ARIS SUMMARY SHEET

District Geologist, Kamloops Off Confidential: 90.02.17

ASSESSMENT REPORT 18736 MINING DIVISION: Vernon

PROPERTY: Quartz Reef
LOCATION: LAT 50 13 00 LONG 119 28 30
UTM 11 5565433 323426
NTS 082L03W
CLAIM(S): Quartz Reef,Bob 1-6
OPERATOR(S): Keefer Res.
AUTHOR(S): Yorke-Hardy, R.W.
REPORT YEAR: 1989, 64 Pages
KEYWORDS: Permian,Tertiary,Cache Creek Group,Kamloops Group,Arenites,Tuffs Greenstones,Basalt,Andesite
WORK DONE: Geophysical,Physical
EMGR 12.2 km;VLF
Map(s) - 4; Scale(s) - 1:5000
LINE 14.0 km
MAGG 4.8 km
Map(s) - 1; Scale(s) - 1:5000
RELATED REPORTS: 14308

"GEOPHYSICAL REPORT"

"VLF-EM AND MAGNETOMETER SURVEYS"

- on the -

"QUARTZ REEF PROPERTY"

Vernon Mining Division
Province of British Columbia

- for -

KEEFER RESOURCES INC.,
Ste. 301 - 701 West Georgia St.,
P.O. Box 10121, Pacific Centre,
Vancouver, B. C. V7Y 1C4

Location:
50° 13' N; 119° 28' 30"W.
N.T.S. 82L/3W
18 Km. N.N.W. of Vernon, B. C.

Prepared By:
Y-H TECHNICAL SERVICES LTD.,
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R. W. Yorke-Hardy, A.Sc.T.
May 15, 1989

Table of Contents

Table of Contents

(continued)

List of Illustrations

Appendices

SUMMARY:

In February of 1989 an assessment work program comprised of grid establishment, chain and compass survey control, a 12.21 kms. VLF-EM survey (readings from two stations; Seattle and Annapolis) and a 4.83 kms. 'test' magnetometer survey was conducted on the Quartz Reef property. The property is located on the west side of Okanagan Lake, immediately south of the lower reaches of Whiteman Creek.

The object of the program was to detect geologic structure and/or lithology underlying the property; and to thereby assist in mapping property geology.

The primary target on the property is gold/silver mineralization related to epithermal alteration zones occuring in and adjacent to feldspar porphyry dykes and associated shear/fault structures.

This report has been compiled to meet assessment requirements and is intended only for that purpose.

CONCLUSIONS AND RECOMMENDATIONS:

The program conducted was successful in determining that:

1. The mineral claims comprising the property form a contiguous group with no apparent internal fractions (subject to the accuracy limitations of chain and compass). The claim map (Figure 2) and the compilation map (Map #4) show the configuration and location of the mineral claims. The claim map as available at the mining records office in Vernon does not accurately show the claims as they exist on the ground and should be changed.

2. The magnetometer survey as conducted appears to have been successful in detecting feldspar porphyry dykes and/or related structures. In the vicinity of the known mineralized showings there is a close spacial relationship between feldspar porphyry dykes and epithermal alteration and mineralization (it remains uncertain whether there is a direct genetic relationship).

Page ii...

3. The VLF-EM surveys were successful in detecting numerous anomalous zones which appear to relate to structure and/or feldspar porphyry dykes and possibly to additional zones of epithermal alteration/mineralization. The VLF-EM surveys also appear to have determined that at least two cross-cutting fault zones exist on the property.

These north-westerly to north-easterly trending shear/fault structures and dyke/shear systems should be carefully and systematically checked for mineralized zones similar to those existing further east on this property and on the inset White claim (particularly Zones A, B, C and F - for details see 1985 report by F.M. Smith, P. Eng.).

It is concluded therein by Smith that "the present surface" (of the property) "is above" (or possibly distal along strike from??) "the precious metal horizon and so offers a good potential of (for) gold and silver values increasing (occuring) at shallow depth".

These systems could host mineralization similar to that related to the epithermal mineralization on the Brett claims located ~15 kms. further upsteam on Whiteman Creek; presently being explored by the Corona/Huntington joint venture group.

On the Brett property mineralization is located, at least in part, within similarly oriented fault/shear structures and extends outward into favorable cross-cutting lithologies.

It is therefore recommended that:

1. A complete and detailed magnetometer survey be conducted on the property. Line spacings should not exceed 60 meters (station spacing 30 m. or less) in order to allow accurate contouring and interpretation. The survey should be extended north and east to cover the known mineralized areas; particularly over the area covered by the 1985 I.P./Resistivity survey and the Hilltop Zone as described by Smith (1985).

Page iii...

2. The VLF-EM survey should also be extended and were necessary interspaced to cover the same ground. Both Seattle and Annapolis stations should be read.

3. Detailed geological mapping should be conducted over the entire property. In particular, mapping and sampling should be conducted in anomalous areas to assist the interpretation of the geophysical surveys.

4. At least some backhoe trenching will be required to facilitate geological mapping and sampling;

5. A test geochem survey should be conducted. The samples should not be screened; but instead the whole sample should be pulverized. Analyze samples for gold in addition to at least six other elements. Gold analyses must be done by fire assay/AA techniques, not strictly by acid digestion. A minimum of six I.C.P. analyses (run for Ag, Fl, Mn, Bi, As & Sb) should also be conducted. Such a program should be successful in detecting zones of favourable trace element mineralization and possibly gold/silver mineralization if any occurs near surface.

6. Upon deliniating specific target areas, a detailed I.P./Resistivity survey (minimum 6 levels at 30 meter separations) should be conducted in order to define drill targets.

7. Extreme care must be taken when drilling to ensure maximum core recovery; epithermal veins are commonly comprised in part of "soft" minerals which can be easily ground. Use only large diameter (NQ or larger) equipment and face discharge bits.

INTRODUCTION:

During the period from February 3, 1989 to February 17, 1989 an exploration program was conducted on Bob #1 to #6 and the Quartz Reef mineral claims which forms part of the Whiteman Group of claims, REEF PROPERTY owned by Keefer Resources Inc., a Vancouver, British Columbia based resource development company. This work program was performed by, or under the direction of Y-H Technical Services Ltd., Vernon, B.C.. This report has been prepared for assessment work purposes in order to qualify the Statement of Work filed on February 17, 1989 (M.R. 1000034).

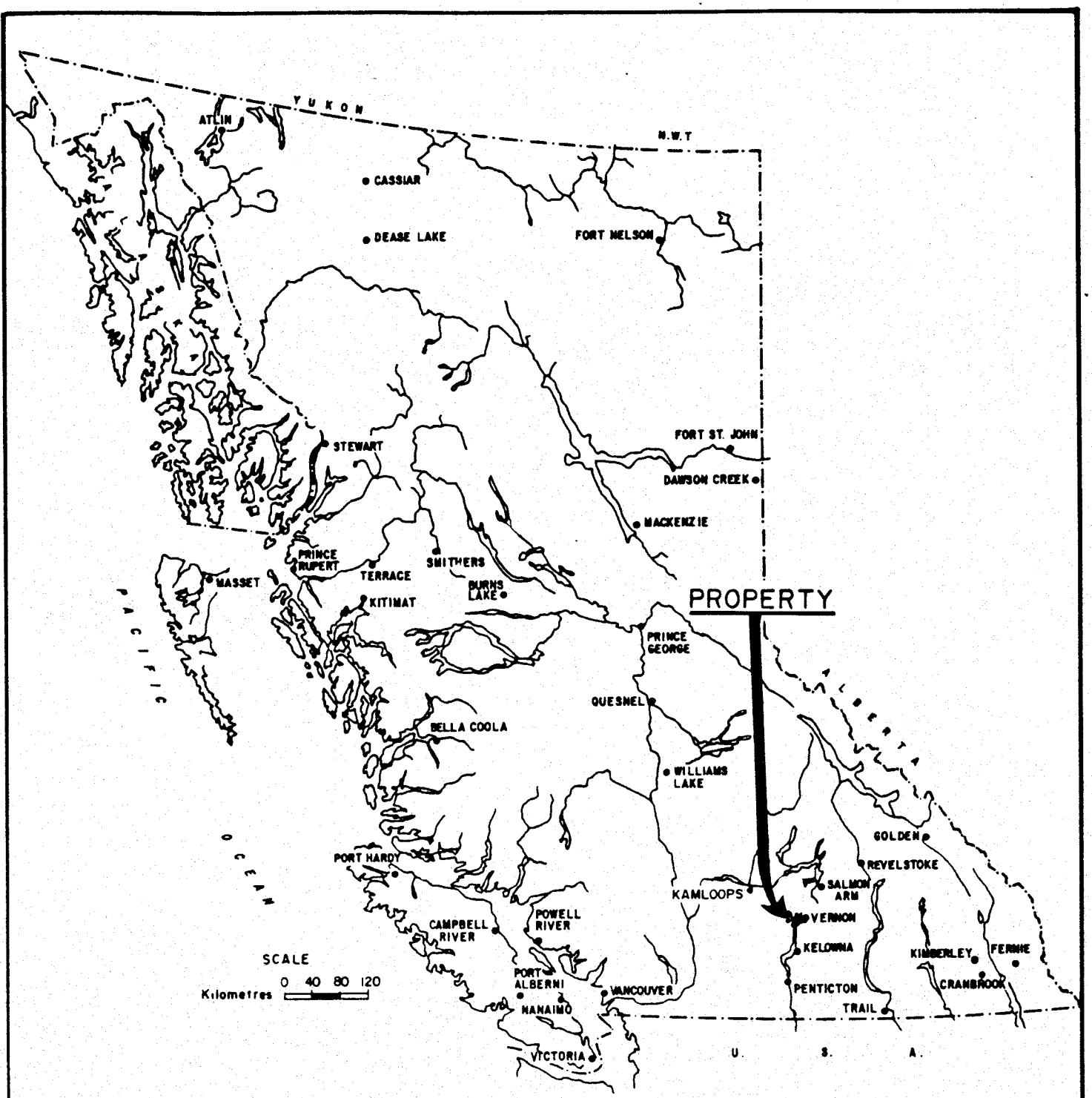
During this program a total of ~14 kilometers of grid was established over which ~12.2 kms. of VLF-EM and 4.8 kms of magnetic surveys were conducted. Additional chain and compass work was done to establish controls for a property base map relative to the LCP of the Quartz Reef mineral claim.

The objectives of this program were to:

1. Determine the orientation of geologic lithological and/or structural trends occuring on the property as might be deliniated by VLF-EM and magnetometer surveys;
2. Locate VLF-EM conductors which might relate to alteration and/or mineralization and to determing targets for further exploration;
3. Locate magnetic anomalies that might relate to alteration and/or mineralization and to determining targets for further exploration;
4. To establish a ground control survey and base map of this portion of the property.

The program as conducted was successful in providing indications of the major structural controls on the property and in so doing has provided target areas for further exploration work. The claim locations were found to form a contiguous block as shown on the claim map herein contained rather than as shown on the current government issued claim maps.

Page 2...



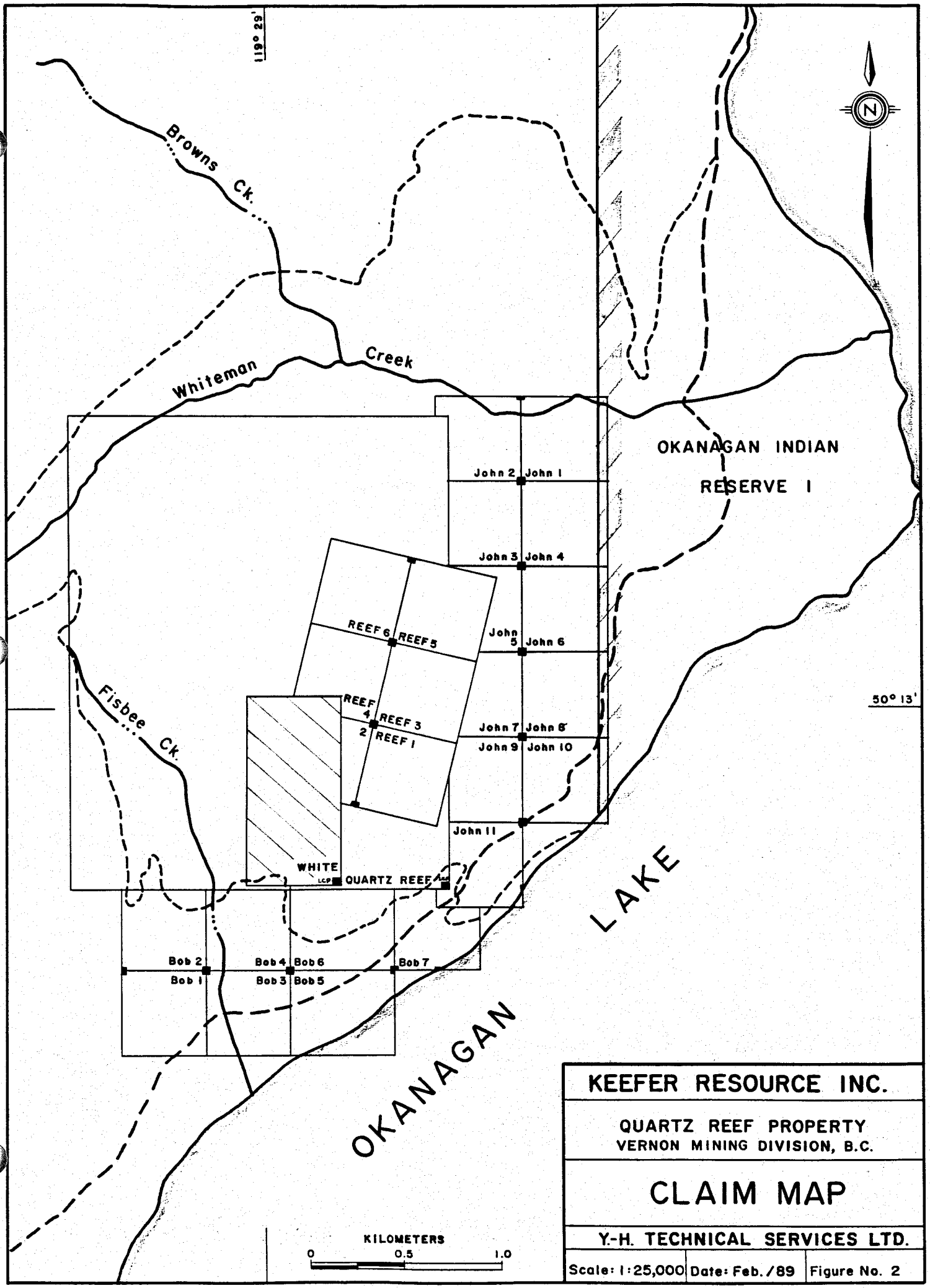
KEEFER RESOURCE INC.		
QUARTZ REEF PROPERTY VERNON MINING DIVISION, B.C.		
LOCATION MAP		
Y.-H. TECHNICAL SERVICES LTD.		
DATE: Feb / 89	SCALE: 1:8,000,000	FIGURE No. 1

PROPERTY:

The property consists of one (1) 20 unit four-post, modified grid claim and twenty-four (24) two-post claims. However, a two (2) unit modified grid claim (the White mineral claim), held by other owners; holds the mineral rights to a central part of the four-post claim and part of several two-post claims; forming part of the group. These claims form a contiguous unit and have been grouped (Whiteman Group, dated February 17, 1989) as provided for under Section 28 of the mineral act.

Claim Name	Record No.	Expiry Date
Quartz Reef (20 units)	1691	Feb. 20, 1990
Reef 1 (1 unit)	1542	July 8, 1989
Reef 2 (1 unit)	1543	July 8, 1989
Reef 3 (1 unit)	1544	July 8, 1989
Reef 4 (1 unit)	1545	July 8, 1989
Reef 5 (1 unit)	1546	July 8, 1989
Reef 6 (1 unit)	1547	July 8, 1989
John 1 (1 unit)	2144	July 5, 1990
John 2 (1 unit)	2145	July 5, 1990
John 3 (1 unit)	2779	July 5, 1990
John 4 (1 unit)	2780	July 5, 1990
John 5 (1 unit)	2781	July 5, 1990
John 6 (1 unit)	2782	July 5, 1990
John 7 (1 unit)	2783	July 5, 1990
John 8 (1 unit)	2784	July 5, 1990
John 9 (1 unit)	2785	July 5, 1990
John 10 (1 unit)	2786	July 5, 1990
John 11 (1 unit)	2787	July 5, 1990
Bob 1 (1 unit)	2788	July 5, 1990
Bob 2 (1 unit)	2789	July 5, 1990
Bob 3 (1 unit)	2790	July 5, 1990
Bob 4 (1 unit)	2791	July 5, 1990
Bob 5 (1 unit)	2792	July 5, 1990
Bob 6 (1 unit)	2793	July 5, 1990
Bob 7 (1 unit)	2794	July 5, 1990

Page 3...



KEEFER RESOURCE INC.

QUARTZ REEF PROPERTY
VERNON MINING DIVISION, B.C.

CLAIM MAP

Y-H. TECHNICAL SERVICES LTD.

Scale: 1:25,000	Date: Feb./89	Figure No. 2

The above claims are owned 100% by Keefer Resources Inc..
These claims are all located and recorded in the Vernon Mining Division. The expiry dates shown herein reflect the one years work applied as a result of this program.

It was determined, by chain and compass survey during the program outlined herein, that the location of the Quartz Reef mineral claim (Rec.# 1691) as depicted on the Ministry's claim map is inaccurate and that the apparent open ground between the Quartz Reef claim and the Bob #1 to #7 (Rec.#'s 2788 to 2794 block does not exist.

*NOTE:

The Reef #1 to #6 two post claims will expire as of July 8, 1989 unless assessment work is done and applied thereto.
An application was made to have these claims included in the surrounding claims. This application was not processed because only that portion inside the Quartz Reef claim (a four-post or modified grid claim) would be allowed to be "included" upon the lapsing of Reef #1 to #6; that portion falling inside the John claims would not be "included" into the John claims because they are two-post claims rather than four-post claims.
This seems inequitable and should be challenged, but not at the expense of opening an internal fraction.

Page 4...

LOCATION AND ACCESS:

The Quartz Reef Property is located ~16 Km. W.S.W. of Vernon in the North Okanagan District of British Columbia. Geographic coordinates of the approximate center of the property are 50° 13'N.; 119° 28' 30"W. All these claims are located on map sheet N.T.S. 82L/3W.

The property is readily accessible year round from Westside road ~22 Km. south from the B.C. Hwy. 97 junction near the O'Keefe Ranch some 15 Km. driving distance northwest of Vernon B. C.. The LCP for the Quartz Reef claim is located ~60 m. westerly from the edge of Westside road from the junction with the road to the regional land fill site.

Access within the claim block is limited mainly to four wheel drive traffic and is subject to limited access during the winter months due to snow conditions.

PHYSIOGRAPHY AND VEGETATION:

The property is located on the moderate to steep east sloping hillside immediately west, of the west shore of Okanagan Lake. Elevations range from the lake level of ~340 m. to 850 m. above mean sea level. The slopes above 750 m., the upper reaches of the property, central to the Quartz Reef claim; are relatively gentle. The lower elevations are cut by creek gullies and draws which are locally steep walled and rock bounded. These gullies trend north to northwesterly along regional structural trends and are probably fault/contact bounded.

The climate is semi-arid, typical of the North Okanagan, and is characterized by long, warm summers and short, moderate winters.

The property is covered with moderate to locally dense brush which locally give way to areas of mature to decadant stands of interior douglas fir. Select portions of this ground have been logged in the past.

Page 5...

PROPERTY HISTORY:

Modified after F. Marshall Smith, P. Eng.- 1984.

Prior to 1983 the area now covered by the White and Quartz Reef mineral claims was explored for its fluorite potential; dating back to 1944 when the B.C. Department of Mines conducted a property examination. Intermittent exploration comprised of surface trenching and short drill holes was conducted by several companies including Placer Development Ltd. and Cerro Mining, who in 1971 conducted a geochemical survey for fluoride on behalf of Kelver Mines.

In 1983 John DeLatre, geologist, re-staked the Reef claims and conducted a preliminary geological evaluation and sampling program for epithermal gold-silver mineralization. The property was optioned to a newly formed Vancouver based mining company in 1984, Reef Development Ltd.; who employed the services of F. Marshall Smith, P. Eng. to conduct a preliminary property examination and prepare an engineering report. Portions of the first phase of work recommended by Smith in his July 1984 report was conducted by the mining division of Mohawk Oil Co. Ltd. in late 1984.

This program was comprised mainly of grid preparation, geological mapping and an I.P./Resistivity geophysical survey designed to deliniate alteration zones associated with epithermal mineralizing events within the Quartz Reef and Reef #1 to #6 mineral claims.

In 1985 the position of the company Reef Development Ltd. was assumed by an affiliate company, Keefer Resources Inc., the current owner. Keefer Resources Inc. acquired a listing on the Vancouver Stock Exchange in July 1988; at the time Huntington Resources Ltd. was causing a market flurry as a result of its exploration successes further upstream on Whiteman Ck..

Page 6...

REGIONAL GEOLOGY:

From F. Marshall Smith, P.Eng.- January 1985 report:

"In the vicinity of the Quartz Reef Property the Carboniferous, Permian and (?) Triassic Thompson Assemblage is intruded by Valhalla type plutons and, locally, capped by Tertiary basalts of the Kamloops Group."

"The Thompson Assemblage was formerly part of the Cache Creek Group and, in places, part of the Anarchist Group. It is primarily composed of volcanic arenite, tuff, greenstone, argillite and phyllite, with minor schist, limestone, basaltic and andesitic flows, amphibolite, conglomerate and breccia."

"The intrusive bodies in the area are provisionally mapped as part of the Valhalla Intrusives. They are predominantly granite and granodiorite with lesser amounts of diorite, gabbro and quartz diorite (monzonite?)."

"The Kamloops Group is composed of basalt, andesite, dacite, trachyte flows and dikes, breccia and tuff."

PROPERTY GEOLOGY:

From F. Marshall Smith, P. Eng.- January 1985 report:

"The Quartz Reef claims are on the edge of a distinctive hill formed by a 1.5 km diameter Laramide-age stock of quartz monzonite. In outcrop the hill is seen to be a medium grained pinkish to grey rock. Thin sections reveal the composition to be oligoclase, andesine, orthoclase, microline, quartz, biotite, and hornblende with minor sphene, magnetite and apatite."

"The quartz monzonite has been intruded by various dykes. The largest (15 - 60 m wide) and most numerous are feldspar porphyries. The feldspar porphyry dykes are the youngest of those intruding the quartz monzonite. They are grey to greenish or pinkish, generally fresh and locally fractured. The phenocrysts are oligoclase-andesine, 4mm to 10 mm long and altered elongate hornblende crystals. The groundmass is fine grained, consisting of mostly quartz and plagioclase. The feldspar porphyry dykes trend 355° to 65° and cross cut small dykes of amygdaloidal andesine and biotite andesine."

"The Reef property is cut by north-trending, normal faulting and fracturing. These fractures strike from 335° to 60° and dip vertically or steeply east. They are closely spaced on the west half of the property where the steep bluffs are formed by fracture surfaces."

"The most significant mineralization on the property is fluorite which occurs as lenses and irregular masses in milky quartz veins, as thin veins by itself and as films on fracture planes. Some fractures are incompletely filled, with vugs and drusy faces in which small quartz crystals are found. The fluorite is coarsely crystalline, usually pale green and occasionally white to yellow and sometimes purple. Some samples of fluorite contained up to 10 ppm (0.3 oz/ton) silver."

"In the intensely fractured zones (in particular in Zone A), the country rock is moderately argilised and kaolinised, and heavily iron stained. Black manganese dioxide staining is usually present with the quartz and fluorite. Silicification is widespread in the said zones. Locally coarse calcite occurs as fracture fillings. Very fine grained pyrite (2-3% occurs along thin fractures and in the feldspar porphyry (Zone A)."

Page 8...

MINERALIZATION:

Discussion of mineralization is herein reduced to a summary of information condensed from referenced reports by De Latre and Smith:

Mineralization, mainly fluorite occuring as lenses and irregular masses in milky quartz veins and as thin veins and coatings on fracture surfaces occurs within intensely fractured zones associated with north to north-east trending feldspar porphyry dykes which have intruded a stock of quartz monzonite along northerly trending, normal faults and fracture zones. Minor fine grained pyrite and some calcite have been noted. Low grade, but anomalous gold and silver values occur in the system.

Several zones of epithermal alteration/mineralization occur on the Reef 1, 2 & 4 mineral claims and on the Quartz Reef mineral claim; however, the main zone (Zone A) occurs within the boundaries of the White mineral claim. Overburden cover obscures greater than half of the surface area of the property.

Prior to 1983 all reported exploration was directed towards evaluating the property's potential for the purpose of developing a viable Fluorite deposit. The most recent work towards this end was conducted in 1971.

In 1983 De Latre recognized that the fluorite mineralization related to typical upper level mineralogy associated with epithermal systems and was able to show that anomalous gold, silver and bismuth levels occured along with fluorite and other epithermal indicator elements within the mineralized system on the Reef property. This was comfirmed by Smith in June 1984 at which time he also recognized zones of clay alteration (low pH, kaolinite facies), moderately altered to weak low pH and propolytic facies alteration and weak propolytic alteration as well as pebble dykes all of which are typically associated with epithermal events. These indicators also infer that the present surface is above the precious metal horizon; offering good potential for gold and silver values to increase with depth, or along strike.

Page 9...

I.P./Resistivity survey conducted in late 1984 indicates four strong alteration haloes associated to and extending to depth (easterly dip) from the known surface zones of mineralization and alteration within the White and Quartz Reef claims. That program is the subject of a report by Smith dated January 1985.

Page 10...

FEBRUARY 1989 ASSESSMENT PROGRAM

BRIEF OUTLINE

During the period from February 3 to February 17, 1989 an exploration program was conducted over portions of the Whiteman Group of claims. This program commenced by establishing a grid in the south-east quarter of the property followed by a preliminary VLF-EM survey. Additionally, several test lines of magnetometer readings were taken; firstly to determine whether significant variations occured to assist in geological interpretation and secondly to aid in the interpretation of the EM data. VLF-EM and Magnetometer data obtained during this program has been plotted on individual plan maps which are enclosed in the back of this report.

GRID PREPARATION

The preparation of the grid commenced on February 3, 1989 by running a 1000 meter chain and compass traverse due west from the LCP of the Quartz Reef mineral claim. At this point a 0+00N/S, 0+00E/W station was established as a commencement point from which to establish the baseline. The baseline from Line 240N to 480S was established. Along the new baseline offsets were established at intervals of 120 meters.

On February 9, 1989 the remainder of the main (#1) baseline to Line 600N, crossline Line 600N from Stn. 0+00 W to 8+40 W and a secondary (#2) baseline from Line 600N, 8+40W to Line 1320 N, 8+40 W. was established; as were offsets at 120 (or 240) meter intervals.

A total of ~2 Km. of baseline and 12 Km. of crosslines were established. The baseline was blazed and flagged, the crosslines were flagged, and all stations were marked using flagging and a weather resistant "tyvek" tags. The grid lines were chain and compassed in as the VLF-EM survey was conducted.

Measurements along the baseline and crosslines were not slope corrected so that the same stations might in the future be used for an I.P./Resistivity survey, which due to the need to maintain a set distance between stations, uses slope distance measurments rather than horizontal distance measurements. The survey of the grid was controlled using and hip-chain and compass.

DISCUSSION OF GEOPHYSICAL SURVEYS:

The geophysical program was conducted under the general guidance of Geotronics Surveys Ltd. of Vancouver, B.C.. The instruments used are owned and were operated by Pat Crook under direction from Y-H Technical Services Ltd.. The following geophysical information is modified after Geotronics Surveys Ltd.

VLF-EM SURVEYS-

A. Instrumentation and Theory-

A VLF-EM receiver, Model 27 (Serial #269) manufactured by Sabre Electornic Instruments Ltd. of Burnaby, B. C. was used to conduct the VLF-EM survey.

The VLF-EM instrument is specially designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for these surveys was transmitted at 21.4 kHz from Annapolis, Md., and 18.6 kHz from Seattle, Wash.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic field (primary) by introducing a strong alternating current, usually through a coil of wire. If a conductive mass such as a sulphide body lies within this primary magnetic field, a secondary alternating current is induced within said conductive mass. This magnetically induced current created in the conductive mass in turn induces a secondary magnetic field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 to 24 kHz, whereas most other EM instruments use frequencies ranging from a few hundred to a few thousand Hz.. Because of its relatively high frequency, the VLF-EM can detect bodies of much lower conductivity and therefore is more susceptible to "picking up" weakly conductive bodies such as clay beds, electrolyte-filled fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods. Consequently the VLF-EM is a useful tool for mapping structure and detecting sulphide bodies of too low a conductivity for conventional EM methods and too small for Induced Polarization methods to detect (in places it can be used instead of I.P.).

Page 12...

However, VLF-EM's susceptibility to lower conductive bodies often results in a large number of anomalies, many of which are difficult to explain. It is therefore advisable not to interpret VLF-EM data without a good geological knowledge of the property and/or in combination with other geophysical and geochemical survey data.

B. Field Procedure-

Utilizing the prepared grid, electromagnetic readings were taken at 30 meter intervals along the various lines.

At each station two readings were taken; one reading facing towards each of the two transmitter stations (Annapolis and Seattle).

C. Compilation of Data-

The VLF-EM survey data were obtained from a survey conducted between February 4 and 13, 1989.

The VLF-EM field results from each station were loaded into seperate computer files and each were thereafter reduced by computerized application of the Fraser-filter (this was also done by hand). The filtered results were subsequently plotted on individual plan maps at a scale of 1:5,000. The original raw data is annexed hereto.

The Fraser-filter is essentially a 4-point difference operator, which transforms zero crossings into peaks, and a low pass smoothing operator which reduces the inherent high frequency noise in the data. Therefore, the noisy, non-contourable data are transformed into less noisy, contourable data. The filtered data is plotted mid way between the actual stations read.

Another advantage of this filtering technique is that a conductor that does not show up as a crossover in the unfiltered data quite often shows up in the filtered data.

MAGNETOMETER SURVEY-

A. Instumentation and Theory-

The magnetometer survey was conducted using a Gem Systems Model GSM 8 (Serial #1202) Proton Precession magnetometer. This instrument reads the Earth's total magnetic field in gammas to an accuracy of ±1 gammas over a range of 20,000 to 100,000 gammas. Operating temperature range of the instrument is -35° to +50° C., and the gradient tolerance is up to 5,000 gammas per meter.

Magnetite and pyrrhotite are the only two commonly occuring minerals which are strongly magnetic. Magnetometer surveys are therefore used to detect the presence and/or varying concentrations of these minerals within the Earth's crust.

Due to varying concentrations of magnetic minerals from one rock type to another and/or the concentration or depletion of magnetic minerals associated with mineralizing events, magnetics is often a useful tool for mapping geologic lithology, structure and zones of mineralization and/or associated alteration.

B. Field Procedure-

The test magnetic survey was comprised of reading the instrument every 30 meters along all or part of seven of the grid lines over which the VLF-EM survey was conducted. The northern four lines (720N, 840N, 1080N and 1200N) were run over their full length and in addition the eastern extent of lines 120S, 360S and part of 480S east were run.

The diurnal variation was monitored in the field by a modified closed loop method; however, no attempt was made to remove any variations as the differences encountered were slight (maximum 21 gammas) and due to the method in which the test survey traverses were run (the loops were only closed at the completion of the survey in each area).

C. Compilation of Data-

The magnetic survey data were obtained from a survey conducted on February 11 and 12, 1989.

The magnetic data was plotted on a plan map (Map #3) at a scale of 1:5000. For ease of plotting a base level value of 57,000 gammas was subtracted from the total field readings. A contour interval of 50 gammas was arbitrarily chosen. Due to the distribution and relatively small volume of data points read, no statistical analysis was conducted on the data.

DISCUSSION OF RESULTS:

GEOLOGICAL-

Utilizing regional and property geologic information one is able to ascertain that there are two major stike trends in the survey area which relate to lithology. These trends are ~020° and ~340°. Secondary, more north-south lithological trends do exist. In addition, a regional structural strike trend of ~310 to 320° is apparent from major topographical trends.

Previous geologic mapping on the property outlined a series of feldspar porphyry dykes. These dykes strike ~020° to ~340° (varying from 355 to 65° per Smith) and dip to the east. During the survey, in spite of a general snow cover, several hand rock specimens were collected from a variety of outcrops. Examination of these showed that one was a lamprophyre dyke and one was a weak to moderately altered feldspar porphyry. The remaining samples can all be classified as diorites or quartz-diorites (monzonites per Smith); part of the underlying Valhalla Intrusive complex.

Magnetic susceptibility was tested and it was noted that:

1. The fresh dark lamprophyre dyke sample showed very slight magnetic attraction;
2. The pink colored, moderately altered feldspar porphyry sample showed a strong magnetic attraction;
3. The relatively fresh, grey to grey-green diorite or quartz-diorite (monzonite) samples all displayed no visible magnetic attraction.

A rock specimen collected from ~Line 1320N, 7+80W exhibits a milky-white (possibly banded) quartz and light green fluorite vein in contact with quartz-diorite; both containing minor pyrite disseminations. Moderate to heavy limonite (some box-work after pyrite) plus manganese dioxide occur on joint and fracture surfaces. Half of the specimen will be sent for gold assay in addition to a 32 element ICP analysis.

Page 16...

The outcrop locations are noted on the compilation map (Map #4) at the back of this report.

Examination of available geological, topographic and airborne magnetic maps indicate the possible existence of regional fault structures trending ~310 to 330° through the property.

MAGNETIC SURVEY-

Although the test magnetic survey was small and incomplete in scope, it is very evident that this type of survey would be very useful in assisting with geological mapping. In particular, the high magnetic susceptibility of the feldspar porphyry dykes, as contrasting to the other intrusive rock units, suggests that these dykes, at least in part, can be detected by this method. It is possible that not all of the feldspar porphyry dykes will be as strongly magnetic as the sample tested; however, it is probable that the intensity of magnetic attraction is directly related to the degree of alteration associated with these dykes and therefore to the epithermal alteration/mineralization adjacent to and in these dykes as noted by Smith in his 1985 report.

Due mainly to the broad spacing between test lines, the magnetic anomalies all appear to orient virtually north-south. The known geology of the property suggests that this should not be so. There does however appear to be an apparent correlation between VLF-EM and magnetic anomalies. No attempt was made to bias the magnetic contouring to more directly reflect known geologic trends as it would not provide a great deal more information considering the limited scope of the test magnetic survey.

VLF-EM SURVEY-

The general strike trend of ~20° is very close to being directly aligned with the Seattle transmitter; even the ~340° strike trends can be reasonably well aligned considering the relative strength of the Seattle signal. Therefore, it can be generally assumed that the anomalies on Seattle survey will be only slightly, if at all displaced from their causative source. It was for this reason that the Seattle transmitter was chosen for this survey.

On the other hand, the anomalies from the Annapolis survey that have a causative source which relate to the ~20° strike trend, can be assumed to have a maximum displacement; as this transmitter is virtually at right angles to this strike trend; even the ~340° trending structures are at an angle 65 degrees. Considering the relative weakness of the signal from the Annapolis transmitter, targets on these adverse strike trends have to be relatively good conductors to be detected. Dispite their orientation the same ~20° and ~340° striking anomalies show up as continuous

and reasonably strong anomalies. However, the Annapolis survey anomalies are in general, displaced ~90 meters to the east of their Seattle survey counterpart. This shift is mainly due to the strike trend of the causative source; and may also reflect the easterly dip of the main geologic features.

In general, the anomalies from the Annapolis survey are broader and do not peak as high as the Seattle survey readings; often two or more anomalies will merge.

The main purpose for utilizing the Annapolis station was to optimize the electromagnetic effect of 'suspected' more north-westerly strike trends related to the regional structure. It can be seen that on many of the anomalies there are tendencies to broaden and/or merge in a north-westerly direction even though this direction is most adverse from the grid line orientation. Numerous spot anomalies also occur along these north-westerly strike trends.

These trends are interpreted as north-westerly trending fault/shear zones which cross-cut the other northerly trending anomalies.

DISCUSSION OF SPECIFIC ANOMALIES:

The most significant anomalies on the various survey maps have been labelled using corresponding lower case lettering to assist in identification. The following discussion relates predominantly to the anomalies as they exist on the Seattle VLF-EM map and where relavent the other surveys are cross referenced.

ANOMALY 'a'-

Although relatively weak with a maximum reading of 8°, this anomaly is situated on strike to the south of I.P./Resistivity anomaly RSW which is in turn an apparent extension of Zone "A" and/or I.P./Resistivity anomaly RNW as discussed by Smith in his 1985 report. Anomaly 'a' could represent a continued extension of this zone onto the Bob claims to the south of the White claim.

This anomaly has a strike length of ~300 meters and remains open both north and south.

ANOMALY 'b'-

The south end of this anomaly relates to the powerline crossing overhead at ~Line 4+80S, 3+90E therefore the high value of 58° is relatively meaningless. To the north a moderately high value of 19° is reached. The northward extension of this anomaly trends towards Zone "C" and/or I.P./Resistivity anomaly RSE as per Smith (1985).

The anomaly has a length of ~300 meters and remains open to the north and south.

ANOMALY 'c'-

This anomaly, as with anomaly 'b', could reflect the southward extension of Zone "C" and/or I.P./Resistivity anomaly RSE as per Smith (1985). A moderate value of 12° is reached.

This anomaly has a strike length of ~300 meter, remains open to the north; but appear to close to the south.

ANOMALY 'w'-

This anomaly has a strike length of 250 to 300 meters and extends between Lines 1320 and 1080N, 3+90 to 4+20W; it is open to the north. The Seattle VLF-EM anomaly correlates with a magnetic high and apparently also with a feldspar porphyry dyke as mapped by Smith in 1985. It is this relationship which appears to be of the most significance due to the apparent close association between feldspar porphyry dykes and the epithermal alteration/mineralization. The anomaly is relatively weak in strength, reaching a maximum value of 8°, with magnetic readings reaching 57,692 gammas.

This anomaly terminates on the south at Fisbee Ck., an apparent fault structure but remains open to the north.

ANOMALY 'x'-

This anomaly has a minimum strike length of 430 meters, extending from Line 840N to Line 1320N; it is open to the north. The readings are moderate, reaching a maximum strength of 11°, and a magnetic high of 57,531 gammas. This anomaly appears to correlate well with the western flank of a magnetic high anomaly located at ~6+60W on Line 1320N. There is and adjacent magnetic low situated to the west which may relate to a fault. It is likely that a feldspar porphyry dyke occurs in this area (see also discussions on anomalies 'w' and 'y'); but no geologic mapping has been conducted to confirm this.

This anomaly terminates to the south at a point believed to be the extension of a cross-cutting fault mentioned under anomalies 'y' and 'z'.

ANOMALY 'y'-

This anomaly is the most prominent of the survey. It extends from Line 120N to Line 1320N, a total strike length in excess of 1200 meters; it is open to both north and south. Along this trend several deflections occur which may relate to cross faulting as will be discussed later. The highest VLF-EM values are found on Lines 480N, 600N, and 720N, reaching a strength of 29°.

This can be considered a highly conductive value. The north end (L. 1320N) of this anomaly correlates with a magnetic high anomaly reaching 57,782 gammas (the highest magnetic reading in the northern part of the grid) and it in turn appears to correlates with a feldspar porphyry dyke as mapped by Smith in 1985.

ANOMALY 'z'-

This anomaly is the second most prominent of the survey and has an overall strike length of ~1200 meters, extending from Line 480S to Line 840N; it is open to both north and south. The southern segment of this anomaly, from Lines 480S to 120S, is very strong, reaching a high of 37° on Line 360 S. On Line 240S in the immediate vicinity of a 23° high there appears to be a cross-cutting trend. This crossing trend, when extended, connects with one of the offsets referenced under anomalies 'x' and 'y' above, and is believed to represent a north-westerly trending fault structure.

INTERPRETED CROSS-CUTTING FAULT STRUCTURES-

On the Annapolis survey map, in addition to the other anomalies, two cross-cutting faults are interpreted. These faults correlate with deflections and broadened segments of the mostly North to ~020° striking trends shown by the Seattle VLF-EM survey; with other spot anomalies; and to some degree with topographic features. The broadening of anomalies and often increased conductivity relative to these apparent cross-cutting faults represent particularly good target areas; particularly if these zones can be shown also to correlate with feldspar porphyry dykes.

The east-west grid orientation favours north-south trending anomalies. The grid line spacing versus station intervals amplifies the north-south enhancement. It is probable that these cross-cutting trends would show more definitively if the grid were oriented more normal to the strike trend.

The location of these interpreted faults as depicted on the Annapolis VLF-EM map (Map #2) are believed to be the true locations. Those depicted on the Seattle VLF-EM appear to be displaced; for the same reasons as previously discussed.

SELECTED BIBLIOGRAPHY

DeLatre, John: 1984 Geological Report on the Reef Property, Vernon Area, British Columbia

Smith, F. Marshall: July 1984 Report on the Quartz Reef Property Vernon Mining Division, British Columbia

Smith, F. Marshall: Jan. 1985 Geological and Geophysical Report on the Quartz Reef Property Vernon Mining Division, British Columbia

Page 22...

Certificate of Qualifications

I, Robert W. Yorke-Hardy, of Vernon, Province of British Columbia, do hereby certify that:

1. I am a Mining Technologist residing at 330 Stepping Stones Road, Vernon, B.C. and I am the owner/operator of Y-H Technical Services Ltd. of P.O. Box 298, Vernon, B.C., an exploration services company. In total I have accumulated 25 years of experience in Mining/Mining Exploration and related industries.

2. I am a graduate of the British Columbia Institute of Technology, Burnaby, British Columbia and a registered charter member of The Association of Applied Science Technologists and Technicians of British Columbia. I have practiced my profession for 20 years.

3. This report is based on my personal review of technical reports and other data available relating to the subject property and the Vernon area; and particularly on the 1985 exploration program conducted on the Quartz Reef property; which included geological mapping and an I.P./Resistivity survey. Said work program was contracted by Mohawk Oil Co. Ltd., and was negotiated by and conducted under my overall management as Manager of Mohawk's mining division.

4. This report is compiled from data obtained during a VLF-EM - Magnetometer geophysical survey conducted in February 1989; under the management of Y-H Technical Services Ltd. and under the guidance of Geotronics Surveys Ltd.

5. I am the beneficial owner of stock in Keefer Resources Inc..

Y-H Technical Service Ltd.,

R. W. Yorke-Hardy, A.Sc.T.
Mining Technologist

May 15, 1989
Vernon, B. C.

Cost Statement

GRID PREPARATION:	
Control Survey and Baseline Establishment	
2 man days at $150.00/day ------	$ 300.00
1 man day at $250.00/day -------	$ 250.00
Grid Line Preparation-	
3 man days at $150.00/day ------	$ 450.00
GEOPHYSICAL SURVEYS:	
VLF-EM Survey and	
9 man days at $150.00/day ------	$1,450.00
Magnetometer Survey	
2 man days at $150.00/day ------	$ 300.00
RELATED EXPENSES:	
11 days vehicle rental (4*4) at $50.00/day -	$ 550.00
Consumable field supplies	
-(flagging, tags, thread, felt pens, etc. -	$ 150.00
Rentals-	
9 days VLF-EM at $25.00/day ----	$ 225.00
2 days Magnetometer at $25.00/day -	$ 50.00
3 days Skidoo at $25.00/day ----	$ 75.00
Engineering and supervision ----------	$1,000.00
Geophysical Consultation ----------	$ 100.00
Computerized Drafting ----------	$ 450.00
Report Preparation and Manual Drafting -	$1,000.00
Total ----------	$6,350.00

Appendix A

VLF-EM AND MAGNETOMETER

RAW DATA AND FIELD NOTES

VLF EM Survey Notes + Data

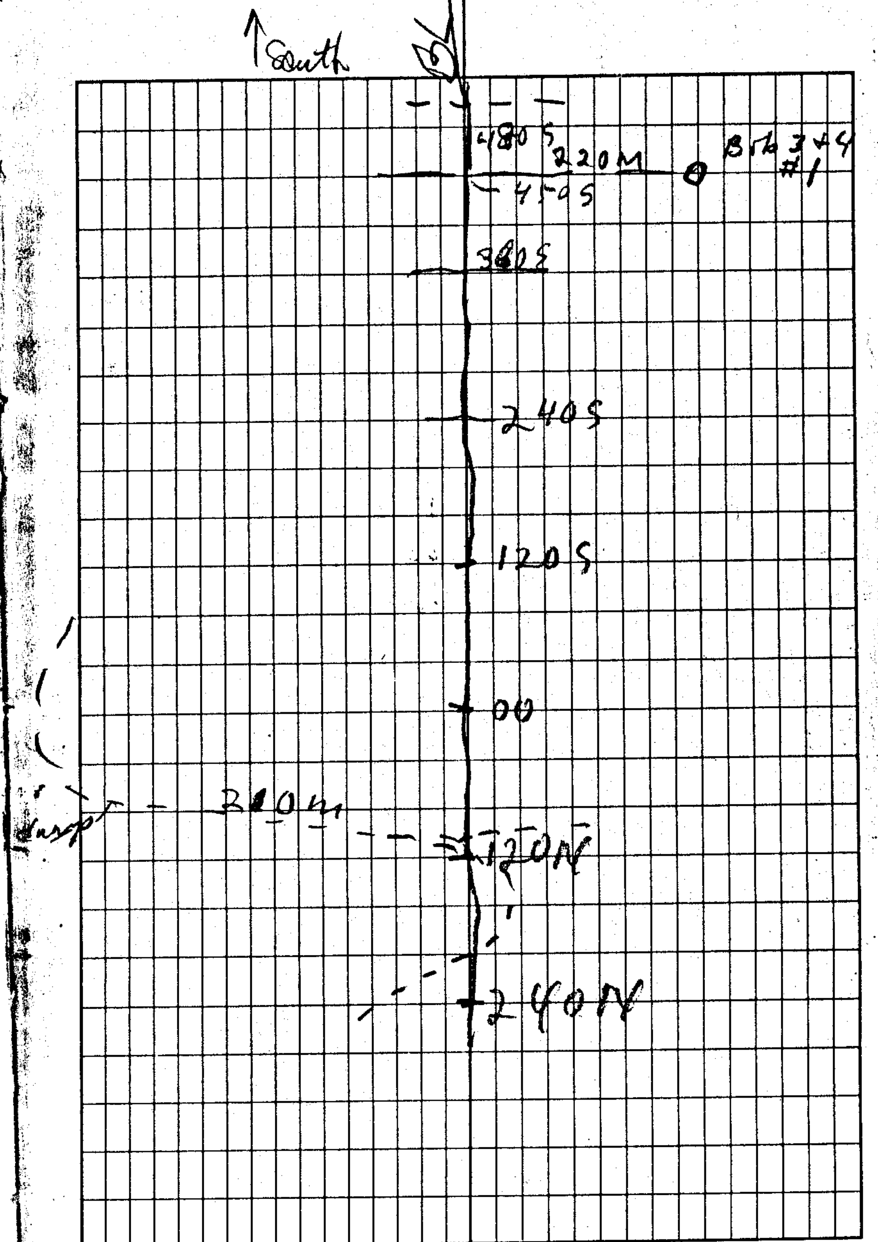
Quartz Reef M.C.
Bob 1-7 M.C.
Vernon M.D.
NTS 82 L/3 W
Fisbee Creek - Whiteman creek
area
Inst. Sabre VLF-EM Mod 27
Ser 269
operator Pat Crook
Box 437
Canoe B.C.
V0E 2T0

TX Seattle Az 205°TN

Tx Annapolis Az 095°TN

Rco 3

		Slope	Chain	
BL 1	[illegible]	-30	0	
Horz corr 117.5	120S	-20	130	
115.0	240S	-15	254	
	360S	-15	376	cross claim line 0 450S Bob 3+4 #1 220m W
	480S	-10	500	road. [illegible]
				120m 230°
	120N	0	120	204m
	240	15	250	
	360	20	385	
	480	15	515	



L480$ S A

690 E
660
630
600
570
540
510
480
450
420
390
360
330
300
270
240
210
180
150
120
90
60
30
00E

-24 FF
-23 -47 1
-22 -45 21
-24 -46 58
-24 -24 44
0 +12 2
+12 +20 14
+8 +10 3
+2 +6 3
+4 +7 5
+3 +5 7
0 +2 11
+2 -4 17
-6 -15 5
-9 -21 4
-12 -20 2
-8 17
-9 18

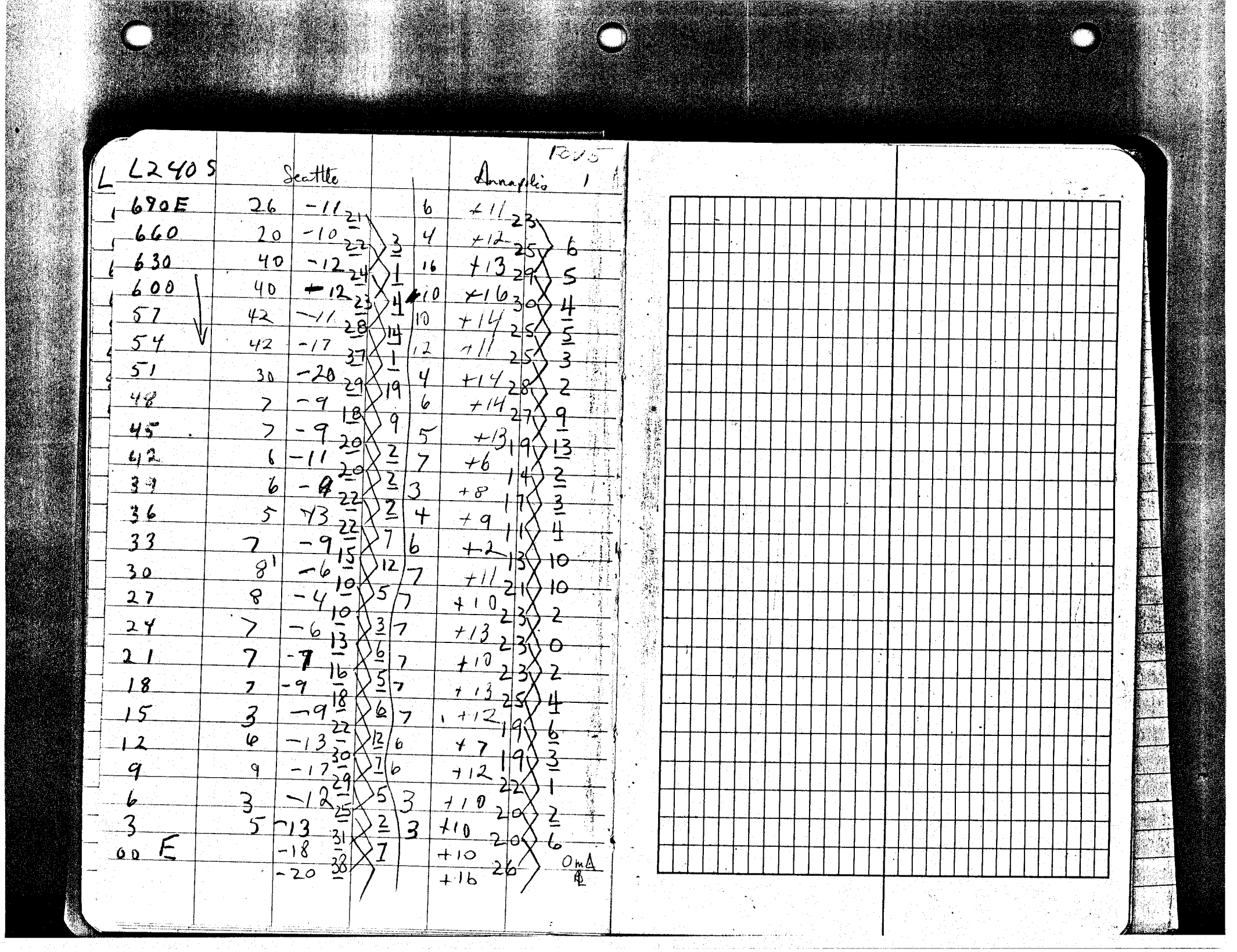
+18 37
+19 39 3
+20 40 5
+20 34 48
+14 8 65
-20 31 5
-9 13 24
-4 7 9
-3 4 8
-1 1 8
+2 4 5
+2 6 8
+4 12 9
+8 15 1
+7 13 5
+6 10 5
+4 8

	Mag
1524	
	7549
	7629
	7527
	7524
	7534
	7532
	7575
	7638
	7737
	57788

Parallel line of road

L	L 480 S	S				A		
6	00 W		-9	18	2	+4	8	5
6	30		-6	15	1	+1	5	3
6	60		-13	19	9	+10	11	18
6	90		-11	24	6	+13	23	15
S	120	7	-14	25	1	+13	26	10
S	150	5	-9	23	7	+13	33	3
S	180	2	-9	18	1	2 +20	29	6
S	210	0	-13	22	11	0 +9	27	4
6	240	0	-16	29	10	2 H8	33	3
	270	0	-16	32	3	0 +15	24	14
	300	0	-16	32	3	0 +9	19	1
	330	2	-13	29	6	0 +10	23	7
	360	0	-13	26	5	0 +13	26	3
	390	2	-11	24	1	3 +13	26	1
	420	3	-14	25	3	1 +12	25	1
	450	3	-13	27	5	0 +13	25	8
	480	2	-17	30	3	3 +20	35	7
	510 W	2	-13	30		0 +12	32	

L L3605	50. odd	S		250 oph		A		Feb 4	
			21	19			26		
00 W	10	-17	30	11	7	+9	22	3	fence
30	31	-23	40	8	15	+20	29	17	fence
60	7	-18	41	9	10	+19	39	7	fence
90	2	-14	32	8	5	+17	36	3 71	2 ms
120	7	-18	32	13	12	+19	36	6	11
150	4	-22	40	9	27	+23	42	11	
180	27	-22	45	11	[illegible]	+24	47	10	11
210	4	-26	49	13	10	+28	52	9	11
240	5	-30	56	6	8	+28	56	6	11
270	1	-32	62	37	5	+30	58	6	11
300	2	-18	50	37	5	+20	50	28	fence
330	3	-7	25	16	1	+10	30	32	11
360	0	-6	13	3	0	+8	18	14	11
390	2	-3	9	6	0	+8	16	1	11
420	0	-7	10	5	2	+9	17	1	11
450	-	-8	15	5	0	+7	17	1	11
480	0	-7	15		0	+9	16	4	11
570 W	3	-13	20		1	+12	21		11


L L240 S
Seattle
Annapolis
690E
660
630
600
57
54
51
48
45
42
39
36
33
30
27
24
21
18
15
12
9
6
3
00 E
OmA

L L2405 S A

000	10	-18	31	10	5	+10	20	15
3	6	-20	38	5	4	+16	26	12
6	19	-21	41	4	15	+19	35	1
9	19	-22	43	4	12	+19	38	5
12	42	-23	45	19	27	+15	31	4
15	37	-16	39	23	11	+18	33	13
18	35	-10	26	18	7	+12	30	16
21	25	-6	16	16	4	+8	20	6
24	15	-2	8	12	3	+6	14	2
27	17	+2	0	0	5	+8	14	1
30	7	+2	4	1	2	+3	12	5
33	5/100	-2	0	3	0	+4	7	2
36	4	-1	3	3	5	+3	7	1
39	0	-2	3	6	5	+2	5	5
42	0	-8	10	13	0	+4	6	8
45	12	-8	16	12	0	+6	10	11
48	9	-14	22	11	0	+8	14	
51 W	6/50	-13	27	2	300	+13	21	

1 L2405 14 m s

--- -35° trail

gully

L	L120S	12 S		150 A		120
	00W	5	-12	5	+8	
	30	1	-9	0	+7	
	60	0	-6	3	+3	
	90	0	-6	0	+2	
	120	0	-2	0	+2	
	150	0	-2	0	-1	
	180	0	-5	0	+1	
	210	0	-7	0	-1	
	240	1	-8	1	+4	
	270	5/40	-1	1	+6	
	300		+1	0	+6	
	330	8	-6	5	+7	
	360	12	-10	7	+9	
	390	21	-7	10	+7	
	420	30	-13	26	+12	
	450	10	-11	3	+11	
	480	7	-10	2	+8	
	570W	5	-6	2	+5	
		0	-3	5	+2	

34	13	25
31		19
21	19	15
15	9	10
12	7	5
8	8	4
4	1	4
7	8	1
12	8	0
15	3	3
9	15	10
0	4	9
5	16	12
16	17	13
17	4	16
20	7	16
24	1	19
21	8	23
16		19
		13

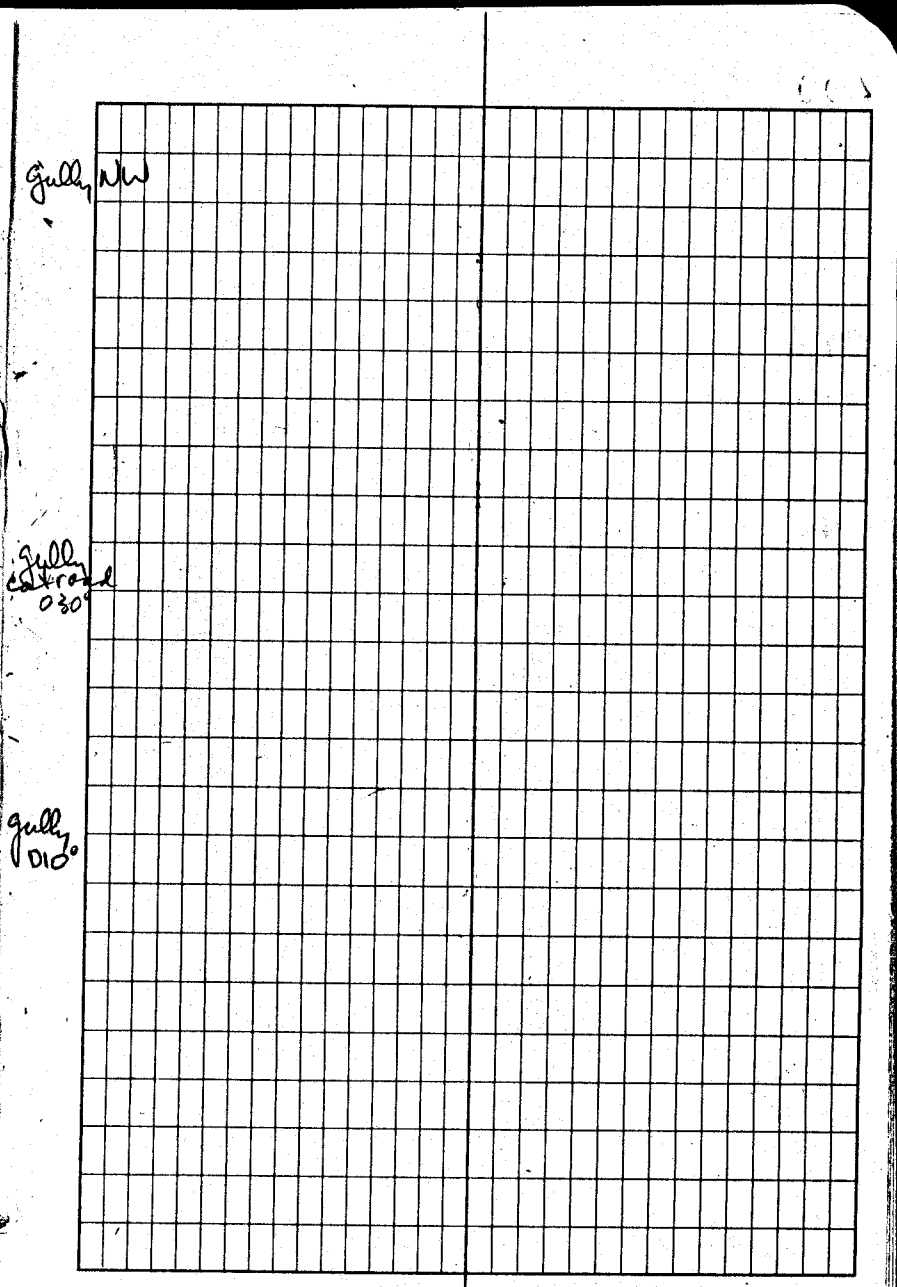


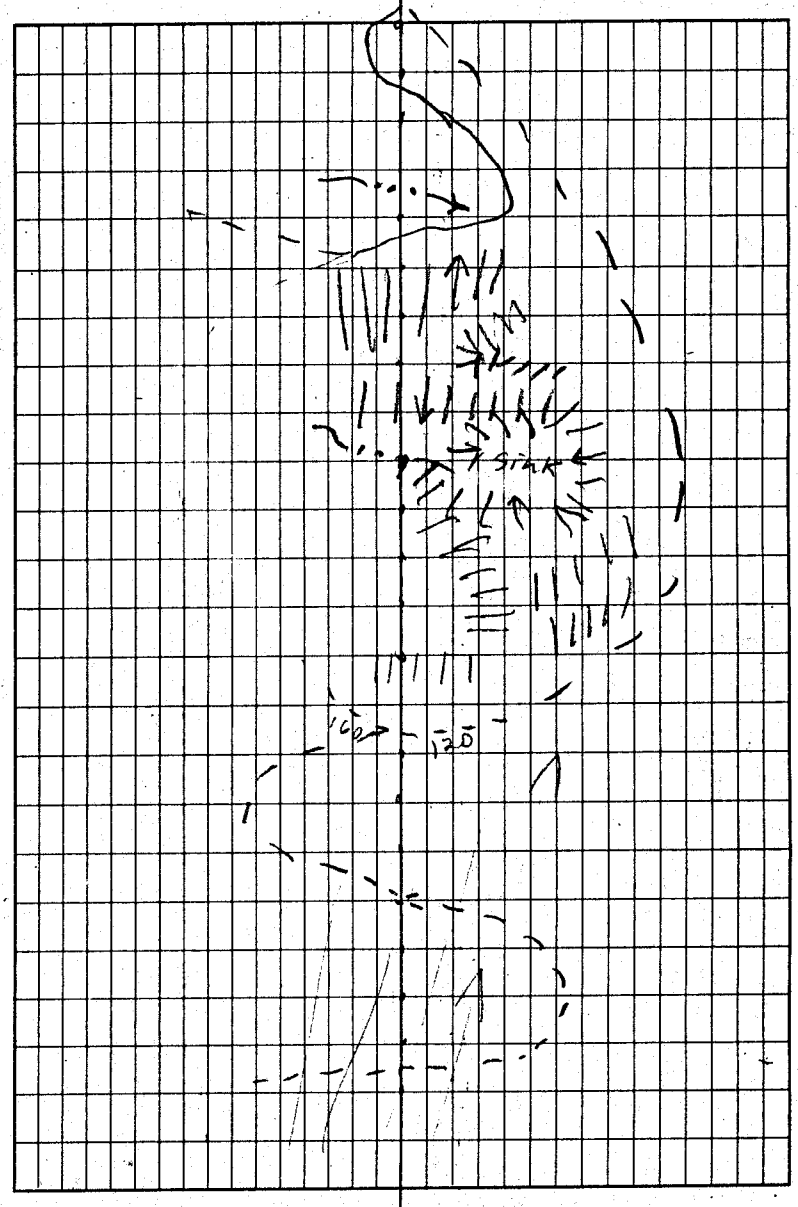
Fig 6

L LOG 5 OF A DA

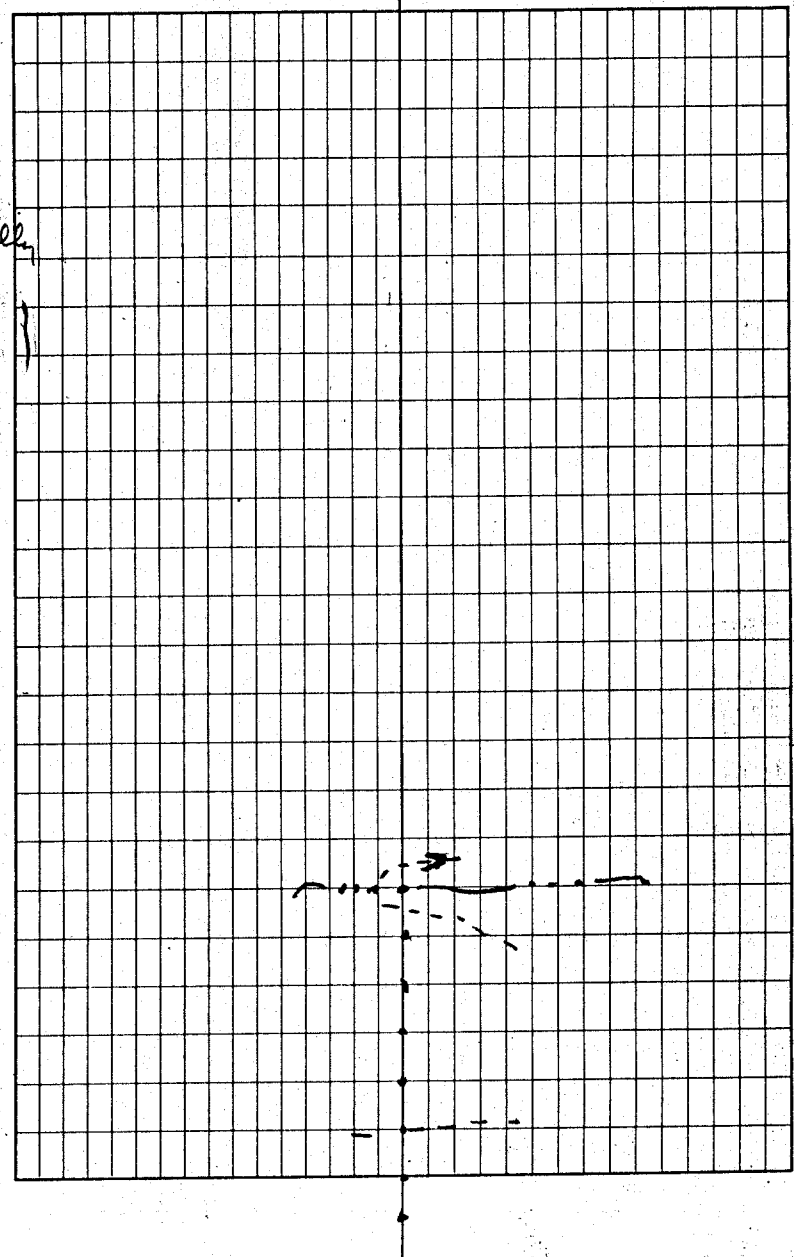
00	9	-3	7	6	+7	14		
30	10	-4	10 3	7	+7	11 2		
60	12	-6	10 1	10	+4	12 3		
90	10	-4	9 1	15	+8	14 1		
120	7	-5	9 5	0	+6	11 3		
150	0	-4	14 13	0	+5	10 1		
180	7	-10	22 7	2	+5	10 7		
210	0	-12	21 3	0	+5	17 12		
240	0	-9	19 4	0	+12	22 6		
270	6	-10	25 9	6	+10	23 10	road	
300	4	-15	28 3	5	+13	32 12		
330	2	-13	28 0	5	+19	35 2	sink 15 ms g wtg	
360	5	-15	28 2	3	+16	30 7		
390	7	-13	26 6	7	+14	28 2		
420	7	-13	22 7	10	+14	28 3		
450	6	-9	19 2	7	+14	25 0		
480	0	-10	20 4	5	+11	20 6		
510	5	-10	23 3	6	+9	19 2	o/c p	
540	12	-13	23 6	3	+10	18 6	granitic	
570	6	-10	17 6	6	+8	13 6		
600	3	-7	17 7	2	+5	12 2		
630	5	-10	24 13	7	+7	15 7		
660	0	-14	30 11	0	+8	19 13		
690	0	-16	35	3	+11	28		
720 cut	0	-19		5	+17		o/c p granitic	

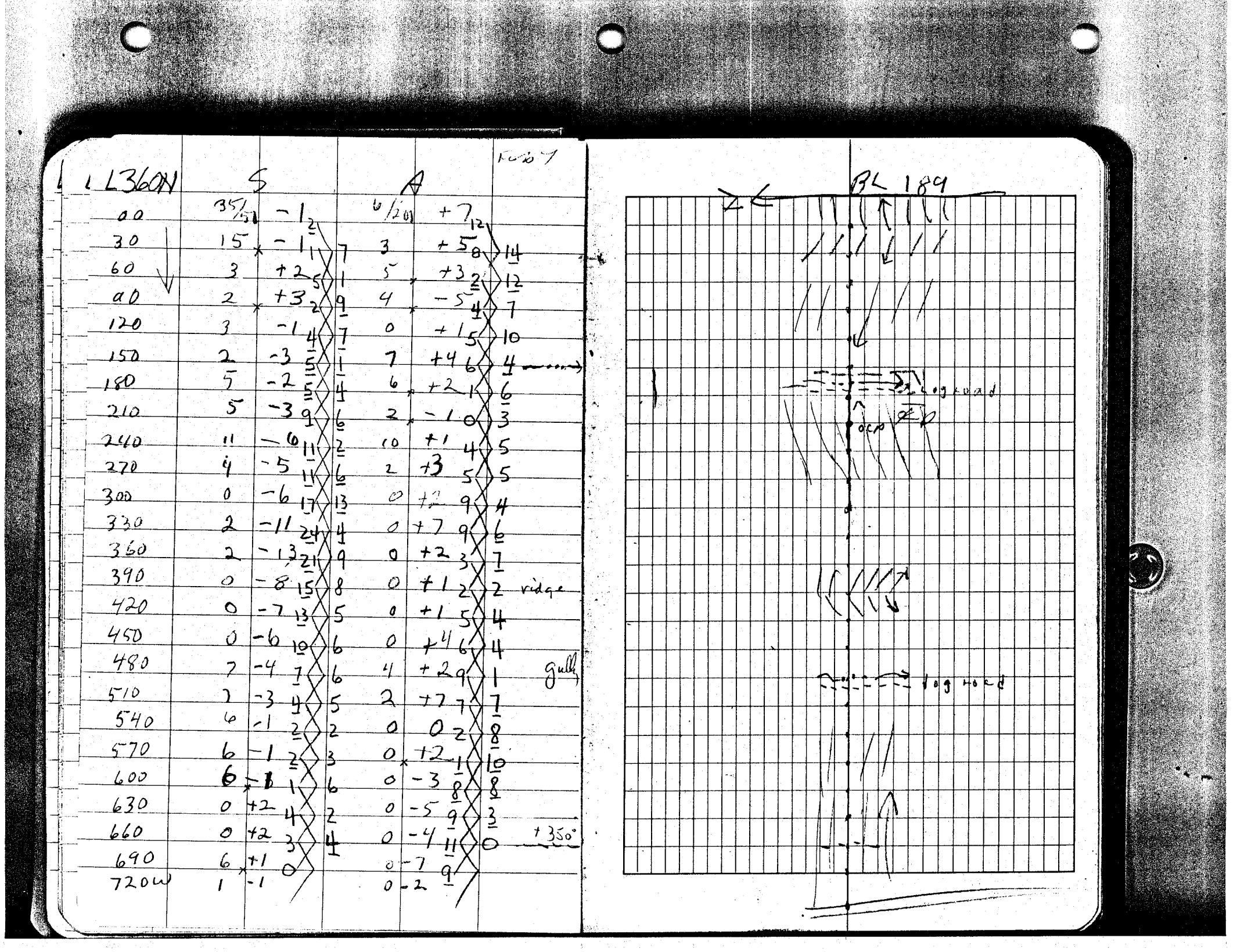
L L120N S

00	10	-11	19			7	+9	19		road
30	22	-8	14	5		9	+10	16	3	025° 4x m
60	10	-6	11	2		5	+8	16	3	
90	10	-8	16	1		3	+8	15	0	gully
120	15	-8	15	0		4	+7	16	1	180° 104m
150	12	-7	16	2		0	+9	14	3	
180	5	-9	17	4		5	+5	13	2	ridge
210	6	-8	20	6		5	+8	16	6	
240	2	-12	23	1		4	+8	19	4	gully
270	5	-11	19	6		4	+11	20	0	
320	0	-8	12	4		10	+9	19	2	
330	5	-9	15	5		2	+10	18	1	
360	5	-6	12	4		5	+8	18	2	ridge
390	6	-6	11	4		12	+10	20	6	
420	3	-5	8	4	136	15	+10	24	8	
450	0	-3	15	21	137	30	+14	29	3	435 m 140°
480	0	-12	29	20	130	15	+14	27	5	
510	0	-17	35	5	163	15	+13	23	2	032° 540 m
540	0	-18	34	0	170	4	+10	25	11	
570	1	-16	35	10	178	8	+15	34	17	
600	0	-19	44	9	179	8	+19	42	4	618 m 178°
630	7	-25	44	9	171	5	+23	38	18	
660	3	-19	35	13	175	7	+15	24	23	
690	0	-16	31			13	+9	15		
720W	0	-15				12	+6			



L240N	S			A		BL 5mN
00	4	-5	8	0	+8	15
30	4	-3	5 6	4	+7	15 5
60	4	-2	2 3	5	+8	10 15
90	5	0	2 0	5	+2	0 6
120	6	-2	2 3	4	-2	4 7
150	2	0	5 5	5	+6	7 1
180	3	-5	7 1	12	+1	3 2
210	12	-2	6 2	7	+2	5 3
240	7	-4	9 3	0	+3	6 1
270	0	-5	9 1	0	+3	6 2
300	0	-4	8 1	0	+3	4 2
330	0	-4	10 6	2	+1	4 1
360	0	-6	14 6	0	+3	5 1
390	0	-8	16 2	0	+2	5 4
420	0	-8	16 2	2	+3	9 12
450	0	-8	14 1	0	+6	17 11
480	2	-6	15 3	5	+11	20 1
510	0	-9	17 1	5	+9	16 5
540	0	-8	16 1	10	+7	15 0
570	0	-8	16 1	15	+8	16 1
600	2	-8	17 1	2	+8	16 3
630	1	-9	15 8	8	+8	13 6
660	0	-6	9 7	0	+5	10 2
690	0	-3	8	5	+5	15
720W	2	-5		0	+10	




L360N
S
A
BL 189
dog road
dog road
ridge
gully
+350°

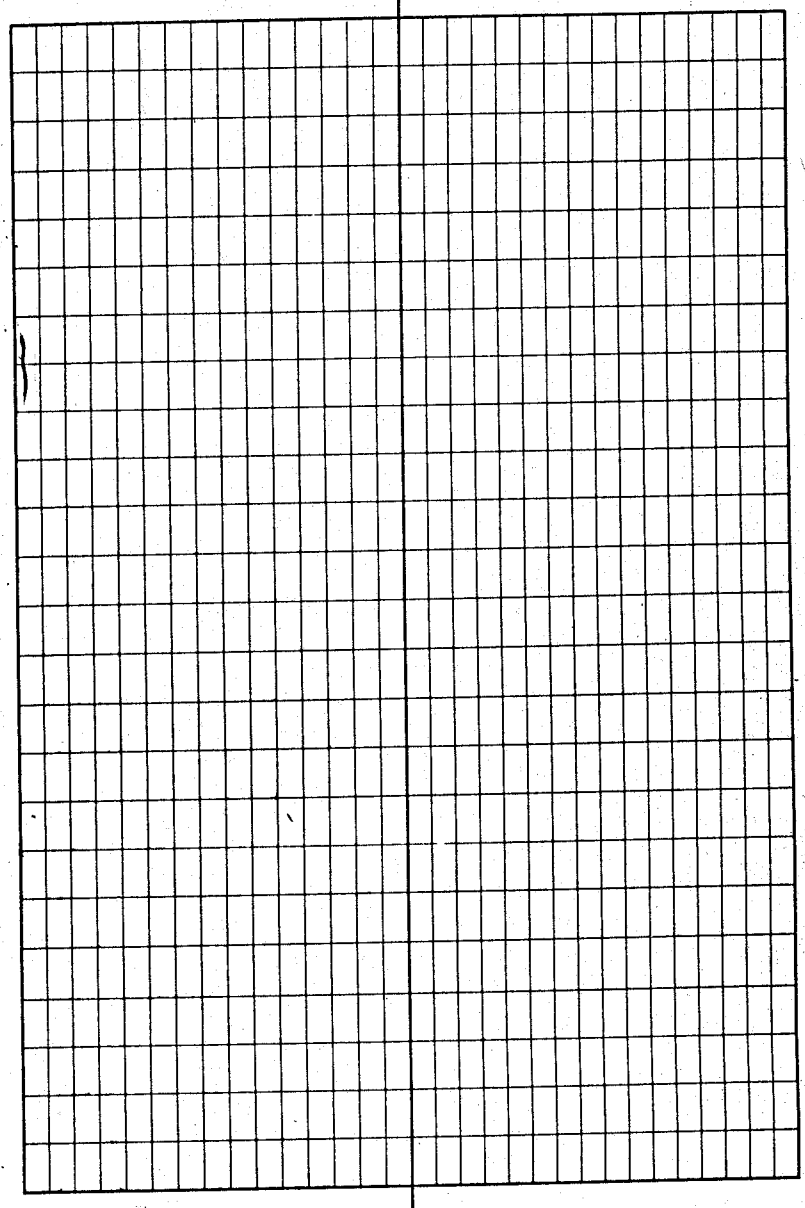
L480N

00							
30	4	+2	3	15	+9	13	
60	6	+1	2	9	15	+4	10	0
90	0	-3	6	2	7	+6	13	2
120	0	-3	4	6	4	+7	12	2	ridge
150	0	-1	0	6	12	+5	11	0
180	1	+1	2	1	7	+6	12	3
210	1	+1	1	9	9	+6	14	1
240	0	-2	7	7	4	+8	13	5
270	3	-5	8	1	6	+5	9	7	Fisboo finally 280 W
305	0	-3	8	1	6	+4	6	2
330	0	-5	9	4	6	+2	7	3
360	0	-4	12	3	6	+5	9	5	ridge
390	0	-8	12	1	5	+4	12	7
420	0	-4	13	3	12	+8	16	1
450	0	-9	15	3	7	+8	13	7	sink finally
480	4	-6	10	18	10	+5	9	10
510	6	-4	3	26	7	+4	3	13
540	7	+7	16	9	10	-1	4	7
570	5	+9	12	12	2	-3	4	2
600	2	+3	4	11	5	-1	2	4
630	6	+1	1	5	6	-1	0	5
660	12	0	1	4	6	#1	3	5
690	6	-1	3		5	+2	5	
~~720~~								

L40DN

720	3	-2	1	4	3	+3
750	2	-3	3	4	5	+2
780	2	-4	5	6	2	+1
810	4	-7	7	6	3	+1
840 W	5	-6	11	6	2	+1
			13		2	+1

skid rod M-S



L600N

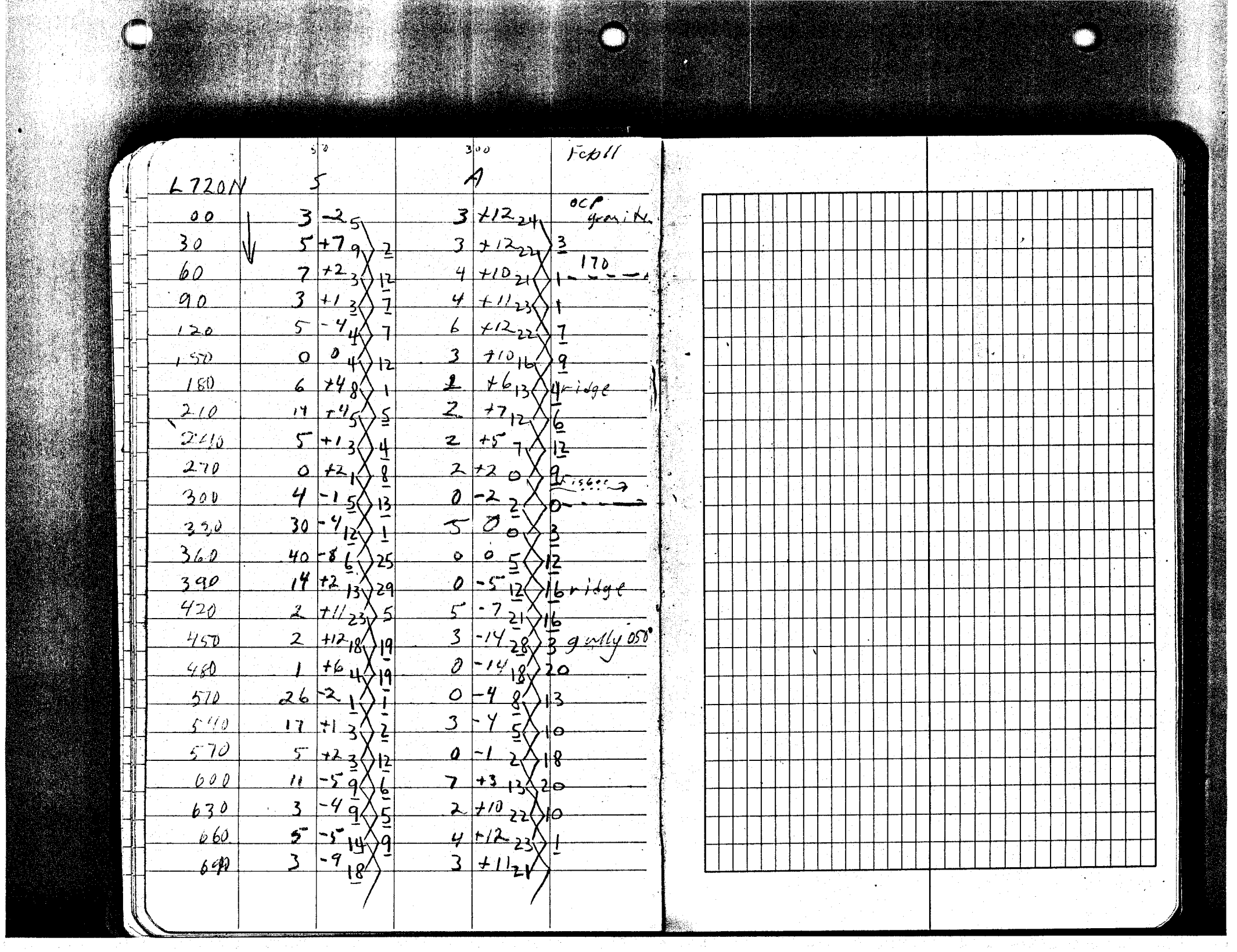
	51 S				300 A				Feb 8
	road	NS							Rad NS on Bl.
00	3	+3	3		5	+8	17		
30	0	0	2	6	3	+9	19	3	Ridge
60	3	-2	3	5	7	+10	20	1	
90	2	-1	7	8	4	+10	18	5	
120	3	-6	11	7	5	+8	15	7	
150	2	-5	0	17	5	+7	11	12	
180	0	+5	6	1	0	+4	3	13	
210	6	+1	1	4	6	-1	2	5	dcp
240	0	0	2	2	3	-1	2	4	Fiskee
270	2	+2	1	14	1	-1	2	13	gully
300	10	-3	12	21	7	+3	11	14	
330	10	-9	22	3	7	+8	16	7	
360	14	-13	15	24	12	+8	4	27	
390	7	-2	2	27	7	-4	11	15	ridge 415
420	6	+4	12	14	7	-7	11	3	
450	16	+8	16	2	5	-4	8	5	gully
480	2	+8	14	17	10	-4	6	16	
510	8	+6	1	30	10	-2	8	28	
540	12	-7	16	8	15	+10	22	15	
570	10	-9	9	11	17	+12	23	4	
600	30	0	5	1	27	+11	18	14	
630	6	-5	10	6	6	+7	9	12	
660	0	-5	11	1	10	+2	6	1	
690	3	-6	11		6	+4	8		

		60		300		Feb 8
L600N		5	11 11 2	A	6 8 2	355-0T 715m
720	↓	5	-5 13 6	6	+4 8 4	
750		3	-8 17 7	5	+4 12 4	
780		2	-9 20	4	+8 12	①
810		6	-11	2	+4	porch
840W		NK				

① Post KK #5 - 413475
June 13/88
Ken McGowan

35m S of ① on older
post ID size tag of
qtz reef approx 4W IN

Feb 9 BL 1 & 2

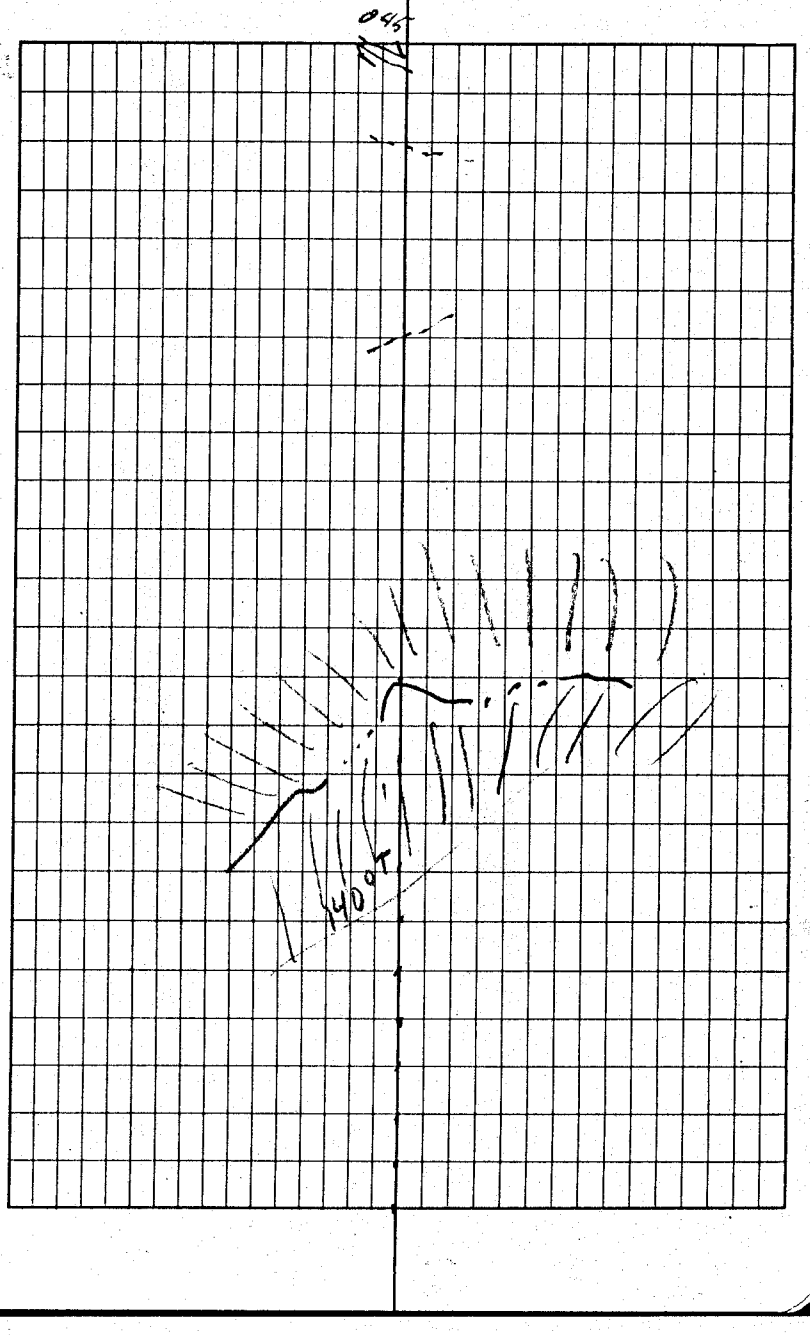

L720N
S
A
Feb 11
ocp grain N.
170
ridge
ridge
gully 050°

L 720N

			14			23	155°
		-9	18	7		+11 21	1
720	3	-11	22	5	5	+10 22	1
750	4	-11	23	2	2	+12 20	7 180
780	2	-12	20	6	5	+8 15	6
810 W	5	-8	17		0	+2 14	
840 W	5	+9			0	+7	12 m 5

1

L840N	Sun 5° S			Sun 300 A			Feb 11
00	5	+3	4	4	+7	19	ocp grans ①
30	1	+1	1 10	5	+12	25 4	280°
60	3	-2	6 4	4	+13	23 0	
90	3	-4	5 6	2	+10	25 5	
120	2	-1	0 5	8	+15	28 6	
150	16	+1	0 6	7	+13	31 5	160°
180	5	-1	6 10	17	+18	33 1	
210	0	-5	10 3	10	+15	30 5	
240	12	-5	9 4	12	+15	28 4	
270	3	-4	6 3	7	+13	26 2	
300	4	-2	6 4	7	+13	26 5	
330	5	-4	2 12	5	+13	21 12	gully
360	3	+2	6 5	2	+8	14 12	
390	6	+4	3 9	4	+6	9 7	
420	4	-1	3 8	5	+3	7 0	ocp 15m cliff
450	0	-2	5 9	7	+4	9 1	ocp grans
480	0	-3	12 13	11	+5	6 4	
510	0	-9	18 5	10	+1	5 5	ridge
540	2	-9	17 0	6	+4	11 7	
570	0	-8	18 1	4	+7	12 1	
600	2	-10	18 0	4	+5	12 3	
630	2	-8	18 4	6	+7	15 2	
660	1	-10	14 9	6	+8	14 5	
690	3	-4	9	6	+6	10	
		-5			+4		



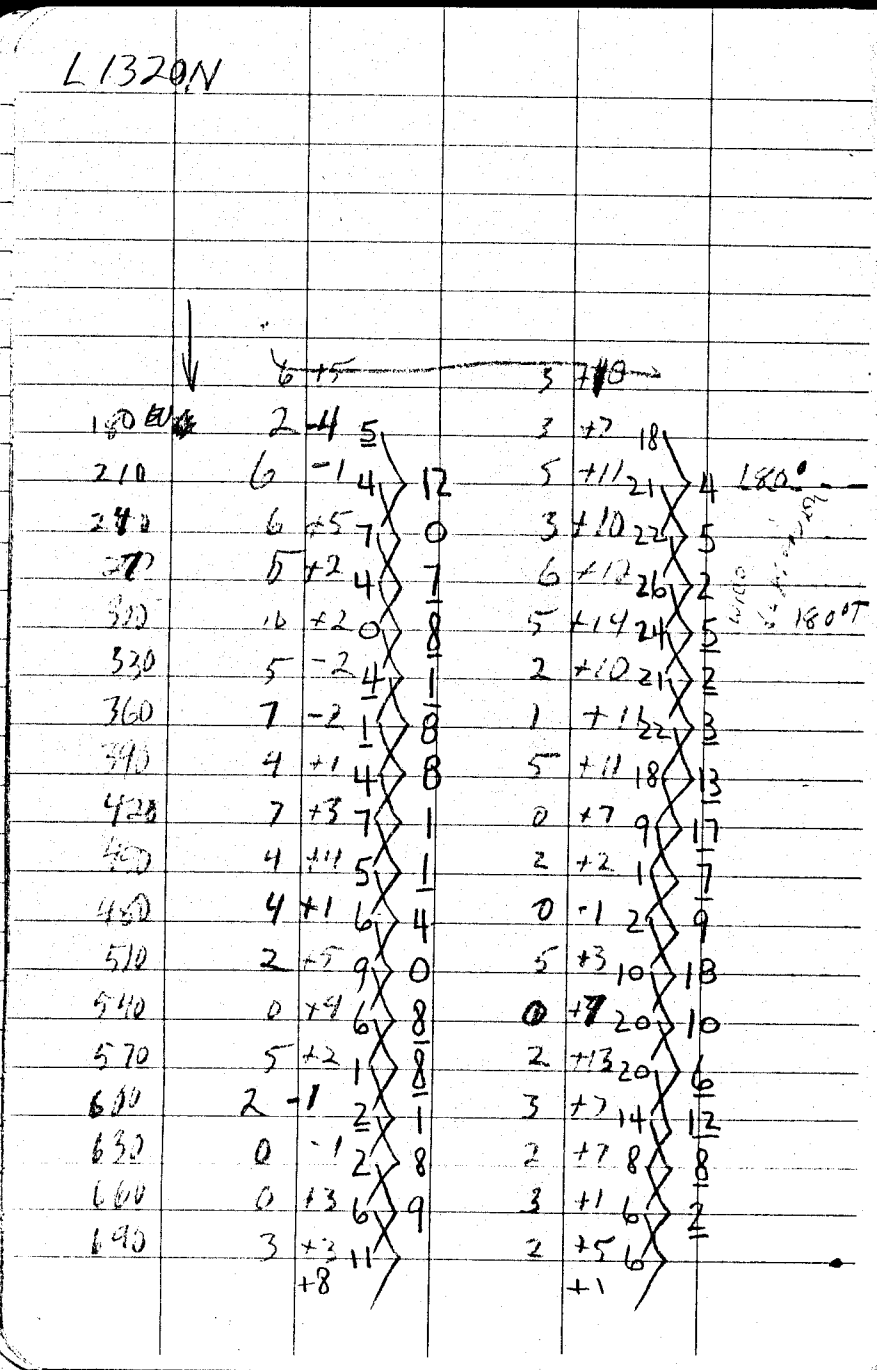
L840N		-4			+6
720	5	-5	7		+4
750	25	-1	17		0
780	30	-3	17		0
810 W	8	-6	15		+3

① 840N 00 A+B
small gully Az 045°T
has been cleared sample A
with sample B in place
from small scale.

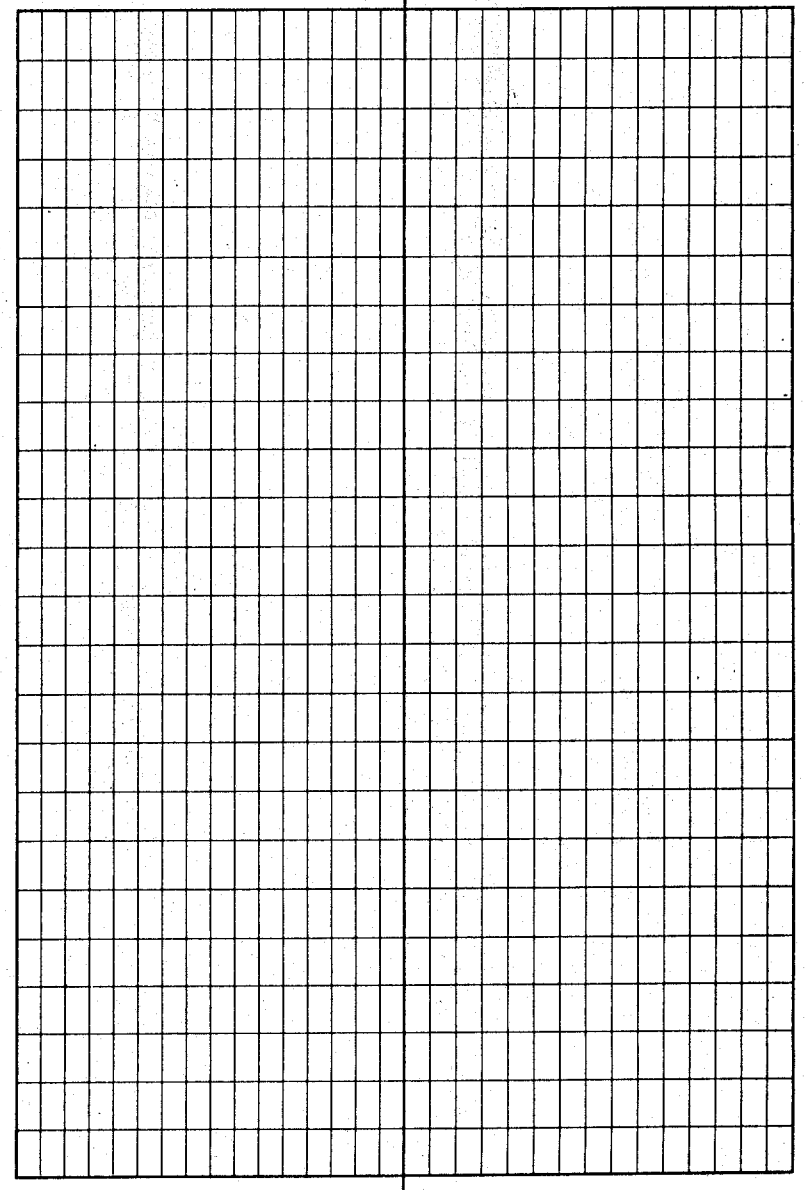
L1080N		5			A			
0								
30	E							
60	↓							
90								
120	W							
150								
180 W		2	-4	8	3	+12	24	road 150°T
210		2	-4	7	2	+12	27	4 / 7
240		2	-3	4	5	+15	31	3 / 3 acid
270		1	-1	4	7	+16	30	3 / 2 granite
300		5	-3	7	7	+14	29	6 / 0
330		10	-4	10	10	+15	30	3 / 0
360		10	-6	10	7	+15	29	3 / 3 gully 010°
390		6	-4	7	7	+14	27	6 / 0
420		2	-3	4	7	+13	29	4 / 5
450		0	-1	11	7	+16	32	13 / 2 horsetrail 146°
480		5	-10	17	7	+16	31	2 / 4
510		5	-7	13	5	+15	28	5 / 2
540		6	-6	12	7	+13	29	3 / 0
570		3	-6	10	7	+16	28	6 / 7
600		0	-4	6	2	+12	22	10 / 17
630		0	-2	0	3	+10	11	11 / 23
660		1	+2	5	0	+1	1	2 / 13 Frisbee 140°T
690		0	+3	2	4	-2	2	
			-1			0		

L 0+00 N		50 S	+3 5 2	4	300 A	-2 1 2	Feb 12
720	↓	0	-1 1	7	0	0 11	10
750		0	+2 9	16	4	11	24
780		3	+7 17		5	-15 26	24
810 W		5	+10		6	-20 35	[illegible] 060
840							
870							
900							
930							
960							
990							
1020							

L 1320N



			6				6		
			+3	11	7		+5	6	4
720		5	+8	14	1	3	+1	2	5
750		5	+6	12	0	0	+1	1	1
780		0	+6	14	2	0	0	1	2
810		3	+8	10	8	0	+1	1	6
840		5	+2	6	9	0	-2	5	6
870		0	+4	1	2	2	-3	7	1
900		6	-3	8		3	-4	4	
930		5	-5			1	0		
960									
990									
1020									



	50			300			12
360 S	5			4			
00 E	40	-13	30 21 15	10	+13	22 26 1	
30	15	-8	15 8	5	+13	23 8	
60	6	-7	13 0	4	+10	18 2	
90	2	-6	15 7	3	+8	21 13	
120	1	-9	21 3	4	+13	31 9	
150	3	-12	18 8	6	+18	30 8	
180	3	-6	13 1	2	+12	23 9	
210	3	-7	17 6	1	+11	21 2	
240	0	-10	19 2	2	+10	21 5	
270	3	-9	19 2	0	+11	16 10	
300	5	-10	21 2	7	+5	11 12	
330	6	-11	17 5	8	+6	4 5	
360	6	-6	16 2	6	-2	6 18	
390	5	-10	19 2	2	+8	22 19	
420	5	-9	18 2	3	+14	25 3	
450	5	-9	21 5	3	+11	25 1	
480	10	-12	23	0	+14	24	
510 E	10	-11		5	+10		

Mon 6mN
DL 2198

L120S			-12	31			+8	19		
00	↑	7	-14	34	7	3	+11	25	9	hit ℄ at 525 / BL 1+55
30		13	-15	24	13	4	+14	28	4	
60		3	-9	21	1	2	+14	29	6	
90		0	-12	23	2	1	+15	34	7	
[illegible]		1	-11	23	1	2	+19	36	3	
[illegible]		2	-12	24	1	0	+17	37	3	
[illegible]		1	-12	24	1	1	+20	39	1	
[illegible]		2	-12	23	6	0	+19	38	7	
[illegible]		1	-11	18	4	1	+19	32	9	
270		3	-9	19	2	1	+13	29	3	
[illegible]		0	-10	16	1	1	+16	29	1	---- 304°
[illegible]		0	-6	20	7	0	+13	30	1	cattle guard
360		4	-14	23	3	2	+17	28	5	25 SE
390		4	-9	23	3	1	+11	25	2	
420		4	-14	26	2	3	+14	30	7	
450		0	-12	25	2	3	+16	32	1	
480		2	-13	24		1	+16	29		
510 E		3	-11			0	+13			road 30m 5

Total
12210 meters
EM Survey

FEB 11/89

BL1/89

L120N 00 57.611 10:31 AM

TY LINE

L840N 810W 57.581 - 11:21 AM 57.602 3.10 PM

L720N 810W 57.565 - 3.02 PM

FEB 12/89

BL1/89

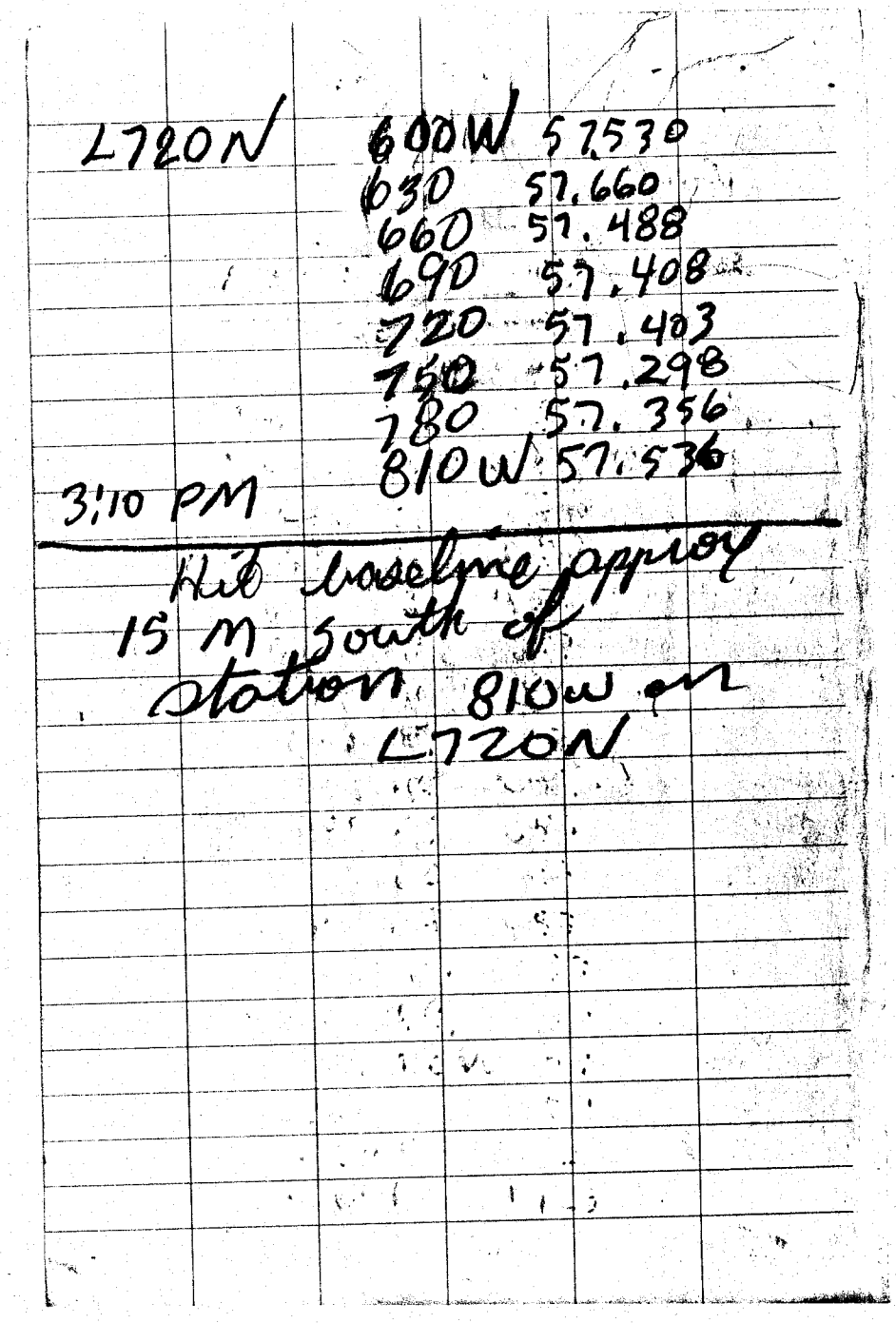
L120N 00 57613 10:21 AM

57614 2:40 PM

Magnetometer Data
Quartz Reef property
Feb/89

L840N	810 W	57.581	11.25AM
	780	57,415	
	750	57.532	
	720	57.552	
	690	57.381	
	660	57.348	
	630	57.518	
	600	57.435	
	570	57.406	
	540	57.316	
	510	57.342	
	480	57.260	Top of Gully
	450	57.210	
	420	57.231	
	390	57.205	Creek
	360	57.337	
	330	57.404	
	300	57.389	
	270	57.437	
	240	57.470	
	210	57.465	
	180	57,494	
	150	57.567	
	120	57.404	

L840N	90W	57.506	
	60W	57.484	
	30W	57.496	
	00	57.475	1PM
4720N	00	57.380	
	30	57.464	
	60	57.425	
	90	57.468	
	120	57.562	
	150	57.491	
	180	57.539	
	210	57.518	
	240	57.411	
Creek @ 2+95W	270	57.286	
	300	57.372	
	330	57.305	
	360	57.356	
	390	57.394	
	420	57.443	
	450	57.294	
	480	57.386	
	510	57.437	
	540	57.453	
	570	57.532	


L720N
600W 57.530
630 57.660
660 57.488
690 57.408
720 57.403
750 57.298
780 57.356
810W 57.536
3:10 PM
Hub baseline approx
15 m South of
station 810W on
L720N

FEB 12-89

L 1080 N

11:10 AM	810 W	57.328
	780 W	57.280
	750 W	57.236
creek	720 W	57.361
@ approx	690	57.169
685 W	660	57.301
	630	57.396
	600	57.531
	570	57.470
	540	57.579
	510	57.684
	480	57.389
	450	57.388
	420	57.577
	390	57.642
	360	57.489
	330	57.227
	300 W	57.273
	270	57.309
	240	57442
	210	57782
12.47 P.M	180 W	57562

L 1320N FEB 12/89

1:02 PM	180W	57.393
	210	57.313
	240	57.355
	270	57.345
	300	57.365
	330	57.448
	360	57.413
	390	57.445
	420	57.440
	450	57.411
	480	57.370
	510	57.444
	540	57.427
	570	57.404
	600	57.475
	630	57.477
	660	57.362
	690	57.571
	720	57.622
	750	57.279
	780	57.356
	810W	57.227

L 1320N

	840W	57.132
	870W	57.242
	900W	57.119
	930W	57.351
2:22PM	960W	57.718

3:20 PM L 3605

	00 E	57.838
	30	57.767
	60	57.718
	90	57.712
	120	57.680
	150	57.624
	180	57.657
	210	57.717
	240	57.694
	270	57.631
	300	57.568
	330	57.502
	360	57.403
	390	57.479
	420	57.498

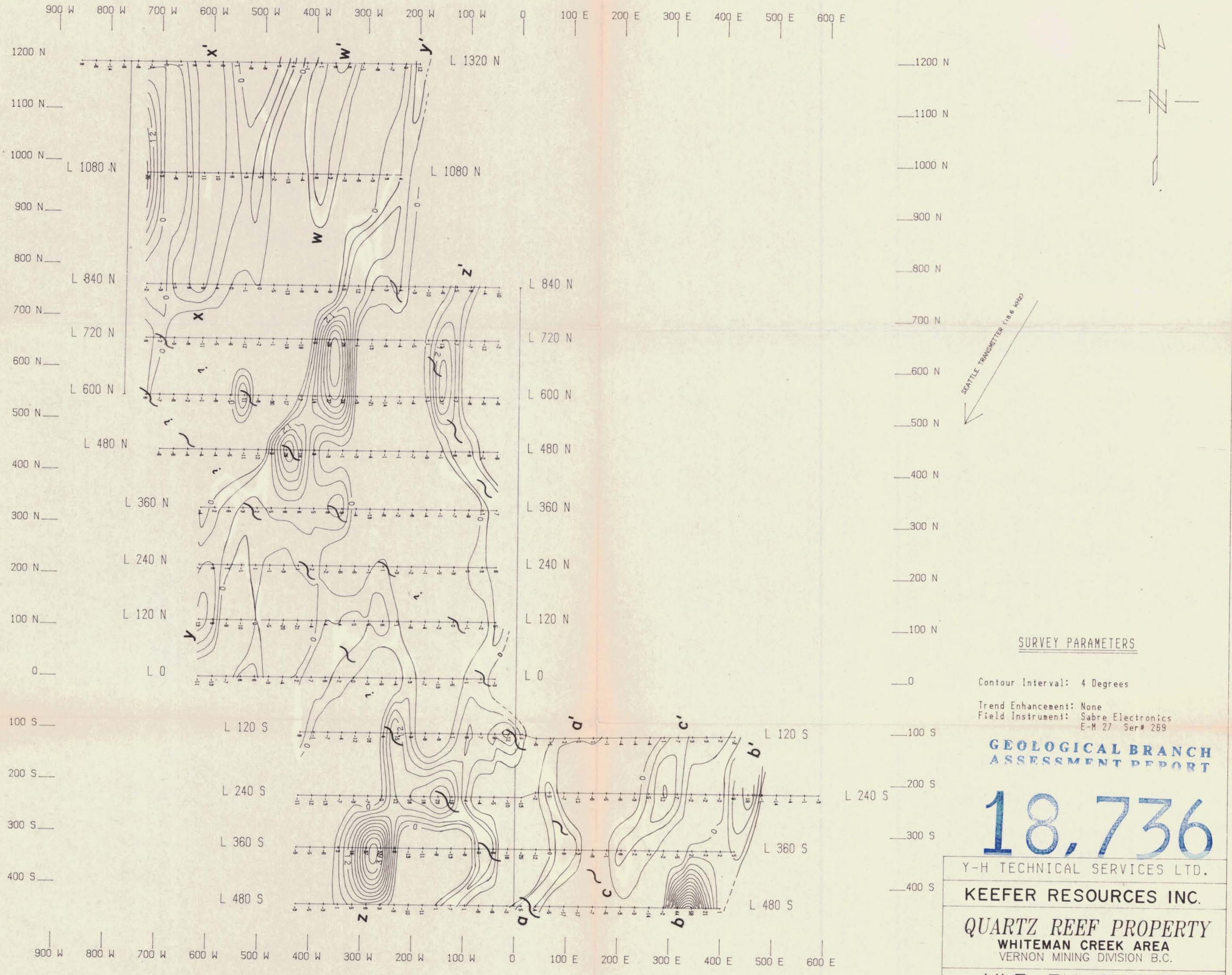
FEB 12-89

L360S

	450		57.491
	480		57.466
4:07 PM	510	E	57.438

L120S

57.491	510	E	4:24 PM
57.579	480		
57.584	450		
57.632	420		
57.650	390		
57.629	360		
57.625	330		
57.619	300		
57.635	270		
57.641	240		
57.651	210		
57.645	180		
57.644	150		
57.680	120		
57.627	90		
57.620	60		
57.625	30		
57.651	00	E	5:05 PM



SCALE 1 : 5000

100 0 100 (metres) 200 300 400

Surveyed by PAT CROOK, February, 1989

SURVEY PARAMETERS

Contour Interval: 4 Degrees

Trend Enhancement: None
Field Instrument: Sabre Electronics
E-M 27 Ser# 269

Y-H TECHNICAL SERVICES LTD.

KEEFER RESOURCES INC.

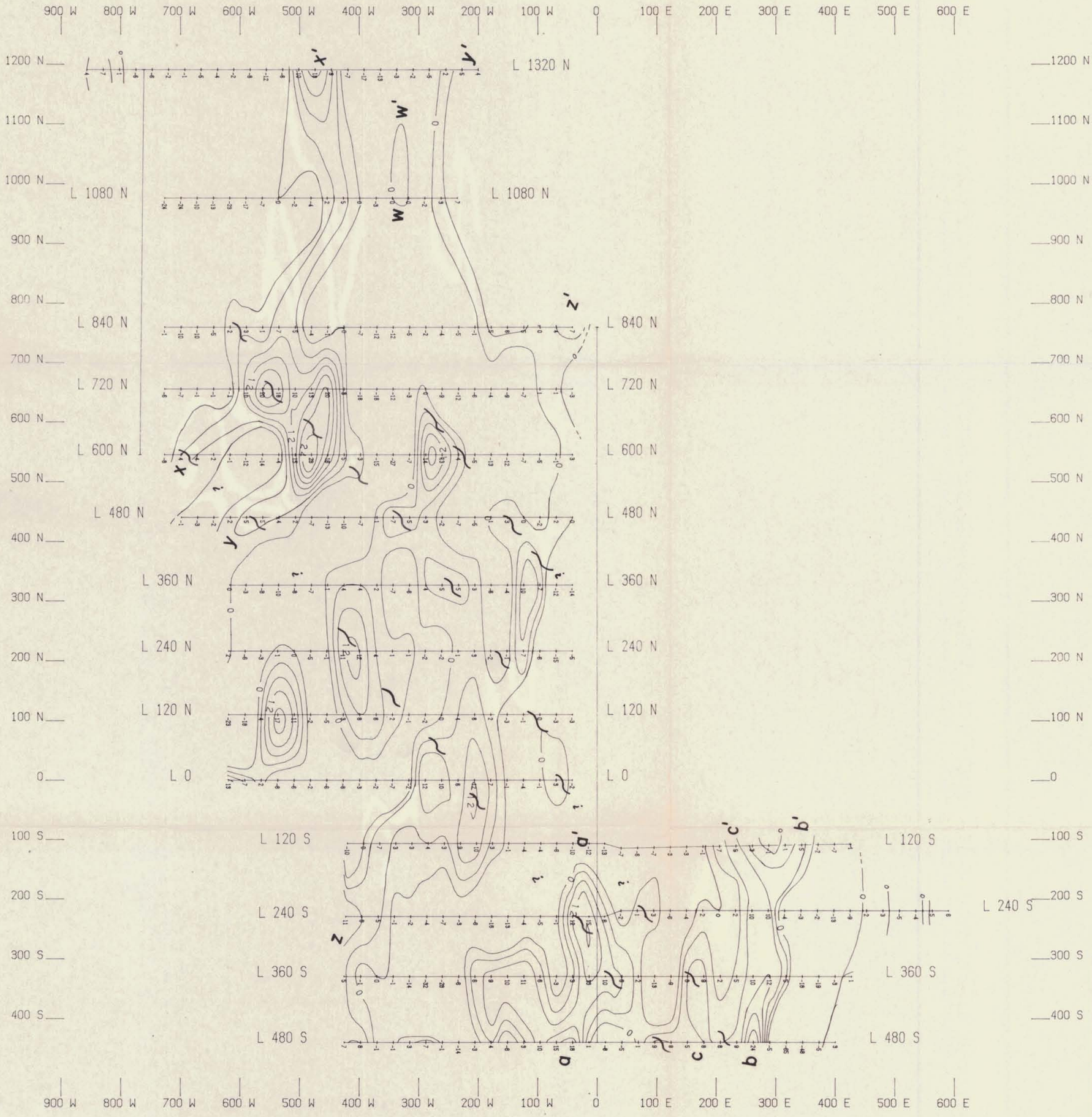
QUARTZ REEF PROPERTY

WHITEMAN CREEK AREA
VERNON MINING DIVISION B.C.

VLF-EM SURVEY

(Seattle Transmitter)
Fraser Filtered
Data and Contours

Drawn by	Job #	N.T.S.	Scale	Date	Map #
GEOTRONICS	89-04	82L/3W	1:5000	Apr/89	1



SCALE 1 : 5000

100 0 100 (metres) 200 300 400

Surveyed by PAT CROOK, February, 1989

SURVEY PARAMETERS

Contour Interval: 4 Degrees

Trend Enhancement: None
Field Instrument: Sabre Electronics
E-M 27, Ser# 269

Y-H TECHNICAL SERVICES LTD.

KEEFER RESOURCES INC.

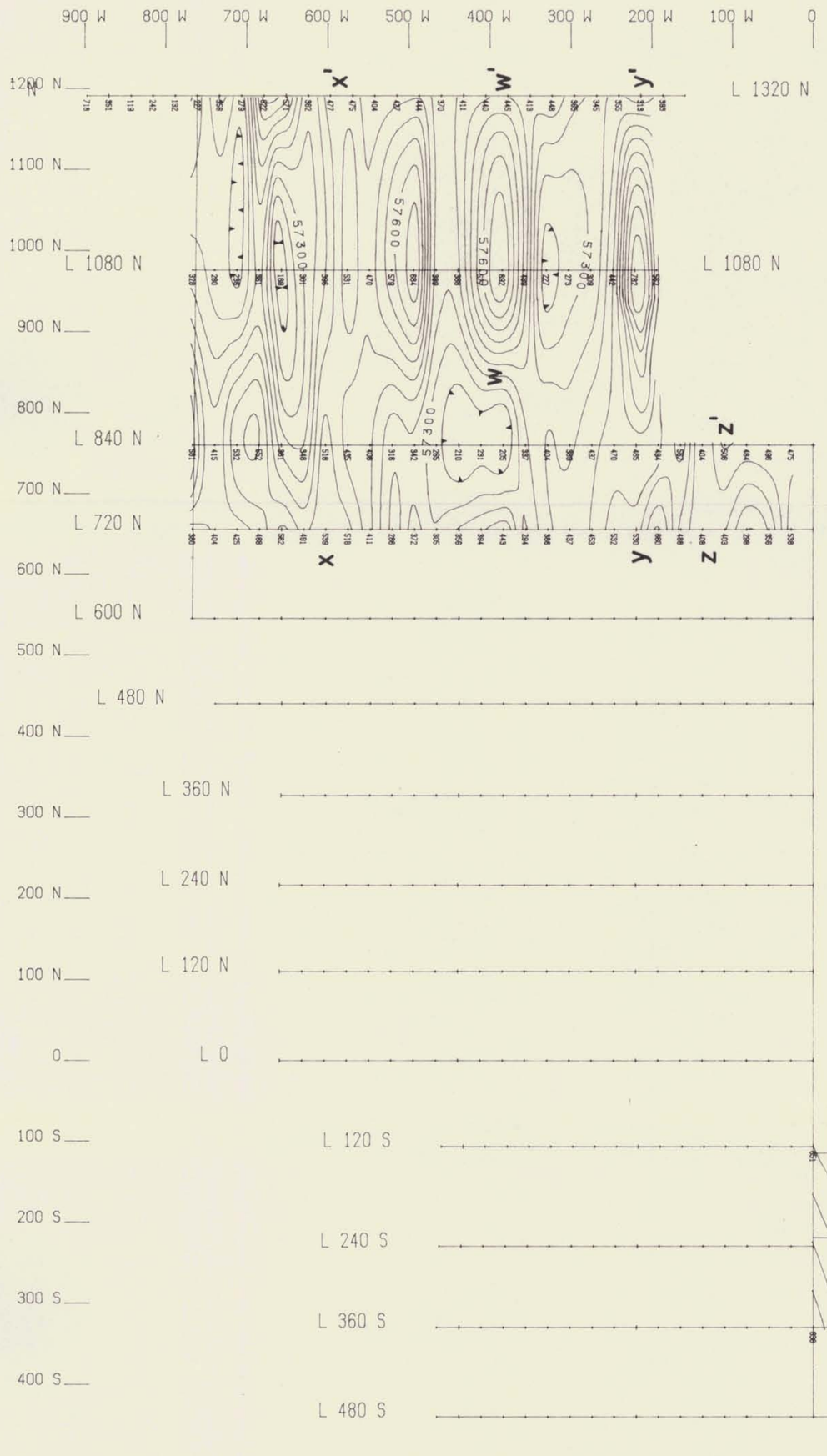
QUARTZ REEF PROPERTY

WHITEMAN CREEK AREA
VERNON MINING DIVISION, B.C.

VLF-EM SURVEY

(Annapolis Transmitter)
Fraser Filtered
Data and Contours

Drawn by	Job #	N.T.S.	Scale	Date	Map #
GEOTRONICS	89-04	82L/3W	1:5000	Apr/89	2



SURVEY PARAMETERS

Contour Interval: 50 Gammas

Trend Enhancement: None
Field Instrument: GEM Systems GSM-8 Proton Precession Magnetometer
Base Station: None

Note: A base level of 57,000 gammas has been subtracted from each value

Surveyed by PAT CROOK, February, 1989

Y-H TECHNICAL SERVICES LTD.

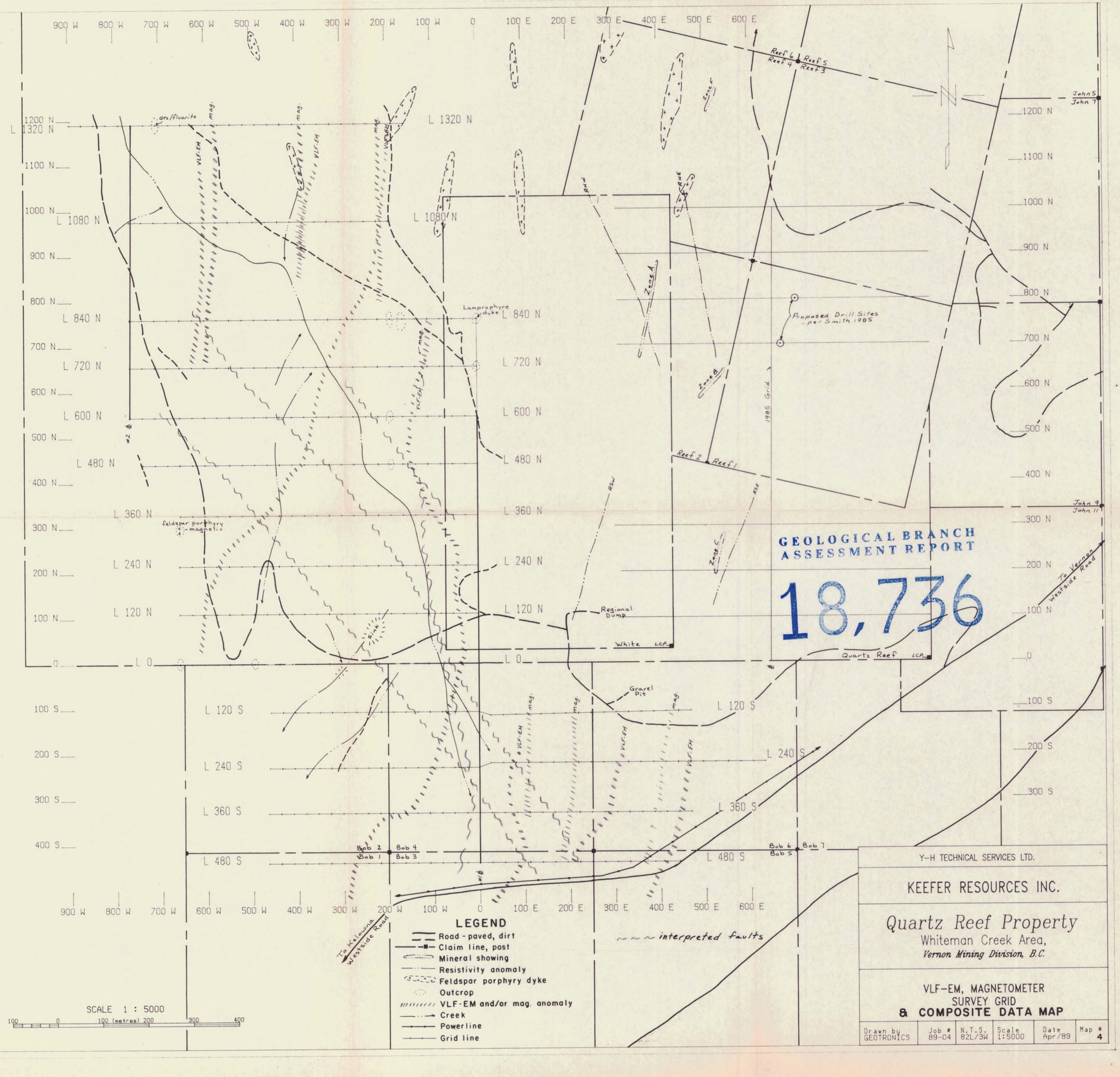
KEEFER RESOURCES INC.

QUARTZ REEF PROPERTY

WHITEMAN CREEK AREA
VERNON MINING DIVISION, B.C.

Magnetometer Survey
Data and Contours

Drawn by	Job #	N.T.S.	Scale	Date	Map #
GEOTRONICS	89-04	82L/3W	1:5000	Apr/89	3



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,736

Y-H TECHNICAL SERVICES LTD.

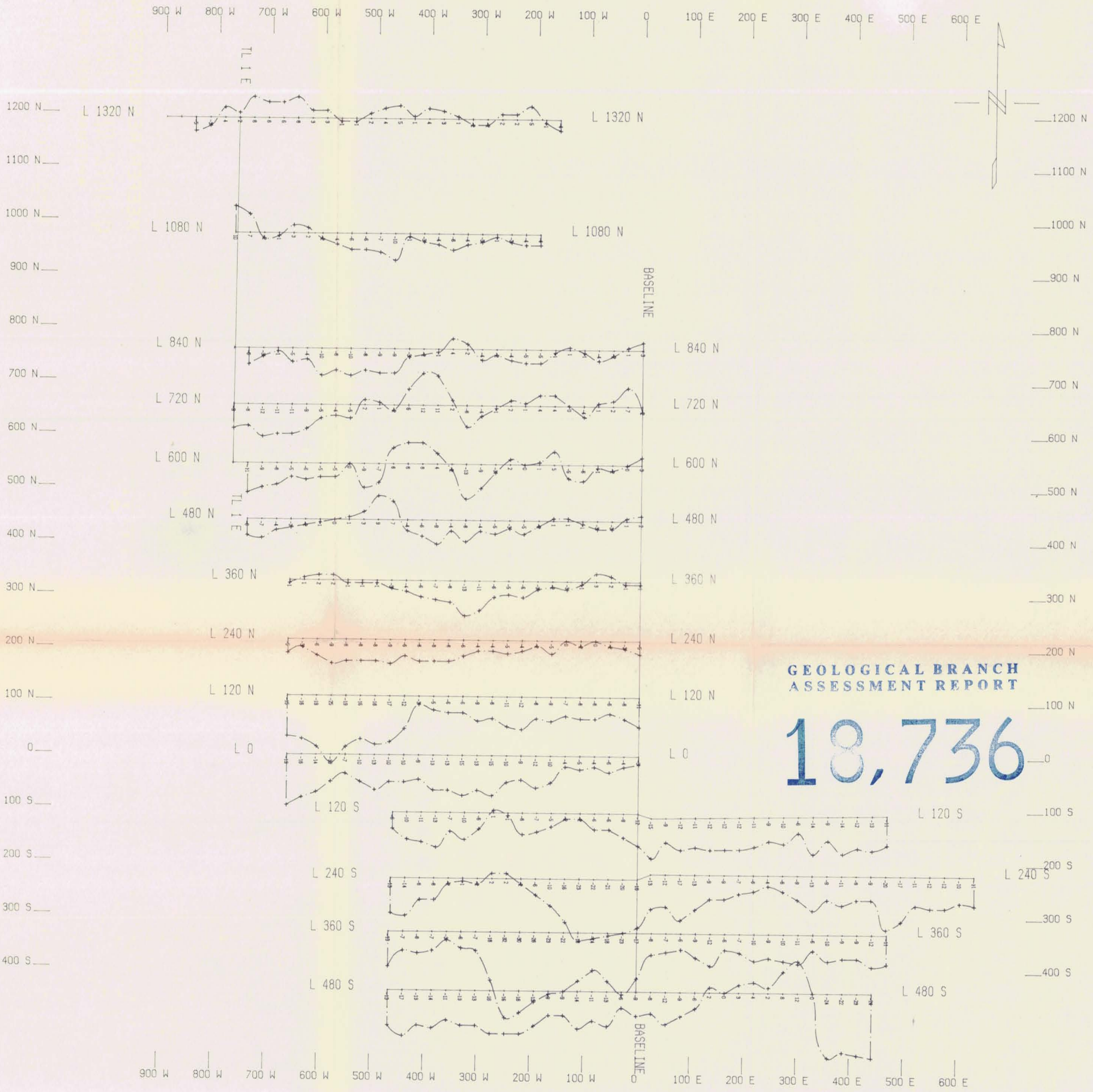
KEEFER RESOURCES INC.

Quartz Reef Property

Whiteman Creek Area,
Vernon Mining Division, B.C.

VLF-EM, MAGNETOMETER
SURVEY GRID
& COMPOSITE DATA MAP

Drawn by	Job #	N.T.S.	Scale	Date	Map #
GEOTRONICS	89-04	82L/3W	1:5000	Apr/89	4



SCALE 1 : 5000

100 0 100 (metres) 200 300 400

Y-H TECHNICAL SERVICES LTD.

KEEFER RESOURCES INC.

Quartz Reef Property

Whiteman Creek Area

Vernon Mining Division, B.C.

VLF-EM SURVEY-Seattle Transmitter

Raw Data and Profiles

1 cm = 10

Drawn by	Job #	N.T.S.	Scale	Date	Map #
GEOTRONICS	89-04	82L/3W	1:5000	Apr/89	5