REPORT ON THE 1996
GEOCHEMICAL AND GEOPHYSICAL SURVEYS OF THE NORTHWEST PART OF THE RABBIT GROUP

IN THE
GREENSTONE MOUNTAIN AREA,
KAMLOOPS MINING DIVISION,
BRITISH COLUMBIA

50 deg. 36', 120 deg. 42'
N. T. S. 92I/10E

WORK ON RABBIT # 4, #9-#12, 23, 36-38

RECORDED OWNERS:
D. L. COOKE & ASSOCIATES LTD.
RAGNAR U. BRUASET & ASSOCIATES LTD.

OPERATOR:
ProAm EXPLORATIONS CORPORATION

REPORT BY:
RAGNAR U. BRUASET BSc
GEOLOGIST

DATE SUBMITTED 18 OCTOBER 1996

FIELD WORK WAS PERFORMED BETWEEN JUNE 8, AND JULY 20, 1996

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FOR ProAm EXPLORATIONS CORPORATION
BY: JOHN CORNOCK, BSc
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LIST OF DETECTION LIMITS

ACTIVATION LABORATORIES LTD. CERTIFICATE 11196RPT.XLS

ELEMENT PLOTS

PLATE NO.	DATA	SCALE
0	SAMPLE LOCATIONS	ALL
1	GOLD	AT
2	CHLORINE	1:15,000
3	BROMINE	
4	IODINE	
5	MOLYBDENUM	
6	TUNGSTEN	
7	ARSENIC	
8	ANTIMONY	
9	COPPER	
10	ZINC	
11	LEAD	
12	COBALT	
13	NICKEL	
14	GALLIUM	
15	VANADIUM	
16	MANGANESE	
17	CADMIUM	
18	BARIUM	
19	CERIUM	
20	RHENIUM	
21	URANIUM	
22	THORIUM	
23	ZIRCONIUM	
24	RUBIDIUM	
25	LIGHT RARE EARTH ELEMENTS	
26	HEAVY RARE EARTH ELEMENTS	
27	STRONTIUM	
28	YTTRIUM	
29	NIOBIUM	
30	SILVER	
31	CESIUM	
32	LANTHANUM	
33	PRASEODYMIUM	
34	NEODYMIUM	
35	SAMARIUM	
36	GADOLINIUM	
37	DYSPROSIUM	
38	ERBIUM	
39	YTTERBIUM	
40	HAFNIUM	

APPENDIX 4

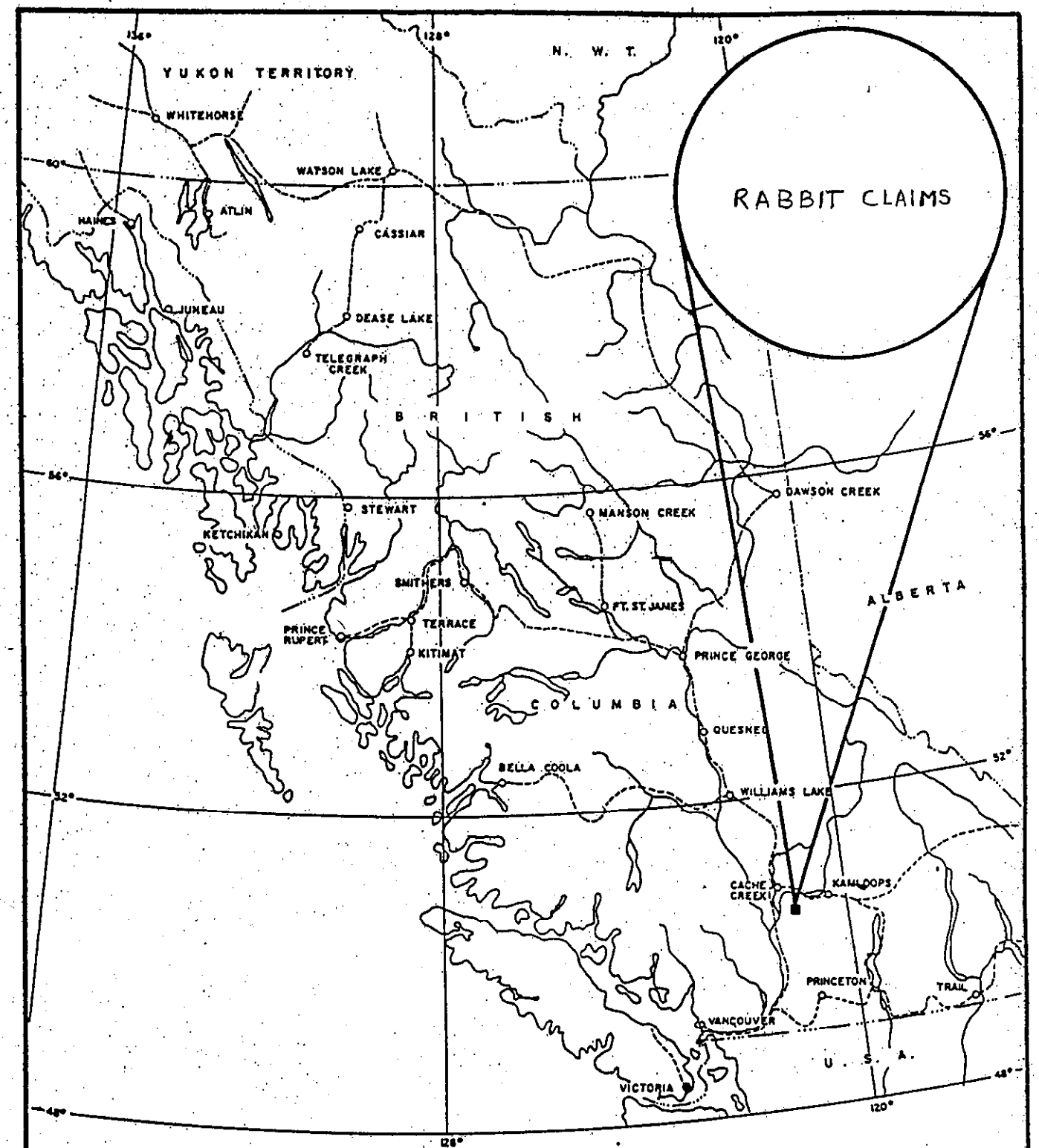
SELECT REFERENCES ENCLOSED ON ENZYME LEACH

J. ROBERT CLARK Detection of Bedrock-related Geochemical Anomalies in the Surface of Transported Overburden. EXPLORE Newsletter for the Association of Exploration Geochemists No. 76 July 1992

J. ROBERT CLARK, DAVID COHAN Innovative Enzyme Leach Provides Cost Effective Overburden Penetration Paper given at Association of Exploration Geochemists meeting at Townsville, Australia May 1995

APPENDIX 5

GROUND CONTROL



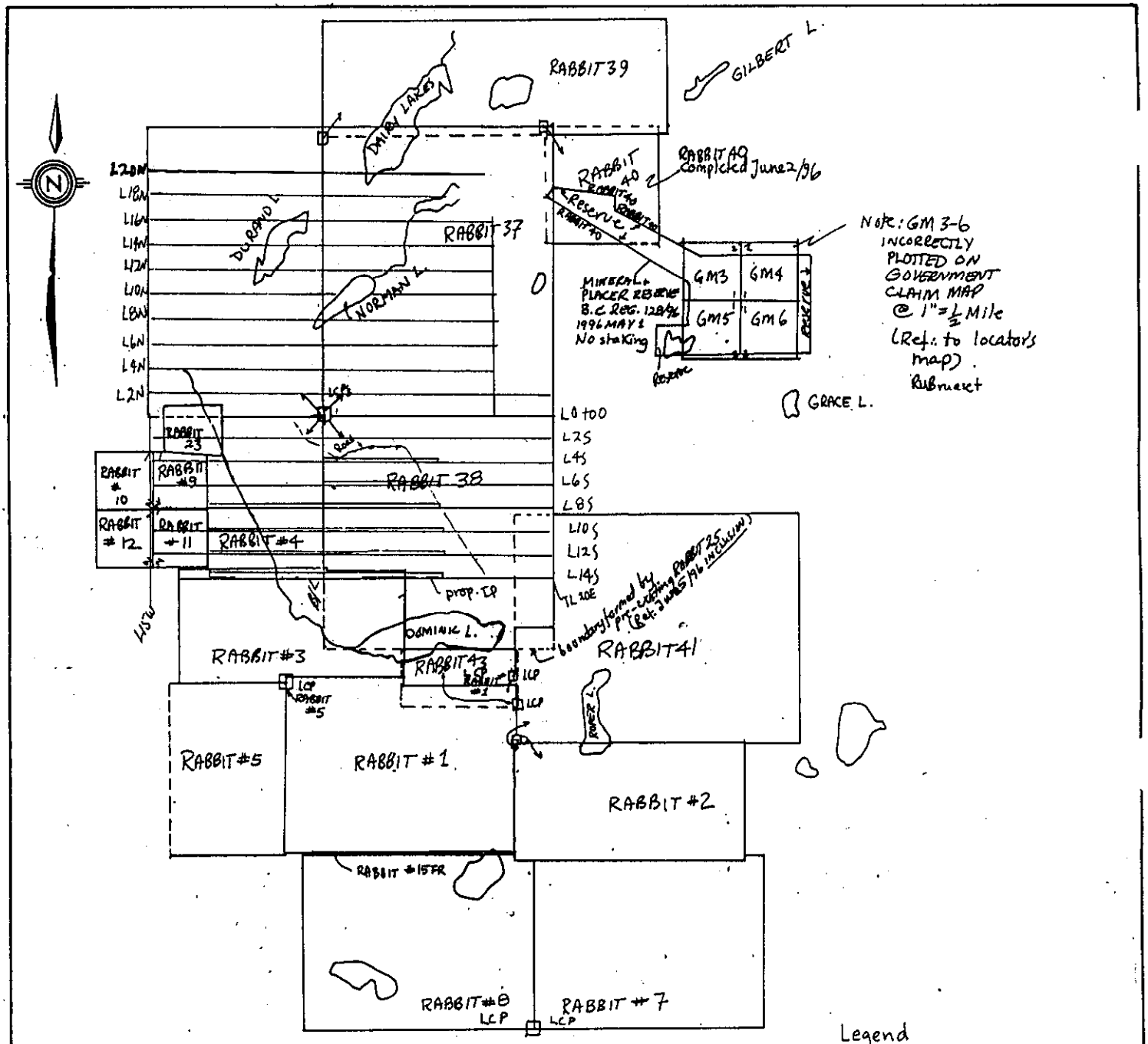
PROPERTY LOCATION MAP

BRITISH COLUMBIA

0 1Km

1:7,920,000

PLATE I



Legend

LCP — LEGAL CORNER POST, WITH APPLICABLE CLAIM 1, 2 INITIAL, FINAL POST, Re.: 2 POST CLAIMS

NORTHWEST RABBIT GROUP (NW RABBIT GROUP):

RABBIT #3, #4, # 9–12, RABBIT 23, 36–40

RABBIT SOUTH GROUP:

RABBIT #1, #2, #5, #7, #8, #15 FR, RABBIT 41, 43.

Revised Oct/96	
	CLAIM MAP
	RABBIT GROUPS: NW AND S.
N.T.S. 92I/10E	DATE: JUNE 12, 1996
DRAWN BY: R.U. Bruaset	SCALE: 0 1 Km
PLATE 2	

SUMMARY

ProAm Explorations Corporation has optioned 12 claims containing 86 units in the northwestern portion of the Rabbit Group (Rabbit NW Group). The Rabbit Group is situated about 25 km WSW of Kamloops in the Kamloops Mining Division on good road access. Unless otherwise indicated, the Rabbit claims discussed herein are the claims operated by ProAm.

Geochemically anomalous gold, with or without associated anomalous copper, has been found in outcrop or intersected in percussion drill holes in several areas in the Rabbit claims. In the south central area, at the so-called Chrysocolla showing (Plate 5) Nicola volcanics have yielded up to 1885 ppb Au (Bruaset, 1991). Four out of five vertical percussion holes collared 200 to 400 m to the west and northwesterly of this showing returned anomalous gold up to 500 ppb over 60 feet (18.3 m) variously in the Nicola volcanics and in younger, possibly E. Cret., or Eocene, leucocratic intrusive (A. R.s 8238, 17669). In the central property area, Teck percussion hole 90-5 intersected 130 feet (39.6 m) of gold mineralization in Durand monzonite averaging 0.051 opst (1.745 g/metric tonne (A. R. 20648). In the north central area, grab samples contain up to 240 ppb Au and 2239 ppm Cu in altered and sheared volcanics and felsite (Appendix 2, 6). In addition, mineralized Nicola float containing chysocolla and malachite with 715 ppb Au and 3.25 % Cu has been found about 1 km WNW of the Chrysocolla showing. Float of massive chalcocite has also been found here.

Systematic exploration of the Rabbit property area commenced with Kennco's program in 1960. This program included low-level aeromagnetics, IP, geological mapping, soil sampling, extensive bulldozer trenching and minor testing with an " xrt" diamond drill (A.R. 325). Programs by Noranda, Cominco Ltd, and Teck followed, in the period 1967 to 1990. Data on these programs are available in Assessment Reports. The current registered owners were involved in field programs on the precursor RAG and HAPPY DAYS Claims of Cominco Ltd. during the period 1969 to 1981. These programs were directed mainly at copper and molybdenum. In 1989, the owners began to assemble ground previously held by Cominco Ltd. and others and commenced exploration for gold. Their approach has been to use a mixture of 'tried and true' methods such as compilation works and soil geochemistry but also newer methods, such as conifer outer-bark biogeochemistry as advocated by Dr. Colin E. Dunn of the G. S. C. and Enzyme Leach as developed by Dr. J. Robert Clark of Enzyme-ACTLABS, LLC, Denver, Co. By the end of 1995, Cominco and Teck had given up all of their claims in the area. The work reported herein has indicated several new drill targets and firmed up some previously indicated ones.

INTRODUCTION

The property consists of Rabbit # 3, # 4, # 9-12, 23, 36-40. Presently, the property is viewed as a gold-copper play with

various targets for the two metals indicated in the central portion of the property. Alkaline porphyry gold-copper targets are indicated in the coeval Nicola volcanics and Durand stock of Upper Triassic age and bulk mining targets for gold occur in association with the Early Cretaceous Roper Lake granite and related rocks as well as the Nicola volcanics. In addition, potential for epithermal gold is indicated in the vicinity of an apparent Eocene extrusive centre on the north edge of our principal soil anomaly. Alteration in the form of strong silicification is evident in the Eocene (?) basalt of this area (Bruaset, 1980).

A detailed IP survey yielding about eleven line-kms of data was carried out in 1996. The area surveyed is about 2 square km and was centered on a 0.4 km by 1 km soil anomaly for gold (>/30 ppb) indicated by the owners' 1990 survey on Rabbit # 4 (Bruaset, 1990). The 1996 IP survey indicated an anomaly partly coincident with the 1990 soil anomaly but extending more than 1 km to the east and at least 1.2 km in the N-S dimension. Follow-up soil sampling (59 samples) east of the 1990 coverage defined the eastern edge of that anomaly and detected an adjacent anomaly (>/30 ppb) measuring about 0.8 km in the N-S and about 1 km in the E-W dimensions (Plates 4-6).

An Enzyme Leach soil survey consisting of 415 samples on lines spaced at 200 m and a sample spacing 150 m was also carried out. Dr. J. Robert Clark, our Enzyme Leach consultant, has identified two drill target from this survey and indicated further targets may be present (Appendix 3).

Enzyme Leach is the highly selective leach developed by Dr. Clark. This method has proven effective in many mineralizing environments and has demonstrated extraordinary ability to detect deeply buried mineralization. Further information on the method is found in Appendix 4. Profiles and plans from case histories may be obtained on request from Activation Laboratories Ltd. Work shops held by Dr. Clark, two of which the author has attended, have proven interesting and informative. This is the third such survey carried out by the author who considers Enzyme Leach to be a powerful geochemical exploration technique that should be part of the "bag of tricks" employed by every explorationist.

The Rabbit property is situated in the physiographic division known as the Thompson Plateau (G.S.C. Map 1701 A: Physiographic Map of the Canadian Cordillera).

The property is accessible by the so-called Dominic Lake logging road which extends northward from Paska Lake. The southern extremity of Paska Lake Road is the Logan Lake Road which is paved to Logan Lake. The property area is well served by logging roads. About one third of the property was clear-cut in the last 8 years.

PROPERTY

ProAm Explorations Corporation holds an option on 12 contiguous unpatented mineral claims comprised of 86 units covering approximately 2150 hectares (Plate 2).

CLAIMS	UNITS	TENURE NUMBERS
Rabbit # 3	8	218836
Rabbit # 4	6	218841
Rabbit # 9	1	219638
Rabbit # 10	1	219639
Rabbit # 11	1	219640
Rabbit # 12	1	219641
Rabbit 23	1	342320
Rabbit 36	15	346382
Rabbit 37	20	346383
Rabbit 38	16	346384
Rabbit 39	12	346385
Rabbit 40	4	346386
12	86 units	

LOCATION AND ACCESS

The Rabbit property is located in southern B. C. approximately 25 km WSW of Kamloops. The claims are in the Kamloops Mining Division at 50 deg. 36' North Latitude and 120 deg. 42' West Longitude.

The property is situated in the physiographic division known as the Thompson Plateau (G. S. C . Map 1701 A: Physiographic Map of the Canadian Cordillera). The average elevation of the Rabbit claims is about 1600 m with the maximum relief about 250 m. The vegetation is typically mixed lodgepole pine and spruce with the former dominant. Locally, such as in the NW corner of the property west of Durand Lake, Douglas fir is abundant. An estimated 30 percent of the property has been clear-cut in the last 8 years and as a result, road access is exceptionally good.

The road distance from Logan Lake road to the property is about 25 km. The first 10 km is an all-weather gravel road and the last 14 km is an inactive main logging road which Dominic Lake Lodge, has kept open during the past two winters.

HISTORY

The available exploration records of the Rabbit area go back to a 1960 program by Kennco Exploration. Subsequent exploration programs by several majors- Cominco, Noranda and Teck-are docu-

mented in Assessment Reports along with programs of two juniors namely Dominic Lake Mining Co. Ltd (Dirom, 1967), and Mid-North Explorations Ltd (Cooke, 1972). Some of the results from these programs were not published. We have succeeded in obtain some of the key unpublished data from these majors by sharing our own information and ideas with them. In two cases this resulted in majors undertaking options on their former claims: Noranda in 1990 and Cominco in 1992.

GEOLOGY

The principal current reference on the regional geology of the Rabbit area is the Ashcroft Map Sheet (G. S. C. Map 42-1989).

The Rabbit claims are located in the eastern Nicola facies which consists of mafic, augite and hornblende porphyry bearing breccia and tuff with local intercalated argillite. The volcanics are typically alkaline. The eastern Nicola belt of B. C. extends northerly into the Omineca region and southerly, at least, to Princeton (Hu Gabrielse, pers. comm.). Important copper and gold areas such as Copper Mountain, Aspen Grove, Iron Mask, QR, Mt. Polley, and Mt. Milligan occur in eastern Nicola belt rocks. It is noted that the Ashcroft Sheet incorrectly shows the Durand stock as granodiorite. This is a throw-back from the old Nicola Sheet (G.S.C. Map 886 A) which classified the local intrusives as Coast Intrusions: granite, granodiorite and gabbro. It is understood that the G. S. C. carried out very limited new mapping in the Greenstone Mtn. area for their most recent map sheet (Monger, pers. comm.). The alkaline classification of the Durand stock is based on extensive feldspar staining and thin section studies by Cominco explorationists in 1969 and 1970. The E. Cretaceous granitic Roper Lake stock underlies the south east portion of the Rabbit claims. The distribution of the Early Cretaceous granite, based on outcrops of similar rocks and drill hole intersections, strongly indicate that the Upper Triassic volcanics of the Rabbit property area are intruded, at shallow depth, by an Early Cretaceous stock or small batholith.

The Durand stock is the principal intrusion in the Rabbit claims area. This differentiated alkaline intrusion has a dioritic to gabbroic border phase with a core consisting of monzonite. The phases of the Durand stock contain abundant magnetite as seams and disseminations in the diorite and as disseminations only in the monzonite. A prominent aeromagnetic high is situated in the area of the Durand stock and extends well to the south of its known exposures (Cherry Creek. Aeromagnetic Map 92I/10). In the past, this led to speculations about a possible hidden southward extension of the Durand stock. Percussion drilling by Teck in 1990 (A.R. 20648) and Cominco Ltd. in 1994 (A.R. 23721) has confirm the occurrence of Durand diorite south of the Durand stock proper in the area of Teck PH 90-6 to 8 and in parts of Cominco PH 94-1 (Plate 4). An E-W trending normal fault is postulated in the area of PH R.L. 80-1 (Plate 5).

The potential for mineral deposits occurring in the roof-rocks of the Durand stock is a matter of ongoing interest. Cominco and Mid-North Explorations Ltd. in 1970 and 1972 indicated widespread disseminated chalcopyrite within the monzonite core of the Durand stock as well as in the volcanics of the western contact area where a hydrothermal magnetite breccia containing chalcopyrite was intersected in DDH 75-1 (Bruaset, 1975). Such breccias are common, and can be economically important, in alkaline porphyry systems. Copper minerals found in the property include chalcocite, bornite, malachite and chrysocolla. Gold is associated with the copper mineralization.

GROUND CONTROL

The discontinuity of the roads north of the western part of L 0+00 relative to those to the south, as per Plate 3, was introduced to account for a control problem possibly related to magnetic disturbance in the area of point "A" near L4S 1+50E.

The grid areas to the north and south of Line 0+00 are indicated to be relatively consistent with respect to roads and lakes based on comparisons of these features with the various topographic maps available to us. The main difference between our road plots and those of the topographic maps are the directions of true north. For the area south of L 0+00, our road plot aligns itself closely with the roads on the base map such that true north on the road plot appears to be 1 degree west of that of the base map. In the case of the area to the north of the same grid line, the grid plot aligns well with the south ends of four lakes such that true north of the road plot is 1.5 degrees east of that on the base map. In view of this, it was decided to divide Plate 3 into two parts with respect to true north. This created the earlier noted discontinuity. Between the northern and southern grid areas, the grid is held partly by tie-lines between grid lines and tie-ins to roads on the eastern edge of the grid. Comparison with the available topographic maps were made by photographically reducing our 1:2500 road and grid plot to 1:10,000 and overlaying the reduction on the topographic base. After Plate 3 was compiled, we obtained photographically enlarged versions of the relevant parts of 1:20,000 TRIM maps. The TRIM maps generally confirm our road survey with the exception of the road running westward from point "A" to the road crossing of L0+00.

Strong magnetic disturbance of the order of 5 to 10 degrees is evident in the area of point "A", and that may have caused this discrepancy. The common LCP of most of the claims-the Rabbits #4 post-, and the Baseline, as well as the road west of that LCP, are all tied to point "A". Accordingly, we are hesitant to change the position of the apparently offending road segment running northwesterly from point "A" without further ground checks. Any shift in the road west of the LCP would necessitate an as yet unwarranted unwanted shift in the grid south of point "A". We have also surveyed the baseline north and south of L0+00N with front sight and back sight based reading (Appendix 5).

INDUCED POLARIZATION

Lloyd Geophysics Inc. conducted an IP survey on the Rabbit in 1996. This survey yielded a total of about 11 km of data. A total of 7 lines spaced 200 m were surveyed with a=50m and 5 separations. The receiver used was the IP-6 unit manufactured by BRGM Instruments, Orleans, France. The survey used a delay time of 120 milliseconds with 90 millisecond window width and a total integration time of 900 milliseconds.

This survey covered a 2 square km "data hole" resulting from the following surveys: A.R. 325, 4008, 7337 and 21125. The principal contribution of the current survey were:

1. to extend and define partly the 1960 IP anomaly obtained by Kennco and define the eastern limits of an anomaly indicated by Cominco in 1979 (A.R. 7337),

2. to indicate an IP anomaly partly coincident with an 800 m by 1000 m conventional soil anomaly for gold obtained in 1996, and partly coincident copper anomaly, and obtaining part coincidence with the 1990 soil anomaly for gold on Rabbit # 4,

A report on the survey is found in Appendix 1.

GEOCHEMISTRY

Beginning with Cominco and Teck in 1988, systematic soil sampling for gold had resulted in coverage of most of the current Rabbit claims area by the end of 1990 (A.R. 17550, 17669, 20,320, 20424, 20793, 21125). That data base included about 2850 soil analyses for gold. We compiled this gold data at a scale of 1:10,000 last winter. That indicated that our 400 m by 1000 m gold anomaly of >/30 ppb on Rabbit # 4 obtained in 1990 was by far the largest and strongest anomaly of this type in this data. Check sampling by Noranda in 1990 had confirmed this anomaly. This year's sampling provides further confirmation. In this year's survey, a second large anomaly (>/ 30 ppb) is indicated to the east of the original anomaly. The new anomaly covers approximately twice the area of the first anomaly.

In addition to the conventional soil survey noted above we conducted an Enzyme Leach survey which covers most of the property. Enzyme Leach is a very selective extraction of trace elements bound to amorphous manganese dioxide, usually in B horizon soil samples (J.R. Clark's Vancouver workshop Feb. 1/96) The purpose of partial analysis is to determine elements found in coatings on mineral grains, not the elements in the mineral substratae. If one analyzed the metals in the mineral substrate one would be looking at the bulk chemistry of the overburden (J.R. Clark Feb. 1/96). This method relies on proprietary geochemical

techniques to bring out subtle geochemical dispersions potentially related to buried mineral deposits. This method is being utilized extensively and there are unconfirmed reports of some exploration success resulting from testing of Enzyme Leach anomalies.

Dr. J.R. Clark has devoted many years to the development of Enzyme Leach. This research including a stint with the U.S.G.S. An enzyme reaction is employed which selectively dissolves amorphous manganese oxides. Amorphous manganese dioxide, a small portion of the total manganese oxide phases in the soil, is a very effective trap for a variety of cations, anions and polar molecules traveling in the soil. Studies over several types of mineral deposits including oil fields have indicated three Enzyme Leach anomaly types. The Appendix provides further detail on these. Dr. Clark has given at least two workshops in Vancouver on Enzyme Leach. These have included discussions of several case histories. The current author has attended these and recorded the proceedings for his reference. The author has employed this technique on his mineral prospects twice before this year's program (Bruaset, 1994). Some of Dr. Clark's case histories indicate that this method has the capability of detect mineral deposits under very adverse geochemical conditions, including thick overburden and barren cover-rocks. Examples include a 70 m thick sequence of post-ore Tertiary volcanics that had been completely argillized by a late hydrothermal event (Clay pit deposit). This would be regarded as an impossible situation for any geochemical exploration technique, yet there had been sufficient trace element migration to the surface to create a strong Enzyme Leach anomaly. In another example, an iodine anomaly with contrast >100 times background was found at the Rabbit Creek deposit where the deposit was covered by over 600 feet of basin fill. Successful tests using Enzyme Leach have been conducted over Wyoming and Texas oil pools. What has been termed exceptional results were obtained over an oil pool 9000 feet below the surface. In another example, B horizon soil coverage was insufficient. Instead, crushed rock samples were analyzed by Enzyme Leach. The results included a prominent oxidation anomaly which when tested resulted in the discovery of a porphyry deposit at a depth of several hundred meters. The cover-rocks include a thick sequence of ignimbrites. Activation Laboratories Ltd. provides information circulars on Enzyme Leach and Dr. Clark provides consultation on sampling and interpretation.

GEOCHEMICAL SAMPLING AND SHIPPING OF SAMPLES

A total of about 50 B horizon soil samples, intended for conventional analysis, were collected at 100 m intervals along parts of four lines, Ls 6S to 14 S. This survey covers largely an area not previously soil sampled for gold. This area is about 1 square km and is located between the owner's 1990 survey on Rabbit # 4 (A.R. 20793) and the 1990 Afton survey area (A.R. 20,424). Samples were generally collected from the B horizon which typically here is

reddish brown. The average sample depth is about 23 cm. Parts of the target are clear-cut. Samples were taken only from undisturbed soil. This required the digging of many extra holes in the clear-cut to obtain good sample material. It was found that areas in close proximity to stumps and between major roots provided undisturbed material. In many cases, we dug under roots to get undisturbed soils in the clear-cuts. All sampling was carried out with a narrow long handled shovel. Samples were placed in pre-numbered kraft soil envelops. They were air dried in a covered area. Samples were shipped to the lab. by air courier overnight to ensure they were not subjected to high summer temperatures over extended periods such as is likely to exist on-board a sealed transport trailer several days en-route to the lab. It is understood that temperatures somewhat in excess of 35 deg. C. may damage Enzyme Leach samples which were shipped together with samples for conventional analysis.

What is termed conventional analysis herein is 34-element Instrumental Neutron Activation Analysis (INAA) including gold at the 2 ppb detection limit. In addition, Cu and Ag were determined by aqua regia and ICP. The results are presented in Appendix 2. The analytical procedure employed in Enzyme Leach is described in Appendix 3. Following leaching, Enzyme Leach samples were run by ICP-MS with determination for 59 elements. Important elements for Enzyme Leach were plotted in colour coded dot-plot format by Prime Geochemical. These were sent to Dr. Clark for interpretation. Uncoloured versions of these plots accompany the current report.

CONVENTIONAL SOIL RESULTS

A conventional soil anomaly for gold measuring about 800 m by 1000 m is indicated adjacent to the east side of the 1990 Rabbit # 4 anomaly (Plate 5). Gold values >/30 ppb are considered anomalous on the strength of the occurrence of 31 ppb gold in the B horizon soil at the Chysocolla showing where the gold content in the bedrock averages about 1000 ppb and the overburden is about 0.7 m thick. Anomalous values in this year's sampling range up to 270 ppb Au. Plate 5 includes the 1990 data from Rabbit # 4. Known drill holes in the anomalous area and marginal to it are shown. The copper plot also includes the corresponding data from 1990. The previously collected soil sample from the Chrysocolla showing was not analyzed for copper. Based on inspection of the data, it is assumed values above 90 ppm Cu are anomalous. There are three discreet clusters of such values and one of these occurs south of the Chrysocolla showing. The glacial direction is towards 155 degrees.

ENZYME LEACH

At the Enzyme Leach workshop on February 7, 1995 Dr. Clark emphasized that this technique is to be looked upon as a tool, like geophysics, for interpreting buried geology. Dr. Clark recommends any Enzyme Leach data be integrated with geological and

geophysical data. Enzyme Leach plots were scanned for halos and lows that may indicate oxidation anomalies. Emphasis is placed on the oxidation suite elements. These are Cl, Br, I, As, Sb, Mo, W, Re, Se, Te, V and U. Occasionally base metals such as Cu, Zn, Cd and Ag form associated highs. The common or central low for a large number of important element is the area under which a deposit is most likely to occur if an oxidation anomaly has been produced. These patterns have been recognized over several types of mineral deposits.

The interpretive procedure includes tracing out areas which repeatedly appear as halos and/ or lows for important elements. In Enzyme Leach terminology, the common central low is caused by a buried reduced body located under the common central low. The reduced body could be anything from an ore deposit to a barren pyrite zone in an environment such as ours. Dr. Clark stresses the need to look at the available geological and geophysical data when deciding on the future course of action. The reader's attention is drawn to the attached letter-reports of Dr. Clark dated Sept. 26, and October 14, 1996 and the two papers on Enzyme Leach in Appendix 4.

CONCLUSIONS

The IP survey indicates an anomaly partly coincident with conventional soil anomalies for copper and gold. The fact that this IP anomaly occurs in the vicinity of anomalous gold in outcrop as well as in drill holes is of course highly encouraging.

The Enzyme Leach survey has indicated at least one prominent anomaly as indicated by four partly overlapping halos. (Plate 7). This anomaly is further enhanced by a multi-element central low involving at least 12 elements (Plate 8). It also has geological and geophysical support, including an untested IP anomaly. The eastern halo area was tested by Teck in 1990 and that drilling encountered up to 130 feet of 1.7 g/tonne Au in P-90-5 (A.R.20648). Interestingly, this is by far the strongest gold intersection to date in this property. A total of five, and possibly six, Enzyme Leach anomalies are indicated in this data. The fact that most of these anomalies have strong geological and geophysical support is encouraging.

Report by
Ragnar U. Bruaset BSc

RUBRAB82.rpt

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Wagner, Darin January 1995. Assessment Report on Percussion Drilling on Roper Lake Property. Assessment report 23721

COST STATEMENT

ANALYSES AS PER ACTIVATION LAB. REPORTS: 11196.RPT.ELX, 10980, 10980B, 11120, 11120B, ECO-TECH LBS. RPTs. AK 96-422, 614 and 711 (413 Enzyme leach samples, 59 multi-element soils, and 8 rock samples)	$12,257
IP SURVEY 11 km incl. report	$11,884
GROUND TRANSPORTATION	$3.105
DOMICILE	$2,036
HELPER'S WAGES 10 days @$250	$2,500
FIELD MATERIALS: PICKETS, STRING, FLAGGING etc.	$1,251
FEES: GEOCHEMICAL SAMPLING 48 days @ $295.27	$14,172
REPRODUCTIONS AND DRAFTING	$2,126
ENZYME LEACH DATA PROCESSING AND ENZYME LEACH CONSULT.	$1,404
INTERPRETATION, REPORTING, TYPING; total 7 days @ $321	$2,247
TOTAL	$52,982

STATEMENT OF QUALIFICATIONS

I certify that:

1. I am a 1967 graduate of the University of British Columbia with a BSc degree in geology. I am a paid up member of the following technical societies: Geological Association of Canada (Fellow), The Association of Exploration Geochemists, and Society of Economic Geologists, and

2. I have carried out geological and geochemical surveys since 1968 and three Enzyme Leach surveys since 1993, and

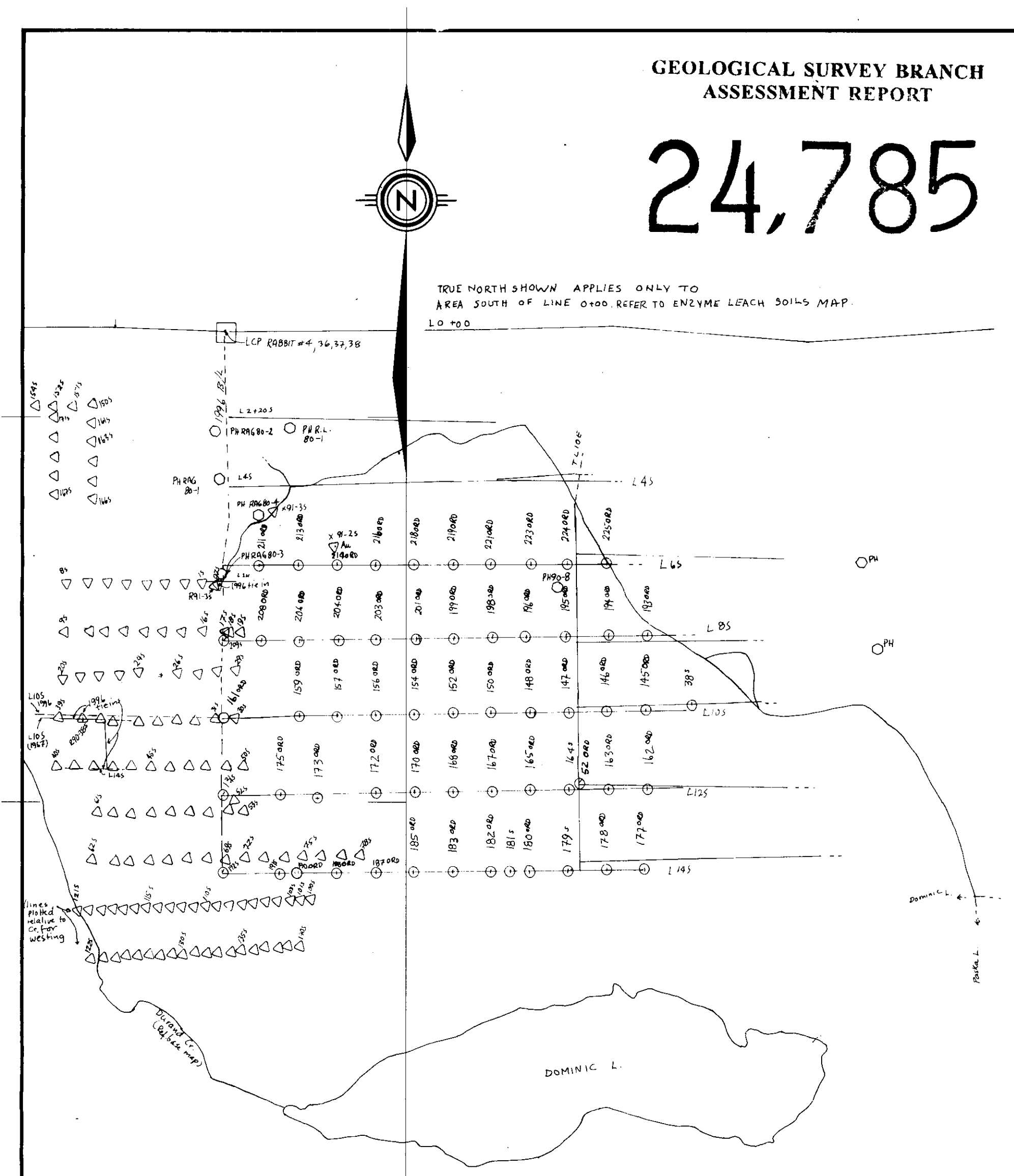
3. I have variously carried out geological and geochemical surveys and supervised diamond and percussion drilling programs in the area covered by the Rabbit claims on numerous occasions since 1969, notably in 1969, '70,'75, '78-'81, '89-'96, and

4. I carried out the geochemical surveys described in this report under the direction of D.L. Cooke PhD, P Eng., and in consultation with J. Robert Clark PhD of Enzyme-ACTLABS, LLC.

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

TRUE NORTH SHOWN APPLIES ONLY TO AREA SOUTH OF LINE 0+00. REFER TO ENZYME LEACH SOILS MAP.



SOIL SAMPLING DATA

SAMPLING WITH SHOVEL, GEN. "B" horizon

YEAR	SYMBOL	LAB.	REF.
1996	○ 179S, 177ORD R96-179S, R96-177ORD	Act. Lab.	RPTs 10980, 10980B, 11120, 11120B
1990,91	△ 135S, X 91-25 R90-135S	Noranda Lab. Vanc. Chemex Labs.	AR 20793 + misc. certs.

SCALE
0 100 200 300 400 500m

To accompany assessment report by R.U. Bruaset

PROAM EXPLORATIONS CORPORATION

RABBIT OPTION

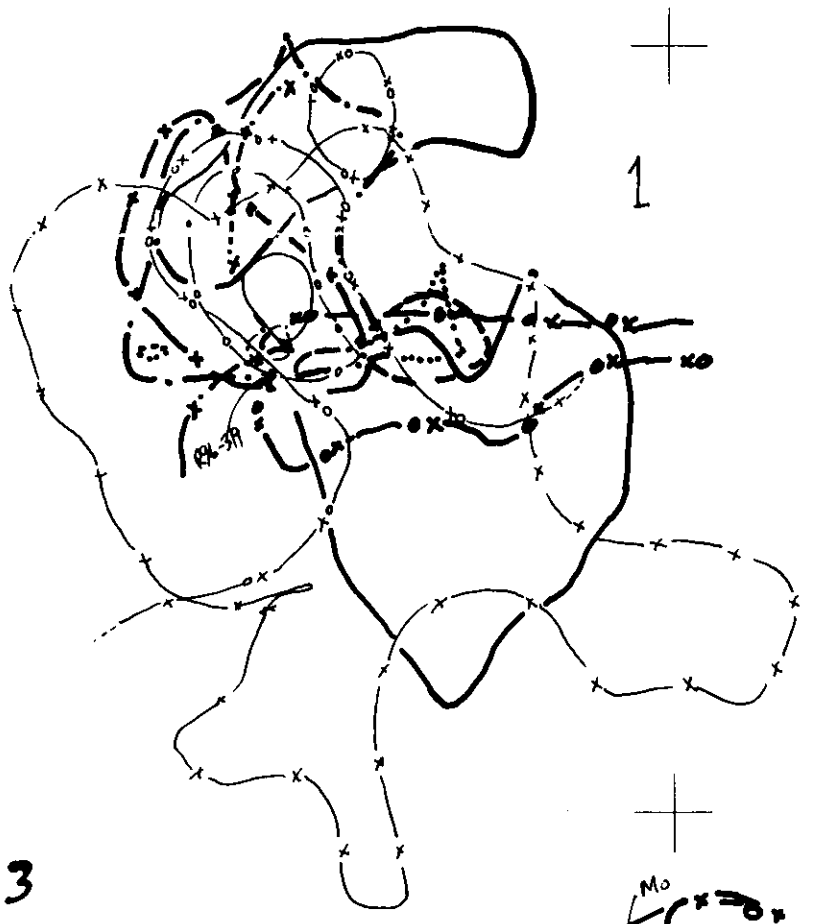
NON-ENZYME LEACH SOIL ANALYSES

SAMPLE LOCATIONS

FIGURE No. 4		PROJECT	
DATE SEPT. 1996	REVISIONS		SCALE BAR
NTS No. 92I/10			FILE No.
COMPILED BY R.U.B.			

UTM 664000mE

5



1

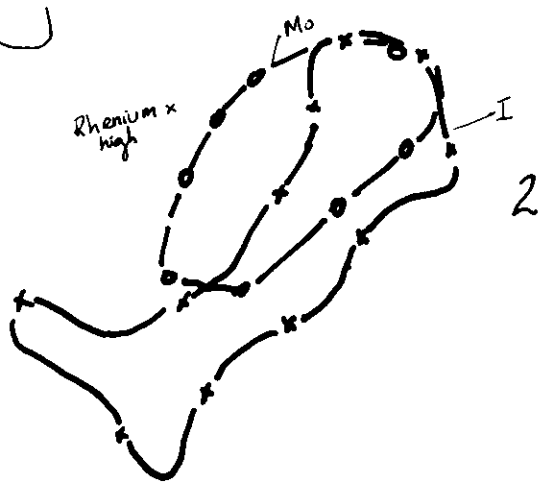
Letter ref.: Clark Oct. 14/96

UTM 5608000m N

4

3

UTM 5608000mN



2

7001000m

pen 0.50 Cadmium

pen 0.25 Copper

0.25 Chlorine

0.25 Antimony

0.25 Heavy Rare Earths

Light Rare Earths

pen (0.70) Zinc

Thorium

Iodine

Nickel

Barium

Molybdenum

cobalt

0 150 300 450 600m

NOTE UTM 5608000mN and UTM 664000mN from 1:20,000 TRIM maps 92I.067 and 92I.047 Digital

401000E (arbitrary grid)

UTM 664000mE

ProAm Explorations Corporation

Enzyme Leach Soil survey

ANOMALY 1, 2

CENTRAL LOWS

Rabbit Option

Map: Sheet 92I/10E	Scale: bar
Date: October 1996	Fig: 8

24,785

P90-4 P90-11 P90-5 P90-12 (A.R. 20648, 49) P90-2 P90-1 P90-3 P90-10

N

← TRUE NORTH SHOWN APPLIES ONLY TO AREA SOUTH OF LINE 0+00. REFER TO ENZYME LEACH SOILS MAP.

LCP RABBIT #4, 36, 37, 38

0+00

1996 B/L

L2+20S

PHRAG80-2 PHRL 80-1

A.R. 8239, 17669

PHRAG 80-1

L4S

PHRAG 80-9

19 30 Chrysocolla showing 31(Cu-Au) 30

PHRAG80-3

L1W 1996 tie in

7 28 23 36 19 23 64 10 53 65

L6S

PH90-6

PH90-8 (A.R. 20648)

PR80-3 (A.R. 325) PR80-2

(A.R. 20649) PH90-9 PH90-7

L8S

PH RL 79-14

L10S

L10S (1967).

L12S

L14S

PA4-1 (A.R. 23721)

DOMINIC L.

(lines plotted relative to Cr. for westing

Durand Cr (Ref. base map)

Paska L.

SOIL SAMPLING DATA

SAMPLING WITH SHOVEL, GEN. "B" horizon

YEAR	SYMBOL	LAB.	REF.
1996	○ 179s, 177ORD R96-179s, R96-177ORD	Act. Lab. Au detection limit (D.L.) 2ppb	RPTs 10980, 10980B, 11120, 11120B
1990,91	△ 135s, X91-2S R90-135S	Noranda Lab. Vanc. Chemex Labs. D.L.=5, 1ppb	AR 20793+ misc. certs.

○ Percussion hole

◁ DDH (A.R. Assessment rpt)

△○ ≥ 100 ppb △○ 30-39 ppb

△○ 40-99 ppb △○ < 30 ppb

SCALE

0 100 200 300 400 500m

To accompany assessment report by R.U. Bruaset

PROAM EXPLORATIONS CORPORATION

RABBIT OPTION

NON-ENZYME LEACH SOIL ANALYSES

GOLD

FIGURE No. 5		PROJECT	
DATE SEPT. 11, 1996	REVISIONS		SCALE BAR
NTS No. 92I/10			FILE No.
COMPILED BY R.U.B.			

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

TRUE NORTH SHOWN APPLIES ONLY TO AREA SOUTH OF LINE 0+00. REFER TO ENZYME LEACH SOILS MAP.

LCP RABBIT #4, 36, 37, 38

L 2+20S

PH RAG80-2

PH R.L. 80-1

PH RAG 80-1

L4S

PH RAG80-4 N/D

Chrysocolla showing (Cu-Au) N/D

PH RAG80-3

L6S

L8S

L10S

L10S (1967)

L14S

L12S

TL 10E

PH 90-8

PH

DOMINIC L.

Parka L.

Durand Cr. (Rabbit map)

lines plotted relative to Cr. for westing

SOIL SAMPLING DATA

SAMPLING WITH SHOVEL, GEN. "B" horizon

YEAR	SYMBOL	LAB.	REF.
1996	○ 179S, 177ORD R96-179S, R96-177ORD	Act. Lab.	RPTs 10980, 10980B, 11120, 11120B
1990,91	△ 135S, X 91-25 R90-135S	Noranda Lab. Vanc. Chemex Labs.	AR 20793 + misc. certs.

○ △ ≥ 90 ppm anomalous

○ △ 50-89 possible anomalous

○ △ <50 background

SCALE

0 100 200 300 400 500m

To accompany assessment report by R.U. Bruaset

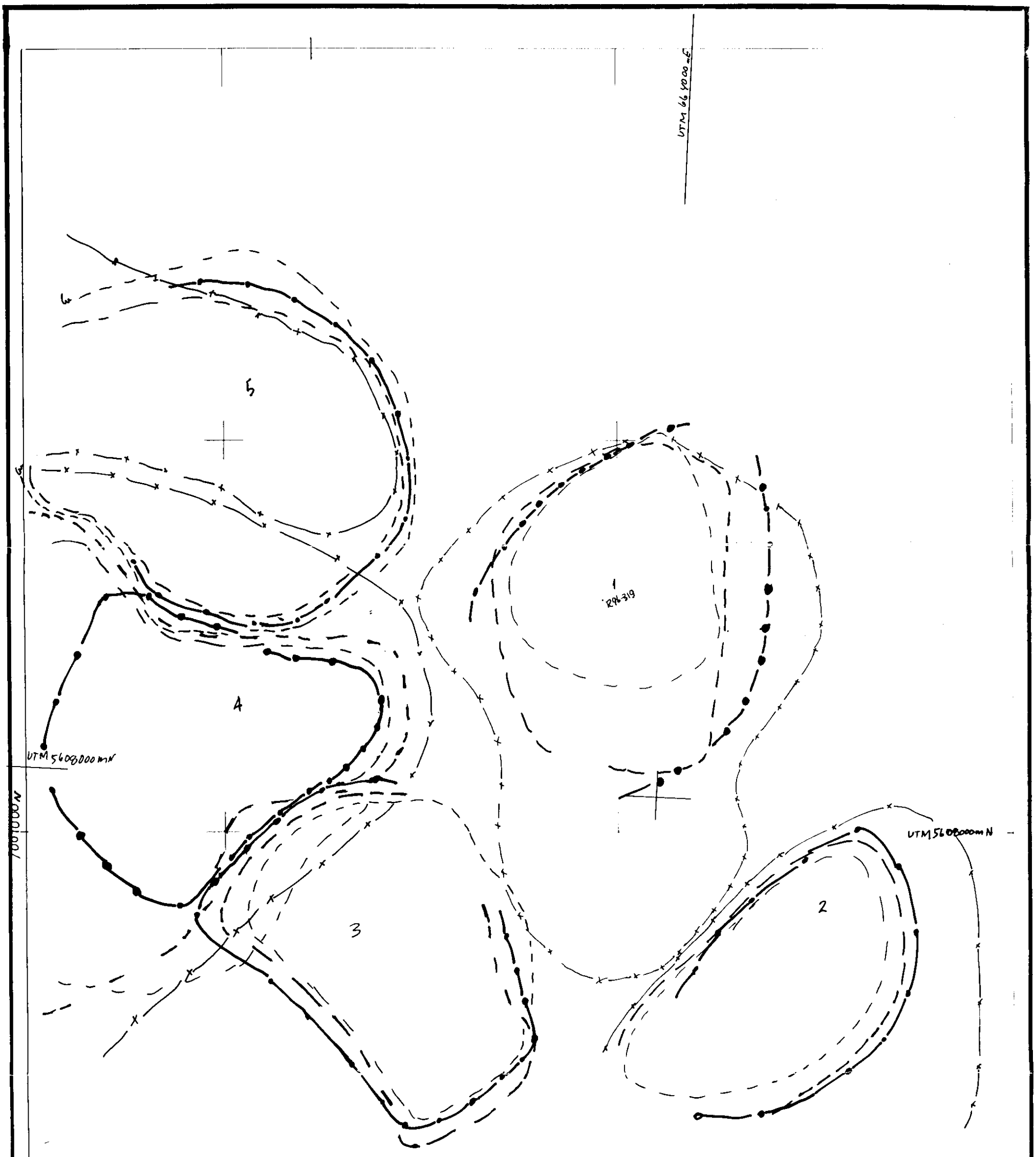
PROAM EXPLORATIONS CORPORATION

RABBIT OPTION

NON-ENZYME LEACH SOIL ANALYSES

COPPER

FIGURE No. 6		PROJECT	
DATE Sept. 11, 1996	REVISIONS		SCALE BAR
NTS No. 92I/10			FILE No.
COMPILED BY R.U.B.			



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

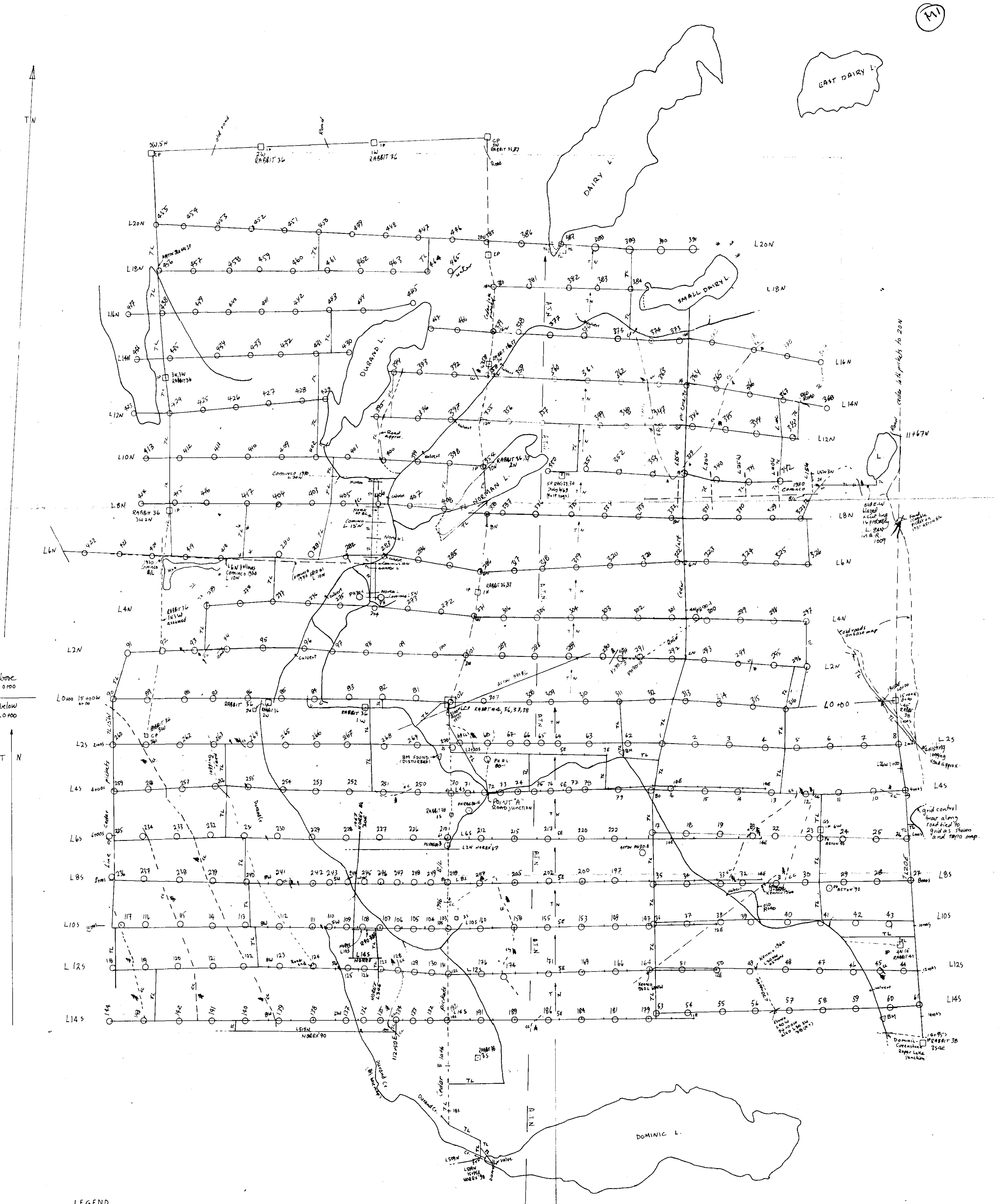
Pro Am Explorations Corporation

Enzyme Leach Soil Survey

HALOS

Rabbit Option

Map sheet 92I/10	Scale: 6cm
Date October 1996	7



LEGEND

(R96-309) 309 ○ ENZYME LEACH SAMPLE (REPORT No. 11196 RPT. XLS)

○ PERCUSSION HOLE TIED-IN

□ CLAIM POST (SELECT POSTS SHOWN) IP: IDENTIFICATION POST, CP: CORNER POST

(LAKE) ON BASE MAP

TIE-IN WITH CHAIN AND COMPASS TO ROAD SURVEY (ref. to report for further information)

BOUNDARY OF CLEARCUT (cc)

A.T.N. IS ACTUAL TRUE NORTH TRACED FROM COMINCO'S 1980 BASE MAP BY LINING UP THIS MAP WITH THE LAKES AND THE ROAD TO POINT "A". ALL PLOTTING ON THE GRID RELATIVE TO THE TWO GRID TRUE NORTHS ONLY.

NOTE: PLEASE REFER TO REPORT FOR GROUND CONTROL INFORMATION

0 100 200 300 400 500 1000 m

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

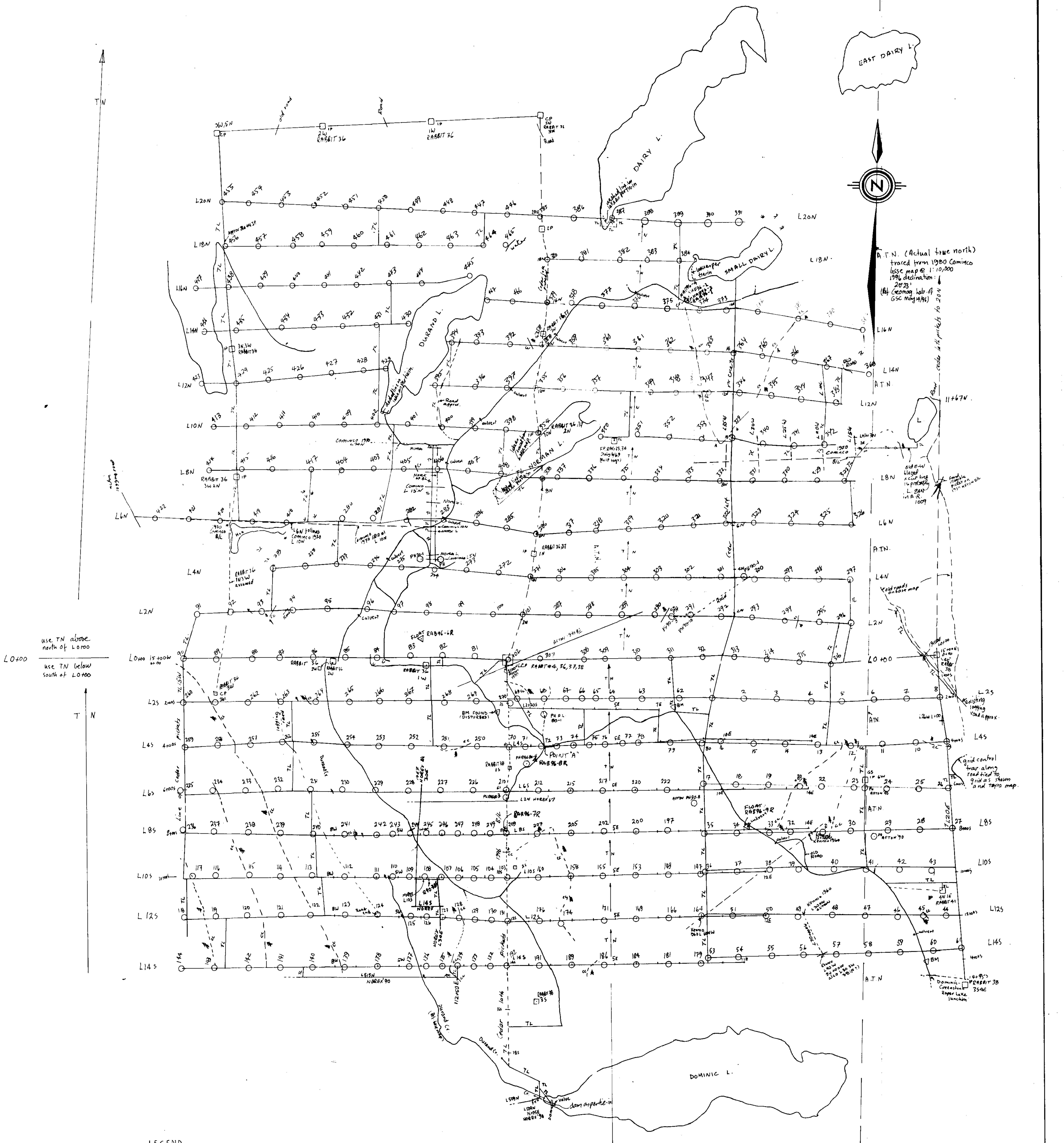
To accompany assessment report by R.U. Bruaset

PROAM EXPLORATIONS CORPORATION

RABBIT OPTION

ENZYME LEACH SOILS

FIGURE No. 3		PROJECT	
DATE SEPT 7, 1996	REVISIONS		SCALE BAR
NTS No. 92 I/10E			FILE No.
COMPILED BY R.U.B.			



LEGEND

(R96-309S) 309 ○ ENZYME LEACH SAMPLE (REPORT No. 11196 RPT·XLS)

RAB96-1R △ Rock sample

○ PERCUSSION HOLE TIED-IN

BM △ COMINCO BENCH MARK 1980 (Tied-in)

□ CLAIM POST (SELECT POSTS SHOWN) IP: IDENTIFICATION POST, CP: CORNER POST

LAKE ← ON BASE MAP

← TIE-IN WITH CHAIN AND COMPASS TO ROAD SURVEY (Ref. to report for further information)

BOUNDARY OF CLEARCUT (cc)

A.T.N. IS ACTUAL TRUE NORTH TRACED FROM COMINCO'S 1980 BASE MAP BY LINING UP THIS MAP WITH THE LAKES AND THE ROAD TO POINT "A". ALL PLOTTING ON THE GRID IS RELATIVE TO THE TWO GRID TRUE NORTHS ONLY.

NOTE: PLEASE REFER TO REPORT FOR GROUND CONTROL INFORMATION

10,000 N. Cominco 1980 base map

to accompany assessment report by R.U. Bruaset

0 100 200 300 400 500 1000 m

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

PROAM EXPLORATIONS CORPORATION

RABBIT OPTION

ENZYME LEACH SOILS

FIGURE No. 3		PROJECT	
DATE SEPT 7, 1996	REVISIONS		SCALE BAR
NTS No. 92 I/10E			FILE No.
COMPILED BY R.U.B.			

APPENDIX 1
IP DATA

A LOGISTIC REPORT ON AN INDUCED POLARIZATION SURVEY ON THE RABBIT PROPERTY NEAR LOGAN LAKE, B. C. KAMLOOPS MINING DIVISION FOR ProAm EXPLORATIONS CORPORATION

BY: JOHN CORNOCK, BSc
LLOYD GEOPHYSICS INC.

APPENDIX I

A LOGISTICS REPORT ON
AN INDUCED POLARIZATION SURVEY
ON THE RABBIT PROPERTY
NEAR LOGAN LAKE, BRITISH COLUMBIA
KAMLOOPS MINING DIVISION

NTS 92J

FOR
PROAM EXPLORATIONS CORPORATION

BY

John Cornock, B.Sc.

LLOYD GEOPHYSICS INC.
VANCOUVER, BRITISH COLUMBIA

SEPTEMBER 1996

Lloyd Geophysics

TABLE OF CONTENTS

1.0 INTRODUCTION

During the period of June 25 to June 29, 1996, Lloyd Geophysics Inc. conducted an Induced Polarization (IP) survey on the Rabbit property near Logan Lake, British Columbia for Proam Explorations Corporation.

The purpose of the survey was to define the sulphide zones associated with a large porphyry system.

2.0 PROPERTY LOCATION AND ACCESS

The Rabbit property is located approximately 30 kilometres east of Logan Lake, British Columbia in the Kamloops Mining Division, NTS 92J.

Access to the property is by truck along forestry roads towards Dominic Lake.

3.0 INSTRUMENT SPECIFICATIONS

The equipment used to carry out this survey was a time domain measuring IP system consisting of a Wagner Leland/Onan motor generator set and a Mark II transmitter manufactured by Huntec Limited, Toronto, Canada and a 6 channel IP-6 receiver manufactured by BRGM Instruments, Orleans, France.

The Wagner Leland/Onan motor generator supplies in excess of 7.5 kilowatts of 3 phase power to the ground at 400 hertz via the Mark II transmitter.

The transmitter was operated with a cycle time of 8 seconds and the duty cycle ratio: [(time on)/(time on + time off)] was 0.5 seconds. This means the cycling sequence of the transmitter was 2 seconds current "on" and 2 seconds current "off" with consecutive pulses reversed in polarity.

The IP-6 receiver can read up to 6 dipoles simultaneously. It is microprocessor controlled, featuring automatic calibration, gain setting, SP cancellation and fault diagnosis. To accommodate a wide range of geological conditions, the delay time, the window widths and hence the total integration time is programmable via the keypad. Measurements are calculated automatically every 2 to 4 seconds from the averaged waveform which is accumulated in memory.

The window widths of the IP-6 receiver can be programmed arithmetically or logarithmically. For this particular survey the instrument was programmed arithmetically into 10 equal window widths or channels, Ch_0, Ch_1, Ch_2, Ch_3, Ch_4, Ch_5, Ch_6, Ch_7, Ch_8, Ch_9 (see Figure 1). These may be recorded individually and summed up automatically to obtain the total chargeability. Similarly the resistivity (ρ_a) in ohm-metres is also calculated automatically.

The instrument parameters chosen for this survey were as follows:

Cycle Time (T_c) = 8 seconds

Ratio $\frac{\text{(Time On)}}{\text{(Time Off)}}$ = 1:1

Duty Cycle Ratio

$\frac{\text{(Time On)}}{\text{(Time On) + (Time Off)}}$ = 0.5

Delay Time (T_D) = 120 milliseconds

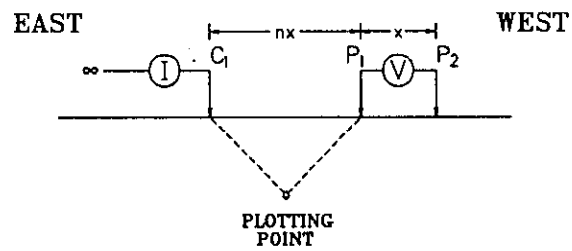
Window Width (t_p) = 90 milliseconds

Total Integration Time = 900 milliseconds

4.0 SURVEY SPECIFICATIONS

The configuration of the pole-dipole assay used for this survey is shown below:

POLE-DIPOLE ARRAY



x = 50 m n = 1,2,3,4 and 5

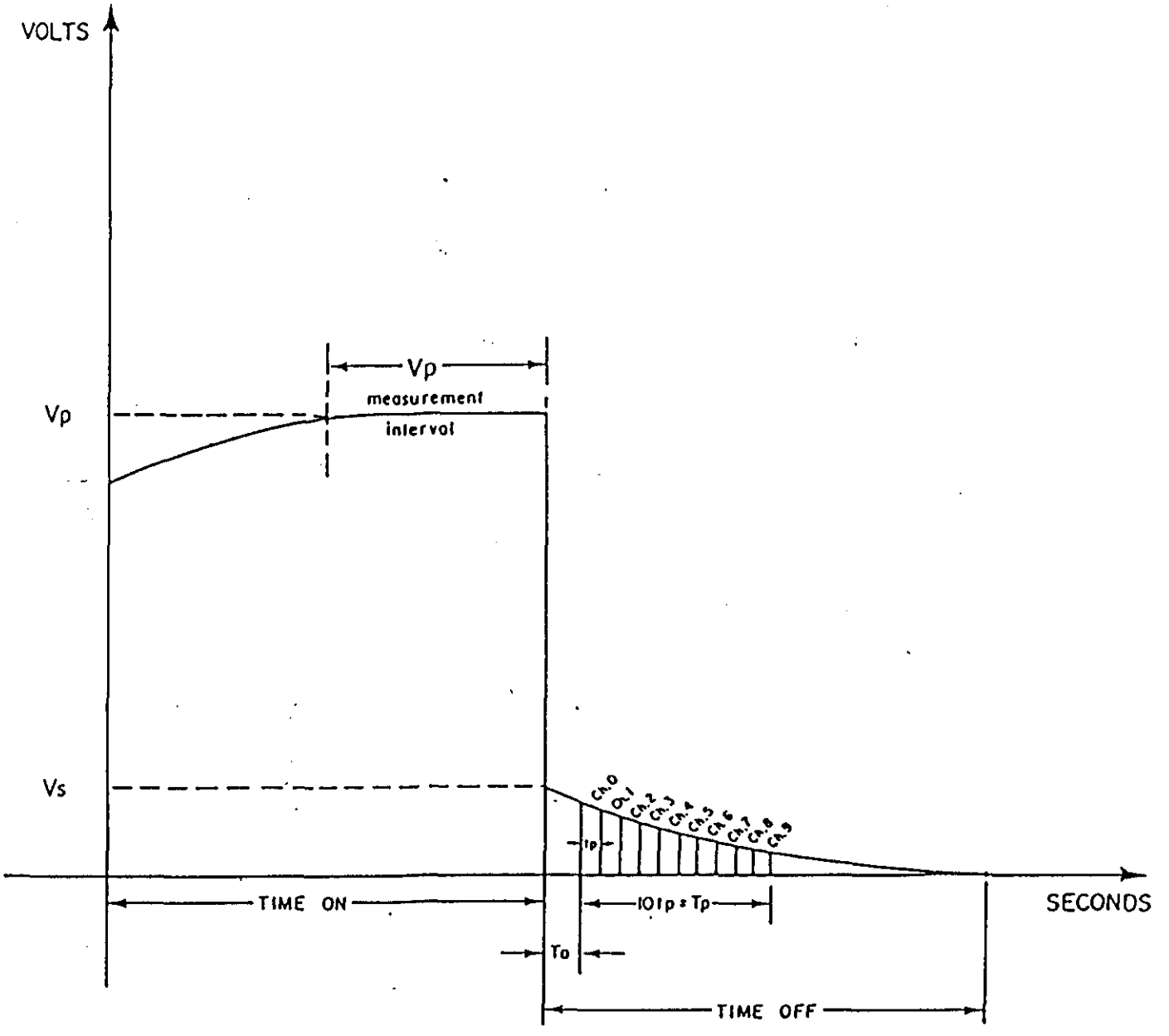
The dipole length (x) is the distance between P_1 and P_2 and determines mainly the sensitivity of the array. The electrode separation (nx) is the distance between C_1 and P_1 and determines mainly the depth of penetration of the array.

The survey was carried out with the current electrode, C_1, to the east of the potential measuring dipole P_1P_2. Measurements were taken for x = 50 metres and n = 1,2,3,4 and 5.

5.0 DATA PROCESSING

The data collected was processed in the field at the end of each survey day using a portable 386 computer and a Fujitsu printer.

The IP pseudosections were plotted out in the field and contoured using in-house software based on the mathematical solution known as kriging.



BRGM IP-6 RECEIVER PARAMETERS

Figure 1

In our Vancouver office, the data was transferred to mylar and presented on colour prints using a Hewlett-Packard DJ650C colour plotter.

6.0 DISCUSSION OF RESULTS

The IP survey on the Rabbit property, has outlined a high chargeability zone on the east side of the grid area which remains open to the east. This zone, as shown on the accompanying chargeability map, has values ranging from 20 to 60 milliseconds above a background of approximately 5 milliseconds.

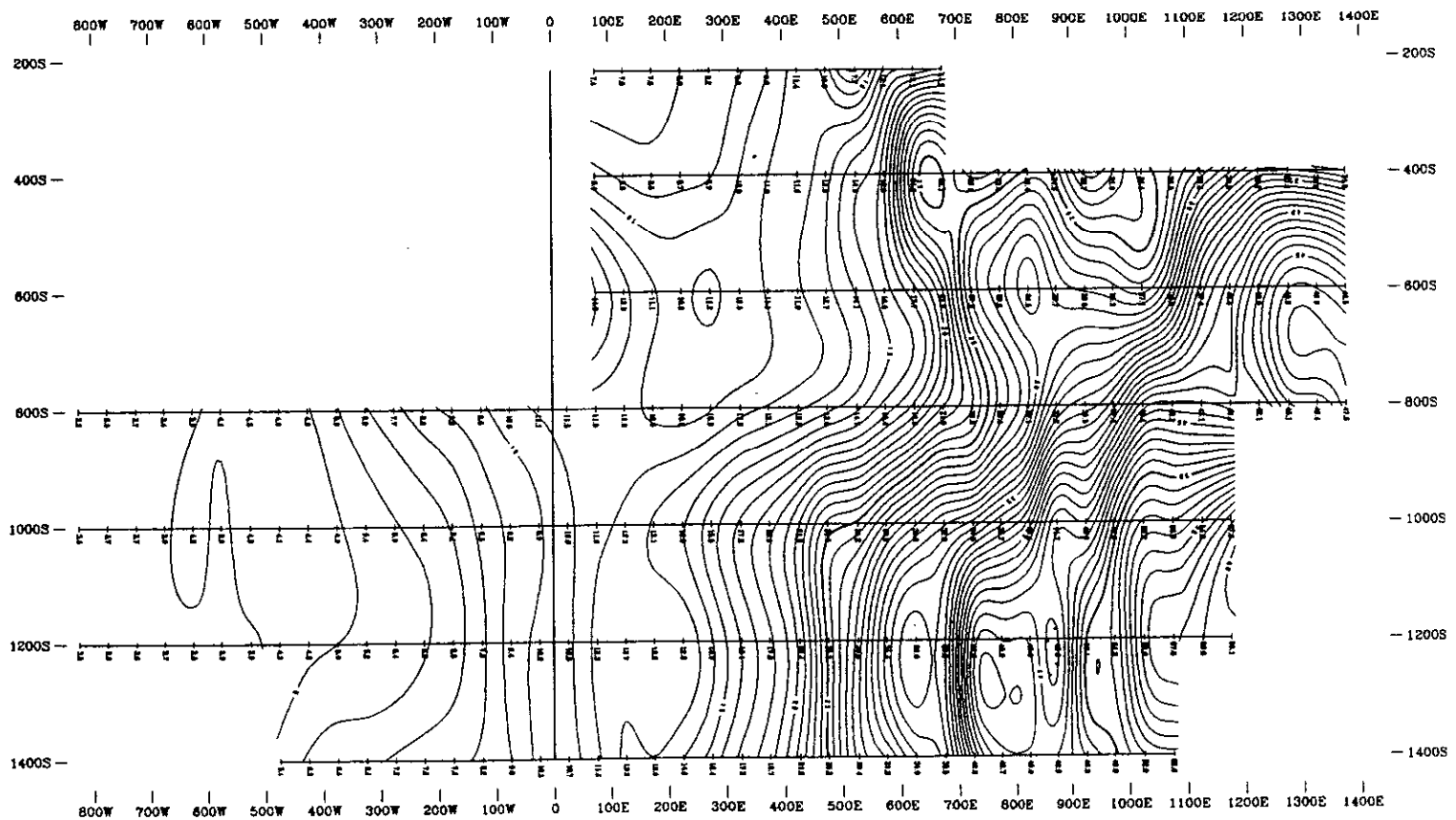
The resistivity data on the grid contains values which range from around 60 ohm-metres in the west part of the grid to almost 1400 ohm-metres in the northeast corner of the grid. The main chargeability anomaly lies within rocks which have low to moderate resistivities. However, trending to the southwest from the northeast corner is an area of increased resistivity which extends off the south edge of the grid. This feature has been interpreted as a fault which forms the western boundary of the chargeability anomaly. For the most part, these increased resistivity zones correspond with chargeabilities that range from 20 to 25 milliseconds.

It is recommended that a drilling program be initiated in order to test this zone. If the program produces positive results then where land holdings permit, additional IP surveying is recommended to the north, west and south in order to determine the full extent of the system.

Respectfully submitted,

LLOYD GEOPHYSICS INC.

John Cornock, B.Sc
Geophysicist



N

LEGEND

CONTOUR INTERVALS

1 msec

5 msec

25 msec

Station Interval: 50 metres

Current Electrode EAST of Potential Dipole

Scale 1:10000

800 0 200 400 600
(metres)

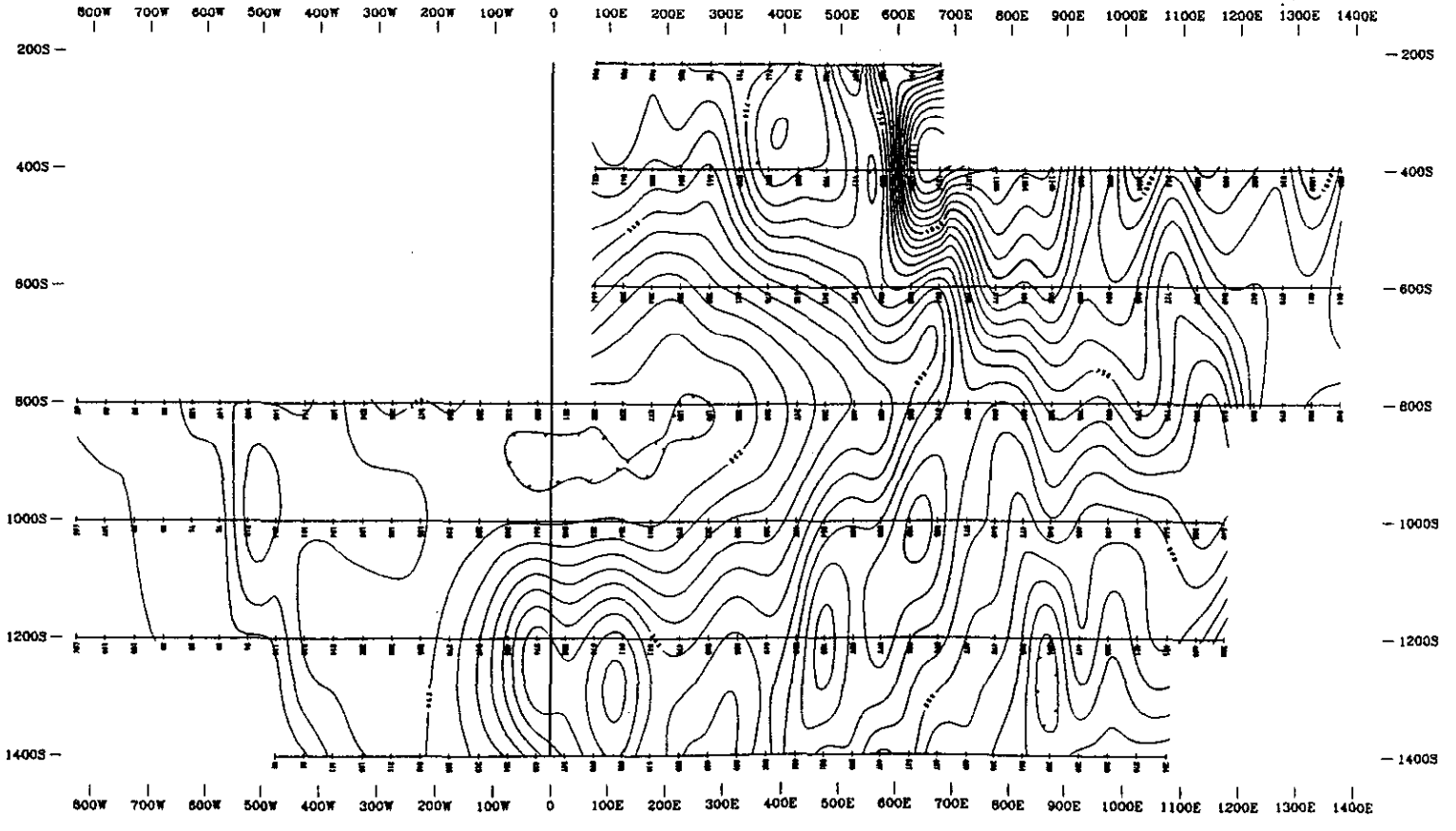
PROAM EXPLORATIONS CORPORATION

Rabbit Property
Kamloops Mining Division

CHARGEABILITY
15 POINT TRIANGULAR FILTER

Scale 1:10000 NTS 92J/ Dwg. No.: 96389-08

LLOYD GEOPHYSICS INC.



LEGEND

CONTOUR INTERVALS

50 ohm-m

250 ohm-m

1000 ohm-m

Station Interval: 50 metres

Current Electrode EAST of Potential Dipole

Scale 1:10000

200 0 200 400 600

(metres)

PROAM EXPLORATIONS CORPORATION

Rabbit Property
Kamloops Mining Division

RESISTIVITY
15 POINT TRIANGULAR FILTER

Scale 1:10000 NTS 92I/ Dwg. No.: 96388-09

LLOYD GEOPHYSICS INC.

I, John A. Cornock, of #455 - 409 Granville Street, in the City of Vancouver, in the Province of British Columbia, do hereby certify that:

1. I graduated from the University of British Columbia in 1986 with a B.Sc. in Geology and a minor in Geophysics.

2. I am a member in good standing of the Society of Exploration Geophysicists of America, British Columbia Geophysical Society, British Columbia and Yukon Chamber of Mines and the Northwest Mining Association.

3. I have practiced my profession continuously since 1987.

Vancouver, B.C.

CERTIFICATION OF AUTHORS

I, John Lloyd, of #455 - 409 Granville Street, in the City of Vancouver, in the Province of British Columbia, do hereby certify that:

1. I graduated from the University of Liverpool, England in 1960 with a B.Sc. in Physics and Geology, Geophysics Option.

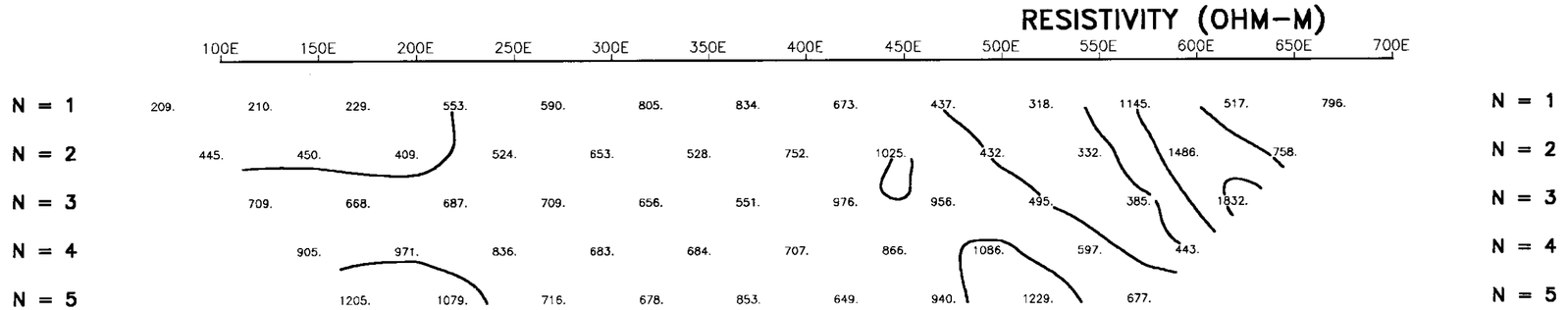
2. I obtained the diploma of the Imperial College of Science, Technology and Medicine(D.I.C.), in Applied Geophysics from the Royal School of Mines, London University in 1961.

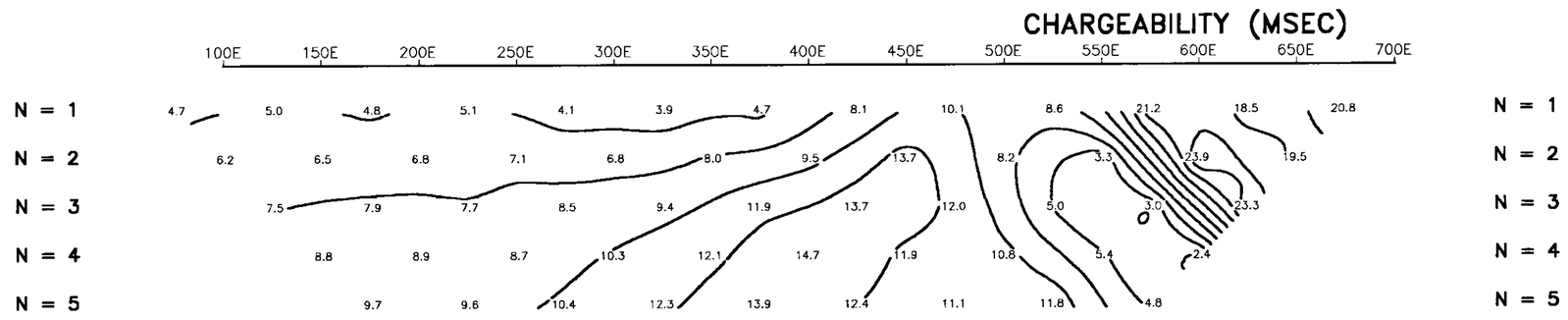
3. I obtained the degree of M.Sc. in Geophysics from the Royal School of Mines, London University in 1962.

4. I am a member in good standing of the Association of Professional Engineers in the Province of British Columbia, the Society of Exploration Geophysicists of America, the European Association of Exploration Geophysicists and the Canadian Institute of Mining and Metallurgy.

5. I have been practising my profession for over thirty years.

Vancouver, B.C.





M3

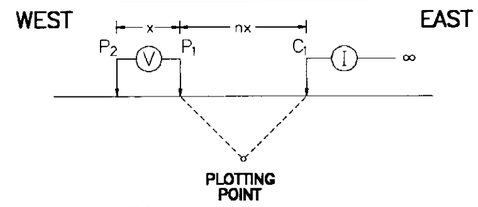
PROAM EXPLORATIONS CORPORATION

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 220S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

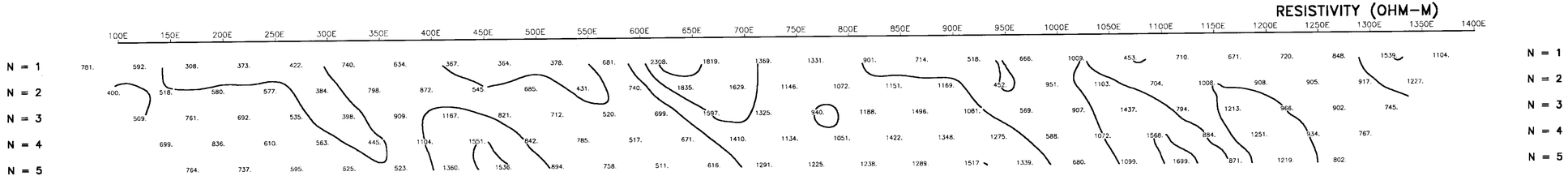
SCALE 1 : 2500

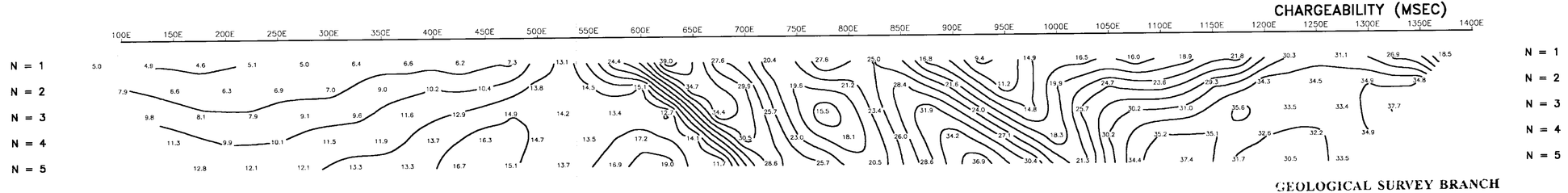
CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 29, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-01





GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

M4

PROAM EXPLORATIONS CORPORATION

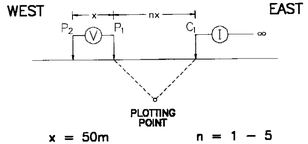
H2

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 400S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

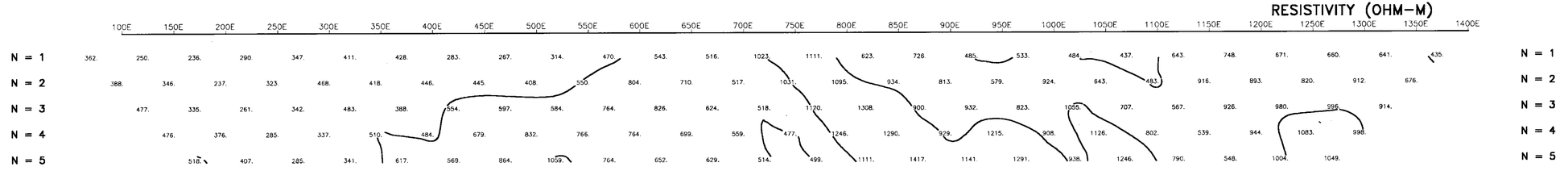
SCALE 1 : 2500

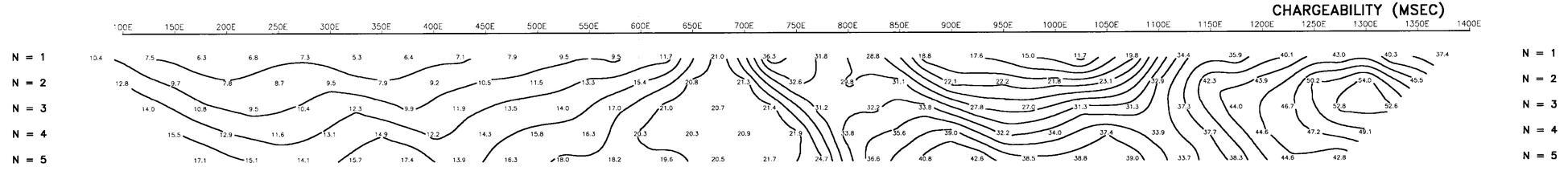
CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 29, 1998
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-02





GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

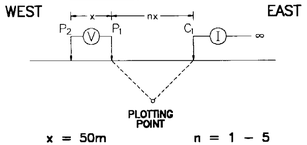
PROAM EXPLORATIONS CORPORATION

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 600S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

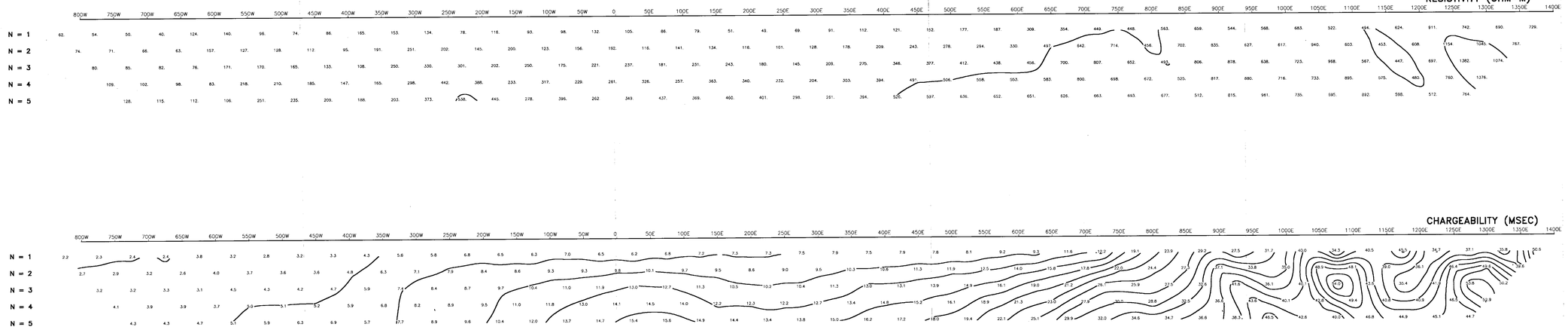
SCALE 1 : 2500

CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 29, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-03



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

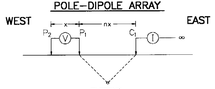
PROAM EXPLORATIONS CORPORATION

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 800S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

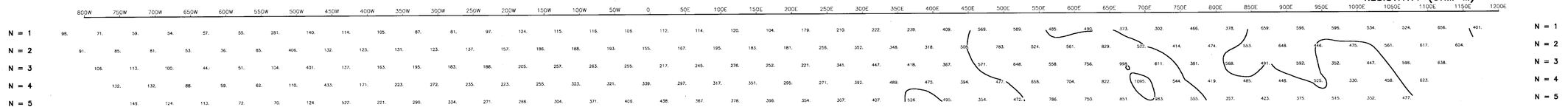
SCALE 1 : 2500

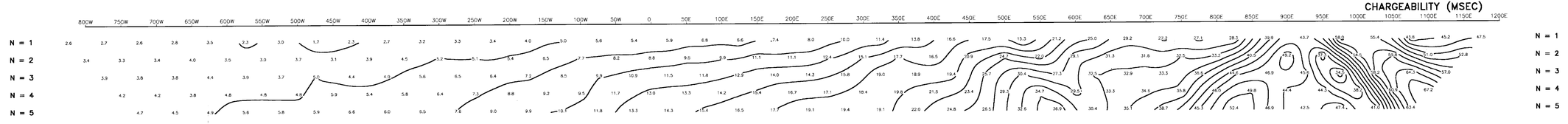
CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 28, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-04





PROAM EXPLORATIONS CORPORATION

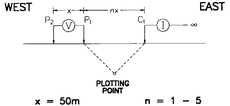
(11-7)

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 1000S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

SCALE 1 : 2500

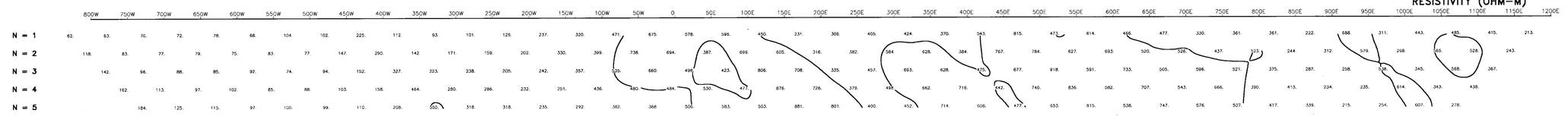
CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

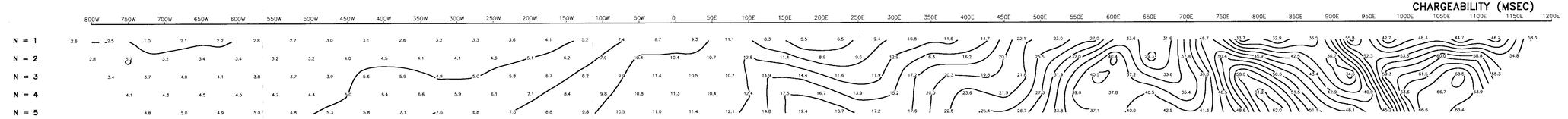
DATE SURVEYED: June 27, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-8

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY

DRAWING NUMBER : 96389-05





GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

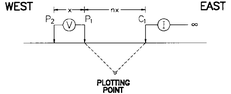
PROAM EXPLORATIONS CORPORATION

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 1200S

POLE-DIPOLE ARRAY



x = 50m n = 1 – 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

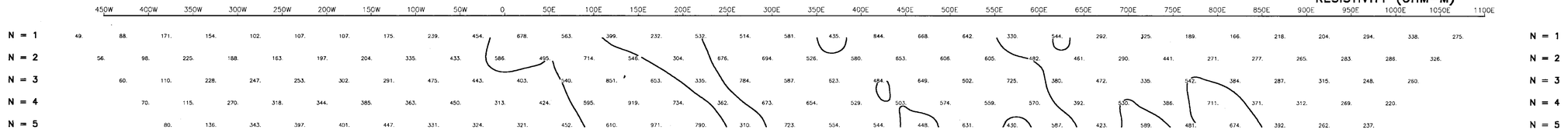
SCALE 1 : 2500

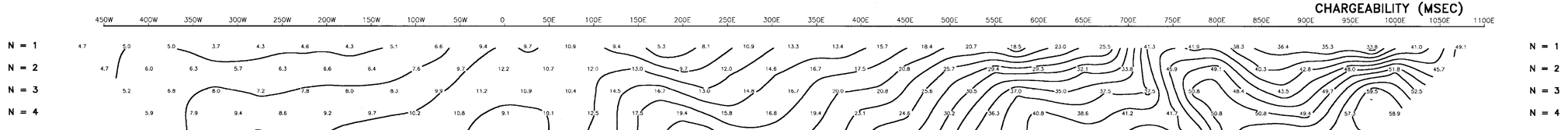
CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 28, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-06





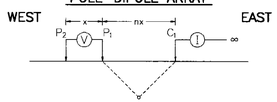
PROAM EXPLORATIONS CORPORATION

RABBIT PROPERTY

Logan Lake Area, B.C.

LINE: 1400S

POLE-DIPOLE ARRAY



x = 50m n = 1 - 5

CURRENT ELECTRODE C_1 EAST OF POTENTIAL DIPOLE P_1P_2

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE
AT DEPTH

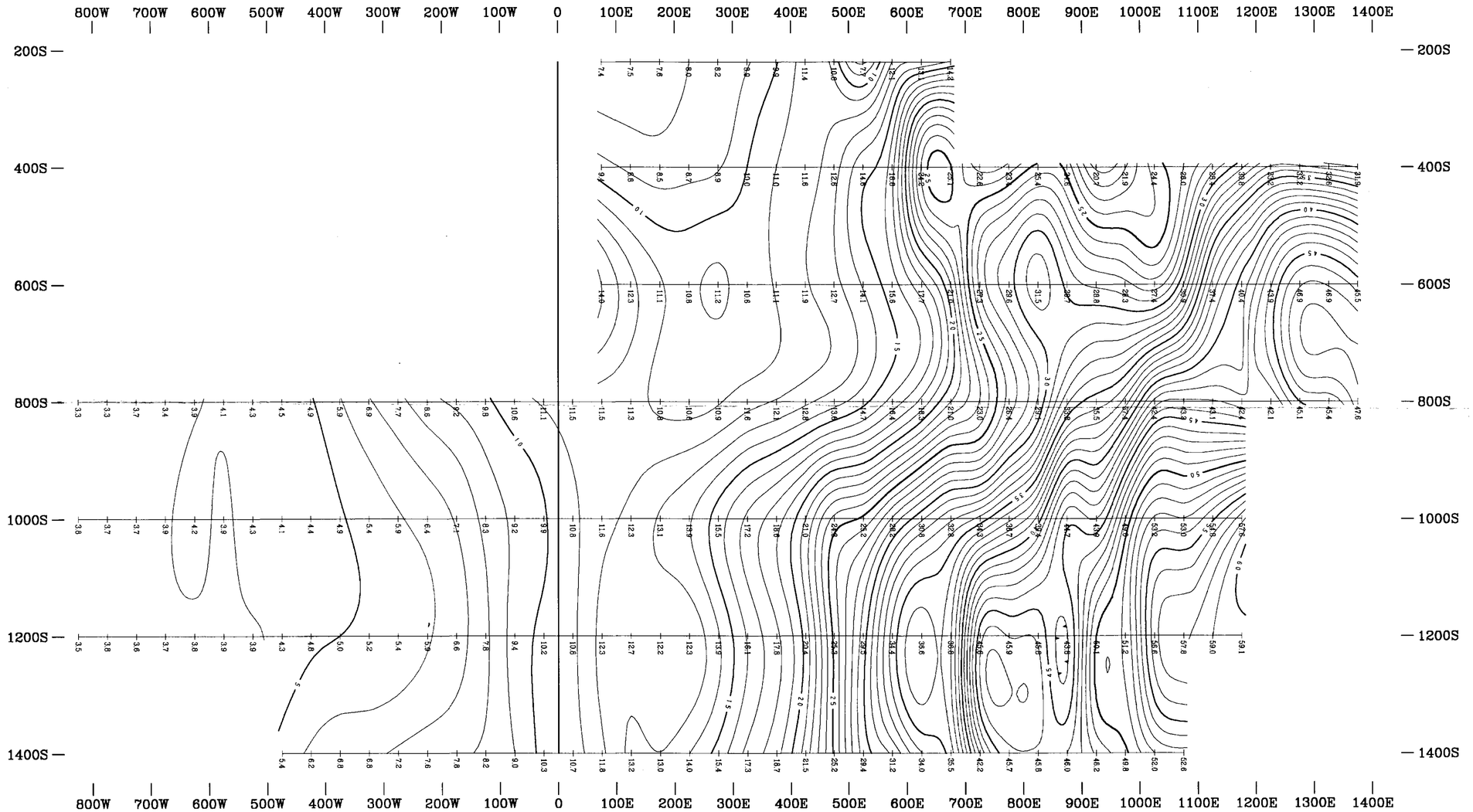
SCALE 1 : 2500

CONTOUR INTERVALS
APP.CHARGEABILITY : 2.5 (msec)
APP.RESISTIVITY : 500 (ohm-m)

DATE SURVEYED: June 26, 1996
Tx: Huntec Mk2 Model 7500
Rx: EDA IP-6

LLOYD GEOPHYSICS INC.

INDUCED POLARIZATION SURVEY
DRAWING NUMBER : 96389-07



MD

LEGEND

CONTOUR INTERVALS

1 msec

5 msec

25 msec

Station Interval: 50 metres

Current Electrode EAST of Potential Dipole

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

Scale 1:5000

100 0 100 200 300
(metres)

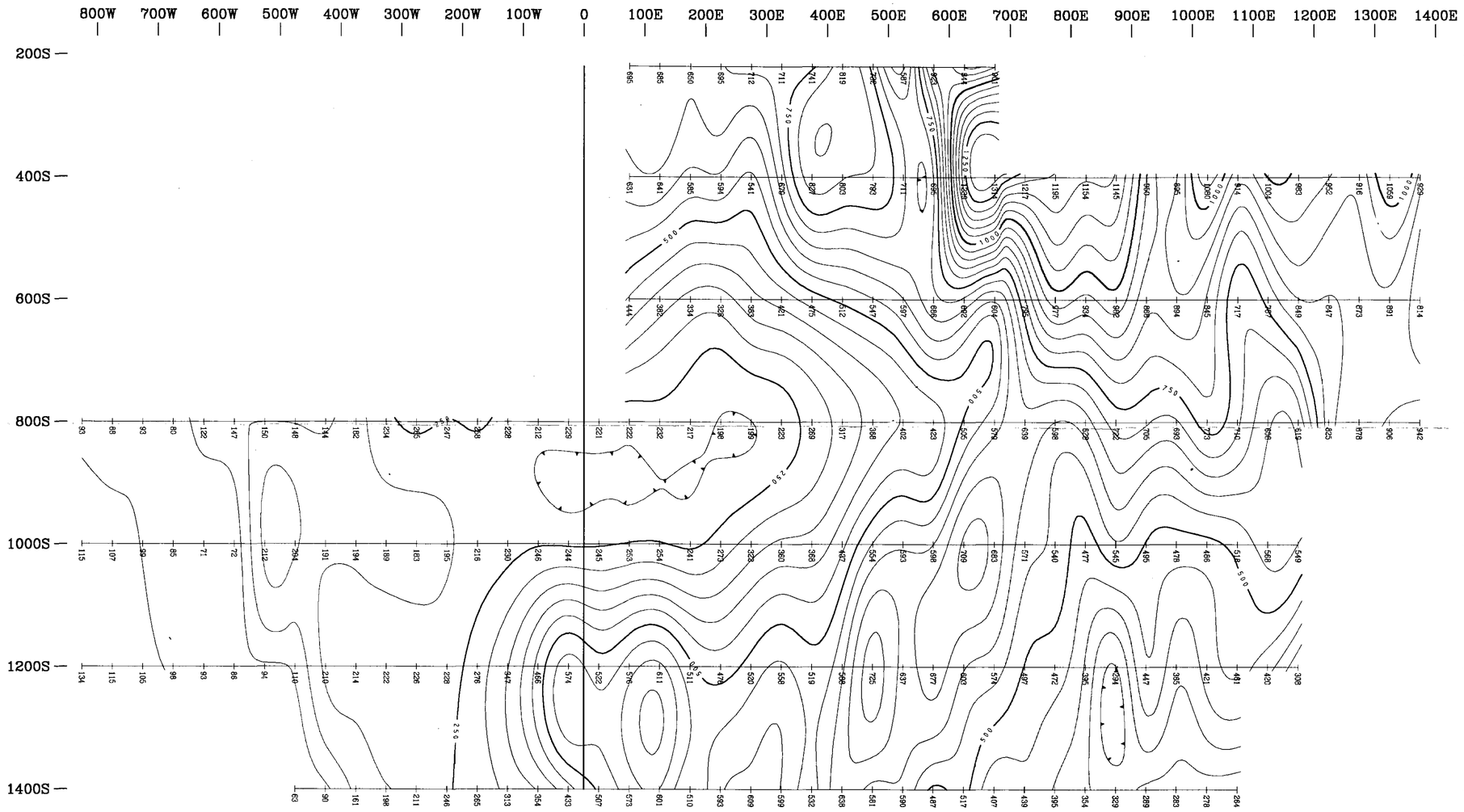
PROAM EXPLORATIONS CORPORATION

Rabbit Property
Kamloops Mining Division

CHARGEABILITY
15 POINT TRIANGULAR FILTER

Scale 1:5000 NTS 92J/ Dwg. No.: 96389-08

LLOYD GEOPHYSICS INC.



LEGEND

CONTOUR INTERVALS

50 ohm-m

250 ohm-m

1000 ohm-m

Station Interval: 50 metres

Current Electrode EAST of Potential Dipole

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,785

Scale 1:5000

100 0 100 200 300
(metres)

PROAM EXPLORATIONS CORPORATION

Rabbit Property
Kamloops Mining Division

RESISTIVITY
15 POINT TRIANGULAR FILTER

Scale 1:5000 NTS 92J/ Dwg. No.: 96389-09

LLOYD GEOPHYSICS INC.

APPENDIX 2
CONVENTIONAL SOIL AND ROCK ANALYSES:

ACTIVATION LABORATORIES LTD. CERTIFICATES 10980, 11120

ANALYTICAL PROCEDURES AND LISTS OF DETECTION LIMITS

ECO-TECH LABORATORIES LTD. CERTIFICATES AK 96-422, 614, 711

ACTLABS

ACTIVATION LABORATORIES LTD

Invoice No.: 10980
Work Order: 11115
Invoice Date: 19-AUG-96
Date Submitted: 26-JUL-96
Your Reference: LIST #2
Account Number: 236

RAGNAR U. BRUASET & ASSOCIATES LTD
5851 HALIFAX STREET
BURNABY, BC
CANADA V5B 2P5

ATTN: RAGNAR BRUASET

CERTIFICATE OF ANALYSIS

INAA package, elements and detection limits:

AU	2.	PPB	AG	5.	PPM	AS	0.5	PPM	BA	50.	PPM
BR	0.5	PPM	CA	1.	%	CO	1.	PPM	CR	5.	PPM
CS	1.	PPM	FE	0.01	%	HF	1.	PPM	HG	1.	PPM
IR	5.	PPB	MO	1.	PPM	NA	0.01	%	NI	20.	PPM
RB	15.	PPM	SB	0.1	PPM	SC	0.1	PPM	SE	3.	PPM
SN	0.01	%	SR	0.05	%	TA	0.5	PPM	TH	0.2	PPM
U	0.5	PPM	W	1.	PPM	ZN	50.	PPM	LA	0.5	PPM
CE	3.	PPM	ND	5.	PPM	SM	0.1	PPM	EU	0.2	PPM
TB	0.5	PPM	YB	0.2	PPM	LU	0.05	PPM			

10980B - AQUA REGIA - ICP

CERTIFIED BY :

DR. ERIC L. HOFFMAN

ORD stands for soils that were subject to non-Enzyme Leach analysis

Activation Laboratories Ltd. Work Order: 11115 Report: 10980

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	MO PPM	NA %	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM	SN %	SR %	TA PPM	TH PPM
R96-520RD	35	<5	10	810	<0.5	2	25	300	18	6.30	4	<1	<5	4	2.32	<36	38	3.8	19	<3	<0.02	<0.05	<0.5	3.1
R96-1450RD	44	<5	13	860	<0.5	2	14	140	9	5.22	4	<1	<5	7	2.74	<36	59	4.5	19	<3	<0.01	<0.05	<0.5	3.7
R96-1460RD	41	<5	11	910	<0.5	4	19	150	8	5.43	4	<1	<5	8	2.58	<35	75	4.8	19	<3	<0.01	<0.05	<0.5	3.2
R96-1470RD	35	<5	11	750	3.6	2	23	100	13	5.80	4	<1	<5	13	2.16	<36	45	2.6	15	<3	<0.02	<0.05	<0.5	3.0
R96-1480RD	17	<5	7.8	1000	3.8	2	16	120	7	5.27	4	<1	<5	<1	2.22	<39	35	2.1	21	<3	<0.02	<0.05	<0.5	4.4
R96-1500RD	38	<5	9.1	990	1.8	3	15	140	3	5.26	4	<1	<5	<1	2.73	<35	67	3.3	20	<3	<0.01	<0.05	<0.5	2.1
R96-1520RD	60	<5	6.6	960	8.0	4	15	130	3	4.83	3	<1	<5	<1	2.28	<38	46	2.5	19	<3	<0.02	<0.05	<0.5	3.1
R96-1540RD	38	<5	5.1	790	<0.5	3	12	120	5	4.25	4	<1	<5	<1	2.40	<35	53	2.0	19	<3	<0.01	<0.05	<0.5	3.2
R96-1560RD	183	<5	7.8	910	<0.5	4	13	160	3	4.57	4	<1	<5	<1	2.87	<35	47	3.2	23	<3	<0.02	<0.05	<0.5	3.1
R96-1570RD	63	<5	9.7	950	5.6	2	17	110	6	5.72	4	<1	<5	<1	1.77	<35	39	2.8	29	<3	<0.01	<0.05	<0.5	4.2
R96-1590RD	72	<5	8.1	680	1.4	4	16	160	5	5.39	5	<1	<5	<1	2.70	<33	70	3.1	23	<3	<0.01	<0.05	<0.5	3.0
R96-1610RD	40	<5	7.5	800	4.6	2	17	100	7	4.91	5	<1	<5	<1	2.69	<34	44	3.0	14	<3	<0.01	<0.05	<0.5	4.6
R96-1620RD	33	<5	8.0	950	<0.5	3	17	140	8	5.09	4	<1	<5	<1	2.76	<34	76	4.7	20	<3	<0.01	0.10	<0.5	4.0
R96-1630RD	20	<5	9.5	980	<0.5	3	20	170	13	5.97	5	<1	<5	5	2.75	<37	60	3.4	19	<3	<0.02	<0.05	<0.5	3.5
R96-1650RD	76	<5	8.3	800	2.2	2	14	140	5	4.87	4	<1	<5	<1	2.54	<33	69	3.1	21	<3	<0.01	<0.05	<0.5	3.0
R96-1670RD	49	<5	7.3	760	2.4	2	13	170	4	5.00	4	<1	<5	<1	2.79	<32	68	3.0	23	<3	<0.01	<0.05	<0.5	3.7
R96-1680RD	112	<5	9.4	1200	3.7	3	16	160	5	5.88	4	<1	<5	<1	2.55	<34	68	2.7	25	<3	<0.01	<0.05	<0.5	4.1
R96-1700RD	35	<5	7.5	890	2.7	3	13	140	6	4.43	4	<1	<5	<1	2.69	<34	110	2.1	21	<3	<0.01	<0.05	<0.5	3.3
R96-1720RD	52	<5	6.2	790	12	2	15	110	5	4.56	5	<1	<5	<1	2.36	<35	32	1.6	20	<3	<0.01	<0.05	<0.5	5.0
R96-1730RD	33	<5	5.5	900	<0.5	3	14	120	3	4.18	5	<1	<5	<1	3.01	<35	49	2.1	20	<3	<0.01	<0.05	<0.5	3.7
R96-1750RD	40	<5	7.0	740	2.4	4	14	110	3	5.33	5	<1	<5	<1	2.97	<35	47	3.1	22	<3	<0.01	<0.05	<0.5	2.9
R96-1770RD	43	<5	6.9	920	<0.5	4	15	200	8	5.47	4	<1	<5	<1	2.78	<33	58	3.7	22	<3	<0.01	<0.05	<0.5	3.0
R96-1780RD	40	<5	10	930	4.4	<1	17	140	9	5.72	6	<1	<5	<1	2.67	<33	91	3.6	17	<3	<0.01	<0.05	<0.5	4.6
R96-1800RD	27	<5	6.9	890	3.9	1	15	140	4	5.12	4	<1	<5	<1	2.57	<31	54	2.5	22	<3	<0.01	<0.05	<0.5	3.7
R96-1820RD	84	<5	9.4	870	8.2	4	15	140	26	5.98	4	<1	<5	<1	2.50	<31	72	3.5	26	<3	<0.01	<0.05	<0.5	3.6
R96-1830RD	50	<5	7.7	820	<0.5	3	16	150	4	5.18	4	<1	<5	<1	2.82	<31	42	3.2	22	<3	<0.01	<0.05	<0.5	3.2
R96-1850RD	9	<5	7.8	850	<0.5	<1	15	130	6	5.02	4	<1	<5	<1	2.78	<30	59	2.8	20	<3	<0.01	<0.05	<0.5	3.2
R96-1870RD	23	<5	6.3	860	2.3	2	12	120	7	3.73	4	<1	<5	<1	3.06	<31	60	2.5	19	<3	<0.01	<0.05	<0.5	3.3
R96-1880RD	38	<5	9.0	890	5.2	2	17	110	5	5.95	4	<1	<5	<1	2.25	<29	54	2.8	25	<3	<0.01	<0.05	<0.5	3.4
R96-1900RD	23	<5	7.9	760	<0.5	3	16	130	3	5.38	4	<1	<5	<1	2.83	<29	61	3.7	20	<3	<0.01	<0.05	<0.5	3.1
R96-1930RD	59	<5	16	1100	4.7	5	16	180	10	6.33	4	<1	<5	<1	2.59	<35	39	6.6	29	<3	<0.01	<0.05	<0.5	3.8
R96-1940RD	50	<5	12	1000	2.9	3	14	160	13	5.18	4	<1	<5	<1	2.69	<31	67	4.4	22	<3	<0.01	<0.05	<0.5	3.7
R96-1950RD	76	<5	15	980	<0.5	4	18	160	13	6.12	4	<1	<5	<1	2.77	<32	57	7.7	22	<3	<0.01	<0.05	<0.5	3.3
R96-1960RD	37	<5	10	1100	<0.5	2	20	180	10	5.79	3	<1	<5	<1	2.61	<30	52	4.6	23	<3	<0.01	<0.05	<0.5	2.7
R96-1980RD	42	<5	9.6	1100	5.9	2	17	150	10	5.54	4	<1	<5	<1	2.34	<33	56	2.5	26	<3	<0.01	<0.05	<0.5	4.3
R96-1990RD	54	<5	5.9	870	<0.5	2	15	130	5	4.58	4	<1	<5	<1	2.24	<28	37	1.8	16	<3	<0.01	0.07	<0.5	3.0
R96-2010RD	10	<5	7.1	750	<0.5	3	16	120	4	4.90	5	<1	<5	5	2.40	<29	49	2.2	17	<3	<0.01	<0.05	<0.5	3.8
R96-2030RD	37	<5	5.3	890	2.6	2	15	130	6	4.47	5	<1	<5	<1	2.60	<31	34	1.8	17	<3	<0.01	<0.05	<0.5	3.8
R96-2040RD	10	<5	6.7	780	2.8	3	14	100	5	4.44	5	<1	<5	<1	2.48	<31	43	1.8	15	<3	<0.01	<0.05	<0.5	4.4
R96-2060RD	37	<5	7.5	720	1.7	<1	15	110	5	4.76	4	<1	<5	<1	2.59	<29	50	3.1	17	<3	<0.01	0.08	<0.5	2.7
R96-2080RD	69	<5	7.3	790	2.6	1	15	120	5	4.87	4	<1	<5	<1	2.53	<29	66	2.7	17	<3	<0.01	0.08	<0.5	3.2
R96-2110RD	7	<5	7.7	860	<0.5	3	16	130	3	5.25	4	<1	<5	<1	2.70	<31	69	2.4	20	<3	<0.01	<0.05	<0.5	3.5
R96-2130RD	28	<5	6.5	840	3.8	3	19	100	9	4.89	5	<1	<5	<1	2.32	<31	42	2.2	18	<3	<0.01	<0.05	<0.5	4.5
R96-2140RD	23	<5	7.1	820	3.0	2	18	110	15	5.02	5	<1	<5	<1	2.11	<23	73	2.0	17	<3	<0.01	<0.05	1.8	3.9
R96-2160RD	36	<5	9.2	730	3.4	2	17	150	7	5.45	3	<1	<5	<1	2.30	<40	77	2.9	22	<3	<0.02	<0.05	<0.5	3.8

Activation Laboratories Ltd. Work Order: 11115 Report: 10980

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
R96-520RD	2.1	7	105	13	26	11	2.4	0.9	<0.5	1.7	0.30	22.02
R96-1450RD	<0.5	8	<50	15	29	11	2.9	0.8	<0.5	2.0	0.26	23.09
R96-1460RD	<0.5	5	<50	14	26	9	2.8	1.0	<0.5	1.8	0.31	22.65
R96-1470RD	<0.5	12	103	14	30	11	2.6	1.0	1.1	1.7	0.26	18.72
R96-1480RD	2.0	<1	138	20	32	21	4.7	1.5	1.1	2.8	0.33	17.76
R96-1500RD	1.6	<1	142	14	26	15	2.7	1.0	0.7	1.8	0.33	22.88
R96-1520RD	2.8	<1	116	16	28	20	3.4	0.6	<0.5	2.0	0.23	18.01
R96-1540RD	1.9	5	<50	16	28	12	3.0	1.1	<0.5	1.9	0.16	21.27
R96-1560RD	<0.5	<1	110	16	29	16	3.3	1.3	<0.5	2.0	0.37	24.01
R96-1570RD	3.1	2	96	31	44	32	6.9	2.4	0.9	3.7	0.54	24.04
R96-1590RD	2.6	3	127	14	26	9	2.9	1.0	<0.5	2.0	0.31	28.06
R96-1610RD	1.5	3	<50	17	33	18	3.2	1.1	0.9	2.0	0.37	19.85
R96-1620RD	1.6	6	115	16	33	9	3.2	1.0	<0.5	2.2	0.32	22.13
R96-1630RD	1.6	9	129	17	35	16	3.0	0.8	<0.5	1.9	0.22	18.54
R96-1650RD	<0.5	<1	<50	20	38	14	4.0	1.3	0.6	2.3	0.19	22.69
R96-1670RD	<0.5	<1	88	16	31	15	3.3	1.1	<0.5	2.2	0.35	26.85
R96-1680RD	<0.5	<1	217	19	37	20	4.0	1.1	<0.5	2.1	0.22	23.64
R96-1700RD	<0.5	<1	184	16	29	11	3.3	1.2	<0.5	2.2	0.32	21.02
R96-1720RD	2.8	<1	140	21	41	20	4.4	1.4	<0.5	2.6	0.25	19.64
R96-1730RD	<0.5	<1	132	16	29	20	3.2	1.2	<0.5	2.1	0.34	21.15
R96-1750RD	2.5	<1	112	16	32	15	3.4	1.3	<0.5	2.3	0.18	22.15
R96-1770RD	1.5	6	69	16	27	17	3.2	1.1	<0.5	2.1	0.18	23.52
R96-1780RD	2.0	7	<50	17	33	9	3.1	0.9	<0.5	2.1	0.32	20.11
R96-1800RD	1.6	<1	112	17	32	15	3.3	1.1	<0.5	2.0	0.31	24.59
R96-1820RD	1.2	3	73	16	30	17	3.6	0.9	<0.5	2.5	0.35	26.52
R96-1830RD	1.9	<1	99	16	30	15	3.0	1.1	<0.5	2.0	0.37	24.05
R96-1850RD	1.1	<1	68	16	33	21	3.2	1.2	<0.5	2.3	0.17	24.70
R96-1870RD	<0.5	<1	<50	15	30	15	2.9	1.0	<0.5	2.0	0.17	22.62
R96-1880RD	3.8	<1	93	18	30	18	3.9	1.3	<0.5	2.6	0.37	26.20
R96-1900RD	<0.5	<1	105	15	28	16	2.9	1.0	<0.5	1.9	0.30	26.58
R96-1930RD	2.2	5	108	18	37	22	4.3	1.4	<0.5	2.7	0.42	21.78
R96-1940RD	2.2	7	127	18	34	16	3.4	1.1	<0.5	2.2	0.20	24.54
R96-1950RD	2.0	13	121	16	32	18	3.2	1.1	<0.5	2.0	0.35	22.38
R96-1960RD	<0.5	<1	<50	16	33	19	3.5	1.2	<0.5	2.4	0.19	23.31
R96-1980RD	1.8	<1	141	25	44	22	5.5	1.8	<0.5	3.1	0.34	20.39
R96-1990RD	<0.5	<1	<50	18	31	16	3.6	1.1	1.2	2.0	0.20	21.56
R96-2010RD	2.2	<1	137	15	31	15	2.9	0.9	<0.5	2.0	0.28	21.26
R96-2030RD	<0.5	4	<50	17	36	22	3.6	1.3	0.7	2.2	0.20	19.59
R96-2040RD	<0.5	<1	113	17	34	15	3.2	1.1	<0.5	1.9	0.16	17.61
R96-2060RD	<0.5	<1	<50	15	30	15	3.0	1.1	0.6	1.9	0.31	22.01
R96-2080RD	<0.5	<1	139	14	27	19	2.8	0.9	<0.5	1.8	0.16	21.78
R96-2110RD	2.5	<1	121	16	34	19	3.1	1.1	<0.5	2.0	0.29	21.57
R96-2130RD	<0.5	<1	83	18	46	17	3.5	1.1	<0.5	2.0	0.19	18.65
R96-2140RD	<0.5	<1	104	15	32	15	3.1	1.0	<0.5	1.9	0.28	19.54
R96-2160RD	2.4	<1	190	21	45	23	4.5	1.5	<0.5	2.5	0.22	21.87

Activation Laboratories Ltd. Work Order: 11115 Report: 10980

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	MO PPM	NA %	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM	SN %	SR %	TA PPM	TH PPM
R96-218ORD	19	<5	8.5	820	<0.5	3	18	160	6	5.56	4	<1	<5	<1	2.46	<40	82	2.3	18	<3	<0.02	<0.05	<0.5	3.8
R96-219ORD	23	<5	7.8	920	<0.5	5	16	140	6	5.00	4	<1	<5	<1	2.76	<41	47	3.5	19	<3	<0.02	<0.05	<0.5	3.3
R96-221ORD	64	<5	13	1000	4.0	3	28	200	14	7.13	2	<1	<5	11	2.36	<48	73	9.9	26	<3	<0.02	<0.05	<0.5	3.2
R96-223ORD	10	<5	11	770	<0.5	3	17	130	9	4.86	4	<1	<5	<1	2.44	<39	61	5.8	17	<3	<0.02	<0.05	<0.5	3.7
R96-224ORD	53	<5	20	870	8.1	2	20	130	22	5.48	4	<1	<5	<1	2.27	<37	62	7.4	18	<3	<0.02	<0.05	<0.5	4.6
R96-225ORD	65	<5	13	750	3.1	3	17	160	9	5.03	4	<1	<5	<1	2.55	<41	54	4.5	18	<3	<0.02	<0.05	<0.5	3.3

Activation Laboratories Ltd. Work Order: 11115 Report: 10980

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
R96-218ORD	<0.5	<1	112	16	34	13	3.2	0.8	<0.5	2.1	0.30	20.29
R96-219ORD	2.0	<1	<50	16	31	13	3.1	1.1	<0.5	2.1	0.22	19.89
R96-221ORD	<0.5	11	<50	16	31	18	3.3	0.9	<0.5	2.1	0.14	16.76
R96-223ORD	2.4	<1	152	14	25	18	2.6	0.8	<0.5	2.0	0.15	20.49
R96-224ORD	<0.5	<1	175	16	36	18	3.2	1.0	0.6	2.2	0.15	22.71
R96-225ORD	<0.5	<1	80	15	31	8	3.1	0.9	<0.5	2.1	0.34	19.78

SAMPLE		Ag	Cu
		ppm	ppm
R96-52	ORD	-0.2	85
R96-145	ORD	-0.2	44
R96-146	ORD	-0.2	53
R96-147	ORD	0.4	165
R96-148	ORD	0.2	72
R96-150	ORD	-0.2	39
R96-152	ORD	-0.2	65
R96-154	ORD	-0.2	98
R96-156	ORD	-0.2	57
R96-157	ORD	-0.2	161
R96-159	ORD	-0.2	69
R96-161	ORD	-0.2	42
R96-162	ORD	-0.2	51
R96-163	ORD	0.2	67
R96-165	ORD	-0.2	69
R96-167	ORD	-0.2	39
R96-168	ORD	-0.2	113
R96-170	ORD	0.2	89
R96-172	ORD	0.2	73
R96-173	ORD	-0.2	33
R96-175	ORD	-0.2	39
R96-177	ORD	-0.2	69
R96-178	ORD	0.2	45
R96-180	ORD	-0.2	68
R96-182	ORD	-0.2	98
R96-183	ORD	-0.2	49
R96-185	ORD	-0.2	42
R96-187	ORD	-0.2	25
R96-188	ORD	-0.2	88
R96-190	ORD	-0.2	54
R96-193	ORD	-0.2	118
R96-194	ORD	-0.2	104
R96-195	ORD	0.2	93
R96-196	ORD	-0.2	75
R96-198	ORD	-0.2	92
R96-199	ORD	-0.2	54
R96-201	ORD	-0.2	37
R96-203	ORD	-0.2	96
R96-204	ORD	-0.2	89
R96-206	ORD	-0.2	41
R96-208	ORD	-0.2	61
R96-211	ORD	-0.2	35
R96-213	ORD	-0.2	63
R96-214	ORD	0.2	175
R96-216	ORD	0.2	92

Negative values indicate less than the detection limit
99999 indicates greater than 10%, the linear working range of the instrument

SAMPLE		Ag	Cu
		ppm	ppm
R96-218	ORD	-0.2	57
R96-219	ORD	-0.2	36
R96-221	ORD	0.2	263
R96-223	ORD	-0.2	51
R96-224	ORD	0.7	105
R96-225	ORD	0.2	52

Negative values indicate less than the detection limit
99999 indicates greater than 10%, the linear working range of the instrument

ACTLABS

ACTIVATION LABORATORIES LTD

Invoice No.: 11120
Work Order: 11116
Invoice Date: 30-AUG-96
Date Submitted: 26-JUL-96
Your Reference: LIST #3
Account Number: 236

RAGNAR U. BRUASET & ASSOCIATES LTD
5851 HALIFAX STREET
BURNABY, BC
CANADA V5B 2P5

ATTN: RAGNAR BRUASET

CERTIFICATE OF ANALYSIS

INAA package, elements and detection limits:

AU	2.	PPB	AG	5.	PPM	AS	0.5	PPM	BA	50.	PPM
BR	0.5	PPM	CA	1.	%	CO	1.	PPM	CR	5.	PPM
CS	1.	PPM	FE	0.01	%	HF	1.	PPM	HG	1.	PPM
IR	5.	PPB	MO	1.	PPM	NA	0.01	%	NI	20.	PPM
RB	15.	PPM	SB	0.1	PPM	SC	0.1	PPM	SE	3.	PPM
SN	0.01	%	SR	0.05	%	TA	0.5	PPM	TH	0.2	PPM
U	0.5	PPM	W	1.	PPM	ZN	50.	PPM	LA	0.5	PPM
CE	3.	PPM	ND	5.	PPM	SM	0.1	PPM	EU	0.2	PPM
TB	0.5	PPM	YB	0.2	PPM	LU	0.05	PPM			

11120B - AQUA REGIA - ICP

CERTIFIED BY :

DR. ERIC L. HOFFMAN

Activation Laboratories Ltd. Work Order: 11116 Report: 11120

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	MO PPM	NA %	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM	SN %	SR %	TA PPM	TH PPM
R96-38S	24	<5	8.8	920	<0.5	<1	18	120	11	4.93	4	<1	<5	9	2.45	<35	63	3.3	15	<3	<0.01	<0.05	<0.5	4.3
R96-131S	40	<5	8.7	730	3.0	<1	14	120	3	5.00	3	<1	<5	6	2.34	<31	66	2.2	16	<3	<0.01	<0.05	<0.5	3.3
R96-164S	271	<5	10	1100	<0.5	3	17	170	14	6.02	5	<1	<5	<1	2.68	<39	42	3.7	17	<3	<0.02	<0.05	<0.5	3.6
R96-179S	36	<5	7.6	820	1.7	2	12	130	3	4.46	3	<1	<5	<1	2.31	<29	35	2.4	16	<3	<0.01	<0.05	<0.5	2.6
R96-181S	90	<5	7.1	870	3.0	3	13	130	3	5.01	4	<1	<5	<1	2.48	<31	68	2.4	20	<3	<0.01	<0.05	<0.5	4.0
R96-191S	29	<5	7.0	820	<0.5	2	15	120	3	4.73	4	<1	<5	7	2.76	<35	61	2.6	17	<3	<0.01	<0.05	<0.5	3.4
R96-192S	105	<5	7.7	900	2.7	2	14	120	4	4.61	4	<1	<5	<1	2.16	<31	44	2.5	13	<3	<0.01	<0.05	<0.5	2.9
R96-209S	66	<5	6.1	900	2.7	2	13	88	5	4.17	5	3	<5	<1	2.31	<38	80	2.4	12	<3	<0.01	<0.05	<0.5	4.4

These are analyses of a split of the original sample. Samples with postscript "S" were intended for EL analyses. They are no different from "ORD" – ORDINARY samples collected at the same time. "ORD"s "S" were post-scripts added to facilitate easy sorting of the samples. All samples are generally "B" horizon – [illegible] whenever "B" was [illegible] to sample.

Activation Laboratories Ltd. Work Order: 11116 Report: 11120

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
R96-38S	<0.5	8	165	14	31	18	2.9	0.9	<0.5	1.8	0.28	17.63
R96-131S	<0.5	<1	<50	13	29	10	2.7	1.0	<0.5	1.6	0.28	22.18
R96-164S	<0.5	<1	153	14	29	10	2.8	1.0	<0.5	1.8	0.33	15.31
R96-179S	<0.5	<1	<50	12	26	11	2.4	0.8	<0.5	1.7	0.24	25.47
R96-181S	1.5	<1	77	14	28	10	2.8	1.0	<0.5	1.9	0.29	24.38
R96-191S	2.3	<1	69	15	33	14	3.0	1.1	<0.5	2.0	0.32	19.03
R96-192S	1.3	<1	97	13	28	9	2.4	0.9	<0.5	1.5	0.24	19.27
R96-209S	<0.5	<1	109	15	31	10	2.9	0.9	<0.5	2.0	0.33	12.82

Activation Laboratories Ltd. Work Order No. 11116 Report No. 11120B

SAMPLE	Ag	Cu
	ppm	ppm
1. R96-38S	0.7	80
2. R96-131S	0.2	47
3. R96-164S	0.2	35
4. R96-179S	-0.2	47
5. R96-181S	-0.2	75
6. R96-191S	-0.2	45
7. R96-192S	-0.2	36
8. R96-209S	0.2	39

Negative values indicate less than the detection limit

12-Jun-96

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 604-573-5700
Fax : 604-573-4557

ICP CERTIFICATE OF ANALYSIS AK 96-422

RAGNAR BRUASET
#40 356 DALADON CRES.
PO BOX 819
LOGAN LAKE, B.C.
V0K 1N0

No. of samples received: 5
Sample type: Rock
PROJECT #: None given
SHIPMENT #: None given
Samples submitted by: R.U. Bruaset

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	RAB96-1R	5	0.2	0.54	<5	990	<5	7.39	<1	18	38	133	5.93	<10	2.57	1051	7	0.03	17	1520	<2	15	<20	94	<.01	<10	56	<10	<1	39
2	RAB96-2R	75	2.2	0.45	125	60	<5	5.96	<1	54	30	1083	5.48	<10	1.64	1190	6	0.02	20	1720	4	40	<20	78	<.01	<10	32	<10	<1	62
3	RAB96-3R	55	<.2	0.67	95	320	<5	6.41	<1	18	30	134	5.02	<10	2.04	952	6	0.02	11	1980	<2	15	<20	74	<.01	<10	44	<10	1	37
4	RAB96-4R	240	0.4	0.64	5	430	<5	4.59	<1	23	25	2239	4.88	<10	1.61	848	4	0.02	19	1790	<2	15	<20	52	<.01	<10	48	<10	2	38
5	RAB96-6R	715	2.0	0.83	25	155	<5	6.40	<1	4	61	>10000	2.16	<10	0.34	295	5	0.02	3	<10	<2	15	<20	29	0.03	<10	191	10	3	23
QC DATA:																														
Resplit:																														
R/S 1	*RAB96-1R*	*5*	*<.2*	*0.54*	*10*	*975*	*<5*	*7.33*	*<1*	*18*	*34*	*135*	*5.93*	*<10*	*2.55*	*1045*	*7*	*0.03*	*19*	*1550*	*<2*	*20*	*<20*	*92*	*<.01*	*<10*	*56*	*<10*	*<1*	*39*
Repeat:																														
1	RAB96-1R	5	0.2	0.54	<5	1010	<5	7.39	2	18	38	140	5.95	<10	2.55	1049	8	0.03	17	1530	<2	20	<20	93	<.01	<10	57	<10	<1	39
Standard:																														
GEO'96		140	1.2	1.78	50	175	<5	1.89	<1	20	63	82	4.29	<10	1.00	754	<1	0.02	22	730	22	<5	<20	58	0.11	<10	79	<10	5	77

df/417
XLS/96Kmisc.#3

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

Eco-Tech
LABORATORIES LTD.

ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4 Phone (604) 573-5700
Fax (604) 573-4557

CERTIFICATE OF ASSAY AK 96-614

RAGNAR BRUASET
356 Daladon Dr.
P.O. Box 819
LOGAN LAKE, B.C.
V0K 1W0

16-Jul-96

attn: RAGNAR BRUASET

No. of samples received: 1
Sample type: ROCK
PROJECT #: NONE GIVEN
SHIPMENT #: NONE GIVEN
Samples submitted by: RAGNAR BRUASET

ET #.	Tag #		Au (g/t)	Au (oz/t)	Cu (%)
1	RAB 96	~~1R-8R~~	0.34	0.010	0.02

QC DATA:

Resplit:

R/S 1	0.37	0.011	0.02

Repeat:

1	0.29	0.008	0.02

Standard:

MPI-a	-	-	1.44
STD-M	2.95	0.086	-

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T
B.C. Certified Assayer

XLS/96kmisc#4

4-Aug-96

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 604-573-5700
Fax : 604-573-4557

ICP CERTIFICATE OF ANALYSIS AK 96-711

RAGNAR U. BRUASET
5851 Halifax Street
BURNABY, B.C.
V5B 2P4

ATTENTION: R.U.BRUASET

No. of samples received:2
Sample type:rock
Project #:none given
Shipment #: none given
Samples submitted by: R.U.Bruaset

Values in ppm unless otherwise reported

Et #.	Tag #		Au(ppb)	Ag	Al %	As	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	RAB	96-8R	35	<0.2	1.97	<5	315	<5	>10	<1	28	164	134	7.45	<10	1.23	1052	5	0.01	43	1580	<2	<5	<20	36	0.01	<10	193	<10	4	24
2	RAB	96-9R	5	0.2	0.83	<5	320	<5	9.39	2	22	34	129	6.36	<10	2.50	1434	8	0.02	13	1250	<2	15	<20	209	0.03	<10	103	<10	4	60
QC DATA:																															
Repeat																															
1	RAB	96-8R	30	<0.2	1.93	<5	315	<5	>10	<1	28	163	132	7.42	<10	1.21	1044	6	0.01	43	1560	<2	<5	<20	38	0.01	<10	191	<10	3	24
Standard:																															
GEO 96			150	1.0	1.66	70	170	5	1.95	<1	21	71	82	4.42	<10	1.04	747	<1	0.02	22	800	18	<5	<20	71	0.15	<10	88	<10	3	72

df/
XLS/96KMISC#5

ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

APPENDIX 3

ENZYME LEACH DATA

LETTER REPORTS BY J. ROBERT CLARK, PhD, SEPT. 26, OCT. 14, 1996

LIST OF DETECTION LIMITS

ACTIVATION LABORATORIES LTD. CERTIFICATE 11196RPT.XLS

ELEMENT PLOTS

PLATE NO.	DATA	SCALE
0	SAMPLE LOCATIONS	ALL
1	GOLD	AT
2	CHLORINE	1:15,000
3	BROMINE	
4	IODINE	
5	MOLYBDENUM	
6	TUNGSTEN	
7	ARSENIC	
8	ANTIMONY	
9	COPPER	
10	ZINC	
11	LEAD	
12	COBALT	
13	NICKEL	
14	GALLIUM	
15	VANADIUM	
16	MANGANESE	
17	CADMIUM	
18	BARIUM	
19	CERIUM	
20	RHENIUM	
21	URANIUM	
22	THORIUM	
23	ZIRCONIUM	
24	RUBIDIUM	
25	LIGHT RARE EARTH ELEMENTS	
26	HEAVY RARE EARTH ELEMENTS	
27	STRONTIUM	
28	YTTRIUM	
29	NIOBIUM	
30	SILVER	
31	CESIUM	
32	LANTHANUM	
33	PRASEODYMIUM	
34	NEODYMIUM	
35	SAMARIUM	
36	GADOLINIUM	
37	DYSPROSIUM	
38	ERBIUM	
39	YTTERBIUM	
40	HAFNIUM	

Enzyme-ACTLABS, LLC
11485 W. I-70 Frontage Road N.
Wheat Ridge, CO 80033

September 26, 1996

To: **Ragnar Bruaset**
FAX: 604-294-3568

From: Bob Clark

Subject: Review of Enzyme Leach data for the Rabbit Option

Thank you for your patience.

There is evidence of at least two large oxidation cells in the area that you sampled, and there are probably several more small cells. Of the halogen elements, Cl produces the most consistent patterns. At least one large halo is present in the east-central part of the sampling grid (marked on the Cl plot). West of this halo, two linear Cl trends lead into this halo, one coming in from the southwest and another from the west-northwest. These may be faults that have a Cl signature, or they may be part of a second halo to the west of the first. Although the patterns for Br and iodine are not as consistent, they do tend to corroborate the halos in the Cl plot.

An Sb anomaly and central low lie within the principle Cl halo, and As more or less shows the same pattern. The central low of this Sb anomaly is a consistent low for a number of other elements. Most notably, the central low of a Cu halo is only one sample site off from the Sb low.

A number of Mo anomalies were found in the sampled area. The only consistent pattern is in the southeast corner of the grid. A central low that is marked there is corroborated by a number of other elements (marked on the individual plots). This should be considered as another drill target.

The highest Zn anomaly is found between these two target, and Zn also weakly halos the Sb central low. Barium is probably showing an alteration zone. It is interesting that the strongest Ba anomaly roughly lies in the same area as the Sb anomaly. Sharp kicks in the concentration of Ga and Cd are often found in the halos produced by concentrations of sulfides in the basement. The highest Ga anomalies flank the Sb and Mo central lows discussed above. Cadmium is most anomalous on the southeast flank of the Sb low.

Zirconium does not have as distinct a pattern here as is found in other cases. A rough alignment of Zr highs may be following a N-S fracture trend in the middle of the sample grid. A strong Zr pattern in the northwest corner of the grid may be due to a N-E fault trend in that area.

The only significant Enzyme Leach Au anomaly is in the southwest edge of the grid in area where you have already defined a gold anomaly with conventional geochemical methods. The halogen, arsenic, and antimony anomalies in that area indicate that more work is needed there. The sampling grid should probably be expanded to the west and south, in order to outline the potential in that area.

The number of anomalies and the magnitude of the anomalies for a number of elements in this grid indicated that the area is strongly mineralized. I could spend a week going through each element plot picking out central lows that are corroborated by other elements. These would be targets of less importance than the two outlined above. Some of them may eventually need to be looked at in greater detail, but you need to concentrate on these two anomalies first.

Let me know if you have any more questions. I will be on the road next week, and the following week I will be in Ancaster.

Regards,

J. Robert Clark, Ph.D.
General Manager
Office phone: 303-456-2981
FAX: 303-425-5417
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email: jclark4@ibm.net
CompuServe: 72622,1165

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Enzyme-ACTLABS, LLC
11485 W. I-70 Frontage Road N.
Wheat Ridge, CO 80033

October 14, 1996

To: Ragnar Bruaset
FAX: 604-294-3568

From: Bob Clark

Subject: Additional review of Enzyme Leach data for the Rabbit Option

Dear Ragnar:

I have looked over the additional material that you sent me. Your area # 3 would have been my third choice as well. It certainly has many of the aspects of a central low, as do your areas 4 and 5 as well. In such a target rich environment you often see interfering patterns from adjacent mineralized bodies. The problem then becomes, how do you tell the difference between central lows and background areas that are bracketed between halos. In the case of area # 3, the zoning of Cl, Br, and I is the reverse of what you would expect if this is a strong electrochemical cell; i.e. the Cl halo lies outside the area of anomalous I and Br. Also, Zn and Co anomalies lie within or very near the central low. Now, if this was a cell of moderate strength, then the relative differences between the halogens could be a product of primary zoning, and Zn and Co could form an apical anomaly in the center of the system. Also, the Cl trends could be structurally controlled. If it is a cell of moderate strength, then the source is probably deeper by several hundred meters than the primary target area that I outlined. Again, the problem here is that it is obvious that you are getting interfering patterns from more than one cell. The coincident low that you have picked for a long list of elements is the site that I would pick as a target within this area.

Many of the same ambiguities are also present with your areas 4 and 5. Are these halos, or is #4 a background area between area 3 and 5. This is why geological familiarity of the area is essential in the final interpretations, and this is something that I cannot provide as well as you can provide for yourself. Area 3 appears to have the geological control to back up your interpretation that there is an oxidation cell centered around the point that you have selected as a central low. Therefore, it is an exploration target.

I hope my answer has not been too ambiguous as well. As I said, your project area is a target rich environment. You may have to spend a few drill holes eliminating hypotheses. Let me know if you have any more questions.

Regards,

J. Robert Clark, Ph.D.
General Manager
Home phone: 303-424-4069
Computer FAX: 303-420-7413

__1__ pages, including this page

ACTLABS

ACTIVATION LABORATORIES LTD

Invoice No.: 11196
Work Order: 11114
Invoice Date: 09-SEP-96
Date Submitted: 26-JUL-96
Your Reference: LIST #1
Account Number: 236

RAGNAR U. BRUASET & ASSOCIATES LTD
5851 HALIFAX STREET
BURNABY, BC
CANADA V5B 2P5

ATTN: RAGNAR BRUASET

CERTIFICATE OF ANALYSIS

ENZYME LEACH - ICP/MS

CERTIFIED BY :

DR. ERIC L. HOFFMAN

7. ENZYME LEACH

This revolutionary highly selective enzyme leach (patents pending) was developed by the current manager of **ACTLABS-SKYLINE, INC.**, DR. J. R. CLARK (formerly with U.S.G.S.) and has the ability of detecting deeply buried mineralization in arid as well as glaciated terrains. Published test results indicate that depth of penetration is up to 1000 feet for gold base metal and porphyry copper deposits in the numerous case histories studied. Limited testing has also been done for oil exploration with exceptional results on an oil pool 9000 feet below the surface.

B soil horizon materials are collected and dried at temperatures not exceeding 40C and sieved at -60 mesh. We require a minimum of 2 grams of sieved material and preferably 10-20 grams. After leaching, the leach solution is run by ICP-MS. Consulting on sample collection and interpretation of data as well as reference papers are available from **ACTLABS** or **ACTLABS, INC**.

ENZYME LEACH					
(DETECTION LIMITS ALL IN PPB)					
Li	10	Mo	1	Dy	1
Cl	3000	Ru	1	Ho	1
Sc	10	Pd	1	Er	1
Ti	20	Ag	0.2	Tm	1
V	5	Cd	0.2	Yb	1
Mn	10	In	0.2	Hf	1
Co	1	Sn	1	Ta	1
Ni	5	Sb	1	W	1
Cu	5	Te	1	Re	0.1
Zn	10	I	15	Os	1
Ga	1	Cs	1	Ir	1
Ge	1	Ba	1	Pt	1
As	5	La	1	Au	0.1
Se	30	Ce	1	Hg	1
Br	50	Pr	1	Tl	1
Rb	1	Nd	1	Pb	1
Sr	1	Sm	1	Bi	1
Y	1	Eu	1	Th	1
Zr	1	Gd	1	U	1
Nb	1	Tb	1		

PRICE:	CDN	US
1-500	$25.00	$20.00
501-1000	$20.00	$17.00
PREP COST/SAMPLE	$ 2.50	$ 2.00

FOR PROGRAM VOLUMES OVER 1000 SAMPLES LARGER DISCOUNTS WILL BE APPLICABLE.

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:
Trace Element Values Are in Parts Per Billion. Negative Values Equal Not Detected at That Lower Limit.
Values = 999999 are greater than working range of instrument. S.Q.=That element is determined SEMIQUANTITATIVELY.

Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-1 S	23	-20	10426	-10	-100	70	2856	14	12	73	29	2	-1	17	-30	100	75	504	15	104	2	2
R96-2 S	-10	-20	11459	-10	-100	80	8110	29	28	45	60	3	-1	19	-30	115	72	335	5	56	2	-1
R96-3 S	11	-20	8794	-10	-100	68	3030	20	15	110	15	-1	-1	19	-30	165	68	480	8	74	1	-1
R96-4 S	41	-20	9871	-10	-100	81	1560	14	22	203	-10	-1	-1	22	-30	361	29	444	7	35	-1	58
R96-5 S	35	-20	5826	-10	-100	73	7111	30	17	132	23	-1	-1	18	-30	86	80	507	3	60	1	6
R96-6 S	30	-20	20390	-10	-100	86	2730	22	15	62	28	2	-1	21	-30	106	86	345	3	45	1	8
R96-7 S	38	-20	8130	-10	-100	78	3859	28	24	43	16	-1	-1	12	-30	68	56	416	3	39	2	-1
R96-8 S	32	-20	6219	-10	-100	90	889	17	27	1900	22	1	-1	14	-30	425	31	515	35	105	1	126
R96-9 S	54	-20	11992	-10	-100	75	175	44	25	195	21	3	-1	14	-30	110	16	369	7	73	2	1
R96-10 S	11	-20	7234	-10	-100	59	755	10	19	126	-10	-1	-1	13	-30	124	14	499	19	56	-1	12
R96-11 S	15	-20	5410	-10	-100	115	2363	36	27	81	16	1	-1	17	-30	80	40	371	5	57	2	-1
R96-12 S	82	-20	3266	-10	-100	25	1453	48	10	258	11	5	-1	23	-30	33	170	510	10	155	-1	-1
R96-13 S	18	-20	5151	-10	-100	70	934	25	21	112	-10	1	-1	17	44	67	25	417	11	58	1	-1
R96-14 S	11	-20	9022	-10	-100	109	874	13	14	73	13	-1	-1	15	48	99	27	534	9	71	2	-1
R96-15 S	17	-20	11831	-10	-100	89	1408	20	17	122	13	3	-1	15	-30	75	48	512	14	76	1	-1
R96-16 S	-10	-20	5334	-10	-100	66	1452	13	7	35	-10	3	-1	16	-30	60	36	323	5	57	1	-1
R96-17 S	16	-20	7700	-10	-100	94	2000	14	30	140	18	3	-1	28	-30	157	47	468	19	60	1	-1
R96-18 S	32	-20	7228	-10	-100	130	769	9	31	338	11	1	-1	37	-30	297	6	592	41	73	1	32
R96-19 S	12	-20	-3000	-10	-100	150	351	18	11	75	18	5	-1	21	-30	106	50	408	9	70	2	-1
R96-20 S	11	-20	3424	-10	-100	75	1109	13	15	84	-10	1	-1	10	-30	62	18	406	11	57	1	-1
R96-22 S	25	-20	8405	-10	-100	56	923	63	16	132	27	4	-1	23	-30	73	91	415	4	52	1	-1
R96-23 S	-10	-20	8493	-10	-100	64	2767	21	9	59	10	4	-1	20	-30	73	101	336	4	58	-1	-1
R96-24 S	-10	-20	5492	-10	-100	88	283	10	16	110	-10	2	-1	16	-30	51	39	559	11	69	2	-1
R96-25 S	-10	-20	7313	-10	-100	66	659	10	13	102	-10	4	-1	17	-30	84	6	631	5	42	2	68
R96-26 S	26	-20	-3000	-10	-100	56	4390	44	17	66	27	-1	-1	10	-30	57	30	286	6	44	1	-1
R96-27 S	14	-20	4151	-10	-100	66	536	16	15	114	16	1	-1	12	-30	88	6	436	12	51	-1	-1
R96-28 S	20	-20	-3000	-10	-100	62	1881	27	12	49	21	2	-1	13	-30	39	57	284	4	52	1	-1
R96-29 S	29	-20	6728	-10	-100	93	930	11	18	188	-10	1	-1	18	-30	94	17	566	19	89	1	-1
R96-30 S	-10	-20	-3000	-10	-100	37	4842	55	11	58	11	-1	-1	14	46	86	57	358	4	43	-1	-1
R96-31 S	13	-20	6762	-10	-100	52	2449	15	18	219	14	3	-1	11	-30	87	19	503	11	66	1	-1
R96-32 S	18	-20	-3000	-10	-100	77	5331	26	18	56	24	2	-1	12	-30	75	72	457	4	32	1	-1
R96-33 S	39	-20	5782	-10	-100	62	2521	32	12	60	59	1	-1	16	-30	125	48	231	4	48	1	-1
R96-34 S	26	-20	8709	-10	-100	110	826	17	27	191	63	3	-1	19	-30	254	11	528	31	126	-1	-1
R96-35 S	47	-20	11263	-10	-100	90	945	7	32	381	19	1	-1	20	-30	208	32	569	31	93	1	17
R96-36 S	19	-20	5201	-10	-100	48	2640	34	14	53	29	-1	-1	8	-30	106	66	422	5	48	-1	-1
R96-37 S	23	-20	-3000	-10	-100	34	500	20	11	44	-10	1	-1	9	-30	-30	65	258	3	30	-1	-1
R96-38 S	-10	-20	4301	-10	-100	51	5206	29	12	31	13	1	-1	10	-30	70	97	312	3	47	-1	-1
R96-39 S	-10	-20	6213	-10	-100	44	1482	18	14	54	-10	3	-1	9	-30	-30	15	428	6	32	-1	-1
R96-40 S	42	-20	-3000	-10	-100	71	1662	14	22	679	17	2	-1	14	-30	252	14	506	19	58	-1	159
R96-41 S	43	-20	-3000	-10	-100	39	5012	51	26	142	96	54	-1	17	-30	74	8	335	7	62	-1	13
R96-42 S	11	-20	-3000	-10	-100	55	930	26	13	46	15	3	-1	10	-30	43	38	299	3	42	-1	-1
R96-43 S	-10	-20	-3000	-10	-100	82	264	6	13	210	-10	2	-1	19	-30	235	7	493	16	39	-1	42

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:
Trace Element Values Are In Parts Per Billion. Negative Values Equal Not Detected at That Lower Limit.
Values = 999999 are greater than working range of instrument. S.Q.=That element is determined SEMIQUANTITATIVELY.

Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-44 S	18	-20	4823	-10	-100	197	1071	15	20	437	-10	4	-1	24	-30	68	7	623	47	181	2	30
R96-45 S	27	-20	11859	-10	-100	58	1812	50	22	88	17	1	-1	16	39	63	27	410	3	47	1	31
R96-46 S	29	-20	4039	-10	-100	73	1177	55	26	119	18	-1	-1	15	-30	48	73	549	7	47	1	-1
R96-47 S	49	-20	7534	18	-100	100	884	35	28	174	-10	2	-1	26	-30	64	12	706	19	221	2	8
R96-48 S	40	-20	4749	-10	-100	87	2610	29	15	59	-10	2	-1	13	-30	50	75	560	8	68	2	-1
R96-49 S	36	-20	6816	-10	-100	181	932	13	18	213	-10	3	-1	48	-30	119	11	614	20	99	1	177
R96-50 S	13	-20	7325	-10	-100	91	4623	70	24	274	13	4	-1	15	-30	54	38	638	17	90	2	15
R96-51 S	26	-20	3510	-10	-100	89	1071	28	17	64	12	2	-1	15	-30	-30	66	516	5	55	2	-1
R96-53 S	44	-20	-3000	-10	-100	141	911	15	23	125	16	4	-1	16	-30	111	14	625	24	139	2	-1
R96-54 S	30	-20	5498	-10	-100	111	1142	18	20	125	-10	1	-1	14	-30	-30	25	636	17	83	2	-1
R96-55 S	-10	-20	4426	-10	-100	91	324	10	13	132	-10	-1	-1	19	-30	70	14	606	15	75	1	16
R96-56 S	-10	-20	4351	-10	-100	157	106	6	9	74	-10	-1	-1	13	-30	62	21	600	6	52	1	106
R96-57 S	29	-20	3595	-10	-100	83	126	13	10	62	-10	-1	-1	13	-30	-30	48	520	6	67	2	-1
R96-58 S	14	-20	3992	-10	-100	87	623	23	10	69	-10	-1	-1	15	-30	-30	58	409	6	75	1	-1
R96-59 S	21	-20	9802	-10	-100	97	1030	26	19	89	-10	-1	-1	16	-30	59	29	536	6	43	2	4
R96-60 S	23	-20	12502	-10	-100	80	768	26	14	140	-10	-1	-1	15	-30	96	27	614	15	77	2	-1
R96-61 S	18	-20	7451	-10	-100	120	1072	24	14	257	-10	-1	-1	18	-30	112	25	756	36	282	2	30
R96-62 S	26	-20	4924	-10	-100	48	4427	29	11	58	-10	-1	-1	10	-30	-30	75	567	7	93	-1	-1
R96-63 S	60	-20	5111	-10	-100	57	2182	63	18	116	20	2	-1	29	-30	40	91	417	7	75	2	-1
R96-64 S	11	-20	3574	-10	-100	86	2847	17	12	45	11	1	-1	14	-30	42	93	684	9	150	5	-1
R96-65 S	24	-20	4431	-10	-100	61	5568	30	7	12	-10	-1	-1	-5	-30	62	66	1038	6	79	-1	-1
R96-66 S	-10	-20	6463	-10	-100	22	5170	21	10	12	-10	-1	-1	-5	-30	153	193	429	5	26	-1	-1
R96-67 S	22	-20	6617	-10	-100	46	5880	50	23	11	22	3	2	7	-30	100	185	576	5	87	1	-1
R96-68 S	-10	-20	5773	-10	-100	57	4880	45	18	40	-10	-1	-1	13	-30	54	28	445	6	81	2	-1
R96-69 S	15	-20	-3000	-10	-100	62	3332	25	19	79	20	1	-1	17	-30	30	17	346	4	41	1	-1
R96-70 S	-10	-20	3557	-10	-100	23	2962	25	6	6	-10	-1	-1	-5	-30	55	137	584	5	58	-1	-1
R96-71 S	-10	-20	8047	-10	-100	29	18831	121	16	8	12	-1	-1	-5	-30	73	125	531	6	29	-1	-1
R96-72 S	13	-20	7576	-10	-100	14	10949	22	18	8	27	2	1	-5	-30	55	146	486	3	37	-1	-1
R96-73 S	-10	-20	12267	-10	-100	54	7268	33	20	20	-10	2	-1	8	-30	39	81	505	4	65	2	20
R96-74 S	39	-20	8331	-10	-100	49	3544	21	18	29	16	-1	-1	7	-30	31	32	463	4	46	2	-1
R96-75 S	23	-20	7525	-10	-100	72	1617	11	32	99	18	2	-1	13	-30	82	6	609	20	57	1	-1
R96-76 S	22	-20	6916	-10	-100	58	1480	6	18	63	13	-1	-1	10	-30	46	32	525	10	52	1	-1
R96-77 S	19	-20	8544	-10	-100	84	8791	26	32	121	11	2	-1	13	-30	76	64	734	20	99	1	-1
R96-78 S	22	-20	7920	-10	-100	29	5543	36	16	82	29	-1	-1	8	-30	84	92	273	3	29	-1	-1
R96-79 S	77	-20	3058	-10	-100	39	3151	35	20	119	12	-1	-1	25	-30	59	112	447	8	51	-1	-1
R96-80 S	-10	-20	5800	-10	-100	82	1438	12	15	48	13	1	-1	19	-30	74	29	381	4	48	2	-1
R96-81 S	-10	-20	4695	-10	-100	62	7730	19	10	32	25	2	-1	16	-30	80	101	343	4	56	2	-1
R96-82 S	46	-20	6762	18	-100	48	14196	39	33	90	17	3	-1	14	-30	170	46	273	18	184	3	-1
R96-83 S	-10	-20	5248	-10	-100	68	2252	16	10	34	-10	-1	2	14	-30	47	72	279	8	79	2	-1
R96-84 S	10	-20	4646	-10	-100	65	5380	30	21	49	34	1	-1	15	-30	113	19	306	5	73	1	-1
R96-85 S	17	-20	4626	-10	-100	107	2624	46	11	32	-10	3	-1	16	41	54	22	384	5	55	2	-1
R96-86 S	23	-20	6312	-10	-100	103	855	14	16	63	16	3	-1	27	-30	-30	17	424	10	60	2	-1

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:
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Values = 999999 are greater than working range of instrument. S.Q.=That element is determined SEMIQUANTITATIVELY.

Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-87 S	-10	-20	5614	-10	-100	64	929	19	12	48	-10	2	-1	14	-30	39	38	439	5	82	2	-1
R96-88 S	-10	-20	3655	-10	-100	40	915	17	10	19	-10	-1	-1	10	-30	-30	54	414	2	33	-1	-1
R96-89 S	21	-20	8403	-10	-100	79	486	12	9	31	13	-1	-1	22	-30	51	2	298	6	46	1	-1
R96-90 S	-10	-20	6469	-10	-100	114	620	7	44	69	20	1	-1	45	-30	-30	3	621	44	74	-1	-1
R96-91 S	-10	-20	7656	-10	-100	79	3386	20	16	30	16	-1	-1	10	-30	57	5	498	11	63	1	-1
R96-92 S	-10	-20	4362	-10	-100	57	4470	39	12	25	54	-1	-1	9	-30	81	5	277	3	35	1	-1
R96-93 S	10	-20	3205	-10	-100	54	2955	19	41	98	12	-1	-1	10	-30	173	34	522	6	20	-1	59
R96-94 S	-10	-20	5232	-10	-100	68	4850	33	12	31	31	2	-1	11	-30	-30	12	276	2	44	1	-1
R96-95 S	-10	-20	5424	-10	-100	126	4576	28	26	98	15	-1	-1	12	-30	83	7	650	25	92	2	-1
R96-96 S	24	-20	4916	-10	-100	77	5008	49	15	38	33	2	-1	14	-30	66	-1	330	7	64	2	2
R96-97 S	20	-20	3134	-10	-100	56	2330	24	16	33	12	-1	-1	10	-30	-30	15	434	4	38	-1	-1
R96-98 S	15	-20	-3000	-10	-100	77	1781	21	11	23	-10	2	-1	12	-30	-30	35	372	3	43	1	-1
R96-99 S	33	-20	5151	-10	-100	69	2244	30	11	37	-10	-1	-1	16	-30	37	17	368	4	38	1	-1
R96-100 S	18	-20	7718	-10	-100	82	1415	11	20	150	-10	-1	-1	15	-30	36	11	514	18	119	2	-1
R96-101 S	12	-20	4478	-10	-100	46	3670	24	7	25	10	-1	-1	8	-30	81	56	363	3	53	-1	-1
R96-102 S	12	-20	3746	-10	-100	41	2579	6	-5	16	-10	-1	-1	-5	-30	155	51	390	3	47	-1	-1
R96-103 S	12	-20	4760	-10	-100	42	3477	18	7	40	-10	-1	-1	8	-30	107	116	405	3	71	1	-1
R96-104 S	19	-20	9164	-10	-100	56	18381	96	17	37	129	2	-1	12	-30	104	121	277	2	52	1	-1
R96-105 S	16	-20	6000	-10	-100	53	1501	34	9	31	11	2	-1	9	38	58	15	584	5	94	2	-1
R96-106 S	-10	-20	-3000	-10	-100	41	378	3	20	12	-10	2	-1	6	-30	105	33	155	8	29	2	-1
R96-107 S	22	-20	3964	-10	-100	94	591	23	12	33	16	2	-1	13	-30	50	30	517	4	58	2	-1
R96-108 S	19	-20	-3000	-10	-100	141	650	23	22	66	10	-1	-1	20	-30	53	15	480	19	84	1	-1
R96-109 S	23	-20	4363	-10	-100	182	455	17	24	78	14	3	-1	25	-30	51	18	503	21	77	2	-1
R96-110 S	26	-20	3922	-10	-100	91	1798	20	63	147	-10	-1	-1	19	-30	56	9	399	11	30	-1	-1
R96-111 S	14	-20	4654	-10	-100	129	1328	16	15	82	13	-1	-1	20	-30	33	19	509	8	53	1	-1
R96-112 S	22	-20	5181	-10	-100	131	1871	32	15	52	10	2	-1	15	-30	-30	17	571	20	72	1	-1
R96-113 S	17	-20	5832	-10	-100	180	1261	16	22	50	-10	-1	-1	16	-30	46	10	456	26	103	3	-1
R96-114 S	28	-20	8321	-10	-100	175	2356	24	24	51	-10	2	-1	19	-30	60	21	579	19	149	1	-1
R96-115 S	11	-20	28042	-10	-100	60	8742	48	10	32	-10	-1	-1	10	-30	190	30	352	12	108	2	-1
R96-116 S	19	-20	8620	-10	-100	107	4308	46	13	40	10	-1	-1	20	-30	66	14	570	16	69	1	-1
R96-117 S	44	-20	5752	24	126	176	5428	68	31	104	92	2	6	5329	-30	72	47	478	8	123	3	-1
R96-118 S	22	-20	7421	-10	-100	117	3183	19	9	40	23	-1	-1	62	-30	72	35	436	6	129	3	-1
R96-119 S	44	-20	3076	-10	141	143	1711	65	21	54	174	9	-1	50	-30	45	37	317	4	62	3	-1
R96-120 S	14	-20	12488	-10	-100	52	15121	57	11	13	47	2	-1	15	-30	55	53	400	2	37	1	-1
R96-121 S	16	-20	9121	-10	-100	114	1723	16	10	44	11	-1	-1	19	-30	74	23	693	23	114	2	-1
R96-122 S	19	-20	5471	-10	-100	82	5107	17	18	32	24	2	-1	22	-30	53	33	665	17	95	2	-1
R96-123 S	13	-20	7808	-10	-100	89	2048	16	7	29	17	-1	-1	16	-30	46	34	553	6	58	2	-1
R96-124 S	19	-20	10606	-10	-100	123	1390	14	15	75	12	2	-1	15	-30	134	17	457	16	76	1	-1
R96-125 S	32	-20	6188	-10	-100	124	1483	9	45	90	-10	-1	-1	17	-30	106	13	563	12	42	-1	-1
R96-126 S	24	-20	4127	-10	-100	164	1419	25	26	85	-10	2	-1	18	-30	150	23	532	17	115	2	-1
R96-127 S	40	-20	-3000	-10	-100	116	1969	21	23	66	-10	-1	-1	16	-30	69	25	505	18	119	2	-1
R96-128 S	27	-20	5054	-10	-100	132	604	12	21	116	-10	-1	-1	18	-30	87	14	522	24	135	2	-1

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R96-129 S	22	-20	4928	-10	-100	116	1569	32	25	78	12	2	-1	15	-30	71	13	534	20	124	1	-1
R96-130 S	12	-20	5474	-10	-100	47	4882	37	6	21	15	-1	-1	9	-30	62	105	518	5	56	1	-1
R96-131 S	16	-20	5525	-10	-100	80	3563	57	8	39	-10	2	-1	14	-30	100	59	586	6	80	1	-1
R96-132 S	25	-20	6375	-10	-100	204	1881	38	26	119	10	2	-1	21	-30	90	10	423	15	64	2	27
R96-133 S	28	-20	3132	-10	-100	237	366	6	26	177	15	3	-1	25	-30	93	23	343	15	88	2	40
R96-134 S	29	-20	4919	-10	-100	255	676	10	31	145	19	5	-1	34	-30	122	15	343	12	41	3	36
R96-135 S	18	-20	6893	-10	-100	250	186	4	20	73	13	2	-1	21	48	147	21	451	14	60	2	4
R96-136 S	20	-20	5089	-10	-100	226	747	10	20	53	-10	-1	-1	25	-30	249	9	412	12	33	-1	3
R96-137 S	29	-20	3174	-10	136	256	1650	17	34	125	38	7	-1	23	-30	145	30	363	20	128	3	19
R96-138 S	14	-20	7000	-10	434	171	2029	23	9	45	-10	2	-1	16	-30	66	13	481	12	96	3	4
R96-139 S	23	-20	6210	-10	-100	82	4363	34	22	45	16	-1	-1	13	-30	50	18	557	10	76	2	-1
R96-140 S	17	-20	10266	-10	-100	68	6839	38	10	25	49	1	-1	8	-30	106	49	285	4	86	2	2
R96-141 S	19	-20	7000	-10	-100	59	4097	20	7	20	15	3	-1	8	-30	57	55	252	2	48	1	-1
R96-142 S	18	-20	7927	-10	-100	76	14375	81	12	24	30	1	-1	14	-30	71	56	366	4	73	1	-1
R96-143 S	13	-20	11051	-10	-100	52	4531	38	7	25	17	-1	-1	8	-30	107	65	303	4	65	1	-1
R96-144 S	15	-20	9796	-10	-100	123	2937	23	6	23	-10	1	-1	13	-30	104	11	329	3	79	2	-1
R96-149 S	11	-20	38725	-10	-100	119	3057	31	17	43	30	1	-1	11	-30	191	19	499	4	45	1	-1
R96-153 S	-10	-20	44742	-10	-100	459	309	12	33	119	-10	1	-1	20	-30	614	6	973	21	97	2	-1
R96-155 S	17	-20	8073	-10	-100	97	106	7	15	108	-10	-1	-1	10	-30	99	60	583	13	80	2	-1
R96-158 S	19	-20	5172	-10	-100	224	167	6	27	235	-10	-1	-1	24	-30	257	6	577	79	251	2	-1
R96-160 S	16	-20	5718	-10	-100	125	520	5	22	209	-10	-1	-1	15	-30	301	22	502	30	107	1	8
R96-164 S	19	-20	5016	-10	-100	87	2403	27	18	49	-10	-1	-1	11	-30	65	32	516	5	52	1	-1
R96-166 S	27	-20	6283	-10	121	194	230	12	33	124	37	8	-1	19	-30	131	49	654	24	169	4	-1
R96-169 S	32	-20	5362	-10	132	251	414	11	35	236	59	9	-1	18	-30	114	62	504	25	202	3	-1
R96-171 S	17	-20	6526	-10	-100	212	1168	33	28	89	29	2	-1	20	-30	112	24	646	18	129	3	-1
R96-174 S	22	-20	7324	-10	-100	176	593	21	14	90	17	3	-1	21	-30	123	7	520	10	111	3	-1
R96-176 S	25	-20	4349	-10	-100	301	2059	15	28	88	-10	-1	-1	21	-30	140	7	610	20	224	2	40
R96-179 S	29	-20	4131	-10	116	191	351	19	26	103	34	9	-1	23	-30	109	44	621	12	115	3	-1
R96-181 S	28	-20	3957	-10	104	180	525	13	25	125	19	-1	3	15	-30	207	34	555	15	127	3	-1
R96-184 S	17	-20	7126	-10	-100	125	1102	36	16	92	14	2	-1	14	-30	159	24	769	15	116	2	-1
R96-186 S	23	-20	5027	-10	-100	124	312	18	17	70	14	1	-1	11	-30	85	58	631	14	110	1	-1
R96-189 S	22	-20	8655	-10	-100	269	362	10	25	184	-10	-1	-1	23	-30	308	18	816	42	144	1	2
R96-191 S	16	-20	5849	-10	-100	110	1761	37	12	66	12	1	-1	14	-30	65	17	601	18	101	2	-1
R96-192 S	12	-20	6392	-10	-100	42	5904	27	9	21	12	-1	-1	8	-30	86	73	422	4	50	-1	-1
R96-197 S	19	-20	5302	-10	-100	80	1446	34	14	35	-10	-1	-1	11	-30	33	23	504	5	53	1	-1
R96-200 S	18	-20	7017	-10	-100	90	623	14	13	102	-10	-1	-1	13	-30	89	42	861	27	117	2	-1
R96-202 S	16	-20	7605	-10	-100	78	405	9	13	75	-10	1	-1	10	-30	77	77	590	7	54	2	-1
R96-205 S	14	-20	6914	-10	-100	75	1786	16	11	101	-10	1	-1	12	47	108	70	585	7	92	2	-1
R96-207 S	17	-20	14929	-10	-100	133	3211	29	20	55	17	2	-1	15	-30	143	58	672	10	85	2	-1
R96-209 S	16	-20	10453	-10	-100	73	2472	38	22	44	19	-1	-1	13	-30	102	78	519	4	69	3	-1
R96-210 S	22	-20	6186	-10	-100	51	1206	33	14	31	19	1	-1	7	-30	91	78	475	3	52	1	-1
R96-212 S	27	-20	8518	-10	-100	113	2591	24	35	115	-10	3	-1	18	-30	106	30	535	31	280	3	-1

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R96-215 S	16	-20	10071	-10	-100	70	960	23	10	124	-10	-1	-1	9	-30	163	63	575	11	105	1	-1
R96-217 S	20	-20	7587	-10	-100	107	575	10	16	85	-10	2	-1	12	-30	124	14	582	17	112	3	-1
R96-220 S	21	-20	5787	-10	-100	93	868	20	22	68	-10	-1	-1	12	-30	60	90	567	14	94	2	-1
R96-222 S	18	-20	9168	-10	-100	78	2561	38	25	128	11	1	-1	20	-30	95	103	495	8	79	1	-1
R96-226 S	23	-20	4354	-10	-100	97	1501	16	12	45	13	1	-1	13	-30	49	57	511	5	64	2	-1
R96-227 S	29	-20	3769	-10	-100	149	369	21	21	82	28	5	-1	15	-30	64	41	489	3	60	3	-1
R96-228 S	28	-20	8572	-10	-100	113	1865	35	18	56	23	1	-1	14	-30	73	9	458	10	89	2	-1
R96-229 S	34	-20	9484	-10	-100	221	982	32	19	50	13	2	-1	15	-30	113	8	539	13	99	3	-1
R96-230 S	19	-20	7285	-10	-100	132	1853	15	10	27	20	-1	-1	18	52	95	34	611	6	88	3	-1
R96-231 S	14	-20	6561	-10	-100	257	470	27	11	51	-10	-1	-1	23	-30	75	10	602	10	65	2	-1
R96-232 S	24	-20	7693	-10	-100	281	495	10	43	88	22	1	2	43	-30	238	15	445	24	54	1	2
R96-233 S	24	-20	6520	-10	-100	240	1321	11	32	110	-10	2	-1	25	-30	174	16	554	41	147	2	-1
R96-234 S	24	-20	6265	-10	-100	104	1042	11	12	49	19	2	-1	14	-30	90	16	448	20	96	1	-1
R96-235 S	11	-20	7539	-10	-100	151	571	8	8	50	13	-1	-1	23	-30	130	4	344	8	77	2	4
R96-236 S	25	-20	6635	-10	-100	182	739	12	10	111	18	3	-1	27	-30	184	7	463	34	149	1	-1
R96-237 S	24	-20	5619	-10	-100	139	1303	24	9	46	17	3	-1	15	-30	68	13	456	15	88	2	-1
R96-238 S	27	-20	8321	-10	-100	155	1010	15	18	52	29	6	-1	17	-30	111	25	499	19	113	3	-1
R96-239 S	26	-20	3967	-10	-100	210	638	8	31	70	-10	-1	-1	23	-30	365	19	533	36	60	2	-1
R96-240 S	25	-20	25066	-10	145	338	287	11	49	128	20	5	-1	24	-30	285	25	405	35	107	3	2
R96-241 S	23	-20	9396	-10	-100	241	419	9	26	147	11	4	-1	24	-30	270	19	416	28	112	2	22
R96-242 S	18	-20	-3000	-10	-100	78	1603	21	18	39	10	-1	-1	13	-30	74	37	438	8	63	-1	-1
R96-243 S	22	-20	7519	-10	-100	148	779	11	28	128	-10	-1	-1	22	-30	208	10	542	15	36	-1	2
R96-244 S	15	-20	5594	-10	-100	98	1599	40	11	41	-10	-1	-1	17	-30	182	17	400	6	58	1	-1
R96-245 S	23	-20	3431	-10	-100	295	4288	29	59	178	-10	2	-1	37	-30	229	27	404	14	52	2	414
R96-246 S	-10	-20	11232	-10	-100	76	369	10	6	47	-10	2	-1	12	-30	145	69	556	3	51	2	5
R96-247 S	-10	-20	8626	-10	-100	78	160	24	9	37	-10	2	-1	10	-30	253	57	498	4	55	3	-1
R96-248 S	-10	-20	6885	-10	-100	51	734	12	6	16	-10	-1	-1	6	-30	180	77	604	4	55	1	-1
R96-249 S	-10	-20	11343	-10	-100	53	828	36	16	30	-10	5	-1	6	-30	151	78	558	3	49	2	-1
R96-250 S	-10	-20	-3000	-10	-100	35	6906	28	-5	6	-10	-1	-1	-5	37	-30	131	347	3	30	-1	-1
R96-251 S	-10	-20	18131	-10	-100	109	1166	29	17	49	-10	1	-1	14	-30	247	138	640	9	93	4	3
R96-252 S	-10	-20	27221	-10	-100	56	1282	17	14	15	-10	2	-1	6	-30	210	149	529	3	35	2	-1
R96-253 S	20	-20	7476	-10	-100	235	606	16	357	119	-10	3	-1	20	-30	209	16	372	18	106	2	-1
R96-254 S	19	-20	8769	-10	-100	177	1649	26	28	108	-10	3	-1	25	72	166	14	355	25	105	2	-1
R96-255 S	55	-20	5039	-10	-100	88	756	10	31	85	-10	-1	-1	18	-30	133	3	391	24	31	-1	-1
R96-256 S	-10	-20	7082	-10	-100	86	1104	18	7	13	-10	-1	-1	10	-30	132	51	470	5	51	1	-1
R96-257 S	13	-20	8232	-10	-100	155	1218	22	112	45	-10	-1	-1	23	-30	350	8	595	19	87	2	-1
R96-258 S	14	-20	6945	-10	-100	211	807	11	105	79	-10	-1	2	25	-30	242	6	529	30	30	2	-1
R96-259 S	-10	-20	11466	-10	-100	240	1992	20	30	61	-10	-1	-1	20	-30	224	12	636	27	81	2	2
R96-260 S	87	-20	3337	-10	-100	120	1624	17	23	41	-10	-1	-1	15	-30	79	19	377	15	103	1	-1
R96-261 S	-10	-20	7883	-10	-100	171	517	12	16	29	-10	-1	-1	27	-30	193	6	701	18	135	4	-1
R96-262 S	-10	-20	12904	-10	-100	110	1250	14	13	97	-10	-1	-1	15	-30	137	13	641	14	62	2	-1
R96-263 S	-10	-20	3647	-10	-100	43	66	13	8	21	-10	-1	-1	10	-30	87	56	492	3	34	-1	-1

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R96-264 S	24	-20	7526	-10	-100	258	1806	12	34	132	-10	-1	-1	28	-30	166	8	483	14	40	1	16
R96-265 S	-10	-20	5337	-10	-100	118	2441	15	27	36	-10	-1	-1	14	-30	141	15	542	6	100	4	-1
R96-266 S	-10	-20	7097	-10	-100	155	2871	21	58	530	-10	-1	-1	22	-30	146	22	512	23	107	3	2
R96-267 S	15	-20	3678	-10	-100	300	867	10	16	307	-10	3	-1	29	-30	204	5	438	31	33	1	-1
R96-268 S	-10	-20	4702	-10	-100	224	686	17	21	450	-10	-1	-1	18	-30	156	5	437	26	49	2	-1
R96-269 S	-10	-20	5351	-10	-100	100	653	18	49	106	46	4	-1	13	-30	116	16	495	11	55	1	3
R96-270 S	-10	-20	8118	-10	-100	67	5686	62	31	67	53	2	-1	9	-30	133	74	686	6	63	1	2
R96-271 S	10	-20	5597	-10	-100	178	2751	17	55	237	25	2	-1	19	-30	196	14	448	22	50	2	14
R96-272 S	-10	-20	4747	-10	-100	138	1251	14	42	194	17	-1	-1	15	-30	208	9	580	38	114	2	6
R96-273 S	27	-20	7442	-10	-100	104	1782	12	37	231	-10	2	-1	12	-30	96	24	477	19	74	2	12
R96-274 S	11	-20	7427	-10	-100	95	2984	27	31	57	45	4	-1	17	-30	69	21	562	8	60	2	-1
R96-275 S	18	-20	-3000	-10	-100	64	2760	22	54	163	24	5	-1	8	-30	91	40	504	26	75	1	-1
R96-276 S	-10	-20	3238	-10	-100	167	2612	15	59	153	25	3	-1	20	-30	197	7	768	21	60	1	11
R96-277 S	11	-20	4939	-10	-100	341	1431	23	83	164	32	2	-1	39	-30	130	8	536	38	94	2	-1
R96-278 S	16	-20	3617	-10	-100	289	1858	27	70	114	28	1	-1	19	-30	230	8	541	17	49	2	8
R96-279 S	16	-20	-3000	-10	-100	67	5084	39	88	137	12	2	-1	15	-30	145	16	502	10	38	-1	78
R96-280 S	12	-20	8776	-10	-100	151	3397	45	66	95	51	5	-1	18	-30	111	6	632	10	74	2	8
R96-281 S	-10	-20	3552	-10	-100	182	265	13	31	141	19	4	-1	20	-30	69	12	711	27	80	2	-1
R96-282 S	-10	-20	10314	-10	-100	99	516	17	31	51	11	2	-1	11	-30	125	3	481	8	45	-1	-1
R96-283 S	20	-20	31217	-10	-100	100	1469	44	34	63	38	4	-1	13	-30	130	25	520	10	119	2	-1
R96-284 S	13	-20	14948	-10	-100	76	543	28	94	117	22	4	-1	13	-30	107	42	547	13	126	2	-1
R96-285 S	-10	-20	6211	-10	-100	105	844	28	47	50	18	2	-1	20	-30	107	9	481	7	74	2	-1
R96-286 S	-10	-20	5084	-10	-100	102	656	19	27	109	37	5	-1	18	-30	135	9	598	14	78	1	-1
R96-287 S	-10	-20	7286	-10	-100	112	499	4	23	267	-10	2	-1	8	-30	329	37	397	67	86	-1	-1
R96-288 S	35	-20	4075	-10	-100	74	455	39	60	149	70	9	-1	16	-30	70	116	366	13	106	3	-1
R96-289 S	12	-20	4957	-10	-100	103	1756	32	27	248	22	5	-1	13	-30	76	20	463	13	163	3	-1
R96-290 S	-10	-20	7547	-10	-100	23	6980	36	38	41	62	1	-1	5	-30	73	97	398	3	35	-1	-1
R96-291 S	-10	-20	3767	-10	-100	86	6255	40	54	78	51	3	-1	13	-30	44	107	623	6	76	1	-1
R96-292 S	-10	-20	3107	-10	-100	63	3207	27	74	42	53	5	-1	13	-30	34	87	539	5	50	1	-1
R96-293 S	-10	-20	3901	-10	-100	76	4743	51	50	71	43	4	-1	15	-30	63	73	638	6	68	2	-1
R96-294 S	-10	-20	-3000	-10	-100	110	3489	28	37	92	49	5	-1	32	-30	52	75	695	7	85	2	-1
R96-295 S	-10	-20	3320	-10	-100	52	8530	53	29	38	53	5	-1	11	-30	-30	93	511	3	38	-1	-1
R96-296 S	18	-20	6770	-10	-100	72	4348	21	35	52	22	2	-1	8	-30	72	38	616	4	53	2	-1
R96-297 S	-10	-20	7087	-10	-100	48	9328	82	45	53	77	3	-1	10	-30	86	108	451	4	57	1	-1
R96-298 S	19	-20	7596	-10	-100	88	6716	61	46	125	54	6	-1	13	-30	64	112	654	7	83	2	-1
R96-299 S	37	-20	8449	-10	128	107	2360	72	35	175	71	9	-1	53	-30	65	67	371	11	108	3	-1
R96-300 S	-10	-20	7669	-10	-100	100	1413	25	29	64	20	4	-1	24	-30	120	53	453	5	61	1	-1
R96-301 S	-10	-20	4087	-10	-100	82	1629	10	45	573	12	23	-1	43	-30	148	23	612	13	54	-1	31
R96-302 S	-10	-20	3921	-10	-100	69	5536	41	46	51	30	2	-1	14	-30	-30	91	457	3	35	1	-1
R96-303 S	11	-20	4518	-10	-100	41	1718	15	85	165	46	4	-1	10	-30	62	64	592	13	123	2	-1
R96-304 S	-10	-20	4661	-10	-100	123	1698	13	49	252	13	3	-1	20	-30	-30	20	554	38	149	2	-1
R96-305 S	-10	-20	3862	-10	-100	73	3893	38	23	37	12	2	-1	14	-30	51	99	450	5	55	1	-1

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:
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Values = 999999 are greater than working range of instrument. S.Q.=That element is determined SEMIQUANTITATIVELY.

Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-306 S	-10	-20	6813	-10	-100	127	6848	51	18	55	13	3	-1	8	-30	56	72	604	14	118	1	-1
R96-307 S	-10	-20	8066	-10	-100	127	2813	14	46	75	22	3	-1	15	-30	90	81	719	12	170	3	-1
R96-308 S	31	-20	7301	-10	-100	86	1886	33	53	70	87	2	-1	19	-30	-30	103	323	6	53	2	-1
R96-309 S	-10	-20	6955	-10	-100	18	568	19	23	5	-10	1	-1	-5	-30	139	51	703	2	33	-1	-1
R96-310 S	-10	-20	3934	-10	-100	66	3309	18	41	141	29	3	-1	15	-30	55	90	638	11	105	2	-1
R96-311 S	105	-20	4082	-10	-100	40	7053	85	31	47	200	5	-1	12	-30	-30	145	239	7	71	2	-1
R96-312 S	25	-20	11921	-10	-100	43	9914	85	22	348	78	5	-1	24	-30	72	29	515	7	40	1	-1
R96-313 S	13	-20	12884	-10	-100	71	4046	39	15	181	39	6	-1	16	-30	137	163	491	9	104	1	-1
R96-314 S	-10	-20	3943	-10	-100	65	5319	41	8	136	28	3	-1	17	-30	45	105	572	5	56	1	-1
R96-315 S	22	-20	4709	-10	-100	76	1596	177	38	112	69	8	-1	15	-30	-30	158	520	8	73	1	-1
R96-316 S	16	-20	4045	-10	101	95	1907	73	27	159	34	6	-1	24	-30	-30	159	539	6	78	2	-1
R96-317 S	10	-20	5649	-10	-100	95	697	18	17	564	-10	4	-1	16	-30	97	27	631	23	79	-1	-1
R96-318 S	31	-20	5507	-10	106	134	4580	38	17	134	12	4	-1	19	-30	38	71	509	13	123	4	-1
R96-319 S	-10	-20	5678	-10	-100	86	6419	17	-5	63	-10	4	-1	14	-30	-30	84	543	7	82	2	-1
R96-320 S	-10	-20	4562	-10	-100	76	544	12	7	54	-10	5	-1	12	-30	31	57	519	4	44	1	-1
R96-321 S	-10	-20	4712	-10	-100	112	2433	14	34	274	-10	3	-1	20	-30	83	20	758	30	104	2	3
R96-322 S	-10	-20	4615	-10	-100	132	484	24	17	145	-10	3	-1	25	-30	94	30	698	28	111	2	-1
R96-323 S	-10	-20	5404	-10	-100	87	1084	13	12	58	32	5	-1	13	-30	40	48	713	9	55	2	-1
R96-324 S	32	-20	17901	-10	-100	76	2036	16	20	79	15	4	-1	16	-30	129	53	808	11	125	2	-1
R96-325 S	-10	-20	17003	-10	-100	93	258	7	8	84	-10	3	-1	13	-30	265	17	732	21	47	1	-1
R96-326 S	11	-20	5303	-10	-100	112	174	14	11	29	12	3	-1	10	-30	-30	38	629	3	41	2	-1
R96-327 S	30	-20	5309	-10	143	115	544	45	26	49	37	5	-1	13	-30	32	31	546	3	76	5	-1
R96-329 S	11	-20	6408	-10	-100	54	1607	44	12	163	31	2	-1	6	-30	71	75	530	11	116	1	-1
R96-330 S	30	-20	4726	-10	-100	51	7992	30	11	56	96	4	-1	21	-30	-30	163	534	8	106	2	-1
R96-331 S	-10	-20	-3000	-10	-100	63	1902	44	11	44	26	2	-1	13	44	-30	63	516	4	44	2	-1
R96-332 S	-10	-20	6689	-10	-100	107	2226	13	19	234	-10	2	-1	15	-30	127	38	684	29	89	2	-1
R96-333 S	41	-20	5100	-10	-100	84	1436	60	40	201	11	2	-1	24	-30	-30	31	606	28	196	3	-1
R96-334 S	19	-20	-3000	-10	-100	63	5605	30	14	31	26	6	-1	11	41	-30	50	420	5	102	2	-1
R96-335 S	19	-20	4652	-10	-100	94	443	35	12	33	54	3	3	18	-30	43	54	461	3	45	2	-1
R96-336 S	-10	-20	-3000	-10	-100	64	1037	15	10	56	22	2	-1	20	-30	-30	69	537	3	31	1	-1
R96-337 S	-10	-20	-3000	-10	-100	87	1734	25	7	72	13	4	-1	14	-30	40	44	638	6	114	2	-1
R96-338 S	44	-20	6357	-10	-100	161	3516	89	98	2549	88	4	-1	31	-30	99	72	695	74	237	2	-1
R96-339 S	-10	-20	3886	-10	-100	193	358	8	8	195	-10	1	-1	23	-30	142	12	651	10	18	-1	-1
R96-340 S	-10	-20	22327	-10	113	85	6246	42	28	163	22	6	-1	32	-30	299	136	1044	28	295	4	-1
R96-341 S	-10	-20	3211	-10	-100	62	888	22	12	56	-10	-1	-1	10	-30	-30	32	462	4	23	1	-1
R96-342 S	12	-20	7598	-10	-100	69	6504	65	27	62	30	2	-1	12	-30	87	63	526	5	102	2	-1
R96-343 S	12	-20	4833	-10	-100	56	4218	60	22	62	21	3	-1	10	-30	-30	67	615	2	54	1	-1
R96-344 S	-10	-20	6096	-10	-100	60	7666	55	7	61	16	3	-1	6	-30	111	123	638	7	67	-1	-1
R96-345 S	-10	-20	3761	-10	-100	83	1396	31	19	155	22	2	-1	20	-30	52	26	686	14	47	1	-1
R96-346 S	-10	-20	4582	-10	-100	92	1867	23	20	121	15	3	-1	18	-30	46	11	742	44	109	2	-1
R96-347 S	-10	-20	-3000	-10	-100	60	410	20	15	100	-10	-1	-1	10	-30	-30	22	502	14	33	1	-1
R96-348 S	-10	-20	19422	-10	-100	308	980	24	46	868	-10	2	-1	38	-30	664	21	1354	23	36	1	3

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:

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Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-349 S	-10	-20	9397	-10	-100	293	350	12	11	141	-10	3	-1	25	-30	100	6	658	19	47	2	-1
R96-350 S	-10	-20	11441	-10	-100	274	304	11	12	93	-10	-1	-1	36	-30	252	2	2043	14	17	-1	-1
R96-351 S	-10	-20	6638	-10	-100	116	1886	6	18	371	-10	1	-1	11	-30	135	21	682	20	36	1	-1
R96-352 S	12	-20	4029	-10	-100	99	1137	22	11	41	15	2	-1	12	-30	-30	27	481	4	24	2	-1
R96-353 S	22	-20	8168	-10	-100	116	1149	12	30	280	-10	2	-1	12	-30	84	34	596	31	99	1	-1
R96-354 S	70	-20	7574	-10	-100	78	4408	47	55	198	-10	2	-1	17	-30	102	23	718	30	175	2	-1
R96-355 S	16	-20	3048	-10	-100	86	3169	34	24	49	-10	2	-1	14	-30	-30	11	479	9	53	-1	-1
R96-356 S	71	-20	5458	-10	-100	102	4592	42	25	62	11	1	-1	13	-30	72	16	530	9	87	2	-1
R96-357 S	34	-20	10152	-10	-100	85	3480	51	63	204	-10	2	-1	28	-30	164	6	918	48	167	1	-1
R96-358 S	23	-20	7232	-10	-100	111	1781	17	26	120	-10	3	-1	13	-30	89	9	770	33	110	1	-1
R96-359 S	40	-20	6943	-10	-100	68	3272	18	20	41	-10	5	-1	10	-30	43	9	556	7	59	1	-1
R96-360 S	29	-20	3419	-10	-100	71	3251	22	15	41	11	2	-1	11	-30	52	27	534	7	48	1	-1
R96-361 S	19	-20	5894	-10	-100	176	2296	12	31	198	21	2	-1	25	-30	228	2	881	24	82	1	-1
R96-362 S	15	-20	4733	-10	-100	138	3532	25	15	66	15	-1	-1	19	-30	37	21	618	9	96	2	-1
R96-363 S	22	-20	4574	-10	-100	128	282	30	19	98	14	2	-1	15	-30	43	15	616	15	108	3	-1
R96-364 S	-10	-20	5599	-10	-100	108	892	18	11	105	16	2	-1	15	-30	-30	10	647	28	108	2	-1
R96-365 S	10	-20	9611	-10	-100	88	539	10	19	261	-10	3	-1	15	-30	43	7	685	33	54	-1	-1
R96-366 S	-10	-20	3666	-10	-100	72	776	28	16	95	-10	1	-1	12	-30	-30	11	602	11	36	-1	-1
R96-367 S	12	-20	4455	-10	-100	33	1626	62	18	111	19	1	-1	8	-30	48	28	528	5	41	-1	-1
R96-368 S	-10	-20	12834	-10	-100	156	1302	23	36	183	12	-1	-1	20	-30	164	19	788	30	107	2	-1
R96-369 S	15	-20	45069	-10	-100	102	1726	24	33	104	35	3	-1	7	-30	245	30	930	30	70	-1	-1
R96-370 S	19	-20	36776	-10	-100	114	2442	25	67	279	-10	-1	-1	12	-30	420	11	951	45	93	-1	-1
R96-371 S	22	-20	9966	-10	-100	132	1754	13	58	663	-10	-1	-1	40	-30	210	20	1241	30	66	-1	-1
R96-372 S	-10	-20	4864	-10	-100	123	311	24	6	84	-10	3	-1	13	-30	73	10	542	10	75	2	-1
R96-373 S	-10	-20	3777	-10	-100	86	2835	28	10	51	20	2	-1	12	-30	55	6	568	8	51	1	-1
R96-374 S	-10	-20	3874	-10	-100	96	424	36	7	68	-10	2	-1	12	-30	111	17	608	10	107	2	-1
R96-375 S	20	-20	6590	-10	-100	89	2761	32	9	70	14	3	-1	13	-30	40	13	531	13	78	2	-1
R96-376 S	22	-20	5755	-10	-100	91	2499	21	23	81	33	-1	-1	12	-30	114	16	720	16	112	2	-1
R96-377 S	-10	-20	4933	-10	-100	89	3198	28	20	67	36	4	-1	15	-30	73	6	520	13	88	1	-1
R96-378 S	24	-20	4650	-10	-100	67	1746	25	23	121	-10	3	-1	9	-30	66	45	604	30	125	-1	-1
R96-379 S	22	-20	5179	-10	-100	83	1344	15	19	79	-10	2	2	13	-30	37	15	556	20	61	-1	-1
R96-380 S	20	-20	6687	-10	-100	88	4504	49	22	69	58	2	-1	12	-30	-30	25	567	8	75	2	-1
R96-381 S	13	-20	10934	-10	-100	156	2198	32	12	65	31	3	-1	23	-30	116	5	786	22	123	3	-1
R96-382 S	-10	-20	5719	-10	-100	244	968	16	26	130	13	1	-1	26	-30	131	9	905	46	102	2	-1
R96-383 S	16	-20	10346	-10	-100	62	2582	20	21	56	34	1	-1	11	-30	97	1	603	14	55	-1	-1
R96-384 S	22	-20	6166	-10	-100	80	3932	37	14	41	12	2	-1	12	-30	62	28	644	6	62	1	-1
R96-385 S	19	-20	5549	-10	-100	101	2045	29	15	57	53	1	-1	18	-30	111	7	554	17	135	2	-1
R96-386 S	81	-20	6811	-10	-100	98	985	60	21	67	30	4	-1	14	-30	43	51	498	16	135	3	-1
R96-387 S	17	-20	17078	29	155	58	10830	147	62	114	33	3	-1	29	-30	212	3	3185	25	79	-1	-1
R96-388 S	19	-20	4446	-10	-100	217	377	5	19	188	-10	-1	-1	29	-30	178	4	682	48	63	1	-1
R96-389 S	14	-20	4763	-10	-100	77	1970	30	10	44	15	3	-1	12	-30	41	20	566	8	64	1	-1
R96-390 S	-10	-20	6259	-10	-100	54	2678	27	19	86	36	1	-1	14	-30	34	4	673	7	41	-1	-1

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R96-391 S	-10	-20	-3000	-10	-100	62	2082	13	7	51	-10	2	-1	10	-30	-30	3	453	7	21	-1	-1
R96-392 S	-10	-20	5601	-10	-100	83	836	28	17	147	-10	2	-1	18	-30	254	6	742	30	60	-1	-1
R96-393 S	21	-20	4920	-10	-100	78	1818	23	22	248	30	3	-1	11	-30	63	8	472	33	96	1	-1
R96-394 S	11	-20	-3000	-10	-100	56	553	23	11	621	-10	2	-1	16	-30	74	10	615	21	112	1	-1
R96-395 S	13	-20	4621	-10	-100	160	2203	22	36	93	22	2	-1	26	-30	130	3	609	30	111	1	-1
R96-396 S	13	-20	14027	-10	-100	190	3522	46	40	298	30	4	2	29	-30	119	13	711	19	40	-1	-1
R96-397 S	-10	-20	-3000	-10	-100	63	1229	23	21	104	-10	1	-1	12	-30	43	3	566	20	85	-1	-1
R96-398 S	11	-20	10105	-10	-100	76	4145	24	26	67	41	2	-1	11	-30	58	13	456	8	69	-1	-1
R96-399 S	22	-20	7829	-10	-100	59	3855	29	25	202	-10	1	-1	12	-30	137	15	545	12	77	-1	-1
R96-400 S	14	-20	4779	-10	-100	71	2084	24	33	91	19	2	-1	10	-30	141	-1	477	21	74	-1	-1
R96-401 S	-10	-20	6666	-10	-100	185	861	20	27	81	-10	1	-1	18	-30	126	3	533	29	161	3	-1
R96-402 S	12	-20	6854	-10	-100	140	1465	22	19	57	18	2	-1	14	-30	112	1	448	9	137	3	-1
R96-403 S	20	-20	6309	-10	-100	78	1820	36	10	24	-10	1	-1	8	47	95	7	342	6	95	2	-1
R96-404 S	19	-20	53596	-10	-100	417	1185	22	40	62	-10	1	-1	26	-30	259	-1	3179	19	23	1	-1
R96-405 S	31	-20	5071	-10	-100	86	3818	39	35	50	28	2	-1	10	51	92	29	517	11	61	1	-1
R96-406 S	17	-20	4818	-10	-100	74	822	30	22	128	-10	4	-1	11	-30	145	17	528	29	180	1	-1
R96-407 S	-10	-20	3963	-10	-100	69	2413	20	15	50	13	-1	-1	14	-30	83	40	393	5	32	-1	-1
R96-408 S	21	-20	4479	-10	-100	49	1168	21	20	98	-10	2	-1	13	-30	78	6	502	8	37	-1	-1
R96-409 S	20	-20	3906	-10	-100	99	2072	14	21	50	-10	2	-1	10	-30	104	5	378	12	87	1	-1
R96-410 S	30	-20	4633	-10	-100	204	554	6	34	140	-10	2	-1	20	-30	325	5	1107	17	18	-1	-1
R96-411 S	39	-20	6075	-10	-100	107	2834	23	27	47	12	-1	-1	9	-30	114	3	489	14	78	2	-1
R96-412 S	17	-20	11748	-10	-100	107	5991	21	18	41	46	2	-1	12	-30	132	3	411	8	65	2	-1
R96-413 S	32	-20	29191	-10	-100	103	2060	21	36	87	-10	3	-1	8	-30	227	9	727	25	104	1	-1
R96-414 S	32	-20	6478	-10	-100	130	1288	14	62	197	-10	2	-1	16	-30	210	7	988	51	59	1	-1
R96-415 S	23	-20	5066	-10	-100	67	8527	25	19	37	132	3	-1	8	-30	121	11	468	12	77	2	-1
R96-416 S	-10	-20	3680	-10	-100	57	5874	26	10	21	35	1	-1	9	-30	127	41	476	6	77	2	-1
R96-417 S	21	-20	3871	-10	-100	115	1136	40	12	52	-10	1	-1	9	-30	62	8	532	9	111	3	-1
R96-418 S	-10	-20	-3000	-10	-100	71	2720	14	9	15	-10	2	-1	6	-30	62	28	385	3	25	1	-1
R96-419 S	15	-20	6115	-10	-100	458	1868	23	71	163	-10	2	-1	35	56	292	14	1315	46	58	2	-1
R96-420 S	22	-20	3708	-10	-100	72	2569	12	18	28	53	2	-1	7	-30	55	21	400	10	71	2	-1
R96-421 S	33	-20	6724	-10	-100	113	3881	25	54	84	-10	3	-1	12	-30	161	6	523	32	68	-1	-1
R96-422 S	28	-20	5514	-10	-100	164	5935	25	38	79	63	3	-1	15	-30	145	10	671	26	78	1	-1
R96-423 S	31	-20	4131	-10	-100	81	2559	28	18	56	-10	1	-1	15	-30	113	10	588	21	101	2	-1
R96-424 S	42	-20	4031	-10	-100	83	2972	23	22	46	-10	2	-1	8	-30	88	33	408	14	96	2	-1
R96-425 S	20	-20	4329	-10	-100	121	2413	27	25	52	-10	-1	-1	13	-30	104	10	378	12	84	1	-1
R96-426 S	27	-20	3059	-10	-100	125	2350	15	32	80	-10	1	-1	11	-30	110	5	487	25	72	-1	-1
R96-427 S	24	-20	-3000	-10	-100	117	2208	18	27	58	-10	2	-1	11	-30	103	4	600	14	58	1	-1
R96-428 S	18	-20	5541	-10	-100	70	6761	33	21	35	16	3	-1	10	-30	99	5	348	10	52	-1	-1
R96-429 S	45	-20	-3000	-10	-100	105	2523	24	55	86	-10	2	-1	12	-30	90	12	503	37	84	-1	-1
R96-430 S	28	-20	3384	-10	-100	141	2187	14	45	107	-10	1	-1	11	-30	139	10	610	34	101	-1	-1
R96-431 S	27	-20	4202	-10	-100	158	2625	15	43	72	-10	2	2	15	-30	114	3	418	25	72	1	-1
R96-432 S	26	-20	7061	-10	-100	234	252	3	22	105	-10	2	-1	13	-30	276	13	2265	10	20	-1	-1

Enzyme Leach Job #: 11114 Report#11196 Customer: RAGNAR BRUASET &ASSOCIATES Geologist:RAGNAR BRUASET Customer's Job #:
Trace Element Values Are in Parts Per Billion. Negative Values Equal Not Detected at That Lower Limit.
Values = 999999 are greater than working range of instrument. S.Q.=That element is determined SEMIQUANTITATIVELY.

Sample ID:	S.Q.Li	S.Q.Be	S.Q.Cl	S.Q.Sc	S.Q.Ti	V	Mn	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Rb	Sr	Y	Zr	Nb	Mo
R96-433 S	12	-20	-3000	-10	-100	70	3822	27	17	41	12	4	-1	9	-30	81	5	404	7	28	-1	-1
R96-434 S	24	-20	-3000	-10	-100	95	2313	26	32	84	13	2	-1	11	-30	152	12	553	26	65	-1	-1
R96-435 S	32	-20	-3000	-10	-100	56	2311	21	15	26	18	-1	-1	8	-30	92	22	349	7	61	1	-1
R96-436 S	52	-20	3317	-10	-100	124	2699	38	27	77	14	3	-1	10	-30	150	33	469	29	195	3	-1
R96-437 S	20	-20	7172	-10	-100	135	3439	12	18	129	-10	-1	-1	10	-30	178	69	659	36	162	2	-1
R96-438 S	33	-20	5243	-10	-100	199	1262	29	31	141	-10	3	-1	14	-30	251	16	1148	47	40	-1	-1
R96-439 S	42	-20	-3000	-10	-100	98	1614	10	19	86	-10	1	-1	7	-30	136	20	584	18	114	1	-1
R96-440 S	11	-20	-3000	-10	-100	174	3745	20	25	46	34	2	-1	15	-30	120	14	539	14	113	3	-1
R96-441 S	29	-20	6203	-10	-100	198	177	4	24	102	-10	2	-1	23	-30	317	11	1347	25	25	-1	-1
R96-442 S	45	-20	12254	24	-100	307	7322	31	55	91	70	3	-1	20	-30	287	22	1387	37	263	4	21
R96-443 S	-10	-20	17831	-10	123	140	8984	53	44	51	-10	2	-1	34	-30	103	15	1206	24	178	5	-1
R96-444 S	15	-20	4834	-10	-100	169	3522	16	50	89	24	1	-1	16	-30	174	4	691	17	51	-1	3
R96-445 S	42	-20	5778	-10	-100	117	2892	16	29	50	-10	3	-1	9	-30	154	12	808	15	84	-1	-1
R96-446 S	60	-20	-3000	-10	-100	86	5812	39	26	46	11	2	-1	9	-30	133	12	786	14	101	1	-1
R96-447 S	61	-20	5159	-10	-100	130	5483	22	43	65	69	2	-1	13	-30	133	13	733	21	110	2	-1
R96-448 S	33	-20	3459	-10	-100	102	3843	19	80	96	17	-1	2	15	-30	175	4	769	20	136	2	-1
R96-449 S	24	-20	3851	-10	-100	103	1832	16	55	266	-10	3	-1	20	-30	259	3	1069	33	117	1	-1
R96-450 S	-10	-20	3574	-10	-100	122	2524	17	21	58	37	2	-1	8	-30	141	10	1626	28	210	3	-1
R96-451 S	-10	-20	4731	-10	-100	76	18667	55	22	34	19	5	-1	-5	-30	117	21	865	10	79	1	-1
R96-452 S	72	-20	-3000	-10	-100	111	8422	111	142	46	39	4	-1	8	-30	103	69	921	21	230	3	-1
R96-453 S	72	-20	3645	-10	-100	101	4177	30	29	44	33	4	-1	9	-30	90	36	609	15	212	4	-1
R96-454 S	24	-20	-3000	-10	-100	121	3750	17	18	28	53	5	-1	8	-30	107	39	520	8	168	4	-1
R96-455 S	-10	-20	6380	-10	-100	88	8373	27	7	71	-10	2	-1	6	-30	127	43	677	19	106	-1	-1
R96-456 S	68	-20	33228	-10	116	110	4465	84	36	74	38	7	-1	11	-30	271	29	925	20	214	5	-1
R96-457 S	46	-20	6399	-10	-100	154	5338	34	55	102	42	3	-1	10	-30	139	22	782	34	176	2	-1
R96-458 S	27	-20	4479	-10	-100	102	4735	53	38	44	32	3	-1	13	-30	79	17	632	10	132	3	-1
R96-459 S	15	-20	4608	-10	-100	185	3850	23	39	131	-10	-1	-1	30	-30	200	6	531	16	19	-1	-1
R96-460 S	-10	-20	7263	-10	-100	270	2475	12	65	152	25	4	-1	28	-30	238	2	661	24	48	1	-1
R96-461 S	15	-20	5903	-10	-100	211	3483	12	32	92	44	-1	-1	20	-30	198	5	693	20	57	1	-1
R96-462 S	24	-20	4063	-10	-100	93	1204	10	24	52	-10	2	-1	11	-30	112	22	779	20	103	-1	-1
R96-463 S	140	-20	6430	-10	-100	112	8408	98	91	144	17	2	-1	17	-30	92	12	836	32	370	3	-1
R96-464 S	20	-20	5665	-10	-100	93	3187	14	37	36	-10	-1	-1	11	-30	120	6	880	9	41	-1	-1
R96-465 S	32	-20	7692	-10	-100	211	2239	27	44	107	-10	3	-1	25	-30	285	5	1106	25	78	1	-1
R96-466 S	14	-20	4890	-10	-100	65	2513	31	33	97	16	2	-1	12	-30	123	1	777	20	57	-1	-1
R96-467 S	19	-20	6641	-10	-100	82	2036	45	17	38	14	3	3	20	-30	143	6	862	6	79	1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W
R96-1 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	37	3	2597	8	16	4	14	3	1	3	1	3	-1	1	-1	2	-1	3	-1	1
R96-2 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	37	1	1258	4	10	2	5	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	2	-1	1
R96-3 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	49	7	978	4	10	2	7	1	-1	2	-1	1	-1	-1	-1	1	-1	2	-1	-1
R96-4 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	9	2	109	11	465	3	8	2	5	1	-1	1	-1	1	-1	-1	-1	1	-1	2	-1	5
R96-5 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	2	36	4	1358	3	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	4
R96-6 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	30	4	1173	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	1
R96-7 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	28	-1	1571	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-8 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	108	5	803	16	31	6	27	5	2	8	1	6	2	3	-1	4	-1	3	-1	-1
R96-9 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	44	-1	1519	5	12	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-10 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	1	53	-1	1318	7	11	3	13	3	1	4	-1	4	-1	1	-1	2	-1	2	-1	-1
R96-11 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	39	-1	1162	4	9	2	5	-1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-12 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	15	-1	35	67	1433	4	13	2	7	2	-1	2	-1	3	-1	-1	-1	1	-1	5	-1	-1
R96-13 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	31	2	1150	6	14	2	9	2	1	3	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-14 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	1	30	1	1538	5	10	2	8	2	-1	2	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-15 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	33	2	1572	7	18	3	13	3	1	4	-1	3	-1	2	-1	2	-1	3	-1	-1
R96-16 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	28	-1	1689	3	8	1	5	1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-17 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	1	58	-1	1349	12	24	4	18	3	1	5	-1	4	-1	1	-1	2	-1	2	-1	-1
R96-18 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	11	-1	160	2	1032	13	16	5	27	6	2	8	1	8	2	4	-1	4	1	2	-1	-1
R96-19 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	54	3	820	5	10	2	8	2	-1	2	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-20 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	32	-1	1396	7	15	2	10	2	1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-22 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	32	10	1558	3	5	1	4	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	1
R96-23 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	35	2	924	4	10	1	5	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-24 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	43	1	1041	7	13	2	11	2	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-25 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	54	-1	911	3	7	1	5	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-26 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	30	-1	1599	4	10	2	6	1	-1	2	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-27 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	41	-1	1133	7	12	2	11	2	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-28 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	27	-1	1393	3	7	1	4	1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-29 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	46	-1	1433	9	20	4	16	3	1	5	-1	4	-1	1	-1	2	-1	2	-1	-1
R96-30 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	11	-1	29	2	860	3	7	-1	4	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	-1	2
R96-31 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	1	35	-1	1566	5	12	2	10	3	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-32 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	22	-1	1457	3	8	1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-33 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	2	1455	3	8	-1	4	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-34 S	-1	-1	1	-0.2	-0.2	-0.2	-1	9	1	91	-1	1135	11	23	5	22	5	1	7	1	6	1	3	-1	3	-1	2	-1	-1
R96-35 S	-1	-1	-1	-0.2	0.2	-0.2	-1	7	-1	79	2	976	10	16	4	18	4	1	6	-1	5	1	2	-1	3	-1	3	-1	-1
R96-36 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	13	1572	3	8	-1	4	1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-37 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	17	2	911	2	5	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-38 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	30	5	1210	2	4	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2
R96-39 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	24	-1	1158	4	10	1	6	-1	-1	2	-1	2	-1	-1	-1	-1	-1	-1	-1	-1
R96-40 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	83	2	822	7	16	3	13	3	1	5	-1	4	-1	2	-1	2	-1	2	-1	3
R96-41 S	-1	-1	-1	-0.2	0.4	-0.2	-1	12	-1	35	-1	1346	5	16	2	8	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	2
R96-42 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	25	-1	1140	3	7	-1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1
R96-43 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	1	112	-1	804	5	9	2	10	2	-1	3	-1	3	-1	1	-1	1	-1	-1	-1	-1

Enzyme Leach Job #: 11114 Repo
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Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
R96-44 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	73	2	2242	17	26	6	32	7	2	10	1	9
R96-45 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	30	-1	1264	2	5	-1	3	-1	-1	1	-1	-1
R96-46 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	36	1	1623	5	11	2	8	2	-1	2	-1	2
R96-47 S	-1	-1	2	-0.2	-0.2	-0.2	-1	5	-1	52	-1	2596	10	28	4	19	5	2	5	-1	5
R96-48 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	34	-1	2234	5	11	2	7	2	1	2	-1	2
R96-49 S	-1	-1	-1	-0.2	-0.2	-0.2	1	9	-1	117	-1	816	7	17	3	15	3	1	4	-1	4
R96-50 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	49	1	2075	8	17	3	15	3	1	4	-1	4
R96-51 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	29	1	1601	4	8	1	6	1	-1	2	-1	2
R96-53 S	-1	-1	-1	-0.2	-0.2	-0.2	2	4	-1	80	2	2068	10	15	4	19	4	2	5	-1	5
R96-54 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	1	35	2	1677	8	15	3	14	3	2	5	-1	4
R96-55 S	-1	-1	-1	-0.2	-0.2	-0.2	2	5	-1	69	1	1267	6	8	2	10	2	-1	3	-1	3
R96-56 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	39	-1	434	4	7	1	6	1	-1	2	-1	1
R96-57 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	34	-1	2043	4	7	1	6	1	-1	2	-1	2
R96-58 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	32	-1	1808	4	11	1	7	1	-1	2	-1	2
R96-59 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	28	-1	1048	4	8	1	6	1	-1	2	-1	1
R96-60 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	39	-1	1610	6	10	2	12	3	1	3	-1	3
R96-61 S	-1	-1	1	-0.2	-0.2	-0.2	-1	8	-1	95	-1	1839	17	34	6	29	6	2	8	1	7
R96-62 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	34	26	1852	5	12	2	7	2	-1	2	-1	2
R96-63 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	3	34	38	1910	5	13	2	6	2	-1	2	-1	2
R96-64 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	64	3	1582	6	13	2	9	2	-1	2	-1	2
R96-65 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	35	3	1600	6	16	2	7	1	-1	2	-1	2
R96-66 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	35	2	1249	6	13	2	7	-1	-1	2	-1	-1
R96-67 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	2	2355	4	12	1	6	-1	-1	2	-1	1
R96-68 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	1644	5	17	2	7	2	-1	2	-1	2
R96-69 S	-1	-1	-1	-0.2	1.6	-0.2	-1	3	-1	24	-1	2034	3	11	1	5	-1	-1	2	-1	1
R96-70 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	795	5	14	2	6	1	-1	2	-1	1
R96-71 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	28	1	824	9	21	2	8	2	-1	2	-1	2
R96-72 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	21	-1	1032	3	9	1	4	-1	-1	-1	-1	-1
R96-73 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	33	-1	1115	4	12	1	4	-1	-1	2	-1	1
R96-74 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	24	-1	1200	3	8	1	5	1	-1	1	-1	-1
R96-75 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	1	54	-1	1801	10	17	4	16	4	2	5	-1	4
R96-76 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	50	-1	1022	5	7	2	9	2	-1	3	-1	2
R96-77 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	69	4	1820	10	26	4	18	4	2	5	-1	4
R96-78 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	36	19	1377	2	5	-1	3	-1	-1	-1	-1	-1
R96-79 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	37	49	1577	5	14	2	8	2	-1	2	-1	2
R96-80 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	34	-1	923	3	9	-1	4	-1	-1	1	-1	1
R96-81 S	-1	-1	-1	-0.2	0.7	-0.2	-1	-1	1	22	2	1630	2	5	-1	3	-1	-1	-1	-1	-1
R96-82 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	70	-1	2997	9	39	4	17	4	2	5	-1	4
R96-83 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	33	-1	1668	5	14	2	7	2	-1	2	-1	2
R96-84 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	45	-1	1469	4	14	1	6	2	-1	2	-1	1
R96-85 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	30	-1	1177	4	9	1	5	1	-1	-1	-1	1
R96-86 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	-1	1042	6	12	2	9	2	-1	3	-1	2

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R96-87 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	37	-1	1254	5	11	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-88 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	15	-1	1134	2	4	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-89 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	21	-1	993	4	13	2	6	1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-90 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	34	-1	553	23	28	8	38	7	3	11	2	9	2	4	-1	4	-1	2	-1	-1
R96-91 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	23	-1	981	6	14	2	10	3	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-92 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	20	-1	565	2	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-93 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	57	-1	555	3	8	1	6	1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	1
R96-94 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	20	-1	1054	2	9	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-95 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	52	-1	1786	9	18	4	18	4	1	6	-1	5	-1	2	-1	3	-1	3	-1	-1
R96-96 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	22	-1	1308	5	16	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	1
R96-97 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	20	-1	1219	2	8	1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-98 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	20	-1	669	2	8	-1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-99 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	25	-1	1093	3	8	-1	4	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-100 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	68	-1	2314	10	26	4	16	3	1	4	-1	4	-1	2	-1	2	-1	4	-1	2
R96-101 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	2	1419	2	7	-1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-102 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	40	4	2224	3	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-103 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	45	1	1179	3	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-104 S	-1	-1	-1	-0.2	0.4	-0.2	-1	2	1	34	-1	1085	2	6	-1	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-105 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	24	-1	1284	5	14	2	7	1	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-106 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	19	-1	137	11	25	3	15	2	-1	2	-1	2	-1	-1	-1	-1	-1	-1	-1	-1
R96-107 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	-1	1486	3	8	1	5	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-108 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	33	-1	1589	8	14	3	15	3	1	6	-1	4	-1	2	-1	2	-1	3	-1	-1
R96-109 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	2	39	2	1543	9	12	3	17	4	2	5	-1	4	-1	2	-1	2	-1	2	-1	1
R96-110 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	28	-1	1282	5	10	2	9	2	-1	2	-1	2	-1	1	-1	1	-1	-1	-1	1
R96-111 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1104	5	10	2	8	1	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-112 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	39	-1	1469	8	15	3	15	4	1	5	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-113 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	45	-1	1302	13	28	5	24	4	2	6	-1	5	-1	2	-1	2	-1	2	-1	-1
R96-114 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	106	-1	1949	10	34	4	19	4	1	6	-1	4	-1	2	-1	3	-1	4	-1	-1
R96-115 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	31	-1	2282	7	25	3	13	3	-1	4	-1	3	-1	1	-1	1	-1	3	-1	-1
R96-116 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	31	-1	1465	9	22	3	14	3	1	5	-1	3	-1	2	-1	2	-1	2	-1	-1
R96-117 S	-1	-1	-1	0.4	-0.2	-0.2	1	20	-1	35	6	2413	5	18	2	9	2	-1	3	-1	2	-1	-1	-1	1	-1	4	-1	1
R96-118 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	43	-1	1278	5	14	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	5	-1	-1
R96-119 S	-1	-1	-1	-0.2	-0.2	-0.2	2	-1	-1	24	2	1612	4	9	1	4	1	-1	1	-1	-1	-1	-1	-1	-1	-1	2	-1	1
R96-120 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	1208	2	4	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-121 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	47	-1	1407	11	17	4	20	5	2	6	-1	5	-1	2	-1	3	-1	4	-1	-1
R96-122 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	1439	8	16	3	16	3	1	5	-1	4	-1	2	-1	1	-1	3	-1	-1
R96-123 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	26	-1	876	4	9	1	6	2	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-124 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	57	-1	819	7	12	3	12	3	-1	4	-1	3	-1	2	-1	2	-1	2	-1	-1
R96-125 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	1	72	-1	877	5	9	2	9	2	-1	3	-1	2	-1	-1	-1	1	-1	1	-1	1
R96-126 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	78	-1	1031	6	17	3	12	2	-1	4	-1	3	-1	1	-1	2	-1	3	-1	2
R96-127 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	56	-1	1874	7	14	3	13	3	1	4	-1	3	-1	2	-1	2	-1	3	-1	-1
R96-128 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	62	-1	1719	10	15	4	19	5	2	5	-1	5	-1	2	-1	3	-1	4	-1	-1

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R96-129 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	46	-1	1709	9	17	3	17	4	2	5	-1	4	-1	2	-1	2	-1	4	-1	-1
R96-130 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	30	-1	1642	3	9	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-131 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	49	-1	1216	4	11	1	6	1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-132 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	1	59	-1	1158	7	19	3	13	3	-1	4	-1	3	-1	1	-1	2	-1	2	-1	2
R96-133 S	-1	-1	-1	0.4	-0.2	-0.2	3	7	1	114	1	828	8	14	3	13	2	-1	4	-1	3	-1	1	-1	2	-1	2	-1	7
R96-134 S	-1	-1	-1	-0.2	-0.2	-0.2	1	10	1	110	2	806	6	12	2	9	2	-1	3	-1	2	-1	1	-1	1	-1	-1	-1	9
R96-135 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	1	65	-1	1081	6	13	3	11	2	-1	3	-1	3	-1	1	-1	1	-1	2	-1	2
R96-136 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	1	73	-1	618	7	8	3	11	2	-1	3	-1	3	-1	1	-1	1	-1	-1	-1	1
R96-137 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	57	2	1057	10	19	3	16	4	1	5	-1	4	-1	2	-1	2	-1	3	-1	2
R96-138 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	41	-1	1118	7	20	3	11	2	-1	3	-1	2	-1	1	-1	1	-1	3	-1	2
R96-139 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	37	-1	1217	7	18	3	11	2	1	3	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-140 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	41	-1	1781	3	9	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-141 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	37	-1	729	2	5	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-142 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	40	-1	1212	3	11	1	5	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1
R96-143 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	38	-1	1291	2	8	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-144 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	41	-1	1137	2	4	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-149 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	18	-1	1383	3	8	-1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-153 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	1	101	-1	1107	9	19	3	16	3	1	5	-1	4	-1	2	-1	2	-1	2	-1	1
R96-155 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	40	-1	1276	7	16	3	11	2	-1	4	-1	3	-1	-1	-1	1	-1	2	-1	-1
R96-158 S	-1	-1	2	-0.2	-0.2	-0.2	-1	6	2	95	-1	1329	32	46	13	63	14	4	19	3	16	3	7	1	9	2	7	-1	-1
R96-160 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	143	-1	811	12	19	5	23	5	2	7	-1	6	1	2	-1	3	-1	3	-1	-1
R96-164 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	36	2	1833	3	7	1	5	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-166 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	75	4	1543	13	23	5	23	5	2	6	-1	6	-1	3	-1	3	-1	4	-1	-1
R96-169 S	-1	-1	-1	-0.2	-0.2	-0.2	2	3	-1	55	6	1015	17	30	6	26	6	2	7	1	6	1	3	-1	3	-1	6	-1	2
R96-171 S	-1	-1	-1	-0.2	-0.2	-0.2	1	5	-1	68	1	1538	9	21	4	18	4	1	5	-1	4	-1	2	-1	2	-1	3	-1	-1
R96-174 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	63	-1	1276	7	16	3	12	2	-1	3	-1	2	-1	-1	-1	1	-1	3	-1	-1
R96-176 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	41	-1	759	10	21	4	19	4	1	5	-1	5	-1	2	-1	3	-1	6	-1	-1
R96-179 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	47	4	1548	7	12	3	11	3	1	3	-1	3	-1	1	-1	1	-1	3	-1	1
R96-181 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	63	2	906	7	16	3	11	3	-1	3	-1	3	-1	1	-1	1	-1	3	-1	1
R96-184 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	67	1	1334	8	19	3	15	3	1	4	-1	4	-1	1	-1	1	-1	3	-1	-1
R96-186 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	40	2	1728	10	24	4	17	3	1	4	-1	4	-1	1	-1	2	-1	3	-1	-1
R96-189 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	176	-1	956	15	22	6	29	6	2	8	1	8	1	3	-1	4	-1	3	-1	-1
R96-191 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	46	-1	2245	10	19	4	18	3	2	5	-1	5	-1	2	-1	2	-1	3	-1	-1
R96-192 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	34	-1	1334	3	8	1	5	1	-1	2	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-197 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	25	-1	1601	4	9	1	6	1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-200 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	61	1	2270	14	16	5	24	5	2	7	-1	5	1	2	-1	2	-1	4	-1	-1
R96-202 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	29	1	819	5	6	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-205 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	50	1	1259	5	9	2	7	1	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-207 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	47	-1	1774	6	15	2	9	2	-1	2	-1	2	-1	-1	-1	1	-1	3	-1	1
R96-209 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	49	1	1686	3	8	1	4	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-210 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	32	1	1868	2	5	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-212 S	-1	-1	1	-0.2	0.8	-0.2	-1	3	-1	162	-1	1535	14	39	6	25	5	2	7	1	7	1	3	-1	4	-1	8	-1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W
R96-215 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	65	7	1890	7	18	2	10	2	-1	3	-1	2	-1	1	-1	1	-1	3	-1	-1
R96-217 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	46	1	1351	10	19	3	16	4	1	4	-1	3	-1	1	-1	2	-1	3	-1	-1
R96-220 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	53	2	2339	7	15	3	13	3	2	4	-1	3	-1	2	-1	2	-1	3	-1	-1
R96-222 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	51	30	1160	5	14	2	8	2	-1	2	-1	2	-1	-1	-1	1	-1	3	-1	2
R96-226 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	28	-1	1870	3	8	2	7	1	-1	2	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-227 S	-1	-1	-1	-0.2	-0.2	-0.2	1	1	-1	29	2	1375	3	8	1	4	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	2	-1	2
R96-228 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	30	-1	1115	6	18	3	11	2	-1	3	-1	3	-1	-1	-1	1	-1	3	-1	2
R96-229 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	41	-1	597	8	23	3	13	3	-1	4	-1	3	-1	1	-1	2	-1	3	-1	2
R96-230 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	43	-1	1466	4	10	1	6	1	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-231 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	46	-1	1039	5	14	2	10	2	-1	2	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-232 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	85	-1	843	10	12	4	19	5	1	5	-1	5	-1	2	-1	2	-1	-1	-1	2
R96-233 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	83	-1	1374	13	20	6	27	7	2	9	1	8	2	4	-1	4	-1	3	-1	1
R96-234 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	37	-1	1061	9	16	4	18	3	2	6	-1	5	-1	2	-1	2	-1	2	-1	-1
R96-235 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	38	-1	653	6	16	2	9	2	-1	2	-1	2	-1	-1	-1	1	-1	3	-1	1
R96-236 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	76	1	820	13	21	5	23	5	2	7	1	6	1	3	-1	3	-1	4	-1	-1
R96-237 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	35	1	1158	6	15	3	13	3	-1	4	-1	3	-1	1	-1	2	-1	3	-1	-1
R96-238 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	46	2	1194	9	14	3	17	3	1	4	-1	4	-1	2	-1	2	-1	3	-1	-1
R96-239 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	97	-1	944	13	18	6	26	6	2	8	1	7	1	3	-1	4	-1	1	-1	1
R96-240 S	-1	-1	-1	0.4	-0.2	-0.2	-1	4	-1	68	2	1293	13	29	5	24	5	2	8	1	6	1	3	-1	3	-1	2	-1	3
R96-241 S	-1	-1	-1	0.6	-0.2	-0.2	-1	4	-1	98	-1	1338	13	16	5	22	4	1	7	-1	5	1	2	-1	3	-1	2	-1	3
R96-242 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	31	-1	1373	5	13	2	8	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-243 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	164	-1	579	5	10	2	9	2	-1	3	-1	3	-1	1	-1	2	-1	-1	-1	1
R96-244 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	32	-1	1113	3	11	1	5	-1	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-245 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	1	109	2	719	5	8	2	8	2	-1	2	-1	3	-1	1	-1	2	-1	1	-1	13
R96-246 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	17	-1	1322	3	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-247 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	13	-1	1251	3	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-248 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1210	4	10	1	4	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-249 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	15	1	1527	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-250 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	17	-1	619	3	9	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-251 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	30	-1	750	6	13	2	9	2	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-252 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	18	-1	665	3	6	-1	3	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-253 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	53	1	991	7	13	3	13	4	-1	4	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-254 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	42	1	1204	9	14	3	17	3	1	5	-1	4	1	2	-1	2	-1	3	-1	-1
R96-255 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	13	-1	987	9	11	3	16	4	1	5	-1	5	-1	2	-1	3	-1	-1	-1	-1
R96-256 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	11	-1	1047	3	9	1	4	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-257 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	32	-1	995	8	24	3	14	4	-1	4	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-258 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	1	45	-1	772	11	21	4	20	4	1	6	1	5	1	2	-1	3	-1	-1	-1	2
R96-259 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	52	-1	908	11	17	4	20	4	1	5	-1	4	1	2	-1	2	-1	2	-1	-1
R96-260 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	22	-1	1145	7	29	3	15	3	1	4	-1	4	-1	2	-1	2	-1	3	-1	-1
R96-261 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	1240	11	22	4	18	3	1	4	-1	3	-1	2	-1	2	-1	3	-1	-1
R96-262 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	18	-1	1247	6	9	2	9	2	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-263 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	-10	-1	2203	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
R96-264 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	114	-1	1298	5	11	2	9	2	-1	3	-1	2
R96-265 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	26	-1	1825	4	11	1	5	1	-1	2	-1	1
R96-266 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	39	-1	2108	7	13	2	12	3	1	4	-1	4
R96-267 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	146	-1	1746	6	10	3	15	4	2	5	-1	5
R96-268 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	43	-1	1112	7	9	3	14	3	-1	4	-1	4
R96-269 S	-1	-1	-1	-0.2	0.4	-0.2	-1	4	-1	30	-1	1652	4	9	2	8	2	-1	2	-1	2
R96-270 S	-1	-1	-1	-0.2	0.7	-0.2	-1	1	-1	37	2	2633	4	11	1	5	1	-1	-1	-1	1
R96-271 S	-1	-1	-1	-0.2	0.7	-0.2	-1	6	-1	104	7	1409	8	20	3	14	4	1	4	-1	4
R96-272 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	57	-1	1069	13	16	5	24	5	2	7	1	6
R96-273 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	68	-1	1452	9	23	3	14	3	1	4	-1	4
R96-274 S	-1	-1	-1	-0.2	0.4	-0.2	-1	1	-1	28	-1	1407	5	13	2	8	2	-1	2	-1	2
R96-275 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	40	-1	844	9	14	3	16	3	1	6	-1	5
R96-276 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	54	-1	1108	8	14	3	13	3	1	5	-1	3
R96-277 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	12	-1	54	-1	1695	13	29	5	25	6	2	9	1	8
R96-278 S	-1	-1	-1	-0.2	0.4	-0.2	-1	5	-1	63	-1	1161	6	28	3	12	2	1	5	-1	4
R96-279 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	48	-1	845	4	12	2	7	2	-1	2	-1	2
R96-280 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	25	-1	1542	6	17	2	9	2	-1	3	-1	2
R96-281 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	38	-1	834	13	23	5	22	4	1	6	1	5
R96-282 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	23	-1	775	4	12	1	7	2	-1	2	-1	2
R96-283 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	28	-1	1705	6	24	2	9	3	-1	2	-1	2
R96-284 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	29	-1	1556	7	25	3	13	3	1	3	-1	3
R96-285 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	25	-1	1524	4	14	2	6	1	-1	2	-1	2
R96-286 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1296	6	17	3	12	2	1	3	-1	3
R96-287 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	9	-1	139	70	991	14	5	5	27	6	2	11	2	9
R96-288 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	50	15	2465	6	18	2	10	2	1	3	-1	3
R96-289 S	-1	-1	-1	-0.2	0.4	-0.2	-1	2	1	42	2	2251	7	24	3	12	2	1	3	-1	3
R96-290 S	-1	-1	-1	-0.2	0.4	-0.2	-1	5	-1	34	61	2191	2	5	-1	3	-1	-1	-1	-1	-1
R96-291 S	-1	-1	-1	-0.2	1.1	-0.2	1	3	-1	32	9	2458	4	12	1	6	1	-1	2	-1	1
R96-292 S	-1	-1	-1	-0.2	3.0	-0.2	-1	2	1	23	6	2703	4	11	1	5	1	-1	1	-1	-1
R96-293 S	-1	-1	-1	-0.2	1.8	-0.2	-1	2	-1	31	4	2467	4	13	1	5	1	-1	1	-1	2
R96-294 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	24	3	2255	6	17	2	8	1	1	2	-1	2
R96-295 S	-1	-1	-1	-0.2	1.3	-0.2	-1	2	1	24	4	2553	3	8	-1	4	-1	-1	-1	-1	-1
R96-296 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	35	1	2323	3	10	1	4	-1	-1	1	-1	-1
R96-297 S	-1	-1	-1	-0.2	1.6	-0.2	-1	-1	-1	23	7	3324	3	9	-1	4	-1	-1	1	-1	-1
R96-298 S	-1	-1	-1	-0.2	0.4	-0.2	-1	1	-1	28	13	5989	5	13	1	6	1	2	2	-1	2
R96-299 S	-1	-1	-1	-0.2	-0.2	-0.2	1	4	-1	31	11	4195	7	23	3	12	2	2	3	-1	3
R96-300 S	-1	-1	-1	-0.2	0.5	-0.2	-1	7	-1	34	3	1632	4	11	1	6	1	-1	1	-1	1
R96-301 S	-1	-1	-1	-0.2	1.4	-0.2	-1	42	1	74	22	620	4	13	2	8	2	-1	3	-1	2
R96-302 S	-1	-1	-1	-0.2	1.6	-0.2	-1	5	-1	22	5	2515	2	6	-1	3	-1	-1	-1	-1	-1
R96-303 S	-1	-1	-1	-0.2	2.5	-0.2	-1	2	-1	38	117	3579	7	20	3	11	2	1	3	-1	2
R96-304 S	-1	-1	1	-0.2	-0.2	-0.2	-1	6	1	76	1	1078	14	25	5	26	6	2	8	1	6
R96-305 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	25	9	2193	3	10	1	5	-1	-1	-1	-1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are In Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W
R96-306 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	34	3	2859	8	20	3	11	3	1	4	-1	3	-1	1	-1	2	-1	3	-1	-1
R96-307 S	-1	-1	-1	-0.2	1.2	-0.2	-1	4	-1	63	142	1645	5	18	2	9	1	1	3	-1	2	-1	1	-1	2	-1	4	-1	-1
R96-308 S	-1	-1	-1	-0.2	0.9	-0.2	-1	6	-1	25	57	1188	4	13	1	6	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-309 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	34	2	282	2	4	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-310 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	62	22	3013	5	12	2	9	2	1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-311 S	-1	-1	-1	-0.2	0.9	-0.2	-1	1	-1	32	55	4337	5	15	1	6	1	1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-312 S	-1	-1	-1	-0.2	1.6	-0.2	-1	30	2	33	6	1961	4	9	2	7	1	-1	2	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-313 S	-1	-1	-1	-0.2	0.3	-0.2	-1	5	-1	56	49	2529	6	21	3	10	3	1	3	-1	2	-1	-1	-1	1	-1	3	-1	-1
R96-314 S	-1	-1	-1	-0.2	1.3	-0.2	-1	9	-1	34	9	1777	4	11	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-315 S	-1	-1	-1	-0.2	2.2	-0.2	-1	2	-1	32	27	2855	6	15	2	8	1	1	3	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-316 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	26	27	2974	4	11	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	1
R96-317 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	44	1	2167	9	18	4	17	4	2	5	-1	4	1	2	-1	2	-1	2	-1	-1
R96-318 S	-1	-1	-1	-0.2	0.3	-0.2	-1	2	-1	35	4	2449	7	28	3	13	3	1	4	-1	3	-1	1	-1	1	-1	3	-1	-1
R96-319 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	29	6	2345	4	12	1	5	2	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-320 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	23	2	790	2	7	-1	4	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-321 S	-1	-1	-1	-0.2	0.4	-0.2	-1	22	-1	80	-1	1075	11	17	4	21	5	2	6	1	6	1	2	-1	3	-1	3	-1	1
R96-322 S	-1	-1	-1	-0.2	0.3	-0.2	-1	4	-1	49	-1	1413	13	19	5	23	5	2	7	1	5	1	2	-1	3	-1	2	-1	-1
R96-323 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	24	-1	1686	5	11	2	8	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-324 S	-1	-1	-1	-0.2	0.3	-0.2	-1	5	-1	49	3	1702	6	15	2	10	2	-1	3	-1	2	-1	1	-1	1	-1	3	-1	-1
R96-325 S	-1	-1	-1	-0.2	0.3	-0.2	-1	5	-1	77	27	1015	9	18	3	15	3	1	5	-1	4	-1	2	-1	2	-1	-1	-1	-1
R96-326 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	18	6	3053	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-327 S	-1	-1	-1	-0.2	1.0	-0.2	-1	-1	-1	32	15	1484	5	15	2	8	1	-1	2	-1	-1	-1	-1	-1	-1	-1	2	-1	-1
R96-329 S	-1	-1	-1	-0.2	0.3	-0.2	-1	-1	-1	38	29	4068	7	18	2	10	2	1	2	-1	2	-1	1	-1	1	-1	3	-1	-1
R96-330 S	-1	-1	-1	-0.2	0.6	-0.2	-1	2	1	34	75	6383	5	13	2	8	2	2	2	-1	2	-1	-1	-1	1	-1	3	-1	-1
R96-331 S	-1	-1	-1	-0.2	1.0	-0.2	-1	2	-1	22	2	2025	3	8	1	4	1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-332 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	65	1	1359	11	13	4	21	5	2	6	-1	6	1	2	-1	3	-1	3	-1	-1
R96-333 S	-1	-1	1	-0.2	-0.2	-0.2	-1	6	-1	56	1	1175	12	26	5	24	5	2	7	-1	6	1	3	-1	3	-1	6	-1	1
R96-334 S	-1	-1	-1	-0.2	0.6	-0.2	-1	1	-1	24	4	3317	3	12	1	5	-1	-1	1	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-335 S	-1	-1	-1	-0.2	0.3	-0.2	-1	4	-1	24	2	1787	3	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-336 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	24	-1	2210	2	5	-1	3	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-337 S	-1	-1	-1	-0.2	0.3	-0.2	-1	1	-1	34	-1	2801	5	19	2	6	1	-1	2	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-338 S	-1	-1	2	-0.2	0.3	-0.2	-1	13	-1	62	1	2930	19	48	8	42	9	4	14	2	12	3	6	1	8	1	6	-1	1
R96-339 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	16	-1	62	5	906	4	9	2	7	1	-1	2	-1	2	-1	-1	-1	1	-1	-1	-1	1
R96-340 S	-1	-1	1	-0.2	0.4	-0.2	-1	6	2	96	22	5342	12	34	4	21	4	3	7	1	6	1	2	-1	3	-1	8	-1	-1
R96-341 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	21	-1	913	2	6	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-342 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	37	2	2557	3	13	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-343 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	24	1	2352	2	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-344 S	-1	-1	-1	-0.2	0.3	-0.2	-1	1	-1	58	4	2565	4	14	1	7	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-345 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1775	6	15	3	11	2	1	3	-1	3	-1	1	-1	1	-1	1	-1	-1
R96-346 S	-1	-1	-1	-0.2	0.3	-0.2	-1	3	-1	44	-1	1799	18	31	7	33	7	2	9	1	8	1	4	-1	4	-1	3	-1	-1
R96-347 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	22	-1	1368	6	11	2	11	3	1	4	-1	3	-1	2	-1	1	-1	-1	-1	-1
R96-348 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	39	-1	399	6	1093	6	13	3	11	2	1	4	-1	4	-1	2	-1	2	-1	-1	-1	5

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W
R96-349 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	46	-1	1281	7	20	3	15	2	-1	4	-1	4	-1	2	-1	2	-1	-1	-1	-1
R96-350 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	20	-1	752	7	15	2	11	2	-1	3	-1	3	-1	1	-1	1	-1	-1	-1	-1
R96-351 S	-1	-1	-1	-0.2	0.4	-0.2	-1	15	-1	108	32	1201	7	14	3	12	3	-1	4	-1	3	-1	1	-1	2	-1	-1	-1	-1
R96-352 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	20	-1	1531	3	7	-1	3	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-353 S	-1	-1	-1	-0.2	0.3	-0.2	-1	6	-1	62	-1	1955	12	18	5	22	4	2	7	-1	5	-1	2	-1	3	-1	2	-1	-1
R96-354 S	-1	-1	1	-0.2	0.2	-0.2	-1	4	-1	70	-1	1167	12	35	5	24	5	2	8	1	7	1	3	-1	4	-1	4	-1	-1
R96-355 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	1	31	-1	1365	4	12	2	7	1	-1	2	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-356 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	33	-1	1503	5	24	3	9	2	-1	2	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-357 S	-1	-1	1	-0.2	-0.2	-0.2	-1	5	-1	62	-1	1944	16	36	7	31	7	2	10	2	9	2	4	-1	6	1	4	-1	-1
R96-358 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	46	-1	1248	13	25	5	24	5	2	7	1	6	1	3	-1	4	-1	2	-1	-1
R96-359 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	27	-1	1868	4	12	2	6	-1	-1	2	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-360 S	-1	-1	-1	-0.2	0.2	-0.2	-1	2	-1	25	-1	2131	4	11	1	7	1	-1	2	-1	2	-1	-1	-1	1	-1	1	-1	-1
R96-361 S	-1	-1	-1	-0.2	0.2	-0.2	-1	7	-1	136	-1	1251	9	15	4	16	4	1	5	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-362 S	-1	-1	-1	-0.2	0.2	-0.2	-1	2	-1	39	-1	1450	5	18	2	8	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-363 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	32	1	1328	8	22	3	13	3	-1	3	-1	3	-1	1	-1	2	-1	3	-1	-1
R96-364 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	34	-1	1638	12	18	4	21	4	2	6	-1	5	1	2	-1	2	-1	3	-1	-1
R96-365 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	35	-1	1261	12	12	4	20	4	2	6	1	6	1	3	-1	3	-1	2	-1	-1
R96-366 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	18	-1	1412	5	10	2	9	3	-1	3	-1	2	-1	1	-1	1	-1	-1	-1	-1
R96-367 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	18	-1	1552	3	9	1	5	1	-1	2	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
R96-368 S	-1	-1	-1	-0.2	0.2	-0.2	-1	4	-1	61	-1	1899	11	14	5	20	4	2	6	-1	5	1	2	-1	3	-1	2	-1	-1
R96-369 S	-1	-1	-1	-0.2	0.2	-0.2	-1	1	-1	24	-1	1251	12	18	5	23	4	2	6	-1	5	1	2	-1	2	-1	2	-1	-1
R96-370 S	-1	-1	2	-0.2	-0.2	-0.2	-1	6	-1	85	-1	1346	13	17	5	25	5	2	8	1	7	1	3	-1	4	-1	2	-1	-1
R96-371 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	9	-1	251	-1	1172	6	10	3	12	3	1	4	-1	4	1	2	-1	3	-1	1	-1	2
R96-372 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	32	-1	1353	5	14	2	9	2	-1	3	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-373 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	31	-1	1462	5	15	2	8	1	-1	2	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-374 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	45	-1	1833	7	22	2	10	2	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-375 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	2186	6	16	2	11	3	1	3	-1	3	-1	1	-1	1	-1	2	-1	-1
R96-376 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	40	-1	1518	8	20	3	14	3	1	4	-1	3	-1	1	-1	2	-1	3	-1	-1
R96-377 S	-1	-1	-1	-0.2	0.2	-0.2	-1	1	-1	28	-1	1349	7	20	2	11	2	-1	3	-1	3	-1	1	-1	1	-1	2	-1	-1
R96-378 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	41	-1	1190	11	31	5	22	5	2	7	-1	6	1	3	-1	3	-1	4	-1	-1
R96-379 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	27	-1	1731	8	17	3	15	3	1	5	-1	4	-1	2	-1	2	-1	1	-1	-1
R96-380 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	27	-1	2016	4	16	2	8	2	-1	3	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-381 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	40	-1	1696	10	31	4	19	3	1	5	-1	4	-1	2	-1	2	-1	3	-1	-1
R96-382 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	70	-1	1216	14	22	6	30	6	2	9	1	8	2	4	-1	4	-1	2	-1	-1
R96-383 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	29	-1	1723	7	18	2	11	3	-1	3	-1	3	-1	1	-1	2	-1	2	-1	-1
R96-384 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	26	-1	1414	4	17	2	7	1	-1	2	-1	1	-1	-1	-1	-1	-1	1	-1	-1
R96-385 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	39	-1	2209	8	25	3	14	3	1	4	-1	3	-1	2	-1	2	-1	3	-1	-1
R96-386 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	27	1	1493	9	30	4	15	3	1	5	-1	3	-1	1	-1	2	-1	4	-1	-1
R96-387 S	-1	-1	-1	-0.2	2.5	-0.2	-1	-1	-1	29	-1	522	13	34	5	20	4	1	6	-1	5	1	2	-1	2	-1	2	-1	-1
R96-388 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	-1	117	-1	1221	14	13	6	30	6	2	9	1	8	2	4	-1	5	-1	-1	-1	-1
R96-389 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	31	-1	1106	4	15	2	7	2	-1	3	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-390 S	-1	-1	-1	-0.2	0.2	-0.2	-1	1	-1	29	-1	1669	4	14	1	6	2	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W
R96-391 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	22	-1	942	3	6	1	7	1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
R96-392 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	85	-1	954	6	14	4	19	4	2	7	1	6	1	3	-1	3	-1	2	-1	-1
R96-393 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	41	-1	2622	9	16	3	19	4	2	7	-1	6	1	3	-1	3	-1	2	-1	-1
R96-394 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	9	-1	42	-1	1791	9	26	4	18	4	2	6	-1	5	-1	2	-1	3	-1	2	-1	-1
R96-395 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	42	-1	1504	13	26	5	24	5	2	8	1	6	1	3	-1	3	-1	2	-1	-1
R96-396 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	8	1	56	-1	1089	7	19	3	13	3	-1	4	-1	4	-1	2	-1	2	-1	-1	-1	-1
R96-397 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	36	-1	936	8	24	3	16	4	1	4	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-398 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	27	-1	908	4	12	1	6	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-399 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	34	-1	1421	5	15	3	9	3	1	3	-1	3	-1	1	-1	1	-1	2	-1	-1
R96-400 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1293	9	21	4	15	4	1	5	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-401 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	47	-1	1212	14	38	6	26	5	2	7	1	6	1	3	-1	3	-1	4	-1	-1
R96-402 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	24	-1	1590	7	30	3	9	2	-1	3	-1	2	-1	-1	-1	-1	-1	3	-1	-1
R96-403 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	25	-1	1134	3	19	2	6	1	-1	1	-1	1	-1	-1	-1	-1	-1	3	-1	-1
R96-404 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	36	-1	644	10	17	4	15	3	1	5	-1	4	-1	1	-1	1	-1	-1	-1	4
R96-405 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	25	-1	1370	5	17	2	10	2	-1	3	-1	2	-1	-1	-1	1	-1	1	-1	-1
R96-406 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	52	-1	903	12	43	5	22	5	1	6	1	6	1	3	-1	3	-1	4	-1	-1
R96-407 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	18	-1	790	3	10	2	6	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-408 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	22	-1	742	4	15	2	7	1	-1	3	-1	2	-1	-1	-1	-1	-1	1	-1	-1
R96-409 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	31	-1	1008	5	21	2	10	2	-1	3	-1	3	-1	1	-1	1	-1	2	-1	-1
R96-410 S	-1	-1	-1	-0.2	0.2	-0.2	-1	6	-1	125	-1	1373	6	9	2	11	2	1	3	-1	2	-1	1	-1	1	-1	-1	-1	-1
R96-411 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	34	-1	1742	6	21	3	12	3	1	3	-1	3	-1	1	-1	2	-1	2	-1	-1
R96-412 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	28	-1	1389	5	16	2	7	2	-1	2	-1	2	-1	-1	-1	-1	-1	2	-1	-1
R96-413 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	2	45	-1	1823	8	21	3	16	4	1	5	-1	5	1	2	-1	3	-1	2	-1	-1
R96-414 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	110	-1	1237	18	28	8	35	7	2	11	1	10	2	4	-1	5	-1	-1	-1	1
R96-415 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	38	-1	1528	7	25	2	11	2	-1	3	-1	3	-1	-1	-1	-1	-1	2	-1	-1
R96-416 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	32	-1	2065	3	14	1	5	1	-1	1	-1	1	-1	-1	-1	-1	-1	2	-1	-1
R96-417 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	34	-1	875	5	25	2	8	2	-1	3	-1	2	-1	-1	-1	1	-1	2	-1	-1
R96-418 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	17	-1	1193	2	7	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
R96-419 S	-1	-1	-1	-0.2	0.4	-0.2	-1	7	-1	149	-1	1211	17	35	7	36	8	2	12	2	9	2	4	-1	4	-1	1	-1	7
R96-420 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	20	-1	1499	6	17	2	10	2	1	3	-1	2	-1	1	-1	1	-1	1	-1	-1
R96-421 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	40	-1	1201	12	30	5	24	5	2	8	-1	7	1	3	-1	3	-1	1	-1	-1
R96-422 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	4	-1	44	-1	1272	8	23	4	18	3	1	6	-1	4	1	2	-1	3	-1	2	-1	1
R96-423 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	31	-1	1415	10	32	4	17	4	1	5	-1	5	-1	2	-1	2	-1	3	-1	-1
R96-424 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	26	-1	1540	8	30	3	14	3	1	4	-1	4	-1	2	-1	2	-1	2	-1	-1
R96-425 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	23	1	989	7	22	3	11	3	-1	4	-1	3	-1	1	-1	1	-1	2	-1	-1
R96-426 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	35	-1	1074	9	19	4	17	3	1	5	-1	5	-1	2	-1	3	-1	1	-1	-1
R96-427 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	29	-1	1174	6	20	3	12	2	1	4	-1	3	-1	1	-1	2	-1	2	-1	-1
R96-428 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	24	-1	1035	5	24	2	9	2	-1	3	-1	2	-1	1	-1	1	-1	2	-1	-1
R96-429 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	26	-1	1531	13	30	6	26	6	2	9	1	8	1	3	-1	4	-1	2	-1	-1
R96-430 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	65	-1	1262	14	24	5	26	5	2	7	1	7	2	3	-1	4	-1	2	-1	-1
R96-431 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	43	-1	1125	9	16	4	18	4	1	5	-1	5	1	2	-1	3	-1	1	-1	-1
R96-432 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	7	-1	42	-1	1579	4	8	2	7	2	-1	2	-1	2	-1	-1	-1	1	-1	-1	-1	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
R96-433 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	16	-1	1460	4	14	2	6	2	-1	2	-1	2
R96-434 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	37	-1	1141	10	26	4	19	4	1	6	-1	5
R96-435 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	25	-1	1758	4	20	2	7	2	-1	2	-1	2
R96-436 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	56	-1	1695	13	45	6	28	5	2	8	1	7
R96-437 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	129	13	1246	13	28	5	23	5	1	6	1	7
R96-438 S	-1	-1	-1	-0.2	0.2	-0.2	-1	4	-1	110	12	1620	19	40	7	36	7	3	10	2	9
R96-439 S	-1	-1	1	-0.2	-0.2	-0.2	-1	1	1	50	-1	980	9	21	4	17	3	1	6	-1	4
R96-440 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	1	54	-1	1175	7	30	3	12	3	-1	4	-1	4
R96-441 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	6	-1	93	-1	697	9	11	4	17	4	1	6	-1	5
R96-442 S	-1	-1	1	-0.2	0.4	-0.2	-1	4	1	81	-1	2987	14	27	6	27	6	2	8	2	7
R96-443 S	-1	-1	1	-0.2	0.4	-0.2	-1	2	-1	32	-1	1749	9	55	5	19	5	2	6	1	6
R96-444 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	63	-1	1473	6	14	3	12	2	-1	4	-1	3
R96-445 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	40	-1	1368	6	12	2	11	3	1	3	-1	3
R96-446 S	-1	-1	-1	-0.2	0.2	-0.2	-1	3	2	44	-1	1714	6	14	3	12	2	1	4	-1	3
R96-447 S	-1	-1	-1	-0.2	0.4	-0.2	-1	2	-1	38	-1	1682	9	19	4	17	4	1	6	-1	4
R96-448 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	3	-1	77	-1	3195	8	18	3	15	3	2	5	-1	4
R96-449 S	-1	-1	-1	-0.2	0.2	-0.2	-1	5	-1	123	-1	1185	13	18	5	25	5	2	8	1	7
R96-450 S	-1	-1	1	-0.2	-0.2	-0.2	-1	1	-1	58	-1	863	13	39	5	24	5	2	7	1	6
R96-451 S	-1	-1	-1	-0.2	0.9	-0.2	-1	-1	-1	32	1	2687	5	13	2	7	2	-1	2	-1	2
R96-452 S	-1	-1	1	-0.2	0.6	-0.2	-1	1	-1	35	3	2002	12	76	5	20	5	1	5	-1	5
R96-453 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	33	2	3069	11	46	4	20	4	2	6	-1	4
R96-454 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	34	3	1834	4	16	2	7	1	-1	2	-1	2
R96-455 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	27	2	867	5	19	2	11	2	-1	3	-1	4
R96-456 S	-1	-1	1	-0.2	-0.2	-0.2	-1	-1	-1	41	3	2186	7	33	4	17	4	2	6	-1	4
R96-457 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	39	1	1892	13	35	5	26	5	2	9	1	7
R96-458 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	-1	28	-1	2136	6	26	2	11	3	1	3	-1	3
R96-459 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	1	64	-1	1397	6	15	2	11	3	-1	4	-1	3
R96-460 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	1	76	-1	1964	10	11	4	18	4	1	5	-1	4
R96-461 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	69	-1	1900	7	11	3	13	4	1	4	-1	4
R96-462 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	2	-1	46	-1	1196	8	15	3	17	3	1	4	-1	4
R96-463 S	-1	-1	1	-0.2	0.9	-0.2	-1	5	-1	52	-1	1944	11	34	5	24	6	2	7	1	7
R96-464 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	37	-1	1339	4	10	2	7	1	-1	2	-1	2
R96-465 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	5	-1	82	-1	1032	10	17	4	18	4	1	6	-1	5
R96-466 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	1	-1	35	-1	1774	5	12	2	12	3	1	5	-1	4
R96-467 S	-1	-1	-1	-0.2	-0.2	-0.2	-1	-1	3	33	-1	1440	3	10	1	6	1	-1	2	-1	1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-1 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	4	1
R96-2 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	3	1
R96-3 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-4 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-5 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-6 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-7 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-8 S	0.2	-1	-1	-1	0.1	-1.0	-1	1	-1	4	2
R96-9 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	5	2
R96-10 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-11 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-12 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	8	2
R96-13 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-14 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-15 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-16 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-17 S	-0.1	-1	-1	-1	0.1	-1.0	-1	-1	-1	4	1
R96-18 S	0.8	-1	-1	-1	0.1	-1.0	-1	-1	-1	3	1
R96-19 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-20 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-22 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-23 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-24 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-25 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-26 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-27 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-28 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-29 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-30 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-31 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-32 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	2	1
R96-33 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-34 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	1	2
R96-35 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-36 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	1	-1
R96-37 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-38 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-39 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-40 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-41 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	5	-1	6	1
R96-42 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	8	1
R96-43 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-44 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	3
R96-45 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-46 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-47 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	10	2
R96-48 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-49 S	-0.1	-1	-1	-1	0.1	-1.0	-1	-1	-1	4	2
R96-50 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-51 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-53 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	2
R96-54 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-55 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-56 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	3
R96-57 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-58 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-59 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-60 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-61 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	8	4
R96-62 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-63 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	2	8	2
R96-64 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-65 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-66 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	1
R96-67 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-68 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-69 S	-0.1	-1	-1	-1	0.1	-1.0	-1	4	-1	4	-1
R96-70 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-71 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-72 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-73 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-74 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-75 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	3	1
R96-76 S	-0.1	-1	-1	-1	0.4	-1.0	-1	-1	-1	2	-1
R96-77 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-78 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-79 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-80 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-81 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-82 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	11	2
R96-83 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-84 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-85 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-86 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1

Enzyme Leach Job #: 11114 Repo
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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-87 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	1
R96-88 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-89 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	4	-1
R96-90 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	13	1
R96-91 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-92 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-93 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-94 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-95 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-96 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	-1
R96-97 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-98 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-99 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-100 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-101 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-102 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-103 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-104 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	-1
R96-105 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-106 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	13	1
R96-107 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-108 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-109 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	1
R96-110 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-111 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-112 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-113 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-114 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-115 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-116 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-117 S	-0.1	-1	-1	-1	0.8	-1.0	-1	6	-1	9	2
R96-118 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-119 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	6	1
R96-120 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-121 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-122 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-123 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-124 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-125 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-126 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-127 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-128 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2

Enzyme Leach Job #: 11114 Repo
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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-129 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-130 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-131 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-132 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-133 S	-0.1	-1	-1	-1	0.1	-1.0	-1	1	-1	6	-1
R96-134 S	-0.1	-1	-1	-1	0.1	-1.0	-1	1	-1	4	-1
R96-135 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-136 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-137 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	6	1
R96-138 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-139 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-140 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-141 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-142 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-143 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-144 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-149 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-153 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-155 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-158 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	3
R96-160 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-164 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-166 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	8	2
R96-169 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	9	3
R96-171 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-174 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	2
R96-176 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	4
R96-179 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	8	2
R96-181 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	2
R96-184 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-186 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	2
R96-189 S	0.4	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	4
R96-191 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-192 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-197 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-200 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-202 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-205 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-207 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-209 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-210 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-212 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	19	3

Enzyme Leach Job #: 11114 Repo
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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-215 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-217 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-220 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-222 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-226 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	3	-1
R96-227 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-228 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-229 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-230 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-231 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-232 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-233 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-234 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	2
R96-235 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-236 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	2
R96-237 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-238 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	8	2
R96-239 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-240 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	1
R96-241 S	-0.1	-1	-1	-1	0.1	-1.0	-1	-1	-1	6	1
R96-242 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-243 S	-0.1	-1	-1	-1	0.1	-1.0	-1	-1	-1	2	1
R96-244 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-245 S	-0.1	-1	-1	-1	0.7	-1.0	-1	4	1	3	-1
R96-246 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	-1
R96-247 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	-1	-1
R96-248 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-249 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	-1
R96-250 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-251 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	2	-1
R96-252 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	-1
R96-253 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	4	-1
R96-254 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	4	-1
R96-255 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-256 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-257 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-258 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	-1	-1
R96-259 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	-1
R96-260 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-261 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-262 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	-1
R96-263 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-264 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-265 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	2	-1
R96-266 S	0.2	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-267 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	-1
R96-268 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	-1	-1
R96-269 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	1	1
R96-270 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	5	-1	3	1
R96-271 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	-1
R96-272 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	5	-1	4	2
R96-273 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	4	1
R96-274 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	1
R96-275 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	2
R96-276 S	0.2	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	2
R96-277 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-278 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	-1
R96-279 S	0.2	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-280 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-281 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-282 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-283 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	5	2
R96-284 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	5	2
R96-285 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-286 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	3	1
R96-287 S	-0.1	-1	-1	-1	0.5	-1.0	-1	2	-1	2	2
R96-288 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	6	1
R96-289 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	7	-1	8	2
R96-290 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-291 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	2
R96-292 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	1
R96-293 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	3	1
R96-294 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	4	2
R96-295 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-296 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-297 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	3	1
R96-298 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	5	-1	3	2
R96-299 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	6	-1	4	2
R96-300 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-301 S	0.2	-1	-1	-1	0.3	-1.0	-1	3	-1	2	1
R96-302 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	1	-1
R96-303 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	3	3
R96-304 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	3	2
R96-305 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1

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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-306 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	3	2
R96-307 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	3	2
R96-308 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	7	-1	4	1
R96-309 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	1
R96-310 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	-1
R96-311 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	4	2
R96-312 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	2
R96-313 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	4	2
R96-314 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	1
R96-315 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	4	2
R96-316 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	4	2
R96-317 S	0.2	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-318 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	7	3
R96-319 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	3	2
R96-320 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-321 S	0.2	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-322 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-323 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	1
R96-324 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	5	-1	4	2
R96-325 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	-1
R96-326 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	2	-1
R96-327 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	4	1
R96-329 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	4	2
R96-330 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	5	2
R96-331 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	1
R96-332 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-333 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	8	4
R96-334 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	5	2
R96-335 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	1
R96-336 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	1
R96-337 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	1
R96-338 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	9	4
R96-339 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	-1
R96-340 S	-0.1	-1	-1	-1	0.1	-1.0	-1	3	-1	10	4
R96-341 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-342 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-343 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-344 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	4	-1	2	2
R96-345 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-346 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-347 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	2	1
R96-348 S	0.2	-1	-1	-1	0.4	-1.0	-1	2	-1	3	1

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R96-349 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	1
R96-350 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	4	-1
R96-351 S	0.2	-1	-1	-1	0.1	-1.0	-1	1	-1	1	-1
R96-352 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-353 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	1
R96-354 S	0.2	-1	-1	-1	-0.1	-1.0	-1	2	-1	5	3
R96-355 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	1	-1
R96-356 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	2	-1	3	2
R96-357 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	2
R96-358 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-359 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-360 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-361 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-362 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-363 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	2
R96-364 S	0.2	-1	-1	-1	-0.1	-1.0	-1	1	-1	4	2
R96-365 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-366 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-367 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-368 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	3	2
R96-369 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-370 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	3
R96-371 S	0.2	-1	-1	-1	0.1	-1.0	-1	-1	-1	2	1
R96-372 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-373 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-374 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-375 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-376 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-377 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-378 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-379 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-380 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-381 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	3	-1	4	2
R96-382 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-383 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-384 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-385 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-386 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	1	-1	8	3
R96-387 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	2
R96-388 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	-1	2
R96-389 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-390 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1

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Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-391 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	1	-1
R96-392 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	1	1
R96-393 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-394 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-395 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-396 S	0.2	-1	-1	-1	-0.1	-1.0	-1	3	-1	1	1
R96-397 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-398 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-399 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-400 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-401 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	3
R96-402 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-403 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-404 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	1
R96-405 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-406 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	2
R96-407 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	2
R96-408 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-409 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-410 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-411 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-412 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-413 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-414 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-415 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-416 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-417 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	-1
R96-418 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	1	-1
R96-419 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-420 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-421 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-422 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-423 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-424 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-425 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-426 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-427 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-428 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-429 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-430 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-431 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-432 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1

Enzyme Leach Job #: 11114 Repo
Trace Element Values Are in Parts
Values = 999999 are greater than w

Sample ID:	Re	Os	Ir	Pt	Au	S.Q.Hg	Tl	Pb	Bi	Th	U
R96-433 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-434 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-435 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-436 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-437 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	2
R96-438 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	-1
R96-439 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	1
R96-440 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-441 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	-1
R96-442 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	9	2
R96-443 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	9	2
R96-444 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-445 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-446 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-447 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-448 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	2
R96-449 S	0.2	-1	-1	-1	-0.1	-1.0	-1	-1	-1	6	1
R96-450 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	9	-1
R96-451 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-452 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	16	2
R96-453 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	15	1
R96-454 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	5	1
R96-455 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1
R96-456 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	10	3
R96-457 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	2
R96-458 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	7	2
R96-459 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-460 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-461 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-462 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	1
R96-463 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	9	2
R96-464 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-465 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	3	2
R96-466 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	2	-1
R96-467 S	-0.1	-1	-1	-1	-0.1	-1.0	-1	-1	-1	4	1

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DOMINIC L.

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UTM 5608000mN

UTM 664000 m E

North Coordinates

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East Coordinates

150 0 150 300 450 600

metres

- UTM from photographic enlargement of TRIM maps
- Roads, lakes traced from photographic reduction of Plate 3

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Sample Locations

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 0
Prime Geochemical Methods Ltd.	

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North Coordinates

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150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Gold (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 1

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Chlorine (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 2

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Chlorine (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 2

Prime Geochemical Methods Ltd.

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North Coordinates

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400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clark notes

Bromine (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 3

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Bromine (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 3

Prime Geochemical Methods Ltd.

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North Coordinates

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400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clark note

Iodine (ppb)

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 4

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Iodine (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 4
Prime Geochemical Methods Ltd.	

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Molybdenum (ppb)

Clark notes Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 5

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Molybdenum (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 5

Prime Geochemical Methods Ltd.

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North Coordinates

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East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Tungsten (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 6

Prime Geochemical Methods Ltd.

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North Coordinates

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East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clark notes

Arsenic (ppb)

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 7

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Arsenic (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 7
Prime Geochemical Methods Ltd.	

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Drill target

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Antimony (ppb)

Clark notes

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 8

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Antimony (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 8

Prime Geochemical Methods Ltd.

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North Coordinates

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East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clark noted

Copper (ppb)

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 9

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Copper (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 9

Prime Geochemical Methods Ltd.

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North Coordinates

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Moly(02)

150 0 150 300 450 600

metres

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East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clarke notes

Zinc (ppb)

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 10

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Zinc (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 10

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

Profim Explorations Corp.

Enzyme Leach Soil Survey

Lead (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 11

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

Profim Explorations Corp.

Enzyme Leach Soil Survey

Cobalt (ppb)

Rabbit Option

Map Sheets 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 12

Prime Geochemical Methods Ltd.

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North Coordinates

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400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Cobalt (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 12
Prime Geochemical Methods Ltd.	

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Nickel (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 13

Prime Geochemical Methods Ltd.

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Sb low

Indicator of sulfide minerals

Mo/Ag low

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Clark notes

Gallium (ppb)

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 14

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Gallium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 14
Prime Geochemical Methods Ltd.	

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Vanadium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 15

Prime Geochemical Methods Ltd.

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North Coordinates

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400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

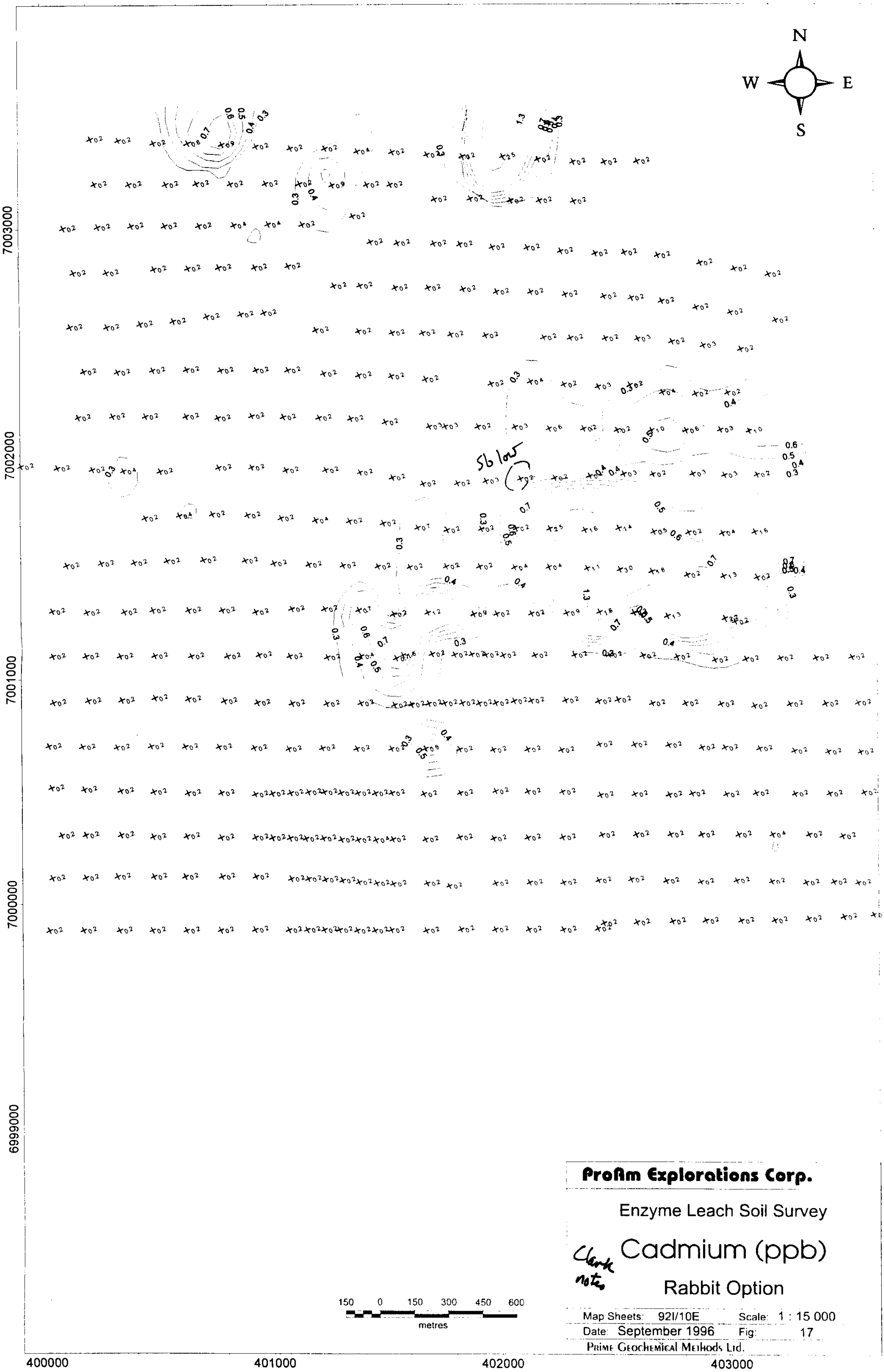
Enzyme Leach Soil Survey

Manganese (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 16

Prime Geochemical Methods Ltd.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North Coordinates
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Sb low
150 0 150 300 450 600
metres
Profim Explorations Corp.
Enzyme Leach Soil Survey
Clark notes
Cadmium (ppb)
Rabbit Option
Map Sheets: 92I/10E
Scale: 1 : 15 000
Date: September 1996
Fig: 17
Prime Geochemical Methods Ltd.

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0.3 0.4 0.5 0.6 0.7 0.9 1.3 2.0 2.5

0.3 0.4 0.5 0.6 0.7 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.8 3.0

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Cadmium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 17

Prime Geochemical Methods Ltd.

N

W E

S

Sb low

Mo Low

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Barium (ppb)

Rabbit Option

clark notes

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 18

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Barium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 18
Prime Geochemical Methods Ltd.	

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Cerium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 19

Prime Geochemical Methods Ltd.

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North Coordinates

0.2

0.3

0.2

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Rhenium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 20
Prime Geochemical Methods Ltd.	

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North Coordinates

150 0 150 300 450 600

metres

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East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Uranium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 21

Prime Geochemical Methods Ltd.

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North Coordinates

150 0 150 300 450 600

metres

400000 401000 402000 403000

East Coordinates

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Thorium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 22

Prime Geochemical Methods Ltd.

Possible fault

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150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Zirconium (ppb)

Clark Notes

Rabbit Option

Map Sheets: 92I/10E Scale: 1 : 15 000

Date: September 1996 Fig: 23

Prime Geochemical Methods Ltd.

Possible fault

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400000 401000 402000 403000

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Zirconium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 23

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

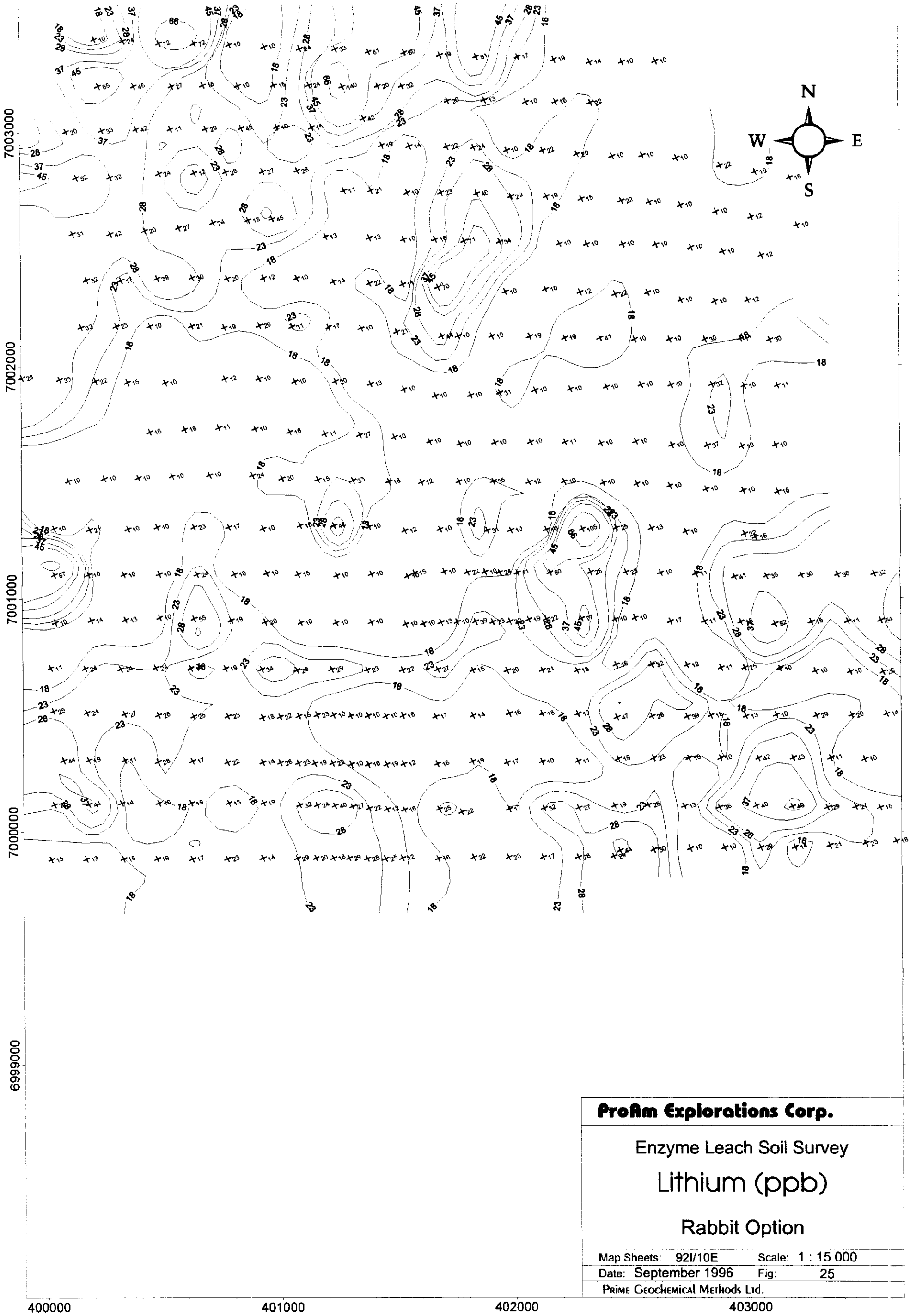
ProAm Explorations Corp.

Enzyme Leach Soil Survey

Rubidium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 24
Prime Geochemical Methods Ltd.	



ProAm Explorations Corp.

Enzyme Leach Soil Survey

Lithium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 25
Prime Geochemical Methods Ltd.	

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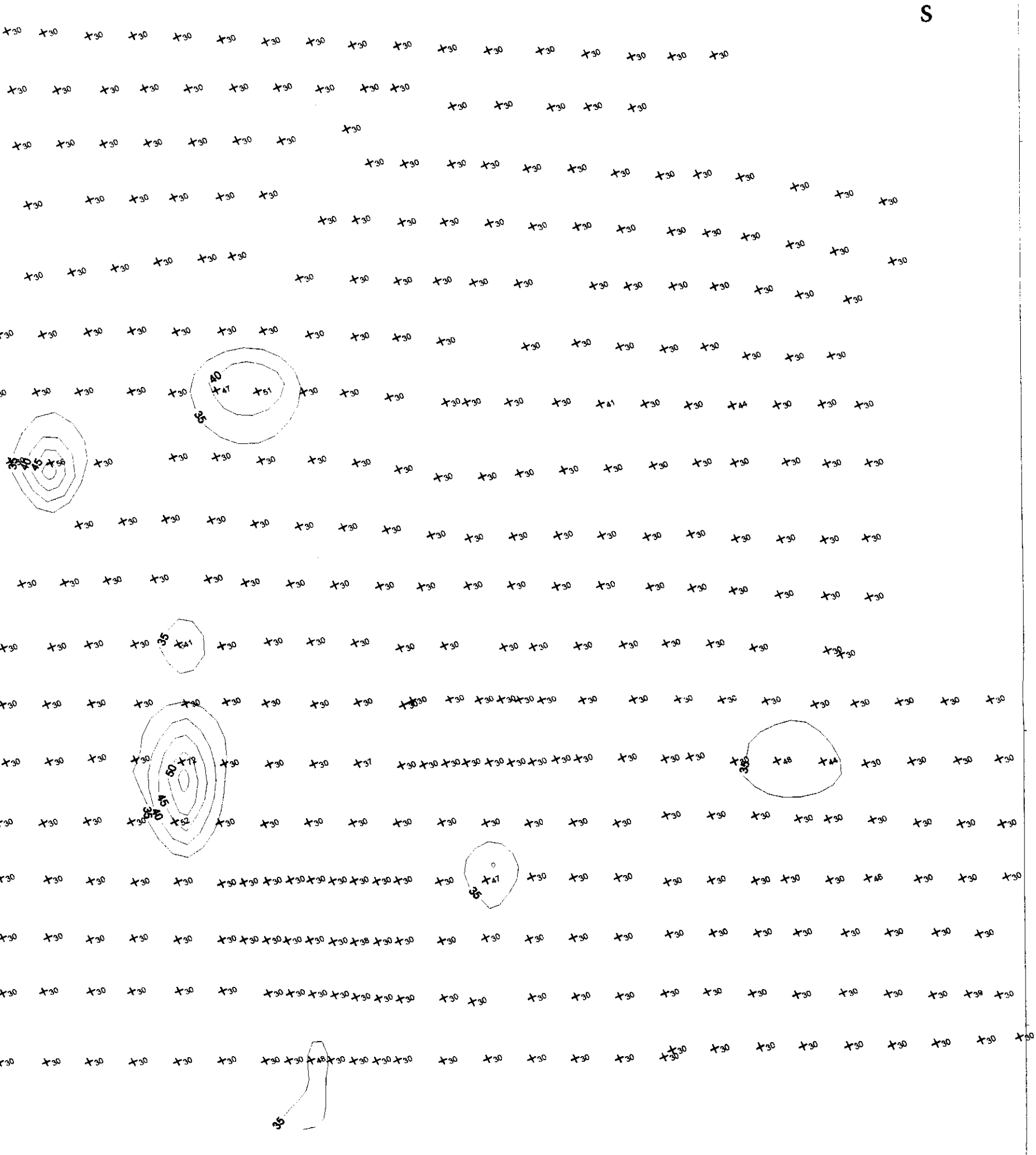
North Coordinates



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East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Selenium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 26

Prime Geochemical Methods Ltd.

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North Coordinates

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400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Strontium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 27

Prime Geochemical Methods Ltd.

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North Coordinates

400000 401000 402000 403000

East Coordinates

150 0 150 300 450 600

metres

ProAm Explorations Corp.

Enzyme Leach Soil Survey

Yttrium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 28

Prime Geochemical Methods Ltd.

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ProAm Explorations Corp.

Enzyme Leach Soil Survey

Niobium (ppb)

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Enzyme Leach Soil Survey

Silver (ppb)

Rabbit Option

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Cesium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
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Enzyme Leach Soil Survey

Lanthanum (ppb)

Rabbit Option

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Enzyme Leach Soil Survey

Praeseodymium (ppb)

Rabbit Option

Map Sheets:	92I/10E	Scale:	1 : 15 000
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Enzyme Leach Soil Survey

Neodymium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
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Enzyme Leach Soil Survey

Samarium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 35
Prime Geochemical Methods Ltd.	

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Enzyme Leach Soil Survey

Gadolinium (ppb)

Rabbit Option

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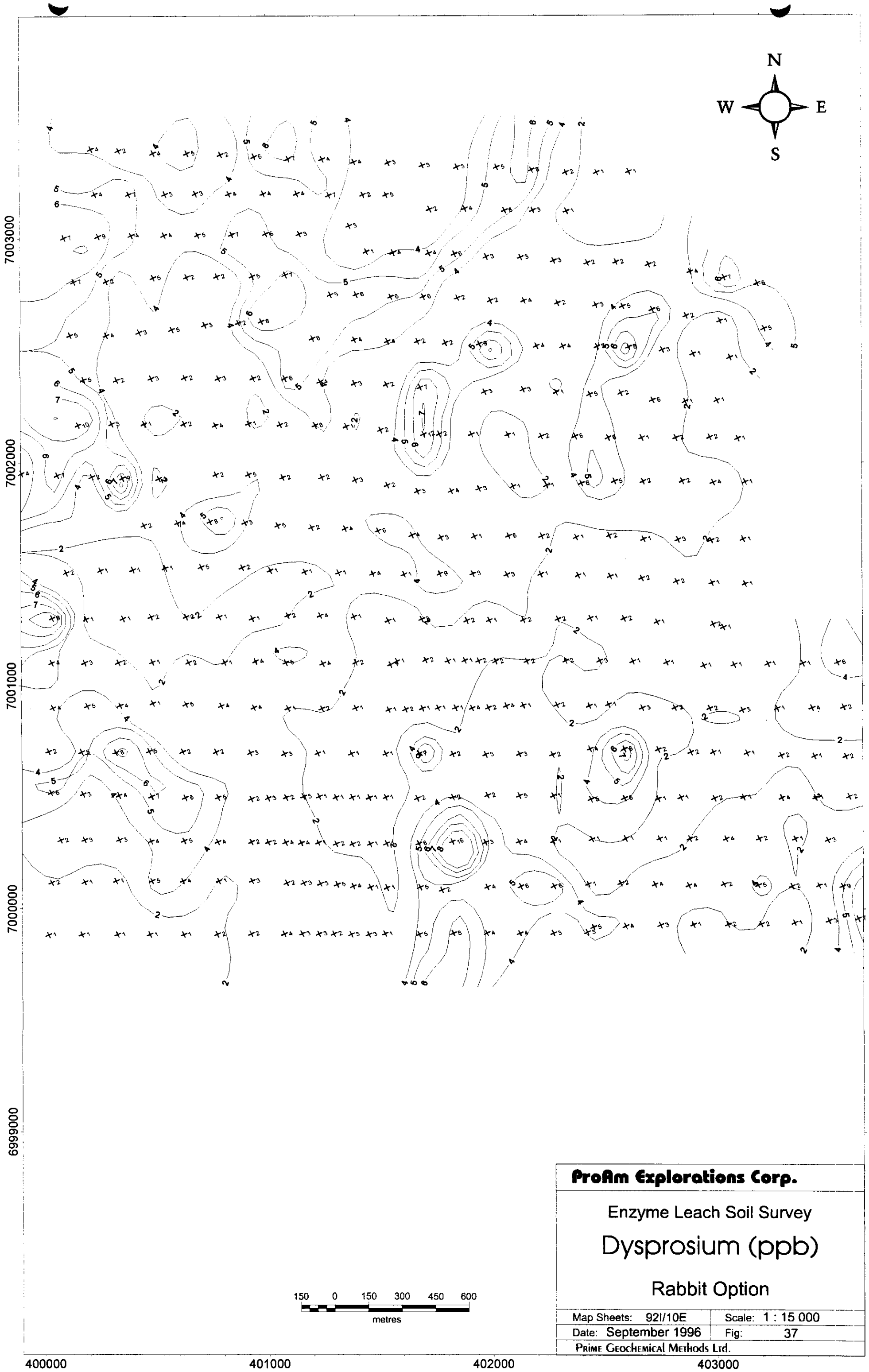
Date: September 1996	Fig: 36

Prime Geochemical Methods Ltd.



ProAm Explorations Corp.

Enzyme Leach Soil Survey

Dysprosium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
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Prime Geochemical Methods Ltd.	

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ProAm Explorations Corp.

Enzyme Leach Soil Survey

Erbium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 38

Prime Geochemical Methods Ltd.

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ProAm Explorations Corp.

Enzyme Leach Soil Survey

Ytterbium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 39

Prime Geochemical Methods Ltd.

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ProAm Explorations Corp.

Enzyme Leach Soil Survey

Hafnium (ppb)

Rabbit Option

Map Sheets: 92I/10E	Scale: 1 : 15 000
Date: September 1996	Fig: 40

Prime Geochemical Methods Ltd.

APPENDIX 4

SELECT REFERENCES ENCLOSED ON ENZYME LEACH

J. ROBERT CLARK Detection of Bedrock-related Geochemical Anomalies in the Surface of Transported Overburden. EXPLORE Newsletter for the Association of Exploration Geochemists No. 76 July 1992

J. ROBERT CLARK, DAVID COHAN Innovative Enzyme Leach Provides Cost Effective Overburden Penetration Paper given at Association of Exploration Geochemists meeting at Townsville, Australia May 1995

EXPLORE

Newsletter for the Association of Exploration Geochemists

NUMBER 76 JULY

PRESIDENT'S MESSAGE

A Need for Volunteers

The Association of Exploration Geochemists was founded twenty-two years ago after members recognized the need for a professional organization to represent exploration geochemists. Our organization has been served over this period of time by a capable group of volunteers in the Executive, Council, EXPLORE, Journal of Geochemical Exploration (JGE), and various committees.

The AEG has reaffirmed its focus on exploration geochemistry but has also made the commitment to expand its contacts with professionals in related fields (e.g. environmental geochemistry) and to conduct activities which will serve the membership (e.g. education, professional registration, short courses, special publications). This taxes the limited time of existing volunteers.

As with any volunteer organization, there is a small active group of volunteers who carry out the vast majority of activities of the Association within the framework of several committees. In order to maintain the vitality of the organization, we need more members to participate in the endeavors of these committees.

The list of committees is included at the end of this column. The titles are, for the most part, self-explanatory and reflect the commitments and activities of the Association. The committees are of two types, those which were formed to address specific issues, such as the Bylaws Review, Elsevier Negotiations, and Membership Application forms. These committees are dissolved after their task has been accomplished. However, the vast majority of committees are ongoing. These committees need your input.

In the past, it has been difficult to determine who to contact to volunteer your assistance. For that reason, we are also including the corresponding addresses of the Committee Chairman. Contact the chairmen and volunteer your time to the Association.

A second way to participate is for members to upgrade their membership status to Voting Member. This gives you the opportunity to vote on matters concerning the Association and have a say in the direction of the Association. Applications may be obtained through the Association offices in Vancouver.

If you have any questions, comments, or suggestions for the Association, feel free to contact any of the Chairman listed starting on the next page.

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Continued on Page 2

TECHNICAL NOTES

Detection of Bedrock-related Geochemical Anomalies at the Surf of Transported Overburden

Introduction

The chemistry performed before instrumental determinat are made is critical to the quality of the geochemical interpretations made from the resulting data. In the 1970's 1980's much emphasis in exploration geochemistry was pla on new instrumental techniques. Many geochemists found volumes of multi-element data could be generated by inductively-coupled plasma/atomic emission spectroscopy (ICP/AES) for a relatively low cost. Consequently, interest data handling and manipulation using computers to assist i producing interpretations increased dramatically. During t period of "Black Box" analyses the importance of preparator chemistry was largely ignored, and the usefulness of analyt chemistry for unraveling dispersion processes was frequentl overlooked. Consequently, geochemical exploration data of have been interpreted with little regard for the strengths or weaknesses of the analytical techniques used to produce the data. Also, an adage that has often been quoted is that you not do exploration geochemistry on transported overburden because the material in the overburden is unrelated to the bedrock that it covers. This viewpoint exemplifies a lack of comprehension of chemical mobility, geochemical barriers, a how selective partial analysis can be used to enhance extren subtle geochemical anomalies.

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CONTENTS

LINDGREN AWARD NOMINATIONS

The Lindgren award is offered annually by the Society of Economic Geologists to a young geologist whose published research represents an outstanding contribution to economic geology. The award, which consists of a citation, dues-free membership in the Society, and travel to the fall meeting for the presentation, is not restricted as to the candidate's nationality, place of employment, or membership in the Society. The work for which the Lindgren Award is given must have been published as a single paper or series of papers in a recognized journal before the author's 35th birthday, and the awardee must be less than 37 years of age on January 1 of the year in which the award is presented.

The award can be given for contributions to economic geology from any subdiscipline of geology (including, among others, structural geology, mineralogy, petrology, geochemistry, stratigraphy, geophysics, and mine geology).

Any Society member in good standing may nominate candidates for the award. We are currently seeking nominations for the 1993 Award, for which nominees must have been born after January 1, 1956. Nominees who are not selected for 1993 but are still eligible will be considered for awards in following years. The deadline for nominations is October 30, 1992.

For more information please contact:
Jonathan G. Price, Chair of the Lindgren Award Committee
Nevada Bureau of Mines and Geology
Mail Stop 178
University of Nevada, Reno
Reno, Nevada 89557-0088
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FAX: (702) 784-1709

Technical Notes

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In the Canadian Shield, large areas are covered by one or more sequences of glacial till and glaciolacustrine sediments. In the Basin and Range Province much of the bedrock has been buried by basin fill. Typically the overburden in these regions is exotic to the bedrock that it covers. A conventional chemical analysis would reveal only the composition of the overburden and would not give any indication of the underlying bedrock. Drilling has been the only means of collecting useful geochemical samples in areas of extensive overburden. An inexpensive technique was needed for gathering meaningful geochemical data from overburden that would provide some indication of the chemistry of the bedrock.

Small amounts of trace elements mobilized by oxidation of sulfide minerals in the bedrock or basal till can migrate through overburden by various mechanisms, such as ground water flow, capillary action, or diffusion of volatile compounds. Oxides of manganese and iron, which form coatings on mineral grains in soils developed on overburden, are effective traps for mobilized elements. However, the proportion of a given element from a bedrock-related source that has been introduced into an overburden sample is typically very small compared to its total concentration in the overburden. Thus, it has been difficult to determine the amount of a trace element that has been added to the overburden rather than the total concentration. Selectively determining trace elements in oxide coatings can be an effective approach to mineral exploration in buried terrains. Chao (1984) thoroughly reviewed the principles and practices of partial analysis.

Analytical Problem

Amorphous manganese oxide, which is commonly a very small part of the total manganese oxides in soils, is one of the most efficient natural traps for trace elements mobilized in the surface/near-surface environment. The large surface area per unit mass and the random distribution of both positive and negative charges on the irregular surface of this material make it an ideal adsorber for a variety of cations, anions, and polar molecules. Anomalous concentrations of trace elements adsorbed by this material are often indicative of the chemistry of oxidizing minerals in the bedrock or basal till rather than the composition of the exotic overburden from which the soil formed. Previously, no partial leaches had been developed which were selective for amorphous manganese oxide.

Hydroxylamine hydrochloride has been used very effectively as a selective reducing agent for manganese oxide coatings (Canney and Nowlan, 1964; Chao, 1972). This reducing agent rapidly reacts with nearly all of the manganese oxide phases in a geological sample. It can be used along with other reagents in

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Technical Notes

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such dilute concentrations that any chemical attack upon the mineral substrates of the coatings is very minor. However, the concentrations of many trace elements in these leach solutions could be so low that specialized instrumental techniques would be needed to make determinations. These techniques would likely be inductively-coupled plasma/mass spectrometry (ICP/MS) and graphite furnace atomic absorption (GFAA). The presence of chloride ions in the hydroxylamine hydrochloride-leach solutions can produce extreme interferences for many elements by both of these instrumental techniques. Therefore, hydroxylamine hydrochloride is not a viable leaching agent when seeking many extremely low-level trace-element signatures.

Hydrogen peroxide also acts as a reducing agent for MnO_2. In an aqueous solution it will react with manganese dioxide, consuming hydrogen ions, and resulting in the manganese being reduced to the divalent state, which is soluble.

$$MnO_{2(s)} + H_2O_2 + 2H^+ \rightarrow Mn^{2+} + O_{2(aq)} + H_2O.$$

In this process, all the trace elements trapped in the manganese dioxide are released. Chao (1972) rejected the use of hydrogen peroxide as a selective leaching agent because, even at very high concentrations, it reacts very slowly with many crystalline phases of manganese dioxide (Taylor and McKenzie, 1966). However, even dilute concentrations of hydrogen peroxide vigorously react with amorphous manganese dioxide.

It would be possible to selectively leach for amorphous MnO_2 by adding H_2O_2 directly to the leach solution. However, the chemist would not know how much hydrogen peroxide should be used to leach each particular soil or sediment sample. If too much were added, there would be increased leaching of crystalline manganese oxides, as well as leaching of organic matter, sulfide minerals, and other oxidizable phases in the soil sample. Also, with some samples too high a concentration of H_2O_2 in the leach solution could produce precipitation of insoluble metal peroxides. Alternatively, if too little reagent were added, the leaching of amorphous manganese oxide would be incomplete.

Enzyme Leach

An enzyme chemical reaction slowly generates very low concentrations of hydrogen peroxide in aqueous media. Glucose oxidase reacts with dextrose (D-glucose) to produce hydrogen peroxide and gluconic acid.

$$\text{Dextrose} + O_{2(aq)} + H_2O \rightarrow^{\text{(Glucose Oxidase)}} \text{Gluconic Acid} + H_2O_2$$

Dilute hydrogen peroxide readily reduces and dissolves amorphous manganese dioxide, releasing trace elements and polar molecules trapped in that material. Gluconic acid complexes the metals and holds them in solution. Once all the amorphous manganese dioxide has been dissolved, the products of the glucose oxidase-dextrose reaction are no longer being consumed at a rapid rate, and the enzyme reaction virtually stops. The hydrogen peroxide concentration probably never exceeds 40 µg/ml, and sufficient gluconic acid is produced to complex the metals solubilized by the process. This self-limiting characteristic of the process minimizes undesirable leaching of mineral substrates. Thus, the background concentrations for many elements determined are extremely low and the anomaly/background contrast is often dramatically enhanced.

Trace-element concentrations for many elements in the leach solutions are often in the mid-to-low picogram-per-liter range. The only current instrumental technique that can be effectively used to determine such low concentrations for large numbers of elements in a significant number of samples is ICP/MS. Nothing is added to the leach solution that would be detrimental to the ICP/MS technique, or which would produce a serious analytical blank problem. The leach solutions are also amenable to determination of many trace elements by GFAA and ICP/AES.

Results and Discussion

In an early experiment with the Enzyme leach, a relatively large quantity of amorphous MnO_2 precipitate was dissolved in only one hour (Clark, pending). Alternatively, in a set of soil samples from a regional mineral-resource assessment project in northern Minnesota, the Enzyme leach typically leached less than five percent of the total manganese oxides in the samples (Clark pending: Clark, in press). Based on the observations of Taylor and McKenzie (1966), it was expected that very dilute hydrogen peroxide concentrations would have minimal leaching effect on many crystalline manganese oxide phases. Thus, it appears that the Enzyme leach is somewhat selective for amorphous manganese dioxide.

Crystalline manganese oxides are known to be effective traps for such metals as Ba, Co, Ni, and Zn. Enzyme leach analyses of soil samples often reveal anomalies not only of these metals, but also a long list of other trace elements, some of which occur as cations and others that form anions in the surficial environment. The list includes Ag, As, Bi, Br, Cd, Cl, Cu, Ga, I, In, Mo, Pb, Re, Sb, Se, Tl, U, V, and W. Because the surface chemistry of amorphous MnO_2 allows it to trap a variety of cations, anions, and polar molecules, selectively leaching for that material provides distinct advantages.

In samples that are identified as being part of a background population with respect to a number of leachable trace elements, a correlation is often observed among leachable Ba, Co, Mn, Ni, and Zn. However, in samples that have concentrations above threshold values for one or more elements, no relationship has been found between leachable Mn and the leachable

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concentrations of the anomalous elements. Therefore, the Enzyme leach is not prone to generating false anomalies.

Glacially Buried Terrain as in Desert Sediments.

A regional mineral-resource assessment project in the International Falls and Roseau 1°x2° quadrangle of Minnesota was the first large-scale application of the Enzyme leach. The bedrock in most of the region is buried by a minimum of two till sheets, and in most of the area these tills are capped by glaciolacustrine sediments from Glacial Lake Agassie. In the initial phase of that project, a pilot study revealed a relationship between Enzyme-leach anomalies in B-horizon soils and vegetation anomalies at the same sites. In effect, the B-horizon soils apparently have been acting as long-term integrators of vegetation anomalies (Clark, in press). Enzyme leaching of B-horizon soils proved to be the most cost-effective means of conducting a mineral-resource assessment of that region.

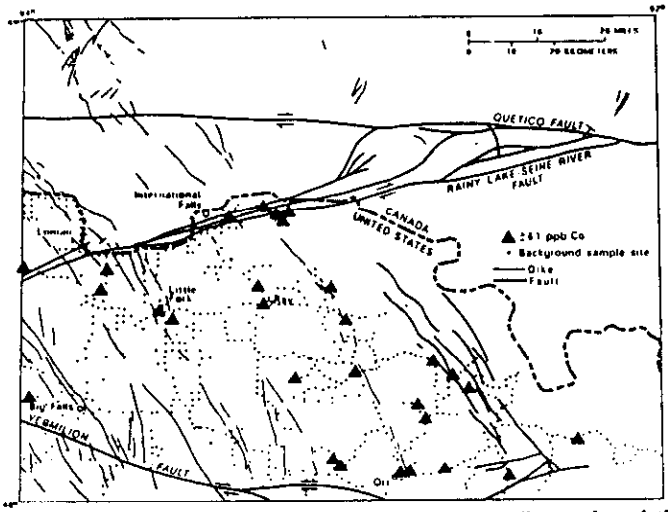

Fig. 1. Enzyme-leach Co anomalies in B-horizon soil samples of the International Fall 1°x2° quadrangle, Minnesota.

This geochemical study of northern Minnesota produced the first recognized evidence of potential for Proterozoic vein deposits in that region. A plot of cobalt anomalies in the International Falls 1°x2° quadrangle revealed an alignment of anomalous-sample sites along what appears to be northwest-striking structural trends (Fig. 1). Some of the trends coincided with diabase dikes, and the Co anomalies tended to occur within a short distance east or west of the termination of dike segments. Other trends appeared to be controlled by faults. Clark et al. (1990) observed that the diabase dikes could not be the sources of the Co, and plots of Ag and Tl revealed anomalous trends that either paralleled or coincided with the Co trends. The anomalous-sample sites tended to cluster in areas where structural trends evidently intersect in the covered basement. Stronger leaching methods did not perform as well as the Enzyme leach. An augmented version of the Enzyme leach (Clark et al. 1990) detected fewer anomalies. In a pilot study, the potassium iodide+ascorbic acid leach (Viets and others, 1984) and the oxalic acid leach (Alminas and Mosier, 1976; Church and others, 1987) failed to detect any of the anomalies along one of the trends southeast of International Falls.

Desert pediments. The first desert pediment study used soil samples collected along two traverses perpendicular to the mineralized structure that hosts the Sleeper ore body, in northwestern Nevada. A plot of Enzyme-leachable Re along traverse two (Fig. 2, 600 meters north of the pit) is one example of trace-element anomalies along that traverse. The overburden along traverse two (Fig. 2, 600 meters north of the pit) is one

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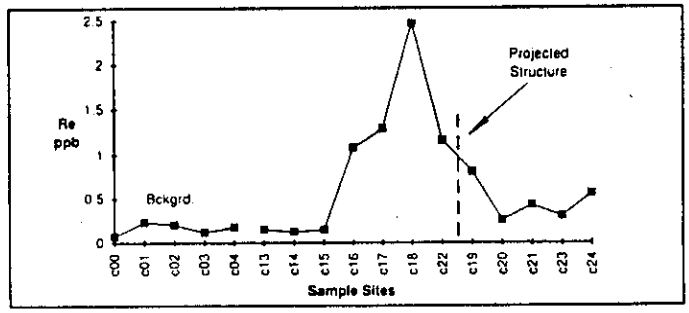

Fig. 2. Enzyme-leach Re anomaly in soil samples along a traverse 600 meters north of the Sleeper pit, Nevada. The vertical dashed line represents the approximate location of a buried mineralized structure. Sample site spacing along traverse 2 varies between 30 and 60 meters.

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example of trace element anomalies along that traverse. The overburden along traverse 2 (sample sites c13-c24) consisted of from 20 meters to 40 meters of basin fill. The background-soil sample sites (c00-c04) were collected on basin fill up slope from the mineralized structure.

Anomaly/background ratios show the dramatic contrast of the Enzyme-leach soil anomalies found near the Sleeper mine (Fig. 3). The elements with the highest anomaly contrasts are those that characteristically occur as anions in the surficial environment. By comparison, the stronger partial leaching methods, potassium iodide+ascorbic acid (Viets and others, 1984) and oxalic acid (Alminas and Mosier, 1976; Church and others 1987), produced much lower anomaly contrasts than the Enzyme leach (Fig. 3). Even higher anomaly contrasts were obtained by using the Enzyme leach on soil samples

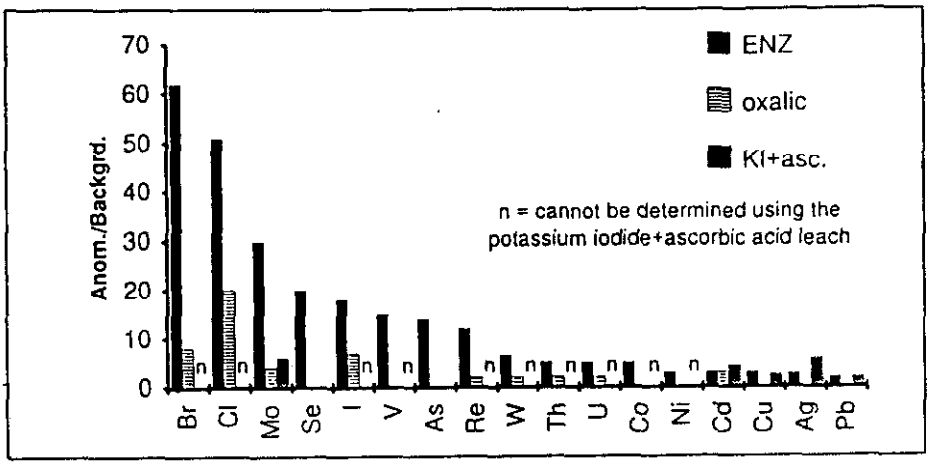

Fig. 3. Anomaly/background ratios for anomalous elements in soils over the mineralized structure at the Sleeper deposit, Nevada. The three analytical methods used were the Enzyme leach, the oxalic acid leach, and the potassium iodide + ascorbic acid leach.

collected over the Rabbit Creek deposit, in north central Nevada.

Enzyme leach analyses of soil samples from desert pediments at several localities have revealed strong correlations between anomalous concentrations of one or more halogens and other trace elements. The leachable concentrations of arsenic and iodine in the samples collected near the Sleeper mine show a nearly linear relationship (Fig. 4). Scatter plots of Mo and Cl and Re and Br also reveal similar relationships in the leach

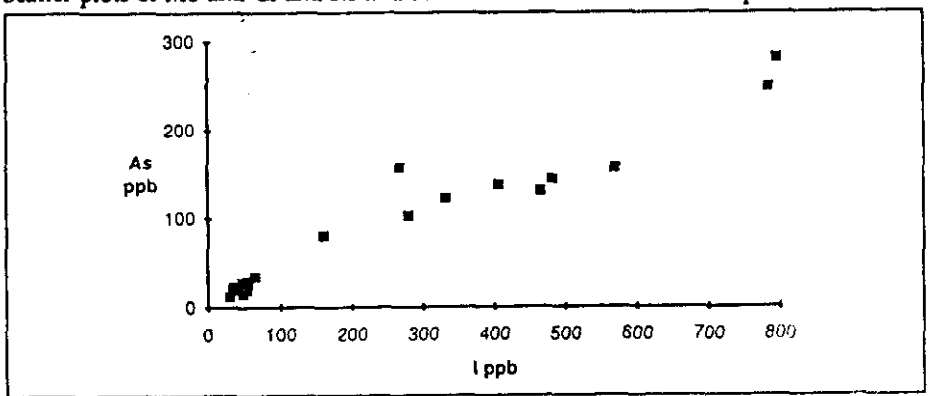

Fig. 4. Scatter plot of Enzyme-leach iodine and arsenic concentrations in soil samples collected near the Sleeper mine, Nevada.

data from the Sleeper samples. Figure 5 shows the nearly linear relationship between Sb and Br produced by Enzyme leaching of soils from another property in Nevada. The strong linear relationships between pairs of elements would seem to indicate that each pair is migrating together at that given location. Trace elements that correlate strongly with the halogens at various localities are those that tend to volatilize as halides under acid/oxidizing conditions used for chemical digestion of geological samples. Although the boiling points of halides and oxyhalides of these metals are 100°C to 300°C above

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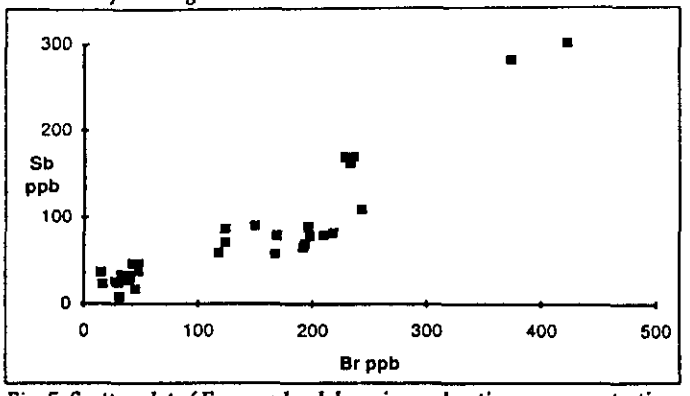

Fig. 5. Scatter plot of Enzyme-leach bromine and antimony concentrations in soil samples collected over a property in Nevada.

the ambient temperature, they would have moderate vapor pressure in localities where sulfide-rich bodies of rock were being oxidized. It seems that these halogen compounds are migrating very slowly through the overburden over extended periods of time and are being trapped by amorphous MnO_2 near the surface.

Limitations. The development of this new leaching technology does not diminish the need for performing pilot studies. In northern Minnesota it was essential to sample the B-horizon (Clark, in press). With desert soils, evidence suggests that the depth of collection can be of major importance. Where the overburden is generally less than 3 meters thick, stronger partial leaches usually produce greater anomaly contrasts. As an experiment, identical sample sets were sieved to minus 60 mesh in one case and pulverized in the other. The pulverized samples either failed to show any anomalies or the anomaly contrast was drastically reduced when compared to the sieved samples. Grinding may have caused this, because amorphous MnO_2 is a soft material that is readily reduced to a fine powder, which in turn may be dissipated by the air movement in and around the grinding apparatus. Alternatively, volatile compounds trapped in MnO_2 coatings could easily be lost due to the heat generated by the grinding process. Although the Enzyme leach performs extremely well for detecting currently active dispersal processes, in cases where barren oxide coatings have had time to accumulate on the surfaces of mineral grains, stronger leaching techniques produce more useful results.

Enzyme leaching of surficial geochemical samples is a relatively inexpensive technique that can be used to define overburden drilling targets. This new technology opens the door for cost-effective geochemical exploration for mineral deposits in many geographic areas where the bedrock is buried by overburden.

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Sample Media

Applied geochemistry and, therefore, plans for geochemical mapping, are being driven increasingly by environmental considerations.

In 1991 it became clear from papers and discussions that the preferred sampling media for the IGM project are stream sediment, soil, and water, as and when analytical problems relating to low concentrations can be overcome. Support for overbank sampling seemed to weaken. Evidence presented by John Ridgway et al. in Uppsala seemed to confirm the opinions of others that for reliable interpretation they require, in general, more detailed site investigations than are practical for regional reconnaissance purposes.

The Uppsala Symposium on Environmental Geochemistry helped to clarify a number of issues. Water is becoming the most sought-after natural commodity and for obvious reasons attracts the greatest public interest. The Symposium underlined the need for baseline data on soils (sensu latu), as the almost-universal surface sampling media of general environmental significance. Stream sediments are complementary in providing enhanced sensitivity for some elements of economic importance, but this medium is of lesser interest to most scientists concerned with non-geological environmental questions. Lake sediments substitute for stream sediments in wet Shield areas with poorly developed drainage, and have the advantage that, with suitable sampling, long-term changes can be detected.

An important consideration in the selection of methods is that sample spacing for soil surveys, and to a lesser degree water, stream and lake sediment surveys, can be increased beyond that required for initial reconnaissance coverage to permit more detailed investigations for specific purposes. Since most countries have undertaken geochemical surveys and based their data on

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GEOCHEMICAL MAPPING

Update on the International Geochemical Mapping Project

The International Geochemical Mapping (IGM) project, sponsored through UNESCO/IUGS as IGCP Project 259, distributes a newsletter in January each year to its 350 listed participants in 80 countries. The following is taken from the editorial in the latest edition, with updates from recent project meetings held in Keyworth U.K. April 22-24, and Reston, Virginia, May 8-10, 1992. For more background information about the project see Vol. 39 (1990) of the Journal of Geochemical Exploration.

INNOVATIVE ENZYME LEACH PROVIDES COST-EFFECTIVE OVERBURDEN PENETRATION

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Keywords: deposit, overburden, analysis, desert, glacial, soil

Introduction

Layers of glacial till and glaciolacustrine sediments cover large areas of the Canadian Shield, and much of the bedrock in the Basin and Range Province of United States and Mexico and much of the Atacama Desert of Chile and Peru have been buried by basin fill and volcanic rocks. The problem, when trying to perform geochemical exploration in terrains that are covered by transported overburden, is that the overburden is usually exotic to the bedrock that it covers. In some regions, intense weathering has stripped the surficial material of the original chemical signature of the parent rock. Conventional chemical analysis would reveal only the composition of the overburden and would not give any indication of the underlying bedrock. Total methods of analysis and stronger-leaching techniques produce results that are dominated by the overburden signature, and random variations in this signature suppress any anomalous chemistry emanating from underlying mineralization. In the past, drilling has been the only means of collecting useful geochemical samples in areas of extensive overburden. An inexpensive means is needed for detecting subtle geochemical dispersion through transported or deeply weathered overburden and providing some indication of the chemistry of the bedrock.

Trace elements released by weathering of mineral deposits in the bedrock will migrate up through overburden by such means as ground water flow, capillary action, or diffusion of volatile compounds. However the amount of these bedrock-related trace elements is typically a very small component of the total concentration of these elements in the overburden. The goal is to determine the amount of a trace element that has been added to the overburden rather than the total amount in the overburden sample. Upon reaching the near surface environment, many of the trace elements migrating through overburden will be trapped in manganese oxide and iron oxide coatings, which form on mineral grains in the soils. One of the most effective traps for trace elements migrating toward the surface is amorphous manganese dioxide, which is usually a very small component of the total manganese oxide phases in the soil sample. Not only does amorphous manganese dioxide have a relatively large surface area, but the irregular surface and the random distribution of both positive and negative charges on that surface make it an ideal adsorber for a variety of cations, anions, and polar molecules.

A selective leach has been developed that employs an enzyme reaction to selectively dissolve amorphous manganese oxides. When all the amorphous manganese dioxide in the sample has been reacted, the enzyme reaction slows, and the leaching action ceases. Because the enzyme leach is self limiting, there is minimal leaching of the mineral substrates in the sample. Thus, the background concentrations for many elements determined are extremely low and the anomaly/background contrast is dramatically enhanced. Typically, three types of geochemical anomalies are found with the Enzyme Leach: 1. Mechanical/hydromorphic dispersion anomalies; 2. Oxidation halo anomalies; 3. Apical anomalies. In terrains where the bedrock is buried by glacial overburden, mechanical/hydromorphic anomalies are the most common type found (although all three types of anomalies are observed in soils developed on tills). Mechanical dispersion trains were formed in the basal till as mineralized bedrock material was smeared down ice during glaciation. Gradual weathering of this mineralized material releases trace elements into the ground water flowing through the till. Vegetation with roots tapping into either the mineralized till or anomalous ground water picks up trace elements which are eventually shed to the forest floor in plant litter. Anomalous trace elements are often relatively quickly leached from the *A*-soil horizon and trapped in oxide coatings in the *B* horizon. In essence the *B*-soil horizon often acts as a long-term integrator of vegetation anomalies (J.R. Clark, 1993). The Enzyme

Leach has been used to detect very subtle mechanical/hydromorphic anomalies related to mineralized bedrock in a number of glacial overburden situations, including areas where the glacial till is blanketed with glaciolacustrine sediments. Subtle hydromorphic dispersion anomalies in stream sediments have also been detected with the Enzyme Leach. Trace element suites comprising mechanical/ hydromorphic-related soil anomalies commonly reflect at least part of the chemical signature of the bedrock source. Anomaly contrast in soils developed on glacial till often range from 2-times to 10-times the background concentrations for the elements forming the anomaly.

Oxidation halo anomalies are produced by the gradual oxidation of buried reduced bodies. Any reduced body (an ore deposit, a barren body of disseminated pyrite, a buried geothermal system, a petroleum reservoir, etc.) can produce one of these anomalies. Once these anomalies are found it is up to the geologist to make a geological interpretation based on all the information at hand, including Enzyme Leach data, as to what the source of the anomaly might be. These anomalies are characterized by very high contrast values for a suite of elements, the "oxidation suite," which can include Cl, Br, I, As, Sb, Mo, W, Re, Se, Te, V, U, and Th. Often, rare-earth elements and base metals will be anomalous in the same soil samples, but with reduced contrast. Evidence indicates that the oxidation suite migrates to the surface as halogen gases and volatile halide compounds. These elemental gases and compounds would tend to form under the acid/oxidizing conditions of the anode of an electrochemical cell. The low contrast base-metal anomalies coinciding with oxidation-suite anomalies may result from the gradual migration of cations away from these anodes along electrochemical gradients. Less commonly, enzyme-soluble Au and enzyme-soluble Hg will be found in the area of these anomalies. Metallic Au and Hg are not soluble in the enzyme leach. These low-level Au and Hg anomalies often appear to form as a result of the oxidation of these elements in the soil by the subtle flux of oxidizing gases passing through the soil. Oxidation anomalies often form an asymmetrical halo or partial halo around the buried reduced body, and that body underlies part of the central low within that halo. The trace element suite in oxidation anomalies, although often enriched in many types of metal deposits, is not typically representative of the composition of the buried reduced body. For example, essentially the same suite of elements forms halos around petroleum reservoirs as is found around porphyry copper deposits, epithermal gold deposits, buried geothermal systems, and barren pyritic bodies. Sometimes, the low contrast base metal association in the halo can be somewhat indicative of the composition of the source. Oxidation anomalies can form above reduced bodies that are covered by either overburden or barren rock. The depth of detection for oxidation anomalies is often too great for the mineralized body to be of economic interest. In arid climates, anomaly-to-background ratios for the oxidation suite commonly range between 5:1 to 50:1, and sometimes anomaly contrast exceeds 100-times background. Oxidation anomalies tend to have more subdued contrasts in humid climates.

Apical anomalies detected with the Enzyme Leach occur directly over the source of the anomaly rather than forming a halo around the source. Often these anomalies appear to form as the result of diffusion of trace elements away from a highly concentrated source. That source can be the actual source of the anomalous trace elements, or it can be a structure such as a fault that facilitates the movement of trace elements to the surface. Simple apical anomalies that lie directly over a buried mineral deposit will not show dramatic halogen contrast, as is typically found with oxidation anomalies. A fault-related anomaly will occur almost directly over the subcrop of the fault. The suite of trace elements represented in the anomaly will often be indicative of the chemical composition of the ultimate source of those trace elements. However, where a deeply buried reduced body is intersected by a fault, an oxidation suite of elements, including one or more halogens, can form an extremely-high-contrast anomaly directly over the trace of the buried fault. Otherwise, apical anomalies usually exhibit a diminished contrast above background, compared to oxidation anomalies. Fault-related anomalies commonly contain very-high-contrast concentrations of zirconium and other supposedly "immobile" elements.

Sample Collection

Although the Enzyme Leach can be used as a partial-analysis method for virtually any surficial geological material, the sample media most commonly analyzed with this method is *B* horizon

This horizon is the most chemically active part of the soil, with regard to the formation of oxide coatings on mineral grains. Studies in both arid and humid climates indicate that the sampler should be careful to collect soil samples from the *B* horizon.

The following information is based on observations from studies in glacially-buried terrain in northern Minnesota and Canada, desert pediments in Nevada, areas of extensive overburden in South America, test sites in the Colorado Front Range, and over oil fields in western Wyoming and southeastern Texas. Soil horizons vary in appearance and depth, even within relatively small areas. It should be emphasized that the samplers should be collecting material from a consistent soil horizon, rather than a consistent depth. Samplers should be encouraged to expose the soil profile whenever they encounter soil zoning that varies from previous observations. Before beginning, it is a good idea to observe soils profiles in ditches and trenches in and near the area to be sampled. The best potential sample sites are those that appear to be undisturbed and that have mature vegetation growing on and around the site. Samples collected from trenches and pit cuts are also good, as long as a fresh surface is scraped on the face of the soil profile to be sure that you are collecting freshly exposed material. Ditch banks, on the side away from infrequently used roads, under most circumstances can also be good sample sites, after scraping the bank to expose fresh material. The sampler should observe the conditions at such sites and make a judgement about the potential for contamination or of excessive disturbance. Road fill (new or old) is not usable sample material. Also, roads are often contaminated with a variety of pollutants that can linger for centuries. Plowed fields can provide usable samples, if an undisturbed site is not available. It is better to move a sample site a relatively short distance rather than to use a bad site just because it is at the specified spot.

Desert-Pediment Soils. There is an adage to the effect that desert soils are not zoned (azonal). In many cases this is not true. The appearance of the horizons is different from soils in humid climates, but they are still frequently zoned. The current surface on many desert pediments is more than one million years old, which is more than sufficient time for soil horizons to develop. Relatively little organic matter is found in *A*-horizon soils in desert climates. The *A* horizon is typically a light-gray to light-grayish-tan, loose, fine sand to silt. Descending through the soil profile, the *B* horizon begins where the soil is more cemented and slightly darker in color, often becoming slightly more brown than the overlying loose material. The brown color often becomes darker farther down into the *B* horizon, but in other cases, the color difference between the *A* and *B* horizons is almost imperceptible. Where the color changes are minimal, a key criteria is that the cementing of the grains in the *B* horizon often produces a weak blocky fracture that is absent in the *A* horizon. In areas that have a history of previous mining activity, the upper centimeter of the *A* horizon can be highly contaminated with many trace elements. Rarer elements, such as gold, can be enriched by as much as 10- to 100-times background. The *A* horizon should be scraped from the area around the spot to be sampled for a radius large enough to prevent this contaminated material from trickling into the sample material. In areas of extreme aridity, such as the Atacama desert of South America, the sampler often will not find soil horizons. At most locations in that region the best level to sample is 25 cm to 40 cm beneath the surface. All the Enzyme Leach studies performed to date have used *B*-horizon soils collected above the caliche layer. Do not sample from the caliche layer or immediately beneath it. Caliche will produce extremely erratic Enzyme Leach data. Where caliche comes too close to the surface to collect a sample, move the sample site a short distance or abandon it. In the Atacama desert a reddish layer will often be encountered just above the caliche layer. This reddish color results from selenite that has formed in the soil. The presence of granular selenite in the soil does not detract from the results.

Humid Climate Soils. Sample sites with the best developed soil horizons are usually found in groves of trees. In northern climates, aspen groves are the best. The *A* horizon consists of an upper humus layer, a dark layer of mixed organic and mineral matter, and there may be a bleached mineral layer at the bottom. The bleached layer results from the reducing action of the overlying organic-rich layers, which dissolves oxide coatings on mineral grains. The top of the *B* horizon is the point below which there is no organic matter and where oxide coatings are found on mineral grains. Iron oxide coatings typically give *B*-horizon soils colors that are some shade of brown or red (dark brown, medium brown, light brown, brick red, tan, orange, etc.). Where

the *A* horizon is quite thick, such as around bogs, there is often a faintly gray layer beneath the bleached layer of the *A* horizon. The faint gray color is due to manganese oxides, and this material is usable *B* horizon, if a darker colored *B*-horizon layer is not available. In a humid, forested area all the material comprising the *A* horizon of the soil (decaying leaf litter, humus, and organic-rich mineral layers) should be scraped away to reveal the *B* horizon. The sample is collected from 10 to 30 centimeters into the top of the *B* horizon. *A*-horizon contamination of *B*-horizon samples should be avoided as much as possible.

Mountain Soils and Glacially Scoured Terrain. Due to the rapid rate of mechanical weathering in mountainous areas, there are localities where the soil is truly azonal. Also, during Pleistocene glaciation, the regolith was completely removed in many areas and a chemically mature soil profile has not had sufficient time to redevelop. In such cases the sampler should dig deep enough to obtain soil material that is as free of organic matter as possible.

Sample Handling

Samples should consist of about 100 to 200 grams of material depending on the fineness of the soil. Coarser soils require more material to assure adequate sieved sample material for analysis. If at all possible, the sample should be air dried. If circumstances require the use of a drying oven, the temperature should not exceed 40°C, and the drying time should not be longer than is necessary to dry the sample. Too high a drying temperature alters the chemistry of the amorphous manganese dioxide coatings and drives out the volatile halogens and halide compounds. If in doubt, let the laboratory perform the sample preparation. They know which sieve sizes to use, and what steps must be followed to maintain the geochemical integrity of the sample material. Pulverized samples and samples that have been "cooked" are not suitable for analysis with the Enzyme Leach.

References

Clark, J.R., 1993. Enzyme-induced leaching of *B*-horizon soils for mineral exploration in areas of glacial overburden. Trans. Instn. Min. Metall. (Sect. B: Appl. earth sci.), 102: B19-B29.

APPENDIX 5

GROUND CONTROL

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Road centre traverses using plastic Brunton and NCI hip chain were made along most of the roads crossing the grid. Grid lines from 1996 at road centre as well as miscellaneous features along the roads such as claim posts, claim lines, old grids lines, drill holes, culvert and surveyed bench marks from a 1980 Cominco survey were tied-in.

The declination used is 20 deg. 23' E which is the value issued by the Geomagnetic Laboratory of the G.S.C. in May 1996. The hip-chain was checked for accuracy relative to distances measured by nylon chain. Six 50.0 m nylon chain lengths were re-measured with hip chain and gave readings ranging from 49.9 to 50.3 m. Four of these hip chain measurements indicated either 50.0 or 50.1 m, with two of each.

Rocks with ribbons tied to them were placed at road centre for stations. All traverses started in the south or the east. The bearing from the initial station to the second was recorded along with the distance. From the second station, one back-sighted on the first station. If the two readings agreed within 2 degrees absolute, they were accepted and the survey proceeded to the third station after a front-sight reading had been obtained on that station, and so forth. If a front-sight and the corresponding back-sight readings did not agree within 2 degrees absolute, the readings would be checked. If magnetic disturbance was indicated -i.e. front-sight and back-sight readings differed by several degrees, commonly 5 to 10 degrees, a new set of front and back sight readings were obtained at the half-way point in addition to checks on the original readings. The readings that most closely defined the line between the points in question would be accepted, or several readings would be averaged at the plotting stage. In general, front sight and the corresponding back sight reading wewre the same, or agreed within one degree.

Traverses were plotted on mylar at the scale of 1:2500, with average bearings plotted (Plate 3).

Two generations of topographic maps for this area were kindly made available to the author in 1986 by Cominco Ltd for the cost of reproduction. These were a 1970 prepared reconnaissance map at a scale of 1 inch=1000 feet and a second map prepared in 1980 at a scale of 1:10,000. The 1970 version covered the grid area whereas the newer map covered about 90% of it. Accordingly we made a 1:10,000 scale enlargement of the 1970 map for use in orienting roads to a topographic base and to obtain the lake outlines.

About 2/3 of the road network now in existence was developed after Cominco's mapping. The road-plot from our own survey was reduced photographically to 1:10,000 and compared to the Cominco maps at the same scale. It was found that the roads south of point

"A" (L4S 1+50E) fit those on the topographic maps very closely but true north on our road map is about 1 degree west of the true north of the base map when the roads are aligned for best fit. In regards to the true north of the base-map, we adapted that direction from the 1980 map because we believe that map to be more accurate on that direction as its control was quite comprehensive, including star shots and surveyed airphoto targets, all control work carried out by professional land surveyors.

There is also close agreement on true north between the 1980 map and the TRIM maps, the difference being less than one half degree. True north of the 1970 topographic map is about 1 degree east of that of the 1980 map. If the road-survey version of true north were projected to the northern parts of the map area, one would finds that the ends of the lakes would be shift about 100 m to the west of their actual location. To elevate this problem, we aligned our road plan, along with its true north, as a best fit to the south ends of Durand , Norman, Dairy and East Dairy Lakes. Plate 3 depicts the northern grid after this rotation with the true north shown being that of the road survey and the lakes traced from an enlargement of the 1970 Cominco topographic map.

The grid in the eastern map area is held by tie-lines and the old roads appearing on the 1970 topographic map. In due course we obtained the 1:20,000 TRIM maps of the area and were then able to compare the road in the northern grid area with an established map. Close agreement between the roads on the TRIM maps and those of the road survey is indicated.

In order to determine if chaining errors had affected the position of the roads in the northern half of the grid we checked about 85 percent of the roads by chaining stretches of several hundred metres as a single chainage and compared that with the sum of the individual chainages. In one location we found an error of about 13 m but elsewhere, the differences ranged from 0.9 to 1.6 m over distances from about 300 to 350 m.

Fundamental problems still remain such as the two true north directions and the apparent road discontinuity at L0+00. This problem is thought to be related to magnetic disturbance in the vicinity of point "A". It is not a simple matter of rotating the road to the east because the common LCP of Rabbit #4 and 36-38 are tied to point "A" by closed traverses and the road has been tied in as well to these LCPs and to make things worse, the LCP is the origin of the grid. Any shift in the road west of the LCP would require some adjustment in the southern part of the grid which is presently not indicated. The present control should be satisfactory until such time as an economic discovery is made.

APPENDIX 6

DESCRIPTION OF ROCK SAMPLES
BY DAVID L. COOKE, PhD, PEng

RAB 96-1R Buff-weathering moderately sheared, ankeritic rock. Felsic in appearance.

RAB 96-2R Buff-weathering, sheared ankeritized volcanic rock. Black specks of Mn and/or iron oxide throughout. Note malachite in shear planes.

RAB 96-4R Buff weathering , carbonatized volcanic rock. Many be altered andesite

RAB 96-6R Green chrysocolla and malachite impregnated medium grain-grain, equigranular rock. Felsic to siliceous in appearance.

RAB 96-7R Sugary textured felsic rock containing abundant specs of a black oxide secondary mineral. Abundant clay alteration. Looks aplitic.

RAB 96-8R Red-brown weathered carbonatized equigranular intrusive rock. Ankeritic fractures are weathered to sooty brown limonite.

RAB 96-9R Equigranular diorite or gabbro. Contains biotite crystals and abundant magnetite disseminations. Note: quartz-pyrite veins and adjoining pyrite disseminations.