

KURUNDI PROJECT

FIRST PARTIAL RELINQUISHMENT REPORT
May 2009

Exploration Licence EL23937



HELD BY
WASHINGTON RESOURCES LIMITED

JOINTLY OPERATED BY
NORTHERN URANIUM LIMITED
(Uranium and Phosphate Rights)
AND
WASHINGTON RESOURCES LIMITED
(All other Minerals)

PARTIAL RELINQUISHMENT REPORT

NTU Report No: 2009-03

NAME: KURUNDI PROJECT – FIRST PARTIAL RELINQUISHMENT REPORT EL23937

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DATE: MAY 2009

SUMMARY

- Location:** The tenement EL23937 is located approximately 400kms NNE of Alice Springs and 100km SE of Tennant Creek. The eastern portion of EL23937 lies on the western edge of Epenarra Station, and the western portion lies on Kurundi Station.
- Geology:** The tenement covers the contact between the western Georgina Basin and the Tennant Creek Inlier on the northern side of the Davenport Range. The regional basement rocks are Proterozoic (1870Ma) deepwater marine interbedded greywacke, siltstone and minor porphyritic felsic volcanics of the Warramunga Group which were moderately to tightly-folded about 1810Ma. The Warramunga Group is intruded by members of the Tennant Creek Supersuite. This includes the Hill of Leaders Granite (Pgb) which outcrops extensively in the northwest of the tenement area. The primary Georgina Basin unit present within the project area is the near-basal Gum Ridge Formation which is known to contain phosphate.
- Work Done:** Exploration activities completed within the relinquished portions of EL23937 were targeted at uranium, tungsten and phosphate and comprised airborne magnetics and radiometrics survey, reconnaissance geological investigations, rock chip sampling and ground scintillometer measurements.
- Results:** The work completed failed to define any targets requiring follow-up work.
- Conclusions:** The relinquished portions of EL23937 are considered to have been adequately tested by the work conducted by Northern Uranium and Washington Resources. The area has low potential for the occurrence of economic mineralisation of the targeted commodities, and has hence been relinquished.

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1.0 SUMMARY

Exploration activities conducted on the relinquished portions of EL23937 by Northern Uranium/Washington Resources were as follows:

- 1) Airborne Magnetics and Radiometrics survey in 2007.
- 2) Reconnaissance geological investigations including rock chip sampling, for uranium and tungsten mineralisation in 2007/2008
- 3) Reconnaissance geological investigations of the phosphate potential of the area underlain by the Georgina Basin, including rock chip sampling in 2008

2.0 INTRODUCTION

This report details exploration activities conducted on the relinquished portions of tenement EL23937 between 13 February 2004 and 12 February 2009. The tenement is held by Washington Resources Limited and exploration work was undertaken by Northern Uranium Limited pursuant to two agreements relating to phosphate and uranium rights. Washington Resources Limited retains the rights to all other minerals on the tenements and has been conducting exploration for other minerals in parallel with Northern Uranium's activities.

3.0 LOCATION, GEOMORPHOLOGY AND ACCESS

EL23937 lies approximately 400kms NNE of Alice Springs and 100kms SE of Tennant Creek (see Figure 1 below). EL23937 extends across both Kurundi and Epenarra Pastoral Stations.

Access to EL23937 is via the unsealed Wauchope-Epenarra road which passes in an easterly direction along the southern portion of the tenement. Station tracks give access to the northern and southern portions of the tenement from this road.

Topographically, the south-western corner of EL23937 overlies part of the Murchison Range with long, steep –sided, narrow to broad, ridges and valleys. Adjacent to the Murchison Range are areas of dissected terrain consisting of low ridges and hills of sedimentary, volcanic and granitic rocks. An erosional, weathered surface with little organised drainage covers the area in the eastern third of the tenement. Kurundi and Whistleduck Creeks are areas of alluvium and may have surrounding areas of dune fields and sand plains.

Elevation ranges from 300m in the eastern region to over 500m in the southwest. The south western and southern ranges display a mostly erosional regime grading to residual in the northwest, to more depositional in the drainage channels in the northeast. All areas can be overlain by Quaternary colluvial and alluvial cover. Intermittent lateritic duricrust and backslope material of uncertain age is also evident, in particular in the central tenement area. The laterite often displays a vermiform texture and a relatively vuggy matrix. The texture indicates an in-situ lateritic duricrust that has undergone little deflation due to top-loading.

The major streams of the area are bound by extensive open grasslands and often provide the best access into areas, provided the streams can be crossed if required. Several major streams transect the area with the Kurundi Creek forming the major drainage channel. The latter transects the central licensed area in a southwest to northeast direction. It is fed by the easterly flowing Granite Creek on its western flank approximately in the center of the license. The Mosquito Creek, situated near the northern boundary of the license, merges with the Kurundi Creek in the Fork Creek Bore area and forms a large floodplain. Whistleduck Creek is located in the southeastern quadrant of the exploration license and flows to the northeast. Steep gullies and gorges drain the Murchison Range while gentle silt filled depressions as well as steeply incised creeks form the main tributaries on the plains.

All streams flow intermittently during the 'wet' season which ranges from October to March. Numerous waterholes are located along the individual streams although only few are permanent. Annual rainfall is in the region of 300mm.

4.0 TENURE AND AGREEMENTS

Details of the tenure are shown in Table 1 below.

Northern Uranium Limited acquired the uranium rights to EL23937 from Washington Resources in August 2006, in exchange for shares in Northern Uranium Limited. In June 2008 a Letter of intent was signed between Northern Uranium and Washington Resources whereby the parties agreed to enter in a Joint Venture arrangement with Northern Uranium earning a 60% interest in the phosphate rights of EL23937 in exchange for exploration expenditure.

Table 1 – Tenement Details

Tenement	Grant Date	Expiry Date	Relinquished Area	Holder
EL23937	13 Feb 04	12 Feb 10	226 blocks	Washington Resources Ltd

5.0 GEOLOGY

The tenement lies within the Davenport Province on the southern part of the Tennant Creek Inlier. The regional basement rocks are Proterozoic (1870Ma) deepwater marine interbedded greywacke, siltstone and minor porphyritic felsic volcanics of the Warramunga Group. The Warramunga Group is intruded by members of the Tennant Creek Supersuite which includes the Hill of Leaders Granite (Pgb). The eastern portion of the tenement and the eastern relinquished portions is underlain by Georgina Basin sediments which is predominantly represented by the Cambrian-aged Gum Ridge Formation.

6.0 EXPLORATION ACTIVITIES

6.1 Airborne Magnetism and Radiometrics survey

A detailed airborne magnetic and radiometric survey was completed over the western portion of EL23937 by Washington Resources and Northern Uranium in early 2007. The survey was completed by GPX Airborne, and the survey specifications were as follows:

Line Spacing	200m
Tie Line Spacing	2000m
Line Direction	E-W
Tie Line Direction	N-S
Magnetometer Sample Rate	10hz
Spectrometer Sample Rate	1hz
GPS Sample Rate	1hz
Altimeter Sample Rate	1hz
Base Magnetometer Sample Rate	1hz
Flying Height	40m subject to risk analysis

The newly acquired data was merged with the existing government data to give effectively 100m spaced flight lines.

The radiometric data was used to identify uranium channel radiometric anomalies. Several radiometric anomalies were identified within the relinquished areas. Basic structural interpretation of the aeromagnetic data was also completed and integrated with the radiometric data to determine whether there was any spatial relationship between the structures and the uranium channel radiometric anomalies. Two linear, magnetically low features, one striking northeasterly and the other southeasterly were noted within the relinquished area.

Figure 3 below shows an outline of the area covered by the survey. The data from within the relinquished portions of EL23937 is attached as Appendix 1 in digital format only.

6.2 Reconnaissance geological prospecting

Prospecting activities conducted by Northern Uranium involved locating of the radiometric anomalies, basic geological mapping if possible, spectrometric analysis to locate anomalous lithologies and sampling of a range of material. Four significant uranium radiometric anomalies were investigated and rock chip samples were taken (see below for details). None of these anomalies warranted further follow-up work.

Washington Resources found no outcrops of any rocks typically associated with tungsten mineralisation within the relinquished area in the course of their prospecting activities.

6.3 Rock-chip Sampling

A total of 12 rock samples were taken from areas associated with uranium radiometric anomalies within the relinquished portions of EL23937. Rock chips were submitted to ALS, Alice Springs for sample preparation and then forwarded to ALS, Perth for multi-element analyses using method ME-MS41.

A second rock chip sampling program was carried out in the eastern portion of EL23937 in September 2008. This followed the signing of a Heads of Agreement between Northern Uranium Ltd and Washington Resources Ltd whereby Northern Uranium would acquire an interest in the phosphate rights of the tenement in exchange for exploration expenditure. Two samples were taken from within the relinquished portions of EL23937, which were submitted to ALS, Alice Springs for sample preparation and then forwarded to ALS, Adelaide for multi-element analyses using methods ICP-MS and ICP-AES. Results from these samples warranted no further follow-up work.

All rock chip sample locations are shown on Figure 2 below and results are attached as Appendix 2. All assay method details are attached as Appendix 3.

6.4 Ground Scintillometer Survey

Total-count readings were taken by Washington Resources with a hand-held Scintrex BGS-1SL scintillometer at two locations within the relinquished area. At both locations the counts were effectively at background levels. Results are shown in the table below.

Table 2 – Ground Scintillometer readings

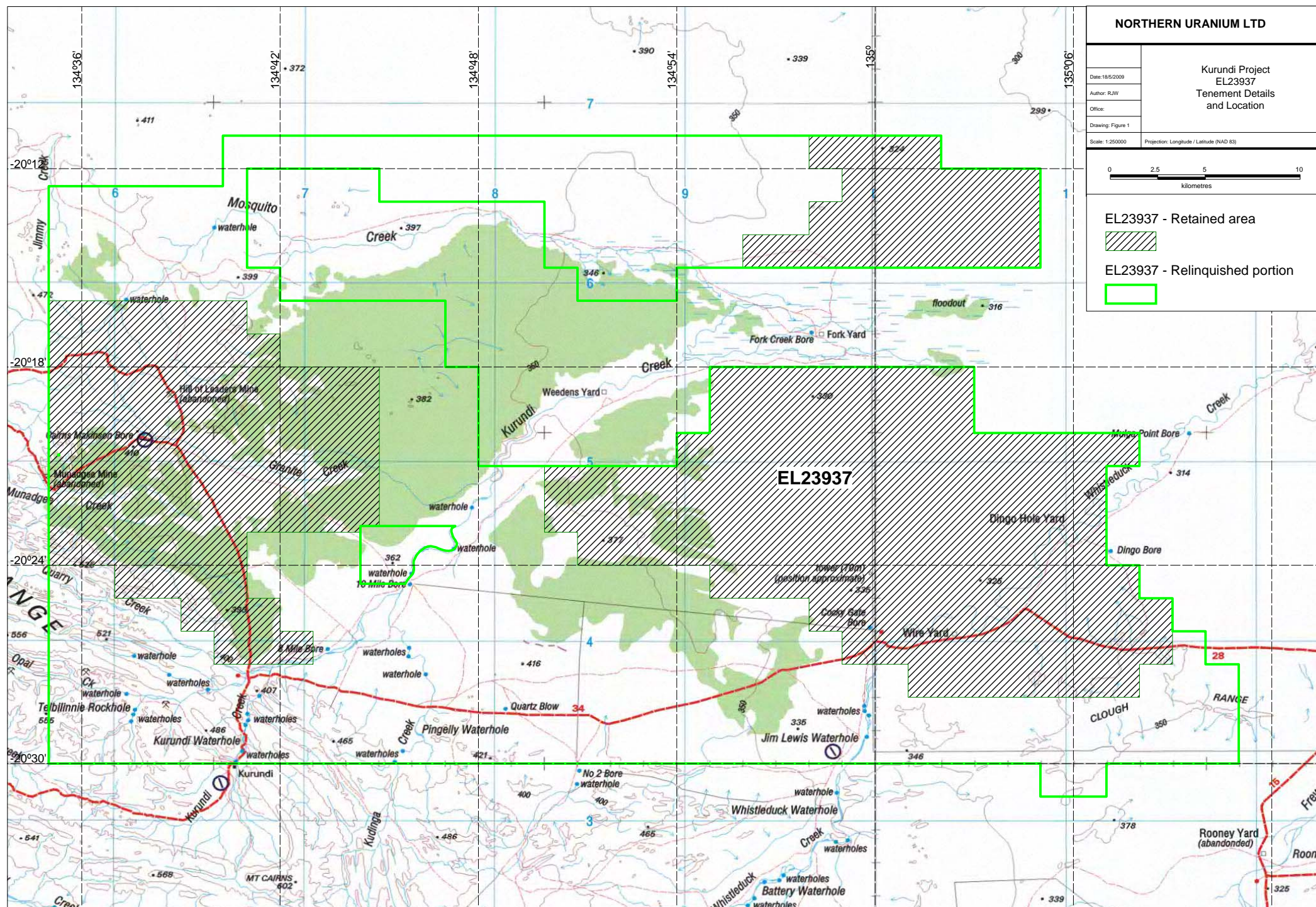
Easting	Northing	Surface Lithology	Counts scinters/second
512319	7739556	Ferricrete & brecciated silcrete	40
509259	7740671	Gravel pit; ferricrete, minor silcrete, calcrete, quartz	70

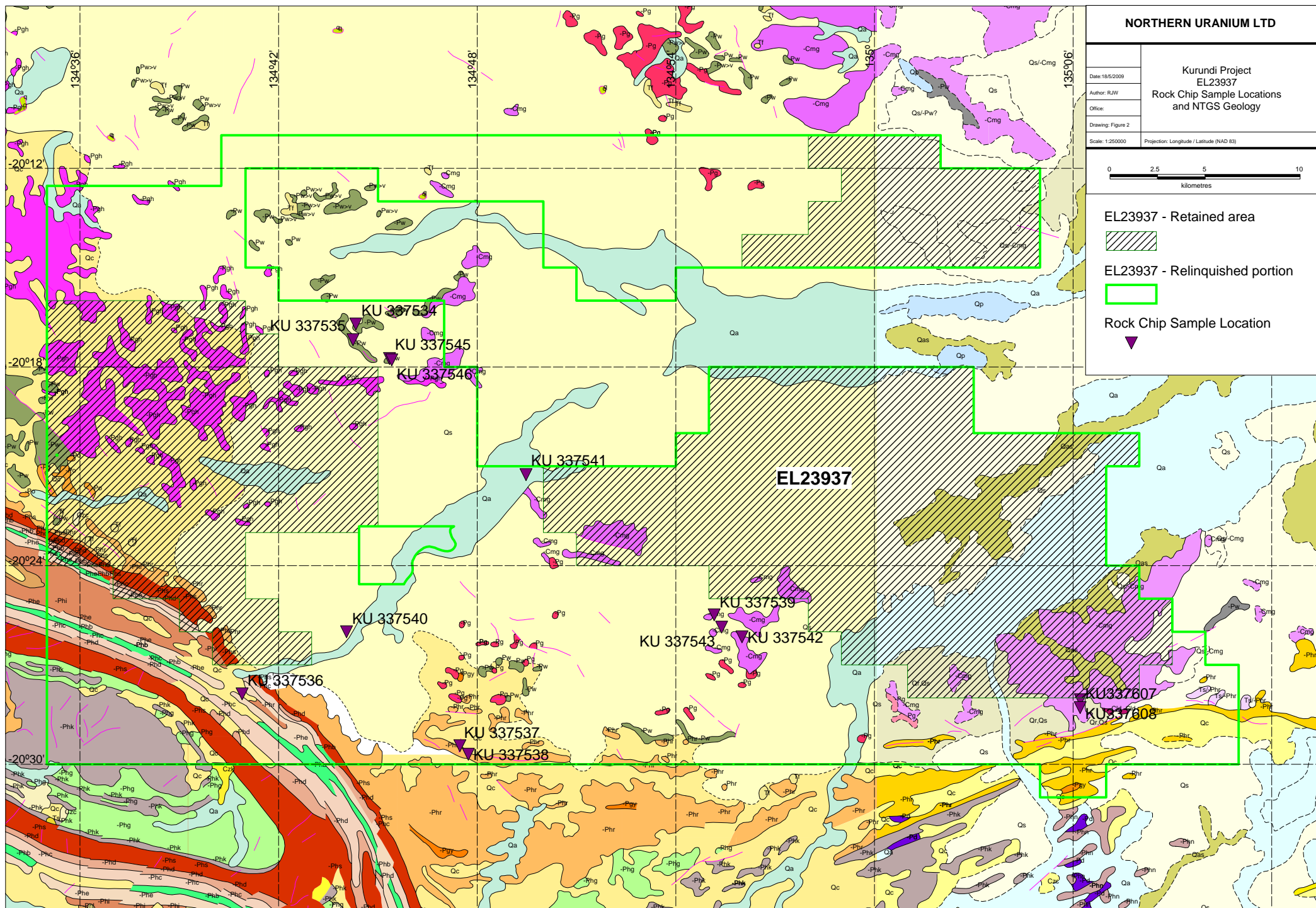
7.0 REFERENCES

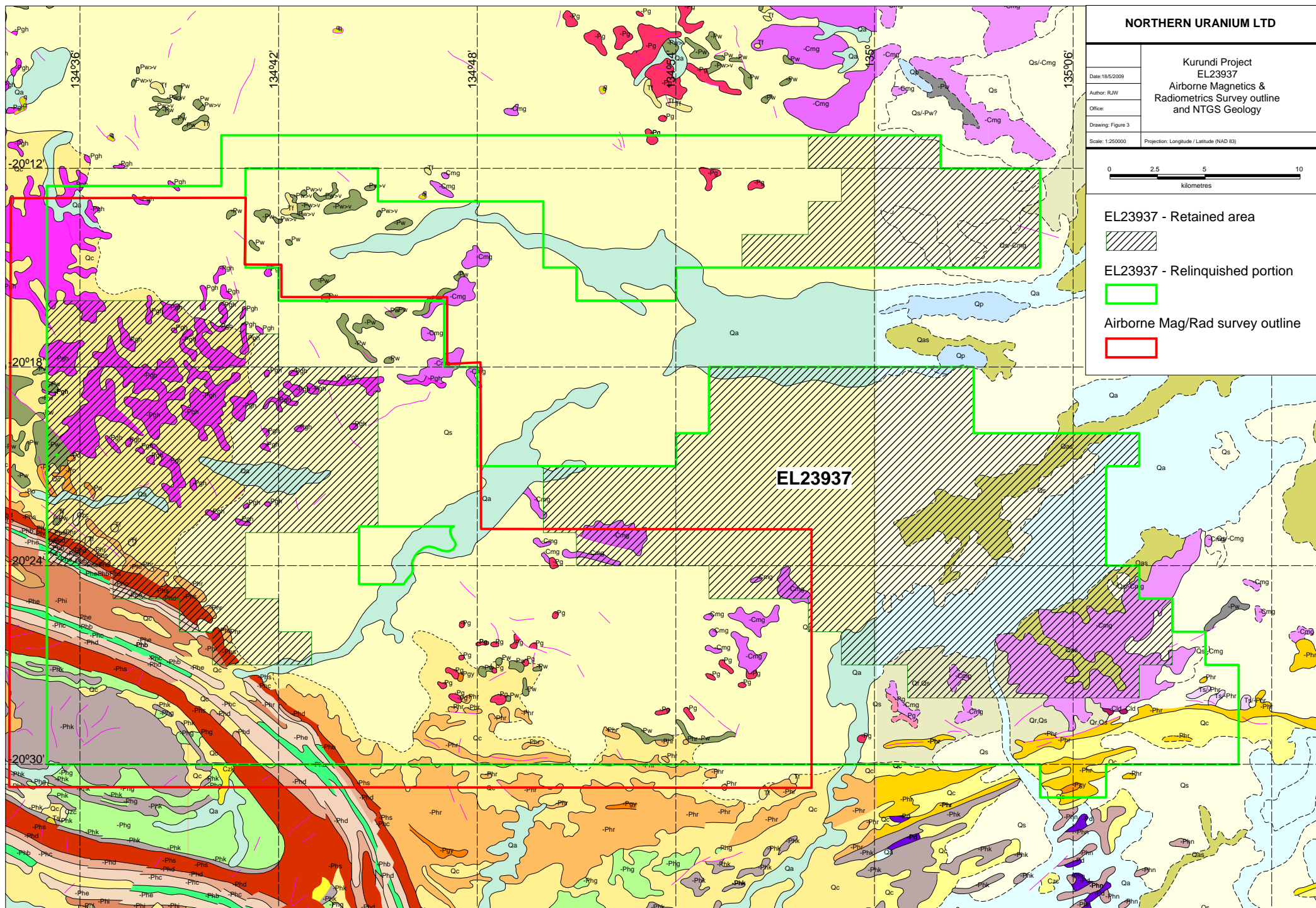
Wyche, S. And Simons, B., 1987. 1:250 000 Geological Maps Series Explanatory Notes, Bonney Well SF 53-2.

Walley, A.M., 1987., 1:250 000 Geological Maps Series Explanatory Notes, Frew River SF 53-3.

FIGURES







APPENDICES

APPENDIX 1

Airborne Magnetism and Radiometrics Survey (Digital Data only)

APPENDIX 2

Rock Chip Sampling Results

H0002 Version 3

H0003 Date_generated 18-May-09

H0004 Reporting_period_end_date 28/04/2009

H0005 State NT

H0100 Tenement_no EL23937

H0101 Tenement_Holder Northern Uranium

H0102 Project_name Kurundi

H0106 Tenement_operator Northern Uranium

H0150 250K_map_sheet_number not known

H0151 100K_map_sheet_number not known

H0200 Start_date_of_data_acquisition 1/05/2007

H0201 End_date_of_data_acquisition 28/04/2009

H0202 Data_format SG3

H0203 Number_of_data_records 14

H0204 Date_of_metadata_update 18-May-09

H0500 Feature_type Sample point

H0501 Geodetic_datum GDA94

H0502 Vertical_datum AHD

H0503 Projection MGA

H0505 Surveying_instrument not known

H0600 Sample_Code ROCK

H1000	SampleID	Project_Code	POINTPROSPECT	PointEast	PointNorth
	PointRL	SAMPLETYPE	POINTTENEMENTID	POINTGRIDNAME	
	POINTZONE	PRIORITY	DATE Wpt_ID	PCOMPANY	
	LITH_DESCRIPTION	Ag_ME_MS41_ppm	Al_ME_ICP61_pct		
	Al_ME_MS41_pct	As_ME_ICP61_ppm	As_ME_MS41_ppm		
	Au_ME_MS41_ppm	B_ME_MS41_ppm	Ba_ME_MS41_ppm		
	Be_ME_MS41_ppm	Bi_ME_MS41_ppm	Ca_ME_MS41_pct		
	Cd_ME_MS41_ppm	Ce_ME_MS41_ppm	Co_ME_MS41_ppm		
	Cr_ME_MS41_ppm	Cs_ME_MS41_ppm	Cu_ME_MS41_ppm		
	Fe_ME_ICP61_pct	Fe_ME_MS41_pct	Ga_ME_MS41_ppm		
	Ge_ME_MS41_ppm	Hf_ME_MS41_ppm	Hg_ME_MS41_ppm		
	In_ME_MS41_ppm	K_ME_ICP61_pct	K_ME_MS41_pct		
	La_ME_MS41_ppm	Li_ME_MS41_ppm	Mg_ME_ICP61_pct		
	Mg_ME_MS41_pct	Mn_ME_ICP61_ppm	Mn_ME_MS41_ppm		
	Mo_ME_MS41_ppm	Na_ME_MS41_pct	Nb_ME_MS41_ppm		
	Ni_ME_MS41_ppm	P_ME_ICP61_ppm	P_ME_MS41_ppm		
	Pas_PUL_QC_pct	Pb_ME_MS41_ppm	Rb_ME_MS41_ppm		
	Re_ME_MS41_ppm	S_ME_MS41_pct	Sb_ME_MS41_ppm		
	Sc_ME_MS41_ppm	Se_ME_MS41_ppm	Sn_ME_MS41_ppm		
	Sr_ME_MS41_ppm	Ta_ME_MS41_ppm	Te_ME_MS41_ppm		
	Th_ME_ICP61_ppm	Th_ME_MS41_ppm	Ti_ME_MS41_pct		
	Tl_ME_MS41_ppm	U_ME_MS41_ppm	V_ME_MS41_ppm		
	W_ME_MS41_ppm	Y_ME_MS41_ppm	Zn_ME_MS41_ppm		
	Zr_ME_MS41_ppm	LabJobNo_D	Drill_code	Sample_code	
H1001		metres	metres	metres	
		ppm	pct	pct	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm
	ppm ppm pct	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm			
	ppm ppm ppm	ppm ppm pct	pct	ppm ppm	ppm ppt ppt
	ppm ppm ppm	pct ppm ppm ppm ppm ppm ppm ppm ppt ppm ppm			
	ppm pct ppm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm			
	pct ppm ppm	ppm ppm ppm ppm ppm ppm ppm ppm			

H1002

			ME_MS41	ICP	ME_MS41	ICP	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ICP	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ICP	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ICP	ME_MS41	ICP	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ICP	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
Pass75um_PUL_QC	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ICP	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	ME_MS41	
ME_MS41								

H1003

			0	0	0	0	0	0.2	10	0	0
0	0	5	0	5	0	0	0	0	0	0	
0.05	0	0.01	0.005	0	0	0	0	0	0.01	0	0
5	0.01	0	0	0	0	0	5	0	0.001	0.01	0
0	0.2	0	0	0.01	0.01	0	0	0.005	0.02	0	0
5	0	5	0								

H1004

			0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001					0.00000001
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	
0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	

D

KU337534	KU	KURUNDI	472734.59	7757686.94		ROCK
EL23937	MGA94	53	1	1-May-07	KU50	NORTH URAN
0.48		1.87	28.9	-0.2 -10	130	1.13 0.51
0.06 0.02	6.55	2.2 40	0.19	22.2	24.7	6.28 0.2
0.42 0.06	0.083	0.05	3.1	1.2	0.02	47
2.02 0.01	0.54	5.4	590	30.2	4.2	-0.001 0.09
1.45 14.7	0.6	1 10.7	-0.01	0.23	8.1	0.037 0.03
7.88 565	1.07	3.58 9	15.2	AS07046740		ROCK

D

KU337535	KU	KURUNDI	472590.01	7756808.03		ROCK
EL23937	MGA94	53	1	1-May-07	KU51	NORTH URAN
0.08		1.88	34.4	-0.2 -10	90	3.51 0.06
0.03 0.07	13.8	4.6 43	0.4	155.5	22.6	4.21 0.13
0.1 0.01	0.042	0.07	7.8	1.2	0.02	250
1.65 0.01	0.59	18.4	3290	20.7	4.6	-0.001 0.04
0.3 9.5	0.7	0.6 17.3	-0.01	0.04	3.1	0.025 0.06
14.45 52	1.15	5.75 99	4.2	AS07046740		ROCK

D

KU337536	KU	KURUNDI	466791.64	7737071.88		ROCK
EL23937	MGA94	53	1	1-May-07	KU54	NORTH URAN
0.01		1.7	1.2	-0.2 -10	110	1.09 0.25
0.27 0.02	87.4	7.4 15	13.15	20.6	3.25	7.32 0.1
0.71 -0.01	0.022	1.05	42	44.8	0.44	311

	1.23	0.1	1.59	9.2		940		13.4	151.5	-0.001	0.01
	0.17	6.8	0.8	3.6	10.7	0.02	0.01		21.1	0.162	0.81
	10.4	38	0.87	21.7	55	18.4	AS07046740			ROCK	
D	KU337537		KU	KURUNDI		478230.73		7734199.34		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU55	NORTH	URAN
		0.04		2.14		2.6	-0.2	-10	180	2.11	0.15
	0.08	0.03	68	6.9	6	2.16	10.2		3.76	8.05	0.07
	0.89	0.01	0.027		0.74	35.8	13		0.53		318
	0.44	0.01	0.1	10.4		470		5.7	89	-0.001	0.01
	0.47	5.6	0.7	1.4	6.9	0.01	0.02		8.2	0.011	0.22
	2.21	41	0.21	24.7	46	32.1	AS07046740			ROCK	
D	KU337538		KU	KURUNDI		478676.9		7733728.78		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU56	NORTH	URAN
		0.05		2.07		5.5	-0.2	10	1080	1.88	0.31
	0.03	0.01	70	2.6	8	5.54	20.7		3.66	9.3	0.07
	0.77	-0.01	0.033		0.81	34.5	2.1		0.13		90
	0.4	0.01	0.14	3.9		550		12.3	119.5	-0.001	0.03
	0.85	5.4	0.7	2.1	32	-0.01	0.01		8.9	0.012	0.44
	3.43	15	0.24	16.7	43	28.2	AS07046740			ROCK	
D	KU337539		KU	KURUNDI		491585.61		7741508.01		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU58	NORTH	URAN
		0.02		1.14		0.6	-0.2	-10	330	1.31	0.04
	0.01	-0.01	29.1	1.4	5	1.8	11.7		2.11	5.55	-0.05
	0.4	-0.01	0.013		0.38	13.6	0.7		0.06		44
	0.08	-0.01	0.09	4.5		470		2.4	28.9	-0.001	0.01
	0.33	2.5	0.5	0.8	10.8	-0.01	0.01		5.9	0.005	0.11
	2.09	10	0.11	15.75	13	13.5	AS07046740			ROCK	
D	KU337540		KU	KURUNDI		472269.8		7740546.97		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU61	NORTH	URAN
		0.17		2.61		23.7	-0.2	-10	50	0.6	0.61
	0.02	0.01	9.9	2.4	132	0.85	14.9		13.45	12.95	0.12
	0.96	0.01	0.116		0.11	5.5	4.1		0.03		90
	1.65	0.01	0.3	5.7		210		20	11.8	-0.001	0.01
	0.76	5.7	1.3	1.5	4.8	-0.01	0.14		22.6	0.043	0.07
	2.4	191	0.38	3.05	9	34.3	AS07046740			ROCK	
D	KU337541		KU	KURUNDI		481685.99		7749311.49		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU62	NORTH	URAN
		0.14		2.96		23.4	-0.2	-10	170	0.83	0.52
	0.04	0.01	4.18	3.9	73	0.33	11.3		24.1	16.8	0.15
	0.88	0.02	0.136		0.04	2.7	2		0.01		79
	1.13	0.01	0.7	6.6		540		24.1	3.8	-0.001	0.1
	0.6	11.4	0.4	2.9	7.7	-0.01	0.11		22.2	0.081	0.03
	4.2	143	0.46	3.45	13	30.9	AS07046740			ROCK	
D	KU337542		KU	KURUNDI		493042.23		7740286.03		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU63	NORTH	URAN
		0.11		3.46		16.8	-0.2	-10	30	0.59	0.99
	0.02	0.01	9.9	2.6	122	0.93	10.2		15.05	21.8	0.13
	1.36	0.02	0.151		0.1	5.8	5.3		0.03		78
	1.73	0.01	0.45	6.2		180		20.2	11.6	-0.001	0.01
	0.83	7	1.5	2.8	4	-0.01	0.21		39.5	0.056	0.07
	2.45	272	0.44	3.74	9	50.5	AS07046740			ROCK	
D	KU337543		KU	KURUNDI		491972.03		7740821.96		ROCK	
	EL23937		MGA94		53	1	1-May-07		KU64	NORTH	URAN
		0.09		3.28		27.1	-0.2	-10	30	0.73	0.93
	0.02	0.01	9.65	3.2	122	0.77	10.4		15.7	21.8	0.13

APPENDIX 3

Rock Chip Sampling – Assay Methods Details

Geochemical Procedure – ME-ICP61

Trace Level Methods Using Conventional ICP-AES Analysis

Sample Decomposition:	HNO ₃ -HClO ₄ -HF-HCl digestion, HCl Leach (GEO-4ACID)
Analytical Method:	Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)

Each sample was taken from an area up to one metre around a central point. Each weighed approximately one kg. Samples were sent to ALS Laboratory Group in Alice Springs for testing. There they were dried at 110-120 C and then the entire sample crushed with either an oscillating jaw crusher or a roll crusher.

The ALS Chemex QC specification for crushed material is that >70% of the sample must pass a 2mm (10 mesh) screen. It was then riffle split to a maximum of 3kg and pulverized using a ring mill to 85% passing 75 microns or better. The unpulverised reject was bagged and retained.

A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and the resulting solution is analyzed by inductively coupled plasma-atomic emission spectrometry. Results are corrected for spectral interelement interferences.

NOTE: Four acid digestions are able to dissolve most minerals; however, although the term “*near-total*” is used, depending on the sample matrix, not all elements are quantitatively extracted.

Element	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Silver	Ag	ppm	0.5	100	Ag-OG62
Aluminum	Al	%	0.01	50	
Arsenic	As	ppm	5	10000	
Barium	Ba	ppm	10	10000	
Beryllium	Be	ppm	0.5	1000	
Bismuth	Bi	ppm	2	10000	
Calcium	Ca	%	0.01	50	
Cadmium	Cd	ppm	0.5	500	
Cobalt	Co	ppm	1	10000	Co-OG62
Chromium	Cr	ppm	1	10000	
Copper	Cu	ppm	1	10000	Cu-OG62
Iron	Fe	%	0.01	50	
Gallium	Ga	ppm	10	10000	
Potassium	K	%	0.01	10	
Lanthanum	La	ppm	10	10000	
Magnesium	Mg	%	0.01	50	
Manganese	Mn	ppm	5	100000	
Molybdenum	Mo	ppm	1	10000	Mo-OG62
Sodium	Na	%	0.01	10	
Nickel	Ni	ppm	1	10000	Ni-OG62
Phosphorus	P	ppm	10	10000	
Lead	Pb	ppm	2	10000	Pb-OG62
Sulphur	S	%	0.01	10	
Antimony	Sb	ppm	5	10000	
Scandium	Sc	ppm	1	10000	
Strontium	Sr	ppm	1	10000	
Thorium	Th	ppm	20	10000	
Titanium	Ti	%	0.01	10	
Thallium	Tl	ppm	10	10000	
Uranium	U	ppm	10	10000	

Element	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Vanadium	V	ppm	1	10000	
Tungsten	W	ppm	10	10000	
Zinc	Zn	ppm	2	10000	Zn-OG62

Geochemical Procedure – ME-MS61U **Single Element Trace Level Method Using ICP-MS**

Sample Decomposition: HF-HNO₃-HClO₄ acid digestion, HCl leach (GEO-4ACID)

Analytical Methods: Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

Each sample was taken from an area up to one metre around a central point. Each weighed approximately one kg. Samples were sent to ALS Laboratory Group in Adelaide for testing. There they were dried at 110-120 C and then the entire sample crushed with either an oscillating jaw crusher or a roll crusher.

The ALS Chemex QC specification for crushed material is that >70% of the sample must pass a 2mm (10 mesh) screen. It was then riffle split to a maximum of 3kg and pulverized using a ring mill to 85% passing 75 microns or better. The unpulverised reject was bagged and retained.

A prepared sample (0.25 g) is digested with perchloric, nitric, and hydrofluoric acids to near dryness. The sample is then further digested in a small amount of hydrochloric acid. The solution is made up to a final volume of 12.5 mL with 11 % hydrochloric acid, homogenized, and analysed by inductively coupled plasma-atomic emission spectrometry.

NOTE: Four acid digestions are able to dissolve most minerals; however, although the term "*near-total*" is used, depending on the sample matrix, not all elements are quantitatively extracted.

Nitric-Perchloric-Hydrofluoric Acid Digestion is the most powerful acid dissolution procedure that used at ALS Chemex. Hydrofluoric acid is capable of reacting with silica to completely destroy silicate matrices and thus liberate all trace constituents. This acid mixture must be taken to incipient dryness in order for the reaction to go to completion. The resulting cake is leached with Hydrochloric acid. All elements for determination following this digestion are normally considered to be "near total".

Although the four acid digestion is able to dissolve most minerals, it may sometimes be necessary to use even stronger dissolution techniques such as fusions in order to get fully quantitative results. However, in most cases, this procedure quantitatively dissolves nearly all elements for the majority of geological materials.

In order to be able to report the widest possible concentration range, this method uses both ICP-MS and ICP-AES techniques.

Method code ME-MS61	Analytes & Ranges (ppm)			
Ag (0.01 - 100)	Cr (1 - 10,000)	Li (0.2 - 10,000)	Re (0.002 - 50)	Tl (0.02 - 10,000)
Al (0.01 - 50%)	Cs (0.05 - 500)	Mg (0.01% - 50%)	S (0.01% - 10%)	U (0.1 - 10,000)
As (0.2 - 10,000)	Cu (0.2 - 10,000)	Mn (5 - 100,000)	Sb (0.05 - 10,000)	V (1 - 10,000)
Ba 10 - 10,000)	Fe (0.01% - 50%)	Mo (0.05 - 10,000)	Se (1 - 1,000)	W (0.1 - 10,000)
Be (0.05 - 1,000)	Ga (0.05 - 10,000)	Na (0.01% - 10%)	Sn (0.02 - 500)	Y (0.1 - 500)
Bi (0.01 - 10,000)	Ge (0.05 - 500)	Nb (0.1 - 500)	Sr (0.2 - 10,000)	Zn (2 - 10,000)
Ca (0.01% - 25%)	Hf (0.1 - 500)	Ni (0.2 - 10,000)	Ta (0.05 - 100)	Zr (0.5 - 500)
Cd (0.02 - 1,000)	In (0.005 - 500)	P (10 - 10,000)	Te (0.05 - 500)	
Ce (0.01 - 500)	K (0.01% - 10%)	Pb (0.5 - 10,000)	Th (0.2 - 10,000)	
Co (0.1 - 10,000)	La (0.5 - 10,000)	Rb (0.1 - 10,000)	Ti (0.005% - 10%)	