MAGNETIC and ELECTROMAGNETIC GEOPHYSICAL SURVEYS

ASH MINERAL CLAIM GROUP

FYRE LAKE AREA

WATSON LAKE MINING DIVISION

YUKON TERRITORY

Long. 130° 35' West
Lat. 61° 15' North

by

JOHN S. BROCK

ATLAS EXPLORATIONS LIMITED

May 20 - June 22, 1967

6655

MAGNETIC and ELECTROMAGNETIC
GEOPHYSICAL SURVEYS

ASH MINERAL CLAIMS

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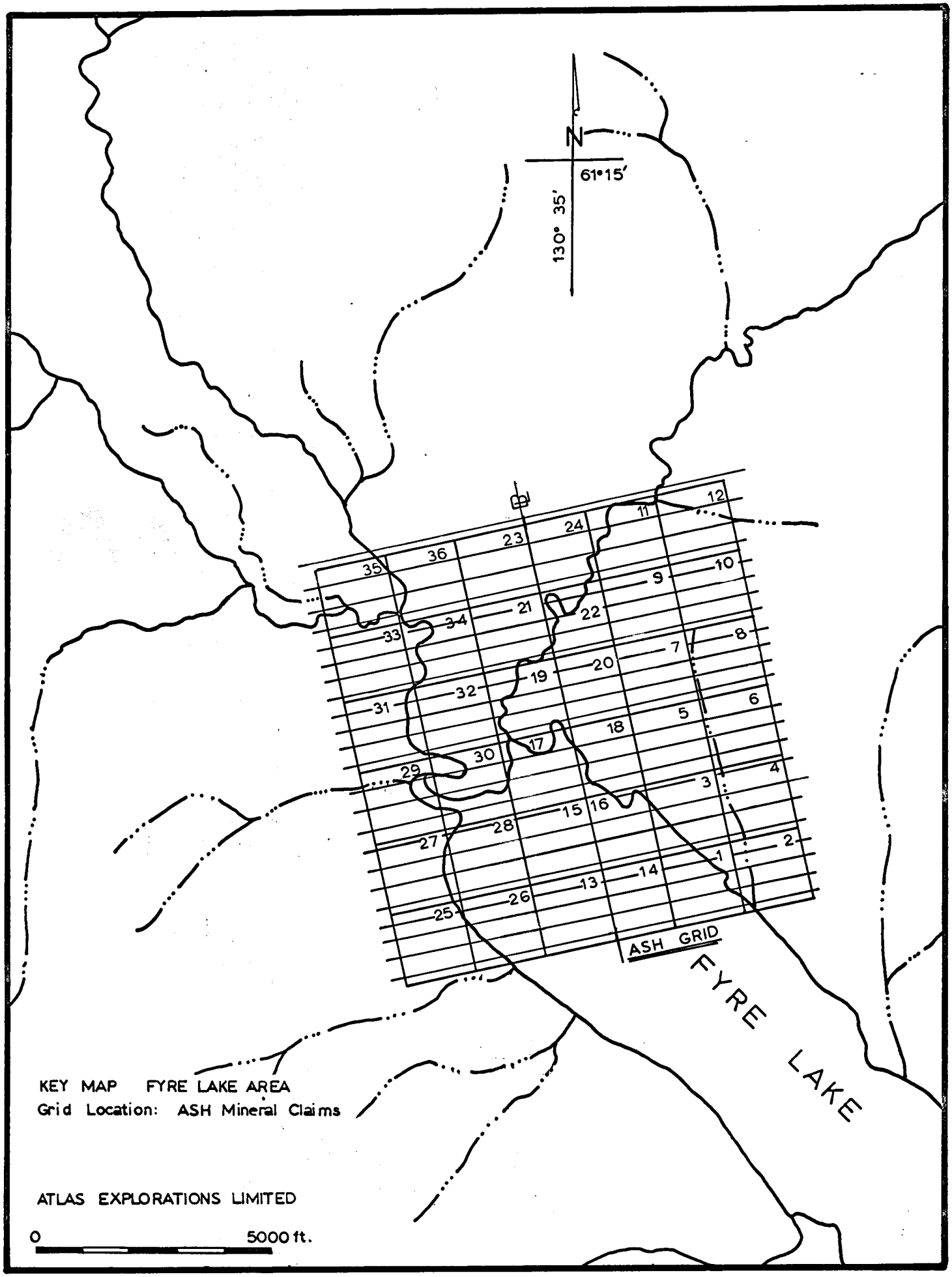

N
61°15'
130° 35'
ASH GRID
FYRE LAKE
KEY MAP FYRE LAKE AREA
Grid Location: ASH Mineral Claims
ATLAS EXPLORATIONS LIMITED
0
5000 ft.

LIST OF CLAIMS

Claim No.	Grant Nos.	Date Recorded
ASH 1 - 36	Y7337 - Y 7372	April 22, 1966

ATLAS EXPLORATIONS LIMITED
(N.P.L.)
330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

INTRODUCTION

After the Dub Mineral claims were acquired by Atlas Explorations in the Fyre Lake area, the region was flown with airborne electromagnetic and magnetic surveys. As a result of the geophysical surveys outlining anomalies in proximity to the Dub Group, an area of known sulphide mineralization, the Ash Group of 36 mineral claims was staked and recorded April 22, 1966.

The claims were staked by Atlas Explorations as part of an intensive follow-up program after completion of the airborne surveys. Ground was obtained in preparation of ground geochemical, geophysical and geologic surveys that were to be employed to delineate airborne anomalies. Commencing May 20, 1966, a crew consisting of geologic, geophysical, geochemical, linecutting and camp support personnel, were placed on the property to investigate the anomalous electromagnetic and magnetic airborne responses. It was hoped that possible diamond drill targets could be outlined and tested in conjunction with a proposed drill program on the Dub Mineral claims.

LOCATION AND ACCESS

The Ash Mineral Claims are located at latitude 61°15' North and longitude 130°35' West at the northwest end of Fyre Lake on the Finlayson Lake Map Sheet. Fyre Lake is situated at the mid-point of the North River. The Ash Group lies between elevations of 3500 and 4000 feet.

The lower elevations of the claim group are over ground that consists mainly of water covered muskeg due to the meandering entrance of the North River into Fyre Lake. Surveys over this portion of the group are best carried out when the surfaces are frozen. Higher elevations are mainly covered with dwarf birch (buckbrush) and some sparse spruce stands.

Access to the properties was made with the aid of aircraft only. Fyre Lake is suitable for all aircraft equipped with floats and skis. A base camp was established on the eastern shores of Fyre Lake for examination of the Ash Group. During breakup conditions the camp was serviced by helicopter from Ross River. Work on the property was administered from Field Offices at Ross River, 82 miles northwest of Fyre Lake: constant communication was kept with the camp by means of single sideband radio. All expediting of supplies was done from Ross River.

PREVIOUS WORK

During 1960 and 1961, Cassiar Asbestos Corporation carried out geologic, geophysical and prospecting work that eventually led to some drilling of a copper property in the area of what is now the Dub Mineral Claim Group held by Atlas Explorations. Work was abandoned after what appeared to be copper mineralization of limited extent and grade in their area of interest. Mineralized float was discovered in the area of the Ash Claims, however, no known development of such was carried out.

METHOD OF SURVEY, Instruments Used

For the magnetometer survey, A Jalander 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 direction of the vertical field. 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.

The electromagnetic survey was carried out with a Crone JEM dual frequency unit. The Crone is of the inductive type and may be either used 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 1800 cycles per second with no interconnecting cables. The effective depth penetration is 300 feet for a horizontal conductor with maximum coil spread (no skin effect allowance) and 100 feet for a vertical conductor. The effective lateral coverage is a direct function of the spread under ideal conditions. The equipment was chosen in order to give reliable information on the attitude and configuration of a conductor, the physical properties of the host rock, dimensions of the conductor and results free from error due to topographic relief.

Survey Method, Linecutting

All grids designed for ground geophysical and geochemical surveys were laid out using eight hundred foot line spacing with one hundred foot station intervals. Over areas of interest, four hundred foot spacing was used and two hundred foot spacing over areas requiring detailed information. Central base lines were used for survey control, all cross lines were surveyed by picket and chain methods. Linecutters were hired from the native settlement of Ross River; survey control was checked by the party chief.

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 a means of controlling drift and diurnal variations. With base stations of an established value serving as a means of controlling drift and diurnal variations, 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, this method provided an internal control for detecting diurnal and drift variations. The survey was done by one operator using the same instrument.

Electromagnetic Survey

All surveys were run with horizontal loop configuration and 300 foot coil spacing in order that highest response could be obtained from flat lying sulphide bodies. Both 1800 and 480 cps readings were taken at each station. The coil configuration was not adaptable to conditions of conductive overburden and maximum response from such was expected. All traverses were made by the 'in line method' and done over the same grid as used for the magnetometer surveys. In some cases shorter spacing was adopted for better resolution of shallow conductors, for the same reason line spacing was reduced to 300 feet over areas of interest. The two man EM crew did all their ground work in coincidence with the magnetometer and soil sampling crew.

Treatment of Data

Magnetic Results

Magnetic results were corrected for diurnal and drift each night by the field operator. The final gamma values were then plotted on a grid plan using scale of 400 feet to 1 inch. This data was presented to the party chief who profiled and contoured the data on overlay material in order that he could remain familiar with day to day results and progress of the survey, direct its course and have results available for comparison with electromagnetic and geological-geochemical data. Field plots of this information were forwarded to the base office at Ross River at the end of the survey for final plotting and examination on a scale of 1 inch to 400 feet. Magnetic data is presented in this report on such maps showing gamma value profiles and contoured results.(see Appendix) All maps show major topgraphic features and locations of mineral claim posts.

Electromagnetic Results

All results as derived in the field were plotted each night by the EM operators on a grid plan using a scale of 1 inch to 400 feet. High and low frequency results were presented to the party chief for inspection and profiling in order that this data be compared with the other surveys and the course of the electromagnetic survey be directed on a daily basis. Plots of readings and profiles were sent to Ross River base at the end of the survey for final plotting and

compilation on grid plans similar to those used for the magnetic maps. Electromagnetic data is presented in this report showing values-profiles (1800 and 480 cps, a contour map of high frequency dip angles.)

GEOLOGY

Only on the eastern third of the claim group area is there sufficient outcrop to permit geological mapping. Fire Lake and a mantle of glacial material obscure the bedrock everywhere else.

The rocks occurring on the slope along the north-east shore of the lake are all essentially medium grained mica schists with varying amounts of quartz and sometimes a little hornblende. Euhedral red garnets were observed in it at one locality (44N, 28E) and many thin veins and interbeds of quartz are also present.

These schists are classed on the G.S.C. map of the area in unit A^{i} for which no age is given. They have, however, been observed unconformably overlying Unit C which forms the

i: Wheeler, Green and Roddick, G.S.C. Map 8-1960
Finlayson Lake.

precambrian basement complex in the area and correllation with rocks described on adjoining sheets suggests a mississipian age. [ii]

The rocks are generally well bedded with a uniform strike of 160 to 180 degrees and a gentle easterly dip of between 5 and 10 degrees. Some contortion occurs in a zone of abundant quartz banding and veining at about 20N, 24E, but this does not appear to be extensive.

Regional mapping and air photographs interpretation suggests the existence of a northwest striking fault zone in the valley of Fire Lake, but, as there is no outcrop in the area, this could not be confirmed on the ground. A straight, deep, north-south striking valley located about 3,000 feet east of the base line and at the bottom of the steepest part of the mountain slope is likely the expression of a fault zone although no evidence of faulting was observed in the rocks adjacent to it.

In spite of moderate geophysical and geochemical anomalies in the central and extreme eastern parts of the claim group, no mineralization of potential economic value was observed during the mapping. Outcrop though, is very scarce, if present at all, in the anomalous areas.

ii: Smith, C.L. Personal Communication

GEOPHYSICAL OBSERVATIONS

Over the Ash grid, one major electromagnetic expression is outlined between lines 32 and 66 north. The response is of negative dip angles which have been contoured above -6 degrees and reach a maximum value of -38 degrees. The anomaly strikes northwest over a length of 4500 feet and has an average width of 1400 feet. General 'background' over the survey area is in the order of -4 degrees resultant dip, and is probably due to an excess of ground water caused by a high water table at the end of Fyre Lake. A variety of southwest trending positive dip angles occur over the eastern section of the grid, they vary in striken length from single line values to 1600 feet and in intensity from +2 to +6 degrees. Other conductive expressions have not been mentioned due to their irregular and limited extent. The major anomaly and positive trends have been outlined on an interpretive contour map.

Air-EM (see appendix) delineates one significant closure of 7 ppm in-phase response and a conductive ratio of two. Although the intensity is not strong, the closure is well defined. The ground follow-up surveys have reproduced the anomaly exactly in dimensions and location.

On broad anomaly of 4040 gamma intensity and 100 gammas above closure, is situated under Fyre Lake at the north end. A single line magnetic coincidence of 4000 gammas and 80 gammas above closure is coincident with the north flank of the electromagnetic anomaly. A 3840 gamma peak, situated at the east end of the claim group of 40 gammas peak intensity is also of single line value.

Ground magnetic surveys delineated all airborne magnetics with good coincidence in location, dimensions and intensity. Within the boundaries of the electromagnetic survey anomaly of major proportions, there occurs two isolated 'highs', one of them being reflected by the airborne survey. At the eastern boundary of the grid several other 'highs' of the same nature ocxur as single line values.

GEOPHYSICAL INTERPRETATION

The most prominent feature geophysically is the large negative resultant dip angle response obtained at the north shore of Fyre Lake. The conductive zone probably lies at a depth in excess of 100 feet from surface as response from the airborne survey is weak (depth penetration 100 to 150 feet) but strong from the ground survey (depth penetration 250 feet). Magnetic coincidences are not obvious but an elongate anomaly in excess of 1000 gammas total intensity lies along strike of the southwest conductor gradient. The strongest magnetic high

is on the north flank or nose of the conductor and is not directly in association with peak of the EM anomaly. A series of three magnetic closures between lines 40 and 56 north at the east end of the grid, reach maximum total intensity of 1600 gammas, there is no evidence of coincident conductors but some geochemical copper results of significance were obtained in this area. The magnetics here could be indicative of limited copper mineralization similar to the Dub Group. None of the positive dip angle trends are reflected by magnetics and are thought to be near surface shear zones.

CONCLUSIONS AND RECOMMENDATIONS

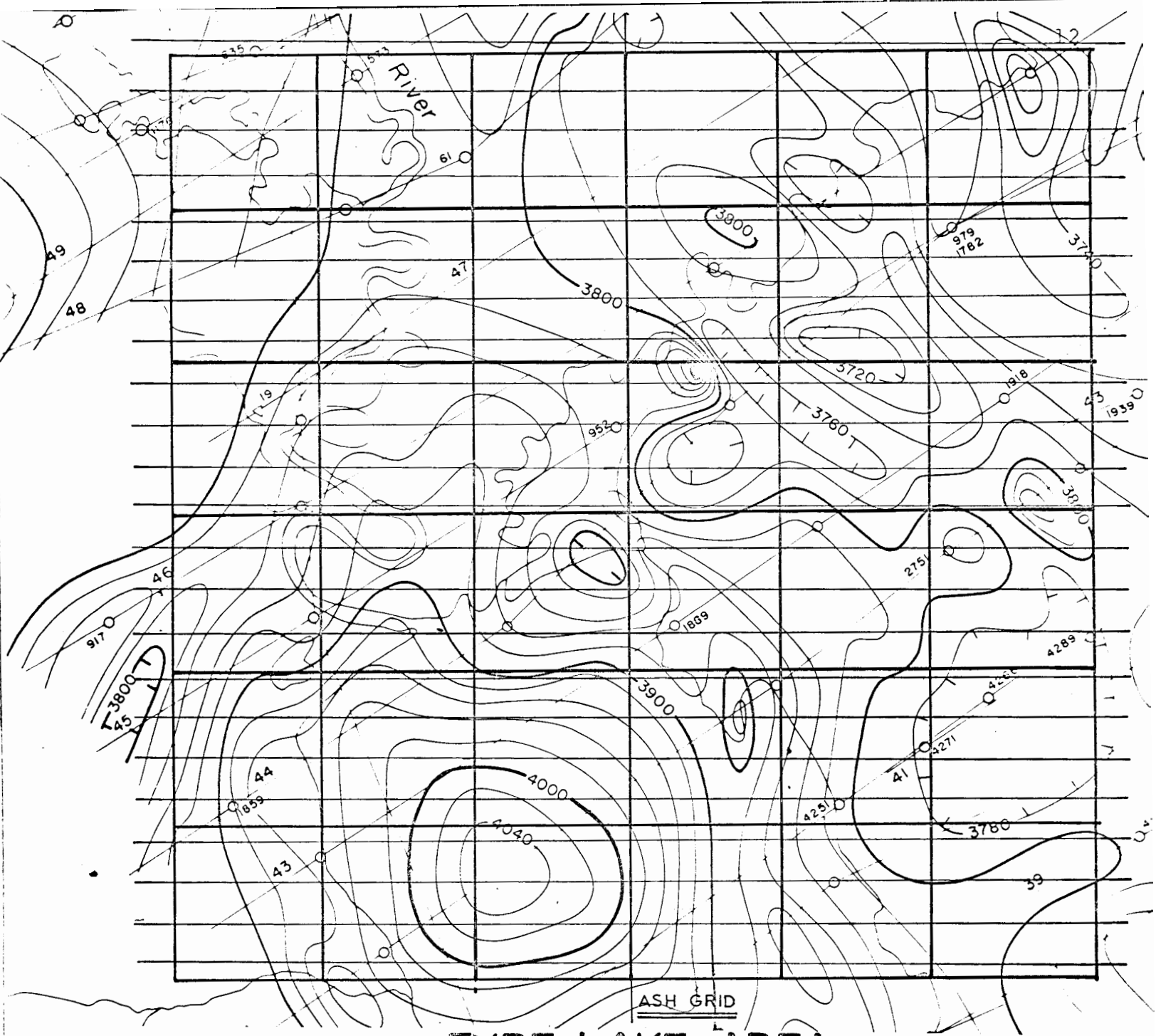
The negative angle electromagnetic anomaly is of interest due to its well defined boundaries and size. It is not thought to be due to conductive overburden conditions due to the majority of the grid having the same drainage system. Geologically it is unusual for graphitic schists to have limited boundaries such as reflected by the EM in this area, some magnetic coincidence adds confirmation to the economic potential of the zone. It is recommended that if the Fyre Lake area is to be drilled extensively, then one hole should be placed on the electromagnetic anomaly to confirm its causative structure.

MAGNETIC AND ELECTROMAGNETIC

GEOPHYSICAL SURVEYS

ASH MINERAL CLAIM GROUP

A P P E N D I C E S



FYRE LAKE AREA

YUKON TERRITORY

ASH MINERAL CLAIMS

SCALE

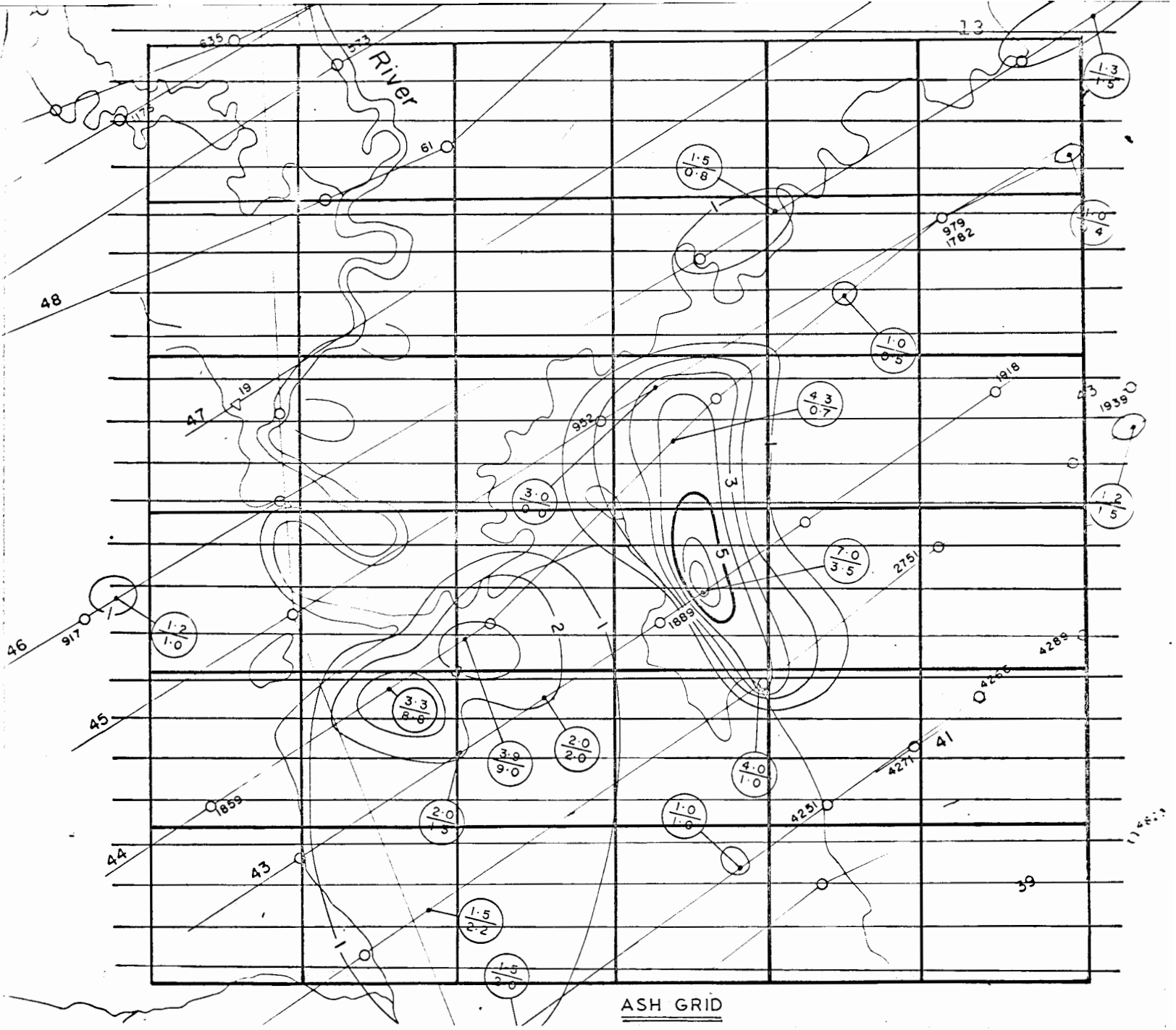
1000 0 1000 2000 3000 4000 5000

FEET FEET

1 Inch to 1320 Feet

AEROMAGNETIC MAP

Appendix 1



ASH GRID

FYRE LAKE AREA

YUKON TERRITORY

ASH MINERAL CLAIMS

SCALE

000 0 1000 2000 3000 4000 5000

FEET FEET

1 Inch to 1320 Feet

ELECTROMAGNETIC MAP

Appendix II

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FYRE LAKE AREA PROJECT

Ash Mineral Claim Group
Magnetic and Electromagnetic Ground Geophysical Surveys

SUMMARY OF COSTS

A.	Linecutting	a)	total footage cut	180,700 ft.	
		b)	overall cost/1000'	$10.00	$1807.00
				$53/Mi	
B.	Magnetometer Survey	a)	total line miles	30.3	
		b)	overall cost/line mile	$50.00	$1515.00
C.	Electromagnetic Survey	a)	total line miles	30.3	
		b)	overall cost/line mile	$110.00	$3333.00
				Mag EM 160/Mi	

NOTE

overall cost per line mile includes:
a) Supervision
b) presentation of data
c) camp costs and field subsistence
d) transportation

TOTAL COST, Geophysical Surveys, Ash Group $6655.00

APPENDIX lV

A F F I D A V I T

Supporting Summary of Costs

I, John S. Brock, Assistant Exploration Manager, Atlas Explorations Limited, of Ross River, Yukon Territory, do hereby state that to the best of my knowledge and belief the statement of costs as presented in Appendix lll of this report 'Magnetic and Electromagnetic Geophysical Surveys, Ash Mineral Claim Group', is both true and correct.

DATED at the City of Whitehorse in the Yukon Territory this 13 day of April A.D. 1967.

SWORN BEFORE ME in the
City of WHITEHORSE
in the Yukon Territory
this day of
A.D. 1967

A Commissioner for taking
Affidavits in the Yukon Territory

John S. Brock

APPENDIX V

FYRE LAKE AREA PROJECT

Ash Mineral Claims

LOG OF DAILY PROGRESS AS PER PARTY CHIEF WEEKLY REPORTS

PROJECT..FYRE LK.....FLASH

ATLAS EXPLORATIONS LIMITED

PERIOD From..May 30.....
To..May 30.....

CLAIM GROUP..ASH.....

PARTY CHIEF..PHIL NIELSEN.

PERSONNEL	POSITION	TIME	WAGE
Tom Lenza	Cook.		Stanton Work. MAY 30 66
Bob McIntyre	Executive	9 24 3	
William Peters	"	24 3	
Joe Abel	"	24	
John Peters	"	24 3	
Lyle Hartley	Mag Operator		
Peter Legat	E.M. Operator		
Ted Lightfoot	"	"	
Pat Crossmount	Geochem Sampler.		

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon.													
Tues.													
Wed.													
Thurs.													Chopper operated from Finlayson-Jasper Road to FYRE LAKE
Fri.	FLY IN CREW + EQUIPMENT	8 HRS			—	—	—	—	—	—	—	—	Men + equipment flown in + camp
Sat.	"	8 HRS			—	—	—	—	—	—	—	—	set up.
Sun.					—	—	—	—	—	—	—	—	Snow storm - worked around camp.
TOTAL		16 HRS.											

PROJECT...[illegible]... ATEMS EXPLORATIONS LIMITED PERIOD From...May 23 '73
To...May 29 '73

CLAIM GROUP...ASH...

PARTY CHIEF...Chas N. Nielsen

PERSONNEL / POSITION / TIME / WAGE

PERSONNEL	POSITION	TIME	WAGE
Doug Dixon	Cook		
Don McPherson	Linecutter	56	
Nielsen, Peter	"	56	
Lee Edgel	"	56	
John Peters	"	56	
Bill Douglas	Mag Op	16	
Peter Pegors	E.M. Op		
Ed Lightfoot	" "		
Pat Drinnan	Geochem Samples		

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 23	—	—	—	—	L52E	4,000	—	—	—	—	—	—	Linecutters started on grid. Pete next built log tent frame for cookhouse.
Tues. 24	—	—	—	—	L52W BASELINE L48E	7400	—	—	—	—	—	—	Students used to locate AXG (ANC) claim group too much snow.
Wed. 25	—	—	—	—	L40,36,32 28,24,20, 4,8	7,000 15,000 10,000	—	—	L0; L4	6000 3000	L0 L4 L8	6000 3000 3500	All work done on ASH. John Peters stopped working TUES. on.
Thurs. 26	—	—	—	—	L12, L16 L48	10,000 6,000	—	—	BASELINE L40 L4 L0	5300 16,00 2700 2500	L16	5000	L12, 16 on ASH L48 on land.
Fri. 27	—	—	—	—	—	—	—	—	—	—	—	—	Smoke Storm - Crew cut fire wood + improved Camp.
Sat. 28	GRUB BROUGHT IN.	1hr 50 mins in ≃2 HRS. OUT	—	—	L0E L44E L44W	1100 4500 1000	—	—	L8 L12 L16	3000 5000 5000	L24 L28 L32 L36 L40	5000 5000 4000 1300 1500	MAG WENT U/S. JOHN PETERS FLOWN OUT ON TODAY'S CHOPPER FLIGHT.
Sun. 29.	—	—	—	—	L40E L36E L32	3000 2500 1500	—	—	L36W L32 L28 L24	000 3000 3500 3500	—	—	MAG. OPERATOR CUTTING THE BAL GEOCHEM. OPERATOR CUTTING ALL WEEK.
TOTAL						79,000				55,500			

35
17
52

16

PROJECT ..6x66..1166..... ATLAS EXPLORATIONS LIMITED PERIOD From MAY 30/66
To MAY 5/66 JUNE

CLAIM GROUP ..ASH.....

PARTY CHIEF ..PAUL NIELSEN

PERSONNEL	POSITION	TIME	WAGE
Dave Tuson	Cook		
Don McPeters	Linecutter		
Wallace Peters	"	40 hrs (5 DAYS)	
Joe Gittel	"	56 hrs. (7 DAYS)	
Bill Barday	Mag. Op.		
Peter Jewett	E.M. Op.		
Ted Hathaway	"		
Pat Greenwood	Spare Line Cutter	~~40 hrs (5 days)~~	
Daniel B. Jackson	Linecutter	40 hrs. (5 days)	
Jim Atkinson	Linecutter	40 hrs (5 days)	

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 30	SUPPLIES + T.IM.S - ORCKS IN 1hr 20 mins; 30 mins GEOLOGY; 1hr 20 mins OUT				L36 L32 L4 L12	2000 3800 1200 1300	—	—	L20 L52 L48	4500 1500 6000	—	—	Jim Sadler-Brown came in, did some recon. geology, stayed overnite.
Tues. 31	SUPPLIES + 2 LINECUTTERS 1 hrs 20 mins IN; 1 hr 20 mins OUT				L12 L36 L32 L8	3500 2800 2600 1400	—	—	L44E L40E L36E L28E	4500 4000 4000 4000	—	—	Dan B. Jackson + Jim Atkinson came in on chopper.
Wed. 1	—	—	—	—	B.LINE L60 L8 L16	4000 3800 1300 1500	—	—	L32 L28 L24 L8	3000 4000 3000 3500 3000	—	—	Sadler-Brown went out. Killed Black Bear.
Thurs. 2	REG. DAVIS + SUPPLIES + RECON. 2 HRS. CHOPPER TIME. (TOTAL)				L60E L56E&W L16E L20E	4500 2500 1500 1400	—	—	L12 L0E L4E B.L L56W L60W	2000 1700 2000 4000 900 900	—	—	Checked over area for claim posts, snow conditions + ground for soil sampling.
Fri. 3	↑				L56E L64E L64W L20 L68	3000 2000 2400 1500 1800	—	—	L52E L60E L20E L16E	4500 5000 3000 3000	—	—	Chopper stayed here thurs. nite. Left for Old Hold 1 P.M Fri.
Sat. 4	—	—	—	—	L64E L68E	2800 3000	—	—	E.M. CAUGHT UP TO LINECUTTERS. SEARCHED FOR DUB GROUP.		—	—	Chopper stopped in for lunch with REG. DAVIS on way to R.R.; W. Peters went out.
Sun. 5	—	—	—	—	L68 L76 L72	2700 1700 4000	BASE-LINE	49	—	—	—	—	Started SOIL SAMPLING. E.M. crew cut line.
TOTAL		6				60,000		49		66,900			

45
17
2.6

23
11
34

29
24

Progress limited due to inferior linecutters (some of them); lack of machetes + field boots; O/S Mag.; and ~~time~~ frozen ground re. soil sampling.

PROJECT..T.Y.R.E..LAKE..... ATEMS EXPLORATIONS LIMITED PERIOD From..MAY 6/66 JUNE..
To..MAY 12/66 JUNE..

CLAIM GROUP...A.S.H.....
PARTY CHIEF..PHIL NIELSEN.

PERSONNEL	POSITION	TIME	WAGE
Doug Lipsy	Cook.		Salary
Don McIntyre	Linecutter	16 hrs (2 DAYS)	$20 per day.
Joe Vogel	"	56 - 7 days.	" " "
Daniel B. Jackson	"	56 - 7 days.	" " "
Glen Atkinson	"	56 - 7 days	" " "
Bill Barclay.	Mag. Op.		Salary
Peter Jaspel	E.M. op.		Salary
Ted Hartfoot	E.M. op.		Salary
Paul Drummond.	Electron. Op.		Salary.
MAC LADUE	LINECUTTER.	(STARTED THURS.)	Salary.

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 6	—	—	—	—	L76W L76E L72E	4000 1600 3000	L0 E L4E L8E	52.	L60 L64 L68	13,200	—	—	D.B. JACKSON CUT HIS LEG.
Tues. 7	—	—	—	—	L80E L80W L76	1400 2800 4000	L12 L16 L20	86	—	—	—	—	E.M. CREW CUT LINE AS THEY WERE CAUGHT UP WITH LINECUTTERS.
Wed. 8	SUPPLIES FROM ROSS + LADUE FROM OLD GOLD	1 hr 50 mins.			L80 L84W L84E	2700 1800 3700	—	—	—	—	—	—	NO SAMPLE BAGS. E.M UNIT WENT TEMORARILY U/S. MAC LADUE CAME IN. O. McINTYRE WENT OUT.
Thurs. 9	—	—	—	—	L88W L88E L84W L84E L84E	1800 2900 300 1300 3000	L24 L28 L32 L36.	100	L76 L64 L68 L72 L80	4500 2500 2500 4200 1500	L56 L60E L60W B-L	4500 4700 1000 1500	MAG SURVEY STARTED AGAIN WITH ARRIVAL of 8 BATTERIES. MAC LADUE STARTED WORK.
Fri. 10	—	—	—	—	L88W L84 L80 L76	1500 1500 600 1600	L36E L40E L44E	90	—	—	L64W L68W L72W L76W	12,000	E.M. U/S - BATTERY POST FOUND TO BE INTERMITTENT.
Sat. 11	MON SAT.				L60 L56 L52 L48	2100 1900 600 600	L44E L48W L52W L56W	108	L72 L76 L80 L84	16,000	B.L. 33 39 50,66 76,72	13,000	TIM SNIDER-BROWN CAME IN. @ HE STARTED ON ASH GP. ON THE 12TH ↓
Sun. 12	TIM BROWN IN SUPPLIES GASPAR WENT OUT TO OLD GOLD		6-5 mins F. from Pelly to Elsa		L48	400	L52 L56 L60	110	-	-	-	-	GRID COVERED WITH WATER. CREW CAME BACK TO CAMP AT 2.00 PM
TOTAL		2½ HRS.				41,000		596	1	77,200		35,700	

Still show progress due to lack of Sample bags; E.M batteries intermittent & flooded grid due to excessive run off & Thunder Showers. Mechanical Problem (inferior gear g)

PROJECT ..... ATLAS EXPLORATIONS LIMITED PERIOD From June 13/66

To June 19/66

CLAIM GROUP ..... DSH

PARTY CHIEF ..... PAUL NIELSEN

PERSONNEL / POSITION / TIME / WAGE

PERSONNEL	POSITION	TIME	WAGE
Dave Lyons	Coop.	7 days	Salary @ $201day = $140
Bob Stein	Linecutter	7 days	@ $201day = $80
Dan B. Jackson	"	7 days	" = $120
Jim Stansfield Atkinson	"	7 days	" = $140
Mac Zadra	"	7 days	Salary
Bill Barclay	Mag Op	7	"
Peter Joost	E.M. Op	7	"
Ted Lichtfoot	"	7	"
Pat Brownwood	Helper Op	7	"
Jim Sadler Brown	Geologist	7	"
Glen Amantea			

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 13	—	—	—	—	—	—	L68 L64 L60	87 ASH	—	—	ASH	3,000	WATER TOO HIGH UNGRID. MOST OF CREW STAKED CLAIMS ON DUB GROUP. NO SAMPLE RIGS - SOIL SAMPLER CUT WOOD TUES.
Tues 14	Bell 206 B 1 hr 15 min 1 1/2 hrs	"	—	—	—	—	—	—	—	—	ASH	1,000	JOHN BROCK CAME IN FOR AN HOUR FROM OLD GOLD CREW STAKED CLAIMS - DUB.
Wed. 15	—	—	—	—	BL of DUB 1 GR TURN OX -	5,000 LINES	58 72 76, 80.	ASH 129	L85 L89	900 ASH.	ASH	5,000	STARTED DUB 1 GRID AND CUTTING WHILE ASH CAMP MOVES UP. GEOLOGIST & GEOP. OPS WORKED ON ASH GP.
Thurs 16	—	—	—	—	23 612 216 L200 L44	1400 2000 L 2500 2500 SOC	84 86	ASH 105	"	—	ASH	3,000	CONTINUE CUTTING ON DUB 1 GRID. CREW HELPED BY TURNING X-LINES - REST OF CREW WORKING ON ASH GP.
Fri. 17	—	—	BEAVER - TURBO Supplies	1 hr 50 minutes from D.P.	—	—	—	—	—	—	—	—	STORMS ALL DAY. CREW CUT WOOD, ETC. D. B JACKSON TERMINATED WORK AT D.P. REGAN WENT OUT ON PLANE
Sat. 18	—	—	—	DUB 1	L29 32 L-5 L-35	2500 2500 2200 2500	SIX SAMPLES BACK UP TO OLD CAMP.	ASH 20	—	—	—	500 (ASH)	SAM STANISH STARTED LINE-CUTTING ON DUB 1 WITH REST OF LINECUTTERS. TED & L STARTED BUILDING ROAD TOWARDS DUB
Sun. 19	—	—	—	Dave Sam Geol.	236 L29 L-29	1000 2500 L-200	—	—	—	—	—	MARINE	STORMS ALL DAY. FINISHED BOAT. BILL MARKED MAG.
TOTAL		1 1/2 Hrs		1 1/2 Hrs		26,400		336		900		60 00	

911
655
123

PROJECT....EYRE LAKE.... ATEMS EXPLORATIONS LIMITED PERIOD From....June 28 1966.....
To....July 26 1966.....

CLAIM GROUP....ASH, DUB 1, ANT (AXE)

PARTY CHIEF....PHIL NIELSEN

PERSONNEL	POSITION	TIME	WAGE
Dave Lingo	Cook	7 days	$450 per month
Pat Sullivan	Timberman	7 days	$140 per week
Tom Robinson	"	7 days	$140 " "
Dave Erlenbach	"	7 days	$140 " "
Jim Swanson	"	7 days	$140 " "
Bill Bailey	"	7 days	$140 " "
* Peter Legault	Prosp Opr.	7 days	$450 per month
Ted Swallfoot	L.W. Opr.	7 days	$ 975 " "
Pat Beaubeaurd	" "	7 days	$400 per month
Edward Thal-Brown	Boatman Opr.	7 days	$375 per month
	Geologist	2 days	

Day Of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 20	—	—	—	—	L 99 / L 4 / B.L. / L 3	1200 / 2050 / 600	RECON. ON CREEK / ON ANT GP.	SILT SAMPLES 20-ANT	L 8 / L 12 / L 90 / L 99	2500 DUB	ASH	1000	LINECUTTERS ON DUB. E.M ON DUB - 160 KHZ. GEOCHEM-GEOLOG ON ANT. MAG. ON ASH.
Tues. 21	—	—	—	—	L 43, 12, L 32, 16, L 24	2=4000 = 3900	L 84 L 80 L 76.	ASH 115	—	—	ASH	2000	MAG CALIBRATION ON ASH. LINECUTTERS ON ASH(N) STILL WIRER WATER BOT-TLED L 3 DUB 1 3R
Wed. 22	FLOWED UP FROM CAMP (RAIN)	3 HRS OLD GOLD	FROM OLD GOLD		STARTED B.L. OF ANT GROUP.		—	—	—	—	—	—	STORMS ALL DAY. VERY LITTLE WORK DONE TIME WENT ON TO DRY CLOTHES
Thurs. 23	—	—	BARGE SUPPLIES	FROM ROCS OVER 22 ROCS	B.L. L 0 L 8 RUN	4500 2900 1500 CR	DUB 1 BASE-LINE.	DUB 1 38	—	—	DUB 1	1000	LINECUTTERS ON ANT GP. STILL STORMY. SLOW PROGRESS
Fri. 24	—	—	—	ANT	L 40 W L 24 E L 40 E L 32	2000 SP 900 SP 2000 2000		DUB 1 96	L 16 L 20 L 24 L 28	2000 DUB	DUB 1	2000	" " " " " " " " "
Sat. 25	—	—	—	RNT	L 32 L 24 L 36	2000 3100 3000		DUB 1 100	L 32 L 36	3000 DUB	DUB 2	2000	LINECUTTERS FINISHED ANT. USING 400' X-LINES. STILL RAINING
Sun. 26.	—	—	—	DUB 1 S	L 16 L 0 L 48	3600 2000 2000		DUB 1 50.	L 4 L 0 DUB.	2000	DUB 1	2000	ALL WORK ON DUB 1. E.M WIS. MORE DOWN, RAIN. VERY DEPRESSING!
TOTAL		3HR	—	2HRS		14,400		419	250			1200	WATSON LAKE BEAVER CAME. MEN SAID THEY WERE SAFER HUNTERS - VERY SUSPICIOUS!

* Peter Legault with Tom Sackler Brown. 2400
Tom worked 1 day on Ant Grid (this week) 800

3200

SUMMARY — FINALLY RELOCATED GOOD MACHETE'S. WORK HAMPERED BY 7 OUT OF 9 DAYS OF CONTINUAL THUNDER STORMS.

PROJECT FYRE LAKE — ATEMS EXPLORATIONS LIMITED — PERIOD From June 27 To July 3

CLAIM GROUP ASH, DUB 1, ANT.

PARTY CHIEF DAVE WILLSON

PERSONNEL	POSITION	TIME	WAGE
DOUG TIZYA	COOK.	Tues	$450 per month.
JOE KOOL	LINECUTTER	"	$140 per week
TIM ATKINSON	"	"	$140 " "
MAC LADUE	"	"	$140 " "
SAM SMARCH	"	"	$140 " "
BILL BARCLAY	"	"	$140 " "
PETE TEGART	MAG. OP.	4 days Tues.	$450 per month
TED LIGHTFOOT	E.M. OP.	"	$475 " "
VIC WRIGHT	"	"	$400 " "
BROWNSWORD	GEOCHEM OP.	"	$375 " "

Day Of Week	HELICOPTER Job	HELICOPTER Loc.	FIXED WING Job	FIXED WING Loc.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Ft.	GENERAL
Mon. 27	—	—	—	—	STAKED CLAIMS	DUB GP.	L44 L48 DUB 1	50	[illegible]		—	—	MORE RAIN. MAG. OP. PLOTTED RESULTS. E TOOK LINECUTTERS STAKING SO NO E.M. DONE.
Tues 28	—	—	—	—	ASH61+ L-36W L-40W [illegible]	1700 1300 [illegible]	68 69 50,49 50,48	90 ASH	L0 L8 L16 L32	3,600	BL. L-0,L8 L16,L24 [illegible]	1,100 ANT	LINECUTTERS & GEOCHEM ON ASH E.M. & MAG ON ANT GP.
Wed. 29	—	—	—	—	L48,L52 L52,L56 [illegible]	2,200 [illegible]	10 12,16,L [illegible]	101 ASH	PLOTTED E.M.	—	L32 L40 L8	1,100 ANT	LINECUTTERS & GEOCHEM ON ASH. MAG ON ANT ANT GP TAGGED TO BUG DOCK
Thurs 30	—	—	—	—	L44 L12 L0, 4, 8	5000 ANT 4500 ASH	SLOUGH AREA.	20 ASH.	L32 L40	5,000	—	—	MAG. PLOTTED RESULTS. GEOCHEM ROUGH GOING DUE TO SWAMP. LINECUTTING ON ASH FINISHED.
Fri. July 1			SUPPLIES & JOHN BROCK (WENT OUT SAME TRIP)	1 hr FROM ROSS	Joe + Jim ANT Sam + Mac	4500 5000	L44, L48 L52, L56 L60.	80 ASH.	—	—			GEOCHEM & FINISHED ON ASH.
Sat. 2			BROUGHT IN VIC WRIGHT + PETE TEGART	1 hr. FROM ROSS.	L52+L56 DUB 1 ANT	4000 4000	—	—	ANT	3,000	ANT PLOTTED RESULTS of	ASH.	SOIL SAMPLER ON E.M.. MAG FINISHED ANT GP.
Sun. 3					CUT WOOD + TOOK IT EASY		DUB 2	40	ANT DUB 1	300 5,200	ASH	2,200	PETE TEGART BACK ON E.M. ALL LINECUTTING FINISHED ON ASH, ANT & DUB 1
TOTAL				4 HRS				381		17,000		3,300	PREPARING FOR CAMP MOVE TO DUB GROUP UP THE HILL

VIC WRIGHT STAYING UNTIL TUES SU-Y 5. COME IN SAT SU-Y 2nd

$1,100

10 9 360

16,000

PROJECT ...FISH LAKE...

ATLAS EXPLORATIONS LIMITED

PERIOD From ...JULY 4/66...
To ...JULY 10/66...

CLAIM GROUP ...W.H.Y. DUB...

PARTY CHIEF ...PAUL WELSEN...

PERSONNEL	POSITION	TIME	WAGE
DOUG TIZYA	COOK	$450	$450/mo.
JOE ETZEL	LINECUTTER	$20/day	$140/wk.
TOM ATKINSON	"	@20/day	$140/wk.
MACK LADUE	"	"	$140/wk.
SAM SMARCH	"	"	$140/wk.
BILL BARCLAY	MAG. OP.	$450/mo	$450/mo.
NEIL TEGART	E.M. OP.	$475/mo	$475/mo.
TED LIGHTFOOT	E.M. O.P.	$400/mo	$400/mo.
PAT BROWNSWORD	GEOCHEM OP.	$375/mo.	$375/mo

Day of Week	HELICOPTER Job	HELICOPTER Hrs.	FIXED WING Job	FIXED WING Hrs.	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM. Lines	GEOCHEM. No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft.	GEOPHYSICS MAG. Lines	GEOPHYSICS MAG. Hrs.	GENERAL
Mon. 4.	—	—	—	—	—	—	—	—	ASH	2,000	ASH	1,000	LINECUTTERS & I CHECKED CLAIMS & NEW CAMP LOCATION. GEOCHEM OP. RECONNED PROP. RUST STAIN ON MTN
Tues 5	—	—	SUPPIES & GAS FOR CHOPPER.	2 TRIPS FROM ROSS. WENT TO OLDG	—	—	—	PLOTTED GEOCHEM RESULTS - ASH.	ASH	1,000	ASH.	1,000	PREPARED FOR CAMP MOVE. E.M. & MAG. ON ASH. SWAMP.
Wed 6	CAMP MOVE UP TO OLD CASSIAR PROP.	APPROX. 4 HRS.	—	—	—	—	—	DUB 2	ASH	1,000	DUB 2	—	E.M. FINISHED ASH GP. REST OF CREW HELPED MOVE CAMP.
Thurs 7	—	—	—	—	LINECUTTERS MADE TENT FRAME FOR COOK HOUSE, ETC. DUB 2	—	—	DUB 2	DUB 2	—	DUB 2	—	STUDENTS + I LOCATED CLAIM POSTS + DRILL HOLES. CLAIMS ALL BALLED-UP. LINECUTTERS WORKED ON CAMP.
Fri 8	—	—	—	—	B.L - North - 2800' LOE - 2800' DUB 2	—	—	DUB 2	DUB 2	—	DUB 2	—	SAM SMARCH ILL. E.M. CREW CLEANED UP OLD CAMP & PAINTED BOAT. MAG + GEOCHEM OPS. PLOTTED. I SET UP BASELINE + TURNED CROSS-LINES.
Sat. 9	—	—	—	—	LOW 3600 L4N 2800 L8N 2800 L12N 2800	—	—	—	—	—	ASH PLOTTED RESULTS	—	E.M CREW + SOIL SAMPLER CUT LINE. MOST OF CREW SICK - POSSIBLY FOOD POISONING.
Sun. 10	SUPPLIES T.S. - BRO	2½ HRS & RETURN FROM	—	—	L4S 3600 L8S 3600	—	—	PLOTTED ASH	DUB 2	3,000	DUB 2	1,000	SADLER - BROWN ARRIVED
TOTAL		6½ 2 HRS		2 HRS.	7>3000					35		25	

16,000 - mag

PROJECT FYRE LAKE. ATLAS EXPLORATIONS LIMITED PERIOD From AUG 29
To AUG. 31.

CLAIM GROUP DUB & ASH, TAK.

PARTY CHIEF PHIL NIELSEN.

PERSONNEL	POSITION	TITLE	RATE
DOUG TIZYA	COOK.		$450/mo.
SAM SMARCH	LINECUTTER.		$20/day
JOE ETZEL	LINECUTTER		$20/day.
BILL BARCLAY	MAG. OP.		$50/day.
TED LIGHTFOOT	E.M. OP.		400/mo
MURRAY SIMPSON	E.M. OP.		450/mo
PAT BROWNSWORD.	GEOCHEM OP.		375/mo.

Day Of Week	HELICOPTER Job	HELICOPTER Hrs	FIXED WING Job	FIXED WING Hrs	LINECUTTING Lines	LINECUTTING Feet	GEOCHEM Lines	GEOCHEM No. Samples Taken	GEOPHYSICS E.M. Lines	GEOPHYSICS E.M. Ft	GEOPHYSICS Mag Lines	GEOPHYSICS Mag Ft	GENERAL
Mon. 29	—	—	—	—	156, 60, 69 69-ASH	3000	DUB & LEN	19	156, 60, 69 ASH	3000	PLOTTER TAK		I STRAIGHTENED OUT ASH #1, 2, 3 & claim posts.
Tues. 30	—	—	—	—	STAKED DUB 165-169 INCLUSIVE.		CACHED SUPPLIES & TOOK INVENTORY				STAKED DUB 165-169 INCLUSIVE.		Cached supplies & took inventory
Wed. 31.	—	—	TOOK CREW TO ROSS.	~~3~~ 4 HOURS	—	—	—	1	—	—	—	—	CREW MOVED OUT TO ROSS RIVER.
Thur.													END OF MOBILE 1 AND FYRE
Fri.													
Sat.													
Sun.													
TOTAL				4 HRS.		3000		19		3000			

APPENDIX V1

PERSONNEL

FYRE LAKE GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL CREW

SURVEYS: ASH MINERAL CLAIMS

Phil Nielsen	Party Chief	1600 Beach Avenue Vancouver 5, B.C.
Peter Tegart	EM Operator	4438 W. 13th Avenue Vancouver 8, B.C.
Murray Simpson	EM Operator	c/o General Delivery Whitehorse, Y.T.
Ted Lightfoot	EM Operator	7081 - 232nd Street RR #7, Langley, B.C.
William Barclay	Magnetometer Operator	6040 Iona Drive Vancouver 8, B.C.
Patrick Brownsword	Geochemical Sampler	3563 Quebec Street Vancouver, B.C.
Timothy Sadlier-Brown	Geologist	1490 Edecliffe Avenue Ottawa 3, Ontario
Douglas Tizya	Cook	c/o General Delivery Whitehorse, Y.T.
Joe Etzel	Linecutter	c/o General Delivery Whitehorse, Y.T.
Sam Smarch	Linecutter	c/o General Delivery Whitehorse, Y.T.
Mac Ladue	Linecutter	c/o General Delivery Ross River, Y.T.
Jim Atkinson	Linecutter	c/o General Delivery Ross River, Y.T.
George Johnny	Linecutter	c/o General Delivery Ross River, Y.T.

ATLAS EXPLORATIONS LTD.

ROSS RIVER, YUKON

FYRE LAKE AREA
ASH MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY
GAMMA VALUES - PROFILES

Scale: 1" = 400'
INSTRUMENT: JALANDER
PROFILE SCALE: 1" = 200 GAMMAS
OPERATOR: W. BARCLAY
PARTY CHIEF: P. NIELSON
DATE: JULY, 1966
DRAWN BY: A. Matthews

Claim post Ash 1 | 3
2 | 4

Ash 25 | 27
26 | 28

Ash 29 | 31
30 | 32

Ash 33 | 35
34 | 36

Ash 17 | 19
18 | 20

Ash 21 | 23
22 | 24

Ash 1 | 3
2 | 4

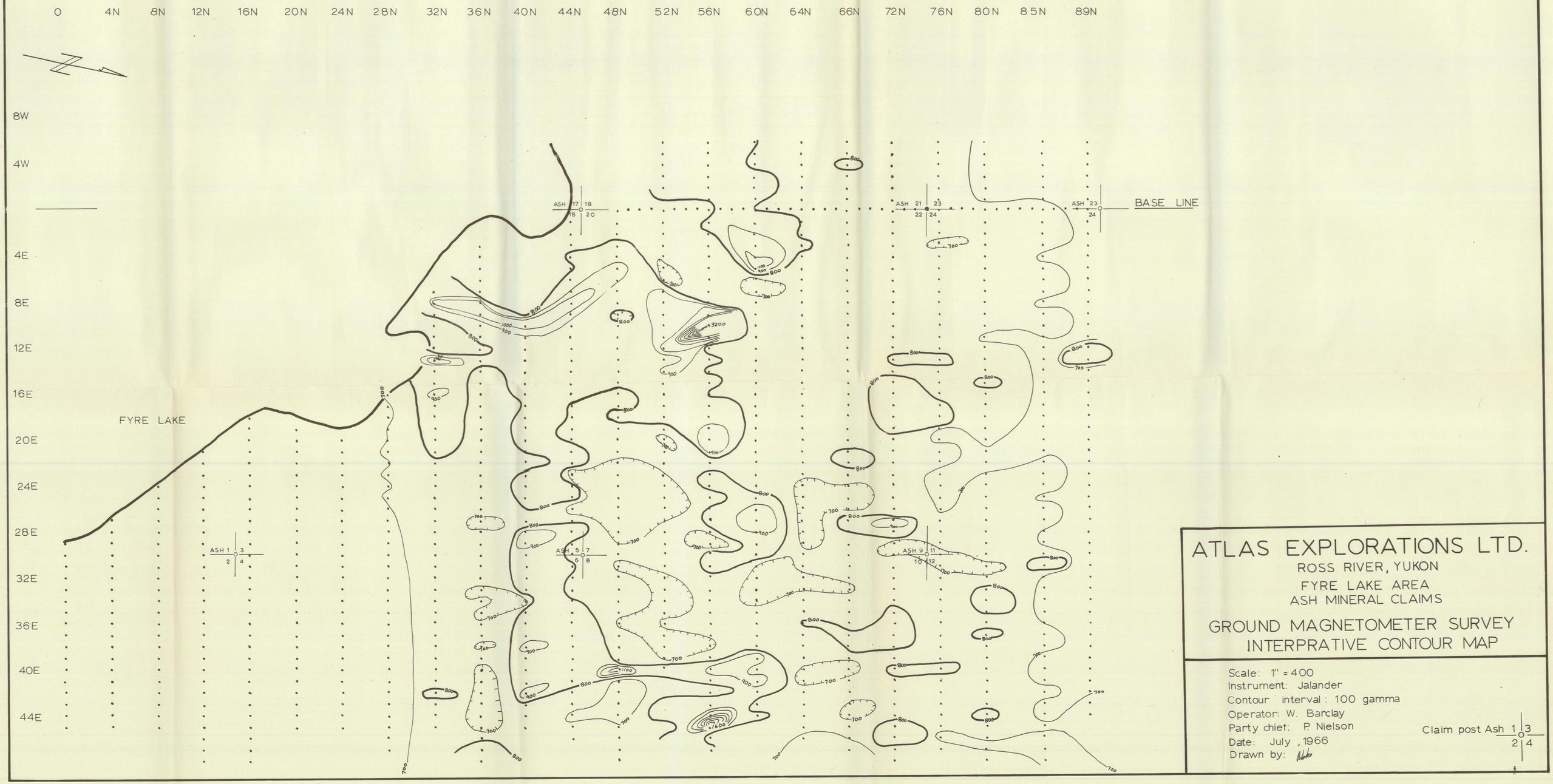
Ash 5 | 7
6 | 8

Ash 9 | 11
10 | 12

FYRE LAKE

48W 44W 40W 36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E

0N 4N 8N 12N 16N 20N 24N 28N 32N 36N 40N 44N 48N 52N 56N 60N 64N 68N 72N 76N 80N 85N 89N



ATLAS EXPLORATIONS LTD.

ROSS RIVER, YUKON

FYRE LAKE AREA
ASH MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY
INTERPRATIVE CONTOUR MAP

Scale: 1" = 400
Instrument: Jalander
Contour interval: 100 gamma
Operator: W. Barclay
Party chief: P Nielson
Date: July, 1966
Drawn by:

Claim post Ash 1 3 / 2 4

0 4N 8N 12N 16N 20N 24N 28N 32N 36N 40N 44N 48N 52N 56N 60N 64N 68N 72N 76N 80N 84N 88N

44W 40W 36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E

Ash 25 27 26 28

Ash 29 31 30 32

Ash 33 35 34 36

Ash 13 15 14 16

Ash 17 19 18 20

Ash 21 23 22 24

Base line

Ash 1 3 2 4

Ash 5 7 6 8

Ash 9 11 10 12

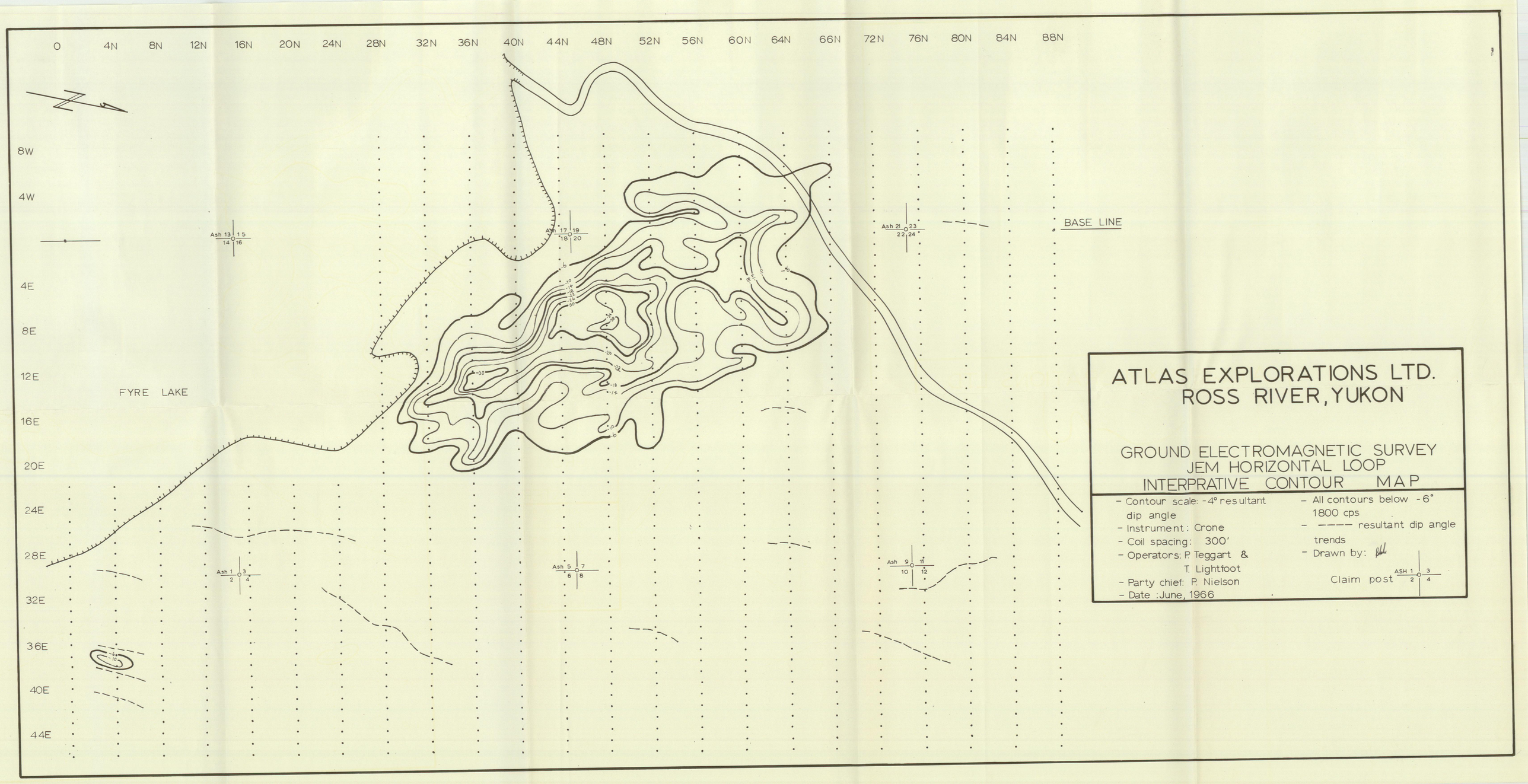
ATLAS EXPLORATIONS LTD.
ROSS RIVER, YUKON

FYRE LAKE AREA
ASH MINERAL CLAIMS

GROUND ELECTROMAGNETIC SURVEY
JEM HORIZONTAL LOOP

Profile scale: 1/10" = 2° resultant dip angle
Scale: 1" = 400'
Instrument: Crone
Coil spacing: 300'
Operators: P. Teggart & T. Lightfoot
Party chief: P. Nielson
Date: June, 1966
Drawn by: A. Watkins

+ve -ve
1800 c.p.s.
480 c.p.s.


0
4N
8N
12N
16N
20N
24N
28N
32N
36N
40N
44N
48N
52N
56N
60N
64N
66N
72N
76N
80N
84N
88N
8W
4W
4E
8E
12E
16E
20E
24E
28E
32E
36E
40E
44E
FYRE LAKE
BASE LINE
Ash 13 15 14 16
Ash 17 19 18 20
Ash 21 23 22 24
Ash 1 3 2 4
Ash 5 7 6 8
Ash 9 11 10 12
ATLAS EXPLORATIONS LTD.
ROSS RIVER, YUKON
GROUND ELECTROMAGNETIC SURVEY
JEM HORIZONTAL LOOP
INTERPRATIVE CONTOUR MAP
- Contour scale: -4° resultant dip angle
- Instrument: Crone
- Coil spacing: 300'
- Operators: P. Teggart & T. Lightfoot
- Party chief: P. Nielson
- Date: June, 1966
- All contours below -6° 1800 cps
- ----- resultant dip angle trends
- Drawn by:
Claim post ASH 1 2 3 4