TNG LIMITED

ENIGMA MINING LTD

MOUNT PEAKE PROJECT

DIAMOND DRILLING COMPLETION REPORT

EL 23074

January 2013

Tenement/s	EL 23074	1:250 000 Sheet Name	Mount Peake (SE5305)
Holder	Enigma Mining Ltd	1:100 000 Sheet Name	Anningie (5554), Mount Peake (5454)
Manager	TNG Limited	Datum	GDA94-52
Operator	Enigma Mining Ltd	GDA_E	317050-327590
Commodity	V, Ti, Fe	GDA_N	7599400-7617851
Elements Analysed			
Keywords			

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Report Date	January 2013	
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Contents

Figures

Tables

1. SUMMARY

This report provides summary of the drilling progress at Mount Peake for October, November and December 2012. Drilling activity is focused on the existing V-Ti-Fe resource at Murray Creek on EL 23074.

Drilling was undertaken with a diamond drill rig, commenced on the 29th October and was completed on 7th December. The rig and equipment was demobilised by 12th December.

Drilling had two specific aims:

1. Provide metallurgical samples to deliver to METS for test work (crushing and process plant pilot testwork)
2. Upgrade the existing resource – from inferred to indicated and/or measured status

Holes were designed by Snowden to fulfill the above requirement. A total of 1891.6 metres of PQ core were completed.

2. INTRODUCTION

The drilling program for the diamond rig was designed primarily to provide samples for metallurgical testwork. METS consultants initially indicated a requirement for 80 tonnes of solid full core sample to use in crushing and process plant testwork. This was deemed to be too high in terms of amount of material and also not all of the material required was required for crushing testwork and so RC chips would be sufficient for a portion of the amount. In the end a compromise was agreed with around 20 tonnes of core to be delivered and the remaining amount to be provided from the bulk RC samples.

The drill sampling was also to be used for resource calculation and so good quality, representative samples were required to be collected from drill core, sufficient to be used by Snowden consultants to calculate resource figures. As such the core was to be crushed in one metre intervals by METS metallurgical consultants and a representative sample split from that material and sent to the lab for analysis.

Program design was by Snowden. Drill hole design details for diamond core is outlined in Table 1 below. All diamond holes were placed within the resource outline – providing metallurgical sample and upgrading the resource.

The diamond core requirement necessitated drilling 15 holes for 2035 metres.

Figure 1. Location map of the Mount Peake project area.

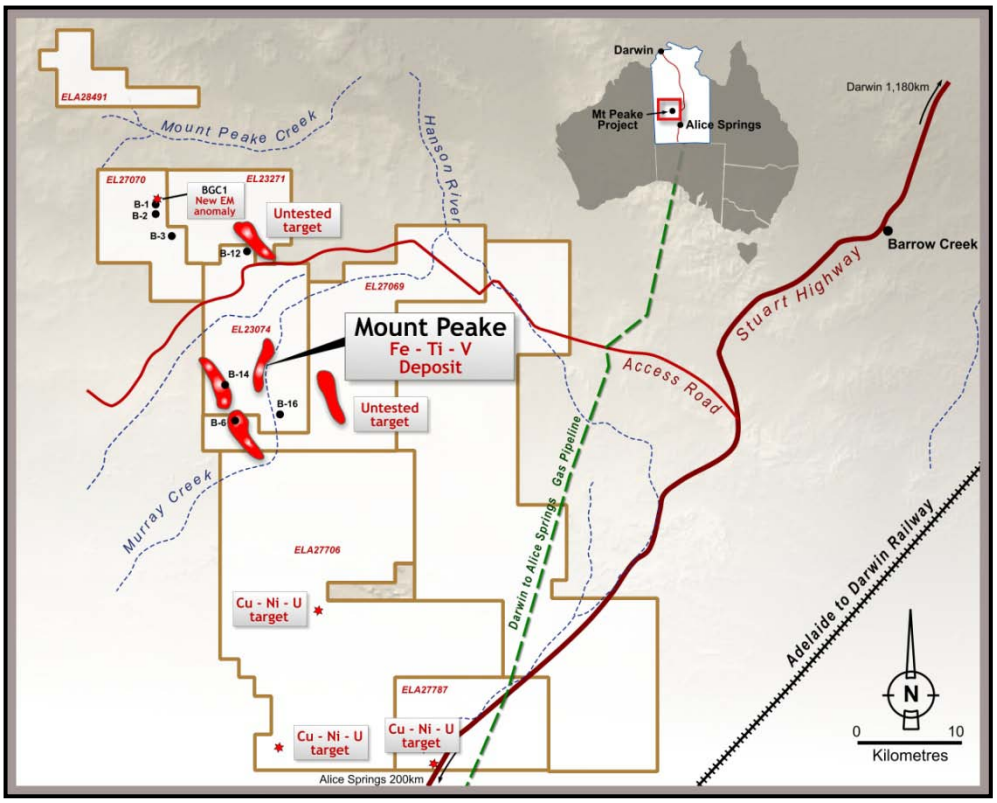


Table 1. Diamond Drilling Design

HOLE_ID_SN	Hole_ID	MGA_East	MGA_North	Depth	Dip	Azim_Mag	Extn?	Upgrade?
SN005	**12MPDD011**	322548	7605800	65	-90	0	No	Yes
SN007	**12MPDD012**	322453	7605900	75	-90	0	No	Yes
SN014	**12MPDD013**	322455	7606100	100	-90	0	No	Yes
SN016	**12MPDD014**	322586	7606100	100	-90	0	No	Yes
SN020	**12MPDD015**	322565	7606200	140	-90	0	No	Yes
SN024	**12MPDD016**	322374	7606300	150	-90	0	No	Yes
SN022	**12MPDD017**	322610	7606300	175	-60	86	No	Yes
SN040	**12MPDD018**	322548	7606400	150	-60	86	No	Yes
SN037	**12MPDD019**	322651	7606400	175	-60	86	No	Yes
SN047	**12MPDD020**	322450	7606500	150	-60	86	No	Yes
SN052	**12MPDD021**	322552	7606600	190	-60	86	No	Yes
SN053	**12MPDD022**	322651	7606600	150	-60	86	No	Yes
SN060	**12MPDD023**	322717	7606800	140	-60	86	No	Yes
SN064	**12MPDD024**	322814	7606900	120	-90	0	No	Yes
SN069	**12MPDD025**	322825	7607200	155	-60	86	No	Yes

Drill collar location maps for diamond drilling are in Figure 2 below.

2.1 Diamond Drilling Program

2.1.1 Overview

Diamond holes have been designed to:

1. Infill the existing resource (possibly convert inferred to indicated and/or measured resource status)
2. Provide material for metallurgical sampling

To this end all holes are sited within the existing resource envelope. A good spread across the resource was also obtained (see Figure 2).

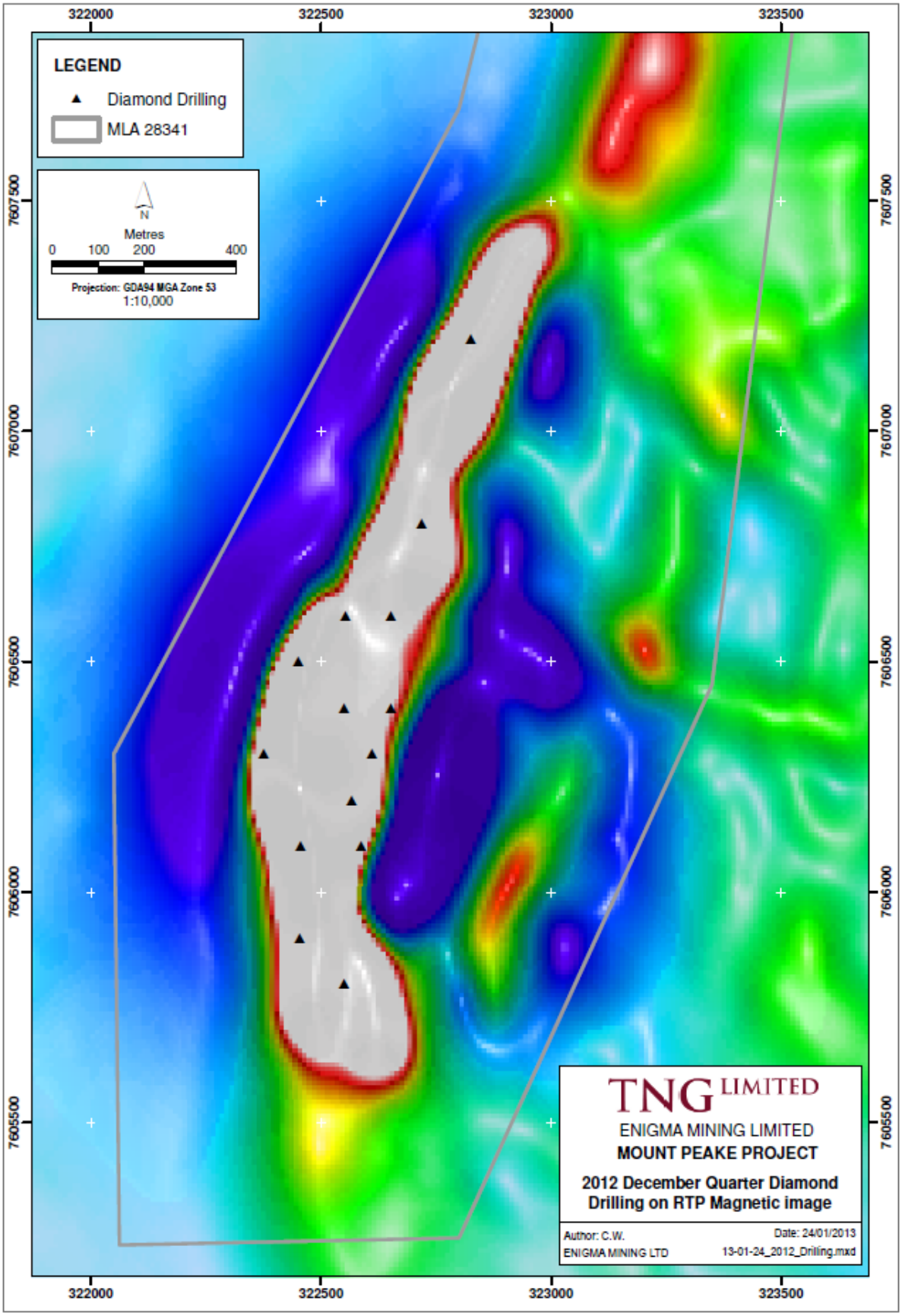


Figure 2. Diamond drill hole collars.

2.1.2 Site Preparation

Site preparation was completed in October using a 140G Catepillar grader (Figure One) dry hired from Stirling station. Work was completed by Andy Rodda and Aaron Moss. Sites were cleared using the grader with a drill site requiring a pad of around 12 metres by 20 metres. Most drill sites were on existing cleared grid lines and so pad and access track construction was minimal. All drill sites were on flat sandplain and so no cut/fill was required. Vegetation (where clearing was required) was predominantly open mulga scrubland with minor areas with Ti Tree instead of mulga, and smaller areas with only shrubs (less than 1.5 metres height).

Some refurbishment of existing tracks was required, both within the drilling/resource area, and on the access track from the Stuart Highway. A couple of creek crossings needed some work to allow truck access across broad sandy and soft/loose material. The largest creek requiring grader work was Murray Creek, just east of the resource area. The drillers camp area was immediately east of Murray Creek.

Figure 3. 140G Caterpillar Grader used to re-establish access tracks and clear new drill site.

2.1.3 Drilling

Drilling was completed using a rig provided by McKay Drilling Pty Ltd of Perth, WA. A Sandvik UDR 1200 (rig #07) rig with a depth capacity to of 2000 metres for NQ core was utilised. Its PQ capacity is well in excess of the maximum designed hole depth of 170 metres.

Figure 4. McKay Drilling Sandvik UDR 1200 diamond drill rig.

Two crews manned the rig on two 12 hours shifts. Night shifts had lighting plants setup.

Holes were drilled with a rock roller bit from surface to a depth ranging 8.5-17.6 metres and averaging 11m, as the entire area of the resource has a sheet of aeolian sand that varies from 2 to 16 metres in thickness. None of the top zone of transported cover contains mineralization.

To provide the largest size sample PQ core was drilled from the base of the roller collar zone to end of hole. All PQ was drilled with a three metre barrel with triple tube splits.

Initial program design had a total of 15 holes for 2035 metres. Details of holes are found in Table 1.

The program finished with 14 holes drilled for 1891.6m. One hole was drilled with the RC rig as sufficient core with grade to be used as metallurgical sample had been obtained from the initial 14 holes (diamond hole SNO64 became 12MPRC094 and SNO69 became 12MPDDH024).

Drilling is summarized in Table 2.

Table 2. Summary of diamond drilling completed.

SN_ID	Hole_ID	MGA East	MGA North	Depth	Dip	Mag Az	Extn?	Upgrade?
SNO05	12MPDDH011	322548	7605800	65.00	-90	90	No	Yes
SNO07	12MPDDH012	322453	7605900	74.70	-90	90	No	Yes
SNO14	12MPDDH013	322455	7606100	99.50	-90	90	No	Yes
SNO16	12MPDDH014	322586	7606100	100.00	-90	90	No	Yes
SNO20	12MPDDH015	322565	7606200	138.50	-90	90	No	Yes
SNO22	12MPDDH016	322374	7606300	150.40	-60	90	No	Yes
SNO24	12MPDDH017	322610	7606300	175.00	-90	90	No	Yes
SNO37	12MPDDH018	322548	7606400	165.50	-60	90	No	Yes
SNO40	12MPDDH019	322651	7606400	147.70	-60	90	No	Yes
SNO47	12MPDDH020	322450	7606500	183.70	-60	90	No	Yes
SNO52	12MPDDH021	322552	7606600	150.60	-60	90	No	Yes
SNO53	12MPDDH022	322651	7606600	147.60	-60	90	No	Yes
SNO60	12MPDDH023	322717	7606800	138.40	-60	90	No	Yes
SNO69	12MPDDH024	322825	7607200	155.00	-60	90	No	Yes

Total	**1891.60**	**Metres**

2.1.4 Sample Processing

The diamond core was processed systematically conforming to the following routine:

- Core pieced together;
- Core orientation line drawn;
- Core Recoveries determined;
- Metre marking;
- RQD recorded;
- Magnetic Susceptibility recorded;
- Niton pXRF analysis;
- Photographs (dry and wet);
- Geological and structural logging; and
- Sampling intervals and metallurgical intervals determined.

Once laid out on racks or the ground core was pieced together.

Core Orientation
Core orientations were completed at the end of every run utilising the Reflex ACT orientation tool. Failures were common in fractured ground, however reasonable coverage was still maintained. Each orientation was marked by in red chinagraph pencil on the bottom of the core by the offsider.

The orientated core was placed in a length of angle iron, positioning the red orientation mark along the edge of the angle iron. Adjacent pieces of core were joined to the oriented core, progressing both up and down hole. This was continued until the orientations failed (due to broken ground, spun core etc).

A solid orientation line was drawn using a black permanent marker where two or more orientations (runs) could be matched. Arrows were drawn onto the core to indicate downhole direction and red driller's breaks were transferred to the orientation line.

Core Recoveries
Following core orientation, core recoveries were completed for each core run. This involved recording the depth on each core block, determining the theoretical length of the run and then measuring the actual length of the core recovered. This process identified several core block annotation errors which were rectified. Where core was lost, loss intervals were allocated to the zones with poor core samples (broken ground).

Table 3. Average diamond core recovery %.

Hole_ID	Average Recovery %
12MPDDH011	99.95
12MPDDH012	98.00
12MPDDH013	99.90
12MPDDH014	99.30
12MPDDH015	99.80
12MPDDH016	99.50
12MPDDH017	99.80
12MPDDH018	99.54
12MPDDH019	99.51
12MPDDH020	98.42
12MPDDH021	99.39
12MPDDH022	95.16
12MPDDH023	98.11
12MPDDH024	98.85

Metre markings
Individual metre marks were annotated on the core in white paint marker based on the core recoveries and location of potential loss zones.

RQD
RQD was recorded for each metre interval based on the metre marking, allowing for the losses as determined by the recovery logs. The RQD value is the length of core in centimetres, in sticks of greater than 10cm length (range 0-100).

Table 4. Average RQD % for diamond core.

Hole_ID	Average RQD %
12MPDDH011	72.7
12MPDDH012	75.1
12MPDDH013	83.3
12MPDDH014	85.1
12MPDDH015	89.2
12MPDDH016	91.1

12MPDDH017	78.1
12MPDDH018	87.8
12MPDDH019	85.8
12MPDDH020	87.4
12MPDDH021	84.6
12MPDDH022	88.3
12MPDDH023	85.9
12MPDDH024	74.6

Magnetic Susceptibility
A model KT-10 portable magnetic susceptibility metre was used to assess the magnetic properties of the entire interval of core. Individual measurements were taken at X.0 and X.5 metre points. All readings were in SI units and recorded as (x 10^{-3}) values of full PQ core.

Portable Niton
A handheld Niton pXRF (model XLt) was used to further identify the ore zone. A single measurement was taken per metre over the entire length of core. Care was taken to analyse away from all paint pen markings. XRF values for Vanadium and Titanium were recorded on to the field sheets. The Niton record was recorded against the hole number and depth and full Niton data was downloaded from the device

Core Photographs
Core photographs were taken following the completion of the core mark-up. Each tray was photographed wet and dry in the sun.

Figure 5. Core photographs showing metre marks and orientation lines.

Geological and Structural Logging
The core was logged onto paper A3 logging sheets. Particular attention was paid to the mineralisation styles and orientations of veins and fractures in an effort to determine structural controls.

The Geological Legend used for the diamond drilling program is presented in Appendix 1.

2.1.5 Sampling

Core trays from the diamond drilling program will initially be stored on site. Material where analysis and testwork is required were dispatched to the Perth METS laboratory prior to Christmas. Core trays (with full PQ sized core, ca. 3m/tray, ca. 40-50kg/tray)

were stacked 15 per pallet and 4x4 pallets sent to Perth via road freight (total 28-29 tonnes).

All ore zone intervals require analysis of a ca. 1-4kg sample, in one metre intervals, for V, Ti etc. These samples will be provided by METS to the laboratory after crushing and splitting out. These analysis are required to be used for resource calculation and so need conform with good practice – representative splits from the total ca. 15kg sample (1m @ PQ core). An appropriate QA/QC regime was established between TNG and METS prior to this commencing. Standard samples were provided to ALS Perth for insertion into the diamond core analysis.

2.1.6 Analysis

Analysis of the diamond core samples collected was done by ALS Perth and the following techniques and elements were determined:

Elements were assayed using the method ME-XRF21n. Details on elements and processing methods found in table 5.

Table 5. ALS Perth, analysis methods and elements.

Elements assayed
Al2O3
As
Ba
CaO
Cl
Co
Cr2O3
Cu
Fe
K2O
MgO
Mn
Na2O
Ni
P
Pb
S
SiO2
Sn
Sr
TiO2
V
Zn
Zr

ALS Code	Description
WEI-21	Received sample weight
LEV-01	Waste disposal levy
LOG-22	Sample login - Rcd w/o barcode
PUL-23	Pulv sample - split/retain
BAG-01	Bulk master for storage
SPL-21	Split sample - riffle splitter
PUL-QC	Pulverising QC test
ME-XRF21n	H2O/LOI by TGA furnace
ME-GRA05	Iron Ore by XRF Fusion

3. SAMPLES PROVIDED TO METS

3.1 Core Samples Provided

The rationale for core provision was that a total of around 20 tonnes of core material was needed for metallurgical/pilot process plant testing. To this end holes were designed to maximize the amount of "ore" material collected. Holes were all sited within the existing resource envelope. Some holes were drilled at an angle maximizing intercepts of ore (dipping to the east at 60 degrees, while the orebody dips at a very low angle to the east).

Table 6. Details of core samples provided for METS.

						Nominal sample numbers		
HOLE_ID	FROM	TO	INTERVAL	SOH?	EOH?	Sample No Start	Sample No End	Number
12MPDDH011	17.6	65	47.4	No	Yes	50001	50048	48
12MPDDH012	25	74.7	49.7	No	Yes	50049	50098	50
12MPDDH013	8.7	99.5	90.8	Yes	Yes	50099	50189	91
12MPDDH014	9.4	100	90.6	Yes	Yes	50190	50280	91
12MPDDH015	11.8	138.5	126.7	Yes	Yes	50281	50406	126
12MPDDH016	8.7	150.4	141.7	Yes	Yes	50407	50547	141
12MPDDH017	11.7	175	163.3	Yes	Yes	50548	50710	163
12MPDDH018	20	165.6	145.6	No	Yes	50711	50855	145
12MPDDH019	20	150.7	130.7	No	Yes	50856	50985	130
12MPDDH020	11.7	183.7	172	Yes	Yes	50986	51158	173
12MPDDH021	20	150.6	130.6	No	Yes	51159	51289	131
12MPDDH022	40	147.6	107.6	No	Yes	51290	51397	108
12MPDDH023	40	110	70	No	No	51398	51467	70
12MPDDH024	11.5	155	143.5	Yes	Yes	51468	51611	144
							Total	**1611**
		Total	**1610.2**	**Metres**				**Samples**

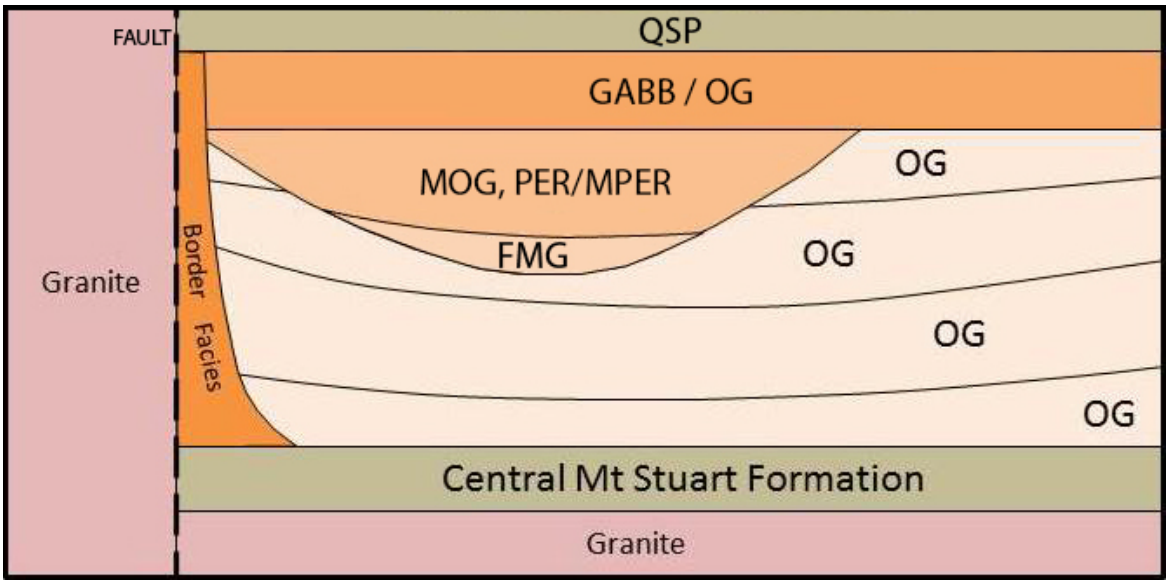
4. APENDICIES

4.1 Appendix 1. Geological Legend

Legend with schematic diagram

LEGEND

Lithology	Lith Code	Description
Quaternary Cover	QSP	Aeolian quartz sands.
Gabbro	GABB	Unmineralised coarse grained gabbro.
Magnetite Olivine Gabbro	MOG	As OG with abundant cumulate magnetite. Cumulate plagioclase laths often form a discrete foliation.
Peridotite	PER	Pyroxene and olivine dominated unit generally within the main MOG and FMG sequence. Associated with Fe chlorite veining and amphibole development on vein margins.
Magnetite bearing Peridotite	MPER	As PER with cumulate and interstitial magnetite.
Footwall Mixed Gabbro	FMG	Footwall gabbro with evident cumulate and interstitial magnetite enrichment from MOG above
Olivine Gabbro	OG	Medium to coarse grained olivine rich gabbro. Commonly, a poikilitic texture can be observed with coarse oikocrysts of plagioclase abundant.
Granite	GRN	Coarse grained granite on western margin.



4.2 Appendix 2. Example geological log field record sheet scanned.

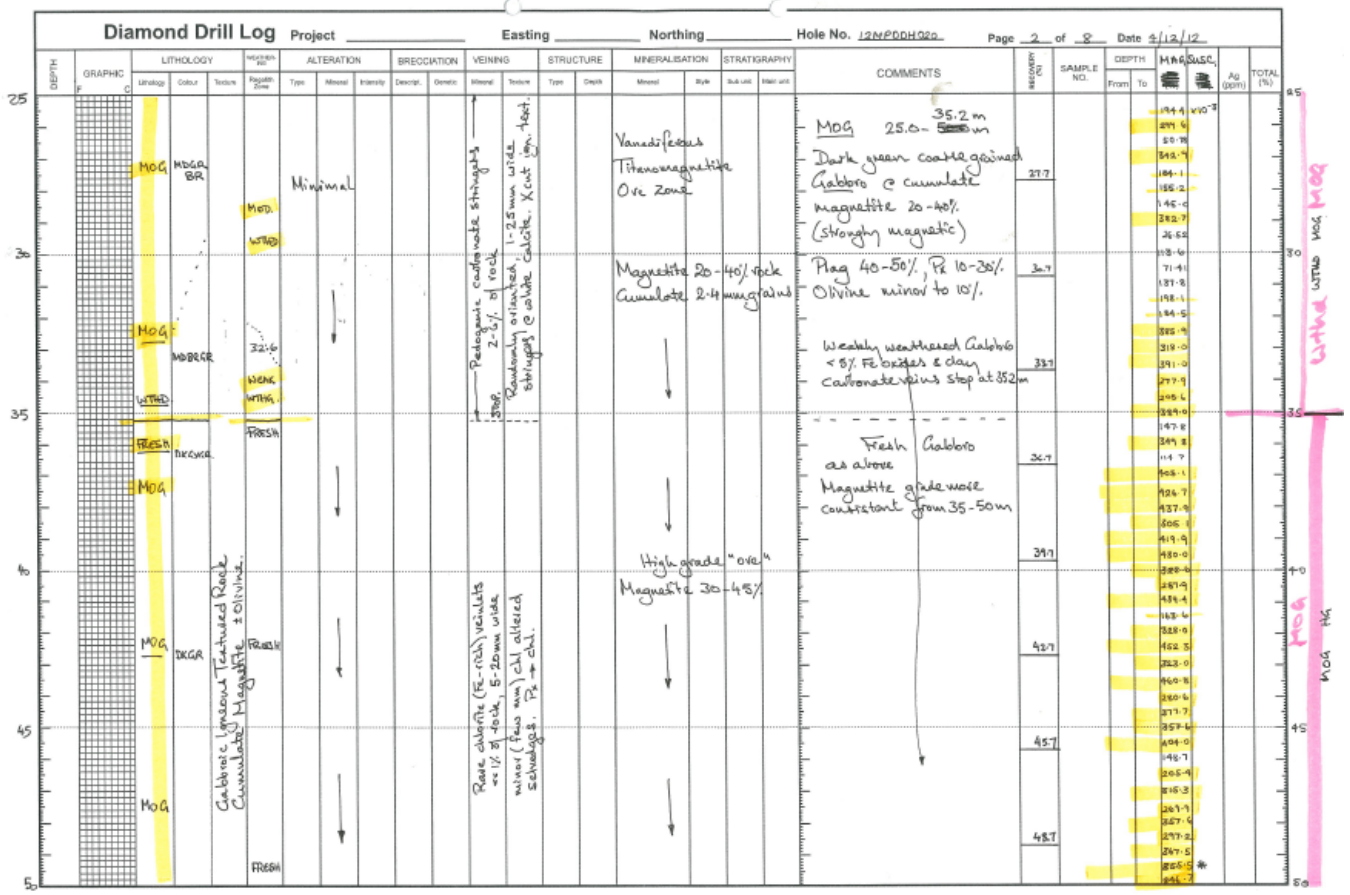


Figure 6. Scanned copy of diamond drill field geological log.

4.3 Appendix 3. Example of database record geology for Diamond Drilling.

	A	B	C	D	E	F	G	H	I	J	K	L
1	HOLE_ID	FROM	TO	WTHG	COLOUR	GRAINSIZE	LITHCODE1	LITHCODE2 = MINERALOGY	LITHCODE3 = TEXTURE	Carb = ORE MIN	Alt1 = ALTERATION	Mag
2				OX, SOX, MOX, WOX, FR	LORBR, MYWBR, DGYGR etc	VFGR, FGR, MGR, CGR, VCGR, VFMGR etc	PLRS, PLRG, PQV, Pp	IN decreasing order of abundance.	e.g. STR FOL, PORPHYRITIC	MAL COMMON, CHRYS RARE	e.g. MK, WSIL etc	Magnetic Susceptibility
3				3Char	6Char	5Char	4Char	Text	Text		12Char	SI units (x 10^{-3})
201	12MPRC048	6.0	7.0	SOX	BR-RED	CGR	QSP	QTZ, OG				1.643
202	12MPRC048	7.0	8.0	SOX	GREY	CGR	QSP	QTZ, OG				3.028
203	12MPRC048	8.0	9.0	SOX	GREY	CGR	QSP	QTZ, OG				4.169
204	12MPRC048	9.0	10.0	SOX	GREY	CGR	QSP	QTZ, OG				1.579
205	12MPRC048	10.0	11.0	MOX	BK-GR	CGR	GABB	OG	Bk-gr coarse OG			5.15
206	12MPRC048	11.0	12.0	MOX	BK-GR	CGR	GABB	OG				9.169
207	12MPRC048	12.0	13.0	MOX	BK	CGR	GABB	OG				15.17
208	12MPRC048	13.0	14.0	MOX	BK	CGR	GABB	OG				20.34
209	12MPRC048	14.0	15.0	MOX	BK	CGR	GABB	OG				16.41
210	12MPRC048	15.0	16.0	MOX	BK	CGR	GABB	OG				13.75
211	12MPRC048	16.0	17.0	MOX	BK	CGR	GABB	OG	Weathered Ol and Px			29.99
212	12MPRC048	17.0	18.0	MOX	BK	CGR	GABB	OG				25.95
213	12MPRC048	18.0	19.0	MOX	BK	CGR	GABB	OG				12.92
214	12MPRC048	19.0	20.0	MOX	BK	CGR	GABB	OG				2.758
215	12MPRC048	20.0	21.0	MOX	BK	CGR	GABB	OG	Chlorite			1.549
216	12MPRC048	21.0	22.0	MOX	BK	CGR	GABB	OG	Carbonate			1.747
217	12MPRC048	22.0	23.0	MOX	BK	CGR	GABB	OG	Carbonate			1.658
218	12MPRC048	23.0	24.0	MOX	BK	CGR	GABB	OG	Carbonate			1.569
219	12MPRC048	24.0	25.0	MOX	BK	CGR	GABB	OG				1.131
220	12MPRC048	25.0	26.0	MOX	BK	CGR	GABB	OG	Green to black?			25.82
221	12MPRC048	26.0	27.0	MOX	BK	CGR	GABB	OG				34.26
222	12MPRC048	27.0	28.0	FR	BK	CGR	GABB	OG	Plag rich			38.47
223	12MPRC048	28.0	29.0	FR	BK	CGR	GABB	OG				4.383
224	12MPRC048	29.0	30.0	FR	BK	CGR	GABB	OG				25.56

Figure 7. Diamond database geology record.