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TERRITORY RESOURCES LIMITED

A.C.N. 100 552 118

FRANCES CREEK

ML24727

ANNUAL REPORT

FOR THE PERIOD

5TH April 2008 – 4TH April 2009

**Pine Creek SD52-08 1:250,000 Sheet
Pine Creek 5270 1:100,000 Sheet
NORTHERN TERRITORY**

**I.P. Hassall
July 2009**

SUMMARY

ML 24747 overlies a significant number of the ore deposits at Frances Creek, and as such significant work was carried during the 2008 – 2009 reporting period.

The tenement is located 220km south of Darwin, and 23km north of Pine Creek.

The lithology is comprised of Palaeoproterozoic sedimentary rocks that have been folded and metamorphosed to green schist facies. Mineralisation is restricted to a narrow brecciated zone that runs above and sub-parallel to the Lower Wildman Formation footwall.

Work included:

- New QuickBird satellite photography was obtained from SRK Consulting to provide base maps for aboriginal heritage and geological mapping;
- 584 Reverse Circulation holes were drilled for a total of 38,555 metres;
- 16 triple tube HQ3 diamond holes were drilled for a total of 991.6 metres;
- Structural and geological surface mapping over selected prospective parts, of ML24747 (Appendix 3);
- Extensive Aboriginal Heritage work over areas within the tenement likely to be disturbed by either Exploration or Mining (Appendix 4);
- Hydrogeological study conducted on the Helene 6/7 ore body by MWH Global hydrogeological consultants to assess potential dewatering strategies for the Helene 6/7 open cut Mining (Appendix 5);
- Resource models were completed by Territory Resources personnel for Helene 3, Helene 5, Helene 6/7, Helene 11, Thelma Rosemary, and Ochre Hill;
- New geotechnical investigations were conducted on the Ochre Hill and Helene 5 ultimate pit shells for ground stability (Appendix 6).

Total expenditure during the reporting year was \$ 5,077,200.20.

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1. INTRODUCTION

This report details exploration activities for iron mineralisation conducted by Territory Resources Ltd. within ML24727 (Frances Creek) during the year ended 4th April 2009.

ML 24727 is located in part within the old Frances Creek iron ore mining district from which about six million tonnes was produced during the period 1967 to 1974. The mining district lies 23km north of the township of Pine Creek which is located on the Stuart Highway about 220km south of Darwin, Figure 1. Access from Pine Creek is along the sealed Kakadu Highway for 2km and then along the graded Frances Creek road for 23km to the Frances Creek iron ore mine site area.

ML 24727 was pegged over the top of a number of exploration tenements to facilitate mining of the Frances Creek Helene, Thelma, Rosemary and Ochre Hill deposits, and was granted on 5th April 2007.

2. TENURE

2.1 MINERAL RIGHTS

ML 24727 was granted to Territory Resources Limited on 5th April 2007 for a term of 25 years, expiring on 4th April 2032. The tenement covers 1,216 hectares.

2.2 LAND TENURE

The tenement includes parts of the following land tenure is held 100% by Territory Resources Ltd. It overlies the Ban Ban Springs pastoral lease.

2.3 ABORIGINAL HERITAGE SURVEY AND NATIVE TITLE

Extensive fieldwork was conducted by Earth Sea Heritage Surveys during the reporting period to identify Significant Sites on ML24727. This work is detailed in Appendix 3, and attached as MapInfo files.

Sites were identified, mapped, and described, and a small number were salvaged.

[ML24727 2009 A 08 CollectedHeritageSites.tab](#), [ML24727 2009 A 09 AboriginalHeritageSites.tab](#).



Figure 1: Tenement Location Plan - ML24727

3. DISTRICT GEOLOGY & MINERALISATION

Palaeoproterozoic Wildman Siltstone and Mundogie Sandstone sediments of the Mt Partridge Group and Koolpin Formation rocks of the overlying South Alligator Groups, forming the west-dipping limb of a NNW trending antiform, are confined to the northern third of the tenement area. The remainder of the tenement is underlain by Allamber Springs Granite.

The Wildman Siltstone is the most widespread rock unit and comprises two informal sequences. The lower sequence consists of carbonaceous phyllite, ironstone, siltstone and phyllite, which at depth is reported to be pyritic and carbonaceous. The upper sequence consists of similar rock units, but also contains minor sandstone and rare dolarenite.

Ironstone, and hence the development of iron occurrences, is absent from this sequence. The Mundogie Sandstone, which underlies the Wildman Siltstone, is a sequence of coarse clastic sediments mainly comprising pebbly feldspathic conglomerate and arkose. Thin usually pyritic and hematitic interbeds of phyllite, carbonaceous phyllite and sandy siltstone are also present. The Sandstone crops out over a small area in the NE corner of the tenement.

Sills of pre-orogenic Zamu Dolerite are mapped in the western part of the tenement and appear to have preferentially intruded along the contact between the Koolpin Formation and the underlying Wildman Siltstone.

These sediments, volcanics and dolerite sills have been moderately to tightly folded about NNW trending axes into a series of synforms-antiforms with vertical dips or steep dips to either side of vertical. On a regional scale, these structures form an anticlinorium with a dominant westerly dip within the tenement area.

Regional lower greenschist grade metamorphism accompanied the folding event during a major deformation period between 1870-1810 Ma.

Within the region, and with the exception of the Lewis and Boots deposits which occur in Koolpin Formation rocks, all known iron mineralisation occurs in the lower Wildman Siltstone as stratiform discontinuous lenses consisting of massive hematite with variable inclusions of quartz and siltstone. The ore is structurally controlled, with thickening of ironstone horizons within minor fold axes. In the Koolpin Formation, band iron formation of the Middle Member forms at surface gossanous, hematite-limonite bodies which are reported by Ahmad et al (1993) to give way at depth to ferro-actinolite, Fe-rich chlorite, garnet, siderite, quartz, carbonates and sulphides. No iron occurrences are known within the tenement.

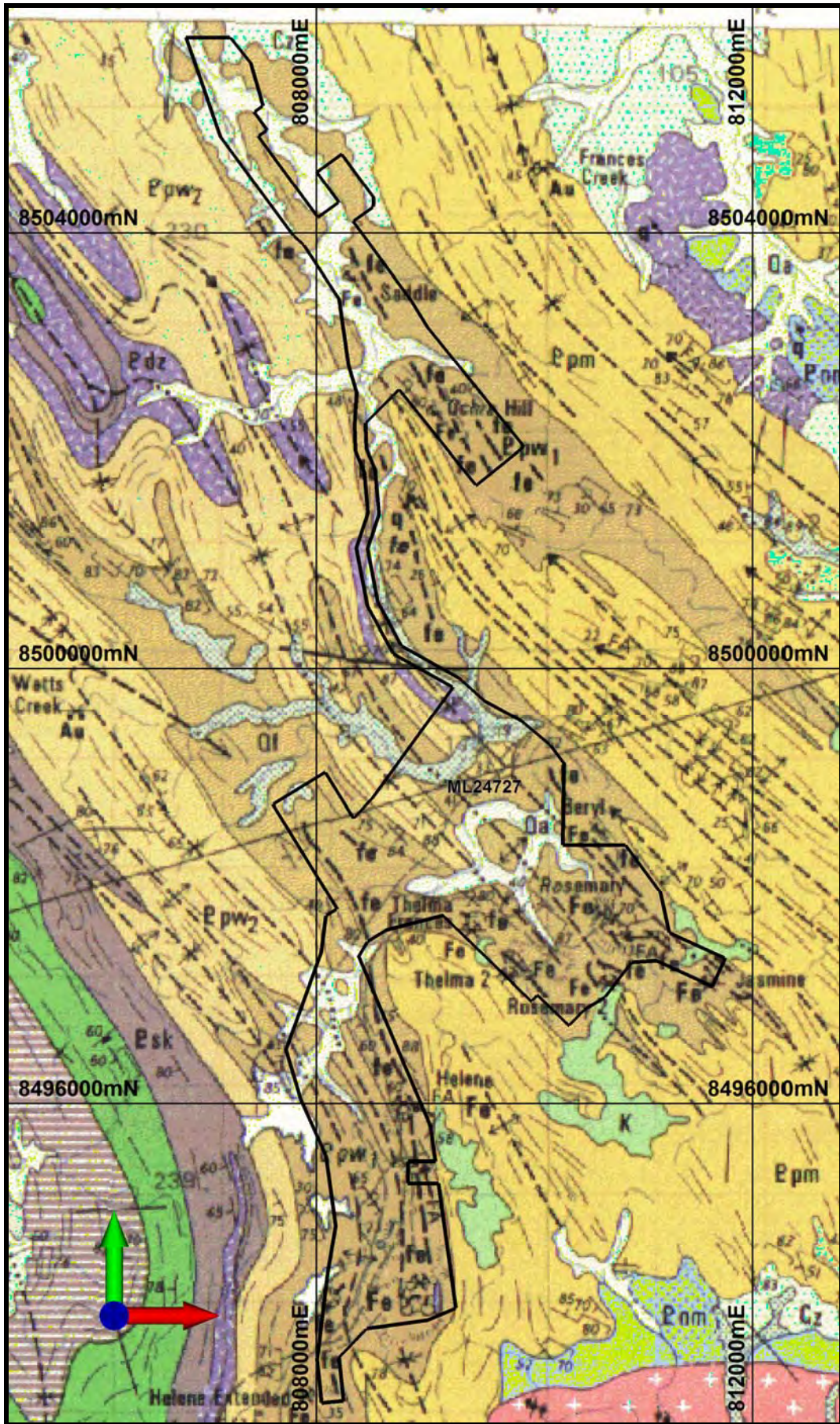


Figure 2: Tenement Geology – ML24727

4. EXPLORATION ACTIVITIES – YEAR 2

4.1 REVERSE CIRCULATION DRILLING PROGRAM

4.1.1 DRILLING

Reverse circulation drilling during the reporting year totaled 584 Reverse Circulation holes for a total of 38,555 metres. Swick Drilling supplied an Ingersoll Rand TH60 Reverse Circulation rig to complete this work. A drill hole location map is presented in Appendix 2.

Drilling was conducted on Elizabeth Marion, Helene 2, Helene 3, Helene 5, Helene 6/7, Helene 11, Jasmine West, Ochre Hill, Thelma Rosemary, Thelma 1, Thelma 3, and Rosemary Extended.

Deposit	Number of Holes	Metres
Elizabeth Marion	25	1,314
Helene 2	20	1,458
Helene 3	18	768
Helene 5	81	7,764
Helene 6/7	132	8,312
Helene 11	65	4,745
Jasmine West	10	390
Ochre Hill	107	6,204
Rosemary Extended	22	1,200
Thelma Rosemary	58	3,100
Thelma 1	30	2,550
Thelma 3	16	750
TOTAL	584	38,555

Figure 3: Reverse Circulation drilling metres by deposit.

Full data is presented in Mineral Exploration Reporting Template formatted files that are attached to this report.

4.1.2 SAMPLING AND ASSAYING

Samples were collected off the drill rig at 1 metre intervals, and put into a large green polythene bag. A representative scoop was sieved, washed, and logged by the geologist for hardness, colour, lithology, oxidation state, and moisture.

A total of 39,479 riffled reverse circulation samples were collected at 1 metre intervals and logged, of which a total of 18,285 were assayed. Selection criteria for assay were:

- Any sample logged as having or having potential for iron bearing minerals (including breccia);
- Five metres above and 5 metres below any sample logged as having or having potential for iron bearing minerals;
- Every fifth sample in waste intervals.

This assaying protocol was decided to confine any mineralisation in waste, and also to provide geochemical data for waste rocks, to be used in waste rock classification and waste

storage designation. The waste rocks include some pyrite-bearing black shales that have potential acid forming properties. Assaying this material provides inputs to mine planning and waste storage strategies.

Only samples that contained iron ore mineralisation were assayed, with the samples being sent to NTEL laboratories in Darwin for assay by XRF.

A suite of elements were assayed for, including: Fe, Fe₂O₃, Al₂O₃, CaO, K₂O, MgO, Mn, MnO, P, P₂O₅, S, SO₃, SiO₂, V₂O₅, and LOI.

4.1.3 DATA MANAGEMENT

Drill hole collars were surveyed by the AusSurv Frances Creek mine surveyors. Collar surveys, lithology, and assay data were uploaded to the Frances Creek drill hole database. Drill hole data was validated and checked against original logging sheets to ensure database integrity.

4.2 DIAMOND CORE DRILLING

'H₂O Drilling', a local Northern Territory drilling contractor based in Coolalinga, supplied Mole Investigator diamond drill rig mounted on a 4 x 4 Unimog truck. The rig was excellent and fit-for purpose. 16 HQ3 triple tube diamond core holes for a total of 991.6 metres.

Diamond drilling was conducted on Helene 3, Helene 5, Helene 6/7, Helene 9, and Ochre Hill.

Deposit	Number of Holes	Metres
Helene 3	5	303.2
Helene 5	4	285
Helene 9	1	32.1
Helene 11	2	160.2
Ochre Hill	4	211.1
TOTAL	16	991.6

Figure 4: Diamond drilling metres by deposit.

The diamond drilling was planned by Adelaide-based Geotechnical Consulting Pty Ltd, who are retained by Territory Iron Pty Ltd to conduct routine geotechnical mapping, logging, and data interpretation services. The core was initially logged for lithology, and then geotechnical logged for rock strength characteristics, geological and geotechnical discontinuities. It was also photographed, and these are an attachment to this report (Appendix 7).

The work completed is detailed in the attached geotechnical reports (Appendix 6A and 6B).

4.3 STRUCTURAL MAPPING

CSA Australia was contracted to supply mapping personnel, consisting of 1 geologist and 1 field assistant, to map geology and geological structures that may host additional iron mineralisation and resources.

The mapping largely confirmed the geology of the **Pine Creek 5270 1:100, 000 Sheet**, in terms of geology and also the distribution of iron mineralisation over the tenement when assessed by geological outcrop. Minor manganese mineralisation to be a contaminant on iron mineralisation away from the basal, Wildman Formation where most of the larger Frances Creek ore bodies are located. 59 rock-chip samples were collected on outcrops identified during mapping.

The mapping was useful in confirming iron mineralisation is restricted to a narrow corridor, between 100 and 200 metres from the basal Wildman contact. This provides a narrow corridor to conduct ground gravity geophysical surveys where mineralisation undercover is suspected.

The MapInfo files for this work are attached to this report.

[ML24727 2009 A 07 LITHOLOGY.tab](#), [ML24727 2009 A 10 FOLN TREND.tab](#),
[ML24727 2009 A 11 INFERRED FAULTS.tab](#), [ML24727 2009 A 12 STRUCTURES.tab](#).

4.4 RESOURCE MODELING

Resource models were updated by Territory Resources personnel for Helene 3, Helene 5, Helene 6/7, Helene 11, Thelma Rosemary, and Ochre Hill. This was done as part of ongoing resource evaluation and upgrade for the resource portfolio at Frances Creek.

The grade and tonnages for the new resource models are detailed below. The modeling process involved generated a conditionally simulated probabilistic lithology model which was then interpolated using ordinary kriging. Conditionally simulating the lithology is necessary due to the short range geological variability along strike. The geology and structure varies to such a degree along strike that wireframed lithology results in a poor modeling outcome. Models generated for the deposits currently being mined – Ochre Hill, Helene 6/7, and Thelma Rosemary.

Deposit	Indicated			Inferred			Total		
	Tonnes	Fe %	P %	Tonnes	Fe %	P %	Tonnes	Fe %	P %
Helene 3	189,121	63.6	0.07	369,328	62.43	0.08	558,449	62.8	0.08
Helene 5	185,209	59.1	0.07	1,318,953	60.17	0.10	1,504,162	60.0	0.09
Helene 6/7	3,693,473	59.5	0.09	384,008	58.70	0.11	4,077,480	59.5	0.09
Helene 11	178,626	60.0	0.14	141	55.19	0.15	178,767	60.0	0.14
Ochre Hill	314,949	59.5	0.17	312,983	58.66	0.22	627,931	59.1	0.20
Thelma Rosemary	350,234	61.0	0.19	713,573	59.73	0.16	1,063,806	60.1	0.17
TOTAL	4,911,612	59.8	0.10	3,098,985	60.0	0.12	8,010,596	59.9	0.11

Table 5: Resource Model Summary Tonnes and Grade

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Ian Hassall, who is a Member of the Australian Institute of Mining and Metallurgy, and is a full-time employee of Territory Resources Limited. Mr Hassall has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves'. Mr Hassall consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

5. PROPOSED EXPLORATION ACTIVITIES –YEAR 3

Continuing development and mining at Frances Creek will require ongoing mapping, infill drilling, and geotechnical work.

There is limited scope for the discovery of significant ore bodies within the remaining ML24727 land area, although selected areas will be targeted using ground gravity and scout reverse circulation drilling.

6. EXPENDITURE

Territory Iron's expenditure for the reporting year was \$ 5,077,200.20 and is detailed in the NT Exploration Expenditure sheet attached as Appendix 1 to this report.