



**BUREAU
VERITAS**

Bureau Veritas Minerals Pty Ltd
MINERAL TESTING & LABORATORY SERVICES

ABN: 30 008 127 802

35 Cormack Road
Wingfield SA 5013

Telephone (08) 8416 5200
Facsimile (08) 8234 0355

Reference: **aa041469.f**
Date Finished: 17/07/2019
Order: E0839
Project: EU4-DDH
Date Received: 01/07/2019
Type of Sample: Pulps
Samples Analysed: **39**

FINAL ANALYSIS REPORT

Analysis of Mineral Samples

for

Prodigy Gold Euro JV

Prodigy Euro JV Account
Level 1

141 Broadway Nedlands WA 6009

Attention: Lab Results

Authorised By:

Vaughn Noble
Senior Chemist

Fabian Gregus
Chemist

Michael Grieger
Chemist

Jenet Hwende
Laboratory Manager



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Method	MA102	MA101	MA102	MA101	MA102	MA102	MA101	MA102
Result Name	Ag	Al	As	Ba	Be	Bi	Ca	Cd
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.2	100	1	2	0.5	0.1	100	0.5
BLANK 1	<0.2	<100	<1	<2	<0.5	<0.1	<100	<0.5
PG012875	<0.2	7.35%	<1	282	1.5	<0.1	2.76%	<0.5
PG012877	<0.2	5.53%	<1	226	1.5	<0.1	8.91%	<0.5
PG012879	<0.2	6.25%	<1	246	1.5	<0.1	4.26%	<0.5
PG012881	<0.2	7.02%	<1	468	1.5	<0.1	3.98%	<0.5
Std Nominal	0.4	6.16%	749	142			2.79%	
Determined	0.4	6.22%	762	140	2.0	0.5	2.71%	<0.5
PG012883	<0.2	7.93%	3	472	1.5	<0.1	3.67%	<0.5
PG012885	<0.2	7.63%	<1	444	1.5	<0.1	2.93%	<0.5
PG012887	<0.2	7.18%	<1	286	1.5	<0.1	7.11%	<0.5
PG012889	<0.2	5.78%	2	254	1.5	<0.1	10.7%	<0.5
PG012891	<0.2	7.29%	3	426	1.5	0.4	3.72%	<0.5
PG012893	<0.2	6.90%	<1	458	1.5	0.2	3.17%	<0.5
PG012895	<0.2	7.43%	<1	340	1.5	<0.1	3.63%	<0.5
Std Nominal	6.0	6.83%	96	132		3.5	2.48%	8.0
Determined	6.0	6.80%	96	132	1.5	3.6	2.51%	8.0
PG012897	<0.2	8.14%	<1	470	1.5	<0.1	1.88%	<0.5
PG012899	<0.2	8.47%	<1	524	2.0	<0.1	1.59%	<0.5
PG012901	<0.2	7.39%	<1	356	1.5	<0.1	1.54%	<0.5
PG012903	<0.2	6.60%	<1	304	1.0	<0.1	2.60%	<0.5
PG012903 Rpt	<0.2	6.71%	<1	314	1.0	<0.1	2.68%	<0.5
PG012905	<0.2	8.34%	<1	338	1.5	<0.1	1.23%	<0.5
PG012907	<0.2	7.81%	<1	306	1.5	0.2	1.00%	<0.5
PG012909	<0.2	7.81%	<1	286	1.0	<0.1	2200	<0.5
PG012911	<0.2	7.12%	2	392	1.5	<0.1	2.03%	<0.5
PG012913	<0.2	7.13%	<1	368	2.0	<0.1	6.13%	<0.5
PG012915	<0.2	6.14%	<1	234	1.0	<0.1	3.02%	<0.5
PG012917	<0.2	7.27%	<1	220	1.0	<0.1	1.69%	<0.5
PG012919	<0.2	6.99%	<1	338	1.0	<0.1	1.29%	<0.5
PG012921	<0.2	6.70%	<1	298	1.0	<0.1	1.73%	<0.5
Std Nominal		4.63%	3	984	1.5	<0.1	600	<0.5
Determined	<0.2	4.74%	4	1030	1.5	<0.1	700	<0.5
PG012923	<0.2	6.17%	<1	242	1.0	<0.1	2.68%	<0.5
PG012925	<0.2	7.33%	<1	358	1.5	<0.1	2.20%	<0.5
PG012927	<0.2	7.04%	<1	330	1.5	<0.1	2.19%	<0.5
PG012929	<0.2	7.59%	<1	342	1.5	<0.1	2.07%	<0.5
PG012931	<0.2	7.11%	<1	266	1.0	<0.1	2.15%	<0.5
PG012933	<0.2	7.50%	<1	288	1.5	0.2	2.25%	<0.5
PG012933 Rpt	<0.2	7.27%	<1	288	1.5	0.2	2.23%	<0.5
PG012935	<0.2	7.61%	2	338	1.0	<0.1	1.54%	<0.5
PG012937	<0.2	8.29%	<1	524	2.0	<0.1	1.53%	<0.5



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Method	MA102	MA101	MA102	MA101	MA102	MA102	MA101	MA102
Result Name	Ag	Al	As	Ba	Be	Bi	Ca	Cd
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.2	100	1	2	0.5	0.1	100	0.5
PG012939	<0.2	6.36%	<1	310	1.5	<0.1	4.95%	<0.5
PG012941	<0.2	6.01%	<1	170	1.5	<0.1	5.28%	<0.5
PG012943	<0.2	6.74%	2	56	1.0	<0.1	2.58%	<0.5
PG012945	<0.2	6.44%	<1	66	0.5	<0.1	5.97%	<0.5
Std Nominal	1.8	7.90%	21	922	3.0	4.3	3.00%	1.0
Determined	2.2	7.53%	21	924	2.5	4.3	3.04%	<0.5
PG012947	<0.2	6.99%	<1	28	0.5	<0.1	5.95%	<0.5
PG012949	<0.2	5.59%	<1	46	1.0	<0.1	3.18%	<0.5
PG012951	<0.2	7.27%	2	224	1.5	<0.1	2.90%	<0.5
Std Nominal	0.8	7.68%	18	1010	3.0	1.5	2.71%	<0.5
Determined	1.0	7.81%	17	988	4.0	1.6	2.72%	<0.5



Reference: aa041469.f Order Number: E0839 Page 3 of 16

Method	MA102	MA101	MA102	MA102	MA101	MA102	MA102	MA102
Result Name	Co	Cr	Cs	Cu	Fe	Ga	Hf	In
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	10	0.1	1	100	0.2	0.2	0.05
BLANK 1	<1	<10	<0.1	<1	<100	<0.2	<0.2	<0.05
PG012875	26	160	1.2	210	10.1%	20.6	3.6	0.10
PG012877	28	60	0.9	200	9.21%	16.2	2.8	0.10
PG012879	26	110	0.9	101	9.73%	16.8	3.0	<0.05
PG012881	32	110	2.6	58	9.24%	21.0	3.2	0.10
Std Nominal	160	2060		120	9.79%			
Determined	161	2020	2.2	120	9.41%	14.4	1.4	0.15
PG012883	36	110	2.6	51	8.81%	23.0	3.2	0.10
PG012885	34	110	2.2	65	9.27%	21.8	3.2	0.10
PG012887	62	60	1.4	710	8.63%	22.2	6.8	0.10
PG012889	33	60	1.3	1030	6.19%	17.8	5.4	0.10
PG012891	71	110	2.1	14	9.68%	22.6	4.0	0.10
PG012893	33	110	2.1	72	8.10%	20.4	3.0	<0.05
PG012895	43	160	1.9	90	9.23%	20.4	4.0	0.10
Std Nominal	43	220		1520	8.65%			
Determined	43	220	15.7	1600	8.32%	21.2	2.6	0.55
PG012897	37	130	2.4	183	10.1%	22.8	3.6	0.10
PG012899	38	130	2.8	166	10.1%	25.6	4.0	0.10
PG012901	32	130	2.1	75	8.50%	21.0	3.8	0.10
PG012903	29	90	1.5	112	7.94%	17.8	3.2	<0.05
PG012903 Rpt	29	100	1.5	111	8.08%	17.6	3.2	<0.05
PG012905	44	170	2.1	177	10.7%	24.4	4.0	0.10
PG012907	37	130	1.6	112	8.65%	24.2	4.4	0.10
PG012909	34	160	1.4	<1	8.92%	22.0	4.0	<0.05
PG012911	49	90	1.2	15	11.1%	22.4	4.8	0.10
PG012913	44	90	1.3	186	11.5%	20.0	4.8	0.10
PG012915	26	90	1.1	138	5.77%	15.6	3.6	<0.05
PG012917	32	170	1.1	181	7.39%	19.6	3.6	<0.05
PG012919	41	90	1.4	131	10.2%	21.4	4.2	0.10
PG012921	40	90	1.4	81	8.95%	19.6	4.0	0.10
Std Nominal	4	30	0.7	3	1.57%	11.0	1.6	<0.05
Determined	4	30	0.7	3	1.64%	11.8	1.6	<0.05
PG012923	36	80	1.2	98	8.78%	17.4	4.2	0.10
PG012925	44	110	1.6	147	9.81%	23.8	4.2	0.10
PG012927	31	130	1.3	95	8.78%	18.8	4.0	0.10
PG012929	32	160	1.5	34	8.85%	20.8	4.0	<0.05
PG012931	36	160	1.5	86	8.40%	21.2	4.0	0.10
PG012933	36	110	1.4	101	9.00%	22.8	4.6	0.10
PG012933 Rpt	37	110	1.4	102	8.73%	22.6	4.6	0.10
PG012935	34	160	1.5	187	10.1%	21.8	4.0	0.10
PG012937	37	110	2.5	42	10.2%	25.8	4.0	0.10



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Method	MA102	MA101	MA102	MA102	MA101	MA102	MA102	MA102
Result Name	Co	Cr	Cs	Cu	Fe	Ga	Hf	In
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	10	0.1	1	100	0.2	0.2	0.05
PG012939	36	80	1.5	352	8.21%	17.6	3.8	0.10
PG012941	37	80	1.1	210	8.61%	19.6	3.8	0.10
PG012943	51	90	0.6	210	11.5%	20.8	3.2	0.10
PG012945	50	130	0.4	239	9.29%	19.8	2.2	0.10
Std Nominal	16	90	9.6	7550	5.80%	23.0	2.0	0.60
Determined	17	90	9.5	7520	5.68%	23.4	2.4	0.60
PG012947	50	130	<0.1	210	9.52%	19.8	2.2	0.10
PG012949	39	90	0.2	141	10.5%	16.6	2.6	0.10
PG012951	54	130	1.0	216	11.5%	22.0	2.8	0.10
Std Nominal	16	90	12.2	2600	4.54%	19.6	2.6	0.20
Determined	17	110	12.4	2540	4.65%	19.4	2.8	0.20



Reference: aa041469.f Order Number: E0839 Page 5 of 16

Method	MA101	MA101	MA101	MA101	MA102	MA101	MA102	MA101
Result Name	K	Li	Mg	Mn	Mo	Na	Nb	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	100	10	100	2	0.5	100	0.5	2
BLANK 1	<100	<10	<100	2	<0.5	<100	<0.5	<2
PG012875	1.29%	30	1.86%	700	1.0	2.48%	5.5	76
PG012877	1.14%	20	1.43%	1180	<0.5	1.74%	6.0	52
PG012879	1.19%	20	1.57%	756	<0.5	2.41%	4.5	66
PG012881	3.07%	20	1.63%	858	<0.5	8300	4.0	68
Std Nominal	5600		6.85%	2380		6300		1180
Determined	5400	10	6.75%	2310	1.0	6100	2.5	1150
PG012883	3.37%	20	1.74%	912	<0.5	7700	3.0	76
PG012885	2.94%	20	1.70%	804	<0.5	9400	3.0	74
PG012887	1.84%	30	2.72%	1830	<0.5	8800	9.0	70
PG012889	1.79%	20	1.66%	2260	<0.5	8600	8.5	46
PG012891	2.77%	20	2.02%	1380	<0.5	5900	5.5	72
PG012893	2.80%	20	1.38%	658	<0.5	4800	3.5	64
PG012895	2.59%	20	2.02%	1000	<0.5	1.17%	3.5	80
Std Nominal	2.35%		1.77%	1180	54.0	1.30%		74
Determined	2.32%	<10	1.69%	1180	55.5	1.25%	4.5	74
PG012897	3.35%	20	1.89%	622	<0.5	8400	2.5	84
PG012899	3.64%	20	2.52%	736	<0.5	4400	3.0	86
PG012901	2.66%	20	2.78%	658	<0.5	8900	2.5	78
PG012903	2.10%	20	2.35%	1160	<0.5	1.38%	3.0	64
PG012903 Rpt	2.12%	20	2.41%	1190	<0.5	1.39%	3.0	64
PG012905	2.70%	30	3.23%	736	<0.5	1.06%	3.5	92
PG012907	2.30%	30	2.96%	686	<0.5	1.30%	5.5	80
PG012909	2.02%	40	4.56%	336	<0.5	6100	7.0	90
PG012911	1.67%	30	4.48%	936	<0.5	9500	8.5	70
PG012913	2.20%	30	3.38%	1660	<0.5	6800	8.5	84
PG012915	1.57%	10	1.78%	754	<0.5	1.55%	5.0	54
PG012917	1.47%	20	3.36%	884	<0.5	1.83%	4.5	108
PG012919	1.98%	20	2.79%	612	<0.5	9800	4.5	78
PG012921	1.93%	20	2.54%	742	<0.5	1.12%	5.0	66
Std Nominal	2.59%	<10	2300	780	7.0	2300	7.5	8
Determined	2.71%	<10	2300	780	6.5	2300	8.0	10
PG012923	1.54%	20	3.23%	990	<0.5	1.23%	6.5	60
PG012925	2.30%	20	3.14%	814	<0.5	1.05%	6.5	78
PG012927	2.01%	20	2.33%	952	<0.5	1.38%	6.5	68
PG012929	2.28%	20	2.11%	714	<0.5	1.43%	4.0	78
PG012931	2.01%	20	2.04%	702	<0.5	1.47%	4.5	76
PG012933	2.10%	20	2.37%	864	<0.5	1.35%	5.0	78
PG012933 Rpt	2.08%	20	2.39%	858	<0.5	1.32%	5.0	74
PG012935	2.33%	20	2.32%	730	<0.5	1.22%	2.5	84
PG012937	3.64%	20	1.76%	506	<0.5	6300	3.0	78



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Method	MA101	MA101	MA101	MA101	MA102	MA101	MA102	MA101
Result Name	K	Li	Mg	Mn	Mo	Na	Nb	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	100	10	100	2	0.5	100	0.5	2
PG012939	2.43%	20	4.29%	2080	<0.5	3700	5.0	62
PG012941	1.38%	20	4.34%	2150	2.0	1.02%	8.0	56
PG012943	4800	40	4.36%	1490	<0.5	1.49%	7.5	84
PG012945	2100	30	3.51%	1810	<0.5	1.95%	4.5	74
Std Nominal	3.10%	30	1.70%	600	274		16.0	50
Determined	3.02%	30	1.62%	582	260	2.02%	15.5	34
PG012947	200	30	3.71%	2250	1.5	2.25%	4.5	76
PG012949	900	30	3.32%	1740	<0.5	2.14%	5.5	62
PG012951	1.21%	40	2.97%	1600	<0.5	1.42%	5.5	84
Std Nominal	3.14%	30	1.48%	546	99.0	2.08%	18.0	42
Determined	3.22%	30	1.51%	578	101	2.06%	18.5	44



Reference: aa041469.f Order Number: E0839 Page 7 of 16

Method	MA101	MA102	MA102	MA102	MA101	MA102	MA101	MA102
Result Name	P	Pb	Rb	Re	S	Sb	Sc	Se
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	50	1	0.2	0.1	50	0.1	1	5
BLANK 1	<50	<1	<0.2	<0.1	<50	<0.1	<1	<5
PG012875	400	4	59.2	<0.1	250	0.6	26	<5
PG012877	750	4	46.8	<0.1	<50	0.6	28	<5
PG012879	550	3	44.6	<0.1	<50	0.2	28	<5
PG012881	550	3	124	<0.1	<50	0.3	30	<5
Std Nominal	100	39			600	4.0	33	
Determined	100	40	23.0	<0.1	500	3.7	33	<5
PG012883	550	3	130	<0.1	100	0.3	32	<5
PG012885	600	4	113	<0.1	150	0.3	31	<5
PG012887	1300	4	67.8	<0.1	800	0.8	37	<5
PG012889	1750	4	70.4	<0.1	900	0.8	30	<5
PG012891	850	5	111	<0.1	1.26%	0.7	32	<5
PG012893	450	4	106	<0.1	2450	0.6	29	<5
PG012895	550	4	98.4	<0.1	200	0.6	32	<5
Std Nominal	600	521	561		2.01%	12.0	15	
Determined	650	514	517	<0.1	1.98%	13.0	15	5
PG012897	600	5	123	<0.1	300	0.5	35	<5
PG012899	600	3	144	<0.1	300	0.3	36	<5
PG012901	550	3	108	<0.1	250	0.3	32	<5
PG012903	450	3	81.8	<0.1	50	0.4	25	<5
PG012903 Rpt	450	3	81.2	<0.1	<50	0.4	26	<5
PG012905	600	4	105	<0.1	250	0.6	37	<5
PG012907	650	5	87.8	<0.1	50	0.7	32	<5
PG012909	500	4	76.4	<0.1	<50	0.9	31	<5
PG012911	1000	4	63.8	<0.1	<50	0.9	34	<5
PG012913	1200	5	75.0	<0.1	<50	1.1	38	<5
PG012915	400	5	59.4	<0.1	<50	0.6	21	<5
PG012917	450	5	59.4	<0.1	150	0.6	23	<5
PG012919	700	3	74.6	<0.1	1350	0.5	33	<5
PG012921	550	3	76.2	<0.1	1550	0.5	28	<5
Std Nominal	100	18	88.0	<0.1	<50	<0.1	3	<5
Determined	150	18	84.0	<0.1	<50	<0.1	3	<5
PG012923	750	4	61.0	<0.1	150	0.8	26	<5
PG012925	650	4	92.8	<0.1	2450	1.0	33	<5
PG012927	450	5	76.0	<0.1	550	1.1	26	<5
PG012929	500	4	86.2	<0.1	<50	0.6	29	<5
PG012931	450	5	84.4	<0.1	<50	0.6	26	<5
PG012933	650	5	83.2	<0.1	<50	0.6	30	<5
PG012933 Rpt	650	5	83.4	<0.1	<50	0.6	30	<5
PG012935	550	3	84.2	<0.1	150	0.2	33	<5
PG012937	600	3	148	<0.1	200	0.5	34	<5



Reference: aa041469.f Order Number: E0839 Page 8 of 16

Method	MA101	MA102	MA102	MA102	MA101	MA102	MA101	MA102
Result Name	P	Pb	Rb	Re	S	Sb	Sc	Se
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	50	1	0.2	0.1	50	0.1	1	5
PG012939	950	2	88.6	<0.1	1200	0.7	30	<5
PG012941	850	3	59.0	<0.1	5500	1.1	28	<5
PG012943	550	4	28.2	<0.1	250	1.2	35	<5
PG012945	550	3	11.2	<0.1	<50	0.7	37	<5
Std Nominal	1000	29	145		9250	0.9	14	5
Determined	1000	28	155	<0.1	9250	1.0	14	10
PG012947	550	4	0.8	<0.1	<50	0.6	40	<5
PG012949	550	3	3.2	<0.1	50	0.6	33	<5
PG012951	700	3	41.8	<0.1	250	0.6	38	<5
Std Nominal	1000	23	184	<0.1	3550	0.9	13	<5
Determined	1000	24	194	<0.1	3600	0.8	14	<5



Reference: aa041469.f Order Number: E0839 Page 9 of 16

Method	MA102	MA102	MA102	MA102	MA102	MA101	MA102	MA102
Result Name	Sn	Sr	Ta	Te	Th	Ti	Tl	U
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.5	0.1	0.2	0.1	50	0.1	0.1
BLANK 1	<0.1	<0.5	<0.1	<0.2	<0.1	<50	<0.1	<0.1
PG012875	1.6	83.0	0.5	<0.2	8.6	3500	0.3	1.3
PG012877	1.2	105	0.4	<0.2	4.7	6050	0.2	0.6
PG012879	1.2	68.5	0.3	<0.2	6.8	4150	0.2	0.9
PG012881	1.3	64.0	0.3	<0.2	6.3	3950	0.5	1.1
Std Nominal	1.0	42.0				3400		
Determined	1.3	42.5	0.2	0.4	2.1	3250	0.6	2.1
PG012883	1.2	64.0	0.2	<0.2	6.7	2850	0.5	1.2
PG012885	1.3	54.5	0.2	<0.2	6.7	2850	0.4	1.1
PG012887	1.9	97.5	0.6	<0.2	6.3	9550	0.3	1.3
PG012889	1.6	131	0.5	<0.2	5.5	8100	0.3	1.6
PG012891	1.8	73.5	0.4	<0.2	6.9	4350	0.4	1.1
PG012893	1.6	59.0	0.3	<0.2	6.3	3000	0.4	0.9
PG012895	1.2	67.0	0.3	<0.2	8.9	3400	0.4	1.4
Std Nominal		104				5100		
Determined	2.6	97.5	0.4	<0.2	2.9	4900	6.4	0.8
PG012897	1.3	42.5	0.2	<0.2	7.6	2450	0.5	1.2
PG012899	1.5	23.5	0.2	<0.2	8.3	2900	0.6	1.5
PG012901	1.2	22.5	0.2	<0.2	10.1	2300	0.4	1.5
PG012903	1.1	48.0	0.2	<0.2	8.3	2400	0.3	1.1
PG012903 Rpt	1.2	48.0	0.2	<0.2	8.2	2500	0.3	1.1
PG012905	1.4	24.5	0.3	<0.2	8.1	3450	0.4	1.5
PG012907	1.6	35.0	0.4	<0.2	9.1	4700	0.3	1.6
PG012909	1.5	16.5	0.5	<0.2	10.1	5800	0.3	1.5
PG012911	1.6	32.5	0.6	<0.2	6.5	7950	0.2	0.8
PG012913	1.6	84.5	0.6	<0.2	4.1	9650	0.3	0.8
PG012915	1.2	63.0	0.4	<0.2	10.2	4500	0.2	1.5
PG012917	1.2	55.0	0.3	<0.2	9.8	3450	0.2	1.8
PG012919	1.5	24.0	0.3	<0.2	7.6	4100	0.3	1.1
PG012921	1.6	28.0	0.3	<0.2	10.0	4450	0.3	1.2
Std Nominal	0.7	124	0.6	<0.2	5.6	2400	0.4	39.6
Determined	0.8	129	0.5	<0.2	5.5	2400	0.5	39.5
PG012923	1.3	34.0	0.4	<0.2	10.2	6800	0.2	1.1
PG012925	1.8	32.5	0.5	<0.2	7.8	6150	0.4	1.4
PG012927	1.4	43.0	0.5	<0.2	10.9	5300	0.3	1.5
PG012929	1.4	56.5	0.3	<0.2	10.2	3550	0.4	1.5
PG012931	1.4	51.5	0.3	<0.2	9.8	3450	0.3	1.5
PG012933	1.6	52.0	0.4	<0.2	9.6	4050	0.3	1.6
PG012933 Rpt	1.6	52.5	0.4	<0.2	9.4	4100	0.3	1.5
PG012935	1.2	42.0	0.1	<0.2	8.4	2400	0.3	1.3
PG012937	1.6	29.0	0.2	<0.2	7.7	3300	0.5	1.2



Reference: aa041469.f Order Number: E0839 Page 10 of 16

Method	MA102	MA102	MA102	MA102	MA102	MA101	MA102	MA102
Result Name	Sn	Sr	Ta	Te	Th	Ti	Tl	U
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.5	0.1	0.2	0.1	50	0.1	0.1
PG012939	1.6	15.0	0.4	<0.2	5.1	5450	0.3	0.9
PG012941	1.6	31.5	0.6	<0.2	5.5	7000	0.2	0.8
PG012943	1.4	113	0.5	<0.2	3.9	8350	0.1	0.6
PG012945	0.9	138	0.3	<0.2	1.3	7550	<0.1	0.2
Std Nominal	11.0	364	0.9		14.0	4700	0.8	3.8
Determined	10.7	352	1.2	<0.2	14.9	4600	0.8	3.8
PG012947	1.0	147	0.3	<0.2	1.3	8050	<0.1	0.2
PG012949	1.2	80.5	0.3	<0.2	2.5	7400	<0.1	0.4
PG012951	1.3	66.0	0.3	<0.2	2.8	7600	0.1	0.5
Std Nominal	5.6	338	1.4	<0.2	18.0	4650	0.9	4.9
Determined	5.8	353	1.4	<0.2	18.4	4850	1.0	4.9



Reference: aa041469.f Order Number: E0839 Page 11 of 16

Method	MA101	MA102	MA102	MA102	MA102	MA102	MA102	MA102
Result Name	V	W	Y	Zn	Zr	La	Ce	Pr
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.5	0.1	2	1	0.1	0.1	0.05
BLANK 1	<5	<0.5	<0.1	<2	<1	<0.1	<0.1	<0.05
PG012875	155	<0.5	12.8	74	109	19.1	38.3	4.70
PG012877	150	<0.5	16.6	66	104	16.0	29.7	4.05
PG012879	165	<0.5	14.4	78	107	16.0	31.0	4.10
PG012881	175	<0.5	16.8	74	115	18.6	36.3	4.85
Std Nominal	200	22.0	26.0	264				
Determined	190	22.0	25.8	282	44	14.2	39.2	5.50
PG012883	170	1.0	15.5	82	118	18.5	38.0	4.95
PG012885	175	1.0	14.5	82	117	22.2	43.0	5.70
PG012887	305	1.0	20.3	134	252	21.0	51.9	7.05
PG012889	255	1.0	21.9	76	208	20.5	46.8	6.35
PG012891	215	1.5	17.1	82	149	19.8	40.6	5.25
PG012893	175	1.0	12.3	72	110	16.7	32.6	4.35
PG012895	205	1.0	13.2	86	145	20.2	41.1	5.10
Std Nominal	115		16.0	5190				
Determined	120	2.0	15.6	5010	92	9.3	18.6	2.55
PG012897	220	<0.5	13.1	98	131	20.6	41.2	5.15
PG012899	225	1.0	14.9	84	144	23.1	46.7	5.80
PG012901	200	<0.5	14.9	76	138	20.0	41.1	5.10
PG012903	160	<0.5	13.8	60	117	17.5	33.6	4.45
PG012903 Rpt	165	<0.5	14.0	60	115	17.0	33.2	4.40
PG012905	240	<0.5	15.4	102	146	23.1	44.6	5.45
PG012907	210	<0.5	17.8	80	157	21.1	43.9	5.35
PG012909	205	1.0	15.5	84	139	22.5	43.8	5.45
PG012911	260	1.0	20.7	102	173	20.3	41.7	5.60
PG012913	245	1.0	21.8	88	166	18.7	39.5	5.60
PG012915	140	<0.5	12.9	58	125	15.6	31.7	4.10
PG012917	160	<0.5	13.8	78	126	22.2	43.1	5.20
PG012919	220	<0.5	14.2	80	156	20.9	42.9	5.35
PG012921	190	1.0	14.9	74	144	19.5	40.5	5.05
Std Nominal	20		10.1	14		20.3	44.5	5.20
Determined	25	<0.5	10.0	14	46	18.8	42.1	4.95
PG012923	200	<0.5	19.4	78	151	18.5	38.6	5.10
PG012925	230	1.0	19.0	78	152	20.8	41.1	5.15
PG012927	180	<0.5	16.5	72	134	20.7	40.6	4.95
PG012929	195	<0.5	13.1	76	142	21.0	41.0	4.90
PG012931	180	<0.5	15.1	80	141	19.9	38.9	4.70
PG012933	195	<0.5	18.2	86	162	21.4	42.8	5.40
PG012933 Rpt	200	<0.5	18.7	86	162	21.3	42.9	5.40
PG012935	215	<0.5	15.0	88	137	24.7	46.5	5.85
PG012937	195	<0.5	14.5	74	137	22.9	44.0	5.75



Reference: aa041469.f Order Number: E0839 Page 12 of 16

Method	MA101	MA102	MA102	MA102	MA102	MA102	MA102	MA102
Result Name	V	W	Y	Zn	Zr	La	Ce	Pr
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.5	0.1	2	1	0.1	0.1	0.05
PG012939	220	<0.5	21.6	68	142	18.7	40.1	5.40
PG012941	205	1.5	23.5	80	133	16.2	33.1	4.65
PG012943	240	1.0	19.7	112	110	13.0	27.3	3.70
PG012945	295	1.0	20.3	98	66	6.6	14.5	2.25
Std Nominal	135	3.5	21.0	120	82	28.0	54.0	7.20
Determined	130	4.5	21.3	112	77	28.1	56.7	6.90
PG012947	295	<0.5	22.5	106	78	6.9	15.1	2.35
PG012949	225	<0.5	21.7	98	90	12.8	27.3	3.70
PG012951	255	<0.5	21.6	112	106	12.1	25.6	3.70
Std Nominal	120	3.5	24.6	88	77	33.0	68.0	7.90
Determined	130	3.5	25.5	92	82	35.3	68.3	8.60



Reference: aa041469.f Order Number: E0839 Page 13 of 16

Method	MA102	MA102	MA102	MA102	MA102	MA102	MA102	MA102
Result Name	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.05	0.05	0.2	0.02	0.05	0.02	0.05
BLANK 1	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05	<0.02	<0.05
PG012875	18.3	3.80	1.15	3.4	0.50	2.70	0.62	1.60
PG012877	16.9	3.90	1.20	4.0	0.58	3.45	0.68	2.05
PG012879	16.8	3.60	1.00	3.6	0.50	2.95	0.58	1.70
PG012881	20.3	4.55	1.35	4.6	0.60	3.65	0.70	2.10
Std Nominal								
Determined	24.1	5.55	1.90	6.4	0.90	5.50	1.06	3.05
PG012883	20.2	4.70	1.40	4.4	0.70	3.35	0.60	1.90
PG012885	22.4	5.10	1.45	5.2	0.66	3.60	0.68	1.95
PG012887	31.4	7.55	2.10	7.2	0.86	4.50	0.94	3.25
PG012889	28.2	6.50	1.90	6.4	0.78	4.65	0.84	2.80
PG012891	21.1	4.75	1.95	5.6	0.66	3.60	0.68	2.05
PG012893	17.5	3.95	1.20	3.8	0.52	2.55	0.50	1.45
PG012895	20.2	4.60	1.30	4.4	0.56	2.90	0.54	1.75
Std Nominal								
Determined	10.8	2.80	1.10	3.4	0.50	3.10	0.60	1.85
PG012897	20.9	4.65	1.30	4.2	0.50	2.65	0.48	1.55
PG012899	23.5	5.15	1.50	5.0	0.60	3.25	0.60	1.90
PG012901	20.7	4.65	1.40	4.4	0.56	3.05	0.60	1.85
PG012903	17.7	3.90	1.20	3.8	0.52	3.25	0.54	1.75
PG012903 Rpt	17.6	3.95	1.25	3.8	0.52	3.10	0.54	1.75
PG012905	21.8	4.80	1.35	4.6	0.58	3.20	0.66	1.90
PG012907	21.6	4.70	1.40	4.6	0.64	3.70	0.74	2.30
PG012909	21.2	4.30	1.20	4.0	0.54	3.10	0.60	2.00
PG012911	24.2	5.80	1.60	6.4	0.78	4.35	0.86	2.60
PG012913	24.4	5.80	1.50	5.8	0.76	4.95	1.04	2.70
PG012915	16.2	3.50	0.95	3.2	0.44	2.75	0.52	1.55
PG012917	19.8	4.05	1.20	3.8	0.50	2.95	0.56	1.70
PG012919	22.2	4.95	1.40	4.8	0.58	3.20	0.56	1.75
PG012921	20.6	4.75	1.45	4.6	0.64	3.15	0.76	2.00
Std Nominal	19.4	3.80		3.2	0.42		0.42	1.20
Determined	19.1	3.70	1.10	3.2	0.40	2.30	0.42	1.15
PG012923	21.0	4.85	1.40	5.2	0.82	4.10	0.80	2.45
PG012925	21.6	5.05	1.50	5.0	0.70	3.90	0.82	2.50
PG012927	19.5	4.30	1.40	4.2	0.58	3.45	0.68	2.25
PG012929	19.4	4.10	1.20	3.8	0.54	2.80	0.52	1.60
PG012931	18.5	4.00	1.15	4.0	0.54	3.35	0.60	1.85
PG012933	21.8	4.75	1.40	4.6	0.64	3.80	0.72	2.35
PG012933 Rpt	21.6	4.70	1.40	4.8	0.66	3.75	0.74	2.35
PG012935	22.5	4.90	1.40	4.8	0.58	3.10	0.62	1.75
PG012937	23.6	5.25	1.55	4.8	0.58	3.30	0.56	2.05



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Method	MA102	MA102	MA102	MA102	MA102	MA102	MA102	MA102
Result Name	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.05	0.05	0.2	0.02	0.05	0.02	0.05
PG012939	22.6	5.50	1.55	5.4	0.74	4.25	0.82	2.45
PG012941	19.8	4.85	1.55	5.6	0.78	4.75	0.94	2.80
PG012943	15.7	3.90	1.20	4.4	0.64	4.25	0.82	2.35
PG012945	11.0	3.15	1.20	4.0	0.62	4.05	0.80	2.45
Std Nominal	27.0	5.50	1.30	5.6		4.30	0.80	2.50
Determined	26.1	5.30	1.25	5.4	0.70	4.25	0.78	2.35
PG012947	11.2	3.45	1.25	4.4	0.68	4.40	0.88	2.75
PG012949	15.6	4.10	1.35	5.2	0.76	4.75	1.12	3.50
PG012951	16.2	4.25	1.35	5.0	0.80	4.40	0.92	2.65
Std Nominal	30.6	5.95	1.40	5.4	0.80	4.85	0.92	2.60
Determined	32.1	6.30	1.45	5.8	0.82	4.90	0.94	2.80



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Method	MA102	MA102	MA102	MA101	MA101
Result Name	Tm	Yb	Lu	MA_Run	MA_Seq
Units	ppm	ppm	ppm		
Detection Limit	0.05	0.05	0.02	1	1
BLANK 1	<0.05	<0.05	<0.02	201687	101
PG012875	0.25	1.65	0.26	201687	102
PG012877	0.30	2.10	0.28	201687	103
PG012879	0.25	1.80	0.24	201687	104
PG012881	0.30	2.30	0.30	201687	105
Std Nominal					
Determined	0.45	2.80	0.36	201687	106
PG012883	0.30	2.20	0.30	201687	107
PG012885	0.30	1.95	0.28	201687	108
PG012887	0.50	3.25	0.50	201687	109
PG012889	0.45	3.10	0.46	201687	110
PG012891	0.35	2.15	0.36	201687	111
PG012893	0.25	1.70	0.24	201687	112
PG012895	0.30	2.00	0.28	201687	113
Std Nominal					
Determined	0.30	1.75	0.24	201687	114
PG012897	0.25	1.80	0.28	201687	115
PG012899	0.30	2.25	0.32	201687	116
PG012901	0.30	2.10	0.28	201687	117
PG012903	0.25	1.80	0.24	201687	118
PG012903 Rpt	0.25	1.85	0.24	201687	119
PG012905	0.30	2.20	0.32	201687	120
PG012907	0.35	2.40	0.34	201687	121
PG012909	0.30	1.95	0.28	201687	122
PG012911	0.40	2.80	0.42	201687	123
PG012913	0.45	2.80	0.40	201687	124
PG012915	0.25	1.65	0.24	201687	125
PG012917	0.25	1.65	0.24	201687	126
PG012919	0.30	1.95	0.30	201687	127
PG012921	0.30	2.00	0.28	201687	128
Std Nominal	0.15	1.05	0.16		
Determined	0.20	1.10	0.12	201687	129
PG012923	0.35	2.45	0.34	201687	130
PG012925	0.40	2.45	0.36	201687	131
PG012927	0.30	2.10	0.28	201687	132
PG012929	0.25	1.80	0.26	201687	133
PG012931	0.30	2.00	0.28	201687	134
PG012933	0.35	2.40	0.34	201687	135
PG012933 Rpt	0.35	2.40	0.34	201687	136
PG012935	0.30	2.00	0.28	201687	137
PG012937	0.30	2.00	0.30	201687	138



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Method	MA102	MA102	MA102	MA101	MA101
Result Name	Tm	Yb	Lu	MA_Run	MA_Seq
Units	ppm	ppm	ppm		
Detection Limit	0.05	0.05	0.02	1	1
PG012939	0.40	2.50	0.36	201687	139
PG012941	0.40	2.85	0.40	201687	140
PG012943	0.35	2.30	0.32	201687	141
PG012945	0.35	2.40	0.32	201687	142
Std Nominal	0.40	2.30			
Determined	0.35	2.15	0.28	201687	143
PG012947	0.40	2.50	0.32	201687	144
PG012949	0.45	2.85	0.38	201687	145
PG012951	0.35	2.50	0.34	201687	146
Std Nominal	0.35	2.50	0.38		
Determined	0.45	2.55	0.36	201687	147

These results pertain to the samples as received at this laboratory.
Where standards are reported, the nominal value for the element is reported above the result found.

"%" Implies this result reported in %

Sample Storage

The excess material (Residue) will be held after 30 days

The pulp samples (Pulp) will be held after 60 days as per instructions.

Sample Preparation

No sample preparation was required on these samples.

Digest and Analysis:

The sample(s) have been digested and refluxed with a mixture of Acids, including: Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. This extended digest approaches a total digest for many elements however, some refractory minerals are not completely attacked.

Al,Ba,Ca,Cr,Fe,K,Li,MA_Run,MA_Seq,Mg,Mn,Na,Ni,P,S,Sc,Ti,V

have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Ag,As,Be,Bi,Cd,Ce,Co,Cs,Cu,Dy,Er,Eu,Ga,Gd,Hf,Ho,In,La,Lu,Mo,Nb,Nd,Pb,Pr,Rb,Re,Sb,Se,Sm,Sn,Sr,Ta,Tb,Te,Th,Tl,Tm,U,W,Y,Yb,Zn,Zr

have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.