NORTHERN TERRITORY IRON ORE PTY LTD

ABN 59 609 206 706

4th Annual Technical Report

Roper Valley Iron Ore Project

ML 29584

For the period

09/07/2017 to 08/07/2018

Tenement	ML 29584	**1:250 000 Sheet Name**	Urapunga (SE5310) Hodgson Downs
Holder	Northern Territory Iron Ore Pty Ltd (NTIO)	**1:100 000 Sheet Name**	Chapman (5768)
Manager	As above	**Datum**	GDA94-53
Operator	Northern Territory Iron Ore Pty Ltd (NTIO)		
Commodity	Fe as principal commodity		
Elements Analysed	Al2O3,As,Ba,CaO,Cl,Co,Cr2O3,Cu,Fe,K2O,HgO,Mn,Na2O,Ni,P,Pb,S,SiO2,Sn,Sr,TiO2,V,Zn,Zr,LOI		
Keywords	RC drilling, Deposit C		
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Report Date	August 2018		
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EXECUTIVE SUMMARY

Northern Territory Iron Ore Pty Ltd (NTIO) - Fourth Annual Technical Report for ML 29584 covers exploration activity from 9 July 2017 to 8 July 2018. The ML covers the largest iron oxide resource in the Project - Deposit C.

The Roper Valley Iron Ore Project (the Project) camp at Area C is located 550kms by road from Darwin via the Stuart Highway and then via Roper Highway east from Mataranka 140kms towards Sherwin Creek.

The Project area lies in the Western Macarthur Basin within Roper Group stratigraphy. NTIO explores and develops laterally extensive ironstone units associated with the Sherwin Formation.

The 2017 RC drilling programme at Area C was aimed at:

- testing extensions of known ironstone stratigraphy at Deposit C down dip and along strike from previous drilling;
- improving knowledge of ironstone grade and thickness trends and mineralisation controls; and
- testing optimum future grade control sampling practice by twinning previous one metre drill intersections with quarter metre samples.

Reverse Circulation (RC) drilling was carried out by NT based WDA Drilling with 60 vertical holes drilled in total, mostly collared within EL24101 with the remainder in ML 29584. In total, 1,723 metres were drilled, logged and sampled, at either quarter or one metre downhole intervals. Sampling was nominally at single metre spacing in step-out holes and at quarter metre intervals when twinning existing intersections. Site preparation included 15.1 line kms of new track access with 60 pads prepared at 25x25m minimum area.

Samples were sent to Intertek in Darwin for crushing and sample preparation. Pulps were on-sent to Genalysis Laboratories in Perth for total iron ore element suite assaying. Certified reference materials (standards) and duplicate drill samples were included in sample submissions for QA/QC assaying purposes.

The drill programme was successful in:

- extending Ironstone Units down dip of previous drilling by several hundred metres in the south west direction;
- closing off mineralisation to the south in Derim Derim Dolerite Sill;
- improving plan interpretations particularly of Middle and Lower Ironstone grade and thickness trends;
- improving understanding of mineralisation controls from the additional drill data and updated grade x thickness plans; and
- demonstrating that quarter metre sampling can be practical, improves stratigraphic understanding and preferred for grade control precision as it minimized boundary waste dilution effects.

Plan interpretation shows a general weakening of grade and thickness of ironstone down dip from the mesa top toward the west, accompanied by a shallowing weathered profile. However, the mineralised stratigraphy may still remain open down dip, as drill hole RR00659, the last hole in the programme suggests.

Highest grade and thickness of iron oxide is observed where ironstone outcrops in the structurally complex “fold nose” exposed along the mesa top. This is possibly enhanced by supergene enrichment processes. Elevated ironstone grade and thickness is also seen on plans along interpreted fold- limb positions. This mineralisation appears continuous for a significant length down dip. The specific Sherwin Bulk Sample Pit design and location appears to be associated with such a corridor of iron enrichment.

The drilling metres completed were less than planned. The reasons are varied:

- a dolerite sill to the south abruptly closed off potential strike extensions of mineralized ironstone in that direction;
- ironstone extensions down dip were near parallel to surface topography ie confirming shallower targets than planned;
- a number of distal down-dip holes had very shallow weathering profiles. Such holes were prematurely terminated 10 to 15 metres into fresh rock. Deeper holes are required in these cases to verify either continuity or closure of the mineralised stratigraphy; and
- some proposed sites in rugged topography were not drilled as they could not be safely accessed by the truck mounted rig. This despite site access and drill pads prepared by experienced D6 Dozer operators.

Separate to the drilling programme, NTIO is examining mineral characterisation of the various ironstones from existing drill core from EL24101 and EL24102 and pit stockpile samples. This includes both ore sorting and core scanning technology. This work is early-stage to be evaluated within the next reporting period.

Elsewhere on the Project detailed ironstone mapping and rock chip sampling was planned for the various Yumanji prospects on EL26412. However, the programme could not be conducted as planned because of severe bushfires in the area, making helicopter access unsafe.

No field exploration activity was conducted on other Project ELs.

1. INTRODUCTION

1.1 Location and Access

The regional location of the Roper Valley Iron Ore Project (GR260-12) is shown in Figure 1. The Project is centred 550kms SE of Darwin and 140kms east of Mataranka. Access from Darwin is via the Stuart Highway to Mataranka and then via Roper Highway (mostly sealed) towards Roper Bar. Part of the Project (EL 24102) is accessed via the Hodgson Downs Road towards Minyerri township, which includes a sealed airstrip.

The Project area was originally applied for to target historic iron ore deposits, potential uranium anomalies, diamond prospectivity and heavy mineral potential. Figure 2 shows the location and distribution of iron deposits identified by BHP in early 1960s within the various oolitic ironstone of the Sherwin Formation.

Figure 1: Location - Roper Valley Iron Ore Project.

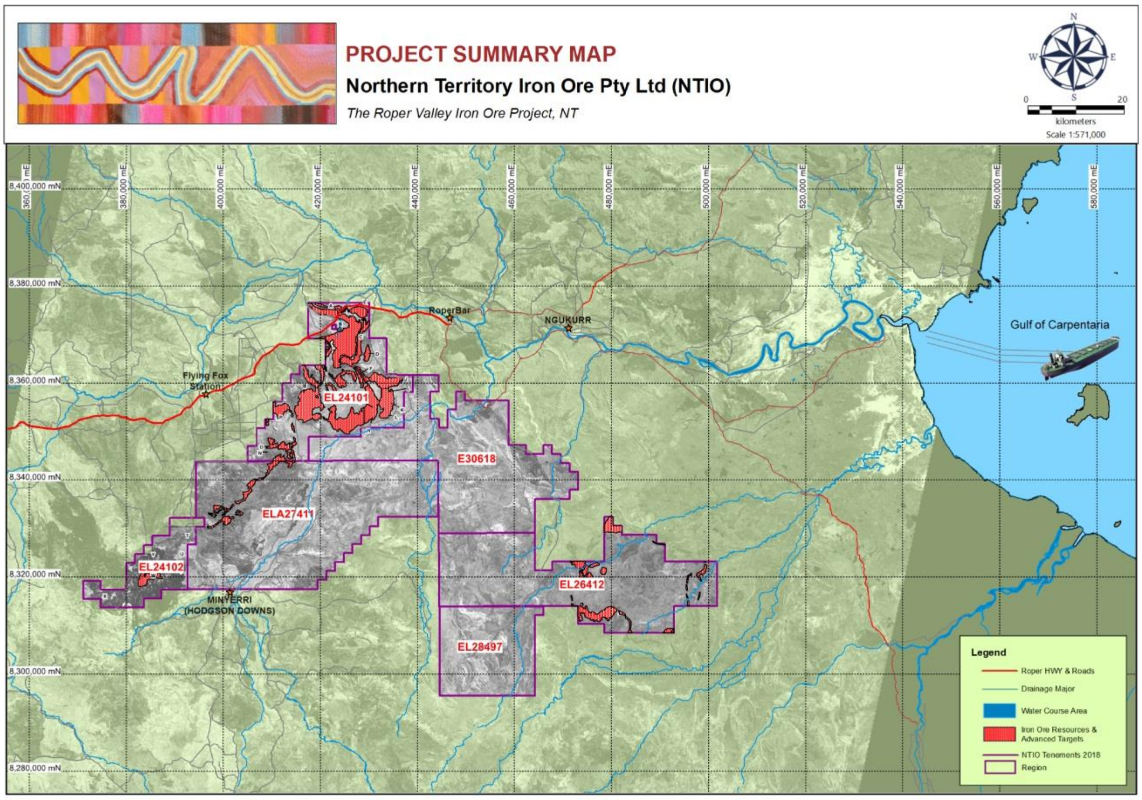

Figure 2: Roper Valley Iron Ore Project- Tenement Plan showing GR260 Reporting ELs.

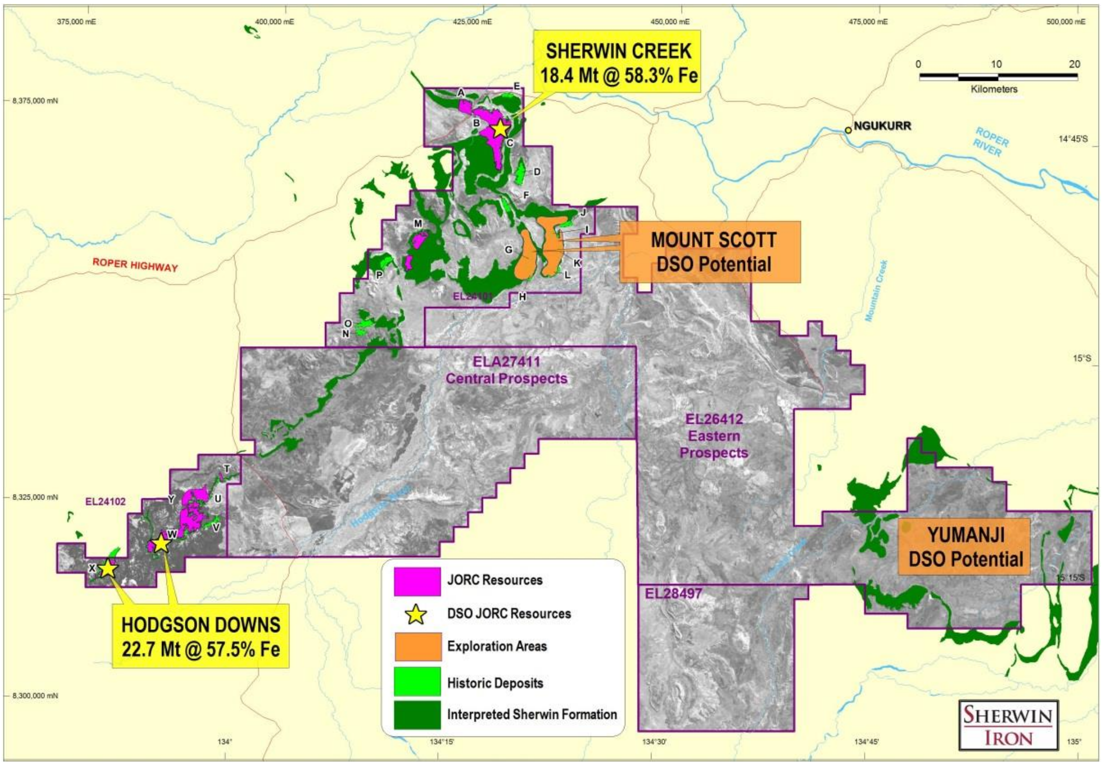

Figure 3: Roper Valley Iron Ore Project showing -Historic BHP Deposits, High Grade (DSO) Resources and Exploration Target Locations with High Grade Resource Potential

EL24101 is located entirely within the Urapunga (SD53-10) 1:250,000 map sheet. EL24101 covers an area of 589.5sq km trending in a southwest/northeast direction with the Roper Highway crossing the northerly portion of the tenement at Sherwin Creek. The tenement straddles large portions of both Namul Namul and Mt McMinn Stations with Sherwin Creek in its upper NE sector.

The NTIO camp and field office is located within the EL one kilometre south of the Roper Highway and approximately 3kms west of Sherwin Creek crossing.

Station tracks provide access within the project area though mostly limited to the dry season (April-November).

2. TENURE

The current tenure status relating to Project Reporting GR260 is shown in Figure 2.

EL24101 hosts the largest of the iron resources at its Deposit C. Much of the resource lies within ML29584 granted on 8 July 2014, subsequent to Sherwin's completion of its exploration bulk sample extraction.

Three ML applications (MLA29070, MLA29071 and MLA29437) have been lodged over EL 24102 for ancilliary purposes, adjacent to Deposit W.

3. PREVIOUS EXPLORATION

3.2 Historic - BHP

The Roper area has attracted various phases of exploration for a range of commodities. The first significant iron ore find in the NT was made in 1911 at Murphy's prospect near Roper Bar. This small discovery attracted BHP to the area in 1955 and led to an investigation of the Roper River oolitic iron deposits. BHP conducted diamond drilling, (38 diamond drill holes total 1,793 m), shaft sinking, sampling and metallurgical testing of composite samples from many of the 20 or so named iron deposits, now within NTIO Project area. Exploration was carried out between 1956 and 1961 on the named deposits A to Z. BHP had estimated total potential of at least 400Mt of variable grade (35%-62% Fe) iron ore.

In the early 1960s, BHP was diverted to the richer Pilbara WA iron ore deposits after two initial phases of exploration leaving the Roper Deposits undeveloped. More recently Roper Resources (Orridge, 1993) and the Northern Territory Geological Survey (NTGS) conducted rock chip sampling which generally supported BHP's estimates of likely deposit size and potential.

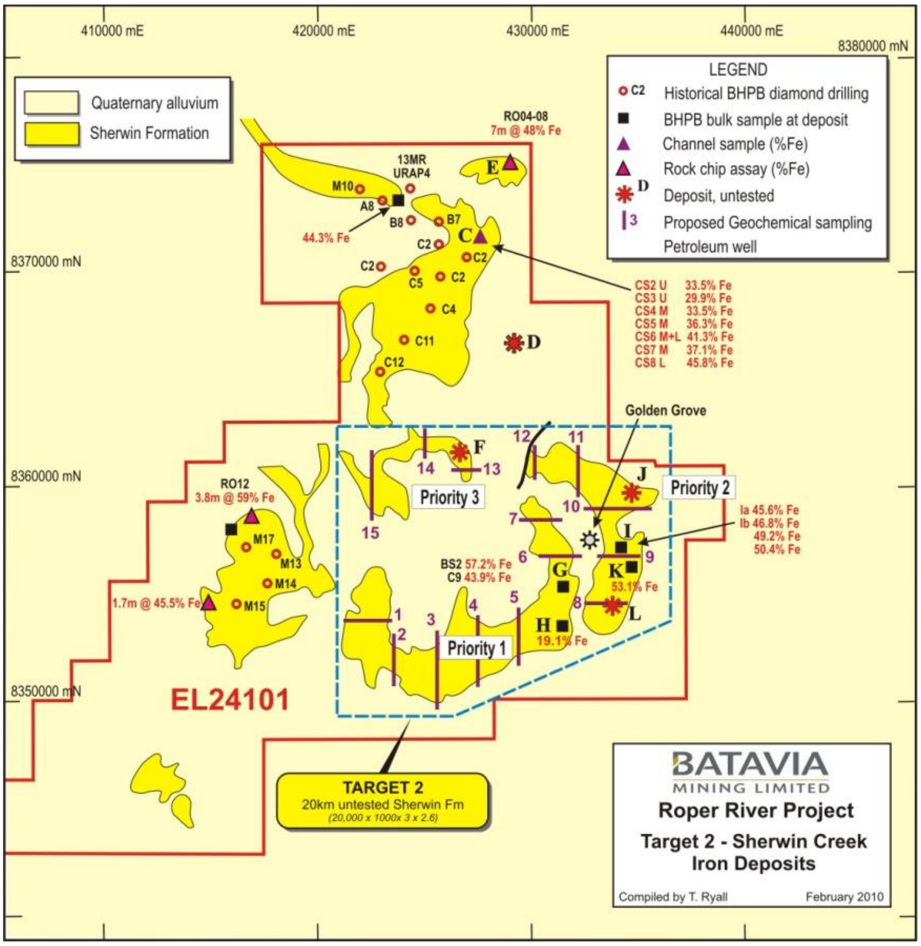

Figure 4: EL24101 BHP Exploration1950s/60s

3.3 Sherwin Iron

Sherwin Iron Pty Ltd commenced active exploration in 2010, initially as Batavia Exploration. Sherwin drilled out its highest-ranked BHP targets at W and X first, upgraded in 1993 by excellent rock chip sample results by Geoff Orridge (NTGS). Combined RC and diamond drilling defined “Low Grade” JORC Iron Oxide Resources of 112Mt @ 43%Fe at W and X, signed- off by SRK at end of 2010.

By end of 2011, Sherwin had increased its total “Low Grade” Iron Resources at W, X, B, C, M and TUY to 488 Mt @41%Fe reported by SRK Consulting.

Plan interpretation of ironstone grades within these resources at end of 2011 showed potential existed for high grade resource components within B, C, and W, X resources areas. This meant the resources could be selectively mined and exported directly without significant development cost. Infill resource drilling commenced in 2012 and resulted in high grade Indicated Resources being defined and signed off by Coffey Mining at B and C and separately W and X.

Following DSO (Direct Shipping Ore) grade resources being defined by drilling, a programme of trenching was carried out at Deposit C in September 2012 confirming the optimal site for the trial pit.

Sherwin sought approval from NT DPIR in late 2012 for a large exploration bulk sample of up to 400,000 tonnes of saleable product to be trucked to Darwin Port for shipping to China. This bulk sample operation was approved by NT DPIR in February 2013 and commenced in May 2013. The bulk sample extraction was completed in early July 2014 with 273,000 tonnes at 58.5% Fe shipped for export. Closure of the bulk sample operation accompanied Sherwin Iron into voluntary receivership, with Korda Mentha appointed as Receivers and Managers.

Sherwin had other prospective targets with resource potential at EL26412 on its Yumanji Prospect (from rock chip sampling in 2011) and also on EL24101 at Mt Scott (from initial diamond drilling of near surface targets in May 2014 at deposits I, K and L).

Table 1: EL24101 Low Grade Resource Estimates: SRK Reported

Historical Deposit	Category	Tonnes (Mt)	Fe (%)	Al2O3 (%)	P (%)	SiO2 (%)	Cut Off Grade
A,B,C	Inferred	320.0	40.1	1.8	0.006	34.4	35
M	Inferred	15.6	44.0	4.4	0.13	26.9	35
Total	**Inferred**	**335.6**	**40.2**	**1.9**	**0.006**	**34.2**	**35**

Table 2: EL24102 Low Grade Resource Estimates: SRK Reported

Historical Deposit	Category	Tonnes (Mt)	Fe (%)	Al2O3 (%)	P (%)	SiO2 (%)	Cut Off Grade
W	Indicated	32.7	47.4	2.7	0.08	20.4	40
W	Inferred	50.8	45.5	2.5	0.07	19.7	40
X	Indicated	23	49.3	2.3	0.09	17.2	40
TUY	Inferred	46	39.9	2.8	0.07	19	35
Total	**Ind +Inf**	**152.5**	**44.8**	**2.1**	**0.03**	**29.9**	**Various**

Table 3: High Grade Resources Roper Project.

Roper River Iron Ore Project

Sherwin Creek Deposit C and Hodgson Downs Deposits X and W Higher Grade Resources

Deposit / Category	Category	Cut-off (Fe %)	Bulk Density	Tonnes (Mt)	Fe (%)	Al_2O_3 (%)	SiO_2 (%)	P (%)	LOI (%)
Sherwin Creek C Deposit	Indicated	55	2.68	18.34	58.3	1.07	12.36	0.03	2.47
Sherwin Creek C Deposit	Inferred	55	2.68	0.08	57.6	1.52	12.68	0.02	2.91
Sherwin Creek Higher Grade Total#	Sub Total	55	2.68	**18.42**	**58.3**	**1.07**	**12.36**	**0.03**	**2.47**
Hodgson Downs X Deposit	Indicated	55	2.68	8.15	57.7	2.11	12.14	0.09	2.62
	Inferred	55	2.68	0.85	58.1	2.58	11.04	0.10	2.37
Hodgson Downs W Deposit	Indicated	55	2.68	13.05	57.3	2.36	11.78	0.08	2.65
	Inferred	55	2.68	0.69	56.7	2.38	11.11	0.09	3.46
Hodgson Downs Higher Grade Total	**Sub Total**	55	2.68	**22.74**	**57.5**	**2.25**	**11.91**	**0.09**	**2.66**
PROJECT TOTAL	**Total**	55	2.68	**41.16**	**57.8**	**1.8**	**12.1**	**0.07**	**2.6**

4. CLIMATE

The Project area has a humid monsoonal climate much of the year, with mild to warm dry winters and hot humid summers often with heavy rains associated with tropical cyclones. The average annual rainfall is 700 mm mostly from November to April. The wet season renders large portions of the area inaccessible by vehicles for exploration, particularly away from sealed roads.

Helicopter access is the only reliable alternative access during wet season and immediately following. Bushfire risk is highest late in the dry season from September to November. It can be sparked by early storms with lightning strikes.

5. GEOLOGY

5.1 Regional Geology

The Project lies in the central-western shelves (Arnhem Shelf and Bauhinia Shelf) of the McArthur Basin. The basin includes several northerly trending rifts separated by northwest-trending faults and transverse ridges. It was subject to repeated cycles of clastic and marine carbonate sedimentation interspersed with volcanic extrusion and sill emplacement (Tawallah, McArthur and Nathan Groups) in response to reactivation of older basement structures.

A later, more passive series of sedimentation cycles in response to western basin subsidence occurred with the deposition of suites of blanket quartz sandstones, micaceous siltstones, black shales and glauconitic sandstones (Roper Group). Ironstones are prominent on a local stratigraphic level (Roper and Hodgson Iron Deposits). 'A variety of marginal, shallow and deeper marine shelf environments reflect alternating basin-wide sea level rises and falls. Tholeiitic dolerite and gabbro sills were emplaced throughout the Roper group soon after deposition ceased and before regional deformation (Figure 5 & 6).

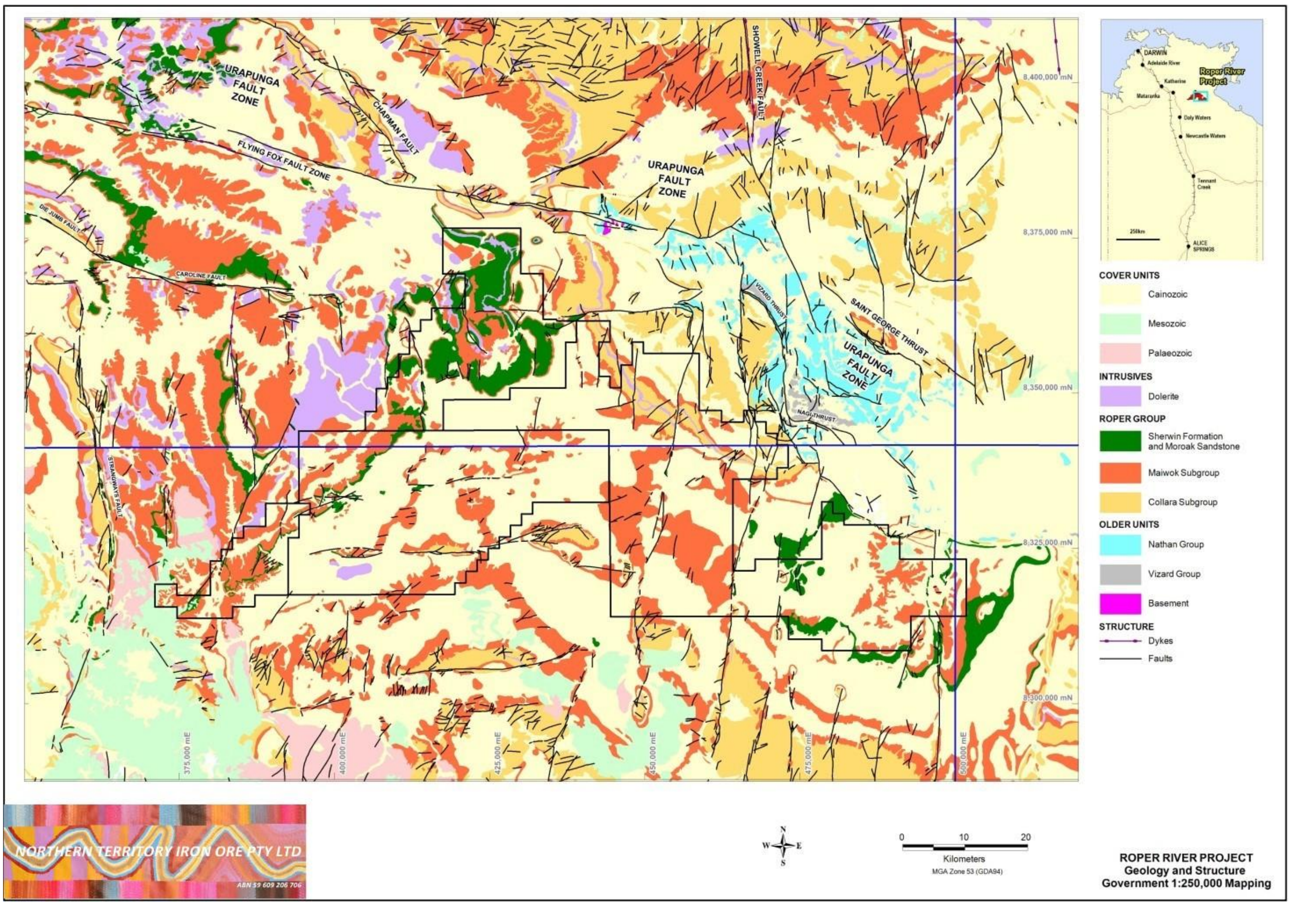

Figure 5: Roper Valley Iron Ore Project 250,000 scale Geology- Urapunga Sheet

The absence of Cambrian flood basalts and only remnant outliers of Cretaceous sandstones, both of which are extensive to the south, west and north of the Project, suggest a significant exposure to uplift and erosion within the area permitting exposure of the underlying Proterozoic sediments and dolerite sills. Extensive deposits of Quaternary to Recent sediments comprising alluvium, colluvium, unconsolidated gravel and sand overlain by mud-rich soils are mapped in the Project area and reflect abrupt changes in sedimentary deposition environments.

5.2 Local Geology

Within the Roper Group Stratigraphy the Roper Valley Iron Ore Project is focussed within Sherwin Formation, where BHP had documented many potential iron oxide deposits. The Sherwin Formation includes four significant oolitic ironstone horizons, characterised into two main groups at the top and base of the Sherwin Formation.

- SHERWIN CREEK Silica- associated finely Oolitic Upper, Middle and Lower Ironstones and
- HODGSON DOWNS Clay- associated coarsely Oolitic Basal Ironstone.

The stratigraphy between these two groups of ironstones includes a sedimentary siltstone / sandstone sequence up to 100m thick with dolerite sills of variable thickness and occurrence erratically present. The Mt Fisher coarsely oolitic ironstone at Deposit M appears to occur in-between the above stratigraphy but this represents a very small resource component to date. The ironstone horizons are characteristically, though not always, flat lying to very shallow dipping exposed at or near mesa tops. Secondary folding and reactivation of older faults result in local steepening of dips and stratigraphic dislocation in places (WNW trending Urapunga Tectonic Ridge in the central area and N-S trending Strangways Fault in the southwest)

Code	Description	Is_Active	Sort_Order	
DDDol	Derim Derim Dolerite	-1	1	
Ky	Kyalla Formation: interbedded siltstone, sandstone and mudstone	-1	2	
Sh	Undifferentiated Sherwin Formation - interbedded siltstone, sandstone, mudstone and ironstone	-1	11	
ShSC_UIrs	Sherwin Formation: Sherwin Creek **Upper** Ironstone	-1	12	
ShSC_04	Sherwin Formation: Sherwin Creek Unit 4 (Between Middle and Upper Ironstones)	-1	13	
ShSC_MIrs_U	Sherwin Formation: Sherwin Creek **Middle** Ironstone - Upper Horizon	-1	14	
ShSC_MIrs_W	Sherwin Formation: Sherwin Creek **Middle** Ironstone - Waste Horizon	-1	15	
ShSC_MIrs_L	Sherwin Formation: Sherwin Creek **Middle** Ironstone - Lower Horizon	-1	16	
ShSC_MIrs	Sherwin Formation: Sherwin Creek **Middle** Ironstone - Undifferentiated	-1	17	
ShSC_03_U	Sherwin Formation: Sherwin Creek Unit 3 - Upper Part above Thin Ironstone Horizon	-1	18	
ShSC_03_Irs	Sherwin Formation: Sherwin Creek Unit 3 - Thin Ironstone Horizon	-1	19	
ShSC_03_L	Sherwin Formation: Sherwin Creek Unit 3 - Lower Part below Thin Ironstone Horizon	-1	20	SHERWIN CREEK AREA
ShSC_03	Sherwin Formation: Sherwin Creek Unit 3 (Between Middle and Lower Ironstones) - Undifferentiated	-1	21	
ShSC_LIrs_U	Sherwin Formation: Sherwin Creek **Lower** Ironstone - Upper Horizon	-1	22	
ShSC_LIrs_W	Sherwin Formation: Sherwin Creek **Lower** Ironstone - Waste Horizon	-1	23	
ShSC_LIrs_L	Sherwin Formation: Sherwin Creek **Lower** Ironstone - Lower Horizon	-1	24	
ShSC_LIrs	Sherwin Formation: Sherwin Creek **Lower** Ironstone - Undifferentiated	-1	25	
ShSC_02	Sherwin Formation: Sherwin Creek Unit 2 (Between Lower Ironstone and Lower Soft Oolitic Ironstone)	-1	26	
ShSC_LSIrs	Sherwin Formation: Sherwin Creek **Lower Soft Oolitic** Ironstone	-1	27	
ShSC_01	Sherwin Formation: Sherwin Creek Unit 1 (Between ShSC_LSIrs and Moroak Sandstone)	-1	28	
ShMF_02	Sherwin Formation: Mount Fisher Unit 2 (Above ShMF_Oir)	-1	46	
ShMF_Oir	Sherwin Formation: Mount Fisher Oolitic Ironstone	-1	47	MOUNT FISHER AREA
ShMF_01	Sherwin Formation: Mount Fisher Unit 1 (Between ShMF_Oir and Moroak Sandstone)	-1	48	
ShHD_02	Sherwin Formation: Hodgson Downs Unit 2 (Above ShHD_Oir)	-1	36	
ShHD_Oir	Sherwin Formation: Hodgson Downs Oolitic Ironstone	-1	37	HODGSON DOWNS AREA
ShHD_01	Sherwin Formation: Hodgson Downs Unit 1 (Between ShHD_Oir and Moroak Sandstone)	-1	38	
Mo	Moroak Sandstone: bedded sandstone with quartz granule intervals	-1	100	
Ve	Velkerri Formation: grey to black siltstone/mudstone with fine glauconitic sandstone	-1	101	

Figure 6: Roper Group Stratigraphy- Sherwin Formation Ironstones.

In areas of intense regional folding such as Deposit B and C ironstone grades are interpreted to be locally enriched possibly in two ways:

- Structurally concentrated into fold nose and hinge positions to a marked extent (as grade x thickness plans demonstrate).

- Iron enriched within near surface exposure by supergene enrichment processes.

6. EXPLORATION ACTIVITY 2017: REPORTING PERIOD

Exploration activities on the various ELs within the Roper Valley Iron Ore Project in 2017 have included:

EL 24101 RC DRILLING EXTENSIONS TO DEPOSIT C

- Planning and conducting RC drilling to test potential along strike and down dip extensions of the Middle and Lower Ironstone units at Deposit C. The drilling was also planned to better understand the ironstone stratigraphy especially controls on its grade and thickness from updated section and plan interpretations.

EL24101 AND EL24102

- Using pit samples for ore sorting optimisation testwork and drill core for optimising "core scanning" technology. The latter is to identify diagnostic mineralogy/ geochemistry signatures for the ironstone stratigraphy at Deposits W and C ironstones. This work is currently being initiated with experts in this field.

EL26412 ROCK CHIP SAMPLING AND MAPPING- YUMANJI PROSPECT

- Planning an infill rock chip sampling and mapping programme at Yumanji on EL26412 from existing rock chip sampling done in 2011. This programme should identify targets for future drilling. The programme was planned but not carried out, due to early seasonal bushfires. It may be commenced in 2019 pending Board approval.

6.1 RC Drill Programme 2017- Area C

6.1.1 Overview

Proposed drilling by NTIO was based on earlier drill section interpretations and to a less extent grade x thickness plans of Deposit C from Sherwin Iron.

Sections and plans showed the Middle and Lower ironstones at C remained open down dip to the west and possibly along strike to the south.

An important observation was that because the ironstone units dip near parallel with surface topography there was little or no increase in waste to ore strip ratio down dip.

Upon MMP approval for the drilling programme, mostly within EL24101, NTIO personnel flagged proposed drill collar locations and track access in field. Collar positions were pegged considered access, safety and environmental aspects also. Pre-disturbance photos were taken for the Environmental Register.

Scope of Works' documents were prepared for each of site preparation, drilling and rig supervision with quotes sought from reputable contractors and awarded and signed accordingly.

Site preparation using a D6 Dozer was conducted from 24th September to 3rd October, 2017. The Dozer and operator were hired through MS Stock Contracting, based at Flying Fox Station. An experienced field geologist was hired from Digirock to oversee and manage the drill programme.

Once track access and drill locations were confirmed the proposed drill sites were re-photographed for the Environmental Rehabilitation Register. Dozer operators were inducted and supervised by NTIO personnel in clearing tracks and drill pads of 25x 25m area. Most drill pads were well prepared but difficult terrain still prevented safe rig access to some sites. There were 15.1 line kms of new track cleared and 60 drill pads prepared in total, with 49 located on EL24101 and the balance on ML 29584.

The drilling contract awarded to WDA Drilling commenced on 1st October 2017 and was completed on 18th October 2017. A drill rig swap by WDA was necessary in accessing difficult sites, incurring a loss of 3 days to obtain a more suitable rig, so 15 days drilling in total. Average drilled metres per day was 115m, compared with 100m per day budgeted.

A total of 60 holes for approximately 2400m had originally been planned. Of these 49 holes were collared on EL24101, with the remainder on ML29584. A total of 66 pads had been prepared with 60 holes drilled. Average hole depth was 31.3m compared to proposed 41.7m.

NTIO CEO requested several very shallow holes be drilled along the mesa top to provide a section along the Lower Ironstone Unit outcrop, also the fold closure zone. These holes are distinctly high grade and are included within the 60 holes drilled.

During drilling the geologist and samplers supervised the rig directly at all times. Quarter metre sampling was carried out as twinned intersections of early (one metre sampled) drill holes. Step out holes were mostly sampled at one metre, though some quarter metre sampling was conducted through mineralised zones as a trial of its practicality.

The programme concluded with 60 RC holes drilled for 1,723 m, against budget estimate of 60 holes for 2400m.

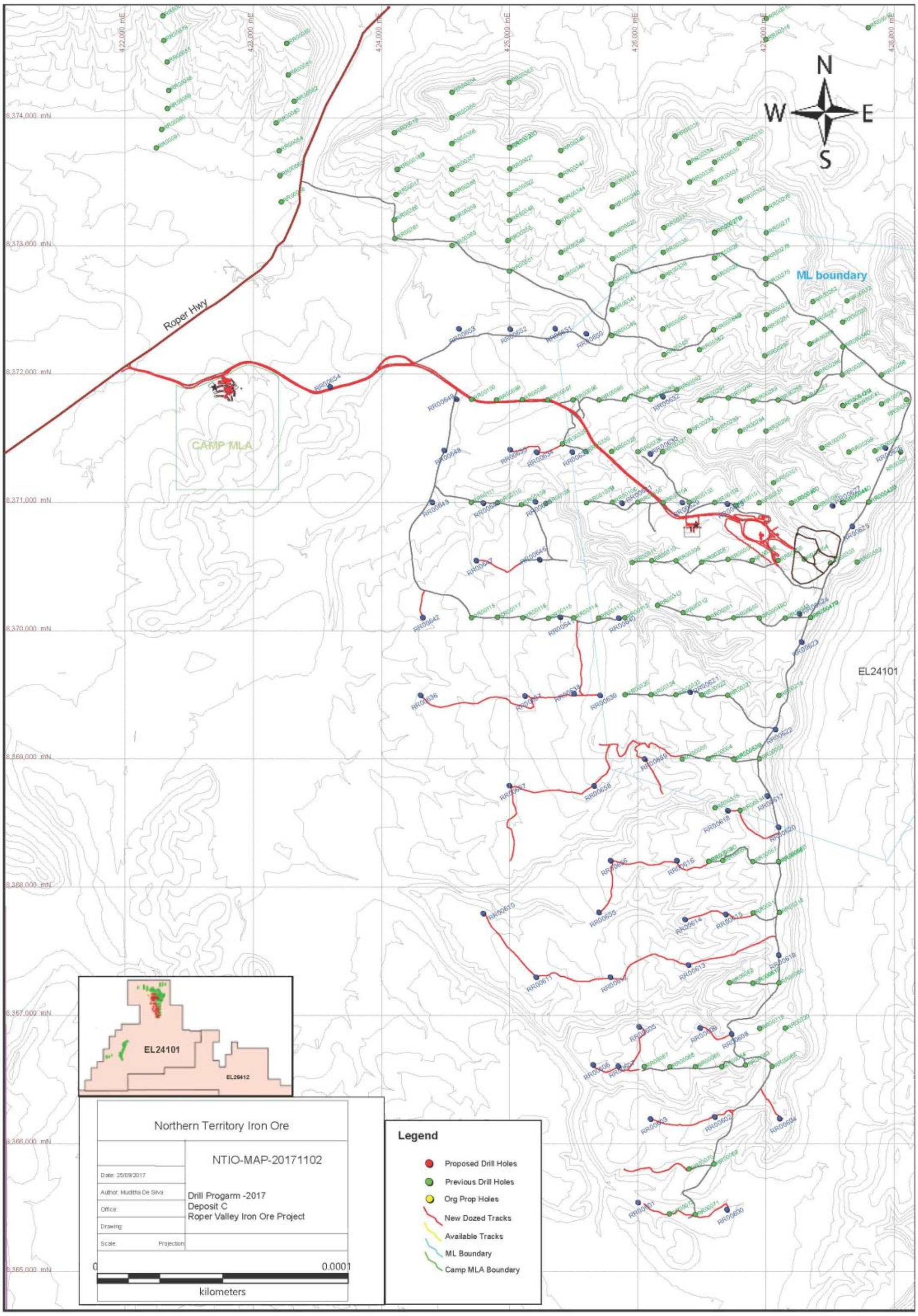

Figure 7: Drill Programme 2017 – Deposit C

6.1.2 Procedure Logging and Sampling

The geologist logged directly into an excel spreadsheet format using a standard geological logging code supplied by NTIO.

All drill holes were sampled and assayed throughout (either at quarter or at one metre depth intervals). Quarter metre samples were generally limited to strong intersections within "twinned holes'' or where confident depth estimates of IRS were evident in some step-out holes. One metre samples were collected both from step-out holes and through non mineralised zones in twinned holes.

Certified Reference Material Samples (CRMs) and duplicates were submitted for assay validation. Three separate CRMs were alternately submitted (with drill samples) each with a unique grade :43.1% Fe, 50.7%Fe and 61.3% Fe value. Both CRMs and duplicates were nominally collected in most alternate drill holes and usually at a similar depth. In total 27 duplicate samples were collected and 26 alternating CRM samples. These were submitted for assay as part of QA/ QC validation.

Samples were collected by drillers' crew from two outlets on the cone splitter one feeding into pre - numbered calico bags and the other as a bucket sample and laid out in 10m sequences. The cone splitter was air cleaned and hammered at the end of each rod run.

Samples were sieved into chip trays and presented to the geologist for logging on site. Samples collected in chip trays were kept in storage for future reference. Sample recovery weight was relatively consistent for each of the quarter and one metre sample groups, typically 3 to 5 kg for one metre samples and 0.5kg to 1kg for quarter metre. Samples from the first metre generally showed lower weights in both cases.

A total of 2,311 samples were submitted for assay (within 7 separate assay submissions) from 1,723 metres drilled in total.

A total of 184 quarter metre samples were collected from intersections within 23 holes. The balance of 37 holes were mostly step out holes with mainly single metre samples. The remaining samples submitted were either the duplicates or CRMs as described.

All bags were removed from site upon completion and the post- drilling environmental register updated with photographs. All drill hole collars were properly plugged either immediately after hole completion or at the end of the programme.

6.1.3 Objectives

Spreadsheets of drill collar locations, geological logging, sampling, assaying, intersection summary, grade x thickness plan are shown in Appendices 1 to 5.

Appendix 1 Drill Collar Locations

Appendix 2 Geology logging

Appendix 3 Sampling

Appendix 4 Assaying

Appendix 5 Intersection Summary (of 2017 drilling at 30%, 40% and 50% Fe cut off grades)

Interpretation of new grade x thickness plans are shown in Figures 8, 9 & 10.

The RC Drill Programme at Deposit C had the following objectives:

- **Test down dip extensions of ironstone stratigraphy (the Lower ironstone in particular) west of existing drilling.**
    - In plan view the oxidation zone shallows to the west pinching out to fresh siltstone from surface.
    - Despite the above the Lower Ironstone is not closed off on all sections down dip and so may continue further west at depth.
    - Upper and Middle Ironstone Units weaken in grade to the west becoming ferruginous sandstones and siltstone but uncertain whether closed off completely.
    - The weaker grade down dip may be associated with faulting /soft sediment slumping terminating IRS or increased sediment mixing in a more active environment.
- **Test strike extensions of Ironstone to the south and down dip extensions south west of existing resource drilling.**
    - Drilling closed off oxidized ironstone sequence to south by an apparent sill of Derim-Derim Dolerite in drill holes RR600 and 601.
    - Areas to the south west show ironstone continuing beyond previous drilling but narrowing and grade weakening down dip from the mesa cliff top.
    - Slight increase in Deposit C resource
    - Improved Plans of grade x thickness to help understand the complexity within the resource.
- **Conduct quarter-metre sampling through twinned intersections to detail any improved grade effect at close sampling intervals (applied in global resource estimate).**
    - Conducted quarter metre sampling in 23 of the 60 holes drilled in total. Projecting top and base depths of ironstone (especially in strep out holes) required visual monitoring and quick response back to driller.
    - Recommendation for future - Drill pilot holes first with one metre sampling and twin hole for quarter metre sampling to capture total intersection with confidence.
    - Intersection summaries were prepared from assay results, and generally upgraded by quarter metre sampling as expected with less dilution resulting in a recommendation for quarter metre sampling in future grade control
- **Broadly define areal distribution of ironstone limits and try to assess controls. (see 6 below)**
    - Minor addition to existing global resource is likely defined from this drilling.
    - However down dip holes should have been extended further at depth to definitively test ironstone extensions of economic grade.
- **Record extent of water inflows during drilling for future follow up.**
    - Several holes intersected minor water flows and these are recorded. At least one of these sites needs follow up for potential bore

6.1.4 Results and Conclusions

The drill programme concluded with 60 RC holes for 1,723 m, against budget estimate of 60 holes for 2,400m.

Reasons for the shortfall in metres drilled include:

- Some planned holes were either not accessible or negated by up dip holes being weakly mineralised ironstones.
- ironstones maintained near parallel dip with topography, both in the west and south west extensions, with hole depth more shallow than anticipated.
- In areas of very shallow weathering in far down-dip positions drill holes were prematurely terminated and should have been extended further into fresh rock.
- In the western area down dip towards Sherwin Creek fresh rock was intersected at very shallow depth in a number of holes. This lead to most holes being terminated 10 to 15 metres into fresh rock. Unfortunately, termination of drilling at relatively shallow depth did not definitively test continuation of the iron ore stratigraphy.
- Upper and Middle Ironstone Units weaken in grade to the west becoming ferruginous sandstones and siltstone but uncertain whether closed off completely.

There is a resulting recommendation for quarter metre sampling to be adopted in future grade control as had been conducted in the Sherwin bulk sample pit.

6.1.5 Key Achievements of the programme

- Mineralisation Closed off along strike to south by Derim Dolerite
- Slight increase in Deposit C resource likely especially to the south west
- Improved understanding of mineralization controls. Plans of grade x thickness improve understanding the complexity within the resource
- Intersection summaries prepared from assay results, generally show upgrading within quarter metre sampled intersections with less boundary dilution. There is a resulting recommendation for quarter metre sampling in future grade control
- Grade x Thickness plans have been updated for each of the Middle and Lower horizons where appropriate, as well as depth to base of weathering and a number of other such plans. Some plans are incomplete awaiting independent survey of collar RLs, planned in May 2018.
- Highest grade and thickness iron oxide is concentrated in the structurally complex "fold nose" exposed along the mesa top, possibly enhanced by supergene enrichment processes.
- Some fold limb positions (such as in the area of the Sherwin Bulk Sample Pit) display elevated grade and thickness along a significant dip length.
- Plan interpretation shows a general weakening of grade and thickness of ironstone down dip from the mesa top, accompanied by a shallowing weathered profile. However, the mineralised stratigraphy still remains open down dip
- Intersection summaries prepared from assay results, show intersections generally upgraded by quarter metre sampling with less dilution at contacts.

In areas of intense regional folding such as Deposit B and C ironstone grades are interpreted to be locally enriched possibly in two ways:

- Structurally concentrated into fold nose and hinge positions to a marked extent (as grade x thickness plans demonstrate).
- Iron enriched within near surface exposure by supergene enrichment processes.

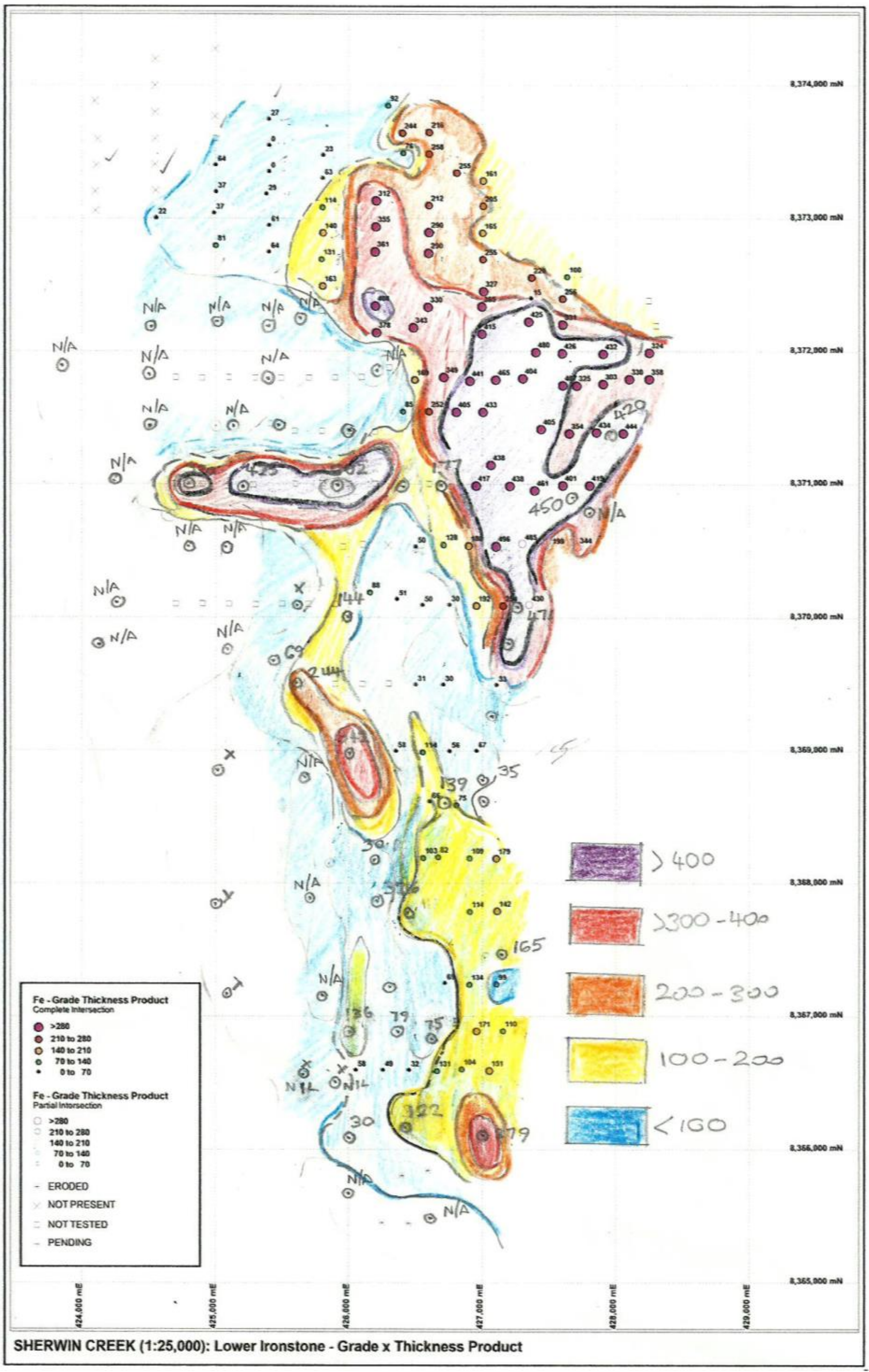

Figure 8. Lower Ironstone Grade x Thickness

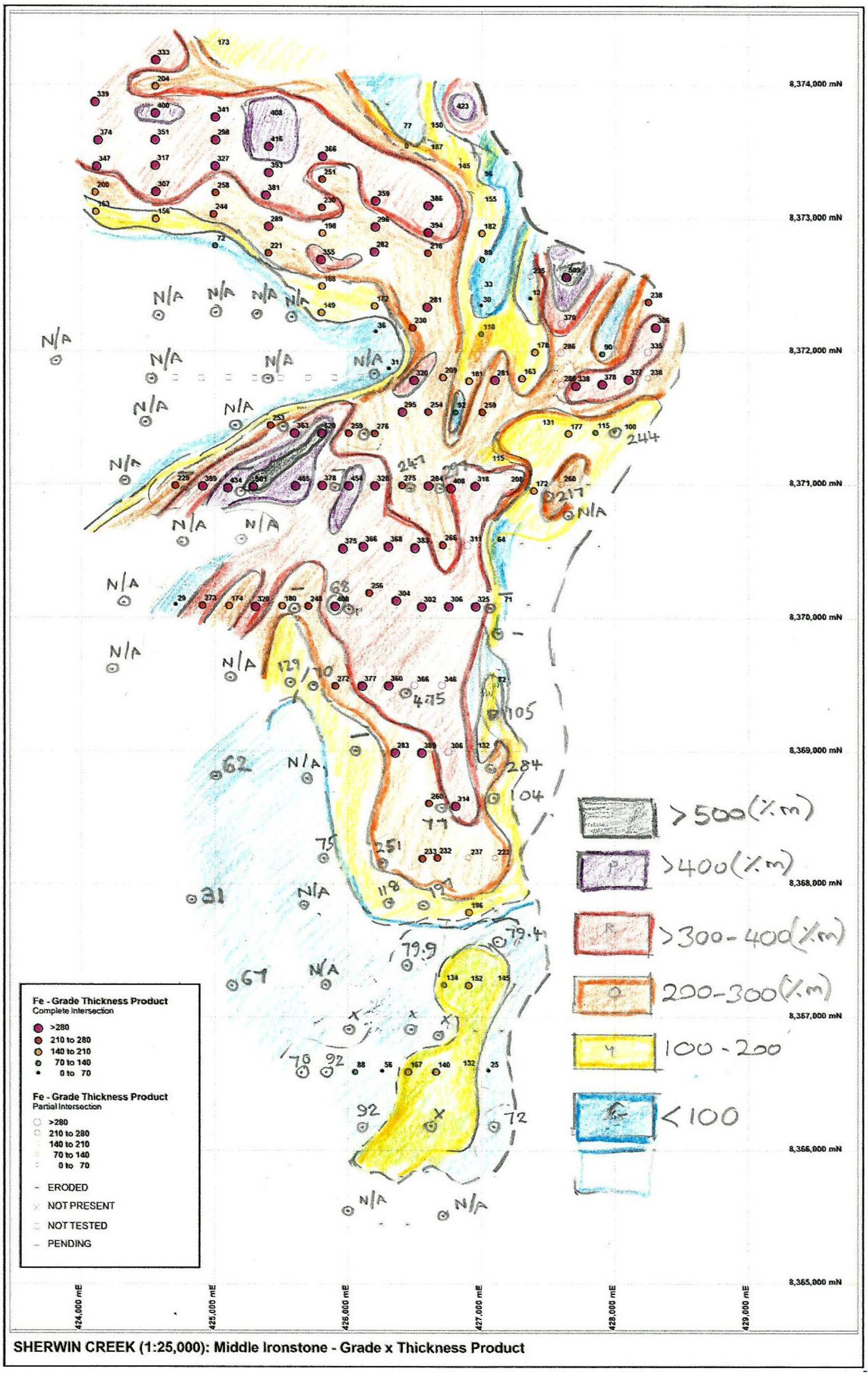

Figure 9. Middle Ironstone Grade x Thickness

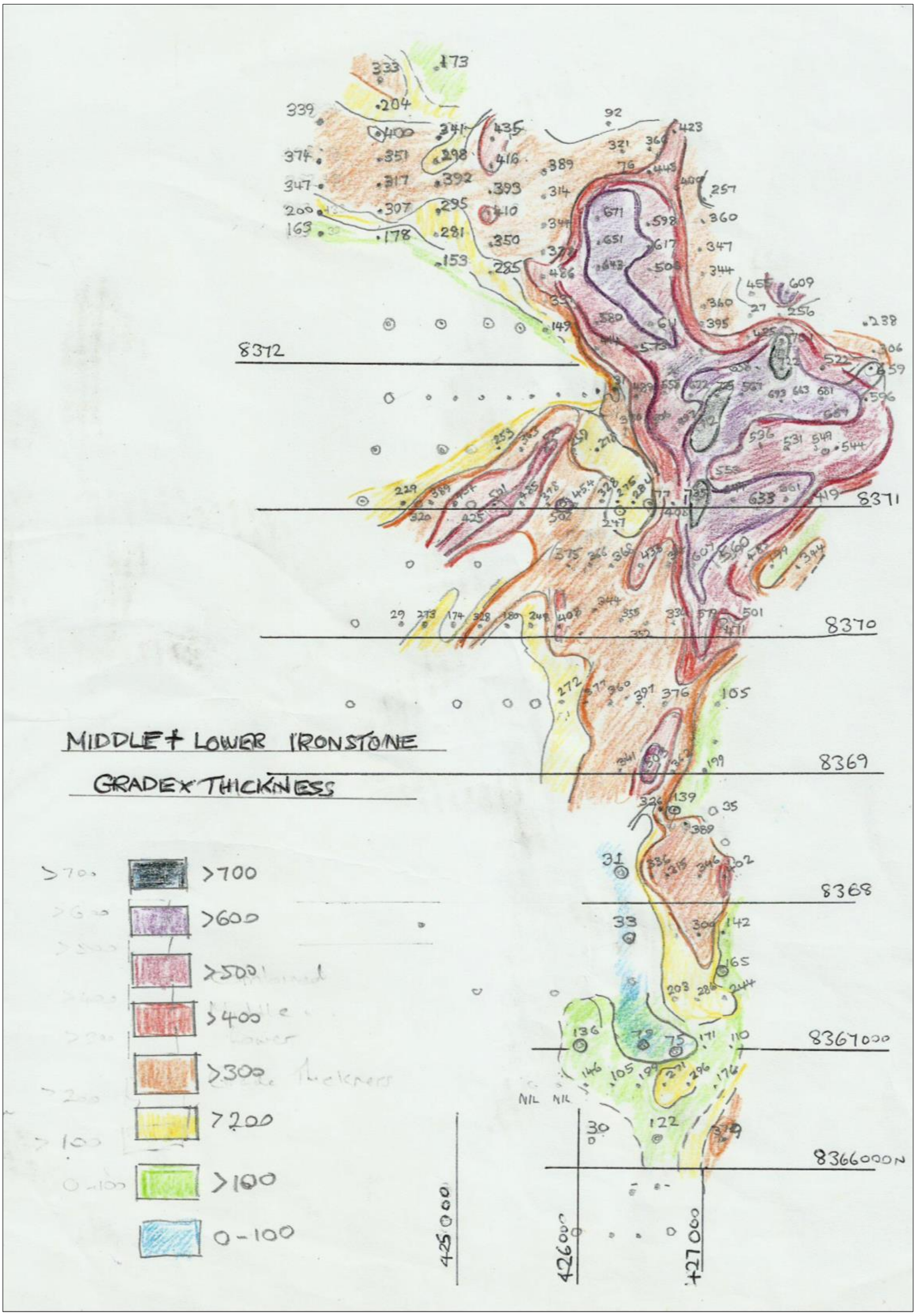

Figure 10: Middle plus Lower Ironstone Grade x Thickness

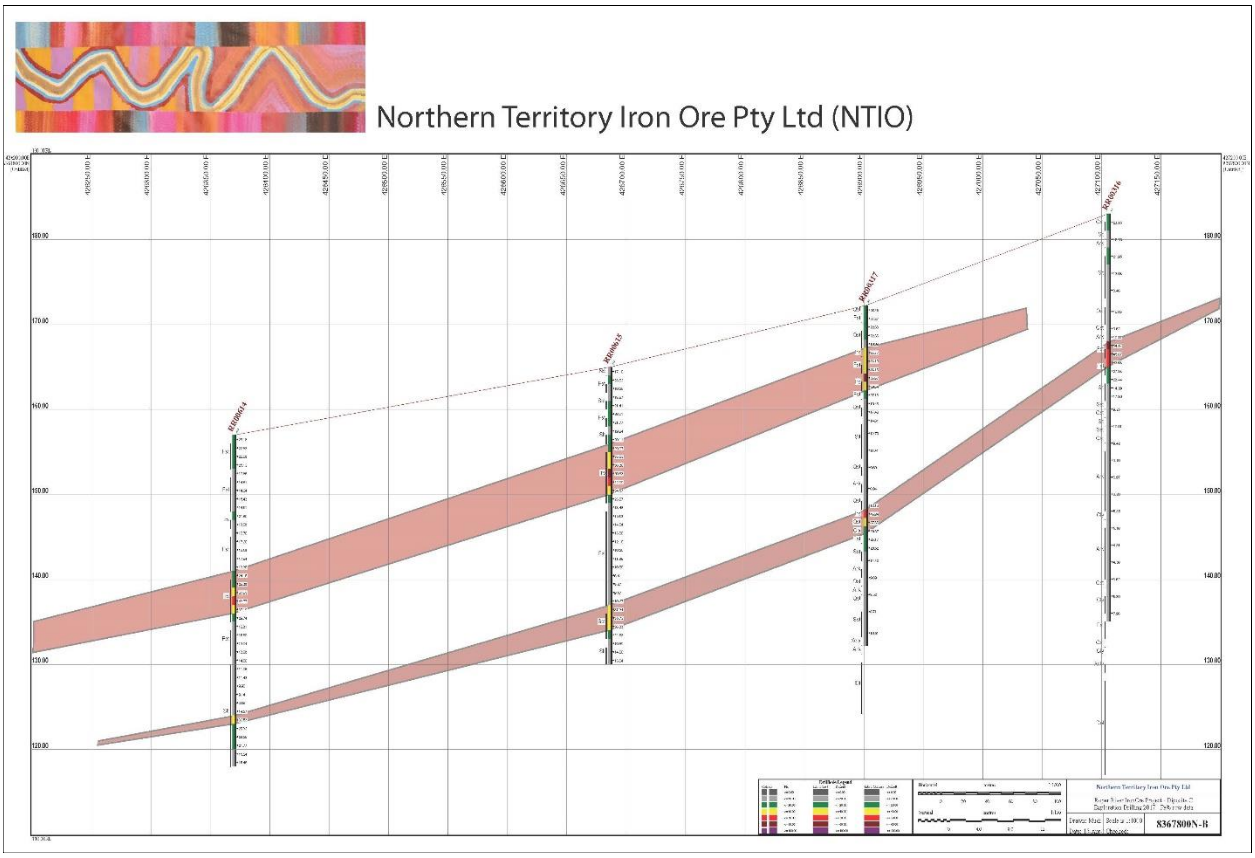

Figure 11: Section 8367800N-B

East – West section showing mineralised continuing down dip to south west

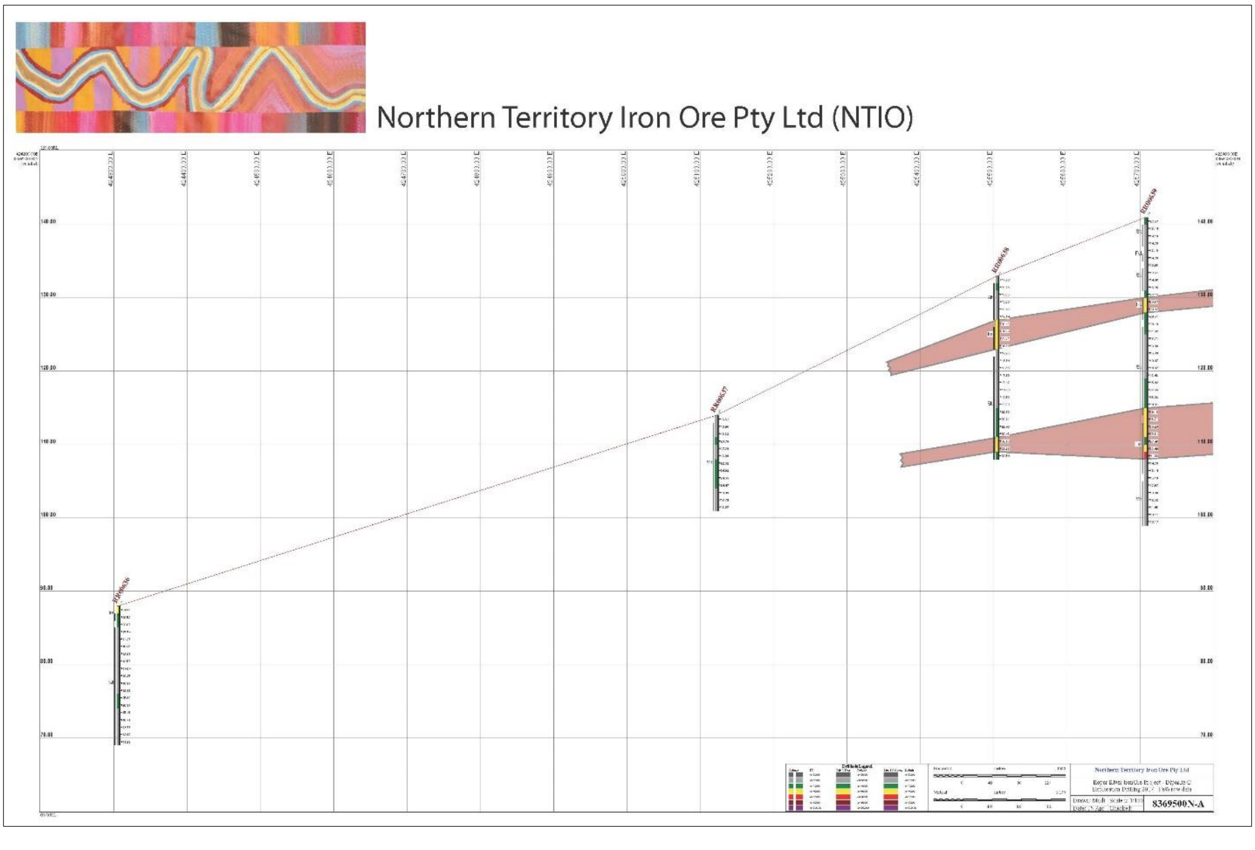

Figure 12: Section 8369500N-A

East- West section showing mineralisation open but weakening to west

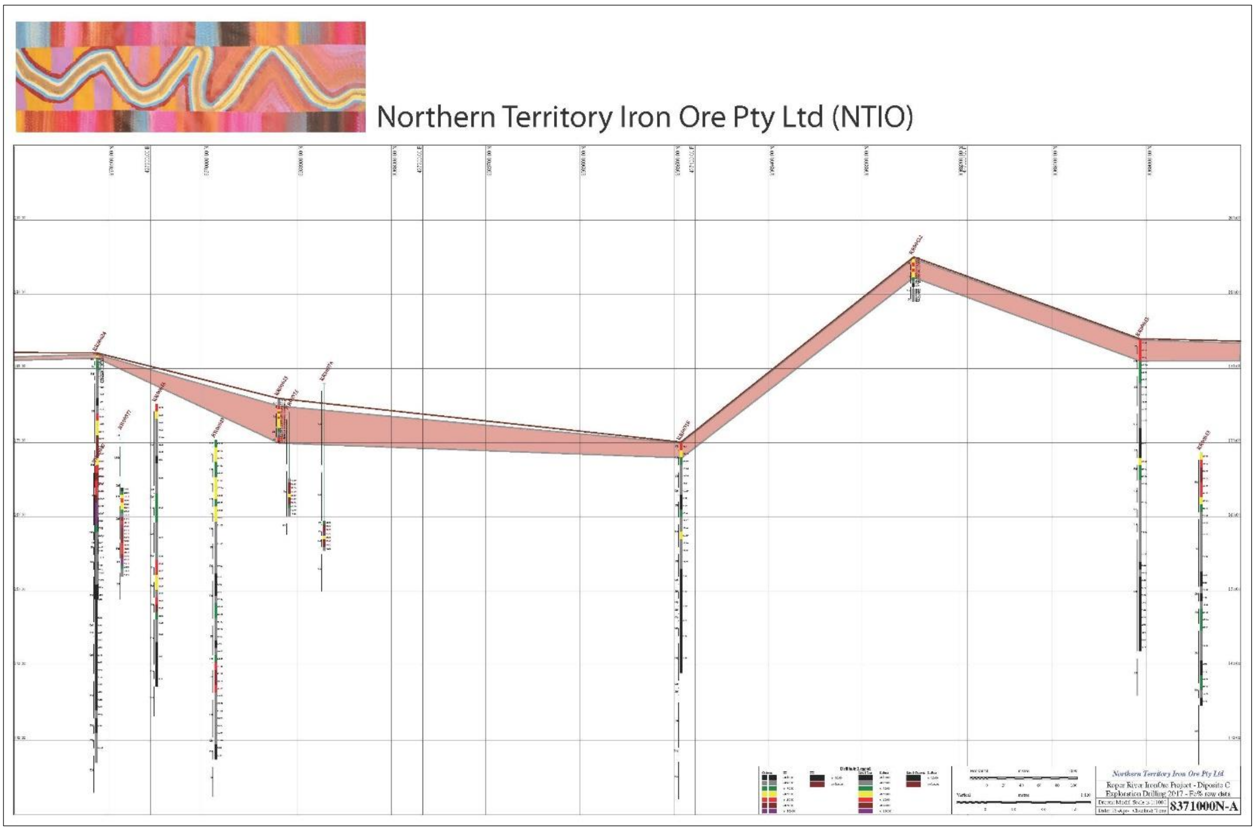

Figure 13: Section 8371000N-A East- West section showing mineralisation open to west

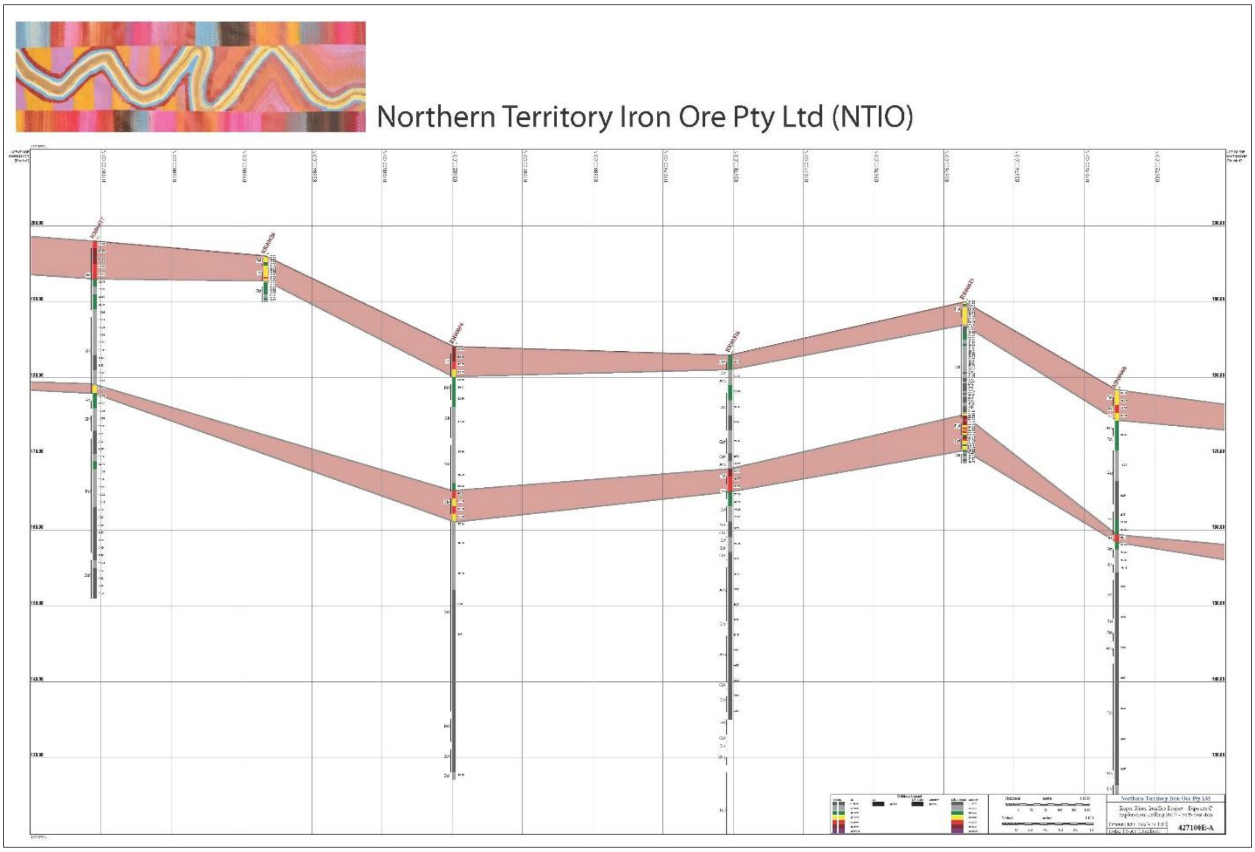

Figure 14: Section 427100E-A
North South Section showing classic Middle and Lower Ironstones

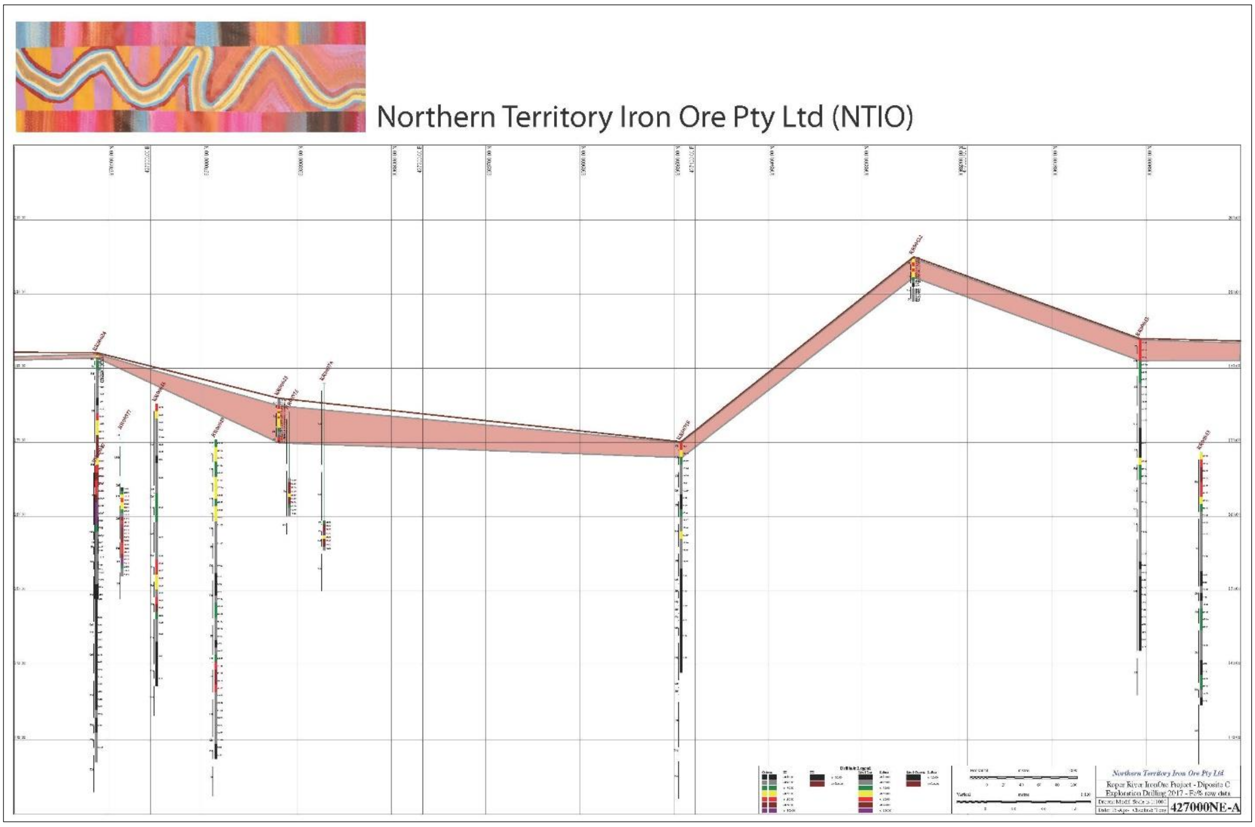

Figure 15: Section 427000NE-A Showing quarter metre assay precision advantage over 1 metre assaying surface expression of Lower Ironstone on mesa top

6.1.6 Incidents- Safety/Environment

No incidents occurred.

6.1.7 Recommendations

- Ensure Site Prep requirements of tracks and drill pads adequately understood by operator and checked by NTIO. Two separate operators with different skills used – not effective.
- In future engage smaller, more flexible track mounted RC rig for difficult terrain to ensure all sites accessed.
- Quarter metre sampling of limited success because intersections only approximate. Should do twin holes to capture true comparison of quarter metre vs one metre intersections.
- There is a resulting recommendation for quarter metre sampling to be adopted in future grade control as had been conducted in the Sherwin bulk sample pit.
- Ensure field decisions have been checked against sections. Holes terminated at shallow depth in fresh rock were clearly terminated too soon when viewed on sections.
- Tracks may have been better prepared to improve safety of drill rig moving on to difficult access sites.

7. COPYRIGHT

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8. REFERENCES

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