

TNG LIMITED

ENIGMA MINING LTD

TOMKINSON PROJECT

HISTORICAL EXPLORATION REPORT

EL 30359

Tenement	EL30359
Holder	TNG Limited
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Report Date	January 2016
Distribution	TNG Limited

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1. INTRODUCTION

The Tomkinson Project area is located in the Northern Territory approximately 60km to the NW of the historical Bootu Creek manganese deposits and 120km NW of Tennant creek. It is situated on the Helen Springs (SE510) 1:250,000 scale map sheet. Access is via the Stuart highway and then along station tracks and fence lines.

This review covers licence area EL30359 which along with EL 30348 makes up the Tomkinson Project. EL30359 is relatively unexplored but holds potential for base metal deposits within the Namerinni Group which is believed to be a stratigraphic equivalent of the McArthur Group.

EL30359 was granted on the 20/01/2015 and covers 213.69km² or 71 blocks (Figure 1).

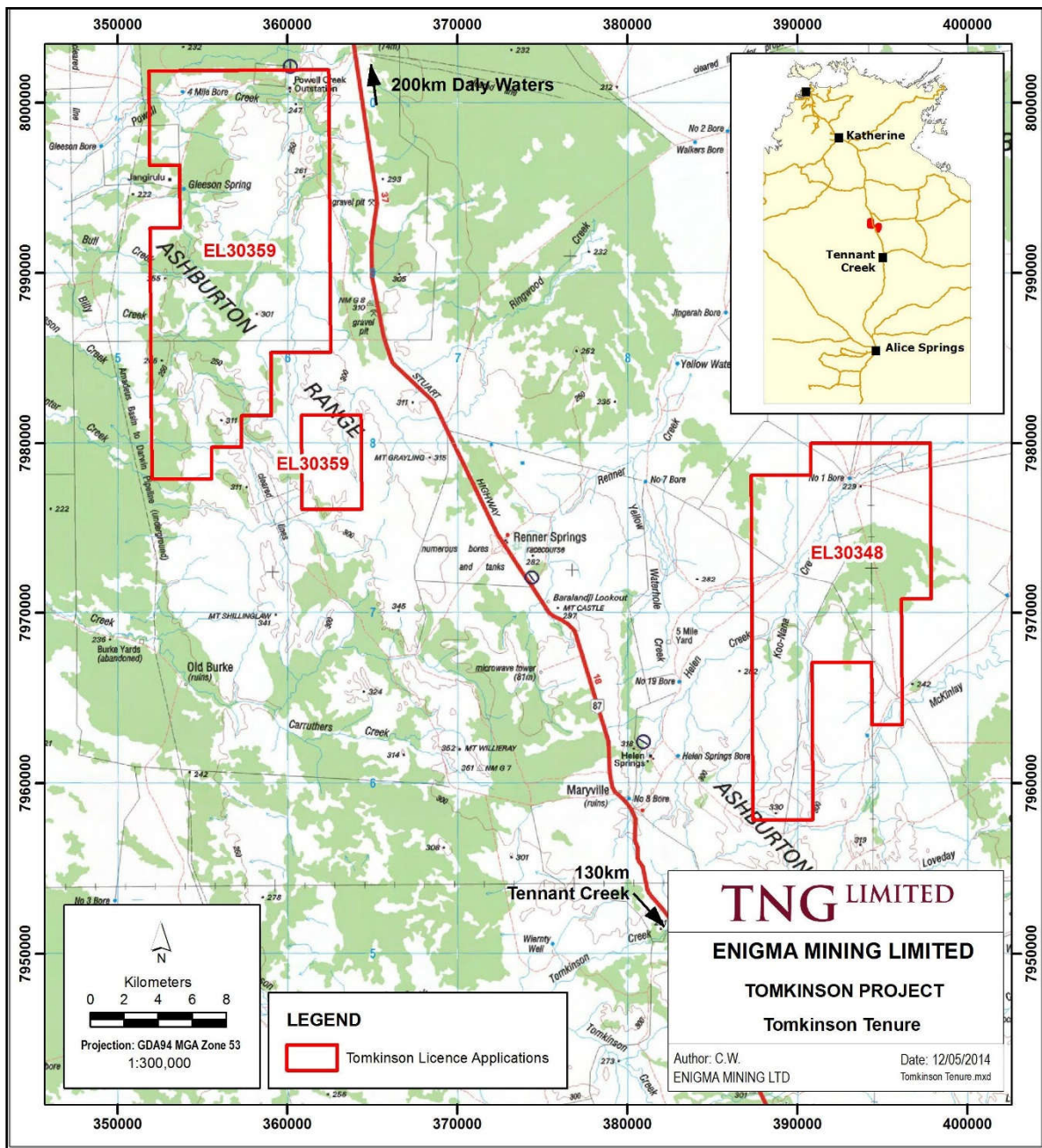


Figure 1: Location of EL30359 and the Tomkinson Project area.

2. REGIONAL GEOLOGY

The Tomkinson Province forms part of the Tennant Region. It ages between Mesoproterozoic (1400Ma) and Palaeoproterozoic (1780Ma) and contains unmetamorphosed and weakly deformed, predominantly shallow marine sedimentary rocks. It is likely to be continuous undercover with the McArthur and Birrindudu Basins (Figure 3) and has a thickness of at least 5km. In addition to hosting substantial manganese deposits, NNW trending growth faults in the area increase its potential for hosting stratiform sediment hosted Pb-Zn mineralisation (Hussey et al., 2001).

The Tomkinson Province lies in the northern part of the Tennant Region (Donnellan, 2013; Figure 2), which also includes the Warramunga and Davenport provinces. The Tomkinson Province comprises: (1) the Late Orosirin/Statherian Tomkinson Creek Group, which is unconformably overlain by (2) the Statherian Namerinni Group, and (3) the Mesoproterozoic Renner Group.

The Tomkinson Basin and Birrindudu Basin are correlated with the "greater" McArthur Super basin (Figure 3) by the Northern Territory Geological Survey (NTGS) (Close, 2014a,b). Within this, the Tomkinson Creek Group is correlated with the Redbank Package of the McArthur Basin and with the Hatches Creek Group of the Davenport Province. The Renner Group has been correlated with the Roper Group of the McArthur Basin (Donnellan, 2013). The group of particular interest to TNG is the Namerinni Group which has been correlated with the McArthur Group of the McArthur Basin (Figure 2 and Figure 3). The correlated McArthur basin is highly prospective for base metals in the Battern fault zone with mines such as HYC, Teena etc.

In addition to the potential and interest in the Namerinni group The Tomkinson creek group outcrops in northern Tennant Creek and southeastern Helen Springs. This group has historically had more focus and interest because it has hosted regional manganese deposits. The group is dominated by thick siliclastic-carbonate intervals that consists of four cycles of ridge-forming clastic sedimentary rocks, overlain by a recessive mixed siliclastic-carbonate which are represented in the Tomkinson Creek Group as the Hayward Creek Formation, Morphett Creek Formation, Short Range Sandstone and Attack Creek Formation and Bootu and Carmilly formations (Donnellan, 2013).

A recessive sequence of calcareous siltstone and stromatolitic dololutite (Attack Creek Formation) is present in the upper part of the group. Along the contact with the overlying predominately ridge-forming sandstone sequence (Bootu Formation) is a Fe-rich manganiferous horizon within dolomitic siltstone and sandstone (Eliyahu, 2007).

Manganese mineralisation is known from the Bootu Creek and the Renner Springs areas in Helen Springs. Deposits are hosted in the lower Bootu Creek Formation of the Tomkinson Creek Group, over approximately 24km strike length on the flanks of the the Bootu Syncline (Donnellan, 2013).

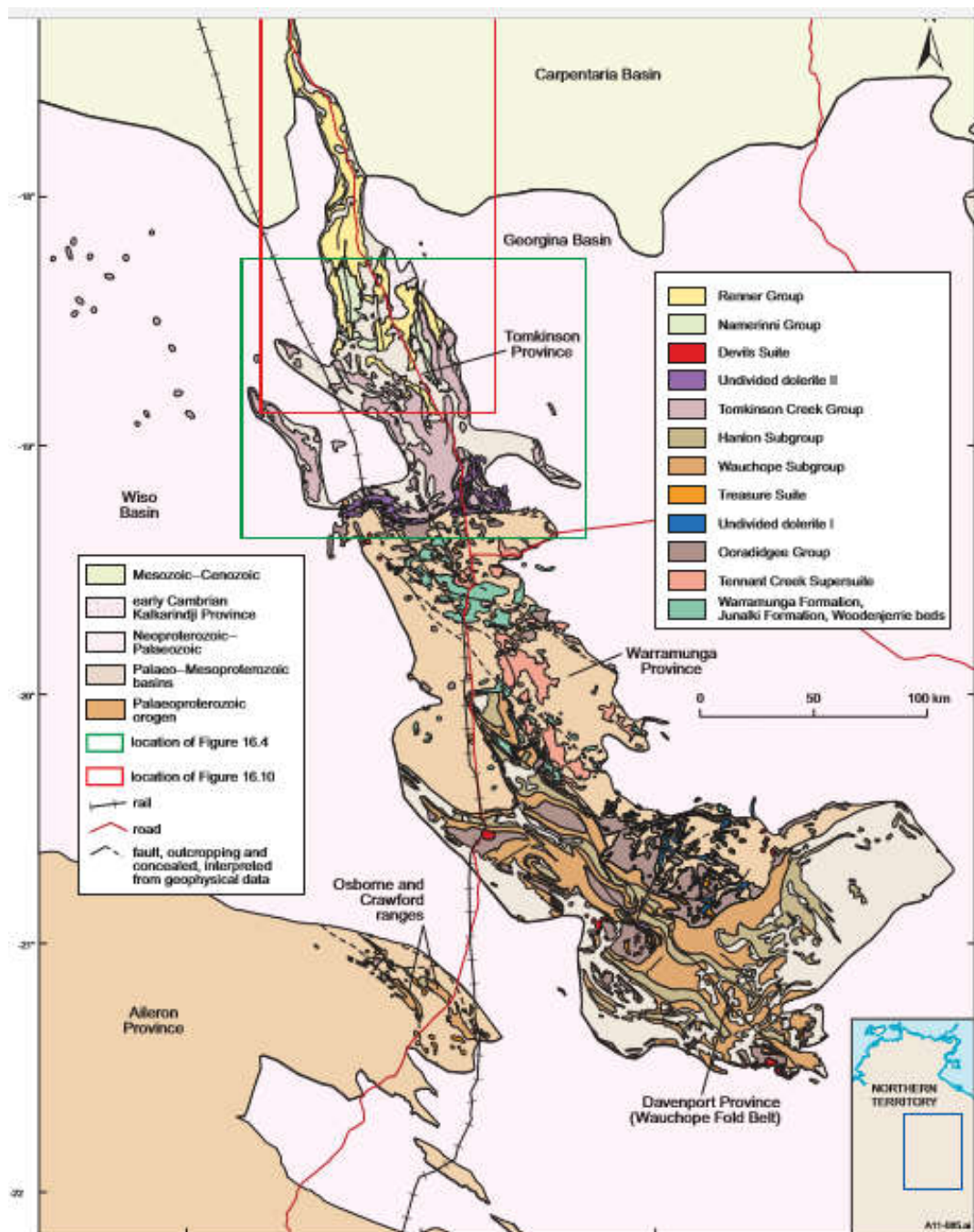
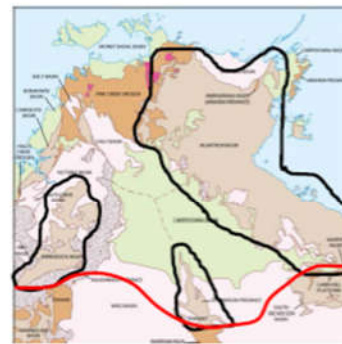


Figure 2: Geological map of Tennant Region (Donnellan, 2013)

The greater McArthur Basin

- Stratigraphic correlations with Birrindudu Basin and Tomkinson Province



Wilton Package equiv = Tijnuna Grp + Renner Grp

Favenc Package equiv = Wattle + Bullita Grps

Glyde Package equiv = Limbunya Grp + Namerinni Grp

Figure 3: Geological interpretation of the greater McArthur Basin and its correlation with the Birrindudu Basin and Tomkinson Province (Close, 2014a, b).

Despite the prospectivity and known resources, much of the McArthur Basin, particularly outside the Battern Fault zone, remains a Greenfields exploration province where there is limited past exploration and a lack of information on 3D basin architecture and links to apparent correlative successions in the Birrindudu Basin and Tomkinson Province have remained poorly understood (Close, 2014a, b).

Geological investigations undertaken by the NTGS in the mid-late 1990's resulted in the second edition of the Helen Springs 250K mapsheet being published in 2001 (Hussey, et al, 2001). The Tomkinson tenure (EL30348 and EL 30359) is shown in Figure 4 overlying the published geology.

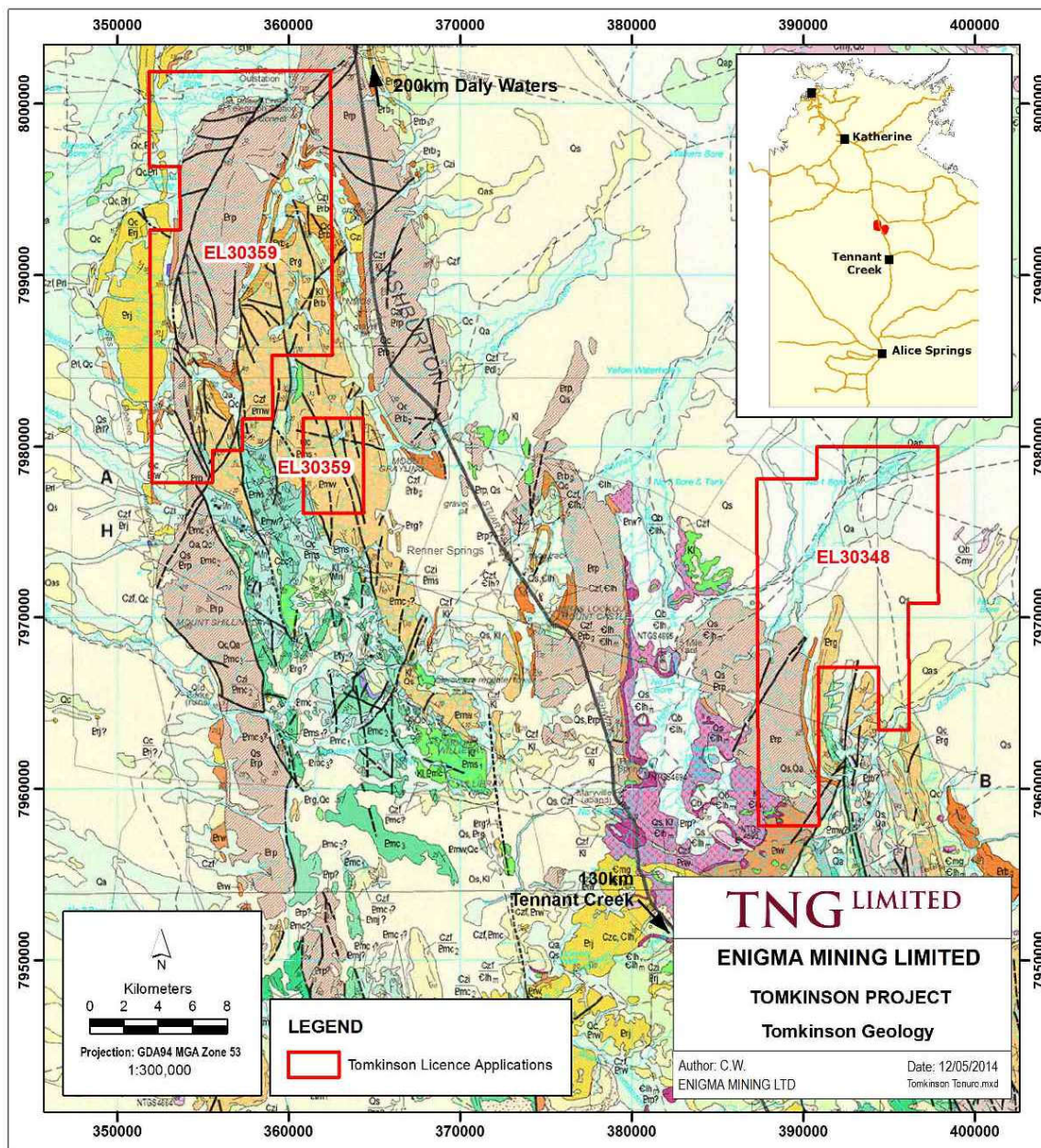


Figure 4: Tomkinson tenure on Helen Springs (SE5310) 250K published geology (Hussey, et al., 2001).

3. PREVIOUS EXPLORATION

Very little exploration has been conducted within the boundaries of EL 30359. The following companies have reports available outlining their exploration in the area. Many of these licences only overlap the tenure area by a few blocks on the extremities of the licence.

- 1981 – 1987: Key Resources Pty Ltd – EL 2835
- 1985 – 1987: Ashton Mining Limited – EL 4556
- 1988 – 1990: Lone Pine Gold Limited – EL 5744
- 1988 – 1990: Rosequartz Mining NL – EL 6333
- 1991 - 1993: MIM Exploration Pty Ltd – EL 7020
- 1996 – 1997: BHP Minerals Pty Ltd – EL 9022

2008 – 2013: OM Manganese Ltd – EL 26552, EL 26562

2011 – 2013: Crossland Diamonds Pty Ltd – EL 28198

3.1 Key Resources Pty Ltd

Key Resources held a number of licences in the Tomkinson area including EL 2835 which intersects a small part of the southern area of EL 30359 and covers the Carruthers Creek-Renner Springs-Helen Springs areas.

A significant amount of geochemical, geophysical and drilling work was undertaken between 1981 and 1988 but the licence was surrendered in 1988 with no significant results achieved.

A summary from Ward, 1988 is as follows:

- The project located an extension of the Carpentarian McArthur Basin.
- McArthur Group sediments were deposited in trough, similar to and parallel to the Batten Trough and bounded by syndepositional faults similar to the Emu Fault.
- The Barney Creek Formation, the host to the large HYC base metal deposit was identified.
- Low-grade HYC-style mineralisation was located indicating the possible existence of an HYC-style base metal deposit in the area.
- A similar tuffaceous event to the one associated with the HYC deposit was located lower in the sequence in the Tatology Sandstone-Tooganinie Formation.
- A gossanous iron manganese horizon carrying anomalous base metals and pathfinder elements has been located in the Tooganinie Formation near the top of the lower tuffaceous sequence.
- Deep leaching and silicification and cover of younger sediments severely hampers exploration.
- No ore-grade mineralisation has been intersected to date.

The Barney Creek Formation outcrops in the Hunter Creek area, close to EL 30359 and black bituminous shales crop out as severely leached white shales in the southern part of this area. Three diamond holes Hunter 1, 2, and 3DD all intersected black bituminous dolomitic tuffaceous sediments with minor pyrite and trace to weak base metal sulphides at several horizons. Isotope ratios taken from this mineralisation did not plot close to HYC values indicating the source of the mineralisation (if of HYC style) was distal (Ward, 1988).

Most work on EL 2835 was concentrated in the Willieray North/Willieray area, further south where two horizons (Barney Creek Formation and lower Tooganinie Formation) were highly prospective for shale-hosted base metal deposits (Ward, 1988).

It was reported that the base metal economic potential of the area was by no means exhausted but the programme was terminated when the licence expired in 1988.

3.2 Ashton Mining Limited

Ashton Mining conducted diamond exploration in the area during the mid-late 1980's. Four samples fall within the boundaries of EL 30359 (HEL061, 062, 80 and 83) though no significant results were returned.

3.3 Lone Pine Gold Limited

Exploration Licence 5744 was granted in March 1988 for a period of six years but was relinquished after only two years of tenure. The company was focussed on exploration for gold and preliminary work suggested that the area was prospective for gold as well as lead-zinc (Shields, 1989). Only the far northern portion of the licence intersected EL 30359. Exploration included reconnaissance, sampling and examination of drill cutting from previous drill holes.

One sample of gossanous material was taken from a creek in the northern part of the licence, but the exact location is uncertain. The sample returned:

Sample No.	Au (ppm)	As (ppm)	Pb (ppm)	Ag (ppm)	Cu (ppm)	Zn (ppm)
NW8	0.01	260	254	<1	-	600

No further reports are available and the licence was relinquished in early 1990.

3.4 Rosequartz Mining NL

Rosequartz Mining was granted EL 6333 on 16 November 1988. The licence covered the majority of EL 30359 and extended approximately 7km further north of the EL 30359 boundary.

The prospect was evaluated to determine (Romanoff, 1989):

1. Its potential to host structurally controlled auriferous vein quartz associated with axial zones of folds within the siltstone and dolerite units.
2. Its potential to host syngenetic base metal mineralisation within the siltstone units.

A total of 28 samples comprising 14 rock chip and 14 stream sediments samples (Figure 5) were taken and assayed for gold and base metals. The results were considered unfavourable to host gold and base metal mineralisation and the licence was relinquished (Romanoff, 1989).

Twelve of the samples fell within EL 30359 though no specific results are given.

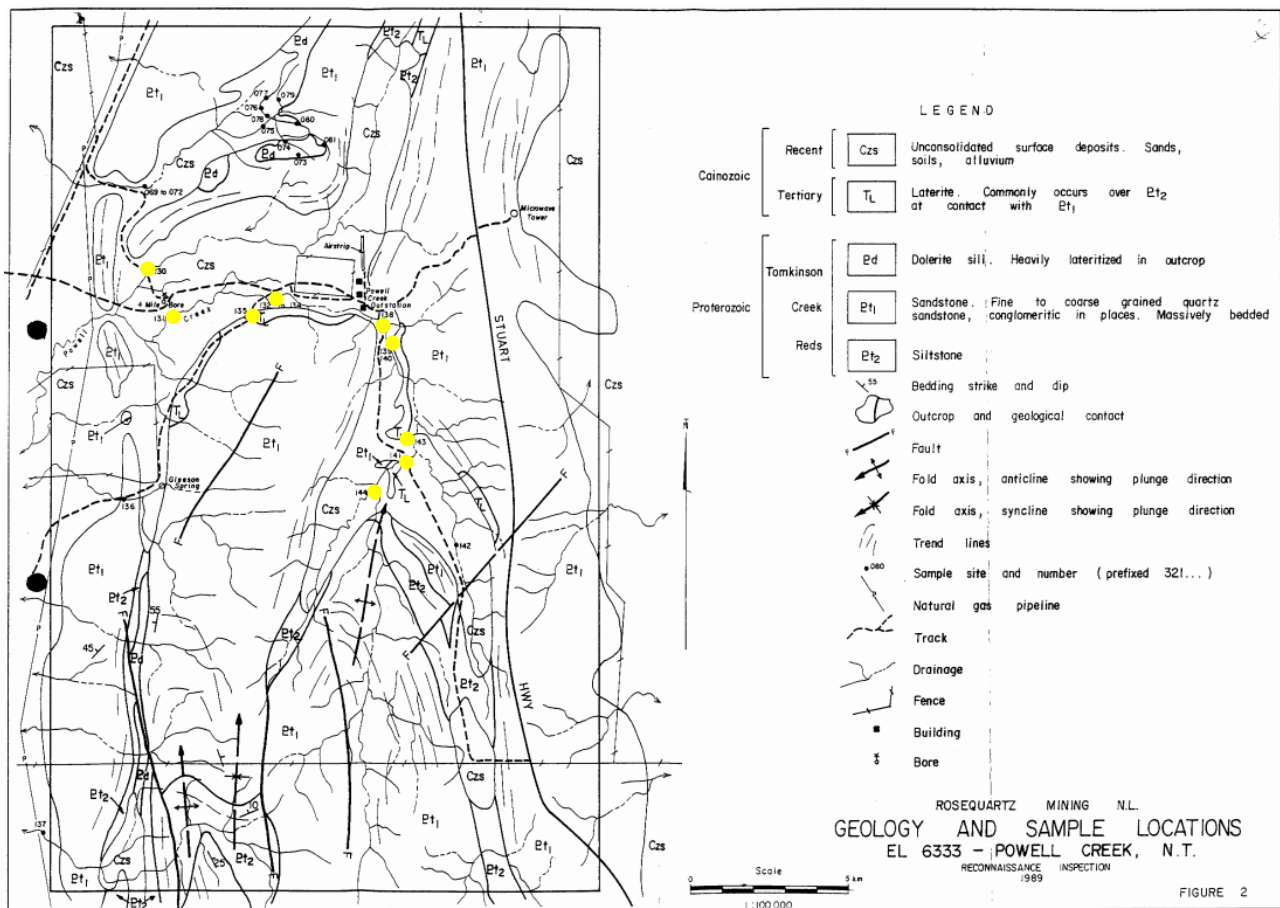


Figure 5: Location of samples with EL 6333 (Romanoff, 1989).

3.5 MIM Exploration Pty Ltd

EL 7020 covered an area similar to that of EL 2835 (Key Resources). A considerable amount of exploration was carried out, all outside the boundaries of EL 30359. The licence was granted on 20 November 1990 and surrendered two years later (Bruce, 1993).

A stream sediment programme took place in March 1991 and 105 samples were seived on site. Anomalous metal values were concentrated in the Hunter Creek area (just south of EL 30359), corresponding to sub-crop of 'Barney Creek Formation' black shales and also trending NW-SE across the headwaters of Carruthers Creek, which corresponds to outcrop of manganiferous stromatolitic dololutes (Bruce, 1993).

Aeromagnetic, SIROTEM and gravity surveys were also undertaken. Most work was concentrated further south within the Carruthers Creek and Willieray locations.

Despite the extensive exploration it was determined that there was no evidence of stratiform or other massive styles of base metal mineralisation and the licence was surrendered.

3.6 BHP Minerals Pty Ltd

EL 9022 'Hunter Creek' was granted to BHP Minerals in June 1995. Once again only a small portion of the licence intersects the southern edge of EL 30359. The licence was applied due to the similarities with the southern reaches of the McArthur Basin and therefore the prospectivity for large sediment-hosted base metal accumulations synonymous with the McArthur River Mine (HYC).

An extensive stream sediment sampling programme (528 samples) was undertaken across the BHP project area (including EL 9022) but only 21 of these were from the northern part of the Hunter Creek licence. No anomalous results were returned and no follow up sampling was undertaken (Nunn, 1996). The northern part of EL 9022 (36 blocks) was surrendered in 1996.

Significant amounts of geophysics and drill testing was carried out on conductors and targets well south of EL 30359. Drilling revealed that the conductors were related to thick zones of weathering with strong associated clay development (Stephens, 1997) but it was decided that even though there were still a number of untested conductors in the region, most coincided with either the lower Attack Creek Formation (and are probably also deeper zones of weathering) or the Roper Group and do not warrant further testing (Stephens, 1997).

3.7 OM Manganese Ltd

Exploration Licence 26552 was granted to OM Manganese on 2 September 2008 (Bushell, 2009). The licence covers 240 blocks, six of which (south eastern separate blocks) intersect with EL 30359.

The series of maps below are taken from Bushell, 2009 and shows the position of EL 30359 overlying the:

- Mapped 250K geology (Hussey et al., 2001),
- Ternary radiometric image,
- TMI magnetic image,
- Aerial photograph.

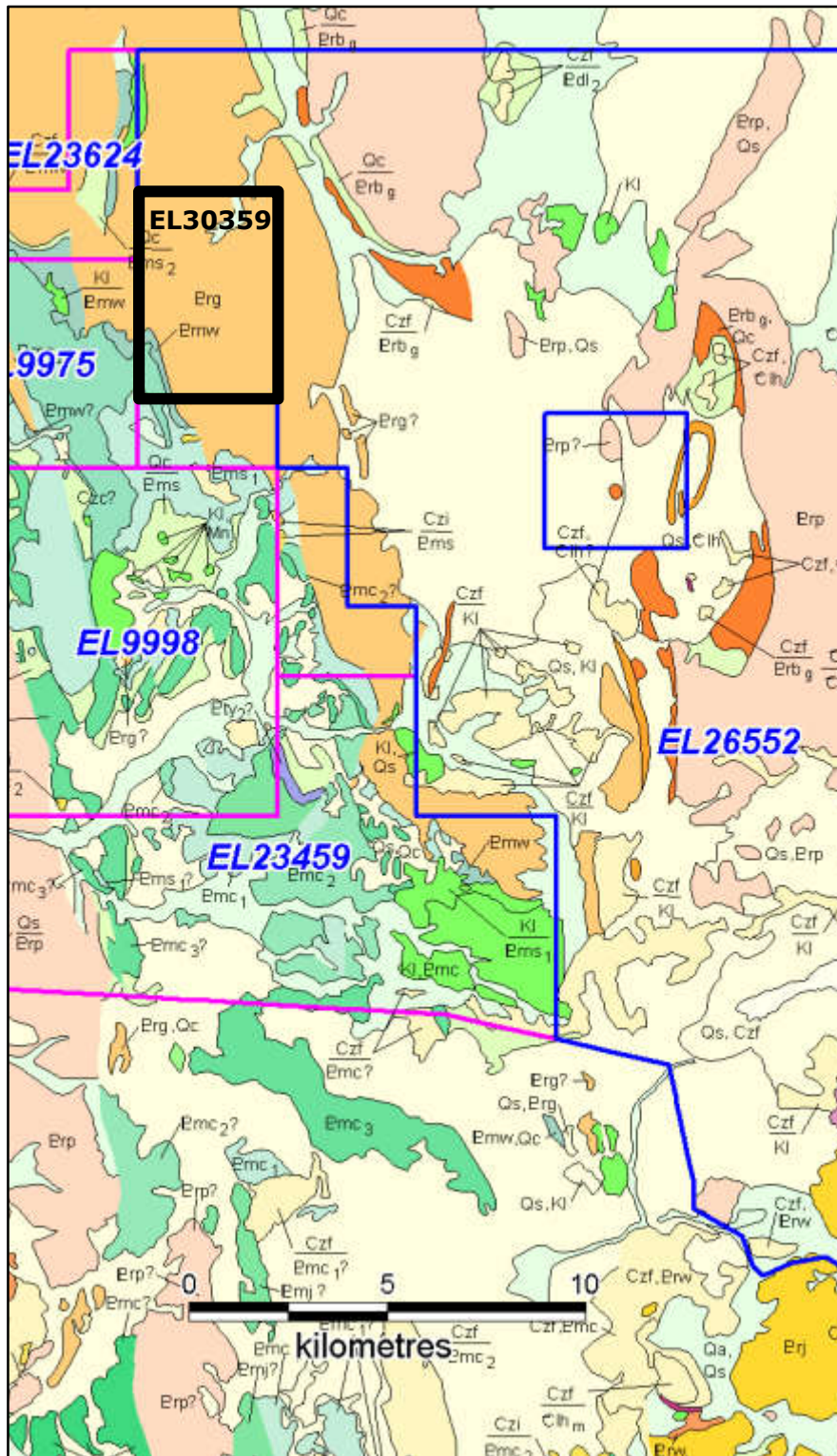


Figure 6: Published 250K geology (Hussey, et al., 2001) showing the known outcrop and extent of recent cover on EL 26552 (Bushell, 2009). Location of EL 30359 shown in black.

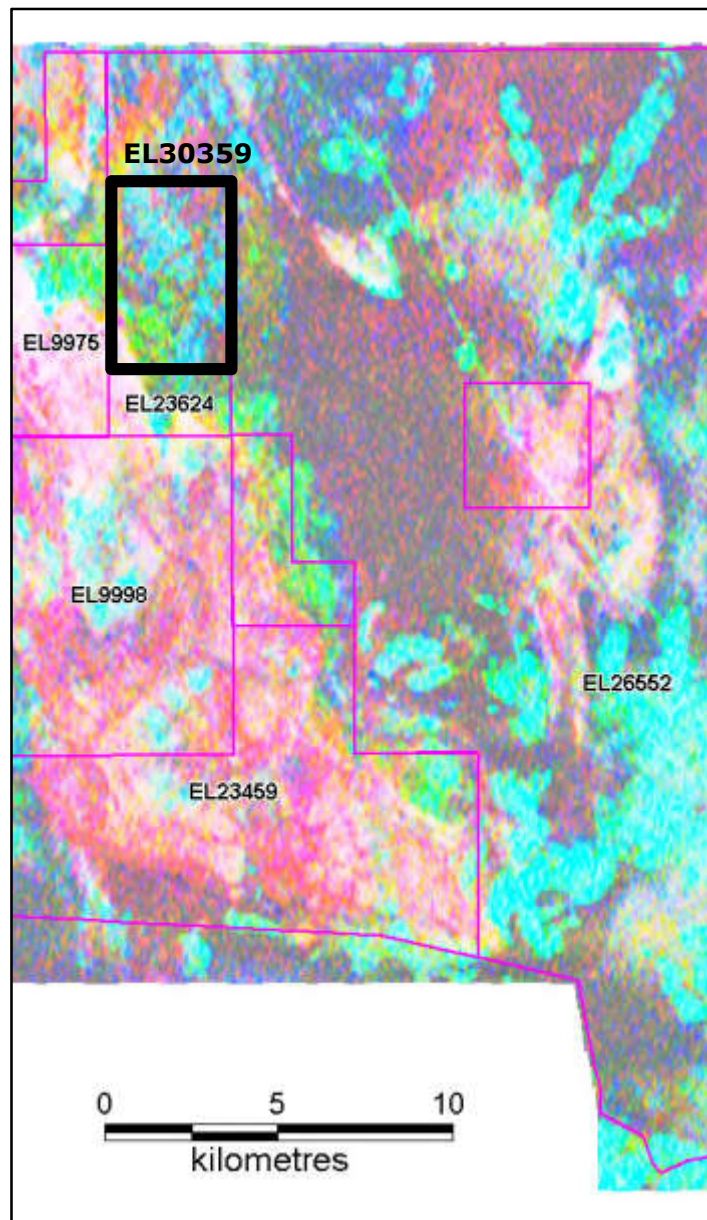


Figure 7: Ternary image compiled from K, U and Th radiometric data acquired in 2008 (Bushell, 2009). Location of EL 30359 shown in black.

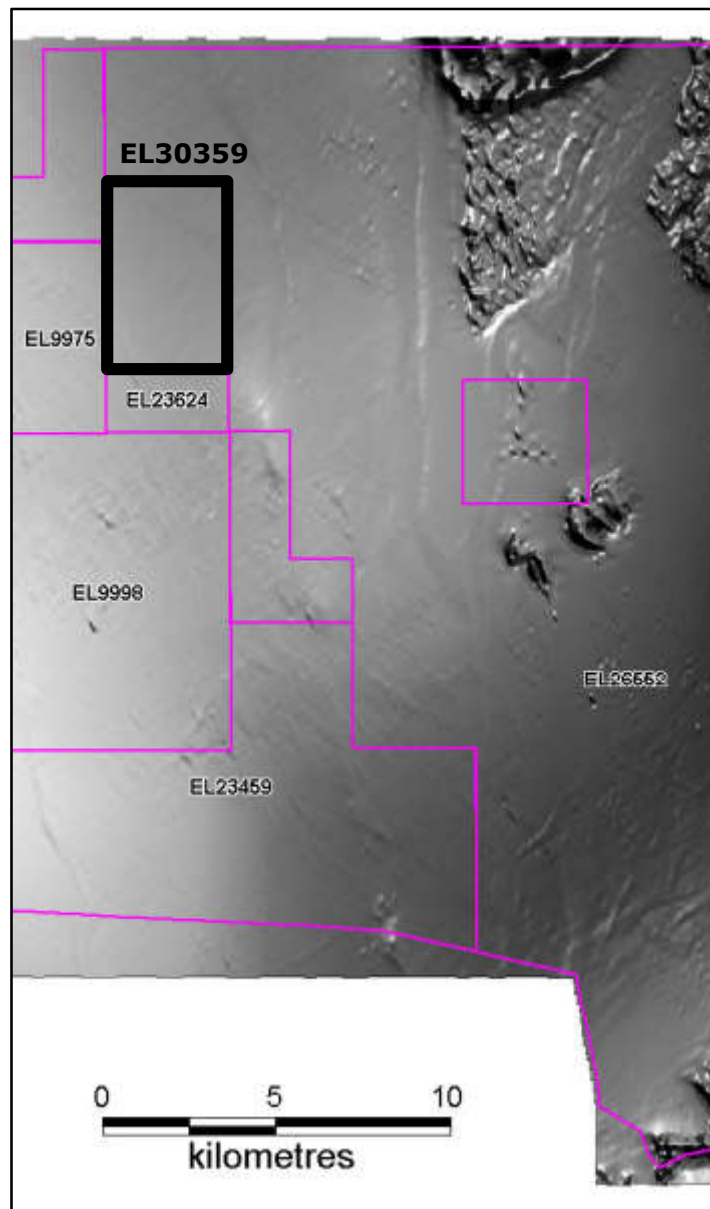


Figure 8: TMI magnetic image (Bushell, 2009). Location of EL 30359 shown in black.

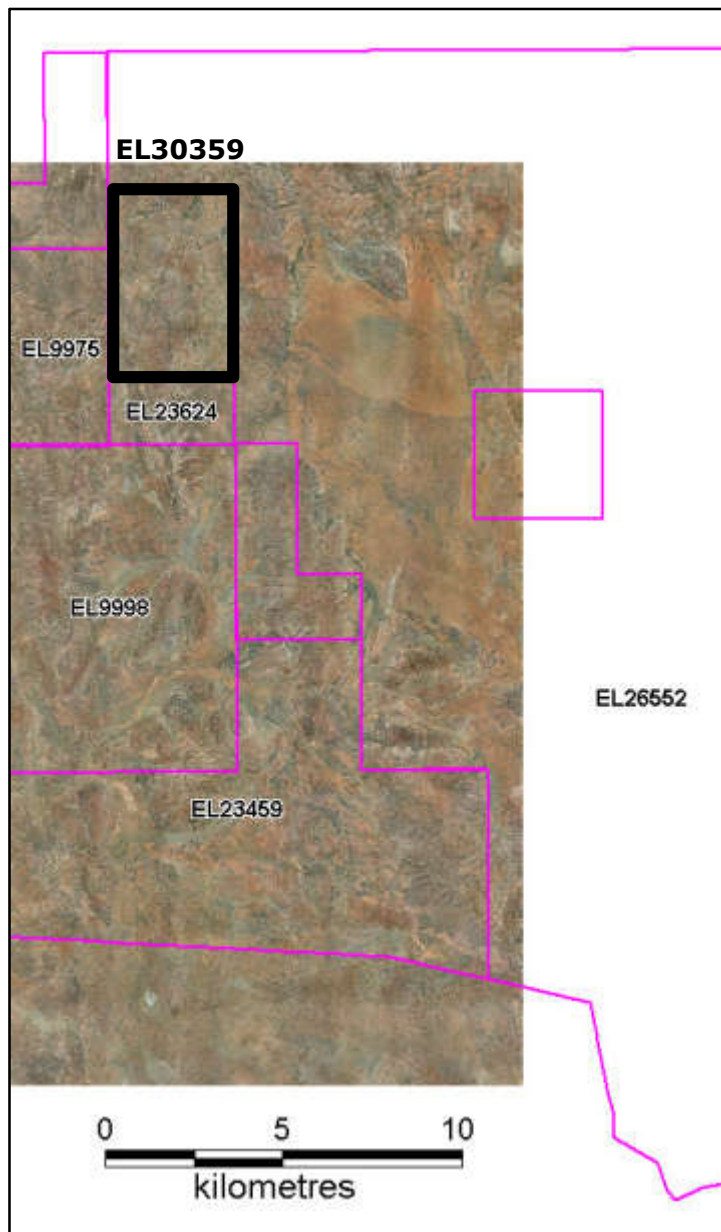


Figure 9: Aerial photography over parts of OM Manganese licences (Bushell, 2009). Location of EL 30359 shown in black.

The aerial photography was obtained from United Photo and Graphic services at a nominal scale of 1:20,000 (approximately 0.5m pixel size).

The area covered by EL 30359 was relinquished in 2012 with only an aerial geophysical survey (see above maps) and reprocessing of new aeromagnetic data having taken place across the area (Reddell and Bailey, 2012).

3.8 OM Manganese Ltd

Exploration Licence 26562 was granted to OM Manganese on 2 September 2008 (Bushell, 2009). The licence covers 73 blocks, five of which intersect with EL 30359 (common area). The licence was reduced in size several times and surrendered in 2013. The common area was retained through to surrender.

The series of maps below are taken from Reddell, 2013 and shows the position of EL 30359 overlying the:

- Mapped 250K geology (Hussey et al., 2001),
- Ternary radiometric image,
- TMI magnetic image,
- Aerial photograph.

Exploration activities in the first year of tenure included the aeromagnetic and radiometric survey across the whole licence area (Figures 11 and 12). 1:20,000 scale aerial photography was captured on the eastern side of the licence and covers the common area of EL 30359 (Figure 13).

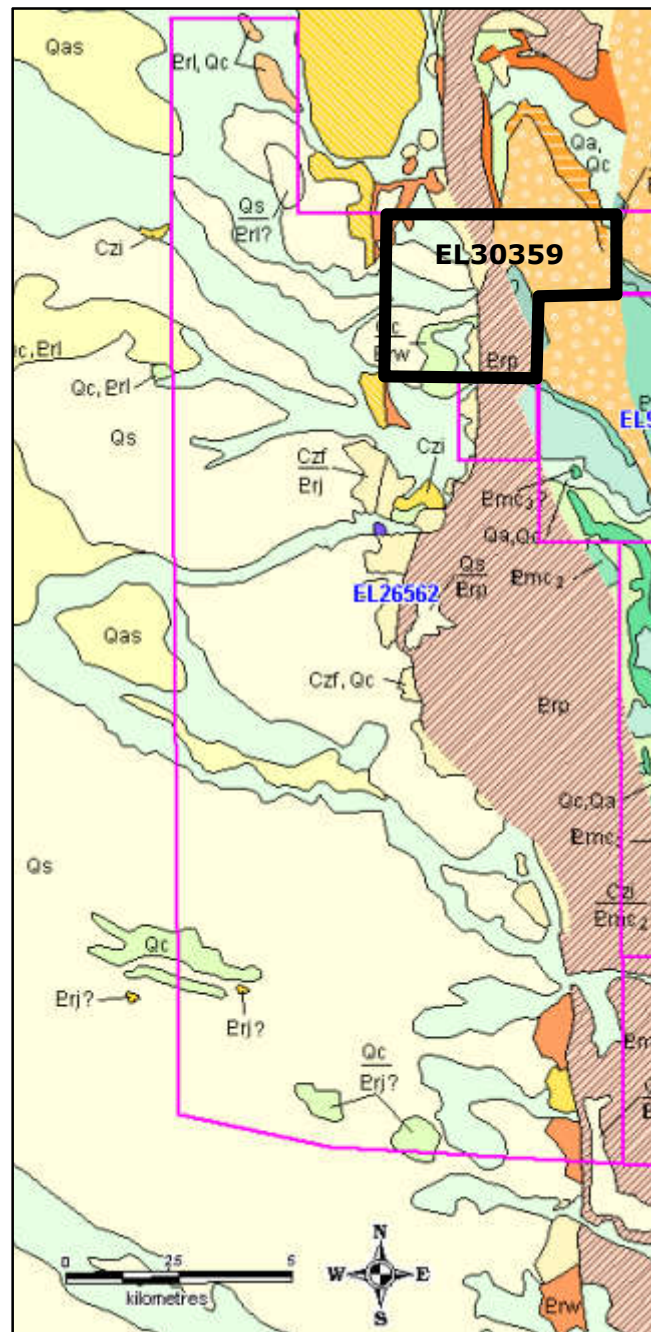


Figure 10: Published 250K geology (Hussey, et al., 2001) showing the known outcrop and extent of recent cover on EL 26562 (Reddell, 2013). Location of common area of EL 30359 shown in black.

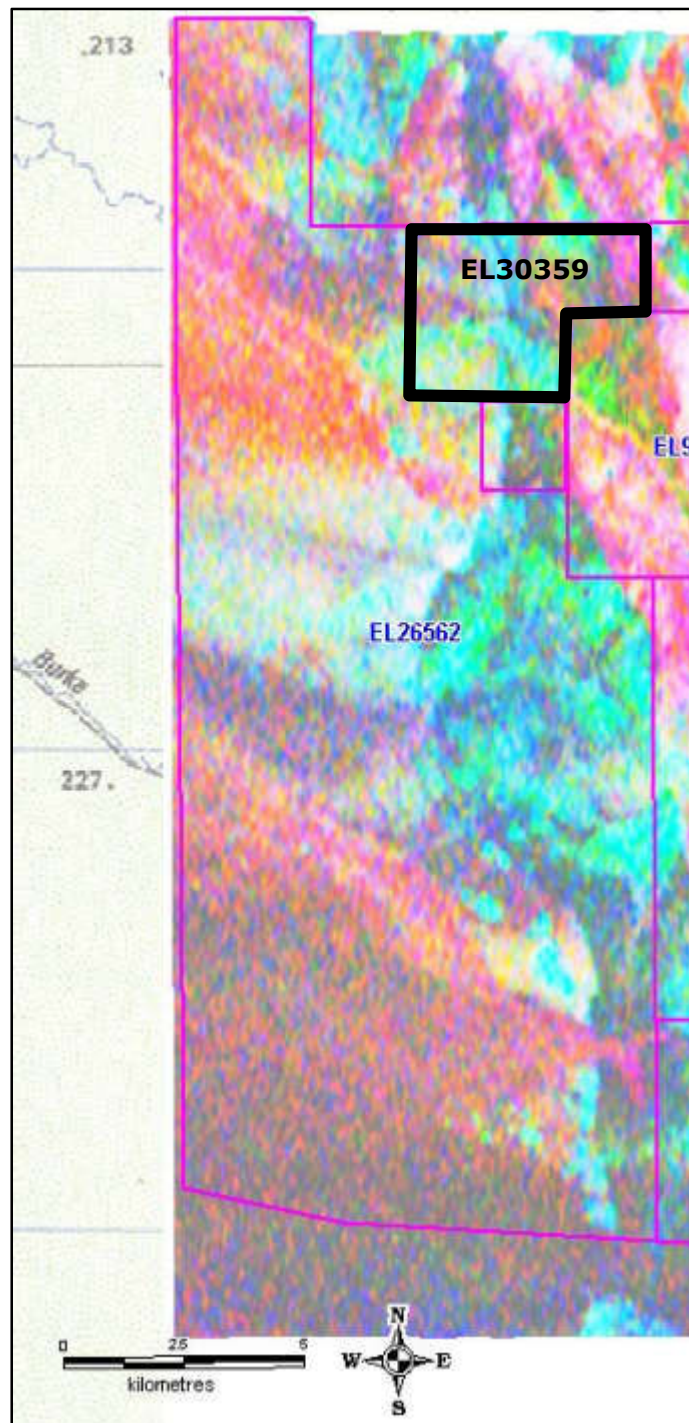


Figure 11: Ternary image compiled from K, U and Th radiometric data acquired in 2008 (Reddell, 2013). Location of EL 30359 shown in black.

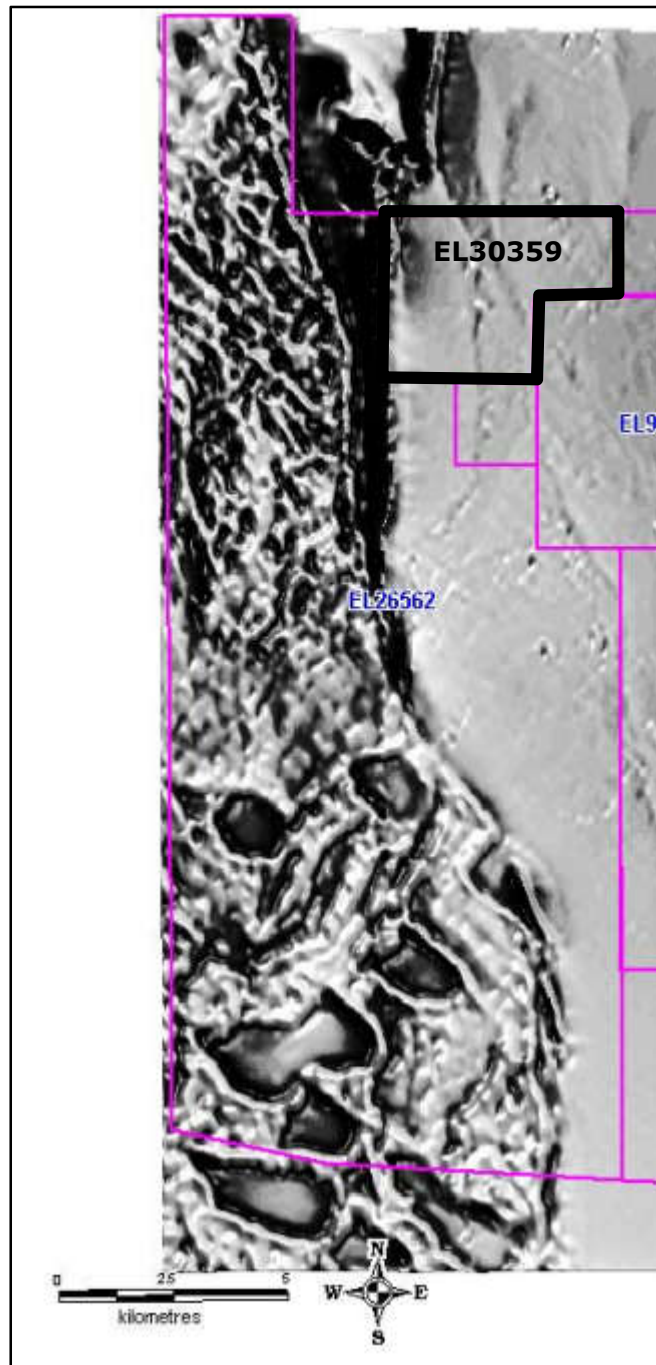


Figure 12: 1VDRTP magnetic image (Reddell, 2013). The 'noisy' signature dominating the western half of the image is interpreted as buried Helen Springs Volcanics. Location of EL 30359 shown in black.

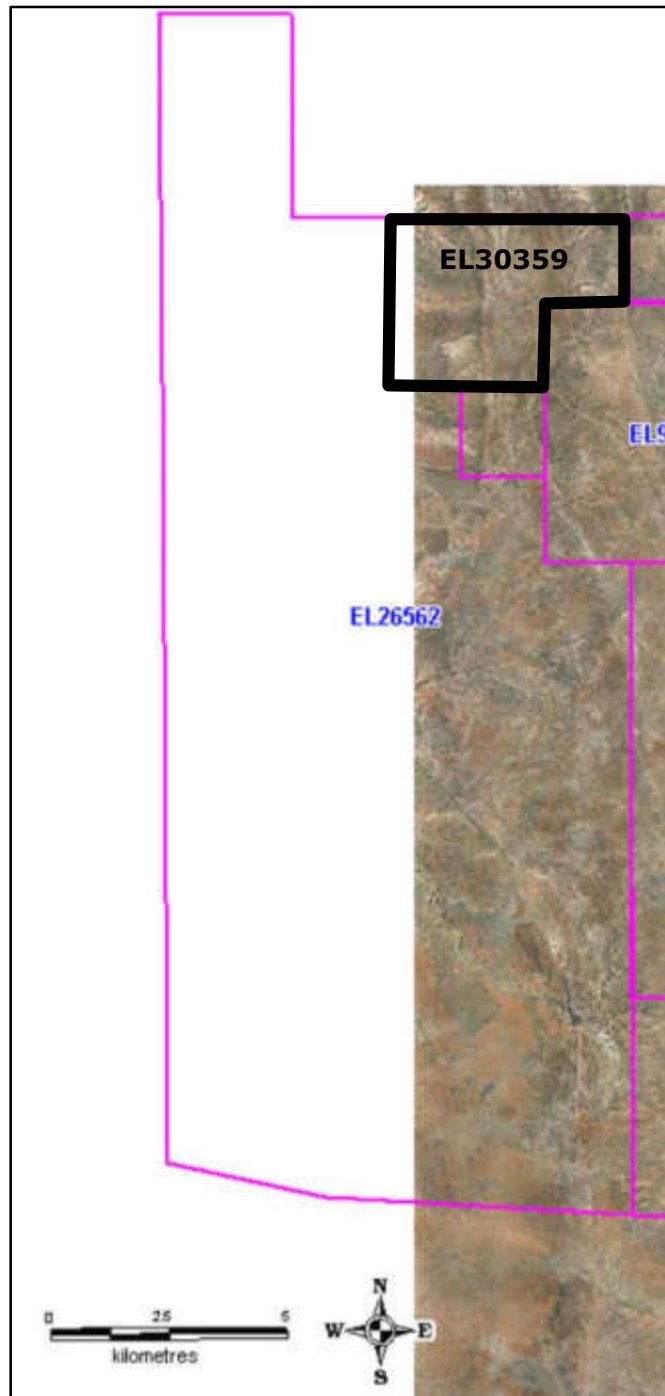


Figure 13: Aerial photography over parts of OM Manganese licences (Reddell, 2013). Location of EL 30359 shown in black.

During Year 2 historical open file data was reviewed, data was collated and mapping was completed. Particular attention was paid to structure and alteration (including mineralisation) and the relationship to stratigraphy (Reddell, 2013). No manganese outcrops or favourable geology was located on EL 25562. No significant exploration was carried out during Years 3, 4 or 5, and the remaining six blocks were surrendered in 2013 (Reddell, 2013).

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- Stephens, D.I., 1997. Final Report, Exploration Licences 9022, 9023 and 9325 – Willieray Project, McArthur Basin. BHP Minerals Pty Ltd. CR1997-0781.

APPENDIX 1

Open File Reports (Northern Territory Geological Survey)

EL30359	EL30348	Report	Date	Held from-to	Tenement/s	Project Name	Company	Location Relative to TNG Tenements	Exploration Activities Conducted	Mineralisation Type and Style Sought	Significant Results
		CR19710081	NIL	Ceased 06/05/1972	PA 3226	Ashburton Range	Metals Investment Holdings NL	IN LICENCE 30359, completely covers and surrounds EL30359	Information missing	Uranium	Unclear
		CR19830299	4/01/1983?	Ceased 06/10/1988 and 25/06/1987	EL3607 and 2835	Helen Springs	Esso Australia Ltd	EL 2835 covers the southern tip of 30359. Adjoining EL3607 approx. 20km South	Field Mapping and stream sediment sampling	Mapped for McArthur equivalents and to aid interpretation, presentation, and prevent proliferation of new formation names	Clearer outlay for geology. Association of anomalously high yet variable Pb and Cu in the horizon which manganese is accumulating, suggestion of a potential mineralised horizon within the Roper Group despite a lack of the equivalent in the McArthur Basin.
		CR19810257	NIL	26/06/1981 to 25/06/1987	EL 2835	Helen Springs	Key Resources Pty Ltd	EL 2835 covers the southern tip of 30359.	Background checking and assessment	Base metals, Placer gold, Uranium, Bootu creek formation and Attack Creek formation	No
		CR19950903	10/10/95	11/10/1994 to 01/07/1996	EL 870	Helen Springs	Stockdale Prospecting limited	Possible overlap to the NE of EL30348. 10 Km NE of Helen Springs homestead	NTGS aerial magnetic survey, Helicopter borne magnetic survey over singular anomaly, ground magnetic surveys, sampling	Diamondiferous diatremes	Drill target possibly defined over a singular anomaly
		CR19960747	1/09/96	11/10/1994 to 01/07/1996		Helen Springs		Possible overlap to the NE of EL30348. 10 Km NE of Helen Springs homestead	Drilling over anomaly, NTGS aerial magnetic survey, Helicopter borne magnetic survey over singular anomaly, ground magnetic surveys, sampling	Diamondiferous diatremes	No
		CR19960515 (First Annual)	1/06/96	June 1995 to May 1996	EL9022- 9025	Tennant Creek Block	BHP Minerals PTY LTD	Approx. 10-15km South of EL30359 extending SE below EL30348	GEOTEM, ground magnetics, geological mapping, stream sediment, rock chip and soil sampling	Tomkinson Creek Subgroup time equivalents to the Tawallah, McArthur and Roper groups of the Palaeo-Mesoproterozoic McArthur Basin. North-North West trending growth faults present in the area increase its potential for hosting stratiform sediment hosted Pb-Zn mineralisation	No?
		CR19970444 (Second Annual)	1/04/97	02/06/1996 to 01/06/1997	EL 9022-9025, 9325-9327 and 9570	Helen Springs Project		Possibly crosses 30348. 120km North of Tennant Creek. Bisected by Stuart highway	Regional stream sediment sampling 1995. Follow up extensive soil sampling and rock chip sampling. GEOTEM (Airborne EM) survey and interpretation. Four Priority anomalies delineated (2 at Bootu and 2 at Willeray) Ground EM carried out over all four anomalies. Willeray intersected a clay rich deep weathered zone. Bootu Creek intersected massive Mn at modelled conductor depths. Percussion holes drilled at Bootu creek as a follow up of the Mn intersection in the Eastern drill hole.	Southern extension of the Mc Arthur Basin, looking for host to HVC Zn-Pb-Ag deposit. Zircon dating confirmed a HVC equivalent age (-1640Ma). Area covers mid-Proterozoic sedimentary and subordinate volcanic rocks of the Tomkinson creek subgroup within the Tennant Creek block	Yes. Mn viewed as source of conductors in Bootu Creek anomalies (Attack Creek Formation). Willeray conductors believed to be from clay. Follow up of Mn suggests Mn body is stratigraphic, has at least 400m strike length and likely length of 5km. Suggestion the Ore occurs as multiple lenses, occurring over a width of 1km. Potential believed to exist for a high tonnage, low-medium grade Mn resource
		CR19970781 (Final)	3/09/97		EL 9022, 9023 and 9325	Willeray Project		Possibly crosses- check this. 120km North of Tennant Creek. Just West of Stuart highway	GEOTEM, Ground TEM and drilling of Two anomalies	Southern extension of the Mc Arthur Basin, looking for host to HVC Zn-Pb-Ag deposit. Zircon dating confirmed a HVC equivalent age (-1640Ma). Area covers mid-Proterozoic sedimentary and subordinate volcanic rocks of the Tomkinson creek subgroup within the Tennant Creek block	Drilling intersected deep clay rich zones of weathering and the high abundance of clay was interpreted as the source of the conductors. Other less conductive conductors with similar characteristics were therefore not drilled.
		CR19980015 (Final)	1/11/97	02/06/1995 to 09/09/1996	EL 9024, 9326, 9327, 9570	Helen Springs Project, covers Bootu Creek, Northern Platforms program		Possibly crosses 30348. 120km North of Tennant Creek. Bisected by Stuart highway	Regional stream sediment sampling 1995. Follow up extensive soil sampling and rock chip sampling. GEOTEM (Airborne EM) survey and interpretation.	Southern extension of the Mc Arthur Basin, looking for host to HVC Zn-Pb-Ag deposit. Zircon dating confirmed a HVC equivalent age (-1640Ma). Area covers mid-Proterozoic sedimentary and subordinate volcanic rocks of the Tomkinson creek subgroup within the Tennant Creek block	Soil sampling in Bootu Creek area exposed anomalous in Cu, Pb and Zn (455ppm, 1140ppm and 101ppm respectively). Rock chip also with elevated Cu, Pb and Mn. No delineated significant anomalies from GEOTEM and anomalies believed to be coincident with interpreted Roper group stratigraphic conductors so no further work recommended.
		CR19980507	1/07/98	1/05/1998	EL 9025	Bootu Creek Project		?	Surface geochemistry, ground magnetics over a small weak aeromagnetic anomaly, regional airborne TEM, ground TEM of selected targets, percussion and diamond drilling of geophysical targets (over a series of licences including this one)	Proterozoic Base metal and Mn due to Sub economic Mn intersected at the REDWIG PROSPECT but due to high silica content and distance downgraded	Holistic results of this work indicated that conductive stratigraphy was caused by sub-economic Mn mineralisation. Details of this found in reports CR8552 (covering EL9022 to 9025) and CR8968 (covering 9022-9025, 9325-9327 and 9570).
		CR19960562	5/11/95	1995 to 30/09/1999	EL8924	?	Owner: Thomas Bohning		Grid sampling and hoping to hire a geologist in the future		No
		CR19980368	25/05/98	1995 to 30/09/1999				Approx. 5km West of EL30348. Touches Stuart highway	Excavation work. Work on four pits. Digging. Visit by Opal expert and Geologist. Rough co-ordinates 79.498E, 62.000N and 79.480E and 63.005N	Opal	Unclear
		CR19960122	1/01/96	1992 to 2005	EL 7948	Carmilly Creek	DF Ward and D Panich in Partnership with BHP Minerals PTY LTD	Approx. 5km SE of EL30348. Around 130km North of Tennant Creek	Mapping, Stream Sediment geochemistry	Tomkinson Creek Subgroup time equivalents to the Tawallah, McArthur and Roper groups of the Palaeo-Mesoproterozoic McArthur Basin	Stratigraphic correlation with McArthur Group
		CR19960490	1/05/96					Approx. 5km SE of EL30348. Around 130km North of Tennant Creek	Mapping, Stream Sediment geochemistry	Tomkinson Creek Subgroup time equivalents to the Tawallah, McArthur and Roper groups of the Palaeo-Mesoproterozoic McArthur Basin	No
		CR19970038	1/01/97					Approx. 5-6km SE of EL30348	GEOTEM survey, ground EM, rock chip and soil sampling	HVC- style sediment hosted base metal deposits	EM anomaly however geochemistry unconvincing so no further work taken
		CR19970169	1/02/97					Approx. 5km SE of EL30348. Around 130km North of Tennant Creek	Mapping, BLEG Stream Sediment sampling and Airborne GEOTEM and ensuing interpretation of geophysical data	Tomkinson Creek Subgroup time equivalents to the Tawallah, McArthur and Roper groups of the Palaeo-Mesoproterozoic McArthur Basin	No. Sampling produced a few coincident element anomalies and GEOTEM unveiled weak conductors deemed to be conductive stratigraphy
		CR19950364	16/06/05				Ward and Panich	Approx. 5km SE of EL30348. East of highway SSE of 30348. NNE of Bootu Creek Mn Mine	Prospectors took BHP Minerals for a recon visit to look at stratigraphy. No results. Stratigraphy discussed	SEDEX Zn like HVC.	Stratigraphic correlation with McArthur Group
		CR19970500	1/08/97	10/05/96 to 08/05/97	EL 9412	Brunchilly prospect, Helen Springs	Normandy Gold Pty Limited	SW of licence areas? 100km NE of Tennant Creek	Review, mapping and regional geophysical interp.	Tennant Creek Style Au/Cu/Bi	Basement to the Cambrian is more likely to be the less prospective Haches Creek group and not the Warramunga group.
		A CR2010-0511, Om Manganese Report 06_07	1/09/07	Ceased 10/08/2010	EL24052, 23495	Mila Mila Project	OM Manganese Ltd	Both EL23495 and EL24052 share borders SE and Centrally to EL30348. The Mila Mila Project is located about 25 km southeast of the Renner Springs roadhouse.	Satellite-borne ASTER spectral study, site visits and examination of exposed trenches	Mn	It is concluded, at this stage, that E23495 is highly prospective to host extensive stratiform shallow dipping Mn mineralisation' Page 22 Evidence for this thin on the ground?
		EL24052_2010_AS (Annual, Final)	9/09/10	11th August 2004 to 10th August 2010	EL24052	Helen Springs Project (Previously Mila Mila project?)	OM Manganese Ltd	Centre of EL30348. Both EL23495 and EL24052 share borders SE and Centrally to EL30348. The Mila Mila/Helen Springs Project is located about 25 km southeast of the Renner Springs roadhouse.	Field inspection, minor ground EM, interpretation of Aster spectral imagery, Helicopter-borne SkyTEM flown on 200m spaced lines, airborne magnetic and radiometric surveys, aerial photography, geological mapping at	Interested in shallow marine sandstone and dolomite packages and Paleoproterozoic rocks of the Middle Tomkinson Creek group.	The drill program was intended to test for a possible northeast extension of the Tomkinson Group rocks, host to Bootu Creek manganese mineralisation, beneath alluvial cover. No manganese mineralisation was intersected and drilling supported the interpretation based on recent detailed mapping that Tomkinson Group rock units do not extend onto this exploration licence
		CR20080591	29/05/08	27/12/2006 to 26/12/2012	EL25354	Bootu Creek/ Mount Hall	Brumby Resources/Marindi metals limited	Approx. 8km SE of EL30348. Situated in the Tomkinson Province.	Landsat targets generated and a radius of 300-400m targeted in field. HEM survey. 53 rock chip samples, Geological mapping	Manganiferous lithologies.....	No indication of Mn oxides found in either outcrop or subcrop
		EL25354_2012_AS	1/12/12			Bootu creek/Mt Hall project	Brumby Resources limited	Approx. 8km S-SE of licence EL30348	Historical reports, Landsat studies, Helicopter field inspection and sampling of Landsat anomalies, Airborne VTEM survey, litho-structural mapping and rock chip sampling, Heritage survey, RC drilling of 14holes for 993m.	Mn in the Bootu creek formation which plunges gently N-NW and can be traced discontinuously for 24 km	No
		EL23687_2008_P_01	12/05/09	17/06/2003 to 08/08/2008	EL23687	Lake Woods Project	Cross Land Diamonds Pty Ltd	Approx. 10km NNE of licence EL30359. Located on the Stuart highway	17 GeoChem samples including stream sediment, soil and rock chip. 4 mineralogical samples from stream sediment for diamond indicator mineral analysis. Geological recon. Airborne EM survey.	Diamonds in Ashburton Province	Outcrop of gypsum in core of antiform may provide a source of sulphur for other deposits such as Pb-Zn (Tomplins et al., 1994) and Nickel platinum deposits (Moldrett, 2004). A single microdiamond and chromite grain found in the 4samples. The AEM data collected indicates that conductive horizons may be associated with dolerite sills or alluvium material.
		CR20080591	15/01/10	03/10/2005 to 02/10/2009	EL24520	Lake Woods Project	Cross Land	Approx. 5km North of EL30359.	2005-2007: Literature Research, geological and geophysical surveys, Acquisition and interpretation of NTGS geological and airborne geophysical data sets, Geological reconnaissance of the area and surrounds, 2007-2008: survey of 845 line km using the TEMPEST system. The survey was centered over the southern part of EL24520, including several of the relinquished blocks. For reference, specifications of the TEMPEST system and the Lake Woods survey data are presented in the Appendices Folder in 'Renewal Report for EL23687' (Buskas et al June 2009). Figure 6 in this report illustrates the survey coverage in relation to the relinquished blocks.	Target identification method. (Identify targets for mineral exploration with the same signatures as major mineral deposits. The selection technique does not permit identification of target commodities, and these must be determined by consideration of regional metallogenic factors and field reconnaissance.	?
		CR2010-0226_GRO84_2010	29/03/10	Ceased 06/04/2011	ELs 23687, 24520, 25631, 27317 and 27318; the latter two were granted in November 2009	Lake Woods Project	Cross Land Uranium mines LTD	IN LICENCE AREA. EL25631 covers EL30359 and extends East to approx. 7km North of EL30348.	Four holes were drilled for a total of 461.6 metres (includes one abandoned hole for 48.3 metres). Seventeen (17) samples were collected for geochemistry and 7.5 kg of core was made available for age dating.	Target identification method. (Identify targets for mineral exploration with the same signatures as major mineral deposits. The selection technique does not permit identification of target commodities, and these must be determined by consideration of regional metallogenic factors and field reconnaissance.	Focus placed on intrusive body. Age of intrusion: 1295 +/- 14ma, lateral extent >50km with the sill estimated at 160+/-10m in thickness. No indication in the drill core of mineralisation or alteration related to a significant mineralising episode. Age of the intrusion comparable with alkaline igneous complexes in South Africa such as Phalaborwa and the bushveld complex and also in North America. The potential is for mineral deposits associated with layered intrusions such as nickel/PGE, carbonates with associated REE deposits, possible phosphate accumulation from weathered alkaline rocks and possible diamond bearing kimberlites or lamproites as the intrusive is similar in age to the Argyle host intrusive. The possibility of potassic metasomatism of the magma may reflect the presence of potassic evaporate minerals in the host sequence at depth.
		CR20100751, GR136-09_2010_A	26/10/10	Ceased 02/11/2012?	EL27190, EL 27186, EL27187, EL27188, EL27189, EL27544	Elliott (lakewoods) Project	Vale Australia EA PTY LTD	EL27190 approx. 2,000m West of EL30359. Other licences extend NW in the Carpentaria and Wiso Basins. (EL27186 100km NW, EL27187 40km NW, EL27188 150km NW, EL27189 30km NW, EL27544 200km NW).	Field Mapping, rock chip sampling (52 samples), RC drilling (10 holes, 1326m, 442 composite drill samples), Open file reviews, AAPA register search, acquisition of NRETAS environmental data, re-processed geophysical data (gravity), XRF analysis of historic water bore chips (522 samples).	Middle Cambrian phosphate interval in the Wonarah formation?	?
		EL28274_2012_A_01	2/07/12	03/05/2011 to	EL 28274	Indamilly waterhole	Natural Resources Exploration	IN LICENCE AREA. NE corner of EL30348. 144km North of Tennant creek	Helicopter program, rock chip samples, geological mapping, desktop studies. Bore hole niton	Phosphate and Base metals alike to wonarah phosphate deposit	No
		EL26534_2012_01_Report.pdf	1/08/12	to 03/08/2012	EL26534	Helen Springs Project	Sinosteel Australia Pty LTD	IN LICENCE AREA EL 30348. Covers East of licence area and trails SE into Georgina basin. 120km North of Tennant Creek. 25 km East of Stuart Highway.	Mapped surface geology, regional aeromagnetic surveying using 400m spaced E-W flight lines and gravity surveying, RepTEM data processing, 17 RC drill holes totalling 2052m	Bootu Style Mn and mineralisation associated with postulated alkaline intrusive rocks	No. mafic rock unit is considered to be responsible for the aeromagnetic anomalous. No obvious conductors were intersected in the drilling. The carbonaceous mudstones in holes HSRC015 and 016 may be responsible for EM anomalies in this area.
		EL26552_2012_A.PDF	9/09/12	02/09/2011 to 01/09/2012	EL26552	Helen Springs Project	Neil Scriven and OM Manganese Ltd	Approx. 5km ESE of EL30348 approx 20km WSW of EL30359. Located on the stuart highway.	An aeromagnetic and radiometric geophysical survey. Trial sil geochem- concentration was placed on exploring the adjacent Renner Springs (EL 28041, EL 28604) and Helen Springs (EL 28843) Project areas.	Mn	No
		EL26562_2013_A	19/08/13	02/09/2008 to 31/07/2013	EL26562	Renner Springs Project	OM Manganese Ltd (50%), Neil Henry Scriven (50%)	IN LICENCE 30359 in SW corner of tenement.	Regional aeromagnetic and radiometric geophysical survey. Aerial photography was conducted over the eastern half of the original EL, dominated by outcropping units belonging to the Renner Group	Looking for a significant extent of Namernini group sediments and Mn. Focus was to the West of original licence area.	No Mn mineralisation was identified, however the portion they chose to retain was the part that overlaps with Enigma Ltd. Mayhaps this was the least explored or most interesting.
Key:											
Exploration within facility of TNG EL303 59 or TNG30348 licence area											
Exploration within 20km of TNG EL303 59 or TNG30348 licence area											
Exploration not in facility of licence area											