

(including the Tomcat and Climax Claims)

Rock Geochemical Report

Nicola M.D. British Columbia, Canada NTS 92H 15E 49°52'N; 120°36'W

(Annual Work Approval Number: KAM 97-1500535-723)

For: Matrix Energy Inc. 810-355 Burrard Street Vancouver, B.C.



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<u>Summary</u>

The Tomcat Claim Group is located southeast of Merritt, B.C. within the Intermontane Belt of the Canadian Cordillera.

It is situated in a geological setting favourable for the formation of Cu-Au porphyry, skarn, vein, shear and/or breccia deposits.

The claims are underlain predominantly by marine volcanics of the Central Belt within the Upper Triassic Nicola Group. A fault bounded monzonite to diorite unit has also been mapped in the northeastern portion of the Tomcat claim.

Mineralization on the property consisted of pyrite, chalcopyrite, bornite, galena, sphalerite, tetrahedrite, magnetite, chalcocite, malachite and azurite. It was associated with shear zones, breccias, quartz-carbonate veinlets and stringers, and fracture sets.

Assay results were anomalous in Cu, Pb, Zn and Ag. Lesser anomalies were also present for Cd, As and Ba.

Nine of the rock samples collected from the Tomcat property assayed greater than 0.3% Cu, and three of those samples carried over 1% Cu. A grab sample taken from a shear surface within the Tomcat claim returned 1.47% Cu. Another sample taken of a silicified volcanic rock assayed 0.96% Cu, 0.35% Pb, 3.9% Zn, 6.5 gpt Ag and 533 ppm Cd.

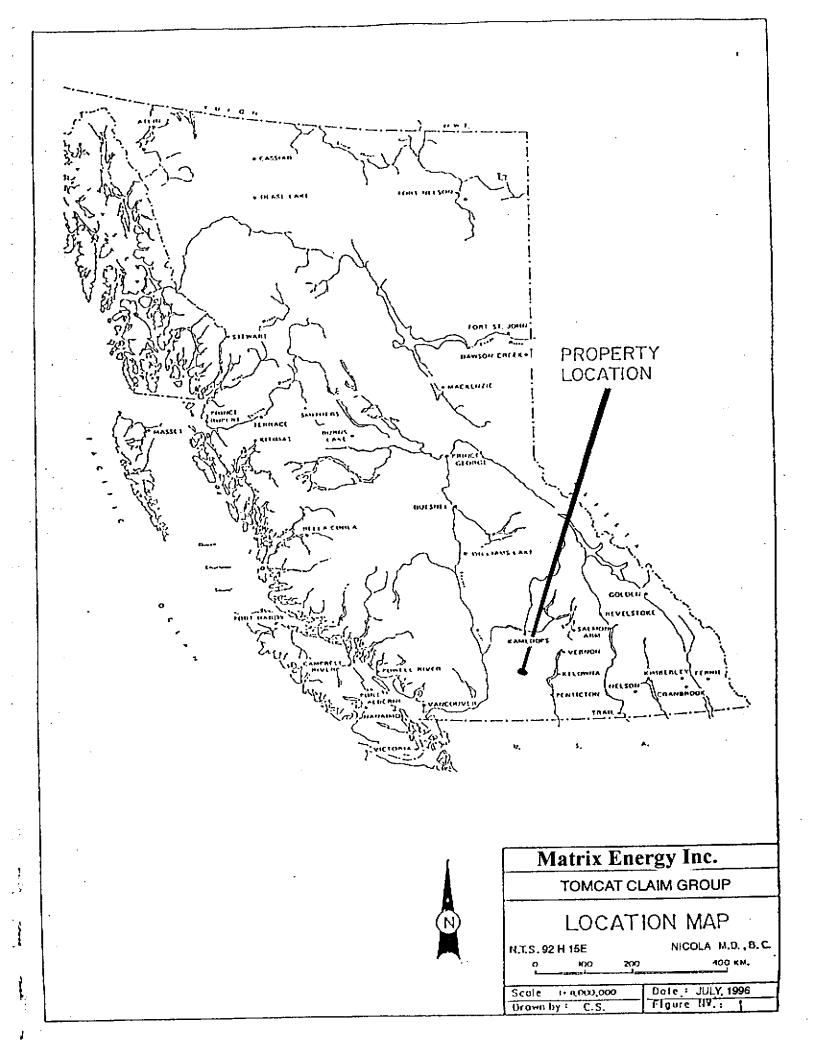
Further work, including detailed geological mapping, geochemical sampling and geophysical surveys, is recommended for the Tomcat Claim Group.

Introduction

The Tomcat Claim Group is located 35 km SE of Merritt, B.C. within the Intermontane Belt of the Canadian Cordillera.

It is situated in a geological setting favourable for the formation of Cu-Au porphyry deposits; skarn or replacement deposits; and/or auriferous quartz-carbonate vein, shear or breccia deposits.

The Highland Valley Copper Mine, a porphyry copper deposit located north of Merritt, contains published reserves of 539.7 million tonnes grading 0.42% Cu (January 1, 1995). The mine is owned by Cominco Ltd. (50%), Rio Algom Ltd. (33.6%), Teck Corp. (13.9%) and the Highmont Mining Company (2.5%).



The Similco (Copper Mountain) Mine owned by the Princeton Mining Corporation and located south of Princeton, B.C.; contains published reserves of over 135 million tonnes grading 0.36% Cu plus additional gold and silver credits (January 1, 1995).

The Elk-Siwash North Mine; a vein deposit owned by Fairfield Minerals Ltd. and located southeast of Merritt; contains stockpiled, probable and possible reserves of over 123,000 tonnes grading 27.43 gpt Au (Jan. 1/96). Between 1992 and 1994 Fairfield produced 1,586 kg (51,000 oz) of gold from ore averaging 97.7 gpt (2.8 opt) Au over 0.4 metres.

During 1997, the Getty Copper Corp. identified/inferred approximately 71 million tonnes of oxide and sulphide ore grading 0.47% copper at the Getty North and South deposits which are located in the Highland Valley about 50 km south of Kamloops.

The Tomcat and Climax claims were visited by the writer during September 15, 16 and 17, 1997. (Annual work approval number : KAM 97-1500535-723.

Location and Access

The Tomcat Claim Group is located 35 km southeast of Merritt in the Nicola Mining Division of B.C. (Figure 1).

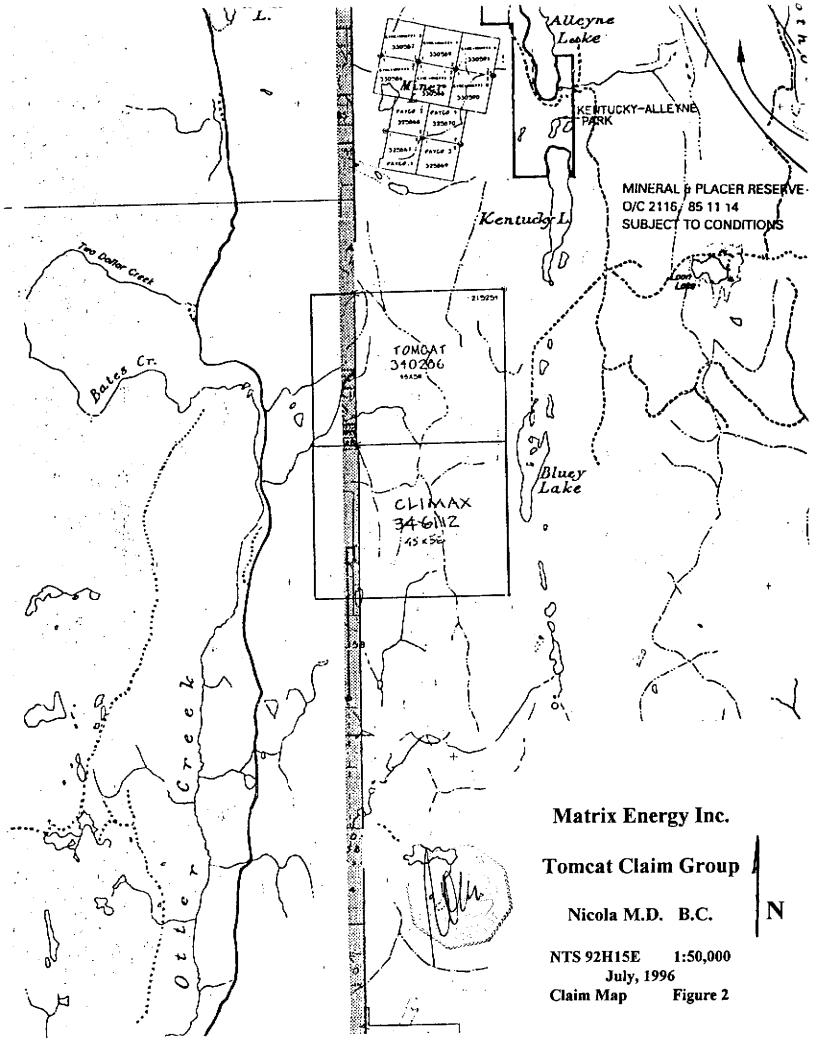
The property is road accessible via highways 97C and 5A which passes through the settlement of Aspen Grove.

From Aspen Grove, highway 5A is followed south for approximately 12 km where a logging road heads east toward Missezula Lake.

This road and other secondary logging roads are followed east and north for approximately 5 km to the southwestern corner of the Climax claim.

<u>Claim Data</u>

<u>Claim Name</u>	<u>Tenure #</u>	<u># of Units</u>	Expiry Date
Tomcat	340286	20	Sept. 26/98
Climax	346112	20	May 11/99



Topography, Vegetation and Climate

The relief within the Tomcat Claim Group is moderate with subcropping and outcropping ridges trending northerly throughout the property. Small ponds and swampy areas are located within topographically low areas around and between the ridges.

Elevations on the property range between 3,500 to 4,500 feet above mean sea level.

Vegetation and climate is typical for the south-central interior (Tulameen Land District-Thompson Plateau) of B.C. Vegetation density was moderate and did not hinder field work.

History and Previous Work

Several mineral occurrences are plotted within the Tomcat and Climax claims on the B.C. Geological Survey Tulameen Minfile Map (NTS 092HNE). These include the Tomcat, Portland, Bloo, Boomerang, Bluey, No 19, Zig 3, and Nor 30 occurrences which contain Cu, Ag & Pb mineralization.

Previous work within the claims include:

- 1. 1900-1905: Portland Mining Co. excavated a shaft and drift for an approximate total extent of 67 metres. A sample taken in 1913 from the dump material adjacent to the shaft assayed 0.4% Cu. Another sample taken from a nearby open cut assayed 0.9% Cu (Tomcat claim).
- 2. 1906-1913: Prospecting and trenching by W. Murray (Tomcat).
- 3. 1956: Fidelity Uranium Mines Ltd.; trenching and geological mapping (Climax claim).
- 4. 1965: Pyramid Mining Co. Ltd. drilled 13 holes totalling 1042 metres. The first hole returned 0.32% Cu over 45.7 metres (Tomcat).
- 5. 1967: Scope Development Ltd. and Alscope Consolidated Ltd. conducted trenching, soil sampling, geophysical surveys and some diamond drilling (Tomcat).
- 6. 1976-1981: F. Gingell; geological, geochemical, and geophysical surveys (Tomcat).

- 7. 1985: Vanco Explorations Ltd.; geological, geochemical and geophysical surveys (Tomcat & Climax).
- 8. 1987: Laramide Resources Ltd.; geological, geochemical and geophysical surveys (Tomcat & Climax).

Regional Geology

The Tomcat Claim Group lies within the Intermontane Belt of the Canadian Cordillera in an area underlain by the Upper Triassic Nicola Group.

The Nicola Group consists of marine volcanics and sediments that were probably deposited in an island arc setting.

Around the study area, Preto (1979) divided the Nicola Group into three separate assemblages (or belts) based upon different lithologies and depositional facies.

1. The Central Belt contains well bedded marine sediments; reefal limestones; and volcanic flows, breccias, tuffs and lahar deposits of andesitic to basaltic composition.

2. The Eastern Belt includes trachyandesitic to trachybasaltic porphyry flows, flow breccias, lapilli tuffs, lahars, sandstones and siltstones.

3. The Western Belt is composed of calcareous volcanic sediments; cherty limestones; and andesitic to dacitic flows, breccias and tuffs.

Comagmatic intrusive rocks composed of diorite, with lesser monzonite and syenite, tend to be associated with the Central Belt of the Nicola Group.

Regional structures in the area trend north-south, northeasterly, and northwesterly.

Several mines and advanced mineral exploration or development projects are located within the Nicola Group in the south-central interior of B.C.

Besides the Highland Valley, Similco, and Elk mines described above; other mines in the area include the Craigmont Cu-Fe skarn deposit near Merritt, the Afton-Ajax Cu-Au porphyry near Kamloops, and the Hedley Tailings and Nickel Plate gold mines near Princeton.

Local Geology

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The Tomcat Claim Group is underlain predominantly by marine volcanics of the Central Belt within the Upper Triassic Nicola Group. A fault bounded monzonite to diorite unit of Upper Triassic to Lower Jurassic age has also been mapped in the northeastern portion of the Tomcat claim by Preto (1979).

A variety of volcanic facies of andesitic to basaltic composition were noted on the property. These included plagioclase and/or pyroxene porphyries, crystal and lithic fragmental tuffs and agglomerates, flows, flow breccias, and lahar deposits. Andesites were generally green to grey and basalts were pink to purple to orange-brown in colour.

Calcareous volcanic sediments and occasional outcrops of limestone were located in the northern half of the claim group.

Mineralization on the claims included trace amounts or minor concentrations of pyrite, chalcopyrite, bornite, galena, sphalerite, tetrahedrite, magnetite, chalcocite, malachite and azurite. It was associated with shear zones and breccias, quartz-carbonate veinlets and stringers, and fracture sets.

Alteration products, generally associated with mineralized areas, consisted of hematite, chlorite, epidote, silica, carbonate, and minor sericite. Some of the lower grade alteration may be due to weak regional metamorphism.

Limonite and pyrolusite, as well as malachite were common oxidation products. Ankeritic carbonate may also be partly responsible for some of the more noticeable gossanous areas on the property.

The claim group is situated between the Allison and Kentucky-Alleyne faults which have been interpreted by Preto (1979) to be major regional faults which represent a rift system that controlled the emplacement of Nicola volcanic rocks, as well as the distribution of later Tertiary sediments.

Within the property, regional structures and volcanic units trend north-south to northnorthwesterly subparallel to the Allison and Kentucky Alleyne fault systems. Small shears and slickensided fault surfaces follow the same trend or are occasionally normal to it. Main fracture orientations also have a similar trend but may vary to the northwest (130°) or the northeast (045°). Mineralization on the Tomcat Claim Group appears to be structurally controlled, epigenetic and may be related to a porphyry-like system.

There is also potential for the discovery of vein, shear, stockwork, or replacement deposits within the claim group area.

Geochemical Sampling

Twenty-two rock samples were taken from outcrop and angular subcrop fragments on the Tomcat property.

Both grab and composite samples were collected of mineralized and relatively unaltered host rock material. Chip samples were also taken across, or adjacent to, minor shear zones or highly fractured and/or mineralized areas (see Appendix I for rock sample descriptions and Figure 3 for sample locations).

The samples were sent to Acme Analytical Laboratories and analyzed for 30 elements using ICP (results Appendix II).

Sample results were anomalous in Cu, Pb, Zn and Ag. Lesser anomalies were also present in Cd, As and Ba.

Copper anomalies were widespread and nine of the rock samples assayed greater than 0.3% Cu and three of those samples carried over 1% Cu.

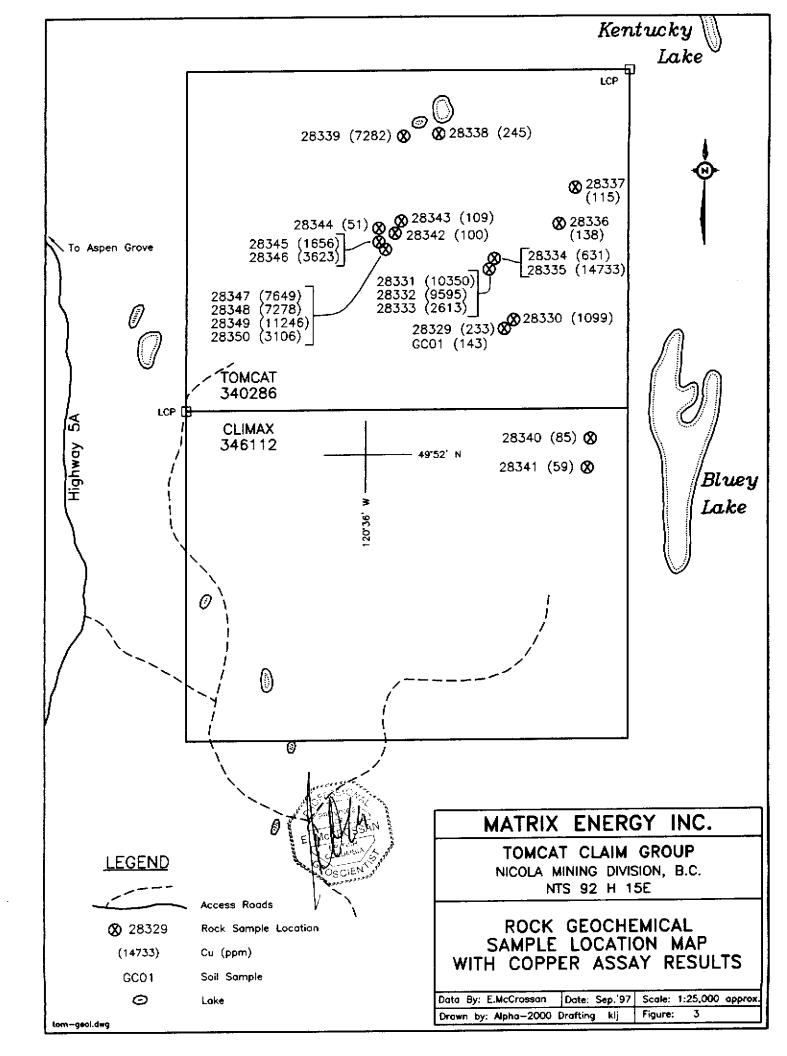
The highest Cu result of 1.47% was a grab sample taken from a shear or slip surface within the Tomcat claim (sample #28335).

Another remarkable sample was a grab of a locally silicified volcanic rock containing fracture related pyrite, azurite, and malachite (28332). It assayed 0.96% Cu, 0.35% Pb, 3.9% Zn, 6.5 gpt Ag and 533 ppm Cd.

A new location, within calcareous volcanic sediments, in the north-central portion of the Tomcat claim, returned 0.73%Cu, 467 ppm Zn, 14.3 gpt Ag, 422 ppm As and 931 ppm Sb (28339). Fracture related mineralization included pyrite, bornite, azurite, Ag sulphides and malachite.

Conclusions and Recommendations

Assay results were anomalous in Cu, Pb, Zn and Ag. Lesser anomalies were also present in Cd, As and Ba.



Since the Tomcat claims lie within the Central Belt of the Nicola Group in a geological setting favourable for the formation of Cu-Au porphyry, skarn/replacement, vein, breccia and shear deposits; further work is warranted for the property.

It is recommended that previous operators on the property (see the History and Previous Work section, page 3) be contacted and a complete review made of their geochemical and geophysical data from the Tomcat Claim Group. Aerial photographs for the area should also be obtained.

After doing so, detailed geological mapping and geochemical sampling would be carried out over the most prospective targets. This program could be followed by geophysical surveys and trenching if warranted.

Cost Statement

Work performed during September 15, 16 and 17, 1997.

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Geologist (including report)		2,600
Vehicle rental		200
Expenses		600
Field equipment		60
Assays		300
Secretarial, copies, etc.		300
Drafting		400
Miscellaneous @ 10%		<u> 400 </u>
	Total	\$4,860
	1000	<u> </u>

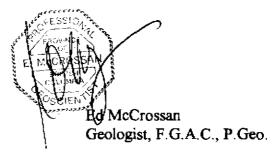
References

- Preto, V.A. 1979: Geology of the Nicola Group between Merritt and Princeton B.C.; B.C. Ministry of Energy, Mines and Petroleum Resources Bulletin 69.
- B.C. Ministry of Energy, Mines, and Petroleum Resources 1992: Geological Survey Branch Minfile Map NTS 092HNE Tulameen.

STATEMENT OF QUALIFICATIONS

I, Ed McCrossan, of 204-1225 Barclay Street, Vancouver, British Columbia hereby certify:

- 1. I am a graduate of the University of British Columbia (1984) and hold a B.Sc. degree in geology.
- 2. I have been employed in my profession by various mining companies since graduation and have worked on projects in Canada, U.S.A., Thailand, China, Argentina, Chile, Bolivia, Peru, Venezuela, Central America, and Mexico.
- 3. I am a member of the Canadian Institute of Mining and Metallurgy, a Fellow of the Geological Association of Canada, and a registered member in good standing of the Association of Professional Engineers and Geoscientists of B.C.
- 4. The information and recommendations contained in this report are based upon a three day work program.
- 5. I consent to and authorize the use of the attached report and my name in the Company's Prospectus, Statement of Material Facts or other public documents.



DATED at Vancouver, British Columbia, this 29 day of Sept , 1997.

Appendix I

Rock Sample Descriptions*

* Note that all terms used are field descriptions based upon visual inspection of hand specimens. No thin sections were prepared for these samples.

28329	Grab sample of angular float. Fine grained andesite containing quartz- carbonate veinlets and stringers throughout.
28330	As in 28329. Moderate fracture related porosity. Partially healed with carbonate.
28331	Grab sample of a fine to medium grained porphyritic basalt. Fracture related pyrite, azurite, and malachite mineralization.
28332	As in 28331. Locally silicified. Epidote fracture fillings and veinlets. Minor malachite and limonite.
28333	Grab sample of a gossanous volcanic rock.
28334	Grab sample of angular float containing quartz stringers and patches. Minor carbonate and malachite.
28335	Grab sample from a small shear surface. Limonitic and malachite staining locally intense.
28336	Grab sample of angular float from subcrop. Sheared and altered diorite. Minor quartz and carbonate stringers, chlorite, epidote.
28337	Composite grab sample of a fragmental basaltic tuff. Traces of epidote and chlorite. Carbonate stringers.
28338	Grab sample of angular subcrop material. Fractured and altered volcanic rock containing traces of disseminated pyrite.
28339	Grab sample of angular subcrop fragments. Fine grained, medium to dark grey calcareous volcanic sediment or limestone. Moderate limonitic staining with pyrite, bornite, azurite and malachite mineralization as disseminations and fracture coatings.
28340	Composite grab sample of a crystal-lithic fragmental tuff (basalt).

- 28341 As in 28340.
- 28342 Grab sample of a porphyritic andesite. Trace to 1% pyrite as disseminations and concentrations within pyroxene crystals.
- 28343 Grab sample of a tuffaceous volcanic rock containing carbonate stringers and minor chloritic and hematitic alteration products.
- 28344 Grab sample of a silicified and hematized volcanic/rock.
- 28345 Grab sample of andesitic volcanic. Mineralized and altered fracture/minor slip surface. Moderately altered with carbonate, chlorite, and hematite. Malachite.
- As in 28345; but with less alteration and mineralization.
- 28347 Selective composite grab sample of ore grade material piled beside the Portland shaft.
- 28348 Random composite grab sample. As in 28347.
- 28349 Selective composite grab sample of "waste" dump material adjacent to the Portland shaft.
- 28350 Random composite grab sample. As in 28349.

Appendix II

Assay Results

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в 28340	<1	85	7	79	<.3	3	15	955	3.68	3	<8	<2	2	66	.3	5	<3				7		1.33				2.50	.06	.10	<2
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B 28350	1	3106				14			4.25	8	<8	<2	ž				- ₹3			.233	8		1.68		.22		2.31	.20	. 13	<2
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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

SAMPLE TYPE: ROCK

DATE RECEIVED: SEP 17 1997 DATE REPORT MAILED: Star 23/9

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. - SAMPLE TYPE: SOIL