APPENDIX D

Geophysical Report by Kenco Minerals, July, 1991

Time Domain Electromagnetics

INTERPRETATION

of the

GEOPHYSICAL DATA

from the

TROUT CREEK PROSPECT

ELKO COUNTY, NEVADA

for

CHALLENGER GOLD

DATA COLLECTED

May 1991 & June 1991

by

KENCO MINERALS, INC.

REPORT

by

KENCO MINERALS, INC.

July 1991

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INTRODUCTION

During May 1991 and June 1991, KENCO MINERALS, INC. conducted a time domain electromagnetic (TDEM) survey over the Trout Creek Prospect for CHALLENGER GOLD.

Based on the geophysical interpretation, geochemistry, geologic mapping, and some drilling the prospect has a high potential for gold mineralization. Much of the area is covered by alluvium and a surface arkose. The area was surveyed during the winter of 1990-91 with ground magnetics and VLF. Five lines were also surveyed with induced polarization and resistivity.

The purpose of the survey was to help map the geology using geophysical methods, particularly to locate structures that may contain gold or that are conduits for mineralizing fluids. Gold bearing rocks in general have no specific geophysical signature. However siliceous zones or jasperoid zones which often contain gold are often much more resistive than the surrounding rock. Alteration which can occur with gold mineralization generally reduces the resistivity of the rock. Of equal or perhaps more important, geophysics is a powerful tool for mapping structures that can serve as conduits for mineralizing fluids.

CONCLUSIONS AND RECOMMENDATIONS

Based on the geophysical interpretation and some geologic and geochemical input several areas are recommended as having potential for gold mineralization. The next phase of the exploration should consist of detailed mapping of the areas, more geochemistry if necessary, and drilling if warranted. More detailed geophysics may be helpful but would depend on the results of the geologic investigation.

Suggested geophysics would be to complete the survey to the south, perhaps survey additional lines to the north over the silicious zone, and some fill in measurements to help better understand the geology. Specific recommendations will not be made until after the report has been reviewed by the project geologists and the interpretation field checked.

The siliceous zone, feature A, on the interpretation map would be given the highest priority. Siliceous zones are good host rocks, and the geochemical analyses have been encouraging. The gold mineralization likely would occur in zones within the siliceous rock. The best gold mineralization is not always with the strongest silicification.

The interpreted deep fault (feature H) could be a potential conduit for mineralizing fluids. The fault zone should be checked closely.

Two specific areas along the fault are recommended. The first, feature B, is interpreted as being an altered zone above the fault. The second, feature L, has anomalous magnetic response above the fault. Both are interpreted as being due to fluids migrating upward through the fault.

It is recommended that the drill holes be probed with geophysical logs. Much of the TDEM and IP interpretation is based on estimated resistivities of the various rock units. Electrical logs can be used to refine the interpretation, to better locate structures or zones of alteration or silicification. In addition electrical logs are valuable for correlating the geology when used with the lithologic logs.

LOGISTICS

The first portion of the TDEM survey was conducted in May 1991. The crew shut down for a break and started the second portion of the survey in June 1991.

During the first work period several test lines were surveyed to determine if TDEM would be effective on the Trout Creek prospect. The lines surveyed with TDEM had been surveyed in November of 1990 with induced polarization. After the data was collected Fred Limbach and Tom Watkins, senior geologists with Challenger Gold, Inc. and Ken Sweet, senior geophysicist with Kenco Minerals Inc, reviewed the data. Based on the interpretation of the TDEM and IP data the decision was made to continue the survey using TDEM. The TDEM data had an increased depth of penetration and much better lateral and depth resolution. The survey costs would

be very similar. A total of 20 lines were surveyed during the two work periods, approximately 500 measurements or soundings.

For the survey 200 foot transmitter loops were used for in-loop TDEM soundings. Data was collected at 200 foot intervals on lines spaced 400 feet apart. The earlier magnetic and VLF data was collected on lines spaced 200 feet apart, the TDEM data was collected on every other line.

TDEM equipment manufactured by Geonics, an EM-37, was used for the survey. The motor generator and transmitter were moved along the survey line using a 4 wheel all terrain vehicle and a trailer. The receiver was carried on a backpack. For the survey a 3 man crew was used consisting of Kenneth Sweet, senior geophysicist, Norbert Jerome, senior operator/geologist, and Kamm Davis, geophysical technician.

COMMENTS ON TDEM

Time Domain Electromagnetics (TDEM or TEM) has been used extensively for mineral exploration in Australia, Canada, and the Soviet Union for many years (perhaps 20). It has been used some in the United States for perhaps 10 years but is not as common.

It can be used in several survey modes (in-loop, slingram, and large loop profiling to name a few). The choice of method depends primarily on the geologic target and of course terrain and access.

TDEM has primarily been used for locating massive sulfide targets at great depths, some claims for over 1000 feet. In general the targets have been in very resistive rock, the Canadian shield for example, covered by deep glacial cover. Profiling using a large loop is the preferred method. Many case histories of discoveries can be found in the literature.

For mapping structures and the extent of different lithologic units the in-loop method is preferable and most commonly used. The in-loop method (which we used for Trout Creek) is good for mapping the thicknesses and depths to

various formations. It is important that the resistivities between the formations are different. The choice of survey parameters, i.e. loop size and choice of equipment depends on the geology.

For the Trout Creek survey we chose a 200 foot transmitter loop using the Geonics EM-37 TDEM equipment. For each individual reading a square loop 200 feet on a side was laid on the ground using standard 16 gauge insulated wire. The loop was centered over the measurement point. The transmitter was then hooked to the loop. For the Trout Creek survey 23 amps were transmitted through the wire. (The turn off time was 55 microseconds).

The receiver coil, 100 turns of wire 1 meter in diameter cased in a fiberglass frame, was located at the center of the loop (the measuring point). It is connected to the receiver by a special cable.

The transmitter energizes the loop with 23 amps of current for a short period of time, then turns off. When the current is turned off the earth is energized by the transmitted electromagnetic energy and produces eddy currents. The eddy currents quickly decay. The rate of the decay depends on the resistivity of the earth. The receiver measures the decay rate.

From the rate of decay the resistivity of the earth can be calculated. From the calculated resistivities the depth of various formations and true resistivities can be determined. Each of the data points was interpreted (modeled) to determine the depth to various lithologic units. When geologic control is available (perhaps from drilling or nearby measured sections) depths to the various units can be determined. When little geologic control is available, as on the Trout Creek project, interpretation can only determine depths and apparent resistivities, not geologic units.

A better interpretation will be possible after more drill hole data is available. The project geologist may also be able to refine the interpretation based on geologic knowledge of the area.

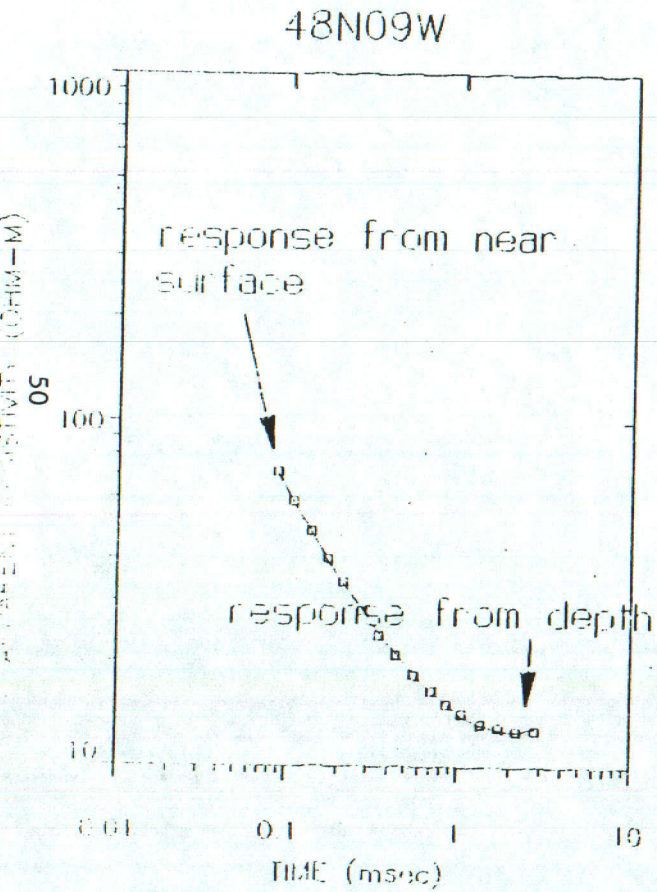
To go into the modeling is beyond the scope of this report. Essentially the field data is converted into an apparent resistivity plot (see 48N09W example, line 4800N station 900W). The apparent resistivity on the Y axis is plotted against measuring time on the X axis. The first times (less than a millisecond) respond more to the near surface rocks. Later times are influenced more by the deeper rock units. Of course some of the near surface response affects all of the data, including the deeper data.

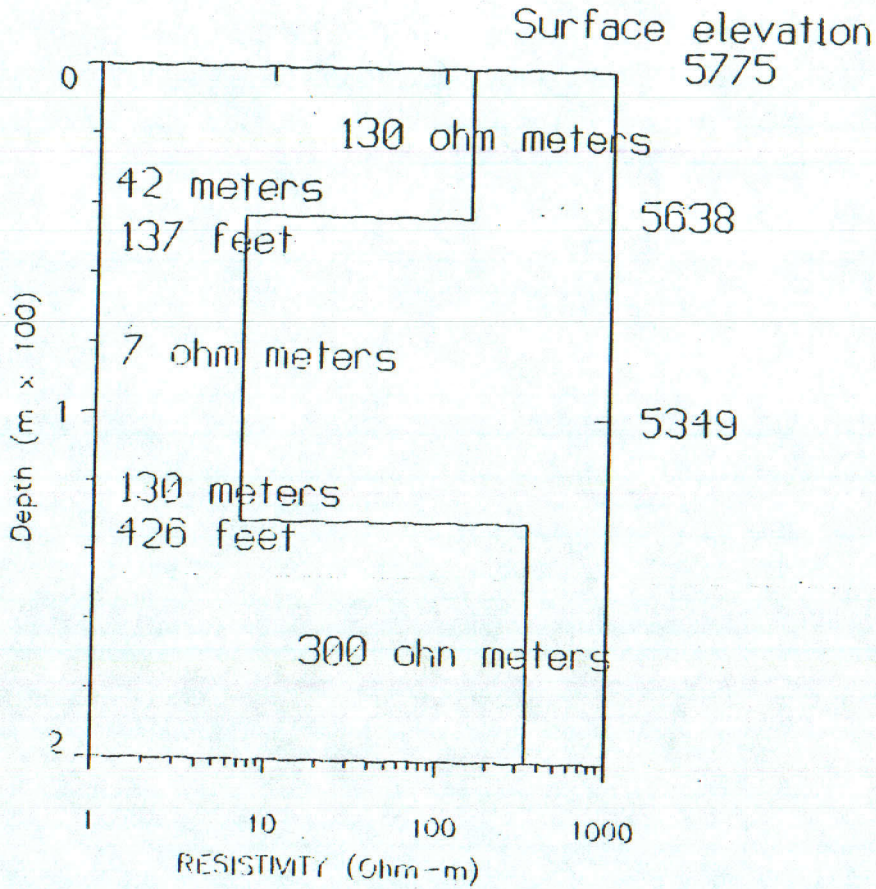
For this example (48N09W) the first few measurements have a fairly high resistivity and the value is decreasing rapidly. At later times, greater than 1 millisecond, the calculated resistivity levels off, in fact is starting to increase slightly.

This data is interpreted as being due to 3 layers, a near surface high resistivity layer, a second layer with a lower resistivity, and a third more resistive layer. Estimates are made of the thickness of the layers and the apparent resistivities based on rough calculations and past experience. Then the values are put in a computer modeling program that calculates the response for the estimated geoelectric section. The results are then plotted, on paper or on the screen. The solid line is the calculated response, the squares are the measured values. The interpreted thicknesses and resistivities are adjusted until an acceptable match occurs between the field data and the calculated model. For this example the match is very good and the interpreter can have a high degree of confidence in the interpretation.

In some cases it is not possible to get an acceptable match. The most common reason is that the data is collected near a lateral change in resistivity, perhaps a fault. Here the response is coming both from depth, and off to the side from a different rock unit at later times. I have labeled those curves as lateral effect and used them with caution in the interpretation.

It is important to know of some other limitations of the interpreted depth sections. From the interpretation of the 48N09W example, there is no doubt that a deep more resistive layer is present at a depth near 130 meters (425 feet). However the value of the resistivity of the third layer


48N09W
1000
100
10
response from near surface
response from depth
0.01
0.1
1
10
TIME (msec)


Surface elevation
5775
130 ohm meters
42 meters
137 feet
5638
7 ohm meters
5349
130 meters
426 feet
300 ohm meters
0
1
2
Depth (m x 100)
1
10
100
1000
RESISTIVITY (Ohm-m)

cannot be determined. It is certainly much more resistive than the second layer, likely at least 10 times as resistive. However the model would match as well if the third layer resistivity was interpreted as 70 ohm-meter to several thousand ohm-meters. A better estimate could be made if we measured later times, perhaps greater than 10 milliseconds. To measure later times would require a change in survey procedures including a larger transmitter loop.

Some other ambiguities (equivalence) can also occur. They will not be illustrated but should be considered when interpreting the data. This is the reason that often resistivities are labeled on the interpreted section as high or low, or with a range. Even though the model shows a precise number, it is not necessarily accurate. It can sometimes have a wide range. Thin zones are often difficult to resolve. A thin zone which cannot be seen can cause an error in the depth interpretation.

Perhaps after all this "what we can't do" we need some strengths of the method. All these limitations also apply to IP and resistivity. The reason they are not as important in IP and resistivity is that only qualitative interpretation, occasionally semi-quantitative interpretation, is used. The "we have a response, drill here approach". There are two reasons for the qualitative approach. First good modeling programs for IP are just now becoming available. My present modeling programs for IP, while accurate take a considerable amount of time to set up, then changing parameters is also time consuming. Several hours may be required to input the parameters and compute a model. Many iterations are required to generate an acceptable model. I have been working with some of the newer programs, still in the testing stage, and will switch to them when they are available.

More important is that the resolving power of IP and resistivity is considerably less than TDEM. Lithologic units must both be relatively thick and have a considerable lateral extent to be mapped with IP.

DISCUSSION OF DATA

Several features of interest based on the TDEM response are discussed individually, not all are interpreted as being favorable for mineralization. Several selected survey lines are discussed individually. It is important for the project geologist to look at the interpreted depth sections closely. I have made some geologic interpretations and correlations across the lines, but the project geologist can add a great deal to the interpretation. This report is a place to start incorporating the geophysical interpretation into a better geologic understanding, not the final product.

The base map for the interpretation is the contoured EMF values from the second time, the near surface response. Contour maps from later times change little so are not included. The EMF values are all normalized to an instrument gain of 2, a current of 23 amps. The transmitter turn off time was 55 microseconds.

Drafted interpreted depth sections are included with the report. The depth sections show the surface elevation, picked from a topographic map, and the interpreted depths to changes in resistivity. When the resistivity breaks could be correlated they are joined by a line. In some cases when a significant change in depth occurs, a fault may exist. It is advised that the project geologist reinterpret the depth sections. The depth sections are based on the computer modeling. A copy of the computer modeling results are included bound separately.

Little correlation occurs between the interpretation of the earlier geophysical data, magnetics and VLF, and the TDEM data. The lack of magnetic correlation is likely because the sedimentary rocks have very little if any magnetic susceptibility. However magnetic changes do occur which can be correlated. In most cases the source is shallow, likely within the upper 100 feet, however the source is unknown.

One magnetic break, feature B on the magnetic interpretation, which is from a deeper source does correlate with a fault interpreted from the TDEM data, feature B, on the TDEM interpretation. It is interpreted from both sets of data as a change in rock units at depth.

The lack of VLF correlation is because of the limited depth of investigation of the VLF. In most the depth of investigation for VLF would be less than 50 feet, the TDEM response would primarily be from deeper sources. The VLF method is considerably more sensitive to weak vertical near surface conductors, near surface faults perhaps, and topography. It is not sensitive to changes in resistivity or deeper structures. Over most of the grid it is not "seeing" through the surface arkose.

FEATURE A (line 10800N station 1700W)

The silica zone on line 10800n is the major area of interest. The major exposure is on Silica Springs line A (grid line 10300N). The zone has been tested by at least one drill hole, TC-9.

The resistivity data collected as part of the IP survey shows a high resistivity response west of the drill hole extending to depth. The data was collected using an "a" spacing of 200 feet, the depth of investigation in this area would be on the order of 200 feet.

The TDEM response over the silica is a very low EMF (low EMF is high resistivity). The most resistive rock (smallest EMF) is west of the drill hole coinciding with the resistivity high. TDEM depth modeling indicates that the silica zone extends to a depth of at least several hundred feet. The response is complex which limits the reliability of the modeling of both the IP resistivity and the TDEM. The complexity of the response is interpreted as being due to complex geology, the high resistivity siliceous rock is likely mixed with unsilicified rock and perhaps alteration zones which would have low resistivities.

The strongest silicification indicated from the modeling (line 10300N, station 1900W and line 10800N, station 1700W) are also the lowest EMF values shown on the plan map. The strongest silicified zone is fairly narrow, less than 200 feet. The data was collected at 200 foot intervals and only one station on each line was interpreted as being strongly silicified. The silicification is interpreted as dipping to the west under the arkose.

To the south the silicification is interpreted as being weaker and perhaps smaller. It may be present on line 9600N but does not extend to depth. A resistive layer at depth is interpreted as being a more resistive rock unit which occurs under much of the prospect, rather than silicification. However the response from a silicified zone at depth would be the same.

To the north (line 10800N, station 1700W) the silicification is interpreted as being stronger. The TDEM response is "cleaner". The zone on line 10800N may be more extensive. Again the strong response occurs only on one station.

A large zone (feature A) on the order of 800 feet wide and at least 2500 long trending northerly is interpreted as being a large siliceous zone, it has not been closed off to the north. It has a smaller (200 feet by at least 600 feet) highly silicified core.

Closer spaced TDEM data could be used to better define the target and to determine the northerly extent.

FEATURE B (line 10000N station 2500W)

Feature B (line 10800N, station 2500W) is a north trending EMF high (resistivity low) adjacent and parallel to the silica zone. The stronger response is due to a decrease in resistivity of the near surface rock, within 100 feet of the surface. It is interpreted as being alteration within a fault zone.

Based on the geophysical response the rock type at depth is different east and west of this structure. The change can be seen on the interpreted depth sections, see line 10800N for example. To the east of 2500W a higher resistivity occurs near surface with a deep low resistivity unit at depth. To the west a more resistive layer occurs on the surface with a less resistive unit at depth. Stations 2900W and 3100W also have a deep resistive unit that likely occurs under the rest of the line, but not within our depth of investigation.

FEATURE C (western portion of grid)

Feature C is the entire area west of feature B. Based on the TDEM interpreted depth sections it is likely sedimentary sequences. The low resistivities may be tuffs, the higher resistivities perhaps arkose or even flows. Little structure is evident, it is given a low priority for gold exploration.

FEATURE D (line 10800N station 900W)

Feature D is not apparent from the contour map. However at depth the computer modeling indicates a good conductor. In a different geologic environment one might suspect massive sulfides. The response can also be caused by lateral effects, the reading being taken at a geologic contact for instance.

The response cannot be explained. More detailed data over the feature would help explain the response.

FEATURE E (line 8800N, station 300W)

Feature E is an area of decreased EMF (increased resistivity). The measured decrease in resistivity is due to a structural depression which results in a thickening of the more resistive near surface rock unit.

FEATURE F (line 8000N, station 1900W)

Feature F is an area of increased EMF (decreased resistivity). The reason for the decrease is a structural high which results in a thinning of the more resistive surface rock. The low resistivity second layer is having a larger affect on the response.

FEATURE G (line 6000N, station 3100W)

Feature G is a small structural high. The increased EMF is due to a thinning of the surface resistive rock unit, likely the arkose.

FEATURE H (line 4800N, station 3600W)

Feature H is a deep fault based on the interpreted depth sections (for example see line 4800N). The surface layer, (arkose?) varies little along the line. However at 3600W the character of the deep TDEM response changes.

The surface arkose on the northern portion of the fault (shown as feature A) has a lower resistivity (alteration?) over the fault. The fault may be a conduit for fluids.

The fault doesn't come to the surface. It is likely, although the resistivities are similar, that the deeper rock unit changes from east to west across the fault.

The fault zone is recommended for testing for gold mineralization. More TDEM data would likely better define the target, unfortunately it would not help determine if the zone was mineralized.

FEATURE I (line 3600N, 900W)

Feature I is a decreased EMF (higher resistivity) zone. It is more obvious from the interpreted depth sections, than from the EMF contour map. The EMF is decreased because the deeper low resistivity rock unit is not present in this section.

FEATURE J (line 3600N, station 100E)

Feature J is the contact between the Humbolt formation and the Jurassic granite. The granite has a significantly higher resistivity than the Humbolt formation. The contact is likely near vertical.

FEATURE K (line 10400N, station 1100W)
(original line A, station 1100E)

Feature K is an EMF high (resistivity low). It is the edge of a thickening section, perhaps a fault. It is unusual in that it also correlates with a magnetic high. The source is unknown.

It has a small areal extent

FEATURE L (line 8400N, station 2600W)

Feature L is along the deep fault, feature H. It is rated as a separate feature because of the correlating magnetic response. It has a decrease of 50 gammas from west to east across the fault, and a zone of erratic magnetic responses over the fault. The erratic magnetic responses are interpreted as being due to the effect of mineralizing fluids migrating up the fault.

DISCUSSION OF SELECTED LINES

LINE 10800N

The center portion of the line, station 1700N, is interpreted as being an extension of the siliceous zone on Line A. The resistivity is higher and the extent is larger than on Line A. It is interpreted as being more silicified, more continuous throughout the zone. No data was collected to the north, The siliceous zone is not closed off to the north. The interpreted siliceous zone is associated with a soil gold geochemical high.

The resistivity modeling indicates a depth extent of 200 to 300 feet. However in areas with complex structure, or big changes in resistivity due to silicification depth interpretations must be used with caution.

The resistivity modeling indicates that the silicification may continue to the west under the surface rock.

At station 2600W a change in the interpreted lithology at depth occurs. This change occurs along the entire length of the surveyed grid, feature B on the interpretation map.

The magnetic low is from a deep source, possible related to the fault mapped with the TDEM. The surface rocks above the interpreted fault have a lower resistivity than east or west of the fault.

It may be that the interpreted fault at 2500W is a conduit for fluids. Fluids may have come up the fault and altered the arkose above the fault, alteration in general decreases resistivity. The fault could also be the conduit for the fluids which silicified the area to the east.

Further east, east of 1500W, the resistivity models become complex. It is likely that some silicification occurs but is spotty . The interpretation software assumes that the rock units are flat to gently dipping and each rock unit has a reasonably uniform resistivity. When many large changes occur in a short distance, vertically or horizontally, the interpretation models are not very accurate.

West of the interpreted fault, west of 3300W, the lithology is interpreted as being flat and having little change due to either alteration or silicification. The only change noted is that on the west end of the line, station 4500W, a deep high resistivity layer occurs. It is too deep to determine the true resistivity, or even an accurate thickness. I expect that it would be a sedimentary layer, perhaps another arkose and not an exploration target. It is first indicated at station 3700W and not shown at station 3500W. I expect that the unit occurs though the entire western portion of the line, but is thinner and cannot be detected from the surface.

Based on the geophysical interpretation line 10800N shows the greatest potential for gold mineralization. The silicified zone and the interpreted alteration zone should be checked out. Both are related to the deep fault.

LINE A (grid line 10300N)

Line A was surveyed with ground magnetics, VLF, and IP in the fall of 1989 before the main grid was put in. It covers the strongest area of surface silicification and was used as an orientation line. The location would be approximately where line 10300N would have been on the new grid, and is plotted in that position on the interpretation map. Both sets of station numbers are shown on the TDEM interpretation cross section.

The response along the entire line is similar to line 10800N. The high resistivity zone at station 500E (grid 1700W) is not as extensive as on line 10800N. It is interpreted as being several hundred feet thick, but may have more zones within that are not silicified.

The deep fault would be interpreted as occurring at 300W. The surface rock unit at 300W has a lower resistivity interpreted as being due to alteration (feature B on the interpretation map). The high resistivity zone, silicification, is interpreted as dipping to the west under the surface arkose.

The surface outcrop of the siliceous zone was tested by drilling at 550E. Based on the geophysical interpretation more extensive silicification occurs to the west.

An interesting structural depression occurs on the east end of the line, station 700W. The structure should be considered, but would not be expected to a target for gold mineralization.

The earlier IP survey on line A also had some interesting features. The high resistivity zone mapped with the IP survey matched well with the interpreted silicified zone. The TDEM response had better resolution. Interpretation of both the IP and TDEM data over the silicified zone were the same, i.e. the strongest silicification was west of the drill hole and the silicification was dipping to the west.

A resistivity low occurs at depth at 900W. It is interpreted as being due to alteration at depth. The TDEM data also indicates a resistivity low at depth. Based on

the better resolution of the TDEM data, the cause of the resistivity low is interpreted as a structure, perhaps a fault. The resistivity low is caused by a low resistivity rock unit (tuff?) being closer to the surface.

An increased IP response occurred at depth at station 1500W. The TDEM interpretation shows a structural break below the source of the IP response. The IP response may be due to sulfides at the structural break.

LINE 10000N

The silicified zone continues south to line 10000N but does not appear to be as extensive. Based on the TDEM interpretation the silicification is not as extensive as on line A and line 10800N.

At 1200W a strong magnetic response occurs indicating a west dipping magnetic source. The source of the response is not known.

LINE 8400N

A deep fault occurs at 2600W. The bottom lithologic unit that can be mapped has a 400 foot vertical displacement. The upper unit on the order of 100 feet. I have interpreted the displacement as being due to a fault that occurred prior to or during the deposition of the surface arkose. A second, but less likely interpretation, is that a large topographical feature occurred at the time of deposition. The arkose lapped up on the topography.

The fault shows up clearly on the magnetic response, in hindsight after seeing the TDEM interpretation. The area was recommended for further investigation based on the magnetic data, but not recognized as a fault.

The reason for the 50 gamma shift in magnetic response is not known. It may be a change in rock units, or due to the deepening section west of the fault. Just as important are the "erratic" single point anomalies over the fault. The "erratic" magnetic response is interpreted as being caused by mineralizing fluids which have migrated up the fault.

LINE 3600N

Line 3600N has a structural depression, graben?, from 500W to 1100W. It also occurs on the adjacent lines, 3200N and 4000N but is not as deep. Actually the second layer, a tuff perhaps, does not occur. The surface arkose would be thicker.

The granite contact occurs at 100E as indicated by the large increase in resistivity. It is not possible to get much information about the contact except that it is likely near vertical.

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APPENDIX E

1991 Drill Sample Assays

CHALLENGER GOLD, INC.

DRILL LOG

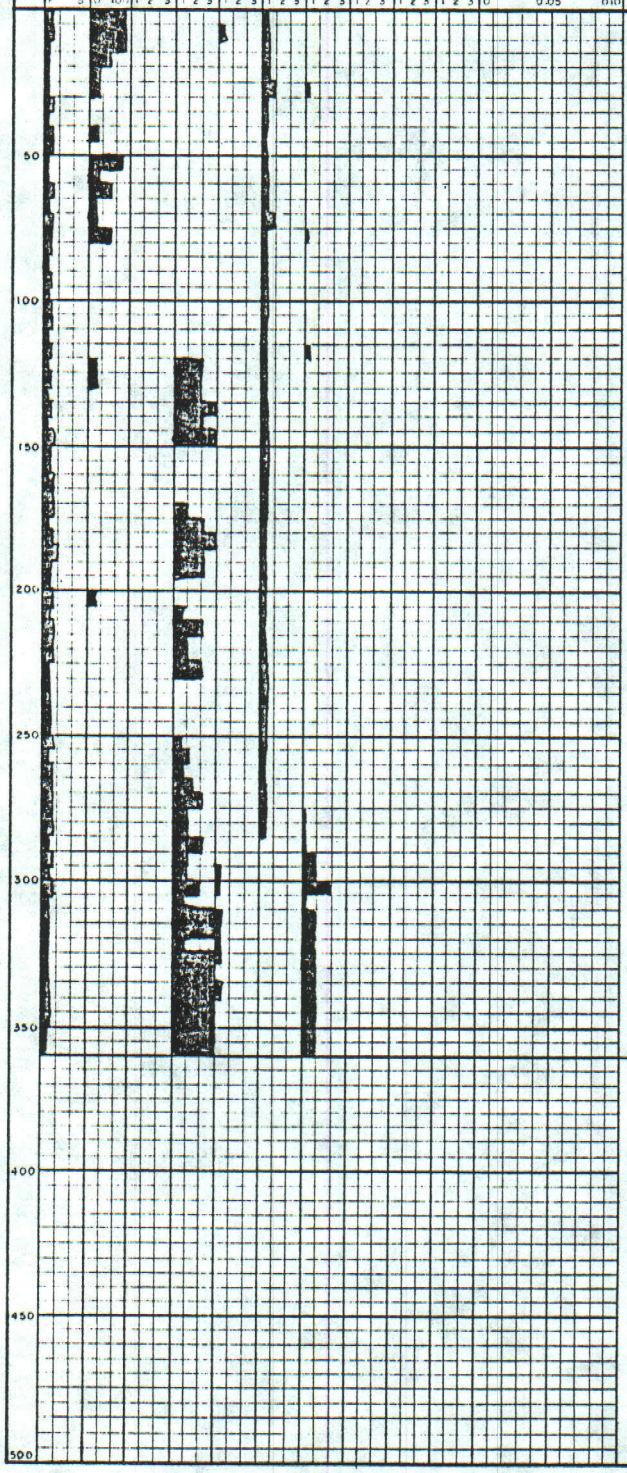
Project Trout Creek State Nevada County Elko Hole # TC-91-24

Location Opaline Springs Coordinates ~8400 N ~2800W Elevation ~5770

Total Depth 350' Bearing N90E Inclination -45

Type Drilling RC DHH Hole Size 5½" Start 8-23-91 Complete 8-23-91

Drilled by Ponderosa D. Uran. Logged by FWL Date 9-3-91



GELOGIC NOTES

Description

Mineralogy, Alteration, Textures, Grain Size, Fragment Size

- Arkose & tuffaceous sediment
yell gray - red brown

drilled dry 0-50'

- buried regolith ?
evidence - hematite + $CaCO_3$

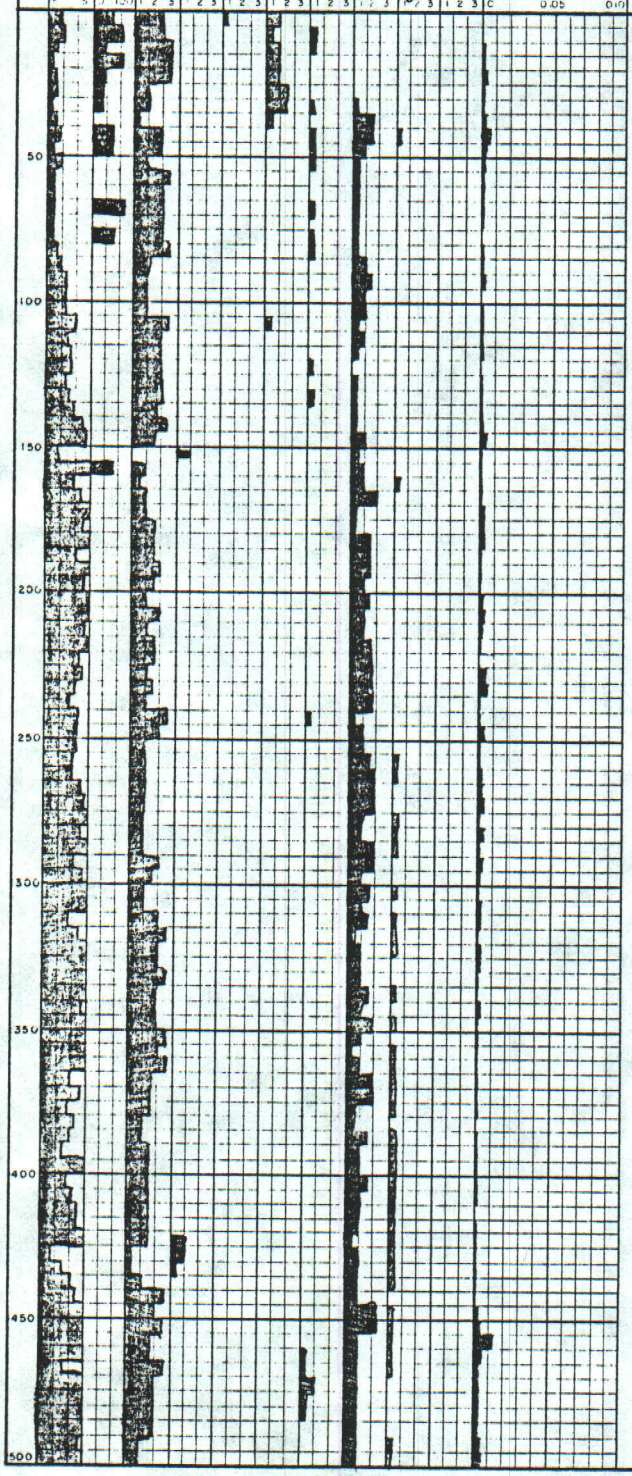
drilled wet 50-350'

T.D. -350'

CHALLENGER GOLD, INC.

DRILL LOG

Project Trout Creek State Nevada County Elko Hole # 15-91-25
Location Opaline Springs Coordinates ~10400 N ~2040W Elevation ~5800
Total Depth 500' Bearing _____ Inclination vertical
Type Drilling RC - tricone Hole Size 5½" Start 8-24-91 Complete 8-27-91
Drilled by Pondrosa Logged by FWL Date 9-3-91



GELOGIC NOTES

Description

Mineralogy, Alteration, Textures, Grain Size, Fragment Size

0-500' Tuffaceous Sediment - Th
- details of lithology masked by alteration
- drilled wet 10-500'
- tr Carbon @ 35'

fractured 190-200'
tricone drill 195-500'

SiO_2 after $CaCO_3$ @ 305'

.013

tr fluorite @ 495'
Total Depth - 500'

APPENDIX F

1991 Drill Hole Logs

CHALLENGER GOLD, INC. -- TROUT CREEK PROJECT, NEVADA -- DRILL ASSAYS - HOLE TC-91-24

ELEMENT	Au	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg
SAMPLES	ppb	opt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm
TC-91-24-5	7	0.000	1	12	18	93	0.1	11	6	919	1.76	3	5	2	14	51	0.4	2	2	21	0.66	0.04	46	57	0.39	317	0.14	14	1.78	0.03	0.26	6	2	1
TC-91-24-10	<7	0.000	1	12	27	80	0.1	9	5	402	1.59	4	5	2	13	47	0.2	2	2	16	0.65	0.03	42	39	0.38	204	0.15	10	1.87	0.05	0.23	1	2	1
TC-91-24-15	7	0.000	2	17	19	80	0.2	9	5	400	1.19	6	5	2	9	43	0.4	2	2	14	2.08	0.03	31	38	1.16	235	0.10	9	1.36	0.04	0.19	1	2	1
TC-91-24-20	<7	0.000	1	10	12	47	0.1	9	6	365	1.65	5	5	2	11	75	0.2	2	2	14	0.57	0.03	35	49	0.33	344	0.17	7	1.69	0.06	0.23	2	2	1
TC-91-24-25	<7	0.000	2	8	6	79	0.1	10	3	322	1.12	2	5	2	11	79	0.2	2	2	15	0.54	0.05	38	61	0.27	353	0.08	4	0.77	0.04	0.16	1	2	1
TC-91-24-30	7	0.000	2	12	11	181	0.1	9	4	427	1.80	5	8	2	14	54	0.2	2	2	19	0.70	0.03	39	59	0.45	225	0.19	7	1.36	0.04	0.17	1	2	1
TC-91-24-35	10	0.000	3	13	29	110	0.1	13	6	379	2.13	4	5	2	14	47	0.2	2	2	25	0.59	0.05	41	63	0.37	204	0.25	12	1.05	0.04	0.18	1	2	1
TC-91-24-40	<7	0.000	3	8	9	61	0.1	13	5	301	1.97	2	6	2	15	49	0.2	2	2	24	0.43	0.06	46	72	0.26	177	0.22	6	1.02	0.04	0.16	1	2	1
TC-91-24-45	<7	0.000	3	13	15	825	0.1	11	5	264	1.80	5	5	2	14	46	0.3	2	2	22	0.80	0.05	43	82	0.48	145	0.20	6	0.97	0.04	0.15	1	2	1
TC-91-24-50	<7	0.000	2	11	17	258	0.1	12	4	212	1.73	2	9	2	12	46	0.2	2	3	23	0.62	0.05	38	64	0.36	138	0.21	10	0.84	0.04	0.14	1	2	1

assays incomplete

CHALLENGER GOLD INC. -- TROUT CREEK PROJECT, NEVADA -- DRILL ASSAYS-HOLE TC-91-25

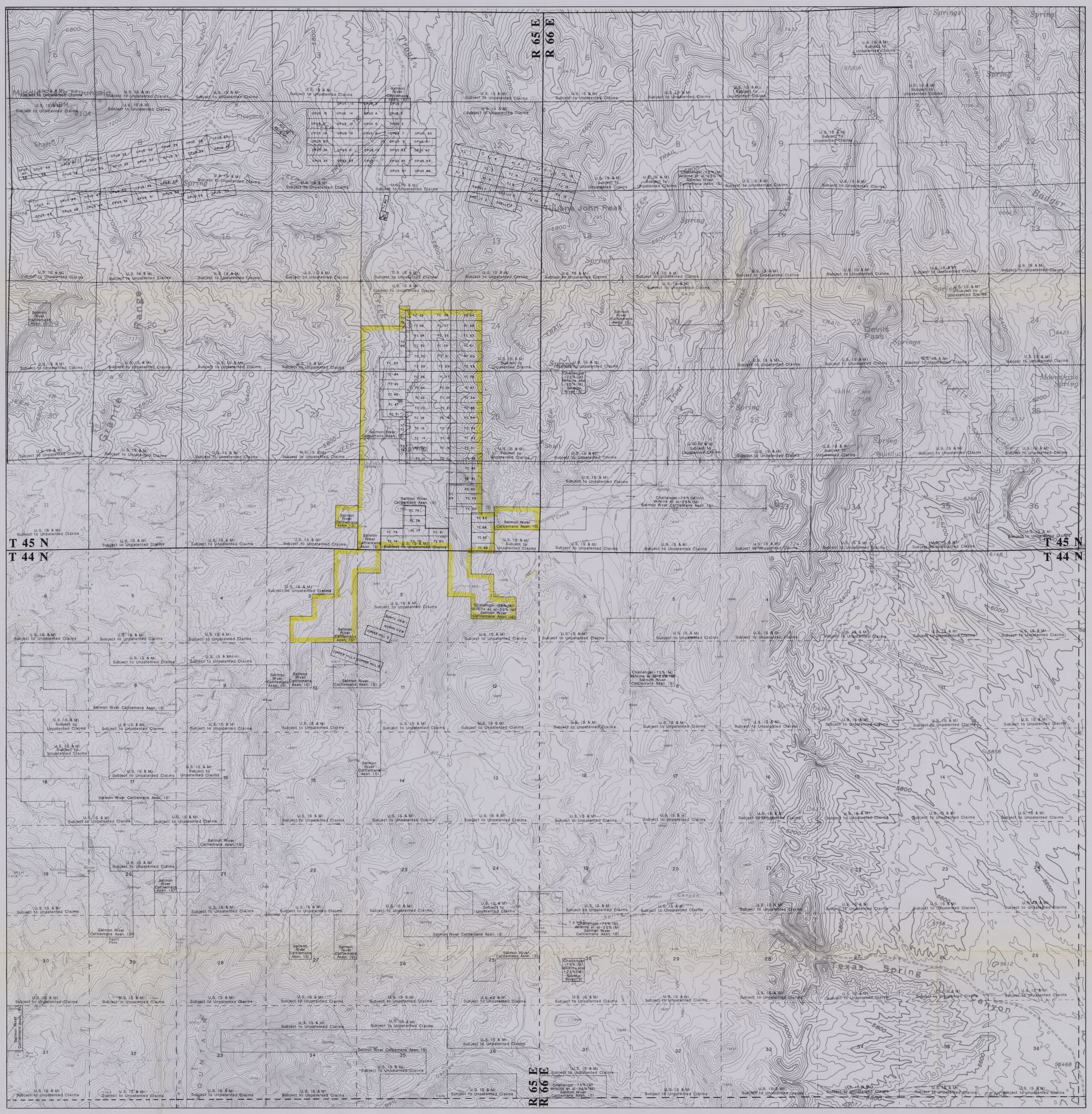
ELEMENT SAMPLES	Au ppb	Au opt	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm
TC-91-25-5	7	0.000	9	4	2	75	0.1	6	1	46	0.54	11	5	2	2	125	0.2	7	2	8	1.24	0.01	7	137	0.13	230	0.01	18	0.42	0.15	0.08	8	2	1
TC-91-25-10	14	0.000	4	2	2	35	0.1	7	1	32	0.31	4	5	2	1	25	0.2	4	2	1	0.18	0.00	2	195	0.03	39	0.01	8	0.08	0.05	0.02	4	2	1
TC-91-25-15	51	0.001	3	4	6	70	0.1	5	1	40	0.31	6	5	2	1	30	0.2	6	2	4	0.21	0.00	3	104	0.07	48	0.01	6	0.22	0.06	0.03	11	2	1
TC-91-25-20	21	0.001	5	15	2	31	0.2	9	3	47	0.41	4	5	2	1	34	0.2	4	2	5	0.06	0.00	2	198	0.01	2363	0.01	7	0.12	0.03	0.01	16	2	1
TC-91-25-25	86	0.003	7	6	2	13	0.1	6	1	31	0.37	10	5	2	1	41	0.2	12	2	2	0.05	0.00	2	134	0.01	850	0.01	3	0.10	0.03	0.02	8	2	1
TC-91-25-30	38	0.001	6	8	11	282	0.1	2	1	83	0.47	40	5	2	3	123	0.3	35	2	4	0.22	0.00	7	29	0.08	469	0.01	4	0.48	0.05	0.07	16	2	1
TC-91-25-35	27	0.001	7	10	5	74	0.1	3	1	58	0.70	62	5	2	5	148	0.2	32	2	4	0.24	0.00	12	30	0.09	251	0.01	4	0.74	0.05	0.08	18	2	2
TC-91-25-40	65	0.002	18	16	9	87	0.2	7	4	60	1.32	104	5	2	8	192	0.3	35	2	5	0.38	0.00	22	41	0.12	57	0.01	5	0.98	0.05	0.10	13	4	1
TC-91-25-45	165	0.005	16	15	29	236	0.1	8	4	73	1.43	118	5	2	7	164	0.4	45	2	4	0.34	0.00	23	10	0.09	50	0.01	5	0.65	0.05	0.10	14	3	2
TC-91-25-50	55	0.002	10	21	14	272	0.1	9	3	80	1.35	80	5	2	5	137	0.2	37	2	4	0.26	0.00	18	11	0.07	54	0.01	5	0.45	0.04	0.08	10	3	3
TC-91-25-55	62	0.001	9	38	22	1253	0.1	15	2	118	1.45	28	5	2	1	46	0.3	15	2	2	0.11	0.00	7	30	0.03	39	0.01	5	0.16	0.02	0.04	12	2	1
TC-91-25-60	38	0.002	11	53	3	62	0.2	23	2	185	2.17	16	5	2	1	17	0.2	7	2	2	0.08	0.00	4	63	0.02	23	0.01	4	0.08	0.01	0.02	5	2	1
TC-91-25-65	72	0.002	8	49	2	19	0.2	20	2	155	1.91	21	5	2	1	22	0.2	6	2	3	0.04	0.00	5	45	0.01	23	0.01	2	0.16	0.02	0.03	6	2	1
TC-91-25-70	34	0.001	5	21	16	358	0.2	9	2	123	0.80	22	5	2	2	35	0.2	6	2	7	0.37	0.01	8	127	0.16	123	0.02	5	0.33	0.03	0.07	5	2	1
TC-91-25-75	43	0.001	6	17	3	76	0.2	7	2	86	0.61	24	5	2	2	46	0.2	8	2	7	0.61	0.01	6	122	0.22	69	0.02	6	0.35	0.03	0.07	3	2	1
TC-91-25-80	17	0.000	5	10	2	49	0.3	7	1	81	0.51	14	5	2	1	42	0.2	3	2	3	0.33	0.00	5	137	0.12	43	0.01	4	0.31	0.03	0.06	3	2	1
TC-91-25-85	45	0.001	5	8	8	31	0.3	5	1	67	0.59	42	5	2	1	55	0.2	12	2	5	0.24	0.00	6	100	0.08	43	0.01	5	0.27	0.03	0.06	10	2	1
TC-91-25-90	34	0.001	8	8	4	24	0.1	5	1	25	0.55	36	5	2	1	61	0.2	17	2	3	0.10	0.00	2	92	0.02	17	0.01	4	0.21	0.02	0.03	10	2	1
TC-91-25-95	55	0.002	10	11	9	44	0.4	8	2	55	1.06	66	5	2	2	47	0.2	21	2	2	0.11	0.00	6	174	0.02	27	0.01	3	0.40	0.02	0.04	6	2	1
TC-91-25-100	10	0.000	10	16	18	58	0.5	6	3	46	1.58	70	5	2	5	53	0.2	24	2	4	0.14	0.00	16	80	0.03	27	0.01	5	0.39	0.02	0.04	12	2	1
TC-91-25-105	51	0.001	8	18	7	36	0.5	7	3	40	1.35	67	5	2	5	86	0.2	19	2	6	0.15	0.00	13	141	0.04	27	0.01	4	0.36	0.02	0.05	8	2	1
TC-91-25-110	41	0.001	4	15	2	35	0.5	9	2	53	0.57	23	5	2	1	14	0.3	10	2	2	0.10	0.00	4	270	0.04	18	0.01	4	0.08	0.01	0.02	4	2	1
TC-91-25-115	31	0.001	2	12	13	19	0.4	7	1	44	0.38	12	5	2	1	11	0.2	6	2	5	0.11	0.00	3	198	0.04	21	0.01	4	0.07	0.01	0.02	4	2	1
TC-91-25-120	31	0.001	5	14	2	44	0.2	10	2	39	0.48	16	5	2	1	14	0.2	9	2	6	0.12	0.00	3	239	0.04	16	0.01	2	0.11	0.01	0.02	6	2	1
TC-91-25-125	10	0.000	4	29	2	27	0.4	9	1	44	0.46	16	5	2	1	9	0.2	8	2	1	0.05	0.00	2	262	0.02	11	0.01	3	0.04	0.01	0.01	4	2	1
TC-91-25-130	27	0.001	4	10	9	62	0.4	12	2	46	0.50	21	5	2	1	16	0.3	11	2	6	0.15	0.00	4	198	0.05	21	0.01	6	0.08	0.01	0.02	7	2	1
TC-91-25-135	21	0.001	5	7	2	13	0.3	10	1	29	0.47	13	5	2	1	8	0.2	7	2	6	0.02	0.00	2	276	0.01	7	0.01	2	0.03	0.01	0.01	5	2	1
TC-91-25-140	31	0.001	9	10	2	14	0.3	9	2	43	0.56	22	5	2	1	18	0.2	12	2	2	0.03	0.00	3	264	0.01	9	0.01	5	0.06	0.01	0.02	17	2	1
TC-91-25-145	24	0.001	7	11	10	22	0.5	6	2	40	0.58	31	5	2	2	20	0.3	15	2	5	0.10	0.00	7	151	0.03	66	0.01	6	0.15	0.01	0.03	12	2	1
TC-91-25-150	103	0.003	27	15	2	29	0.3	10	2	29	0.65	39	5	2	1	17	0.2	18	2	6	0.05	0.00	7	202	0.01	84	0.01	2	0.11	0.01	0.02	13	3	1
TC-91-25-155	34	0.001	12	12	16	42	0.2	6	4	37	1.66	77	5	2	6	55	0.4	18	2	5	0.11	0.01	25	39	0.03	48	0.01	5	0.42	0.02	0.11	14	2	1
TC-91-25-160	45	0.001	11	18	10	66	0.3	9	4	69	1.28	37	5	2	7	44	0.6	10	2	5	0.16	0.01	26	104	0.07	95	0.01	2	0.50	0.01	0.10	27	2	1
TC-91-25-165	51	0.001	11	12	22	45	0.2	6	3	48	1.07	52	5	2	6	61	0.3	4	2	9	0.45	0.01	22	60	0.10	98	0.01	8	1.14	0.02	0.21	9	2	1
TC-91-25-170	51	0.001	13	11	9	43	0.1	6	3	41	1.10	80	5	2	5	86	0.2	6	2	7	0.23	0.01	21	66	0.07	71	0.01	3	0.72	0.02	0.12	7	4	1
TC-91-25-175	72	0.002	12	13	8	38	0.2	8	4	53	1.32	78	5	2	4	89	0.3	11	2	5	0.22	0.01	16	120	0.07	16	0.01	4	0.64	0.02	0.11	6	2	1
TC-91-25-180	65	0.002	12	12	11	37	0.4	7	3	37	0.98	75	5	2	3	69	0.3	17	2	5	0.16	0.00	12	111	0.05	19	0.01	4	0.31	0.01	0.06	5	2	1
TC-91-25-185	58	0.002	19	18	7	27	0.4	12	3	36	1.19	49	5	2	2	31	0.2	16	3	6	0.08	0.00	12	178	0.03	18	0.01	2	0.27	0.01	0.08	5	2	2
TC-91-25-190	45	0.001	12	16	16	49	0.8	14	4	48	1.23	74	5	2	5	39	0.2	22	9	4	0.08	0.00	16	228	0.03	13	0.01	6	0.28	0.01	0.09	6	2	3
TC-91-25-195	38	0.001	6	8	18	28	0.1	8	1	38	0.61	31	25	2	1	13	0.2	3	2	4	0.08	0.00	5	194	0.02	16	0.01	5	0.12	0.01	0.04	2	2	1
TC-91-25-200	38	0.001	8	13	3	18	0.1	11	2	32	0.63	26	5	2	1	10	0.2	2	2	6	0.03	0.00	3	285	0.01	12	0.01	2	0.07	0.01	0.03	4	2	1
TC-91-25-205	55	0.002	15	13	6	23	0.1	10	2	47	0.95	48	5	2	1	15	0.3	11	2	2	0.08	0.00	6	262	0.03	68	0.01	5	0.11	0.01	0.05	7	2	2
TC-91-25-210	86	0.003	11	7	10	8	0.3	8	2	33	0.53	28	5	2	1	14	0.2	4	2	5	0.10	0.00	3	188	0.01	16	0.01	6	0.12	0.01	0.04	5	2	1
TC-91-25-215	62	0.002	24	14	6	12	0.2	9	2	31	0.70	42	5	2	1	22	0.2	4	4	5	0.07	0.00	7	232	0.01	10	0.01	4	0.18	0.01	0.06	6	2	1
TC-91-25-220	79	0.002	10	9	7	10	0.9	8	3	31	2.49	109	5	2	6	26	0.3	22	2	5	0.22	0.00	12	185	0.02	17	0.01	4	0.29	0.01	0.13	15	2	1
TC-91-25-225	7	0.000	10	15	9	17	0.1	4	1	31	1.10	77	5	2	1	45	0.2	2	2	6	0.42	0.00	10	102	0.05	17	0.01	5	0.61	0.01	0.23	4	2	1
TC-91-25-230	86	0.003	12	7	7	6	0.1	5	1	30	1.37	99	5	2	1	43	0.2	8	2	8	0.20	0.00	6	146	0.03	17	0.01	5	0.47	0.01	0.17	7	2	1
TC-91-25-235	151	0.004	9	13	4	12	0.4	8	3	44	2.20	179	5	2	1	58	0.2	14	2	7	0.72	0.00	4	250	0.05	58	0.01	3	0.70	0.01	0.26	4	2	2
TC-91-25-240	41	0.001	6	7	10	8	0.1	9	2	41	0.79	44	20	2	1	41	0.2	6	5	9	1.20	0.00	2	185	0.06	45	0.01	6	0.57	0.02	0.21	3	2	1
TC-91-25-245	41	0.001	15	12	2	14	0.1	10	2	34	0.81	30	5	2	1	21	0.2	2	2	7	0.08	0.00	2	282	0.02	14	0.01	2	0.13	0.01	0.02	3	2	1

CHALLENGER GO[illegible] INC. -- TROUT CREEK PROJECT, NEVADA -- DRILL ASSAYS-HOLE TC-91-25

ELEMENT SAMPLES	Au ppb	Au opt	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm
TC-91-25-250	110	0.003	48	23	12	34	0.7	11	6	40	2.56	100	5	2	4	53	0.2	17	4	4	0.10	0.00	9	159	0.03	15	0.01	2	0.32	0.01	0.10	4	2	3
TC-91-25-255	48	0.001	8	11	11	122	0.1	11	4	25	1.53	67	5	2	1	67	0.2	2	2	4	0.13	0.00	2	75	0.04	16	0.01	2	0.28	0.01	0.09	3	2	1
TC-91-25-260	51	0.001	10	13	6	67	0.6	8	3	25	1.37	62	5	2	10	55	0.2	7	2	6	0.14	0.02	13	127	0.03	18	0.01	2	0.25	0.01	0.13	4	2	1
TC-91-25-265	79	0.002	10	13	5	39	0.9	12	6	39	2.92	137	5	2	9	42	0.4	11	2	3	0.08	0.01	20	122	0.03	10	0.01	5	0.24	0.01	0.10	3	2	1
TC-91-25-270	103	0.003	34	9	15	47	1.1	8	4	30	2.45	108	5	2	9	44	0.2	7	2	4	0.09	0.00	26	72	0.04	10	0.01	6	0.24	0.01	0.12	4	2	1
TC-91-25-275	141	0.004	23	12	10	36	1.4	9	5	26	3.75	198	11	2	9	36	0.2	14	4	6	0.08	0.01	19	133	0.03	9	0.01	2	0.19	0.01	0.11	3	2	1
TC-91-25-280	41	0.001	17	18	11	27	0.4	9	5	32	1.27	67	5	2	7	54	0.3	8	2	5	0.09	0.01	15	87	0.03	8	0.01	4	0.29	0.01	0.13	5	2	1
TC-91-25-285	154	0.004	23	9	10	56	0.2	9	3	24	1.31	58	5	2	5	52	0.2	6	2	6	0.10	0.01	17	64	0.02	12	0.01	4	0.25	0.01	0.13	5	2	1
TC-91-25-290	27	0.001	15	10	11	59	0.1	8	3	23	1.44	47	5	2	3	38	0.2	2	2	7	0.08	0.01	23	91	0.02	10	0.01	4	0.25	0.01	0.14	4	2	1
TC-91-25-295	103	0.003	11	8	8	28	0.6	8	3	36	1.40	65	5	2	4	45	0.2	6	2	14	0.83	0.03	18	157	0.07	19	0.01	4	0.94	0.01	0.43	4	2	1
TC-91-25-300	54	0.002	15	7	10	30	0.7	9	3	28	1.25	61	5	2	7	41	0.2	9	3	11	0.23	0.01	22	80	0.06	17	0.01	6	0.49	0.01	0.18	5	2	1
TC-91-25-305	51	0.001	7	10	11	29	0.2	7	3	28	1.17	51	5	2	3	20	0.2	6	2	9	0.07	0.01	22	123	0.03	23	0.01	4	0.22	0.01	0.13	6	2	1
TC-91-25-310	62	0.002	3	12	17	32	0.1	8	4	21	1.29	89	5	2	6	17	0.2	5	2	5	0.09	0.02	30	115	0.02	29	0.01	5	0.17	0.01	0.13	6	2	1
TC-91-25-315	55	0.002	3	12	11	30	0.4	7	4	37	1.24	96	5	2	11	33	0.3	6	5	7	0.10	0.02	30	128	0.05	26	0.01	5	0.23	0.01	0.16	5	2	1
TC-91-25-320	48	0.001	7	14	8	27	0.3	8	2	45	1.10	77	5	2	7	24	0.2	5	2	11	0.28	0.01	19	165	0.04	26	0.01	2	0.38	0.01	0.16	5	2	1
TC-91-25-325	75	0.002	11	11	8	26	0.2	5	3	32	1.05	53	5	2	4	21	0.3	4	2	10	0.24	0.01	18	133	0.03	24	0.01	5	0.36	0.01	0.15	8	2	1
TC-91-25-330	55	0.002	4	11	6	26	0.3	8	3	35	0.95	55	5	2	5	22	0.2	4	2	9	0.20	0.01	16	165	0.04	19	0.01	5	0.34	0.01	0.16	6	2	1
TC-91-25-335	31	0.001	11	10	6	20	0.6	8	3	23	0.94	55	5	2	5	20	0.2	5	2	12	0.07	0.01	15	171	0.02	15	0.01	4	0.17	0.01	0.10	7	2	1
TC-91-25-340	38	0.001	6	34	18	206	0.1	10	3	64	1.01	47	5	2	8	35	0.2	2	2	12	0.12	0.02	30	143	0.03	25	0.01	4	0.26	0.01	0.14	6	2	1
TC-91-25-345	75	0.002	6	14	23	89	0.1	9	3	35	1.22	69	5	2	8	42	0.2	3	2	28	0.32	0.02	24	84	0.09	19	0.01	11	0.67	0.02	0.32	11	2	1
TC-91-25-350	48	0.001	8	10	17	45	0.1	5	2	27	0.85	62	5	2	9	29	0.2	2	2	12	0.27	0.03	28	99	0.04	37	0.01	12	0.39	0.02	0.21	5	2	1
TC-91-25-355	49	0.001	5	64	12	77	0.6	9	4	39	1.06	87	5	2	10	39	0.2	7	2	19	0.57	0.02	25	107	0.07	35	0.01	4	0.73	0.01	0.39	10	2	1
TC-91-25-360	21	0.001	11	28	10	40	0.1	12	3	28	0.99	62	5	2	5	25	0.3	4	2	6	0.08	0.01	18	93	0.03	16	0.01	6	0.24	0.01	0.15	9	2	1
TC-91-25-365	24	0.001	6	18	17	46	0.7	6	3	34	0.80	50	5	2	8	32	0.2	3	2	6	0.17	0.01	20	73	0.06	18	0.01	9	0.36	0.01	0.17	5	2	1
TC-91-25-370	31	0.001	6	21	11	41	0.5	9	3	29	0.86	57	11	2	6	28	0.2	5	2	5	0.09	0.01	19	87	0.04	13	0.01	8	0.27	0.01	0.15	3	2	1
TC-91-25-375	34	0.001	6	10	8	29	0.2	8	3	22	0.90	61	5	2	5	19	0.2	4	2	5	0.08	0.01	18	113	0.02	18	0.01	7	0.17	0.01	0.11	4	2	1
TC-91-25-380	24	0.001	6	10	7	26	0.5	8	3	35	0.88	54	5	2	6	24	0.2	7	2	4	0.08	0.01	17	106	0.04	14	0.01	6	0.23	0.01	0.11	3	2	1
TC-91-25-385	10	0.000	6	14	8	35	0.1	7	3	29	0.73	50	5	2	3	29	0.2	2	2	4	0.09	0.01	17	63	0.04	13	0.01	5	0.26	0.01	0.13	2	2	1
TC-91-25-390	24	0.001	4	9	7	26	0.2	6	2	22	0.64	42	5	2	6	30	0.2	2	2	4	0.11	0.01	21	84	0.05	9	0.01	7	0.29	0.01	0.14	1	2	1
TC-91-25-395	38	0.001	11	16	10	31	0.4	8	3	24	0.95	76	5	2	7	32	0.2	5	2	6	0.10	0.01	19	84	0.04	15	0.01	7	0.28	0.01	0.15	2	2	1
TC-91-25-400	24	0.001	9	9	8	30	0.4	10	4	34	0.99	90	5	2	6	33	0.3	3	2	9	0.36	0.01	18	96	0.10	22	0.01	6	0.62	0.01	0.29	3	2	1
TC-91-25-405	21	0.001	6	10	8	34	0.2	7	3	27	0.82	62	5	2	6	35	0.3	4	2	5	0.09	0.01	20	77	0.04	15	0.01	8	0.26	0.01	0.14	2	2	1
TC-91-25-410	41	0.001	7	11	9	35	0.4	8	3	40	0.94	59	5	2	6	31	0.2	3	2	4	0.10	0.01	18	100	0.04	12	0.01	3	0.27	0.01	0.14	3	2	1
TC-91-25-415	17	0.000	7	8	6	32	0.1	8	3	29	0.82	48	6	2	4	42	0.2	2	2	6	0.14	0.01	20	61	0.06	11	0.01	6	0.43	0.01	0.19	2	2	1
TC-91-25-420	41	0.001	7	7	11	28	0.7	7	3	29	0.84	57	5	2	6	35	0.2	3	2	5	0.12	0.01	18	60	0.06	13	0.01	5	0.37	0.01	0.18	3	2	1
TC-91-25-425	45	0.001	11	11	16	61	0.6	7	4	41	1.32	62	5	2	7	79	0.3	3	2	5	0.20	0.02	32	34	0.10	15	0.01	7	0.73	0.02	0.30	7	2	1
TC-91-25-430	51	0.001	8	15	24	71	0.5	11	5	44	1.71	97	5	2	11	97	0.5	8	2	5	0.23	0.03	40	42	0.08	17	0.01	6	0.59	0.02	0.25	7	2	1
TC-91-25-435	34	0.001	19	10	9	36	0.3	11	3	45	1.19	65	5	2	5	43	0.2	5	2	4	0.11	0.01	19	137	0.05	17	0.01	4	0.35	0.01	0.14	3	2	1
TC-91-25-440	45	0.001	12	7	10	28	0.3	7	3	34	1.05	66	5	2	6	37	0.2	2	2	8	0.15	0.01	20	82	0.06	18	0.01	4	0.46	0.01	0.21	2	2	1
TC-91-25-445	21	0.001	13	11	15	33	0.6	8	3	33	1.03	69	5	2	5	33	0.2	4	2	8	0.43	0.01	18	83	0.07	34	0.01	5	0.56	0.01	0.27	3	2	1
TC-91-25-450	72	0.002	10	13	13	35	1.4	13	6	64	1.84	99	5	2	7	28	0.2	8	2	3	0.30	0.03	19	225	0.03	36	0.01	6	0.40	0.01	0.21	6	2	1
TC-91-25-455	106	0.003	14	16	9	37	1.0	8	3	34	1.37	106	5	2	2	53	0.2	2	2	5	1.04	0.02	14	137	0.04	132	0.01	2	0.94	0.01	0.81	5	2	1
TC-91-25-460	429	0.013	5	16	8	34	1.7	9	3	47	0.93	31	5	2	3	19	0.2	2	2	7	0.21	0.01	19	130	0.06	24	0.01	5	0.29	0.01	0.26	5	2	1
TC-91-25-465	120	0.003	18	4	4	15	1.2	7	2	33	0.74	54	5	2	1	29	0.2	2	2	6	0.65	0.00	11	178	0.07	79	0.01	4	0.83	0.01	0.89	1	2	1
TC-91-25-470	93	0.003	23	11	3	19	1.1	9	2	31	0.77	48	5	2	1	30	0.3	2	2	9	0.68	0.00	11	170	0.07	86	0.01	4	0.84	0.01	0.90	2	2	1
TC-91-25-475	99	0.003	7	10	10	34	1.7	11	4	52	1.32	62	5	2	4	35	0.2	3	2	7	0.21	0.01	24	164	0.07	32	0.01	6	0.33	0.01	0.22	4	2	1
TC-91-25-480	93	0.003	6	10	11	25	2.1	11	3	37	0.93	55	5	2	4	45	0.2	2	2	5	0.36	0.02	21	125	0.04	66	0.01	4	0.34	0.01	0.27	3	2	1
TC-91-25-485	117	0.003	18	7	6	23	1.6	10	3	32	0.87	67	5	2	6	52	0.2	2	2	8	0.99	0.02	21	163	0.07	99	0.01	3	0.90	0.01	0.69	1	2	1

CHALLENGER G[illegible] INC. -- TROUT CREEK PROJECT, NEVADA -- DRILL ASSAYS-HOLE TC-91-25

ELEMENT	Au	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg
SAMPLES	ppb	opt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm
TC-91-25-490	117	0.003	12	13	7	25	1.6	11	4	27	1.20	110	5	2	6	25	0.2	5	2	6	0.28	0.02	21	129	0.04	22	0.01	5	0.38	0.01	0.22	4	2	1
TC-91-25-495	185	0.005	4	31	18	47	1.2	13	5	28	1.18	149	5	2	7	29	0.2	5	2	7	0.17	0.02	32	74	0.06	17	0.01	6	0.41	0.01	0.24	4	2	1
TC-91-25-500	151	0.004	10	11	7	33	1.1	9	4	32	0.91	89	5	2	5	31	0.2	4	2	6	0.50	0.01	19	142	0.07	26	0.01	5	0.62	0.01	0.35	6	2	1
# of samples	100																																	
Maximum	429	0.013	48	64	29	1253	2.1	23	6	185	3.75	198	25	2	11	192	0.6	45	9	28	1.24	0.03	40	285	0.22	2363	0.02	18	1.14	0.15	0.90	27	4	3
Minimum	7	0.000	2	2	2	6	0.1	2	1	21	0.31	4	5	2	1	8	0.2	2	2	1	0.02	0.00	2	10	0.01	7	0.01	2	0.03	0.01	0.01	1	2	1
Average	60	0.002	10	14	9	61	0.4	9	3	44	1.09	60	5	2	4	43	0.2	9	2	6	0.23	0.01	14	130	0.05	71	0.01	5	0.36	0.02	0.15	6	2	1
Std Dev	52	0.002	7	9	6	132	0.4	3	1	26	0.57	35	3	0	3	33	0.1	8	1	4	0.24	0.01	9	66	0.03	251	0.00	2	0.24	0.02	0.16	4	0	0



EXPLANATION

MS 37 PATENTED CLAIM BOSTON LODE
B.T. Hanks
523 NW 4th Pendleton OR 97801

Salmon River Cattlemans Assn.
P.O. Box 1278 Twin Falls, Idaho 83301

Copper Hill & North View Claims
Kirk & James Baker
Box 93
Jack Pot NV 89825

TJ, Shelley & Shelley Millsite Claims
Michael & Kathi J. Knight
Route 1
Filer ID 83328

Opus Claims
Great Lakes Exploration Inc.
4020 McCullock St.
Duluth MN 55804

Scale: 1"=2000'

0 2000 4000 6000 FEET

CHALLENGER GOLD, INC.

TROUT CREEK PROJECT

Elko County, Nevada

CLAIM MAP

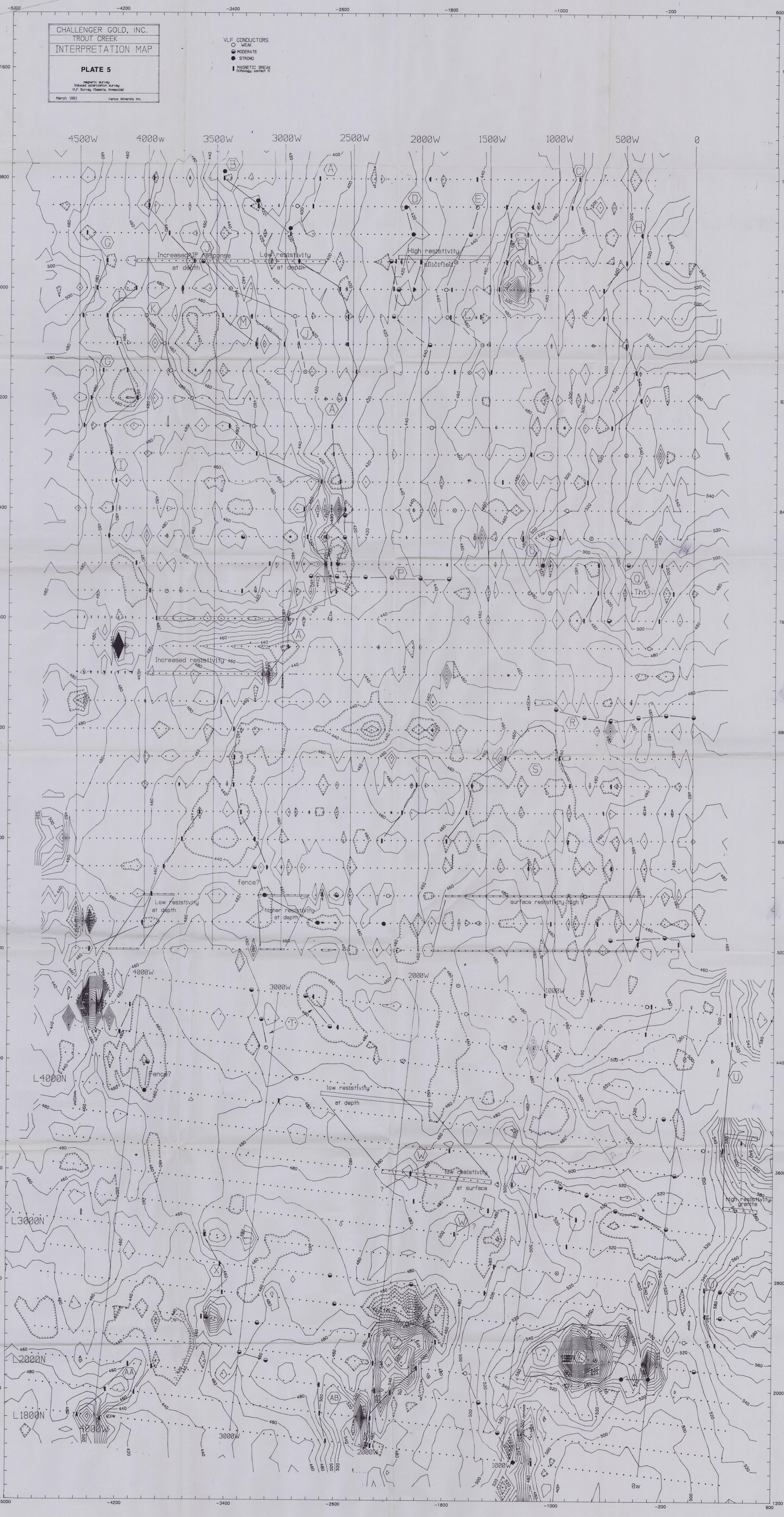
SURFACE AND MINERAL OWNERSHIP

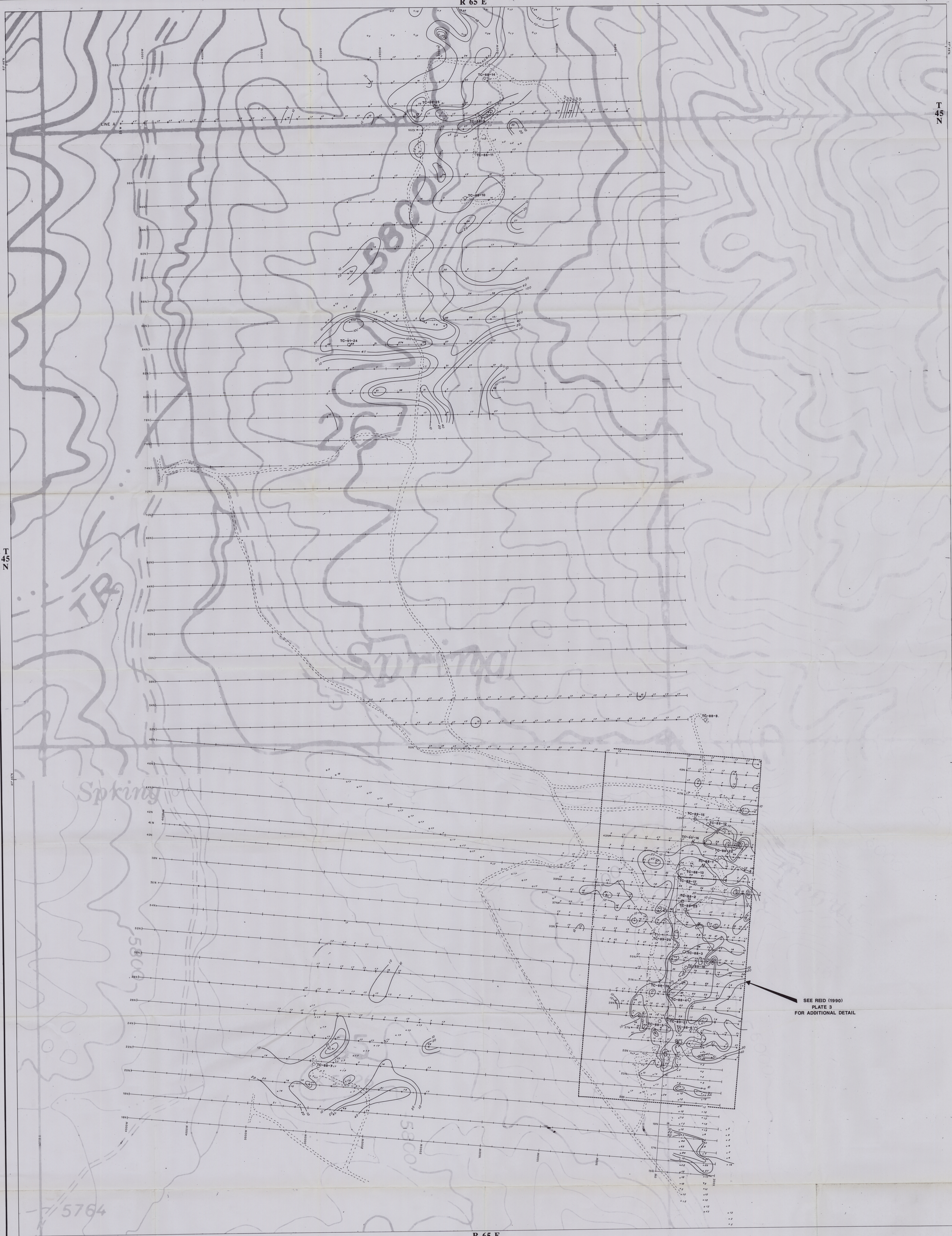
DATE	SCALE	MAP BY	
March 1991	1"=2000'		PLATE 1

ELKO COUNTY GENERAL
Item 126

1210 0181

ELKO COUNTY GENERAL
Item 126





R 65 E

SYMBOLS

- Sample Site Locations - Soils
- Drill Hole - Vertical
- Drill Hole - Inclined
- Roads

N

SCALE: 1" = 200'

0 200 400 600 800 FEET

CHALLENGER GOLD, INC.

TROUT CREEK
Elko County, Nevada

Au IN SOIL
(ppb)

DATE	SCALE	MAP BY	
9-1991	1" = 200'	FWL	PLATE 4

ELKO COUNTY
GENERAL
Item 126

R 65 E

SYMBOLS

- Drill Hole - vertical
- Drill Hole - inclined
- Faults
- Roads
- Alteration Boundary
- Strke & Dip of Beds
- Strike & Dip of Joints
- Outcrop Area
- Boulder Conglomerate Units in Humboldt Fm

ROCK TYPES

- Qa — Quaternary-Silt and sand along modern drainage
- Th — Miocene Humboldt Formation- Conglomerates, arkoses, volcaniclastics & ashy tuffs
  - Th - Unaltered
  - Tho - Opaline Silica Alteration
  - Tha - SiO2-clay-FeS2 Alteration
- Jg — Jurassic Contact Pluton Massive, coarse-grained, granodiorite

SCALE 1"=200'

0 200 400 600 800 FEET

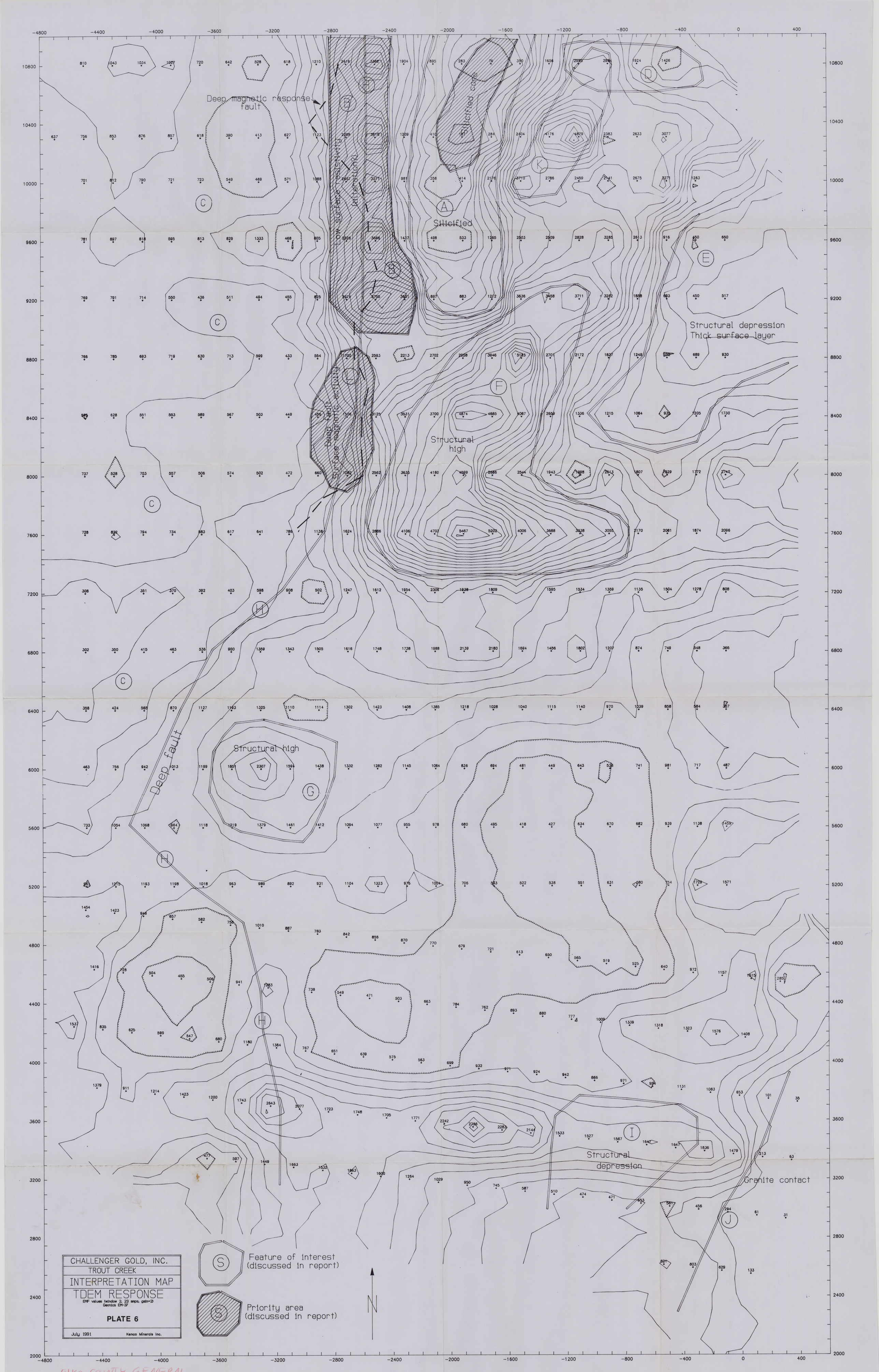
CHALLENGER GOLD, INC.

TROUT CREEK
Elko County, Nevada

GEOLOGIC MAP

DATE	SCALE	MAP BY	
9-1991	1"=200'	FWL	PLATE 2

ELKO COUNTY GENERAL
Item 126



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