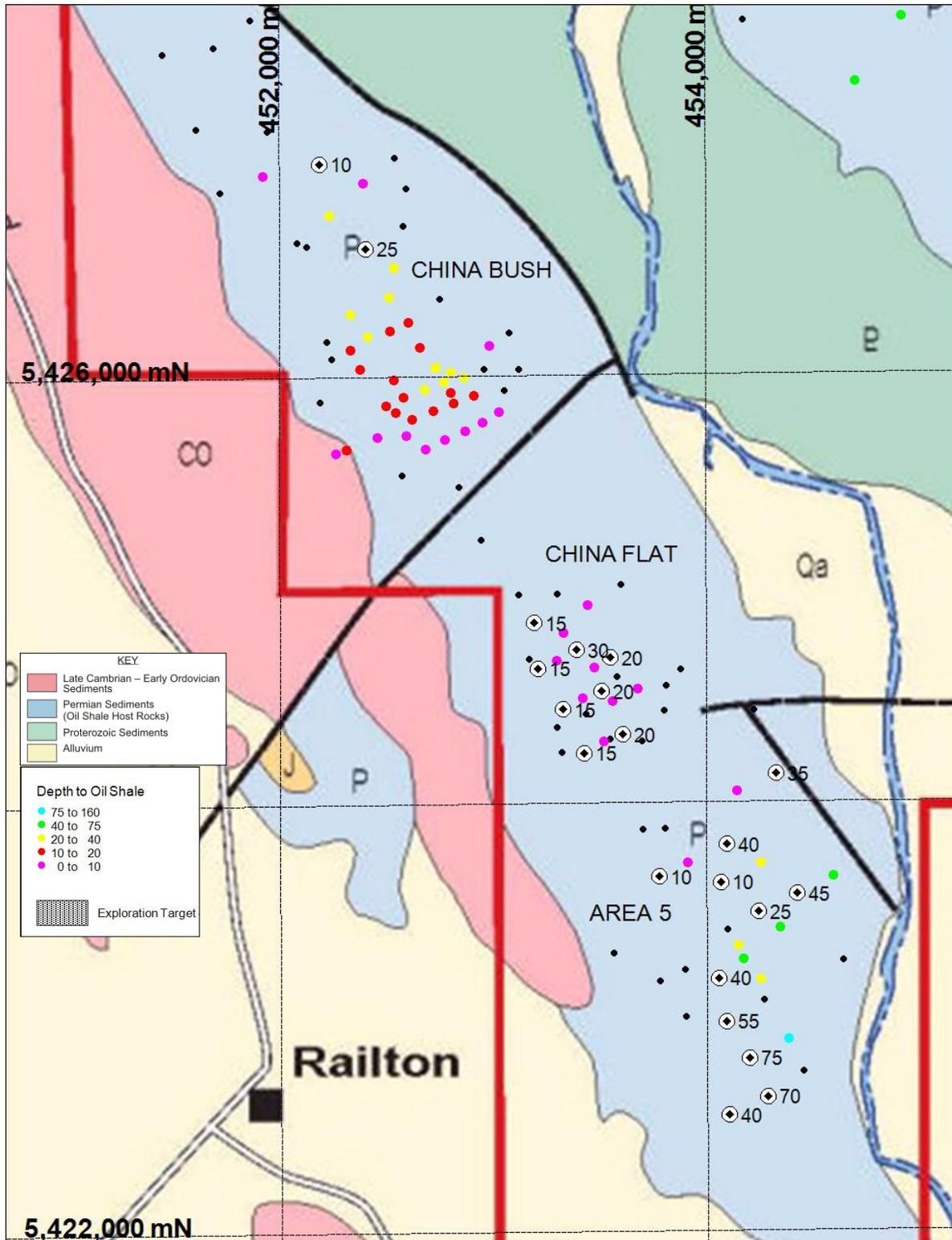


Figure 5: Proposed drill hole locations (labelled by depth) over interpreted geology.

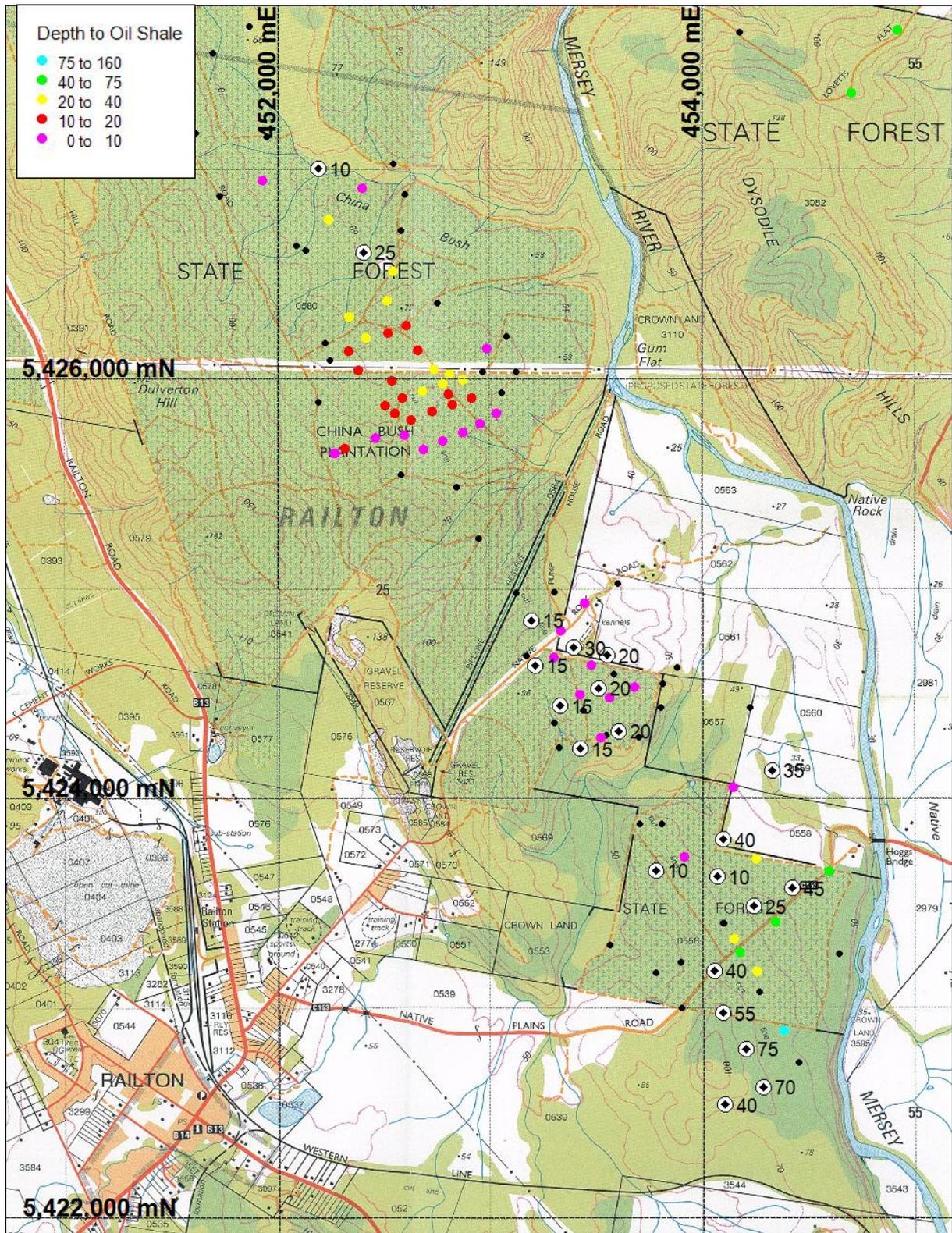


Figure 6: Proposed drilling collar locations over 25,000 scale topography map.

Table 3: China Bush, China Flat and Area 5 proposed drilling program (AGD66)

HoleID	Prospect	Hole Type	East	North	RL	Dip	Azi	Depth
BRC13CF-Prop01	Area 5	RC	454284	5422623	83	-90	0	70
BRC13CF-Prop02	Area 5	RC	454103	5422538	83	-90	0	40
BRC13CF-Prop03	Area 5	RC	454200	5422804	87	-90	0	75
BRC13CF-Prop04	Area 5	RC	454093	5422975	93	-90	0	55
BRC13CF-Prop05	Area 5	RC	454053	5423177	74	-90	0	40
BRC13CF-Prop06	Area 5	RC	454422	5423570	57	-90	0	45
BRD13CF-Prop07	Area 5	DD	454241	5423485	66	-90	0	25
BRD13CF-Prop08	Area 5	DD	454066	5423624	63	-90	0	10
BRC13CF-Prop09	Area 5	RC	454093	5423803	54	-90	0	40
BRD13CF-Prop10	Area 5	DD	453776	5423655	70	-90	0	10
BRD13CF-Prop11	Area 5	DD	454325	5424132	39	-90	0	35
BRD13CF-Prop12	China Flat	DD	453422	5424235	76	-90	0	15
BRD13CF-Prop13	China Flat	DD	453604	5424319	76	-90	0	20
BRD13CF-Prop14	China Flat	DD	453327	5424439	82	-90	0	15
BRD13CF-Prop15	China Flat	DD	453508	5424523	83	-90	0	20
BRD13CF-Prop16	China Flat	DD	453546	5424679	80	-90	0	20
BRD13CF-Prop17	China Flat	DD	453209	5424632	85	-90	0	15
BRD13CF-Prop18	China Flat	DD	453391	5424716	88	-90	0	30
BRD13CF-Prop19	China Flat	DD	453193	5424845	77	-90	0	15
BRD13CF-Prop20	China Bush	DD	452402	5426600	60	-90	0	25
BRD13CF-Prop21	China Bush	DD	452189	5426997	60	-90	0	10

Exploration Program Cost Estimate

The cost estimates shown in Table 4 below relate to the proposed drill program indicated in Table 3 and Figures 5 and 6.

Table 4: China Bush, China Flat and Area 5 proposed drilling cost estimate

Prospect	No. of	Hole Type	Total Depth	Cost estimate
China Bush	2	DD	35	\$8,750
China Flat	8	DD	150	\$37,500
Area 5	4	DD	80	\$20,000
Area 5	7	RC	365	\$36,500
Grand Total			630	\$102,750

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Appendix 1 – Drill Logs

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452592 (EPS)
N: 5425725 (EPS)
RL:

AZM N/A
Dip: -90
Total Depth: 15.4m.
Water Table: -

Graphic Log
 From To Structure 1/4 1 4 16 64 mm

Lithology

0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	20
20	21
21	22
22	23
23	24
24	25
25	26
26	27
27	28
28	29
29	30
30	31

0-1.1m : orange brown clay

1.1-2.4 : cream clays, oxidised siltstone

2.4-8.26 : grey weakly pebbly siltstone - variably oxidised.

8.26-8.63 Tasmanite - upper horizon
 pebbly upper contact. densely packed spores 80:90% bedding 85°/vca

8.63-9.28 Tasmanite - middle horizon
 10-20% spores, occasional pyritic nodules. silty. ~2% pyrite.

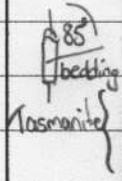
9.28-9.57 Tasmanite - lower horizon
 contact 83°/vca. 80%+ spores

9.57-13.9 grey moderately pebbly siltstone. occasional cobbles 5cm+ pyritic nodules rounded 2cm, elongate to 5cm. 4% pyrite.

13.9-15.4
 grey polymict cobbly tillite
 sub angular to sub rounded cobbles of cream, pink & green quartzite. occasional pyritic nodules

samples

7	- 8.26
8.26	- 8.63
8.63	- 9.28
9.28	- 9.57
9.57	- 10.5



Boss Resources PTY LTD Drill Log.

Hole No: BRD12-02

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452456 (GPS)
N: 5425714
RL:

AZM: N/A
Dip: -90
Total Depth: 18.5m
Water Table: —

From To		Structure	Graphic Log	Lithology
			1/4 1 4 16 64 mm	
0	1			0-0.6m : topsoil, brown clays
1	2	45° contact fault		0.6-3.7m : orange-cream clays
2	3			
3	4	irregular contact jointed.		3.7-4.16m : Tasmanite - upper horizon 80%+ spores bedding 80°/VCA.-95°/VCA.
4	5			
5	6			4.16-4.88 : Tasmanite - middle band ~10% spores in fine sandstone/siltstone
6	7			
7	8			4.88-5.15m : Tasmanite - lower horizon 80%+ spores. scattered quartzite pebbles and pyritic concretions (<5%)
8	9			
9	10			
10	11			5.15-7.2 pebbly fine grey sandstone/siltstone no Tasmanite spores
11	12			
12	13			
13	14			7.2-7.4 fine grey-green siltstone with cm scale concretions, some pyritic. Ovoid to elongate & burrow-like. possibly burrow casts
14	15			
15	16			
16	17			7.4-18.5m (ECH)
17	18			Medium grey cobble tillite with sub-angular grey, white and pink quartzite clasts to 20cm Silty grey matrix.
18	19			
19	20			
20	21			
21	22			
22	23			
23	24			
24	25			
25	26			
26	27			
27	28			
28	29			
29	30			
30	31			

Boss Resources PTY LTD Drill Log.

Hole No: BRD12-03

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452499
N: 5425865 (GPS)
RL:

AZM N/A
Dip: -90
Total Depth: 24.5m
Water Table: —

Graphic Log
From To Structure 1/4 1 4 16 64 mm

Lithology

From	To	Structure
0	1	
1	2	
2	3	
3	4	
4	5	
5	6	
6	7	
7	8	
8	9	
9	10	
10	11	
11	12	
12	13	contact 60°/NCA
13	14	
14	15	
15	16	contact 85°/NCA
16	17	
17	18	
18	19	
19	20	
20	21	
21	22	
22	23	
23	24	
24	25	
25	26	
26	27	
27	28	
28	29	
29	30	
30	31	

0-0.6m brown surficial clays

0.6-5m partially oxidised grey siltstone with occasional quartzite pebbles 4mm-5cm. strongly fractured & Fe stained

5-13.6m: grey siltstone / fine sandstone weakly pebbly with occasional pyritic nodules cm scale.

strong oxidation 12cm.

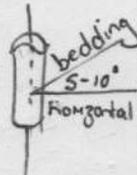
13.6-14 Tasmanite - upper horizon. pebbly upper contact 75-80% spores in silty matrix

14-14.65: Tasmanite - middle horizon gradual contact ~10% spores.

14.65-15.08: Tasmanite - lower horizon 75-80% spores. Occasional pebbles & weathered pyrite nodules (~2% py)

15.08-19: Pebbly siltstone, grey silty matrix dominant. ~2% pyritic nodules cm scale & pyrite mining clasts.

19-24.5m. Tillite - cobble rich sub-angular to sub rounded pink, cream, green, black clasts of quartzite & volcanics. silty matrix supported



Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452375
N: 5426035
RL: —

AZM N/A
Dip: -90
Total Depth: 18.5m
Water Table: —

Graphic Log
From To Structure 1/4 1 4 16 64 mm

Lithology

From	To	Structure
0	1	
1	2	
2	3	
3	4	
4	5	base oxidation.
5	6	
6	7	
7	8	
8	9	
9	10	
10	11	
11	12	
12	13	Tasmanite
13	14	
14	15	
15	16	
16	17	
17	18	
18	19	18.5. EOH
19	20	
20	21	
21	22	
22	23	
23	24	
24	25	
25	26	
26	27	
27	28	
28	29	
29	30	
30	31	

0-2.0 orange-brown clays, organic matter + quartzite pebbles & cobbles.

2.0-3.5m orange-cream to cream clays.

3.5-12.06 m.

light grey weakly pebbly, weakly bedded flat lying fine sandstone. * Fossil snail cast noted at 4.7m. Occasional cm scale pyritic nodules & rounded dissolution structures.

12.06-12.5 Tasmanite - upper horizon
~60-70% spores. pebbly upper contact flat lying @ 85°/NCA
+ bedding 85°/NCA. pyrite in nodules ~2%.

12.5-12.93 Tasmanite - middle horizon
~10% spores in fine sandy matrix.
pyrite nodules to 4cm. ~3% py.

12.93-13.21 Tasmanite - lower horizon
upper contact ~~85°/NCA~~ flat lying, lower contact 85°/NCA. 60-70% spores.

13.21-14.5m. Pebbles cobbles bearing fine sandstone. Wispy disrupted bedding

14.5-18.5. Clast-rich cobble tillite
distinctive polymict tillite with cream, pink, green & grey dominantly quartzite clasts in fine sandy pebbly matrix. patchy pyrite staining
Massively bedded.

samples
11 - 12.06
12.06 - 12.5
12.5 - 12.93
12.93 - 13.21
13.21 - 14.

Boss Resources PTY LTD Drill Log.

Hole No: BRD12-05

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452222
N: 5426168
RL: —

AZM: N/A
Dip: -90
Total Depth:
Water Table: —

Graphic Log
From To Structure 1/4 1 4 16 64 mm

Lithology

From	To	Structure	1/4	1	4	16	64 mm
0	1						
1	2						
2	3						
3	4						
4	5						
5	6						
6	7						
7	8						
8	9						
9	10						
10	11						
11	12						
12	13						
13	14						
14	15						
15	16						
16	17						
17	18						
18	19						
19	20						
20	21						
21	22						
22	23						
23	24						
24	25						
25	26						
26	27						
27	28						
28	29						
29	30						
30	31						

0-2.7 gravels - quartzite. 10cm recovery only

2.7-7.1m brown clays with quartzite and dolerite pebbles. core recovery poor (1.3m recovered)

7.1-11.3 dolerite. Core traverses through several oxidised margins between which are 10-30 cm zones filled with rounded to lobate cm scale dolerite clasts in an oxidised quartz bearing matrix.

Possibly represents autoclastic entrained material or the margin of a thin flow/sill.

11.3-12.5 quartzite rubble (20 cm recovery)

Hole abandoned at 12.5m due to difficult drilling, poor recovery and the likelihood of dolerite stopping out the permian sequence.

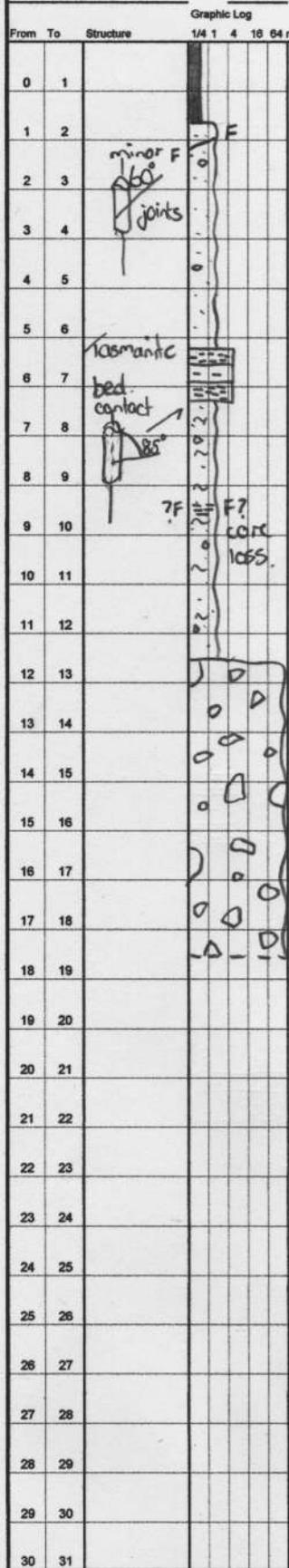
NO SAMPLES

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ.

Datum: AGD66
E: 453027 (GPS)
N: 5425829
RL:

AZM N/A
Dip: -90
Total Depth:
Water Table:



0-1.6 m surficial clays, organic matter

1.6-6.15 m light grey weakly pebbly siltstone fine sandstone. quartzite + volcanic pebbles to 4 cm. occasional pyritic nodules (cm scale) + dissolution vugs.

6.15-6.5 m Tasmanite - upper horizon
75% spores. Pebbly upper contact, lower contact 80°/NCA (bedding distorts around pebbles)

6.15-6.9 m Tasmanite - middle horizon.
~15-20% spores. Irregular flat lying ^{lower} ~~upper~~ contact

6.9-7.27 m Tasmanite - lower horizon
90% spores. lower contact flat lying ~~to horizon~~
85°/NCA.

7.27-12.5 m light grey weakly pebbly siltstone fine sandstone. Wispy irregular bedding

12.5-18.5 m. Cobble Tillite
light grey distinctive polymict cobble tillite fine sandy matrix supported. Clasts abundant sub angular to sub round pink, cream & green quartzite & acid volcanics. Massively bedded. scattered pyritic nodules (cm scale)

- samples
- 5 - 6.15
 - 6.15 - 6.5
 - 6.5 - 6.9
 - 6.9 - 7.27
 - 7.27 - 8m.

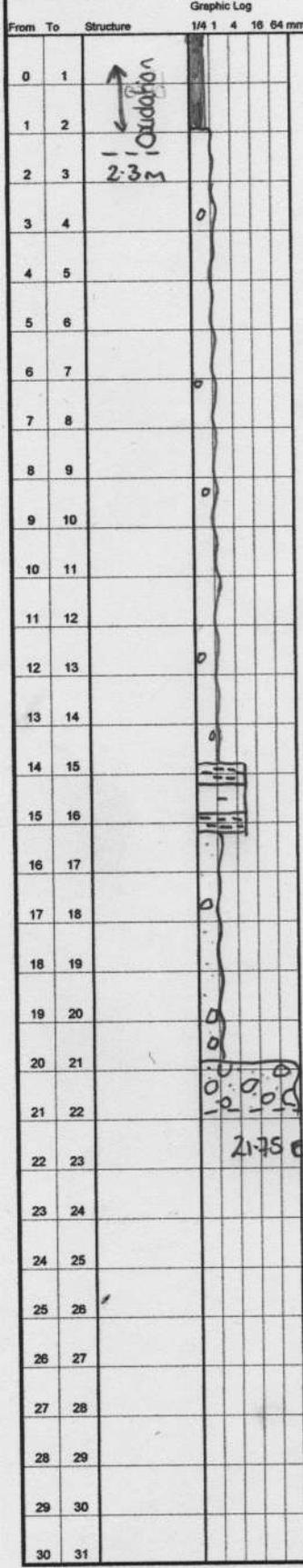
Boss Resources PTY LTD Drill Log. Hole No: **BRD12-07**

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452654
N: 5426133
RL: —

AZM N/A
Dip: -90
Total Depth: 21.75 m
Water Table: —



0-1.7 pebbly orange-brown & cream clays, weathered pebbly siltstone

1.7-14.88 weakly pebbly siltstone grey siltstone with pale quartzite & siltstone clasts ~2% to 4 cm dia. scattered pebble shaped holes indicate leaching and dissolution of some (probably pyritic) clasts occasional pyritic nodules up to 6 cm elongate. generally siltstone is massive, with partings ~ 85°/vca.

14.88-15.25. Tasmanite - upper horizon. ~70-80% spores. bedding ~85°/vca, second cleavage @75°/vca.

15.25-15.75. Tasmanite - middle horizon ~7% spores fine sandy to silty matrix

15.75-16.11 Tasmanite - lower horizon 70% spores, ~4% pebbles <0.5cm. upper contact 80°/vca, lower contact 90°/vca.

16.11-20.7 m grey siltstone with scattered pebbles & cobbles.

20.7-21.75 grey cobbly tillite. silty matrix supported tillite with clasts sub angular to sub round dominantly quartzite.

NB. vca = vertical core axis.

samples

14-14.88
14.88-15.25
15.25-15.75
15.75-16.11
16.11-17.

Boss Resources PTY LTD Drill Log.

Hole No: BRD12-08

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452512
N: 5426369 (GPS)
RL:

AZM N/A
Dip: -90
Total Depth: 33.5m
Water Table:

From To		Structure	Graphic Log	Lithology	
			1/4 1 4 16 64 mm		
0	1			0-1 m. brown surficial clay.	
1	2			1-6.6 orange-brown clays. strongly weathered zone. (17m core loss)	
2	3				
3	4			6.6-6.9 purple clay	
4	5			6.9-7.1 orange-brown clay / saprock.	
5	6				
6	7			7.1-13.3 mixed zone of dolerite & entrained quartzite pebbles. ? extensive contact.	
7	8			lower contact is oxidised with 2 cm of quartzite pebbles in fine matrix - not baked.	
8	9				
9	10				
10	11				
11	12				
12	13			13.3-28.05 medium grey weakly pebbly relatively soft siltstone. scattered quartzite pebbles & pyritic nodules (cm scale). Massive with cleavage 80-85°/VCA.	
13	14				
14	15				
15	16				
16	17				
17	18				
18	19			28.05 - 28.38 Tasmanite - upper horizon	
19	20			densely packed spores 90%. Pebbly upper contact with tom pug fault.	
20	21			28.38 - 28.77 Tasmanite - middle horizon	
21	22			<10% spores - silt dominant.	
22	23			28.77 - 29.3 Tasmanite - lower horizon.	
23	24			densely packed spores 90%, contacts 85°/VCA.	
24	25			29.3-33.3	
25	26			medium grey weakly to moderately pebbly siltstone with clay content increasing downhole.	Samples
26	27			quartzite	27 - 28.05
27	28			33.3 - 33.5	28.05 - 28.38
28	29			Cobble rich tillite - gradational contact with above.	28.38 - 28.77
29	30				28.77 - 29.3
30	31				29.3 - 30
32					
33					

oxidation zone



32
33

Boss Resources PTY LTD Drill Log.

Hole No: BRD12-09

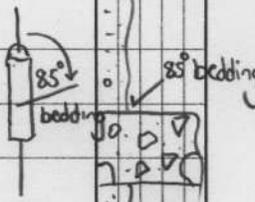
Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452580
N: 5426705
RL: —

AZM: N/A
Dip: -90
Total Depth: 24.5m.
Water Table: —

From To		Structure	Graphic Log	Lithology
			1/4 1 4 16 64 mm	
0	1			0-0.7 surficial brown clay, organic matter.
1	2	HIGH. CORE		
2	3	LOSS		
3	4			0.7-7.4m. Weathered tillite.
4	5			zone of very poor core recovery (~2m recov)
5	6			includes orange-cream clays, sand and pebbles from decomposed tillite
6	7			
7	8			
8	9			7.4-15.8m Cobble rich tillite
9	10			massive, poorly sorted, sandy matrix supported.
10	11			Clasts angular to sub-round quartzite, siltstone & volcanics up to 10cm ⁺ . Tillite is only weakly consolidated & is slightly friable. Minor pyritic nodules & pyrite rimming clasts.
11	12			
12	13			
13	14			
14	15			15.8-20.05
15	16			weakly pebbly brownish-grey fine sandstone
16	17			Irregular wispy bedded, pyrite stained.
17	18			weakly micaceous with occasional pyritic nodules.
18	19			
19	20			20.05 - 21.5 Cobble rich tillite - as at 7.4m.
20	21			
21	22			
22	23			
23	24			21.5 - 24.5 (EOM)
24	25			weakly pebbly fine sandstone, as at 15.8m.
25	26			
26	27			
27	28			
28	29			
29	30			
30	31			



Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452596
N: 5426878 (GPS)
RL:

AZM N/A
Dip: -90
Total Depth: 18.5m
Water Table: —

Graphic Log
From To Structure 1/4 1 4 16 64 mm

Lithology

0	1	
1	2	
2	3	
3	4	
4	5	
5	6	
6	7	
7	8	
8	9	
9	10	
10	11	minor pug fault
11	12	F
12	13	
13	14	
14	15	
15	16	
16	17	
17	18	
18	19	
19	20	
20	21	
21	22	
22	23	
23	24	
24	25	
25	26	
26	27	
27	28	
28	29	
29	30	
30	31	

0-0.5m brown surficial clays
0.5-2m pebbly orange-brown clays
2-4.3m pebbly cream-orange clays

4.3-8.2m weathered tillite - zone of heavy core loss. quartzite pebbles & cobbles recovered

8.2-18.5m cobbly tillite
distinctive tillite with abundant pink, cream, green & grey sub-angular to sub round clasts up to 10 cm.
dominantly quartzites with minor grey & cream siltstone & mafic clasts.
grey silty matrix supported. v. poorly sorted.

NO SAMPLES

18.5m EOH

* Interpreted that this hole was collated stratigraphically beneath the Tasmanite horizon.

Boss Resources PTY LTD Drill Log. Hole No: BR02 - 11

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 451722
N: 5426866 (GPS)
RL:

AZM N/A
Dip: -90
Total Depth: 24.5m
Water Table: —

From To		Structure	Graphic Log				
			1/4	1	4	16	64 mm
0	1						
1	2						
2	3						
3	4						
4	5						
5	6						
6	7						
7	8						
8	9						
9	10						
10	11						
11	12						
12	13						
13	14						
14	15						
15	16						
16	17						
17	18						
18	19						
19	20						
20	21						
21	22						
22	23						
23	24						
24	25						
25	26						
26	27						
27	28						
28	29						
29	30						
30	31						

0-0.8 surficial brown clays

0.8-3.5m orange-brown clays

3.5-10.5 zone of heavy core-loss -
weathered tillite with numerous quartzite
clasts.

10.5-17.5. tillite oxidation zone.
patchy oxidation in cobbly tillite.
multiple runs with poor core recovery

17.5-24.5

dark grey pebble to cobble tillite. sand
and silt matrix dominant
clasts sub angular to sub round mainly
pink & cream quartzite, with minor siltstone
& granite

partings generally > 80°/UCA i.e bedding
near horizontal.

24.5 EOM.

Interpretation: hole collared below the
Tasmanite horizon

NO
SAMPLES.

Boss Resources PTY LTD Drill Log.

Hole No: BRD12-13

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ.

Datum: AGD66
E: 452537
N: 5426508
RL: -

AZM: N/A
Dip: -90
Total Depth: 29.5m
Water Table: -

From	To	Structure
0	1	
1	2	
2	3	
3	4	
4	5	
5	6	
6	7	
7	8	
8	9	
9	10	
10	11	
11	12	
12	13	
13	14	
14	15	
15	16	
16	17	
17	18	
18	19	
19	20	
20	21	
21	22	
22	23	
23	24	
24	25	TASMANITE
25	26	
26	27	
27	28	
28	29	
29	30	
30	31	

0-0.5m. organic material, brown clay
 Mch soil

0.5-1.6m orange & cream clays.

1.6-2.9m. strongly weathered siltstone

2.9-24.33m.
 light grey siltstone. v. weakly pebbly,
 occasional rounded to elongate dissolution
 textures (cm scale) + occasional pyritized clasts
 nodules. weak MM carbonate veining
 diffusely bedded.

24.33-24.65 Tasmanite - upper horizon
 pebbly upper contact. 70% spores bedding is
 flat lying

24.65-25.1 Tasmanite - middle horizon
 5-10% spores.

25.1-25.46 Tasmanite - lower horizon
 upper contact 80°/NCA. 80% spores
 lower contact 7°/NCA.

25.46-28.3 Pebbly to cobbly fine grey
 sandstone

28.3-29.5m Cobble-rich tillite
 abundant sub angular to sub round dominantly
 quartzite clasts (polymict.) Gravelly to sandy matrix
 massively bedded.

SAMPLES

23.5-24.33
24.33-24.65
24.65-25.1
25.1-25.46
25.46-26

Boss Resources PTY LTD Drill Log.

Hole No: BRD12 - 14

Tenement: EL20/2004
Prospect: China Flats

Driller: Spauldings
Geologist: M. Blake
Date Drilled:
Hole Diam: HQ

Datum: AGD66
E: 452222
N: 542648
RL:

AZM: N/A
Dip: -90
Total Depth: 27.5m
Water Table:

Graphic Log
From To Structure 1/4 1 4 16 64 mm

Lithology

0	1	
1	2	
2	3	
3	4	
4	5	○
5	6	○
6	7	○
7	8	○
8	9	○
9	10	○
10	11	○
11	12	○
12	13	○
13	14	○
14	15	○
15	16	
16	17	○ ○ ○
17	18	○ ○ ○
18	19	○ ○ ○
19	20	○ ○ ○
20	21	○ ○ ○
21	22	○ ○ ○
22	23	○ ○ ○
23	24	○ ○ ○
24	25	Flat lying fault
25	26	
26	27	27.5m
27	28	
28	29	
29	30	
30	31	

0-0.5m surficial brown clays, organic matter.

0.5-2.0 orange-cream clays, intensely weathered siltstone

2.0-3.2 weathered grey siltstone

3.2-10.5 zone of core loss (3m recovered) fillite and associated quartzite and volcanic cobble rubble

10.5-15.8 sandy matrix weakly cobble bearing fillite

15.8-16.6 greenish grey siltstone

16.6-18.2 moderately cobby fillite, soft unconsolidated / decomposed sandy matrix? faulted

18.2-19.4 grey siltstone.

19.2-24m. cobble fillite - sandy matrix. grain size of matrix reducing downhole.

24 - 27.5 FCH
dark grey weakly pebbles cobble bearing siltstone. Flat lying, very fissile.
Faulted 25.75-25.85. Flat lying pug.
carbonate filled joints/minor faults 45°/NCA.
Strongly pyritic (nodules 24.2-24.5m)

NO SAMPLES.