

To: Greatland Pty Ltd
Attn: Callum Baxter

Re: NOTES on Geology and Geochemistry of the **LOBSTER PROJECT** area.

Methodology

Mapping was done by foot traversing of the subject area using a hand-held GPS and following a field assistant (Neil Ferguson/ Christine Earthrowl) on a predetermined compass course. At all outcrops, sub-outcrops and if necessary rubble, a waypoint was recorded and geological notes made into a field book. Any significant rocks were sampled and assigned a sample number in the 140xxx series and additional data recorded on the sample tag book. These data were all subsequently transferred to an excel spreadsheet.

Access

Vehicular access was made along Forestry tracks and on foot, in some cases, along plantation tracks. Most foot- traverses were hampered by one or other of very dense undergrowth, dozer disturbed ground, closely planted trees and steep cliffs. In some areas ground visibility was less than 2m due to undergrowth making the location of any rocks difficult. Creeks with leeches added to the problems!

Geology: Rock Types

(1) Conglomerates: This rock type is confined to the northeastern corner of the prospect area. The conglomerate is of varying clast size up to 20mm and both polymictic and oligomictic varieties were seen. Matrix was variable and appeared in some places to be volcanoclastic.

(2) Sandstone/Quartzite: The mapped areas of quartzite in the central and southeastern parts of the prospect appeared massive and uniform. However in the northwest there appeared to be facies changes between saccharoidal quartz sandstone and the quartzite.

(3) Dolerite/Basalt: These rock types have been mapped intermittently in a belt 1.5km long and 500m wide extending from the northwest to the southeast of the area. The dolerite displays typical ophitic texture and is intimately associated with the finer grained, often, amygdaloidal basalt. The two rock types occur in places only a few metres apart. No actual outcrop with a visible contact between the two was found.

(4) Schist/Siltstone: These poorly outcropping rock types occur mainly in the north of the area and are probably different metamorphic facies derived from the same unit. No such lithology appears to be present in government maps' stratigraphy of the area.

Geology: Structure

Very little structural information was gleaned of the stratigraphy during the traversing .Of the more than 200 geological waypoints recorded only 5 were of outcrop. A further 23 were from suboutcrop; the rest being of rubble and soil colour.

The faulting interpreted from results of the soil sampling have been amended slightly and used in the geology mapping and fit well with the distribution of the basic rocks and the conglomerates.

Soil and Rock Sample Assay Results

Referring to the assay results with statistics as shown, the following comments are made:

Element	Units	Max	(Sample #)	Av	Min
Au	ppb	5	(140150)	2	1
As	ppm	70	(140108)	18	6
Ba	ppm	386	(140149)	66	6
Bi	ppm	/	/	/	/
Ca	%	4.04	(140138)	0.72	0.01
Ce	ppm	199	(140106)	65	22
Co	ppm	29	(140144)	6	1
Cr	ppm	230	(140138)	63	6
Cu	ppm	257	(140150)	33	2
Fe	%	28.64	(140150)	3.94	0.6
K	ppm	3972	(140140)	1461	87
La	ppm	96	(140106)	51	21
Mg	%	2.5	(140144)	0.25	0.02
Mn	ppm	655	(140144)	166	34
Mo	ppm	3	(140108)	2.5	2
Na	%	0.68	(140149)	0.13	0.03
Ni	ppm	78	(140144)	19	1
P	ppm	799	(140140)	217	29
Pb	ppm	44	(140150)	9	1
Sb	ppm	2	/	2	2
Sc	ppm	48	(140150)	7	1
Sr	ppm	95	(140149)	19	1
Te	ppm	2	/	2	2
Ti	ppm	983	(140144)	210	10
V	ppm	267	(140150)	47	2
W	ppm	/	/	/	/
Zn	ppm	186	(140150)	31	1

From the above results it can be seen that the following samples have returned possibly significant results:

- **Sample 140150** from coords 458219E, 5403748N: Breccia, schistose Quartz Rock, gossanous; returned maximum values in Au, Cu, Fe, Pb, Sc, V and Zn.
- **Sample 140144** from coords 459164E, 5403019N: Basalt, amygdaloidal, brecciated, fresh; returned maximum values in Co, Mg, Mn, Ni and Ti.

Another four samples (140149, 140140, 140108 and 140106) returned maxima in Ba, Na, Sr; K, P; As, Mo; and Ce, La respectively.

Conclusions

The geology map produced from the foot traversing of the area has defined the distribution of the stratigraphy in more detail albeit without much structural information.

LEGEND

- o o CONGLOMERATE: poly and oligomitic matrix volcaniclastic ?
- ... SANDSTONE: m-l. laminar, qtz rich saccharoidal
- ∧ QUARTZITE: massive, bedded
- ∧ DOLERITE: f-mad, ophitic text.
- ∧ BASALT: f.gel, some amygdaloidal
- Q QUARTZ VENS: massive white to limonite stained.
- ◆ 314 Mapping Waypoint: see Spreadsheet for details
- 140137 Rock sample site: if underlined in part gossanous.
- | Soil Sample Traverse: 50m sites

Geological Traversing by J.A. Earthwool May/June 2011

Geological Interpretation by J.A. Earthwool Aug. 2011

Base Map by Greatland P/L May 2011



458 000mE

458 500mE

459 000mE

459 500mE

460 000mE

S 442
8404 000mN

EL31/2004

S 442
8403 500mN

S 442
8403 000mN

S 442
8402 500mN

