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	VANCOUVER, B.C.	

### **ASSESSMENT REPORT**

### ON A

# HEAVY MINERAL STREAM SEDIMENT

PROGRAM

# ON THE

# **RED TUSK PROPERTY**

### **RED TUSK 1 MINERAL CLAIM**

### SQUAMISH AREA

### **VANCOUVER MINING DIVISION, BC**

NTS: LATITUDE: LONGITUDE: OWNER: OPERATOR: AUTHORS: DATE: 092G/14W 49° 46' 30"N 123° 19' 10"W W.R. Gilmour Discovery Consultants W.R. Gilmour, P.Geo. August 3, 2000 GEOLOCICAL

GEOLOGICAL SURVEY BRANCH ASSESSMENT DEPONT



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- APPENDIX A Heavy Mineral Stream Sediment Survey: Fraction Weights and Analytical Results
- APPENDIX B Analytical Procedures

#### SUMMARY

This report is an update of exploration on the Red Tusk property, and it significantly draws on the 1996 assessment report by T.H. Carpenter.

The Red Tusk property is a possible volcanogenic-massive-sulphide-type prospect in felsic volcanic rocks of the Gambier Group. Mineralization is in the same rocks as and is along strike from the former Britannia Mine at Britannia Beach.

The property received no known exploration before 1981. Between 1982 and 1988 a series of exploration programs outlined an altered horizon of felsic volcanic units within a roof pendant of Lower Cretaceous Gambier rocks in the Coast Plutonic Complex. Anomalous copper, lead, zinc, silver and gold are associated with two zones 1100 metres apart. Rock sampling on the property in 1988 contained assays up to 0.576 oz/ton gold and 4.9 oz/ton silver.

In 1995, a limited program of heavy mineral stream sediment sampling and minor rock sampling was carried out on the property. In 2000, additional heavy mineral fractions were produced from the three heavy mineral samples collected in 1995. Where sufficient sample size allowed, five additional fractions were analysed for each sample. The stream sediments contain anomalous concentrations of copper, zinc, lead and silver.

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#### LOCATION AND ACCESS

The property is located in the Tantalus Mountain Range of the Coast Mountains approximately 55 km north of Vancouver at latitude 49°46'30"N and longitude 123°19'10"W. The communities of Sechelt and Squamish are located 45 km southwest and 14 km southeast respectively (Figure 1).

The property can be reached by water taxi from Sechelt to the Clowhon Falls logging camp and by logging road for 26 km to the Red Tusk Valley.

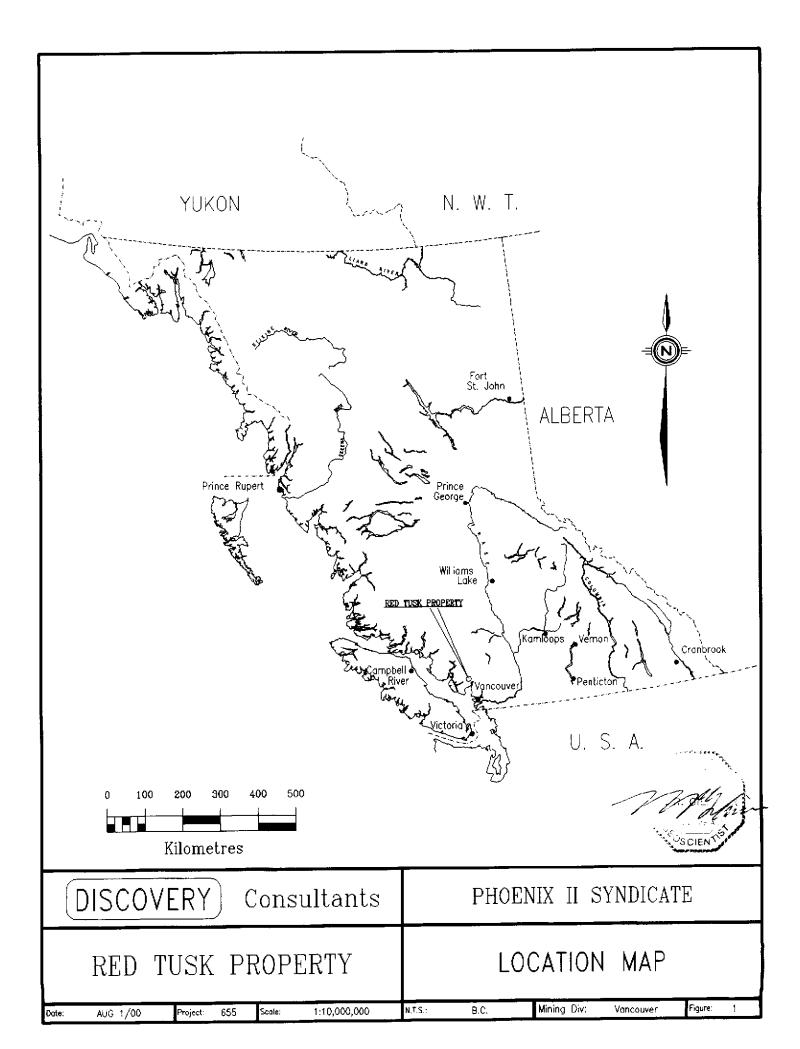
Helicopter access to the property is available from Squamish, Sechelt or Vancouver.

#### **<u>TOPOGRAPHY</u>**

The Red Tusk claim overlies a portion of the Tantalus Range. Elevations on the claim range from 880 m at the southwest corner to 1550 m at the northeast corner of the claim. Small remnant glaciers occur above 1500 metres.

The valley of Red Tusk Creek is a broad u-shaped valley. Tributary creeks are generally deeply incised with canyon sidewalls. Recent logging has been carried out in the valley of Red Tusk Creek.

2



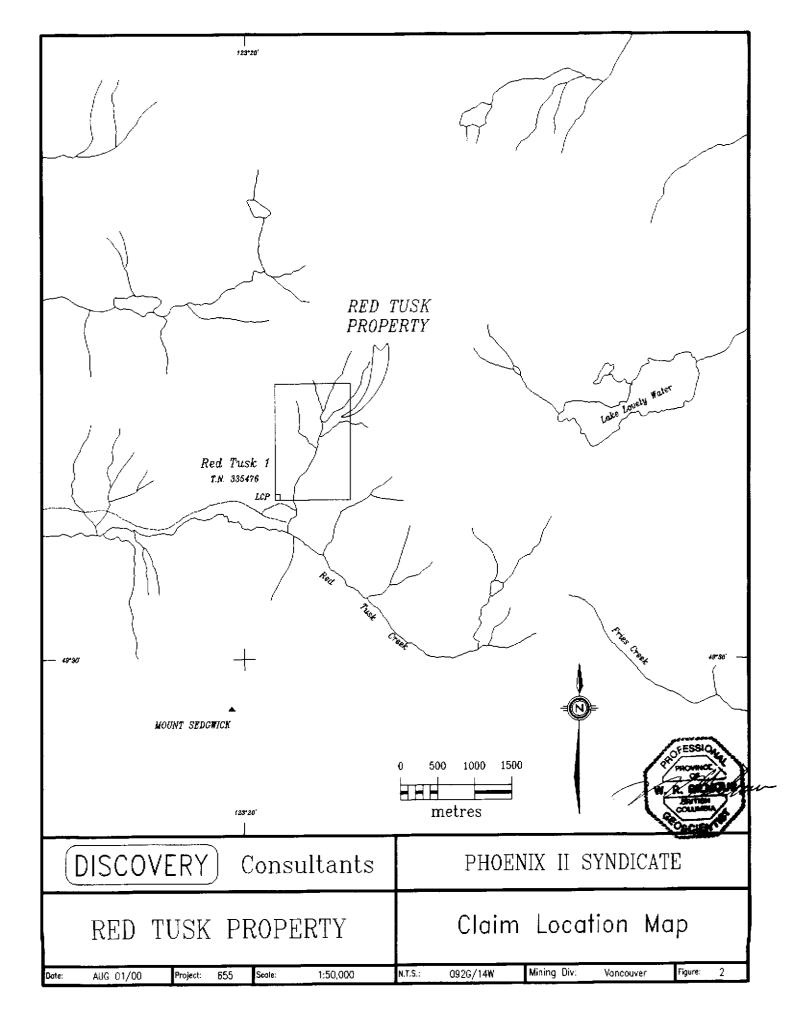
### PROPERTY

The Red Tusk property (Figure 2) comprises a six-unit four-post mineral claim. The claim was staked by E.D. Harrington on May 5, 1995 and recorded in Vernon on May 10, 1995.

<u>Claim Name</u>	<u>Record No.</u>	Owner of Record	<u>Anniversary</u> Date *
Red Tusk 1	335476	W.R. Gilmour	May 5, 2001

The registered owner is William R. Gilmour, and is held in trust for the Phoenix II Syndicate.

\* Pending acceptance of this report.



#### **HISTORY**

The property was originally staked in 1981 by James Laird, who optioned the property to Newmont Mines Ltd. in 1982. From 1982 to 1984, Newmont carried out surface mapping and rock chip sampling with limited stream sediment sampling. This work defined three zones, the North, the South and the Mavis Zones. The North and the South zones were the targets of a drill program by Newmont in 1985. Drilling suggested more positive results in the south zone.

In 1988 Schellex Gold Corp. carried out prospecting and sampling on the North, South and Mavis zones and identified two additional zones, the Cirque and the North Zone Extension, the latter a possible extension of the North Zone. Further work was recommended.

The Phoenix Syndicate staked the property in 1995 and Discovery Consultants carried out a preliminary heavy mineral stream sediment survey and a minor rock-sampling program.

In 2000, Discovery Consultants, on behalf of the Phoenix II Syndicate, had additional fractions produced and analysed from the three heavy mineral samples collected in 1995.

#### GENERAL GEOLOGY

The Red Tusk property occurs within the Clowhon pendant, an elongate pendant of Lower Cretaceous Gambier Group volcanic and sedimentary rocks. The pendant is surrounded by quartz diorite/diorite of the Cenozoic-Mesozoic Coast Plutonic Complex and has undergone local folding, faulting and hornfelsing.

The property is underlain by a series of marine sediments and volcanic rocks in a relatively undisturbed sequence of north to northwest trending and moderately to steeply west dipping units. The sedimentary units are composed of cherts and argillites but do not constitute a large portion of the stratigraphy.

The volcanic rocks are variable in composition and range from basalts to rhyolites including massive andesite porphyries, laminated tuffs and a fragmental unit.

Mineralization is largely associated with altered siliceous rhyolite that varies from 30 to 100 metres in width and 2000 metres in length. The North, South and North Extension Zones occur within this unit.

The Mavis Zone is located 500 metres east of the South Zone and comprises disseminations and pods of semi-massive to massive sphalerite, chalcopyrite and galena in a zone 3 metres wide and 100 metres long.

The Cirque Zone is located 900 metres east of the Mavis zone and comprises massive pods of sphalerite, chalcopyrite and galena in andesite.

#### **GEOCHEMISTRY**

Work carried out on the property in 2000 comprised the production and analysis of additional heavy mineral fractions, from stream sediment samples collected in 1995.

The locations of the three heavy mineral stream sediment samples are shown on Figure 3.

Heavy mineral drainage sampling entailed the sampling of gravels, sands and silts from creek beds. The material was sieved in the field until approximately 10 kg of -20 mesh material is obtained. The sample was then shipped to C.F. Mineral Research Ltd. in Kelowna for heavy mineral separation. Fractions were produced according to grain size, specific gravity and magnetic susceptibilities.

The -150HN fraction (-150 mesh, >3.2 specific gravity, non-magnetic), which can include native gold, pyrite and many base metal sulphides, was analysed in 1995.

The present work produced and analysed the following fractions:

### <u>1. -60+150HN fraction</u>

• -60+150 mesh, heavy (>3.2 specific gravity), non-magnetic

### 2. -60+150IP and -150IP fractions

- -60+150 mesh and -150 mesh
- Intermediate: >2.7 and <3.2 specific gravity
- Para-magnetic: minerals such as limonite minerals.
- Secondary minerals after sulphide minerals, such as zinc-bearing hemimorphite, can occur in this fraction.

#### 3. -60+150HP and -150HP fractions

- -60+150 mesh and -150 mesh
- Heavy: >3.2 specific gravity
- Para-magnetic: minerals include garnets, hornblende and epidote, and some limonite minerals

The fractions selected for analysis were sent to ALS Chemex laboratory in North Vancouver for aqua regia digestion and ICP analysis (see Appendix B).

### <u>Results</u>

With only three samples, it is not possible to determine the local anomalous threshold values. However, based on similar surveys in other areas, copper, zinc, lead and silver appear to be anomalous in some sample fractions (see results in Appendix A).

For <u>copper values</u>, the -60+150HN fraction is anomalous in samples 1 and 2 (there was insufficient material in sample 3 to analyse the -60+150HN fraction). The coarser fraction -60+150HN gives significantly higher concentrations than the finer fraction (-150HN).

For zinc values, the -60+150HN fraction is anomalous in samples 1 and 2. Previous work (Carpenter) showed that the -150HN fraction was anomalous in sample 3. The general restriction of high zinc concentrations to the HN (heavy, non-magnetic) fractions indicates the presence of sphalerite in the stream sediments.

For <u>lead</u> values, the heavy, non-magnetic fraction gives anomalous concentrations. There does not appear to be as much of a difference between the -150 mesh and the -60+150 mesh fractions, as for copper and zinc values.

For <u>silver</u> values, the heavy, non-magnetic fraction gives anomalous concentrations, with higher concentrations in the coarser size fraction.

Sample 3 contains significantly higher copper, lead, zinc and silver values in the HP fractions than does samples 1 and 2. This indicates that the stream sediments contain more oxidized (limonitic?) mineral grains.

#### **CONCLUSIONS**

The Red Tusk is a possible volcanogenic massive sulphide prospect in rocks similar to and along strike from the former Britannia Mine at Britannia Beach. Between 1905 and 1977 the Britannia Mine produced 52.7 million tonnes of ore containing 1.1% Cu, 0.65% Zn, 6.8 g per tonne Ag and 0.6 g per tonne Au.

Precious and base metal mineralization is associated with altered rhyolitic rocks exposed over a strike length of two kilometres. Portions of the mineralization, including the North Zone Extension, discovered in 1988, have not been adequately explored.

The geochemistry of stream sediments reflects the occurrence of copper, zinc and lead sulphides, and demonstrates its potential for finding new mineralized zones.

#### **RECOMMENDATIONS**

Further work on the Red Tusk property should largely consist of recommendations put forth at the end of the 1988 program in the area. These include, additional mapping and prospecting in the North Extension Zone to evaluate this untested area, detailed prospecting and mapping around altered rhyolite tuffs in the South Zone that returned assays to 0.418 oz/ton Au.

As well, additional heavy mineral sampling should be carried out along strike from the property to test for additional mineralized zones. Of the fractions analysed, the -60+150HN fraction appears to be the most useful in delineating copper, zinc, lead and silver mineralization.

Respectfully submitted,

W. R. GILMC l W.R. Compour.

August 3, 2000 Vernon, BC

### **REFERENCES**

British Columbia Ministry of Energy, Mines and Petroleum Resources - Assessment Reports #10279, 11180, 12660, 14478, 18615

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Carpenter, T.H. Assessment report on the Red Tusk, 1996 (24421)

### STATEMENT OF COSTS

1. Professional Services		
Report Writing		
W.R. Gilmour (P.Geo.)		
1.0 day @\$450/day	\$ 450.00	
Data Compilation		
T.H. Carpenter (P.Geo.)		
0.25 days @450/day	112.50	
		\$ 562.50
2. Office Personnel		
Drafting	64.00	
Secretarial	64.00	
		128.00
3. Expenses		
Analyses		
CF Mineral Research	\$ 86.36	
ALS-Chemex Labs	92.40	
	178.76	
Shipping	5.45	
Communications	3.00	
Office Supplies	50.00	
		237.21
	<b>Total Exploration Costs:</b>	<u>\$ 927.71</u>

### STATEMENT OF QUALIFICATIONS

I, WILLIAM R. GILMOUR of 13511 Sumac Lane, Coldstream, BC, V1B 1A1, DO HEREBY CERTIFY that:

- 1. I am a consulting geologist in mineral exploration and a partner in Discovery Consultants, Vernon, BC.
- 2. I have been practising my profession for 30 years.
- 3. I am a graduate of the University of British Columbia with a Bachelor of Science degree in geology.
- 4. I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
- 5. This report is based upon knowledge of the Red Tusk property gained from supervision.
- 6. I do hold an indirect interest in the Red Tusk property, through the Phoenix II Syndicate.

hnour, P.Geo.

August 3, 2000 Vernon, BC Appendix A

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Date of Report: 08/03/00

Project 655

#### Red Tusk

#### Re: 655'geodata'scp\_2000.wks

HM Stream Sediment Sample Analyses 2000

Reference : a0018950

Sample (D	Lab report #	ICP Ag ppm	KCP As ppm	ICP Sta ppm	ICP Cu ppm	ICP Pb ppm	ICP Zn ppm	KCP W ppm	ICP Cd ppm	ICP Mo ppm	KCP Bi ppm	ICP Ni IPpm	ICP Co ppm	KCP Cr ppm	ICP Fe %	ксе Mn ppm	ICF Ba
				ppm									- paparin	ppin			ррт
60+150IP traction																	
RT-001	#0016960	0.2	8	<2	81	14	122	<10	<0.5	з	<2	10	15	15	4.02	620	190
RT-002	#3016960	<0.2	10	<2	70	14	122	<10	<0.5	1	<2	10	15	13	3.88	620	190
RT-003	-0010560	2.6	26	<2	<b>9</b> 9	162	186	<10	0.5	7	<2	10	15	15	5 27	765	200
60+150HP frection																	
RT-001	-0016960	1.0	12	<2	166	14	60	<10	0.5	з	<2	8	43	6	3.73	405	60
RT-002	49018960	0.6	18	<2	183	18	76	<10	0.5	1	2	7	34	6	3.31	380	60
RT-003	40014950	5.0	50	<2	313	220	630	<10	4.5	7	<2	16	53	12	5. <b>95</b>	980	60
60+150HN traction																	
RT- <b>0</b> 01	+0018960	15.0	356	2	746	204	640	270	3.0	22	<2	11	55	2	6.10	190	40
RT- <b>802</b>	#0018569	6.8	282	2	1050	170	762	200	4.0	7	2	10	51	2	5.62	210	50
RT-003	+0018968	n/s	n/s	n/s	៧/ទ	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n∕s	n/s	ល់ទ	n∕s
150IP fraction																	
RT-001	#DQ 18960	0.6	8	<2	81	18	180	<10	<0.5	1	<2	14	19	21	5.33	800	220
RT-002	#DC 18960	0.2	2	<2	63	16	156	<10	<0.5	1	<2	10	15	15	4.22	695	180
RT-003	80018960	0.8	28	<2	56	122	222	<10	<0.5	7	<2	27	13	30	4.52	715	140
150HP fraction																	
T-001	#DQ 16960	0.4	10	<2	100	18	50	<10	<0.5	<1	<2	8	27	7	3,10	365	60
T-002	80018960	0.4	10	<2	106	18	42	<10	<0.5	1	2	5	25	7	2.93	365	70
T-003	#0018960	n/s	rv/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

### Red Tusk

### HM Stream Sediment Sample Analyses (part 2)

Sample ID	KCP V	ICP Hg	ICP Sr	ICP La	ICP Al	ICP Mg	ICP Ca	ICP Na	ICP K	ICP Ti	КСР U	KCP Be	ICP Ga	ICP P	ICP Sc	KCP TI	КР В	ю ;
	ppm	ppm	ppm	ppm	%	%	%	*	%	%	ppm	ррт	ppm	ppm	ppm	ppm	ppm	5
80+150/P.Imction																		
RT-001	83	<1	52	<10	2.37	1.54	0.81	0.04	0.68	0 19	<10	<0.5	<10	880	5	<10	<10	0.02
RT-002	81	<1	45	<10	2,38	1.55	0.73	0.04	0.69	0.17	<10	<0.5	<10	880	5	<10	<10	0.02
RT-003	77	<1	53	<10	2.24	1.34	0.83	0,04	0 61	0.17	<10	<0.5	<10	980	4	<10	<10	0.15
60+150HP fraction																		
RT-001	53	<1	44	10	0.84	0.45	0.68	0.01	0.22	0.16	<10	<0.5	<10	710	Э	<10	<10	0.38
RT-002	47	<1	43	10	0.84	0.45	0.67	0.01	0.22	0.16	<10	<0.5	<10	700	Э	<10	<10	0.39
RT-003	37	<1	36	10	0.80	0.42	0.55	<0.01	0.20	0.11	<10	<0.5	<10	620	1	<10	<10	1.23
<u>-60+150HM (taction</u> )																		
RT-001	50	<1	26	20	0.75	0.39	1.36	0.02	0.25	0.16	20	<0.5	<10	4640	1	<10	<10	>5.00
RT-002	43	<1	27	20	0.74	0.39	1.62	0.02	0.27	0,16	30	<0.5	<10	5660	1	<10	<10	4,26
RT-003	n/s	n/s	n/s	n/s	n/s	លន	n/s	n/s	n∕s	n/s	n/s	ល់ទ	n/s	n/s	n/s	n/s	n/s	n/s
150(P fraction																		
RT-001	114	<1	44	<10	3.04	2.08	0.76	0.04	0.82	0.24	<10	<0.5	10	960	8	<10	<10	0.03
RT-002	96	<1	41	<10	2.63	1.82	0.69	0.04	0.69	0.23	<10	<0.5	<10	690	7	<10	<10	0.02
RT-003	79	<1	50	<10	2.38	1.72	0.66	0.08	0.48	0.19	<10	<0.5	<10	740	4	<10	<10	0 09
150HP fraction																		
RT-001	54	<1	48	10	0.88	0.44	0.77	0.01	0.20	0.14	<10	<0.5	<10	1070	3	<10	<10	0.33
(T-002	52	<1	54	10	0.85	0.39	0.88	0.01	0.17	0.14	<10	<0.5	<10	1230	4	<10	<10	0.33
RT-003	n/s	n/s	n/s	o/s	n/s	n/s	n/s	n/s	n/s	rv's	n/s	n/s	n/s	n/s	n/s	n/s	n/s	۲Vs

#### Project 655

#### Red Tusk

An: #551geodalahul\_chart H)

HM Stream Sediment Sample Weight Chart 2000

Reference : cfm-00-1533

Sample ID	Lab reperj #	IM gm	60+150i IP gm	и gm	IM gm	-150) <b>1P</b> gm	iN gm	HM gm	-60+150H HP gm	HN gm	150H HP grn
RT-001	cfm-001533	2.49	44.59	46.05	0.08	5.57	18.34	27.95	31.19	2.66	9.76
RT-002	dim-001533	3 37	61.98	64.36	0.11	10.42	30.96	16.83	28,76	1.78	15.44
RT-003	ahn-001533	1.08	28.39	8.8	0.01	0.89	2.68	0.36	1.51	0.17	0 29

Appendix B

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# ANALYTICAL PROCEDURES

# Geochemical Analysis

### by ALS-Chemex Labs Ltd.

ELEM	ENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD
Al*	Aluminum	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sb	Antimony	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
As	Arsenic	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ba*	Barium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Be*	Beryllium	0.5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Bi	Bismuth	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Cd	Cadmium	0.5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ca*	Calcium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Cr*	Chromium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Со	Cobalt	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Cu	Copper	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ga*	Gallium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Fe	Iron	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
La*	Lanthanum	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Pb	Lead	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Mg*	Magnesium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Mn	Maganese	5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Hg	Mercury	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Мо	Molybdenum	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ni	Nickel	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Р	Phosphorus	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
К*	Potassium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sc*	Scandium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ag	Silver	0.2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Na*	Sodium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sr*	Strontium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
TI*	Thallium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ti*	Titanium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
W*	Tungsten	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
U	Uranium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
V	Vanadium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Zn	Zinc	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma

\* Incomplete digeston.

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