GEOPHYSICAL REPORT

ON

RESISTIVITY and INDUCED POLARIZATION SURVEYS

THE OXIDE PEAK PROPERTY
(Amethyst Valley and Kidview Claims)

OXIDE CREEK and BELLE CREEK

TOODOGGONE RIVER AREA

OMINECA MINING DISTRICT, BRITISH COLUMBIA

PROPERTY LOCATION : 57° 29’N Latitude, 127° 09’W Longitude
N.T.S. - 94E/6 and /11
U.T.M. - E610000 N638000

WRITTEN FOR : MATRIX ENERGY INC.
#810 - 355 Burrard Street
Vancouver, British Columbia V6C 2G8

WRITTEN BY : David G. Mark, P.Geo.,
GEOTRONICS SURVEYS LTD.
#405 - 535 Howe Street
Vancouver, British Columbia V6C 2Z4

DATED : January 23, 1997
GEOPHYSICAL REPORT
ON
RESISTIVITY and INDUCED POLARIZATION SURVEYS
THE OXIDE PEAK PROPERTY
(Amethyst Valley and Kidview Claims)
OXIDE CREEK and BELLE CREEK
TOODOGGONE RIVER AREA
OMINECA MINING DISTRICT, BRITISH COLUMBIA

PROPERTY LOCATION: 57° 29’N Latitude, 127° 09’W Longitude
                      N.T.S. - 94E/6 and /11
                      U.T.M. - E610000 N638000

WRITTEN FOR: MATRIX ENERGY INC.
                  #810 - 355 Burrard Street
                  Vancouver, British Columbia  V6C 2G8

WRITTEN BY: David G. Mark, P.Geo.  
             GEOTRONICS SURVEYS LTD.
             #405 - 535 Howe Street
             Vancouver, British Columbia  V6C 2Z4

DATED: January 23, 1997

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,930
TABLE OF CONTENTS

SUMMARY .................................................................................................................................................... i

CONCLUSIONS ............................................................................................................................................. ii

RECOMMENDATIONS .......................................................................................................................... iii

INTRODUCTION AND GENERAL REMARKS ......................................................................................... 1

PROPERTY ................................................................................................................................................... 2

LOCATION AND ACCESS .................................................................................................................... 2

PHYSIOGRAPHY AND VEGETATION ....................................................................................................... 3

HISTORY ....................................................................................................................................................... 3

(a) District ................................................................................................................................................ 3

(b) Property .......................................................................................................................................... 4

GEOLOGY .................................................................................................................................................. 5

(a) Regional ........................................................................................................................................... 5

(b) Property ......................................................................................................................................... 7

INSTRUMENTATION .................................................................................................................................. 8

THEORY ..................................................................................................................................................... 8

SURVEY PROCEDURE .......................................................................................................................... 9

COMPILATION OF DATA ..................................................................................................................... 10

GEOCHEMISTRY ...................................................................................................................................... 11

DISCUSSION OF RESULTS .................................................................................................................... 11

REFERENCES .......................................................................................................................................... 15

GEOSCIENTIST'S CERTIFICATE ............................................................................................................. 16

AFFIDAVIT OF EXPENSES ................................................................................................................... 17

APPENDIX I. SOIL SAMPLE RESULTS
## MAPS AT BACK

### MAPS - At Back

<table>
<thead>
<tr>
<th>Map Description</th>
<th>Scale</th>
<th>Map #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Map</td>
<td>1:9,375,000</td>
<td>1</td>
</tr>
<tr>
<td>Claim Map</td>
<td>1:50,000</td>
<td>2</td>
</tr>
<tr>
<td>Regional Geology</td>
<td>1:125,000</td>
<td>3</td>
</tr>
<tr>
<td>Detail Map - Low Saddle Area</td>
<td>1:1,250</td>
<td>4</td>
</tr>
</tbody>
</table>

### MAPS - In Pockets

**IP and Resistivity Pseudosections with Self-Potential Profiles**

<table>
<thead>
<tr>
<th>Line</th>
<th>Scale</th>
<th>Map #</th>
</tr>
</thead>
<tbody>
<tr>
<td>50N</td>
<td>1:1250</td>
<td>GP-1</td>
</tr>
<tr>
<td>75N</td>
<td>1:1250</td>
<td>GP-2</td>
</tr>
<tr>
<td>100N</td>
<td>1:1250</td>
<td>GP-3</td>
</tr>
<tr>
<td>125N</td>
<td>1:1250</td>
<td>GP-4</td>
</tr>
<tr>
<td>150N</td>
<td>1:1250</td>
<td>GP-5</td>
</tr>
</tbody>
</table>

**Plan Maps**

<table>
<thead>
<tr>
<th>Map Description</th>
<th>Level</th>
<th>Scale</th>
<th>Map #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparent Resistivity</td>
<td>Level 1</td>
<td>1:2500</td>
<td>GP-6</td>
</tr>
<tr>
<td>Apparent Chargeability (IP)</td>
<td>Level 1</td>
<td>1:2500</td>
<td>GP-7</td>
</tr>
<tr>
<td>Apparent Resistivity</td>
<td>Level 4</td>
<td>1:2500</td>
<td>GP-8</td>
</tr>
<tr>
<td>Apparent Chargeability (IP)</td>
<td>Level 4</td>
<td>1:2500</td>
<td>GP-9</td>
</tr>
</tbody>
</table>
SUMMARY

Resistivity and induced polarization (IP) surveys along with some soil sampling were carried out during August, 1996, over a part of the Oxide Peak Property located within the Toodoggone Mining Camp which is 290 km due north of the town of Smithers and is within the Omineca Mining Division of B.C. The terrain of the property varies from steep over much of the property to fairly level within the cirque. Access is best by helicopter from the Cheni Mine site which is about 30 km away.

The main purpose of the geophysical surveys, especially resistivity, was to map the alteration zone associated with the Mist Vein in order to determine the shape, strike extent and dip extent of the vein for optimum drill hole locations. This work was a follow-up to resistivity/IP surveying done in August, 1994. That of the soil sampling was to determine its response to the Mist Vein.

The IP and resistivity surveys were carried out using a BRGM Elrec 6 multi-channel receiver operating in the time-domain mode. The dipole length chosen was the 15-meter dipole read to 12 levels. The survey consisted of five lines surveyed for a total survey length of 2,200 meters. The results were plotted both in pseudosection and plan, and contoured.

The soil sampling consisted of 17 samples picked up along the base line and line 100N. They were sent in for analysis to Chemex Labs and the anomalous results plotted on top of the pseudosections.
CONCLUSIONS

1. The resistivity survey responded as a low over the Mist Vein on all four lines that crossed it resulting in the following information.

   a) It has a minimum strike length of 75 meters open both to the north and to the south as determined from the resistivity survey. This coupled with the geological mapping of the Mist Vein increases the minimum strike extent to 200 meters.

   b) All four lines show the minimum depth extent to be about 90 meters and open to depth. The previous work, however, showed the minimum depth to be about 175 meters, but this work consisted of only one survey line.

   c) All four lines reveal a step-shape to the footwall of the vein. Using the ‘A’ vein of the Baker Mine as a model, the step part of the system is the one that would be mineralized.

   d) The outcrop of the Mist Vein on line 100N may actually be float that has moved 10 or 20 meters westerly from the in-place location.

   e) The resistivity high to the west of the Mist Vein is probably a reflection of the lamprophyre dyke.

2. The resistivity survey revealed an additional five resistivity lows occurring to the west of the Mist Vein any of which could be reflecting epithermal alteration. These occur at 230W, 290W, 380W, 440W, and 500W. The 230W zone is of the strongest exploration interest since it has the lowest resistivity values indicating stronger alteration which indicates higher grade mineralization.

3. The IP survey results were of minimal interest except for an anomaly occurring to the east of the Mist Vein on the four southern lines. On line 100N, it correlates directly with a soil sample that is highly anomalous in copper and zinc and a little anomalous in gold. The anomaly occurs within the country rock (epidote-rich volcanics) and thus is not epithermal mineralization but it could be associated with the Mist Vein system.

4. Other soil geochemistry samples revealed anomalous values in arsenic, barium, and possibly lead associated with the Mist Vein system.
RECOMMENDATIONS

The work discussed within this report is a partial fulfilling of the writer’s recommendations in his previous report on the property. The results were encouraging and thus the recommendations should be continued. They are repeated here with some adjustments because of the additional work.

The main focus of further exploration should be on the Mist Vein. The purpose of this work would be to determine its strike length, its depth extent, and the amount of gold mineralization. This would best be accomplished by:

1. Walking an excavator or a bulldozer onto the property and trenching along strike. An excavator would be preferred to a bulldozer since it would cause less environmental damage but the choice would probably depend on what is available. The trenches should be long enough to not only map the vein but to map the associated alteration package in order to help understand where the mineralization may be located.

2. Continuing the resistivity/IP surveying to the north and to the south using the same survey parameters of 15-meter dipoles, 25-meter spaced lines, and 12 separations of the dipole-dipole array. The main exploration tool, as mentioned within the body of the report, is the resistivity surveying since it would be mapping the shape of the alteration at depth which should help in the location of gold mineralization. The survey lines should extend from 50 to 100 meters east of the expected location of the vein to several 100 meters west of the vein since the vein dips westerly and thus the clay alteration occurs to the west. Also there appears to be additional veins with the associated alteration to the west which is a common feature of epithermal vein systems.

3. Diamond drilling. The trenching and resistivity/IP surveying are both important in determining the optimum location of the targets.

Prospecting/geological mapping should also be carried out on the other areas of the property especially the alteration zone on Oxide Peak. Since a bulldozer or excavator will be on the property, trenching should also be done on the Oxide Peak zone as well. In addition, depending on the results, it may be advisable to carry out one or two lines of resistivity/IP surveying.
INTRODUCTION and GENERAL REMARKS

This report discusses the instrumentation, theory, field procedure and results of resistivity and induced polarization ("IP") surveys carried out over the Mist Vein portion of the Oxide Peak Property located within the Toodoggone River Area. A small number of soil samples were picked up as well and tested for 30 elements as well as for gold.

The field work was carried out from August 20 to 26, 1996, under the supervision of the writer and under the direct field supervision of Roger Mackenzie, geophysical technician. One geophysical technician as well as three helpers completed the crew of five.

The main purpose of the geophysics was to map, mainly through the resistivity survey, the epithermal alteration zones occurring with the Mist Vein. It was intended not only to map the areal extent but also the shape and depth extent of the epithermal alteration and, as a result, locate for optimum drilling purposes the epithermal vein. Resistivity results reflect epithermal alteration zones as resistivity lows, and, if the epithermal quartz veins are large enough, or show sufficient contrast, they reflect the veins as resistivity highs within the resistivity lows. The IP survey may reflect sulphides, which also at times can be useful in mapping epithermal zones since pyrite often occurs peripheral to the main alteration.

This is follow-up work to resistivity/IP surveying done in August, 1994 when line 100N, with 30-meter dipole lengths (the current work was done with 15-meter dipole lengths), was done across the Mist Vein. The purpose at that time was to determine the resistivity and IP
responses to the vein and to determine its true dip (The vein outcropping indicated a northerly dip but the location of the alteration zone indicated it to dip to the south, unless there was an overturning of the vein). The results were that the resistivity responded well to the alteration as a resistivity low; that the IP responded to sulphide mineralization possibly associated with the zone; and that the vein dipped to the south. Furthermore, the resistivity pseudosection indicated three additional epithermal zones.

PROPERTY

The property which consists of a total of 40 units occurring within the Omineca Mining Division is shown on figure #2 as well as described below:

<table>
<thead>
<tr>
<th>NAME</th>
<th>RECORD No.</th>
<th>TENURE No.</th>
<th>No. UNITS</th>
<th>EXPIRY DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidview</td>
<td>5706</td>
<td>238668</td>
<td>20</td>
<td>August 22, 1998</td>
</tr>
<tr>
<td>Amethyst Valley</td>
<td>5707</td>
<td>238669</td>
<td>20</td>
<td>August 22, 1998</td>
</tr>
</tbody>
</table>

The expiry dates shown assumes that the current work under discussion will be accepted for assessment credits.

The property was originally staked in 1983 and therefore, since the claims are more than 3 years old, the assessment work now costs $200 per unit. As a result, each year, $8,000 worth of work must be done in order to keep the claims in good standing.

The property is owned by Charles C. Kowall and is being optioned to Matrix Energy, the operator of the property.

LOCATION AND ACCESS

The property is located in northwestern British Columbia, as shown on figure #1, within the Toodoggone Mining Camp 480 km 325° E (N25°W) of the city of Prince George and 290 km due north of the town of Smithers. It occurs on Oxide Peak to the immediate north and east of McClair Creek, and to the immediate west of Belle Creek.

The NTS is 94E/6 and /11 and the latitude is 127° 09' West and the longitude is 57° 29' North. The UTM co-ordinates are E610000 and N638000 with those of the Mist Vein being E610833 and N6374125.

The Camp is generally reached by fixed wing aircraft from either Terrace or Smithers to the Sturdee Airstrip. Alternatively road access is available from Windy Point 155 km north of Prince George. The gravel road from Windy Point to the Cheni minesite is 468 km. It takes most of a day to drive to either the Sturdee Strip or to the Cheni Mine Heliport, where a helicopter must be used to fly the 30 km north to the property.
Bulldozer access has recently been made onto the AGC Gold property immediately south and that route could be extended north onto the property.

**PHYSIOGRAPHY and VEGETATION**

Oxide Peak is part of the Metsantan Mountain Range which is part of the Swanell Ranges, a physiographic unit of the Omineca Mountains. The property covers an area of alpine topography north of the Toodoggone River with the Kidview Claim covering Oxide Peak and the Amethyst Valley Claim covering 2011 Peak.

The elevation of the property varies from 1,380 meters within the southeast corner to 2,011 meters on top of the 2011 Peak within the northeast corner to give an elevation difference of 631 meters (2,070 feet).

The western and southern boundaries of the property occur within the McClair Creek valley which flows southerly and easterly around the edges of the property and then southerly into the Toodoggone River about 5 km to the south. The eastern boundary occurs within the Belle Creek valley which flows southerly into McClair Creek. An alpine lake about 325 meters long occurs within the northwest corner of the property and would be a good source of water for any diamond drilling on the Mist Vein. Oxide Creek which flows east-southeasterly into Belle Creek appears to drain the alpine lake underground.

The property is mostly covered in alpine vegetation which is predominantly heather and sedges and the topography is mostly steep except for the valley floors such as within the cirque area to the north of the Mist Vein.

**HISTORY**

(a) **District**

In 1824 the explorer Samuel Black noted in his diary the unusual and many gossanous colors in the headwaters of the Findlay River system. In 1915 Charles McClair placer mined $17,500 in gold, and in 1933 and 1934 a public company, Two Brothers Valley Gold Mines Ltd., re-explored McClairs placer gold prospects including drilling near the junction of McClair Creek and Toodoggone River.

The lode potential of the area was investigated initially in 1929 and the 1930’s when Cominco explored several base metal showings in the camp. Lead-zinc mineralization was discovered near the north end of Thutade Lake and south of Baker Mine and some limited drilling was reportedly done (Krause, December, 1994) on Oxide Peak.

It wasn’t until 1968 when Kenneco Exploration (Western) Ltd. completed geochemical stream silt sampling of the area in a search for porphyry copper type
deposits that their prospector, Gordon Davies, discovered quartz float with good gold values in what later became the Baker Mine.

During the 1970's and 1980's there was a massive staking and exploration rush in the camp and many properties were explored.

Dupont put the Baker Mine into production from 1980 to 1983 and produced 37,558 ounces of gold and 742,198 ounces of silver from 79,580 tonnes or ore. In 1991, a consortium of Sable Resources and Shasta International used the old Baker Mine mill and mined the Shasta deposit and the "B: zone of the Baker Mine at the rate of 300 tonnes per day.

In 1989, the Lawyers Mine was put into production by Cheni Mines after they and the Provincial government built a road into the area. Reserves prior to mining were 950,000 tonnes grading 0.2 oz/t gold and 4.38 oz/t silver. Cheni mined the deposit at the rate of 500 tons per day and presently have the mill on standby. They also mined the property of Energex which consisted of 250,000 tonnes of 0.3 ounces gold per tonne.

In 1994 and 1995 America’s Gold Corporation explored their JD Property just to the south of Oxide Peak for epithermal gold with base values. Over $2,000,000 was spent on a program which involved 10,607 meters (34,800 feet) of drilling with 136 holes. An exploration of over $1,000,000 is planned for this year.

(b) Property

The creeks draining the property, Belle Creek, McClair Creek, and Oxide Creek as well as their subsidiaries were part of a well-known gold placer camp indicating the possible occurrence of gold in place on the property.

As mentioned above, Cominco reportedly did some limited drilling on the property on Oxide Peak in the 1930's. The property has been explored since the mid 1970's by numerous companies and groups. Burton in his report refers to previous reports by Pamicon, a consulting geological firm having done work on the property prior to 1988.

In 1987, Hi-Tec Resource Management Inc. carried out soil and stream sediment sampling, magnetic and VLF-EM surveying, hand trenching, and prospecting and geological mapping on behalf of Shayna Resources Inc. The work was reported on by Lyman in a January, 1988 report.

The 1988 report revealed a number of targets with accompanying recommendations. These were followed up on by Alex Burton, P. Eng., geologist with Burton Consulting, during July of 1990 on behalf of Clipper Minerals Ltd. He examined the targets and discounted most of them for various reasons, as discussed in his report.
However, one of these targets was the “Low Saddle Area”, part of the 2011 Peak portion of the property. Here Burton discovered the “Mist Vein” which was a previously unrecognized vein with an epithermal alteration zone. It consisted of a strongly developed clay alteration zone under a red weathering hangingwall zone of quartz, sericite, hematite and pyrite. Along the footwall of the clay zone there occurred a line of multi-stage quartz vein boulders. This surface expression was noted to be identical to that developed around the epithermal quartz vein at the Baker Mine and was deemed to be of major importance.

The Mist Vein was traced by hand trenching in 1990 with the aid of gas-operated rock drills and dynamite for a surface trace strike length of 190 metres. The Mist Vein appeared to continue in both directions along strike; but budget constraints stopped further trenching. Comparison of the vein and the theoretical model showed that the surface outcrop of the Mist Vein is not at an ore grade portion of the vein. This is confirmed by the fact that there is a dip reversal on the vein at the point of surface outcrop.

Burton also examined an alteration zone on Oxide Peak that appeared to be similar to that of the Mist Vein, as well as several others occurring on the property.

In 1994 a test geophysical line of resistivity/induced polarization surveying was run across the vein normal to the strike. The purpose of the work was not only to test the response of the resistivity to the alteration, but to determine the dip direction of the vein since it appeared to be the reverse, dipping easterly, of what it was expected to be, dipping westerly. The geophysics gave a classic response matching the epithermal vein and hangingwall alteration model and indicated the vein to dip westerly.

In 1995 further hand trenching traced the vein further north to extend the minimum strike length to 220 meters and showed that there was another narrow parallel vein to the Mist Vein. Preliminary stream geochemical results showed anomalous gold values just downstream from the surface trace of the Mist Vein.

**GEOLOGY**

(a) **Regional**

The Toodoggone district lies within the eastern margin of the Intermontane Belt, of the Canadian Cordillera. The oldest rocks in the area are tilted and broadly folded cherts, volcanics and limestones of the Asitka Group of Paleozoic Age. The next oldest rocks are Takla Group of Triassic Age, consisting of basalt flows, andesitic to dacitic flows and pyroclastic rocks.

Intrusive into the above units are small stocks of Omineca Intrusives of Jurassic and Cretaceous Age. These rocks range in composition from granodiorite to syenite.
Minor syenomonzonite and quartz feldspar porphyry stocks and dykes, appear to be part of the Omineca Intrusions and act as feeders to the younger Toodoggone volcanic rocks which unconformably overlie the Takla Group.

Toodoggone rocks form an over 500 meter thick pile of complexly intercalated volcanic and volcano-sedimentary rocks of Lower to Middle Jurassic Age. These rocks consist of a lower volcanic assemblage of andesitic effusives, a middle assemblage of trachytes, crystal and lithic tuffs, welded tuffs, and an upper suite of lacustrine volcanic sediments and younger andesitic flows with minor quartz feldspar porphyries. To the east, the Toodoggone rocks are in fault contact with Permian Asitka rocks.

Flanking the area to the west is the nearly flat lying to westerly dipping, Upper Cretaceous to Tertiary Age, Tango Creek Formation of the Sustat Group. This formation consists of interbedded pebble conglomerate and sandstones composed, in large part, of quartz and volcanic rock fragments. These sediments unconformably overlie the Takla and Toodoggone volcanic rocks.

The eastern contact for the district is a major series of faults and thrusts with the Jurassic age Hazelton group of the Toodoggone volcanics to the east of the faults.

Both the Takla and the Toodoggone host precious metal mineralization. The gold and silver deposits in the camp are all epithermal and have been shown to extend from surface sulfotaric hot spring type of deposits to low pH clay alteration zone, to breccias and deeper types of the various epithermal classes.

Brecciation along major faults and splays resulted in silicification and epithermal mineralization, like the Castle and Drybrough northwest faults and subsidiary splays from regional fault systems such as the McClair. These are thought to be important channelways for the formation of the sulphide rich zones (now gossans) and the precious metal mineralization.

There are several sets of faults that host mineralization but the north-northeast and the east-west set may be the critical directions for openings for hydrothermal solutions. The A vein at Baker Mine is the largest and best grade of all of the veins in the district and it is in a north-northeast striking structure. The C and West Chappelle, also at the Baker Mine, are nearly east-west striking.

Porphyry deposits including the Fin, Kemess, to the south and Porphyry Pearl to the north are known around the claims. They are of interest for their copper, molybdenum, and gold plus silver content. It is the value of their gold and silver that makes them more interesting than before when only the copper and molybdenum had economic significance.
(b) **Property**

The geology of the property is shown on figures 3, 4, and 4A which were maps contained within Burton’s report.

The property is primarily underlain by volcanics and sediments of the Toodoggone Group with the northeast corner being underlain by marble of the Asitka Group. Two faults are shown striking through the property, one north-northwesterly and the other northwesterly.

The primary area of interest is the **Mist Vein**. This vein system has been traced for over 220 meters, is open along strike in both directions, and has a well-developed hangingwall alteration zone that is strong and large enough so that it could contain enough tonnage to be economic. The clay alteration zone has a maximum width on the hangingwall of 50 meters, and the sericitic hangingwall and outer alteration has a maximum width of at least 25 meters.

The Mist Vein, at elevation 1850 meters, is 900 meters southwest from 2011 Peak and 650 meters east from the alpine lake. It is in a small saddle along the westerly trending ridge crest. Trenching to the north and south is on the lower slopes of the ridge so the depth of overburden gradually increases. (Therefore, trenching for the next phase should be with an excavator-type digger on a tracked turntable such as a Cat 225 or similar machine.)

Burton, during his 1995 work on the property, took 4 samples of the Mist vein and had them analyzed and studied by Vancouver Petrographics Ltd. Their report by C.H.B. Leitch, Ph.D., P.Eng., is given at the end of this report and indicates the samples are intensely altered, intensely silicified, and from a low temperature system. In other words, the samples indicate the Mist vein is epithermal.

Occurring for the most part west of the Mist Vein and subparallel to it is a lamprophyre dyke. These are commonly found near epithermal systems and are thought to be the engine for the vein deposition.

There are at least three other alteration zones west of the Mist Vein that are similar in character but have not been explored to see if they are well enough developed to be economically significant. These hangingwall zones are probably imbricate veinlets subsidiary to the main vein.

As mentioned above, there occurs an alteration zone on Oxide Peak that is similar to that of the Mist Vein and thus indicates the possible presence of an epithermal gold vein. Other alteration zones occur throughout the property also indicating the possible occurrences of additional gold veins.
INSTRUMENTATION

The transmitter used for the induced polarization/resistivity survey was a Model IPT-1 manufactured by Phoenix Geophysics Ltd. of Markham, Ontario. It was powered by a 2.5 kw motor generator, Model MG-2, also manufactured by Phoenix. The receiver used was a six-channel BRGM, model Elrec 6. This is state-of-the-art equipment, with software-controlled functions, programmable through a keyboard located on the front of the instrument. It can measure up to 10 chargeability windows and store up to 2,500 measurements within the internal memory.

THEORY

When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (mostly sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the “time-domain” or the “frequency-domain”.

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability “M”, which is a measure of the strength of the induced polarization effect. Measurements in the frequency domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect, or “PFE”.

The quantity, apparent resistivity, \( \rho_a \), computed from electrical survey results is only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they almost always will, the apparent resistivity will be
influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading, therefore, cannot be attributed to a particular depth.

The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely dependent on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

\[ R_o = \Omega^{-2} R_w \]

Where: 
- \( R_o \) is formation resistivity
- \( R_w \) is pore water resistivity
- \( \Omega \) is porosity

**SURVEY PROCEDURE**

The grid was first put in with compass and hip chain using 200W as the baseline. It was attempted to center the grid around line 100N from the previous 1994 work but the station markings had disappeared. As a result the stations on the present grid were put in every 25 m with a wooden stake and an aluminum tag stapled to it which had the grid coordinates marked thereon. The chosen line spacing was 25 meters.

The reading interval and dipole length chosen was 15 meters which was read to 12 separations. The survey was carried out along five lines for a total survey length of 2,200 m. The 1994 work which was done only along line 100N used a dipole length of 30 meters. This was good for depth penetration but it was decided that greater detail was needed for more optimum drill targets and thus the dipole length was reduced to 15 meters.

The IP and resistivity measurements were taken in the time-domain mode using an 8-second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative
charge, 2-seconds off). The delay time used after the charge shuts off was 240 milliseconds and the integration time used was 1,600 milliseconds divided into 10 windows.

The array chosen was the dipole-dipole, shown as follows:

Stainless steel stakes were used for current electrodes as well as for the potential electrodes.

**COMPILATION OF DATA**

All the data were reduced by a computer software program developed by Geosoft Inc. of Toronto, Ontario. Parts of this program have been modified by Geotronics Surveys Inc. for its own applications. The computerized data reduction included the resistivity calculations, pseudosection plotting, survey plan plotting and contouring.

The chargeability (IP) values are read directly from the instrument and no data processing is therefore required prior to plotting. The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipole-dipole array to compute the apparent resistivities.

All the data have been plotted in pseudosection form at a scale of 1:1250. One map has been plotted for each of the five lines and are numbered GP-1 to GP-5, respectively. The pseudosection is formed by each value being plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles. The result of this method of plotting is that the farther the dipoles are separated, the deeper the reading is plotted. The resistivity pseudosection is plotted on the upper part of the map for each of the lines, and the chargeability pseudosection is plotted on the lower part.

All pseudosections were contoured at an interval of 5 milliseconds for the chargeability results, and at an interval of logarithmic to the base 10 for the resistivity results.

The self-potential (SP) data from the IP and resistivity survey was plotted on top of the two pseudosections at a vertical scale of 1 cm = 75 millivolts with a base of zero millivolts. It is not expected that the SP data will be important in the exploration of the property but considering that the data was taken anyway it was thought that it could at least be plotted and profiled in case it turned out to be useful.
Also, plan maps were prepared for level 1 (n=1) and level 4 (n=4) each for IP and resistivity, each at a scale of 1:2500. The data were plotted and contoured at the same contour interval as that of the pseudosections. The four plans were numbered GP-6 to GP-9, respectively.

**GEOCHEMISTRY**

A total of 17 soil samples were picked up along line 100N and along baseline 200W. This was not considered a complete survey but was only done as fill-in to the resistivity/IP work. Its purpose was to check the response over the Mist Vein and the other parallel structures as well as along the baseline.

The samples were forwarded to Chemex Labs in North Vancouver for analysis after they had dried. The samples were sieved to -80 mesh and a fraction of each was digested in aqua regia and subjected to a 32 element ICP analysis. Each was also analyzed for gold by geochemistry techniques using fire assay/A.A. methods. The certificates of the results have been included in Appendix I of this report.

**DISCUSSION OF RESULTS**

The resistivity survey, as was indicated in the previous work on line 100N, has responded to the Mist Vein as a strong resistivity low. This is seen on all four lines, 50N, 75N, 100N, and 125N, that cross it or its projected strike. (Line 150N did not extend far enough east to cross the projected strike of the Mist Vein because of lack of time.) The resistivity response is an anomalous low which is a reflection of the hydrothermal alteration associated with the Mist Vein. The alteration will always occur on the hanging wall of the vein (unless it is overturned) and therefore the vein occurs along the footwall.

The Mist Vein is shown to occur at 170W on line 100N. On the other three lines occurs a small resistivity high at 170W which may be reflection of the Mist Vein. However, The resistivity low which is indicative of the epithermal alteration continues to the east of 170W. Since the alteration occurs on the hanging wall and the vein dips to the west, this would suggest that a vein may occur to the east possibly at about 150W on all four lines.

Another possible explanation is that the visible outcropping of the vein on line 100N is float that has moved westwards from its actual occurrence in place. This is supported by the fact that the vein outcropping shows a dip to the east, but the resistivity pseudosections clearly indicate a westerly dip. In other words the vein outcropping is actually float.

The minimum strike length of the Mist Vein, therefore, as indicated by the resistivity survey, is 75 meters with it being open both to the north and to the south. The geological mapping, however, done by Burton as shown on Fig. #4A, shows a minimum strike length of 200 meters which is almost entirely to the south. (Line 100N closely aligns with line 00 on the geological map.) But to the north, the Mist Vein becomes buried by overburden and...
thus its extension to the north cannot be mapped. Nevertheless, the resistivity survey on line 125N shows the Mist Vein to extend to the north for at least a further 25 meters resulting in a total minimum strike length of 225 meters. In addition, it indicates, the vein and its associated alteration to occur just below the surface, perhaps about 10 meters but probably shallower.

In addition to extending the strike length, the resistivity survey results indicate the vein system extends to depth. The previous work on line 100N showed a minimum down dip depth extent of 175 meters below the surface on this line. On the present survey, since the electrode spacing was half as much at 15 meters, the minimum depth extent is indicated to be about half as much also, which is about 90 meters. This is seen on at least three of the lines - 50N, 100N, and 125N. The probability, therefore, is that the 180-meter depth extent also occurs on all three of the same lines.

What is of prime interest in epithermal-caused resistivity lows are step-like features in going down dip of the low. These are often caused by structure and cross-structure such that when there is movement along the epithermal system, either the step or the rise opens up to allow mineralizing fluids to enter and fill. However, other features can cause the step-like shapes such as the electrode effect from nearby faulting and intrusive dykes, but, in the writer's experience, the steps are often a reflection of epithermal mineralization. On the 'A' vein of the Baker Mine, which the Mist Vein seems to be similar to and thus is being modeled after, the ore occurred within the steps of the system which dipped at 65° while the rise was almost vertical. As a result the step-like features within the floor of the Mist Vein resistivity low are of prime exploration interest, especially where the resistivity values are lower above the step. This would indicate stronger alteration which would indicate stronger mineralization.

The step-like features within the Mist Vein, some of which are quite subtle, are located below the following grid points:

(2) Line 75N - 150W, 170W, 210W, and 235W.
(3) Line 100N - 165W, 190W, 205W, and 235W.
(4) Line 125N - 155W, possibly, and 185W. The latter one is somewhat subtle but has a strong resistivity low associated with it.

The resistivity low that is indicative of the Mist Vein on line 75N is terminated at depth by a strong resistivity high centering at 300W that is probably a reflection of an intrusive. This would therefore suggest that the intrusive occurred after the epithermal vein event. Interestingly, this high is only shown with strength on line 75N. On the adjacent line of 50N at about 275W, a resistivity high can be seen, but it is smaller and occurs at a greater depth.
On line 100N, there are two small, weak resistivity highs that occur at 320W and 275W, respectively, at depth. Either one could be the northern extension of the intrusive(?).

The resistivity high that occurs to the west of the resistivity low is probably the lamprophyre dyke as shown on fig. #4A. The occurrence on each of the lines would be at

(1) line 50N, 205W
(2) line 75N, 205W - very weak
(3) line 100N, 200W
(4) line 125N, 215W.

There are 5 additional resistivity low features occurring to the west of the Mist Vein, most of which are probably reflecting epithermal vein systems. They are labeled according to the average station location and are discussed below.

230W - This low can be seen on the four southern lines. It is not as strong as the Mist Vein zone but it does become stronger to the north.

290W - This low is also seen on all four southern lines but appearing to bend to 320W on line 125N. In fact the eastern end of line 150N may have barely touched it. This is the strongest of all the resistivity lows within the survey area containing the lowest resistivity values some near zero on line 100N. Thus it is of strong exploration interest. Some target areas would be below 350W on lines 50N and 100N.

380W - This low can be seen on all five lines and is the strongest on line 75N, but is otherwise generally weak.

440W - This low is mainly seen on line 150N and has an easterly dip. It also possibly occurs at the western ends on the southern four lines.

500W - This low occurs only on line 150N since there is no adjacent surveying. It also dips to the east.

The IP values are anomalous mostly within the resistivity highs which would be reflecting the unaltered host rock(s). They undoubtedly reflect sulphides, probably pyrite, which usually occurs peripheral to epithermal systems. One IP high which could be of economic interest is discussed below.

There are some anomalous soil geochemistry results which are plotted above the pseudosections. Two anomalous arsenic values of 62 ppm and 56 ppm occur on lines 50N and 100N at the eastern edge of the Mist Vein epithermal alteration zone. Also an anomalous lead value of occurs on the base line at 350N which is the projected strike extent of the Mist Vein. And an anomalous barium value of 670 ppm occurs at the eastern edge of the Mist Vein epithermal system on line 100N. There were no anomalous gold values
associated with the Mist Vein but this was not surprising since the gold mineralization is expected to occur at depth.

Of possible exploration interest are anomalous soil values of 357 ppm copper, 482 ppm zinc, and 20 ppb gold located at 50W on line 100N. This correlates directly with an IP high which therefore is probably reflecting sulphides of economic interest such as chalcopyrite. The IP high can also be seen on line 125N and probably 50N and 75N where it is not so obvious. This anomaly occurs within the country rock (epidote-rich volcanics) that forms the footwall of the Mist Vein and therefore is probably not part of the epithermal system.

Respectfully submitted,

GEOTRONICS SURVEYS LTD.

David G. Mark, P.Geo., Geophysicist

January 23, 1997
REFERENCES


Schroeter, T.G., Geology of Early Jurassic Toodoggone Formation, EMPR Bull. 86


GEOSCIENTIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify that:

I am a Consulting Geoscientist of Geotronics Surveys Ltd., with offices at #405 - 535 Howe Street, Vancouver, British Columbia.

I further certify that:

1. I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

2. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

3. I have been practicing my profession for the past 29 years, and have been active in the mining industry for the past 32 years.

4. This report is compiled from data obtained from resistivity, IP, and soil sampling surveys carried out over a portion of the Oxide Peak Property from August 19 to 27, 1996. The surveys were carried out under my supervision and under the direct field supervision of Roger Mackenzie, geophysical technician.

5. I do not hold any interest in Matrix Energy Inc., nor in the property discussed within this report, nor in any other property held by Matrix Energy, nor do I expect to receive any interest as a result of writing this report.

Respectfully submitted,

GEOTRONICS SURVEYS LTD.

David G. Mark, P.Geo., Geophysicist

January 23, 1997
AFFIDAVIT OF EXPENSES

I.P. and resistivity surveys, along with grid preparation and soil geochemistry, were carried out over a portion of the Oxide Peak Property located in the Toodoggone Mining Camp, from August 19 to 27, 1996, to the value of the following:

**Mob-demob**, at cost

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>$5,452.00</td>
</tr>
<tr>
<td>Airline ticket, Vancouver to Smithers, return</td>
<td>677.00</td>
</tr>
<tr>
<td>Truck rental and gas</td>
<td>1,484.00</td>
</tr>
<tr>
<td>Room and board</td>
<td>366.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$7,980.00</strong></td>
</tr>
</tbody>
</table>

**Field:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satelite telephone</td>
<td>1,030.00</td>
</tr>
<tr>
<td>Helicopter</td>
<td>3,620.00</td>
</tr>
<tr>
<td>5-man crew, 5 days @ $2,000/day</td>
<td>10,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14,650.00</strong></td>
</tr>
</tbody>
</table>

**Laboratory:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing of 17 samples for gold and 32-mineral ICP</td>
<td>292.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>292.00</strong></td>
</tr>
</tbody>
</table>

**Data Reduction & Report:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior geophysicist, 23 hr. @ $50/hr.</td>
<td>1,150.00</td>
</tr>
<tr>
<td>Computer-aided data reduction &amp; drafting, 21 hr. @ $50/hr</td>
<td>1,050.00</td>
</tr>
<tr>
<td>Printing, photocopying, compilation</td>
<td>250.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,450.00</strong></td>
</tr>
</tbody>
</table>

**GRAND TOTAL**

$25,372.00

Note: 50% of the field work was done on and before August 22nd, and 50% was done after.

Respectfully submitted,

GEOTRONICS SURVEYS LTD.

[Signature]

David G. Mark, P. Geo.,
Geophysicist
APPENDIX I

SOIL SAMPLE RESULTS
CERTIFICATE  A9642103

(AHZ) - GEOTRONICS SURVEYS LTD.

Samples submitted to our lab in Vancouver, BC.
This report was printed on 5-DEC-96.

SAMPLE PREPARATION

<table>
<thead>
<tr>
<th>CHEMEX CODE</th>
<th>NUMBER SAMPLES</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>17</td>
<td>Dry, sieve to -80 mesh</td>
</tr>
<tr>
<td>202</td>
<td>17</td>
<td>save reject</td>
</tr>
<tr>
<td>223</td>
<td>16</td>
<td>ion - AQ Digestion charge</td>
</tr>
</tbody>
</table>

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

<table>
<thead>
<tr>
<th>CHEMEX CODE</th>
<th>NUMBER SAMPLES</th>
<th>DESCRIPTION</th>
<th>METHOD</th>
<th>DETECTION LIMIT</th>
<th>UPPER LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>17</td>
<td>Au ppb: Fused 10 g sample</td>
<td>FA-AAS</td>
<td>5</td>
<td>10000</td>
</tr>
<tr>
<td>2118</td>
<td>16</td>
<td>Ag ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.2</td>
<td>1000.0</td>
</tr>
<tr>
<td>2119</td>
<td>16</td>
<td>Al %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>15.00</td>
</tr>
<tr>
<td>2120</td>
<td>16</td>
<td>As ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>2121</td>
<td>16</td>
<td>Ba ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2122</td>
<td>16</td>
<td>Be ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.5</td>
<td>10000</td>
</tr>
<tr>
<td>2123</td>
<td>16</td>
<td>Bi ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>2124</td>
<td>16</td>
<td>Ca %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>15.00</td>
</tr>
<tr>
<td>2125</td>
<td>16</td>
<td>Cd ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.5</td>
<td>10000</td>
</tr>
<tr>
<td>2126</td>
<td>16</td>
<td>Co ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2127</td>
<td>16</td>
<td>Cr ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2128</td>
<td>16</td>
<td>Cu ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2129</td>
<td>16</td>
<td>Fe %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>15.00</td>
</tr>
<tr>
<td>2130</td>
<td>16</td>
<td>Ga ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2131</td>
<td>16</td>
<td>Hg ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2132</td>
<td>16</td>
<td>K %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>10.00</td>
</tr>
<tr>
<td>2133</td>
<td>16</td>
<td>La ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2134</td>
<td>16</td>
<td>Mg %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>15.00</td>
</tr>
<tr>
<td>2135</td>
<td>16</td>
<td>Mn ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>5</td>
<td>10000</td>
</tr>
<tr>
<td>2136</td>
<td>16</td>
<td>Mo ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2137</td>
<td>16</td>
<td>Na %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>5.00</td>
</tr>
<tr>
<td>2138</td>
<td>16</td>
<td>Ni ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2139</td>
<td>16</td>
<td>P ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2140</td>
<td>16</td>
<td>Pb ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>2141</td>
<td>16</td>
<td>Sb ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>2142</td>
<td>16</td>
<td>Se ppm: 32 elements, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2143</td>
<td>16</td>
<td>Sr ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2144</td>
<td>16</td>
<td>Ti %: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>0.01</td>
<td>10000</td>
</tr>
<tr>
<td>2145</td>
<td>16</td>
<td>Tl ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2146</td>
<td>16</td>
<td>U ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2147</td>
<td>16</td>
<td>V ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>2148</td>
<td>16</td>
<td>W ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>10</td>
<td>10000</td>
</tr>
<tr>
<td>2149</td>
<td>16</td>
<td>Zn ppm: 32 element, soil &amp; rock</td>
<td>ICP-AES</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>SAMPLE</td>
<td>PREP CODE</td>
<td>Au ppb</td>
<td>Ag ppm</td>
<td>Al %</td>
<td>As ppm</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>--------</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>#1 100N-50W</td>
<td>201 202</td>
<td>20</td>
<td>0.2</td>
<td>2.36</td>
<td>6</td>
</tr>
<tr>
<td>#2 100N-110W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss not/ss</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
</tr>
<tr>
<td>#3 100N-140W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#4 100N-170W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#5 100N-200W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#6 100N-230W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#7 100N-260W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#8 100N-280W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#9 100N-300W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#10 100N-320W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#11 100N-340W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#12 100N-350W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#13 100N-370W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#14 100N-390W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#15 100N-410W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#16 100N-430W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
<tr>
<td>#17 100N-450W</td>
<td>201 202</td>
<td>&lt; 5</td>
<td>&lt; 0.2</td>
<td>2.44</td>
<td>4</td>
</tr>
</tbody>
</table>
## CERTIFICATE OF ANALYSIS

**A9642103**

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>PREP CODE</th>
<th>Mo ppm</th>
<th>Na ppm</th>
<th>Ni ppm</th>
<th>P ppm</th>
<th>Pb ppm</th>
<th>Sb ppm</th>
<th>Sc ppm</th>
<th>Sr ppm</th>
<th>Ti ppm</th>
<th>Ti ppm</th>
<th>U ppm</th>
<th>V ppm</th>
<th>W ppm</th>
<th>Zn ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 100N-50W</td>
<td>201 202</td>
<td>1 &lt; 0.01</td>
<td>14</td>
<td>970</td>
<td>34</td>
<td>&lt; 2</td>
<td>1</td>
<td>40</td>
<td>0.03</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>41</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>482</td>
</tr>
<tr>
<td>#2 100N-110W</td>
<td>201 202</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td>not/ss</td>
<td></td>
</tr>
<tr>
<td>#3 100N-140W</td>
<td>201 202</td>
<td>&lt; 1 &lt; 0.01</td>
<td>3</td>
<td>1650</td>
<td>14</td>
<td>4</td>
<td>9</td>
<td>52 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>56</td>
<td>&lt; 10</td>
<td>107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#4 100N-170W</td>
<td>201 202</td>
<td>&lt; 1 &lt; 0.01</td>
<td>1</td>
<td>250</td>
<td>10</td>
<td>&lt; 2</td>
<td>&lt; 1</td>
<td>41 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>10</td>
<td>&lt; 10</td>
<td>107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#5 100N-200W</td>
<td>201 202</td>
<td>5 &lt; 0.01</td>
<td>1</td>
<td>940</td>
<td>30</td>
<td>&lt; 2</td>
<td>&lt; 1</td>
<td>57 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>11</td>
<td>&lt; 10</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#6 100N-230W</td>
<td>201 202</td>
<td>2 &lt; 0.01</td>
<td>7</td>
<td>1640</td>
<td>28</td>
<td>&lt; 2</td>
<td>3</td>
<td>21 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>36</td>
<td>&lt; 10</td>
<td>248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#7 200N-50N</td>
<td>201 202</td>
<td>2 &lt; 0.01</td>
<td>1</td>
<td>1510</td>
<td>16</td>
<td>&lt; 2</td>
<td>1</td>
<td>23 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>13</td>
<td>&lt; 10</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#8 200N-100N</td>
<td>201 202</td>
<td>3 &lt; 0.01</td>
<td>4</td>
<td>2650</td>
<td>44</td>
<td>&lt; 2</td>
<td>&lt; 1</td>
<td>16 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>40</td>
<td>&lt; 10</td>
<td>154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#9 200N-150N</td>
<td>201 202</td>
<td>3 &lt; 0.01</td>
<td>4</td>
<td>1740</td>
<td>30</td>
<td>&lt; 2</td>
<td>1</td>
<td>16 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>39</td>
<td>&lt; 10</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#10 200N-200N</td>
<td>201 202</td>
<td>2 &lt; 0.01</td>
<td>1</td>
<td>1540</td>
<td>26</td>
<td>&lt; 2</td>
<td>3</td>
<td>11 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>18</td>
<td>&lt; 10</td>
<td>82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#11 200N-250N</td>
<td>201 202</td>
<td>3 &lt; 0.01</td>
<td>5</td>
<td>2320</td>
<td>28</td>
<td>&lt; 2</td>
<td>3</td>
<td>14 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>30</td>
<td>&lt; 10</td>
<td>166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#12 200N-300N</td>
<td>201 202</td>
<td>1 &lt; 0.01</td>
<td>4</td>
<td>1520</td>
<td>20</td>
<td>&lt; 2</td>
<td>1</td>
<td>29 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>54</td>
<td>&lt; 10</td>
<td>174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#13 200N-350N</td>
<td>201 202</td>
<td>1 &lt; 0.01</td>
<td>5</td>
<td>2320</td>
<td>102</td>
<td>&lt; 1</td>
<td>25 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>52</td>
<td>&lt; 10</td>
<td>154</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#14 200N-290W</td>
<td>201 202</td>
<td>1 &lt; 0.01</td>
<td>10</td>
<td>1300</td>
<td>26</td>
<td>6</td>
<td>25 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>44</td>
<td>&lt; 10</td>
<td>208</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#15 100N-350W</td>
<td>201 202</td>
<td>&lt; 1 &lt; 0.01</td>
<td>7</td>
<td>2550</td>
<td>24</td>
<td>&lt; 2</td>
<td>&lt; 1</td>
<td>21 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>50</td>
<td>&lt; 10</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#16 100N-410W</td>
<td>201 202</td>
<td>&lt; 1 &lt; 0.01</td>
<td>4</td>
<td>1310</td>
<td>30</td>
<td>&lt; 2</td>
<td>2</td>
<td>17 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>40</td>
<td>&lt; 10</td>
<td>192</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#17 100N-470W</td>
<td>201 202</td>
<td>1 &lt; 0.01</td>
<td>4</td>
<td>1630</td>
<td>44</td>
<td>2</td>
<td>3</td>
<td>23 &lt; 0.01</td>
<td>&lt; 10</td>
<td>&lt; 10</td>
<td>38</td>
<td>&lt; 10</td>
<td>190</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STRATIFIED ROCKS

MIDDLE AND UPPER JURASSIC

J_{RT}  "TOODOGGONE" volcanic rocks; dacite, latite, rhyolite, tuff, breccia, flows; local maroon weathering conglomerate, includes local intrusive equivalents.

LOWER JURASSIC

J_{RI}  HAZELTON GROUP; volcanic conglomerate, breccia, lahar, abundant pink feldspar, porphyry dykes and sills.

TRIASSIC

U_{RT}  TAKLA GROUP; coarse-bladed plagioclase porphyry, augite porphyry, tuff, agglomerate.

PERMIAN

P_{AC}  ASITKA GROUP(?); marble.

GRANITIC ROCKS

MIDDLE JURASSIC(?)

mJRgd  granodiorite.
 Lamprophyre Dyke

1995 Trenching

Mist vein with alteration zone

To accompany report by David G. Marle, P.Geo.

Geotronics Surveys Ltd.

MATRIX ENERGY INC.

OXIDE PEAK PROPERTY

OXIDE CREEK AND BELLE CREEK
TOODEGOONE RIVER AREA OMINENCA M.D., B.C.

DETAIL MAP - LOW SADDLE AREA

SCALE: 1:250  DATE: June, 1995  NO.: 546/0 and /11  JOB: 96-12  FIGURE No: 4A