

Title Holder	Territory Iron Pty Ltd
Operator	Territory Iron Pty Ltd
Tenement Manager / Agent	Linda Glass – Tenement and Rehabilitation Manager
Titles / Tenements	EL24045
Mine / Project Details	Frances Creek
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TERRITORY IRON PTY LIMITED
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EL24045

ANNUAL REPORT
For The Period
19th August 2014 – 18th August 2015

Pine Creek SD52-08 1:250,000 Geological Map Sheet
Pine Creek 5270 1:100,000 Geological Map Sheet

NORTHERN TERRITORY

LM Glass
October 2015

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SUMMARY

This report describes exploration activities conducted on Frances Creek tenement EL24045 by operator Territory Iron Pty Ltd (subsidiary of Territory Resources Ltd) from 19th August 2014 to 18th August 2015. EL24045 was originally 100% held by Title Holder Territory Resources Ltd and operated by Territory Iron Pty Ltd (which is a 100% subsidiary of Territory Resources). The Transfer of Title from Territory Resources Ltd to Territory Iron Pty Ltd occurred on the 18th June 2015, when the Instrument of Dealing – Transfer D93658 was approved by the Delegate of the Minister in accordance with Section 123 of the Minerals Title Act.

Exploration activities during the reporting year included desktop studies to evaluate the iron ore and manganese potential and earthworks and rehabilitation of earlier drill sites. Expenditure for the reporting year on EL24045 was \$46,400.

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1.0 INTRODUCTION, LOCATION AND ACCESS

This report details exploration activities for iron mineralisation conducted by Territory Iron Pty Ltd within tenement EL24045 during the 19th August to 2014 to the 18th August 2015. EL24045 is an exploration lease within the Frances Creek Project Area in the Pine Creek Orogen in the Northern Territory. The Frances Creek Project Area is located about 220km south of Darwin and ~23km north of Pine Creek town ship, Figure 1.

EL24045 is located directly south of the current Frances Creek mining operations, Figure 2. Access to the tenement is via a graded access road.

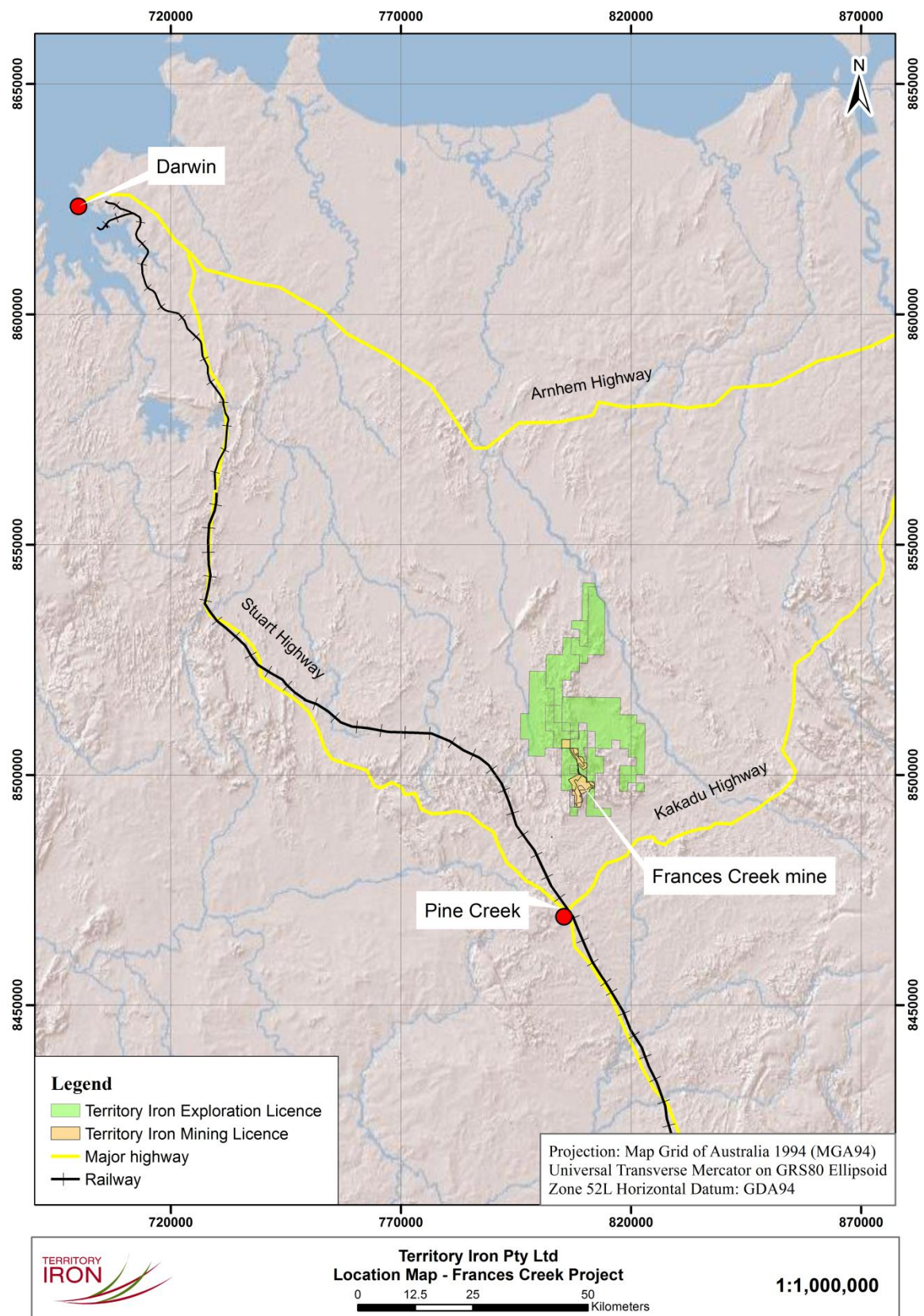


Figure 1: Location Map of Frances Creek Project with ESRI world shaded relief defining background topographic elevation. Beige polygons represent Frances Creek Mining Leases and green polygons represent Exploration Licences (the remainder of the Frances Creek Project Area)

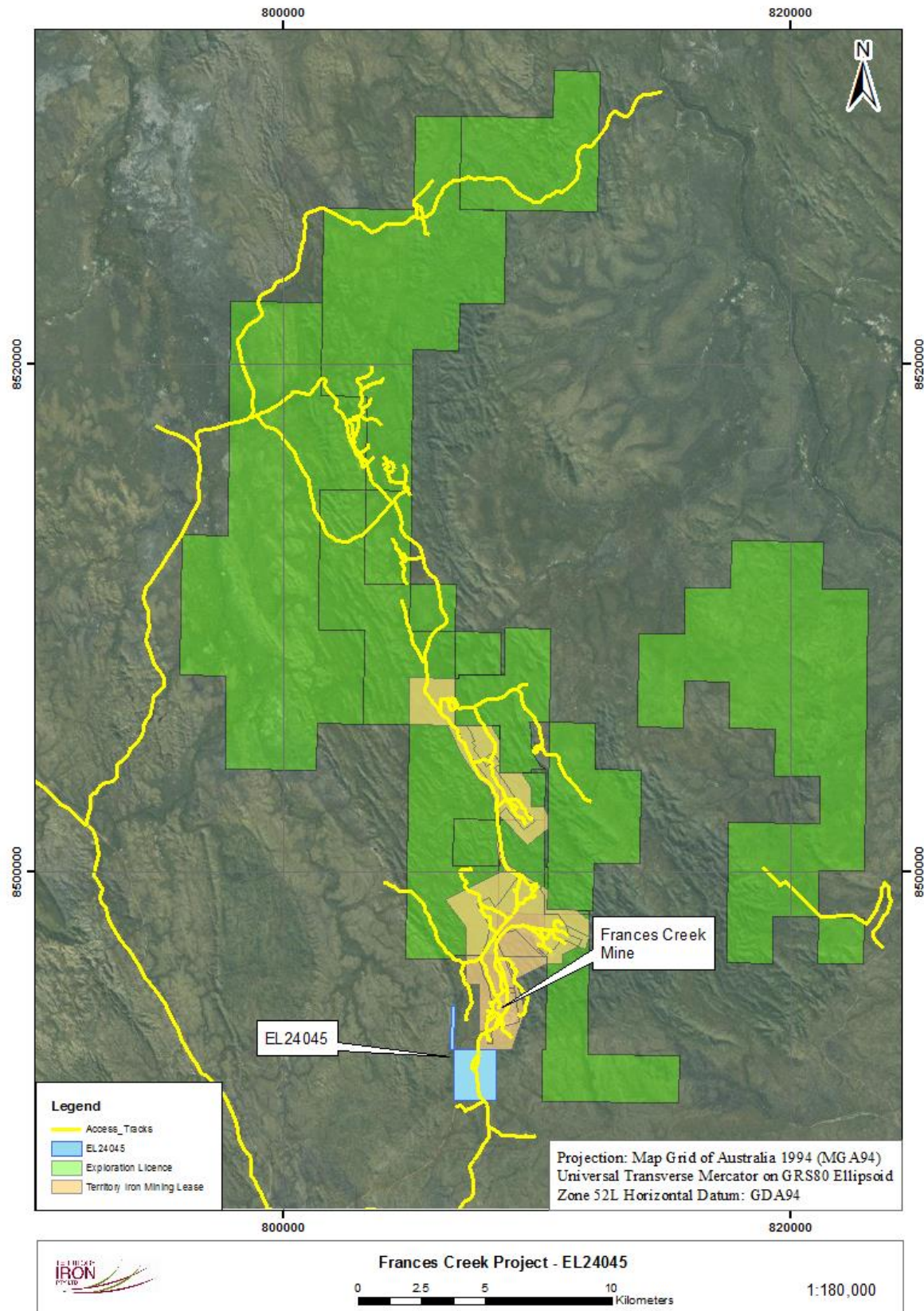


Figure 2: Location map of EL24045 (blue polygon) and Frances Creek mine site. ESRI world satellite imagery defines background relief.

2.0 TENURE

2.1 MINERAL RIGHTS

Territory Iron Limited (later Territory Resources Limited) applied for tenement EL24045 on 23rd September 2003 for 100% of the mineral rights. Following native title, landholder notification, and advertising, the tenement was granted on 19th August 2004 for a term of six years to the 18th August 2010.

Applications for a reduction waiver were granted on the 1st August 2006, the 6th September 2007, and the 28th July 2008. From 2008 to 2009, a decision was made to relinquish some of the ground. On the 19th August 2009 the 1st compulsory surrender reduced the tenure from five to three sub-blocks, with a corresponding area reduction from 7.91 to 6.93 km². On the 19th August 2010, one of the three remaining blocks (SD52 1439M) was dropped reducing the area of the tenement to 3.59 km². The tenement is due to expire on the 18th August 2016.

EL24045 was originally 100% held by Title Holder Territory Resources Ltd and operated by Territory Iron Pty Ltd (which is a 100% subsidiary of Territory Resources). The Transfer of Title from Territory Resources Ltd to Territory Iron Pty Ltd occurred on the 18th June 2015, when the Instrument of Dealing – Transfer D93658 was approved by the Delegate of the Minister in accordance with Section 123 of the Minerals Title Act.

2.2 LAND TENURE

Land tenure under the title is within Mary River West Pastoral Lease, PPL 815- NT portion 1630, owned by Adicrest Pty Ltd, as trustee for the Geschwenter Family Trust Number Two, PO Box 7207, St Kilda Road, Melbourne, Vic 8004.

2.3 NATIVE TITLE ACT 1993

A registered native title claim DC2001/006 lodged on the 1st February 2001 covers the pastoral lease.

3.0 CULTURAL HERITAGE MANAGEMENT

Forty-seven archaeological sites have been recorded by Territory Iron archaeologists within tenement EL24045. These sites remain protected under the provisions of the *Heritage Act* 2012. There are no recorded sacred sites within the tenement area.

More recently, in December 2013, Territory Iron was issued a permit under Section 72 of the Act to disturb sites throughout the entire Frances Creek project area if required for mining activities or exploration. However, sites will only be disturbed if absolutely necessary. Territory Iron archaeologists supervise any heritage management activities in accordance with the requirements of the permit. An Authority Certificate under the NT Aboriginal Sacred Sites Act 1989 will only be issued should the area ever be mined.

4.0 GEOLOGY AND MINERALISATION

4.1: REGIONAL GEOLOGY

The Frances Creek mine site and adjacent exploration area are located within the Palaeoproterozoic Pine Creek Orogen which forms part of the North Australian Craton. The Pine Creek Orogen covers an area of ~50,000 km² and represents a >4 km succession of carbonate, clastic and carbonaceous sedimentary and volcanic rocks, which unconformably overlie Neoarchaeon (~2500 Ma) basement granite and gneiss. Based on the timing of

sedimentation, magmatism and metamorphism, the Pine Creek Orogen has been divided into three distinct domains, from west to east; the amphibolite to granulite facies Litchfield Domain, the greenschist facies Central Domain and the amphibolite facies Nimbuwah Domain. The Frances Creek mine site and adjacent exploration area is located within the Central Domain.

The oldest rocks (the Palaeoproterozoic Woodcutters Supergroup) comprise the Namoon Group (Masson Formation) to the east of the Frances Creek project area. They are unconformably overlain by the Mount Partridge Group (Mundogie Sandstone and Wildman Siltstone) which cover the majority of the Frances Creek project. The Mundogie Sandstone (Mount Partridge Group) forms prominent continuous northwest-striking ridges of dominantly coarse, pebbly, feldspathic quartzite and arkosic sandstone (Stuart-Smith *et al.*, 1987). Massive, graded beds of pebble conglomerate are common and units often display graded bedding and lenticular cross-bedding. Subsequent to sedimentation of the Mundogie Sandstone, the Wildman Siltstone (subdivided into two members; the Lower Wildman Siltstone and Upper Wildman Siltstone) were deposited with apparent conformity. The unit mainly comprises metapelitic assemblages with subordinate sandstone. The Lower Wildman Siltstone is host to the majority of the iron mineralisation at Frances Creek.

In the western portion of the Frances Creek project area, the Mt Partridge Group is unconformably overlain by the stratigraphic sequences of the Cosmo Supergroup, comprising the South Alligator Group (Koolpin Formation, Gerowie Tuff and Mt Bonnie Formation) stratigraphic sequence. Subsequent to deposition of these units, pre-orogenic Zamu Dolerite sills intruded these stratigraphic successions.

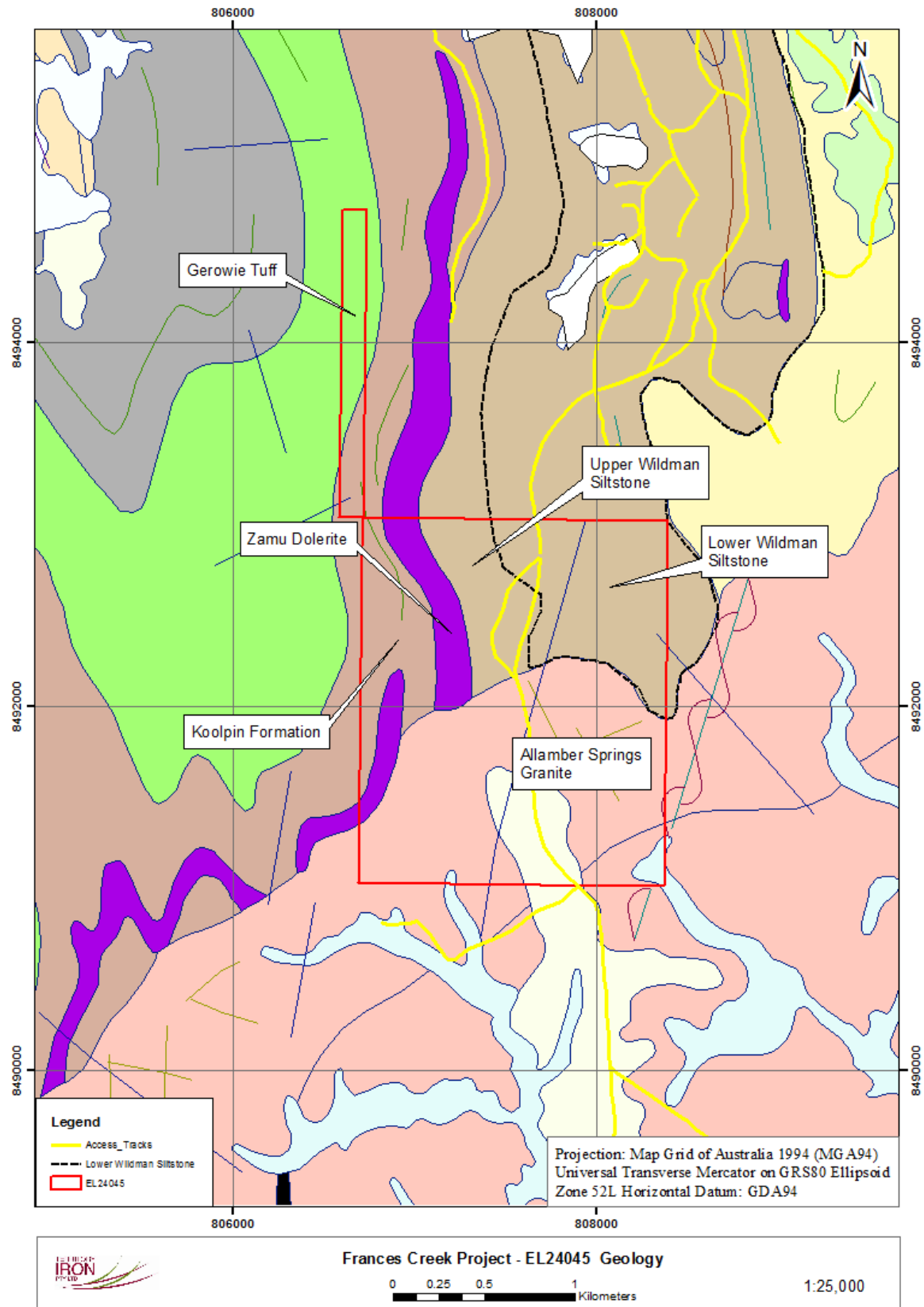
Syn- to post-orogenic activity is represented by intrusion of the 1835-1800 Ma Cullen Supersuite granitoids. Intrusion of the granite led to contact aureoles in the surrounding pre-orogenic Masson Formation, Mundogie Sandstone and Zamu Dolerite.

Two major episodes of folding are recognised, earlier tight to isoclinal F1 folds followed by younger open (widely spaced) folds (Stuart-Smith *et al.*, 1987). The major structural controls in the tenement area are related to D3 1-3 km scale northwest-trending non-cylindrical folds, which plunge gently to the northwest to form a series of anticlines and synclines pre-dating the intrusion of the Cullen Supersuite, and 1-3 km long northwest and northeast-trending faults.

4.2: LOCAL GEOLOGY AND MINERALISATION

The northern portion of EL24045 (Figure 3) is dominated by Mount Partridge Group stratigraphy (Lower and Upper Wildman Siltstone), Zamu Dolerite and South Alligator Group stratigraphy (Koolpin Formation). The southern portion consists of the Allamby Springs Granite (Cullen Supersuite).

In the Frances Creek area, economic grade iron mineralisation is concentrated primarily within basal breccias of the Lower Wildman Siltstone, within regional fold hinge zones and limbs of overturned NNW-trending, shallow plunging, non-cylindrical folds and subordinate parasitic folds and fold flexures. The lower sequence consists of carbonaceous phyllite, ironstone, siltstone and phyllite which is overlain by laminated grey, brown, red and cream banded siltstone (Stuart-Smith *et al.*, 1987). At depth, the sequence grades into pyritic carbonaceous shale. The lower member in surface outcrop consists of bleached white to grey carbonaceous shale including highly angular iron-rich breccias and massive ironstone, overlain by laminated grey, brown, red and cream shale and siltstone.



Although not recognized in the official stratigraphic definition for the Wildman Siltstone, drilling at Frances Creek has revealed extensive dolostone in the lower member. Iron enrichment is not restricted to one stratigraphic unit and occurs in strata both above and below the Wildman Siltstone, although these enrichments do not reach economic levels. A characteristic feature of the Frances Creek deposit is that high-grade zones comprise numerous, small, irregular, “pod-like” ore bodies that are of the order of 10 – 20 m in diameter and generally within 100 m of the contact to the underlying Mundogie Sandstone.

Iron-bearing oxides include hematite (Fe_2O_3) and goethite ($\text{FeO}(\text{OH}) \pm$ accessory manganese minerals which are associated with goethite. High grade Fe-ore (>65 %Fe) is characterized by hard, grey, massive hematite or friable purple, microplaty hematite. These ores can range from extremely fine grained to coarse grained and bladed with numerous irregularly shaped vugs and skeletal-textures reminiscent of boxworks, in which vugs are often filled with late-crystallising, coarse-grained hematite. Goethite occurs as both ochreous and vitreous forms.

5.0: EXPLORATION ACTIVITIES – CURRENT REPORTING YEAR

During the reporting period, Territory Iron undertook desktop geological studies to evaluate the iron ore and manganese potential and also monitor the status of rehabilitation for drill sites and tracks from the previous years’ drill programme.

6.0: CONCLUSIONS AND RECOMMENDATIONS

An in depth review of all available data including the recently acquired geophysical data to further evaluate the economic potential of the tenement.

7.0: REFERENCES

Glass LM, 2014. Territory Iron Pty Ltd, EL24045 – Annual Report for the period 19th August 2013 – 18th August 2014.

Stuart-Smith PG, Needham RS, Bagas L and Wallace DA, 1987. Pine Creek, Northern Territory, *BMR 1:100,000 Geological Map Commentary*, Bureau of Mineral Resources, Geology and Geophysics, Canberra, Australia.