

TORQUE MINING LTD
ANNUAL REPORT ON EXPLORATION
EL 6/2011 - "Interview River"
November 2011 to November 2012

Grant MacDonald - B.Sc. (Hons)
Jane Farrell - B.Sc. (Hons)
Torque Mining Ltd
134 Beveridges Lane,
Hagley, Tasmania

TABLE OF CONTENTS

	Page No.
1.0 Summary	1
2.0 Introduction	2
2.1 Tenure	2
2.2 Location and Access	2
2.3 Topography and Vegetation	3
3.0 Geology	4
3.1 Introduction	4
3.2 Tungsten and tin	4
3.3 Copper	5
3.4 Lead-zinc	6
4.0 Exploration Philosophy	8
5.0 Previous Exploration	9
5.1 Introduction	9
5.2 Interview River area – Cooneys, Kennys, and Tungsten Reward Prospects	9
5.2.1 Early Prospecting 1890s - 1950s	9
5.2.2 1953 - 1954 Interview River Wolfram Syndicate	10
5.2.3 1970 - 1972 ACI -Renison -Mt Lyell Joint Venture	10
5.2.4 1973 - 1980 Interview River Mining and Associates Pty Ltd	15
5.2.5 1981 - 1989 Abignano Constructions	15
5.2.6 2007 - 2009 Stonehenge Metals Ltd	18
5.3 Copper Reward and Silver Reward Workings	18
5.3.1 Early Prospecting	18
5.3.2 1970 - 1972 ACI -Renison -Mt Lyell Joint Venture	18
5.3.3 1981 - 1989 Abignano Constructions	18
5.4 Chimney Creek area	19
6.0 Exploration Completed November 2011 to November 2012	20
6.1 Introduction	20
6.2 Geophysics	20
6.3 Historical Compilation	25
7.0 Proposed work November 2012 to November 2013	26
8.0 Environmental	27
9.0 Expenditure	28
10.0 References	29

Figures

		Page No.
Figure 2.1	EL 6/2011 "Interview River" location plan. Grid datum is AGD66	2
Figure 3.1	Geology of EL 6/2011 "Interview River"	4
Figure 5.1	ACI-Renison-Mt Lyell JV stream sediment survey – WO3	11
Figure 5.2	ACI-Renison-Mt Lyell JV stream sediment survey – Sn	11
Figure 5.3	ACI-Renison-Mt Lyell JV soil survey – WO3	12
Figure 5.4	ACI-Renison-Mt Lyell JV soil survey – Sn	13
Figure 5.5	ACI-Renison-Mt Lyell JV soil – As	14
Figure 6.1	Magnetics - total magnetic intensity	20
Figure 6.2	Magnetics - reduced to pole	21
Figure 6.3	Magnetics - 1 st vertical derivative	21
Figure 6.4	Magnetics - 2 nd vertical derivative	22
Figure 6.5	Radiometrics – potassium	22
Figure 6.6	Radiometrics – uranium	23
Figure 6.7	Radiometrics – thorium	23
Figure 6.8	Radiometrics – ternary	24
Figure 6.9	Radiometrics – total count	24
Figure 6.10	Digital elevation model	25

1.0 Summary

Work in year 1 has been desktop and involved:

- Compilation of previous exploration
- Airborne geophysics acquisition and enhancement

Appraisal of historic exploration suggests there may be potential in the Cooneys-Kennys area for a small but high grade tungsten resource.

2.0 Introduction

2.1 Tenure

EL 6/2011 "Interview River" was granted to Frontier Resources Ltd. on 24th November, 2011. On 30th January the licence was voluntarily surrendered and re-pegged including the ~0.83km sliver of ground running along the southern boundary in order to adjust for changes from an AGD66 to MGA94 datum.

On May 4th the title was transferred to Torque Mining Ltd, a wholly owned, as yet unlisted subsidiary of Frontier Resources Ltd.

2.2 Location and Access

The licence lies on Tasmania's central west coast to the north of the mouth of the Pieman River (see figure 1). It does not quite border the Southern Ocean as there is a coastal reserve of ~500m width along the licence's western boundary. Whilst historically an old track runs south along the coast to the Interview area this track is long since overgrown and as such there is no road access to the licence or within it. The Western Explorer gravel road which connects Corinna with the far northwest passes approximately 10 km's east of the licence's easternmost boundary.

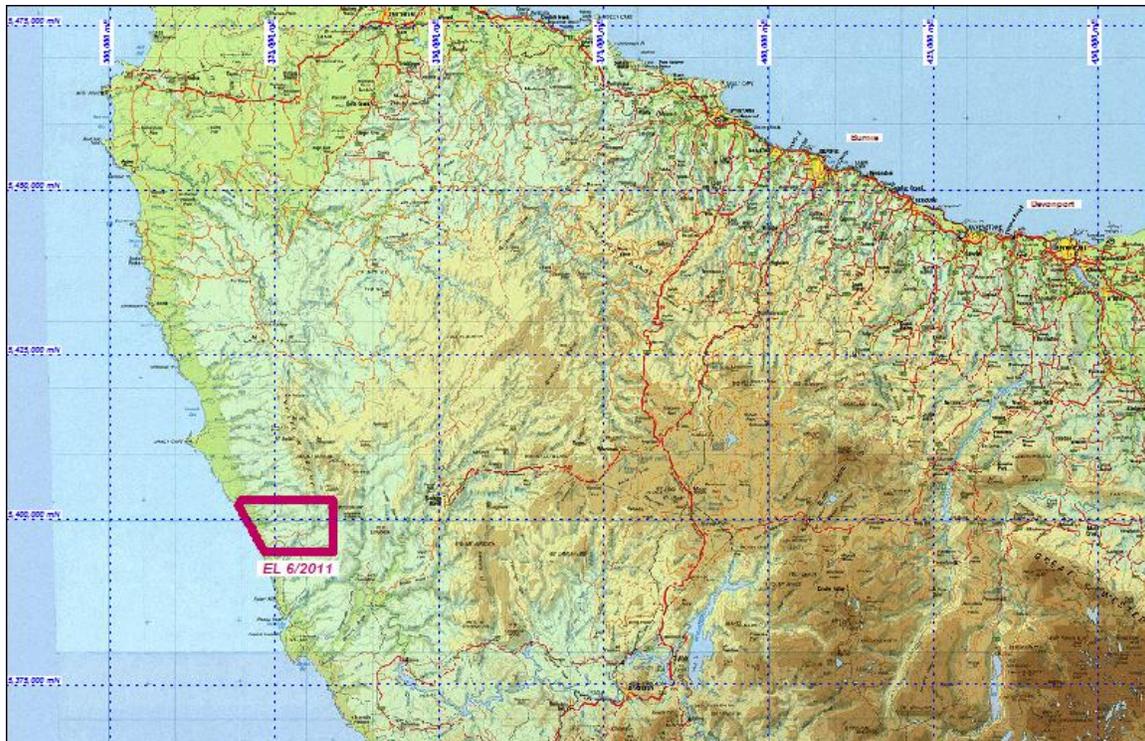


Figure 2.1: EL 6/2011 "Interview River" location plan. Grid datum is AGD66

2.3 Topography, Vegetation and Land Use

The land is gently sloping coastal plain incised by numerous small west draining creeks, rising in the far east on the flanks of Mt Sunday. The vegetation is coastal heath for the most part with low dense scrub in creeks and some areas of Ti Tree. The land is part of the Arthur Pieman Conservation Area.

3.0 Geology

3.1 Introduction

The following description draws largely from the work of Bottrill (2011)

The geology of the licence is reasonably simple with the Interview River granite making up the western third of the licence. Based on gravity interpretation (Leaman, 1988), the top of the granite gradually deepens to the east.

The rest of the licence consists of metasediments of the Proterozoic Rocky Cape Group including the Lagoon River Quartzite and Interview River Siltstone. "These rocks are structurally complex, mostly showing a regional N-S to NNE-SSW-trending strike, sub-parallel to the Arthur Lineament" Bottrill (2011).

The Rocky Cape Group is locally intruded by narrow, altered mafic dykes trending between EW (in the west) and NNE (in the east).

There are essentially three different styles of mineralisation within the area; tungsten-tin, copper, and silver-lead. These are briefly described below.

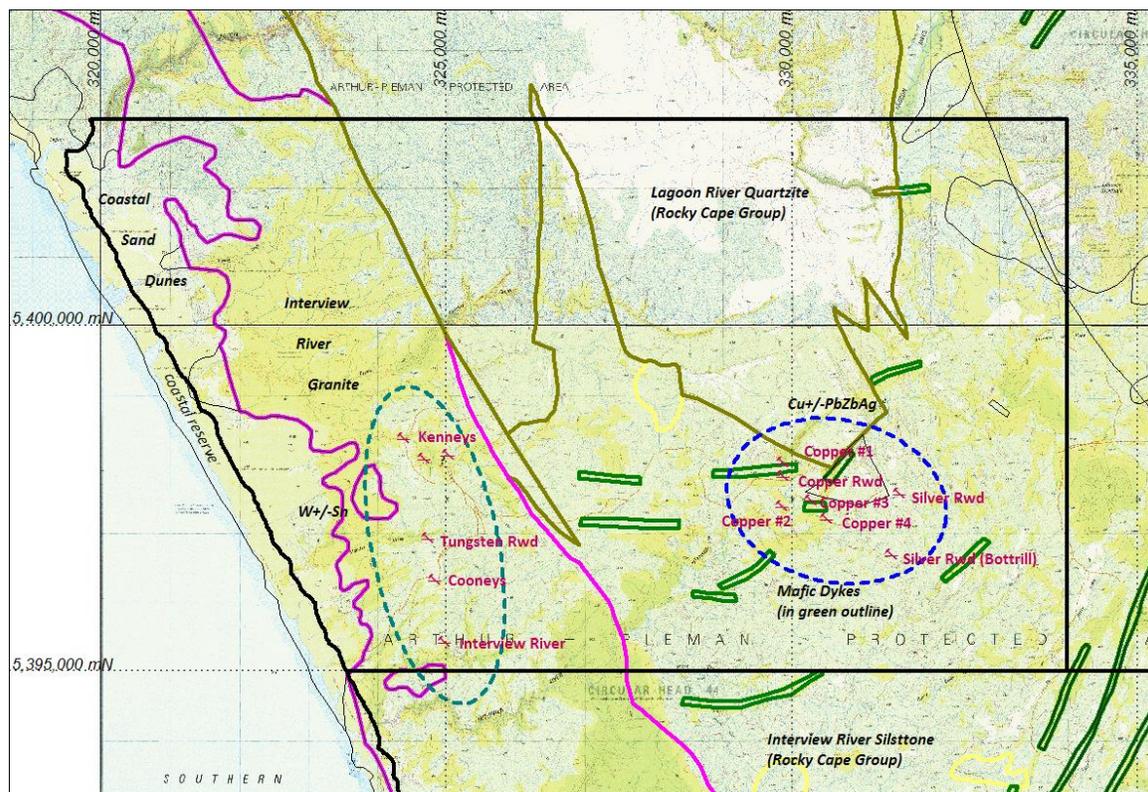


Figure 3.1: Geology of EL 6/2011 "Interview River"

3.2 Tungsten and tin

"These deposits are located in a belt approximately 2.5 km from the coast and are entirely hosted by the Interview Granite. They occur as veins varying in width from 100 to 400 mm with local high-grade tungsten mineralisation over a possible strike length of 2500 m (Cromer, 1989). Mineralogically, the deposits consist of quartz-pyrite-wolframite, tourmaline, muscovite, and

arsenopyrite with minor cassiterite and scheelite. The high-grade sections are normally less than 400 mm wide, but are very rich in tungsten, containing up to 27% WO₃.

Based on (very limited) drilling programs (and trenching), it has been estimated that a total of 1.6 million tonnes of ore containing 1.4% WO₃ is present in the area (Brink, 1985). The deposits were only visited very briefly in this study (Kennys and Cooneys workings). The base metal sulphide contents are very low." Bottrill (2011).

3.3 Copper

These deposits, like those in the Balfour belt (Bottrill and Taheri, 2003; Taheri and Bottrill, 2004), are hosted on a regional scale by the Interview Siltstone, which mainly consists of laminated siltstone and minor quartzite. The deposits occur as brecciated veins along east–west trending, fracture or shear zones within the siltstone. Structurally, the lodes appear to have been formed along weak zones in kick bands, as in the Balfour belt (to the north).

The main (copper) prospect is the Copper Reward mine, but mapping by Gouge (1982) identified other mineralised lodes (quartz veins containing pyrite and chalcopyrite) within the area. These lodes show similar strikes and dips to those observed at the Copper Reward prospect (i.e. ~300° and 80°S respectively)." Bottrill (2011).

The mineralisation here (at Copper Reward) consists of a 300 mm wide, brecciated lode, occurring at the contact between a laminated siltstone (hanging wall) and a nearly one metre wide, altered dolerite dyke (footwall). The lode strikes about 290°T and dips 80° to the south, with the variation in dip of the country rock to either side suggesting it may be in a small kink zone. The rock is heavily brecciated and contains small fragments of veined country rocks.

Gouge (1982) inspected the old Reward shaft which was sunk on the lode (now water filled: 329 990 mE; 5 397 820 mN). This showed that the lode width is up to about 600 mm at a depth of six metres. A representative sample from the bottom of the shaft contained 10.5% copper. The lode has also been intersected in an inclined shaft, located about 16 m to the west of the Reward shaft, at a depth of about three metres (Gouge, 1982). Further west, the surface expression of the lode structure is only characterised by the contact between the dolerite dyke and the siltstone, with no indication of mineralisation. The lode can also be traced east to the bed of the Interview River, beyond which it is probably covered by alluvial flats on the eastern bank of the river.

The lode is a weakly siliceous, sulphidic breccia. The main sulphide is chalcopyrite, which is medium grained and varies from an infiltration, intergranular or cement texture to quite massive (close to 90% in patches). It is almost unaltered (except for minor limonite and trace covellite). The chalcopyrite contains small quartz and siderite blebs, plus bands, stringers and patches of pyrrhotite, now mostly altered to a fine-grained mixture of pyrite and marcasite.

Apparently early-formed, semi-massive pyrite + quartz clasts also occur in the vein. Some relatively unaltered pyrrhotite occurs as laths in quartz veins, in part associated with chalcopyrite (now partly replaced by covellite). The quartz veinlets (in clasts) also contain traces of muscovite, chlorite, albite, green-brown biotite and allanite (Appendix 1).

The breccia nature of the lode means that it cannot be presumed that all lode constituents have the same origin; some may be from the immediate wall rocks, and some from much deeper. The quartz is largely recrystallised and granular, but some is fibrous in the pyrite-rich clasts, suggesting it is pre-metamorphic or syn-metamorphic. Lithic clasts in the breccia are mostly chalcopyrite or quartz-hosted and are fine-grained aggregates of quartz, chlorite, muscovite and

leucoxene. These largely resemble siltstone but the locally high leucoxene content may indicate that some may be altered (silicified) dolerite.

The dolerite dyke is less than a metre wide near the river, but widens to more than ten metres about 200 m to the west, where it is much coarser (gabbroic) and more foliated in texture. At the mine site it is altered (presumably hydrothermally, during mineralisation?) and is composed mostly of chlorite and sericite, with some relict albitised plagioclase, and ~5% iron-titanium oxides (ilmenite and/or Ti-magnetite?) now mostly altered to leucoxene. There are numerous small rounded quartz blebs (~5%, vesicles?), mostly containing splashes of chalcopyrite (~1% of the rock). The dolerite is quite fine-grained (<1 mm) and non-porphyrific. There is some weak lamination defined by grain size variation, but no obvious metamorphic foliation. The dolerite adjacent to the lode was only identified after petrological studies were undertaken. This may indicate that dolerite dykes may also be associated with other copper deposits along the belt, but have not yet been recognised in the field.

The presence of allanite in quartz clasts suggests that these formed in underlying rocks, perhaps granites, skarns or relatively high-grade metamorphic rocks (not otherwise preserved in the lode).

Structurally all the copper deposits occur along zones of weakness such as kink bands, pre-existing faults and shear zones, and perhaps axial planes of folds. The copper mineralisation commonly occurs as thin, rich veins on the selvages to massive, barren quartz blows.

All copper lodes are associated with high aeromagnetic anomalies. The source and depth of the anomalies are not fully understood.

3.4 Lead-zinc

There is only one known lead-zinc deposit (Silver Reward anomaly) within the area (331 586 mE; 5 396 846 mN, MGA94). Based on surface expression, the lode is small and only appears to be about 600 mm wide and a couple of metres long with an unknown depth. The workings include a small open cut (a few metres in diameter) and a shaft sunk on the vein which is currently filled with water.

The main sulphide mineral is galena, which occurs as disseminated to massive ($\leq 90\%$) patches in a quartz-siderite-chlorite-siltstone breccia. The galena is coarse grained and shows an infiltration, intergranular or cement texture in the breccia, or rarely exhibits bladed forms. Other sulphide minerals include minor patches of pyrite (<5%, mostly in siltstone clasts), traces of chalcopyrite and traces of fine-grained pyrite/marcasite aggregates after pyrrhotite (mostly as inclusions in galena). No sphalerite or silver minerals were detected. The sulphide minerals are almost unaltered, except for supergene limonite (goethite and lepidocrocite) and trace sulphur. The breccia contains abundant coarse-grained quartz and siderite blebs, the quartz showing a mosaic recrystallised texture indicating it is pre-deformational. Traces of chlorite, muscovite and biotite occur in the quartz.

Rare earth-rich phosphate mineralisation (\pm Th, U) is locally disseminated in some chloritic selvages between the siltstone and siderite (Bottrill et al., in prep.).

Zinc is surprisingly low. Silver is locally high in the Pb-rich samples (up to 680 g/t). Both ore samples from Silver Reward are anomalous in gold, containing 0.2 and 0.9 g/t Au.

Rare earth, uranium and thorium analyses on the samples collected are not particularly high, despite some samples being locally rich in monazite, xenotime, and uranium and thorium

minerals. This is due to the erratic and poorly understood distribution of these minerals (Bottrill et al., in prep.).

The Silver Reward prospect is associated with a very strong aeromagnetic anomaly occurring along the copper belt from north of Balfour to the Interview River. The source and nature of the anomaly are not known, but may relate to the ilmenite disseminated in the siltstone (see above).

4.0 Exploration Philosophy

Torque Mining Ltd is targeting W, Sn, Mo, Bi, Au, Ag, Cu, Pb, Zn and rare earths and base metal mineralization.

Early prospecting and previous exploration has located high grade W and Cu mineralization in structural settings.

In particular Torque is interested in determining whether there are economic quantities of W in the Cooneys/Kennys workings.

5.0 Previous Exploration

5.1 Introduction

Apart from regional surveys (aeromagnetics, stream sediments) and some reconnaissance ground magnetic traverses and rock sampling in the Chimney Creek area, previous exploration over the area covered by EL 6/2011 has focused on two areas in particular, these being (1) the tungsten workings along the eastern margin of the Interview River granite; and (2) the copper and lead-zinc workings of the Cooper and Silver Reward prospects further east.

Excellent summaries of historical exploration have been produced by Bacon (1992), largely paraphrased by Vaarwerk (2008), for the tungsten workings, and by Bottrill (2011) for the Copper and Silver Reward workings.

The following summaries quote extensively from Vaarwerk (2008) and Bottrill (2011). Bell (1972) also provides detail not included in these other references.

5.2 Interview River area – Cooneys, Kennys, and Tungsten Reward Prospects

5.2.1 Early Prospecting 1890s-1950s

Small quantities of alluvial tin were discovered in the area in the 1890s. Wolfram was discovered in 1891.

A Reward Lease (5119M) for wolfram of 80 acres (32.4 hectares) at Interview River was granted to Alfred Foster on 7 July 1891. This lease was transferred to Adolphus Oppelheimer on 31 July 1893, for a short time small quantities of ore were won from trenches cut to expose the thin mineralised veins.

The first Government inspection of the field was by G. Waller in 1901 (Waller, 1902), who reported that while a little activity had taken place on the Reward Lease and both to the north and south of it, the field was not at the time of his visit being worked. However leases were held and marked out indicating some interest in the area.

On the northern most lease (4943-93M) Waller noted a good deal of vein quartz had been obtained about ten years earlier (i.e. around 1890). This area is now known as "Kenny's Prospect". South of this, Waller saw that "an old shaft had been sunk" (this is on the Reward Lease, shown as Lease 5119M. The mullock heap around this old shaft had been picked over and the greater part of the wolfram had been taken away.

South of this again were some 1.5m deep trenches (on 5121) and to the northeast of these trenches one 15m long trench - filled in at the time of Waller's visit, from which one ton of ore had been won. Nearby was a shaft, 2.7m deep and full of water, dug on a vein containing wolframite following the discovery of this particular vein in March. This shaft had been deepened by 1943 to 4.3 metres and had a 15 centimetre wide vein at the bottom. This work is in the area known as "Cooney's Workings".

The field was visited by the Assistant Government Geologist, L. Keith Ward, in 1910. Little work had been since Waller's 1901 visit. Shortly after Ward's return a fresh discovery of wolfram in the western portion of Lease 5120M was reported. This is in the area now known as Kenny's Prospect.

The field then received little attention for many years. Quentin Henderson visited the site in 1935 (Henderson, 1935) and noted nothing has been done since Ward's 1910 visit.

During the Second World War the area attracted attention due to the strategic importance of tungsten. Henderson visited Kenny's and Cooney's in 1943. Kenny's workings had some 120m in total of trenches exposing veins of about 25cm wide bearing wolfram. A 15m long trench was dug south of the creek and a shaft 6-7.5m deep was found just to the north of the creek, along with a few more trenches. Henderson also located two shafts on the Reward Lease (5119M) and a number of trenches.

By 1937, the southern workings – Cooney's located on 5121M—included three shafts on six parallel wolfram veins (10-30 centimetres wide) which had been exposed in a series of hand cut trenches.

A trial parcel of ore was reported to be dispatched but did not fetch a favourable price. Henderson concluded that small scale mining would be possible and recommended trenches be dug every 15m to establish the position of the narrow ore veins.

5.2.2 1953 – 1954 Interview River Wolfram Syndicate

The Interview River Wolfram Syndicate was formed in 1953 to undertake work in the area. A track was put in from Pieman Heads to the Interview River; bridges were built crossing the Rocky, Ford and Interview Rivers.

Exploratory work over a period of about two years consisted of sinking a 12m deep shaft and digging more trenches. The price of tungsten crashed in 1954 and work stopped.

5.2.3 1970 - 1972 ACI -Renison -Mt Lyell Joint Venture

In September 1970, ACI Ltd and Renison Ltd simultaneously applied for a 460 square mile (700 km²) exploration licence over an area extending from Sandy Cape to Granville Harbour. Each company was awarded half the area, and exploration proceeded over both licences (EL49/70, EL48/70) by a joint venture partnership between ACI Ltd, Renison Ltd, Mt Lyell and Consolidated Goldfields Australia. An aeromagnetic survey was completed over most of the licence, the Interview River region grids were laid out, soil and stream sediment samples taken, and the old dumps sampled.

This data has been digitally captured with streams shown on figures 5.1 (WO3) and 5.2 (Sn) and soils on figures 5.3 (WO3), 5.4 (Sn) and 5.5 (As).

The aeromagnetic survey was flown at 2700 feet on 0.4 mile line spacing. A considerable number of anomalies were outlined but for reasons of access and cost only the nearest the coast were followed up on the ground. Overall results were discouraging, leading the companies to conclude that the possibility of developing an economic open cut mining operation for tin and tungsten very unlikely. Floodwaters destroyed the camp in April 1971 and both licences were given up in November 1972 after EL48/70 was reduced to 39 square miles around the Pieman Heads area.

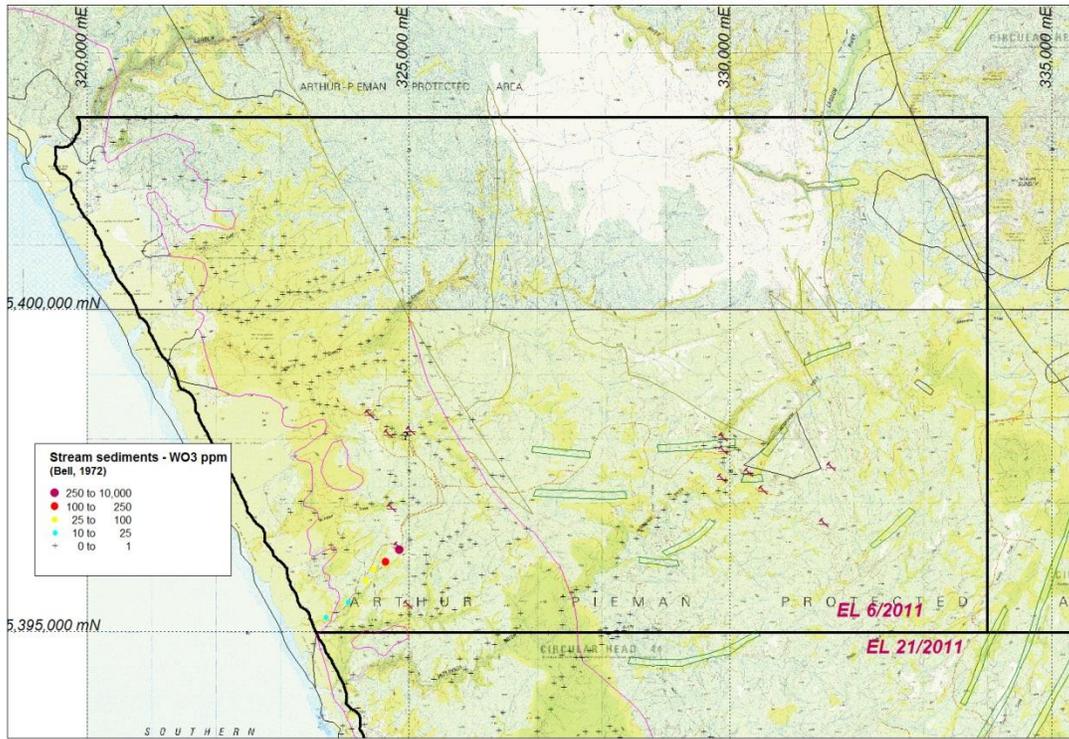


Figure 5.1: ACI-Renison-Mt Lyell JV stream sediment survey – WO3

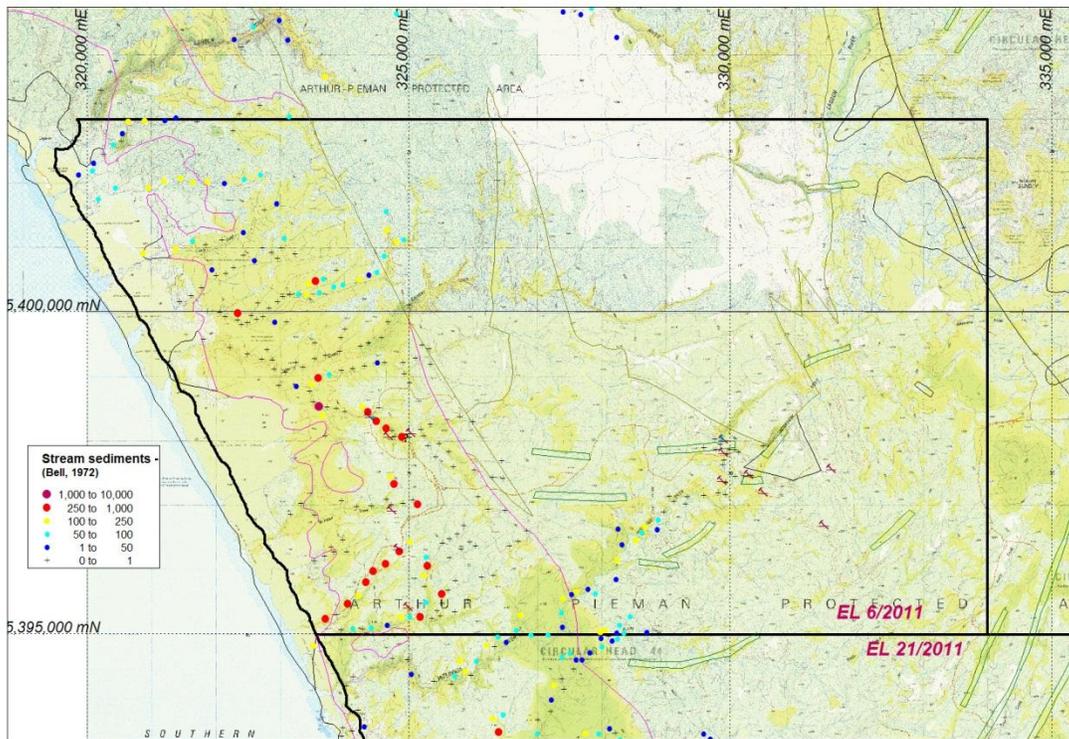


Figure 5.2: ACI-Renison-Mt Lyell JV stream sediment survey – Sn

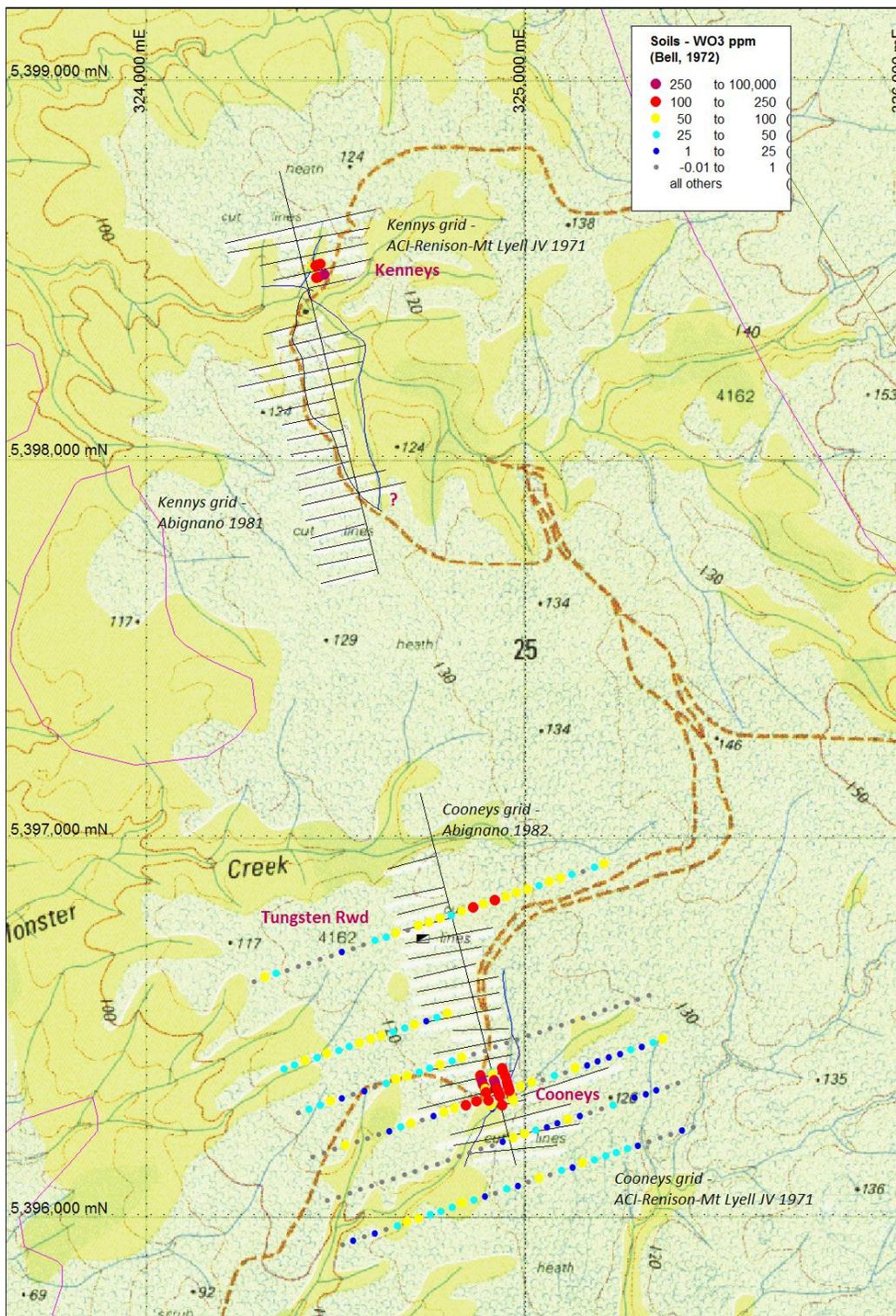


Figure 5.3: ACI-Renison-Mt Lyell JV soil survey – WO3

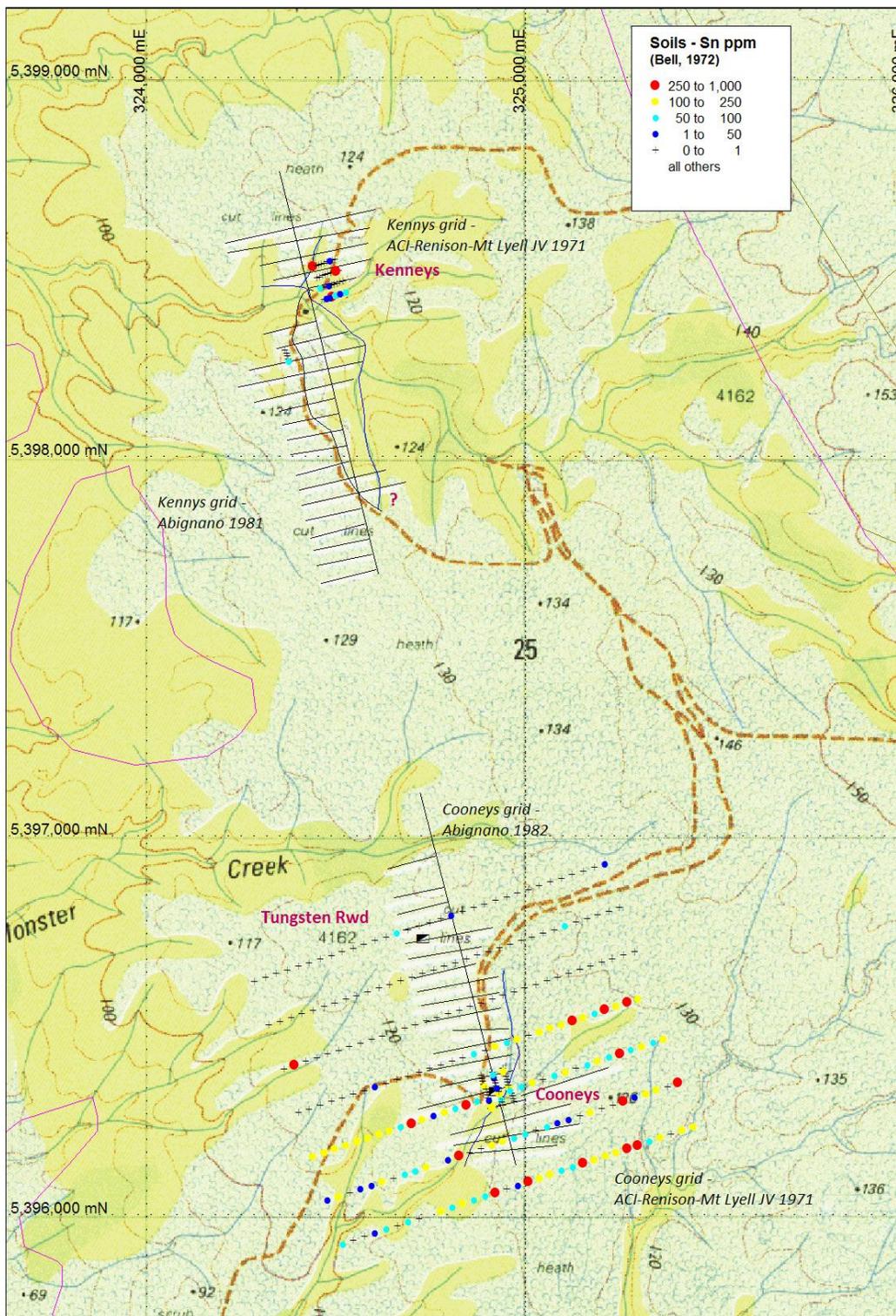


Figure 5.4: ACI-Renison-Mt Lyell JV soil survey – Sn

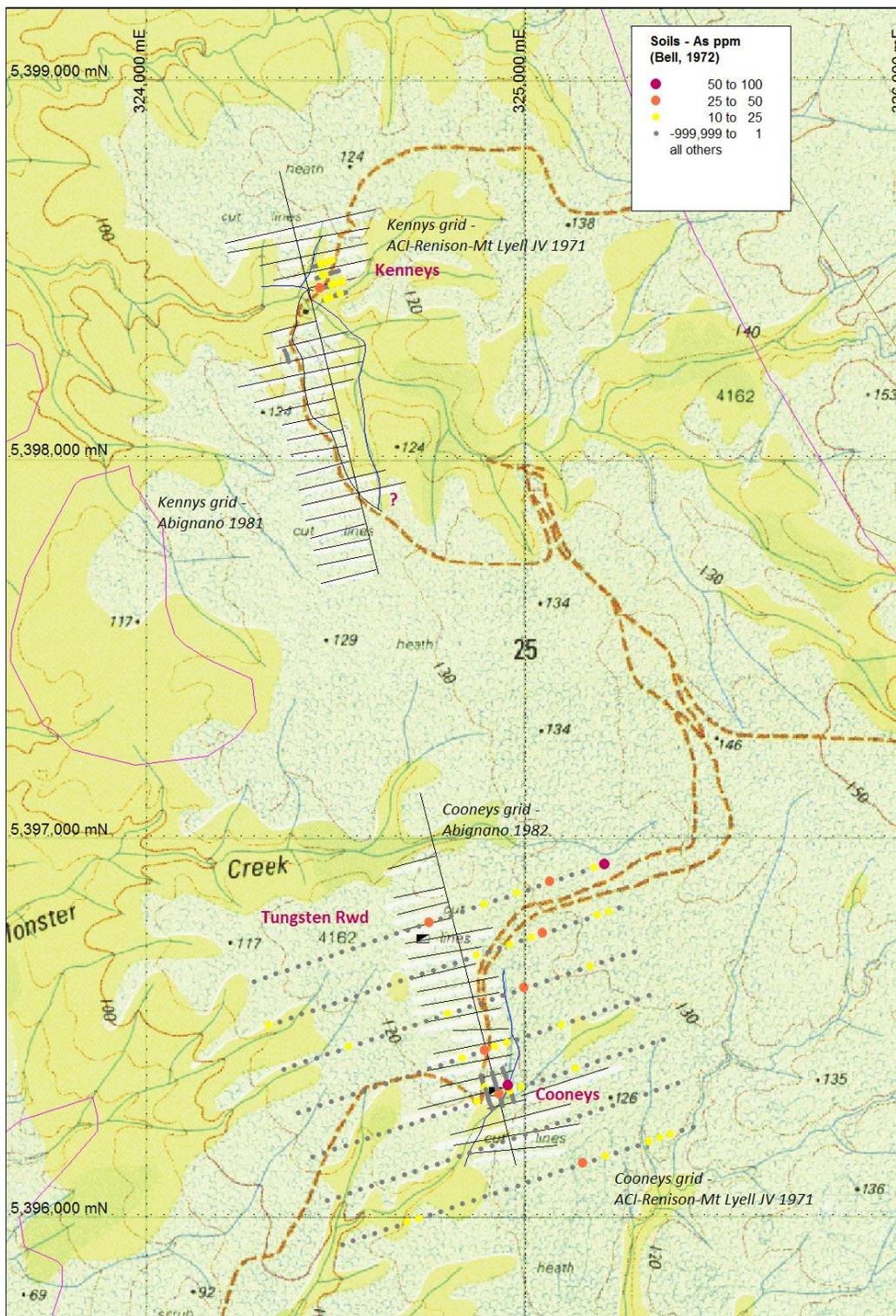


Figure 5.5: ACI-Renison-Mt Lyell JV soil – As

5.2.4 1973 -1980 Interview River Mining and Associates Pty Ltd

In 1973, Mr M. P. Munday pegged exploration licence EL1/73 which was eventually held by Interview River Mining and Associates Pty Ltd.

Dozer cuts were made near Cooney's Workings and some drilling was undertaken. The area was examined by Geopeko in 1976 who concluded that the prospect had little economic potential as the tungsten was too irregular and too sparse.

In 1978, Mr M. P. Munday, his son, and two other men, uncovered various veins and opened an adit 35m south of Kenny's Shaft, following a 40cm wide vein for ten metres. Work initially stopped when the adit reached a fracture plane, striking 320°. The mineralised vein was offset, and although the adit was extended to 25.5 metres, the vein was not rediscovered. Some three tonnes of wolfram ore was produced. Mining equipment was acquired and taken to the site, including a compressor, a jaw crusher, roll table, and a magnetic separator.

Later in 1978, M. P. Munday and D. Holness applied for three mining leases (3M/78, 35M/78 and 19M/78). These were granted and transferred to Interview River Mining Associates Pty Ltd.

In November 1978, the Syndicate made application to the Tasmanian Department of Planning and Development for a Government guarantee over a proposed bank loan to facilitate working the deposit. To help in assessing this request, Department of Mines geologist P. L. F. Collins visited the workings in January 1979. Collins reported that the major prospect was at Kenny's Workings; old trenches and a shaft could be seen at Cooney's and trenching had been done at two places in between. However each of these four prospects had an entirely different small vein system and there was no evidence to indicate continuity between the four sets. At Kenny's Workings a number of trenches up to 2.5 metres deep, 5 metres long and 1.5 metres wide were seen, along with the adit, (25.5 metres in length). Collins concluded that underground mining would not be feasible because of the irregular nature of the veins, the lack of proven depth extensions of the veins, and the capital expense involved in such a remote area. The Syndicate was contemplating crushing the ore and sluicing to obtain a concentrate, but Collins envisaged problems with a water supply during dry periods. Transporting the ore would also have been problematical.

Air transport, both light plane and helicopter was considered. Road transport was difficult, the coastal route was unsuited to any regular access, and the cost of constructing an access road from Corinna would be prohibitive.

Production from this phase of activity was confined to two parcels of ore sent for assay. Exploration Licence EL1/73 expired on 11 July 1980.

5.2.5 1981-1989 Abignano Constructions

EL1/73 was transferred to Abignano Constructions in 1981 and a new exploration licence - EL 13/81 - was taken out surrounding the leases.

Access to the site was still a problem therefore a study into a route (Stephenson Maunsell & Partners 1981) to the workings was completed, however the road was never constructed.

In 1981, a series of backhoe trenches was dug at intervals of 40m from Kenny's Workings in the north to Cooney's Workings in the south. All occurrences of mineralised veins were mapped. An adit at Kenny's Workings was re-timbered and extended. Numerous samples were taken and assayed. The vein system was estimated (by Gouge and Brink 1982) to extend over a distance of 2.5km and assumed to have depth extents of 200m. On this basis the area was estimated to

contain, 1.6 million tonnes of ore, at a grade of 1.4% WO₃, giving (in 1982 dollars) a potential worth of \$125M, with \$1.7M estimated to prove (or otherwise) the target.

This resource is based upon the north-northeast veins at Kennys and Cooneys being part of a contiguous single vein offset on northwest striking sinistral faults, or continuous vein system with an en-echelon pattern. Average grades calculated by trenching along the strike of the lode had showed an average grade of 5% WO₃ and width of 0.3m mined over a 2.5km strike and 200m depth with 0.9m waste dilution on average.

Collins also made a rough calculation of the reserves of wolframite at Kenny's Prospect, his assumptions were:

- the vein (0.32 m thick) to be continuous over the full 215 m exposed in the trenches, not proven at the time;*
- grade of the vein assumed to be 3.8 mass% wolframite (2.9 mass% WO₃);*
- a mining thickness of 1.20 m (0.32 m vein, 0.88 m granite waste);*
- density of the vein 2.88 t/m³ and granite 2.67 t/m³ therefore Kenny's Prospect could yield 1473 t of ore (416 tonnes vein, 1057 tonnes granite).*

Exploration licence EL 13/81 was relinquished in November 1982.

Another licence EL64/83 was taken out over the same ground in 1983 by Abignano Constructions P/L.

Metallurgical test work (Lanyon 1983) commissioned by Abignano concluded;

- The sample contained 0.74% WO₃, 0.06% As and less than 0.01% tin.*
- The tungsten was present as wolframite and also scheelite.*
- Heavy liquid separation produced a concentrate containing 93.7% of the tungsten at a grade of 42.2% WO₃.*
- The tungsten minerals present were coarse and well-suited to primary concentration by gravity means.*
- The upgrading of a primary concentrate to sales grade is likely to be a complex process. The presence of scheelite limits the extent to which high intensity magnetic separation can be used.*

In December 1984, two diamond drill holes were completed (Brink 1985a). Three drill sites were prepared at 200 meter intervals at the Kenny's Adit vein. Diamond drill holes (NQ) were drilled at 45° declination at right angles to the vein strike and aimed at intersecting the veins between 40 and 50 meters vertically below the surface. Only two holes were completed; serious breakdown of the rig prevented drilling of the third. INT001 was drilled to 71.0m and INT002 to 72.52m.

Results are tabulated in Table 5.1.

Hole_ID	sample_id	from m	to m	depth m	Au g/t	Sn %	WO3 %	Mo %	Cu_ %
DDH1	1	43	44.15	1.15	0.08	0.04	0.04	0.02	0.01
DDH1	2	44.15	46.63	2.48	0.13	0.03	0.08	0.02	0.003
DDH1	3	46.63	48.63	2	0.07	0.02	0.04	0.02	0.002
DDH1	11	48.63	50	1.37	na	na	na	na	na
DDH1	12	50	52	2	na	na	na	na	na
DDH1	13	52	54	2	na	na	na	na	na
DDH1	14	54	56	2	na	na	na	na	na
DDH1	15	56	58	2	na	na	na	na	na
DDH1	16	58	59	1	na	na	na	na	na
DDH1	4	59	59.8	0.8	0.04	0.04	0.07	0.01	0.098
DDH1	5	59.8	61.4	1.6	0.04	0.03	0.06	0.02	0.002
DDH1	6	61.4	63.66	2.26	0.01	0.03	0.08	0.01	0.005
DDH1	7	63.66	64.8	1.14	<0.01	0.03	0.02	0.01	0.003
DDH1	8	64.8	67.34	2.54	0.06	0.03	0.07	0.02	0.003
DDH1	9	67.34	69.17	1.83	0.06	0.03	0.08	0.03	0.003
DDH1	10	69.17	71	1.83	0.03	0.03	0.08	0.04	0.004
DDH2	1	51.31	52.1	0.79	0.02	0.05	0.05	0.01	0.07
DDH2	2	58.6	59.33	0.73	0.02	0.03	0.42	0.01	0.03
DDH2	3	59.33	61.25	1.92	0.03	0.04	0.06	0.02	0.01
DDH2	4	53	53.3	0.3	<0.01	0.03	0.03	0.02	0.006
DDH2	5	53.3	53.8	0.5	0.04	0.04	0.09	0.01	0.52
DDH2	6	53.8	54.83	1.03	0.01	0.05	0.05	0.02	0.03
DDH2	7	54.83	55.77	0.94	0.01	0.09	0.09	0.02	0.05
DDH2	8	55.77	56.71	0.94	0.02	0.05	0.06	0.02	0.08
DDH2	9	56.71	58.6	1.89	0.06	0.03	0.11	0.02	0.01

Brink 1985b concluded most of the sampled and analysed core can be regarded as being mineralised, but apart from sample 2 of INT002 (DDH 2), all must be considered as sub economic, given current (1985) commodity prices. The overall low order of the assays resulted in the decision to defer further exploration activities. However, the drilling indicated the continuation of the mineralised quartz reef at depth, as well as a pervasive mineralisation over considerable width. Brink also commented that, if and when tungsten prices attain more favourable levels, serious consideration may be given to investigating the prospect as a potential low grade, large volume open-cut target (Mt. Carbine tungsten ore grades about 0.1% WO3 and is being mined commercially).

Brink continued saying “some of the gold values are in the significant category and also deserve further attention.

The lease lapsed in January 1987 and the three mining leases were forfeited in April 1989.

5.2.6 2007-2009 Stonehenge Metals Ltd

A new exploration lease, EL12/2007, was granted to Stonehenge Metals Ltd in 2007 *“in order to access the potential of the high grade tungsten deposits and elevated copper levels that had been reported by previous explorers.”* (Vaarwerk 2008)

The company undertook a literature and digital data review of the area but relinquished the lease in 2009 due to the remote location of the tenement and the area’s environmental value.

5.3 Copper Reward and Silver Reward Workings

5.3.1 Early Prospecting

The Copper Reward and associated workings were probably commenced about 1900, at the same time as initial development of the Interview River tin-tungsten workings. The Silver Reward “vein” was discovered about 1910, with minimal subsequent development.

“There is no recorded production from the area, and dumps of rich ore are still in evidence at the collars of both the Copper Reward and Silver Reward Shafts. Ward (1911), in discussing the Copper Reward mine, records that “from these workings some 12 tons of ore have been raised, and lie on the surface”. This relatively rich ore still lies beside the southern shaft at the Copper Reward workings, although it is now in a somewhat oxidized state”. (Bell 1972).

5.3.2 1970 -1972 ACI -Renison -Mt Lyell Joint Venture

Site reconnaissance investigations were carried out over a 25 hour period in late January 1972, using helicopter access. The following investigations were carried out:

“Old workings were located from the air and from subsequent ground traverses.

Geological examination and appraisal of workings, with both chip and bulk sampling of ore (in dumps or in situ) and associated rock types.

Stream sediments sampling of watercourses draining the area surrounding the Copper Reward Workings”

From these investigations the following conclusions were reached:

“The Copper Reward and Silver Reward workings have been developed in hydrothermal veins occurring within the Interview Siltstone, and a possible genetic relationship with the nearby Interview River Granite is noted. The veins have apparently carried relatively rich copper and silver-lead ore, although the strike extent of the veins does not appear to be great, and their exposed width is less than 0.6m. There exists a possibility that the veins may widen at depth, but there is certainly no surface geological evidence that mayor ore bodies outcrop in the area.

It is stressed that the area has been inadequately appraised geologically (because of time limitations), and that further prospecting may be warranted. However, the relative remoteness of the area, and the fact that the vein exposures are not particularly encouraging, suggests that the prospects should be given only a low priority” (Bell 1972).

5.3.3 1981-1989 Abignano Constructions

Abignano investigated the Copper Reward area, taking samples from the Reward shaft as well as from five other quartz-pyrite-haematite veins identified by mapping, *“which occupy major fracture zones striking between 2700 and 3000 magnetic. These veins are named Copper No. 1 to No. 5”* (Gouge 1982).

Gouge summarized findings as follows: "Sampling of the above veins indicates that the main copper mineralization is confined to the Copper Reward vein and Copper No. 1 vein. Of these two, only the Copper Reward vein has an ore grade which could be considered economic. However, the limited known strike length of 40 metres is insufficient to indicate a viable ore body. As the eastern extension of the vein is covered by alluvial flats, further exploration would involve geophysical prospecting or diamond drilling."

5.4 Chimney Creek area

In the Chimney Creek area, north-south trending aeromagnetic anomalies interpreted by C.G.G. (April 1971) were followed up by reconnaissance ground magnetometer traverses. Rock samples were taken as well as six hand-auger holes (Bell 1972).

The report came to the following conclusions:

"The Chimney Creek aeromagnetic anomaly appears to be related to differing magnetic susceptibilities of the Lagoon River Quartzite and the Interview Siltstone outcropping in the area, the anomaly coinciding with the latter unit.

The ground magnetometer peak coincides with laterite development within the Interview Siltstone, and is attributed to magnetite development, either

- 1) associated with a particular siltstone bed; or*
- 2) related to an unexposed Precambrian dolerite body.*

The former interpretation is favoured, as the dolerites developed elsewhere do not generally trend parallel to the bedding of the Precambrian sediments, nor do they have any obvious magnetic expression. Certainly, the geochemical data obtained do not suggest that the ground anomaly has any economic significance, particularly in so far as tin mineralization is concerned".

The area was explored further by CRA/Geopeko in 1983 (Weber 1983) as "a tin skarn target (due to its proximity to the granite) and as a base metal target due to two anomalous lead geochemical results outlined by Weir (1982)" with 2 magnetometer traverses totaling 4000m and some rock and stream sample analysis.

Computer modeling of the magnetic traverse results suggested "the magnetic anomaly was due to changes in lithology or disseminated magnetite occurring within the Interview Siltstone sequence". The two stream geochemical results indicated by Weir were not explained and several rock samples and stream sediments collected showed only background geochemical values

The report continues as follows: "a fifty metre zone of goethite – limonite (ironstone) was found in a small wooded area approximately 500m east of the magnetic anomaly and 500m to the north of the northern traverse. This zone returned low geochemical values and is believed to be due to water leakage along a fault zone (Cameron 1980)".

The report recommended that no further work be undertaken in the area.

6.0 Exploration Completed November 2011 to November 2012

6.1 Introduction

No fieldwork was carried out during the first year of the licence. Work has focused on compiling, digitizing and appraising previous exploration.

6.2 Geophysics

Existing geophysical data was appraised and the better data enhanced and imaged by Phil Muir of Southern Mineral Exploration Geophysics. Images were produced of potassium, uranium, thorium, ternary and total count for radiometrics; total magnetic intensity, reduced to pole, 1st vertical derivative and 2nd vertical derivative for magnetics; and digital elevation model.

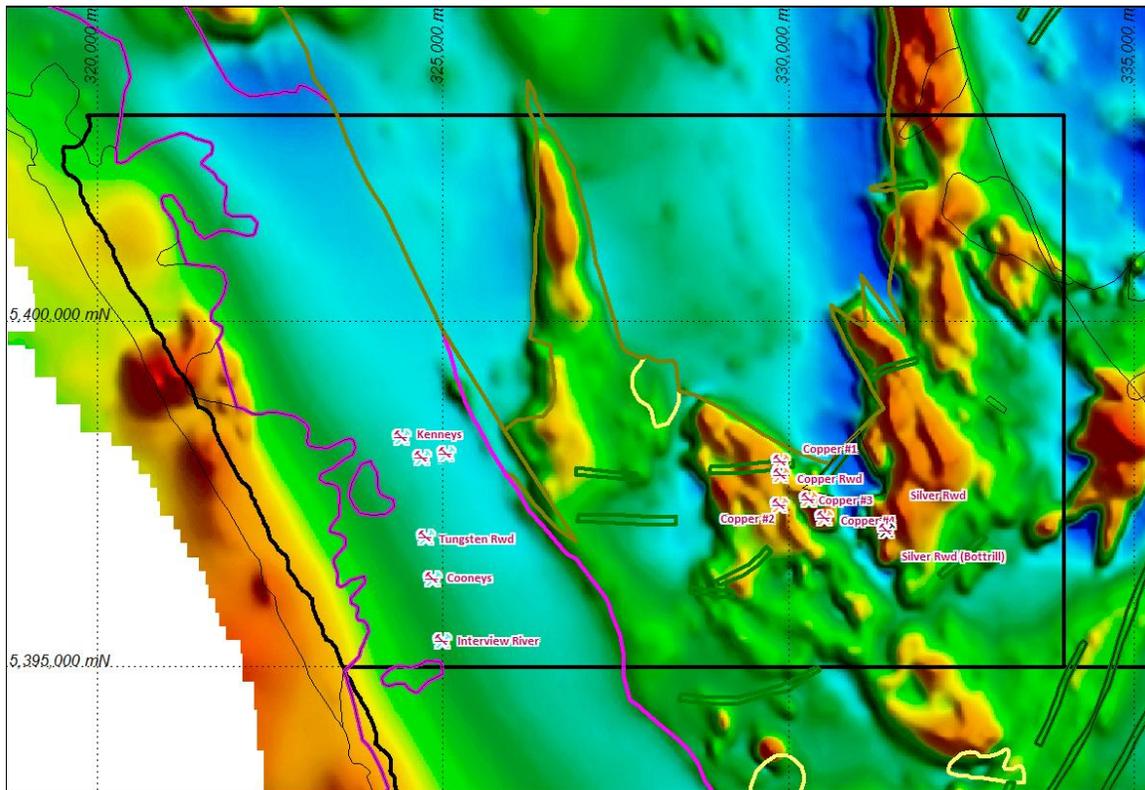


Figure 6.1: Magnetics - total magnetic intensity. This figure and following figures cover the same area as figure 3.1. Irregular lines are geology contacts taken from figure 3.1.

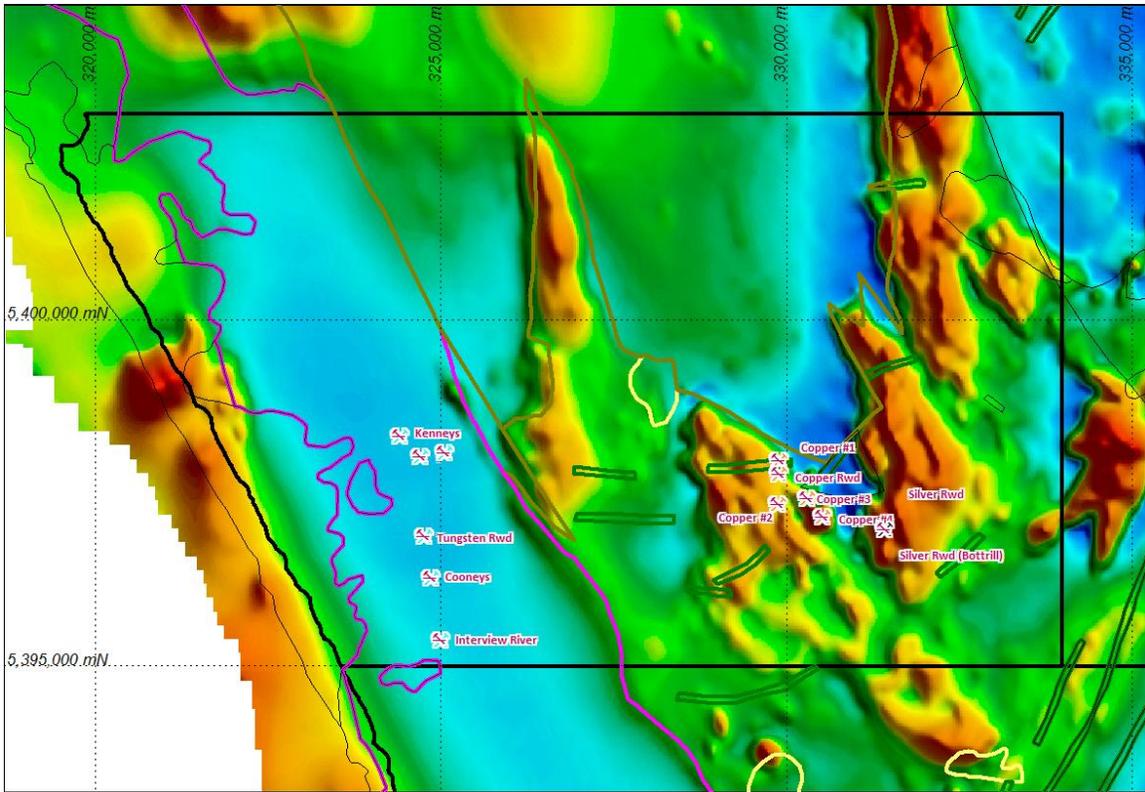


Figure 6.2: Magnetics - reduced to pole

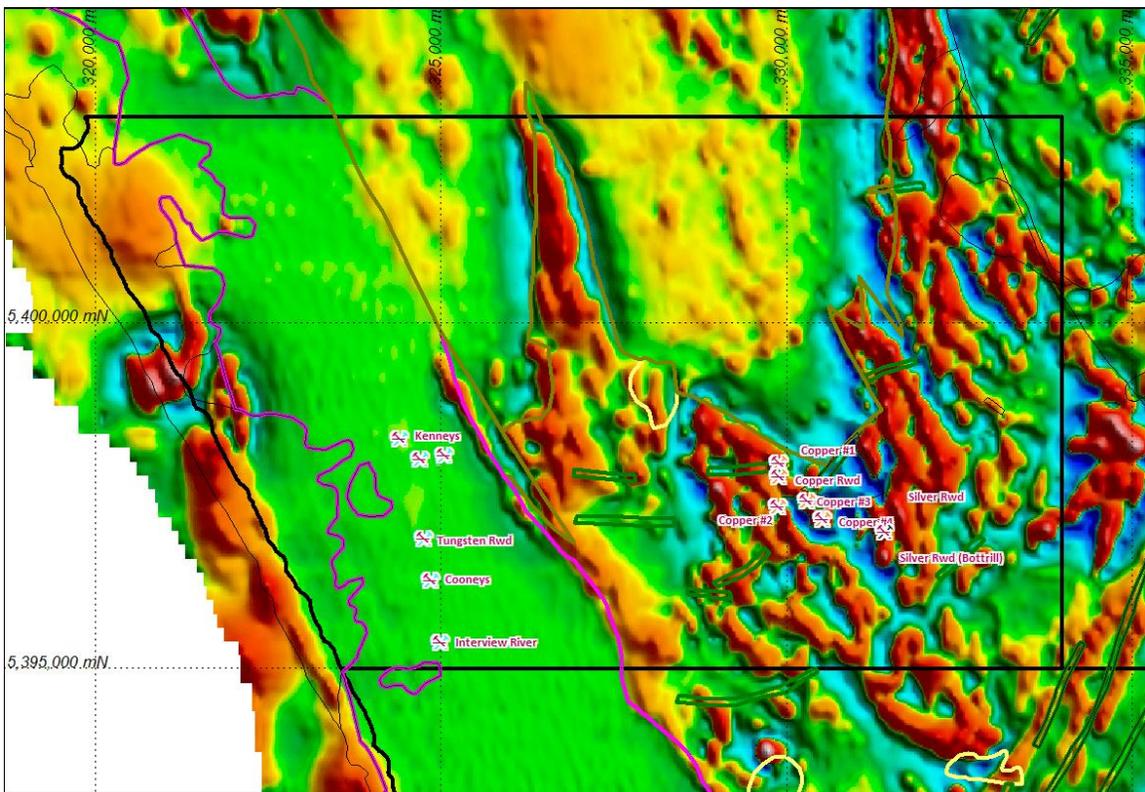


Figure 6.3: Magnetics - 1st vertical derivative

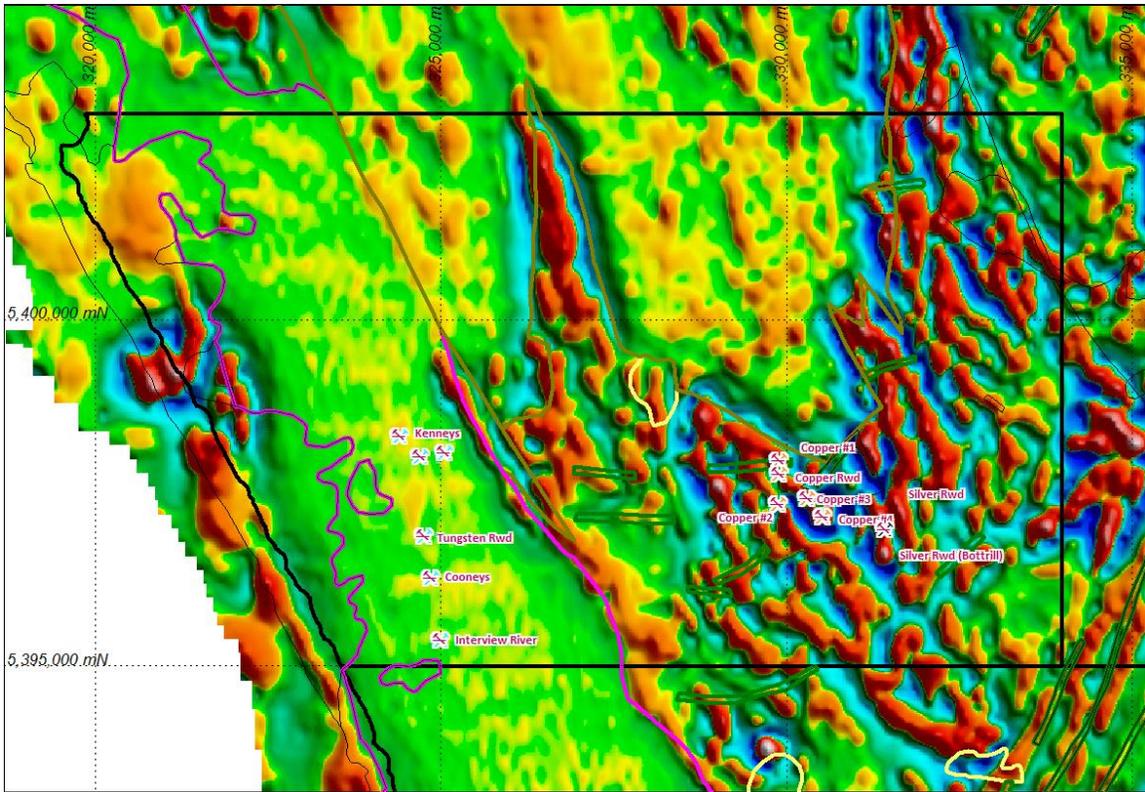


Figure 6.4: Magnetics - 2nd vertical derivative

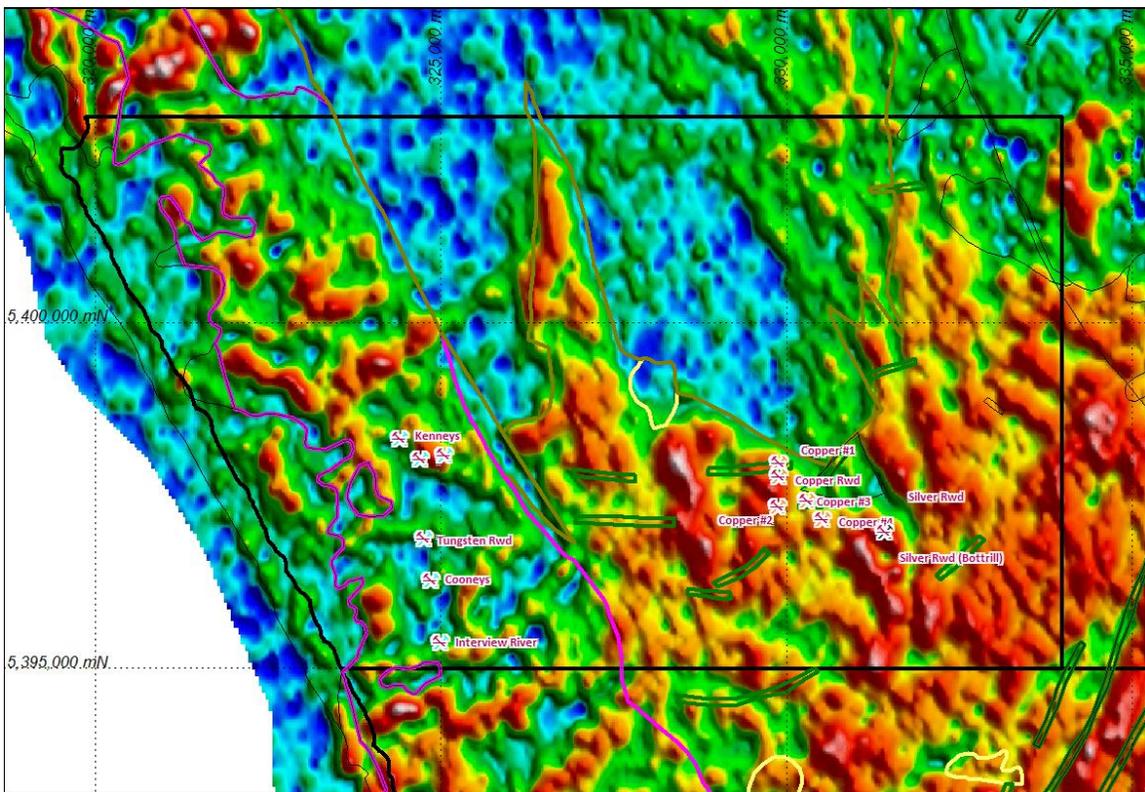


Figure 6.5: Radiometrics – potassium

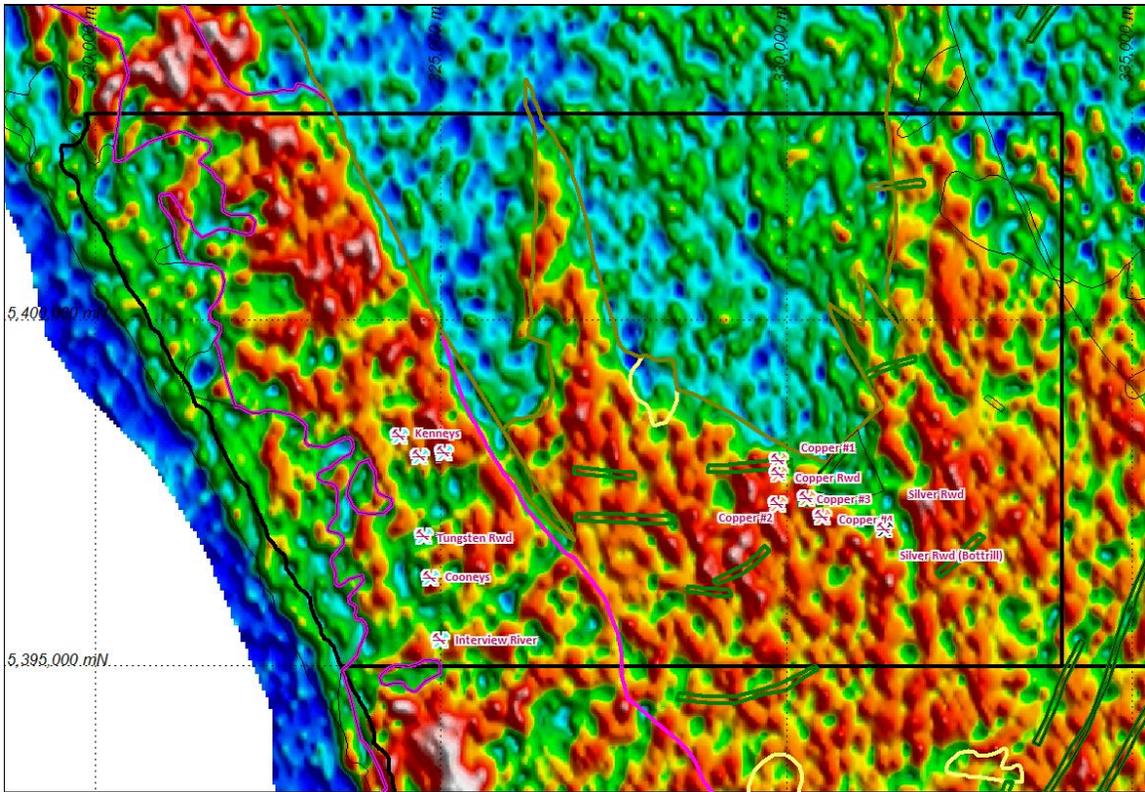


Figure 6.6: Radiometrics – uranium,

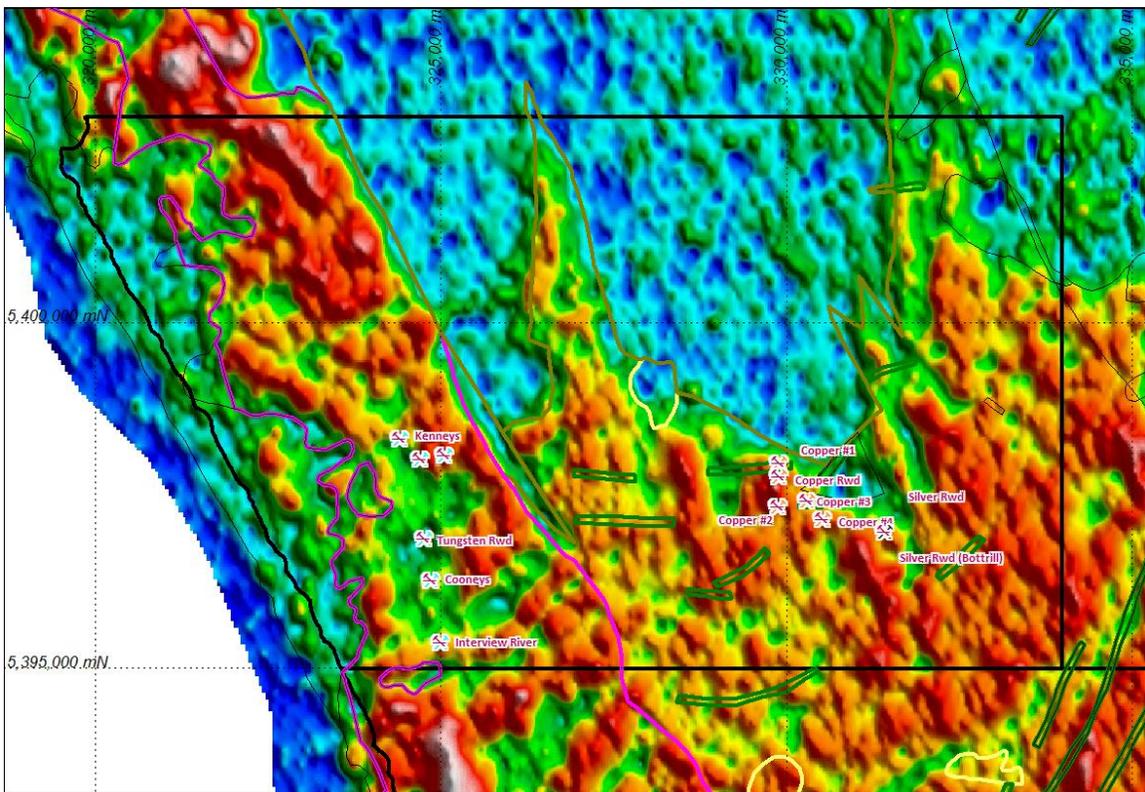


Figure 6.7: Radiometrics – thorium,

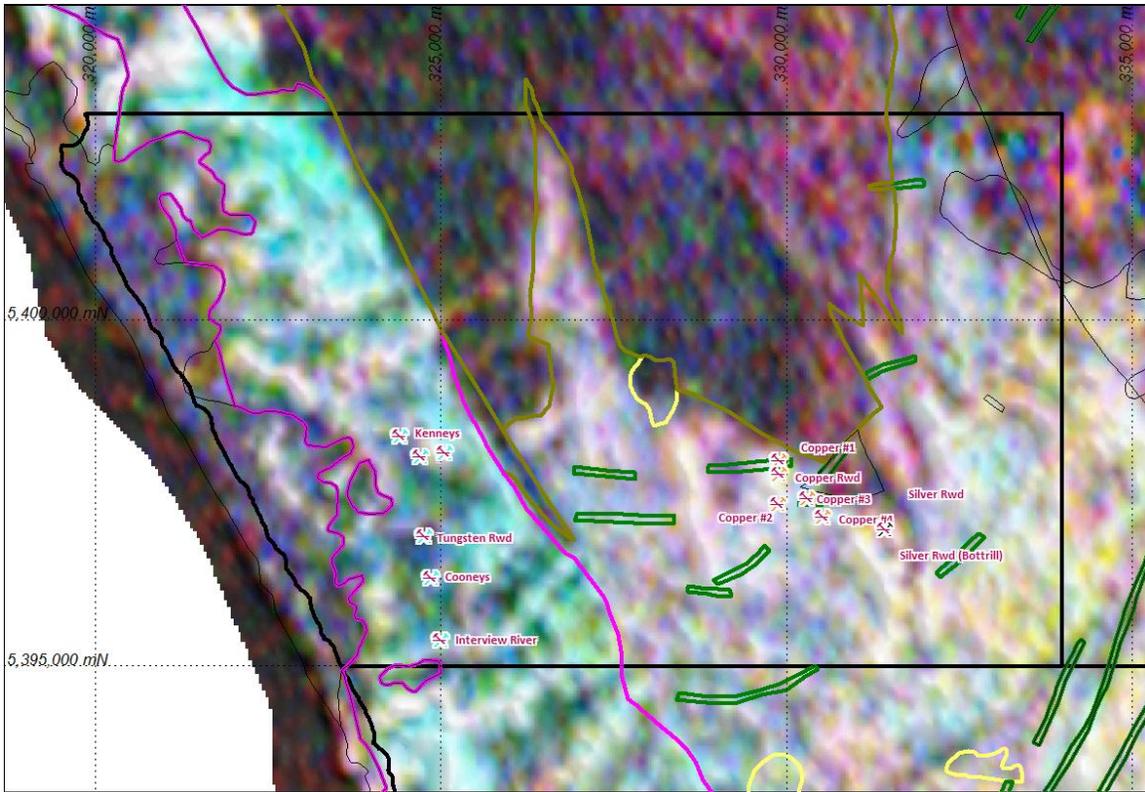


Figure 6.8: Radiometrics – ternary

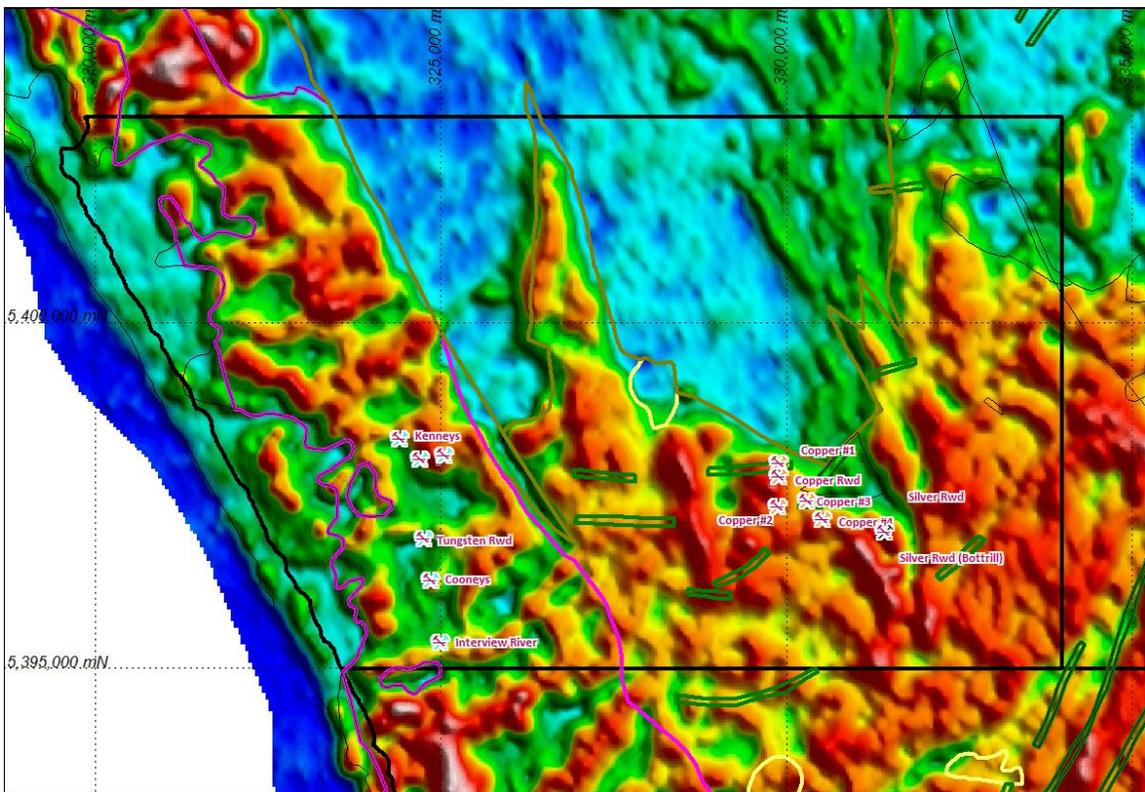


Figure 6.9: Radiometrics – total count

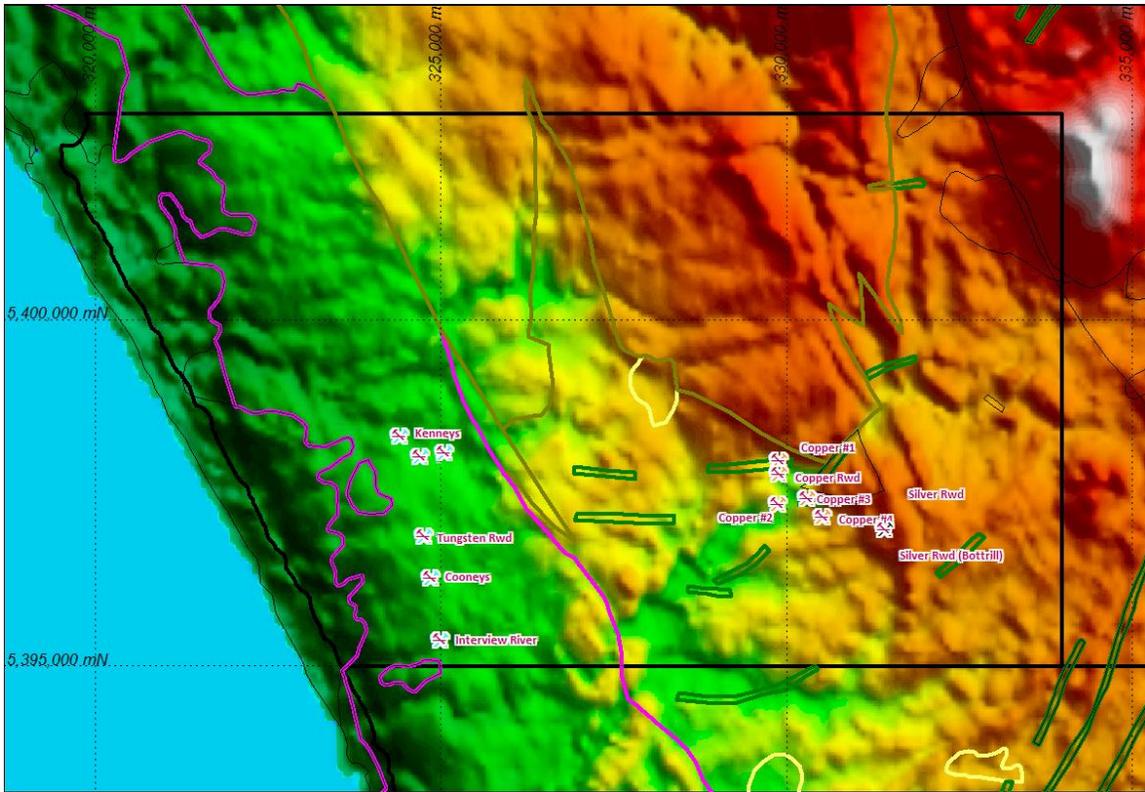


Figure 6.10: Digital elevation model

6.3 Historical Compilation

Work has focused on compiling and appraising previous exploration.

Digitised historical soils and streams are shown on figures 5.1 to 5.5.

Appraisal of historic exploration suggests there may be potential in the Cooneys-Kennys area for a small but high grade tungsten resource (Gouge and Brink, 1983).

The calculation of said resource is based on an average grade throughout of 5% WO₃, an average width of 0.3m over a strike of 2.5km and depth extent of 200m and with an average dilution of 0.9m. Yet mineralization is described as being in shoots of strike length of 5-10m and shoot separation of 30-35 metres between two shoots on both Kennys and Cooneys veins. Nonetheless the shoots do contain quite exceptional grades (Gouge and Brink, 1983).

7.0 Proposed work March 2012 to March 2013

Proposed work for the 2012-13 year will involve fieldwork. It is proposed that a reconnaissance soil geochemical survey be conducted between Cooneys and Kennys workings and extending to the north and south of these workings in order to determine whether there is continuity between the two prospects.

Attention will be given to confirming or otherwise the geological assumptions underpinning the rough resource calculation of Gouge and Brink (1983).

Existing drillcore will be assessed to see whether there are any other pathfinder elements which might prove useful.

Anomalies generated will be drill tested later in the year using the man-portable Poltock drill rig.

8.0 Environmental

There has been no environmental impact on the licence in its first year.

9.0 Expenditure

Geology	\$20,730
Geophysics	\$1,785
Administration	\$2,419
Total	\$24,934

10.0 References

- BACON, C.A. 1992. Notes on previous mining and exploration activities in the Interview River Area (Revision 1). Tasmanian Department of Mines – [UR1992_31]
- BELL, D. H. 1972. 1971-72 Annual report, EL48/70 and EL49/70, north western Tasmania. Consolidated Syndicate-ACI Ltd Joint Venture [TCR 71-876].
- BOTRILL, R.S., GREEN, G.R., TAHERI, J.2011. A ground-truthing survey in the Interview River area, northwest Tasmania. Tasmanian Geological Survey Record [UR2011_01]
- BRINK, G.B. 1985a. Progress report for the year of 1984 for EL 64/83. Abignano Limited. [TCR-85-2320]
- BRINK, G.B. 1985b. Progress report for the year of 1985 for EL 64/83. Abignano Limited. [TCR-85-2507]
- BROWN, S. G. 1976. Interview River tungsten and copper prospects. Inter-office memo, Geopeko Limited. [TCR 76-1161]
- CAREY, S. W. 1981 Notes to Accompany the photo-interpretation of the country between the Arthur and Pieman Rivers, Tasmania. Geopeko. [TCR 82-1753]
- C.G.G. (Compagne Generale de Geophysique) 1971 Interpretation Report for Consolidated Syndicate of the Queenstown Aeromagnetic Survey – ACI Ltd Joint Venture [TRC71-0754]
- COLLINS, P. L. F. 1982 An occurrence of ferritungstite at Interview River. Unpublished Report Department of Mines Tasmania 1982/01. [UR1982_01]
- GOUGE, P. 1982. The Interview River (Tas.) Tungsten/Tin and Copper Mineralisation Exploration Licence No. 13/81 (previously EL 1/73). Abignano Ltd [TCR82-1824]
- GOUGE, P. and BRINK, G.B. 1983. Progress Report for the Interview River Tungsten and Copper Mineralisation EL 13/81 (previously EL 1/73). Abignano Limited. [TCR 83-1971]
- GOUGE, P. and BRINK, G.B.1983. Progress Report April 1982 for the Interview River Tungsten and Copper Mineralisation EL 13/81 (previously EL 1/73). Abignano Limited. [TCR 83-2074]
- HENDERSON, Q. 1937. Report on Balfour and Interview River Tin Fields. Department of Mines Report [UR1935_008_19].
- HENDERSON, Q. 1943. Interview River wolfram deposits. Unpublished Report Department Mines Tasmania. [UR1943_146_151].
- LEAMAN, D. E. 1988. Regional Geophysical Review EL 27/87 for New Holland Mining N.L. [TCR 89-2911]
- NEWNHAM, L. A. 1972. Summary review of exploration projects completed on EL 48/70 and EL 49/70, western Tasmania, 1970-1972. Consolidated Syndicate-ACI Ltd Joint Venture [TCR 72-909].
- WALLER, G. A. 1902. Report on some wolfram sections near Pieman Heads. Rep. Secr. Mines Tasm. 1901-02:6-12. [OS_179]

- WARD, L. K. 1911. The Mount Balfour Mining Field. Bull. geol. Surv. Tasm.[GSB10]
- WEBER, G .B. 1983. Progress Report on EL1/77, Rocky Cape, Tasmania (Destination Creek – Interview Granite and Chimney Creek Areas. CRA Exploration Pty Ltd [TCR 83_2013]
- WEIR D. J. 1982. Rocky Cape E.L. 1/77 Lead Zinc Computer Study-Stream Sediments. CRA Exploration Pty Ltd, Geopeko Ltd [TCR 82_1801]