

# ANALYTICAL TEST REPORT

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## ARAFURA RESOURCES NL

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JOB NUMBER	<b>NT49077</b>
PO NUMBER	107777
PROJECT	G400I/M - Soil
CHAIN OF CUSTODY	
DATE RECEIVED	13/06/2018
DATE REPORTED	2/08/2018
NO. SAMPLES	23 Mineral/Ores for Geochem Analysis

## COMMENTS

- > Geochemical analysis was performed on milled samples.
  - > Test results are reported on a dry weight basis.
  - > Samples will be discarded three months from final report date.
- > THIS REPORT IS RESUBMITTED & SUPERCEDES THE REPORT ISSUED ON 10/07/2018 (Dated 28/06/2018 #2).  
The report is updated to include Sm as requested.

## TESTED BY

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## RESULTS AUTHORISED BY

NAME **Fiona Dunbar-Smith**  
POSITION Intertek NTEL signatory

Accredited for compliance with ISO/IEC17025 - Testing  
Accreditation Number 14610  
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**REPORT CODE:** NT49077  
**Methodology:**



Analysis Code	Description	Method Reference	Analytical Scheme	Technique / Instrument	Detection Limit	Data Units
Ag	Silver	G400	G400M	ICPMS	0.05	ppm
Al	Aluminium	G400	G400I	ICPOES	50	ppm
As	Arsenic	G400	G400M	ICPMS	0.5	ppm
Ba	Barium	G400	G400M	ICPMS	0.05	ppm
Be	Beryllium	G400	G400M	ICPMS	0.1	ppm
Bi	Bismuth	G400	G400M	ICPMS	0.02	ppm
Ca	Calcium	G400	G400I	ICPOES	10	ppm
Cd	Cadmium	G400	G400M	ICPMS	0.05	ppm
Ce	Cerium	G400	G400M	ICPMS	0.01	ppm
Co	Cobalt	G400	G400M	ICPMS	0.05	ppm
Cr	Chromium	G400	G400M	ICPMS	1	ppm
Cs	Cesium	G400	G400M	ICPMS	0.01	ppm
Cu	Copper	G400	G400M	ICPMS	0.2	ppm
Dy	Dysprosium	G400	G400M	ICPMS	0.01	ppm
Er	Erbium	G400	G400M	ICPMS	0.01	ppm
Eu	Europium	G400	G400M	ICPMS	0.01	ppm
Fe	Iron	G400	G400I	ICPOES	20	ppm
Gd	Gadolinium	G400	G400M	ICPMS	0.01	ppm
Hf	Hafnium	G400	G400M	ICPMS	0.01	ppm
K	Potassium	G400	G400I	ICPOES	50	ppm
La	Lanthanum	G400	G400M	ICPMS	0.01	ppm
Li	Lithium	G400	G400M	ICPMS	0.1	ppm
Mg	Magnesium	G400	G400I	ICPOES	10	ppm
Mn	Manganese	G400	G400M	ICPMS	0.05	ppm
Mo	Molybdenum	G400	G400M	ICPMS	0.05	ppm
Na	Sodium	G400	G400I	ICPOES	50	ppm
Nb	Niobium	G400	G400M	ICPMS	0.05	ppm
Nd	Neodymium	G400	G400M	ICPMS	0.05	ppm
Ni	Nickel	G400	G400M	ICPMS	0.2	ppm
P	Phosphorus	G400	G400I	ICPOES	20	ppm
Pb	Lead	G400	G400M	ICPMS	0.2	ppm
Pr	Praseodymium	G400	G400M	ICPMS	0.01	ppm
Rb	Rubidium	G400	G400M	ICPMS	0.01	ppm
S	Sulphur	G400	G400I	ICPOES	20	ppm
Sb	Antimony	G400	G400M	ICPMS	0.05	ppm
Sc	Scandium	G400	G400M	ICPMS	0.1	ppm
Se	Selenium	G400	G400M	ICPMS	1	ppm
Sm	Samarium	G400	G400M	ICPMS	0.01	ppm
Sn	Tin	G400	G400M	ICPMS	0.2	ppm
Sr	Strontium	G400	G400M	ICPMS	0.05	ppm
Ta	Tantalum	G400	G400M	ICPMS	0.02	ppm
Te	Tellurium	G400	G400M	ICPMS	0.1	ppm
Th	Thorium	G400	G400M	ICPMS	0.01	ppm
Ti	Titanium	G400	G400I	ICPOES	10	ppm
Tl	Thallium	G400	G400M	ICPMS	0.01	ppm
U	Uranium	G400	G400M	ICPMS	0.01	ppm
V	Vanadium	G400	G400M	ICPMS	1	ppm
W	Tungsten	G400	G400M	ICPMS	0.05	ppm
Y	Yttrium	G400	G400M	ICPMS	0.01	ppm

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**Methodology:**



<b>Analysis Code</b>	<b>Description</b>	<b>Method Reference</b>	<b>Analytical Scheme</b>	<b>Technique / Instrument</b>	<b>Detection Limit</b>	<b>Data Units</b>
Yb	Ytterbium	G400	G400M	ICPMS	0.02	ppm
Zn	Zinc	G400	G400M	ICPMS	0.5	ppm
Zr	Zirconium	G400	G400M	ICPMS	0.1	ppm



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Project:

G400I/M - Soil

Element:	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method:	G400M	G400I	G400M	G400M	G400M	G400M	G400I	G400M	G400M
Detection Limit:	0.05	50	0.5	0.05	0.1	0.02	10	0.05	0.01
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018
<b>Sample ID</b>									
F12039	<0.05	3.85%	1.5	587	0.6	0.12	1540	<0.05	150
F12040	<0.05	5.00%	2.5	467	0.9	0.20	2510	0.05	262
F12041	<0.05	3.74%	2.0	615	0.5	0.14	1440	<0.05	129
F12042	0.10	5.02%	2.0	452	1.0	0.22	2560	<0.05	243
F12043	0.05	3.79%	1.5	613	0.6	0.16	1660	<0.05	163
F12044	<0.05	5.22%	2.5	426	1.0	0.24	2490	<0.05	292
F12045	<0.05	3.25%	1.0	634	0.4	0.10	900	<0.05	117
F12046	<0.05	4.49%	2.0	484	0.7	0.16	1680	<0.05	218
F12047	<0.05	3.34%	1.0	599	0.4	0.10	980	<0.05	104
F12048	<0.05	4.54%	2.0	481	0.8	0.18	1750	0.05	205
F12049	<0.05	4.81%	2.0	489	0.9	0.16	980	0.05	109
F12050	<0.05	7.08%	3.5	421	1.3	0.28	1650	<0.05	180
F12051	<0.05	3.80%	1.5	563	0.6	0.12	890	<0.05	95.7
F12052	<0.05	5.92%	3.0	421	1.2	0.24	1710	<0.05	191
F12053	<0.05	3.39%	1.5	504	0.5	0.12	1260	<0.05	124
F12054	<0.05	4.85%	2.5	434	1.2	0.22	2460	<0.05	212
F12055	<0.05	3.61%	1.5	518	0.5	0.14	1220	<0.05	136
F12056	<0.05	5.80%	3.0	452	1.2	0.24	2520	<0.05	199

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Project:

G400I/M - Soil

Element:	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Gd
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method:	G400M	G400M	G400M	G400M	G400M	G400M	G400M	G400I	G400M
Detection Limit:	0.05	1	0.01	0.2	0.01	0.01	0.01	20	0.01
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018
<b>Sample ID</b>									
F12039	6.45	110	1.36	9.6	5.75	2.38	1.24	2.65%	10.1
F12040	9.10	130	2.10	15.4	10.3	3.90	1.73	3.61%	17.4
F12041	5.05	130	1.20	9.2	5.09	1.99	1.15	3.15%	8.41
F12042	8.35	100	2.11	14.6	9.67	3.51	1.60	3.49%	16.1
F12043	6.35	110	1.26	9.4	6.23	2.46	1.29	2.73%	9.94
F12044	9.00	80	2.18	15.2	10.8	4.10	1.85	3.77%	18.7
F12045	4.25	130	0.94	6.6	4.31	1.64	1.04	2.14%	7.53
F12046	7.85	90	1.75	12.6	8.32	3.06	1.48	3.19%	14.3
F12047	4.15	100	0.96	7.2	4.06	1.62	1.02	1.95%	6.75
F12048	7.75	80	1.88	13.6	7.63	2.95	1.46	3.08%	14.1
F12049	6.60	100	1.97	17.0	5.11	2.24	1.26	2.65%	7.63
F12050	10.3	90	3.39	25.2	8.34	3.71	1.79	4.25%	12.4
F12051	4.40	100	1.29	9.4	4.23	1.57	1.07	2.01%	6.43
F12052	8.90	80	2.72	19.6	7.70	3.15	1.59	3.70%	12.8
F12053	5.25	110	1.32	9.6	4.54	1.75	1.01	2.17%	7.89
F12054	9.50	100	2.32	16.8	8.45	3.26	1.55	3.42%	13.7
F12055	5.75	110	1.40	10.6	4.88	1.95	1.09	2.29%	8.46
F12056	10.9	90	2.86	21.4	8.54	3.45	1.67	3.86%	13.6

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Project: G400I/M - Soil

Element:	Hf	K	La	Li	Mg	Mn	Mo	Na	Nb
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method:	G400M	G400I	G400M	G400M	G400I	G400M	G400M	G400I	G400M
Detection Limit:	0.01	50	0.01	0.1	10	0.05	0.05	50	0.05
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018
<b>Sample ID</b>									
<b>F12039</b>	3.01	1.79%	76.6	8.4	1430	312	0.35	2000	11.9
<b>F12040</b>	5.10	1.47%	136	12.9	2170	446	0.40	2100	17.4
<b>F12041</b>	2.81	1.78%	66.6	7.5	1170	240	0.35	1900	9.50
<b>F12042</b>	4.98	1.48%	121	12.5	2060	388	0.35	1950	15.7
<b>F12043</b>	2.99	1.78%	80.9	7.6	1480	342	0.30	2000	13.0
<b>F12044</b>	5.85	1.48%	144	13.4	2250	429	0.40	2000	17.4
<b>F12045</b>	2.40	1.81%	60.2	5.0	980	235	0.25	1900	9.90
<b>F12046</b>	4.72	1.57%	109	9.5	1690	427	0.35	2100	15.8
<b>F12047</b>	2.46	1.78%	51.9	5.5	1030	233	0.20	1900	9.90
<b>F12048</b>	4.02	1.52%	104	9.7	1760	431	0.35	2100	15.4
<b>F12049</b>	3.63	1.61%	55.9	10.5	1450	241	0.40	1450	8.80
<b>F12050</b>	4.24	1.51%	92.6	17.2	2490	365	0.65	1600	15.1
<b>F12051</b>	2.89	1.71%	50.3	7.0	1080	192	0.25	1650	8.35
<b>F12052</b>	5.17	1.53%	95.8	13.4	2140	359	1.15	1900	15.6
<b>F12053</b>	2.68	1.41%	61.6	7.8	1150	263	0.30	1600	11.7
<b>F12054</b>	4.49	1.44%	110	13.7	2100	458	0.40	2100	17.9
<b>F12055</b>	2.69	1.51%	69.0	8.5	1230	287	0.25	1500	13.1
<b>F12056</b>	5.45	1.52%	104	16.8	2450	499	0.55	1950	17.6

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Project:

G400I/M - Soil

Element:	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method:	G400M	G400M	G400I	G400M	G400M	G400M	G400I	G400M	G400M
Detection Limit:	0.05	0.2	20	0.2	0.01	0.01	20	0.05	0.1
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018
<b>Sample ID</b>									
<b>F12039</b>	64.0	10.4	220	18.6	16.0	69.1	60	0.10	6.8
<b>F12040</b>	112	15.8	320	20.2	30.6	74.0	120	0.20	10.2
<b>F12041</b>	54.0	9.8	200	19.6	13.8	65.1	60	0.10	5.8
<b>F12042</b>	105	15.2	340	19.6	27.0	71.7	100	0.15	9.7
<b>F12043</b>	67.5	10.2	220	19.4	16.8	67.8	80	0.15	6.8
<b>F12044</b>	124	16.0	360	20.6	32.5	73.7	120	0.20	10.6
<b>F12045</b>	48.1	8.0	180	17.4	12.2	63.1	20	0.05	4.8
<b>F12046</b>	92.8	13.2	280	19.2	23.1	72.7	40	0.15	8.8
<b>F12047</b>	43.6	7.6	180	17.4	10.8	62.3	20	0.10	4.7
<b>F12048</b>	87.9	13.2	300	18.8	21.9	72.6	60	0.15	8.7
<b>F12049</b>	46.5	14.2	300	19.4	11.5	73.7	40	0.10	8.5
<b>F12050</b>	78.8	23.0	500	21.8	19.7	94.5	60	0.20	14.6
<b>F12051</b>	41.1	9.2	220	17.8	10.2	66.1	20	0.15	5.8
<b>F12052</b>	82.5	18.4	420	20.8	20.6	84.8	60	0.20	11.8
<b>F12053</b>	51.5	9.6	200	16.2	12.9	58.5	40	0.10	6.2
<b>F12054</b>	91.4	15.6	340	20.2	23.1	77.2	60	0.15	10.6
<b>F12055</b>	57.1	10.6	240	16.8	14.4	63.7	40	0.10	6.8
<b>F12056</b>	89.1	19.4	380	20.6	22.0	85.9	60	0.20	12.6

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Project: G400I/M - Soil

Element:	Se	Sm	Sn	Sr	Ta	Te	Th	Ti	Tl
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method:	G400M	G400M	G400M	G400M	G400M	G400M	G400M	G400I	G400M
Detection Limit:	1	0.01	0.2	0.05	0.02	0.1	0.01	10	0.01
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018
<b>Sample ID</b>									
F12039	<1	12.0	2.2	45.4	1.00	<0.1	39.8	5250	0.34
F12040	1	20.9	2.6	56.3	1.46	<0.1	71.2	8340	0.41
F12041	<1	10.5	2.0	44.6	0.78	<0.1	40.3	4300	0.34
F12042	1	19.5	2.6	56.5	1.26	<0.1	65.7	7950	0.43
F12043	<1	12.6	2.2	46.2	1.06	<0.1	44.4	6000	0.34
F12044	1	23.0	2.8	56.5	1.44	<0.1	74.1	8730	0.44
F12045	<1	9.18	1.6	39.6	0.74	<0.1	32.7	4410	0.30
F12046	<1	17.6	2.4	50.6	1.30	<0.1	62.0	7880	0.38
F12047	<1	8.20	1.4	40.1	0.86	<0.1	26.9	4080	0.32
F12048	<1	16.4	2.4	50.6	1.20	<0.1	54.3	7570	0.41
F12049	<1	8.55	2.0	44.8	0.78	<0.1	27.4	3980	0.39
F12050	<1	14.5	4.2	58.9	1.34	<0.1	46.8	6800	0.52
F12051	<1	7.73	1.6	42.8	0.70	<0.1	23.9	3910	0.34
F12052	1	15.4	2.8	59.2	1.36	<0.1	51.4	7560	0.47
F12053	<1	9.87	1.6	39.6	2.02	<0.1	32.2	5430	0.31
F12054	<1	17.0	3.8	56.4	1.50	<0.1	56.8	8790	0.47
F12055	<1	10.6	1.8	39.7	1.04	<0.1	40.0	5640	0.34
F12056	<1	16.8	3.0	56.9	1.52	<0.1	51.6	8490	0.47

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Project:

G400I/M - Soil

Element:	U	V	W	Y	Yb	Zn	Zr		
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Method:	G400M	G400M	G400M	G400M	G400M	G400M	G400M		
Detection Limit:	0.01	1	0.05	0.01	0.02	0.5	0.1		
Analysis Date:	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018	22/06/2018		
<b>Sample ID</b>									
F12039	2.43	70	0.65	22.4	2.00	44.5	97.5		
F12040	4.25	90	1.15	38.1	3.04	48.0	178		
F12041	2.26	80	0.60	19.5	2.06	32.0	89.8		
F12042	3.96	90	1.05	34.9	2.86	46.0	162		
F12043	2.44	70	0.70	23.5	2.06	33.5	95.1		
F12044	4.50	100	1.15	39.9	3.26	48.5	184		
F12045	1.80	50	0.45	16.7	1.36	26.5	78.1		
F12046	3.62	90	1.00	30.6	2.48	43.5	146		
F12047	1.65	50	0.50	15.4	1.42	25.0	75.1		
F12048	3.26	80	0.90	28.4	2.96	44.5	132		
F12049	2.01	70	0.75	21.0	2.04	43.5	113		
F12050	3.09	110	1.35	35.3	3.08	67.5	139		
F12051	1.59	50	0.55	15.0	1.30	31.0	89.4		
F12052	3.22	100	1.15	29.5	2.64	57.5	146		
F12053	2.03	50	0.60	17.3	1.52	32.0	88.7		
F12054	3.80	90	1.10	31.1	2.54	50.0	156		
F12055	2.13	60	0.65	18.3	1.60	31.0	79.3		
F12056	3.48	110	1.35	33.8	2.88	55.0	157		

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