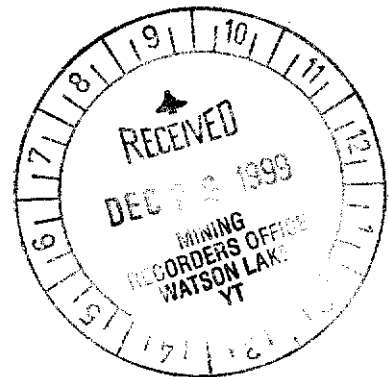


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EQUITY ENGINEERING LTD.

**HORIZONTAL LOOP ELECTROMAGNETIC
AND TOTAL MAGNETIC FIELD
SURVEY AT THE STARR PROPERTY,
ROSS RIVER AREA, YUKON TERRITORY**

M.A. Power, M.Sc. P.Geoph.



Location: 61° 25' N 131° 36' W
NTS: 105 G / 5, 6, 12
Mining District: Watson Lake, YT
Date: 04 Oct 99

SUMMARY

Horizontal loop electromagnetic field (HLEM) and total magnetic field surveys were conducted on the Starr Property for Equity Engineering Ltd. to locate volcanogenic massive sulphide mineralization on the property. A total of 23.8 line-km were surveyed on the Willow Grid and 1.9 line-km were surveyed on the Pyrite Grid. HLEM surveys were conducted with a 100 m coil spacing and 25 m station spacing using frequencies of 880, 3520 and 7040 Hz. The total magnetic field survey was conducted at a 12.5 m station spacing using a synchronized base station magnetometer installed on the grid.

The surveys on the Willow Grid identified 6 conductors. In the northern portion of the grid, anomaly **A-1** appears to be caused by a fault truncating an anomaly associated with the Willow showing (**A-2**). To the south, anomalies **A-5** and **A-6** appear to be caused by a single conductor. On the east end, this conductor is quite wide and conductive suggesting that it may be caused by graphitic argillite. To the west, the conductor thins and the complex response appears to be caused by two separate conductors. The total magnetic field response on the Willow Grid is quite flat although **A-6** is associated with a very weak magnetic low.

On the Pyrite Grid, the surveys identified three conductors. Conductors **A-8** and **A-9** are parallel, curved conductors of indeterminate dip. Conductor **A-7** may be a fault offset portion of either of the other two conductors. None of the conductors have associated magnetic field responses.

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1.0 INTRODUCTION

This report describes horizontal loop electromagnetic (HLEM) surveys conducted on the Starr Property in the Watson Lake Mining District, Yukon Territory. The surveys were conducted to locate volcanogenic massive sulphide mineralization associated with felsic volcanic rocks.

2.0 GRID

Two grids were surveyed on the property. The Willow Grid covers 23.8 line-km and the Pyrite Grid covers 1.9 line-km. Survey lines were cut and straight-chained (not slope corrected) with stations placed at 25 m intervals along the survey lines. Line spacing was nominally 100 m except where terrain prevented lines at this interval.

3.0 PERSONNEL AND EQUIPMENT

The surveys were conducted by a two man HLEM crew consisting of Gary Smith and Chris Gooliaff. They were equipped with the following instruments and equipment:

Instruments: Apex Parametrics MaxMin I-10 and MaxMin Computer (MMC) equipped with 50, 100 and 150 m cables.
3 - GEM proton precession magnetometers

Data processing: P-100 laptop and HP-680C colour printer.

Other equipment: F350 truck

The crew spent a total of 10 days on the property. The survey log containing the addresses of crew personnel is attached as Appendix B.

4.0 SURVEY SPECIFICATIONS

The HLEM surveys were conducted according to the following specifications:

Coil spacing: 100 m

Station spacing: 25 m

<u>Frequencies:</u>	880, 3520 and 7040 Hz
<u>Terrain corrections:</u>	Slope chain method using oriented coils (ie. tilt corrected in the field). Short coil errors introduced by irregular topography were removed during data processing.

The HLEM method requires that the coils be held a constant distance apart and be coplanar. In steep irregular terrain, the coils will frequently be less than the nominal coil spacing (short coiling) and may not be coplanar. These variations in coil geometry produce strong in-phase errors and must be removed from the data before plotting and interpretation. The method used to mitigate these effects requires a slope-chained grid and requires the operator to measure the station-to-station terrain slope in percent with a clinometer. This is normally done by the receiver operator who is in the lead position. The correct slope required to maintain the coils coplanar is the arithmetic average of the station-to-station slopes in the interval between the two coils. The operators hold the coils coplanar during the surveys by holding their coils at this orientation which is calculated and displayed for each reading station by the Maxmin MMC. The effect of short coiling created by irregular topography was removed with Apex Parametrics data processing software (MMCFIX1). The numerical method is described in Varre (1990) (pp A11-3-4).

The total magnetic field surveys were conducted with a synchronized base station magnetometer installed on each grid and cycled at a 10 s interval. The reading interval was 12.5 m and all data has been base station corrected.

5.0 DATA

Digital data is appended to this report in ASCII XYZ format. Each file has a header on the first line showing the data contained in the columns beneath. For the magnetic field data, the common format is:

Line Station x y Corr_mag

For the HLEM data, the common format is:

Line Station x y 880IP 880Q 3520IP 3520Q 7040IP 7040Q

Corr_mag denote total magnetic field data corrected for diurnal variation. xxxIP and xxxQ denotes in-phase and quadrature components at the prefixing frequency in percent of the vertical primary magnetic field (H_z).

The following plots are appended to this report:

- Figure 1 - Willow / 880 Hz
- Figure 2 - Willow / 3520 Hz
- Figure 3 - Willow / 7040 Hz
- Figure 4 - Willow / Total magnetic field
- Figure 5 - Pyrite / 880 Hz
- Figure 6 - Pyrite / 3520 Hz
- Figure 7 - Pyrite / 7040 Hz
- Figure 8 - Pyrite / Total magnetic field

HLEM data is displayed in stacked profile plots showing the survey grid and the in-phase and quadrature readings as solid and dashed line profiles. The zero level on each profile is coincident with the survey line. Stacked profiles are plotted at 1:3,000 and a vertical profile scale of 20% H_z per cm is used to display the HLEM data. Along the grid lines, the small tick marks show the station locations and every 100 m is indicated by a larger tick. On some plots, alternate station ticks were suppressed by the plotting software. The north arrow in each plot indicates grid north. Conductors of interest are indicated with symbols at each intersection. All anomalies were interpreted as thin tabular conductors unless otherwise indicated. Apparent target conductance is indicated by variably filling the redball symbol. Calculated depth to the top of the conductor and any excess width in the response which might indicate a wide target are shown numerically on opposite sides of the anomaly symbols. Conductor axes formed by linking similar line-to-line responses are indicated by thick dashed lines.

Total magnetic field data is displayed in colour contoured maps. These show the locations of the grid lines, marked in the same fashion as in the HLEM plots and contoured values of the total magnetic field. Superimposed on this is a full colour contour plot and any HLEM conductor axes.

6.0 HLEM THEORY AND INTERPRETATION PROCEDURES

The horizontal loop EM method is well described in standard texts such as Telford *et al.* (1990) and Ketola and Puranen (1967). This section summarizes the key features of the HLEM method and describes the interpretation algorithms used in this survey program.

The HLEM method involves the use of a pair of separated horizontal coils (Figure MM1). Most commonly, the surveys are conducted in the frequency domain. In this method, a sine wave of variable frequency is sent through one of the coils to create a

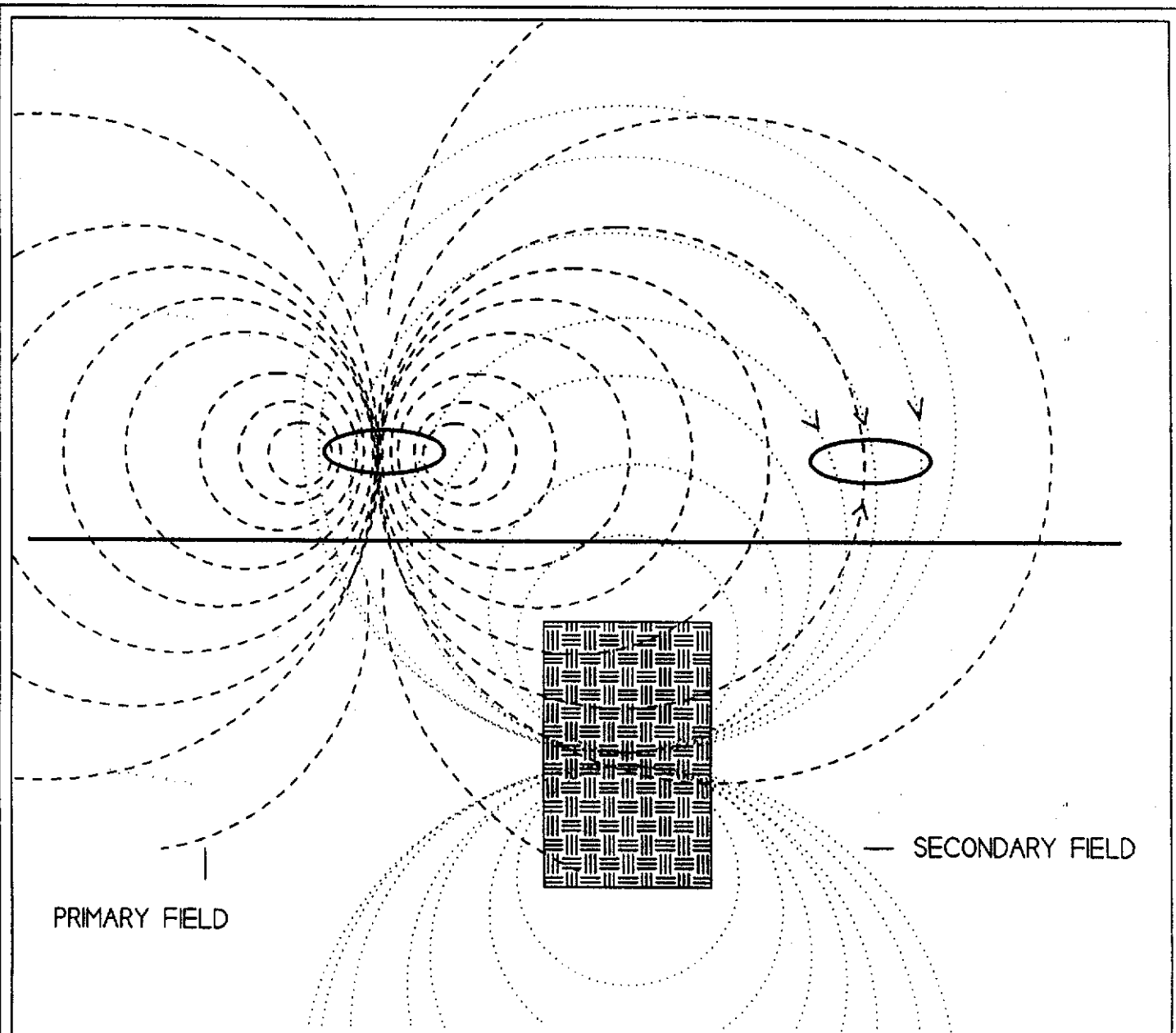
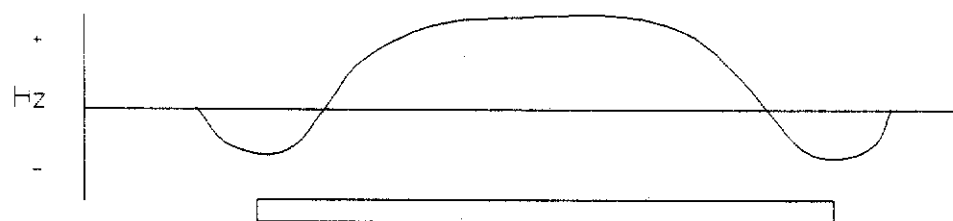
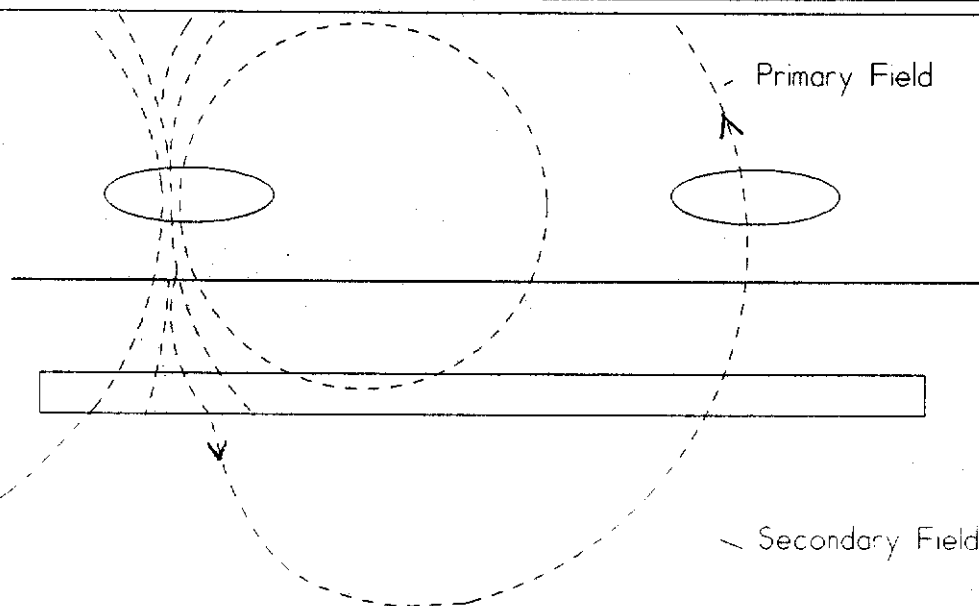


Figure MM1. HLEM source field. The field from the transmitter loop produces an oscillating vertical magnetic dipole. This induces a secondary field in a conductive body in the earth. At the receiver coil, both the primary field and secondary field are received.

(a)



(b)

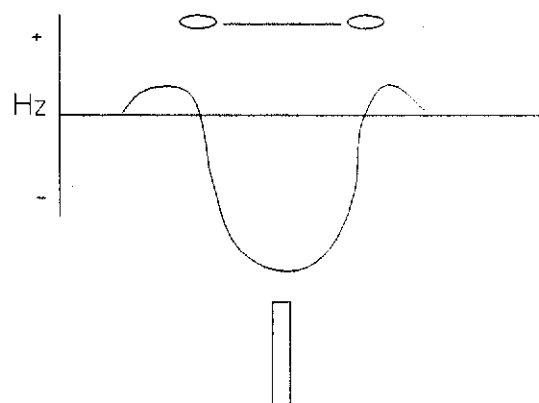
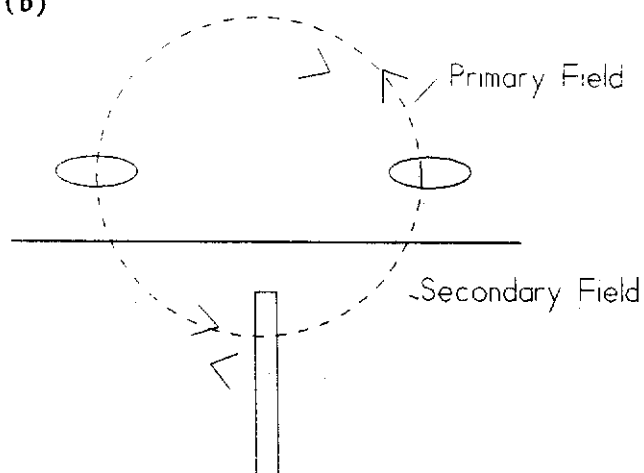
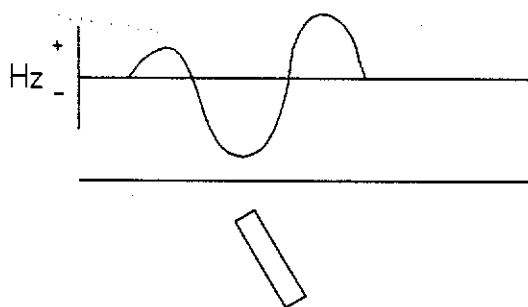
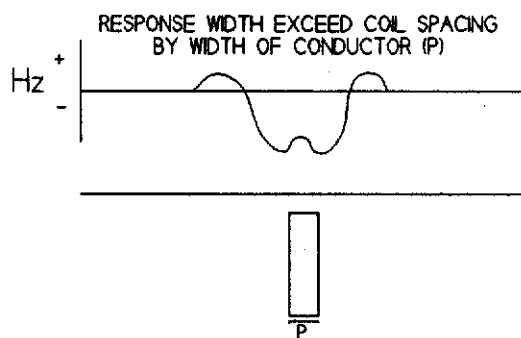


Figure MM2. HLEM responses. (a) Response over a flat-lying conductor consists of a positive response. (b) Response over a dipping conductor consists of a negative response.

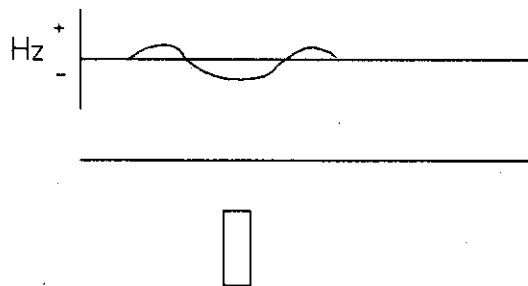
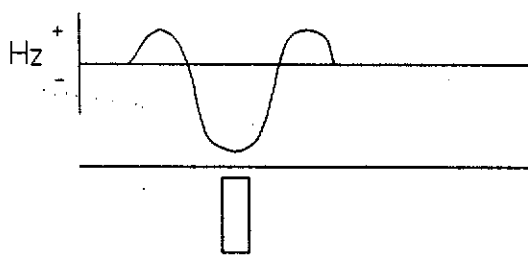
(a)



(b)



(c)



(d)

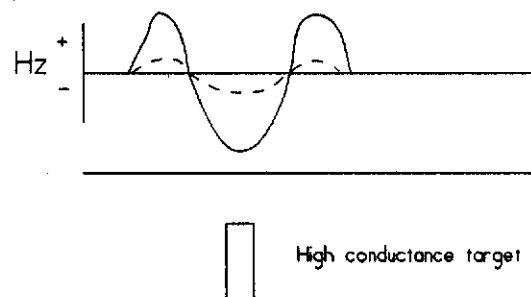
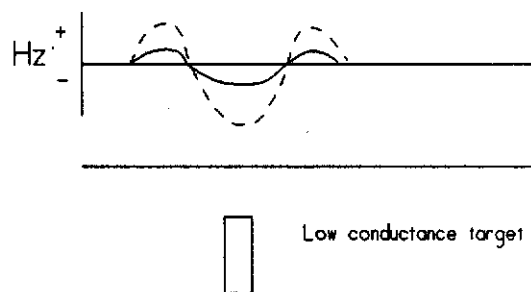


Figure MM3. HLEM response of dipping tabular conductors. (a) Effect of dip on HLEM response. (b) Effect of depth. (c) Effect of conductor width. (d) Effect of conductance.

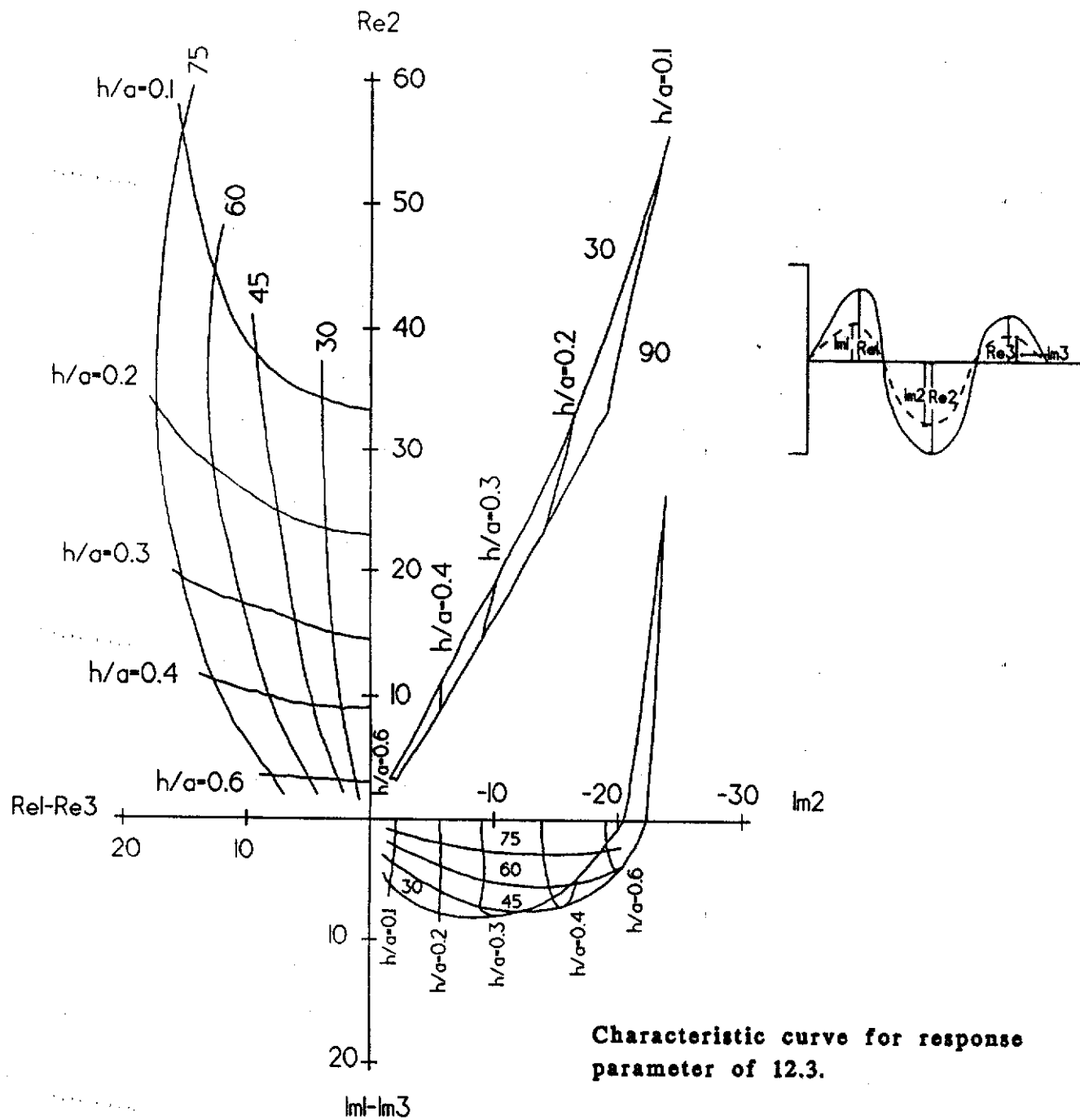


Figure MM4. Characteristic curve for a dipping tabular conductor from Ketola and Puranen (1967). Critical measurements of the response shown in the upper right are extracted and plotted to determine the geometry and conductance of the target.

time-varying vertical magnetic dipole source. The second coil is a receiver which detects both the primary signal from the transmitting coil and a secondary signal created by magnetic induction in a conductive target in the earth. There are two variants of the method in the frequency domain: The Slingram or conventional HLEM method and the Genie method.

The Slingram method (normally referred to as HLEM) requires that a sample of the transmitted signal be sent along a wire to the receiver where it is used to synchronize the phase of the receiver with the transmitter. This permits the receiver to remove the effect of the transmitter signal (primary field) and to split the remaining secondary field into two components. One component represents the portion of the secondary field which is synchronized or in-phase with the primary field (in-phase component). The second component is the portion of the secondary field which lags the primary field by one quarter cycle (90°) (quadrature component). The ratio of the in-phase to quadrature components is used to determine the electrical conductance of a target.

HLEM instruments remove the primary field from the signal to leave only the secondary field. By convention, a secondary field in the same direction as the primary field is recorded as positive while a secondary field in the opposite direction to the primary field is recorded as negative. HLEM data is commonly plotted as profiles with the reading plotted at the midpoint between the transmitter and receiver. The reason for this is that the response from a steeply dipping conductor, the most common target of this method, is strongest when the two coils straddle the conductor. Normally, the in-phase response is plotted as a solid line and the quadrature response as a dashed line.

The HLEM response of a flat lying body is shown in Figure MM2(a). Magnetic field lines (flux) are directed primarily into the region beneath the transmitter loop. Lenz's Law dictates that the induced secondary field will oppose the primary field. Consequently, at the receiver, both the primary and secondary field will be in the same direction. As a result, the response from a flat lying conductor consists of a positive response over the target. At the edge of the conductor, there is a negative response which occurs when both coils are straddling the edge of the conductor. When either the transmitter or receiver coil is over the edge of the conductor, there is no secondary field and the response is zero. As the depth to the flat lying conductor increases, the strength of the response is attenuated. The effective depth of investigation of the HLEM method for flat lying conductors is approximately 1.5 times the coil spacing.

The HLEM response of a steeply dipping conductor is shown in Figure MM2(b). Field lines from the transmitter are horizontal at a point midway between the two coils and in this orientation, cut the conductor at right angles creating the best coupling. Lenz's Law dictates that the secondary field will oppose the primary field and at the receiver coil,

the secondary field is in the opposite direction to the primary field. As a result, the response when profiling over a steeply dipping conductor consists of a trough with peak negative value occurring when the coils straddle the conductor. The flanking positive peaks result from induction effects as the pair of coils are close to but not straddling the conductor. When either of the coils is directly over the target, the response is zero because the primary field is not well coupled with the target (ie it is perpendicular to the edge of the conductor) and little secondary field is created.

A dipping tabular conductor can be specified by the dip and dip direction, depth to top, target width and electrical conductance (conductivity thickness product or σt). The effect of varying these parameters is shown in Figure MM3 for the case of a response from a single isolated HLEM conductor. Asymmetry in the positive shoulders indicates the dip direction and the ratio of the positive shoulder responses can be used to estimate the dip (Figure MM3(a)). The strength of the response is largely determined by the depth to the top of the conductor. Increasing the depth to the top of the conductor decreases the amplitude of the response but does not otherwise change the shape of the response (Figure MM3(b)). The effective depth of investigation of the HLEM method for steeply dipping targets is approximately one half the coil spacing. If the conductor is wide, the location of the zero crossovers, normally equal to the coil spacing, will increase. If the width reaches approximately one half the coil spacing, the trough of the response for shallow targets will start to deflect slightly to the positive. If the width of the target approaches that of the coil spacing, the positive return in the trough will be apparent at any depth to target (Figure MM3(c)). As noted above, the electrical conductance controls the ratio of the in-phase to quadrature response. Weak targets show only a quadrature response. As the target conductance increases the strength of the in-phase component will increase. Very high conductance targets are characterized by strong in-phase responses and weak to very weak quadrature responses (Figure MM3(d)).

Interpretation procedures for HLEM data are dependent upon the model to which the data is to be fitted. In most cases, the characteristic shape of the response will dictate the likely overall geometry of the source and thus the model to which the response should be fitted. Flat lying targets can be directly modelled with computerized calculations of target responses. Dipping tabular body responses on the other hand cannot be numerically modelled and must either be approximated through finite-element models or interpreted using characteristic curves. Characteristic curves for tabular dipping conductors incorporate several key features of the responses described in Figure 3 into simple charts. These responses are derived from model experiments. The ratio of positive shoulders responses and the ratio of in-phase to quadrature peak negative values are the commonly used features of the response. An example of these charts is shown in Figure MM4.

The data contained in this report was interpreted using characteristic curves developed by Ketola and Puranen (1967). The procedure, normally done by hand, has been automated in proprietary software (MMPLOT) developed by Amerok Geosciences Ltd. The characteristics of each response are entered into a computer program which creates a batch plotting file. The data is plotted directly on a CADD diagram with each of the characteristic curves on a different layer. The operator is able to quickly match the data to the curve which best fits the data by selecting different characteristic curves (ie. by changing layers). Where the data falls between two curves, the conductance and depth to top parameters can be interpolated but the dip cannot be reliably interpolated.

7.0 GEOLOGY

This section describes the geology of the grid areas available to the author at the time of writing. The principle source is a geological compilation map prepared by Equity (1999) and the regional description is from Hunt (1999).

The property area is underlain by Devono-Mississippian mafic and felsic volcanic rocks, argillite and limestone. The lowermost sequences consist of Devonian and older limestone, dolomite and clastic sedimentary rocks. These grade up into pelagic sandstone and argillite through a succession of mafic and felsic volcanic flows with interbedded pyroclastics and epiclastic rocks. A mudstone unit (MDST) may be locally quite conductive based on the helicopter-borne electromagnetic (HEM) responses recorded on the property. This behaviour, also common in similar rocks in the Finlayson area, stems from the high concentration of carbonaceous (graphitic) material within these rocks.

Rocks on the Willow Grid strike predominantly NW-SE and apparently dip SW. On the Pyrite Grid, 5 km to the NW, the apparent strike veers to the north. The rocks on both grids are in the footwall of a major NW-SE striking thrust fault, 2 km to the SW. Faults of indeterminate minor displacement, trending both parallel and perpendicular to the major thrust, are found on the Willow Grid.

Exposed mineralization consists of massive pyrite in pods and stringer-type pyrite on Willow Creek centred at L19900E 5850N. This showing is mapped within the metasedimentary mudstone unit. Further south and upslope, coincident Pb-Zn soil anomalies from contour surveys are associated with felsic volcanic and pyroclastic rocks.

The nearby Wolf Deposit serves as the best model for mineralization in these rocks.

Kuroko-style Zn-Pb-Cu mineralization occurs with felsic volcanic rocks in the Devonian-Mississippian sequence (Gibson, Holbek and Wilson, 1999). Sulphide mineralization occurs at three levels, the upper and middle of which are most significant. The middle sulphide layer is entirely contained within by quartz pyritic trachyte flows. In contrast, the upper layer is underlain by massive porphyritic trachyte flows and thin pyritic lapilli tuffs and overlain by laminated barite and sulphides, capped by ash-lapilli tuff. Mineralization consists of stratiform pyrite, carbonate, sphalerite, galena and barite with rare specular hematite and chalcopyrite. The Wolf Deposit has a very poor electromagnetic signature due to the high zinc content of the ore. It was detected as a very weak UTEM anomaly and similar mineralization would be expected to produce a HLEM response characterized by low conductance (high quadrature / low in-phase).

8.0 RESULTS

The results from the Willow and Pyrite Grids are discussed in turn. Conductances on the Willow Grid were calculated from the 880 Hz data as this provided acceptable signal-to-noise ratios at a low operating frequency. On the Pyrite Grid, conductances were calculated from the 3520 Hz data on account of the lower response amplitude. Detailed anomaly descriptions are contained in Appendix C.

Willow Grid

HLEM responses on the Willow Grid consist of complex, locally wide anomalies over the complete spectrum of the instrument. A portion of the grid in the rectangular area bounded by L19400E 4400N to L19600E 5200N contains suspect data. The line cutters were unable to picket grids in this interval and the crew rough chained these sections of the lines during the survey, resulting in in-phase errors. This accounts for the gap in anomalies **A-5** and **A-6**. The total magnetic response is weak with maximum amplitude range of only 40 nT. There is a weak magnetic break parallel with one of the HLEM conductors; the remainder show little if any correlation with magnetic field trends. The ambient noise level of the magnetic field data appears to be around ± 4 nT.

Anomaly **A-1** is a complex, variable response from L19200E 6100N to L20300E 6013N. The response consists of a variable strength in-phase trough with weak opposing to absent quadrature response. The source conductor appears to be weak to moderate (7.2 to 19 S), shallow (15-20 m) and locally up to 50 m wide. The source conductor passes north of the pyrite showing and appears to lie in the mudstone unit (MDST). The anomaly follows a weak (10 nT) break in magnetic field response with higher magnetic responses recorded north of the conductor. Anomaly **A-1** truncates **A-2** and this, together with the magnetic response suggests that it may be a fault.

Anomaly **A-2** is a discontinuous in-phase trough extending from L19400E 6000N to L20000E 5800N. At its western end it appears to bifurcate from anomaly **A-1** which may truncate it at this location. The anomaly strengthens and changes character from west to east along strike, most particularly in the area of the Willow Showing. The source conductor varies from 8.6 to 20 S and has apparent depths to top of 12 to 20 m. The response in the area of the Willow Showing is unusual and does not match that expected for a steeply dipping target. An alternative interpretation which explains the response but may not be geologically plausible is that the source conductor in the area of the Willow Showing dips to the north at a shallow angle ($<20^\circ$) and is truncated by anomaly **A-1**. If this latter interpretation is correct, the conductor apex would be shifted 50 m N on L20000E and 75 m N on L19900E to 5850N and 5875N respectively. These locations are also closer to the location of surface mineralization.

Anomalies **A-3** and **A-4** are complex in-phase lows extending from L19400E 6000N to L20000E 5800N. The source conductors are shallow (12-20 m), weak to moderately conductive, show little excess width and appear to dip steeply south. The conductors occur in the mudstone unit (MDST).

Anomalies **A-5** and **A-6** are probably part of the same conductor but are apparently truncated by the poor response in an area which was not chained in by the line cutters. **A-5** extends from L19250E 4813N to L18900E 4975N. The source conductor has depths to top ranging from 8 to 22 m and shows excess width only on the last line where conductor strike may also widen the response. The conductor appears to dip moderately to steeply north and has conductances ranging from 7.6 to 14 S. On its west end, the anomaly is complex, suggesting that two or more conductors are present. The quadrature trough north of the in-phase trough on L19250E and L19100E in particular suggest that a less conductive planar feature lies immediately north of a more conductive planar feature and this may also contribute to the apparent width in the response on L19250E.

Anomaly **A-6** extends from L20300E 5238N to L19700E 5100N and is characterized by a variable width, high amplitude in-phase trough with weak to absent quadrature response. Response width narrows from 100 m in the east to nil on the west end of the anomaly. Conductance also decreases from west to east and this may be partially influenced by the narrowing of the conductor. Both this anomaly and **A-5** show little correlation with the weak magnetic field trends in the area.

Pyrite Grid

The Pyrite Grid covered a restricted area and consequently the HLEM responses were truncated to some extent. The responses on L1300E show phase rotation, particularly

on the southern anomaly, indicating the presence of conductive host rocks. The HLEM responses show little correlation with magnetic field trends and none of the conductors has a distinctive magnetic response.

Anomaly **A-7** is a two line anomaly extending from L1100E 9050N to L1200E 9125N. The response is truncated and conductor dip cannot be estimated with great confidence although the quadrature response suggest that the source may dip to grid south. The source conductor appears to be shallow (10 m) and has an indeterminate conductance.

Anomaly **A-8** extends from L1300E 9025N to L1500E 9000N, forming a convex trend bulging to the N. The source conductor appears to be shallow (10 - 18 m) and weakly conductive (2.0 S).

Anomaly **A-9** is roughly parallel to **A-8**, extending from L1200E 8838N to L1500E 8850N. The response on L1300E is unusual in that the in-phase response is completely absent at 880 Hz and rises quickly at higher frequencies. This suggests the presence of a shallow, weakly conductive source.

9.0 DISCUSSION

Zinc-rich VMS mineralization would be expected to produce responses suggesting low conductances (low in-phase relative to quadrature). Since this also resembles the response from many geological features including faults and pyrite-bearing shales, target discrimination is difficult.

On the Willow Grid, Anomaly **A-1** appears to be a fault. It separates weak magnetic domains and truncates a conductor associated with strataform mineralization. Consequently it appears to be of little interest as a VMS target.

Anomaly **A-2** appears to dip to the north at a very shallow angle. This may account for the amount of mineralization observed in the Willow Showing, which extends down slope to the north some distance. A steeply dipping horizon with this amount of sulphide mineralization would be expected to produce a very large negative in-phase response and instead we find a comparatively low amplitude positive response. In addition, the response decays rapidly away from the creek where it is exposed, suggesting that the depth to the conductor increases significantly on the adjacent lines. This would be unlikely if the target were a steeply dipping bedrock conductor as the depth to bedrock would, if anything, shallow somewhat on the ridges flanking the creek in this situation. If the target dips to the north at a shallow angle, the HLEM survey would not provide much definitive information on the significance of this feature. This is because HLEM source fields are more optimally coupled with steeply dipping

conductors at mid-spread. If the **A-2** source conductor dips to the north, the sharp taper to the north suggests that it is truncated by the **A-1** source conductor.

Anomalies **A-3** and **A-4** occur in the mudstone and have relatively weak target conductances. This together with the complex geometry of the anomaly traces suggests that they may be structural rather than stratigraphic conductors.

Anomalies **A-5** and **A-6** appear to be the most interesting targets on the Willow Grid. The strike of the conductors is roughly parallel with stratigraphy and the conductors lie within a complex package of metamorphosed felsic volcanics and lesser amounts of metasedimentary rocks. The wide conductive portions of **A-6** are probably carbonaceous (graphitic) argillites based on their response and a very weak correlation with a subtle magnetic low. The wide, conductive portions of **A-6** also have apparent dips to the south, in accordance with the mapped geology. To the west, the apparent dip direction reverses and rocks appear to dip to the north, based on response asymmetry. The variation in apparent dip indicated by the change in response asymmetry may be significant. While this may be caused by a true (though unlikely) dip reversal, there is an alternative explanation for this response. A south-dipping conductor with weak, slightly conductive mineralization in the footwall rocks to the north can also produce an asymmetric response. The presence of conductive mineralization on the north side of the stronger main conductor would elicit a positive in-phase and quadrature response sufficient to distort the response. This elevated response would be on the north flank of the main trough coincident with the stronger conductor and could be easily misinterpreted as an indication that the main conductor dips to the north.

Where the response is narrow and especially where the source appears to be two conductors at L19100E 4800N and L19250E 4875N, there may be targets of interest. Fixing the dip of the strata to the south, the source conductor of **A-5** and **A-6** appears to be a package of graphitic argillite thinning to the west. In the area of L19100E and L19200E, a weaker conductor appears immediately to the north of the main "argillite" conductor. This weaker conductor in turn appears to be underlain by slightly conductive footwall rocks. Zinc-rich sulphide mineralization preserved beneath graphitic argillite and underlain by stringer mineralization would be expected to produce a similar response. The alternative explanation which attributes the response asymmetry to the true dip of the rocks, suggests a thin conductive argillite bed immediately overlain by a thin layer of less conductive rock, both dipping to the north. It should be noted that the low conductances (~10 S) detected on the western portion of the conductor are those commonly observed over zinc-rich sulphide deposits.

On the Pyrite Grid, the best EM responses are recorded at L1300E 8900N and L1400E

8900N. Conductor **A-7** may be a faulted extension of either of **A-8** or **A-9**.

10.0 CONCLUSIONS

The results of the HLEM and total magnetic field survey suggest the following conclusions:

- a. Conductor **A-1** appears to be a fault. It follows a magnetic field break and truncates anomaly **A-2**.
- b. Conductor **A-2** is associated with the Willow showing and has a response which appears to be caused by a flat to shallow north-dipping conductor. It appears that the HLEM survey did not accurately define the lateral limits of the Willow showing.
- c. Conductor **A-5** and **A-6** appears to be caused by a single stratigraphic conductor which could be a package of rocks hosting VMS mineralization. The western portion of the conductor where it thins and becomes locally complex, is the most prospective area for VMS mineralization.
- d. On the Pyrite Grid, conductors **A-8** and **A-9** appear to be caused by stratigraphic horizons. The strongest response and the most prospective area for VMS mineralization is on anomaly **A-9**.

11.0 RECOMMENDATIONS

The following recommendations are made based on the conclusions of this work:

- a. If geological investigations support the inference that the Willow showing is flat-lying, a large-loop time domain method (EM-37 or UTEM) should be used to investigate the lateral extent of the showing.
- b. If geological or geochemical evidence indicates that the area of anomaly **A-5** is favourable for VMS mineralization, it should be tested at L19100E 4800N and L19250E 4875N.
- c. On the Pyrite Grid, anomaly **A-9** should be tested if this anomaly is considered favourable in light of geological and geochemical evidence.

Respectfully submitted,
AMEROK GEOSCIENCES LTD.

Mike Power M.Sc. P.Geoph.
Geophysicist

REFERENCES CITED

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- Hunt, C. (1999) Preliminary stratigraphy and distribution of Devono-Mississippian massive sulphide bearing volcanic rocks in the Mount Vermilion (Wolf) area, Pelly Mountains (105 G/5 and G/6), southeast Yukon. In: C.F. Roots and D.S. Emond (eds.), Exploration and Geological Services Division, Indian and Northern Affairs Canada, p. 73-89.
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- Varre, T. (1990) Apex Parametrics Maxmin I-9 manual. Uxbridge: Apex Parametrics.

APPENDIX A. CERTIFICATE

I, Michael Allan Power, M.Sc. P.Geo., P.Geoph., with business and residence addresses in Whitehorse, Yukon Territory do hereby certify that:

1. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (registration number 21131) and a professional geophysicist registered by the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (licensee L942).
2. I am a graduate of the University of Alberta with a B.Sc. (Honours) degree in Geology obtained in 1986 and a M.Sc. in Geophysics obtained in 1988.
3. I have been actively involved in mineral exploration the Northern Cordillera since 1988.
4. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in Petra Resources Ltd. or any of its properties.

Dated this 4th day of October 1999 in Whitehorse, Yukon.

Respectfully Submitted,

Michael A. Power M.Sc. P. Geoph.

APPENDIX B. SURVEY LOG



AMEROK GEOSCIENCES LTD.

SURVEY LOG JOB 99-20 STARR MAXMIN / MAG SURVEY JULY 23 - AUGUST 03, 1999

Crew: Gary Smith - Crew chief (GS)
Chris Gooliaff - Technician (CG)

Fri 23 Jul 99	Mobe day from Whitehorse to airstrip. Arrive at Starr Property camp approximately 18h00. Set-up office and prep gear.
Sat 24 Jul 99	Maxmin Survey of Lines 20100E and 20000E completed. Weather: Partly cloudy and cool with hail and some snow. GS on Rx , CG on TX. Total Production: 3.6 line-km
Sun 25 Jul 99	Maxmin Survey of Lines 19900E and 19800E completed. Weather: Cloudy and cool with light rain. Surveyed using 3 frequencies determined from previous day's data. From this day on using only the following frequencies, 880Hz, 3520Hz and 7040Hz. GS on Rx, CG on TX. Total Production: 3.2 line-km
Mon 26 Jul 99	Maxmin Survey of Lines 19700E and 19600E completed. Weather: Cloudy and rainy all day. GS on RX and CG on Tx. Total Production: 3.2 line-km
Tue 27 Jul 99	Maxmin survey done on L19400E from 5875N-6200N, L19500E from 4675N-6200N and L19250E from 4475N-6200N. Weather:

Cloudy with rain. GS on Rx, CG on Tx.

Total Production: 3.6 line-km

Wed 28 Jul 99 Maxmin survey done on L19400E from 5775N-4775N and L19100E from 4375N-6200N. On L19400E GS experienced bad fall with Rx around 5000N or 5100N, also no pickets found in this area, resulting data from this portion of the line is suspect. Weather: Overcast with rainy periods. GS on Rx and CG on Tx.

Total Production: 2.8 line-km

Thu 29 Jul 99 Maxmin survey of L19000E from 4400N-6200N, L18900E from 4375N-6200N, L19250E line extension from 6200N-6400N, L19400N line extension from 6200N-6400N as well as omitted 100m segment of L19400E from 5775N to 5785N. Weather: Partly cloudy and warm. GS on Rx and CG on Tx.

Total Production: 4.1 line-km

Fri 30 Jul 99 Maxmin survey of L20200E from 4775N-6200N and L20300E from 6200N-4800N. Had grizzly bear encounter on way back to camp which delayed surveying for approx. 1 hr. Finished survey alive and well. Weather: Sunny and hot. GS on Rx, CG on Tx.

Total Production: 2.8 line-km

Sat 31 Jul 99 Maxmin and mag survey of smaller Pyrite Creek Grid completed. 500m surveyed on L1100E, L1200E, L1300E and L1400E. 400m on L1500E. Weather: Sunny and hot. GS on Rx, CG on Tx. CG on Mag. Base station placed at NE corner of helicopter pad (between L1300N and L1400N at 9050N) and cycled for 10 secs.

Total Production: 2.4 line-km of Maxmin
2.4 line-km of mag

Sun 01 Aug 99 Mag survey of Willow Grid. Following lines were completed...
L18900E, 4375N-6200N
L19000E, 4350N-6200N

L19100E, 4425N-6200N
 L19250E, 4425N-6400N
 L19400E, 4700N-6400N
 L19500E, 4600N-6200N
 L19600E, 4600N-6200N
 L19700E, 4600N-6225N
 L19800E, 4600N-5600N
 L19900E, 4350N-5600N
 L20000E, 4350N-5300N
 L20100E, 4300N-5300N
 L20200E, 4750N-5300N
 L20300E, 4800N-6250N

Weather: sunny and hot. Both GS and CG ran mags. Base station placed on hill approx. 75m grid west of camp and cycled for 10 secs.

Total Production: 20.15 line-km of mag.

Mon 02 Aug 99

Mag survey finished on Willow Grid.

L19800E, 5600N-6200N
 L19900E, 5600N-6200N
 L20000E, 5300N-6200N
 L20100E, 5300N-6150N
 L20200E, 5300N-6400N

Weather: Sunny and hot. CG ran mag, GS stayed at camp and finished all field plots.

Total Production: 4.05 line-km of mag.

Tue 03 Aug 99

De-mobe from camp to Whitehorse.

Production Totals: 25.7 line-km MaxMin
 26.6 line-km mag

Summary: 2.0 days mobe/demobe
 10.0 days survey

Personnel: Gary Smith
 Suite 201 - 5600 52nd Ave
 Yellowknife, NT X1A 2R7

Chris Gooliaff
 Box 5808
 Whitehorse, YT Y1A 5L6

APPENDIX C. ANOMALY DESCRIPTIONS

Anomaly A-1

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L19250E 6100N	22	60° N (?)	10	18.7
L19400E 6075N	15	?	0	7.2
L19500E 6075N	13	?	0	7.9
L19600E 6075N	15	?	10	7.6
L19700E 6100N	<10	?	20	7.6
L20200E 6050N	30	?	0	7.6
L20300E 6013N	14	?N	50	8.6

Anomaly A-2

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L19400E 6000N	0	0	0	0
L19500E 5975N	0	0	0	0
L19600E 5925N	20	60-75°	20	20.0

L19700E 5875N	0	0	0	0
L19800E 5775N	0	0	0	0
L19900E 5763N	<10	<30°N	80	8.6
L20000E 5800N	<10	?N	10	14.0

Anomaly A-3

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L18900E 5825N	20	75° N?	0	8.6
L19000E 5725N	0	0	0	0
L19100E 5700N	0	0	0	0
L19250E 5688N	0	0	0	0
L19400E 5600N	20	?N	0	4.3
L19500E 5550N	0	0	0	0

Anomaly A-4

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L18900E 5500N	0	0	0	0
L19000E 5775N	12	55°N	20	7.6
L19100E 5675N	0	0	0	0

Anomaly A-5

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L19250E 4813N	8	60° N	10	7.6
L19100E 4800N	22	60° N	0	14.0
L19000E 4875N	20	40° N	0	13.0
L18900E 4975N	18	?N	75	7.6

Anomaly A-6

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L20300E 5238N	10	60° N	60	43

L20200E 5163N	36	? N	0	>43
L20100E 5125N	15	60° S	75	46
L20000E 5113N	8	80° S	100	18
L19900E 5075N	15	75° N	100	14
L19800E 5150N	30	35° S	0	7.6
L19700E L5100N	35	?N	0	7.6

Anomaly A-7

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L1100E 9050N	10	?	n/a	?
L1200E 9125N	10	?	n/a	?

Anomaly A-8

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L1300E 9925N	18	?	?	?
L1400E 9050N	15	?	0	1.8

L1500E 9000N	10	?	0	2.0
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Anomaly A-9

Apex Location	Depth to top (m)	Dip / Dip Direction	Excess width (m)	Conductance (S)
L1200E 8838N	28	?	0	1.4
L1300E 8900N	15	?	0	2.0
L1400E 8900N	15	?	0	2.0
L1500E 8850N	18	?	0	?

? - Unknown or impossible to estimate.

APPENDIX D. INSTRUMENT SPECIFICATIONS

MAXMIN I-10 SPECIFICATIONS:

Frequencies:	110, 220, 440, 880, 1760, 3520, 7040, 14080, ~~28160~~ and ~~56320~~ HZ.	Signal filtering:	Powerline comb filter, continuous spherics noise clipping, autoadjusting time constant and other filtering.
Modes:	MAX 1: Horizontal loop mode [Transmitter and receiver coil planes horizontal and coplanar]. MAX 2: Vertical coplanar loop mode [Transmitter and receiver coil planes vertical and coplanar]. MIN 1: Perpendicular loop mode 1 [Transmitter coil plane horizontal and receiver coil plane vertical]. MIN 2: Perpendicular loop mode 2 [Transmitter coil plane vertical and receiver coil plane horizontal].	Warning lights:	Receiver signal and reference warning lights to indicate potential errors.
Coil separations:	12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300, & 400 metres [stand-ard]. 10, 20, 40, 60, 80, 100, 120, 160, 200, 240 & 320 metres [selected with grid switch inside of receiver]. 50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 & 1600 feet [selected with grid switch inside of receiver].	Survey depth:	From surface down to 1.5 times coil separation used.
Parameters measured:	In-Phase and quadrature components of the secondary magnetic field, in % of primary [transmitted] field.	Transmitter dipole moments:	110 Hz: ~~200~~Atm² 1760 Hz: ~~110~~ Atm² 220 Hz: ~~190~~ Atm² 3520 Hz: ~~80~~Atm² 440 Hz: ~~170~~ Atm² 7040 Hz: ~~40~~ Atm² 880 Hz: ~~140~~Atm² 14080 Hz: ~~20~~ Atm² ~~28 KHz: 10 Atm²~~ ~~56 KHz: 5 Atm²~~
Readouts:	Analog direct readouts on edgewise panel meters for in-phase, quadrature and tilt. (Additional digital readouts when using the DAC, for which interfacing and controls are provided for plug-in).	Reference cable:	Light weight unshielded 4/2 conductor teflon cable for maximum temperature range and for minimum friction. Please specify cable lengths required.
Ranges of readouts:	Analog in-phase and quadrature scales: 0 ± 4%, 0 ± 20%, 0 ± 100%, switch activated. Analog tilt scale: 0 ± 75% grade. [Digital in-phase and quad. 0 ± ~~199.9~~ %].	Intercom:	Voice communication link provided for operators via the reference cable.
Readability:	Analog in-phase and quadrature 0.05% to 0.5%, analog tilt 1% grade. [Digital in-phase and quadrature 0.1%].	Receiver power supply:	Four standard 9V batteries (0.5Ah, alkaline). Life ~~25~~ hrs continuous duty, less in cold weather. Rechargeable battery and charger option available.
Repeatability:	± 0.05% to ± 1% normally, depending on frequency, coil separation & conditions.	Transmitter power supply:	Rechargeable sealed gel type lead acid 6V-26Ah batteries (4x6V-6 1/2Ah) in canvas belt. Optional 6V-16Ah light duty belt pack available.
		Transmitter battery charger:	For 110-120/220-240VAC, 50/60/400 Hz and 12-15VDC supply operation, automatic float charge mode, three charge status indicator lights. Output 7.3V-2.8A nominal.
		Operating temp:	-30 to + 60 degrees Celsius.
		Receiver weight:	8 kg, including the two integral ferrite core antennas [9 kg with data acq. computer].
		Transmitter weight:	16 kg with standard 6V-26Ah battery pack. 14 kg with light duty 6V-16Ah pack.
		Shipping weight:	60 kg plus weight of reference cables at 2.8 kg per 100 metres plus other optional items if any.
		Standard spares:	One spare transmitter battery pack, one spare transmitter battery charger, two spare transmitter retractile connecting cords, one spare set receiver batteries.

Specifications subject to change without notification.

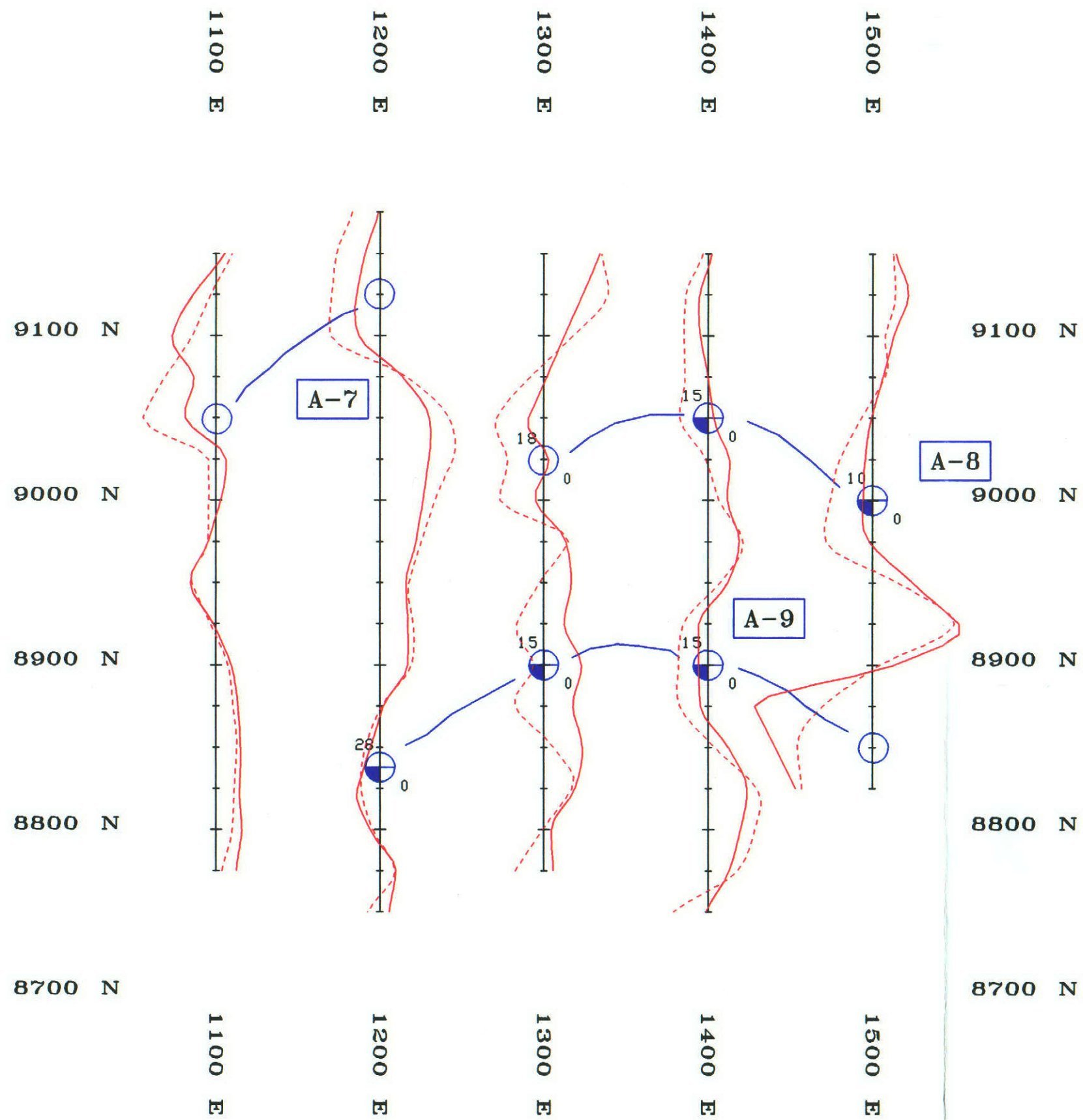
APEX PARAMETRICS LIMITED

P.O. Box 818, Uxbridge
Ontario, Canada **L9P 1N2**

Telephones: 416-640-6102
416-852-5875

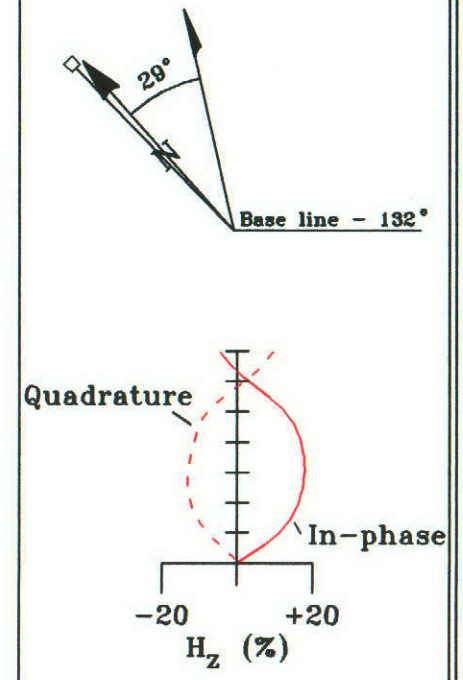
Fax: 416-852-9688

Cables: APEXPARA TORONTO



EM ANOMALY SYMBOLS

	Unknown	Depth (m) 10 20 Excess width (m)
	<1 S	
	1-5 S	
	5-10 S	
	10-40 S	
	>40 S	



Coil Spacing - 100m
 - CONDUCTOR AXIS

500,000E
 6,600,000N UTM Registration Point

0 100
 metres
 Scale: 1:3,000

094 048

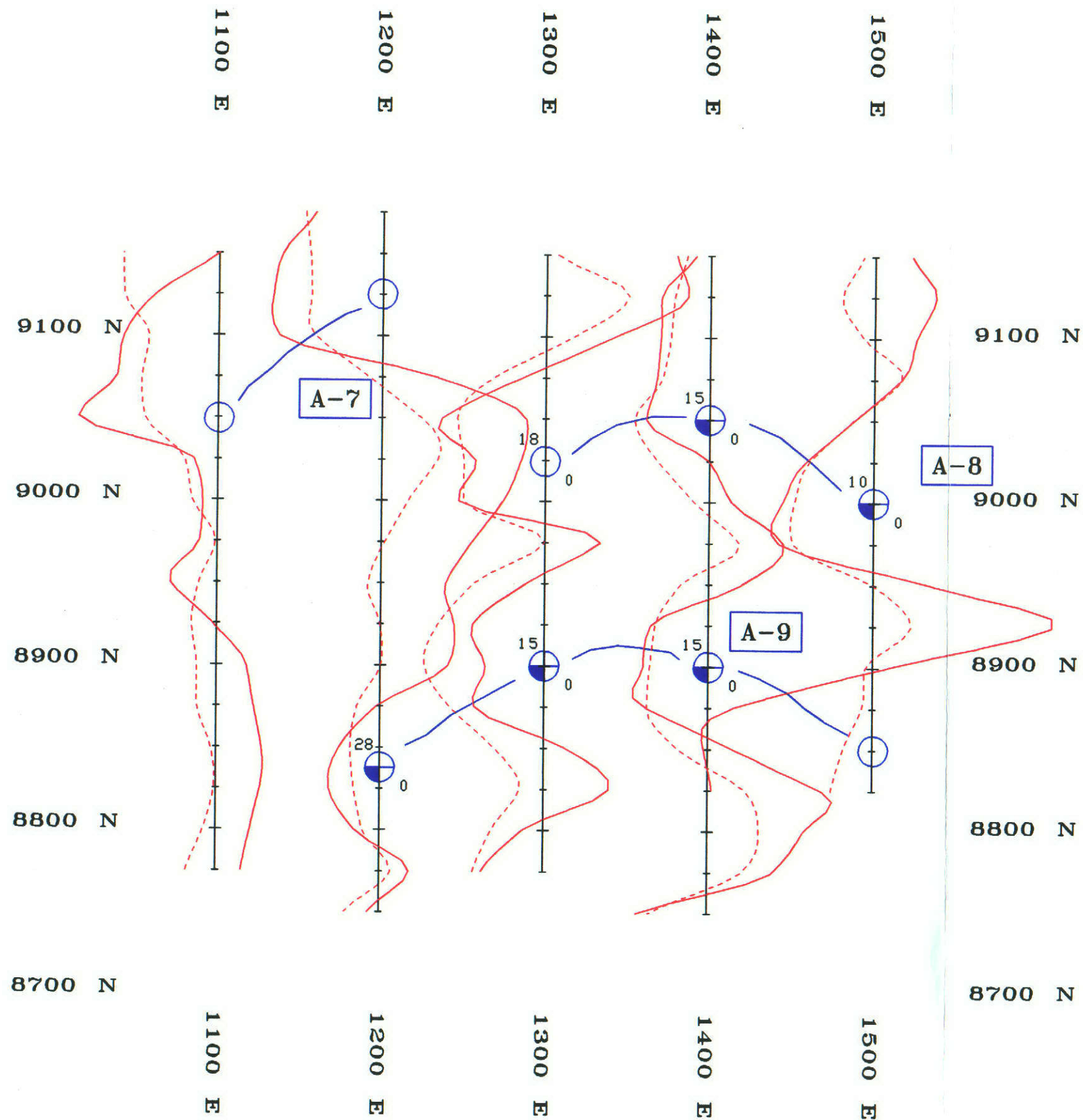
EQUITY ENGINEERING LIMITED

STARR PROPERTY

PYRITE GRID
 MaxMin 1-10 Survey
 880 Hz
FIGURE 5.

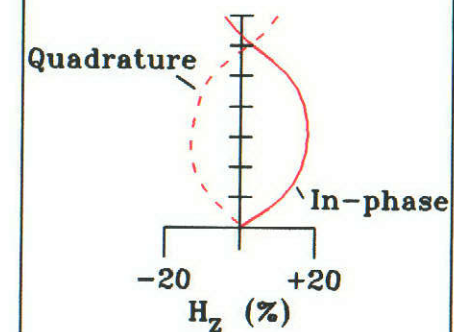
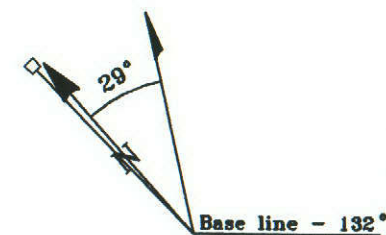
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Mining District: Watson Lake, YT	
Job: 99-20	Date: 11AUG99

AMEROK GEOSCIENCES LTD.



EM ANOMALY SYMBOLS

- Unknown
 - <1 S
 - 1-5 S
 - 5-10 S
 - 10-40 S
 - >40 S
- Depth (m)
- Excess width (m)



Coil Spacing - 100m
- CONDUCTOR AXIS

500,000E
6,600,000N UTM
Registration
Point

0 100
metres
Scale: 1:3,000

EQUITY ENGINEERING
LIMITED

STARR PROPERTY

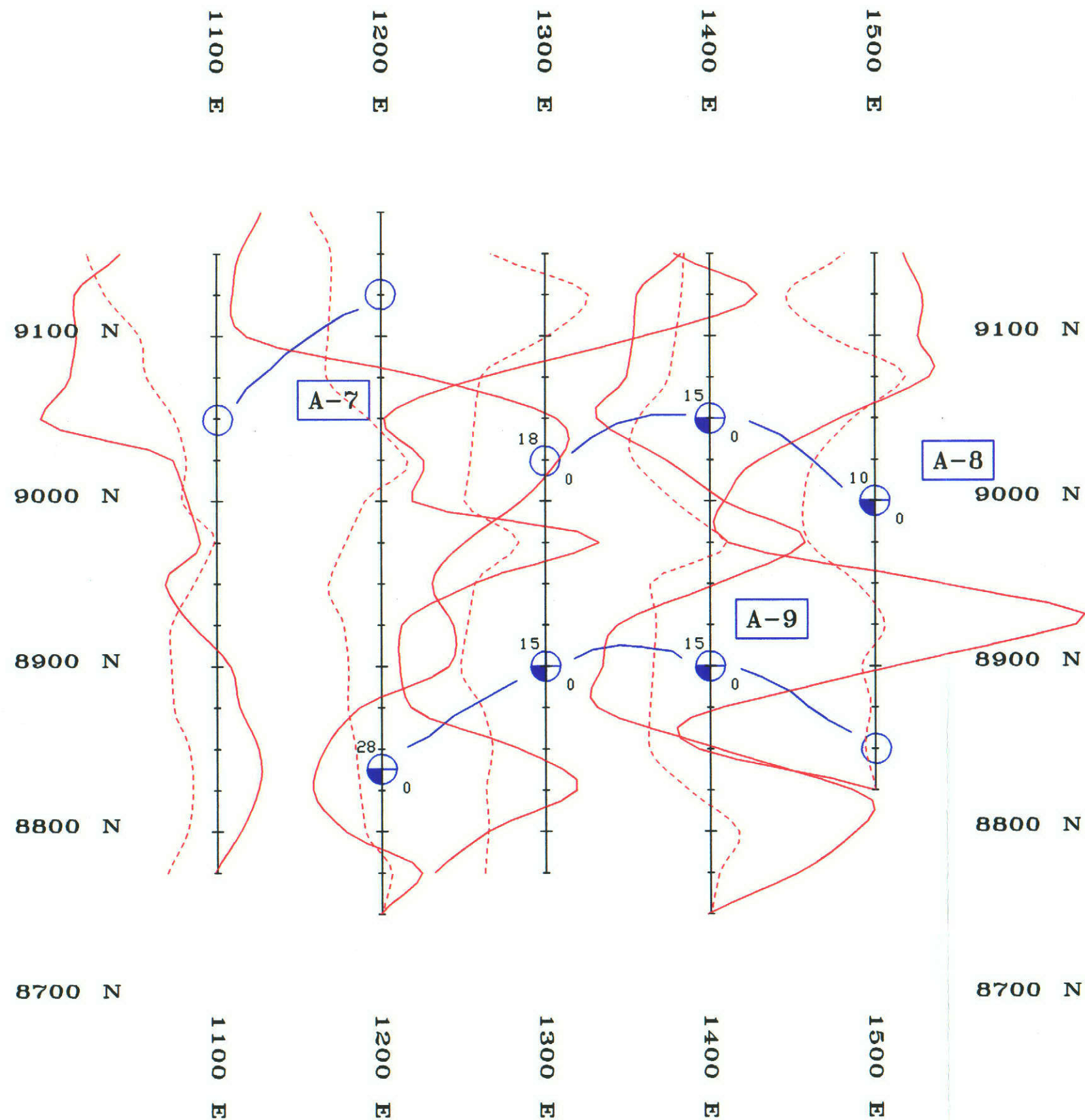
PYRITE GRID
MaxMin 1-10 Survey
3520 Hz
FIGURE 6.

NTS: 105G12 Datum: NAD27
Mining District: Watson Lake, YT
Job: 99-20 Date: 11AUG99

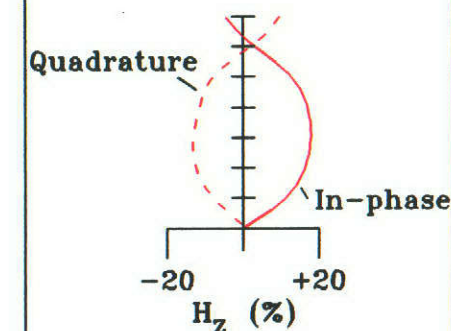
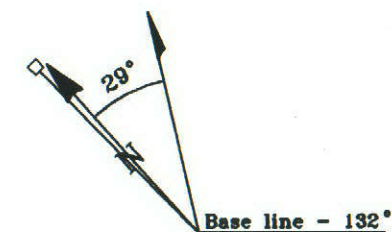
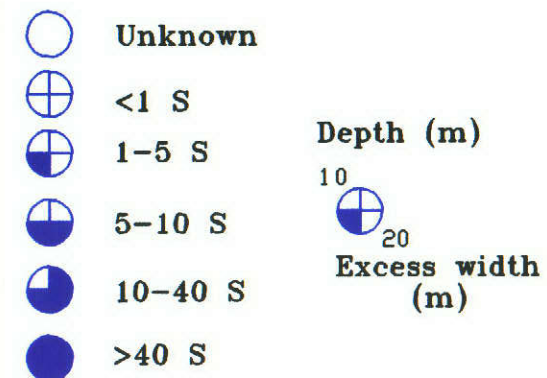
AMEROK
GEOSCIENCES LTD.

094 048





EM ANOMALY SYMBOLS



Coil Spacing - 100m

— CONDUCTOR AXIS

500,000E UTM
6,600,000N Registration
Point

0 100
metres
Scale: 1:3,000

094 048



EQUITY ENGINEERING
LIMITED

STARR PROPERTY

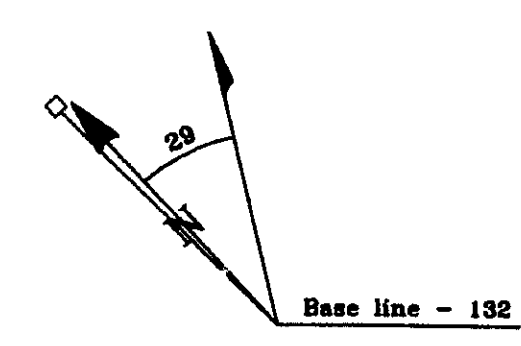
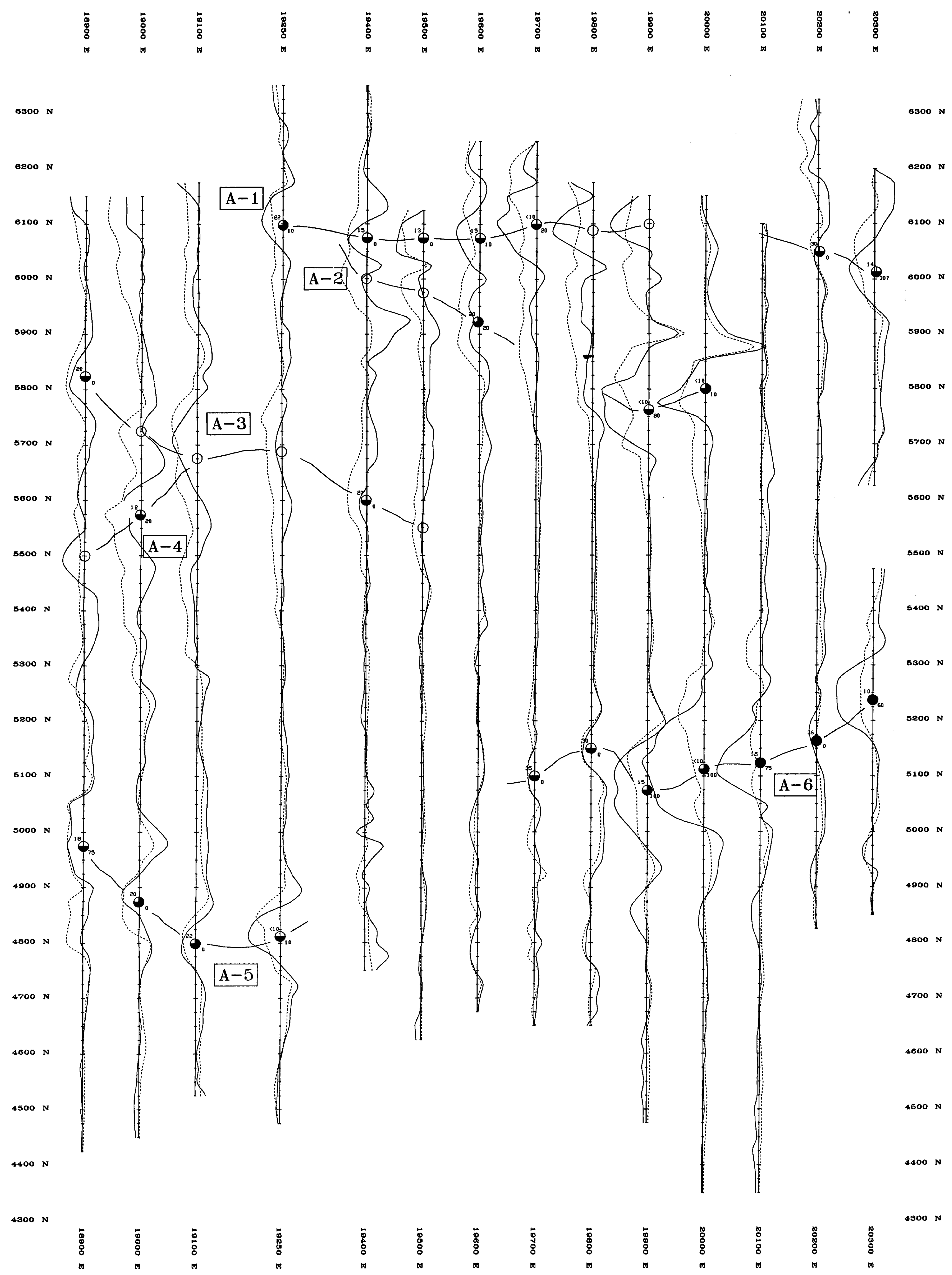
PYRITE GRID
MaxMin I-10 Survey
7040 Hz
FIGURE 7.

NTS: 105G12 Datum: NAD27

Mining District: Watson Lake, YT

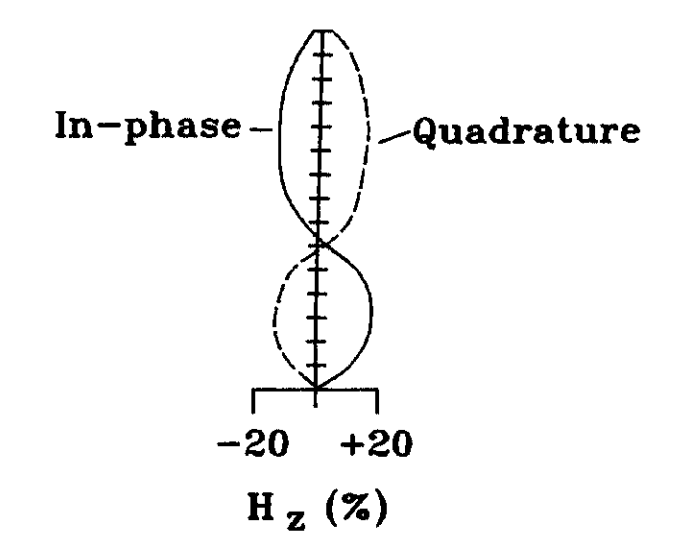
Job: 99-20 Date: 11AUG99

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GEOSCIENCES LTD.

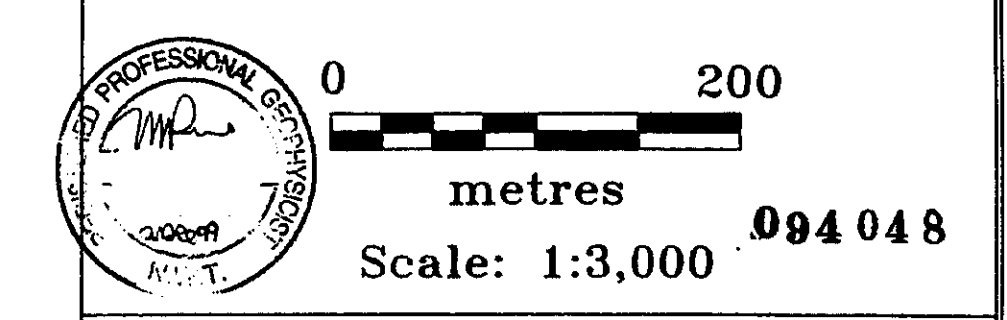


EM ANOMALY SYMBOLS
(CONDUCTANCE - 880 Hz)

- Unknown
- ⊕ <1 S
- ⊕ 1-5 S Depth (m)
- ⊕ 5-10 S 10
- 10-40 S Excess width (m)
- >40 S



Coil Spacing - 100m
 — CONDUCTOR AXIS
 500,000E
 6,660,000N + UTM registration point



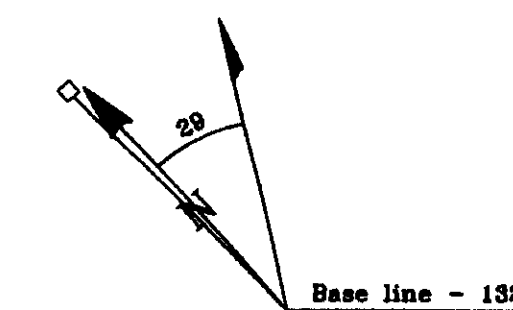
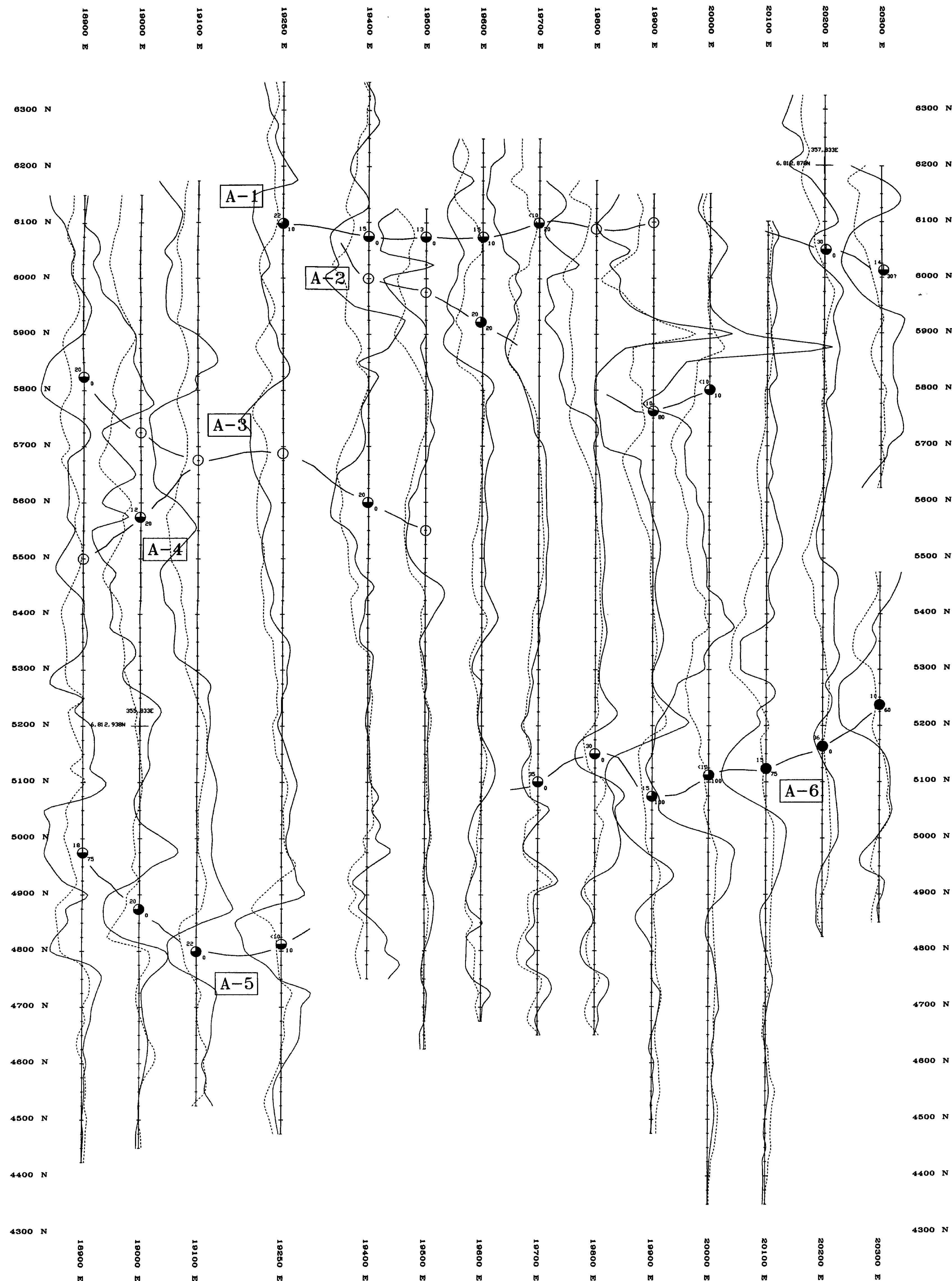
EQUITY ENGINEERING LTD.

STARR PROPERTY

WILLOW GRID
 MaxMin 1-10 Survey
 880 Hz
 FIGURE 1.

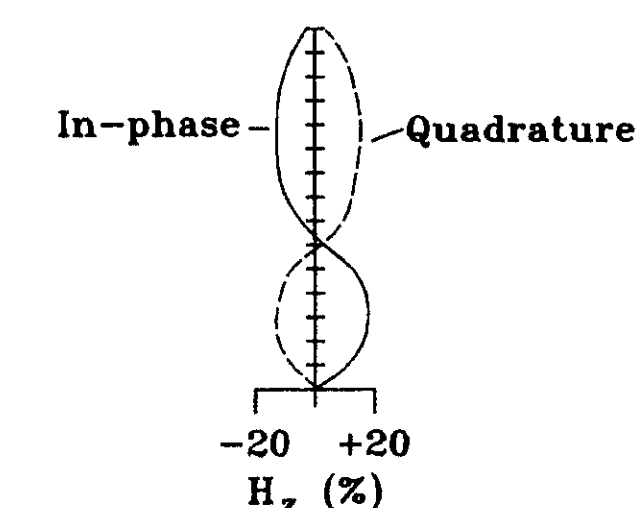
NTS: 105 G/10	Datum: NAD27
Mining District: Watson Lake	
Job: 99-20	Date: 09AUG99

AMEROK GEOSCIENCES LTD.



EM ANOMALY SYMBOLS (CONDUCTANCE - 880 Hz)

- Unknown
 - ⊕ <1 S
 - ⊕ 1-5 S
 - ⊕ 5-10 S
 - 10-40 S
 - >40 S
- Depth (m)
- Excess width (m)



Coil Spacing - 100m

500,000E
6,600,000N + - UTM registration point

0 200
metres

Scale: 1:3,000

EQUITY ENGINEERING LTD.

STARR PROPERTY

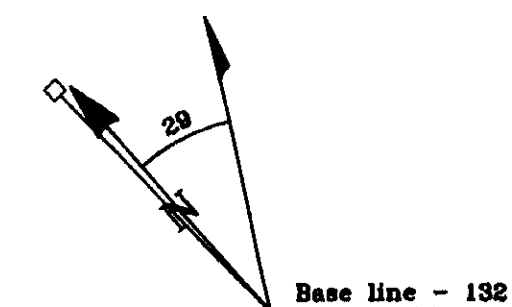
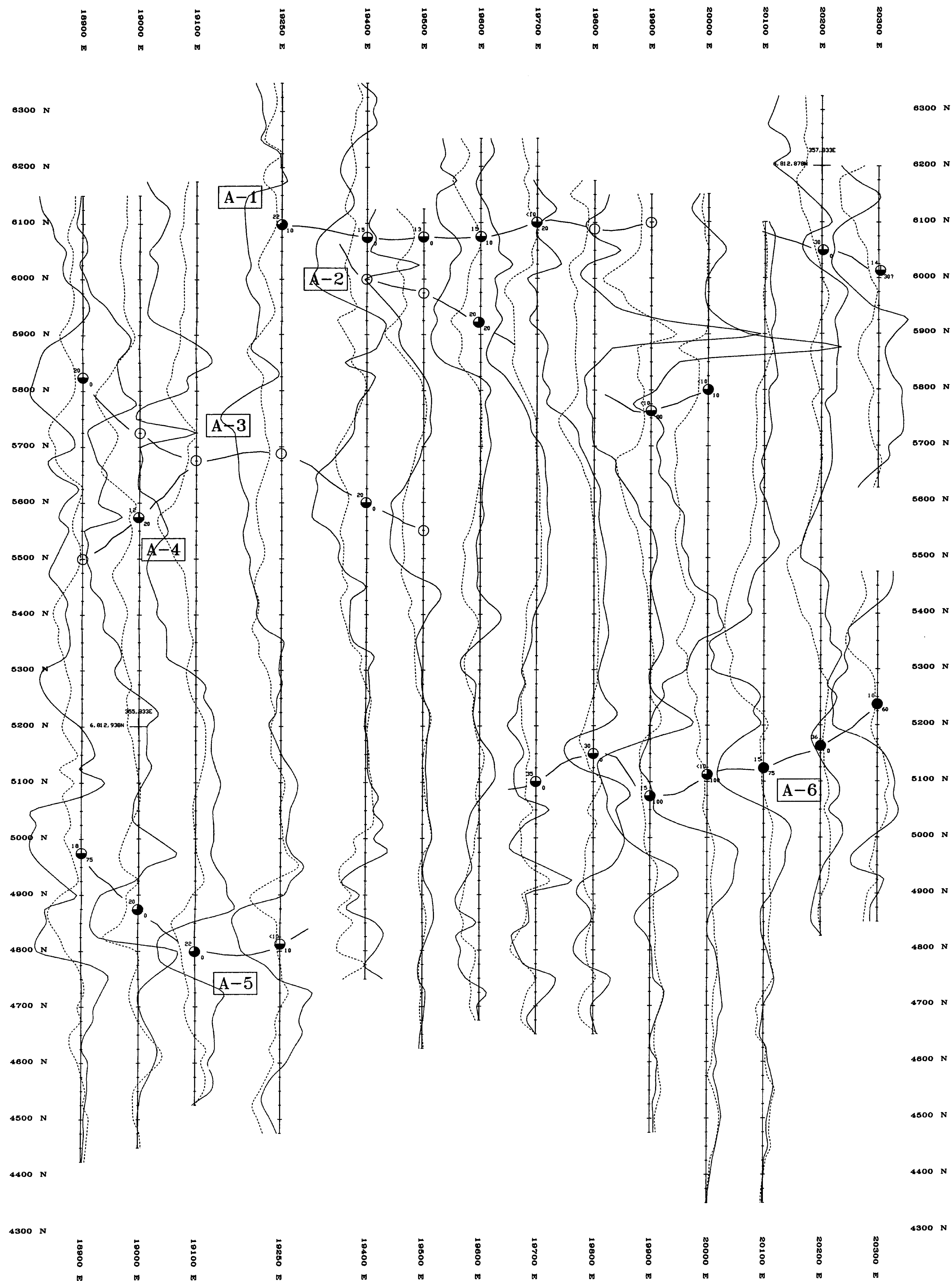
WILLOW GRID
MaxMin I-10 Survey
3520 Hz
FIGURE 2.

NTS: 105 G/10 Datum: NAD27

Mining District: Watson Lake

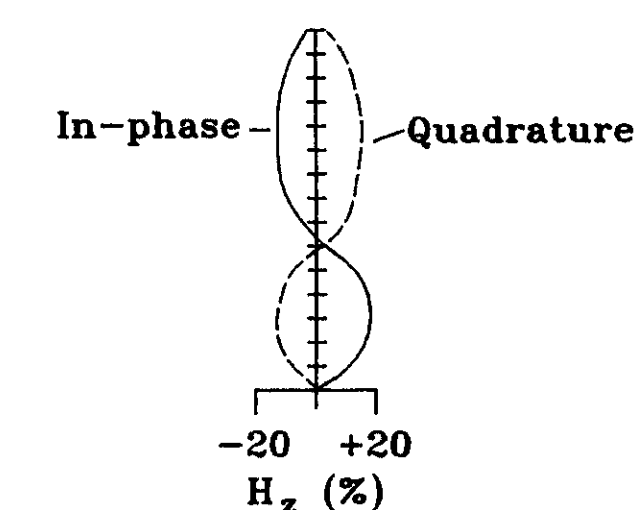
Job: 99-20 Date: 09AUG99

AMEROK GEOSCIENCES LTD.



EM ANOMALY SYMBOLS (CONDUCTANCE - 880 Hz)

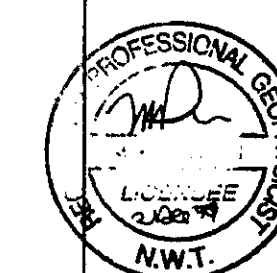
- Unknown
 - ⊕ <1 S
 - ⊕ 1-5 S
 - ⊕ 5-10 S
 - ⊕ 10-40 S
 - >40 S
- Depth (m)
- Excess width (m)



Coil Spacing - 100m

— CONDUCTOR AXIS

500,000E
6,600,000N + UTM registration point



0 200
metres
Scale: 1:3,000 094 048

EQUITY ENGINEERING LTD.

STARR PROPERTY

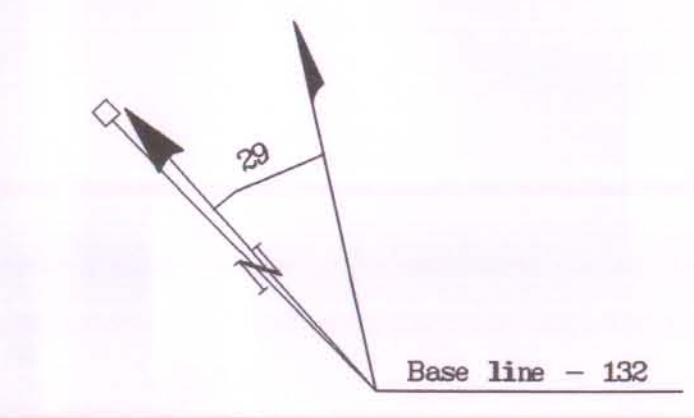
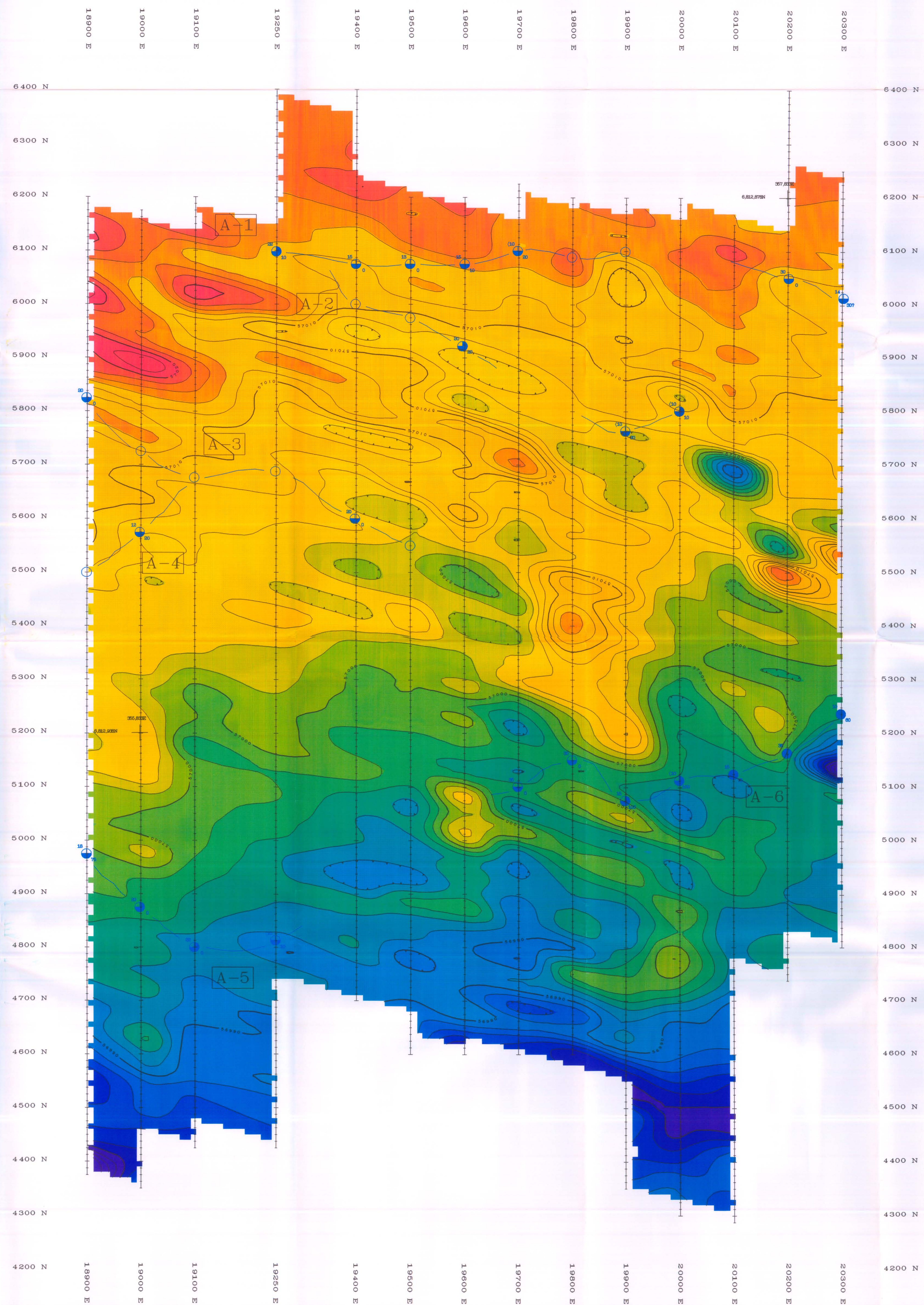
WILLOW GRID
MaxMin I-10 Survey
7040 Hz
FIGURE 3.

NTS: 105 G/10 Datum: NAD27

Mining District: Watson Lake

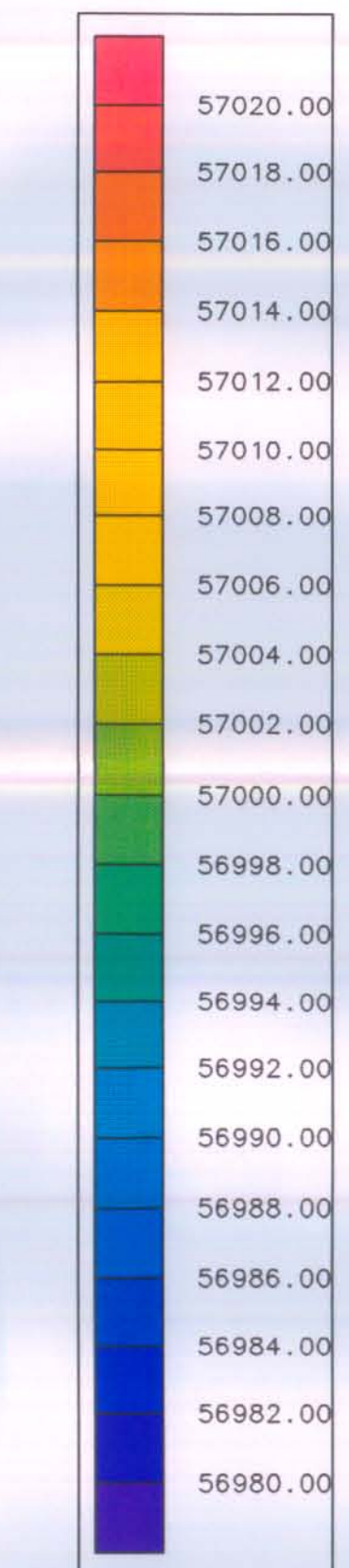
Job: 99-20 Date: 09AUG99

AMEROK GEOSCIENCES LTD.



EM ANOMALY SYMBOLS
(CONDUCTANCE - 880 Hz)

- Unknown
 - ⊕ (1 S
 - ⊕ 1-5 S
 - ⊕ 5-10 S
 - ⊕ 10-40 S
 - >40 S
- Depth (m)
- Excess width (m)



Total Magnetic Field (nT)

GRID CELL SIZE: 10 m
CONTOUR INTERVALS: 2, 10 nT

— CONDUCTOR AXIS
+ UTM registration point



EQUITY ENGINEERING LTD.

STARR PROPERTY

WILLOW GRID
Total Magnetic Field Survey
Contour Map

FIGURE 4. 094048

NTS: 105 G/10 Datum: NAD27

Mining District: Watson Lake

Job: 99-20 Date: 09AUG99

AMEROK GEOSCIENCES LTD.

094048
**PETRA RESOURCE CORP.
GEOLOGICAL, GEOCHEMICAL AND
GEOPHYSICAL REPORT ON THE
STARR PROPERTY**

VOLUME I - TEXT

Watson Lake Mining District, Yukon Territory
NTS 105G/5,6,12; 105F/8,9
61°27' North Latitude 131°43' West Longitude

Prepared for

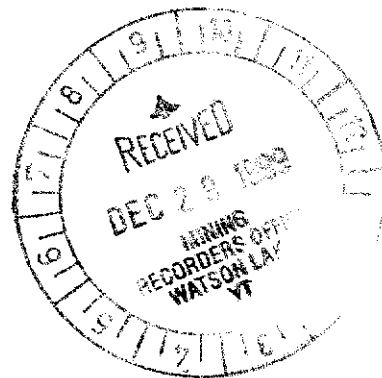
PETRA RESOURCE CORP.
1550 - 409 Granville Street
Vancouver, B.C., Canada
V6C 1T2

Prepared by

Jason S. Weber, B.Sc., G.I.T.

EQUITY ENGINEERING LTD.
700-700 West Pender Street
Vancouver, B.C., Canada
V6C 1G8

November 1999



This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 55,700

M. Burke
for Regional Manager, Exploration and
Geological Services for Commissioner,
Yukon Territory.

SUMMARY

The 563 unit Starr property is located in the southeastern Yukon, approximately 80 kilometres southeast of Ross River, within the St. Cyr Range of the Pelly Mountains. Property access is via helicopter from the Ketza River Mine airstrip, approximately 30 kilometres northwest of the centre of the property. Pathfinder Resources Ltd. staked the property in 1997, and has since optioned it to Petra Resource Corp.

The Starr claims were staked after Atna Resources Ltd.'s drill hole discovery on the Wolf deposit, in which Atna intersected 25.2 metres of massive sulphides that graded 6.9% zinc, 2.8% lead, and 138.6 g/t silver. Upon release of this news, Pathfinder embarked on an aggressive staking program, acquiring all the remaining favourable stratigraphy along strike from the Wolf. A brief reconnaissance geology and geochemistry program confirmed the continuity of the stratigraphy. An airborne geophysical survey was also flown. Examination of the property confirmed the potential for the Starr property to host VMS mineralization similar to that of the Wolf deposit. Numerous strongly pyritic, gossanous exposures, similar to those present at the Wolf, were noted on the Starr property. In 1998, geological mapping and soil, silt and rock geochemistry highlighted areas of strongly anomalous multi-element soil geochemistry, and large massive pyrite occurrences, including the Willow Showing, on the Willow Grid. In 1999, a follow-up program was conducted on the Willow grid and Pyrite Creek areas, consisting of Horizontal Loop Electromagnetic (HLEM) and total field magnetics surveys, prospecting, mapping, and soil and rock geochemical surveys.

The favourable stratigraphy is composed of Mississippian trachytic volcanics, with intercalated mudstones, tuffaceous mudstones and minor chert, the "McNeil Belt." Mafic volcanic flows and hypabyssal mafic rocks occur at higher elevations. Trachyte flows and tuffs are generally strongly ankerite-pyrite-sericite±barite±fluorite±K-feldspar altered, creating prominent rusty orange and red gossans.

Two significant Pb ± Zn, Ba in soil anomalies are present within the area of coverage of the 1999 program. Both the Willow Creek and Fluorite Creek Basins host anomalous Pb-in-soil anomalies, south of station 5200 N. Anomalous Mo, Ba, and Zn in soil coincides with anomalous Pb-in-soil geochemistry. A broad Ba-in-soil geochemical anomaly extends from L17400E to 20000E, north of 5500N, likely reflecting the presence of baritic shales.

Prospecting in 1999 led to the discovery of two pyrite-sphalerite-calcite vein occurrences. The Caribou Showing, located at approximately 20150E, 4575N returned values up to 5.97% Zn. The East Willow Showing, located at approximately 22925E, 4950N assayed up to 4.9% Zn. One float sample assayed 11.55% Zn from a trachyte boulder with PY-CA-SL veinlets.

The HLEM survey identified 3 conductors on the Pyrite Creek Grid and 6 on the Willow Grid. One conductor on the Pyrite Creek Grid coincides with a graphitic fault, and the other two likely reflect structural anomalies. On the Willow Grid, four of the six conductors identified are structural rather than stratigraphic in nature. One of these coincides with the Willow Showing, discovered in 1998. Two conductors are interpreted to be stratigraphic, and may be comprised of a number of closely spaced conductors of variable strength. Anomalous Pb soil geochemistry and favourable geology coincident with these two conductors defines two target areas for drill testing.

1999 GEOLOGICAL, GEOCHEMICAL, & GEOPHYSICAL REPORT ON THE STARR PROPERTY

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1.0 INTRODUCTION

The 563 unit Starr property is located in the southeastern Yukon, approximately 80 kilometres southeast of Ross River, in the Watson Lake Mining District (Figure 1). The area has experienced little exploration activity other than sporadic exploration for massive sulphide deposits on the adjoining Wolf and Lynx properties which adjoin the Starr property to the southeast. The region northeast of the Starr, on the opposite side of the Tintina Fault Zone, has recently been the focus of intense exploration for volcanogenic massive sulphide (VMS) deposits, which has led to significant discoveries, including the Kudz Ze Kayah, Wolverine, Fyre Lake and Ice deposits. In late 1997, Atna Resources announced a significant discovery on their Wolf property, where they had intersected 25.2 metres of massive sulphides that graded 6.9% zinc, 2.8% lead and 138.6 g/t silver.

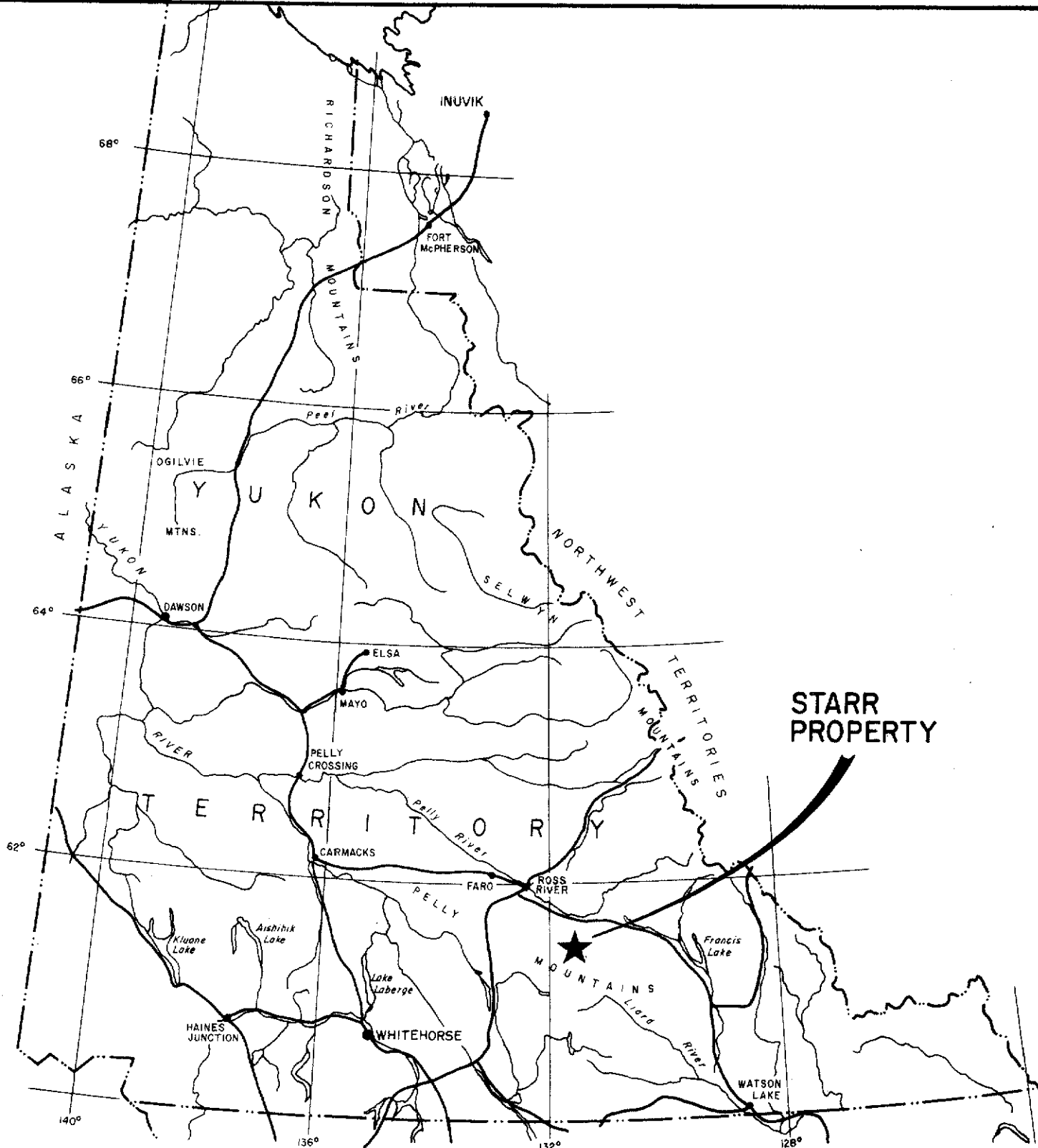
The Starr property is underlain by late Devonian alkaline felsic volcanic rocks, herein referred to as the McNeil Belt, equivalent to those which host the Wolf massive sulphide discovery. It was the Wolf discovery that led to Pathfinder to acquire the Starr property, staking the remaining favourable stratigraphy of the McNeil Belt. Subsequently, Petra Resource Corp. has acquired an option on the Starr property from Pathfinder and completed a geological mapping, prospecting and rock, silt and soil sampling program on the Starr property in 1998. A follow-up program was conducted in July and August of 1999 to investigate areas of anomalous soil geochemistry, and massive pyrite mineralization on the Willow Grid. Equity Engineering Ltd. conducted the 1999 field program, which consisted of Horizontal Loop Electromagnetic (HLEM) and total field magnetic surveys, geological mapping, prospecting, and soil and rock geochemical sampling. Equity Engineering Ltd. has also been retained to report on the results of the fieldwork.

2.0 MINERAL CLAIMS

The Starr property is comprised of 563 Yukon Quartz mineral claims in two separate blocks. The main block of the Starr property adjoins the Wolf and Lynx properties to the southeast. The eight claim unit Pup block adjoins the Wolf to the southeast. The property is located in the Watson Lake Mining District (Figure 2). Government records indicate that the claims are wholly owned by Pathfinder Resources Ltd. Separate documents detail the option agreement between Petra Resource Corp. and Pathfinder on the Starr Property. Claim data for the Starr Property is tabulated below in Table 2.0.1.

Table 2.0.1
List of Claims

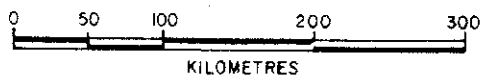
Claim Name	Grant Number	# of Claims	Expiry Date
Lone 1,2	YB90057 - YB90058	2	June 29, 2002*
Lone 3-64	YB90059 - YB90120	62	June 29, 2001
Cry 1 - 6	YB90121 - YB90126	6	June 29, 2002*
Cry 7-14	YB90127 - YB90134	8	June 29, 2001
Cry 15 - 38	YB90135 - YB90158	24	June 29, 2002*
Cry 39 - 52	YB90159 - YB90172	14	June 29, 2001
Cry 53 - 79	YB90173 - YB90199	27	June 29, 2002*
Cry 80 - 82	YB90200 - YB90202	3	June 29, 2001
Cry 83 - 162	YB90203 - YB90282	80	June 29, 2002*
Den 1 - 198	YB90283 - YB90480	198	June 29, 2002*
Den 199 - 206	YB90481 - YB90488	8	June 29, 2001



**STARR
PROPERTY**

PETRA RESOURCE CORP.

**STARR PROJECT
LOCATION MAP**



Date	Nov 1999	Scale	As shown	Figure
U.T.M. Zone	8/9	Mining Dist.	Watson Lake	1.
N.T.S.	105 6/5 6 12 105 2/8 3	State/Prov.	YUKON	

Table 2.0.1
List of Claims cont'd.

Claim Name	Grant Number	# of Claims	Expiry Date
Pup 1 – 8	YB90049 – YB90056	8	June 29, 2001
Red 1 – 14	YB91079 – YB91092	14	July 29, 2002*
Red 15, 16	YB91093 – YB91094	2	July 29, 2001
Grey 1 – 13	YB91095 – YB91107	13	July 29, 2002*
Pelly 1 – 8	YB91108 – YB91115	8	July 29, 2002*
Far 1 – 17	YB91116 – YB91132	17	July 29, 2002*
Far 18	YB91133	1	July 29, 2001
Starr 1 – 6	YB91134 – YB91139	6	July 29, 2001
Sly 1-38	YB91754 – YB91791	38	June 18, 2002*
Howl 1-24	YB91792 – YB91815	24	June 18, 2002*
		563	

*Subject to approval of assessment work covered in this report.

3.0 LOCATION, ACCESS AND GEOGRAPHY

The Starr property is located approximately 80 kilometres southeast of Ross River, Yukon, within the St. Cyr Range of the Pelly Mountains, on the south side of the Tintina Trench. The co-ordinates for the approximate centre of the Starr property are 61°27' North, 131°43' West on NTS map sheet 105G/5. Elevations on the property vary from 1200 to 1900 metres. The area is mountainous with steep, often non-vegetated, cliffs and talus slopes at higher elevations, with tree and scrub filled valley bottoms. Outcrop in the low-lying areas averages less than 10%, and is restricted to streambeds, but outcrop exposure may be as high as 20-40% in areas above tree line. The area has a continental climate with moderate levels of precipitation and a wide seasonal temperature range. Summers are typically pleasant with long daylight hours, whereas winters are long and may be very cold. Most of the snow cover disappears by the start of June and may return by the beginning of October.

For the 1999 program, the property was accessed by helicopter based in Ross River, Yukon Territory. The exploration program was conducted from a fly camp located on Willow Creek at the same site as the previous year. During the 1970's or early 1980's, a cat road from the junction of Mink Creek and the Robert Campbell Highway was built to the present Wolf property. The current condition of this road is not known, however, a Nodwell tracked vehicle was taken into the Argus property in the winter of 1993. The Argus property is roughly 20 kilometres north of the Wolf and at approximately halfway along the access road from Mink Creek.

4.0 REGIONAL AND PROPERTY EXPLORATION HISTORY

The Starr property and adjacent areas have a fairly limited exploration history. Brief exploration histories of some of the occurrences in the area are listed below. These fall into four groups based on mineralization type: 1) vein copper hosted in Ordovician-Silurian basalts of the Cassiar Platform; 2) Mississippi Valley-type lead-zinc, hosted in Silurian-Devonian dolomites; 3) Sedex lead-zinc deposits hosted in Ordovician shales and 4) lead zinc-bearing volcanogenic massive sulphide mineralization (VMS) hosted in latest Devonian or Mississippian felsic alkali volcanics.

(Ord-Sil) Vein Copper

The Axe occurrence consists of a number of small copper in vein showings located 3 kilometres north of the G10 gossan (Figure 4). It was first staked in 1954 as the Axe claims and was optioned to Berens River Minerals, a subsidiary of Newmont. It has since been restaked frequently as the Rum in 1956 by L. Romfo and W. McKinnon; as the Jacobs by P. Poggenburg in 1963, and as the Bell in 1968 by W. Hyde. The Bell claims were optioned during 1970 by the Caltor Syndicate (Rayrock Minerals; Canadian Industrial Gas & Oil; Ashland Oil Canada), who performed geochemical sampling, mapping and hand trenching. It was restaked as the Ram claims in 1983 by A. Mercier. These claims were allowed to lapse and the showing is currently unstaked.

The Connolly showing, located 2 kilometres northwest of the Axe, is a poorly documented copper occurrence that was originally staked in 1956. No work was ever recorded and the area is presently unstaked.

(Sil-Dev) Carbonate Hosted Pb-Zn

The Zimmer showing is located 2 kilometres north of the northeast boundary of the Lone group of claims. The breccia-hosted mineralization was staked in 1976 by Newmont, and explored by hand trenching and EM surveys in 1977. These claims were allowed to lapse and no further work has been recorded on the showings.

(Ord) Sedex in Ordovician Shales

The Fairbank occurrence lies at the south edge of the Lone block of claims. Hydrozincite and minor sphalerite mineralization were discovered after follow-up of anomalous silt results. The occurrence was staked by Noranda Minerals in 1976 as the NMT claims. Noranda performed reconnaissance mapping and sampling later in the same year.

(Dev - Miss) VMS hosted in Felsic Alkali Volcanics

The Coope occurrence, located in the headwaters of the Willow Creek basin on the Starr property's Den claims, was staked as the JAC claims in 1977 by Newmont. Newmont identified the target by follow-up of an anomalous stream sediment, but filed no further work and the claims lapsed. Examination of the area in the 1997 program revealed an extensive area of pyritic gossans with associated barite and fluorite mineralization. The Willow Grid covers this area, and soil geochemical results display anomalous Pb, Mo, As, Ba, and Ag values based on a 90th percentile threshold.

The Whit occurrence was staked as the Whit claims by D. Halstead, who added the Guy claim in 1986. Pyrite-fluorite veins cut felsic volcanics pervasively altered by quartz-ankerite-sericite-pyrite. No assessment work was filed, but the claims remain in good standing.

The Wolf, Fox and Lynx properties lie between the two blocks of the Starr property. Newmont discovered the showings in the area in 1955 and eventually staked the FH claims in 1966. In 1967, the company constructed a tote road to within two kilometres of the Joe showing and explored with mapping, soil sampling and hand trenching. The claims were allowed to lapse and were restaked as the Rover claims in 1972 by F. Hasselberg and as the Sip claims in 1974 by Hesca Resources Ltd., which drilled two x-ray holes (61 m), both of which failed to reach their target. The area was again restaked as the Joe claims in 1976 by Newmont and Asamera Oil Corp. Ltd., which explored with geochem, EM and mag surveys, mapping, and hand trenching. The property was enlarged in 1977, and a program of trenching and 528 metres of diamond drilling in three holes was completed in 1978. Again, the property lapsed and was restaked as the Zap & Zoo claims in 1982 by Amax, which transferred its interest to Canamax Resources Incorporated, who performed mapping and geochem sampling in 1983. The

original Joe showing was restaked as the Wolf claims by YGC Resources Ltd. in 1990. Cominco immediately followed by staking the surrounding Fox claims. YGC tied on the Lynx claims later in the same year. Both Cominco and YGC conducted geochemical surveys in 1990. Cominco optioned the Wolf and Lynx claims from YGC in 1991 and performed contour and grid soil sampling and minor geological mapping. In 1992, Cominco completed UTEM and magnetic surveys over the Wolf claims, but later dropped their option. In 1995, Atna Resources Ltd. optioned the Wolf property from YGC and in 1996 carried out a program of mapping, geochemistry and the drilling of 3 holes from a single setup (350 metres). In 1997, Atna carried out a property-wide mapping program prior to the drilling of 12 holes (2956 metres). In their seventh hole of the program, targeted on the UTEM anomaly defined by Cominco, they made a significant discovery by intersecting 25.2 metres of massive sulphides that graded 6.9% zinc, 2.8% lead and 138.6 g/t silver. An additional 8 holes intersected the massive sulphides, but were of narrower widths and generally lower grades.

In 1998, Atna Resources Ltd continued its exploration program on the Wolf property, as well as the recently optioned Fox claims. In this program, Atna drilled 30 holes (totalling 6625 metres), resulting in an inferred resource of 4.1 million tonnes grading 6.2% zinc, 1.8% lead, and 84 g/t silver, based on 31 drill intersections of the deposit. The deposit is said to be open down-dip as well as to the southeast. In addition, Atna discovered the East Slope Zone, 1.2 km southeast of the Wolf Deposit. This zone, intersected by four diamond drill holes, consists of banded semi-massive to massive sulphides, and is thought to occur approximately 70 metres stratigraphically below the Wolf Deposit horizon (Gibson et al., 1999).

After staking the Starr property in September, 1997, a three man, three day, reconnaissance examination of the claim group was undertaken. This brief examination confirmed that the property was underlain by equivalent stratigraphy to that hosting the Wolf, and that alteration and mineralization, including massive, stratabound pyrite and barite, showed strong similarities to the Wolf. Silt sample results also indicated that numerous drainages on the Starr property are strongly anomalous in lead, zinc and silver (Baknes, 1998). The completion of an airborne geophysical survey over the Wolf, Lynx and Starr properties by Atna, Cominco, and Pathfinder resulted in the definition of several unexplained conductive bodies on the Starr property (Baknes, 1998, Appendix G). Petra Resource Corp. optioned the Starr Property in 1998 and carried out property-wide mapping, prospecting, and soil and silt geochemistry, focusing on geochemical and geophysical targets defined by the 1997 programs, and prominent gossans. A total of 279 rock samples, 42 silt samples, and a total of 1749 soil samples were collected during the 1998 program. Soil sampling highlighted strongly anomalous lead, zinc, and barium soil geochemistry on the Willow Grid, and mapping and prospecting identified massive pyrite occurrences in the Willow and Pyrite Creek areas (Weber, 1999).

5.0 1999 EXPLORATION PROGRAM

The 1999 Starr exploration program was designed to investigate geochemical anomalies and massive pyrite showings outlined in 1998. HLEM and total magnetic field surveys were completed on two areas on the property. A total of 23.8 line-km was surveyed on the Willow Grid, and an additional 1.9 line-km on the Pyrite Creek Grid. HLEM surveying was conducted on 100-metre grid spacing and 25 metre station spacing. Grid lines were spaced at 100 m intervals, and straight chained (not slope corrected). In areas of buckbrush or below treeline, lines were brushed out with a chainsaw. Stations were marked with pickets every 25 m and tied with green flagging. The frequencies used for the survey are 880, 3520, and 7040 Hz. Total magnetic field surveys were conducted on the same lines as the HLEM survey, on 12.5 metre station spacing. Amerok Geosciences Ltd. carried out these surveys and have described their procedures, results and interpretations separately (Power, 1999).

Geological mapping and prospecting was conducted in the Willow and Pyrite Creek areas. In the Willow area, mapping and prospecting concentrated on the areas of anomalous soil geochemistry identified in the 1998 program, and the northern sections of the Willow Grid where massive pyrite

showings were identified in 1998. In-fill soil sampling was conducted on the Willow Grid. Samples were collected every 50 metres on lines spaced 100 metres apart, to fill in between lines completed in 1998. In some areas lines were sampled every 25 metres for increased detail. As well, a soil grid was established over the Pyrite Creek showing area. In total, 592 soil samples were placed in kraft envelopes, the sites marked with a station picket and blue and orange flagging and a tyvek tag, and notes were taken on soil characteristics. One silt sample was collected from the active portion of a small drainage. It was placed in a kraft envelope and the sample site marked with orange flagging. The sampler recorded notes pertaining to sample, colour, texture, and local outcrop and stream characteristics. All silt and soil samples were analyzed for 34 elements by ICP, with additional gold and barium analyses. A total of 150 rock samples were collected and analysed for 34 elements by ICP, with additional analyses performed for barium and gold. Of these, 14 were assayed for zinc, one was assayed for lead, and 15 were assayed for barium. In addition, 11 of the samples were submitted for whole rock analyses, including oxide and trace element determination. Rock sample sites were marked in the field with orange and blue flagging and numbered aluminum tags. Detailed descriptions of rock samples were taken in the field and can be found in Appendix D. Silt and soil samples were partially air-dried in camp and then shipped to Chemex Labs of North Vancouver, B.C. for sample preparation and analysis. A complete set of analytical results for silts, soil and rock samples can be found in Appendix G.

A declination of 27.9° east, was obtained from the Geological Survey of Canada, Geomagnetic Laboratory, and was used in all compass work.

6.0 REGIONAL GEOLOGY

The region lying southwest of the Tintina Trench comprises a portion of the Cassiar Platform (Figure 3). The geology on the northeast side of the Tintina Trench belongs to the Yukon Tanana Terrane (YTT). The YTT is considered the innermost of the accreted terranes in the western Canadian Cordillera. It is comprised largely of a Late Devonian-Mississippian volcanic-plutonic, pericratonic arc assemblage that was strongly deformed and metamorphosed in late Triassic time (Mortensen, et. al., 1985). This period of metamorphic and associated intrusive igneous activity probably indicates the time at which the YTT accreted to the North American margin consisting of the Cassiar Platform, Selwyn Basin and Mackenzie platform to the northeast (Mortensen, 1992). The evolution of the Cassiar platform is indicated by the deposition of shallow water sediments during the Upper Proterozoic through Middle Devonian. This sedimentation was onto a positive topographic feature parallel to the Continental margin, but separated from it by the miogeoclinal sequences of the Selwyn Basin. In upper Devonian to approximately middle Mississippian time uplift, block faulting and erosion occurred in the Selwyn basin. Siliciclastic rocks derived from this erosion also spread across the Cassiar Platform, which no longer influenced sedimentation patterns after the Devonian (Tempelman-Kluit et. al., 1976). In the central Pelly Mountains (south of the present position of the Tintina Fault), the Upper Devonian and Mississippian clastic sequence overlying the Cassiar platform strata contains extensive deposits of intermediate to felsic alkalic volcanic rocks (McNeil Belt). Recent uranium-lead dating of a related syenite body returned an age of 363 Ma, which indicates latest Devonian (Mortensen pers. comm, 1998).

From Middle Mississippian through Upper Triassic time, calcareous shales were the principle lithology deposited over the former Cassiar Platform. Factors complicating the stratigraphy are: 1) extensive thrust faulting and metamorphism associated with the obduction, in the Mid-Mesozoic, of the Anvil Allochthon, which is an ophiolitic package possibly equivalent to the Slide Mountain Terrane of British Columbia; 2) emplacement of Cretaceous batholiths; 3) right lateral displacement along the Tintina Fault during the Cretaceous and into the Tertiary.

The general stratigraphy of the Devonian and Mississippian rocks in the Starr property area consists of black shale containing very minor chert granule grit (uDMs), with locally voluminous alkaline-felsic volcanic rocks. These volcanic rocks form coalescing piles of marine deposited volcanoclastic



STARR
PROPERTY

WOLF
DISCOVERY

PETRA RESOURCE CORP.

STARR PROJECT
REGIONAL GEOLOGY



Date	Nov 1999	Scale	1:250,000	Figure
U.T.M. Zone	8/9	Mining Dist.	Watson Lake	3
N.T.S.	05/6/5, 6/12/8/9	State/Prov.	YUKON	

GEOLOGICAL LEGEND (to accompany figure 3)

PELLY-CASSIAR PLATFORM

Upper Triassic and Jurassic

uRJv Dark green, massive, volcanoclastic sandstone; minor tuff.

uRsc Dark grey and buff weathering, recessive, thin-bedded bioclastic limestone with interbedded sandy or silty limestone, calcareous siltstone and shale; commonly finely cross-laminated.

Mississippian latest Devonian

Mva Heterogeneous, rusty, black, white and orange weathering lapilli and sand sized tuff, volcanic breccia and flow rocks ranging from trachyte to andesite in composition; black argillaceous slate and siliceous pale grey and pale green "cherty tuff" locally abundant; minor finely crystalline buff limestone; locally includes abundant trachyte dykes; locally highly pyritic; weakly sericitized and commonly strongly foliated so that primary textures are masked.

Mt Rusty orange weathering, resistant, apple green and dark grey thin bedded chert and cherty tuff; may include minor Mv undifferentiated.

Upper Devonian and Mississippian

uDMs Black recessive weathering, with rusty streaks, thin bedded black siliceous slate with minor interbedded chert grain greywacke and chert granule grit; includes lenses of intermediate to acid volcanoclastic rocks undifferentiated; includes interbedded dark grey barite undifferentiated.

Silurian and lower Devonian

Sd Resistant, light grey and white weathering, massive, medium grey, medium bedded, laminated to sucrose, dolomite; minor sandy dolomite.

Sdf Resistant, thick-bedded to massive, red weathering, coarsely sucrose dolomite; minor sandy dolomite.

Ss Tan, medium grey, and very locally deep maroon weathering; light grey, thin-bedded to platy dolomitic siltstone, dolomitic fine-grained sandstone and minor silty dolomite.

Upper Cambrian and Ordovician (Silurian, Devonian)

COSDsI Orange-brown weathering, recessive, thin bedded, medium to dark grey, calcareous shale, siltstone and argillaceous limestone; includes slate and phyllitic slate.

OSsl Recessive, black, locally calcareous, fissile, graptolitic slate; includes thin sills or flows of dark green, basalt undifferentiated; includes Sv undifferentiated; rarely includes lenses or large blocks of algal-laminated dolomite: grades upward into Ss and laterally into uCOsl, uCOslv and uCOc.

uCOsl Medium grey, recessive weathering, chlorite muscovite quartz phyllite and slaty phyllite, locally calcareous; in places includes lenses sills and flows of olive to dark green basalt and basaltic tuff COv and COvb; grades laterally to uCOc.

uCOc Orange to orange-brown weathering, recessive, medium grey, thinly interlaminated calcareous shale and silty limestone or calcareous siltstone; proportion of carbonate to clastic material varies widely; includes slaty and phyllitic equivalents; includes distinctive red weathering quartz ankerite "sweats"; locally includes thin layers of olive green tuff undifferentiated; laterally gradational to uCOsl.

COv Olive green, sandy and finer grained tuff and tuffaceous slate; commonly strongly foliated and metamorphosed to greenschist facies - equivalents include chlorite phyllite and chlorite amphibolite.

COvb Resistant, dark weathering, massive, dark green and dark maroon amygdaloidal basalt; calcite fills amygdules; locally strongly foliated and amygdules are chlorite patches; may include COv undifferentiated.

Geology after D.J. Tempelmen-Kluit (1977).

material and local intrusive bodies. Volcanic centres are evident by syenite and trachyte domes and stocks. The volcanic section is capped by an extensive tuffaceous chert horizon (Mt). The thickness of the volcanic section reaches 600 metres, but is generally less than 100 metres. Total thickness of the Upper Devonian to Mississippian sequence ranges from 500 to 800 metres (Mortensen et. al., 1982). The most characteristic feature of the Devonian-Mississippian volcanics is the alkaline to peralkaline chemistry such that most of the volcanics classify as trachytes. This unusual volcanic chemistry and the overall setting likely indicates formation in a rift environment developed within a previously miogeoclinal area. This package of volcanics is also exposed 50 kilometres to the northwest in the McConnell River area. The geology surrounding the Devonian-Mississippian package consists of a wide variety of lithologies from dolomites to basalts that range in age from Upper Cambrian to Upper Triassic and Jurassic. Units are interlayered parallel to the Tintina trench and are divided by numerous strike-parallel northeast-directed thrust faults. This is exemplified by the south boundary of the Mississippian volcanic sequence (Mva) which is marked by an oblique thrust that puts Cambrian and Ordovician phyllites on top of the Mississippian volcanics.

The Mississippian volcanics of the Cassiar platform have over the years attracted mineral exploration directed at volcanogenic massive sulphide deposits. Along with the Wolf discovery, there are three other significant massive occurrences in the McNeil Belt. These are the Bnob, Chzerpnough and the MM. All four appear to share a number of common characteristics: 1) associated with small felsic domes or intrusives; 2) associated with felsic volcanoclastic rocks; 3) metal values are typically zinc>lead>copper; 4) exhalative barite often pyritic and locally contains base metals in close association with massive sulphides. The MM is one of the best described of the four occurrences. Mineralization is closely related to a trachytic dome with flanking volcanic breccia that grades into volcanic tuffs and intercalated carbonaceous sediments. These carbonaceous sediments also form the footwall and hanging wall to the volcanic sequence. The thickest massive sulphide lens (9 m) lies immediately above the dome, but lesser syngenetic sulphide lenses occur through 75 metres of the section and extend up to 3 kilometres along strike. Exhalative barite with pyrite predominates over sulphides distally from the dome. Footwall stockwork mineralization consisting of quartz, chlorite, pyrite and chalcopryrite is moderately well developed beneath the biggest massive sulphide lens. Grades encountered to date average about 5% lead plus zinc. The newly discovered Wolf deposit shares several features with the other occurrences. One significant massive sulphide layer is underlain by up to three thinner and less Pb-Ag rich massive sulphide layers. Pyrite-barite mudstone forms the footwall to the middle sulphide horizon and extends well out laterally. The deposit occurs at the thickest part of the felsic stratigraphy in the area and has an immediate footwall of quartz-crystal ash tuff and occurs within amygdaloidal trachyte flows and has a hanging wall of trachyte tuffs and pyritic lapilli tuffs. An apparent halo of ankerite-pyrite $\pm$ sphalerite veins seem to form around the deposit. Fluorite-ankerite crackle breccias are said to lie both above and below the Wolf deposit. It is believed that a monzonite intrusive present on the property may form some spatial relationship with the deposit, perhaps indicating a root to a volcanic centre. A possible chalcopryrite-bearing stockwork has been noted in two intersections and lies between the upper and lower sulphide horizons. An important feature of the Wolf massive sulphide lenses is that they appear to be vertically zoned, with the Pb-Ag rich zone found in the upper sulphide lens. Another feature of the Wolf is the very extensive zone of disseminated pyrite mineralization on the property that forms intense gossans over much of the Wolf property. Recent work by Atna has lead to the conclusion that the Wolf deposit is oriented right side up, based on Au, Mo, Hg, and As footwall lithogeochemistry (Holbek, pers. comm., 1999). The massive sulphide mineralization extends 600 metres in strike length and 500 metres down-dip, and is open down-dip and to the east (Gibson et al., 1999). A second lens was discovered East Slope Zone, 1.2 km southeast of the Wolf Deposit, consisting of semi-massive to massive sulphides, approximately 70m stratigraphically below the Wolf Deposit horizon (Gibson et al., 1999).

7.0 PROPERTY GEOLOGY AND MINERALIZATION

7.1 Stratigraphy

The stratigraphic package exposed on the Starr property is part of the McNeil Belt volcanic sequence, which is oriented approximately northwest-southeast, dipping moderately to the southwest. This corresponds to the Mva unit in regional mapping by Templeman-Kluit (1972 – Fig. 3). No definite clues to stratigraphic tops were observed in the field. Fourteen rock specimens were submitted for thin-section observation to Vancouver Petrographics. A report of the findings of the study is included in Appendix E. Geological compilation is presented on Figures 4-7.

Lower Silurian to Devonian dolomite and limestone (**Sd1**) are exposed at the lowest elevations (Figure 4). These rocks are exposed on cliffs on the northeastern section of the Willow Grid. Overlying the carbonate rocks is a series of intercalated mudstones and tuffaceous mudstones, and lesser trachyte flows and tuffs of upper Devonian and Mississippian age (in part **uDMs** and **Mva**). Continuing up-section, stratigraphy is composed predominantly of trachyte tuff and flow rocks, with interbedded argillaceous tuffs and mudstone (**Mva**). Thin-section studies performed by Vancouver Petrographics describes the trachyte units as flows and autobrecciated flows, altered variably by ankerite, quartz, sericite, pyrite, and lesser fluorite, albite and chlorite (Appendix E). These units are generally associated with strong gossans that form around the weathered outcrops. Throughout this section, especially in areas of abundant trachyte flow rocks, a maroon trachyte exhibits both dyke and extrusive flow characteristics, locally forming plugs and dykes crosscutting stratigraphy. Thin-section examination confirms that the maroon trachyte is likely a hypabyssal rock or the core to a very thick flow (Appendix E). Andesitic rocks, both hypabyssal and extrusive, occur in the section, especially in the upper elevations.

Measurement of the stratigraphic section indicates a thickness of the **Mva** unit of at least 285 metres. A description of the rock types encountered in unit **Mva** during the 1999 field program follows.

Table 7.1.1
Starr Property Stratigraphy

FELSIC VOLCANIC UNITS

TRAC	Trachyte flows: Generally grey to buff in colour, weathering buff to rusty orange, forming prominent gossans. Commonly noted with up to 15% iron carbonate filled amygdules. Commonly exhibits sucrosic texture, and fine (<1 mm) needle shaped feldspar crystals. Generally pyritic, with up to 10% disseminated pyrite. Very often pyrite-sericite-iron carbonate±barite±fluorite altered. Characteristic blocky fracture.
TRAT	Undifferentiated trachyte tuffs: Generally grey, very fine-grained, lacking amygdules. Buff to rusty-orange weathering, forming prominent gossans. Alteration similar to that of TRAC. Commonly pyritic. May include the following units: • Trachyte lapilli tuff, commonly with argillite clasts. • Trachyte ash tuff, very fine-grained, glassy, occasionally weakly banded.
TRAM	Maroon trachyte dykes and flows: Texture ranges from very fine-grained to fine-grained needles and laths. Weakly pyritic locally, generally less altered than TRAC and TRAT.

MAFIC VOLCANIC UNITS

ANDS	Mafic volcanic flows: Green to brown weathering, medium to dark green mafic volcanic flows, massive to weakly amygdaloidal, rarely exhibiting columnar jointing.
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Table 7.1.1
Starr Property Stratigraphy cont'd

ANDT Undifferentiated mafic tuffs: Dark brown to green weathering, green to olive green tuffs. Commonly weakly carbonate-veined. Commonly schistose. May be equivalent to HTUF.

UNDIFFERENTIATED FRAGMENTAL UNITS

ARGT Tuffaceous argillite and mudstone: Undifferentiated shale/mudstone matrix tuff with trachytic and/or shaley clasts supported in an argillaceous matrix. Rare massive pyrite fragments. Commonly grades into **MDST**. May contain the following units:

- Argillaceous crystal tuff: Similar to above with dominant fragment type(s) composed of feldspar crystals (<1 mm) and/or quartz eye crystals (<2 mm).
- Argillaceous heterolithic tuff - Contains both trachytic and shaley fragments.
- Argillaceous lapilli tuff - Fragments are dominantly trachyte lapilli.
- Argillaceous bomb tuff - Fragments are dominantly large (>15 cm) trachyte bombs.

HTUF Heterolithic tuff: Pink/brown/buff weathering schistose heterolithic tuff. Clasts consist of pale green sericite-altered volcanic fragments and strongly iron carbonate-altered orange fragments, generally less than 15 cm in size.

SEDIMENTARY UNITS

MDST Black argillaceous sediments, including mudstone, shale, phyllitic shale, argillite and slate.

CHRT Grey, buff or green-grey chert: Commonly banded. May be exhalative in origin.

LMST Grey to buff-weathering grey limestone.

DLST Buff to brown weathering dolostone: Commonly banded grey/buff, sucrosic texture. Often with sandy laminae.

GYWK Grey to buff greywacke and siltstone.

7.2 Mineralization

Two areas of Zn $\pm$ Pb mineralization were located on the property in this program. Follow-up of anomalous Zn and Pb in soil anomalies from the 1998 program led to both discoveries. A total of 20 rock samples returned values of greater than 0.25% Zn. Of these, 14 returned values greater than 1.0% Zn. Table 7.2.1 summarizes the significant rock samples collected during this program.

Table 7.2.1
Significant Rock Samples

SAMPLE	East	North	Ag	As	Cu	Hg	Mo	Pb	Zn	Ba
113307	355307.08	6812907.83	<.2	<2	36	<1	<1	<2	3810	940
113311	355846.09	6812809.26	<.2	<2	<1	<1	<1	2	2	4.52%
113313	355421.46	6812697.65	<.2	2	5	1	1	6	30	1.54%
113315	356086.80	6812201.66	<.2	28	9	<1	<1	218	9300	600
113316	356066.96	6812165.75	<.2	<2	10	<1	<1	192	2800	110
113317	356022.64	6812142.07	<.2	42	39	<1	<1	606	3.03%	230

Table 7.2.1
Significant Rock Samples cont'd

SAMPLE	East	North	Ag	As	Cu	Hg	Mo	Pb	Zn	Ba
113319	355988.13	6812097.07	<.2	<2	36	2	1	150	4.79%	730
113320	355985.40	6812000.19	<.2	<2	9	3	<1	56	4.87%	2010
113321	356013.78	6811871.33	<.2	<2	<1	<1	4	20	5000	530
113323	355970.84	6811936.59	<.2	64	58	<1	6	256	2.50%	1370
113324	356009.51	6812056.24	<.2	66	89	1	<1	260	1.73%	930
113325	355969.36	6811954.77	0.4	56	129	<1	<1	1845	3.46%	90
113326	355990.63	6811923.67	<.2	84	63	<1	<1	734	2590	9410
113327	355990.63	6811923.67	<.2	38	6	2	46	152	5.97%	490
113328	356543.12	6811466.32	2.8	<2	1	<1	1	1.68%	176	120
113330	358108.11	6810099.98	1	2	1	<1	546	84	1.62%	740
113331	358117.80	6810102.06	0.8	12	3	<1	207	74	4.08%	1360
113332	357953.36	6810283.41	0.4	32	9	<1	15	142	1.41%	790
113333	358134.91	6810097.12	1	2	54	3	11	970	4.90%	2390
113334	358114.44	6810090.10	0.4	<2	<1	<1	76	842	4180	170
113335	356602.60	6811110.94	0.4	12	89	<1	<1	122	5420	1200
124586	357068.54	6813332.48	<.2	18	13	<1	12	58	26	2.81%
124587	357068.34	6813318.96	<.2	<2	41	<1	4	42	12	4.92%
124588	357076.38	6813325.00	0.2	<2	49	1	4	108	10	3.93%
124597	356124.81	6814134.27	1.2	<2	<1	12	7	804	11.55%	2240
124599	356232.28	6814446.08	<.2	2	52	<1	2	28	70	1.34%
130445	355482.40	6812565.85	<.2	6	5	<1	13	8	2	1.18%
459561	355589.96	6813145.04	<.2	8	6	<1	<1	22	18	3.92%
459570	358122.40	6810102.11	0.2	10	<1	<1	8	30	6540	850
459571	358122.40	6810102.11	0.2	4	<1	<1	10	30	2.00%	990
459572	358053.47	6810065.21	<.2	2	11	<1	3	2	3210	1710
459574	357517.97	6809867.59	0.2	<2	40	<1	<1	<2	100	2.34%
459578	356457.00	6811368.97	0.2	6	<1	2	<1	82	24	1.83%
459585	355651.60	6812572.09	<.2	<2	<1	<1	<1	4	2	4.76%
459607	350501.47	6815351.60	<.2	2	1	<1	7	8	2	1.48%
459608	350464.06	6815370.11	<.2	<2	1	<1	3	14	2	1.50%
459609	350476.17	6815362.40	<.2	<2	2	<1	5	10	66	1.72%
459615	357197.57	6810861.56	1.6	96	15	<1	29	1175	12	2750
459629	357961.55	6810123.56	0.6	28	28	1	19	236	2.14%	1040
459645	354055.23	6813368.04	0.4	14	4	1	11	32	<2	1.01%

All values are in parts per million (ppm), except where indicated.

The areas of significant Zn mineralization occur in the upper portions (trachyte dominated) of the stratigraphic section. The Caribou Showing (20150E, 4575N) consists of disseminated and vein sphalerite with pyrite, calcite, quartz, sericite and barite in HTUF. Veins may be single discreet veins to 2 cm thick, or more diffuse vein zones up to 40 cm thick. Sheeted veins are noted. Downslope of the showing, isolated veins generally less than 3 cm thick are located near an andesite dyke. The sphalerite is honey coloured and very difficult to see in weaker concentrations without the presence of hydrozincite stain on the rock. Values of up to 5.97% Zn, and 152 ppm Pb were returned from samples of the Caribou Showing.

The second significant zone of Zn mineralization was discovered on a ridge at the eastern end of the Willow Grid (22925E, 4950N – East Willow Showing). Follow-up prospecting of anomalous Zn-in-soil values located sphalerite-pyrite-calcite veins in altered trachyte just below heterolithic tuff. A very strong colour anomaly is present 25 metres grid north of the showing, but only disseminated pyrite mineralization was noted in it. Samples from this area returned up to 4.9% Zn, 970 ppm Pb, and 2390 ppm Ba.

Other Pb and Zn-bearing samples were collected from the Willow Grid area. The highest Pb sample was collected in the southern portion of the Willow Grid, with 1.68% Pb from a quartz-galena vein float sample taken at 20900E, 4500N. No bedrock source was located for it. The highest Zn value obtained from the 1999 field program was from a float sample collected from the Fluorite Creek drainage, at the north edge of the Willow Grid. This sample returned 11.55% Zn from a pyrite-sphalerite-calcite vein in trachyte.

8.0 SOIL GEOCHEMISTRY

Soil sampling was concentrated on two areas of the Starr Property in the 1999 field program. The main goal of the program was to extend coverage to the north on the Willow Grid, and to fill in between existing lines to a spacing of 100 metres. A secondary program of sampling the Pyrite Creek area was undertaken to cover the area surrounding the Pyrite Creek Showing. On the Willow Grid, many of the samples were collected from areas that are predominantly composed of talus fines and colluvium, possibly reflecting values closer to those present in rock rather than B-horizon soil. Soil geochemical results are presented in Figures 5-7. Percentile rank statistics for selected elements in soils for 1998-1999 data are shown in Table 8.0.1.

TABLE 8.0.1
Percentile Rank Statistics for Soil Samples

	Ag	As	Ba*	Cu	Fe	Hg	Mn	Mo	Pb	Zn
Population	2333	2333	2329	2333	2333	2333	2333	2333	2333	2333
Max Value	6.6	870	26300	253	>15.00	5	>10000	127	1115	2500
Min Value	<0.2	<2	50	<1	0.25	<1	5	<1	<2	2
98th	1.2	74	5803	92	10.92	1	2997	42	165	639
95th	0.8	54	4166	64	8.87	1	2128	30	110	434
90th	0.6	40	3440	48	7.53	<1	1679	23	80	326
85th	0.4	34	2930	40	6.82	<1	1406	19	66	260
80th	0.2	30	2620	34	6.27	<1	1205	16	56	222
70th	0.2	24	2230	27	5.32	<1	940	12	44	176
60th	<0.2	20	1940	23	4.62	<1	720	10	36	148
50th	<0.2	16	1690	19	4.11	<1	555	8	30	124
40th	<0.2	12	1440	17	3.66	<1	425	6	26	104
30th	<0.2	10	1240	14	3.18	<1	320	5	20	86

All values are in parts per million (ppm) except Fe (%).

* Barium values obtained using triple-acid digestion.

8.1 Willow Grid Soil Geochemistry

Soil geochemical surveys on the Willow Grid concentrated on in-fill sampling to investigate and verify anomalous Pb, Zn, Ba, and Mo geochemistry identified in the 1998 field program. Anomalous (>90

percentile) Pb, Zn and Mo soil geochemistry is concentrated in the Willow Basin, and Fluorite Creek Basins in the central portion of the Willow Grid between lines 18900 and 20300E, between 4600 and 5200 N (Figure 6).

Anomalous Zn mineralization occurs sporadically in the Willow Creek drainage extending from the Caribou Showing in the southern extreme of line 20200E, to the Willow Showing area on line 20000E at 5900N. This anomaly likely represents downslope dispersion from the Caribou, and possibly other mineralization located in the basin at the headwaters of the Willow Creek drainage. The anomalies are patchy, and to the north, zones are located in flat swampy areas or on moraines. Anomalous Pb, Mo, and Ba are coincident with Zn in the Willow Creek basin. It is unclear whether anomalous values coincident with the A5 and A6 anomalies from the HLEM survey reflect local sources or downslope dispersion.

The distribution of anomalous Pb and Mo soil geochemistry is coincident in the upper headwaters of Fluorite Creek, dominantly south of baseline 5000N, between lines 18900 and 19500 E. An arrow-shaped Pb anomaly is located in the upper Fluorite Creek basin, extending over the ridge into the western limb of the Willow Creek basin. The northern extent of the anomaly likely reflect downslope dispersion of the anomalous source material, located at or near the ridge crest. Coincident with this Pb anomaly is a Mo anomaly that is somewhat smaller in size with a similar shape to that of Pb. It looks to be derived from material on the ridge dividing the Willow and Fluorite basins. It should be noted that the lithologies that outcrop in the probable source areas for these anomalies are dominantly trachyte flows, with lesser heterolithic tuffs and black shales and tuffaceous shales. These trachyte units are carbonate, quartz, barite and fluorite altered. Barite anomalies exist on both the east and west margins of the coincident Pb-Mo soil anomalies. The source for the western Ba anomaly may be buried or poorly exposed, as the anomaly lies within the talus field in the valley bottom of Fluorite Creek. The Ba anomaly to the east lies on the crest and eastern slope of the ridge between Willow and Fluorite Creeks, and may reflect values derived from barite veins found in float on the ridge crest that assayed up to 4.76% Ba.

A very prominent Ba-in-soil anomaly exists in the northern portion of the Willow Grid, extending from the edge of the grid at line 17400 E and is abruptly truncated at 20000 E, possibly due to thick moraine deposits. The fashion in which the anomalous geochemistry mimics topography suggests it may be a moderately southwest-dipping stratigraphic feature such as baritic shales.

8.2 Pyrite Creek Grid Soil Geochemistry

The Pyrite Creek Grid was established to investigate the area surrounding the massive pyrite showing on Pyrite Creek, in conjunction with the total field magnetics and HLEM surveys. Results from the geochemical survey are generally poor with respect to Pb and Zn values (Figure 5). The Pyrite Creek Showing does not have a strong base-metal geochemical signature.

9.0 WHOLE ROCK GEOCHEMISTRY

A total of 14 samples were analyzed for major and trace elements on the Starr Property. Results of these analyses and conserved element plots are appended. The objective of the whole rock analyses was to determine the magmatic affinity of the various volcanic units.

Classification diagrams based on major element geochemistry are not useful due to the degree of alteration of the volcanic units as evidenced by inconsistent classifications of samples. However, using a conserved (or immobile) element plot of Winchester and Floyd 1977 (Fig 6), classifications fall into the previously determined categories of trachyte, trachyandesite, and basalt (Mortensen, 1992). One sample, 130446, plots in the rhyolite field rather than the expected trachyte field (Appendix F).

On an x-y plot of conserved elements, co-magmatic rocks should plot on a line with unique slope, that passes through the origin. Alteration or magmatic differentiation should not affect this. Alteration or

differentiation that adds mass to the affected rock should cause the original composition to migrate towards the origin along the slope of the line. The reverse is true of alteration or differentiation that removes mass from the affected rock.

A conserved element plot of Nb versus Zr for the samples collected from the Willow Grid area clearly shows that the volcanic rocks are derived from the same magma source (Appendix F). The andesite, trachyte, and maroon (intrusive) trachyte plot along the same trend on this plot, with the exception of one sample, 130446. This sample was described as a dark grey trachyte, but no clues are evident as to why it does not plot on the trend with the other samples.

10.0 GEOPHYSICAL SURVEYS

Horizontal loop electromagnetic field (HLEM) and total magnetic field surveys were conducted on the Starr Property by Amerok Geosciences of Whitehorse, YT. A complete description of the method, theory and results of the survey are reported by Power (1999). The surveys were conducted on two areas of the property, the Willow Grid and the Pyrite Creek Grid. A total of 23.8 km of HLEM surveying was conducted on the Willow Grid and another 1.9 km on the Pyrite Creek Grid. Frequencies of 880, 3520, and 7040 Hz were used with a coil spacing of 100 metres, and 25 metre station spacing. Total magnetic field surveying was completed on the same area, using stations spaced 12.5 metres apart.

Three conductors were identified on the Pyrite Creek Grid. Conductors A7 and A8 appear to be fault offsets of the same conductor, interpreted to be a fault. Conductor A9 is coincident with graphitic shales exposed in Pyrite Creek canyon.

Six conductors were identified on the Willow Grid (A1-A6). Of these, four conductors (A1-A4) have been characterized as structural rather than stratigraphic. Conductor A2 is coincident with the Willow Showing, but it is interpreted to dip shallowly to the north. Stratigraphy dips to the south. Thus, the extensive creekbed exposure of pyrite mineralization at the Willow Showing appears to be due to a north-dipping fault.

Conductors A5 and A6 are interpreted to be stratigraphic targets. The conductors are approximately parallel with stratigraphy, and are roughly coincident with Pb, Zn, Ba anomalous soil geochemistry. A5 extends from L19250E 4813N to L18900E 4975N. The conductor appears to dip moderately to steeply north and has conductances ranging from 7.6 to 14 Seimens. On its west end, the anomaly is complex, suggesting that two or more conductors are present.

Anomaly A6 extends from L20300E 5238N to L19700E 5100N and is characterized by a variable width, high amplitude in-phase trough with weak to absent quadrature response. Response width narrows from 100 m in the east to nil on the west end of the anomaly. Conductance also decreases from west to east and this may be partially influenced by the narrowing of the conductor.

The total field magnetic survey data did not define any strong magnetic field trends on either grid, and HLEM conductors A5 and A6 show little correlation with the weak magnetic field trends in Willow Grid area.

11.0 DISCUSSION

The 1999 field program was focused on the Willow and Pyrite Creek areas of the Starr Property. Mapping, prospecting, rock and soil geochemical surveys combined with HLEM and total magnetic field geophysical surveys were conducted to assess these two areas.

Field work conducted in the Pyrite Creek area was intended to investigate massive pyrite occurrences within trachyte flows exposed in creek canyon walls. Significant pyrite is present within the trachyte units, which are overlying mudstone and tuffaceous mudstone units. The pyrite mineralization present in the canyon was identified during the 1998 program, and at the time appeared to have some characteristics of stratiform mineralization, especially at the trachyte/tuffaceous trachyte contact. In addition, pyrite clasts were noted in the tuffaceous unit, supporting the theory of stratiform massive sulphide mineralization present in this area. However, upon further examination in 1999, it was determined that pyrite occurs as wide veins near the contact, and is probably fault-related in nature. Geochemical and geophysical surveys were unable to identify anomalies that would indicate the presence of lead and zinc-rich massive sulphide mineralization.

The 1999 field program conducted on the Willow Grid area was designed to accomplish 3 main goals:

1. To follow up areas of anomalous Pb, Zn and Ba soil geochemistry defined by the 1998 field program with further soiling and focused prospecting. Fill-in soil geochemical coverage consisted of samples every 50 m on grid lines spaced 100 m apart over the area of interest (L19000E to 20300E).
2. To investigate the northern portion of the grid to determine the nature and extent of the Willow Showing, and to identify other possible showings at the same stratigraphic level. This included the extension of 1998 lines at least 500 m to the north.
3. To conduct HLEM and total magnetic field surveys over the Willow Showing and areas of anomalous Pb-Zn-Ba soil geochemistry to identify conductors that may be due to Pb-Zn-Ag rich volcanogenic massive sulphides.

The fill-in soil sampling was successful in providing further definition of the soil geochemical anomalies present, especially in the southern Willow Grid area. To some extent, the size and distribution of the anomalies identified by this program are influenced by downslope dispersion of parent material, derived from outcrops within the Willow and Fluorite Creek headwaters.

An extensive Ba anomaly exists in the northern extensions of the grid. This anomaly appears to be stratigraphic due to its thickness and the way it relates to topography. Baritic mudstones likely underlie this area.

Prospecting and mapping targeted on areas of anomalous Pb and Zn soil geochemistry identified in the 1998 program led to the discovery of two sphalerite vein showings. It should be noted that the occurrences that were found in this program were both located within or just below the HTUF unit, a calcareous trachytic tuff with heterolithic fragments. As at the Wolf deposit, the sphalerite is honey-coloured, making visual identification difficult. Anomalous Pb and Zn soil geochemistry may originate from this horizon, so it is possible that more showings exist along strike. Follow-up work is needed in Fluorite Creek and the northwest limb of the Fluorite Creek basin to determine the source for the 11.55% Zn value obtained from a pyrite-sphalerite-calcite veined trachyte flow cobble.

HLEM conductors A5 and A6 are the most interesting geophysical targets on the Willow Grid. The strike of these conductors is roughly parallel with stratigraphy and they lie within a complex package of felsic volcanics, argillite, and heterolithic trachytic tuff. The wide conductive portions of A6 are probably carbonaceous (graphitic) argillites based on their response and a very weak correlation with a subtle magnetic low. The wide, conductive portions of A6 also have apparent dips to the south, in accordance with the mapped geology. To the west, the apparent dip direction reverses and conductor appears to dip to the north. The variation in apparent dip indicated by the change in response asymmetry may be significant. While this may be caused by a true (though unlikely) dip reversal, there is an alternative explanation for this response. A south-dipping conductor with weak, slightly conductive mineralization in the footwall rocks to the north can also produce an asymmetric response. The presence of conductive mineralization on the north side of the stronger main conductor would elicit positive in-phase and quadrature response sufficient to distort the response. This elevated response

would be on the north flank of the main trough coincident with the stronger conductor and could be easily misinterpreted as an indication that the main conductor dips to the north (Power, 1999).

With respect to HLEM conductor A5, there may be targets of interest where the HLEM response narrows and especially where the source appears to be two conductors at L19100E 4800N and L19250E 4875N. Assuming the strata dips to the south, the source conductor of A5 and A6 appears to be a package of graphitic argillite thinning to the west. Outcrops along strike indicate a series of argillites, tuffaceous argillites, and heterolithic trachytic tuff should underlie the talus cover in the vicinity of the conductor. In the area of L19100E and L19200E, a weaker conductor appears immediately to the north of the main "argillite" conductor. This weaker conductor, in turn, appears to be underlain by slightly conductive footwall rocks. Zinc-rich sulphide mineralization preserved beneath graphitic argillite and underlain by stringer mineralization would be expected to produce a similar response. The alternative explanation, which attributes the response asymmetry to the true dip of the rocks, suggests a thin conductive argillite bed immediately overlain by a thin layer of less conductive rock, both dipping to the north. It should be noted that the low conductances detected on the western portion of the conductor are those commonly observed over zinc-rich sulphide deposits (Power, 1999).

Thus, based on favourable soil geochemistry, geology, and permissive electromagnetic conductors, two areas are targeted for follow-up diamond drilling. Both conductors A5 and A6 are proximal to anomalous Pb, Zn, Ba, and Mo in soils, and occur on strike with favourable stratigraphy. Geophysical interpretation indicates that L19100E, 4800N and 19250E, 4875N are the two best sites to test the A5 anomaly (Power, 1999). Anomaly A6 should be tested between 19900E and 20100E between 5075N and 5125N.

Respectfully submitted,

EQUITY ENGINEERING LTD.



Jason S. Weber, B.Sc., G.I.T.

Vancouver, British Columbia
November, 1999

APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

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APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

July 17 – August 4, 1999

CANADA) In the matter of an evaluation program on the Starr property

I, Jason S. Weber for Equity Engineering Ltd., 700 - 700 West Pender Street, Vancouver, B.C. do solemnly declare that a program of geological mapping, geochemical soil sampling and geophysics was carried out on the Lone 1-2, Cry 1-6, 15-38, 53-79, 83-162, Den 1-198, Red 1-14, Grey 1-13, Pelly 1-8, Far 1-17, Sly 1-38, Howl 1-24 claims between July 17-August 4, 1999.

The following expenses were incurred during the course of this work and in the compilation and reporting of results:

PROFESSIONAL FEES AND WAGES:

Jason Weber, G.I.T.	30.25 days @ \$460/day	13,915.00
Tim Sullivan, Prospector	20 days @ \$300/day	6,000.00
John Peters	23 days @ \$200/day	4,600.00
Matt Henry	22 days @ \$275/day	6,050.00
Devon McDiarmid	22 days @ \$225/day	4,950.00
Ryan Willoughby	22 days @ \$225/day	4,950.00
Clerical	16.5 hours @ \$25/hr	412.50
First Aid Attendant	22 days @ \$25/day	550.00
		\$ 41,427.50

EQUIPMENT RENTALS:

Chainsaw	17 days @ \$15/day	255.00
Fly Camp	141 days @ \$25/man-day	3,525.00
Generator (1kVA)	19 days @ \$10/day	190.00
Pentium Computer	14 days @ \$15/day	210.00
		\$ 4,180.00

EXPENSES:

Accommodation	\$ 509.00
Ground Geophysics	13,187.24
Airfare	4,382.00

Petrography	1,473.50
Camp Food	4,771.16
Camp Supplies	574.88
Chemical Analyses	15,770.22
Courier	88.28
Expediting	1,675.00
Freight	1,456.28
Helicopter Charters	18,955.68
Printing and Reproductions	302.31
Communications	1,053.87
Truck Rental (Non-Equity)	1,730.00
Drafting	
Other	<u>315.42</u>

\$ 66,244.84

SUB-TOTAL: \$ 111,852.34

REPORT: (estimated) \$ 12,350.00

Drafting \$ 2,500.00

Time \$ 8,500.00

Plotting \$ 1,350.00

SUB-TOTAL: \$ 124,202.34

PROJECT SUPERVISION:

12% on 1st \$100,000 \$ 12,000.00

10% on next \$400,000 \$ 2,420.23

8% on next \$1,500,000 \$ -

6% on balance of sub-total \$ -

\$ 14,420.23

SUB-TOTAL: \$ 138,622.57

G.S.T.: (7% on sub-total) \$ 9,703.58

TOTAL: \$ 148,326.15

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the
Province of British Columbia this

29th day of November, 19 99

)
)
) C. J. Allen

[Signature]

Notary Public for the Province of British Columbia

APPENDIX C

LIST OF PERSONNEL

LIST OF PERSONNEL

Field Crew

Chris Gooliaff, Amerock Geosciences
Box 5808
Whitehorse, YT Y1A 5L6

Matt Henry, Senior Sampler
700 - 700 West Pender St.
Vancouver, BC V6C 1G8

Devon McDiarmid, Sampler
21 Klondike Road
Whitehorse, YT Y1A 3L8

John Peters, Geologist
1550-409 Granville Street
Vancouver, BC V6C 1T2

Gary Smith, Amerok Geosciences
Suite 201 – 5600 52nd Avenue
Yellowknife, NT X1A 2R7

Tim Sullivan, Prospector
Box 579
Hazelton, BC VOJ 1YO

Jason Weber, Project Geologist
700 - 700 West Pender St.
Vancouver, BC V6C 1G8

Ryan Willoughby, Sampler
10060 Fundy Drive
Richmond, BC V7E 5M7

APPENDIX D

ROCK SAMPLE DESCRIPTIONS

AK	ankerite	BA	barite	BI	biotite
CA	calcite	CB	Fe-carbonate	CL	chlorite
CY	clay	EP	epidote	FL	fluorite
GE	goethite	GL	galena	GR	graphite
HE	hematite	JA	jarosite	KF	potassium feldspar
MG	magnetite	MN	Mn-oxides	MS	sericite
PY	pyrite	QZ	quartz	SI	silica
		SP	sphalerite		

ALTERATION INTENSITY

tr	trace	w	weak	m	moderate
		s	strong		

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113301	UTM 6814487.	N	UTM 356225.2	E	Strike Length Exp:	10 m	Metallics:	40%PY	<0.2	8	12	<1
Starr	Elevation 1340	m	Sample Width: 2	m	True Width:	2 m	Secondaries:	sGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Argillite to silt stone			114	12	1350	30
Comments: Unsure of bedding probably lying close to parallel to creek? Disseminated bedded, veiny and massive pyrite throughout this section of creek. Have to take grabs and run getting late.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113302	UTM 6814496.	N	UTM 356226.8	E	Strike Length Exp:	5 m	Metallics:	50%PY	0.6	20	4	<1
Starr	Elevation 1340	m	Sample Width: 50	cm	True Width:	cm	Secondaries:	sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Argillite			780	114	2560	50
Comments: Quick grab, several along this section-not much time, may come back.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113303	UTM 6814507.	N	UTM 356226.3	E	Strike Length Exp:	5 m	Metallics:	30%PY	<0.2	<2	13	<1
Starr	Elevation 1340	m	Sample Width: 5	m	True Width:	cm	Secondaries:	sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Argillite			104	156	3170	50
Comments: Downstream of 13301 and 13302. Veiny pyrite, bedded, and disseminated.												
Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113304	UTM 6814523.	N	UTM 356230.1	E	Strike Length Exp:		Metallics:	5%PY	0.2	8	2	<1
Starr	Elevation 1340	m	Sample Width: 5	m	True Width:	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Argillite			180	82	220	20
Comments: Same as above 15m downstream.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113305	UTM 6814535.	N	UTM 356231.2	E	Strike Length Exp:		Metallics:	60%PY	<0.2	2	11	1
Starr	Elevation 1340	m	Sample Width: 0	cm	True Width:	0 cm	Secondaries:	sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Carbon			32	12	3380	40
Comments: 15m downstream of 113304 on west side of creek.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Select	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113306	UTM 6814572.	N	UTM 356217	E	Strike Length Exp:		Metallics:	80%PY	0.4	8	8	<1
Starr	Elevation 1335	m	Sample Width: 0	cm	True Width:	0 cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Carbonate altered Argillite			368	12	1150	90
Comments: Beautiful massive pyrite 65m downstream of 113305 on east side, just up main stream from junction of small tributary.												

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type: Select	Alteration: sCA, sCB, sCL, QZ, BA?	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113307	UTM 6812907.	N	UTM 355306.4	E	Strike Length Exp: 5 m	Metallics: trCP, 30%PY, 10%SP	<0.2	<2	36	<1
	Elevation 1710	m	Sample Width: 30	cm	True Width: 30	cm	Secondaries: mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation		Vein		Host : Black calcite carbonate vein		<2	3810	940	430

Comments: Veins in outcrop as well as float across hillside. Once again found at end of day. Need to come back for chip sample (siderite ?).

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: mCA, mCB, sCL,wQZ,?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113308	UTM 6812916.	N	UTM 355303.9	E	Strike Length Exp: 5 m	Metallics: 40%PY	<0.2	<2	50	<1
	Elevation 1710	m	Sample Width: 50	cm	True Width: 0	cm	Secondaries: sGE, sHE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host :		22	678	3410	1300

Comments: 1m away from 113307

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: sCB, wQZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113309	UTM 6812960.	N	UTM 355292.4	E	Strike Length Exp:	Metallics: 60%PY	<0.2	<2	80	<1
	Elevation 1710	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: sGE, sHE, sJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host :		124	16	6720	750

Comments: Lots of carbonate precipitate. Very gossanous. 20m north of 113308. Lots of chlorite in host rock.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: sCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113310	UTM 6814550	N	UTM 354612.2	E	Strike Length Exp:	Metallics: 40%PY	<0.2	2	1	<1
	Elevation 1480	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: sGE, mHE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Carbonate altered siltstone?		20	4	5330	330

Comments: Top end of gully above last year's samples. Large square boulder lying on top of moss swamp. Definitely came from slope above.

Sample Number:	Grid North:	N	Grid East:	E	Type: Select	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113311	UTM 6812809.	N	UTM 355845	E	Strike Length Exp:	Metallics:	<0.2	<2	<1	<1
	Elevation 1775	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: mGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Barite altered trachyte		2	2	45200	10

Comments: Dark sections in rock. Seems to be a pocket. Can't trace it. Surrounding rock chert with abundant fine pyrite 10m west and downhill of 5000N 19450 E.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: sCA, sCB, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113312	UTM 6812885.	N	UTM 355781.5	E	Strike Length Exp: 30 m	Metallics: 60%PY	<0.2	4	2	3
	Elevation 1740	m	Sample Width: 2	m	True Width: 3	m	Secondaries: sGE, mHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Altered trachyte with calcite, FE-carbonate + massive pyrite		38	148	3890	<10

Comments: Right at 5000N 19350E. Messed up section 2-3m wide. Same rocks across gully, close to contact with shales.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sFV	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113313	UTM 6812697.	N	UTM 355421.2	E	Strike Length Exp:	30 m	Metallics:	10%PY	<0.2	2	5	1
	Elevation 1790	m	Sample Width: 1	m	True Width: 1	m	Secondaries:	mGE, mJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Fluorite altered trachyte			6	30	15400	510
Comments: Large outcrop.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Select/Grab	Alteration:	sCA	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113314	UTM 6812561	N	UTM 357896.9	E	Strike Length Exp:		Metallics:	50%PY	1	2	1	<1
	Elevation 1345	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Cherty siltstone			174	6	1200	50
Comments: Large cliff overlooking main valley at waterfall in steep section of creek. Just below samples, it looks like calcite-pyrite vein is pushing up and brecciating small section of cliff. Just above contact with argillite.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	sCA, mCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113315	UTM 6812202.	N	UTM 356086.8	E	Strike Length Exp:		Metallics:	20%PY, 5%SP	<0.2	28	9	<1
	Elevation 1715	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	wGE, mHE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Calcite, carbonate in green altered siltstone			218	9300	600	120
Comments: Lots in float above. Similar to samples 113311. Carbonate veins in same rock host, just below andesite.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	sCA	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113316	UTM 6812165.	N	UTM 356067	E	Strike Length Exp:		Metallics:	PY, SP	<0.2	<2	10	<1
	Elevation 1735	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	mGE, mHE, mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	calcite			192	2800	110	30
Comments: Same as 113315.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	sCA, sQZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113317	UTM 6812142	N	UTM 356022.2	E	Strike Length Exp:		Metallics:	40%PY, 5%SP	<0.2	42	39	<1
	Elevation 1740	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	mGE, mHE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :				606	30300	230	340
Comments: Same as 113315 and 113316. 10 m east of 9725N.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	sCA	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113318	UTM 6812120	N	UTM 356032.5	E	Strike Length Exp:		Metallics:	trGL	<0.2	<2	<1	6
	Elevation 1745	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	sGE, mHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Altered schist?			534	98	990	100
Comments: 25m E from 4700. Small cubes of galena, sporadic.												

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	sCA, ?CB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113319	UTM 6812098	N	UTM 355987.7	E	Strike Length Exp:		Metallics:	3%PY, 30%SP	<0.2	<2	36	1
	Elevation 1780	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	wGE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Calcite and quartz in light green brecciated trachyte			150	47900	730	220

Comments: 25m East of 4650. Veins of sphalerite, very nice sample not too far below outcrop.

Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	sCA, possCB, mQZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113320	UTM 6811999.	N	UTM 355985.2	E	Strike Length Exp:		Metallics:	trPY, 20%SP	<0.2	<2	9	<1
	Elevation 1805	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Chlorite altered with calcite veins and blebs			56	48700	2010	530

Comments: 25m below 20100 E 4575 N. Huge boulders at this point with veins of sphalerite brecciating host rock.

Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	sCA, possCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113321	UTM 6811871.	N	UTM 356013.9	E	Strike Length Exp: 15 m		Metallics:		<0.2	<2	<1	4
	Elevation 1970	m	Sample Width: 5	m	True Width: 5	m	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Altered trachyte			20	5000	530	150

Comments: Pale salmon, white, and green. Small pockets of sphalerite and disseminated pyrite on top of outcrop above 113322. Contact with altered schist and mudstone. Zone actually wider, possibly 20m.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sSI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113322	UTM 6811935.	N	UTM 355981.6	E	Strike Length Exp: 4 m		Metallics:	10%PY, trSP	<0.2	12	9	26
	Elevation 1935	m	Sample Width: 50	cm	True Width: 50	cm	Secondaries:	wGE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Altered mudstone very hard, possibly altered tuff			14	520	1030	480

Comments: Small clasts of pyrite and honey sphalerite (does not bleed easily with zinc zap) Disseminated pyrite. Base of large outcrop above 20100 E 4575 N. VERY INTERESTING.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Select	Alteration:	sCA, mCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113323	UTM 6811936.	N	UTM 355970	E	Strike Length Exp:		Metallics:	trCP, 30%PY, 1%SP	<0.2	64	58	6
	Elevation 1935	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	sGE, sHE, sHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :				256	25000	1370	880

Comments: Right next to 113322. Veins like this all through outcrop containing sphalerite and pyrite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	wCA, wMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113324	UTM 6812056.	N	UTM 356009.7	E	Strike Length Exp:		Metallics:	2%SP	<0.2	66	89	<1
	Elevation 1765	m	Sample Width: 15	cm	True Width: 0	cm	Secondaries:	wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Matic tuff?			260	17300	930	1100

Comments: Calcite +/- pyrite. Sphalerite veinlets in pale green weakly schistose tuff with dark green clasts <1cm. Veinlets seem to dominantly follow fabric but also cross-cut.

Rock Sample Descriptions

Project Name: Starr

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Sample Number:	Grid North:	N	Grid East:	20105	E	Type: Float	Alteration: wCA, wMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113325	UTM 6811954.	N	UTM 355969.4	E	Strike Length Exp:	Metallics: 2%PY, 2%SP		0.4	56	129	<1
	Elevation 1775	m	Sample Width: 10	cm	True Width: 0	cm	Secondaries: wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Mafic tuff			1845	34600	90	140
Comments: 10cm thick calcite and pyrite, sphalerite and hydrozincitic in mafic tuff.											
Sample Number:	Grid North:	N	Grid East:		E	Type: Grab	Alteration: sCA, sCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113326	UTM 6811900.	N	UTM 355998.7	E	Strike Length Exp: 30 m	Metallics: 1%PY, 1%SP		<0.2	84	63	<1
	Elevation 1850	m	Sample Width: 1	m	True Width: 1	m	Secondaries: sGE, sHE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Calcite, Fe-carbonate in mafic tuff			734	2590	9410	140
Comments: Right above 113323 on ledge.											
Sample Number:	Grid North:	N	Grid East:		E	Type: Select	Alteration: sCA, sCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113327	UTM 6811923.	N	UTM 355990.4	E	Strike Length Exp: 4 m	Metallics: 4%PY, 5%SP		<0.2	38	6	46
	Elevation 1875	m	Sample Width: 30	cm	True Width: 0	cm	Secondaries: mGE, wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Orange weathering tuff or altered trachyte			152	59700	490	400
Comments: Intersecting sphalerite veins at sample 113321. Nice honey sphalerite. Caribou showing.											
Sample Number:	Grid North:	N	Grid East:		E	Type: Float	Alteration: sQZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113328	UTM 6811466.	N	UTM 356543.2	E	Strike Length Exp:	Metallics: 1%GL		2.8	<2	1	1
	Elevation 1760	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: wJA, wMN	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Quartz			16800	176	120	40
Comments: 20900 E 4650 N.											
Sample Number:	Grid North:	N	Grid East:		E	Type: Grab	Alteration: sCA, sCB, mQZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113329	UTM 6812575.	N	UTM 355173.3	E	Strike Length Exp: 20 m	Metallics: 20%PY		1	12	58	4
	Elevation 1775	m	Sample Width: 1	m	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Altered trachyte			58	736	1410	540
Comments: Similar to samples 113311 and 113312. No zinc. Top of ravine.											
Sample Number:	Grid North:	N	Grid East:		E	Type: Grab	Alteration: sCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
113330	UTM 6810100.	N	UTM 358108	E	Strike Length Exp: 5 m	Metallics: trPY, 10%SP		1	2	1	546
	Elevation 1675	m	Sample Width: 30	cm	True Width: 30	cm	Secondaries: sGE, sHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Altered trachyte lense			84	16200	740	80
Comments: On ridge at BL on east side of bowl.											

Rock Sample Descriptions

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Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sCA	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113331	UTM 6810100.	N	UTM 358108	E	Strike Length Exp:	10 m	Metallics:	3%PY, 3%SP	0.8	12	3	207
Starr	Elevation 1675	m	Sample Width: 3	m	True Width: 3	m	Secondaries:	sGE, sHE, sHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host:	Altered trachyte			74	40800	1360	190
Comments: Took hydrozincite stained pieces across zone for 3m. Starts 3m from 113330.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	mCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113332	UTM 6810283.	N	UTM 357952.9	E	Strike Length Exp:	15 m	Metallics:	3%PY, 3%SP	0.4	32	9	15
Starr	Elevation 1680	m	Sample Width: 50	cm	True Width: 50	cm	Secondaries:	sGE, mHE, mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host:	Trachyte			142	14100	790	360
Comments: Stringers of pyrite and sphalerite through sample on north facing outcrop just uphill from 113331.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Select	Alteration:	sCA, sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113333	UTM 6810097.	N	UTM 358134.5	E	Strike Length Exp:		Metallics:	30%PY, 30%SP	1	2	54	11
Starr	Elevation 1675	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries:	mGE, mHE, sHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host:	Trachyte			970	49000	2390	550
Comments: Just below 113332.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Select	Alteration:	sCB, sQZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113334	UTM 6810090	N	UTM 358114.3	E	Strike Length Exp:		Metallics:	?GL, ?MO, PY, trSP	0.4	<2	<1	76
Starr	Elevation 1780	m	Sample Width: 8	cm	True Width: 8	cm	Secondaries:	mGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation		Vein		Host:	Quartz in Trachyte			842	4180	170	150
Comments: On top edge outcrop above 113333.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
113335	UTM 6811110.	N	UTM 356602.2	E	Strike Length Exp:		Metallics:	15%PY, 20%SP	0.4	12	89	<1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	sGE, sHE, mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation		Vein		Host:	Calcite-carbonate vein			122	5420	1200	130
Comments: 50m past end of line 21200 just below rusty andesite outcrop. Most likely came from above andesite.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124581	UTM 6813219.	N	UTM 357004	E	Strike Length Exp:		Metallics:	3-5%PY	3.2	20	75	14
Starr	Elevation 1385	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	mGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host:	Argillite			38	60	2480	390
Comments: Blobs of pyrite disseminated throughout. Large angular boulder in creek bed. Most likely from Willow showing. Some smaller float boulders and cobbles with massive pyrite here as well. 50m above claim line.												

Rock Sample Descriptions

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Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124582	UTM 6813241.	N	UTM 357012.8	E	Strike Length Exp:	Metallics: 3%PY	<0.2	12	7	8
	Elevation 1380	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Tuff		14	28	4330	170

Comments: Pyrite in fragments.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124583	UTM 6813285.	N	UTM 357035.4	E	Strike Length Exp: 0.5 m	Metallics: 5<%PY	0.2	6	29	3
	Elevation 1380	m	Sample Width: 3	cm	True Width: 30	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 132°/60°		Bedding		Host: Phyllitic tuff		60	122	5210	380

Comments: No veins. Pyrite disseminated throughout, some blebs as well. On both sides of 0.5m cherty section.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124584	UTM 6813293.	N	UTM 357039.1	E	Strike Length Exp:	Metallics:	<0.2	<2	15	1
	Elevation 1380	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host:		26	24	4840	230

Comments: Same as 124583, 0.5m away, downstream.

Sample Number:	Grid North:	N	Grid East:	E	Type: Chip	Alteration: sCA, mQZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124585	UTM 6813313.	N	UTM 357055	E	Strike Length Exp: 3 m	Metallics: 10%PY	0.2	<2	<1	<1
	Elevation 1370	m	Sample Width: 1.5	m	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation		Bedding		Host: (brecciated) Argillite?		624	26	230	<10

Comments: Fragmented section broken by veining. Large veins 3-5cm of massive pyrite. Large crystal structure, often radiating. 20m below 124584.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: sQZ, mFU	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124586	UTM 6813321	N	UTM 357063	E	Strike Length Exp:	Metallics: 3<%PY	<0.2	18	13	12
	Elevation 1370	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host:		58	26	28100	210

Comments: Right above 124585.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: sCB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124587	UTM 6813307.	N	UTM 357062.1	E	Strike Length Exp:	Metallics: sPY	<0.2	<2	41	4
	Elevation 1375	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Tuffaceous argillite		42	12	49200	1880

Comments: Fragments of pyrite in tuff. Just above 124586. Very likely from nearby. Strong iron carbonate.

Rock Sample Descriptions

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Sample Number:	Grid North:	N	Grid East:	E	Type:	Chip	Alteration:	sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124588	UTM 6813313.	N	UTM 357070.5	E	Strike Length Exp:	1 m	Metallics:	10<%PY	0.2	<2	49	4
Starr	Elevation 1380	m	Sample Width: 3	m	True Width:	cm	Secondaries:	sGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Silty tuffaceous argillite			108	10	39300	2400

Comments: 124585 to 124589 awesome showing. Should be trenched. Had to remove overburden, can see whole showing. Possibly 20m whole and in contact with 124585 (upstream), 124589 (downstream). Diagram in book. Originally appeared to be vein related but, upon further examination, possibly brecciated and massive in contact with tuff.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	wCA, mQZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124589	UTM 6813321.	N	UTM 357071.8	E	Strike Length Exp:	5 m	Metallics:	5<%PY	<0.2	<2	2	1
Starr	Elevation 1373	m	Sample Width: 4	m	True Width: 0	cm	Secondaries:	sGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Brecciated argillite			328	22	600	100

Comments: Possibly brecciated in contact with pyritic tuff. Large blebs of pyrite with large crystal structure as well as fine disseminated pyrite. Nice showing throughout darker sections.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	mCA, sCB, mQZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124590	UTM 6813339.	N	UTM 357081.8	E	Strike Length Exp:		Metallics:	5<%PY	<0.2	14	<1	1
Starr	Elevation 1365	m	Sample Width: 1	m	True Width:	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Brecciated Argillite			106	40	240	60

Comments: Large 12cm wide section of pyrite. Pyrite stockwork probably radiating crystal structure. Fine disseminated pyrite above. Taken 3m downstream of 124589 in creek bed.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Chip	Alteration:	sCB, ?QZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124591	UTM 6813034.	N	UTM 357186.5	E	Strike Length Exp:	2 m	Metallics:	>10%PY	<0.2	10	4	1
Starr	Elevation 1445	m	Sample Width: 5	m	True Width: 5	m	Secondaries:	sGE, sHE, mJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Altered brecciated Argillite			30	54	600	90

Comments: Connects to 124592. Rock becomes more altered as you head upstream. Jason Weber sampled 130200 5m upstream sample on east side in creek at base of scree slope. Large pyrite veins up to 5cm.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Chip	Alteration:	sCB,	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124592	UTM 6813012.	N	UTM 357184.9	E	Strike Length Exp:	2 m	Metallics:	>20%PY	0.4	18	3	1
Starr	Elevation 1445	m	Sample Width: 5	m	True Width: 5	m	Secondaries:	mGE, wHE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Carbonate altered and brecciated Argillite			86	104	650	80

Comments: Altered more at upstream end, buried in overburden. Grab sample at upstream end 124593. Diagram in book.

Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124593	UTM 6813012.	N	UTM 357184.9	E	Strike Length Exp:	2 m	Metallics:	>20%PY	0.6	16	1	1
Starr	Elevation 1445	m	Sample Width: 1	m	True Width: 0	cm	Secondaries:	mGE, mHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Carbonate altered Argillite			132	68	470	60

Comments: Possibly fault related? Alteration becomes greater upstream. 10m below Jason's sample 130200.

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Sample Number:	Grid North:	N	Grid East:	E	Type:	Chip	Alteration:	sCB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124594	UTM 6813013.	N	UTM 357171.9	E	Strike Length Exp:	2 m	Metallics:	>20%PY	0.6	18	6	2
	Elevation 1445	m	Sample Width: 2.5	m	True Width:	2.5 m	Secondaries:	sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Altered argillite			90	78	690	80

Comments: Very soft, had to dig out of scree slope. Rotten, large pyrite veins up to 5cm across. Disseminated pyrite on west side of creek across from 124593.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	?CB	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124595	UTM 6813453.	N	UTM 356518.8	E	Strike Length Exp:	10 m	Metallics:	trPY	<0.2	8	5	9
	Elevation 1500	m	Sample Width: 0	cm	True Width:	0 cm	Secondaries:	sGE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Argillite			10	144	1720	660

Comments: Lots of rusted boxwork and clasts. Outcrop running down south side of gully.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124596	UTM 6814080.	N	UTM 356086.6	E	Strike Length Exp:		Metallics:	20%PY	0.2	16	1	10
	Elevation 1400	m	Sample Width: 0	cm	True Width:	0 cm	Secondaries:	sGE, sHE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Tuffaceous argillite			58	4	4400	120

Comments: Large moraine base in creek top end of gully section.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	mQZ, sSI	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124597	UTM 6814133.	N	UTM 356124.4	E	Strike Length Exp:		Metallics:	1%GL, 50%PY, 20%SP	1.2	<2	<1	7
	Elevation 1380	m	Sample Width: 0	cm	True Width:	0 cm	Secondaries:	sGE, sHE, mJA, mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Chert			804	115500	2240	330

Comments: Very yellow precipitate. Neat blebs of pyrite framboids in vugs. Disseminated pyrite and sphalerite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sSI	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124598	UTM 6814413.	N	UTM 356232.3	E	Strike Length Exp:	4 m	Metallics:	30%PY	0.2	2	2	2
	Elevation 1245	m	Sample Width: 3	m	True Width:	0 cm	Secondaries:	sGE, sME, mMN, GY?	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Altered argillite			84	230	530	60

Comments: Small spiky precipitate. Looks like calcite or iron carbonate, maybe ????. On east side of creek upstream of moraine ridge toe. Argillite section continues downstream. Large 30cm vugs of rotten pyrite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	possCB, mQZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
124599	UTM 6814445.	N	UTM 356232.3	E	Strike Length Exp:	1 m	Metallics:	40%PY	<0.2	2	52	2
	Elevation 1345	m	Sample Width: 1	m	True Width:	0 cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Siltstone			28	70	13400	3700

Comments: Lots of pyrite with quartz clasts throughout. Finely disseminated to blobs possibly in contact with 124598 and 124600.

Rock Sample Descriptions

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Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: ?QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
124600	UTM 6814455.	N	UTM 356232.3	E	Strike Length Exp: 5 m	Metallics: 40%PY	0.2	6	6	1
	Elevation 1345	m	Sample Width: 3	m	True Width: 0 cm	Secondaries: sGE, sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Argillite - brecciated sections.		112	46	570	90

Comments: 5m downstream from 124599.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: <1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
130444	UTM 6812767.	N	UTM 355611.8	E	Strike Length Exp:	Metallics:	<0.2	2	3	3
	Elevation	m	Sample Width: 0	cm	True Width: 0 cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Grey-tan trachyte tuff		8	12	2710	390

Comments: For whole rock analysis. Homogeneous trachyte tuff - few inclusions - no sulphides. Slight sheen (sericite?) Columnar jointing.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
130445	UTM 6812566	N	UTM 355482.6	E	Strike Length Exp:	Metallics: <1%PY	<0.2	6	5	13
	Elevation	m	Sample Width: 0	cm	True Width: 0 cm	Secondaries: 5%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Pale grey trachyte flow		8	2	11810	520

Comments: For whole rock analysis. High jarosite sample - below heterolithic tuff unit.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: <1%SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
130446	UTM 6813047.	N	UTM 356038	E	Strike Length Exp:	Metallics: <1%PY	<0.2	2	1	<1
	Elevation	m	Sample Width: 0	cm	True Width: 0 cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Dark grey trachyte tuff		8	<2	870	270

Comments: On boulder talus - non weathered. For whole rock. Hard - no texture orientation.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: wCA, ?DO, wMS, wAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459551	UTM 6813265.	N	UTM 357023.6	E	Strike Length Exp:	Metallics: 5%PY	<0.2	6	5	9
	Elevation 1380	m	Sample Width: 10	cm	True Width: 0 cm	Secondaries: wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Foliated, felsic fragment tuff		12	112	1470	160

Comments: Boulder found in Willow Creek. Others in area look similar. Green grey and dark grey pyritic tuff? Weak fabric to rock.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: trMS, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459552	UTM 6813131.	N	UTM 356944.4	E	Strike Length Exp: 3 m	Metallics: tr-0.5%PY	<0.2	8	3	<1
	Elevation 1390	m	Sample Width: 10	cm	True Width: 5 cm	Secondaries: wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 115°/70° S		Bedding		Host: Shaley siltstone		<2	12	770	1230

Comments: Shaley siltstone and shale interbedded. Black with dark grey on fresh surface with very fine-grained wispy pyrite as disseminated and small aggregates. Very fine-grained wispy brown mineral. No I.D. Heavy - baritic?

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	trMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459553	UTM 6813086.	N	UTM 356914.5	E	Strike Length Exp:	3 m	Metallics:	1-3%PY	<0.2	6	2	1
Starr	Elevation 1420	m	Sample Width: 60	cm	True Width: 60	cm	Secondaries:	wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Silty shale			<2	14	240	290
Comments: Disseminated pyrite, very fine-grained. Spherical very fine-grained masses in silty shale.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	wMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459554	UTM 6813077.	N	UTM 356919.1	E	Strike Length Exp:		Metallics:	1-2%PY	<0.2	2	2	5
Starr	Elevation 1420	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	wHE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Coarse heterolithic breccia			8	22	1110	350
Comments: 3 large boulders buried in hillside at creek level. Coarse breccia (to 8cm) fragments in shaley matrix.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	?DO, wMS, ?SI, mAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459555	UTM 6812573.	N	UTM 356459.1	E	Strike Length Exp:	2 m	Metallics:	trPY	<0.2	<2	<1	7
Starr	Elevation 1550	m	Sample Width: 15	cm	True Width: 15	cm	Secondaries:	mHE, wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Maroon trachyte			<2	18	2650	170
Comments: Massive trachyte. Purple weathering grey-green on fresh - (difficult to find unweathered).												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	mAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459556	UTM 6812533.	N	UTM 356436	E	Strike Length Exp:		Metallics:	trPY	<0.2	4	9	20
Starr	Elevation 1560	m	Sample Width: 5	cm	True Width: 0	cm	Secondaries:	?GE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Trachyte tuff with argillite matrix			6	12	930	370
Comments: Black groundmass with orange Fe-carbonate weathered blebs. Granular trachyte fragments to 2mm.												
Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	wMS, wAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459557	UTM 6812419.	N	UTM 356394.2	E	Strike Length Exp:		Metallics:	~5%PY	<0.2	6	4	11
Starr	Elevation 1580	m	Sample Width: 5	cm	True Width: 0	cm	Secondaries:	trJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Argillaceous trachyte lapilli tuff			18	40	2600	400
Comments: Small cobble of argillaceous matrix lapilli tuff. Mostly felsic fragments but some argillite fragments as well. Very fine-grained pyrite in groundmass. Massive locally.												
Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	wMS, ?QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459558	UTM 6812420.	N	UTM 356377.1	E	Strike Length Exp:		Metallics:	10%PY	<0.2	<2	3	15
Starr	Elevation 1585	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Pyritic TRA			36	8	470	80
Comments: Yellow ironoxide on surface of very pyritic trachyte flow or tuff. Most texture gone. Net texture - pyrite.												

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459559	UTM 6812849	N	UTM 355715.2	E	Strike Length Exp:	70 m	Metallics: trPY	<0.2	24	10	20
	Elevation 1730	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: trGE, trJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: rusty shale			106	252	4160	360

Comments: Rusty shale just above contact with trachyte.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459560	UTM 6813071	N	UTM 355712.5	E	Strike Length Exp:		Metallics: 50%PY	0.6	26	<1	4
	Elevation 1560	m	Sample Width: 10	cm	True Width: 0	cm	Secondaries: wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Massive PY cobble			110	40	2280	<10

Comments: 10x7x5 massive pyrite boulder found in fluorite basin between L19100E and L19000E at ~5075m.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459561	UTM 6813144	N	UTM 355589.8	E	Strike Length Exp:		Metallics: 10-15%PY	<0.2	8	6	<1
	Elevation 155	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Pyrite/barite/CB vein			22	18	39200	<10

Comments: Barite-pyrite-calcite vein with 10% pyrite and trace fluorite. Cobble 20x10x10cm.

Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459562	UTM 6813002	N	UTM 355509.9	E	Strike Length Exp:		Metallics: ?PY	0.2	10	3	2
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: trLIM	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Tuffaceous Argillite			32	12	2900	870

Comments: Grey tuffaceous argillite (5x5x10 cm boulder) covered with blue coating - doesn't react to zinc zap.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459563	UTM 6812814	N	UTM 355407.2	E	Strike Length Exp:		Metallics: 5%PY	<0.2	34	8	45
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: mLIM	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Heterolithic tuff (calcareous)			92	26	5580	80

Comments: Flaggy weathering with pitted surface. Dominantly calcite and pyrite. Exhalite???

Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459564	UTM 6812128	N	UTM 356021.5	E	Strike Length Exp:		Metallics: 2%PY	<0.2	18	<1	2
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: trLIM	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host: Mudstone			<2	40	1380	330

Comments: 20x15x15cm boulder - concretion in mudstone? Pyrite dodecahedron.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

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Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	wCA, trMS, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459565	UTM 6811900.	N	UTM 355997.4	E	Strike Length Exp: 2 m	Metallics:	trPY	<0.2	<2	<1	4
	Elevation 1875	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: trFL	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Strongly foliated or mafic Heterolithic tuff			<2	28	850	200

Comments: Trace fluorite in 2x0.25m lens of trachyte or baritic trachyte in heterolithic tuff.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	sCA, ?DO, wMS, sAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459566	UTM 6813002.	N	UTM 355509.9	E	Strike Length Exp: 20 m	Metallics:	trPY, trSP	<0.2	<2	<1	<1	
	Elevation 1890	m	Sample Width: 20	cm	True Width: 20	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation 110°/70° S				Host : Ankerite altered tuff?			6	14	610	150	

Comments: Ankerite altered host rock to Caribou showing. Cut by stringers of calcite and quartz locally.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	trCA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459567	UTM 6811793.	N	UTM 355984.6	E	Strike Length Exp: 7 m	Metallics:		<0.2	<2	55	4	
	Elevation 1910	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation				Host : Mafic volcanic			<2	60	505	1620	

Comments: Mafic volcanic for whole rock analysis.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	trCA, trMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459568	UTM 6812111.	N	UTM 355678.4	E	Strike Length Exp: 4 m	Metallics:		<0.2	<2	73	1	
	Elevation 1870	m	Sample Width: 40	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation				Host : Andesite			<2	40	875	1470	

Comments: Light grey weathering to tan weathering green-grey andesite with amygdulites (calcite) to 1cm.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	trCA, wMS, mSI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459569	UTM 6811911.	N	UTM 355762	E	Strike Length Exp:		Metallics:	2%PY	<0.2	4	<1	1
	Elevation 188	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: trHE, mJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation				Host : Silicified trachyte ash tuff			36	6	4770	30	

Comments: Rusty trachyte ash tuff. Very fractured. Silicified.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	tr-wCA, trMS, mA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459570	UTM 6810102	N	UTM 358117.7	E	Strike Length Exp: 5 m	Metallics:	1%PY, 1%SP	0.2	10	<1	8	
	Elevation 1670	m	Sample Width: 1.5	m	True Width: 1	m	Secondaries: w-mJA, whZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation				Host : Ankerite-altered trachyte tuff			30	6540	850	170	

Comments: Dig up loose outcrop of hydrozincite stained trachyte tuff. Yellow-brown weathering. Grab over 1.5 m.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	trCA, trMS, mAK	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459571	UTM 6810102	N	UTM 358122.5	E	Strike Length Exp: 5 m	Metallics:	3%SP	0.2	4	<1	10
	Elevation 1670	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: wJA, mHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Ankerite altered trachyte tuff			30	20000	990	100
Comments: Select sample of 459572.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	wCA, ?QZ, m-sAK	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459572	UTM 6810065.	N	UTM 358053.1	E	Strike Length Exp: 40 m	Metallics:	trPY, trSP	<0.2	2	11	3
	Elevation 1685	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: tr-wHZ	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 185°/35° E		Vein		Host : Trachyte flow			2	3210	1710	1520
Comments: Trace pyrite/sphalerite in calcite veinlets.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	sAK	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459573	UTM 6809973	N	UTM 357517	E	Strike Length Exp: 7 m	Metallics:		0.2	2	6	<1
	Elevation 1725	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 110°/60° S		Bedding		Host : Ankerite (lapilli) tuff			36	64	140	200
Comments: Orange ankerite tuff.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	?DO, sAK	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459574	UTM 6809867.	N	UTM 357517.5	E	Strike Length Exp: 40 m	Metallics:	trPY, ?SP	0.2	<2	40	<1
	Elevation 1825	m	Sample Width: 5	cm	True Width: 5	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Ankerite-altered tuff			<2	100	23400	710
Comments: Calcite veinlet 1cm across with very fine-grained grey mineral selvages (locally).											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:		Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459575	UTM 6811767.	N	UTM 357070.9	E	Strike Length Exp: 4 m	Metallics:		<0.2	<2	6	11
	Elevation 1685	m	Sample Width: 15	cm	True Width: 15	cm	Secondaries: sHE	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Maroon Trachyte			8	122	330	190
Comments: Maroon trachyte. Fine, clear, colourless needles. Random orientations.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	tr-wAK	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459576	UTM 6811723.	N	UTM 356912.6	E	Strike Length Exp: 10 m	Metallics:		<0.2	4	10	3
	Elevation 1700	m	Sample Width: 25	cm	True Width: 25	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Grey trachyte			4	50	2640	1100
Comments: Weakly amygdaloidal grey trachyte for whole rock. 75m up ridge from 459575.											

Rock Sample Descriptions

Project Name: Starr

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Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: wAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459577	UTM 6811542.	N	UTM 356705.1	E	Strike Length Exp: 2 m	Metallics:	<0.2	4	5	3
	Elevation 1780	m	Sample Width: 10	cm	True Width: 10	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Brown/maroon heterolithic tuff		<2	26	2110	130

Comments: Brown/maroon weathering heterolithic tuff with silver sheen, strongly foliated.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: wCA, ?DO, sAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459578	UTM 6811369.	N	UTM 356457.1	E	Strike Length Exp: 2 m	Metallics:	0.2	6	<1	<1
	Elevation 1895	m	Sample Width: 25	cm	True Width: 25	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Dolomite- or Ankerite-altered lens in foliated heterolithic tuff		82	24	18340	230

Comments: Lens in foliated heterolithic tuff. Knobby weathering to matrix, and pitted surface to lens.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459579	UTM 6811411.	N	UTM 356421.8	E	Strike Length Exp: 3 m	Metallics:	<0.2	10	6	4
	Elevation 1930	m	Sample Width: 20	cm	True Width: 20	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Maroon trachyte		4	162	1820	270

Comments: Maroon - brown weathering trachyte, massive, very fine-grained. Blocky fracture. Whole rock.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459580	UTM 6811319.	N	UTM 356399	E	Strike Length Exp:	Metallics:	0.2	<2	<1	<1
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Heterolithic tuff		4	2	790	260

Comments: Whole rock analysis.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: wCA, trMS, wAK, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459581	UTM 6812662.	N	UTM 355392.3	E	Strike Length Exp: 1 m	Metallics: trPY	<0.2	40	3	1
	Elevation 1795	m	Sample Width: 15	cm	True Width: 15	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Tuffaceous argillite		4	52	4410	340

Comments: Tuffaceous argillite cut by calcite +/- barite veinlets. Fairly heavy rock. Barite?

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: mCA, wMS, trFL, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459582	UTM 6812637.	N	UTM 355401.1	E	Strike Length Exp:	Metallics: 50%PY	3	68	18	60
	Elevation 1815	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Massive pyrite		190	14	670	50

Comments: Massive pyrite cobbles to 10x5x5cm. At least 10 in a 2x2m area. Fluorite, calcite, and barite in pyrite.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	m-sCA, ?BA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459583	UTM 6812631.	N	UTM 355389.8	E	Strike Length Exp:	Metallics:	trPY	<0.2	4	3	12
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host : Carbonate-altered tuff			18	40	8240	510
Comments: Possible barite in carbonate-altered tuff.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	wCA, trMS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459584	UTM 6812631.	N	UTM 355389.8	E	Strike Length Exp:	Metallics:	<1%PY	0.4	<2	41	<1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :			<2	42	2810	160
Comments: Possible sphalerite in tuff (argillaceous matrix heterolithic tuff).											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	wCA, sBA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459585	UTM 6812572.	N	UTM 355650.9	E	Strike Length Exp:	Metallics:		<0.2	<2	<1	<1
Starr	Elevation 1885	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host : Barite vein			4	2	47600	<10
Comments: Barite vein (?) float. All pieces are 3x3x3 (approx) in size. 5 m NW of 4650N, L1900E											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459586	UTM 6815299.	N	UTM 350556.1	E	Strike Length Exp:	Metallics:	25%PY	1.8	24	10	<1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host : Dark grey trachyte flow			66	8	6090	<10
Comments: Vic's grab sample. Pyritic trachyte.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:		<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459587	UTM 6815291.	N	UTM 350557.6	E	Strike Length Exp:	Metallics:	PY	1.2	<2	5	<1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host : Dark grey trachyte tuff			12	6	3360	30
Comments: Grey vein in trachyte tuff. 10 m downstream from 459586.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	wCA	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459588	UTM 6815280	N	UTM 350560	E	Strike Length Exp: 4 m	Metallics:	25%PY	1.4	12	9	4
Starr	Elevation 1170	m	Sample Width: 10	cm	True Width: 10	cm	Secondaries: wJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host : Argillaceous tuff			60	8	8130	90
Comments: Pyrite vein in tuff, just below trachyte/argillite contact.											

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration:	?QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459589	UTM 6812903.	N	UTM 356828	E	Strike Length Exp:	Metallics:	5%PY	<0.3	15	2	1
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Argillite			49	27	143	40

Comments: Disseminated pyrite in argillite at 130343 (1998) - Willow Creek showing.

Sample Number:	Grid North: 5275	N	Grid East: 20100	E	Type: Float	Alteration: ?MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>	
459590	UTM 6812702.	N	UTM 355349.1	E	Strike Length Exp:	Metallics: 10%PY	0.4	2	2	18	
	Elevation 1565	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: m-sJA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Argillite or tuffaceous argillite		44	10	1060	50	

Comments: Yellow-rusty weathering pyritic argillite or tuffaceous argillite downslope (north) of A6 conductor.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	wAK	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459591	UTM 6812736.	N	UTM 355381.5	E	Strike Length Exp:		Metallics:		<0.2	6	<1	<1
	Elevation 1650	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Amygdaloidal trachyte			6	8	5000	240

Comments: Amygdaloidal trachyte. Ankerite amygdules to 0.5 cm.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	5%CB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>	
459602	UTM 6813050.	N	UTM 357168.7	E	Strike Length Exp:	5 m	Metallics:	<5%PY	<0.2	2	3	<1	
	Elevation 1440	m	Sample Width:	0	cm	True Width:	0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 140°/80° N		Bedding		Host :	Argillite			<2	34	960	270	

Comments: Fe-carbonate/pyrite veinlets in slate/argillite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	60%CA, CB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459603	UTM 6813258.	N	UTM 357466.1	E	Strike Length Exp:		Metallics:		<0.2	<2	1	1
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host :	Arallite			<2	6	90	60

Comments: Increasing boxwork Fe-carbonate/calcite infilling.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>	
459604	UTM 6814576.	N	UTM 356207.6	E	Strike Length Exp:	4 m	Metallics: 50%PY	<0.2	8	9	<1	
	Elevation	m	Sample Width:	0	cm	True Width:	0 cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 150°/50°		Bedding		Host :	Argillite		446	10	1560	60	

Comments: Weak marcasite? Massive and veined pyrite in boxwork argillite.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: <1%CA, 20%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459605	UTM 6813726.	N	UTM 356346.7	E	Strike Length Exp:	Metallics: 2%PY	0.2	10	3	14
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: <1%HE, <1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Trachyte flow			54	10	2850
Comments: Increasing alteration (frothy) with cavities. Pyrite disseminated. Green sericite with rusty coating.										200

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%MS, 10%SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459606	UTM 6815314	N	UTM 350539.8	E	Strike Length Exp: 50 m	Metallics: 60%PY	<0.2	6	8	9
Starr	Elevation 1195	m	Sample Width:	cm	True Width: 0	cm	Secondaries: 1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation 010°/80° E		Fault		Host : Trachyte flow			6	6	3110
Comments: Top of Pyrite creek. Grey trachyte with pyrite in veins and disseminated in proximity of fault.										390

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: <1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459607	UTM 6815351.	N	UTM 350501.7	E	Strike Length Exp: 2 m	Metallics: 1%PY	<0.2	2	1	7
Starr	Elevation 1200	m	Sample Width: 2	cm	True Width: 0	cm	Secondaries: 1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Trachyte tuff			8	2	14850
Comments: Dark grey trachyte tuff - disseminated pyrite.										140

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 1%MS, 2%QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459608	UTM 6815369.	N	UTM 350464	E	Strike Length Exp: 6 m	Metallics: <1%PY	<0.2	<2	1	3
Starr	Elevation 1200	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: <1%HE, 1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Trachyte tuff			14	2	15010
Comments: Dark grey trachyte tuff cross-cut with fine (up to 4mm) quartz veinlets.										30

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459609	UTM 6815362.	N	UTM 350475.9	E	Strike Length Exp: 5 m	Metallics: 2%PY	<0.2	<2	2	5
Starr	Elevation 1200	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: <1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation 020°/80° E				Host : Argillite tuff			10	66	17210
Comments: Black argillite tuff with disseminated fine pyrite. Shear zone boundary.										90

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 3%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459610	UTM 6815362.	N	UTM 350469	E	Strike Length Exp:	Metallics: <1%PY	<0.2	2	<1	3
Starr	Elevation 1200	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 2%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Trachyte tuff			20	2	5510
Comments: Dark grey trachyte with fine fluorite crystals in proximity of shear.										40

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North: 5050	N	Grid East: 20900	E	Type: Float	Alteration: 1%DO, 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459611	UTM 6811728.	N	UTM 356821.3	E	Strike Length Exp:	Metallics: <1%GL, 2%PY	<0.2	8	6	8
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Trachyte tuff		8	22	2090	170

Comments: Grey-green tuff with disseminated pyrite ± galena. Rusty, clay pockets - from large outcrop.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 5%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459612	UTM 6811246	N	UTM 356562.9	E	Strike Length Exp: 5 m	Metallics: 4%PY	<0.2	2	2	3
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Trachyte tuff		8	6	1630	380

Comments: Dark grey trachyte tuff - disseminated pyrite (fine) brassy. In proximity to major fault zone above soil anomaly.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration: 3%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459613	UTM 6811453.	N	UTM 356754.1	E	Strike Length Exp: 500 m	Metallics: ~1%PY	<0.2	2	8	9
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Heterolithic tuff	Secondaries: 2%AK	2	12	2860	530

Comments: Fine disseminated pyrite (oxidized) in heterolithic tuff (phyl) green coloured - sericite - close to andesite tuff contact.

Sample Number:	Grid North: 4700	N	Grid East: 01700	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459614	UTM 6810891.	N	UTM 357057.7	E	Strike Length Exp: 10 m	Metallics: 4%PY	0.2	26	36	16
	Elevation 1800	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation 080°/45° E		Bedding		Host : Grey trachyte tuff		24	8	2480	520

Comments: Slightly rusty.

Sample Number:	Grid North: 4750	N	Grid East: 21850	E	Type: Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459615	UTM 6810862.	N	UTM 357197.9	E	Strike Length Exp: 1 m	Metallics: 30%PY	1.6	96	15	29
	Elevation 1800	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation		Bedding		Host : Dark grey trachyte flow	Secondaries: 10%JA	1175	12	2750	120

Comments: Crushed pyrite trachyte flow - shear zone? in snow chute - mostly obscured.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: <1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459616	UTM 6810879	N	UTM 357173.6	E	Strike Length Exp: 5 m	Metallics: <1%PY	0.2	6	2	18
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Grey trachyte flow	Secondaries: 10%JA	8	4	3360	110

Comments: Adjacent to pyrite shear zone.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459617	UTM 6810859.	N	UTM 357210.7	E	Strike Length Exp:		Metallics: 60%PY	0.6	24	18	15
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 2%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		330	68	2580	150
Comments: Massive pyrite vein in trachyte flow near shear zone.											
Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration: 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459618	UTM 6810862.	N	UTM 357243.1	E	Strike Length Exp:		Metallics: 2%PY	<0.2	<2	1	7
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		8	14	3850	180
Comments: Slightly rusty decreasing jarosite. Disseminated pyrite - coarse to 0.5mm											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459619	UTM 6810883	N	UTM 357243.1	E	Strike Length Exp:		Metallics: 2%PY	0.2	<2	1	4
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 5%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		28	2	9840	30
Comments: Continuation of anomalous horizon. No gouge or pyrite seams - disseminated.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459620	UTM 6810865.	N	UTM 357321.3	E	Strike Length Exp:		Metallics: 40%PY	0.6	<2	5	9
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 2%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		48	6	3890	20
Comments: Lithology thickens up to 40m wide .Pyrite disseminated throughout. Entire strike length of zone ~ 70m in outcrop											
Sample Number:	Grid North:	N	Grid East:	E	Type:		Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459621	UTM 6810832.	N	UTM 357337.1	E	Strike Length Exp:		Metallics: 2%GL, 5%PY	0.4	4	4	13
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 2%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		24	2	8350	40
Comments: Sulphides (coarse - euhedral) disseminated throughout float of similar material above - wide zone.											
Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459622	UTM 6810850	N	UTM 357317.9	E	Strike Length Exp:		Metallics: 90%PY	<0.2	2	3	19
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte flow		16	24	6170	320
Comments: Fine disseminated pyrite throughout. Deep orange/red weathering.											

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North: 4900	N	Grid East: 21100	E	Type:	Alteration: 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459623	UTM 6811473.	N	UTM 356860	E	Strike Length Exp:	Metallics: 10%PY	0.2	<2	4	5
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: <1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Dark grey trachyte flow		16	26	620	240

Comments: Finely disseminated pyrite through blocky weathered trachyte outcrop. Located below heterolithic tuff.

Sample Number:	Grid North: 5000	N	Grid East: 22880	E	Type: Grab	Alteration: 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459624	UTM 6810161.	N	UTM 358153.6	E	Strike Length Exp:	Metallics: 15%PY, ?SP	0.2	14	15	10
	Elevation 1760	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Pale-dark grey trachyte flow		28	22	1060	590

Comments: Highly altered fine sulphides. Iron weathering.

Sample Number:	Grid North: 5000	N	Grid East: 22870	E	Type: Grab	Alteration: 2%MS, 2%SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459625	UTM 6810149.	N	UTM 358126.8	E	Strike Length Exp:	Metallics: 15%PY	<0.2	4	3	6
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 4%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Light grey trachyte flow		20	12	930	420

Comments: Deeply weathered, vuggy, fine pyrite in clumps, cherty look.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%CL	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459626	UTM 6810141.	N	UTM 358122.3	E	Strike Length Exp:	Metallics: 3%PY	0.2	14	8	2
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Trachyte tuff		20	18	1090	500

Comments: Dark grey to black matrix (Argillite?). Dark green alteration (Chlorite?). Deeply weathered - rusty coating.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Alteration: 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459627	UTM 6810139.	N	UTM 358058.9	E	Strike Length Exp:	Metallics: 10%PY	<0.2	2	6	5
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 3%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Dark grey trachyte flow		6	14	1430	430

Comments: Cavity rich - fine pyrite in clumps and disseminated.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459628	UTM 6810125.	N	UTM 358046.9	E	Strike Length Exp:	Metallics: 5%PY	<0.2	2	1	9
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 3%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		16	46	1370	440

Comments: Pyrite/black clay filled, irregular cavities.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: 1%MS, 10%QZ, SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459629	UTM 6810123.	N	UTM 357961.7	E	Strike Length Exp:	Metallics: 15%PY	0.6	28	28	19
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Grey trachyte tuff breccia		236	21400	1040	150

Comments: Pyrite veinlets and disseminations. Quartz veinlets.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 1%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459630	UTM 6810298.	N	UTM 358090.6	E	Strike Length Exp:	Metallics: 1%PY	<0.2	<2	<1	4
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		<2	52	1460	330

Comments: Fine pyrite disseminations.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: 1%MS, 1%SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459631	UTM 6810398.	N	UTM 357930.3	E	Strike Length Exp:	Metallics: 5%PY	<0.2	44	1	4
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey siliceous trachyte flow		376	70	380	330

Comments: Vuggy cavities - pyrite clumps.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459632	UTM 6810404.	N	UTM 357956.8	E	Strike Length Exp:	Metallics: 3%PY	<0.2	2	9	8
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Heterolithic tuff		8	12	2530	400

Comments: Heterolithic tuff (grey-rusty) with blebs of sulphides.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float	Alteration: 2%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459633	UTM 6810424.	N	UTM 357941.4	E	Strike Length Exp:	Metallics: 30%PY	0.2	2	3	27
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		16	8	2780	160

Comments: Very fine disseminated pyrite in competent, rusty weathered, blocky rock.

Sample Number:	Grid North:	5050	Grid East:	22495	E	Type: Grab	Alteration: 1%CB, 5%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459634	UTM 6810446.	N	UTM 357926	E	Strike Length Exp:	Metallics: 2%PY	<0.2	10	8	27	
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>	
Starr	Orientation				Host : Argillite/grey-green trachyte tuff		34	12	3720	410	

Comments: Highly seritized green pyritic tuff. Frothy texture.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North: 4975	N	Grid East: 22370	E	Type: Grab	Alteration: <1%CB	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459635	UTM 6810446.	N	UTM 357837.5	E	Strike Length Exp: 5 m	Metallics: <1%PY	0.2	2	31	2
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Heterolithic tuff- tan, blocky		<2	102	1580	1710

Comments: Unresolved dark mineral - sphalerite.

Sample Number:	Grid North:	N	Grid East:	E	Type: Float + Grab	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459636	UTM 6810444	N	UTM 357891.4	E	Strike Length Exp:	Metallics: <1%PY	<0.2	<2	1	5
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Tan heterolithic tuff		<2	30	1390	330

Comments: Large 3cm fluorite crystal.

Sample Number:	Grid North: 5040	N	Grid East: 22350	E	Type: Float	Alteration: 1%MS, 1%SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459637	UTM 6810470.	N	UTM 357869.1	E	Strike Length Exp:	Metallics: 8%PY	<0.2	12	15	1
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Heterolithic tuff		44	20	3750	860

Comments: Highly weathered - boxwork, oxidized pyrite in concentrated pockets.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%MS	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459638	UTM 6811369.	N	UTM 357051.6	E	Strike Length Exp:	Metallics: 25%PY	0.2	<2	<1	7
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		14	6	1470	190

Comments: Fine disseminated sulphides in sericite-rich trachyte flow. Small outcrop in creek bed. Runoff from soil anomaly further up canyon.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%MS, SI	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459639	UTM 6811176.	N	UTM 357121.3	E	Strike Length Exp: 5 m	Metallics: 10%PY	<0.2	<2	<1	3
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		8	2	640	200

Comments: Knob at middle of cirque bottom. Very fine pyrite disseminations.

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: <1%MS, 1%QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459640	UTM 6811366.	N	UTM 357140	E	Strike Length Exp:	Metallics: 40%PY	<0.2	<2	<1	4
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
Starr	Orientation				Host : Pale grey trachyte flow		16	2	1510	180

Comments: Very fine disseminated pyrite throughout quartz veinlets - parallel.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	2%MS	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459641	UTM 6811535.	N	UTM 356566	E	Strike Length Exp:		Metallics:	5%SP	<0.2	<2	3	1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Heterolithic tuff			<2	374	800	170

Comments: In boulder talus, mostly andesite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Float	Alteration:	1%MS, 2%QZ	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459642	UTM 6811545.	N	UTM 356437.4	E	Strike Length Exp:		Metallics:	3%PY	0.2	44	34	<1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Trachyte tuff - tan/brown			122	144	2420	970

Comments: Quartz veined tuff with disseminated pyrite.

Sample Number:	Grid North: 3800	N	Grid East: 17600	E	Type: Float	Alteration:	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)	
459643	UTM 6813405.	N	UTM 353723.8	E	Strike Length Exp:	Metallics: 10%PY	<0.2	6	3	5	
	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries: 2%JA	Pb (ppm)	Zn (ppm)	Ba (ppm)	P (ppm)
Starr	Orientation				Host : Trachyte flow, dark grey		10	2	6470	50	

Comments: Fe-ox-creted. Fine pyrite evenly disseminated. Near lead anomaly.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	2%MS, 1%SI	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459644	UTM 6813298	N	UTM 353887.3	E	Strike Length Exp:		Metallics:		0.2	4	70	<1
Starr	Elevation 1460	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	3%HE, 1%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Ttrachyte flow breccia			<2	96	860	980

Comments: Increasing alteration - shear zone. Iron oxides all through.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	QZ, SI	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459645	UTM 6813368.	N	UTM 354055.4	E	Strike Length Exp:		Metallics:	30%PY	0.4	14	4	11
Starr	Elevation 1495	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	3%JA	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Pale grey trachyte flow			32	<2	10140	180

Comments: Quartz veinlets. Dark finely disseminated pyrite.

Sample Number:	Grid North:	N	Grid East:	E	Type:	Grab	Alteration:	1%MS, 1%SI	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)
459646	UTM 6813508	N	UTM 354439.5	E	Strike Length Exp:		Metallics:	5%PY	<0.2	6	10	10
Starr	Elevation 1615	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:		<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>	<u>P (ppm)</u>
	Orientation				Host :	Dark grey trachyte tuff			12	<2	3430	500

Comments: Disseminated pyrite. Dark tuff in otherwise pale grey trachyte flow outcrop.

Rock Sample Descriptions

Project Name: Starr

Project: PTH99-02

NTS: 105 G/5,12

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 2%QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459647	UTM 6812925	N	UTM 356828.7	E	Strike Length Exp:	Metallics:	<0.3	13	3	-1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Argillite			26	48	137
Comments: Near 130373 - Willow Creek										140

Sample Number:	Grid North:	N	Grid East:	E	Type: Grab	Alteration: 1%QZ	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459648	UTM 6812905	N	UTM 356845.5	E	Strike Length Exp:	Metallics:	<0.3	7	2	-1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Argillite			21	32	122
Comments: Near 130374										40

Sample Number:	Grid North:	N	Grid East:	E	Type: Chip	Alteration:	<u>Ag (ppm)</u>	<u>As (ppm)</u>	<u>Cu (ppm)</u>	<u>Mo (ppm)</u>
459649	UTM 6812925	N	UTM 356828.7	E	Strike Length Exp:	Metallics: <1%PY	0.3	11	4	-1
Starr	Elevation	m	Sample Width: 0	cm	True Width: 0	cm	Secondaries:	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ba (ppm)</u>
	Orientation				Host : Argillite			56	29	187.5
Comments: Resample 130373.										50

APPENDIX E

PETROGRAPHIC STUDIES



Vancouver Petrographics Ltd.

8080 GLOVER ROAD, LANGLEY, B.C. V3A 4P9
PHONE (604) 888-1323 • FAX (604) 888-3642

Report 990491 for:

**Jason Weber,
Equity Engineering Ltd.,
700 - 700 West Pender Street,
Vancouver, B.C., V6C 1G8**

September, 1999

Project: PTH99-02 (Starr Property)

Samples: TS-1 to TS-14 (14 thin sections)

Summary:

1.1 Trachy-Latite

Sample TS-1 is an autobrecciated trachy-latite flow containing minor phenocrysts of K-feldspar and quartz in a groundmass dominated by cryptocrystalline plagioclase and K-feldspar. The rock was autobrecciated moderately, with fragments healed by a slightly coarser intergrowth of plagioclase and K-feldspar. Although textures are not definitive, the rock is more probably a flow than a tuff. Interstitial and replacement patches are of barite and quartz. A few veinlets are of quartz. Late, braided veinlets are of jarosite/limonite and sericite.

1.2 Trachyte

Sample TS-2 is a very fine grained trachyte flow containing lathy K-feldspar and irregular patches of equant K-feldspar in a cryptocrystalline matrix of K-feldspar. In an alteration zone up to 1 cm wide K-feldspar is replaced strongly by sericite. A few replacement lenses and veinlets are of quartz and K-feldspar with minor sericite. A slightly boudinaged veinlet is of K-feldspar. Late veinlets are of limonite.

Sample TS-3 is a hypabyssal trachyte dike, intrusion, or core of a thick flow. It contains minor phenocrysts of K-feldspar in a groundmass of interlocking, slightly lathy K-feldspar and much less abundant plagioclase, with moderately abundant disseminated patches of ankerite (altered moderately to hematite/limonite).

Sample TS-5 is a fine grained trachyte flow containing abundant prismatic K-feldspar grains in a sparser matrix of extremely fine grained quartz/plagioclase, moderately abundant replacement patches of pyrite and minor patches of sericite. Some feldspar grains appear to contain relic plagioclase, suggesting that some of the K-feldspar was formed by replacement of plagioclase. However, identification of plagioclase is not certain. Orientation of feldspars produced a weak flow-foliation. A coarser grained, dikelike zone a few mm wide at one end of the sample is of similar texture, but with less abundant K-feldspar and more abundant matrix quartz.

Sample TS-8 is a fine grained trachyte flow dominated by lathy to equant K-feldspar with lesser interstitial quartz and minor plagioclase phenocrysts. Ankerite, replaced slightly by limonite/hematite, forms ragged replacement patches in K-feldspar. Minor plagioclase phenocrysts were replaced by sericite and/or K-feldspar with minor ankerite. Coarser interstitial patches are of quartz and ankerite. Minor fracture-filling veinlets are of quartz.

Sample TS-11 is a fine grained trachyte flow dominated by K-feldspar with much less abundant interstitial quartz. Two patches of quartz-sericite may be after plagioclase phenocrysts. Late, interstitial patches and minor veinlets are of quartz and fluorite.

Sample TS-13 is a trachyte flow dominated by lathy K-feldspar showing a moderate to strong flow-banding perpendicular to the length of the section. Quartz forms minor interstitial grains. A phenocryst is of K-feldspar. Replacement patches and lenses, the latter mainly parallel to flow-banding, are of quartz. Several irregular veinlets are of semi-opaque (leucoxene-limonite). One irregular veinlet is of quartz. A set of several, late, *en echelon* fracture-filling veinlets of quartz cut the flow-banding at a high angle.

2.0 Felsic/Intermediate Tuff

Sample TS-6 contains abundant fragments up to 1 cm in size that were replaced strongly by calcite with a delicate spheroidal to lency texture that suggests that the fragments were pumice. These are set in a moderately sparse groundmass of cryptocrystalline to extremely fine grained plagioclase with much less abundant wispy seams of sericite and patches of calcite. Irregular replacement patches up to 1.5 mm in size are of calcite and much less albite, with accessory hematite and minor pyrite and quartz. A vein on one face of the hand sample is of cryptocrystalline sericite(?).

Sample TS-10 is a crystal-lithic felsic tuff containing angular fragments of quartz, much less abundant ones of dolomite and scattered coarser fragments of sericite-rich rock (tuff or argillite). Quartz grains are phenocrysts from a felsic volcanic rock. Dolomite and dolomite-sericite fragments may be secondary after plagioclase. The groundmass is moderately foliated and cryptocrystalline, and probably consists of feldspar-sericite-clay.

Sample TS-12 is an argillaceous lithic tuff containing lency fragments up to several mm long of altered volcanic and/or sedimentary rock and a few fragments of porphyritic trachyte in a well foliated groundmass of sericite-plagioclase-clay. Many fragments contain disseminated opaque (pyrite), some of which was leached from the rock during weathering. The pyrite is part of the alteration assemblage in the fragments as opposed to being a later preferential replacement of the fragments rather than the groundmass.

3.0 Olivine Gabbro

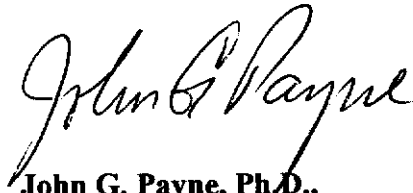
Sample TS-14 is a porphyritic olivine gabbro containing phenocrysts of clinopyroxene, olivine, and plagioclase in a matrix of finer grained plagioclase and less abundant clinopyroxene and leucoxene. Olivine is replaced completely by chlorite, and plagioclase is altered moderately to strongly to clinozoisite. Interstitial patches are of chlorite-(calcite).

4.0 Mafic Volcanic Rock

Sample TS-9 is an amygdaloidal basaltic andesite containing minor phenocrysts of plagioclase and clinopyroxene and elongate lithic fragments of sericite-(calcite) and of chlorite in a groundmass dominated by plagioclase and chlorite with minor disseminated opaque. Plagioclase is replaced completely by sericite. Clinopyroxene phenocrysts are replaced by intergrowths of quartz, calcite, and hematite, with locally chlorite and epidote(?). Abundant, mainly spheroidal amygdules from 0.5-3 mm in size are of calcite with lesser quartz, chlorite, and hematite. A few contain sericite or ankerite intergrown with quartz. Textures of amygdules vary widely. Some have concentrically zoned textures. Minor wispy veinlets are of calcite.

5.0 Strongly Altered Rock: Sericite-Pyrite; Calcite-Quartz

Sample TS-7 contains irregular, in part foliated patches of host rock altered completely to cryptocrystalline sericite and disseminated opaque. Early(?) replacement patches are of pyrite. The fragments are replaced by and enclosed in a matrix dominated by medium to coarse grained calcite with a few patches of quartz-calcite and minor patches containing moderately abundant K-feldspar. Some calcite grains have a vague, spheroidal texture of uncertain origin. A speculation is that this spheroidal texture represents more strongly replaced pumice fragments as in sample TS-6.



John G. Payne, Ph.D.,

Tel: (604)-986-2928

Fax: (604)-983-3318

email: johnpayn@istar.ca

Sample TS-1**Field Description: Willow Grid (Siliceous Trachyte)
Autobrecciated Trachy-latite flow: Patches of Barite-Quartz,
Veinlets of Jarosite/Limonite-Sericite and of Quartz**

The sample is an autobrecciated trachy-latite flow containing minor phenocrysts of K-feldspar and quartz in a groundmass dominated by cryptocrystalline plagioclase and K-feldspar. The rock was autobrecciated moderately, with fragments healed by a slightly coarser intergrowth of plagioclase and K-feldspar. Although textures are not definitive, the rock is more probably a flow than a tuff. Interstitial and replacement patches are of barite and quartz. A few veinlets are of quartz. Late, braided veinlets are of jarosite/limonite and sericite.

phenocrysts	percentage	main size range
K-feldspar	1- 2	0.1-0.5 mm (one phenocryst 1.5 mm long)
quartz	0.5	0.1-0.3
groundmass		
plagioclase	40-45	cryptocrystalline-0.03
K-feldspar	30-35	cryptocrystalline-0.01
sericite	0.5	cryptocrystalline-0.03
pyrite	0.5	0.01-0.05 (several up to 0.2 mm)
quartz	0.3	0.01-0.03
leucoxene	0.1	cryptocrystalline
barite	0.1	0.03-0.15
replacement patches		
barite	1- 2	0.1-0.7
quartz	0.5	0.03-0.07
chlorite	trace	0.05-0.15
veinlets		
jarosite/limonite-sericite	2- 3	cryptocrystalline
quartz	0.1	0.01-0.03

K-feldspar forms subhedral to anhedral, equant to prismatic phenocrysts and a few clusters of a few similar phenocrysts. Those that are twinned show ragged, discontinuous twins.

Quartz forms anhedral, equant phenocrysts

In the groundmass, fragments up to several mm across are dominated by plagioclase with much less abundant K-feldspar and with wispy seams of sericite. Plagioclase also forms scattered equant to prismatic grains up to 0.05 mm long. Irregular patches and seams between fragments are of slightly coarser grained plagioclase and K-feldspar. Some of these also contain minor to moderately abundant quartz. Some well-defined coarser grained patches up to 1.5 mm across may have been formed early in the magmatic history. More irregular patches probably were formed after the autobreccation event.

Pyrite forms disseminated euhedral to subhedral grains and clusters up to 0.7 mm across of grains, mainly from 0.01-0.03 mm in size, with a few subhedral to euhedral grains up to 0.2 mm across. Associated with some clusters are a few anhedral, equant grains of barite.

Disseminated ragged to subhedral patches mainly from 0.05-0.15 mm in size are dominated by cryptocrystalline dusty leucoxene.

(continued)

Interstitial and replacement patches up to 2 mm in size are of anhedral barite and lesser quartz; in many patches, coarser grained, in part elongate barite grains occur in the cores of the patches with much finer grained quartz concentrated along the margins. Some patches contain regions of extremely fine grained intergrowths of quartz and barite. One interstitial patch 0.3 mm across contains a few grains of pale green chlorite in the core and finer grained quartz along the margin.

A few veinlets from 0.02-0.07 mm wide are of quartz; in these, grains commonly are oriented perpendicular to vein walls.

The rock was fractured moderately and replaced along fractures zones up to 0.5 mm wide by irregular, commonly braided veinlets of jarosite/limonite and sericite. Some pyrite grains are replaced completely by cryptocrystalline jarosite.

**Sample TS-2 Very Fine Grained Trachyte Flow; Sericite Replacement; Patches and Veinlets of Quartz, K-feldspar; Late Veinlets of K-feldspar and Limonite
(Field Description: Trachyte Tuff)**

The sample is a very fine grained trachyte flow containing lathy K-feldspar and irregular patches of equant K-feldspar in a cryptocrystalline matrix of K-feldspar. In an alteration zone up to 1 cm wide K-feldspar is replaced strongly by sericite. A few replacement lenses and veinlets are of quartz and K-feldspar with minor sericite. A slightly boudinaged veinlet is of K-feldspar. Late veinlets are of limonite.

mineral	percentage	main size range
K-feldspar	70-75%	0.1-0.3 mm
sericite	10-12	cryptocrystalline
quartz	2-3	
hematite/limonite	0.2	
replacement patches, veinlets		
quartz	3-4	0.02-0.07
K-feldspar	2-3	0.03-0.05
sericite	0.3	cryptocrystalline-0.03
late veinlets		
K-feldspar-(hematite)	1-2	0.01-0.05 (K-feldspar); dusty (hematite)
limonite	0.2	cryptocrystalline

K-feldspar occurs in three main modes. It forms individual, unoriented lathy grains averaging 0.1-0.2 mm long. In places these form poorly developed radiating aggregates. Interstitial to these are anhedral K-feldspar grains mainly from 0.03-0.08 mm in size. Equant to lathy patches mainly from 0.1-0.2 mm in size are of intergrowths of equant, K-feldspar grains averaging 0.05 mm in size.

The groundmass feldspar is replaced slightly to very strongly by cryptocrystalline to extremely fine grained sericite. Dusty hematite/limonite is common.

Replacement patches from 0.5-1.5 mm in size are mainly of quartz and/or K-feldspar. A few also contain patches of sericite. In many, K-feldspar occurs along the margins as subradiating aggregates, and quartz occurs in the core as slightly interlocking grains. Where sericite is present, it is mainly in the core.

In the main alteration zone, K-feldspar in the groundmass is replaced strongly by cryptocrystalline to extremely fine grained sericite. A few coarse grained patches are of clusters of subparallel, sericite flakes. Dusty to extremely fine patches of hematite/limonite are widespread. This zone contains several, subrounded patches, possibly fragments, of extremely fine grained trachyte consisting of equant, slightly interlocking K-feldspar grains mainly from 0.015-0.025 mm in size.

One discontinuous veinlet 0.2 mm wide consists of quartz grains oriented perpendicular to the length of the vein. It also has a delicate banded texture parallel to the length of the vein. It contains a few patches of opaque (probably hematite) up to 0.1 mm in size.

A few irregular veinlets and replacement patches are of extremely fine grained quartz.

A slightly boudinaged veinlet 0.2-0.4 mm wide is of K-feldspar with moderately abundant dusty hematite.

A few braided to irregular veinlets of limonite cut the main alteration zone and the K-feldspar veinlet.

Sample TS-3**Hypabyssal Trachyte Dike/Intrusion/Core of Flow****Field Description: Maroon Trachyte**

The sample is a hypabyssal trachyte dike, intrusion, or core of a thick flow. It contains minor phenocrysts of K-feldspar in a groundmass of interlocking, slightly lathy K-feldspar and much less abundant plagioclase, with moderately abundant disseminated patches of ankerite (altered moderately to hematite/limonite).

phenocrysts	percentage	main grain size
K-feldspar	1%	1.5-2.5 mm
groundmass		
K-feldspar	80-85	0.3-0.8
plagioclase	3- 4	0.2-0.5
ankerite	10-12	0.02-0.3 (altered to hematite/limonite)
sericite	0.3	0.005-0.02
chlorite	trace	cryptocrystalline
apatite	trace	0.02-0.1

K-feldspar forms two, equant, anhedral phenocrysts. The larger one is replaced moderately by patches of cryptocrystalline to extremely fine grained sericite and cut by wispy seams of ankerite/hematite.

The rock is dominated by strongly interlocking, anhedral K-feldspar grains with diffuse borders. Some grains show vague Carlsbad twins, and most have wavy to irregular extinction.

Plagioclase forms disseminated subhedral to anhedral grains. It is difficult to distinguish from K-feldspar in thin section, the main difference being a slightly higher birefringence in plagioclase and presence of minor dusty hematite inclusions in K-feldspar. Alteration of plagioclase is slight to disseminated flakes and patches of sericite. The distribution of plagioclase is shown well in the stained offcut block as the disseminated white grains.

Ankerite forms disseminated patches mainly from 0.2-0.7 mm in size. These consist of a few to many, anhedral grains. In many patches, alteration is strong to opaque hematite and orange-brown limonite.

Chlorite forms disseminated patches up to 0.07 mm in size of cryptocrystalline, pale green grains.

Apatite forms minor acicular grains.

Sample TS-4 Heterolithic Felsic Tuff: Accessory Argillite and Pyrite Clasts
Strong Sericite Alteration
(Field Description: Tuff with Pyrite Clasts)

The sample is a heterolithic felsic tuff that was altered strongly to sericite; during this alteration, many original features were destroyed. Felsic fragments are much more obvious in hand sample than in thin section. Argillite fragments are altered completely to sericite. A few fragments or replacement patches are of fresh plagioclase. Quartz forms a few phenocrysts. A few patches contain abundant pyrite intergrown with sericite and plagioclase. Because of the strong alteration, it is difficult to determine if these are fragments or were formed by replacement. Much of the rock has a variable, lensey texture shown by variation in abundance and grain size of sericite; however, contacts between zones are diffuse, making impossible the distinction between fragments and groundmass.

fragments	percentage	main size range
felsic rock	5- 7%	cryptocrystalline-0.01 (seen in hand sample)
argillite	3- 4	cryptocrystalline
plagioclase-rich	1- 2	0.05-0.15 (possibly replacement patches)
pyrite-rich	0.3	0.01-0.03
quartz	minor	0.2-0.35 (phenocrysts)
groundmass		
sericite	65-70	cryptocrystalline-0.02
plagioclase(?)	12-15	cryptocrystalline
quartz (?)	2- 3	cryptocrystalline
leucoxene	0.3	cryptocrystalline

Quartz forms a few rounded to angular phenocrysts.

A few elongated patches up to 1.1 mm long may be plagioclase phenocrysts in felsic fragments; they are altered completely to cryptocrystalline sericite. Felsic fragments probably are represented by patches that are altered completely to sericite.

The groundmass (and probably some felsic fragments) has a variable and patchy texture and is dominated by cryptocrystalline sericite, probably containing some cryptocrystalline plagioclase and quartz. The stained offcut block indicates that K-feldspar is not present.

Fragments of argillite are replaced by dense aggregates of cryptocrystalline sericite.

Opaque (pyrite) is concentrated strongly in patches and lenses up to 0.8 mm in size. In these, it forms abundant, equant, anhedral to subhedral grains intergrown intimately with extremely fine grained sericite. Some of the sericite is secondary after lathy feldspar.

A few patches up to 1.5 mm in size consist of moderately interlocking, equant grains of plagioclase. One of these is very irregular in outline and is intergrown coarsely with extremely fine grained sericite.

Sample TS-5**Trachyte Flow with coarser-grained Trachyte Dike(?)****Replacement Patches of Pyrite****Field Description Pyritic Trachyte Tuff or Flow**

The sample is a fine grained trachyte flow containing abundant prismatic K-feldspar grains in a sparser matrix of extremely fine grained quartz/plagioclase, moderately abundant replacement patches of pyrite and minor patches of sericite. Some feldspar grains appear to contain relic plagioclase, suggesting that some of the K-feldspar was formed by replacement of plagioclase. However, identification of plagioclase is not certain. Orientation of feldspars produced a weak flow-foliation. A coarser grained, dikelike zone a few mm wide at one end of the sample is of similar texture, but with less abundant K-feldspar and more abundant matrix quartz.

mineral	percentage	main size range
K-feldspar	60-65%	0.1-0.5 mm (a few grains up to 0.7 mm long)
quartz/plagioclase	20-25	0.005-0.015
pyrite	4- 5	0.03-0.2
sericite	0.5	cryptocrystalline-0.02
leucoxene	0.1	cryptocrystalline
veinlike zone		
K-feldspar	3- 4	0.4-0.9
quartz	2- 3	0.005-0.015
sericite	0.3	cryptocrystalline-0.02
pyrite	0.3	0.05-0.2

K-feldspar forms clusters of slightly to moderately interlocking, subhedral, prismatic grains. Very finely laminated, discontinuous albite twins are poorly developed. Textures suggest that some of the K-feldspar may be secondary after plagioclase, and some grains may contain minor to moderately abundant plagioclase. Dusty hematite inclusions are widespread but not abundant. Some clusters have a poorly developed, radiating texture. Overall slightly preferred orientation of K-feldspar grains defines a weak flow foliation at about 70° to the length of the section.

Interstitial to K-feldspar are patches of slightly interlocking to submosaic, equant grains of quartz (possibly also including some plagioclase of similar texture).

Pyrite forms disseminated patches, mainly from 0.1-0.5 mm in size and locally up to 1 mm long of equant, anhedral to subhedral grains. These patches are intergrown with quartz and with patches up to 0.1 mm in size of sericite.

Leucoxene forms ragged patches up to 0.1 mm in size of cryptocrystalline grains, mainly along borders of quartz and K-feldspar.

In the coarser grained dikelike zone at one end of the section, K-feldspar is less abundant and moderately coarser grained than in the main rock. Because of this, grains are more separated and tend to be more elongate and more euhedral. Some grains contain Carlsbad twins. Groundmass quartz is more abundant than in the main rock, with some patches being over 1 mm across.

Sample TS-6**Pumaceous Felsic Tuff(?): Calcite-(Albite-Hematite) Alteration
(Field Description: Heterolithic Tuff)**

The sample contains abundant fragments up to 1 cm in size that were replaced strongly by calcite with a delicate spheroidal to lency texture that suggests that the fragments were pumice. These are set in a moderately sparse groundmass of cryptocrystalline to extremely fine grained plagioclase with much less abundant wispy seams of sericite and patches of calcite. Irregular replacement patches up to 1.5 mm in size are of calcite and much less albite, with accessory hematite and minor pyrite and quartz. A vein on one face of the hand sample is of cryptocrystalline sericite(?).

fragments	percentage	main size range
pumice(?)	63-67%	0.1-0.3 mm (calcite)
plagioclase	two grains	0.5-0.7
groundmass		
plagioclase	17-20	cryptocrystalline-0.01, locally 0.01-0.02 mm
sericite	2- 3	cryptocrystalline-0.02
calcite	1- 2	0.01-0.05
opaque	minor	0.01-0.03
pyrite	minor	0.07-0.1
replacement patches		
calcite	7- 8	0.3-1
albite	2- 3	0.01-0.02; 0.07-0.3
hematite	0.5	cryptocrystalline
pyrite	0.1	0.05-0.15
quartz	minor	0.03-0.06

Fragments show a variety of textures. Many contain delicate spheroids and lenses of calcite from 0.05-0.2 mm in size. In a few, slender, parallel lenses of calcite are from 0.3-0.7 mm in length. Calcite patches are enclosed in a sparse groundmass of plagioclase and minor sericite, and outlined weakly to strongly by rims of hematite. In other fragments, the texture is more diffuse, and consists of more irregular patches of calcite intergrown with plagioclase and sericite. The fragments may be of pumice, in which the delicate spheroidal textures represent calcite-replaced gas bubbles.

One equant, subhedral plagioclase grain 0.5 mm across is a phenocryst (crystal fragment). One anhedral plagioclase phenocryst 0.7 mm across is enclosed by secondary albite, which in turn is rimmed by calcite.

The groundmass is dominated by equant, slightly interlocking grains of plagioclase. A patch 3 mm across is slightly coarser grained than normal. Sericite forms wispy lenses and is concentrated in a few subparallel, braided, sericite-rich seams up to 0.1 mm wide. Calcite forms irregular, disseminated grains. Opaque (possibly pyrite) forms disseminated, equant, anhedral grains that are concentrated moderately in a few patches. Pyrite forms a few euhedral grains.

Irregular replacement patches up to 2.5 mm in size are dominated by anhedral calcite. Some contain minor to moderately abundant patches and disseminated grains of albite. The latter mineral occurs in two main modes. The first is as interlocking aggregates of grains, with grain size varying between patches from 0.01-0.02 mm in some to 0.03-0.07 mm in others. The second is as subhedral to euhedral, equant to slightly prismatic grains (0.07-0.2 mm) disseminated in calcite or as clusters of a few grains. Hematite occurs as irregular rims bordering some calcite grains and patches. Pyrite forms a few clusters of subhedral grains. Quartz forms scattered, euhedral grains enclosed in calcite; most grains in the section have hexagonal outlines.

Sample TS-7**Calcite-Pyrite-(Quartz) Replacement of Sericite-Altered Rock
(Field Description: Black Carbonate Vein or Exhalite?)**

The sample contains irregular, in part foliated patches of host rock altered completely to cryptocrystalline sericite and disseminated opaque. Early(?) replacement patches are of pyrite. The fragments are replaced by and enclosed in a matrix dominated by medium to coarse grained calcite with a few patches of quartz-calcite and minor patches containing moderately abundant K-feldspar. Some calcite grains have a vague, spheroidal texture of uncertain origin. A speculation is that this spheroidal texture represents more strongly replaced pumice fragments as in sample TS-6.

host rock	percentage	main grain size
sericite	20-25	0.005-0.01 mm
pyrite	4- 5	0.02-0.15
opaque	1	0.002-0.01
replacement		
calcite	65-70	0.5-1.5; 0.03-0.3 (intergrown with quartz)
quartz	2	0.05-0.1
K-feldspar	0.2	0.05-0.1
veinlet		
calcite	0.1	0.05-0.1

Patches of altered host rock are up to a few mm in size. They consist of sericite with minor to abundant disseminated equant grains of opaque (possibly pyrite). In some fragments these opaque grains are oriented in wispy trains defining a weak to moderate foliation. A few patches of sericite also contain diffuse patches from 0.05-0.2 mm in size containing moderately abundant dusty opaque, that give them a medium grey colour.

Pyrite forms irregular replacement patches up to 2.5 mm in size of subhedral grains intergrown with minor, in part recrystallized sericite. In many patches, minor sericite forms recrystallized flakes 0.02-0.05 mm in length size oriented perpendicular to pyrite crystal faces.

The rock was replaced strongly, mainly by calcite with minor quartz. Calcite forms anhedral, slightly interlocking grains with diffuse borders. Many grains are strained slightly to moderately. A few diffuse patches up to a few mm across contain minor to moderately abundant, dusty opaque. Moderately abundant calcite grains contain patches up to 1 mm in size with vague relic(?) textures consisting of ellipsoids and partial spheroids from 0.07-0.15 mm in size. These are partly outlined by minor dusty opaque.

Quartz is concentrated strongly in one lens up to 6 mm long and 3 mm wide, in which it forms interlocking, anhedral grains intergrown strongly with irregular, in part porphyroblastic calcite grains. A few smaller patches up to 1 mm in size are of similar quartz-calcite intergrowths.

K-feldspar was not identified in thin section, but its presence was confirmed in the stained offcut block. There it was concentrated in several, scattered patches up to 0.2 mm in size.

A few discontinuous, subparallel veinlets 0.03-0.04 mm wide are of calcite.

Sample TS-8**Fine Grained Trachyte Flow; Replacement Patches of Quartz
Field Description: Trachyte**

The sample is a fine grained trachyte flow dominated by lathy to equant K-feldspar with lesser interstitial quartz and minor plagioclase phenocrysts. Ankerite, replaced slightly by limonite/hematite, forms ragged replacement patches in K-feldspar. Minor plagioclase phenocrysts were replaced by sericite and/or K-feldspar with minor ankerite. Coarser interstitial patches are of quartz and ankerite. Minor fracture-filling veinlets are of quartz.

mineral	percentage	main size range
K-feldspar	83-85%	0.07-0.25 mm
quartz	8-10	0.03-0.1
ankerite	4- 5	0.03-0.1
plagioclase	0.2	0.5-0.7
sericite	0.2	cryptocrystalline-0.02
opaque	minor	0.03-0.1
late patches		
quartz	3- 4	0.2-1
ankerite	1	0.07-0.2
veinlets		
quartz	minor	0.01-0.05

Plagioclase forms a few euhedral, prismatic phenocrysts. One was replaced almost completely by extremely fine grained sericite with minor patches of ankerite. Another was altered in patches up to 0.3 mm across to sericite and the remainder of the grain replaced by K-feldspar.

K-feldspar forms lathy prismatic from 0.15-0.25 mm in length intergrown with anhedral, equant, interstitial grains of K-feldspar and lesser quartz mainly from 0.03-0.1 mm in size. A weak to locally moderate flow-foliation is defined by subparallel orientation of feldspar laths. K-feldspar commonly contains moderately abundant dusty hematite inclusions. Minor plagioclase may be present.

Ankerite forms ragged, disseminated patches mainly less than 0.2 mm in size, and mainly replacing K-feldspar. It is replaced slightly to locally moderately by dusty hematite.

Sericite forms a few irregular patches up to 0.3 mm in size, mainly as a replacement of K-feldspar or plagioclase.

Opaque (probably hematite after pyrite) forms disseminated, equant, anhedral to subhedral grains.

Interstitial patches, mainly from 0.2-0.8 mm in size and locally up to 1.7 mm across, are mainly of single grains or aggregates of a few grains of quartz. Some are intergrown with fine laths of K-feldspar along one or more margins. A few have sharp contacts against finer interstitial quartz. Associated with several coarser patches of quartz are patches up to 1 mm in size of anhedral ankerite grains mainly from 0.07-0.2 mm in size. A few patches up to 1.5 mm in size are entirely of ankerite.

A few fracture-filling veinlets up to 0.02 mm wide are of quartz with minor patches of limonite.

Sample TS-9

**Altered Amygdaloidal Basaltic Andesite:
Calcite-Quartz-Chlorite-Hematite Amygdules
(Field Description: Mafic Volcanic Rock)**

The sample is an amygdaloidal basaltic andesite containing minor phenocrysts of plagioclase and clinopyroxene and elongate lithic fragments of sericite-(calcite) and of chlorite in a groundmass dominated by plagioclase and chlorite with minor disseminated opaque. Plagioclase is replaced completely by sericite. Clinopyroxene phenocrysts are replaced by intergrowths of quartz, calcite, and hematite, with locally chlorite and epidote(?). Abundant, mainly spheroidal amygdules from 0.5-3 mm in size are of calcite with lesser quartz, chlorite, and hematite. A few contain sericite or ankerite intergrown with quartz. Textures of amygdules vary widely. Some have concentrically zoned textures. Minor wispy veinlets are of calcite.

phenocrysts	percentage	main size range
plagioclase	3- 4%	0.3-1 mm
clinopyroxene	1- 2	0.5-1.2
lithic fragments		
sericite-(calcite)	1	0.005-0.02 (sericite), 0.05-0.15 (calcite)
chlorite	1	cryptocrystalline
groundmass		
plagioclase	60-65	0.03-0.1
chlorite	12-15	cryptocrystalline
opaque	0.1	0.02-0.03
amygdules		
calcite	12-15	0.1-0.3
quartz	1	0.03-0.08
chlorite	1	cryptocrystalline
hematite	1	cryptocrystalline
sericite	0.2	cryptocrystalline
ankerite	minor	0.07-0.2
veinlets		
calcite	minor	cryptocrystalline-0.02

Plagioclase forms subhedral, prismatic phenocrysts that are altered completely to cryptocrystalline sericite. A few phenocrysts also contain moderately abundant patches of very fine grained calcite. Associated with calcite are wispy patches of hematite.

Clinopyroxene phenocrysts are subhedral to anhedral in outline and mainly equant to stubby prismatic in habit. Alteration is complete to various aggregates of quartz, calcite, and hematite. In one phenocryst, quartz is intergrown intimately with moderately abundant anhedral grains of apatite(?).

A few elongate, altered, lithic fragments from 0.7-2 mm long are of extremely fine grained sericite that has a moderate foliation. Some of these also contain replacement patches of calcite and one contains a euhedral pyrite grain 0.2 mm in size. Two proximal, elongate lithic fragments up to 1 x 2 mm in size are of cryptocrystalline chlorite.

(continued)

In the groundmass, plagioclase ranges from lathy grains up to 0.1 mm in length to much finer anhedral, equant grains. Alteration is complete to cryptocrystalline sericite. Intergrown with plagioclase is cryptocrystalline chlorite and dusty semi-opaque, which makes impossible positive optical identification of minerals in the groundmass.

Amygdules vary widely in composition and texture. Shapes are mainly spheroidal and some are overlapping. Most are dominated by calcite. Some have a weak to strong concentric structure outlined by thin seams and thicker bands of dusty, reddish brown hematite. Calcite grain size and texture commonly varies between different concentric zones.

Quartz and chlorite are concentrated alone or together in patches mainly in cores of calcite-rich amygdules. A few amygdules have thin rims of calcite and cores of very fine to extremely fine grained quartz intergrown with lesser, cryptocrystalline sericite. In some of these, quartz grains are strongly interlocking. In the core of one amygdale, quartz forms several, proximal, spheroidal patches 0.1-0.15 mm across of radiating grains enclosed in cryptocrystalline chlorite. A few amygdules contain euhedral grains of ankerite (altered slightly to hematite) enclosed in patches of quartz.

Minor wispy veinlets from 0.01-0.02 mm wide are of calcite.

Sample TS-10**Crystal (Quartz-Dolomite) - Lithic (Sericite) Felsic Tuff
(Field Description: Argillite Crystal Tuff)**

The sample is a crystal-lithic felsic tuff containing angular fragments of quartz, much less abundant ones of dolomite and scattered coarser fragments of sericite-rich rock (tuff or argillite). Quartz grains are phenocrysts from a felsic volcanic rock. Dolomite and dolomite-sericite fragments may be secondary after plagioclase. The groundmass is moderately foliated and cryptocrystalline, and probably consists of feldspar-sericite-clay.

fragments	abundance	main size range
quartz	20-25%	0.1-0.5 mm (a few grains from 0.7-2 mm)
dolomite	3- 4	0.1-0.3 (a few patches up to 0.5 mm)
sericite-rich	3- 4	1-4
quartz-sericite	0.3	0.05-0.15 (quartz); cryptocrystalline-0.02 (sericite)
opaque	minor	0.02-0.05
apatite	trace	0.05-0.4
Mineral X	trace	0.2
groundmass		
plagioclase-clay	45-50	cryptocrystalline
sericite	10-12	cryptocrystalline-0.02

Quartz forms angular fragments of single, mainly unstrained grains. A few grains have minor embayments of groundmass along their margins, and several grains contain rounded inclusions of cryptocrystalline sericite. These textures indicate that they are phenocrysts from a felsic volcanic rock. A few quartz grains contain patches or veinlets of calcite.

Dolomite forms anhedral grains and clusters of grains, which probably are secondary after plagioclase (or less probably after mafic minerals). Dolomite is altered slightly to orange-brown limonite. A few dolomite-rich fragments contain patches of sericite and a few contain minor flakes of muscovite up to 0.05 mm long, mainly along their margins.

A few fragments from 0.5-1.3 mm in size are of metamorphic or hydrothermal aggregates of quartz and minor to abundant sericite.

A few fragments up to a few mm long are dominated by sericite; these may be of argillite or less probably of felsic dust tuff. A few sericite-rich fragments contain minor to moderately abundant patches of dolomite.

Opaque (probably hematite after pyrite) forms a few fragments up to 0.3 mm size of extremely fine to very fine grained aggregates.

Apatite forms a euhedral, prismatic grain 0.4 mm long with an inclusion of cryptocrystalline sericite. It also forms a few equant grains averaging 0.05 mm across.

One fragment 0.2 mm across is of Mineral X, a high relief, colourless mineral with moderate birefringence. It is replaced moderately along its margin by opaque.

The groundmass has a moderately variable texture and a moderate foliation. Much of it is cryptocrystalline, and probably composed of plagioclase-clay with minor to moderately abundant disseminated sericite. This grades broadly to sharply into lenses and seams dominated by sericite with minor to moderately abundant plagioclase-clay. Sericite-rich seams are parallel to the foliation. Some of the sericite-rich zones are texturally similar to sericite-rich fragments.

Sample TS-11**Fine Grained Trachyte Flow; Patches and Veinlets of Quartz-Fluorite
(Field Description: Fluorite Basin Trachyte)**

The sample is a fine grained trachyte flow dominated by K-feldspar with much less abundant interstitial quartz. Two patches of quartz-sericite may be after plagioclase phenocrysts. Late, interstitial patches and minor veinlets are of quartz and fluorite. Fracture surfaces in the hand sample are coated with limonite.

mineral	percentage	main size range
K-feldspar	85-88%	0.2-0.5 mm (a few lathy grains up to 0.8 mm long)
quartz	7- 8	0.02-0.05
plagioclase	0.7	1.5-2 (possible phenocrysts)
leucoxene/limonite-hematite	0.3	cryptocrystalline
opaque (pyrite?)	minor	0.01-0.02
interstitial patches, veinlets		
quartz	3- 4	0.1-0.5
fluorite	2- 3	0.1-0.8

K-feldspar forms an intergrowth of unoriented, slender lathy grains and interstitial, anhedral tabular to equant grains. Locally, lathy grains show poorly developed, radiating textures. K-feldspar commonly contains dusty hematite inclusions. Quartz forms interstitial patches mainly from 0.05-0.1 mm in size of slightly interlocking grains.

Two rectangular patches up to 2 mm in size are of very fine grained quartz with cores of very fine grained plagioclase (altered completely to cryptocrystalline sericite). These may be secondary after plagioclase phenocrysts.

Leucoxene and limonite/hematite are concentrated in irregular patches, mainly along margins of K-feldspar and interstitial quartz. Elsewhere, they form dusty grains, in part outlining lathy K-feldspar grains. Some fracture surfaces of the hand sample are coated with orange limonite.

Opaque (pyrite?) forms disseminated, equant, subhedral grains.

Late-formed, interstitial patches up to 2 mm in size are of fluorite and quartz in widely varying proportions. In several patches, fluorite forms anhedral grains in cores of patches, and quartz forms much finer grained aggregates along margins. Some patches are dominated by quartz, with only minor fluorite. Some patches and veinlets up to 0.15 mm wide are of fluorite. In thin section, fluorite is mainly colourless with scattered patches of light to medium purple colour. In hand sample, much of the fluorite is purple. A few fracture-filling veinlets up to 0.02 mm wide are of extremely fine grained quartz.

In answer to the specific question about fluorite in this sample, it (with quartz) fills both interstitial patches and probably slightly later, irregular fractures.

Sample TS-12**Lithic Felsic Tuff, Argillaceous Matrix
(Field Description: Argillaceous Tuff)**

The sample is an argillaceous lithic tuff containing lensy fragments up to several mm long of altered volcanic and/or sedimentary rock and a few fragments of porphyritic trachyte in a well foliated groundmass of sericite-plagioclase-clay. Many fragments contain disseminated opaque (pyrite), some of which was leached from the rock during weathering.

fragments	percentage	main size range
sericite-quartz/plagioclase-pyrite	8-10%	cryptocrystalline-0.02
quartz-pyrite-sericite	2- 3	0.01-0.03
porphyritic trachyte	0.2	0.7-1.7 (phenocrysts), 0.01 (groundmass)
groundmass		
sericite	60-65	cryptocrystalline-0.01 mm
plagioclase/clay	20-25	cryptocrystalline
leucoxene	0.2	cryptocrystalline

Many fragments are of altered volcanic(?) rock dominated by cryptocrystalline sericite and plagioclase/quartz/clay. These fragments contain minor to moderately abundant, disseminated opaque (pyrite) grains. In fragments in which sericite is less abundant, it forms disseminated flakes in random orientation in a groundmass of equant plagioclase (0.005-0.01 mm).

Several fragments up to 2 mm in size are dominated by quartz (0.01-0.03 mm) with moderately abundant disseminated patches of pyrite (0.02-0.05 mm) and minor sericite (cryptocrystalline-0.02 mm).

One fragment of porphyritic trachyte 3 mm long is of coarse K-feldspar grains (altered slightly to patches of sericite and opaque) with minor interstitial patches of extremely fine grained K-feldspar. A smaller fragment is of a K-feldspar phenocryst containing abundant dusty hematite grains which render the fragment semi-opaque.

One very elongate fragment 2.5 mm long by 0.1 mm wide is of lathy K-feldspar grains (0.05-0.1 mm) oriented parallel to the length of the fragment.

The groundmass is dominated by sericite with lesser plagioclase/clay. Relative abundances vary widely, with some sericite-rich seams and others composed of about equal amounts of sericite and plagioclase/clay. Wispy seams in the groundmass are defined by wispy trains and patches of leucoxene.

Sample TS-13**Flow-Banded Trachyte: Replacement Patches and Lenses of Quartz parallel to Flow-Banding; Veinlets of Leucoxene-Limonite, Quartz
(Field Description: Trachyte Ash Tuff)**

The sample is a trachyte flow dominated by lathy K-feldspar showing a moderate to strong flow-banding perpendicular to the length of the section. Quartz forms minor interstitial grains. A phenocryst is of K-feldspar. Replacement patches and lenses, the latter mainly parallel to flow-banding, are of quartz. Several irregular veinlets are of semi-opaque (leucoxene-limonite). One irregular veinlet is of quartz. A set of several, late, *en echelon* fracture-filling veinlets of quartz cut the flow-banding at a high angle.

phenocryst	percentage	main grain size
K-feldspar	0.2%	1.7 mm (one grain)
groundmass		
K-feldspar	85-90	0.1-0.4
quartz	2-3	0.05-0.1
leucoxene	0.2	cryptocrystalline
pyrite	minor	0.02-0.03
replacement lenses and patches		
quartz	5-7	0.05-0.4
pyrite	0.2	0.01-0.05
K-feldspar	minor	0.05-0.15
veinlets		
quartz	1-2	0.02-0.05
leucoxene/limonite	0.3	cryptocrystalline

K-feldspar forms slender lathy grains that are oriented strongly subparallel to banding in the rock. Many show Carlsbad twins. Clusters of a few to several laths commonly show a slightly radiating texture. Some plagioclase may be present; however, the strong yellow stain on the offcut block indicates that its abundance is at most minor. One anhedral phenocryst of K-feldspar shows moderately strained, patchy extinction.

Quartz forms anhedral, equant to elongate, disseminated grains interstitial to K-feldspar.

Leucoxene forms dusty grains concentrated slightly to moderately in irregular to wispy patches.

Opaque (possibly pyrite) forms minor, equant grains.

Lenses mainly from 0.2-0.5 mm wide and up to a few mm long parallel to flow-foliation are of anhedral, submosaic to slightly interlocking grains of quartz. Some patches contain single grains and clusters of grains of pyrite, in part altered to hematite. Bordering a few quartz-rich lenses are subradiating aggregates of K-feldspar growing inward from the walls of the lens. One large lens up to 1.5 mm wide and 1.2 cm long contains prismatic quartz grains up to 0.8 mm long.

Semi-opaque (leucoxene and limonite?) forms irregular veinlets from 0.02-0.08 mm in width of cryptocrystalline to extremely fine grains.

One irregular vein up to 0.3 mm wide is of extremely fine grained, interlocking quartz grains.

A set of several, late, *en echelon* veinlets mainly from 0.01-0.05 mm wide perpendicular to flow-banding are of extremely fine grained quartz.

The sample is a porphyritic olivine gabbro containing phenocrysts of clinopyroxene, olivine, and plagioclase in a matrix of finer grained plagioclase and less abundant clinopyroxene and leucoxene. Olivine is replaced completely by chlorite, and plagioclase is altered moderately to strongly to clinozoisite. Interstitial patches are of chlorite-(calcite).

phenocrysts	percentage	main grain size
clinopyroxene	12-15	0.5-2.5
olivine	5- 7	0.5-1.2
plagioclase	2- 3	0.7-1.8
groundmass		
plagioclase	55-60	0.2-0.5 mm
clinopyroxene	10-12	0.1-0.3
chlorite	2- 3	0.01-0.03
leucoxene	2- 3	0.1-0.2
calcite	0.1	0.2-0.5
apatite	0.1	0.1-0.25

Olivine forms disseminated, subhedral to locally euhedral equant to slightly prismatic phenocrysts that are concentrated moderately in a few patches. Alteration is complete to extremely fine grained, pale green chlorite, with locally minor tremolite, dusty semi-opaque, and red-brown hematite.

Clinopyroxene forms subhedral, equant phenocrysts and clusters of a few phenocrysts. Some are intergrown slightly to moderately with groundmass plagioclase. A few grains contain minor, ragged patches of calcite up to 0.1 mm in size.

Plagioclase forms subhedral, prismatic phenocrysts that are altered moderately to cryptocrystalline clinozoisite(?).

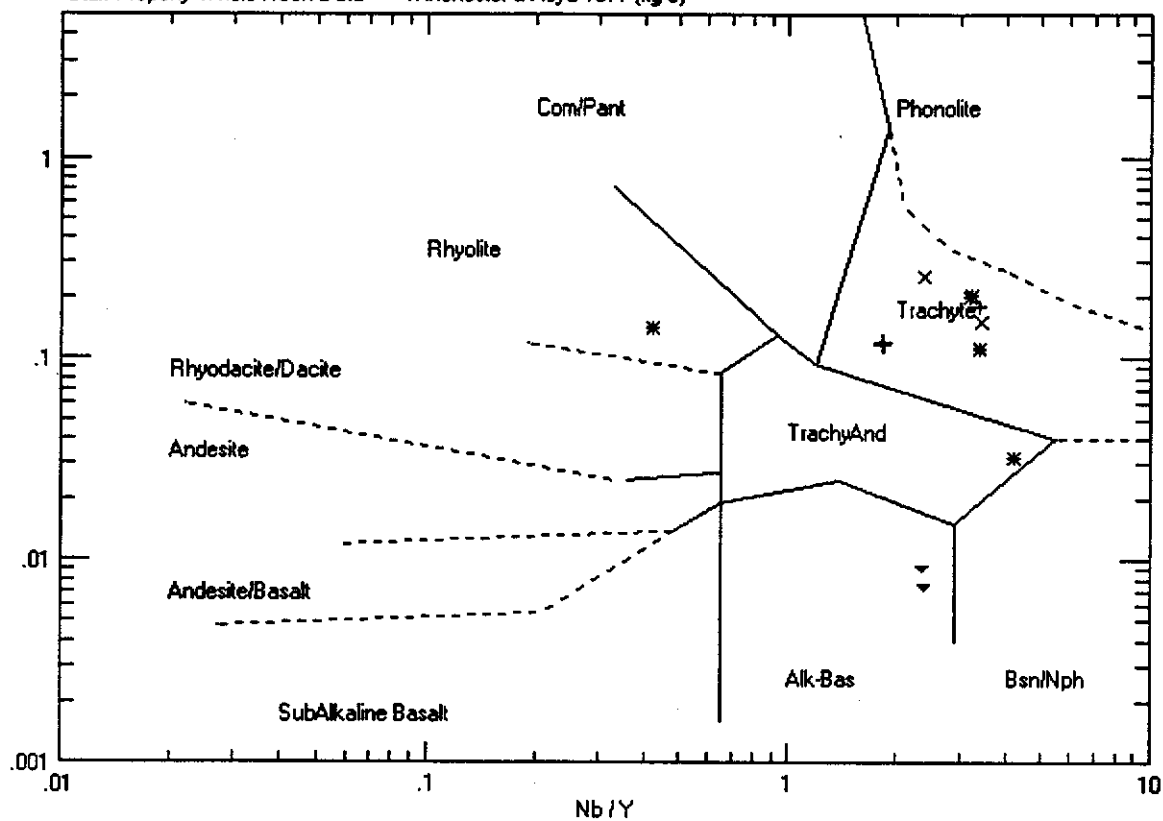
In the groundmass, plagioclase forms unoriented, anhedral to subhedral, prismatic grains. Alteration is moderate to cryptocrystalline clinozoisite(?) as in the phenocrysts. Interstitial to plagioclase are anhedral, equant grains of clinopyroxene and ragged patches of leucoxene (probably after ilmenite). Apatite forms disseminated, acicular to prismatic grains, mainly intergrown with plagioclase.

Chlorite forms interstitial patches mainly from 0.1-0.2 mm in size, with a few up to 0.8 mm across. Some of the larger patches are difficult to distinguish from altered olivine grains. Calcite forms a few ragged grains associated with chlorite patches.

APPENDIX F

WHOLE ROCK GEOCHEMISTRY

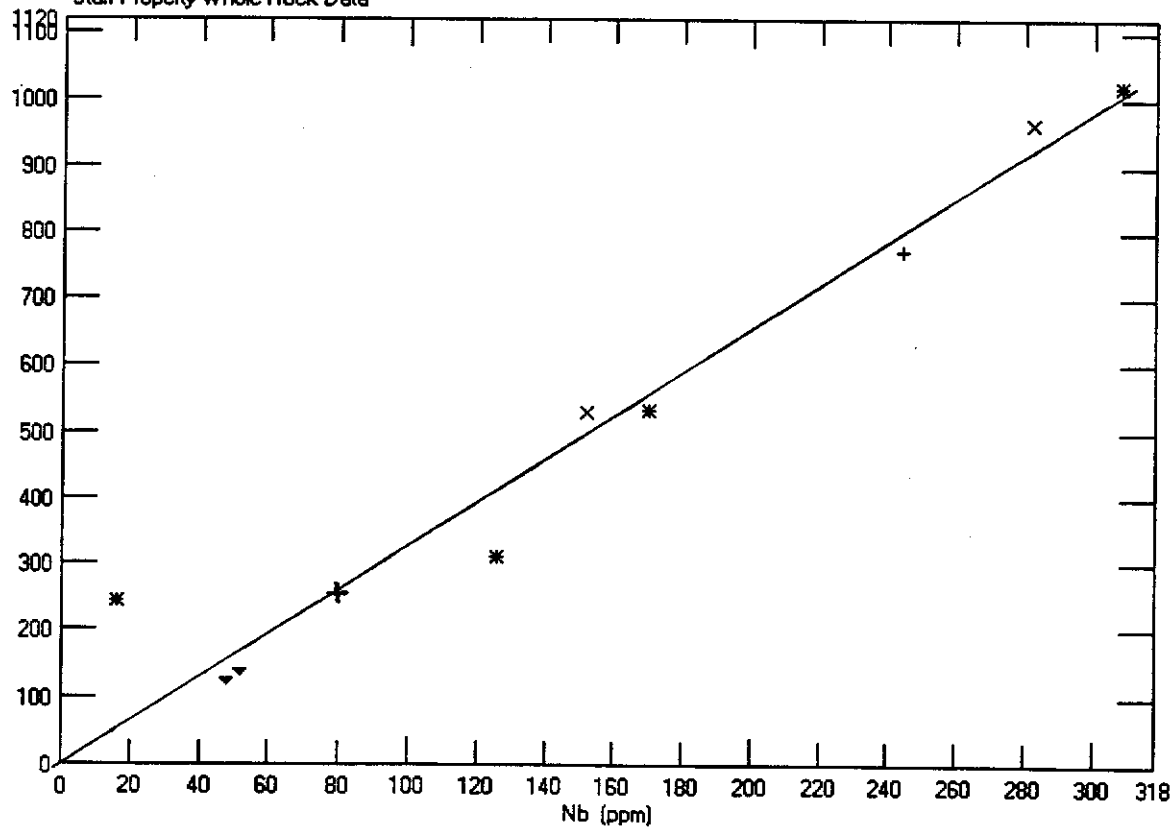
Starr Property Whole Rock Data Winchester & Floyd 1977 (fig 6)



Legend

- ANDS = ▽
- TRAFw = *
- HTUF = X
- TRAM = +

Starr Property Whole Rock Data



APPENDIX G

CERTIFICATES OF ANALYSIS



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925656

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925656

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 06-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	227	Dry, sieve to -80 mesh save reject ICP - AQ Digestion charge
202	227	
229	227	
* NOTE	1.	

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	227	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	227	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	227	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	227	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	227	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	227	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	227	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	227	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	227	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	227	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	227	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	227	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	227	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	227	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	227	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	227	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	227	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	227	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	227	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	227	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	227	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	227	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	227	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	227	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	227	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	227	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	227	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	227	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	227	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	227	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	227	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	227	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	227	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	227	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	227	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	225	Ba ppm	XRF	10	50000



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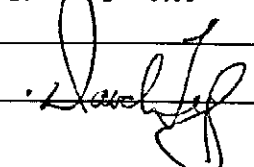
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Comments: ATTN: JASON WEBER

Page Number :1-A
Total Pages :6
Certificate Date: 06-SEP-1999
Invoice No. :19925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS A9925656

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
JP-01-99	201 202	< 5	0.4	0.90	6	< 10	370	< 0.5	< 2	1.22	2.0	11	23	31	2.69	< 10	< 1	0.06	30	0.92
RL1-0N	201 202	< 5	< 0.2	1.01	< 2	< 10	120	< 0.5	< 2	0.03	< 0.5	2	9	8	1.51	< 10	< 1	0.05	30	0.12
RL1-50N	201 202	< 5	0.2	1.43	6	< 10	140	< 0.5	< 2	0.05	< 0.5	9	16	16	3.80	< 10	< 1	0.11	50	0.36
RL1-100N	201 202	< 5	< 0.2	1.44	10	< 10	200	< 0.5	< 2	0.07	0.5	14	35	19	4.01	< 10	< 1	0.08	50	0.29
RL1-150N	201 202	< 5	0.2	1.23	8	< 10	370	< 0.5	< 2	0.04	0.5	9	14	20	3.09	< 10	< 1	0.12	30	0.11
RL1-200N	201 202	< 5	0.4	1.55	2	< 10	430	< 0.5	< 2	0.19	< 0.5	25	17	31	3.95	< 10	1	0.09	50	0.46
RL1-250N	201 202	< 5	0.4	1.62	14	< 10	340	< 0.5	< 2	0.12	0.5	23	18	33	4.34	< 10	< 1	0.04	40	0.40
RL1-300N	201 202	< 5	0.2	1.40	2	< 10	560	< 0.5	< 2	0.59	< 0.5	9	13	18	3.18	< 10	1	0.05	50	0.47
RL1-350N	201 202	< 5	0.8	1.98	4	< 10	610	< 0.5	< 2	0.35	0.5	15	7	17	3.83	< 10	< 1	0.08	80	0.67
RL1-400N	201 202	< 5	0.8	1.91	8	< 10	330	< 0.5	< 2	0.24	1.5	12	7	18	3.67	< 10	< 1	0.08	80	0.66
RL1-450N	201 202	< 5	< 0.2	2.34	< 2	< 10	480	< 0.5	< 2	1.09	1.5	33	79	76	4.21	< 10	< 1	0.06	80	0.92
RL1-500N	201 202	< 5	< 0.2	1.59	6	< 10	160	< 0.5	< 2	0.21	0.5	18	36	34	3.19	< 10	< 1	0.07	30	0.57
RL1-550N	201 202	< 5	< 0.2	1.21	2	< 10	300	< 0.5	< 2	0.23	0.5	11	16	19	3.66	< 10	< 1	0.05	100	0.25
RL1-600N	201 202	< 5	< 0.2	1.21	22	< 10	180	< 0.5	< 2	0.27	< 0.5	10	11	18	5.38	< 10	1	0.05	160	0.28
RL1-650N	201 202	< 5	< 0.2	1.30	12	< 10	180	< 0.5	< 2	0.35	< 0.5	9	12	18	6.28	< 10	< 1	0.04	190	0.37
RL1-700N	201 202	< 5	< 0.2	0.89	4	< 10	250	< 0.5	< 2	0.34	< 0.5	5	7	11	4.93	< 10	< 1	0.04	250	0.23
RL1-750N	201 202	< 5	< 0.2	1.38	2	< 10	160	< 0.5	< 2	0.21	< 0.5	7	11	14	5.30	< 10	2	0.03	190	0.42
RL1-800N	201 202	< 5	< 0.2	1.18	4	< 10	240	< 0.5	< 2	0.40	0.5	9	13	15	5.45	< 10	< 1	0.05	240	0.31
RL1-850N	201 202	< 5	< 0.2	1.55	10	< 10	240	< 0.5	< 2	0.46	< 0.5	27	44	46	5.30	< 10	< 1	0.05	90	0.75
RL1-900N	201 202	< 5	< 0.2	2.00	12	< 10	380	< 0.5	< 2	1.09	0.5	23	83	50	4.41	< 10	< 1	0.04	40	0.79
RL1-950N	201 202	< 5	< 0.2	1.39	10	< 10	380	< 0.5	< 2	0.82	< 0.5	22	44	37	4.90	< 10	< 1	0.09	90	0.46
RL1-1000N	201 202	< 5	< 0.2	1.20	28	< 10	310	0.5	< 2	0.32	1.0	14	11	22	5.56	< 10	1	0.33	140	0.06
RL1-1050N	201 202	< 5	< 0.2	0.55	20	< 10	240	< 0.5	< 2	1.13	0.5	21	10	35	5.37	< 10	< 1	0.17	110	0.13
RL1-1100N	201 202	< 5	< 0.2	0.82	20	< 10	230	< 0.5	< 2	0.59	< 0.5	10	8	19	6.90	< 10	< 1	0.43	260	0.07
RL1-1150N	201 202	< 5	< 0.2	1.09	10	< 10	220	0.5	< 2	0.87	< 0.5	32	79	55	5.98	< 10	< 1	0.09	90	0.46
RL1-1200N	201 202	< 5	0.2	0.78	16	< 10	410	< 0.5	< 2	0.55	1.0	25	22	58	4.81	< 10	< 1	0.25	30	0.10
L1100E 8700N	201 202	< 5	< 0.2	1.00	6	< 10	170	< 0.5	< 2	0.09	< 0.5	7	28	21	3.18	< 10	< 1	0.06	40	0.32
L1100E 8750N	201 202	< 5	< 0.2	0.55	6	< 10	60	< 0.5	< 2	0.04	< 0.5	2	13	9	1.56	< 10	1	0.05	40	0.12
L1100E 8800N	201 202	< 5	< 0.2	1.07	8	< 10	110	< 0.5	< 2	0.14	0.5	8	29	30	4.49	< 10	< 1	0.04	40	0.30
L1100E 8850N	201 202	< 5	< 0.2	1.15	8	< 10	110	< 0.5	< 2	0.07	0.5	6	28	11	3.66	< 10	< 1	0.06	30	0.34
L1100E 8900N	201 202	< 5	< 0.2	1.01	14	< 10	100	< 0.5	< 2	0.04	< 0.5	5	22	8	2.71	< 10	< 1	0.05	30	0.23
L1100E 8950N	201 202	< 5	< 0.2	1.36	2	< 10	100	< 0.5	< 2	0.06	< 0.5	8	35	25	4.26	< 10	< 1	0.04	30	0.41
L1100E 9000N	201 202	< 5	< 0.2	1.07	< 2	< 10	390	< 0.5	< 2	0.16	< 0.5	4	12	10	2.69	< 10	< 1	0.03	10	0.12
L1100E 9050N	201 202	< 5	< 0.2	1.01	4	< 10	220	< 0.5	< 2	0.22	< 0.5	7	24	14	2.04	< 10	< 1	0.04	10	0.46
L1100E 9100N	201 202	< 5	0.4	0.84	12	< 10	570	< 0.5	< 2	0.61	1.0	12	24	32	2.90	< 10	1	0.05	30	0.56
L1100E 9150N	201 202	< 5	0.6	0.72	96	< 10	260	< 0.5	< 2	0.11	1.0	9	17	27	3.33	< 10	1	0.07	30	0.20
L1100E 9200N	201 202	< 5	< 0.2	0.89	10	< 10	160	< 0.5	< 2	0.06	< 0.5	8	22	19	3.17	< 10	< 1	0.05	30	0.24
L1200E 8700N	201 202	< 5	0.2	1.03	14	< 10	280	< 0.5	< 2	0.08	1.0	9	27	24	6.32	< 10	1	0.07	30	0.28
L1200E 8750N	201 202	< 5	0.2	0.79	8	< 10	80	< 0.5	< 2	0.10	< 0.5	3	20	8	1.99	< 10	< 1	0.05	20	0.20
L1200E 8800N	201 202	< 5	< 0.2	0.76	4	< 10	460	< 0.5	< 2	0.14	0.5	5	15	14	2.13	< 10	1	0.06	40	0.12

CERTIFICATION:  +



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

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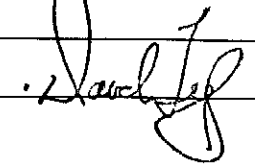
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Page Number : 1-B
Total Pages : 6
Certificate Date: 06-SEP-1999
Invoice No. : I9925656
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Account : EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
JP-01-99	201 202	550	4 < 0.01		38	990	26	0.08	< 2	3	52	0.01	< 10	< 10	22	< 10	228		2460
RL1-0N	201 202	205	1 0.01		8	550	8	0.02	< 2	< 1	5	0.01	< 10	< 10	19	< 10	36		1380
RL1-50N	201 202	875	5 < 0.01		20	1260	26	0.04	< 2	< 1	8	0.01	< 10	< 10	25	< 10	126		1830
RL1-100N	201 202	1160	14 < 0.01		29	950	24	0.04	< 2	< 1	11	< 0.01	< 10	< 10	20	< 10	178		2290
RL1-150N	201 202	1265	5 < 0.01		20	1700	22	0.08	< 2	< 1	7	< 0.01	< 10	< 10	30	< 10	130		2360
RL1-200N	201 202	1340	3 < 0.01		41	1140	26	0.04	< 2	1	17	< 0.01	< 10	< 10	19	< 10	134		3720
RL1-250N	201 202	1245	5 < 0.01		44	750	36	0.05	< 2	1	22	< 0.01	< 10	< 10	22	< 10	278		2710
RL1-300N	201 202	625	2 < 0.01		22	700	18	0.04	< 2	< 1	31	< 0.01	< 10	< 10	20	< 10	132		2760
RL1-350N	201 202	1740	4 < 0.01		28	860	40	0.04	< 2	1	26	< 0.01	< 10	< 10	8	< 10	218		3200
RL1-400N	201 202	770	3 < 0.01		39	670	32	0.06	< 2	< 1	28	< 0.01	< 10	< 10	8	< 10	344		2930
RL1-450N	201 202	2480	1 0.01		70	1620	20	0.08	< 2	8	70	0.04	< 10	< 10	55	< 10	178		2240
RL1-500N	201 202	425	6 < 0.01		62	700	38	0.03	< 2	1	17	0.01	< 10	< 10	22	< 10	424		4060
RL1-550N	201 202	850	8 0.01		26	640	28	0.06	2	2	20	0.01	< 10	< 10	22	< 10	160		2680
RL1-600N	201 202	1425	40 < 0.01		23	500	34	0.03	2	2	16	0.01	< 10	< 10	9	< 10	144		2160
RL1-650N	201 202	2400	10 < 0.01		20	680	20	0.05	< 2	3	18	< 0.01	< 10	< 10	9	< 10	118		2620
RL1-700N	201 202	2470	11 < 0.01		10	360	18	0.03	< 2	1	20	< 0.01	< 10	< 10	5	< 10	86		3410
RL1-750N	201 202	2120	15 < 0.01		12	440	22	0.04	< 2	1	16	0.01	< 10	< 10	9	< 10	114		3080
RL1-800N	201 202	2710	24 < 0.01		15	700	18	0.04	< 2	1	18	< 0.01	< 10	< 10	11	< 10	136		2840
RL1-850N	201 202	1950	14 < 0.01		41	610	10	0.04	< 2	6	19	0.03	< 10	< 10	31	< 10	74		1840
RL1-900N	201 202	1180	3 < 0.01		51	1300	12	0.11	< 2	7	42	0.02	< 10	< 10	58	< 10	154		1260
RL1-950N	201 202	1625	7 0.03		50	830	68	0.22	< 2	4	33	< 0.01	< 10	< 10	25	< 10	144		2320
RL1-1000N	201 202	1690	8 0.01		35	530	52	0.61	2	2	80	< 0.01	< 10	< 10	1	< 10	250		1880
RL1-1050N	201 202	1470	17 < 0.01		37	730	38	0.23	< 2	3	36	< 0.01	< 10	< 10	6	< 10	118		1680
RL1-1100N	201 202	1605	16 0.01		21	990	68	0.81	< 2	2	51	< 0.01	< 10	< 10	5	< 10	136		2780
RL1-1150N	201 202	1580	11 < 0.01		80	870	18	0.12	< 2	9	26	< 0.01	< 10	< 10	32	< 10	88		2070
RL1-1200N	201 202	825	15 0.01		56	1760	16	0.21	2	8	53	< 0.01	< 10	< 10	60	< 10	122		1730
L1100E 8700N	201 202	220	4 < 0.01		25	770	22	0.01	< 2	1	8	0.03	< 10	< 10	33	< 10	182		1940
L1100E 8750N	201 202	65	4 < 0.01		10	490	10	0.01	< 2	< 1	5	< 0.01	< 10	< 10	23	< 10	80		1600
L1100E 8800N	201 202	250	5 < 0.01		30	910	44	0.01	6	1	13	0.03	< 10	< 10	26	< 10	186		2100
L1100E 8850N	201 202	235	4 < 0.01		19	1020	26	< 0.01	< 2	1	8	0.04	< 10	< 10	36	< 10	138		1780
L1100E 8900N	201 202	165	4 < 0.01		13	790	20	< 0.01	< 2	< 1	6	0.03	< 10	< 10	33	< 10	82		1710
L1100E 8950N	201 202	240	4 < 0.01		28	1040	42	0.01	< 2	1	7	0.03	< 10	< 10	34	< 10	178		1790
L1100E 9000N	201 202	415	1 0.02		42	720	44	0.04	< 2	< 1	17	0.01	< 10	< 10	23	< 10	322		1760
L1100E 9050N	201 202	235	1 0.01		19	600	18	0.01	< 2	1	17	0.03	< 10	< 10	22	< 10	88		1420
L1100E 9100N	201 202	410	4 < 0.01		38	890	36	0.05	< 2	3	41	0.01	< 10	< 10	23	< 10	202		2580
L1100E 9150N	201 202	390	6 0.01		26	1200	64	0.08	< 2	< 1	39	< 0.01	< 10	< 10	18	< 10	276		2050
L1100E 9200N	201 202	360	4 0.01		22	450	32	0.02	< 2	1	10	0.02	< 10	< 10	25	< 10	140		2150
L1200E 8700N	201 202	335	6 < 0.01		20	1520	34	0.11	< 2	1	17	0.03	< 10	< 10	26	< 10	186		2430
L1200E 8750N	201 202	105	3 0.01		9	490	16	< 0.01	< 2	< 1	10	0.03	< 10	< 10	35	< 10	62		1440
L1200E 8800N	201 202	145	3 < 0.01		11	540	18	< 0.01	< 2	< 1	11	0.01	< 10	< 10	28	< 10	126		2300

CERTIFICATION:  +



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :2-A
Total Pages :6
Certificate Date: 06-SEP-1999
Invoice No. :19925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS A9925656

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L1200E 8850N	201	202	< 5	< 0.2	0.51	6	< 10	70	< 0.5	< 2	0.04	< 0.5	1	9	7	1.05	< 10	< 1	0.04	30	0.08
L1200E 8900N	201	202	< 5	< 0.2	1.01	12	< 10	130	< 0.5	< 2	0.06	< 0.5	5	22	11	2.72	< 10	< 1	0.07	40	0.23
L1200E 8950N	201	202	< 5	< 0.2	1.18	14	< 10	120	< 0.5	< 2	0.06	< 0.5	8	32	14	4.48	< 10	< 1	0.06	30	0.35
L1200E 9000N	201	202	< 5	0.4	0.27	< 2	< 10	120	< 0.5	< 2	0.05	< 0.5	1	5	3	0.65	< 10	< 1	0.03	< 10	0.04
L1200E 9050N	201	202	< 5	0.2	0.86	6	< 10	160	< 0.5	< 2	0.01	< 0.5	12	11	18	4.00	< 10	< 1	0.05	10	0.03
L1200E 9100N	201	202	< 5	< 0.2	0.81	8	< 10	120	< 0.5	< 2	0.03	0.5	12	24	14	3.97	< 10	< 1	0.04	30	0.18
L1200E 9150N	201	202	< 5	< 0.2	0.56	2	< 10	80	< 0.5	< 2	0.02	< 0.5	3	7	8	1.14	< 10	< 1	0.04	10	0.03
L1200E 9200N	201	202	< 5	< 0.2	1.14	10	< 10	80	< 0.5	< 2	0.05	< 0.5	14	37	20	6.28	< 10	< 1	0.05	30	0.31
L1300E 8700N	201	202	< 5	0.2	0.73	2	< 10	250	< 0.5	< 2	0.25	2.0	5	17	16	1.83	< 10	< 1	0.05	20	0.21
L1300E 8750N	201	202	< 5	< 0.2	1.50	4	< 10	260	< 0.5	< 2	0.39	2.0	15	38	33	4.00	< 10	< 1	0.06	30	0.76
L1300E 8800N	201	202	< 5	< 0.2	1.02	6	< 10	290	< 0.5	< 2	0.28	2.0	12	35	34	4.03	< 10	< 1	0.09	70	0.45
L1300E 8850N	201	202	< 5	< 0.2	0.88	18	< 10	850	< 0.5	< 2	0.07	1.0	6	17	27	5.76	< 10	< 1	0.20	30	0.15
L1300E 8900N	201	202	< 5	< 0.2	1.02	12	< 10	530	< 0.5	< 2	0.36	0.5	6	28	13	2.55	< 10	< 1	0.07	40	0.33
L1300E 8950N	201	202	< 5	< 0.2	0.62	12	< 10	340	< 0.5	< 2	0.06	< 0.5	3	6	17	5.53	< 10	< 1	0.11	100	0.06
L1300E 9000N	201	202	< 5	0.4	0.81	10	< 10	350	< 0.5	< 2	1.33	0.5	7	17	13	2.24	< 10	< 1	0.06	10	0.30
L1300E 9050N	201	202	< 5	< 0.2	0.78	2	< 10	250	< 0.5	< 2	0.28	3.0	11	22	20	2.86	< 10	< 1	0.06	20	0.20
L1300E 9100N	201	202	< 5	0.2	1.18	6	< 10	630	< 0.5	< 2	1.02	2.5	10	22	36	3.44	< 10	< 1	0.06	50	0.25
L1300E 9150N	201	202	< 5	< 0.2	1.28	10	< 10	130	< 0.5	< 2	0.05	< 0.5	14	33	23	5.91	< 10	< 1	0.05	30	0.26
L1300E 9200N	201	202	< 5	< 0.2	0.79	12	< 10	130	< 0.5	< 2	0.05	< 0.5	7	23	10	2.95	< 10	< 1	0.06	30	0.20
L1400E 8700N	--	--	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L1400E 8750N	201	202	< 5	0.2	0.61	18	< 10	310	< 0.5	< 2	0.32	0.5	5	18	21	6.53	< 10	< 1	0.06	10	0.16
L1400E 8800N	201	202	< 5	< 0.2	0.55	28	< 10	140	< 0.5	< 2	0.03	2.0	3	15	11	7.52	< 10	< 1	0.05	10	0.03
L1400E 8850N	201	202	< 5	< 0.2	1.00	10	< 10	150	< 0.5	< 2	0.08	0.5	16	37	11	2.88	< 10	< 1	0.06	30	0.37
L1400E 8900N	201	202	< 5	< 0.2	1.42	16	< 10	100	< 0.5	< 2	0.09	0.5	11	50	19	4.67	< 10	< 1	0.05	30	0.74
L1400E 8950N	201	202	< 5	< 0.2	1.24	8	< 10	110	< 0.5	< 2	0.11	< 0.5	6	32	12	2.93	< 10	< 1	0.05	20	0.38
L1400E 9000N	201	202	< 5	< 0.2	1.22	8	< 10	170	< 0.5	< 2	0.10	0.5	9	34	26	3.89	< 10	< 1	0.06	30	0.45
L1400E 9050N	201	202	< 5	< 0.2	0.76	6	< 10	90	< 0.5	< 2	0.07	< 0.5	4	19	15	2.65	< 10	< 1	0.05	10	0.19
L1400E 9100N	201	202	< 5	< 0.2	1.01	10	< 10	210	< 0.5	< 2	0.10	0.5	11	31	26	4.06	< 10	< 1	0.06	40	0.33
L1400E 9150N	201	202	< 5	< 0.2	2.35	< 2	< 10	90	< 0.5	< 2	0.43	0.5	19	69	12	5.00	< 10	< 1	0.05	20	1.66
L1400E 9200N	201	202	< 5	< 0.2	0.95	14	< 10	110	< 0.5	< 2	0.03	< 0.5	10	26	11	4.01	< 10	< 1	0.05	20	0.18
L1500E 8800N	201	202	< 5	0.2	0.98	< 2	< 10	210	< 0.5	< 2	0.13	2.0	6	29	12	4.99	< 10	< 1	0.04	10	0.15
L1500E 8850N	201	202	< 5	0.2	1.39	6	< 10	390	< 0.5	< 2	0.47	0.5	15	46	28	3.54	< 10	< 1	0.05	70	0.79
L1500E 8900N	201	202	< 5	< 0.2	1.21	< 2	< 10	240	< 0.5	< 2	0.06	2.0	10	32	16	3.54	< 10	< 1	0.05	30	0.51
L1500E 8950N	201	202	< 5	< 0.2	0.87	8	< 10	120	< 0.5	< 2	0.08	< 0.5	5	30	11	3.79	< 10	< 1	0.04	20	0.34
L1500E 9000N	201	202	< 5	0.2	1.46	12	< 10	170	< 0.5	< 2	0.03	< 0.5	6	24	20	4.54	< 10	< 1	0.04	20	0.26
L1500E 9050N	201	202	< 5	< 0.2	0.94	< 2	< 10	140	< 0.5	< 2	0.07	< 0.5	3	20	16	1.83	< 10	< 1	0.04	20	0.16
L1500E 9100N	201	202	< 5	< 0.2	1.20	< 2	< 10	560	< 0.5	< 2	0.31	0.5	8	24	20	2.95	< 10	< 1	0.04	20	0.33
L1500E 9150N	201	202	< 5	< 0.2	1.10	2	< 10	110	< 0.5	< 2	0.05	0.5	8	25	10	3.81	< 10	< 1	0.04	20	0.20
L1500E 9200N	201	202	< 5	< 0.2	1.48	6	< 10	120	< 0.5	< 2	0.06	< 0.5	7	33	11	4.06	< 10	< 1	0.04	20	0.38
BL9000N 1150E	201	202	< 5	< 0.2	0.89	8	< 10	100	< 0.5	< 2	0.08	< 0.5	5	23	14	3.06	< 10	< 1	0.05	30	0.21

CERTIFICATION:

Jason Weber



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

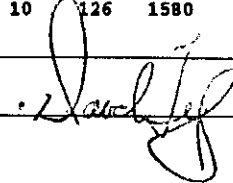
Project: STARR
Comments: ATTN: JASON WEBER

Page Number :2-B
Total Pages :6
Certificate Date: 06-SEP-1999
Invoice No. :19925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L1200E 8850N	201	202	55	2	0.01	6	360	10	0.01	< 2	< 1	4	< 0.01	< 10	< 10	19	< 10	54		1350
L1200E 8900N	201	202	185	3	< 0.01	14	820	24	< 0.01	< 2	1	9	0.04	< 10	< 10	37	< 10	116		1740
L1200E 8950N	201	202	325	5	< 0.01	20	1120	40	0.01	< 2	1	9	0.08	< 10	< 10	72	< 10	108		1640
L1200E 9000N	201	202	40	< 1	0.03	3	470	6	0.03	< 2	< 1	7	< 0.01	< 10	< 10	14	< 10	28		1330
L1200E 9050N	201	202	125	5	< 0.01	15	720	26	0.03	< 2	< 1	6	0.03	< 10	< 10	27	< 10	54		2160
L1200E 9100N	201	202	710	4	< 0.01	16	1180	32	0.01	< 2	< 1	6	0.03	< 10	< 10	33	< 10	112		2360
L1200E 9150N	201	202	55	2	< 0.01	6	450	10	0.01	< 2	< 1	4	< 0.01	< 10	< 10	21	< 10	28		1490
L1200E 9200N	201	202	465	5	< 0.01	32	2140	66	0.01	< 2	1	7	0.04	< 10	< 10	37	< 10	104		2460
L1300E 8700N	201	202	450	1	0.02	12	610	20	0.03	< 2	< 1	14	0.02	< 10	< 10	22	< 10	94		1600
L1300E 8750N	201	202	770	4	< 0.01	38	1290	28	0.03	< 2	2	23	0.02	< 10	< 10	36	< 10	230		2090
L1300E 8800N	201	202	520	7	< 0.01	40	1060	42	0.01	< 2	3	23	0.05	< 10	< 10	28	< 10	450		2490
L1300E 8850N	201	202	180	10	0.01	27	820	56	0.37	2	3	24	0.03	< 10	< 10	32	< 10	240		5500
L1300E 8900N	201	202	255	3	0.01	20	540	28	0.01	< 2	1	20	0.02	< 10	< 10	25	< 10	202		2260
L1300E 8950N	201	202	205	15	< 0.01	7	910	24	0.21	< 2	< 1	26	< 0.01	< 10	< 10	6	< 10	62		4210
L1300E 9000N	201	202	255	3	0.01	21	1330	26	0.09	< 2	1	69	0.01	< 10	< 10	23	< 10	206		2110
L1300E 9050N	201	202	625	4	0.01	20	1030	24	0.06	2	< 1	21	0.01	< 10	< 10	23	< 10	178		2230
L1300E 9100N	201	202	940	4	0.02	30	1180	60	0.09	< 2	3	62	0.01	< 10	< 10	16	< 10	180		2300
L1300E 9150N	201	202	430	5	< 0.01	30	930	58	0.03	2	1	7	0.04	< 10	< 10	30	< 10	148		2520
L1300E 9200N	201	202	285	5	< 0.01	17	990	20	0.01	< 2	< 1	7	< 0.01	< 10	< 10	25	< 10	88		2380
L1400E 8700N	--	--	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L1400E 8750N	201	202	185	6	0.01	15	950	224	0.12	4	1	24	0.04	< 10	< 10	22	< 10	124	not/ass	
L1400E 8800N	201	202	40	7	< 0.01	9	970	32	0.01	2	< 1	6	0.05	< 10	< 10	38	< 10	64		2460
L1400E 8850N	201	202	1000	3	< 0.01	18	940	20	0.01	< 2	1	10	0.04	< 10	< 10	39	< 10	100		1970
L1400E 8900N	201	202	445	4	< 0.01	35	1140	20	< 0.01	< 2	1	9	0.06	< 10	< 10	56	< 10	130		2150
L1400E 8950N	201	202	195	1	< 0.01	20	750	18	0.01	4	1	13	0.03	< 10	< 10	34	< 10	96		1780
L1400E 9000N	201	202	220	4	< 0.01	31	860	28	< 0.01	< 2	1	11	0.05	< 10	< 10	37	< 10	150		2340
L1400E 9050N	201	202	155	4	< 0.01	16	1220	26	0.02	< 2	< 1	10	0.01	< 10	< 10	33	< 10	92		1950
L1400E 9100N	201	202	320	5	< 0.01	28	830	60	0.02	< 2	1	12	0.02	< 10	< 10	28	< 10	186		2290
L1400E 9150N	201	202	625	3	< 0.01	66	820	46	0.02	< 2	1	34	0.25	< 10	< 10	57	< 10	162		1500
L1400E 9200N	201	202	565	4	< 0.01	18	1010	32	0.01	2	< 1	7	0.03	< 10	< 10	47	< 10	74		2170
L1500E 8800N	201	202	425	1	0.01	12	760	22	0.03	< 2	< 1	12	0.04	< 10	< 10	31	< 10	96		1320
L1500E 8850N	201	202	445	3	< 0.01	43	1310	30	0.01	< 2	3	30	0.06	< 10	< 10	37	< 10	146		2160
L1500E 8900N	201	202	620	3	< 0.01	20	760	26	0.01	2	< 1	10	0.02	< 10	< 10	44	< 10	126		2550
L1500E 8950N	201	202	180	4	< 0.01	20	940	38	0.04	< 2	< 1	11	0.03	< 10	< 10	28	< 10	82		2330
L1500E 9000N	201	202	225	5	< 0.01	21	730	30	0.01	< 2	1	7	0.01	< 10	< 10	32	< 10	150		2800
L1500E 9050N	201	202	70	2	< 0.01	11	410	26	0.01	< 2	< 1	8	0.03	< 10	< 10	39	< 10	52		1350
L1500E 9100N	201	202	280	2	< 0.01	21	560	22	0.02	2	1	18	0.03	< 10	< 10	37	< 10	142		2210
L1500E 9150N	201	202	620	3	< 0.01	13	810	22	0.01	< 2	1	7	0.06	< 10	< 10	56	< 10	110		1630
L1500E 9200N	201	202	190	3	< 0.01	20	790	20	< 0.01	< 2	1	7	0.05	< 10	< 10	41	< 10	104		1810
BL9000N 1150E	201	202	265	3	< 0.01	15	860	38	0.02	< 2	< 1	8	0.03	< 10	< 10	37	< 10	126		1580

CERTIFICATION:  +



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Page Number :3-A
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Certificate Date: 06-SEP-1999
Invoice No. :19925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
BL9000N 1250E	201	202	< 5	< 0.2	0.93	< 2	< 10	290	< 0.5	< 2	0.14	< 0.5	1	5	6	1.26	< 10	< 1	0.02	10	0.09
BL9000N 1350E	201	202	< 5	< 0.2	1.41	2	< 10	330	< 0.5	< 2	0.17	0.5	12	39	21	3.24	< 10	< 1	0.06	20	0.54
BL9000N 1450E	201	202	< 5	< 0.2	1.11	10	< 10	240	< 0.5	< 2	0.02	< 0.5	6	27	14	4.74	< 10	< 1	0.06	30	0.28
L17400E 5050N	201	202	< 5	0.6	0.71	16	< 10	340	< 0.5	< 2	0.06	0.5	6	16	40	2.44	< 10	< 1	0.09	20	0.16
L17400E 5100N	201	202	< 5	0.2	1.06	28	< 10	330	< 0.5	< 2	0.10	0.5	13	23	28	4.02	< 10	< 1	0.09	30	0.19
L17400E 5150N	201	202	< 5	< 0.2	0.63	10	< 10	200	< 0.5	< 2	0.14	< 0.5	5	16	19	2.16	< 10	2	0.07	10	0.13
L17400E 5200N	201	202	< 5	< 0.2	1.51	< 2	< 10	440	< 0.5	< 2	0.11	0.5	8	27	30	2.77	< 10	< 1	0.08	20	0.23
L17400E 5250N	201	202	< 5	0.2	0.75	14	< 10	500	< 0.5	< 2	0.25	< 0.5	13	13	22	3.02	< 10	< 1	0.05	30	0.14
L17400E 5300N	201	202	< 5	< 0.2	1.19	4	< 10	130	< 0.5	< 2	0.04	< 0.5	9	50	30	3.94	< 10	1	0.09	20	0.31
L17400E 5350N	201	202	< 5	0.2	1.00	10	< 10	150	< 0.5	< 2	0.04	< 0.5	8	29	18	2.70	< 10	< 1	0.07	10	0.18
L17400E 5400N	201	202	< 5	0.2	1.18	4	< 10	370	< 0.5	< 2	0.26	< 0.5	4	22	18	1.88	< 10	1	0.07	10	0.16
L17400E 5450N	201	202	< 5	< 0.2	1.36	< 2	< 10	220	< 0.5	< 2	0.29	< 0.5	13	38	30	2.57	< 10	< 1	0.08	20	0.51
L17400E 5500N	201	202	< 5	0.6	1.34	16	< 10	200	< 0.5	< 2	0.03	< 0.5	8	35	34	5.01	< 10	< 1	0.11	30	0.34
L17400E 5550N	201	202	< 5	< 0.2	1.05	2	< 10	90	< 0.5	< 2	0.09	< 0.5	4	26	12	1.92	< 10	< 1	0.05	10	0.22
L17400E 5600N	201	202	< 5	< 0.2	1.20	24	< 10	110	< 0.5	< 2	0.11	< 0.5	10	35	17	3.30	< 10	1	0.06	10	0.36
L17400E 5650N	201	202	< 5	< 0.2	0.61	10	< 10	80	< 0.5	< 2	0.10	< 0.5	4	10	7	2.60	< 10	1	0.04	10	0.05
L17400E 5700N	201	202	< 5	< 0.2	1.24	12	< 10	250	< 0.5	< 2	0.05	< 0.5	5	20	13	2.22	< 10	1	0.08	10	0.16
L17400E 5750N	201	202	< 5	0.4	0.23	8	< 10	250	< 0.5	< 2	0.06	< 0.5	2	4	26	1.16	< 10	< 1	0.10	< 10	0.01
L17400E 5800N	201	202	< 5	< 0.2	0.85	12	< 10	430	< 0.5	< 2	0.27	< 0.5	9	22	29	2.72	< 10	< 1	0.08	30	0.25
L17400E 5850N	201	202	< 5	< 0.2	0.97	< 2	< 10	150	< 0.5	< 2	0.16	0.5	7	19	30	1.93	< 10	< 1	0.07	10	0.31
L17400E 5900N	201	202	< 5	0.2	0.63	8	< 10	110	< 0.5	< 2	0.05	< 0.5	9	12	39	3.36	< 10	< 1	0.05	< 10	0.23
L17400E 5950N	201	202	< 5	0.2	0.59	6	< 10	130	< 0.5	< 2	0.07	0.5	9	8	36	2.03	< 10	< 1	0.04	< 10	0.16
L17400E 6000N	201	202	< 5	0.2	0.56	6	< 10	140	< 0.5	< 2	0.04	< 0.5	5	10	25	1.66	< 10	1	0.05	< 10	0.11
L17400E 6050N	201	202	< 5	0.6	0.57	8	< 10	70	< 0.5	< 2	0.03	< 0.5	1	5	14	1.01	< 10	< 1	0.03	< 10	0.04
L17400E 6100N	201	202	< 5	0.4	0.44	6	< 10	120	< 0.5	< 2	0.01	< 0.5	3	6	17	1.20	< 10	< 1	0.05	< 10	0.08
L17400E 6150N	--	--	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L17900E 5050N	201	202	< 5	< 0.2	1.17	34	< 10	650	< 0.5	< 2	0.68	< 0.5	6	13	14	4.09	< 10	1	0.17	70	0.12
L17900E 5100N	201	202	< 5	< 0.2	1.29	108	< 10	170	< 0.5	< 2	0.25	2.0	16	35	24	3.90	< 10	< 1	0.09	40	0.43
L17900E 5150N	201	202	< 5	< 0.2	0.95	20	< 10	250	< 0.5	< 2	0.10	< 0.5	9	15	15	3.74	< 10	< 1	0.13	50	0.15
L17900E 5200N	201	202	< 5	< 0.2	0.68	14	< 10	210	< 0.5	< 2	0.10	< 0.5	4	12	10	2.01	< 10	< 1	0.08	30	0.10
L17900E 5250N	201	202	< 5	< 0.2	1.66	4	< 10	300	< 0.5	< 2	0.44	< 0.5	34	53	37	5.12	< 10	1	0.17	40	0.61
L17900E 5300N	201	202	< 5	< 0.2	1.36	8	< 10	330	< 0.5	< 2	0.43	< 0.5	18	39	35	3.69	< 10	1	0.11	30	0.41
L17900E 5350N	201	202	< 5	< 0.2	0.87	10	< 10	370	< 0.5	< 2	0.32	< 0.5	20	27	28	3.42	< 10	< 1	0.14	30	0.19
L17900E 5400N	201	202	< 5	< 0.2	1.39	2	< 10	180	< 0.5	< 2	0.31	< 0.5	9	36	20	2.26	< 10	< 1	0.07	20	0.52
L17900E 5450N	201	202	< 5	< 0.2	1.28	< 2	< 10	190	< 0.5	< 2	0.44	< 0.5	10	40	25	2.28	< 10	< 1	0.08	10	0.56
L17900E 5500N	201	202	< 5	< 0.2	1.18	6	< 10	180	< 0.5	< 2	0.33	< 0.5	12	36	16	2.71	< 10	1	0.06	20	0.47
L17900E 5550N	201	202	< 5	< 0.2	1.23	< 2	< 10	170	< 0.5	< 2	0.23	< 0.5	8	34	22	2.09	< 10	< 1	0.04	10	0.45
L17900E 5600N	201	202	< 5	0.4	0.43	12	< 10	390	< 0.5	< 2	0.24	< 0.5	12	7	44	2.01	< 10	< 1	0.07	< 10	0.05
L17900E 5650N	201	202	< 5	0.2	0.63	10	< 10	180	< 0.5	< 2	0.07	< 0.5	9	13	40	3.18	< 10	< 1	0.05	< 10	0.11
L17900E 5700N	201	202	< 5	0.4	0.35	6	< 10	130	< 0.5	< 2	0.04	< 0.5	6	6	35	1.76	< 10	< 1	0.04	< 10	0.04

CERTIFICATION:

Jason Weber



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :3-B
Total Pages :6
Certificate Date: 06-SEP-1999
Invoice No. :I9925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
BL9000N 1250E	201 202	35	< 1	0.04	4	470	8	0.04	< 2	< 1	15	0.02	< 10	< 10	11	< 10	16	1360	
BL9000N 1350E	201 202	370	2	< 0.01	32	610	22	0.01	< 2	2	13	0.06	< 10	< 10	45	< 10	162	1850	
BL9000N 1450E	201 202	195	6	< 0.01	19	910	26	0.04	< 2	1	12	0.03	< 10	< 10	35	< 10	122	2620	
L17400E 5050N	201 202	45	6	< 0.01	23	890	50	0.17	< 2	4	150	< 0.01	< 10	< 10	34	< 10	92	3230	
L17400E 5100N	201 202	505	7	< 0.01	30	2030	62	0.15	2	1	120	< 0.01	< 10	< 10	39	< 10	156	3440	
L17400E 5150N	201 202	145	4	0.01	19	1320	26	0.11	2	< 1	59	< 0.01	< 10	< 10	30	< 10	98	2540	
L17400E 5200N	201 202	210	4	0.01	27	1550	34	0.09	< 2	1	62	< 0.01	< 10	< 10	41	< 10	124	3470	
L17400E 5250N	201 202	365	6	< 0.01	26	1120	34	0.12	< 2	1	100	< 0.01	< 10	< 10	23	< 10	112	3820	
L17400E 5300N	201 202	230	5	< 0.01	31	1780	24	0.11	2	< 1	22	0.01	< 10	< 10	54	< 10	104	2030	
L17400E 5350N	201 202	290	4	0.01	20	1010	24	0.08	< 2	< 1	19	< 0.01	< 10	< 10	40	< 10	62	2130	
L17400E 5400N	201 202	195	3	0.01	15	1740	16	0.09	< 2	< 1	56	< 0.01	< 10	< 10	32	< 10	80	2610	
L17400E 5450N	201 202	400	3	0.01	38	880	16	0.01	< 2	3	33	0.06	< 10	< 10	41	< 10	124	2100	
L17400E 5500N	201 202	305	7	< 0.01	33	1650	32	0.17	2	< 1	32	< 0.01	< 10	< 10	36	< 10	150	2530	
L17400E 5550N	201 202	135	1	< 0.01	16	650	14	0.02	2	< 1	17	0.01	< 10	< 10	32	< 10	56	1770	
L17400E 5600N	201 202	210	4	< 0.01	29	930	20	0.04	2	1	22	0.03	< 10	< 10	40	< 10	112	1800	
L17400E 5650N	201 202	130	1	< 0.01	8	1500	38	0.04	< 2	< 1	15	< 0.01	< 10	< 10	8	< 10	38	1610	
L17400E 5700N	201 202	80	5	< 0.01	16	1030	28	0.12	< 2	< 1	53	0.01	< 10	< 10	34	< 10	56	1990	
L17400E 5750N	201 202	30	3	< 0.01	20	580	22	0.15	< 2	1	185	< 0.01	< 10	< 10	16	< 10	62	3530	
L17400E 5800N	201 202	255	4	< 0.01	37	1130	24	0.08	< 2	2	91	0.04	< 10	< 10	31	< 10	128	3260	
L17400E 5850N	201 202	135	3	< 0.01	32	740	14	0.03	< 2	2	65	0.03	< 10	< 10	30	< 10	140	2800	
L17400E 5900N	201 202	145	3	< 0.01	46	1050	22	0.05	< 2	3	58	< 0.01	< 10	< 10	56	< 10	166	3940	
L17400E 5950N	201 202	100	3	< 0.01	39	790	18	0.04	2	1	48	< 0.01	< 10	< 10	18	< 10	206	4410	
L17400E 6000N	201 202	55	3	< 0.01	24	690	16	0.04	< 2	< 1	41	< 0.01	< 10	< 10	22	< 10	136	3690	
L17400E 6050N	201 202	20	2	0.01	9	640	14	0.04	< 2	< 1	38	< 0.01	< 10	< 10	18	< 10	36	2150	
L17400E 6100N	201 202	20	4	< 0.01	20	550	18	0.04	< 2	< 1	44	< 0.01	< 10	< 10	20	< 10	98	2820	
L17400E 6150N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L17900E 5050N	201 202	400	15	0.02	15	2040	86	0.38	6	1	95	< 0.01	< 10	< 10	50	< 10	60	2810	
L17900E 5100N	201 202	920	12	< 0.01	62	1530	52	0.07	< 2	3	28	0.03	< 10	< 10	37	< 10	466	1710	
L17900E 5150N	201 202	490	7	0.01	20	1590	48	0.22	2	1	79	< 0.01	< 10	< 10	40	< 10	108	1830	
L17900E 5200N	201 202	155	4	0.03	12	950	28	0.13	< 2	< 1	60	< 0.01	< 10	< 10	20	< 10	58	1900	
L17900E 5250N	201 202	1135	3	0.02	75	1880	24	0.19	< 2	3	61	< 0.01	< 10	< 10	34	< 10	102	1800	
L17900E 5300N	201 202	225	4	0.01	62	1460	22	0.12	< 2	3	39	< 0.01	< 10	< 10	29	< 10	84	1830	
L17900E 5350N	201 202	1200	5	0.01	39	1730	26	0.21	2	1	41	< 0.01	< 10	< 10	27	< 10	86	2100	
L17900E 5400N	201 202	310	1	< 0.01	33	830	12	0.01	< 2	3	26	0.08	< 10	< 10	36	< 10	86	1540	
L17900E 5450N	201 202	390	< 1	0.01	35	840	8	< 0.01	< 2	4	33	0.11	< 10	< 10	43	< 10	60	1100	
L17900E 5500N	201 202	355	1	< 0.01	30	900	16	0.03	2	3	32	0.06	< 10	< 10	43	< 10	76	1690	
L17900E 5550N	201 202	245	< 1	< 0.01	30	610	10	< 0.01	< 2	3	20	0.07	< 10	< 10	36	< 10	78	1520	
L17900E 5600N	201 202	90	6	< 0.01	64	1360	24	0.03	2	1	106	< 0.01	< 10	< 10	30	< 10	62	4610	
L17900E 5650N	201 202	195	4	< 0.01	36	1080	24	0.05	2	< 1	38	< 0.01	< 10	< 10	42	< 10	106	3920	
L17900E 5700N	201 202	35	3	< 0.01	26	530	20	0.02	< 2	1	21	< 0.01	< 10	< 10	34	< 10	82	4690	

CERTIFICATION: _____



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

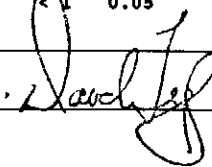
700 - 700 W. PENDER ST.
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Project: STARR
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L17900E 5750N	201 202	< 5	1.0	0.45	< 2	< 10	110	< 0.5	< 2	0.01	< 0.5	1	4	7	0.91	< 10	< 1	0.03	< 10	0.02
L17900E 5800N	201 202	< 5	< 0.2	0.40	< 2	< 10	100	< 0.5	< 2	0.01	< 0.5	3	6	13	1.23	< 10	< 1	0.04	< 10	0.02
L17900E 5850N	201 202	< 5	0.6	0.51	< 2	< 10	110	< 0.5	< 2	0.04	< 0.5	3	11	13	1.33	< 10	< 1	0.05	< 10	0.09
L17900E 5900N	201 202	< 5	0.2	0.66	6	< 10	120	< 0.5	< 2	0.20	0.5	4	11	20	1.83	< 10	< 1	0.06	< 10	0.19
L18200E 5050N	201 202	< 5	1.0	0.80	24	< 10	280	< 0.5	< 2	0.35	0.5	11	19	26	4.39	< 10	< 1	0.40	70	0.30
L18200E 5100N	201 202	< 5	0.4	0.97	24	< 10	280	< 0.5	< 2	0.80	< 0.5	11	26	23	4.79	< 10	< 1	0.33	80	0.43
L18200E 5150N	201 202	< 5	< 0.2	0.50	28	< 10	440	< 0.5	< 2	0.09	< 0.5	5	2	8	8.17	< 10	< 1	0.32	80	0.03
L18400E 5050N	201 202	< 10	0.4	0.44	16	< 10	420	< 0.5	< 2	0.06	< 0.5	< 1	3	7	3.29	< 10	< 1	0.29	30	0.03
L18400E 5100N	201 202	< 5	0.2	0.75	34	< 10	110	< 0.5	< 2	0.02	< 0.5	2	8	8	5.90	< 10	< 1	0.78	50	0.05
L18400E 5150N	201 202	< 5	< 0.2	0.43	2	< 10	280	0.5	< 2	0.73	< 0.5	3	3	7	1.28	< 10	< 1	0.07	30	0.05
L18400E 5200N	201 202	< 5	< 0.2	1.09	8	< 10	220	< 0.5	< 2	0.06	< 0.5	10	43	20	3.53	< 10	1	0.14	30	0.33
L18400E 5250N	201 202	< 5	< 0.2	0.73	12	< 10	130	0.5	< 2	0.21	< 0.5	5	4	21	6.57	< 10	< 1	0.04	120	0.10
L18400E 5300N	201 202	< 5	< 0.2	0.53	24	< 10	170	< 0.5	< 2	0.11	< 0.5	3	1	8	1.90	< 10	< 1	0.07	10	0.03
L18400E 5350N	201 202	< 5	0.6	0.36	12	< 10	430	< 0.5	< 2	0.13	< 0.5	4	5	21	2.54	< 10	< 1	0.12	20	0.03
L18400E 5400N	201 202	< 5	0.6	0.83	2	< 10	460	< 0.5	< 2	0.09	< 0.5	10	11	54	3.34	< 10	< 1	0.07	< 10	0.19
L18400E 5450N	201 202	< 5	0.2	0.73	12	< 10	130	< 0.5	< 2	0.06	< 0.5	7	14	28	2.24	< 10	< 1	0.08	10	0.17
L18400E 5500N	201 202	< 5	0.4	1.53	8	< 10	160	< 0.5	< 2	0.07	0.5	9	33	29	4.21	< 10	< 1	0.11	20	0.25
L18400E 5550N	201 202	< 5	0.2	0.93	2	< 10	280	< 0.5	< 2	0.15	0.5	7	19	35	2.86	< 10	< 1	0.07	40	0.33
L18400E 5600N	201 202	< 5	< 0.2	0.69	10	< 10	170	< 0.5	< 2	0.03	< 0.5	5	23	18	3.71	< 10	< 1	0.09	60	0.09
L18400E 5650N	201 202	< 5	< 0.2	0.92	6	< 10	180	< 0.5	< 2	0.17	0.5	6	21	27	2.59	< 10	< 1	0.06	20	0.34
L18400E 5700N	201 202	< 5	0.4	1.02	8	< 10	170	< 0.5	< 2	0.05	0.5	7	23	32	2.93	< 10	< 1	0.07	10	0.24
L18400E 5750N	201 202	< 5	0.8	0.79	12	< 10	390	< 0.5	< 2	0.35	0.5	34	25	57	5.52	< 10	< 1	0.07	30	0.18
L18400E 5800N	201 202	< 5	0.8	0.62	4	< 10	140	< 0.5	< 2	0.03	< 0.5	4	11	19	1.61	< 10	< 1	0.06	10	0.06
L18400E 5850N	201 202	< 5	1.0	0.45	< 2	< 10	210	< 0.5	< 2	0.01	< 0.5	9	7	40	2.46	< 10	< 1	0.06	< 10	0.05
L18400E 5900N	201 202	< 5	0.6	0.59	2	< 10	190	< 0.5	< 2	0.03	0.5	7	9	36	2.59	< 10	< 1	0.07	< 10	0.18
L18400E 5950N	201 202	< 5	0.2	0.38	6	< 10	90	< 0.5	< 2	0.02	< 0.5	3	5	21	1.35	< 10	< 1	0.06	< 10	0.03
L18400E 6000N	201 202	< 5	0.2	0.45	10	< 10	120	< 0.5	< 2	0.01	< 0.5	4	6	23	1.43	< 10	< 1	0.06	< 10	0.06
L18400E 6050N	201 202	< 5	1.6	1.07	< 2	< 10	810	< 0.5	< 2	0.14	< 0.5	5	9	38	1.77	< 10	< 1	0.08	< 10	0.07
L18800E 5550N	201 202	< 5	< 0.2	0.93	14	< 10	390	< 0.5	< 2	0.21	0.5	20	61	32	5.33	< 10	< 1	0.25	60	0.43
L18800E 5600N	201 202	< 5	< 0.2	1.01	16	< 10	310	< 0.5	< 2	0.20	1.0	13	37	32	5.63	< 10	< 1	0.28	100	0.28
L18800E 5650N	201 202	< 5	< 0.2	1.38	16	< 10	290	0.5	< 2	0.18	2.0	16	63	53	6.06	< 10	< 1	0.34	240	0.49
L18800E 5700N	201 202	< 5	< 0.2	1.40	12	< 10	590	0.5	< 2	0.25	4.0	12	65	27	4.40	< 10	< 1	0.15	310	0.52
L18800E 5750N	201 202	< 5	< 0.2	1.03	18	< 10	400	< 0.5	< 2	0.92	< 0.5	10	59	24	3.87	< 10	< 1	0.14	70	0.55
L18800E 5800N	201 202	< 5	0.6	0.86	12	< 10	510	< 0.5	2	0.51	5.5	7	28	21	10.65	< 10	< 1	0.06	50	0.26
L18800E 5850N	201 202	< 5	0.4	1.46	2	< 10	1220	0.5	< 2	0.19	< 0.5	5	28	25	2.13	< 10	< 1	0.04	100	0.29
L18800E 5900N	201 202	< 5	0.2	0.88	8	< 10	630	0.5	< 2	0.38	0.5	6	21	17	2.76	< 10	< 1	0.06	60	0.27
L18800E 5950N	201 202	< 5	0.2	1.16	8	< 10	190	< 0.5	< 2	0.03	< 0.5	5	21	17	3.78	< 10	< 1	0.06	20	0.12
L18800E 6000N	201 202	< 5	0.2	1.10	10	< 10	100	< 0.5	< 2	0.12	< 0.5	6	33	22	3.57	< 10	< 1	0.08	30	0.35
L18800E 6050N	201 202	< 5	0.2	1.05	12	< 10	690	< 0.5	< 2	0.26	0.5	6	26	21	2.66	< 10	< 1	0.07	50	0.30
L18800E 6100N	201 202	< 5	0.4	0.69	4	< 10	450	< 0.5	< 2	0.29	0.5	4	12	22	2.31	< 10	< 1	0.05	20	0.17

CERTIFICATION: 



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 4-B
Total Pages : 6
Certificate Date: 06-SEP-1999
Invoice No. : I9925656
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	KRF ppm
L17900E 5750N	201 202	20	< 1	0.01	5	240	8	0.01	< 2	< 1	8	< 0.01	< 10	< 10	21	< 10	10		2840
L17900E 5800N	201 202	60	2	< 0.01	14	290	16	0.03	< 2	< 1	23	< 0.01	< 10	< 10	30	< 10	52		2930
L17900E 5850N	201 202	50	2	0.01	17	550	14	0.04	< 2	< 1	32	< 0.01	< 10	< 10	26	< 10	62		2770
L17900E 5900N	201 202	95	3	< 0.01	39	630	18	0.03	< 2	1	74	< 0.01	< 10	< 10	27	< 10	168		3780
L18200E 5050N	201 202	290	41	0.05	55	590	90	0.91	10	1	65	< 0.01	< 10	< 10	119	< 10	42		2850
L18200E 5100N	201 202	275	22	0.04	44	810	62	0.72	4	2	79	< 0.01	< 10	< 10	71	< 10	54		2900
L18200E 5150N	201 202	690	36	0.02	15	690	60	0.62	10	< 1	62	< 0.01	< 10	< 10	36	< 10	150		2930
L18400E 5050N	201 202	70	20	0.01	6	610	52	0.52	2	< 1	40	< 0.01	< 10	< 10	37	< 10	48		2640
L18400E 5100N	201 202	55	18	0.05	5	570	74	1.52	6	< 1	35	< 0.01	< 10	< 10	33	< 10	20		3740
L18400E 5150N	201 202	330	4	< 0.01	9	1260	26	0.11	< 2	1	73	< 0.01	< 10	< 10	7	< 10	54		2220
L18400E 5200N	201 202	275	5	0.01	36	930	24	0.25	< 2	< 1	26	0.01	< 10	< 10	35	< 10	60		1900
L18400E 5250N	201 202	740	18	< 0.01	16	820	40	0.06	6	< 1	17	< 0.01	< 10	< 10	34	< 10	48		1020
L18400E 5300N	201 202	210	5	< 0.01	14	1070	40	0.09	< 2	< 1	31	< 0.01	< 10	< 10	7	< 10	66		1470
L18400E 5350N	201 202	70	7	< 0.01	25	720	44	0.21	2	1	124	< 0.01	< 10	< 10	21	< 10	138		3110
L18400E 5400N	201 202	170	4	< 0.01	62	750	22	0.04	2	3	29	< 0.01	< 10	< 10	30	< 10	80		3840
L18400E 5450N	201 202	110	3	< 0.01	35	550	18	0.07	2	1	42	< 0.01	< 10	< 10	26	< 10	140		3700
L18400E 5500N	201 202	265	5	< 0.01	37	790	28	0.14	2	1	27	0.01	< 10	< 10	43	< 10	158		2440
L18400E 5550N	201 202	170	4	< 0.01	44	700	16	0.05	< 2	2	47	0.01	< 10	< 10	32	< 10	210		3760
L18400E 5600N	201 202	300	10	< 0.01	19	1050	30	0.13	< 2	< 1	22	< 0.01	< 10	< 10	37	< 10	162		2240
L18400E 5650N	201 202	165	4	< 0.01	40	840	14	0.04	< 2	1	47	0.01	< 10	< 10	31	< 10	168		3680
L18400E 5700N	201 202	130	4	< 0.01	43	920	18	0.07	2	< 1	37	< 0.01	< 10	< 10	34	< 10	172		3950
L18400E 5750N	201 202	585	4	< 0.01	57	2000	32	0.16	2	6	82	< 0.01	< 10	< 10	78	< 10	126		4930
L18400E 5800N	201 202	50	5	< 0.01	22	920	20	0.05	< 2	< 1	26	< 0.01	< 10	< 10	34	< 10	70		3770
L18400E 5850N	201 202	95	5	< 0.01	60	970	24	0.06	< 2	< 1	65	< 0.01	< 10	< 10	36	< 10	120		5000
L18400E 5900N	201 202	55	4	< 0.01	51	810	26	0.04	< 2	1	45	< 0.01	< 10	< 10	34	< 10	190		3530
L18400E 5950N	201 202	35	4	< 0.01	24	840	18	0.03	< 2	< 1	27	< 0.01	< 10	< 10	30	< 10	74		3360
L18400E 6000N	201 202	35	4	0.01	25	520	14	0.03	< 2	< 1	33	< 0.01	< 10	< 10	28	< 10	112		3180
L18400E 6050N	201 202	75	3	0.03	45	880	20	0.08	< 2	3	85	< 0.01	< 10	< 10	32	< 10	100		4660
L18800E 5550N	201 202	560	10	0.01	62	1030	56	0.49	< 2	3	40	0.04	< 10	< 10	27	< 10	120		4010
L18800E 5600N	201 202	390	12	0.01	53	910	60	0.56	< 2	2	55	0.03	< 10	< 10	22	< 10	180		6000
L18800E 5650N	201 202	595	14	0.01	68	1050	64	0.68	2	5	69	0.05	< 10	< 10	33	< 10	230		3570
L18800E 5700N	201 202	195	8	< 0.01	72	970	46	0.21	< 2	4	54	0.06	< 10	< 10	34	< 10	278		3940
L18800E 5750N	201 202	180	6	< 0.01	55	760	46	0.25	2	4	94	0.04	< 10	< 10	27	< 10	116		3240
L18800E 5800N	201 202	295	6	< 0.01	62	1160	24	0.27	2	1	86	0.02	< 10	< 10	21	< 10	462		3750
L18800E 5850N	201 202	290	4	< 0.01	25	930	40	0.04	2	3	33	0.01	< 10	< 10	30	< 10	130		4600
L18800E 5900N	201 202	330	7	< 0.01	26	880	26	0.07	< 2	1	55	0.01	< 10	< 10	24	< 10	150		3750
L18800E 5950N	201 202	125	7	< 0.01	20	640	32	0.06	6	< 1	23	< 0.01	< 10	< 10	41	< 10	104		3080
L18800E 6000N	201 202	190	6	< 0.01	28	720	40	0.06	< 2	1	28	0.06	< 10	< 10	48	< 10	138		2950
L18800E 6050N	201 202	255	4	0.01	29	760	28	0.02	2	2	37	0.02	< 10	< 10	33	< 10	162		3730
L18800E 6100N	201 202	105	3	0.01	29	760	34	0.03	< 2	1	37	< 0.01	< 10	< 10	28	< 10	138		3420

CERTIFICATION:



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Analytical Chemists * Geochemists * Registered Assayers

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To: EQUITY ENGINEERING LTD.

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Project: STARR
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Total Pages : 6
Certificate Date: 06-SEP-1999
Invoice No. : 19925656
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L18800E 6150N	201 202	< 5	< 0.2	0.72	6	< 10	210	< 0.5	< 2	0.08	0.5	6	18	13	2.56	< 10	< 1	0.04	10	0.20
L18900E 4450N	201 202	< 5	0.2	3.53	8	< 10	710	0.5	< 2	1.50	< 0.5	55	280	96	5.81	< 10	< 1	0.14	30	2.82
L18900E 4500N	201 202	< 5	< 0.2	3.94	12	< 10	360	0.5	< 2	2.06	0.5	94	523	157	6.52	< 10	3	0.22	30	3.01
L18900E 4550N	201 202	< 5	< 0.2	2.91	10	< 10	270	< 0.5	< 2	1.32	0.5	76	317	148	8.64	< 10	< 1	0.17	30	2.14
L18900E 4600N	201 202	< 5	< 0.2	2.41	6	10	340	0.5	< 2	1.50	0.5	46	230	106	6.88	< 10	< 1	0.13	50	1.45
L18900E 4650N	201 202	< 5	< 0.2	0.51	40	< 10	200	< 0.5	2	0.46	1.0	14	8	26	9.12	< 10	< 1	0.14	120	0.19
L18900E 4700N	201 202	< 5	0.6	1.28	20	30	80	< 0.5	4	0.93	< 0.5	1	8	10	5.96	10	< 1	1.16	150	0.09
L18900E 4750N	201 202	< 5	< 0.2	1.22	14	< 10	190	< 0.5	< 2	1.29	0.5	22	68	53	5.70	< 10	< 1	0.28	120	0.52
L18900E 4800N	201 202	< 5	< 0.2	1.45	8	< 10	320	< 0.5	< 2	0.85	1.0	24	106	56	5.95	< 10	< 1	0.29	120	0.68
L18900E 4850N	201 202	< 5	0.2	1.77	4	< 10	590	< 0.5	< 2	0.46	0.5	29	149	71	6.52	< 10	< 1	0.30	90	1.01
L18900E 4900N	201 202	< 5	< 0.2	1.91	18	< 10	710	< 0.5	< 2	0.24	< 0.5	32	139	51	7.17	< 10	< 1	0.20	60	0.90
L18900E 4950N	201 202	< 5	< 0.2	1.63	16	< 10	530	< 0.5	< 2	0.14	0.5	17	120	40	5.59	< 10	< 1	0.17	50	0.57
L18900E 5000N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L18900E 5050N	201 202	< 5	0.2	0.62	34	< 10	760	< 0.5	< 2	0.03	< 0.5	3	37	15	6.62	< 10	< 1	0.13	30	0.11
L18900E 5100N	201 202	< 5	0.2	1.20	32	< 10	530	< 0.5	< 2	0.05	0.5	11	64	31	7.52	< 10	< 1	0.23	50	0.29
L18900E 5150N	201 202	< 5	0.2	2.26	22	< 10	400	< 0.5	< 2	0.36	0.5	24	168	55	6.73	< 10	< 1	0.38	100	1.31
L18900E 5200N	201 202	< 5	0.2	2.09	10	< 10	520	< 0.5	< 2	0.31	1.0	22	149	42	6.38	< 10	< 1	0.37	80	1.07
L18900E 5250N	201 202	< 5	< 0.2	0.97	10	< 10	360	< 0.5	< 2	0.06	< 0.5	5	20	16	3.36	< 10	< 1	0.16	40	0.12
L18900E 5300N	201 202	< 5	0.4	1.66	12	< 10	290	< 0.5	< 2	0.03	< 0.5	5	26	29	9.07	< 10	< 1	0.19	50	0.11
L18900E 5350N	201 202	< 5	0.2	0.80	18	< 10	530	< 0.5	< 2	0.14	0.5	10	17	34	4.76	< 10	< 1	0.24	60	0.15
L18900E 5400N	201 202	< 5	0.2	1.09	14	< 10	470	< 0.5	< 2	0.33	0.5	15	66	34	5.11	< 10	< 1	0.28	80	0.51
L18900E 5450N	201 202	< 5	< 0.2	0.92	14	< 10	350	< 0.5	< 2	0.26	1.0	21	49	40	6.46	< 10	< 1	0.31	90	0.40
L18900E 5500N	201 202	< 5	0.2	0.99	8	< 10	460	< 0.5	< 2	0.20	0.5	16	70	30	5.64	< 10	< 1	0.31	60	0.50
L18900E 5550N	201 202	< 5	0.2	0.89	28	< 10	370	< 0.5	< 2	0.17	1.5	18	54	33	6.75	< 10	< 1	0.41	70	0.37
L18900E 5600N	201 202	< 5	0.2	1.07	24	< 10	490	< 0.5	< 2	0.39	0.5	16	57	32	6.19	< 10	< 1	0.35	80	0.46
L18900E 5650N	201 202	< 5	0.2	0.92	8	< 10	120	< 0.5	< 2	0.07	< 0.5	6	25	17	3.66	< 10	< 1	0.09	20	0.19
L18900E 5700N	201 202	< 5	0.2	1.03	18	< 10	140	< 0.5	< 2	0.05	< 0.5	5	27	25	4.50	< 10	< 1	0.08	20	0.14
L18900E 5750N	201 202	< 5	0.2	1.21	10	< 10	160	< 0.5	< 2	0.03	< 0.5	5	20	30	3.38	< 10	< 1	0.09	20	0.07
L18900E 5800N	201 202	< 5	< 0.2	1.24	18	< 10	160	< 0.5	< 2	0.07	< 0.5	6	36	21	4.40	< 10	< 1	0.08	30	0.25
L18900E 5850N	201 202	< 5	< 0.2	1.05	10	< 10	400	< 0.5	< 2	0.32	0.5	8	30	21	2.71	< 10	< 1	0.06	40	0.39
L18900E 5900N	201 202	< 5	< 0.2	1.21	10	< 10	130	< 0.5	< 2	0.07	< 0.5	5	25	22	3.09	< 10	< 1	0.06	10	0.27
L18900E 5950N	201 202	< 5	0.4	1.30	10	< 10	190	< 0.5	< 2	0.05	< 0.5	5	26	21	3.41	< 10	< 1	0.09	20	0.18
L18900E 6000N	201 202	< 5	< 0.2	1.36	12	< 10	200	< 0.5	< 2	0.13	0.5	7	35	21	3.37	< 10	< 1	0.09	30	0.36
L18900E 6050N	201 202	< 5	0.2	1.34	22	< 10	180	< 0.5	2	0.12	0.5	15	35	43	4.15	< 10	< 1	0.09	30	0.43
L18900E 6100N	201 202	< 5	< 0.2	1.34	18	< 10	350	< 0.5	< 2	0.20	1.0	11	31	28	3.85	< 10	< 1	0.09	40	0.37
L18900E 6150N	201 202	< 5	0.2	1.50	10	< 10	400	< 0.5	< 2	0.15	1.0	6	38	23	3.60	< 10	< 1	0.07	50	0.22
L19000E 4450N	201 202	< 5	< 0.2	0.60	4	< 10	150	0.5	< 2	2.59	< 0.5	19	21	36	4.58	< 10	< 1	0.18	40	0.10
L19000E 4500N	201 202	< 5	< 0.2	1.06	12	< 10	110	< 0.5	6	1.68	0.5	79	58	142	9.14	< 10	< 1	0.24	10	0.58
L19000E 4550N	201 202	< 5	< 0.2	1.55	6	< 10	170	< 0.5	2	0.94	1.5	74	70	136	13.55	< 10	< 1	0.23	40	0.57
L19000E 4600N	201 202	< 5	< 0.2	0.76	6	< 10	100	< 0.5	8	1.83	2.5	68	39	153	11.90	< 10	< 1	0.38	30	0.24

CERTIFICATION:

Jason Weber



Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
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V6C 1G8

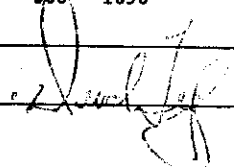
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CERTIFICATE OF ANALYSIS

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SAMPLE		PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	IRF ppm
L18800E 6150N	201	202		280	3	< 0.01	23	540	30	0.02	2	< 1	14	0.01	< 10	< 10	30	< 10	134	3560	
L18900E 4450N	201	202		1270	< 1	< 0.01	185	890	8	0.26	< 2	16	37	0.29	< 10	< 10	96	< 10	54	1520	
L18900E 4500N	201	202		1975	< 1	0.01	207	1380	12	0.09	< 2	15	61	0.38	< 10	< 10	121	< 10	98	1150	
L18900E 4550N	201	202		1595	< 1	0.03	221	1440	12	0.28	< 2	14	116	0.43	< 10	< 10	99	< 10	130	1300	
L18900E 4600N	201	202		910	4	0.01	196	1280	26	0.19	< 2	12	73	0.27	< 10	< 10	68	< 10	150	1960	
L18900E 4650N	201	202		505	80	0.01	62	580	70	0.42	2	1	27	< 0.01	< 10	< 10	6	< 10	132	4780	
L18900E 4700N	201	202		115	22	0.01	6	780	242	1.31	6	< 1	95	0.01	< 10	< 10	6	< 10	22	16740	
L18900E 4750N	201	202		510	7	0.01	92	1200	68	0.50	< 2	5	61	0.06	< 10	< 10	25	< 10	156	8410	
L18900E 4800N	201	202		650	6	0.02	94	1400	46	0.51	< 2	6	63	0.07	< 10	< 10	36	< 10	168	4400	
L18900E 4850N	201	202		705	7	0.02	130	1090	44	0.47	< 2	9	55	0.12	< 10	< 10	46	< 10	170	4870	
L18900E 4900N	201	202		1260	7	0.01	105	1200	66	0.25	< 2	7	29	0.08	< 10	< 10	51	< 10	104	3190	
L18900E 4950N	201	202		920	13	0.01	61	1040	48	0.24	2	2	29	0.06	< 10	< 10	64	< 10	98	2920	
L18900E 5000N	--	--		NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L18900E 5050N	201	202		100	23	< 0.01	15	760	192	0.25	< 2	< 1	30	0.06	< 10	< 10	35	< 10	42	10370	
L18900E 5100N	201	202		395	20	0.01	36	1300	126	0.40	4	3	41	0.06	< 10	< 10	54	< 10	84	3730	
L18900E 5150N	201	202		615	11	0.01	106	1350	48	0.50	< 2	7	68	0.18	< 10	< 10	69	< 10	136	2550	
L18900E 5200N	201	202		665	10	0.02	91	1080	44	0.55	< 2	6	70	0.11	< 10	< 10	59	< 10	140	2980	
L18900E 5250N	201	202		310	7	0.02	17	820	36	0.26	< 2	< 1	34	< 0.01	< 10	< 10	27	< 10	64	3010	
L18900E 5300N	201	202		295	9	0.01	17	1440	38	0.35	< 2	1	30	0.01	< 10	< 10	29	< 10	98	2590	
L18900E 5350N	201	202		255	9	0.01	32	1060	44	0.41	< 2	1	75	< 0.01	< 10	< 10	28	< 10	160	4270	
L18900E 5400N	201	202		405	10	0.01	59	950	50	0.46	< 2	4	58	0.05	< 10	< 10	32	< 10	138	4200	
L18900E 5450N	201	202		505	14	0.02	77	1100	76	0.61	< 2	4	55	0.03	< 10	< 10	26	< 10	162	4530	
L18900E 5500N	201	202		455	11	0.01	57	1090	52	0.49	< 2	1	51	0.04	< 10	< 10	33	< 10	126	3770	
L18900E 5550N	201	202		505	15	0.01	56	1090	74	0.74	2	2	60	0.04	< 10	< 10	28	< 10	152	4100	
L18900E 5600N	201	202		475	14	0.01	61	1210	72	0.60	2	3	61	0.03	< 10	< 10	31	< 10	154	4010	
L18900E 5650N	201	202		190	8	0.01	21	720	32	0.07	2	< 1	18	0.01	< 10	< 10	45	< 10	90	2940	
L18900E 5700N	201	202		410	8	< 0.01	23	1660	34	0.09	< 2	< 1	20	< 0.01	< 10	< 10	52	< 10	118	2940	
L18900E 5750N	201	202		115	10	0.01	23	1490	36	0.09	4	< 1	24	< 0.01	< 10	< 10	49	< 10	132	3050	
L18900E 5800N	201	202		255	8	< 0.01	31	1060	40	0.07	< 2	< 1	26	0.01	< 10	< 10	54	< 10	158	3250	
L18900E 5850N	201	202		360	4	< 0.01	36	780	24	0.03	< 2	2	45	0.04	< 10	< 10	30	< 10	194	3450	
L18900E 5900N	201	202		135	4	< 0.01	31	610	28	0.05	2	< 1	34	0.01	< 10	< 10	35	< 10	122	2950	
L18900E 5950N	201	202		150	6	< 0.01	23	600	30	0.06	< 2	< 1	28	0.01	< 10	< 10	45	< 10	114	2910	
L18900E 6000N	201	202		250	7	< 0.01	30	560	28	0.04	< 2	1	32	0.04	< 10	< 10	43	< 10	142	3160	
L18900E 6050N	201	202		695	6	< 0.01	61	740	44	0.06	< 2	3	43	0.03	< 10	< 10	43	< 10	268	3790	
L18900E 6100N	201	202		490	5	< 0.01	39	1050	38	0.05	2	3	40	0.02	< 10	< 10	41	< 10	236	3650	
L18900E 6150N	201	202		250	6	< 0.01	23	2380	42	0.14	2	1	36	0.01	< 10	< 10	42	< 10	142	3210	
L19000E 4450N	201	202		785	1	0.02	90	1530	< 2	0.39	2	6	56	< 0.01	< 10	< 10	14	< 10	12	600	
L19000E 4500N	201	202		810	3	0.01	300	2020	154	0.97	< 2	6	69	< 0.01	< 10	< 10	18	< 10	34	1130	
L19000E 4550N	201	202		1310	4	0.04	294	1550	274	1.04	< 2	7	73	0.01	< 10	< 10	28	< 10	190	970	
L19000E 4600N	201	202		765	3	0.07	264	1190	200	1.79	< 2	7	96	0.03	< 10	< 10	19	< 10	308	1690	

CERTIFICATION:  +



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :6-A
Total Pages :6
Certificate Date:06-SEP-1999
Invoice No. :19925656
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19000E 4650N	201 202	< 5	< 0.2	3.04	10	< 10	240	0.5	< 2	1.88	< 0.5	46	223	110	5.82	< 10	< 1	0.30	40	2.20
L19000E 4700N	201 202	< 5	< 0.2	2.23	< 2	< 10	420	0.5	< 2	1.28	0.5	36	184	98	6.92	< 10	< 1	0.14	80	1.34
L19000E 4750N	201 202	< 5	< 0.2	2.11	6	< 10	260	1.0	< 2	0.77	0.5	15	97	41	5.28	< 10	< 1	0.07	140	0.96
L19000E 4800N	201 202	< 5	< 0.2	1.44	22	< 10	610	0.5	< 2	0.84	< 0.5	22	63	38	7.00	< 10	< 1	0.18	110	0.55
L19000E 4850N	201 202	< 5	0.6	1.20	28	< 10	420	< 0.5	< 2	0.06	< 0.5	13	53	32	8.31	< 10	< 1	0.33	120	0.33
L19000E 4900N	201 202	< 5	< 0.2	1.00	34	< 10	130	< 0.5	< 2	0.12	0.5	14	21	34	9.84	< 10	< 1	0.61	130	0.16
L19000E 4950N	201 202	< 5	0.2	0.85	38	< 10	120	< 0.5	< 2	0.30	< 0.5	8	13	27	8.21	< 10	< 1	0.73	200	0.15
L19000E 5000N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L19000E 5050N	201 202	< 5	0.2	0.50	30	< 10	260	< 0.5	< 2	0.07	0.5	6	5	20	6.04	< 10	< 1	0.45	160	0.04
L19000E 5100N	201 202	< 5	0.4	0.49	38	< 10	360	< 0.5	< 2	0.16	1.5	5	5	22	5.29	< 10	< 1	0.24	120	0.08
L19000E 5150N	201 202	< 5	0.8	0.72	76	< 10	290	0.5	< 2	0.12	3.0	6	4	43	9.28	< 10	2	0.34	50	0.13
L19000E 5200N	201 202	< 5	< 0.2	0.64	2	< 10	130	< 0.5	< 2	0.18	< 0.5	1	3	4	1.26	< 10	< 1	0.04	50	0.08
L19000E 5275N	201 202	< 5	0.2	0.62	12	< 10	240	0.5	< 2	0.24	0.5	8	6	34	2.60	< 10	< 1	0.10	30	0.13
L19000E 5300N	201 202	< 5	0.2	0.63	8	< 10	250	< 0.5	< 2	0.26	0.5	6	5	26	2.12	< 10	< 1	0.11	20	0.13
L19000E 5350N	201 202	10	0.6	0.81	10	< 10	400	< 0.5	< 2	0.15	0.5	6	8	42	3.32	< 10	< 1	0.13	50	0.11
L19000E 5400N	201 202	< 5	0.6	0.95	14	< 10	260	< 0.5	< 2	0.25	1.0	13	14	57	3.57	< 10	< 1	0.10	20	0.21
L19000E 5450N	201 202	< 5	0.4	1.00	2	< 10	250	< 0.5	< 2	0.14	0.5	8	11	32	2.50	< 10	< 1	0.06	10	0.23
L19000E 5500N	201 202	< 5	0.6	0.96	2	< 10	180	< 0.5	< 2	0.08	0.5	9	12	53	4.05	< 10	< 1	0.08	< 10	0.26
L19000E 5550N	201 202	< 5	0.6	1.10	14	< 10	240	< 0.5	< 2	0.10	0.5	16	14	77	5.76	< 10	< 1	0.06	< 10	0.25
L19000E 5600N	201 202	< 5	0.2	0.67	14	< 10	120	< 0.5	< 2	0.01	< 0.5	8	11	40	3.24	< 10	< 1	0.06	10	0.10
L19000E 5650N	201 202	< 5	< 0.2	0.85	12	< 10	150	< 0.5	< 2	0.05	< 0.5	5	21	20	3.58	< 10	< 1	0.06	10	0.16
L19000E 5700N	201 202	< 5	< 0.2	1.24	8	< 10	120	< 0.5	< 2	0.05	< 0.5	8	32	22	4.03	< 10	< 1	0.07	10	0.24
L19000E 5750N	201 202	< 5	< 0.2	1.04	10	< 10	150	< 0.5	< 2	0.09	0.5	8	24	22	3.78	< 10	< 1	0.06	20	0.24
L19000E 5800N	201 202	< 5	1.6	1.80	8	< 10	840	0.5	< 2	0.36	1.0	3	20	31	2.54	< 10	< 1	0.06	140	0.21
L19000E 5850N	201 202	< 5	0.6	0.65	< 2	< 10	60	< 0.5	< 2	0.07	< 0.5	1	5	7	0.72	< 10	< 1	0.03	10	0.06
L19000E 5900N	201 202	< 5	< 0.2	1.07	12	< 10	120	< 0.5	< 2	0.04	< 0.5	5	28	18	3.65	< 10	< 1	0.07	10	0.21
L19000E 5950N	201 202	< 5	< 0.2	0.91	< 2	< 10	250	< 0.5	< 2	0.36	< 0.5	1	2	3	0.52	< 10	< 1	0.01	< 10	0.07
L19000E 6000N	201 202	< 5	0.2	1.65	14	< 10	680	0.5	< 2	0.74	1.5	11	54	20	4.25	< 10	< 1	0.08	100	0.59
L19000E 6050N	201 202	< 5	< 0.2	0.88	4	< 10	90	< 0.5	< 2	0.07	< 0.5	3	19	10	2.09	< 10	< 1	0.05	10	0.14
L19000E 6100N	201 202	< 5	< 0.2	0.96	< 2	< 10	110	< 0.5	< 2	0.12	< 0.5	5	28	13	2.67	< 10	< 1	0.07	30	0.15
L19000E 6150N	201 202	< 5	< 0.2	1.01	< 2	< 10	510	< 0.5	< 2	0.98	1.5	3	10	10	1.41	< 10	< 1	0.05	10	0.24

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

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VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 6-B
Total Pages : 6
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Account : EIA

CERTIFICATE OF ANALYSIS

A9925656

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Ti ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19000E 4650N	201 202	725	< 1	< 0.01	160	1250	14	0.11	< 2	13	45	0.15	< 10	< 10	74	< 10	88	990	
L19000E 4700N	201 202	740	4	0.05	157	1190	60	0.35	< 2	9	58	0.15	< 10	< 10	57	< 10	154	2260	
L19000E 4750N	201 202	625	4	0.03	72	1060	42	0.15	< 2	5	34	0.07	< 10	< 10	34	< 10	116	1970	
L19000E 4800N	201 202	565	15	0.01	65	860	120	0.29	< 2	3	40	0.05	< 10	< 10	27	< 10	140	4340	
L19000E 4850N	201 202	480	27	0.01	39	1200	114	0.62	2	3	47	0.04	< 10	< 10	29	< 10	116	4020	
L19000E 4900N	201 202	300	16	0.03	41	960	112	1.24	< 2	2	61	0.01	< 10	< 10	13	< 10	170	5650	
L19000E 4950N	201 202	730	23	0.01	17	1230	96	1.32	2	1	80	0.01	< 10	< 10	18	< 10	128	not/ass	
L19000E 5000N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	
L19000E 5050N	201 202	475	26	< 0.01	13	900	78	0.84	6	< 1	71	< 0.01	< 10	< 10	17	< 10	100	3920	
L19000E 5100N	201 202	380	28	< 0.01	19	850	78	0.47	8	< 1	75	< 0.01	< 10	< 10	32	< 10	216	5540	
L19000E 5150N	201 202	375	60	0.01	43	1120	102	0.71	10	1	100	< 0.01	< 10	< 10	108	< 10	420	7530	
L19000E 5200N	201 202	70	3	0.05	4	550	8	0.06	< 2	< 1	13	0.01	< 10	< 10	15	< 10	24	1220	
L19000E 5275N	201 202	335	6	< 0.01	34	920	28	0.11	2	1	93	< 0.01	< 10	< 10	19	< 10	164	2540	
L19000E 5300N	201 202	260	5	< 0.01	26	960	28	0.11	< 2	1	89	< 0.01	< 10	< 10	17	< 10	134	2430	
L19000E 5350N	201 202	120	8	0.01	28	1200	44	0.18	2	1	126	< 0.01	< 10	< 10	27	< 10	154	2980	
L19000E 5400N	201 202	260	6	< 0.01	44	1220	32	0.12	2	1	77	< 0.01	< 10	< 10	30	< 10	230	3370	
L19000E 5450N	201 202	155	3	0.01	34	880	18	0.04	< 2	1	39	< 0.01	< 10	< 10	28	< 10	152	3460	
L19000E 5500N	201 202	265	6	< 0.01	42	1120	28	0.08	2	2	49	< 0.01	< 10	< 10	36	< 10	180	4610	
L19000E 5550N	201 202	325	6	< 0.01	77	1620	30	0.07	2	3	58	< 0.01	< 10	< 10	48	< 10	246	4470	
L19000E 5600N	201 202	85	8	< 0.01	37	1160	24	0.08	< 2	< 1	43	< 0.01	< 10	< 10	38	< 10	142	4600	
L19000E 5650N	201 202	115	7	< 0.01	22	750	30	0.05	2	< 1	19	0.01	< 10	< 10	38	< 10	128	3900	
L19000E 5700N	201 202	220	5	0.01	27	820	22	0.07	2	< 1	21	0.01	< 10	< 10	43	< 10	104	2820	
L19000E 5750N	201 202	420	5	0.01	28	790	26	0.07	< 2	< 1	25	0.01	< 10	< 10	35	< 10	132	2620	
L19000E 5800N	201 202	60	5	0.03	38	1300	28	0.13	< 2	3	62	0.01	< 10	< 10	29	< 10	302	2750	
L19000E 5850N	201 202	30	1	0.04	4	390	6	0.01	< 2	< 1	9	0.01	< 10	< 10	11	< 10	24	1430	
L19000E 5900N	201 202	130	5	< 0.01	21	730	24	0.08	2	< 1	22	0.01	< 10	< 10	37	< 10	88	2860	
L19000E 5950N	201 202	55	< 1	0.06	2	520	2	0.09	< 2	< 1	16	0.03	< 10	< 10	11	< 10	8	1210	
L19000E 6000N	201 202	810	6	< 0.01	36	1170	34	0.05	< 2	3	49	0.07	< 10	< 10	36	< 10	318	3540	
L19000E 6050N	201 202	155	4	0.01	14	650	20	0.04	< 2	< 1	18	0.01	< 10	< 10	37	< 10	78	2280	
L19000E 6100N	201 202	180	6	0.01	15	680	18	0.05	< 2	< 1	26	0.03	< 10	< 10	51	< 10	86	2400	
L19000E 6150N	201 202	430	1	0.04	8	1320	10	0.11	2	< 1	34	0.01	< 10	< 10	19	< 10	112	2390	

CERTIFICATION:



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To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925657

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925657

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O.#: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 13-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	230	Dry, sieve to -80 mesh save reject ICP - AQ Digestion charge
202	230	
229	230	
* NOTE	1:	

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	230	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	230	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	230	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	230	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	230	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	230	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	230	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	230	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	230	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	230	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	230	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	230	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	230	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	230	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	230	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	230	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	230	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	230	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	230	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	230	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	230	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	230	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	230	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	230	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	230	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	230	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	230	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	230	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	230	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	230	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	230	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	230	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	230	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	230	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	230	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	229	Ba ppm	XRF	10	50000



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SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19100E 5550N	201 202	< 5	0.2	0.99	6	< 10	150	< 0.5	< 2	0.07	< 0.5	8	14	37	2.90	< 10	1	0.07	10	0.17
L19100E 5600N	201 202	< 5	0.2	0.74	10	< 10	140	< 0.5	< 2	0.02	< 0.5	6	13	34	2.97	< 10	< 1	0.07	< 10	0.10
L19100E 5650N	201 202	< 5	0.2	1.01	6	< 10	440	< 0.5	< 2	0.25	1.0	6	15	34	2.23	< 10	< 1	0.08	10	0.29
L19100E 5700N	201 202	< 5	0.8	1.34	10	< 10	440	0.5	< 2	0.45	1.0	6	28	20	2.91	< 10	< 1	0.07	50	0.37
L19100E 5750N	201 202	< 5	< 0.2	0.78	8	< 10	350	< 0.5	< 2	0.08	< 0.5	7	12	18	2.40	< 10	< 1	0.08	30	0.15
L19100E 5800N	201 202	< 5	< 0.2	1.13	12	< 10	370	0.5	< 2	0.19	2.0	10	29	21	3.77	< 10	< 1	0.08	70	0.29
L19100E 5850N	201 202	< 5	< 0.2	0.64	6	< 10	90	< 0.5	< 2	0.04	< 0.5	5	15	15	2.74	< 10	< 1	0.06	10	0.07
L19100E 5900N	201 202	< 5	< 0.2	0.88	10	< 10	100	< 0.5	< 2	0.07	< 0.5	5	20	12	2.27	< 10	< 1	0.06	20	0.17
L19100E 5950N	201 202	< 5	< 0.2	1.17	6	< 10	130	< 0.5	< 2	0.12	< 0.5	8	41	17	4.53	< 10	< 1	0.07	20	0.27
L19100E 6000N	201 202	< 5	< 0.2	1.78	18	< 10	120	< 0.5	< 2	0.24	0.5	11	59	18	4.64	< 10	< 1	0.07	30	0.59
L19100E 6050N	201 202	< 5	0.2	1.49	4	< 10	740	< 0.5	< 2	0.91	0.5	5	22	13	2.43	< 10	< 1	0.06	30	0.36
L19100E 6100N	201 202	< 5	< 0.2	1.43	8	< 10	230	< 0.5	< 2	0.10	< 0.5	4	31	13	2.74	< 10	< 1	0.05	30	0.16
L19100E 6150N	201 202	< 5	< 0.2	1.41	12	< 10	260	< 0.5	< 2	0.15	0.5	7	33	17	3.92	< 10	< 1	0.06	20	0.28
L19250E 5550N	201 202	< 5	0.2	0.78	4	< 10	470	< 0.5	< 2	0.16	0.5	4	8	21	1.81	< 10	< 1	0.08	30	0.10
L19250E 5600N	201 202	< 5	< 0.2	0.58	2	< 10	210	< 0.5	< 2	0.15	< 0.5	4	6	19	1.83	< 10	< 1	0.08	10	0.09
L19250E 5650N	201 202	< 5	0.2	0.75	8	< 10	290	< 0.5	< 2	0.28	< 0.5	5	11	21	2.21	< 10	< 1	0.08	30	0.18
L19250E 5700N	201 202	< 5	0.2	1.35	12	< 10	180	< 0.5	< 2	0.12	0.5	6	31	18	3.23	< 10	< 1	0.07	30	0.29
L19250E 5750N	201 202	< 5	0.2	1.23	16	< 10	170	< 0.5	< 2	0.12	0.5	12	27	41	4.69	< 10	< 1	0.10	30	0.32
L19250E 5800N	201 202	< 5	< 0.2	0.97	4	< 10	200	< 0.5	< 2	0.13	0.5	3	17	8	1.59	< 10	< 1	0.05	20	0.18
L19250E 5850N	201 202	< 5	< 0.2	1.10	16	< 10	570	0.5	< 2	0.26	2.0	8	31	31	5.09	< 10	< 1	0.09	120	0.27
L19250E 5900N	201 202	< 5	0.2	0.80	6	< 10	380	< 0.5	< 2	0.27	0.5	4	10	6	1.07	< 10	< 1	0.04	20	0.11
L19250E 5950N	201 202	< 5	1.2	2.92	16	< 10	500	2.0	< 2	1.36	1.5	15	48	18	5.07	< 10	< 1	0.04	70	0.84
L19250E 6000N	201 202	< 5	< 0.2	1.08	2	< 10	340	< 0.5	< 2	0.30	0.5	5	26	10	2.61	< 10	< 1	0.06	30	0.30
L19250E 6050N	201 202	< 5	< 0.2	1.44	10	< 10	190	< 0.5	< 2	0.21	< 0.5	9	37	16	3.72	< 10	< 1	0.07	30	0.35
L19250E 6100N	201 202	< 5	< 0.2	0.91	< 2	< 10	220	< 0.5	< 2	0.08	< 0.5	4	17	12	2.63	< 10	< 1	0.06	30	0.08
L19250E 6150N	201 202	< 5	< 0.2	0.91	14	< 10	120	< 0.5	< 2	0.07	< 0.5	6	23	11	3.18	< 10	< 1	0.05	30	0.16
L19250E 6200N	201 202	< 5	< 0.2	0.99	8	< 10	670	< 0.5	< 2	0.27	< 0.5	8	17	14	3.52	< 10	< 1	0.05	20	0.13
L19250E 6250N	201 202	< 5	< 0.2	1.26	8	< 10	610	0.5	< 2	0.33	0.5	11	36	15	3.87	< 10	< 1	0.05	40	0.42
L19250E 6300N	201 202	< 5	0.2	0.90	20	< 10	1140	< 0.5	< 2	1.39	< 0.5	6	16	15	2.86	< 10	< 1	0.05	10	0.68
L19250E 6350N	201 202	< 5	< 0.2	1.13	8	< 10	460	0.5	< 2	0.43	< 0.5	10	27	10	3.88	< 10	< 1	0.05	30	0.27
L19400E 4700N	201 202	< 5	0.8	0.87	42	< 10	80	0.5	4	0.17	1.5	4	1	25	9.75	< 10	< 1	0.88	220	0.05
L19400E 4750N	201 202	< 5	0.4	0.50	36	< 10	60	< 0.5	6	0.06	0.5	6	3	23	10.05	< 10	< 1	1.27	160	0.03
L19400E 4800N	201 202	< 5	< 0.2	0.52	28	< 10	80	< 0.5	2	0.01	< 0.5	16	6	33	11.10	< 10	< 1	0.97	90	0.02
L19400E 4850N	201 202	< 5	0.6	0.47	50	10	100	< 0.5	< 2	0.02	< 0.5	3	7	25	6.04	< 10	< 1	0.72	370	0.04
L19400E 5150N	201 202	< 5	< 0.2	1.02	14	< 10	130	< 0.5	< 2	0.05	< 0.5	4	16	14	4.23	< 10	< 1	0.06	40	0.12
L19400E 5200N	201 202	< 5	< 0.2	1.21	14	< 10	340	< 0.5	< 2	0.10	0.5	7	21	15	4.55	< 10	< 1	0.10	30	0.26
L19400E 5250N	201 202	< 5	< 0.2	0.64	12	< 10	140	0.5	< 2	0.07	< 0.5	5	6	11	4.65	< 10	< 1	0.07	20	0.06
L19400E 5300N	201 202	< 5	< 0.2	0.64	10	< 10	320	0.5	< 2	0.13	0.5	6	7	37	4.33	< 10	< 1	0.16	60	0.12
L19400E 5350N	201 202	< 5	0.2	0.48	6	< 10	180	< 0.5	< 2	0.11	0.5	6	5	31	2.09	< 10	< 1	0.07	30	0.09
L19400E 5400N	201 202	< 5	0.2	0.69	6	< 10	250	< 0.5	< 2	0.11	0.5	5	7	25	2.14	< 10	< 1	0.09	30	0.09

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 1-B
Total Pages : 6
Certificate Date: 13-SEP-1999
Invoice No. : I9925657
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19100E 5550N	201 202	165	5	0.01	30	970	22	0.07	< 2	< 1	30	< 0.01	< 10	< 10	31	< 10	148		2950
L19100E 5600N	201 202	75	6	< 0.01	33	1040	20	0.07	< 2	< 1	55	< 0.01	< 10	< 10	41	< 10	136		4210
L19100E 5650N	201 202	120	4	< 0.01	42	720	16	0.05	< 2	1	65	< 0.01	< 10	< 10	30	< 10	150		3810
L19100E 5700N	201 202	200	4	0.01	33	860	18	0.06	< 2	3	78	0.03	< 10	< 10	27	< 10	502		3500
L19100E 5750N	201 202	320	6	< 0.01	22	760	28	0.09	< 2	< 1	50	< 0.01	< 10	< 10	23	< 10	114		2790
L19100E 5800N	201 202	970	7	< 0.01	27	840	34	0.09	< 2	< 1	37	0.02	< 10	< 10	32	< 10	174		3010
L19100E 5850N	201 202	125	6	< 0.01	16	500	24	0.06	< 2	< 1	18	0.01	< 10	< 10	43	< 10	102		2700
L19100E 5900N	201 202	140	5	< 0.01	17	440	14	0.04	< 2	< 1	20	0.03	< 10	< 10	37	< 10	82		2580
L19100E 5950N	201 202	740	7	< 0.01	22	930	38	0.07	4	< 1	20	0.06	< 10	< 10	58	< 10	128		2300
L19100E 6000N	201 202	450	6	< 0.01	34	720	24	0.05	< 2	1	24	0.09	< 10	< 10	46	< 10	132		2260
L19100E 6050N	201 202	240	4	0.01	16	2160	12	0.15	< 2	1	43	0.01	< 10	< 10	28	< 10	158		3120
L19100E 6100N	201 202	175	6	< 0.01	15	510	20	0.03	< 2	< 1	22	0.02	< 10	< 10	45	< 10	76		2620
L19100E 6150N	201 202	360	6	< 0.01	22	780	30	0.05	< 2	< 1	28	0.01	< 10	< 10	47	< 10	170		2790
L19250E 5550N	201 202	160	5	0.01	19	970	24	0.11	2	< 1	66	< 0.01	< 10	< 10	21	< 10	90		2630
L19250E 5600N	201 202	130	3	< 0.01	17	870	18	0.08	< 2	< 1	44	< 0.01	< 10	< 10	17	< 10	88		2240
L19250E 5650N	201 202	195	5	< 0.01	21	970	24	0.09	< 2	< 1	69	< 0.01	< 10	< 10	19	< 10	100		2440
L19250E 5700N	201 202	200	7	0.01	21	640	24	0.07	< 2	< 1	22	0.04	< 10	< 10	37	< 10	92		2400
L19250E 5750N	201 202	385	9	< 0.01	44	1030	30	0.09	< 2	1	37	0.03	< 10	< 10	48	< 10	200		3380
L19250E 5800N	201 202	125	1	0.03	12	620	14	0.04	< 2	< 1	17	0.01	< 10	< 10	21	< 10	74		2370
L19250E 5850N	201 202	530	12	< 0.01	31	940	44	0.07	< 2	3	43	0.06	< 10	< 10	32	< 10	292		3510
L19250E 5900N	201 202	485	1	0.04	8	810	16	0.08	< 2	< 1	26	0.01	< 10	< 10	17	< 10	40		1860
L19250E 5950N	201 202	2150	3	< 0.01	38	1330	32	0.05	< 2	2	26	0.01	< 10	< 10	37	< 10	256		2840
L19250E 6000N	201 202	175	3	< 0.01	20	980	20	0.05	< 2	1	26	0.02	< 10	< 10	30	< 10	168		3390
L19250E 6050N	201 202	465	5	< 0.01	26	810	26	0.05	< 2	1	22	0.05	< 10	< 10	38	< 10	154		2330
L19250E 6100N	201 202	210	6	< 0.01	14	660	28	0.04	< 2	< 1	20	0.01	< 10	< 10	45	< 10	100		2720
L19250E 6150N	201 202	280	7	< 0.01	18	520	28	0.04	2	< 1	14	0.01	< 10	< 10	45	< 10	134		2500
L19250E 6200N	201 202	280	1	0.02	16	940	34	0.06	< 2	3	40	< 0.01	< 10	< 10	30	< 10	94		4090
L19250E 6250N	201 202	540	3	< 0.01	32	410	38	0.05	< 2	4	19	0.05	< 10	< 10	38	< 10	144		3340
L19250E 6300N	201 202	410	7	0.01	18	720	64	0.11	< 2	2	30	< 0.01	< 10	< 10	47	< 10	82		4370
L19250E 6350N	201 202	870	3	< 0.01	24	1090	46	0.04	< 2	1	17	< 0.01	< 10	< 10	42	< 10	144		2840
L19400E 4700N	201 202	995	27	0.03	12	1110	108	1.70	8	< 1	121	< 0.01	< 10	< 10	14	< 10	158		4030
L19400E 4750N	201 202	410	28	0.01	10	1220	74	2.36	6	< 1	118	< 0.01	< 10	< 10	10	< 10	78		3160
L19400E 4800N	201 202	395	23	0.01	25	1400	48	1.85	< 2	2	150	< 0.01	< 10	< 10	8	< 10	96		2510
L19400E 4850N	201 202	185	49	< 0.01	7	1090	148	1.29	< 2	< 1	92	< 0.01	< 10	< 10	16	< 10	56		2370
L19400E 5150N	201 202	190	24	< 0.01	15	570	34	0.10	2	< 1	12	0.02	< 10	< 10	50	< 10	120		2280
L19400E 5200N	201 202	460	7	< 0.01	18	1120	36	0.20	2	1	59	0.03	< 10	< 10	32	< 10	92		1780
L19400E 5250N	201 202	350	8	< 0.01	12	1450	46	0.15	2	< 1	38	< 0.01	< 10	< 10	17	< 10	90		1580
L19400E 5300N	201 202	335	10	< 0.01	22	660	24	0.36	< 2	< 1	79	< 0.01	< 10	< 10	21	< 10	140		2220
L19400E 5350N	201 202	140	6	< 0.01	30	650	24	0.09	< 2	1	76	< 0.01	< 10	< 10	18	< 10	130		2400
L19400E 5400N	201 202	130	5	0.01	24	690	30	0.11	< 2	1	78	< 0.01	< 10	< 10	25	< 10	108		2600

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :2-A
Total Pages :6
Certificate Date: 13-SEP-1999
Invoice No. :19925657
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19400E 5450N	201	202	< 5	0.2	0.51	6	< 10	230	< 0.5	< 2	0.09	< 0.5	3	6	22	1.65	< 10	< 1	0.10	30	0.07
L19400E 5500N	201	202	< 5	0.2	0.50	4	< 10	240	< 0.5	< 2	0.10	< 0.5	3	5	21	1.59	< 10	< 1	0.08	30	0.07
L19400E 5550N	201	202	< 5	0.2	0.69	4	< 10	190	< 0.5	< 2	0.06	< 0.5	4	10	21	2.00	< 10	< 1	0.07	30	0.11
L19400E 5600N	201	202	< 5	0.2	0.59	10	< 10	250	< 0.5	< 2	0.07	< 0.5	4	7	23	1.91	< 10	< 1	0.09	30	0.08
L19400E 5650N	201	202	< 5	< 0.2	0.86	4	< 10	150	< 0.5	< 2	0.08	< 0.5	2	13	14	1.70	< 10	< 1	0.05	20	0.12
L19400E 5700N	201	202	< 5	< 0.2	1.15	8	< 10	120	< 0.5	< 2	0.16	< 0.5	8	32	16	2.74	< 10	< 1	0.07	20	0.31
L19400E 5750N	201	202	< 5	< 0.2	1.35	12	< 10	270	< 0.5	< 2	0.09	< 0.5	11	35	20	3.92	< 10	< 1	0.08	50	0.30
L19400E 5800N	201	202	< 5	< 0.2	1.52	6	< 10	110	< 0.5	< 2	0.18	< 0.5	8	42	18	3.21	< 10	< 1	0.05	30	0.43
L19400E 5850N	201	202	< 5	< 0.2	0.98	26	< 10	140	0.5	< 2	0.08	1.0	10	26	26	5.75	< 10	< 1	0.07	60	0.20
L19400E 5900N	201	202	< 5	0.6	0.53	12	< 10	180	< 0.5	< 2	0.04	< 0.5	6	12	24	2.98	< 10	< 1	0.06	10	0.04
L19400E 5950N	201	202	< 5	< 0.2	0.92	10	< 10	190	< 0.5	< 2	0.21	< 0.5	9	27	21	3.77	< 10	< 1	0.05	10	0.22
L19400E 6000N	201	202	< 5	< 0.2	0.93	22	< 10	310	< 0.5	< 2	0.20	< 0.5	9	21	20	4.75	< 10	< 1	0.04	20	0.15
L19400E 6050N	201	202	< 5	< 0.2	0.98	6	< 10	270	< 0.5	< 2	0.16	0.5	7	21	10	3.42	< 10	< 1	0.04	20	0.18
L19400E 6100N	201	202	< 5	< 0.2	0.81	12	< 10	250	< 0.5	< 2	0.13	< 0.5	4	16	11	2.82	< 10	< 1	0.05	40	0.09
L19400E 6150N	201	202	< 5	< 0.2	0.77	14	< 10	550	< 0.5	< 2	5.05	0.5	11	24	16	3.56	< 10	< 1	0.06	20	3.18
L19400E 6200N	201	202	< 5	< 0.2	0.30	6	< 10	380	< 0.5	< 2	8.29	0.5	7	17	10	3.15	< 10	< 1	0.03	30	4.16
L19400E 6250N	201	202	< 5	< 0.2	0.78	10	< 10	300	< 0.5	< 2	4.90	< 0.5	8	20	10	2.22	< 10	< 1	0.06	20	2.12
L19400E 6300N	201	202	< 5	< 0.2	1.06	2	< 10	1620	< 0.5	< 2	5.87	0.5	10	20	13	2.84	< 10	< 1	0.04	30	3.72
L19450E 4850N	201	202	< 5	0.2	1.30	74	< 10	50	< 0.5	6	0.24	< 0.5	8	10	60	>15.00	< 10	< 1	2.18	710	0.10
L19450E 4900N	201	202	< 5	< 0.2	0.80	22	< 10	300	< 0.5	< 2	0.06	0.5	4	8	17	3.92	< 10	< 1	0.26	120	0.09
L19450E 4950N	201	202	< 5	0.2	1.20	28	< 10	560	< 0.5	< 2	0.06	0.5	5	17	20	5.17	< 10	< 1	0.15	40	0.24
L19450E 5000N	201	202	< 5	0.2	0.85	52	< 10	440	< 0.5	< 2	0.02	< 0.5	3	10	18	4.54	< 10	< 1	0.12	40	0.07
L19450E 5050N	201	202	< 5	0.2	1.08	28	< 10	370	< 0.5	< 2	0.03	0.5	4	6	24	6.88	< 10	< 1	0.15	40	0.06
L19450E 5100N	201	202	< 5	< 0.2	1.18	18	< 10	150	< 0.5	2	0.04	0.5	4	15	14	7.02	< 10	< 1	0.11	40	0.13
L19450E 5150N	201	202	< 5	< 0.2	1.48	12	< 10	240	< 0.5	< 2	0.13	0.5	7	30	14	3.66	< 10	< 1	0.11	50	0.39
L19500E 4600N	201	202	< 5	0.2	0.90	42	< 10	90	< 0.5	< 2	0.05	< 0.5	5	4	21	11.05	< 10	< 1	0.80	100	0.10
L19500E 4650N	201	202	< 5	0.8	0.23	60	30	20	< 0.5	8	0.04	0.5	3	< 1	4	>15.00	< 10	< 1	3.24	10	0.02
L19500E 4700N	201	202	< 5	< 0.2	1.45	22	< 10	540	1.0	< 2	0.33	10.0	10	13	14	6.35	< 10	< 1	0.18	290	0.32
L19500E 4750N	201	202	< 5	< 0.2	0.43	68	< 10	80	< 0.5	< 2	0.03	< 0.5	3	8	41	10.85	10	< 1	1.00	480	0.06
L19500E 4800N	201	202	< 5	0.2	0.83	24	< 10	620	2.0	2	0.05	0.5	5	5	21	6.47	< 10	< 1	0.17	150	0.04
L19500E 4850N	201	202	< 5	0.2	0.22	30	< 10	190	< 0.5	< 2	0.01	< 0.5	4	6	18	6.15	< 10	< 1	0.48	110	0.01
L19500E 4900N	201	202	< 5	0.2	1.04	14	< 10	460	< 0.5	< 2	0.09	0.5	8	23	19	5.24	< 10	< 1	0.39	120	0.23
L19500E 4950N	201	202	< 5	< 0.2	1.40	18	< 10	260	< 0.5	< 2	0.12	0.5	7	24	14	4.13	< 10	< 1	0.12	40	0.38
L19500E 5050N	201	202	< 5	< 0.2	1.24	6	< 10	170	< 0.5	< 2	0.13	< 0.5	6	29	12	3.15	< 10	< 1	0.07	20	0.41
L19500E 5100N	201	202	< 5	< 0.2	1.59	16	< 10	380	< 0.5	< 2	0.08	< 0.5	3	10	10	5.87	< 10	< 1	0.35	50	0.18
L19500E 5150N	201	202	< 5	< 0.2	1.36	10	< 10	160	< 0.5	< 2	0.14	< 0.5	6	29	13	3.64	< 10	< 1	0.09	40	0.40
L19500E 5200N	201	202	< 5	0.2	0.36	8	< 10	240	< 0.5	< 2	0.08	< 0.5	2	5	8	1.62	< 10	< 1	0.11	30	0.06
L19500E 5250N	201	202	< 5	0.2	0.41	28	< 10	250	< 0.5	< 2	0.05	0.5	3	13	21	2.99	< 10	< 1	0.19	20	0.07
L19500E 5300N	201	202	< 5	< 0.2	0.59	10	< 10	270	< 0.5	< 2	0.14	< 0.5	7	12	19	3.69	< 10	< 1	0.09	60	0.14
L19500E 5350N	201	202	< 5	0.2	0.70	12	< 10	320	< 0.5	< 2	0.14	0.5	7	12	25	3.43	< 10	< 1	0.10	40	0.13

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :2-B
Total Pages :6
Certificate Date: 13-SEP-1999
Invoice No. :19925657
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19400E 5450N	201	202	70	5 < 0.01		14	560	26	0.08	2	< 1	72 < 0.01	< 10	< 10	22	< 10	80	2610		
L19400E 5500N	201	202	60	3 < 0.01		13	560	30	0.07	< 2	< 1	70 < 0.01	< 10	< 10	21	< 10	72	2670		
L19400E 5550N	201	202	145	5 < 0.01		17	790	28	0.07	< 2	< 1	53 < 0.01	< 10	< 10	24	< 10	86	2350		
L19400E 5600N	201	202	135	5 < 0.01		17	640	28	0.10	2	< 1	80 < 0.01	< 10	< 10	23	< 10	90	2600		
L19400E 5650N	201	202	70	3 0.03		10	630	20	0.05	< 2	< 1	18 0.02	< 10	< 10	26	< 10	40	1680		
L19400E 5700N	201	202	315	4 0.03		23	740	14	0.07	< 2	1	20 0.05	< 10	< 10	31	< 10	84	1760		
L19400E 5750N	201	202	1375	7 < 0.01		27	840	32	0.09	2	1	29 0.03	< 10	< 10	36	< 10	136	2680		
L19400E 5800N	201	202	230	4 < 0.01		29	670	22	0.05	2	1	22 0.07	< 10	< 10	39	< 10	98	2110		
L19400E 5850N	201	202	915	13 < 0.01		25	1140	44	0.08	< 2	1	29 0.03	< 10	< 10	29	< 10	244	2800		
L19400E 5900N	201	202	80	8 < 0.01		27	1220	28	0.10	< 2	< 1	20 < 0.01	< 10	< 10	47	< 10	166	3630		
L19400E 5950N	201	202	165	6 < 0.01		32	650	32	0.04	4	< 1	26 0.02	< 10	< 10	43	< 10	160	3260		
L19400E 6000N	201	202	210	7 < 0.01		27	940	54	0.05	6	< 1	47 < 0.01	< 10	< 10	45	< 10	206	3570		
L19400E 6050N	201	202	290	4 0.01		19	740	34	0.04	< 2	< 1	15 0.01	< 10	< 10	32	< 10	106	2630		
L19400E 6100N	201	202	160	9 < 0.01		11	870	24	0.08	< 2	< 1	14 < 0.01	< 10	< 10	32	< 10	86	2730		
L19400E 6150N	201	202	575	2 0.01		28	640	38	0.05	< 2	4	65 0.03	< 10	< 10	28	< 10	126	2700		
L19400E 6200N	201	202	1115	< 1 0.01		20	290	50	0.07	< 2	3	83 < 0.01	< 10	< 10	16	< 10	164	3880		
L19400E 6250N	201	202	410	1 0.01		23	710	18	0.02	< 2	3	75 0.04	< 10	< 10	27	< 10	102	1960		
L19400E 6300N	201	202	735	3 0.01		37	470	46	0.08	< 2	4	48 < 0.01	< 10	< 10	26	< 10	108	3750		
L19450E 4850N	201	202	420	67 0.01		21	2030	294	3.87	2	3	206 < 0.01	< 10	< 10	11	< 10	26	3030		
L19450E 4900N	201	202	325	20 0.04		9	630	72	0.48	2	< 1	39 0.01	< 10	< 10	18	< 10	52	1900		
L19450E 4950N	201	202	340	23 < 0.01		18	460	56	0.28	< 2	1	34 0.03	< 10	< 10	47	< 10	164	3840		
L19450E 5000N	201	202	115	60 < 0.01		16	1180	70	0.26	10	< 1	42 < 0.01	< 10	< 10	91	< 10	140	4140		
L19450E 5050N	201	202	125	19 0.01		17	760	64	0.34	4	< 1	23 < 0.01	< 10	< 10	48	< 10	248	3060		
L19450E 5100N	201	202	395	19 < 0.01		14	430	50	0.17	4	< 1	13 0.03	< 10	< 10	36	< 10	200	2100		
L19450E 5150N	201	202	265	8 < 0.01		20	410	32	0.15	< 2	1	20 0.06	< 10	< 10	39	< 10	98	1920		
L19500E 4600N	201	202	775	30 0.03		5	1520	88	1.53	< 2	1	180 < 0.01	< 10	< 10	7	< 10	72	3440		
L19500E 4650N	201	202	30	19 < 0.01		1	1230	384	4.98	< 2	< 1	18 0.01	< 10	< 10	9	< 10	24	26300		
L19500E 4700N	201	202	3160	16 0.01		15	780	72	0.25	< 2	1	43 0.04	< 10	< 10	13	< 10	1945	8420		
L19500E 4750N	201	202	155	40 0.01		4	1930	212	1.78	2	< 1	77 0.01	< 10	< 10	23	< 10	50	7440		
L19500E 4800N	201	202	1170	22 < 0.01		14	620	46	0.27	< 2	1	48 < 0.01	< 10	< 10	18	< 10	156	3520		
L19500E 4850N	201	202	120	27 0.01		7	1340	56	1.00	2	< 1	215 < 0.01	< 10	< 10	12	< 10	138	2420		
L19500E 4900N	201	202	240	21 0.01		17	970	90	0.70	4	1	96 0.03	< 10	< 10	26	< 10	84	2680		
L19500E 4950N	201	202	370	11 0.03		21	370	62	0.24	< 2	1	26 0.05	< 10	< 10	32	< 10	94	2020		
L19500E 5050N	201	202	245	6 < 0.01		19	310	28	0.07	< 2	1	14 0.07	< 10	< 10	39	< 10	70	1580		
L19500E 5100N	201	202	170	10 0.01		9	230	84	0.58	2	< 1	12 < 0.01	< 10	< 10	15	< 10	62	2280		
L19500E 5150N	201	202	325	6 < 0.01		20	320	22	0.11	< 2	1	15 0.07	< 10	< 10	36	< 10	98	1510		
L19500E 5200N	201	202	80	5 0.01		6	490	26	0.19	< 2	< 1	46 < 0.01	< 10	< 10	15	< 10	26	1650		
L19500E 5250N	201	202	120	10 < 0.01		15	860	38	0.41	< 2	< 1	124 < 0.01	< 10	< 10	44	< 10	60	1700		
L19500E 5300N	201	202	305	11 < 0.01		21	560	32	0.14	< 2	1	63 0.01	< 10	< 10	22	< 10	106	2050		
L19500E 5350N	201	202	280	9 < 0.01		25	790	32	0.16	< 2	1	90 < 0.01	< 10	< 10	30	< 10	134	2350		

CERTIFICATION:



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CERTIFICATE OF ANALYSIS

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SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19500E 5400N	201 202	< 5	0.2	0.58	12	< 10	330	< 0.5	< 2	0.12	< 0.5	5	8	27	2.26	< 10	< 1	0.12	20	0.11
L19500E 5450N	201 202	< 5	0.2	0.78	12	< 10	410	0.5	< 2	0.12	< 0.5	5	10	29	2.29	< 10	< 1	0.11	40	0.11
L19500E 5500N	201 202	< 5	0.2	0.52	14	< 10	240	< 0.5	< 2	0.04	< 0.5	4	7	20	1.97	< 10	< 1	0.10	20	0.05
L19500E 5550N	201 202	< 5	0.2	0.97	12	< 10	370	< 0.5	< 2	0.06	< 0.5	5	14	21	2.62	< 10	< 1	0.09	40	0.07
L19500E 5600N	201 202	< 5	< 0.2	0.77	22	< 10	250	< 0.5	< 2	0.03	< 0.5	4	14	22	4.36	< 10	< 1	0.12	50	0.07
L19500E 5650N	201 202	< 5	< 0.2	1.43	10	< 10	580	< 0.5	< 2	0.11	< 0.5	17	66	28	5.13	< 10	< 1	0.15	40	0.40
L19500E 5700N	201 202	< 5	< 0.2	1.26	10	< 10	380	< 0.5	< 2	0.07	< 0.5	7	33	18	3.32	< 10	< 1	0.08	60	0.26
L19500E 5750N	201 202	< 5	< 0.2	0.95	14	< 10	140	< 0.5	< 2	0.06	0.5	8	28	19	3.77	< 10	< 1	0.10	30	0.23
L19500E 5800N	201 202	< 5	< 0.2	1.29	8	< 10	150	< 0.5	< 2	0.18	< 0.5	11	37	23	3.82	< 10	< 1	0.07	30	0.44
L19500E 5850N	201 202	< 5	< 0.2	1.14	12	< 10	120	< 0.5	< 2	0.16	< 0.5	9	31	19	3.88	< 10	< 1	0.05	20	0.33
L19500E 5900N	201 202	< 5	< 0.2	0.95	8	< 10	100	< 0.5	< 2	0.14	0.5	8	30	23	3.13	< 10	1	0.05	30	0.28
L19500E 5950N	201 202	< 5	< 0.2	0.89	6	< 10	230	< 0.5	< 2	0.09	< 0.5	4	15	10	2.04	< 10	< 1	0.04	20	0.11
L19500E 6000N	201 202	< 5	< 0.2	1.05	12	< 10	390	< 0.5	< 2	0.22	0.5	7	18	14	5.16	< 10	< 1	0.04	50	0.13
L19500E 6050N	201 202	10	0.2	0.52	12	< 10	350	< 0.5	< 2	0.14	< 0.5	6	13	8	4.02	< 10	< 1	0.12	30	0.08
L19500E 6100N	201 202	< 5	< 0.2	0.87	14	< 10	430	1.0	< 2	0.52	< 0.5	13	23	15	4.05	< 10	< 1	0.04	60	0.25
L19500E 6150N	201 202	< 5	< 0.2	1.35	8	< 10	460	0.5	< 2	0.36	0.5	16	29	22	5.12	< 10	< 1	0.06	40	0.34
L19600E 4600N	201 202	< 5	< 0.2	3.97	16	< 10	1270	2.0	< 2	1.38	10.5	81	192	161	9.17	< 10	< 1	0.07	70	2.30
L19600E 4650N	201 202	< 5	< 0.2	1.82	34	20	230	0.5	< 2	0.96	1.5	4	5	12	7.16	10	< 1	0.69	140	0.19
L19600E 4700N	201 202	< 5	0.2	0.50	52	< 10	70	< 0.5	< 2	0.06	< 0.5	4	4	15	10.05	< 10	< 1	1.17	120	0.09
L19600E 4750N	201 202	< 5	0.6	0.40	50	< 10	50	< 0.5	< 2	0.04	< 0.5	2	8	16	13.95	10	< 1	1.44	80	0.09
L19600E 4800N	201 202	< 5	0.2	0.94	32	< 10	140	< 0.5	< 2	0.16	0.5	5	5	17	7.25	< 10	< 1	0.50	150	0.09
L19600E 4850N	201 202	< 5	0.2	0.91	16	< 10	780	0.5	< 2	0.23	0.5	3	7	13	3.48	< 10	< 1	0.13	80	0.08
L19600E 4900N	201 202	< 5	0.2	0.33	16	< 10	70	< 0.5	< 2	0.01	< 0.5	3	8	14	7.19	< 10	1	0.74	110	0.03
L19600E 4950N	201 202	< 5	< 0.2	1.12	14	< 10	210	< 0.5	< 2	0.07	0.5	5	23	15	3.33	< 10	< 1	0.10	60	0.25
L19600E 5300N	201 202	< 5	0.2	0.87	6	< 10	260	0.5	< 2	0.12	< 0.5	6	13	26	3.64	< 10	< 1	0.12	60	0.24
L19600E 5350N	201 202	< 5	< 0.2	1.09	10	< 10	260	< 0.5	< 2	0.24	< 0.5	7	29	20	3.35	< 10	< 1	0.10	40	0.42
L19600E 5400N	201 202	< 5	0.2	0.83	14	< 10	190	< 0.5	< 2	0.09	< 0.5	5	16	15	2.08	< 10	< 1	0.06	30	0.17
L19600E 5450N	201 202	< 5	0.2	1.02	10	< 10	200	< 0.5	< 2	0.08	< 0.5	5	19	17	3.15	< 10	< 1	0.10	50	0.21
L19600E 5500N	201 202	< 5	0.6	0.78	6	< 10	180	< 0.5	< 2	0.07	< 0.5	3	8	18	1.57	< 10	< 1	0.06	20	0.10
L19600E 5550N	201 202	< 5	< 0.2	1.21	24	< 10	770	< 0.5	< 2	0.14	0.5	9	33	23	5.40	< 10	< 1	0.15	70	0.26
L19600E 5600N	201 202	< 5	< 0.2	1.11	8	< 10	710	< 0.5	< 2	0.13	< 0.5	8	18	18	2.25	< 10	< 1	0.07	50	0.15
L19600E 5650N	201 202	< 5	< 0.2	1.61	20	< 10	190	< 0.5	< 2	0.08	0.5	11	44	20	5.67	< 10	< 1	0.09	50	0.35
L19600E 5700N	201 202	< 5	< 0.2	1.35	6	< 10	120	< 0.5	< 2	0.05	0.5	10	40	23	4.21	< 10	< 1	0.08	30	0.31
L19600E 5750N	201 202	< 5	< 0.2	1.49	12	< 10	210	< 0.5	< 2	0.07	< 0.5	8	34	17	4.49	< 10	< 1	0.07	50	0.23
L19600E 5800N	201 202	< 5	< 0.2	1.48	10	< 10	320	< 0.5	< 2	0.09	0.5	5	30	14	2.94	< 10	< 1	0.06	40	0.18
L19600E 5850N	201 202	< 5	0.2	0.97	10	< 10	100	< 0.5	< 2	0.07	< 0.5	10	23	31	3.56	< 10	< 1	0.06	30	0.24
L19600E 5900N	201 202	< 5	0.6	0.86	14	< 10	160	< 0.5	< 2	0.15	1.5	14	17	48	4.03	< 10	< 1	0.05	30	0.23
L19600E 5950N	201 202	< 5	< 0.2	1.44	18	< 10	430	1.0	< 2	0.14	0.5	12	30	23	5.28	< 10	< 1	0.05	50	0.19
L19600E 6000N	201 202	< 5	< 0.2	0.24	8	< 10	240	< 0.5	< 2	10.10	0.5	10	13	15	2.37	< 10	< 1	0.01	< 10	6.29
L19600E 6050N	201 202	< 5	< 0.2	0.73	12	< 10	5280	< 0.5	< 2	10.60	5.5	7	14	5	4.28	< 10	1	0.01	< 10	6.86

CERTIFICATION:



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SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19500E 5400N	201	202	120	7 < 0.01		23	630	34	0.19	< 2	< 1	113 < 0.01	< 10	< 10	27	< 10		126	not/##	
L19500E 5450N	201	202	130	7 < 0.01		22	850	36	0.15	< 2	< 1	101 < 0.01	< 10	< 10	30	< 10		126		2890
L19500E 5500N	201	202	130	7 < 0.01		16	680	32	0.13	< 2	< 1	79 < 0.01	< 10	< 10	27	< 10		98		2550
L19500E 5550N	201	202	160	8 < 0.01		15	1440	34	0.19	< 2	< 1	40 < 0.01	< 10	< 10	27	< 10		82		2530
L19500E 5600N	201	202	140	16 < 0.01		14	950	38	0.20	4	< 1	34 < 0.01	< 10	< 10	31	< 10		130		2850
L19500E 5650N	201	202	510	5 < 0.01		49	1310	44	0.22	2	< 1	28 < 0.03	< 10	< 10	36	< 10		112		4050
L19500E 5700N	201	202	590	8 < 0.01		23	770	32	0.10	4	< 1	30 < 0.01	< 10	< 10	34	< 10		108		2640
L19500E 5750N	201	202	515	9 < 0.01		25	870	36	0.11	2	< 1	29 < 0.04	< 10	< 10	33	< 10		106		2780
L19500E 5800N	201	202	330	5 < 0.01		36	870	24	0.07	< 2	1	29 < 0.04	< 10	< 10	37	< 10		156		2510
L19500E 5850N	201	202	325	5 < 0.01		28	770	32	0.05	2	1	25 < 0.04	< 10	< 10	36	< 10		140		2410
L19500E 5900N	201	202	355	6 < 0.01		26	750	20	0.05	< 2	1	20 < 0.04	< 10	< 10	34	< 10		150		3210
L19500E 5950N	201	202	125	5 < 0.01		11	540	26	0.03	< 2	< 1	17 < 0.01	< 10	< 10	35	< 10		76		2600
L19500E 6000N	201	202	510	9 < 0.01		19	850	46	0.04	6	< 1	15 < 0.01	< 10	< 10	59	< 10		158		4560
L19500E 6050N	201	202	295	22 < 0.01		11	590	100	0.19	< 2	< 1	17 < 0.01	< 10	< 10	43	< 10		66		3560
L19500E 6100N	201	202	805	3 < 0.01		34	890	32	0.03	< 2	7	23 < 0.01	< 10	< 10	25	< 10		94		1990
L19500E 6150N	201	202	630	3 < 0.01		30	1150	44	0.07	< 2	3	37 < 0.03	< 10	< 10	40	< 10		150		2690
L19600E 4600N	201	202	3940	12 < 0.01		123	1980	44	0.10	< 2	12	159 < 0.32	< 10	< 10	92	< 10		2500		3390
L19600E 4650N	201	202	810	16 < 0.06		5	800	44	0.69	2	< 1	60 < 0.03	< 10	< 10	9	< 10		348		8320
L19600E 4700N	201	202	155	19 < 0.04		4	2360	156	1.96	2	< 1	64 < 0.01	< 10	< 10	8	< 10		118		14870
L19600E 4750N	201	202	85	22 < 0.02		4	1850	172	2.42	2	< 1	32 < 0.04	< 10	< 10	19	< 10		56		11680
L19600E 4800N	201	202	570	25 < 0.03		10	1080	96	0.93	< 2	1	126 < 0.01	< 10	< 10	11	< 10		86		3800
L19600E 4850N	201	202	395	19 < 0.03		7	870	86	0.25	4	< 1	30 < 0.01	< 10	< 10	21	< 10		122		3110
L19600E 4900N	201	202	100	22 < 0.01		5	1650	62	1.36	< 2	< 1	179 < 0.01	< 10	< 10	12	< 10		60		3060
L19600E 4950N	201	202	230	8 < 0.01		16	550	34	0.17	2	1	23 < 0.03	< 10	< 10	32	< 10		84		1830
L19600E 5300N	201	202	400	13 < 0.01		25	550	28	0.24	< 2	1	90 < 0.01	< 10	< 10	24	< 10		140		2540
L19600E 5350N	201	202	345	7 < 0.01		23	600	22	0.14	< 2	1	64 < 0.05	< 10	< 10	33	< 10		104		2050
L19600E 5400N	201	202	405	4 < 0.01		14	630	16	0.10	< 2	< 1	49 < 0.01	< 10	< 10	28	< 10		78		1920
L19600E 5450N	201	202	205	10 < 0.01		16	870	38	0.13	< 2	< 1	39 < 0.02	< 10	< 10	32	< 10		92		2700
L19600E 5500N	201	202	75	4 < 0.03		13	630	16	0.09	< 2	< 1	52 < 0.01	< 10	< 10	22	< 10		70		1800
L19600E 5550N	201	202	390	14 < 0.01		26	760	48	0.21	4	1	42 < 0.03	< 10	< 10	41	< 10		152		3630
L19600E 5600N	201	202	945	5 < 0.01		16	860	24	0.10	< 2	< 1	48 < 0.01	< 10	< 10	33	< 10		78		2580
L19600E 5650N	201	202	500	11 < 0.01		31	840	48	0.10	4	1	23 < 0.03	< 10	< 10	39	< 10		176		2350
L19600E 5700N	201	202	420	8 < 0.01		31	720	28	0.09	< 2	1	19 < 0.04	< 10	< 10	41	< 10		116		2690
L19600E 5750N	201	202	450	8 < 0.01		21	730	28	0.07	8	< 1	17 < 0.02	< 10	< 10	37	< 10		142		2480
L19600E 5800N	201	202	225	6 < 0.01		16	690	20	0.05	< 2	< 1	17 < 0.01	< 10	< 10	39	< 10		116		2520
L19600E 5850N	201	202	260	5 < 0.01		38	890	24	0.06	4	< 1	22 < 0.01	< 10	< 10	35	< 10		204		3830
L19600E 5900N	201	202	455	6 < 0.01		42	1170	56	0.05	< 2	1	48 < 0.01	< 10	< 10	29	< 10		214		4700
L19600E 5950N	201	202	745	6 < 0.01		26	980	66	0.07	2	1	23 < 0.01	< 10	< 10	34	< 10		222		4530
L19600E 6000N	201	202	335	< 1 < 0.01		31	380	50	0.05	< 2	4	105 < 0.01	< 10	< 10	17	< 10		60		3570
L19600E 6050N	201	202	440	< 1 < 0.01		24	330	190	0.10	< 2	3	190 < 0.01	< 10	< 10	22	< 10		1280		11620

CERTIFICATION:

Jason Jeff



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 4-A
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Certificate Date: 13-SEP-1999
Invoice No. : 19925657
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19600E 6100N	201 202	< 5	< 0.2	0.60	12	< 10	650	0.5	< 2	5.60	0.5	10	17	11	3.11	< 10	< 1	0.04	50	3.56
L19600E 6150N	201 202	< 5	< 0.2	0.53	4	< 10	380	< 0.5	< 2	0.83	0.5	9	11	9	2.73	< 10	< 1	0.03	20	0.20
L19600E 6200N	201 202	< 5	< 0.2	0.73	14	< 10	360	< 0.5	< 2	0.51	< 0.5	20	19	27	4.24	< 10	< 1	0.06	40	0.21
L19700E 6250N	201 202	< 5	< 0.2	0.68	< 2	< 10	400	< 0.5	< 2	1.26	0.5	18	14	26	4.09	< 10	< 1	0.05	10	0.35
L19700E 4925N	201 202	< 5	0.2	0.82	32	< 10	520	0.5	< 2	0.05	0.5	5	11	20	5.16	< 10	< 1	0.31	130	0.09
L19700E 4975N	201 202	< 5	< 0.2	0.42	22	< 10	110	< 0.5	< 2	0.06	0.5	4	15	12	2.31	< 10	< 1	0.09	40	0.06
L19700E 5025N	201 202	< 5	0.2	1.07	24	< 10	240	1.0	< 2	0.10	1.5	8	30	23	4.28	< 10	< 1	0.13	100	0.32
L19700E 5075N	201 202	< 5	0.2	0.67	20	< 10	250	< 0.5	< 2	0.04	< 0.5	3	12	11	3.42	< 10	< 1	0.12	110	0.06
L19700E 5125N	201 202	< 5	< 0.2	1.33	14	< 10	380	< 0.5	< 2	0.17	0.5	10	37	18	4.02	< 10	< 1	0.14	70	0.45
L19700E 5175N	201 202	< 5	< 0.2	1.77	8	< 10	360	< 0.5	< 2	0.31	0.5	11	69	18	4.11	< 10	< 1	0.09	30	0.81
L19700E 5225N	201 202	< 5	< 0.2	1.06	12	< 10	250	< 0.5	< 2	0.05	< 0.5	5	24	15	3.58	< 10	< 1	0.10	40	0.26
L19700E 5275N	201 202	< 5	< 0.2	1.06	18	< 10	270	< 0.5	< 2	0.07	< 0.5	7	24	15	3.65	< 10	< 1	0.10	40	0.29
L19700E 5550N	201 202	< 5	< 0.2	1.11	22	< 10	230	< 0.5	< 2	0.04	1.0	8	20	19	6.24	< 10	< 1	0.04	120	0.16
L19700E 5600N	201 202	< 5	< 0.2	0.92	14	< 10	150	< 0.5	< 2	0.05	0.5	7	26	17	4.35	< 10	< 1	0.05	40	0.20
L19700E 5650N	201 202	< 5	< 0.2	1.34	10	< 10	200	< 0.5	< 2	0.09	0.5	11	42	22	4.48	< 10	< 1	0.09	40	0.39
L19700E 5700N	201 202	< 5	< 0.2	1.42	18	< 10	170	< 0.5	< 2	0.09	0.5	12	36	22	5.11	< 10	< 1	0.07	40	0.37
L19700E 5750N	201 202	< 5	< 0.2	1.22	18	< 10	160	< 0.5	< 2	0.06	0.5	5	26	17	3.35	< 10	< 1	0.06	40	0.15
L19700E 5800N	201 202	< 5	< 0.2	0.72	6	< 10	170	< 0.5	< 2	0.04	< 0.5	9	10	15	1.92	< 10	< 1	0.04	10	0.08
L19700E 5850N	201 202	< 5	0.2	1.01	14	< 10	90	< 0.5	< 2	0.06	0.5	7	16	52	4.04	< 10	< 1	0.05	10	0.28
L19700E 5900N	201 202	< 5	0.2	0.68	6	< 10	220	< 0.5	< 2	0.05	0.5	19	9	47	4.54	< 10	< 1	0.06	< 10	0.09
L19700E 5950N	201 202	< 5	0.2	0.40	18	< 10	330	< 0.5	< 2	0.86	1.0	13	8	54	3.37	< 10	< 1	0.05	< 10	0.45
L19700E 6000N	201 202	< 5	< 0.2	0.41	2	< 10	120	< 0.5	< 2	0.26	< 0.5	3	7	9	1.36	< 10	< 1	0.03	20	0.06
L19700E 6050N	201 202	< 5	< 0.2	0.50	4	< 10	590	< 0.5	< 2	5.32	3.0	4	14	7	2.80	< 10	< 1	0.01	10	3.08
L19700E 6100N	201 202	< 5	< 0.2	0.32	12	< 10	90	< 0.5	< 2	10.70	1.0	4	12	3	1.66	< 10	< 1	0.01	10	6.67
L19700E 6150N	201 202	< 5	< 0.2	0.42	4	< 10	200	0.5	< 2	2.18	< 0.5	13	16	22	3.71	< 10	< 1	0.02	10	1.09
L19700E 6200N	201 202	< 5	< 0.2	0.50	< 2	< 10	210	< 0.5	< 2	0.50	< 0.5	6	6	7	1.87	< 10	< 1	0.02	10	0.14
L19800E 4650N	201 202	< 5	< 0.2	3.48	32	< 10	540	2.0	< 2	0.75	1.5	41	98	78	8.97	< 10	< 1	0.13	130	1.32
L19800E 4700N	201 202	< 5	< 0.2	1.71	66	< 10	140	1.5	< 2	0.49	0.5	8	16	35	10.60	< 10	< 1	0.53	290	0.26
L19800E 4750N	201 202	< 5	0.2	0.92	36	< 10	150	< 0.5	< 2	0.41	0.5	13	32	22	6.35	< 10	< 1	0.39	150	0.23
L19800E 4800N	201 202	< 5	< 0.2	1.26	6	< 10	570	< 0.5	< 2	0.29	< 0.5	7	30	16	2.62	< 10	< 1	0.05	50	0.36
L19800E 4850N	201 202	< 5	< 0.2	1.57	20	< 10	500	0.5	< 2	0.35	2.5	14	34	35	7.43	< 10	< 1	0.31	180	0.41
L19800E 4900N	201 202	< 5	< 0.2	1.37	40	< 10	370	0.5	< 2	0.74	2.5	10	22	27	6.93	< 10	< 1	0.46	210	0.30
L19800E 4925N	201 202	< 5	0.2	1.03	60	< 10	590	1.0	< 2	0.16	5.5	6	8	42	7.41	< 10	< 1	0.20	150	0.14
L19800E 4950N	201 202	< 5	0.2	0.98	62	< 10	400	1.0	< 2	0.16	7.5	6	6	42	7.43	< 10	< 1	0.19	150	0.14
L19800E 4975N	201 202	< 5	< 0.2	0.49	18	< 10	450	< 0.5	< 2	0.03	0.5	5	9	15	4.25	< 10	< 1	0.25	110	0.06
L19800E 5025N	201 202	< 5	0.2	0.86	32	< 10	220	< 0.5	< 2	0.04	0.5	6	13	17	5.64	< 10	< 1	0.11	70	0.12
L19800E 5075N	201 202	< 5	< 0.2	0.74	22	< 10	280	< 0.5	< 2	0.03	< 0.5	4	16	16	4.77	< 10	< 1	0.15	70	0.11
L19800E 5125N	201 202	< 5	< 0.2	1.01	24	< 10	660	< 0.5	< 2	0.05	0.5	5	22	19	5.50	< 10	< 1	0.16	100	0.11
L19800E 5175N	201 202	< 5	< 0.2	1.07	18	< 10	180	< 0.5	< 2	0.03	< 0.5	5	19	21	5.45	< 10	< 1	0.08	70	0.12
L19800E 5225N	201 202	< 5	< 0.2	0.74	16	< 10	370	< 0.5	< 2	0.11	< 0.5	5	17	13	3.06	< 10	< 1	0.09	70	0.22

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 4-B
Total Pages : 6
Certificate Date: 13-SEP-1999
Invoice No. : I9925657
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19600E 6100N	201 202	640	< 1	< 0.01	22	400	44	0.05	< 2	4	45	< 0.01	< 10	< 10	20	< 10	120		3420
L19600E 6150N	201 202	470	< 1	0.01	16	760	26	0.04	4	4	20	< 0.01	< 10	< 10	21	< 10	58		1810
L19600E 6200N	201 202	750	3	< 0.01	35	1770	54	0.03	< 2	5	138	< 0.01	< 10	< 10	31	< 10	124		2140
L19700E 6250N	201 202	440	1	0.01	32	1230	36	0.07	< 2	6	28	< 0.01	< 10	< 10	26	< 10	84		2310
L19700E 4925N	201 202	720	20	0.01	12	960	56	0.55	< 2	< 1	92	< 0.01	< 10	< 10	27	< 10	154		3220
L19700E 4975N	201 202	215	13	< 0.01	10	600	28	0.10	< 2	< 1	23	0.03	< 10	< 10	67	< 10	88		1690
L19700E 5025N	201 202	405	14	< 0.01	38	640	40	0.19	6	1	50	< 0.01	< 10	< 10	39	< 10	192		1860
L19700E 5075N	201 202	305	16	< 0.01	9	700	40	0.17	2	< 1	24	0.01	< 10	< 10	29	< 10	58		2530
L19700E 5125N	201 202	1300	9	0.01	23	900	40	0.21	< 2	1	29	0.08	< 10	< 10	40	< 10	112		2750
L19700E 5175N	201 202	520	5	< 0.01	30	690	26	0.14	< 2	1	26	0.15	< 10	< 10	52	< 10	94		2220
L19700E 5225N	201 202	310	7	< 0.01	15	540	34	0.19	< 2	< 1	20	0.03	< 10	< 10	30	< 10	94		2320
L19700E 5275N	201 202	275	9	< 0.01	18	580	30	0.18	< 2	< 1	21	0.04	< 10	< 10	31	< 10	104		2410
L19700E 5550N	201 202	555	16	< 0.01	18	780	54	0.07	4	< 1	14	< 0.01	< 10	< 10	18	< 10	196		3000
L19700E 5600N	201 202	270	10	< 0.01	21	670	36	0.10	4	< 1	15	0.01	< 10	< 10	29	< 10	166		2280
L19700E 5650N	201 202	345	8	< 0.01	36	670	40	0.15	< 2	1	23	0.03	< 10	< 10	34	< 10	142		2840
L19700E 5700N	201 202	580	10	< 0.01	32	650	48	0.10	< 2	1	24	0.03	< 10	< 10	38	< 10	220		2440
L19700E 5750N	201 202	320	8	< 0.01	17	1150	28	0.10	< 2	< 1	15	< 0.01	< 10	< 10	38	< 10	90		2310
L19700E 5800N	201 202	1695	4	0.03	12	610	28	0.06	< 2	< 1	11	0.01	< 10	< 10	21	< 10	96		1970
L19700E 5850N	201 202	150	5	< 0.01	47	1190	20	0.04	< 2	2	25	< 0.01	< 10	< 10	48	< 10	280		4130
L19700E 5900N	201 202	150	5	< 0.01	47	1030	22	0.10	< 2	4	102	< 0.01	< 10	< 10	39	< 10	220		6130
L19700E 5950N	201 202	350	5	< 0.01	59	970	24	0.07	2	4	94	< 0.01	< 10	< 10	21	< 10	200		5180
L19700E 6000N	201 202	45	4	< 0.01	8	480	28	0.02	< 2	< 1	17	< 0.01	< 10	< 10	23	< 10	60		5140
L19700E 6050N	201 202	405	< 1	< 0.01	15	510	64	0.05	< 2	3	37	< 0.01	< 10	< 10	29	< 10	740		3280
L19700E 6100N	201 202	460	< 1	0.01	13	220	38	0.05	< 2	2	44	< 0.01	< 10	< 10	16	< 10	78		1750
L19700E 6150N	201 202	290	< 1	< 0.01	45	770	36	0.04	< 2	5	31	< 0.01	< 10	< 10	17	< 10	60		1290
L19700E 6200N	201 202	125	< 1	0.01	11	470	20	0.03	< 2	< 1	27	< 0.01	< 10	< 10	14	< 10	52		1420
L19800E 4650N	201 202	3230	13	0.01	73	1610	46	0.11	4	9	89	0.13	< 10	< 10	56	< 10	196		1770
L19800E 4700N	201 202	2090	11	0.03	11	1810	76	1.09	< 2	1	143	0.03	< 10	< 10	12	< 10	124		4130
L19800E 4750N	201 202	2520	19	0.01	15	1780	80	0.81	< 2	< 1	85	0.01	< 10	< 10	28	< 10	104		4460
L19800E 4800N	201 202	445	5	0.03	15	770	14	0.10	< 2	1	29	0.06	< 10	< 10	26	< 10	82		2040
L19800E 4850N	201 202	1415	13	0.03	27	1200	68	0.58	< 2	3	68	0.08	< 10	< 10	25	< 10	570		6590
L19800E 4900N	201 202	1340	19	0.03	16	1190	76	0.59	< 2	2	67	0.06	< 10	< 10	32	< 10	344		9680
L19800E 4925N	201 202	715	42	< 0.01	28	1190	68	0.39	16	1	57	< 0.01	< 10	< 10	58	< 10	422		3400
L19800E 4950N	201 202	1040	41	< 0.01	32	1130	56	0.47	10	1	61	< 0.01	< 10	< 10	53	< 10	462		3090
L19800E 4975N	201 202	400	16	< 0.01	10	790	38	0.46	< 2	< 1	81	< 0.01	< 10	< 10	15	< 10	70		3080
L19800E 5025N	201 202	710	19	0.01	15	920	46	0.18	6	< 1	24	0.02	< 10	< 10	29	< 10	240		2050
L19800E 5075N	201 202	305	16	< 0.01	11	730	52	0.27	4	< 1	28	0.01	< 10	< 10	30	< 10	124		3040
L19800E 5125N	201 202	1185	17	< 0.01	13	1110	54	0.31	2	< 1	27	0.01	< 10	< 10	37	< 10	154		3960
L19800E 5175N	201 202	425	17	< 0.01	14	780	40	0.16	< 2	< 1	14	0.01	< 10	< 10	28	< 10	162		2560
L19800E 5225N	201 202	365	9	< 0.01	14	580	38	0.16	6	< 1	27	0.02	< 10	< 10	27	< 10	74		2650

CERTIFICATION:



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SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19800E 5275N	201 202	< 5	< 0.2	1.48	10	< 10	230	< 0.5	< 2	0.10	0.5	10	32	20	5.15	< 10	< 1	0.09	50	0.32
L19800E 5950N	201 202	< 5	0.4	0.79	16	< 10	280	< 0.5	< 2	0.10	0.5	7	13	44	3.58	< 10	< 1	0.04	< 10	0.19
L19800E 6000N	201 202	< 5	0.2	0.83	10	< 10	220	< 0.5	< 2	0.07	0.5	8	14	27	3.81	< 10	< 1	0.05	10	0.14
L19800E 6050N	201 202	< 5	< 0.2	0.91	20	< 10	110	< 0.5	< 2	0.05	< 0.5	8	15	15	3.90	< 10	< 1	0.04	20	0.09
L19800E 6100N	201 202	< 5	0.2	0.71	14	< 10	260	< 0.5	< 2	0.37	0.5	9	14	29	2.93	< 10	< 1	0.05	10	0.18
L19800E 6150N	201 202	< 5	1.0	0.84	14	< 10	150	< 0.5	< 2	0.17	< 0.5	8	12	36	3.80	< 10	< 1	0.05	10	0.21
L19900E 4400N	201 202	< 5	0.2	0.20	18	< 10	120	< 0.5	< 2	0.01	< 0.5	1	< 1	2	8.07	10	< 1	0.29	< 10	0.01
L19900E 4450N	201 202	< 5	0.4	0.98	34	< 10	120	1.5	2	0.83	10.0	90	15	191	12.10	< 10	< 1	0.08	110	0.14
L19900E 4500N	201 202	< 5	< 0.2	1.67	54	< 10	140	1.5	2	0.41	7.5	30	30	64	8.03	< 10	< 1	0.13	200	0.38
L19900E 4550N	201 202	< 5	< 0.2	3.92	40	< 10	100	1.5	< 2	1.45	3.0	60	211	132	8.46	< 10	< 1	0.10	50	2.23
L19900E 4600N	201 202	< 5	< 0.2	2.92	24	< 10	80	1.0	< 2	1.00	2.0	36	173	77	7.06	< 10	< 1	0.08	60	1.78
L19900E 4650N	201 202	< 5	< 0.2	3.50	6	< 10	50	0.5	< 2	1.19	0.5	39	187	65	6.54	< 10	< 1	0.14	30	2.59
L19900E 4700N	201 202	< 5	< 0.2	3.84	< 2	< 10	50	0.5	< 2	1.24	0.5	32	164	54	6.35	< 10	< 1	0.35	30	2.88
L19900E 4750N	201 202	< 5	< 0.2	3.87	< 2	< 10	40	0.5	< 2	1.31	0.5	34	187	58	6.47	< 10	< 1	0.34	30	2.94
L19900E 4800N	201 202	< 5	0.2	4.92	10	< 10	160	1.5	< 2	1.03	1.0	45	184	78	8.08	10	< 1	0.27	90	3.27
L19900E 4850N	201 202	< 5	< 0.2	1.48	16	< 10	830	0.5	< 2	2.10	0.5	16	64	36	3.88	< 10	< 1	0.12	70	0.79
L19900E 4900N	201 202	< 5	< 0.2	1.89	18	< 10	900	0.5	< 2	0.42	1.0	10	26	24	6.92	< 10	< 1	0.20	160	0.34
L19900E 4925N	201 202	< 5	< 0.2	1.30	16	< 10	390	0.5	< 2	0.17	0.5	7	16	20	4.20	< 10	< 1	0.11	110	0.23
L19900E 4950N	201 202	< 5	0.6	0.90	30	< 10	690	0.5	< 2	0.35	1.5	4	8	19	4.69	< 10	< 1	0.17	130	0.10
L19900E 4975N	201 202	< 5	0.2	0.92	36	< 10	580	0.5	< 2	0.16	1.5	3	6	24	4.56	< 10	< 1	0.13	110	0.09
L19900E 5025N	201 202	< 5	< 0.2	0.57	20	< 10	130	0.5	< 2	0.10	4.0	4	< 1	15	6.56	< 10	< 1	0.02	220	0.13
L19900E 5075N	201 202	< 5	0.2	1.09	36	< 10	150	< 0.5	< 2	0.05	2.0	3	1	27	8.92	< 10	2	0.03	140	0.08
L19900E 5125N	201 202	< 5	0.2	0.88	28	< 10	430	0.5	< 2	0.19	3.0	5	11	23	5.12	< 10	< 1	0.15	110	0.11
L19900E 5175N	201 202	< 5	< 0.2	0.76	12	< 10	90	0.5	< 2	0.06	0.5	4	10	12	8.62	< 10	< 1	0.02	210	0.10
L19900E 5225N	201 202	< 5	0.4	0.86	32	< 10	220	0.5	< 2	0.09	2.0	9	15	29	7.66	< 10	< 1	0.05	210	0.15
L19900E 5275N	201 202	< 5	< 0.2	0.64	24	< 10	390	< 0.5	< 2	0.07	1.0	5	14	13	7.25	< 10	< 1	0.23	30	0.09
L19900E 5625N	201 202	< 5	< 0.2	0.72	36	< 10	320	0.5	2	0.17	0.5	9	11	22	7.28	< 10	< 1	0.06	90	0.12
L19900E 5675N	201 202	< 5	0.2	0.68	22	< 10	160	0.5	< 2	0.07	1.0	6	14	26	4.57	< 10	< 1	0.05	80	0.12
L19900E 5725N	201 202	< 5	0.2	0.88	16	< 10	380	0.5	< 2	0.15	2.0	10	19	38	4.05	< 10	< 1	0.07	80	0.22
L19900E 5775N	201 202	< 5	0.4	0.58	8	< 10	210	< 0.5	< 2	0.04	0.5	5	9	27	3.02	< 10	< 1	0.05	20	0.09
L19900E 5825N	201 202	< 5	0.2	0.93	16	< 10	390	< 0.5	< 2	0.04	0.5	6	13	29	2.96	< 10	< 1	0.05	10	0.15
L19900E 5875N	201 202	< 5	0.6	0.49	14	< 10	220	< 0.5	< 2	0.23	< 0.5	4	6	14	1.88	< 10	< 1	0.04	10	0.08
L20000E 4925N	201 202	< 5	< 0.2	2.80	16	< 10	180	1.5	< 2	0.78	4.0	28	80	48	6.52	< 10	< 1	0.21	120	1.68
L20000E 4975N	201 202	< 5	< 0.2	2.26	12	< 10	240	0.5	< 2	0.59	3.0	31	80	50	5.96	< 10	< 1	0.12	100	1.50
L20000E 5025N	201 202	< 5	0.2	1.85	24	< 10	320	1.0	< 2	0.37	2.5	22	45	46	6.74	< 10	< 1	0.18	130	0.74
L20000E 5075N	201 202	< 5	< 0.2	1.73	24	< 10	390	1.0	< 2	0.40	1.5	13	29	32	6.24	< 10	< 1	0.12	120	0.44
L20000E 5125N	201 202	< 5	0.2	0.86	40	< 10	320	0.5	< 2	0.07	1.5	5	10	19	6.31	< 10	< 1	0.11	100	0.11
L20000E 5175N	201 202	< 5	< 0.2	0.94	14	< 10	250	< 0.5	< 2	0.15	1.0	6	19	14	3.50	< 10	< 1	0.06	40	0.17
L20000E 5225N	201 202	< 5	< 0.2	1.58	78	< 10	210	1.5	< 2	0.55	4.0	13	26	25	7.98	< 10	< 1	0.07	140	0.55
L20000E 5275N	201 202	< 5	0.2	0.96	28	< 10	530	0.5	< 2	0.19	3.0	6	18	20	4.75	< 10	< 1	0.11	100	0.17

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 5-B
Total Pages : 6
Certificate Date: 13-SEP-1999
Invoice No. : 19925657
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19800E 5275N	201 202	490	12	0.01	24	760	38	0.15	< 2	1	23	0.04	< 10	< 10	36	< 10	154	2030	
L19800E 5950N	201 202	150	6	< 0.01	43	1490	24	0.04	< 2	1	24	< 0.01	< 10	< 10	38	< 10	248	6120	
L19800E 6000N	201 202	445	6	< 0.01	30	1030	32	0.05	< 2	< 1	22	< 0.01	< 10	< 10	36	< 10	172	3570	
L19800E 6050N	201 202	425	5	< 0.01	19	1070	66	0.03	< 2	< 1	11	< 0.01	< 10	< 10	41	< 10	186	2570	
L19800E 6100N	201 202	435	4	< 0.01	32	1010	24	0.04	2	1	56	< 0.01	< 10	< 10	27	< 10	174	4160	
L19800E 6150N	201 202	525	5	< 0.01	34	1110	46	0.03	2	1	27	< 0.01	< 10	< 10	37	< 10	270	2420	
L19900E 4400N	201 202	15	4	0.28	< 1	110	64	1.42	< 2	< 1	23	< 0.01	< 10	< 10	6	< 10	10	6510	
L19900E 4450N	201 202	1560	20	0.03	249	670	134	0.99	2	4	55	< 0.01	< 10	< 10	20	< 10	1320	1160	
L19900E 4500N	201 202	1975	20	0.08	83	960	228	0.46	2	3	97	0.02	< 10	< 10	20	< 10	1360	1240	
L19900E 4550N	201 202	2200	13	0.03	128	1860	62	0.16	< 2	10	142	0.30	< 10	< 10	89	< 10	560	910	
L19900E 4600N	201 202	1405	10	0.03	96	1720	54	0.16	< 2	7	100	0.25	< 10	< 10	70	< 10	422	1180	
L19900E 4650N	201 202	1350	3	0.01	97	1800	20	0.05	2	4	65	0.21	< 10	< 10	66	< 10	150	820	
L19900E 4700N	201 202	1180	4	< 0.01	82	2630	12	0.03	6	4	50	0.17	< 10	< 10	68	< 10	120	720	
L19900E 4750N	201 202	1210	< 1	< 0.01	83	2620	10	0.01	< 2	4	59	0.17	< 10	< 10	69	< 10	140	630	
L19900E 4800N	201 202	2390	4	< 0.01	98	2060	14	0.08	2	6	64	0.22	< 10	< 10	81	< 10	222	890	
L19900E 4850N	201 202	720	5	0.01	36	1480	22	0.30	< 2	3	91	0.10	< 10	< 10	31	< 10	112	3080	
L19900E 4900N	201 202	760	12	0.02	19	1230	76	0.39	8	1	52	0.02	< 10	< 10	18	< 10	440	6070	
L19900E 4925N	201 202	650	9	0.03	13	900	46	0.21	< 2	1	29	0.02	< 10	< 10	18	< 10	202	2770	
L19900E 4950N	201 202	550	21	0.01	12	1600	66	0.29	6	< 1	64	< 0.01	< 10	< 10	37	< 10	180	3360	
L19900E 4975N	201 202	270	20	0.02	14	860	50	0.25	2	< 1	48	0.01	< 10	< 10	38	< 10	196	2620	
L19900E 5025N	201 202	710	16	< 0.01	12	600	20	0.10	2	2	13	< 0.01	< 10	< 10	3	< 10	358	2300	
L19900E 5075N	201 202	80	31	< 0.01	42	270	90	0.04	6	1	7	< 0.01	< 10	< 10	11	< 10	1320	1220	
L19900E 5125N	201 202	615	27	< 0.01	18	820	52	0.26	6	< 1	45	< 0.01	< 10	< 10	42	< 10	222	2730	
L19900E 5175N	201 202	1040	22	< 0.01	6	500	22	0.03	4	1	14	< 0.01	< 10	< 10	7	< 10	88	2110	
L19900E 5225N	201 202	1200	21	< 0.01	22	750	76	0.10	6	< 1	19	0.01	< 10	< 10	18	< 10	330	3260	
L19900E 5275N	201 202	765	26	0.01	11	1010	94	0.49	2	< 1	26	0.01	< 10	< 10	19	< 10	140	2210	
L19900E 5625N	201 202	1290	19	< 0.01	17	720	84	0.12	2	< 1	20	< 0.01	< 10	< 10	10	< 10	386	4000	
L19900E 5675N	201 202	325	12	< 0.01	21	590	42	0.06	2	< 1	17	0.01	< 10	< 10	20	< 10	210	3190	
L19900E 5725N	201 202	635	7	< 0.01	37	930	36	0.10	2	1	63	< 0.01	< 10	< 10	20	< 10	236	4910	
L19900E 5775N	201 202	210	6	< 0.01	25	1060	24	0.07	2	< 1	26	< 0.01	< 10	< 10	24	< 10	128	5150	
L19900E 5825N	201 202	540	7	0.01	29	890	26	0.05	< 2	1	24	< 0.01	< 10	< 10	30	< 10	150	5090	
L19900E 5875N	201 202	240	3	0.03	14	590	38	0.02	2	< 1	21	< 0.01	< 10	< 10	23	< 10	114	3140	
L20000E 4925N	201 202	1185	6	0.05	72	1040	78	0.34	< 2	4	64	0.20	< 10	< 10	49	< 10	844	2080	
L20000E 4975N	201 202	1035	6	0.05	78	1050	76	0.28	< 2	4	54	0.11	< 10	< 10	39	< 10	506	2640	
L20000E 5025N	201 202	1140	12	0.05	56	880	112	0.38	< 2	3	59	0.06	< 10	< 10	31	< 10	472	2240	
L20000E 5075N	201 202	795	12	0.03	31	820	106	0.27	< 2	1	45	0.01	< 10	< 10	22	< 10	396	2580	
L20000E 5125N	201 202	770	27	< 0.01	12	820	66	0.21	6	< 1	41	< 0.01	< 10	< 10	29	< 10	238	2670	
L20000E 5175N	201 202	425	11	0.01	15	540	30	0.07	< 2	< 1	18	0.02	< 10	< 10	31	< 10	150	1750	
L20000E 5225N	201 202	2170	39	< 0.01	67	680	128	0.11	2	1	30	0.04	< 10	< 10	20	< 10	642	2630	
L20000E 5275N	201 202	640	19	0.01	25	900	50	0.19	< 2	< 1	38	0.01	< 10	< 10	33	< 10	298	2600	

CERTIFICATION:

Jason Jeff



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :6-A
Total Pages :6
Certificate Date: 13-SEP-1999
Invoice No. :19925657
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925657

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L20000E 5625N	201 202	< 5	0.4	0.68	26	< 10	470	< 0.5	< 2	0.12	0.5	4	14	13	4.87	< 10	< 1	0.04	100	0.13
L20000E 5675N	201 202	< 5	0.2	0.69	42	< 10	480	< 0.5	< 2	0.06	1.0	6	11	18	7.17	< 10	< 1	0.07	100	0.10
L20000E 5725N	201 202	< 5	< 0.2	0.81	20	< 10	150	< 0.5	< 2	0.04	< 0.5	4	13	21	3.60	< 10	< 1	0.04	40	0.11
L20000E 5775N	201 202	< 5	0.2	1.06	20	< 10	200	< 0.5	< 2	0.09	1.5	12	20	27	4.39	< 10	< 1	0.07	40	0.23
L20000E 5825N	201 202	< 5	< 0.2	1.22	20	< 10	170	< 0.5	< 2	0.08	< 0.5	9	25	26	3.81	< 10	< 1	0.07	40	0.29
L20000E 5875N	201 202	< 5	0.4	1.15	38	< 10	590	< 0.5	< 2	0.06	0.5	7	20	18	6.50	< 10	< 1	0.06	80	0.15
L20100E 4350N	201 202	< 5	< 0.2	4.31	8	< 10	90	0.5	< 2	1.06	0.5	35	209	51	6.26	< 10	< 1	0.51	40	3.96
L20100E 4400N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L20100E 4450N	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L20100E 4500N	201 202	< 5	0.2	2.57	22	< 10	240	1.0	< 2	0.52	2.0	25	95	37	6.51	< 10	< 1	0.27	90	1.62
L20100E 4550N	201 202	< 5	0.2	3.17	26	< 10	200	< 0.5	< 2	0.97	2.5	40	97	72	7.07	< 10	< 1	0.12	100	2.33
L20100E 4600N	201 202	< 5	0.2	1.65	34	< 10	190	1.5	< 2	0.28	3.0	11	24	24	7.02	< 10	< 1	0.05	160	0.51
L20100E 4650N	201 202	< 5	0.2	1.84	52	< 10	340	< 0.5	< 2	0.52	1.0	13	40	28	7.86	< 10	< 1	0.19	130	0.89
L20100E 4700N	201 202	< 5	< 0.2	1.21	64	< 10	250	< 0.5	< 2	0.17	1.5	7	7	29	7.97	< 10	< 1	0.45	320	0.16
L20100E 4750N	201 202	< 5	0.4	0.33	88	< 10	250	< 0.5	< 2	0.03	< 0.5	1	4	19	12.50	< 10	< 1	0.19	110	0.06
L20100E 4800N	201 202	< 5	0.2	2.39	56	< 10	280	< 0.5	< 2	0.57	< 0.5	19	63	35	7.22	< 10	< 1	0.36	80	1.69
L20100E 4850N	201 202	< 5	0.2	1.21	84	< 10	410	< 0.5	< 2	0.23	< 0.5	10	31	21	8.28	< 10	< 1	0.30	150	0.70
L20100E 4900N	201 202	< 5	< 0.2	0.64	36	< 10	400	< 0.5	< 2	0.11	0.5	6	7	22	7.36	< 10	< 1	0.28	240	0.12
L20100E 4950N	201 202	< 5	0.2	2.22	34	< 10	470	< 0.5	< 2	0.60	1.5	22	59	49	7.55	< 10	< 1	0.23	170	1.23
L20100E 4925N	201 202	< 5	< 0.2	2.34	30	< 10	380	< 0.5	< 2	0.60	< 0.5	21	64	44	8.00	< 10	< 1	0.27	180	1.37
L20100E 4975N	201 202	< 5	0.2	2.01	42	< 10	420	< 0.5	< 2	0.33	2.0	22	50	66	8.72	< 10	< 1	0.19	260	0.73
L20100E 5025N	201 202	< 5	< 0.2	1.72	38	< 10	570	< 0.5	< 2	0.34	2.5	23	47	52	7.56	< 10	< 1	0.15	180	0.66
L20100E 5075N	201 202	< 5	0.2	0.85	58	< 10	410	< 0.5	< 2	0.13	< 0.5	6	8	24	8.07	< 10	< 1	0.25	260	0.15
L20100E 5125N	201 202	< 5	< 0.2	1.00	32	< 10	210	0.5	< 2	0.24	0.5	6	11	22	7.18	< 10	< 1	0.18	260	0.25
L20100E 5175N	201 202	< 5	< 0.2	0.70	34	< 10	150	0.5	< 2	0.21	0.5	4	4	18	7.98	< 10	< 1	0.18	210	0.15
L20100E 5225N	201 202	< 5	< 0.2	0.92	34	< 10	110	0.5	< 2	0.12	< 0.5	6	3	19	10.90	< 10	< 1	0.16	340	0.13
L20100E 5275N	201 202	< 5	< 0.2	0.72	30	< 10	130	0.5	< 2	0.15	< 0.5	5	< 1	17	10.35	< 10	< 1	0.16	350	0.09
L20200E 4775N	201 202	< 5	0.6	0.34	68	< 10	110	< 0.5	< 2	0.03	< 0.5	2	7	10	12.20	< 10	< 1	0.93	100	0.08
L20200E 4850N	201 202	< 5	< 0.2	1.47	30	< 10	520	< 0.5	< 2	0.42	< 0.5	12	32	25	7.00	< 10	< 1	0.27	170	0.81
L20200E 4900A N	201 202	< 5	< 0.2	0.52	32	< 10	110	< 0.5	< 2	0.20	4.5	3	1	10	8.08	< 10	< 1	0.76	220	0.05
L20200E 4900B N	201 202	< 5	< 0.2	0.68	56	< 10	200	< 0.5	< 2	0.44	< 0.5	5	4	27	8.09	< 10	< 1	0.23	350	0.24
L20200E 4950N	201 202	< 5	< 0.2	0.45	22	< 10	220	< 0.5	< 2	1.39	0.5	2	< 1	12	6.14	< 10	< 1	0.19	280	0.68

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SAMPLE	PREP CODE		Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn	Ba	XRF
			ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
L20000E 5625N	201	202	485	14	< 0.01	14	710	44	0.06	< 2	< 1	11	< 0.01	< 10	< 10	16	< 10	234		3770
L20000E 5675N	201	202	1395	17	< 0.01	14	790	82	0.11	< 2	< 1	14	< 0.01	< 10	< 10	12	< 10	370		5110
L20000E 5725N	201	202	255	7	< 0.01	21	910	38	0.04	< 2	< 1	14	< 0.01	< 10	< 10	31	< 10	172		3160
L20000E 5775N	201	202	765	7	< 0.01	43	990	46	0.05	< 2	1	29	< 0.01	< 10	< 10	37	< 10	316		4060
L20000E 5825N	201	202	350	7	< 0.01	35	480	36	0.07	< 2	1	22	0.01	< 10	< 10	38	< 10	210		2430
L20000E 5875N	201	202	850	15	< 0.01	20	790	64	0.06	< 2	< 1	13	0.01	< 10	< 10	28	< 10	332		3600
L20100E 4350N	201	202	970	1	0.01	95	2470	6	0.01	< 2	5	47	0.35	< 10	< 10	111	< 10	186		1170
L20100E 4400N	--	--	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L20100E 4450N	--	--	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
L20100E 4500N	201	202	1030	4	0.04	70	1150	66	0.43	< 2	4	46	0.22	< 10	< 10	52	< 10	386		1810
L20100E 4550N	201	202	1345	8	0.04	100	1710	70	0.25	< 2	5	74	0.25	< 10	< 10	57	< 10	524		2240
L20100E 4600N	201	202	1460	12	< 0.01	38	610	134	0.23	< 2	2	22	< 0.01	< 10	< 10	9	< 10	760		2590
L20100E 4650N	201	202	1215	17	0.04	33	1040	152	0.38	< 2	4	62	0.21	< 10	< 10	38	< 10	318		2890
L20100E 4700N	201	202	1005	24	< 0.01	10	1610	104	0.92	< 2	1	94	0.03	< 10	< 10	8	< 10	634		4100
L20100E 4750N	201	202	75	26	< 0.01	3	2070	112	0.43	< 2	< 1	33	0.02	< 10	< 10	7	< 10	110		6300
L20100E 4800N	201	202	710	9	0.01	42	1520	82	0.29	< 2	4	43	0.25	< 10	< 10	58	< 10	238		2420
L20100E 4850N	201	202	560	14	< 0.01	21	1520	134	0.57	< 2	3	53	0.16	< 10	< 10	33	< 10	252		3300
L20100E 4900N	201	202	885	17	< 0.01	6	1100	98	0.55	< 2	2	37	0.03	< 10	< 10	10	< 10	188		3630
L20100E 4950N	201	202	1115	13	< 0.01	46	1610	80	0.35	< 2	5	55	0.21	< 10	< 10	51	< 10	316		3260
L20100E 4925N	201	202	1195	12	< 0.01	41	1530	70	0.45	< 2	6	58	0.27	< 10	< 10	60	< 10	264		3230
L20100E 4975N	201	202	1060	17	0.01	53	1450	132	0.44	< 2	5	67	0.11	< 10	< 10	36	< 10	494		4070
L20100E 5025N	201	202	1255	15	0.01	53	1290	114	0.33	< 2	4	55	0.10	< 10	< 10	33	< 10	462		4360
L20100E 5075N	201	202	815	29	< 0.01	13	1050	106	0.50	< 2	1	46	< 0.01	< 10	< 10	9	< 10	174		4720
L20100E 5125N	201	202	785	25	< 0.01	15	900	70	0.34	< 2	1	28	0.01	< 10	< 10	16	< 10	290		1840
L20100E 5175N	201	202	935	23	< 0.01	11	660	58	0.46	< 2	1	24	< 0.01	< 10	< 10	8	< 10	218		1340
L20100E 5225N	201	202	1500	31	< 0.01	9	690	68	0.42	< 2	1	23	< 0.01	< 10	< 10	6	< 10	218		1010
L20100E 5275N	201	202	1665	35	< 0.01	8	510	64	0.45	< 2	2	28	< 0.01	< 10	< 10	1	< 10	152		1020
L20200E 4775N	201	202	145	33	0.01	3	1460	144	1.88	< 2	< 1	64	0.05	< 10	< 10	10	< 10	206		4540
L20200E 4850N	201	202	935	12	< 0.01	23	1440	74	0.46	< 2	3	52	0.15	< 10	< 10	34	< 10	212		3390
L20200E 4900A N	201	202	770	21	< 0.01	3	1120	170	1.44	< 2	< 1	101	0.01	< 10	< 10	3	< 10	678		4740
L20200E 4900B N	201	202	865	33	< 0.01	9	940	118	0.77	< 2	1	49	< 0.01	< 10	< 10	7	< 10	150		4750
L20200E 4950N	201	202	750	23	< 0.01	5	530	50	0.49	< 2	< 1	26	< 0.01	< 10	< 10	4	< 10	152		1860

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925659

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925659

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	58	Geochem ring to approx 150 mesh
226	58	0-3 Kg crush and split
3202	58	Rock - save entire reject
229	58	ICP - AQ Digestion charge

* NOTE 1:

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	58	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	58	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	58	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	58	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	58	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	58	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	58	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	58	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	58	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	58	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	58	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	58	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	58	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	58	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	58	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	58	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	58	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	58	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	58	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	58	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	58	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	58	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	58	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	58	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	58	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	58	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	58	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	58	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	58	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	58	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	58	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	58	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	58	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	58	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	58	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	58	Ba ppm	XRF	10	50000



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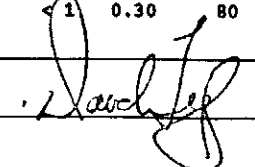
Project: STARR
Comments: ATTN: JASON WEBER

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Certificate Date: 16-SEP-1999
Invoice No. : 19925659
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925659

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Bg ppm	K %	La ppm	Mg %
113301	205 226	< 5	< 0.2	0.11	8	< 10	60	< 0.5	< 2	10.40	< 0.5	4	< 1	12	9.53	10	< 1	0.03	< 10	4.98
113302	205 226	< 5	0.6	0.17	20	< 10	< 10	< 0.5	< 2	6.98	0.5	1	23	4	14.90	10	2	0.04	< 10	4.38
113303	205 226	< 5	< 0.2	0.21	< 2	< 10	100	< 0.5	< 2	9.91	0.5	1	37	13	4.04	10	< 1	0.05	< 10	6.35
113304	205 226	< 5	0.2	0.06	8	< 10	40	< 0.5	< 2	12.00	< 0.5	< 1	< 1	2	7.72	10	< 1	0.01	< 10	7.77
113305	205 226	< 5	< 0.2	0.19	2	< 10	130	< 0.5	< 2	4.86	< 0.5	3	88	11	2.28	10	< 1	0.04	< 10	3.02
113306	205 226	< 5	0.4	0.11	8	< 10	10	< 0.5	< 2	9.33	< 0.5	1	< 1	8	10.45	< 10	< 1	0.03	< 10	6.34
113307	205 226	< 5	< 0.2	0.50	< 2	< 10	120	< 0.5	< 2	>15.00	17.5	17	77	36	2.40	< 10	< 1	0.09	10	0.40
113308	205 226	< 5	< 0.2	0.90	< 2	< 10	70	< 0.5	< 2	8.76	3.5	36	192	50	5.60	< 10	< 1	0.11	10	0.53
113309	205 226	< 5	< 0.2	0.40	< 2	< 10	< 10	< 0.5	< 2	10.35	< 0.5	34	49	80	9.72	< 10	< 1	0.20	10	0.08
113310	205 226	< 5	< 0.2	0.27	2	< 10	200	< 0.5	< 2	0.03	< 0.5	1	76	1	1.04	< 10	< 1	0.12	10	< 0.01
113311	205 226	< 5	< 0.2	0.01	< 2	< 10	1070	< 0.5	< 2	0.04	< 0.5	< 1	11	< 1	0.21	< 10	< 1	< 0.01	< 10	< 0.01
113312	205 226	< 5	< 0.2	0.13	4	< 10	20	< 0.5	< 2	7.81	1.0	< 1	14	2	10.30	10	< 1	0.06	< 10	3.02
113313	205 226	< 5	< 0.2	2.70	2	< 10	90	< 0.5	< 2	3.44	< 0.5	< 1	32	5	1.04	< 10	1	2.64	30	0.01
113314	205 226	< 5	1.0	0.07	2	< 10	< 10	< 0.5	< 2	6.21	< 0.5	< 1	3	1	13.55	10	< 1	0.05	< 10	3.42
113315	205 226	< 5	< 0.2	0.11	28	< 10	90	1.5	< 2	>15.00	52.5	6	11	9	2.27	< 10	< 1	0.03	10	0.11
113316	205 226	< 5	< 0.2	0.05	< 2	< 10	30	0.5	< 2	>15.00	20.0	< 1	39	10	2.59	< 10	< 1	< 0.01	10	0.10
113317	205 226	< 5	< 0.2	0.18	42	< 10	50	0.5	< 2	>15.00	142.0	11	41	39	5.89	< 10	< 1	0.01	20	0.42
113318	205 226	< 5	< 0.2	0.94	< 2	10	310	2.5	< 2	14.10	< 0.5	< 1	8	< 1	2.26	< 10	< 1	0.22	60	0.54
113319	205 226	< 5	< 0.2	0.58	< 2	< 10	20	< 0.5	< 2	>15.00	253	7	57	36	2.37	< 10	2	< 0.01	20	0.63
113320	205 226	< 5	< 0.2	0.44	< 2	< 10	90	1.5	< 2	>15.00	185.5	33	41	9	1.07	< 10	3	0.07	10	0.22
113321	205 226	< 5	< 0.2	0.30	< 2	< 10	160	1.0	< 2	>15.00	47.5	< 1	3	< 1	1.51	< 10	< 1	0.05	40	0.18
113322	205 226	< 5	< 0.2	0.49	12	< 10	180	1.0	< 2	2.44	3.0	10	38	9	2.42	< 10	< 1	0.13	110	0.32
113323	205 226	< 5	< 0.2	0.71	64	< 10	50	1.0	< 2	11.40	93.5	31	70	58	6.99	< 10	< 1	0.14	30	0.34
113324	205 226	< 5	< 0.2	1.29	66	< 10	80	1.0	< 2	12.50	61.0	60	117	89	4.47	< 10	1	0.12	10	0.52
113325	205 226	< 5	0.4	0.42	56	< 10	< 10	< 0.5	< 2	6.94	187.0	26	44	129	>15.00	10	< 1	0.01	10	1.34
113326	205 226	< 5	< 0.2	0.08	84	< 10	10	1.5	< 2	>15.00	22.5	14	16	63	3.47	< 10	< 1	0.02	20	0.11
113327	205 226	< 5	< 0.2	0.19	38	< 10	60	3.5	< 2	>15.00	>500	< 1	10	6	3.64	< 10	2	0.03	50	0.34
113328	205 226	< 5	2.8	0.09	< 2	< 10	30	< 0.5	6	0.40	2.0	< 1	212	1	0.59	< 10	< 1	0.02	10	0.01
459559	205 226	< 5	< 0.2	0.18	24	< 10	860	< 0.5	< 2	0.06	1.5	< 1	121	10	1.96	< 10	< 1	0.16	< 10	0.01
459560	205 226	< 5	0.6	0.21	26	< 10	< 10	< 0.5	< 2	0.03	< 0.5	< 1	106	< 1	>15.00	< 10	< 1	0.16	< 10	0.01
459561	205 226	< 5	< 0.2	0.08	8	< 10	10	< 0.5	< 2	0.05	< 0.5	< 1	11	6	3.36	< 10	< 1	0.04	< 10	< 0.01
459562	205 226	< 5	0.2	0.27	10	< 10	450	< 0.5	< 2	0.01	< 0.5	< 1	77	3	0.45	< 10	< 1	0.18	30	0.01
459563	205 226	< 5	< 0.2	1.13	34	< 10	10	< 0.5	< 2	15.00	< 0.5	< 1	9	8	5.50	< 10	< 1	0.44	40	0.08
459564	205 226	15	< 0.2	0.34	18	< 10	120	1.5	< 2	11.55	< 0.5	< 1	10	< 1	9.87	10	< 1	0.07	30	1.47
459565	205 226	< 5	< 0.2	0.95	< 2	< 10	330	2.0	< 2	8.52	< 0.5	< 1	15	< 1	4.23	10	< 1	0.11	40	3.19
459566	205 226	< 5	< 0.2	0.41	< 2	< 10	110	1.0	< 2	>15.00	< 0.5	< 1	7	< 1	1.79	< 10	< 1	0.07	50	0.28
459569	205 226	< 5	< 0.2	0.42	4	< 10	230	0.5	< 2	0.03	< 0.5	< 1	38	< 1	2.23	< 10	< 1	0.53	10	0.03
459603	205 226	< 5	< 0.2	1.10	< 2	10	240	1.0	< 2	1.74	< 0.5	2	28	< 1	1.67	10	< 1	0.52	280	0.37
459604	205 226	< 5	< 0.2	0.10	8	< 10	< 10	< 0.5	< 2	7.41	< 0.5	2	5	9	12.20	10	< 1	0.03	< 10	5.14
459605	205 226	< 5	0.2	0.32	10	< 10	50	< 0.5	< 2	0.04	< 0.5	< 1	20	3	3.62	< 10	< 1	0.30	80	0.02

CERTIFICATION: 



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212 Brooksbank Ave., North Vancouver
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CERTIFICATE OF ANALYSIS

A9925659

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
113301	205 226	215	< 1	0.01	21	30	114	>5.00	4	1	62	< 0.01	< 10	< 10	15	< 10	12		1350
113302	205 226	185	< 1	0.01	13	50	780	>5.00	2	1	69	< 0.01	< 10	< 10	13	< 10	114		2560
113303	205 226	220	< 1	0.01	10	50	104	2.66	2	1	116	< 0.01	< 10	< 10	15	< 10	156		3170
113304	205 226	255	< 1	0.01	9	20	180	>5.00	2	< 1	156	< 0.01	< 10	< 10	10	< 10	82		220
113305	205 226	135	1	0.01	9	40	32	1.99	< 2	3	103	< 0.01	< 10	< 10	40	< 10	12		3380
113306	205 226	260	< 1	0.01	16	90	368	>5.00	4	2	170	< 0.01	< 10	< 10	12	< 10	12		1150
113307	205 226	1480	< 1	0.02	98	430	< 2	2.13	< 2	7	255	< 0.01	< 10	< 10	22	< 10	3810		940
113308	205 226	635	< 1	0.03	152	1300	22	>5.00	< 2	6	188	< 0.01	< 10	< 10	35	< 10	678		3410
113309	205 226	515	< 1	0.01	141	750	124	>5.00	< 2	4	560	< 0.01	< 10	< 10	11	< 10	16		6720
113310	205 226	5	< 1	< 0.01	3	330	20	0.72	< 2	< 1	28	< 0.01	< 10	< 10	< 1	< 10	4		5330
113311	205 226	< 5	< 1	< 0.01	< 1	10	2	0.06	< 2	< 1	76	< 0.01	< 10	< 10	< 1	< 10	2		>50000
113312	205 226	640	3	0.01	9	< 10	38	>5.00	2	< 1	98	< 0.01	< 10	< 10	8	< 10	148		3890
113313	205 226	5	1	0.04	3	510	6	0.90	< 2	< 1	53	< 0.01	< 10	< 10	< 1	< 10	30		15400
113314	205 226	180	< 1	< 0.01	9	50	174	>5.00	2	< 1	71	< 0.01	< 10	< 10	1	< 10	6		1200
113315	205 226	1395	< 1	0.01	56	120	218	2.84	2	5	287	< 0.01	< 10	< 10	4	< 10	9300		600
113316	205 226	1195	< 1	< 0.01	11	30	192	2.96	< 2	1	432	< 0.01	< 10	< 10	3	< 10	2800		110
113317	205 226	1245	< 1	0.01	69	340	606	>5.00	2	5	276	< 0.01	< 10	< 10	10	< 10	>10000		230
113318	205 226	2030	6	0.08	2	100	534	0.19	< 2	< 1	126	< 0.01	< 10	< 10	< 1	< 10	98		990
113319	205 226	1645	1	0.01	40	220	150	3.64	< 2	7	376	< 0.01	< 10	< 10	21	< 10	>10000		730
113320	205 226	1170	< 1	0.01	91	530	56	2.48	< 2	6	213	< 0.01	< 10	< 10	11	< 10	>10000		2010
113321	205 226	1330	4	0.05	4	150	20	0.48	< 2	< 1	312	< 0.01	< 10	< 10	< 1	< 10	5000		530
113322	205 226	790	26	0.06	44	480	14	1.04	< 2	1	53	< 0.01	< 10	< 10	3	< 10	520		1030
113323	205 226	1130	6	0.04	142	880	256	>5.00	< 2	8	213	< 0.01	< 10	< 10	14	< 10	>10000		1370
113324	205 226	1060	< 1	0.02	245	1100	260	3.99	< 2	7	204	< 0.01	< 10	< 10	25	< 10	>10000		930
113325	205 226	1575	< 1	0.01	170	140	1845	>5.00	< 2	4	245	< 0.01	< 10	< 10	12	< 10	>10000		90
113326	205 226	1320	< 1	0.01	102	140	734	>5.00	< 2	3	270	< 0.01	< 10	< 10	2	< 10	2590		9410
113327	205 226	1335	46	0.04	32	400	152	>5.00	2	< 1	308	< 0.01	< 10	< 10	< 1	< 10	>10000		490
113328	205 226	235	1	< 0.01	4	40	>10000	0.36	< 2	< 1	11	< 0.01	< 10	< 10	< 1	< 10	176		120
459559	205 226	15	20	< 0.01	6	360	106	0.35	< 2	< 1	24	< 0.01	< 10	< 10	31	< 10	252		4160
459560	205 226	< 5	4	< 0.01	10	< 10	110	>5.00	2	< 1	6	< 0.01	< 10	< 10	< 1	< 10	40		2280
459561	205 226	< 5	< 1	< 0.01	1	< 10	22	3.63	< 2	< 1	70	< 0.01	< 10	< 10	< 1	< 10	18		>50000
459562	205 226	5	2	< 0.01	2	870	32	0.25	< 2	< 1	13	< 0.01	< 10	< 10	< 1	< 10	12		2900
459563	205 226	840	45	0.01	4	80	92	>5.00	< 2	< 1	376	< 0.01	< 10	< 10	< 1	< 10	26		5580
459564	205 226	5110	2	0.01	4	330	< 2	3.92	< 2	< 1	211	< 0.01	< 10	< 10	< 1	< 10	40		1380
459565	205 226	3900	4	0.16	4	200	< 2	0.04	< 2	< 1	242	< 0.01	< 10	< 10	< 1	< 10	28		850
459566	205 226	1485	< 1	0.06	3	150	6	0.14	< 2	< 1	181	< 0.01	< 10	< 10	< 1	< 10	14		610
459569	205 226	10	1	0.04	3	30	36	0.90	< 2	< 1	22	< 0.01	< 10	< 10	< 1	< 10	6		4770
459603	205 226	485	16	0.01	4	220	10	1.17	< 2	< 1	48	< 0.01	< 10	< 10	< 1	< 10	46		2860
459604	205 226	235	< 1	0.01	25	60	446	>5.00	< 2	1	166	< 0.01	< 10	< 10	11	< 10	10		1560
459605	205 226	25	14	< 0.01	3	200	54	2.98	< 2	< 1	8	< 0.01	< 10	< 10	< 1	< 10	20		2850

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

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P.O. Number :PTH99-02

Account :EIA

CERTIFICATE OF ANALYSIS

A9925659

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
459606	205 226	< 5	< 0.2	0.74	6	< 10	40	< 0.5	< 2	0.59	< 0.5	1	30	8	3.98	< 10	< 1	0.42	80	0.05
459607	205 226	< 5	< 0.2	0.39	2	< 10	630	< 0.5	< 2	0.01	< 0.5	< 1	26	1	0.90	< 10	< 1	0.23	40	0.02
459608	205 226	< 5	< 0.2	0.40	< 2	< 10	1120	< 0.5	< 2	< 0.01	< 0.5	< 1	28	1	0.30	< 10	< 1	0.28	< 10	< 0.01
459609	205 226	< 5	< 0.2	0.33	< 2	< 10	120	< 0.5	< 2	0.01	< 0.5	< 1	33	2	1.81	< 10	< 1	0.27	20	< 0.01
459610	205 226	< 5	< 0.2	0.38	2	< 10	600	< 0.5	< 2	< 0.01	< 0.5	< 1	25	< 1	0.63	< 10	< 1	0.30	< 10	< 0.01
459611	205 226	< 5	< 0.2	0.49	8	< 10	230	< 0.5	< 2	0.37	< 0.5	< 1	40	6	2.02	< 10	< 1	0.31	70	0.11
459612	205 226	< 5	< 0.2	0.40	2	< 10	90	0.5	< 2	4.10	< 0.5	< 1	13	2	2.09	< 10	< 1	0.25	30	0.04
459613	205 226	< 5	< 0.2	0.50	2	< 10	250	1.5	< 2	1.83	< 0.5	2	10	8	3.17	< 10	< 1	0.29	90	0.09
459614	205 226	< 5	0.2	0.51	26	< 10	130	1.0	< 2	1.51	< 0.5	3	22	36	2.55	< 10	< 1	0.30	70	0.04
459615	205 226	< 5	1.6	0.21	96	< 10	< 10	< 0.5	< 2	0.04	< 0.5	2	52	15	14.25	< 10	< 1	0.30	20	0.02
459616	205 226	< 5	0.2	0.49	6	< 10	430	0.5	< 2	0.04	< 0.5	< 1	26	2	0.49	< 10	< 1	0.38	20	0.03
459617	205 226	< 5	0.6	0.22	24	< 10	< 10	< 0.5	< 2	0.65	< 0.5	2	66	18	7.67	< 10	< 1	0.15	90	0.16
459618	205 226	< 5	< 0.2	0.50	< 2	< 10	150	1.0	< 2	0.52	< 0.5	< 1	22	1	1.55	10	< 1	0.27	220	0.15
459619	205 226	< 5	0.2	0.14	< 2	< 10	10	< 0.5	< 2	0.01	< 0.5	< 1	31	1	4.30	< 10	< 1	0.12	20	< 0.01
459620	205 226	< 5	0.6	0.23	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 0.5	< 1	42	5	9.27	< 10	< 1	0.18	10	0.01
459621	205 226	< 5	0.4	0.27	4	< 10	20	< 0.5	< 2	< 0.01	< 0.5	2	38	4	4.35	< 10	< 1	0.22	10	0.01
459622	205 226	< 5	< 0.2	1.06	2	10	130	2.0	< 2	0.50	< 0.5	1	21	3	2.38	10	< 1	0.56	330	0.15
459623	205 226	< 5	0.2	0.83	< 2	< 10	50	< 0.5	< 2	0.28	< 0.5	4	49	4	3.90	< 10	< 1	0.24	30	0.38

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

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Account :EIA

CERTIFICATE OF ANALYSIS

A9925659

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
459606	205 226	5	9	0.04	2	390	6	4.19	< 2	< 1	21	< 0.01	< 10	< 10	< 1	< 10	6		3110
459607	205 226	5	7	< 0.01	1	140	8	0.42	< 2	< 1	12	< 0.01	< 10	< 10	< 1	< 10	2		14850
459608	205 226	< 5	3	< 0.01	< 1	30	14	0.06	< 2	< 1	22	< 0.01	< 10	< 10	< 1	< 10	2		15010
459609	205 226	25	5	< 0.01	1	90	10	1.11	< 2	< 1	11	< 0.01	< 10	< 10	< 1	< 10	66		17210
459610	205 226	< 5	3	< 0.01	< 1	40	20	0.40	< 2	< 1	15	< 0.01	< 10	< 10	< 1	< 10	2		5510
459611	205 226	165	8	< 0.01	1	170	8	0.87	< 2	< 1	10	< 0.01	< 10	< 10	< 1	< 10	22		2090
459612	205 226	340	3	< 0.01	1	380	8	1.99	< 2	< 1	56	< 0.01	< 10	< 10	< 1	< 10	6		1630
459613	205 226	1015	9	0.02	< 1	530	2	0.15	< 2	< 1	55	< 0.01	< 10	< 10	< 1	< 10	12		2860
459614	205 226	230	16	< 0.01	3	520	24	1.80	< 2	< 1	71	< 0.01	< 10	< 10	< 1	< 10	8		2480
459615	205 226	< 5	29	0.01	10	120	1175	>5.00	< 2	< 1	22	< 0.01	< 10	< 10	< 1	< 10	12		2750
459616	205 226	5	18	< 0.01	1	110	8	0.31	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	4		3360
459617	205 226	95	15	0.01	6	150	330	>5.00	< 2	< 1	34	< 0.01	< 10	< 10	< 1	< 10	68		2580
459618	205 226	100	7	0.05	2	180	8	1.14	< 2	< 1	25	< 0.01	< 10	< 10	< 1	< 10	14		3850
459619	205 226	< 5	4	0.04	1	30	28	4.33	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	2		9840
459620	205 226	< 5	9	0.02	2	20	48	>5.00	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	6		3890
459621	205 226	< 5	13	< 0.01	3	40	24	4.26	< 2	< 1	12	< 0.01	< 10	< 10	< 1	< 10	2		8350
459622	205 226	40	19	< 0.01	8	320	16	1.84	< 2	< 1	30	< 0.01	< 10	< 10	< 1	< 10	24		6170
459623	205 226	160	5	0.04	3	240	16	2.58	< 2	1	23	0.05	< 10	< 10	20	< 10	26		620

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Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925660

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925660

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-AUG-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	2	Geochem ring to approx 150 mesh
226	2	0-3 Kg crush and split
3202	2	Rock - save entire reject
229	2	ICP - AQ Digestion charge
* NOTE	1.	

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2118	2	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	2	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	2	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	2	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	2	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	2	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	2	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	2	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	2	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	2	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	2	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	2	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	2	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	2	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	2	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	2	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	2	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	2	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	2	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	2	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	2	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	2	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	2	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	2	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	2	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	2	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	2	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	2	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	2	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	2	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	2	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	2	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	2	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	2	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000



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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

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Account : EIA

CERTIFICATE OF ANALYSIS

A9925660

SAMPLE	PREP CODE	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
459567	205 226	< 0.2	4.08	< 2	< 10	30	< 0.5	< 2	1.42	< 0.5	38	230	55	5.66	20	1	< 0.01	10	4.34	775
459568	205 226	< 0.2	1.78	< 2	< 10	90	0.5	< 2	10.35	< 0.5	40	120	73	3.63	< 10	< 1	0.23	30	0.51	1055

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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CERTIFICATE OF ANALYSIS

A9925660

SAMPLE	PREP		Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
	CODE		ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
459567	205	226	4	0.03	142	1620	< 2	0.01	< 2	3	72	0.20	< 10	< 10	61	< 10	60
459568	205	226	1	0.02	113	1470	< 2	0.18	< 2	7	332	< 0.01	< 10	< 10	36	< 10	40

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
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V6C 1G8

A9925661

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925661

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 27-AUG-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	2	Pulp; prepped on other workorder

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
902	2	Al2O3 %: XRF	XRF	0.01	100.00
906	2	CaO %: XRF	XRF	0.01	100.00
2590	2	Cr2O3 %: XRF	XRF	0.01	100.00
903	2	Fe2O3 %: XRF	XRF	0.01	100.00
908	2	K2O %: XRF	XRF	0.01	100.00
905	2	MgO %: XRF	XRF	0.01	100.00
1989	2	MnO %: XRF	XRF	0.01	100.00
907	2	Na2O %: XRF	XRF	0.01	100.00
909	2	P2O5 %: XRF	XRF	0.01	100.00
901	2	SiO2 %: XRF	XRF	0.01	100.00
904	2	TiO2 %: XRF	XRF	0.01	100.00
910	2	LOI %: XRF	XRF	0.01	100.00
2540	2	Total %	CALCULATION	0.01	105.00
2891	2	Ba ppm: XRF	XRF	5	50000
2067	2	Rb ppm: XRF	XRF	2	50000
2898	2	Sr ppm: XRF	XRF	2	50000
2973	2	Nb ppm: XRF	XRF	2	50000
2978	2	Zr ppm: XRF	XRF	3	50000
2974	2	Y ppm: XRF	XRF	2	50000



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CERTIFICATE OF ANALYSIS

A9925661

SAMPLE	PREP CODE	Al2O3	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SiO2	TiO2	LOI	TOTAL	Ba	Rb	Sr	Nb	Zr	Y
		% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	%	ppm	ppm	ppm	ppm	ppm	ppm
459567	299 --	13.68	7.80	0.05	11.31	0.13	10.28	0.18	3.64	0.41	44.99	1.71	4.81	98.99	505	10	254	48	126	20
459568	299 --	14.78	16.86	0.02	5.90	2.80	1.26	0.14	3.02	0.35	37.52	1.50	15.34	99.49	875	52	274	52	138	22

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925724

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925724

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	45	Geochem ring to approx 150 mesh
226	45	0-3 Kg crush and split
3202	45	Rock - save entire reject
229	45	ICP - AQ Digestion charge
* NOTE	1:	

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	45	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	45	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	45	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	45	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	45	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	45	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	45	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	45	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	45	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	45	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	45	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	45	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	45	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	45	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	45	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	45	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	45	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	45	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	45	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	45	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	45	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	45	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	45	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	45	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	45	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	45	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	45	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	45	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	45	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	45	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	45	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	45	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	45	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	45	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	45	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	45	Ba ppm	XRF	10	50000



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Account :EIA

CERTIFICATE OF ANALYSIS

A9925724

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
113329	205 226	< 5	1.0	0.28	12	< 10	10	< 0.5	< 2	9.91	2.0	24	32	58	13.70	< 10	< 1	0.15	10	0.06
113330	205 226	< 5	1.0	0.30	2	< 10	110	3.0	< 2	6.12	22.0	< 1	1	1	12.15	< 10	< 1	0.16	20	1.92
113331	205 226	< 5	0.8	0.45	12	< 10	170	1.5	< 2	2.72	136.5	1	18	3	8.26	< 10	< 1	0.09	40	0.62
113332	205 226	< 5	0.4	0.37	32	< 10	120	< 0.5	< 2	3.55	109.5	3	28	9	3.83	< 10	< 1	0.07	70	1.01
113333	205 226	< 5	1.0	0.45	2	< 10	30	0.5	< 2	3.71	206	18	20	54	6.69	< 10	3	0.11	90	0.53
113334	205 226	< 5	0.4	0.74	< 2	20	130	< 0.5	< 2	8.14	45.0	1	65	< 1	4.20	< 10	< 1	0.04	40	1.50
113335	205 226	< 5	0.4	0.38	12	< 10	50	< 0.5	< 2	>15.00	31.0	9	11	89	4.22	< 10	< 1	0.21	10	0.23
459570	205 226	< 5	0.2	0.68	10	< 10	180	0.5	< 2	2.12	14.5	< 1	15	< 1	9.62	< 10	< 1	0.05	40	0.23
459571	205 226	< 5	0.2	0.53	4	< 10	140	1.0	< 2	2.53	41.0	< 1	12	< 1	9.68	< 10	< 1	0.08	30	0.36
459572	205 226	< 5	< 0.2	1.15	2	< 10	210	0.5	< 2	5.55	11.5	17	44	11	5.14	< 10	< 1	0.14	50	0.46
459573	205 226	< 5	0.2	0.18	2	< 10	50	0.5	< 2	>15.00	< 0.5	1	4	6	2.43	< 10	< 1	0.05	50	1.08
459574	205 226	< 5	0.2	1.05	< 2	< 10	1760	< 0.5	< 2	>15.00	0.5	26	110	40	2.82	< 10	< 1	0.05	20	0.54
459575	205 226	< 5	< 0.2	0.30	< 2	< 10	120	1.5	< 2	1.63	< 0.5	1	33	6	6.35	< 10	< 1	0.22	230	0.39
459581	205 226	< 5	< 0.2	1.20	40	< 10	510	1.0	< 2	4.37	< 0.5	2	8	3	4.86	< 10	< 1	0.47	150	1.02
459582	205 226	< 5	3.0	1.25	68	< 10	< 10	< 0.5	< 2	5.26	< 0.5	5	26	18	>15.00	< 10	< 1	0.51	30	0.05
459583	205 226	< 5	< 0.2	0.73	4	< 10	110	0.5	< 2	3.38	< 0.5	3	9	3	2.48	< 10	< 1	0.30	200	0.04
459584	205 226	< 5	0.4	1.37	< 2	< 10	230	< 0.5	< 2	12.95	< 0.5	27	82	41	3.10	< 10	< 1	0.34	10	0.60
459585	205 226	< 5	< 0.2	< 0.01	< 2	< 10	1560	< 0.5	< 2	0.03	< 0.5	< 1	5	< 1	0.07	< 10	< 1	< 0.01	< 10	< 0.01
459586	205 226	< 5	1.8	0.21	24	< 10	< 10	< 0.5	< 2	0.04	< 0.5	1	62	10	>15.00	< 10	< 1	0.16	< 10	0.01
459587	205 226	< 5	1.2	0.57	< 2	< 10	< 10	< 0.5	< 2	0.01	< 0.5	< 1	59	5	>15.00	< 10	< 1	0.30	< 10	0.03
459588	205 226	< 5	1.4	0.30	12	< 10	< 10	< 0.5	< 2	0.03	< 0.5	< 1	39	9	>15.00	< 10	< 1	0.17	10	0.01
459590	205 226	< 5	0.4	0.33	2	< 10	60	0.5	< 2	0.08	< 0.5	< 1	48	2	3.16	< 10	< 1	0.26	50	0.02
459624	205 226	< 5	0.2	0.36	14	< 10	80	< 0.5	< 2	0.94	< 0.5	3	22	15	3.44	< 10	< 1	0.30	20	0.06
459625	205 226	< 5	< 0.2	0.39	4	< 10	150	< 0.5	< 2	1.57	< 0.5	< 1	28	3	1.44	< 10	< 1	0.44	80	0.07
459626	205 226	< 5	0.2	0.41	14	< 10	100	0.5	< 2	3.55	< 0.5	1	12	8	2.70	< 10	< 1	0.33	80	0.13
459627	205 226	< 5	< 0.2	0.37	2	< 10	120	< 0.5	< 2	0.96	< 0.5	1	23	6	2.08	< 10	< 1	0.33	20	0.01
459628	205 226	< 5	< 0.2	0.36	2	< 10	160	< 0.5	< 2	0.13	< 0.5	< 1	19	1	1.93	< 10	< 1	0.39	10	0.02
459629	205 226	< 5	0.6	0.50	28	< 10	150	< 0.5	< 2	3.77	109.5	8	66	28	4.36	< 10	1	0.08	60	0.98
459630	205 226	< 5	< 0.2	0.32	< 2	< 10	100	0.5	< 2	0.70	< 0.5	1	44	< 1	6.23	< 10	< 1	0.22	30	0.10
459631	205 226	< 5	< 0.2	0.17	44	< 10	70	< 0.5	< 2	0.13	< 0.5	< 1	112	1	3.68	< 10	< 1	0.03	50	0.03
459632	205 226	< 5	< 0.2	0.49	2	< 10	460	0.5	< 2	2.63	< 0.5	1	8	9	1.71	< 10	< 1	0.32	70	0.03
459633	205 226	< 5	0.2	0.51	2	< 10	60	0.5	< 2	< 0.01	< 0.5	< 1	28	3	3.54	< 10	< 1	0.38	80	0.04
459634	205 226	< 5	< 0.2	0.51	10	< 10	340	0.5	< 2	< 0.01	< 0.5	< 1	10	8	4.60	< 10	< 1	0.33	310	0.03
459635	205 226	< 5	0.2	1.42	2	< 10	220	0.5	< 2	5.79	< 0.5	24	33	31	3.71	< 10	< 1	0.29	40	0.31
459636	205 226	< 5	< 0.2	0.85	< 2	10	490	1.0	< 2	7.16	< 0.5	< 1	10	1	3.23	< 10	< 1	0.26	90	2.74
459637	205 226	< 5	< 0.2	0.52	12	< 10	520	0.5	< 2	0.05	< 0.5	3	4	15	4.23	< 10	< 1	0.27	60	0.03
459638	205 226	< 5	0.2	0.22	< 2	< 10	40	< 0.5	< 2	1.43	< 0.5	< 1	24	< 1	6.68	< 10	< 1	0.22	20	0.46
459639	205 226	< 5	< 0.2	0.42	< 2	< 10	60	< 0.5	< 2	0.01	< 0.5	< 1	24	< 1	2.30	< 10	< 1	0.37	40	0.02
459640	205 226	< 5	< 0.2	0.36	< 2	< 10	90	< 0.5	< 2	0.15	< 0.5	< 1	21	< 1	4.31	< 10	< 1	0.30	50	0.04
459641	205 226	< 5	< 0.2	0.39	< 2	< 10	110	2.0	< 2	13.80	0.5	< 1	4	3	2.60	< 10	< 1	0.26	70	0.55

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :1-B
Total Pages :2
Certificate Date: 16-SEP-1999
Invoice No. :19925724
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925724

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
113329	205 226	860	4	0.01	116	540	58	>5.00	< 2	5	211	< 0.01	< 10	< 10	10	< 10	736		1410
113330	205 226	4430	546	0.01	4	80	84	1.02	6	1	122	< 0.01	< 10	< 10	< 1	< 10	>10000		740
113331	205 226	2820	207	< 0.01	3	190	74	1.39	< 2	1	52	< 0.01	< 10	< 10	< 1	< 10	>10000		1360
113332	205 226	940	15	0.04	8	360	142	2.02	< 2	1	82	< 0.01	< 10	< 10	< 1	< 10	>10000		790
113333	205 226	905	11	0.04	24	550	970	>5.00	4	2	156	< 0.01	< 10	< 10	1	< 10	>10000		2390
113334	205 226	3280	76	0.41	10	150	842	0.22	2	< 1	107	< 0.01	< 10	< 10	< 1	< 10	4180		170
113335	205 226	1265	< 1	0.01	32	130	122	4.44	2	4	618	< 0.01	< 10	< 10	3	< 10	5420		1200
459570	205 226	3260	8	< 0.01	2	170	30	0.21	< 2	1	34	< 0.01	< 10	< 10	< 1	< 10	6540		850
459571	205 226	3170	10	< 0.01	3	100	30	0.87	< 2	1	50	< 0.01	< 10	< 10	< 1	< 10	>10000		990
459572	205 226	1345	3	0.05	25	1520	2	0.08	< 2	5	178	< 0.01	< 10	< 10	21	< 10	3210		1710
459573	205 226	1695	< 1	0.03	3	200	36	0.25	< 2	1	377	< 0.01	< 10	< 10	2	< 10	64		140
459574	205 226	1350	< 1	0.05	90	710	< 2	0.15	< 2	13	193	< 0.01	< 10	< 10	38	< 10	100		23400
459575	205 226	1950	11	0.10	2	190	8	0.01	< 2	1	36	0.10	< 10	< 10	< 1	< 10	122		330
459581	205 226	2030	1	0.01	5	340	4	0.59	< 2	< 1	120	< 0.01	< 10	< 10	< 1	< 10	52		4410
459582	205 226	295	60	0.01	21	50	190	>5.00	22	< 1	104	0.01	< 10	< 10	< 1	< 10	14		670
459583	205 226	400	12	0.01	4	510	18	2.05	< 2	< 1	34	< 0.01	< 10	< 10	< 1	< 10	40		8240
459584	205 226	915	< 1	0.01	62	160	< 2	1.46	< 2	11	174	< 0.01	< 10	< 10	22	< 10	42		2810
459585	205 226	< 5	< 1	< 0.01	< 1	< 10	4	0.10	< 2	< 1	398	< 0.01	< 10	< 10	< 1	< 10	2		>50000
459586	205 226	< 5	< 1	0.01	7	< 10	66	>5.00	2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	8		6090
459587	205 226	< 5	< 1	0.01	8	30	12	>5.00	< 2	< 1	7	< 0.01	< 10	< 10	1	< 10	6		3360
459588	205 226	< 5	4	0.01	7	90	60	>5.00	2	< 1	10	< 0.01	< 10	< 10	< 1	< 10	8		8130
459590	205 226	10	18	0.02	2	50	44	3.41	< 2	< 1	4	< 0.01	< 10	< 10	< 1	< 10	10		1060
459624	205 226	115	10	< 0.01	2	590	28	2.33	< 2	< 1	28	< 0.01	< 10	< 10	< 1	< 10	22		1060
459625	205 226	190	6	< 0.01	< 1	420	20	0.57	< 2	< 1	54	< 0.01	< 10	< 10	< 1	< 10	12		930
459626	205 226	310	2	< 0.01	3	500	20	2.29	< 2	< 1	60	< 0.01	< 10	< 10	< 1	< 10	18		1090
459627	205 226	75	5	< 0.01	1	430	6	0.62	< 2	< 1	28	< 0.01	< 10	< 10	< 1	< 10	14		1430
459628	205 226	30	9	< 0.01	1	440	16	0.62	< 2	< 1	12	< 0.01	< 10	< 10	< 1	< 10	46		1370
459629	205 226	1450	19	< 0.01	14	150	236	2.37	< 2	1	64	< 0.01	< 10	< 10	< 1	< 10	>10000		1040
459630	205 226	1815	4	< 0.01	1	330	< 2	0.08	< 2	< 1	14	< 0.01	< 10	< 10	< 1	< 10	52		1460
459631	205 226	25	4	0.07	2	330	376	2.38	< 2	< 1	15	< 0.01	< 10	< 10	< 1	< 10	70		380
459632	205 226	665	8	< 0.01	2	400	8	0.48	< 2	< 1	27	< 0.01	< 10	< 10	< 1	< 10	12		2530
459633	205 226	< 5	27	< 0.01	1	160	16	2.50	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	8		2780
459634	205 226	35	27	< 0.01	2	410	34	0.19	< 2	< 1	15	< 0.01	< 10	< 10	< 1	< 10	12		3720
459635	205 226	1115	2	0.05	49	1710	< 2	0.08	< 2	6	133	< 0.01	< 10	< 10	20	< 10	102		1580
459636	205 226	1865	5	0.04	1	330	< 2	0.18	< 2	1	61	< 0.01	< 10	< 10	3	< 10	30		1390
459637	205 226	40	1	< 0.01	1	860	44	0.41	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	20		3750
459638	205 226	235	7	< 0.01	4	190	14	>5.00	< 2	1	35	< 0.01	< 10	< 10	< 1	< 10	6		1470
459639	205 226	15	3	< 0.01	1	200	8	0.82	< 2	< 1	13	< 0.01	< 10	< 10	< 1	< 10	2		640
459640	205 226	70	4	< 0.01	2	180	16	2.92	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	2		1510
459641	205 226	2110	1	< 0.01	4	170	< 2	0.12	< 2	< 1	153	< 0.01	< 10	< 10	< 1	< 10	374		800

CERTIFICATION:

Jason Jeff



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 2-A
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Invoice No. : I9925724
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CERTIFICATE OF ANALYSIS

A9925724

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
459642	205 226	< 5	0.2	0.88	44	< 10	200	< 0.5	< 2	7.63	0.5	28	62	34	4.48	< 10	< 1	0.22	30	2.40
459643	205 226	< 5	< 0.2	0.40	6	< 10	50	< 0.5	< 2	0.04	< 0.5	1	28	3	2.80	< 10	1	0.29	< 10	0.01
459644	205 226	< 5	0.2	4.47	4	< 10	70	< 0.5	< 2	4.71	< 0.5	37	205	70	6.61	< 10	< 1	0.21	40	3.71
459645	205 226	< 5	0.4	0.48	14	< 10	20	< 0.5	< 2	0.07	< 0.5	1	36	4	3.68	< 10	1	0.35	70	0.02
459646	205 226	< 5	< 0.2	0.53	6	< 10	100	< 0.5	< 2	0.31	< 0.5	3	25	10	2.31	< 10	1	0.29	110	0.02
459647	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
459648	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
459649	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed

CERTIFICATION:

Jason Web



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
459642	205 226	2170	< 1	0.08	68	970	122	2.05	< 2	10	114	< 0.01	< 10	< 10	72	< 10	144		2420
459643	205 226	25	5	0.03	< 1	50	10	2.60	< 2	< 1	7	< 0.01	< 10	< 10	< 1	< 10	2		6470
459644	205 226	900	< 1	0.01	151	980	< 2	0.01	< 2	12	48	0.04	< 10	< 10	123	< 10	96		860
459645	205 226	5	11	< 0.01	3	180	32	3.66	< 2	< 1	8	< 0.01	< 10	< 10	< 1	< 10	< 2		10140
459646	205 226	20	10	0.02	< 1	500	12	2.24	< 2	< 1	23	< 0.01	< 10	< 10	< 1	< 10	< 2		3430
459647	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
459648	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
459649	-- --	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925725

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925725

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-AUG-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	9	Geochem ring to approx 150 mesh
226	9	0-3 Kg crush and split
3202	9	Rock - save entire reject
229	9	ICP - AQ Digestion charge

* NOTE 1:

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2118	9	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	9	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	9	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	9	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	9	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	9	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	9	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	9	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	9	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	9	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	9	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	9	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	9	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	9	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	9	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	9	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	9	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	9	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	9	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	9	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	9	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	9	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	9	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	9	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	9	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	9	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	9	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	9	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	9	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	9	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	9	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	9	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	9	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	9	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000



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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

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CERTIFICATE OF ANALYSIS

A9925725

SAMPLE	PREP CODE	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
130444	205 226	< 0.2	0.39	2	< 10	160	0.5	< 2	2.90	< 0.5	1	9	3	2.35	< 10	1	0.25	150	0.14	1015
130445	205 226	< 0.2	2.45	6	10	150	< 0.5	< 2	2.95	< 0.5	1	33	5	0.94	< 10	< 1	2.63	30	< 0.01	5
130446	205 226	< 0.2	0.39	2	< 10	150	< 0.5	< 2	0.06	< 0.5	< 1	72	1	0.25	< 10	< 1	0.22	10	0.02	10
459576	205 226	< 0.2	1.19	4	< 10	300	< 0.5	< 2	2.88	< 0.5	9	22	10	3.30	< 10	< 1	0.47	60	0.24	920
459577	205 226	< 0.2	1.29	4	< 10	420	0.5	< 2	2.17	< 0.5	1	10	5	4.43	< 10	< 1	0.24	10	0.38	1200
459578	205 226	0.2	0.59	6	10	680	0.5	< 2	9.23	< 0.5	< 1	9	< 1	2.80	< 10	2	0.07	110	2.26	2190
459579	205 226	< 0.2	0.31	10	< 10	630	< 0.5	< 2	1.31	< 0.5	1	19	6	5.12	< 10	< 1	0.16	140	0.14	1810
459580	205 226	0.2	0.26	< 2	< 10	130	0.5	< 2	>15.00	< 0.5	< 1	3	< 1	1.34	< 10	1	0.20	40	0.08	2200
459591	205 226	< 0.2	1.76	6	10	380	0.5	< 2	6.94	< 0.5	< 1	12	< 1	1.76	< 10	< 1	1.35	160	1.64	860

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

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Account : EIA

CERTIFICATE OF ANALYSIS

A9925725

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
130444	205 226	3	< 0.01	< 1	390	8	0.40	< 2	< 1	34	< 0.01	< 10	< 10	< 1	< 10	12
130445	205 226	13	0.04	< 1	520	8	0.67	< 2	< 1	61	< 0.01	< 10	< 10	< 1	< 10	2
130446	205 226	< 1	< 0.01	1	270	8	0.02	< 2	< 1	20	< 0.01	< 10	< 10	< 1	< 10	< 2
459576	205 226	3	0.03	11	1100	4	0.03	< 2	2	126	0.01	< 10	< 10	10	< 10	50
459577	205 226	3	0.02	< 1	130	< 2	0.18	< 2	< 1	8	< 0.01	< 10	< 10	< 1	< 10	26
459578	205 226	< 1	0.13	< 1	230	82	0.16	< 2	< 1	228	< 0.01	< 10	< 10	< 1	< 10	24
459579	205 226	4	0.04	< 1	270	4	0.01	< 2	< 1	59	0.04	< 10	< 10	< 1	< 10	162
459580	205 226	< 1	< 0.01	< 1	260	4	0.01	< 2	< 1	80	< 0.01	< 10	10	< 1	< 10	2
459591	205 226	< 1	0.02	< 1	240	6	0.49	< 2	< 1	119	0.01	< 10	< 10	< 1	< 10	8

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

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V6C 1G8

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(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 27-AUG-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	9	Pulp; prepped on other workorder

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
902	9	Al2O3 %: XRF	XRF	0.01	100.00
906	9	CaO %: XRF	XRF	0.01	100.00
2590	9	Cr2O3 %: XRF	XRF	0.01	100.00
903	9	Fe2O3 %: XRF	XRF	0.01	100.00
908	9	K2O %: XRF	XRF	0.01	100.00
905	9	MgO %: XRF	XRF	0.01	100.00
1989	9	MnO %: XRF	XRF	0.01	100.00
907	9	Na2O %: XRF	XRF	0.01	100.00
909	9	P2O5 %: XRF	XRF	0.01	100.00
901	9	SiO2 %: XRF	XRF	0.01	100.00
904	9	TiO2 %: XRF	XRF	0.01	100.00
910	9	LOI %: XRF	XRF	0.01	100.00
2540	9	Total %	CALCULATION	0.01	105.00
2891	9	Ba ppm: XRF	XRF	5	50000
2067	9	Rb ppm: XRF	XRF	2	50000
2898	9	Sr ppm: XRF	XRF	2	50000
2973	9	Nb ppm: XRF	XRF	2	50000
2978	9	Zr ppm: XRF	XRF	3	50000
2974	9	Y ppm: XRF	XRF	2	50000



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V6C 1G8

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CERTIFICATE OF ANALYSIS

A9925726

SAMPLE	PREP CODE	Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	MgO % XRF	MnO % XRF	Na2O % XRF	P2O5 % XRF	SiO2 % XRF	TiO2 % XRF	LOI % XRF	TOTAL %	Ba ppm	Rb ppm	Sr ppm	Nb ppm	Zr ppm	Y ppm
130444	299 --	16.77	4.05	< 0.01	4.20	5.44	0.69	0.14	< 0.01	0.11	60.20	0.54	6.41	98.55	2710	116	20	318	1115	98
130445	299 --	15.65	3.75	< 0.01	1.22	12.95	< 0.01	< 0.01	0.08	0.16	61.75	0.47	2.33	98.36	11810	108	66	170	534	50
130446	299 --	9.17	0.11	< 0.01	0.60	3.13	0.49	0.01	< 0.01	0.08	84.08	0.17	1.51	99.35	870	106	16	16	243	38
459576	299 --	17.88	4.03	< 0.01	6.30	5.92	0.74	0.14	4.07	0.28	54.01	0.96	5.08	99.41	2640	114	144	126	312	30
459577	299 --	15.28	2.93	< 0.01	6.54	3.79	0.85	0.16	0.33	0.10	61.88	0.64	6.12	98.62	2110	90	14	282	963	82
459578	299 --	6.16	14.78	< 0.01	4.28	0.17	3.68	0.28	2.87	0.04	45.30	0.21	17.34	95.11	18340	8	458	152	531	64
459579	299 --	15.69	1.72	< 0.01	7.43	6.46	0.24	0.24	4.77	0.09	58.28	0.43	3.25	98.60	1820	132	56	244	771	72
459580	299 --	7.14	28.98	< 0.01	2.24	2.44	0.33	0.24	< 0.01	0.08	31.68	0.21	25.71	99.05	790	48	46	80	255	44
459591	299 --	12.22	10.00	< 0.01	2.67	9.21	2.91	0.12	0.18	0.08	50.45	0.51	9.86	98.21	5000	120	86	308	1020	96

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9926561

Comments: ATTN: JASON WEBER

CERTIFICATE

A9926561

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	30	Geochem ring to approx 150 mesh
226	30	0-3 Kg crush and split
3202	30	Rock - save entire reject
229	30	ICP - AQ Digestion charge
* NOTE 1:		

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	30	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	30	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	30	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	30	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	30	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	30	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	30	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	30	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	30	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	30	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	30	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	30	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	30	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	30	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	30	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	30	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	30	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	30	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	30	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	30	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	30	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	30	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	30	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	30	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	30	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	30	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	30	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	30	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	30	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	30	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	30	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	30	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	30	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	30	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	30	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	30	Ba ppm	XRF	10	50000



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To: EQUITY ENGINEERING LTD.

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VANCOUVER, BC
V6C 1G8

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CERTIFICATE OF ANALYSIS

A9926561

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
124581	205 226	< 5	3.2	0.88	20	< 10	40	1.5	< 2	0.07	< 0.5	2	43	75	4.11	< 10	< 1	0.43	10	0.07
124582	205 226	< 5	< 0.2	0.66	12	< 10	40	< 0.5	< 2	0.46	< 0.5	1	18	7	2.92	< 10	< 1	0.40	100	0.05
124583	205 226	< 5	0.2	1.05	6	< 10	40	0.5	< 2	2.90	< 0.5	11	38	29	2.78	< 10	< 1	0.27	< 10	1.72
124584	205 226	< 5	< 0.2	0.98	< 2	< 10	270	0.5	< 2	7.02	< 0.5	8	12	15	1.60	< 10	< 1	0.24	< 10	4.28
124585	205 226	< 5	0.2	0.06	< 2	< 10	10	< 0.5	< 2	4.52	< 0.5	< 1	25	< 1	>15.00	< 10	9	0.02	< 10	4.01
124586	205 226	< 5	< 0.2	3.24	18	< 10	60	< 0.5	< 2	2.89	< 0.5	2	155	13	2.05	10	< 1	2.26	10	0.05
124587	205 226	< 5	< 0.2	2.46	< 2	< 10	10	< 0.5	< 2	0.77	< 0.5	41	19	41	7.53	< 10	< 1	0.21	< 10	0.45
124588	205 226	< 5	0.2	1.91	< 2	< 10	10	< 0.5	< 2	0.85	< 0.5	45	21	49	13.10	< 10	1	0.18	< 10	0.30
124589	205 226	< 5	< 0.2	0.09	< 2	< 10	10	< 0.5	< 2	8.67	< 0.5	< 1	24	2	11.10	< 10	2	0.01	< 10	5.53
124590	205 226	< 5	< 0.2	0.04	14	< 10	30	< 0.5	< 2	9.87	< 0.5	< 1	19	< 1	9.52	< 10	< 1	< 0.01	< 10	5.88
124591	205 226	< 5	< 0.2	0.10	10	< 10	130	< 0.5	< 2	13.80	< 0.5	< 1	8	4	2.22	< 10	< 1	0.03	< 10	7.79
124592	205 226	< 5	0.4	0.07	18	< 10	50	< 0.5	< 2	10.55	< 0.5	< 1	17	3	7.52	< 10	< 1	0.01	< 10	6.46
124593	205 226	< 5	0.6	0.03	16	< 10	10	< 0.5	< 2	10.70	< 0.5	< 1	13	1	9.53	< 10	< 1	< 0.01	< 10	6.66
124594	205 226	< 5	0.6	0.11	18	< 10	30	< 0.5	< 2	11.05	< 0.5	< 1	14	6	8.97	< 10	1	0.03	< 10	6.39
124595	205 226	< 5	< 0.2	0.55	8	< 10	200	1.0	< 2	0.10	< 0.5	6	17	5	3.58	< 10	< 1	0.42	100	0.08
124596	205 226	< 5	0.2	0.52	16	< 10	320	0.5	< 2	0.05	< 0.5	< 1	29	1	1.09	< 10	< 1	0.27	80	0.04
124597	205 226	< 5	1.2	0.22	< 2	< 10	20	0.5	< 2	0.43	>500	2	71	< 1	3.07	40	12	0.17	20	0.01
124598	205 226	< 5	0.2	0.05	2	< 10	40	< 0.5	< 2	11.85	2.0	< 1	18	2	6.30	< 10	< 1	0.01	< 10	5.13
124599	205 226	< 5	< 0.2	1.19	2	< 10	60	< 0.5	< 2	7.24	0.5	39	15	52	1.54	< 10	< 1	0.17	20	4.02
124600	205 226	< 5	0.2	0.09	6	< 10	60	< 0.5	< 2	11.60	< 0.5	< 1	8	6	6.10	< 10	< 1	0.01	< 10	6.84
459551	205 226	< 5	< 0.2	0.97	6	< 10	200	1.5	< 2	1.79	1.5	< 1	39	5	2.23	< 10	< 1	0.47	50	0.37
459552	205 226	< 5	< 0.2	0.29	8	< 10	180	< 0.5	< 2	12.10	< 0.5	3	13	3	0.94	< 10	< 1	0.08	< 10	7.14
459553	205 226	< 5	< 0.2	0.16	6	< 10	50	< 0.5	< 2	12.40	< 0.5	< 1	14	2	0.87	< 10	< 1	0.07	< 10	7.51
459554	205 226	< 5	< 0.2	0.36	2	< 10	180	1.0	< 2	4.66	< 0.5	1	17	2	6.53	< 10	< 1	0.32	20	1.90
459555	205 226	< 5	< 0.2	0.37	< 2	< 10	160	0.5	< 2	0.91	< 0.5	< 1	16	< 1	4.75	< 10	< 1	0.33	90	0.53
459556	205 226	< 5	< 0.2	0.82	4	< 10	90	2.0	< 2	0.92	< 0.5	1	64	9	1.71	< 10	< 1	0.41	240	0.18
459557	205 226	10	< 0.2	0.86	6	< 10	220	1.5	< 2	2.10	< 0.5	< 1	14	4	1.92	< 10	< 1	0.53	160	0.09
459558	205 226	10	< 0.2	0.21	< 2	< 10	30	< 0.5	< 2	0.05	< 0.5	1	87	3	5.90	< 10	< 1	0.12	50	0.01
459602	205 226	< 5	< 0.2	0.26	2	< 10	250	< 0.5	< 2	>15.00	< 0.5	1	5	3	0.60	< 10	< 1	0.12	< 10	1.88
459603	205 226	5	< 0.2	0.10	< 2	< 10	40	< 0.5	< 2	14.00	< 0.5	< 1	13	1	0.27	< 10	< 1	0.01	< 10	8.45

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
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V6C 1G8

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CERTIFICATE OF ANALYSIS

A9926561

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
124581	205 226	40	14 < 0.01		27	390	38	3.66	12	< 1	3 < 0.01	< 10	< 10	44	< 10		60		2480
124582	205 226	55	8 < 0.01		1	170	14	2.44	< 2	< 1	16 < 0.01	< 10	< 10	< 1	< 10		28		4330
124583	205 226	70	3 0.07		41	380	60	2.53	< 2	5	59 < 0.01	< 10	< 10	11	< 10		122		5210
124584	205 226	140	1 0.04		36	230	26	1.58	< 2	7	79 < 0.01	< 10	< 10	10	< 10		24		4840
124585	205 226	145	< 1 0.01		9	< 10	624	> 5.00	< 2	< 1	29 < 0.01	< 10	< 10	11	< 10		26		230
124586	205 226	15	12 0.04		6	210	58	1.08	< 2	< 1	67 < 0.01	< 10	< 10	5	< 10		26		28100
124587	205 226	15	4 0.08		28	1880	42	> 5.00	< 2	8	20 < 0.01	< 10	< 10	95	< 10		12		49200
124588	205 226	25	4 0.07		36	2400	108	> 5.00	2	4	15 < 0.01	< 10	< 10	71	< 10		10		39300
124589	205 226	235	1 < 0.01		1	100	328	> 5.00	2	1	78 < 0.01	< 10	< 10	16	< 10		22		600
124590	205 226	535	1 < 0.01		< 1	60	106	> 5.00	< 2	< 1	55 < 0.01	< 10	< 10	6	< 10		40		240
124591	205 226	315	1 < 0.01		4	90	30	1.89	2	1	69 < 0.01	< 10	< 10	17	< 10		54		600
124592	205 226	305	1 < 0.01		5	80	86	> 5.00	6	1	63 < 0.01	< 10	< 10	17	< 10		104		650
124593	205 226	290	1 < 0.01		4	60	132	> 5.00	4	1	48 < 0.01	< 10	< 10	14	< 10		68		470
124594	205 226	300	2 < 0.01		5	80	90	> 5.00	6	1	68 < 0.01	< 10	< 10	15	< 10		78		690
124595	205 226	685	9 < 0.01		9	660	10	0.06	< 2	< 1	6 < 0.01	< 10	< 10	4	< 10		144		1720
124596	205 226	5	10 < 0.01		< 1	120	58	0.65	2	< 1	8 < 0.01	< 10	< 10	4	< 10		4		4400
124597	205 226	60	7 < 0.01		< 1	330	804	> 5.00	38	1	10 < 0.01	< 10	< 10	< 1	< 10		> 10000		2240
124598	205 226	280	2 < 0.01		3	60	84	> 5.00	2	< 1	167 < 0.01	< 10	< 10	8	< 10		230		530
124599	205 226	170	2 0.09		32	3700	28	1.68	2	18	145 < 0.01	< 10	< 10	95	< 10		70		13400
124600	205 226	235	1 < 0.01		1	90	112	> 5.00	2	1	95 < 0.01	< 10	< 10	15	< 10		46		570
459551	205 226	480	9 < 0.01		3	160	12	1.27	2	< 1	50 < 0.01	< 10	< 10	< 1	< 10		112		1470
459552	205 226	2110	< 1 0.01		4	1230	< 2	0.26	2	1	586 < 0.01	< 10	< 10	18	< 10		12		770
459553	205 226	325	1 < 0.01		2	290	< 2	0.66	< 2	1	184 < 0.01	< 10	< 10	9	< 10		14		240
459554	205 226	2440	5 < 0.01		1	350	8	0.81	2	< 1	82 < 0.01	< 10	< 10	6	< 10		22		1110
459555	205 226	930	7 0.01		< 1	170	< 2	0.06	< 2	< 1	52 < 0.01	< 10	< 10	< 1	< 10		18		2650
459556	205 226	195	20 0.08		< 1	370	6	0.65	< 2	< 1	14 < 0.01	< 10	< 10	< 1	< 10		12		930
459557	205 226	220	11 < 0.01		1	400	18	1.46	< 2	< 1	77 < 0.01	< 10	< 10	< 1	< 10		40		2600
459558	205 226	5	15 0.06		< 1	80	36	> 5.00	< 2	< 1	7 < 0.01	< 10	< 10	< 1	< 10		8		470
459602	205 226	475	< 1 < 0.01		3	270	< 2	0.04	< 2	2	854 < 0.01	< 10	< 10	5	< 10		34		960
459603	205 226	305	1 < 0.01		< 1	60	< 2	0.04	2	1	223 < 0.01	< 10	< 10	18	< 10		6		90

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9925658

Comments: ATTN: JASON WEBER

CERTIFICATE

A9925658

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	134	Dry, sieve to -80 mesh
202	134	save reject
229	134	ICP - AQ Digestion charge
* NOTE	1.	

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

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	134	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	134	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	134	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	134	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	134	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	134	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	134	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	134	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	134	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	134	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	134	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	134	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	134	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	134	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	134	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	134	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	134	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	134	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	134	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	134	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	134	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	134	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	134	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	134	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	134	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	134	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	134	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	134	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	134	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	134	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	134	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	134	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	134	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	134	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	134	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
912	133	Ba ppm	XRF	10	50000



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Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 1-A
Total Pages : 4
Certificate Date: 16-SEP-1999
Invoice No. : 19925658
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19600E 5050N	201 202	< 5	< 0.2	1.08	20	< 10	280	< 0.5	< 2	0.10	< 0.5	6	31	13	3.52	< 10	< 1	0.12	40	0.27
L19600E 5100N	201 202	< 5	< 0.2	0.88	18	< 10	490	< 0.5	< 2	0.08	< 0.5	4	23	13	3.36	< 10	< 1	0.10	50	0.13
L19600E 5150N	201 202	< 5	< 0.2	1.55	14	< 10	140	< 0.5	< 2	0.15	< 0.5	8	38	13	3.29	< 10	< 1	0.08	30	0.45
L19600E 5200N	201 202	< 5	< 0.2	1.79	28	< 10	220	< 0.5	< 2	0.15	0.5	11	40	19	6.03	< 10	< 1	0.13	70	0.51
L19600E 5250N	201 202	< 5	< 0.2	1.42	18	< 10	390	< 0.5	< 2	0.21	< 0.5	6	37	14	4.04	< 10	< 1	0.08	110	0.40
L19800E 5050N	201 202	< 5	< 0.2	0.50	34	< 10	180	< 0.5	< 2	0.01	< 0.5	3	4	15	5.77	< 10	< 1	0.09	110	0.03
L19800E 5100N	201 202	< 5	0.4	0.97	26	< 10	650	< 0.5	< 2	0.07	< 0.5	7	27	15	4.79	< 10	< 1	0.17	80	0.16
L19800E 5150N	201 202	< 5	< 0.2	1.13	14	< 10	330	< 0.5	< 2	0.05	< 0.5	3	12	14	2.67	< 10	< 1	0.05	80	0.06
L19800E 5200N	201 202	< 5	0.2	0.99	20	< 10	390	< 0.5	< 2	0.13	< 0.5	6	22	16	3.85	< 10	< 1	0.13	90	0.25
L19800E 5250N	201 202	< 5	0.2	0.80	28	< 10	200	< 0.5	< 2	0.08	1.0	6	14	20	4.95	< 10	< 1	0.09	110	0.15
L19800E 5300N	201 202	< 5	< 0.2	1.43	18	< 10	420	< 0.5	< 2	0.13	< 0.5	5	25	21	2.88	< 10	< 1	0.06	70	0.28
L19800E 5350N	201 202	< 5	< 0.2	1.64	14	< 10	120	< 0.5	< 2	0.09	< 0.5	5	28	14	3.67	< 10	< 1	0.05	50	0.30
L19800E 5400N	201 202	< 5	0.2	1.35	34	< 10	190	< 0.5	< 2	0.11	0.5	8	22	21	5.69	< 10	< 1	0.06	80	0.27
L19800E 5450N	201 202	< 5	< 0.2	1.45	24	< 10	180	< 0.5	< 2	0.07	< 0.5	10	30	24	5.14	< 10	< 1	0.07	50	0.33
L19800E 5500N	201 202	< 5	< 0.2	1.51	14	< 10	200	< 0.5	< 2	0.07	< 0.5	5	26	14	3.07	< 10	< 1	0.05	80	0.20
L19800E 5550N	201 202	< 5	< 0.2	1.24	20	< 10	180	< 0.5	< 2	0.06	< 0.5	6	22	17	5.03	< 10	< 1	0.07	60	0.18
L19800E 5600N	201 202	< 5	< 0.2	1.39	22	< 10	180	< 0.5	< 2	0.20	< 0.5	10	35	19	4.35	< 10	< 1	0.08	80	0.41
L19800E 5650N	201 202	< 5	< 0.2	1.50	26	< 10	200	0.5	< 2	0.21	1.0	11	28	24	6.75	< 10	< 1	0.08	160	0.36
L19800E 5700N	201 202	< 5	< 0.2	0.58	2	< 10	50	< 0.5	< 2	0.07	< 0.5	1	5	7	0.96	< 10	< 1	0.03	10	0.07
L19800E 5750N	201 202	< 5	< 0.2	1.26	20	< 10	390	< 0.5	< 2	0.16	< 0.5	8	28	23	3.95	< 10	< 1	0.07	80	0.32
L19800E 5800N	201 202	< 5	0.4	0.72	16	< 10	610	< 0.5	< 2	0.18	1.0	5	12	24	3.50	< 10	< 1	0.08	60	0.16
L19800E 5850N	201 202	< 5	< 0.2	0.65	12	< 10	110	< 0.5	< 2	0.01	< 0.5	4	7	23	2.33	< 10	< 1	0.04	10	0.03
L19800E 5900N	201 202	< 5	0.4	0.82	18	< 10	90	< 0.5	< 2	0.05	< 0.5	7	14	27	4.07	< 10	< 1	0.04	10	0.11
L19900E 5050N	201 202	< 5	0.6	1.17	60	< 10	630	0.5	< 2	0.11	5.0	6	8	38	7.86	< 10	< 1	0.22	170	0.12
L19900E 5100N	201 202	< 5	0.6	0.45	34	< 10	380	< 0.5	< 2	0.08	< 0.5	1	7	11	5.63	< 10	< 1	0.22	160	0.07
L19900E 5150N	201 202	< 5	0.2	1.25	28	< 10	290	< 0.5	< 2	0.06	0.5	7	26	17	5.78	< 10	< 1	0.06	120	0.22
L19900E 5200N	201 202	< 5	0.2	1.35	30	< 10	440	< 0.5	< 2	0.09	0.5	7	23	19	5.41	< 10	< 1	0.08	120	0.15
L19900E 5250N	201 202	< 5	0.2	1.23	20	< 10	260	< 0.5	< 2	0.23	1.0	9	30	18	4.61	< 10	< 1	0.05	70	0.46
L19900E 5300N	201 202	< 5	0.2	1.58	24	< 10	210	< 0.5	< 2	0.12	< 0.5	9	39	18	4.83	< 10	< 1	0.06	50	0.43
L19900E 5350N	201 202	< 5	0.2	1.24	28	< 10	310	0.5	< 2	0.09	1.0	7	24	20	6.30	< 10	< 1	0.09	130	0.23
L19900E 5400N	201 202	< 5	0.4	1.38	24	< 10	230	0.5	< 2	0.15	1.5	10	30	25	5.28	< 10	< 1	0.09	150	0.33
L19900E 5450N	201 202	< 5	0.8	0.99	56	< 10	140	< 0.5	< 2	0.05	< 0.5	6	12	32	>15.00	< 10	< 1	0.02	130	0.13
L19900E 5500N	201 202	< 5	< 0.2	1.74	18	< 10	310	0.5	< 2	0.11	0.5	9	28	16	5.03	< 10	< 1	0.06	110	0.35
L19900E 5550N	201 202	< 5	< 0.2	0.84	32	< 10	230	0.5	< 2	0.07	0.5	8	17	21	6.03	< 10	< 1	0.05	210	0.14
L19900E 5600N	201 202	< 5	< 0.2	1.36	14	< 10	290	< 0.5	< 2	0.07	< 0.5	6	21	12	4.57	< 10	< 1	0.05	80	0.20
L19900E 5650N	201 202	< 5	< 0.2	1.29	38	< 10	400	0.5	< 2	0.12	0.5	8	23	26	6.94	< 10	< 1	0.09	180	0.25
L19900E 5700N	201 202	< 5	0.4	0.85	12	< 10	220	< 0.5	< 2	0.11	0.5	8	12	42	3.10	< 10	< 1	0.07	20	0.22
L19900E 5750N	201 202	< 5	0.2	0.78	22	< 10	270	< 0.5	< 2	0.08	< 0.5	5	12	25	4.08	< 10	< 1	0.05	80	0.16
L19900E 5800N	201 202	< 5	0.2	0.55	14	< 10	110	< 0.5	< 2	0.03	< 0.5	6	9	42	3.39	< 10	< 1	0.04	< 10	0.13
L19900E 5850N	201 202	< 5	0.4	0.30	2	< 10	60	< 0.5	< 2	0.01	< 0.5	< 1	2	4	0.77	< 10	< 1	0.01	10	0.01

CERTIFICATION:

Jason Weber

+



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
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V6C 1G8

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CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19600E 5050N	201	202	335	8	0.01	18	950	34	0.18	< 2	< 1	21	0.04	< 10	< 10	41	< 10	100		2100
L19600E 5100N	201	202	255	8	< 0.01	13	790	28	0.16	< 2	< 1	17	0.03	< 10	< 10	42	< 10	84		2400
L19600E 5150N	201	202	245	3	0.01	22	360	22	0.09	< 2	2	16	0.09	< 10	< 10	37	< 10	78		1360
L19600E 5200N	201	202	520	20	0.01	30	630	48	0.21	< 2	1	19	0.08	< 10	< 10	35	< 10	124		1640
L19600E 5250N	201	202	380	9	< 0.01	21	820	32	0.13	< 2	1	24	0.06	< 10	< 10	38	< 10	96		2130
L19800E 5050N	201	202	205	25	< 0.01	12	990	40	0.15	< 2	< 1	16	< 0.01	< 10	< 10	16	< 10	278		2010
L19800E 5100N	201	202	630	17	< 0.01	15	1250	54	0.29	< 2	< 1	32	0.02	< 10	< 10	40	< 10	112		3740
L19800E 5150N	201	202	365	11	0.01	10	750	12	0.07	< 2	< 1	9	0.01	< 10	< 10	33	< 10	94		1950
L19800E 5200N	201	202	510	12	< 0.01	19	940	38	0.17	< 2	1	25	0.04	< 10	< 10	32	< 10	118		2600
L19800E 5250N	201	202	630	19	< 0.01	23	910	42	0.14	< 2	1	23	0.02	< 10	< 10	27	< 10	252		2590
L19800E 5300N	201	202	220	7	0.01	23	770	22	0.05	< 2	1	17	0.03	< 10	< 10	31	< 10	106		2090
L19800E 5350N	201	202	210	8	< 0.01	18	810	28	0.06	< 2	< 1	14	0.02	< 10	< 10	35	< 10	98		1840
L19800E 5400N	201	202	605	12	< 0.01	25	890	52	0.07	< 2	1	18	0.03	< 10	< 10	24	< 10	188		2370
L19800E 5450N	201	202	585	9	< 0.01	30	730	42	0.10	< 2	1	18	0.03	< 10	< 10	33	< 10	184		2260
L19800E 5500N	201	202	170	8	< 0.01	19	680	24	0.05	< 2	1	13	0.03	< 10	< 10	39	< 10	128		1980
L19800E 5550N	201	202	420	14	< 0.01	19	880	40	0.09	< 2	< 1	14	0.01	< 10	< 10	31	< 10	170		2430
L19800E 5600N	201	202	585	7	< 0.01	35	710	36	0.08	< 2	2	24	0.06	< 10	< 10	36	< 10	222		2140
L19800E 5650N	201	202	1160	12	< 0.01	30	910	62	0.07	< 2	1	25	0.05	< 10	< 10	23	< 10	360		3700
L19800E 5700N	201	202	75	1	0.04	5	410	6	0.03	< 2	< 1	8	0.03	< 10	< 10	15	< 10	32		1300
L19800E 5750N	201	202	515	8	< 0.01	29	640	36	0.06	< 2	1	23	0.03	< 10	< 10	31	< 10	186		3520
L19800E 5800N	201	202	390	9	< 0.01	27	670	34	0.05	< 2	2	34	< 0.01	< 10	< 10	22	< 10	220		6910
L19800E 5850N	201	202	90	5	< 0.01	20	970	16	0.04	< 2	< 1	13	< 0.01	< 10	< 10	42	< 10	140		3790
L19800E 5900N	201	202	200	4	< 0.01	29	1360	26	0.06	< 2	< 1	16	< 0.01	< 10	< 10	43	< 10	168		3530
L19900E 5050N	201	202	905	38	< 0.01	25	1180	90	0.43	6	1	66	< 0.01	< 10	< 10	47	< 10	372		3190
L19900E 5100N	201	202	165	44	< 0.01	16	770	118	0.45	12	< 1	37	0.01	< 10	< 10	22	< 10	166		2570
L19900E 5150N	201	202	720	21	< 0.01	21	790	46	0.09	< 2	< 1	13	0.01	< 10	< 10	32	< 10	236		2590
L19900E 5200N	201	202	2410	19	< 0.01	18	1230	54	0.17	< 2	< 1	21	0.01	< 10	< 10	35	< 10	202		2440
L19900E 5250N	201	202	660	9	< 0.01	30	710	32	0.06	< 2	1	18	0.09	< 10	< 10	34	< 10	270		2010
L19900E 5300N	201	202	725	8	< 0.01	26	760	34	0.10	< 2	1	18	0.09	< 10	< 10	50	< 10	198		1900
L19900E 5350N	201	202	955	18	< 0.01	24	820	54	0.08	< 2	1	20	0.02	< 10	< 10	32	< 10	366		2540
L19900E 5400N	201	202	800	12	< 0.01	42	790	42	0.09	< 2	3	21	0.05	< 10	< 10	35	< 10	354		2000
L19900E 5450N	201	202	1965	5	0.01	34	580	82	0.09	< 2	3	8	0.01	< 10	< 10	55	< 10	194		470
L19900E 5500N	201	202	640	10	< 0.01	30	600	40	0.06	< 2	1	16	0.02	< 10	< 10	31	< 10	244		2160
L19900E 5550N	201	202	1305	13	< 0.01	23	600	74	0.07	< 2	1	14	< 0.01	< 10	< 10	9	< 10	328		3070
L19900E 5600N	201	202	585	10	< 0.01	17	620	32	0.04	< 2	1	10	0.01	< 10	< 10	30	< 10	152		2400
L19900E 5650N	201	202	1085	15	< 0.01	25	780	70	0.10	< 2	2	22	0.01	< 10	< 10	20	< 10	328		4090
L19900E 5700N	201	202	210	4	< 0.01	41	910	32	0.08	< 2	1	62	< 0.01	< 10	< 10	24	< 10	224		3330
L19900E 5750N	201	202	465	8	< 0.01	25	870	36	0.09	< 2	1	52	< 0.01	< 10	< 10	17	< 10	212		4760
L19900E 5800N	201	202	110	5	< 0.01	40	1310	22	0.06	< 2	1	27	< 0.01	< 10	< 10	31	< 10	166		5060
L19900E 5850N	201	202	115	2	0.02	3	340	6	0.01	< 2	< 1	4	< 0.01	< 10	< 10	12	< 10	21		1960

CERTIFICATION:

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :2-A
Total Pages :4
Certificate Date: 16-SEP-1999
Invoice No. :19925658
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L19900E 5900N	201 202	< 5	0.6	0.18	2	< 10	120	< 0.5	< 2	13.80	0.5	2	3	3	3.38	< 10	< 1	0.01	< 10	8.62
L19900E 5950N	201 202	< 5	0.2	0.16	8	< 10	270	< 0.5	< 2	10.75	0.5	5	6	4	3.19	< 10	< 1	0.03	< 10	6.61
L19900E 6000N	201 202	< 5	< 0.2	0.23	10	< 10	320	< 0.5	< 2	6.70	< 0.5	6	7	11	2.34	< 10	< 1	0.04	10	4.00
L19900E 6050N	201 202	< 5	0.2	0.73	8	< 10	240	< 0.5	< 2	0.45	0.5	6	9	24	3.11	< 10	< 1	0.06	60	0.25
L19900E 6100N	201 202	< 5	0.4	0.79	10	< 10	340	< 0.5	< 2	0.51	0.5	6	12	31	2.48	< 10	< 1	0.06	30	0.27
L19900E 6150N	201 202	< 5	0.4	0.81	24	< 10	610	< 0.5	< 2	2.70	4.0	11	22	28	3.79	< 10	< 1	0.09	30	1.72
L20000E 6050N	201 202	< 5	< 0.2	0.74	10	< 10	60	< 0.5	< 2	0.08	< 0.5	8	9	25	2.74	< 10	< 1	0.05	10	0.19
L20000E 6100N	201 202	< 5	0.6	0.65	8	< 10	50	< 0.5	< 2	0.06	< 0.5	5	7	27	2.34	< 10	< 1	0.04	< 10	0.12
L20000E 6150N	201 202	15	0.8	0.77	28	< 10	150	< 0.5	< 2	0.25	5.5	9	12	38	6.20	< 10	< 1	0.05	170	0.15
L20100E 5050N	201 202	< 5	< 0.2	1.07	50	< 10	420	< 0.5	< 2	0.26	1.5	13	24	38	7.49	< 10	< 1	0.16	290	0.40
L20100E 5100N	201 202	< 5	0.4	0.84	58	< 10	410	< 0.5	< 2	0.12	< 0.5	6	7	26	8.58	< 10	< 1	0.24	260	0.14
L20100E 5150N	201 202	< 5	0.2	0.55	36	< 10	200	0.5	< 2	0.18	1.5	4	3	17	7.40	< 10	< 1	0.19	180	0.12
L20100E 5200N	201 202	35	0.4	0.51	44	< 10	130	< 0.5	< 2	0.11	< 0.5	2	1	15	10.15	< 10	< 1	0.32	130	0.08
L20100E 5250N	201 202	< 5	< 0.2	0.61	30	< 10	70	0.5	< 2	0.08	< 0.5	4	< 1	16	9.72	< 10	< 1	0.07	260	0.07
L20100E 5300N	201 202	< 5	< 0.2	0.64	34	< 10	80	< 0.5	< 2	0.08	< 0.5	5	< 1	17	10.75	< 10	< 1	0.08	280	0.07
L20100E 5350N	201 202	< 5	0.2	1.71	44	< 10	420	0.5	< 2	0.43	< 0.5	13	36	32	7.95	< 10	< 1	0.12	230	0.67
L20100E 5400N	201 202	< 5	< 0.2	1.95	36	< 10	470	< 0.5	< 2	0.63	0.5	20	55	45	7.13	< 10	< 1	0.14	180	0.97
L20100E 5450N	201 202	< 5	0.2	1.89	42	< 10	430	< 0.5	< 2	0.55	0.5	17	50	34	6.65	< 10	< 1	0.10	150	0.82
L20100E 5500N	201 202	< 5	0.2	1.75	36	< 10	320	0.5	< 2	0.42	0.5	12	41	34	6.49	< 10	< 1	0.08	150	0.65
L20100E 5550N	201 202	< 5	< 0.2	0.96	16	< 10	60	< 0.5	< 2	0.03	< 0.5	4	16	12	4.31	< 10	< 1	0.04	30	0.14
L20100E 5600N	201 202	< 5	< 0.2	1.42	30	< 10	300	< 0.5	< 2	0.51	2.5	14	34	33	6.21	< 10	< 1	0.07	130	0.58
L20100E 5650N	201 202	< 5	0.2	1.63	30	< 10	410	< 0.5	< 2	0.52	0.5	15	43	31	6.24	< 10	< 1	0.10	150	0.73
L20100E 5700N	201 202	< 5	< 0.2	1.03	14	< 10	70	< 0.5	< 2	0.06	0.5	6	17	17	3.29	< 10	< 1	0.04	40	0.22
L20100E 5750N	201 202	< 5	0.2	0.77	34	< 10	80	< 0.5	< 2	0.03	2.0	8	12	22	5.68	< 10	< 1	0.05	110	0.09
L20100E 5800N	201 202	10	0.6	0.81	42	< 10	80	0.5	< 2	0.11	7.0	7	8	38	7.06	< 10	< 1	0.06	220	0.06
L20100E 5850N	201 202	< 5	0.6	1.11	32	< 10	440	0.5	< 2	0.07	2.0	6	14	25	5.14	< 10	< 1	0.07	190	0.09
L20100E 5900N	201 202	< 5	< 0.2	1.09	24	< 10	160	< 0.5	< 2	0.05	0.5	5	15	18	3.92	< 10	< 1	0.06	80	0.17
L20100E 5950N	201 202	< 5	< 0.2	1.14	18	< 10	80	< 0.5	< 2	0.04	< 0.5	4	14	21	3.45	< 10	< 1	0.05	70	0.16
L20100E 6000N	201 202	< 5	0.4	0.86	14	< 10	70	< 0.5	< 2	0.09	< 0.5	6	12	23	3.48	< 10	< 1	0.06	< 10	0.21
L20100E 6050N	201 202	< 5	0.8	0.99	14	< 10	80	< 0.5	< 2	0.13	0.5	13	10	54	4.03	< 10	< 1	0.06	10	0.26
L20100E 6100N	201 202	< 5	< 0.2	0.76	18	< 10	60	< 0.5	< 2	0.06	0.5	9	10	29	5.77	< 10	< 1	0.04	70	0.13
L20200E 5000N	201 202	< 5	0.4	0.75	50	< 10	320	0.5	< 2	0.23	0.5	4	1	19	9.07	< 10	< 1	0.29	280	0.11
L20200E 5050N	201 202	< 5	0.2	0.84	36	< 10	320	0.5	< 2	0.15	1.5	3	3	17	6.52	< 10	< 1	0.26	180	0.09
L20200E 5100N	201 202	< 5	< 0.2	0.86	30	< 10	240	0.5	< 2	0.15	0.5	4	< 1	14	9.28	< 10	< 1	0.31	230	0.10
L20200E 5150N	201 202	< 5	< 0.2	0.84	32	< 10	100	0.5	< 2	0.32	< 0.5	5	< 1	21	10.35	< 10	< 1	0.14	300	0.17
L20200E 5200N	201 202	< 5	< 0.2	0.75	34	< 10	70	0.5	< 2	0.76	< 0.5	5	< 1	18	8.13	< 10	< 1	0.06	270	0.43
L20200E 5250N	201 202	< 5	< 0.2	0.78	34	< 10	70	0.5	< 2	0.47	< 0.5	5	< 1	17	8.21	< 10	< 1	0.08	300	0.20
L20200E 5300N	201 202	< 5	< 0.2	0.65	30	< 10	60	0.5	< 2	0.72	< 0.5	7	< 1	29	7.65	< 10	< 1	0.08	270	0.41
L20200E 5350N	201 202	< 5	0.6	0.94	30	< 10	80	0.5	< 2	0.33	0.5	3	3	16	3.67	< 10	< 1	0.06	120	0.11
L20200E 5400N	201 202	< 5	1.0	0.41	70	< 10	130	0.5	< 2	0.14	5.0	4	4	37	3.91	< 10	< 1	0.06	70	0.08

CERTIFICATION:



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212 Brooksbank Ave., North Vancouver
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To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

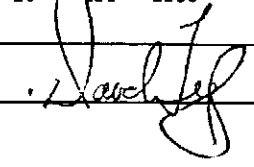
Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 2-B
Total Pages : 4
Certificate Date: 16-SEP-1999
Invoice No. : I9925658
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L19900E 5900N	201 202	725	< 1	< 0.01	10	200	176	0.06	< 2	< 1	265	< 0.01	< 10	< 10	11	< 10	180	1160	
L19900E 5950N	201 202	420	< 1	< 0.01	25	160	100	0.09	< 2	< 1	99	< 0.01	< 10	< 10	13	< 10	418	not/ass	
L19900E 6000N	201 202	355	2	< 0.01	23	710	42	0.08	< 2	2	115	< 0.01	< 10	< 10	12	< 10	146	1730	
L19900E 6050N	201 202	350	7	< 0.01	22	740	30	0.03	< 2	1	24	< 0.01	< 10	< 10	23	< 10	194	2390	
L19900E 6100N	201 202	105	4	< 0.01	31	990	26	0.04	< 2	2	46	< 0.01	< 10	< 10	22	< 10	226	2680	
L19900E 6150N	201 202	375	10	< 0.01	43	1030	52	0.04	< 2	3	58	0.01	< 10	< 10	34	< 10	282	2540	
L20000E 6050N	201 202	300	4	< 0.01	27	900	22	0.02	< 2	1	18	< 0.01	< 10	< 10	25	< 10	188	2410	
L20000E 6100N	201 202	110	2	< 0.01	23	1080	18	0.02	< 2	< 1	13	< 0.01	< 10	< 10	25	< 10	158	2230	
L20000E 6150N	201 202	1165	16	< 0.01	48	910	64	0.02	< 2	2	19	< 0.01	< 10	< 10	26	< 10	846	2290	
L20100E 5050N	201 202	990	22	< 0.01	29	1090	100	0.46	< 2	3	46	0.03	< 10	< 10	17	< 10	324	4070	
L20100E 5100N	201 202	865	33	< 0.01	13	1110	114	0.53	< 2	1	51	< 0.01	< 10	< 10	9	< 10	198	4810	
L20100E 5150N	201 202	1190	25	< 0.01	11	650	56	0.51	< 2	< 1	28	< 0.01	< 10	< 10	9	< 10	238	1690	
L20100E 5200N	201 202	805	29	< 0.01	7	910	90	0.83	< 2	< 1	28	< 0.01	< 10	< 10	8	< 10	202	1010	
L20100E 5250N	201 202	1370	29	< 0.01	7	570	64	0.24	< 2	1	13	< 0.01	< 10	< 10	3	< 10	174	960	
L20100E 5300N	201 202	1500	33	< 0.01	8	590	64	0.26	< 2	1	14	< 0.01	< 10	< 10	2	< 10	162	940	
L20100E 5350N	201 202	840	19	0.01	32	1040	88	0.24	< 2	4	40	0.11	< 10	< 10	31	< 10	294	2990	
L20100E 5400N	201 202	945	16	< 0.01	49	1190	98	0.30	< 2	5	54	0.19	< 10	< 10	44	< 10	348	4040	
L20100E 5450N	201 202	590	13	0.01	42	1280	88	0.16	< 2	4	42	0.16	< 10	< 10	40	< 10	348	3680	
L20100E 5500N	201 202	535	18	< 0.01	37	1030	84	0.12	< 2	3	34	0.07	< 10	< 10	43	< 10	316	2660	
L20100E 5550N	201 202	260	13	< 0.01	17	630	30	0.05	< 2	< 1	11	0.01	< 10	< 10	32	< 10	136	1680	
L20100E 5600N	201 202	760	15	< 0.01	40	1000	68	0.13	< 2	3	39	0.08	< 10	< 10	37	< 10	396	2590	
L20100E 5650N	201 202	795	15	0.01	40	1050	68	0.20	< 2	3	40	0.11	< 10	< 10	37	< 10	314	2940	
L20100E 5700N	201 202	375	7	< 0.01	33	850	24	0.04	< 2	< 1	14	< 0.01	< 10	< 10	28	< 10	302	2280	
L20100E 5750N	201 202	705	26	< 0.01	28	740	54	0.04	4	1	8	< 0.01	< 10	< 10	29	< 10	718	1720	
L20100E 5800N	201 202	890	31	< 0.01	34	830	68	0.05	6	1	8	< 0.01	< 10	< 10	32	< 10	1180	1890	
L20100E 5850N	201 202	525	21	< 0.01	35	870	140	0.05	< 2	1	15	< 0.01	< 10	< 10	53	< 10	640	2810	
L20100E 5900N	201 202	340	12	< 0.01	24	870	32	0.04	< 2	1	14	< 0.01	< 10	< 10	38	< 10	364	2370	
L20100E 5950N	201 202	255	11	< 0.01	17	860	28	0.04	< 2	< 1	10	< 0.01	< 10	< 10	36	< 10	234	2110	
L20100E 6000N	201 202	190	3	< 0.01	32	1420	24	0.03	< 2	1	20	< 0.01	< 10	< 10	30	< 10	168	2400	
L20100E 6050N	201 202	265	4	< 0.01	52	1090	30	0.03	< 2	1	30	< 0.01	< 10	< 10	26	< 10	332	2470	
L20100E 6100N	201 202	750	19	< 0.01	34	740	36	0.01	< 2	1	11	< 0.01	< 10	< 10	24	< 10	286	1970	
L20200E 5000N	201 202	1065	33	< 0.01	10	770	86	0.59	< 2	1	38	< 0.01	< 10	< 10	8	< 10	248	2350	
L20200E 5050N	201 202	1280	21	< 0.01	11	700	64	0.49	< 2	< 1	33	< 0.01	< 10	< 10	14	< 10	304	1870	
L20200E 5100N	201 202	1705	27	< 0.01	9	560	72	0.63	< 2	1	33	< 0.01	< 10	< 10	5	< 10	248	1340	
L20200E 5150N	201 202	1535	32	0.01	6	540	46	0.50	< 2	2	24	< 0.01	< 10	< 10	3	< 10	162	780	
L20200E 5200N	201 202	1655	35	< 0.01	4	430	38	0.35	< 2	2	20	< 0.01	< 10	< 10	1	< 10	102	930	
L20200E 5250N	201 202	1700	34	< 0.01	4	490	34	0.30	< 2	2	21	< 0.01	< 10	< 10	2	< 10	114	1000	
L20200E 5300N	201 202	1475	35	< 0.01	12	440	42	0.26	< 2	1	22	< 0.01	< 10	< 10	3	< 10	164	1170	
L20200E 5350N	201 202	460	20	0.02	11	870	40	0.10	2	< 1	28	< 0.01	< 10	< 10	37	< 10	114	1020	
L20200E 5400N	201 202	375	48	< 0.01	36	1010	62	0.11	14	1	28	< 0.01	< 10	< 10	92	< 10	434	1560	

CERTIFICATION: 

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CERTIFICATE OF ANALYSIS A9925658

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L20200E 5450N	201 202	< 10	1.0	0.43	38	< 10	120	0.5	< 2	0.40	2.5	3	6	29	3.08	< 10	< 1	0.05	60	0.13
L20200E 5500N	201 202	< 10	< 0.2	1.03	16	< 10	150	0.5	< 2	0.79	1.0	5	19	16	1.41	< 10	< 1	0.03	80	0.34
L20200E 5550N	201 202	< 5	0.2	0.86	22	< 10	80	< 0.5	< 2	0.03	< 0.5	5	11	20	4.63	< 10	< 1	0.05	70	0.10
L20200E 5600N	201 202	< 5	< 0.2	1.02	12	< 10	80	< 0.5	< 2	0.03	< 0.5	3	11	11	3.26	< 10	< 1	0.04	60	0.07
L20200E 5650N	201 202	< 5	< 0.2	1.05	18	< 10	70	< 0.5	< 2	0.03	< 0.5	4	13	13	4.00	< 10	< 1	0.04	50	0.13
L20200E 5700N	201 202	10	0.4	0.97	26	< 10	60	< 0.5	< 2	0.02	< 0.5	7	14	21	6.55	< 10	< 1	0.05	60	0.15
L20200E 5750N	201 202	10	< 0.2	0.82	28	< 10	170	< 0.5	< 2	0.02	1.0	7	10	21	5.64	< 10	< 1	0.04	120	0.12
L20200E 5800N	201 202	< 5	0.2	1.10	20	< 10	150	< 0.5	< 2	0.04	< 0.5	5	14	16	5.04	< 10	< 1	0.05	60	0.11
L20200E 5850N	201 202	< 5	0.2	0.50	14	< 10	80	< 0.5	< 2	0.03	< 0.5	3	4	11	2.96	< 10	< 1	0.03	70	0.03
L20200E 5900N	201 202	< 5	0.2	0.90	16	< 10	70	< 0.5	< 2	0.06	< 0.5	5	10	21	3.50	< 10	< 1	0.05	< 10	0.16
L20200E 5950N	201 202	< 5	< 0.2	0.44	< 2	< 10	60	< 0.5	< 2	0.01	< 0.5	1	3	8	0.80	< 10	< 1	0.04	< 10	0.02
L20200E 6000N	201 202	< 5	0.2	0.77	14	< 10	140	< 0.5	< 2	0.04	0.5	10	10	29	3.04	< 10	< 1	0.05	10	0.20
L20200E 6050N	201 202	5	< 0.2	0.52	14	< 10	50	< 0.5	< 2	0.02	< 0.5	1	6	19	1.98	< 10	< 1	0.04	< 10	0.05
L20200E 6100N	201 202	< 5	1.0	1.18	14	< 10	140	< 0.5	< 2	0.81	1.5	13	14	35	3.05	< 10	< 1	0.04	10	0.56
L20200E 6150N	201 202	< 5	< 0.2	0.55	14	< 10	210	< 0.5	< 2	3.84	0.5	7	15	8	3.04	< 10	< 1	0.02	20	2.07
L20200E 6200N	201 202	< 5	0.2	0.67	14	< 10	340	< 0.5	< 2	5.24	0.5	7	18	10	3.06	< 10	< 1	0.03	30	2.98
L20200E 6250N	201 202	< 5	0.2	1.00	32	< 10	460	< 0.5	< 2	1.24	1.0	11	25	16	6.65	< 10	< 1	0.04	30	0.60
L20200E 6300N	201 202	< 5	0.2	1.14	24	< 10	470	0.5	< 2	1.27	1.0	10	24	17	4.48	< 10	< 1	0.05	70	0.70
L20200E 6350N	201 202	< 5	0.2	0.90	18	< 10	270	< 0.5	< 2	0.43	0.5	8	12	15	3.53	< 10	< 1	0.03	40	0.13
L20300E 6050N	201 202	< 5	< 0.2	1.01	6	< 10	220	< 0.5	< 2	0.31	< 0.5	2	8	8	1.16	< 10	< 1	0.03	10	0.14
L20300E 6100N	201 202	< 5	< 0.2	1.02	10	< 10	210	< 0.5	< 2	0.29	< 0.5	2	10	5	1.56	< 10	< 1	0.03	10	0.14
L20300E 6150N	201 202	5	< 0.2	0.55	14	< 10	500	< 0.5	< 2	0.71	< 0.5	3	8	6	1.51	< 10	< 1	0.02	< 10	0.29
L20300E 6200N	201 202	< 5	< 0.2	0.46	18	< 10	530	< 0.5	< 2	1.91	0.5	30	21	34	8.24	< 10	< 1	0.26	40	0.99
L20600E 5650N	201 202	< 5	0.2	0.76	32	< 10	2240	< 0.5	< 2	0.33	0.5	4	10	17	2.33	< 10	< 1	0.03	10	0.14
L20600E 5700N	201 202	10	0.4	0.44	28	< 10	610	< 0.5	< 2	0.39	1.0	8	11	15	3.76	< 10	< 1	0.03	30	0.22
L20600E 5750N	201 202	< 5	0.8	0.17	66	< 10	1380	< 0.5	< 2	10.90	0.5	9	10	25	4.30	< 10	< 1	0.01	< 10	6.76
L20600E 5800N	201 202	< 5	0.4	0.33	14	< 10	730	< 0.5	< 2	11.00	< 0.5	5	12	9	2.59	< 10	< 1	0.01	< 10	6.80
L20600E 5850N	201 202	< 5	0.2	0.39	< 2	< 10	190	< 0.5	< 2	12.20	< 0.5	4	12	5	1.75	< 10	< 1	0.01	< 10	7.77
L20600E 5900N	201 202	< 5	0.4	0.34	8	< 10	250	< 0.5	< 2	9.94	1.5	7	17	12	2.60	< 10	< 1	0.03	< 10	6.09
L20600E 5950N	201 202	< 5	0.2	0.17	< 2	< 10	110	< 0.5	< 2	14.80	< 0.5	13	4	2	2.14	< 10	< 1	< 0.01	< 10	9.11
L20600E 6000N	201 202	< 5	0.4	0.40	14	< 10	640	< 0.5	< 2	12.70	0.5	8	9	10	1.99	< 10	< 1	0.02	< 10	7.92
L20600E 6050N	201 202	< 5	0.2	0.18	< 2	< 10	290	< 0.5	< 2	15.00	< 0.5	5	7	5	1.66	< 10	1	0.01	< 10	9.33
L20600E 6100N	201 202	< 5	0.4	0.33	< 2	< 10	150	< 0.5	< 2	13.25	< 0.5	5	14	8	1.84	< 10	< 1	0.03	< 10	8.29
L20900E 5650N	201 202	10	0.6	0.46	60	< 10	1830	< 0.5	< 2	0.05	< 0.5	3	9	24	3.51	< 10	< 1	0.04	10	0.05
L20900E 5700N	201 202	< 5	0.4	0.50	26	< 10	830	< 0.5	< 2	0.15	0.5	8	6	33	3.06	< 10	< 1	0.07	10	0.09
L20900E 5750N	201 202	< 5	0.4	0.14	10	< 10	630	< 0.5	< 2	13.05	< 0.5	3	6	2	2.02	< 10	< 1	0.01	< 10	8.11
L20900E 5800N	201 202	< 5	0.2	0.26	18	< 10	130	< 0.5	< 2	6.35	< 0.5	5	9	6	2.53	< 10	< 1	0.03	10	3.80
L20900E 5850N	201 202	5	< 0.2	0.42	18	< 10	190	< 0.5	< 2	8.01	< 0.5	9	12	13	2.42	< 10	< 1	0.04	10	2.01
L20900E 5900N	201 202	< 5	0.2	0.25	< 2	< 10	200	< 0.5	< 2	13.95	< 0.5	5	4	4	1.16	< 10	< 1	0.03	< 10	8.64
L20900E 5950N	201 202	< 5	< 0.2	0.19	6	< 10	180	< 0.5	< 2	14.20	< 0.5	3	4	3	1.16	< 10	< 1	0.02	< 10	8.89

CERTIFICATION:

Jason Jeff



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number :3-B
Total Pages :4
Certificate Date: 16-SEP-1999
Invoice No. :19925658
P.O. Number :PTH99-02
Account :EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE		Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn	Ba	XRF	
			ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm		
L20200E 5450N	201	202	135	32 < 0.01		34	1020	50	0.09	8	1	37 < 0.01	< 10	< 10	71	< 10	364	2340			
L20200E 5500N	201	202	80	21 < 0.01		20	650	40	0.73	< 2	1	34	0.03	< 10	< 10	15	< 10	156	2280		
L20200E 5550N	201	202	345	16 < 0.01		25	860	32	0.05	< 2	< 1	9 < 0.01	< 10	< 10	31	< 10	328	1880			
L20200E 5600N	201	202	135	13 < 0.01		12	800	18	0.04	< 2	< 1	8 < 0.01	< 10	< 10	34	< 10	132	1950			
L20200E 5650N	201	202	210	11 < 0.01		17	840	26	0.05	< 2	< 1	8 < 0.01	< 10	< 10	27	< 10	164	1910			
L20200E 5700N	201	202	380	15 < 0.01		30	760	50	0.05	< 2	1	12 < 0.01	< 10	< 10	34	< 10	338	2040			
L20200E 5750N	201	202	515	16 < 0.01		30	640	38	0.03	< 2	1	9 < 0.01	< 10	< 10	24	< 10	468	2170			
L20200E 5800N	201	202	310	12 < 0.01		25	830	38	0.04	< 2	< 1	10 < 0.01	< 10	< 10	36	< 10	256	2270			
L20200E 5850N	201	202	150	14 < 0.01		17	800	22	0.03	< 2	< 1	7 < 0.01	< 10	< 10	29	< 10	268	1730			
L20200E 5900N	201	202	170	4 < 0.01		26	1500	24	0.03	< 2	< 1	17 < 0.01	< 10	< 10	31	< 10	152	2530			
L20200E 5950N	201	202	30	2 < 0.01		7	440	6	0.01	< 2	< 1	3 < 0.01	< 10	< 10	20	< 10	64	2070			
L20200E 6000N	201	202	550	5 < 0.01		35	850	24	0.04	< 2	1	12 < 0.01	< 10	< 10	27	< 10	250	2620			
L20200E 6050N	201	202	25	3 < 0.01		15	1120	14	0.02	< 2	< 1	6 < 0.01	< 10	< 10	30	< 10	120	2370			
L20200E 6100N	201	202	510	3 < 0.01		65	1150	28	0.03	< 2	3	32 < 0.01	< 10	< 10	23	< 10	306	2140			
L20200E 6150N	201	202	935	1 < 0.01		20	1020	40	0.04	< 2	4	33 < 0.01	< 10	< 10	18	< 10	68	1670			
L20200E 6200N	201	202	1170	3 < 0.01		22	1330	56	0.04	< 2	3	50 < 0.01	< 10	< 10	27	< 10	180	2070			
L20200E 6250N	201	202	1435	3 < 0.01		33	1140	194	0.04	< 2	5	18 < 0.01	< 10	< 10	79	< 10	290	6760			
L20200E 6300N	201	202	1260	4 < 0.01		32	1290	76	0.04	< 2	3	32 < 0.01	< 10	< 10	30	< 10	280	2890			
L20200E 6350N	201	202	1190	5 0.02		23	860	144	0.03	< 2	1	30 < 0.01	< 10	< 10	33	< 10	172	2040			
L20300E 6050N	201	202	155	< 1 0.04		8	800	8	0.04	< 2	< 1	11	0.01	< 10	< 10	20	< 10	116	1520		
L20300E 6100N	201	202	160	1 0.03		8	930	18	0.04	< 2	< 1	11	0.01	< 10	< 10	26	< 10	58	1900		
L20300E 6150N	201	202	375	1 0.03		8	550	28	0.03	< 2	1	10 < 0.01	< 10	< 10	18	< 10	44	2020			
L20300E 6200N	201	202	540	1 < 0.01		52	2410	176	0.53	< 2	6	277 < 0.01	< 10	< 10	49	< 10	426	3210			
L20600E 5650N	201	202	180	3 < 0.01		19	740	68	0.04	< 2	3	21 < 0.01	< 10	< 10	28	< 10	298	6830			
L20600E 5700N	201	202	1000	5 < 0.01		43	800	68	0.04	< 2	5	24 < 0.01	< 10	< 10	31	< 10	300	7710			
L20600E 5750N	201	202	770	4 < 0.01		44	540	94	0.10	4	1	280 < 0.01	< 10	< 10	19	< 10	202	6910			
L20600E 5800N	201	202	595	< 1 < 0.01		25	360	72	0.05	< 2	1	76 < 0.01	< 10	< 10	18	< 10	32	3750			
L20600E 5850N	201	202	770	< 1 < 0.01		13	580	36	0.01	< 2	< 1	107 < 0.01	< 10	< 10	16	< 10	50	1590			
L20600E 5900N	201	202	525	1 < 0.01		37	770	68	0.04	< 2	1	119 < 0.01	< 10	< 10	23	< 10	380	5660			
L20600E 5950N	201	202	2040	< 1 < 0.01		26	490	16 < 0.01	< 2	< 1	179 < 0.01	< 10	< 10	10	8	< 10	74	2010			
L20600E 6000N	201	202	2450	< 1 < 0.01		21	1570	36	0.02	< 2	< 1	209 < 0.01	< 10	< 10	19	< 10	94	3230			
L20600E 6050N	201	202	1375	< 1 < 0.01		15	710	56 < 0.01	2	< 1	160 < 0.01	< 10	< 10	< 10	11	< 10	72	2590			
L20600E 6100N	201	202	1245	< 1 < 0.01		19	660	58	0.02	< 2	< 1	105 < 0.01	< 10	10	16	< 10	90	3590			
L20900E 5650N	201	202	40	54 < 0.01		21	950	72	0.10	2	< 1	77 < 0.01	< 10	< 10	56	< 10	102	9430			
L20900E 5700N	201	202	110	7 < 0.01		36	1090	40	0.15	< 2	1	115 < 0.01	< 10	< 10	24	< 10	190	8340			
L20900E 5750N	201	202	565	< 1 < 0.01		13	180	48	0.03	< 2	< 1	104 < 0.01	< 10	< 10	14	< 10	48	3010			
L20900E 5800N	201	202	440	< 1 < 0.01		20	690	40	0.01	< 2	3	113 < 0.01	< 10	< 10	16	< 10	32	1210			
L20900E 5850N	201	202	640	1 < 0.01		27	1180	24	0.03	< 2	3	318 < 0.01	< 10	< 10	15	< 10	38	1320			
L20900E 5900N	201	202	550	< 1 < 0.01		10	590	24	0.03	< 2	< 1	84 < 0.01	< 10	< 10	6	< 10	26	2240			
L20900E 5950N	201	202	575	< 1 < 0.01		9	470	20	0.02	2	< 1	94 < 0.01	< 10	< 10	7	< 10	32	1900			

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 4-A
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Certificate Date: 16-SEP-1999
Invoice No. : 19925658
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
L20900E 6000N	201 202	< 5	< 0.2	0.18	16	< 10	1540	< 0.5	< 2	14.80	< 0.5	4	3	3	0.66	< 10	< 1	0.01	< 10	9.24
L20900E 6050N	201 202	< 5	< 0.2	0.13	< 2	< 10	80	< 0.5	< 2	>15.00	< 0.5	3	5	1	0.62	< 10	< 1	0.01	< 10	11.05
L20900E 6100N	201 202	< 5	< 0.2	0.22	< 2	< 10	100	< 0.5	< 2	>15.00	< 0.5	1	4	< 1	0.63	< 10	1	0.01	< 10	9.79
L21200E 5550N	201 202	< 5	< 0.2	0.61	10	< 10	80	< 0.5	< 2	0.19	< 0.5	2	5	9	1.95	< 10	< 1	0.05	40	0.14
L21200E 5600N	201 202	< 5	0.2	0.65	22	< 10	660	< 0.5	< 2	0.03	< 0.5	2	4	11	2.35	< 10	< 1	0.05	40	0.04
L21200E 5650N	201 202	< 5	< 0.2	1.16	20	< 10	110	< 0.5	< 2	0.07	< 0.5	6	43	13	3.71	< 10	< 1	0.11	40	0.27
L21200E 5700N	201 202	< 5	< 0.2	0.64	14	< 10	60	< 0.5	< 2	0.01	< 0.5	4	7	15	2.54	< 10	< 1	0.05	40	0.04
L21200E 5750N	201 202	< 5	< 0.2	0.72	18	< 10	360	< 0.5	< 2	0.26	< 0.5	5	12	13	2.61	< 10	< 1	0.06	30	0.11
L21200E 5800N	201 202	< 5	< 0.2	1.02	14	< 10	170	< 0.5	< 2	0.55	< 0.5	7	20	11	4.09	< 10	< 1	0.04	60	0.37
L21200E 5850N	201 202	< 5	0.4	0.46	14	< 10	650	< 0.5	< 2	0.28	< 0.5	5	6	13	2.04	< 10	< 1	0.05	10	0.09
L21200E 5900N	201 202	< 5	< 0.2	0.65	18	< 10	280	< 0.5	< 2	0.30	< 0.5	7	16	18	5.47	< 10	< 1	0.06	120	0.20
L21200E 5950N	201 202	10	< 0.2	0.76	20	< 10	650	< 0.5	< 2	0.37	< 0.5	6	13	13	4.18	< 10	< 1	0.04	140	0.16
L21200E 6000N	201 202	< 5	< 0.2	0.90	14	< 10	210	< 0.5	< 2	0.45	0.5	7	22	12	3.74	< 10	< 1	0.06	80	0.28
L21200E 6050N	201 202	< 5	0.2	0.82	14	< 10	560	< 0.5	< 2	2.54	0.5	5	14	13	3.28	< 10	1	0.05	60	1.37

CERTIFICATION:

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

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Total Pages : 4
Certificate Date: 16-SEP-1999
Invoice No. : 19925658
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9925658

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	Ba ppm	XRF ppm
L20900E 6000N	201 202	605	< 1	< 0.01	8	370	22	0.05	2	< 1	108	< 0.01	< 10	10	5	< 10	32	3740	
L20900E 6050N	201 202	390	< 1	< 0.01	8	220	20	< 0.01	< 2	< 1	115	< 0.01	< 10	10	5	< 10	50	1910	
L20900E 6100N	201 202	540	< 1	< 0.01	6	300	8	0.01	< 2	< 1	109	< 0.01	< 10	< 10	7	< 10	32	870	
L21200E 5550N	201 202	125	10	0.01	8	370	8	0.03	< 2	< 1	5	< 0.01	< 10	< 10	40	< 10	62	1530	
L21200E 5600N	201 202	270	11	0.01	9	510	16	0.07	< 2	< 1	8	< 0.01	< 10	< 10	42	< 10	68	1670	
L21200E 5650N	201 202	525	8	< 0.01	26	800	20	0.05	< 2	1	15	0.04	< 10	< 10	57	< 10	90	1680	
L21200E 5700N	201 202	120	8	< 0.01	15	620	16	0.04	< 2	< 1	9	< 0.01	< 10	< 10	46	< 10	102	1720	
L21200E 5750N	201 202	385	6	< 0.01	18	1170	24	0.04	< 2	< 1	17	< 0.01	< 10	< 10	27	< 10	90	2210	
L21200E 5800N	201 202	685	5	< 0.01	25	810	32	0.03	< 2	3	12	< 0.01	< 10	< 10	28	< 10	102	1830	
L21200E 5850N	201 202	235	7	0.01	26	680	42	0.06	< 2	1	38	< 0.01	< 10	< 10	22	< 10	146	4300	
L21200E 5900N	201 202	515	14	< 0.01	19	800	48	0.03	< 2	1	19	< 0.01	< 10	< 10	16	< 10	174	1750	
L21200E 5950N	201 202	1100	9	< 0.01	17	770	56	0.04	< 2	1	22	< 0.01	< 10	< 10	18	< 10	130	2780	
L21200E 6000N	201 202	850	5	< 0.01	20	880	36	0.04	< 2	3	14	< 0.01	< 10	< 10	27	< 10	182	2540	
L21200E 6050N	201 202	600	6	< 0.01	19	740	36	0.06	< 2	1	32	< 0.01	< 10	< 10	22	< 10	180	2370	

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9928589

Comments: ATTN: JASON WEBER

CERTIFICATE

A9928589

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	8	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	7	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project : STARR
Comments: ATTN: JASON WEBER

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CERTIFICATE OF ANALYSIS

A9928589

SAMPLE	PREP CODE	Pb %	Zn %								
113317	212 --	-----	3.03								
113319	212 --	-----	4.79								
113320	212 --	-----	4.87								
113323	212 --	-----	2.50								
113324	212 --	-----	1.73								
113325	212 --	-----	3.46								
113327	212 --	-----	5.97								
113328	212 --	1.68	-----								

OVERLIMITS from A9925659

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9928590

Comments: ATTN: JASON WEBER

CERTIFICATE

A9928590

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	6	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	6	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
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V6C 1G8

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CERTIFICATE OF ANALYSIS

A9928590

SAMPLE	PREP CODE	Zn %									
113330	212 --	1.62									
113331	212 --	4.08									
113332	212 --	1.41									
113333	212 --	4.90									
459571	212 --	2.00									
459629	212 --	2.14									

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9928591

Comments: ATTN: JASON WEBER

CERTIFICATE

A9928591

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	1	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0



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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 1
Total Pages : 1
Certificate Date: 15-SEP-1999
Invoice No. : 19928591
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9928591

SAMPLE	PREP		Zn %									
	CODE											
124597	212	--	11.55									

CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9929170

Comments: ATTN: JASON WEBER

CERTIFICATE

A9929170

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O.#: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	2	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
3551	2	Ba %: XRF	XRF	0.01	100.0



212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

Project : STARR
Comments: ATTN: JASON WEBER

Page Number : 1
Total Pages : 1
Certificate Date: 28-SEP-1999
Invoice No. : I9929170
P.O. Number : PTH99-02
Account : EIA

A9929170

CERTIFICATION:

OVERLIMITS from A9925659



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

A9929171

Comments: ATTN: JASON WEBER

CERTIFICATE

A9929171

(EIA) - EQUITY ENGINEERING LTD.

Project: STARR
P.O. #: PTH99-02

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-SEP-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	1	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
3551	1	Ba %: XRF	XRF	0.01	100.0



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: EQUITY ENGINEERING LTD.

700 - 700 W. PENDER ST.
VANCOUVER, BC
V6C 1G8

Project: STARR
Comments: ATTN: JASON WEBER

Page Number : 1
Total Pages : 1
Certificate Date: 28-SEP-1999
Invoice No. : 19929171
P.O. Number : PTH99-02
Account : EIA

CERTIFICATE OF ANALYSIS

A9929171

SAMPLE	PREP CODE		Ba XRF %									
459585	212	--	47.6									

OVERLIMITS from A9925724

CERTIFICATION: _____

APPENDIX H

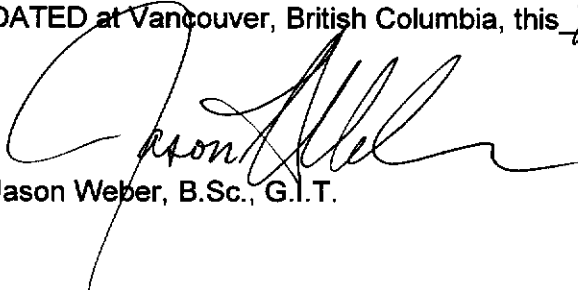
GEOLOGIST'S CERTIFICATE

GEOLOGIST'S CERTIFICATE

I, Jason Weber of Suite #7b 1385 West 15th Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geologist with offices at Suite 700, 700 West Pender Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geology.
3. THAT I am a Geoscientist-in-Training registered in good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
4. THAT this report is based on property work I conducted during July and August, 1999, and government publications and assessment reports filed with the Yukon Territory.

DATED at Vancouver, British Columbia, this 29th day of November, 1999.



Jason Weber, B.Sc., G.I.T.

PETRA RESOURCE CORP.

**GEOLOGICAL, GEOCHEMICAL AND
GEOPHYSICAL REPORT ON THE
STARR PROPERTY**

094 048 VOLUME II - FIGURES

Watson Lake Mining District, Yukon Territory
NTS 105G/5,6,12; 105F/8,9
61°27' North Latitude 131°43' West Longitude

Prepared for

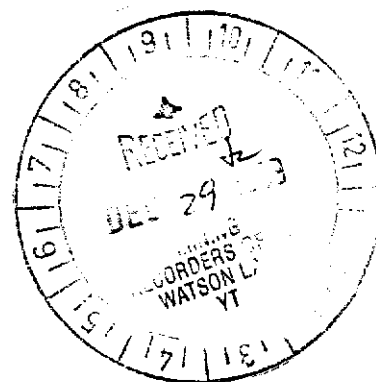
PETRA RESOURCE CORP.
1550 - 409 Granville Street
Vancouver, B.C., Canada
V6C 1T2

Prepared by

Jason S. Weber, B.Sc., G.I.T.

EQUITY ENGINEERING LTD.
700-700 West Pender Street
Vancouver, B.C., Canada
V6C 1G8

November 1999

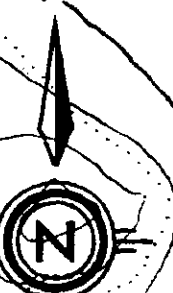


PETRA RESOURCE CORP.

**STARR PROJECT
CLAIM MAP_{094 048}**

	Date	NOV. 1999	Scale	1:50,000	FIGURE
	UTM Zone	8/9	Mining District	WATSON LAKE	2
	N.T.S.	105 6/5, 6, 12 105 F/8, 9	State/Province	YUKON	

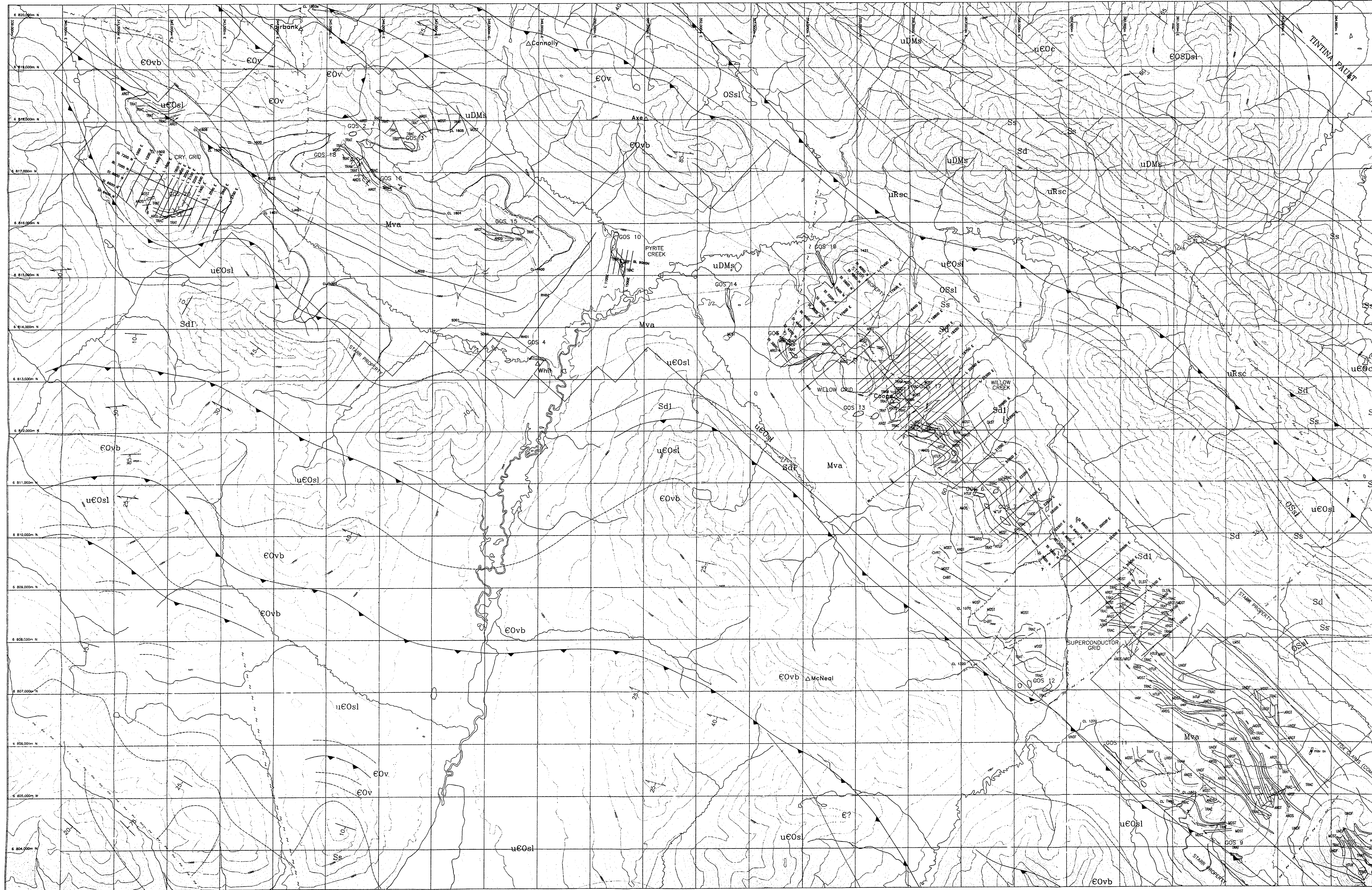
0 1 2 3 4 5
KILOMETRES

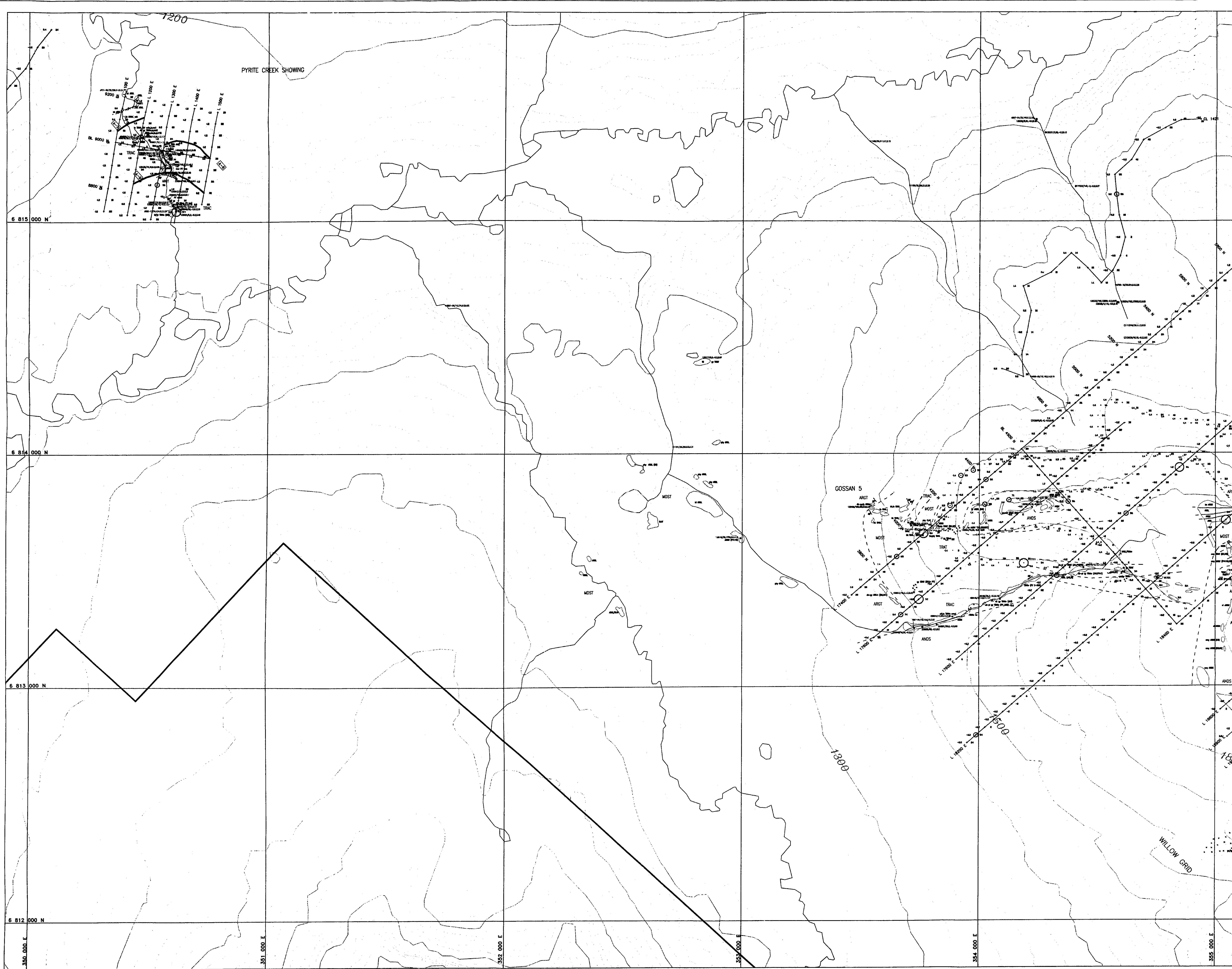


CRY/DEN/GRY/
HOWL/SLY/BED
BLOCK

WOLF
DISCOVERY

PUP
BLOCK





INDEX MAP

LITHOLOGICAL LEGEND

FELSIC VOLCANIC UNITS

TRAC: Trachyte flows. Generally gray to buff in color, weathering buff to orange-brown. Contains rounded fragments of quartz, feldspar, and biotite. (C) matrix of trachyte is uncrystallized flow. Commonly contains rounded fragments of quartz, feldspar, and biotite. Commonly contains rounded fragments of quartz, feldspar, and biotite. (C) matrix of trachyte is uncrystallized flow. Commonly contains rounded fragments of quartz, feldspar, and biotite.

TRAT: Undifferentiated trachyte. Buff to light gray, fine-grained, lacking crystalline. Buff to light gray, fine-grained, lacking crystalline. Buff to light gray, fine-grained, lacking crystalline.

TRAM: Trachyte with buff, very fine-grained, glassy, occasionally vesicular. Buff to light gray, fine-grained, lacking crystalline. Buff to light gray, fine-grained, lacking crystalline.

MATIC VOLCANIC UNITS

ANDS: Andesite. Buff to brown, weathering. Medium to dark green matrix. Buff to brown, weathering. Medium to dark green matrix. Buff to brown, weathering. Medium to dark green matrix.

ANDT: Undifferentiated andesite. Dark brown to olive green in color. Commonly contains rounded fragments of quartz, feldspar, and biotite. Dark brown to olive green in color. Commonly contains rounded fragments of quartz, feldspar, and biotite.

SEDIMENTARY UNITS

ARGT: Argillite. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering.

HTUR: Heterolithic. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering. Buff to brown, weathering.

OUTCROP DESCRIPTIVE CODES

UNITS

TRAC: Trachyte
TRAT: Trachyte
TRAM: Trachyte
ANDS: Andesite
ANDT: Andesite
ARGT: Argillite
HTUR: Heterolithic

MODIFIERS

1: 100%
2: 200%
3: 300%
4: 400%
5: 500%
6: 600%
7: 700%
8: 800%
9: 900%

COLORS

1: 100%
2: 200%
3: 300%
4: 400%
5: 500%
6: 600%
7: 700%
8: 800%
9: 900%

STRUCTURAL SYMBOLS

1: 100%
2: 200%
3: 300%
4: 400%
5: 500%
6: 600%
7: 700%
8: 800%
9: 900%

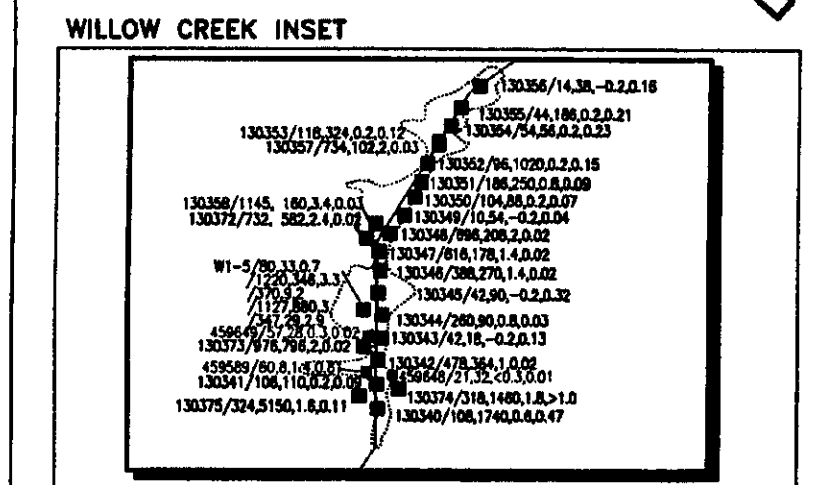
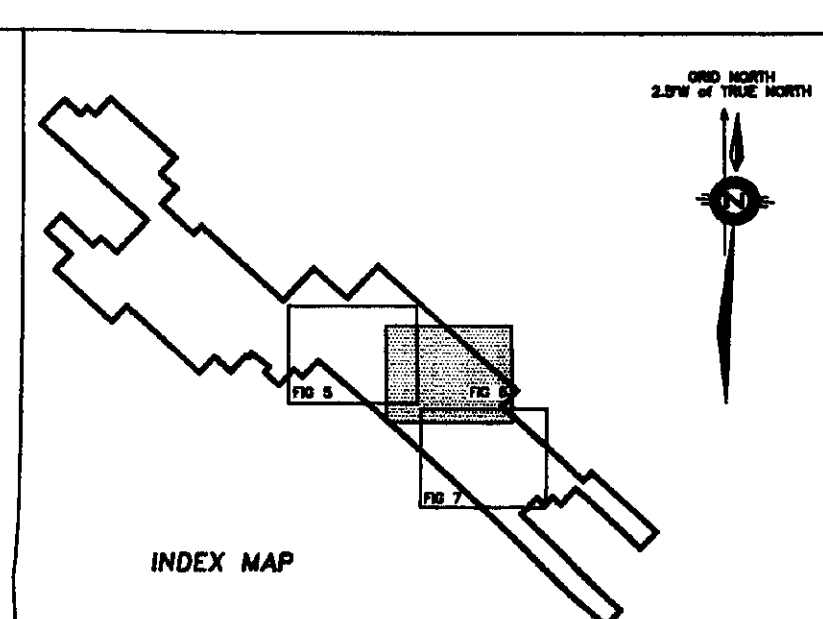
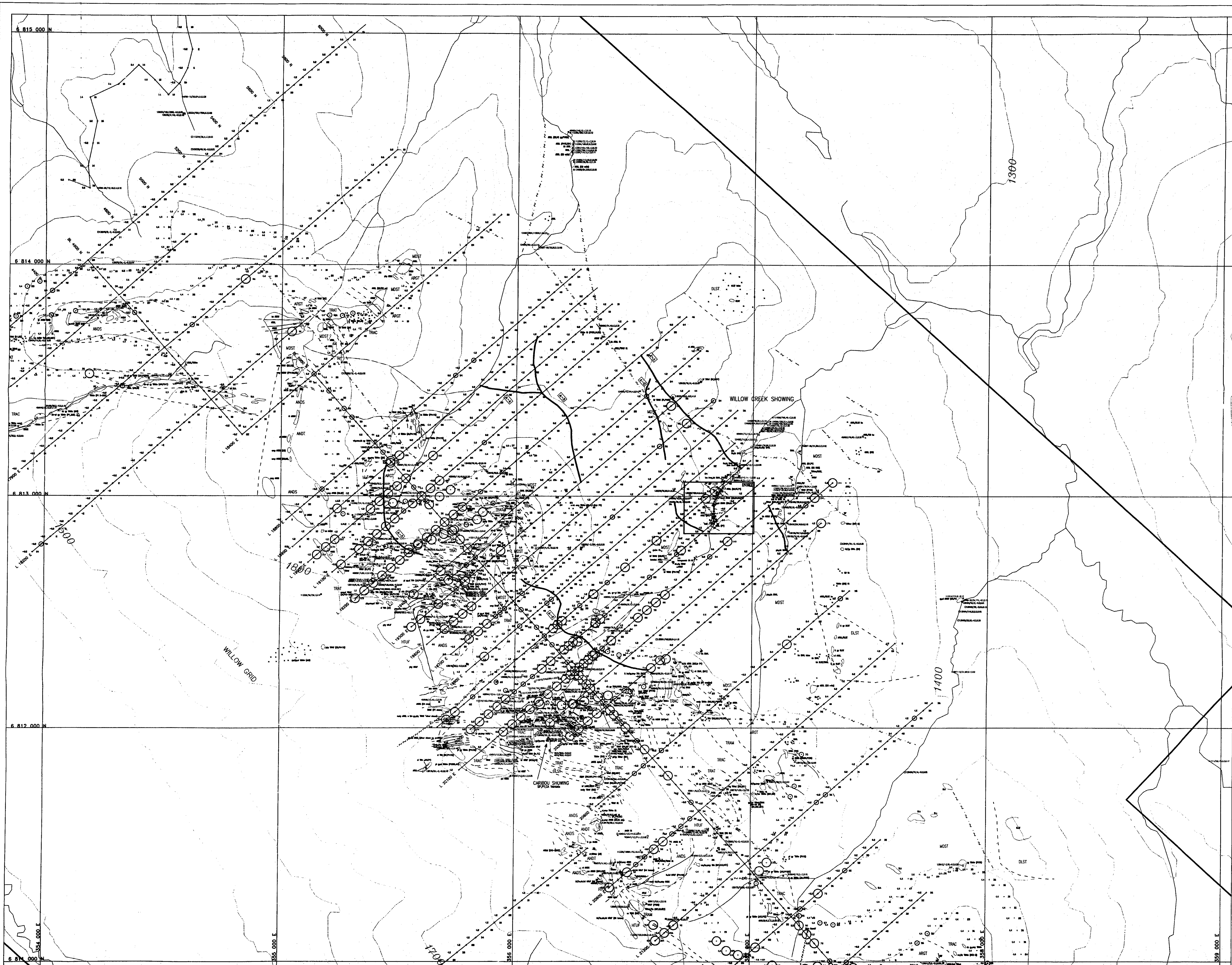
PETRA RESOURCE CORP

STARR PROJECT

GEOLOGY, GEOCHEMISTRY & GEOPHYSICS COMPILATION

Pb / Ag SOIL GEOCHEMISTRY

Scale: 1:5,000
Date: November 1999
Map: 100%
Zone: 8
Sheet: 100%
Scale: 1:5,000
Date: November 1999
Map: 100%
Zone: 8
Sheet: 100%



LITHOLOGICAL LEGEND

FELSIC VOLCANIC UNITS

TRAC Trachyte flows. Usually gray to buff in colour, weathering buff to orange-brown, prominent columnar jointing, often with a thin, dark, siliceous crust. Commonly pyroclastic. Characteristic identity features are (1) and (2) in the accompanying photographs.

TRAT Unfractionated trachyte tuff. Commonly gray, very fine grained, blocky, microporous, flat to irregularly bedded. Columnar jointing is common. The tuff is usually covered by a thin, dark, siliceous crust. The tuff can be buff, very buff and very siliceous.

TRAM Magma brecciated trachyte and tuff. Trachyte ranges from very fine-grained to fine-grained, microporous, blocky to irregularly bedded. The tuff is usually covered by a thin, dark, siliceous crust.

MAFIC VOLCANIC UNITS

MAF Mafic volcanic flows. Orange to brown, weathering brown. Mafic to dark gray mafic volcanic flows. Commonly to locally microporous, blocky, relatively columnar jointed.

AMST Magma brecciated mafic tuff. Mafic tuff to also gray in colour. Commonly and locally highly agglutinated to silty.

SEDIMENTARY UNITS

ASST Sandstone and siltstone. Unfractionated ash/sandstone matrix with large and small, irregularly bedded, brown massive pyroclastic fragments. Commonly greenish grey. May be microporous.

HTUF Heavy tuff. Buff, Play/Purple buff weathering sandstone matrix. Commonly exhibiting columnar jointing. May be microporous. Commonly greenish grey. May be microporous. Ash/sandstone matrix. HTUF - fragments are essentially large (0.5-10 m) trachyte blocks.

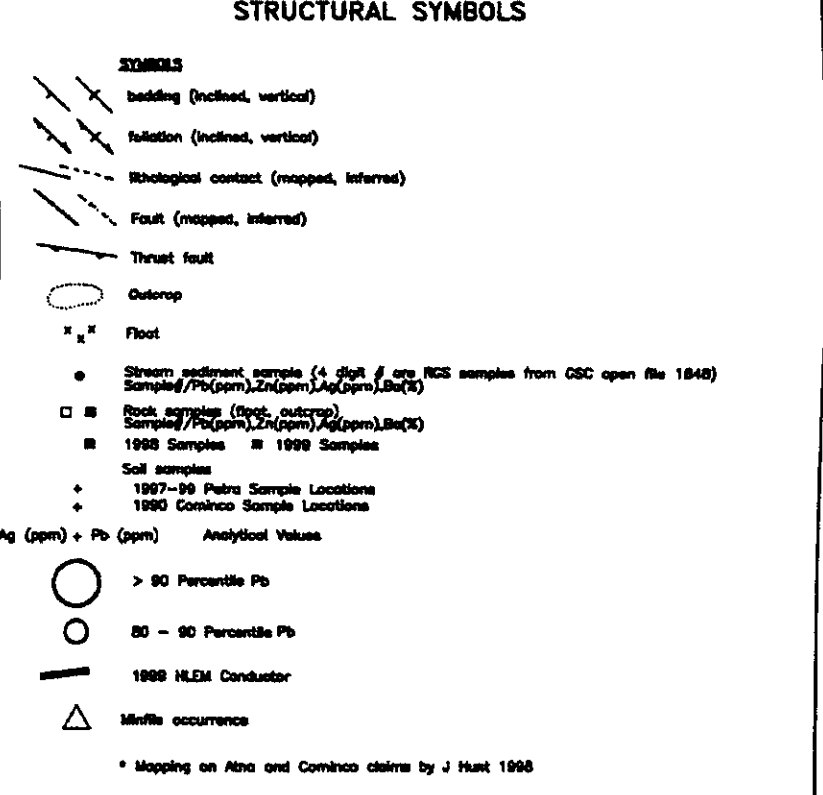
GYST Gypsiferous and/or silty.

MOST Sand, siltstone and sandstone, including nodules, silty, phyllite, silty, silty and slate.

CHST Chert. Thin to very thin, dark, columnar jointed, blocky, buff to siliceous in colour.

LSST Gray to buff weathering silty Brecciated.

DLST Buff to brown weathering sandstone. Commonly bedded gray/buff, massive, blocky.

[illegible]

094 048

scale: 1:5,000
0 50 100
meters

PETRA RESOURCE CORP

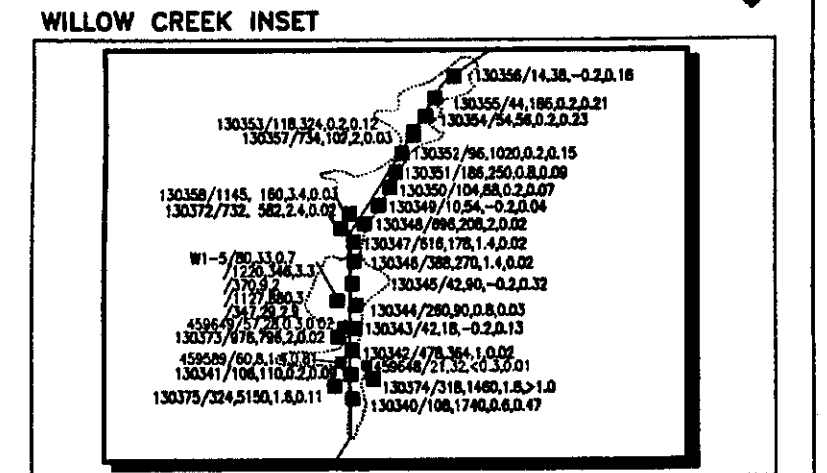
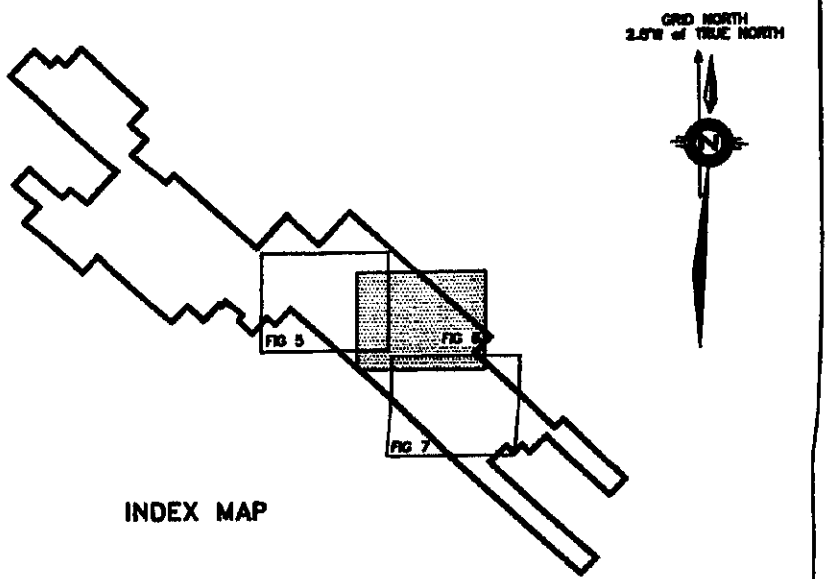
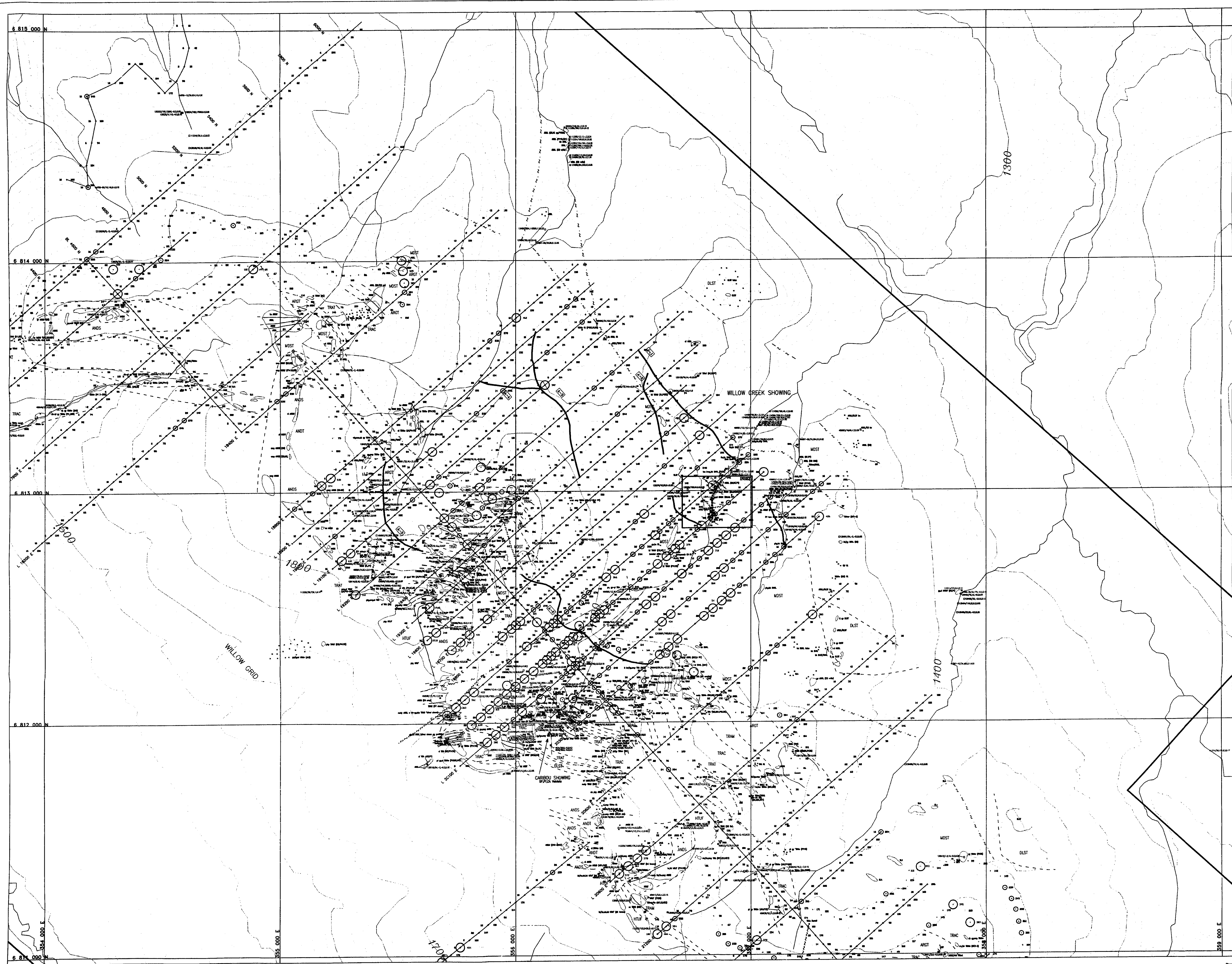
STARR PROJECT

**GEOLOGY, GEOCHEMISTRY
& GEOPHYSICS COMPILATION**

Pb / Ag SOIL GEOCHEMISTRY

Date November 1999	Scale 1:5,000	Figure
7424 Zone N4027 - Zone 8 1056/5,6,12 F/8,9 Mining District Watson Lake Yukon Territory		

6a

[illegible]

OUTCROP DESCRIPTIVE CODES

UNITS

ANDL = mafic volcanics
ARGZ = argillite
ARGZL = talusaceous argillite
CHRT = chert
GLST = glauconite
GYSC = gypsocrite
LUST = limestone
QZ-MS SL = quartz-carbonate schist
SLAL = slate
SLT = shale

AC - Antenna
 BA - Barbs
 B - Body
 CV - Caudal
 P - Pectoral
 S - Snout
 ST - Squamation
 T - Tail
 OG - Operculum
 OS - Ostracum

MODIFIERS
 1 - Anterior
 2 - Anteromedial
 3 - Anterolateral
 4 - Anterior-lateral
 5 - Anterior-lateral
 6 - Anterior-lateral
 7 - Anterior-lateral
 8 - Anterior-lateral
 9 - Anterior-lateral
 10 - Anterior-lateral
 11 - Anterior-lateral
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 97 - Anterior-lateral
 98 - Anterior-lateral
 99 - Anterior-lateral
 100 - Anterior-lateral

STRUCTURAL SYMBOLS

SCHEMES

- bedding (inclined, vertical)
- foliation (inclined, vertical)
- slatonic contact (napped, inferred)
- Fault (napped, inferred)
- Thrust fault
- Outcrop
- Peak

- Stream network (single & pair of lines, RCS originates from CSC upon the 1000)
- Dark swampy (dark, swampy)
- 1968 Survey (1968 Survey)
- 1988 Survey (1988 Survey)
- Sub contour
- 1987-88 Photo Sample Locations
- 1992 Corneen Sample Locations

the (grey) = 2% (grey) = 2% (grey) = 2%

- > 90 Percentile Zn
- 80 - 90 Percentile Zn
- 1988 HLM Conductor
- shale occurrence

* Mapping on Atlas and Corneen sheets by J. Hunt 1988

0 50 100 150 200

scale: 1:5,000

PETRA RESOURCE CORP STARR PROJECT GEOLOGY, GEOCHEMISTRY & GEOPHYSICS COMPILATION Zn / As SOIL GEOCHEMISTRY			
	Date November 1999 UTM Zone 18NUT - Zone 8 45°S 105°E 15°E 10°E	Scale 1:5,000 Mining District Watson Lake State, Province, Territory Yukon	Figure 6b

