GEOPHYSICAL SURVEYS
PIKE MINERAL CLAIM GROUP

Traffic Mountain
Watson Lake Mining Division
Yukon Territory

Longitude	**130° 40' West**
Latitude	**62° 08' North**

by:

John S. Brock
ATLAS EXPLORATIONS LIMITED

June 23 - July 12,1966
July 27 - Aug. 18, 1966
Oct. 18 - Nov. 20,1966
May 29 - June 23,1966

GEOPHYSICAL SURVEYS

PIKE MINERAL CLAIM GROUP

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GEOPHYSICAL SURVEYS
PIKE MINERAL CLAIM GROUP

INTRODUCTION

Due to prospecting in the Traffic Mountain area, Atlas Explorations Limited became interested in the Pike Lake region in early June of 1966. The discovery of mineralized float prompted the staking of the Pike Mineral Claims. Follow up work consisted of aeromagnetic surveys, ground magnetic, electromagnetic and induced polarization surveys as well as geologic and geochemical surveys. Results proved encouraging and bulldozer trenching and limited diamond drilling programs were carried out during 1966 and 1967. Geophysical surveys were done during July, August and October-November, over three separate periods as further zones of economic potential were outlined during the course of follow-up and development work.

LOCATION AND ACCESS

The Pike Group is centered roughly at latitude 62° 03' north and longitude 130° 40' west, and covers much of the north half of claim sheet 105J-2, and a western portion of sheet 105J-1. The group is elongated in a westerly direction, and extends from the south slopes of Traffic Mountain to a point 15 miles to the west.

Access to the property is by aircraft from Rose River; air-line mileage is 52 miles. Most float-equipped aircraft may land on Pike Lake, 4 miles in length. A temporary camp was established on the north side of Pike Lake, from which supplies were transported to the base camp, 1½ miles to the

west, by helicopter or D6 Cat. Pike Lake is connected with the base camp by Cat road. During April 1967, a tote road was constructed from Finlayson Lake, on the Watson Lake-Ross River road to the Pike Group. This access served as 'winter road' entry and provided bombardier transport as far as the Felly River which could not be forded with the bombardier.

METHOD OF SURVEY

Instruments Used: For the magnetometer survey, a Sander 46-65 magnetometer was used, the instrument is hand held and measures the vertical magnetic component by use of an oil-dampened fluxgate which automatically levels itself in the vertical direction. The range of this instrument is 10 to 250,000 gammas over five sensitivity ranges, the lowest being 10 gammas per scale division. The magnetometer is of light weight and readings can be obtained quickly, a conversion factor is necessary before gamma values can be determined.

For the electromagnetic survey, a Crone Dual Frequency unit was employed. The Crone unit is of the inductive type and may be used either as a horizontal or vertical loop apparatus. Measurements are made of the resultant dip angle of the field and the width of null or out of phase component. It is designed to be operated with a maximum coil spread of 300 feet on frequencies of 480 and 1600 cps, with no interconnecting cables. The effective depth penetration is 300 feet for a horizontal conductor with maximum coil spread. The equipment was chosen in order to give reliable information on the attitude and configuration of a conductor with results free from error due to topographic relief.

The induced polarization equipment was manufactured by Geoscience Incorporation of Lexington, Massachusetts. The Sonder supplies a preset constant current that is applied

to the ground through two electrodes. The voltage between two potential electrodes is passed into the receiver. A meter is nulled at one frequency and gives a direct reading of the percent frequency effect at a second frequency. From the applied current and received potential, the apparent resistivity of the medium may be calculated

Linecutting: All grids designed for ground geophysical and geochemical surveys were laid out using 400 foot line spacing with 100 foot station intervals. Two hundred foot line spacing was used over areas requiring detailed information. 800 foot line spacing was used over areas requiring reconnaissance surveys for location of aeromagnetic anomalies. Central base lines were used for control, all cross lines were surveyed by picket and chain methods. Linecutters were hired from the settlement of Ross River. Survey control was later checked by aerial survey.

Magnetometer Survey: Prior to the actual magnetometer survey, readings were taken along the central base line at cross line intersection points. These stations were looped and re-read every hour as a means of controlling drift and diurnal variations. With base stations of an established value serving as reference points for each cross line portion of the survey, a rapid and precise check was kept on magnetic variations and the entire survey was thus kept on a relative basis during day to day operation. Each cross line was read with re-checks at the base station within every hour as an internal check for magnetic variation.

Electromagnetic Survey: All surveys were run with horizontal loop configuration and 300 foot coil spacing in order that the highest response could be obtained from flat lying sulphide bodies. Both 1300 and 430 cps readings were taken at each station. The coil configuration was not adaptable to conditions

of conductive overburden and conditions from such was expected. All traverses were made by the 'in line' method and over the same survey lines as the other geophysical and geochemical surveys.

Induced Polarization Survey: The electrodes were placed in collinear array, with the current electrodes separated by a distance 'a'. The potential electrodes were also separated by a distance 'a'. The nearest current and potential electrodes are then also separated by a distance 'na', where n = 1, 2 or 3. By varying n, the sender-receiver spacing, one obtains a depth-probing effect, since the effective dpth of exploration varies with this spacing.

TREATMENT OF DATA

Magnetic Results: Magnetic results were corrected for diurnal and drift by the field operator. Final gamma values were then plotted on a grid plan using scale of 1:400. Data was then profiled and contoured using an interval of 20 gammas. all maps show major topographic features and claim post locations.

Electromagnetic Results: All resultant dip angles were plotted on a grid plan to scale 1:400. High and low frequency results were profiled, on a separate map high frequency values were contoured.

Induced Polarization Results: The results were plotted at the intersection between 45° diagonal lines drawn from the mid-points of the sender and receiver dipoles. Percent frequency effect values are plotted below the reference line, resistivity values in ohm-feet above. The row of data nearest the reference line corresponds with N = 1 values, the second row N = 2 and the third N = 3.

GEOLOGY

Pike region lies within major northwesterly-striking wrench fault zone and is underlain by steeply-dipping early Paleozoic cherts and shales folded around northwest-southeast striking axes and intruded by a Cretaceous granitic stock.

A portion of the Pike number 1 grid is underlain by steeply-dipping, N 70° W striking, partially chilled biotite granite dykes ranging from a few feet to 500 feet wide with length in total of about 2 miles. This dyke system appears to be an offshoot of the underlying Pike stock.

No outcrop was observed in the area of Pike Number 2 grid, however graphitic schist horizons bearing magnetite mineralization were found over Pike Number 3 grid.

Porphyry copper-silver mineralization with minor lead zinc veins, occur throughout much of the hydrothermally altered (silica, chlorite, clay-sericite, and biotite), chilled biotite granite dyke of the Pike grid.

GEOPHYSICAL RESULTS

Grid 1

Ground Magnetics: The Pike Number 1 grid area has a background level of about 1100 gammas, the survey gradient slopes southward from an average of 1200 gammas in the north to 1000 gammas in the south. The most pronounced anomalous feature is a broad sinuous band of below-background values which trend N 70° W and run across the entire grid area. Within this band values range up to 3000 gammas above background. Although the zone of high magnetics is contiguous, its appearance relative to the nearly smooth background profile level, is erratic for it is composed of isolated troughs with widely varying values.

A comparison between outcrop geology and ground magnetics shows that a narrow dyke-like, N 70° W- trending granitic intrusive underlies a portion of the magnetically negative zone. In the eastern grid area the dyke corresponds roughly

with the southern margin of the magnetically high zone, although the far eastern end of the dyke nearly bisects the zone. In the western grid area the dyke occurs in the midst of a much broader magnetic zone and appears to bear no particular special relation to it. In brief, relations between outcrop geology and ground magnetics suggest that the dyke is magnetic to varying degrees and is a small offshoot of a much larger underlying granitic mass.

It is notable that what are probably successively lower levels of the Pike granitic intrusion are reflected by outcrop geology, ground EM, and ground magnetics. The geologic map shows a dyke-like structure of 100 to 600 feet wide. EM indicates a broad non-conductive structure underlying the dyke with widths between 1,000 to 2,600 feet. The zone of high magnetics underlies not only the dyke and the EM non-conductive area, but expands into the western grid area. The discrepancy between EM and magnetics is perhaps best explained by the presence of conductive country rock capping most of the granitic intrusive in the western grid area.

Mineralized zones 1 and 2 (see geologic map) are crudely reflected by ground magnetics. In zone 1, mineralization occurs near or just north of a contact between high magnetics (intrusive) and country rock. In general the contact situation between negative anomalous zones and positive anomalous zones, appears to reflect erratically distributed pyrrhotite mineralization. Pyrrhotite is a prominant mineral in the known copper, lead, zinc assemblages of this zone.

Ground Electromagnetics: Much of the Pike grid area shows conductance with high frequency (1800 cps) resultant dip angles ranging from -5° to -30°. Two broad anomalous zones of less than -15° dips occur between the following coordinates: 30W to 20W, 4N-16N and 30W to 40W, 45-26S. Both

anomalies are characterized by small elongate troughs of -25° and -30° dips which range in length from 100 to 1,000 feet and strike N50° - 70° W. The two anomalies are separated by a northwest-striking non-conductive band of about 1,500 feet wide. Dips of conducting units within the anomalies are steep, a particularly good example occuring on line 56W between 4S and 12S where a sub-outcrop positive hump occurs between two equally-spaced troughs of -15° and -50°.

Because the EM anomalies are broad, occur within a large EM conductive area, and correspond in location and attitude with known carboneceous sediments, they are believed to reflect conductive country rocks. Individual conductive units strike N 70° W, but the total conductive zone strikes northeasterly, indicating that the units are lens-like and lie within a stratigraphically transgressive zone.

The non-conductive band ranges in width from 1,000 to 2,600 feet and trends N45° W through the grid area. Because this band corresponds closely with outcropping granitic intrusive and a negative magnetic anomalous zone (interpreted as indicating intrusive) it too is believed to reflect intrusive rock.

Mineralization zones 1 and 2 lie close to the south margin of the non-conductive band; this relation reflects, as does ground magnetics, that mineralization occurs along the contact of the granitic intrusive of the Pike grid.

Induced Polarization (IP) Five profile lines were run in the western Pike grid area on lines 60W, 56W, 44W, 32W and 16W. Electrode spacing was a = 100 feet (except for line 60W where a = 200) and high frequency of 3 cps and low frequency of 0.1 cps were used.

The lines consist of central IP lows (reflected by negative P.F.E., or percentfrequency effect, which is directly proportional to metal factor) with extended anomalous (in PFE)

areas to the north and south; these low points lie north of mineralized intrusive. Because of an extensive PFE anomaly south of the central low and its cursory relation to mineralization.

In general, the low resistivity areas appear to reflect conductive country rock (carbonaceous sediments) and high resistivity areas, intrusive or pure quartzite or cherts. The only line crossing outcropping granite is 44W where only moderate resistivity values are shown. Because mineralization is known to occur in intrusive, the first prerequisite of significant PFE anomalies would seem to be a correspondence with high resistivity. The extensive anomalies correspond only locally with high resistivities, and are therefore probably caused by carbonaceous material. Only one point of PFE rise corresponds with high resistivity, and this is on line 56W at the western edge of zone 1 where mineralization could be reliably predicted.

Grid 2

Ground Magnetics: The Pike Grid Number 2 was surveyed magnetically during the late fall of 1966 in order to further extend results obtained on Grid 1 to the southwest. The magnetic survey outlined a broad sinuous anomaly trending in a northwesterly direction for approximately the length of the survey area, approximately 10,000 feet. Within this broad zone of magnetic response lies scattered peaks of single line value. The magnetics are partially coincident with a conductive zone extending in the same direction. It is thought that the probable cause of the magnetic anomaly and its enclosed irregular 'highs' is formational and due to the same rock units as explaining geophysical responses on Grid 1.

Ground Electromagnetics: A large, well defined conductor striking in a northwesterly direction across the grid was

outlined in partial coincidence with the magnetic responses. Within the conductive zone numerous small resultant negative dip angles of high intensity are delineated, their apparant strike is at 45° to the main conductive body. The electromagnetic results are thought to be due to an extension of carbonaceous horizons outlined on the Pike Number 1 Grid.

Grid 3

Ground Magnetics: An elongate aeromagnetic anomaly striking in a northwesterly direction was fully delineated on the ground by magnetometer survey. Good coincidence was obtained in relative intensities between the two surveys. No interpretation of the anomaly was carried out due to ground geologic work outlining concentrations of magnetite in metamorphic formations. Detailed geologic examinations of outcrop at geophysical stations revealed that coincident magnetic-electromagnetic anomalies within the major anomaly lay immediately over steeply-dipping black carbonaceous slates at points where slates have a magnetic content of one percent or better. Slates were crushed and tested for magnetics on stations across the three major magnetic anomalies in the area and a very close correspondence between variations in magnetometer profiles and percentage of magnetic material in the slates was found. Ground EM anomalies are abundant and may be unquestionably explained by the black slates.

Ground Electromagnetics: A Ronka EM 16 electromagnetic unit was used in place of the Crone JEM for the electromagnetic survey. It was estimated that the Ronka would bee a deeper penetrating unit for follow-up of airborne electromagnetic anomalies in this area than the Crone. Results gained were on 18.6 kc frequency. The conductors outlined are extensive and trend in a northwest direction, the area outlined is more extensive than that shown by the airborne survey, the reason being the ground surveys deeper penetration (600 feet vs. 150 feet). The ir-

regular profiles of in and out-phase response is extremely pronounced and conductive axis are difficult to trace. The electromagnetics are typical of graphitic horizons with varying conductivity. This fact was later proven by ground examination of areas of high conductivity.

CONCLUSIONS

Grid 1: A broad magnetic anomaly of average intensity 1100 gammas trends N70°W and runs across the entire Pike grid, the magnetic response appears to reflect granitic intrusive. Pyrrhotite mineralization gives rise to isolated and erratic magnetic 'highs' throughout the granitic intrusive, the erratic magnetics perhaps indicate epigenetic mineralization.

Two broad anomalous zones of less than -15° resultant dip angles, reflect steeply dipping, northwest trending carbonaceous sediments in western Pike grid. The conductive zones are split by a non-conductive band of 1,000 to 2,000 feet in width which represents the granitic intrusive. Mineralized zones lie at the margins of the non-conductive intrusive band.

Broad, low-resistivity- moderate P.F.E. anomalies probably indicate carbonaceous sediments; high resistivity areas apparently indicate intrusive rock. Porphyry mineralization appears to be reflected only by combined high-resistivity-P.F.E. values as on lines 44W and 56W. One I.P. line crosses known mineralization and does not reflect it.

Grid 2: The coincident magnetic and electromagnetic (partial) anomalies of the Pike Number 2 grid are thought to be of formational nature and not sulphide mineralization, no further follow-up is recommended.

Grid 3: Magnetic and electromagnetic anomalies of an extensive nature were delineated both through airborne and ground surveys. The cause of each has been explained by the presence of magnetite bearing graphitic schists. No further work is recommended.

Respectfully submitted,

John S. Brock,

Assistant Exploration Manager,
Atlas Explorations Limited

PERSONNEL

Andy Harman	Party Chief	Vancouver, B.C.
Robert Lucas	Magnetometer op.	Vancouver, B.C.
Mike Smith	"	Amos, Quebec
Charles Wicks	"	Antigonish, Nova Scotia
Peter Dean	EM Operator	Victoria, B.C.
Ted Lightfoot	"	Vancouver, B.C.
Merle Curry	"	Whitehorse, Y.T.
Val Pratico	"	Vancouver, B.C.
Charlie Ollie	Linecutter	Ross River, Y.T.
Nclary Acklack	"	"
John Acklack	"	"
Robert Etzel	"	"
Bill Etzel	"	"
Mike Shorty	"	"
Franklin Charlie	"	"
John S. Brock	Geophysicist	Vancouver, B.C.
Clyde L. Smith	Geologist	"

PELLY RIVER

GRID 3 JUNE 87

GRID 1 JULY 88

GRID 2 NOV. 86

PIKE 1 - 88

PIKE Mineral Claims
Grid location
Sheldon Area
Sheets: 105J 1 & 2

ATLAS EXPLORATIONS LTD.

ROSS RIVER, YUKON

TRAFFIC MTN AREA

PIKE MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY

GAMMA VALUES - PROFILES

Scale 1" = 400'
Date August 1969
Instrument Askania
Profile Scale 1" = 1000 gamma
Surveyed by J. Whyte
Part of Report
Drawn by K. Bell

GRID ◆ 1

SCALE

400 0 400 800 1000

1 INCH TO 400 FEET

CLAIM POST: PIKE 4 | 2 / 3 | 1

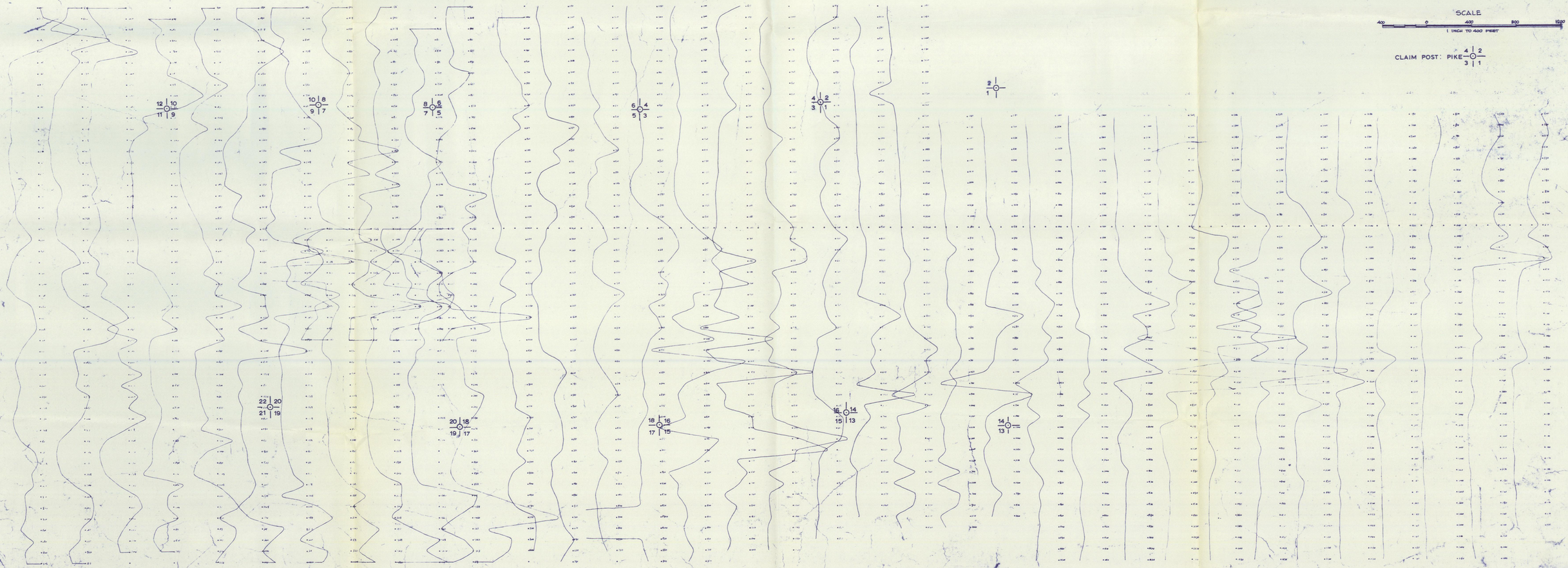


FIG. 26

ATLAS EXPLORATIONS LTD.
ROSS RIVER YUKON
TRAFFIC MTN. AREA
PIKE MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY
CONTOUR MAP

Date : August 1966
Instrument : Jalander
Contour interval : 200 gammas
Surveyed by: P.Sandaluk
Party chief : A.Hammer
Drawn by:

GRID # 1



SCALE

400 0 400 800 1200

1 inch to 400 feet

FIG. 29

ATLAS EXPLORATIONS LTD
VANCOUVER, B C
PIKE MINERAL CLAIMS

GROUND ELECTROMAGNETIC SURVEY

HIGH FREQ RESULTANT DIP ANGLE CONTOURS

INSTRUMENT CRONE J E M

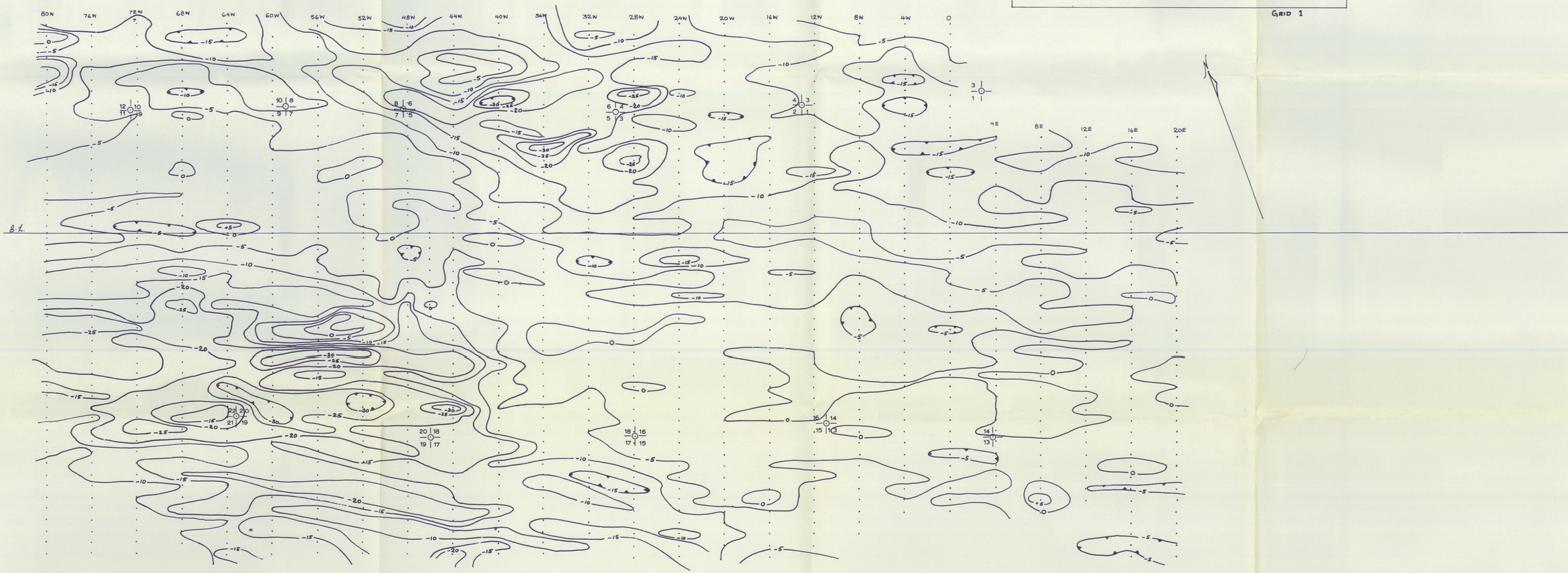
OPERATORS P DEAN, D PRESTON

DATE JULY, 1966

CONTOUR INTERVAL 5°

SCALE: 1"= 400'

GRID 1



SCALE

400 0 400 800 1200

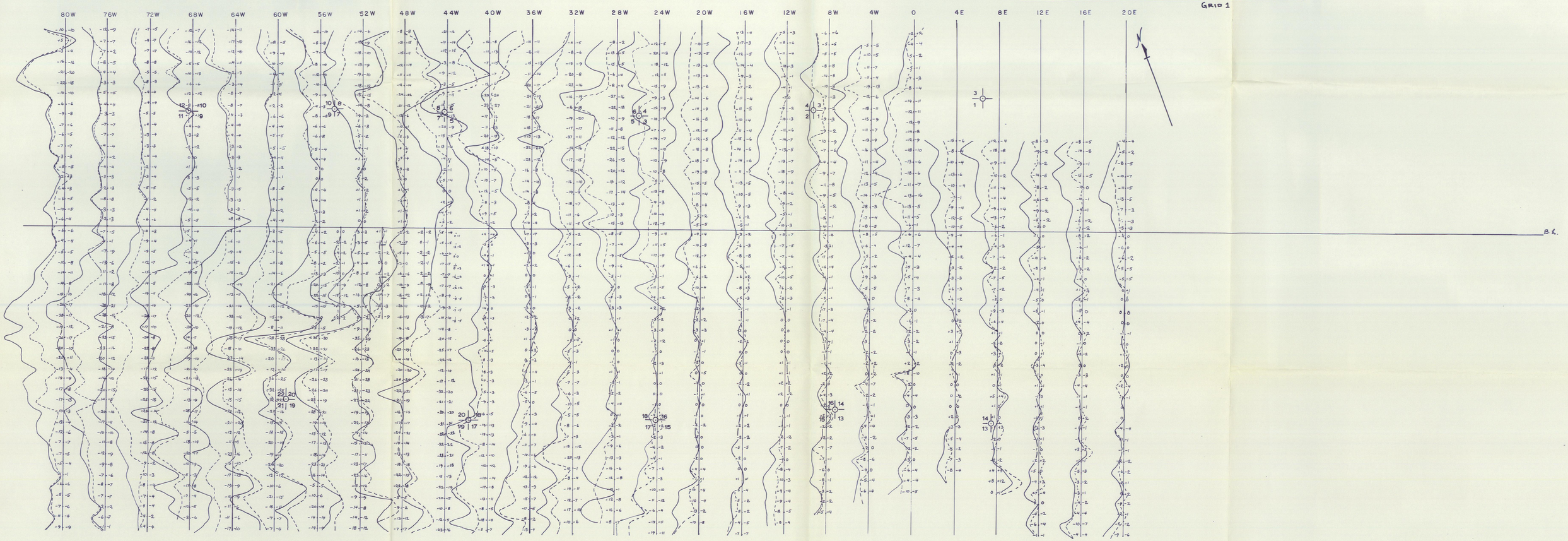
1 inch to 400 feet

FIG. 30

ATLAS EXPLORATIONS LTD
VANCOUVER, B. C.
PIKE MINERAL CLAIMS
GROUND ELECTROMAGNETIC SURVEY
HIGH AND LOW FREQ PROFILES

INSTRUMENT : CRONE JEM
OPERATORS : P DEAN D PRESTON
PROFILE ORIENTATION : -1+ ; 1=20° DIP
SCALE : 1"=400' HIGH
DATE : JULY, 1966 LOW
DRAWN BY : JNB

GRID 1



SCALE
400 0 400 800 1200
1 inch to 400 feet

FIG. 31

ATLAS EXPLORATIONS LTD
VANCOUVER, B.C.
PIKE MINERAL CLAIMS

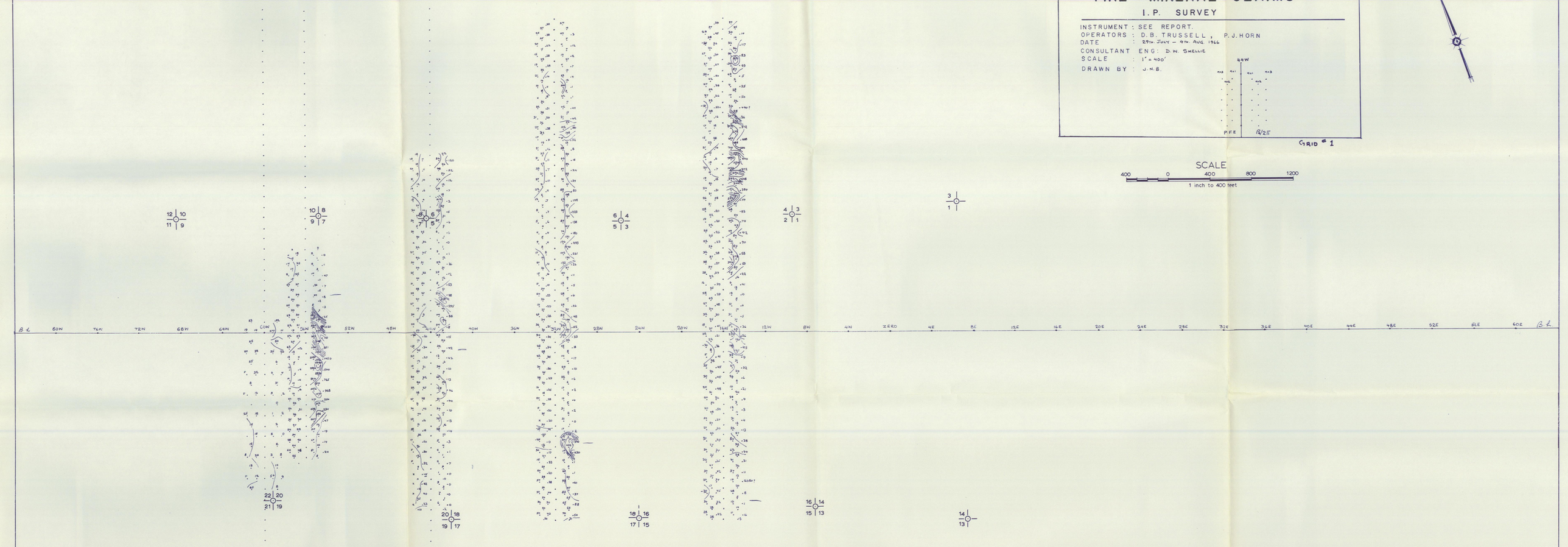
I.P. SURVEY

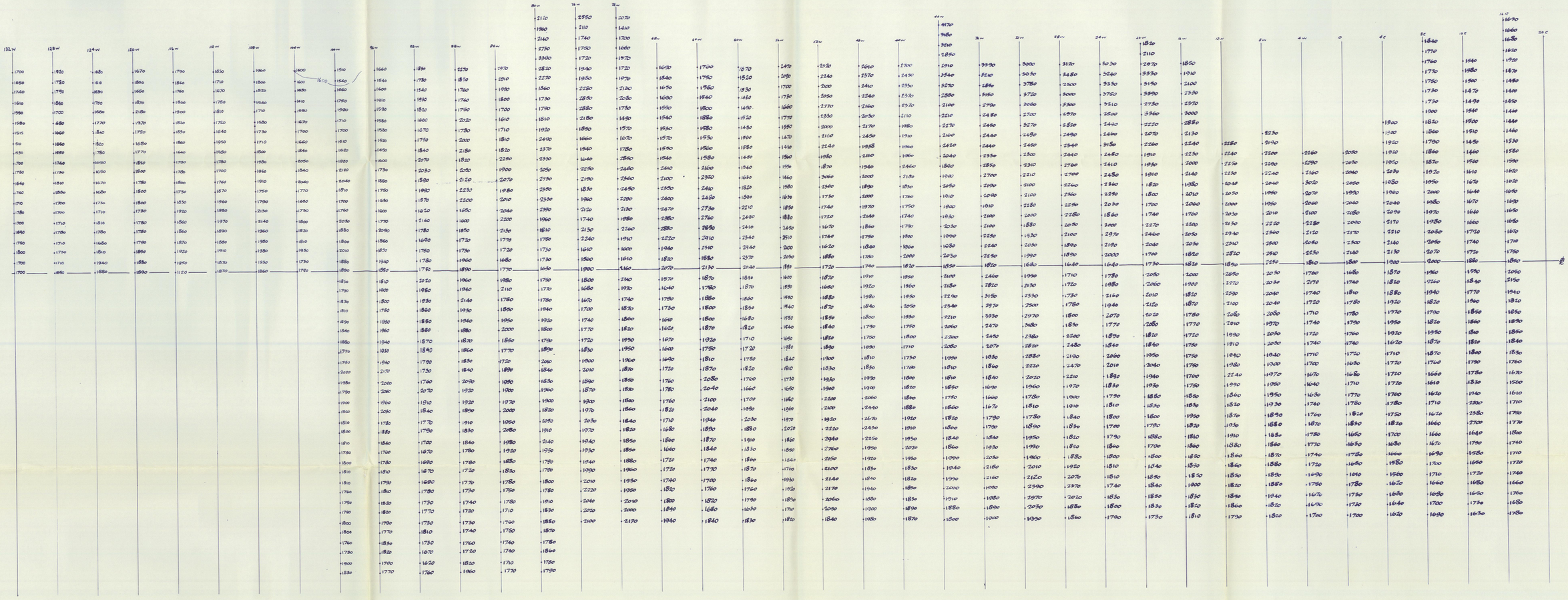
INSTRUMENT : SEE REPORT.
OPERATORS : D.B. TRUSSELL, P.J. HORN
DATE : 29th JULY – 4th AUG. 1966
CONSULTANT ENG: D.W. SMELLIE
SCALE : 1" = 400'
DRAWN BY : J.N.B.

GRID # 1

SCALE
400 0 400 800 1200
1 inch to 400 feet





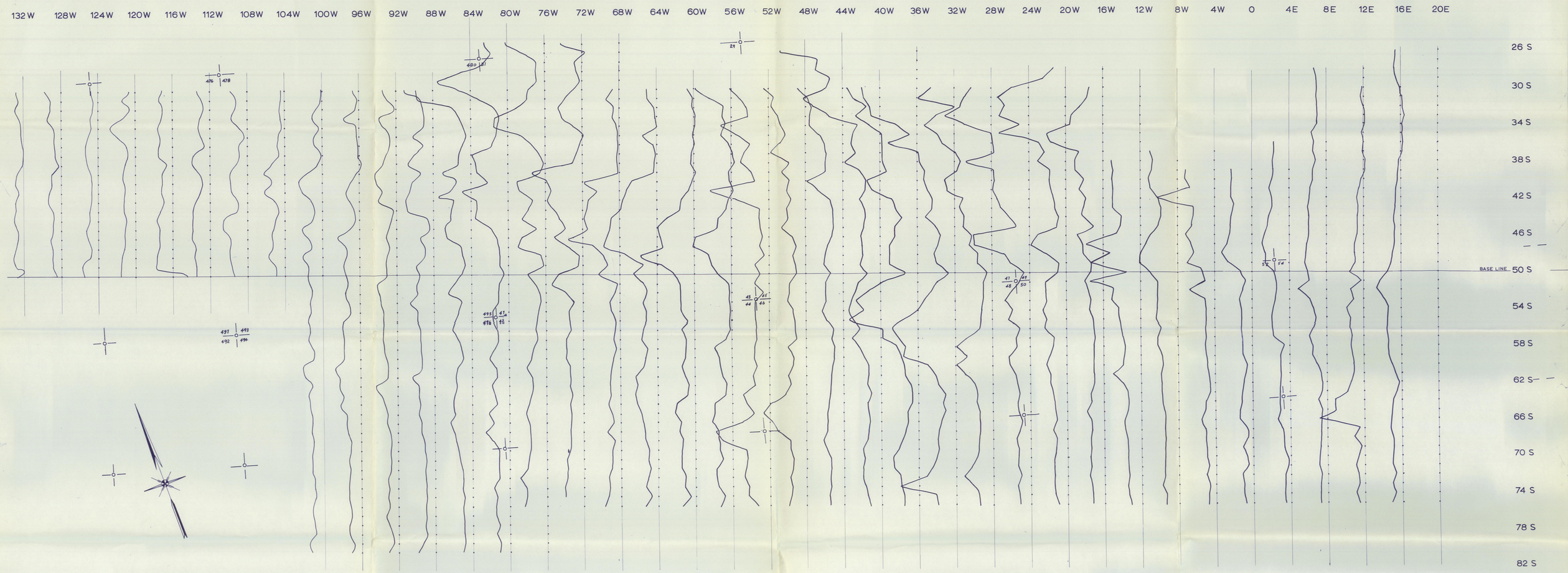


PIKE LAKE

SOUTH GRID MAG. VALUES MAP

SCALE 1" = 400

GRID 2



GRID 2

NOTE:
A) BACKGROUND DETERMINED AS 1500 GAMMA'S.
B) ALL VALUES REPRESENTATIVE OF VERTICAL MAGNETIC FIELD COMPONENT.
C) MAGNETIC INCLINATION 80°N AT 62°10' N LAT.
D) TOTAL ABSOLUTE FIELD APPROX. 58000 GAMMA'S.
E) ALL VALUES CORRECTED FOR DRIFT AND DIURNAL VARIATIONS.

SCALE

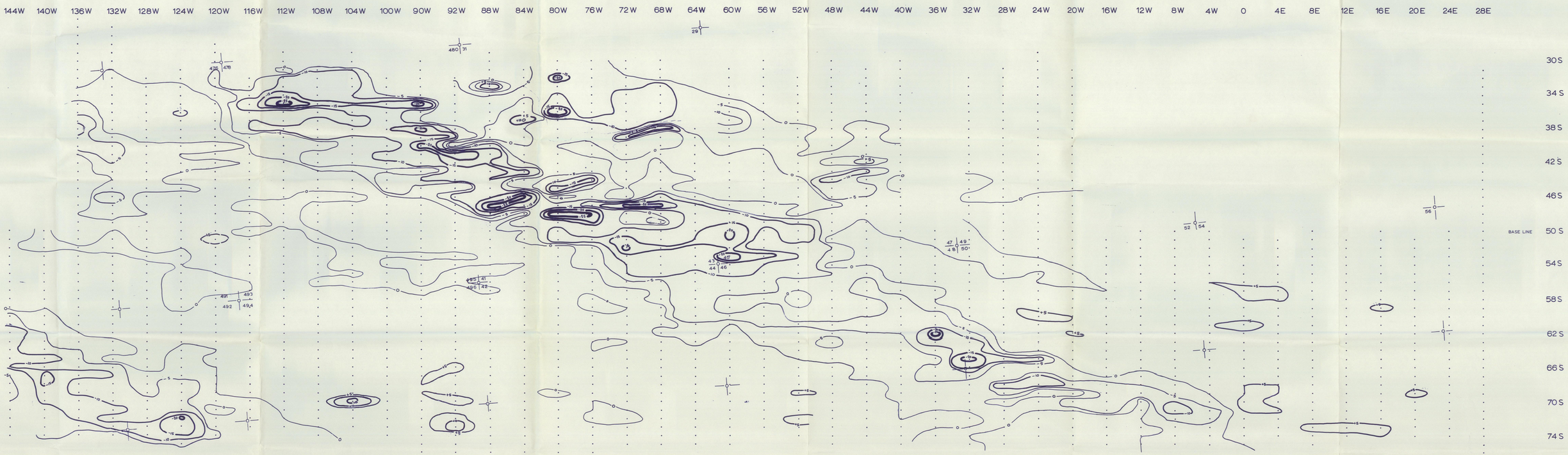
400 0 400 800 1200

1 INCH TO 400 FEET

ATLAS EXPLORATIONS LTD.
ROSS RIVER, YUKON
SHELDON AREA
PIKE MINERAL CLAIMS

RECONNAISSANCE GROUND MAGNETOMETER SURVEY PROFILES

PROFILE SCALE:	1" = 1000 GAMMA'S FROM A BASE OF 500 GAMMA'S
INSTRUMENT:	JALANDER
OPERATORS:	M. CURRY AND M. SMITH
SUPERVISOR:	J.S. BROCK
DATE:	NOVEMBER 1966
DRAWN BY:	P.J.F. VLASVELD



SCALE

400 0 400 800 1200

1" TO 400 FEET GRID 2

ATLAS EXPLORATIONS LIMITED

ROSS RIVER, YUKON

SHELDON REGION

PIKE MINERAL CLAIMS

GROUND ELECTROMAGNETIC SURVEY

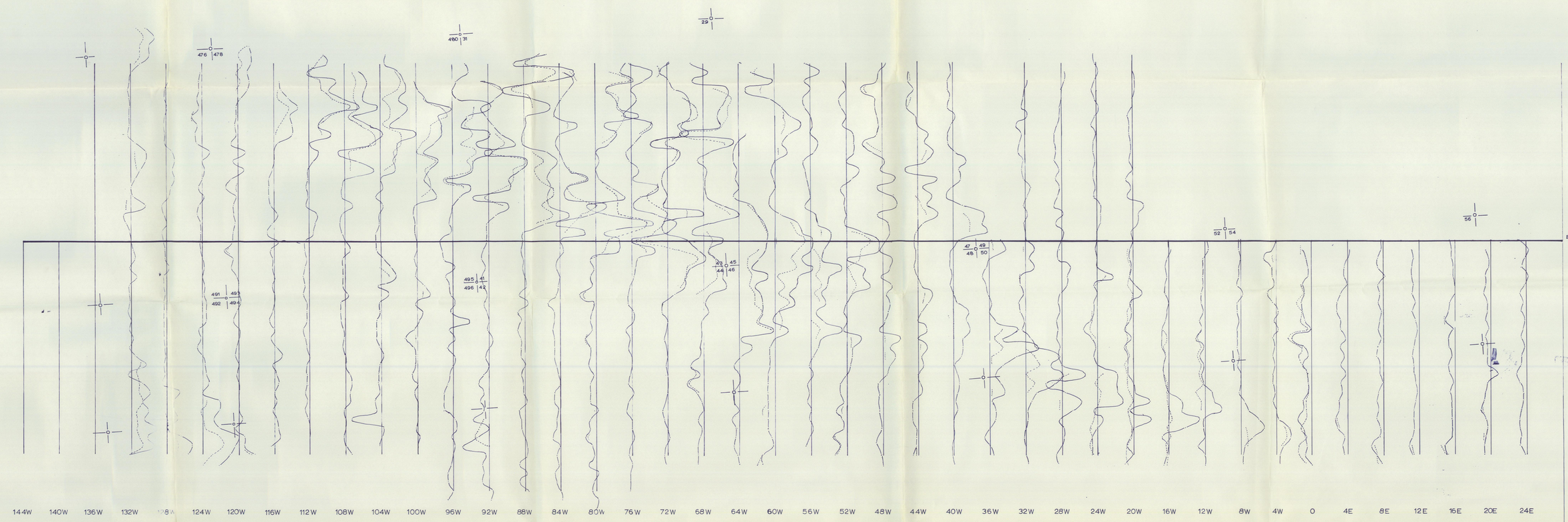
JEM HORIZONTAL LOOP

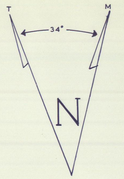
CONTOUR MAP

INSTRUMENT : CRONE
CONTOUR INTERVAL : 5%
COIL SPACING : 300'

OPERATORS : M.CURRIE and M. SMITH
PARTY CHIEF : J.S. BROCK
DATE : NOVEMBER 1966

DRAWN BY : P.J.F. VLASVELD





GRID 2

ATLAS EXPLORATIONS LTD.
ROSS RIVER, YUKON.
PIKE LAKE AREA.
RECONNAISSANCE, JEM. E.M. SURVEY.

SCALE, 1" = 400'
1" = 20°

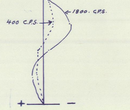
Instrument: Crone

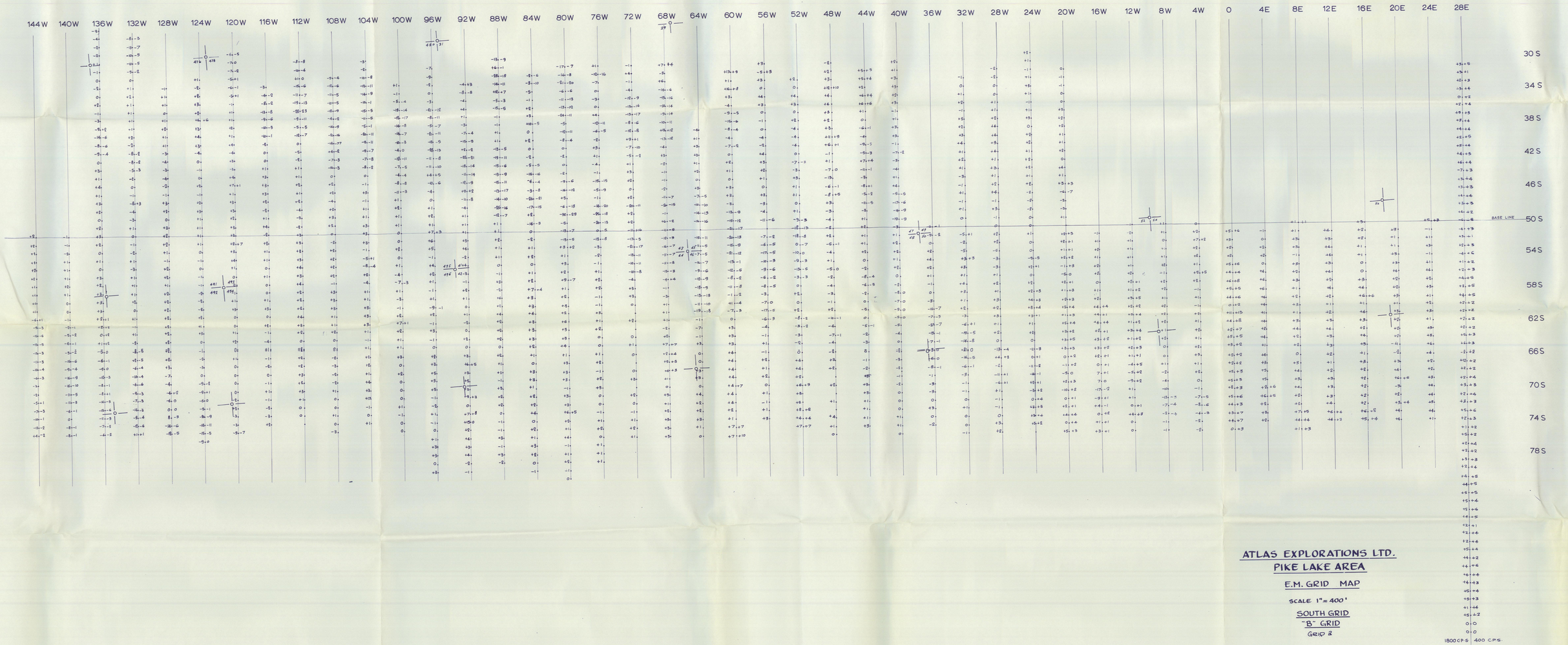
Coil spacing: 300'

Operators: M. Currie M. Smith

Party chief J.S. Brock

Date: Nov. 66





ATLAS EXPLORATIONS LTD.
PIKE LAKE AREA

E.M. GRID MAP

SCALE 1" = 400'

SOUTH GRID

"B" GRID

GRID B

220 W | 212 W | 204 W | 196 W | 188 W | 180 W | 172 W | 164 W | 156 W | 148 W | 140 W | 132 W | 124 W | 116 W

BASE LINE

449 | 450

451 | 453
452 | 454

455 | 457
456 | 458

459 | 461
460 | 462

465

467 | 469

471 | 473

475 | 477
476 | 478

IN PHASE % | QUADRATURE

GRID 3

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

PIKE MINERAL CLAIMS

GROUND E.M. SURVEY

—VALUES—

INSTRUMENT: RONKA E.M. 16

OPERATOR: V. PRATICO

DATE: JUNE 1967

DRAWN BY: P.J.F. VLASVELD

400 0 400 800

scale in feet

E M

N

56W 52W 48W 44W 40W 36W 32W 28W 24W 20W 16W 4W 0

BASE LINE

116W 100W 92W 84W 80W 76W 68W 60W 52W 44W 36W 28W

CREEK CREEK STREAM CREEK

ROAD ROAD ROAD

BASE LINE 2

IN PHASE QUADRATURE

GRID 1&3

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

PIKE MINERAL CLAIMS

GROUND E.M. SURVEY

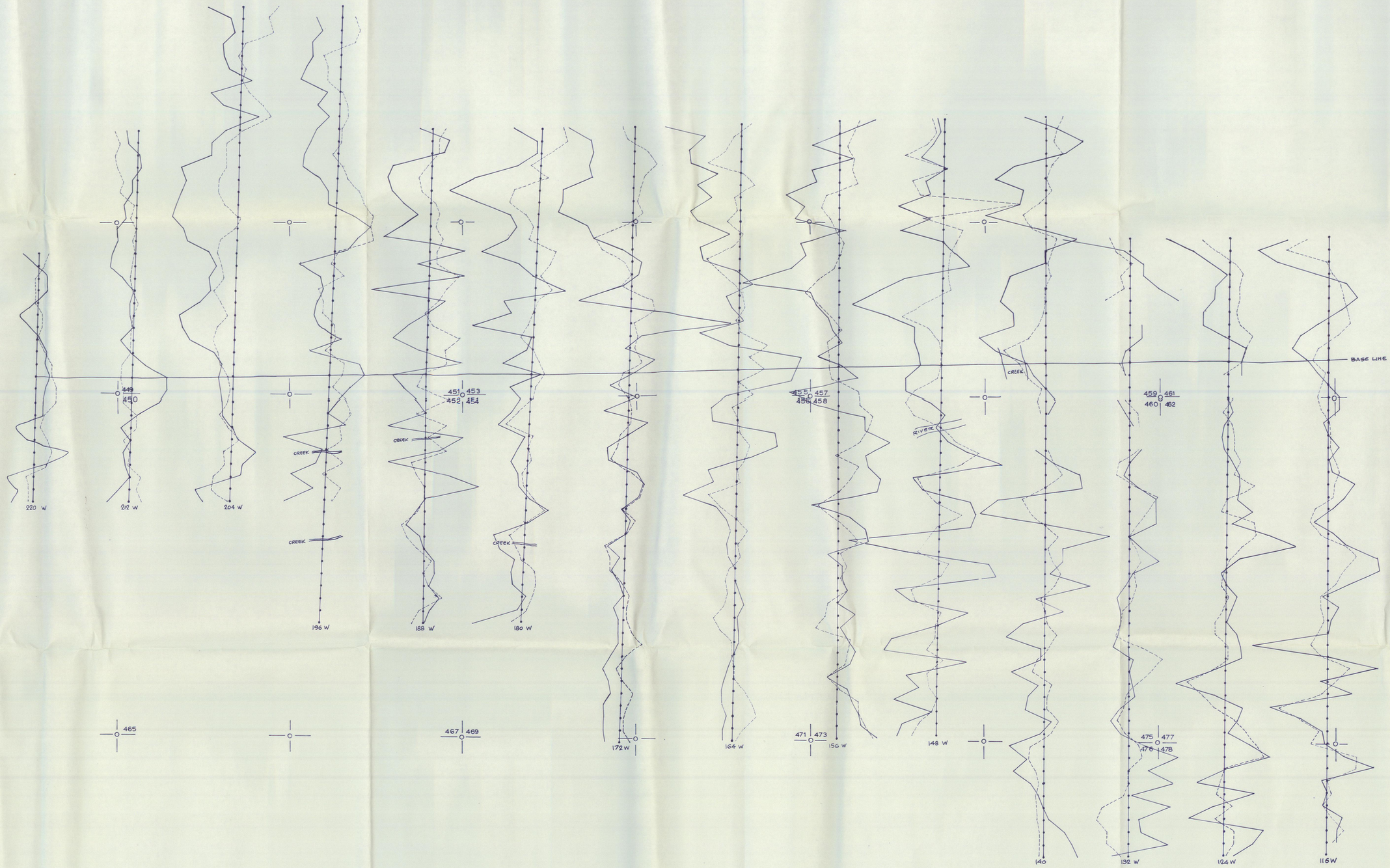
PROFILES & VALUES

INSTRUMENT: RONKA E.M. PROFILE SCALE: 1/10"= 2° DATE: JUNE 1967

OPERATOR: V. PRATICO DRAWN BY: P.J.F. VLASVELD

400 0 400 800

scale in feet



GRID 3

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

PIKE MINERAL CLAIMS

GROUND E.M. SURVEY

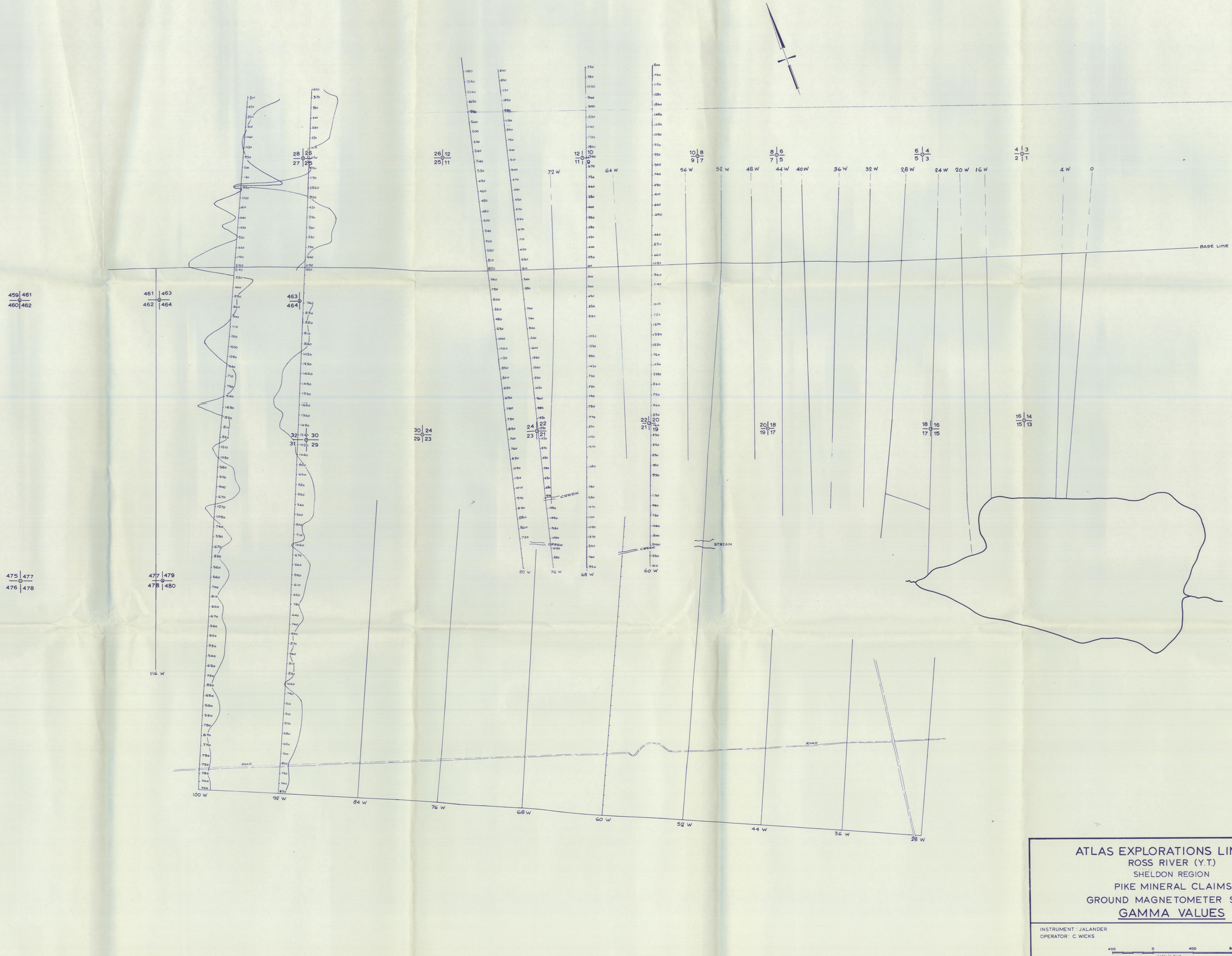
PROFILE MAP

INSTRUMENT: RONKA E.M. 16 PROFILE SCALE: 1/10"= 2" DATE: JUNE 1967

OPERATOR: V. PRATICO DRAWN BY: P.J.F.VLASVELD

400 0 400 800

scale in feet



GRID 1 & 3

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

PIKE MINERAL CLAIMS

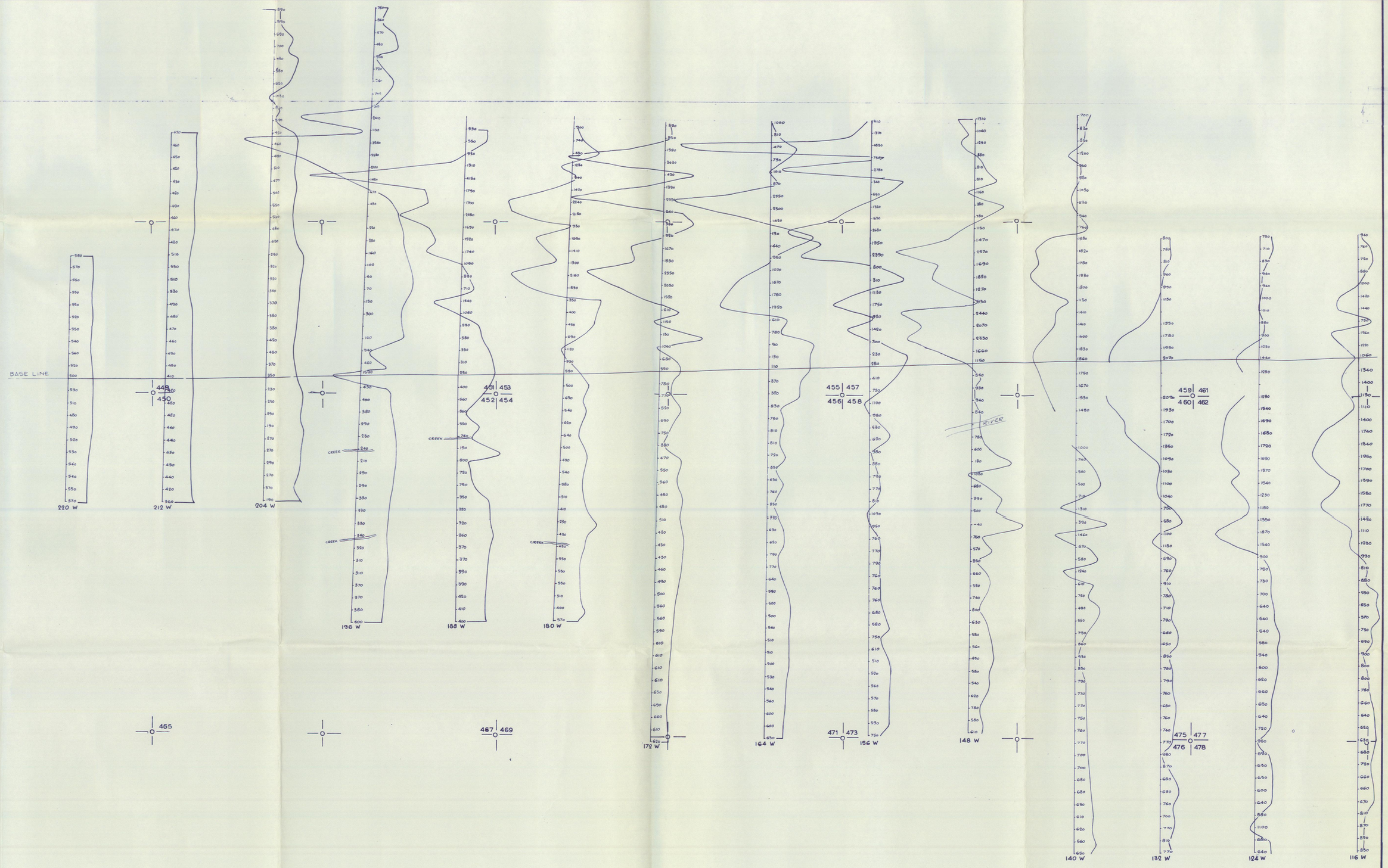
GROUND MAGNETOMETER SURVEY

GAMMA VALUES (EASTERN PART)

INSTRUMENT : JALANDER
OPERATOR : C. WICKS

DATE : JUNE 1967
DRAWN BY : P.J.F.VLASVELD

400 0 400 800
scale in feet



GRID 3

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

SHELDON REGION

PIKE MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY

GAMMA VALUES (WESTERN PART)

INSTRUMENT: JALANDER
OPERATOR: C.WICKS

PROFILE SCALE: 1/10" = 100 ɣ

DATE: JUNE 1967
DRAWN BY: P.J.F.VLASVELD

400 0 400 800
scale in feet

GEOLOGICAL REPORT

on

PIKE MINERAL CLAIM GROUP

TRAFFIC MOUNTAIN AREA

Watson Lake Mining Division

Yukon Territory

Long. 130° 40' West

Lat. 62° 08' North

by

Clyde L. Smith

Atlas Explorations Limited

July 1 - October 25, 1966

and

May 29 - June 23, 1967

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PELLY RIVER

N

GRID 3 JUNE 67

GRID 1 JULY 66

GRID 2 NOV. 66

PIKE 1-88

Same to Adjoin

Same to Adjoin

Same to Adjoin

Same to Adjoin

PIKE Mineral Claims
Grid location
Sheldon Area
Sheets: 105J 1 & 2

LIST OF CLAIMS

Claim Number	Grant Number	Date Recorded
PIKE 1 - 24	Y13149 - Y13172	July 4, 1966
25 - 83	Y13443 - Y13506	August 20, 1966
89 - 152	Y13662 - Y13745	August 30, 1966
153 - 608	Y13763 - Y16204	September 9, 1966
609 - 776	Y16727 - Y16894	October 17, 1966
PIKE FRACTIONS		
1 - 6		
8 - 9		
14 - 22	Y17243 - Y17259	November 21, 1966

INTRODUCTION

Atlas Explorations Limited became interested in the Pike Lake area during June, 1966. Interest was prompted primarily by an earlier prospecting discovery by A. Aulan of Cu-Zn mineralization in porphyry, running about 20 ounces Ag, in the area of Pike Lake. An airborne magnetic and electromagnetic survey, under contract to Lockwood Survey Corporation, was conducted in a 35 square mile area west of Traffic Mountain in early June, and prospectors began prospecting, trenching and geochemical silt sampling anomalous magnetic areas.

A 24-claim group was staked in mid-June to cover showings and anomalous geochemical results discovered. The Pike group was increased to 152 claims in mid-July. In mid-August, the decision was made to increase the Pike group to 608 total claims to cover scattered high geochemical results as well as an area of apparently significant structural geology. A 168-claim addition was staked in mid-September, bringing the Pike group total to 776 claims.

Geologic mapping on Pike grid number 1 was done using grid stakes for location. This grid consists of 140,000 feet of cut line with a 10,000-foot long base line and 400-foot spaced cross lines. Cross lines between 80 W and 0 run 2,000 feet north and 3,000 feet south of base line. Between 0 and 56 E cross lines run 1,000 feet north and 3,000 feet south of base line.

Mapping on Pike grid number 3 was done on 1,000-foot scale air photo blow-ups and was tied to grid stakes in the north half of the grid area. Pike grid number 3 consists of 111,100 feet of cut line with a 14,000-foot long base line and 800-foot spaced cross lines. Cross lines average about 5,000 feet long.

LOCATION AND ACCESS

The Pike group is centered roughly at latitude 62°03' North and longitude 130°40' West, and covers much of the north half of topographic sheet 105J-2, and a western portion of sheet 105J-1. The group is elongate in a westerly direction, and extends from the south slopes of Traffic Mountain to a point 15 miles to the west. Three small groups adjoin the Pike claims on the west end: Star 1-40 and Tree 1-32 held by A. Lasicot, and Ace 1-40 held by V. Toll.

Access to the property is by aircraft from Ross River; air-line mileage is 52 miles. Seavers on floats have been

used, and landings made on 3/4 -mile long Pike Lake. A temporary camp was established on the north side of Pike Lake, from which supplies were transported to the base camp, 1½ miles to the west, by helicopter or D6 Cat. Pike Lake is connected with the base camp by a Cat road.

During April, 1967, a tote road was put in from north of Finlayson Lake on the Watson Lake-Ross River road to the Pike group. Fuel was trucked over the road to the Pike base camp. It was intended that the road be used for bombardier support but the Kelly River could not be forded with the bombardier and it was not used on the property.

REGIONAL GEOLOGIC SETTING

The Pike area is located within, or just north of, a major northwesterly-striking wrench fault, here termed the Traffic Mt. Fault. The Traffic Mt. Fault is topographically and geologically recognizable over a distance of about 100 miles from Anderson Creek in the southeast to Big Timber Creek in the northwest, and is well exposed along the south slope of Traffic Mt. where it brings older, Precambrian or Cambrian, quartzites to the north against Lower Mississippian shales and cherts to the south. Northwest of Traffic Mt., in the Pike area, lineaments are recognizable on air photos which parallel the major fault and suggest that the Pike area lies within a zone of strong dislocation.

The Pike area is underlain by a succession of Ordovician and Silurian black and gray cherts and shales (unit 3 on G.S.C. Sheldon Lake sheet) which lies along the axis of a northwesterly-plunging tight syncline.

The deformed sedimentary rocks of the Pike area have been intruded by a granitic stock of probable Cretaceous age, which outcrops locally on the property, and to the east on Traffic Mt., and occurs at the northwest end of a linear intrusive belt which extends southeasterly through the Logan Mountains. The Pike stock is outlined by an area of anomalous air magnetics which is largely covered by the Pike group, although extensions occur to the west, northwest, and east of the group. The stock is only slightly unroofed and outcrops may be only dykes and cupolas.

TABLE OF ROCK TYPES

Cretaceous (?):	6	Dyke rocks of dark color
	6a	Koruntite lamprophyre
	6b	gray aplite
	6c	greenstone
	6e	alkalic gabbro or diabase
	1	Granitic intrusives (3 on 400-foot scale map)
	1a	quartz monzonite
	1b	quartz monzonite porphyry
	1c	granite
	1d	fine grained chilled granite
Paleozoic (?):	2	Shales
	2a	limey shale
	2b	graphitic shale with limestone interbeds
	2c	graphitic shale
	3	Slates
	3a	gray slate
	3b	black slate
	3c	black chorty slate
	4	Limestone
	5	Chert
	5a	chert breccia
	2	(on 400-foot scale map) Quartzite

GEOLOGY OF PIKE GRID 1

A. Sangster mapped much of the Pike grid at a scale of 1" = 400' and submitted a brief report dated July 17, 1966. The following is a synopsis of Sangster's findings, but consists mainly of notes made by C. L. Smith during brief outcrop examinations.

The dominant geologic feature of the grid area is a 070°; trending, steeply-dipping biotite granite dyke. The dyke is exposed over widths of a few feet to over 200 feet, and over a length of about 2 miles. The intrusion is relatively resistant to erosion and underlies a low-lying ridge on the property. Country rocks are steeply-dipping and consist of interbedded

cherts, quartzites, and slates to the north of the intrusion and black slates and minor limestone to the south.

Most exposed granite is chilled and contains angular quartz eyes in a fine-grained matrix; central portions of the intrusion consist of medium-grained biotite granite.

The granite dyke is offset up to 400 feet by northerly-trending faults. Langton mapped an east-west offsetting fault between zone 1 (lines 43W to 50W) and zone 2.

Ground magnetic and IP data indicate that the granitic dyke of the Pike grid is an offshoot of the underlying Pike stock. Position of the dyke may have been controlled by a fault for the intrusion trends parallel to the Traffic Mt. Fault fracture system.

GEOLOGY OF PIKE GRID 3

During late May and June, 1967, T. Adamson mapped the area of Pike grid number 3. Outcrop is scarce in the area, most occurring in low hills north of the grid and in stream banks west of the grid.

Four stratigraphic units containing at least seven sub-units were recognized. Stratigraphic relations are not clear; the sequence is steeply-dipping and tops of beds could not be determined. The most prominent stratigraphic unit is black slate which varies locally in color but has a generally high carbonaceous content and local narrow lenses containing magnetic material. It is this unit which is responsible for narrow, intense magnetic anomalies in the grid area. In places electromagnetic anomalies correspond - these may be explained by the graphitic content of the slates.

Gray to black, massive-bedded cherts occur in contact north of the slates. These are followed again to the north by black carbonaceous shales with sub-units containing interbedded black limestone bands; this unit is also abundant in stream outcrops west of the grid.

Stratigraphic units are cut by dykes and sills of quartz monzonite (locally porphyritic), granite (locally chilled), and four varieties of gray dyke rocks. Granitic intrusives are biotite-bearing and commonly contain disseminated pyrrhotite or pyrite. Pyrrhotite in intrusives appears to explain the magnetics of some of the Pike region. Gray dyke rocks consist of kersantite lamprophyre, gray aplite, limestone, and basalt diabase.

Structural trends are about N70°W throughout the area. Dips are steep and to the north or south. Extensive faults of the same attitude are suggested by strong photo-lineaments in the area and fault zones may be seen cutting sediments west of the grid.

Apart from disseminated pyrrhotite, pyrite, and arsenopyrite in altered granitic intrusive, and rare arsenopyrite veins, no mineralization was noted in the area.

DETAILED GEOLOGY OF TRENCHED AREA IN ZONE 1

J. Staniford mapped all trenches in zone 1, and trench maps were made by C. A. Smith at 49W and 48W in zone 1.[1] The following statements are drawn mainly from Smith's observations in zone 1.

Copper-silver, with minor lead-zinc, mineralization of potential economic grade occurs over narrow widths in the hydrothermally altered, chilled granitic dyke of the Fika grid area.

Mineralization is predominantly of the porphyry copper type with the rather unusual mineral assemblage, arsenopyrite, pyrrhotite, pyrite, chalcopyrite, tetrahedrite, and minor enstatite, bornite, sphalerite, and galena occurring as disseminations and veinlets in zonally altered intrusive. Narrow ladder veins occur perpendicular to dyke contacts along the north and south margins and carry nearly all of the significant lead-zinc.

The intrusive contains irregular alteration-mineral type zones which roughly parallel dyke contacts. Alteration minerals are silica (quartz), chlorite, clay-sericite, and biotite.

DISCUSSION AND CONCLUSIONS

A major geochemical anomaly and a major magnetic-electromagnetic anomaly have been located on the Fika group. The geochemical anomaly reflects porphyry copper-silver mineralization in an altered granitic intrusive. Detailed trenching and sampling of part of the anomaly area revealed a small

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1. Refer to report "Trenching and Engineering Evaluation on Fika Mineral Claim Group" by C. A. Smith for Atlas Explorations Ltd.

tonnage situation with marginal copper-silver grades and narrow sections of lead-zinc-silver. However, only a portion of the entire anomaly has been adequately investigated and sufficient drilling has not been done to test depth extensions in the area trenched. Results to date are encouraging and further drilling and perhaps more trenching are warranted.

The magnetic anomaly with areas of superimposed electromagnetics reflects magnetic black carbonaceous slates which crop out along the north side of the number 3 grid. This anomaly should not be considered as having economic potential.

FIG. 2

ATLAS EXPLORATIONS LTD
VANCOUVER, B.C.
PIKE MINERAL CLAIMS
GEOLOGY UP TO AUGUST, 1966

LEGEND

SLATE	1	GRANITE	3
QUARTZITE	2	FOLIATION	
FAULT		FLOAT	xxxx
BLASTHOLE	0	OUTCROP	

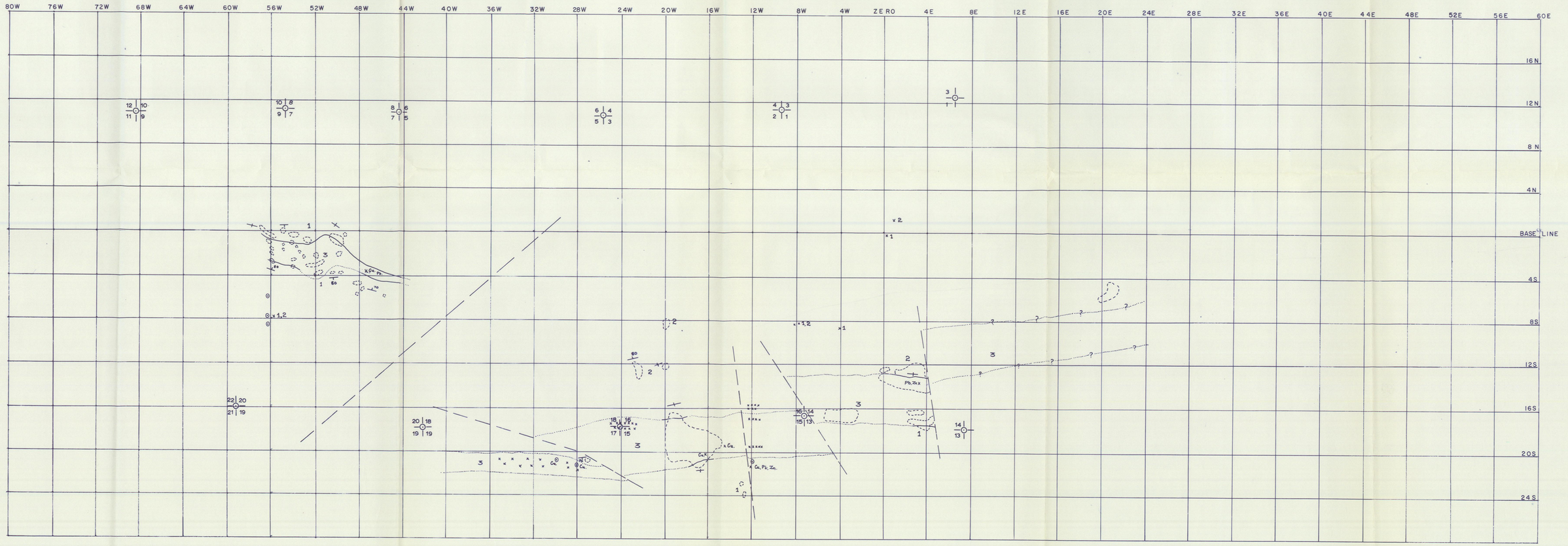
DATE : NOV 21, 1966 — MAPPED BY : A.L. SANGSTER

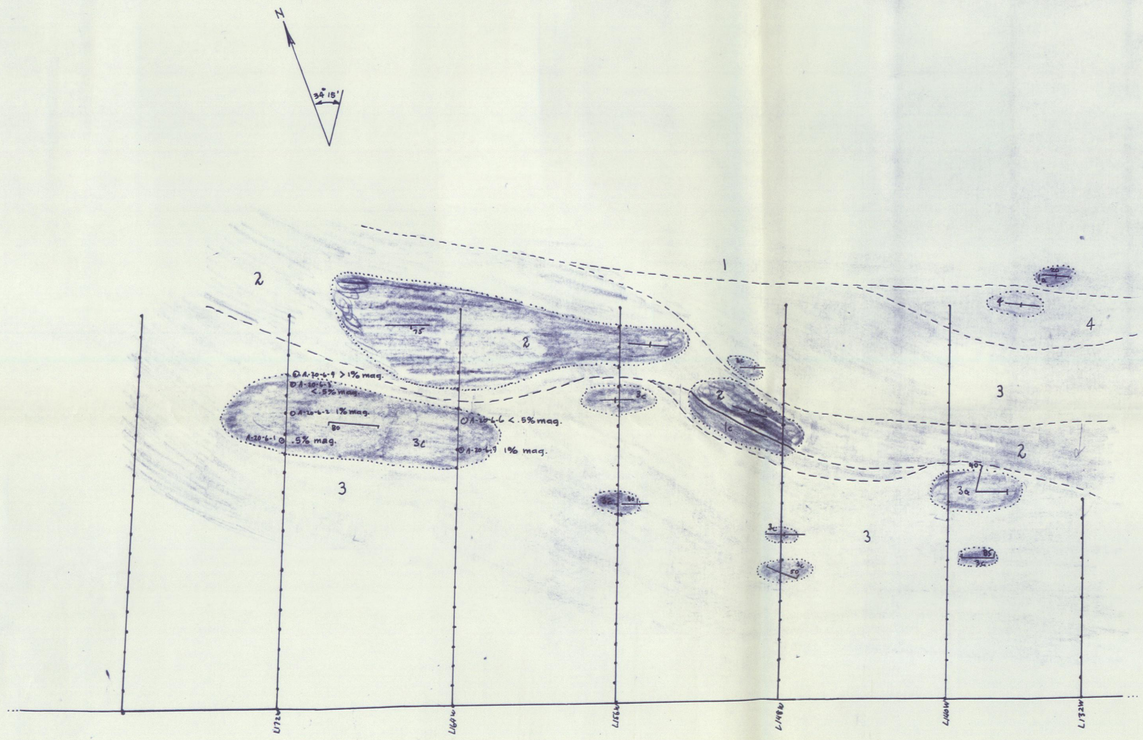
DRAWN BY : J.N.B. — SCALE : 1"=400'

SCALE

400 0 400 800 1200

1 inch to 400 feet




N
34° 18'
2
1
4
3
2
3
3
2
3
3c
3c
1c
3c
3c
3

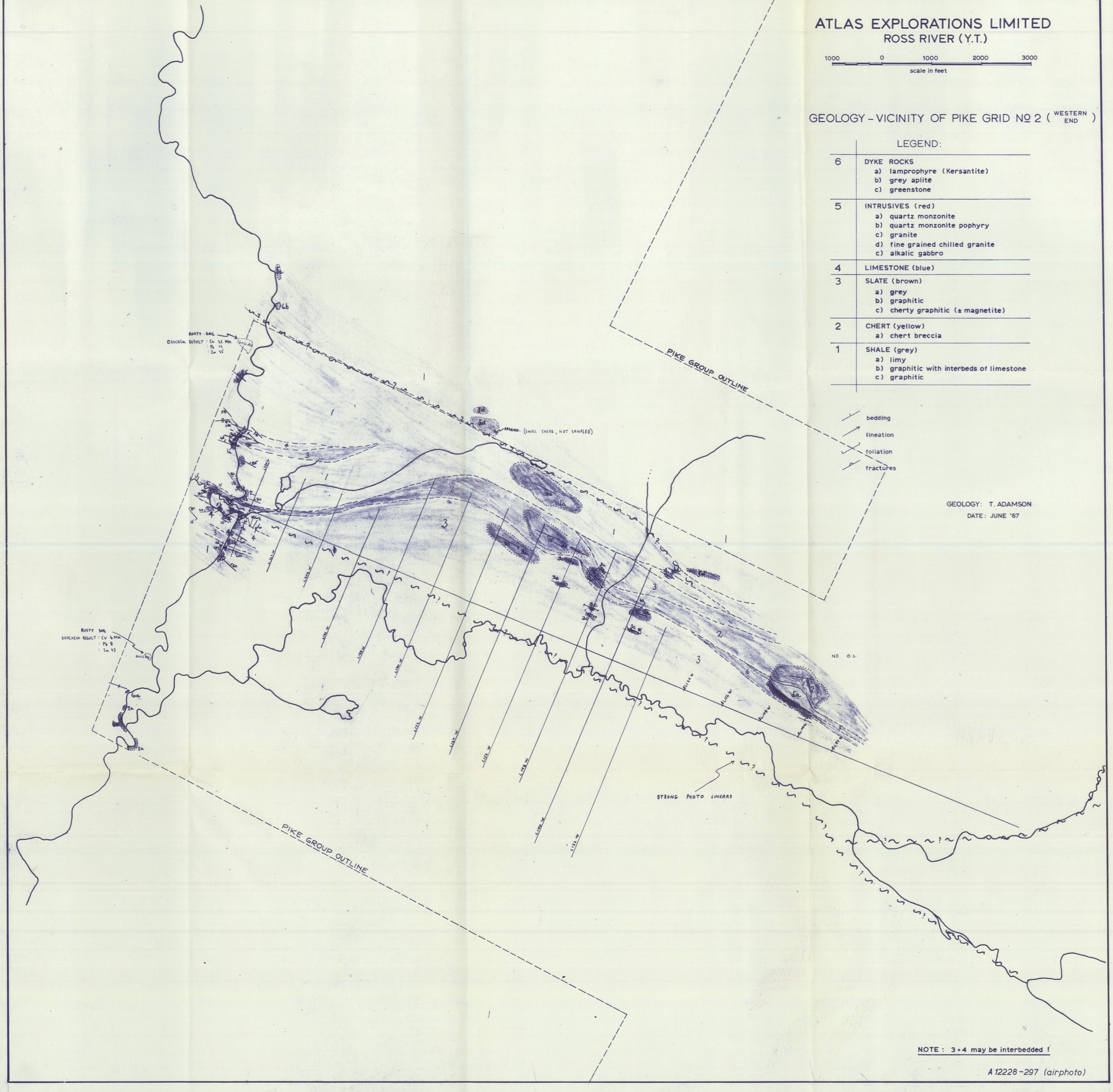
ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

1000 0 1000 2000 3000

scale in feet

GEOLOGY – VICINITY OF PIKE GRID Nº 2 (WESTERN END)



LEGEND:

6	DYKE ROCKS a) lamprophyre (Kersantite) b) grey aplite c) greenstone
5	INTRUSIVES (red) a) quartz monzonite b) quartz monzonite pophyry c) granite d) fine grained chilled granite c) alkalic gabbro
4	LIMESTONE (blue)
3	SLATE (brown) a) grey b) graphitic c) cherty graphitic (± magnetite)
2	CHERT (yellow) a) chert breccia
1	SHALE (grey) a) limy b) graphitic with interbeds of limestone c) graphitic

bedding

lineation

foliation

fractures

GEOLOGY: T. ADAMSON

DATE: JUNE '67

NOTE : 3+4 may be interbedded !

A 12228-297 (airphoto)

DD-115 Atlas Mining Pike Claims 1967 105-J-1+2

DIAMOND DRILL RECORD, HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 1
LATITUDE 29'S. of Hub 3 in Tr.43
DEPARTURE 4'W. of Hub 3 in Tr.43
ELEVATION 3400'

SECTION FROM 0 TO 7'1"
DATUM -
BEARING N 10°E
DIP -60°

STARTED October 10, 1966
COMPLETED October 23, 1966
ULTIMATE DEPTH 78'
PROPOSED DEPTH -

113157
Pike #3

Logged by C. L. Smith.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
0'-2'		Light gray, massive chert with scattered small lenses of black chert. Minor quartz veinlets.												
2'-6'5"		Black, massive, bedded chert with some light gray chert interbeds up to 1/2" thick. Bedding c.a. 45°. White sugar quartz, irregular, planar veinlets, c.a. 5-30°. One 1/4" wide quartz vein, c.a. 45°. Local brecciation and slight movement along fracture. Minor fracture set, c.a. 80°.												
6'6"-7'1"		Gray-olive green massive chert. Disseminated black spots (~1 mm. diameter) throughout contain pyrrhotite (5%), sphalerite (2%)? Three veinlet sets: (1) pyrrhotite-sphalerite, c.a. 20°, 5/perpendicular foot;												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 2

LATITUDE 29' S. of Hub 3 in Tr.43

DEPARTURE 4' W. of Hub 3 in Tr.43

ELEVATION 3400'

SECTION FROM 6'6" TO 14'6"

DATUM -

BEARING N 10°E

DIP -60°

STARTED October 10, 1966

COMPLETED October 23, 1966

ULTIMATE DEPTH 78'

PROPOSED DEPTH -

Logged by
C. L. Smith

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		(2) pyrrhotite, c.a. 20°; (3) galena-												
		sphalerite up to 1/4" wide.												
		Pb-.8%, Zn.-.5%.												
7'1"-7	6"	Dark gray bedded chert. Intensely fractured.												
		Viewing in fractures: pyrrhotite, galena,												
		sphalerite, chalcopyrite, arsenopyrite,												
		pyrite, minor quartz.												
		Cu.-.1%, Pb.-.7%, Zn.-.5%, asp.-.5%,												
		pyrr.-.5%, py.-.5%.												
7'6"-9	9"	Interbedded dark gray and light gray,												
		finely laminated chert. Bedding c.a. 60°.												
		Minor disseminated pods of pyrrhotite. Bare												
		veinlets of pyrrhotite, pyrite, c.a. 80°.												
		Rare quartz veinlets. Pyro.-2%, py.-1%.												
9'9"-14	'6"	Olive green-gray and dark bluish gray												
		finely laminated chert with minor												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 3 | SECTION FROM 14'6" TO 14'6" | STARTED October 10, 1966

LATITUDE 29' S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4' W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78' | Logged by

ELEVATION 3400' | DIP -60° | PROPOSED DEPTH - | C. L. Smith

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		grossularite. Green color of chert minor clay or epidote alteration (?). Small sections of disseminated chalcopyrite, galena, sphalerite, pyrrhotite, pyrite, arseno-pyrite. Irregular veinlets of above minerals up to 1/4" wide, 4-5/perpendicular foot, c.a. 40-80°. Thickest and most abundant veinlets occur in fracture zones spaced about 1' apart. Quartz veining and intense chlorite alteration in these zones. This entire section is fractured but in varying degrees. In black chert sections disseminations of up to 2% galena, 1% sphalerite, 8% pyrrhotite, 1% chalcopyrite, 1% pyrite. Cu.-.3%, Pb.-.7%, Zn.-.5%, asp.-1%, pyrr.-2%, py.-.5%.											

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 4
SECTION FROM 14'6" TO 25'8"
STARTED October 10, 1966

LATITUDE 29' S. of Hub 3 in Tr.43
DATUM -
COMPLETED October 23, 1966

DEPARTURE 4' W. of Hub 3 in Tr.43
BEARING N 10°E
ULTIMATE DEPTH 78'
Logged by C. L. Smith

ELEVATION 3400'
DIP -60°
PROPOSED DEPTH -

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
14'6"-16'2"		Dark brownish gray massive chert with patches of quartz alteration rarely carrying disseminated chalcopyrite. Spots of disseminated arsenopyrite, pyrite, pyrrhotite. Section characterized by 1/2" wide fractures, spaced 3-4" apart, up to 90% filled with arsenopyrite and minor pyrite. Vein core angles 20°. Arseno-pyrite veinlets marginal to the veins. Quartz veins, up to 1/4" wide, with c.a. 30° cut arsenopyrite veins at about 80°. Cu.-.2%.												
16'2"-25'8"		Chilled porphyritic granite with minor biotite phenocrysts and 5-40% quartz phenocrysts or sugar quartz replacement clusters (one cluster up to 1½" long and												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 5 | SECTION FROM 25'8" TO 25'8" | STARTED October 10, 1966

LATITUDE 29' S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4' W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78' | Logged by C. L. Smith.

ELEVATION 3400' | DIP -60° | PROPOSED DEPTH -

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		obvious replacement feature). Small												
		patches of mild quartz alteration.												
		Minor chlorite alteration. Minor												
		irregular wispy tannish-cream colored												
		alteration throughout the section - in												
		veinlets in places, c.a. 30°. Clusters												
		of disseminated pyrite and arsenopyrite.												
		Some arsenopyrite veins up to 1/2" wide												
		(similar to those in above section) with												
		quartz and minor pyrite.												
		Asp. - 2%, py- 1%.												
25'8"		End of logging by C. L. Smith.												

DD - 115

DIAMOND DRILL RECORD, HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 7 SECTION FROM 16'7" TO 25'8" STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 DATUM - COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 BEARING N 10°E ULTIMATE DEPTH 78'

ELEVATION 3400' DIP -60° PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		is generally pale green with about 20%												
		qtz. phenocrysts, and contains very (mild)												
		chl. alteration. The quartz phenocrysts												
		are irregular in shape and mineralization												
		and chl. alteration can be found within												
		them along very irregular fractures.												
		Mineralization consists of fine irregular												
		stringers and patches of Asp. (5% of rock)												
		and py (1% of rock) with an anastomizing												
		vein of Asp. up to 1" wide C.A. 70°,												
		within the vein is a 1/8" qtz. stringer,												
		at 16'7".												
17'3"-25'8"		Granite similar to previous section, but												
		30% phenocrysts of qtz., and medium												
		chl. alteration. Mineralization consists												
		of scattered patches and irregular												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 8 SECTION FROM 25'8" TO 27'3" STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 DATUM - COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr. 43 BEARING N 10°E ULTIMATE DEPTH 78'

ELEVATION 3400' DIP -60° PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		discontinuous veinlets of pyrr. (2%)												
		and Py (1%). Phenocrysts are rarely up												
		to 2" by 1" and are up to 40% of rock in												
		some places. Chl. alteration becomes												
		quite intense locally along fractures.												
		Chl. varies from 5% - 25% of rock. Cream												
		tan wispy alteration (probably clay) is												
		seen throughout granite, but is mild.												
25'8"-27'3"		Moderate chl. alteration. Py. (3%) and												
		asp. (2%) in very irregular anastomizing												
		veinlets and clusters and disseminated												
		veinlets C.A. 60°. Qtz. stringers 1/16"												
		wide C.A. 50°-70°. Qtz. phenocrysts												
		only 10% of rock entirely absent in some												
		places. 26'3" - 26'7" section of fine												
		brown rock with black and quartz phenocrysts.												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 9 | SECTION FROM 27'3" TO 30'9" | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP -60° | PROPOSED DEPTH

Logged by
J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		Section is broken by patches of green												
		chilled granite, but lower contact is												
		continuous. C.A. 55°. Vugs in py. and												
		asp. may represent < ½% Ch., 1% Pyrr. in												
		stringers and disseminated.												
27'3"-27'9"		Moderate chl. alteration, chl. 25%.												
		Patches and seams of white clay alteration												
		(mild) 2% of rock. Qtz. phenocrysts 30%, pyrr.												
		veinlets very irregular and discontinuous												
		1/2%,py. 1/2%.												
27'9"-30'9"		Very pale greenish-white granite. Mild												
		chl. alteration - chl. 3%, pyrr. 1%, py. 1%												
		mixed with stringers and flecks of chl.-												
		chl. 2%. Quz. phenocrysts 5%, 1/8" qtz. and												
		pyrr. vein at 28'. Pyrr. 20% of vein.												
		C.A. 60°. At 29'4" a series of fine												

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DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 10 | SECTION FROM 30'9" TO 33'2" | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP -60° | PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		anastomizing chl. veins. C.A. 45°.												
		29'10" - 1/8" qtz. vein C.A. 70°. 1/2%												
		Asp. Tr. cp. Asp. and cp. increase with												
		depth but are still less than 1%.												
30'9"-32'		Chl. alteration locally intense -												
		intimately associated with mineralization.												
		Mineralization disseminated and in												
		irregular disseminated veinlets. Asp. 10%,												
		Pyrr. 1%, py. 5%, Ch. 2%?, Cp. 1/2%,												
		Qtz. phenocrysts very rare.												
32'-32'5"		Bluish-gray medium grained biotite granite.												
		Py. and pyrr. in a few fine stringers 1/2%												
		each. Gray fractures or stringers 3/11												
		C.A. 65°.												
32'5"-33'2"		Blue-green chilled granite with 10% qtz.												
		phenocrysts. Localized intense chl.												

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DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 11

SECTION FROM 33'2" TO 46'9"

STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr. 43

DATUM -

COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr. 43

BEARING N 10°E

ULTIMATE DEPTH 78'

ELEVATION 3400'

DIP -60°

PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		alteration (1% of rock) associated with												
		mineralization 1% pyrr. 3% py.												
33'2"-	34'9"	Pale green granite 20% qtz. phenocrysts.												
		Mild chl. alteration associated with												
		Asp. Asp. vein very irregular up to 1"												
		wide C.A. 65°, and several smaller												
		Asp. and py. veins. Asp. 10%, Py. 3%,												
		pyrr. 2%. Pink clay alteration up to 5%												
		of rock. Green crystals at 34' may be												
		epidote.												
34'9"-	36'9"	Blue-brown biotite (5%) granite.												
		Disseminated pyrr. 1%, Asp. Tr. Qtz.												
		phenocrysts (25%) but very faint. Few												
		veins of mild chl. alteration (5%) 2%												
		pink irregular clay alteration.												
36'9"-	46'9"	Pale green-gray granite. Qtz. phenocrysts												

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DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 12 | SECTION FROM 46'9" TO 61'8" | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP -60° | PROPOSED DEPTH

Logged by
J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		2%. Py. up to 5% of rock. Chl. alteration												
		intense when associated with py. chl. 25%												
		or less. Asp. 5% at 37' mixed with pyrite												
		in weak vein. C.A. 55°. Cp. tr. at 37'.												
		Py. disseminated in clusters, or in												
		fine steeply dipping veins with occasional												
		discontinuous veins up to 1/2" in width.												
		C.A. 75°. Some sections contain up to												
		10% biotite and are lower in py. (1%) and												
		richer in pyrr. (3%) and chl. alteration												
		becomes moderate chl. 25%. Occasional												
		flecks of disseminated Asp. throughout												
		rock < 1/2%. 44'7" cp. tr.												
		45'3" - 45'11" very fine grained blackish-												
		green granite. Fine disseminated py												
		(1%) and pyrr. (1/2%).												

DD-115

DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 13 | SECTION FROM 46'9" TO 61'8" | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP 60° | PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
46'9"-61'8"		Dark green granite with 5% qtz. phenocrysts.												
		Asp. 2%, py. 2%, cp 1/2%. Mineralization												
		disseminated clusters and veins. 47'1"												
		Asp. vein 1/2" wide. C.A. 70°. Chl.												
		alteration mild (5%) to occasionally												
		moderate (25%) in sections with up to 3%												
		pyrr. Cp. seems to be surrounded by chl.												
		alteration but not necessarily intense.												
		Asp. often mixed with up to 40% qtz. in												
		veins and clusters. Up to 5% biotite in												
		sections with pyrr. Occasional dis-												
		continuous qtz. stringers of any dip.												
		Local wispy clay alteration - very mild												
		1%. Chl. alteration is absent												
		surrounding Asp. 4" of 1% cp. at 53'6".												
		58'2" slickensides 45° fault? plane. C.A. 60°.												

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DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 14 | SECTION FROM 61'8" TO 75'1" | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr. 43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr. 43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP 60° | PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
61'8"-62'0"		Coarse grained biotite granite. Biotite												
		10%, qtz.phenocrysts 20%. Pyrr. 1%,												
		py. 1/2%.												
62'0"-63'6"		Black fine to coarse grained granite.												
		Qtz. phenocrysts 0 to 20%. Irregular												
		wispy veinlets of pinkish-brown clay?												
		alteration. Py. 2%, pyrr. 1%, cp. tr.												
		Mineralization disseminated and in												
		discontinuous fine veinlets. Cp. is												
		mixed with pyrr.												
63'6"-64'10"		Dark gray biotite granite, biotite 20%,												
		qtz. phenocrysts 5-10%. Pyrr. 2%, py. 1%.												
64'10"-66'		Pale green granite with 2% biotite 1"												
		anastomizing Asp. vein C.A. 70°. White												
		clay alteration veins C.A. 60°.												
66'-75'1"		Coarse grained greenish granite. 2% biotite.												

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DIAMOND DRILL RECORD,

HOLE NO. P.D.H. #1

PROPERTY PIKE - ZONE 1 (WESTERN)

SHEET NUMBER 15 | SECTION FROM 75'1" TO 78' | STARTED October 11, 1966

LATITUDE 29'S. of Hub 3 in Tr.43 | DATUM - | COMPLETED October 23, 1966

DEPARTURE 4'W. of Hub 3 in Tr.43 | BEARING N 10°E | ULTIMATE DEPTH 78'

ELEVATION 3400' | DIP 60° | PROPOSED DEPTH

Logged by J. Staniford.

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS AG.	CU.	PB.	ZN.	SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS AG.	CU.	PB.	ZN.
		Chl. alteration mild 5% chl. Irregular												
		veinlets and disseminated pyrr. (2%) and												
		Py. (2%). C.A. 55°. chl. alteration												
		concentrated around Py. Tr. of C.P. in												
		blob of smoky white qtz. 1/2" x 1/4" 67'.												
		Fracture at 67'4" C.A. 65°. 5% pinkish												
		qtz. phenocrysts. 72' 7-1/2" 2 1/2" of												
		finer grained granite with 25% of wispy												
		white clay alteration. C.A. 40°.												
75'1"-	78'	Coarse biotite granite. Biotite 10% qtz.												
		phenocrysts 25%. Disseminated py. 1/2%												
		and pyrr. 1/2%.												
78'		end of hole.												