

GEOPHYSICAL REPORT

ON

PART OF THE AJ-JA CLAIM GROUP

LATITUDE $64^{\circ} 17.5'$ NORTH

LONGITUDE 138° WEST

CLAIM SHEET 116-B-8

DAWSON MINING DISTRICT


YUKON TERRITORY

for

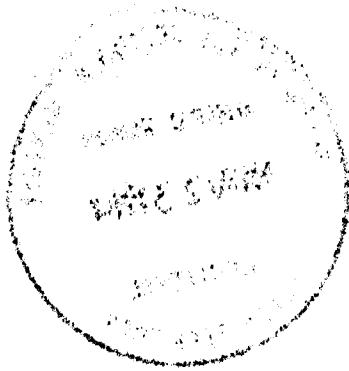
CODY HAWK RESOURCES INC.

September 26 - October 3, 1983

Toronto, Ontario, Canada
October 31, 1983


G.W. Grant
Exploration Geologist

091576



This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 8,437.68.

for

D A Edmond

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

MAP NO.

116 B 8

ASSESSMENT REPORT
PROSPECTUS
CONFIDENTIAL
OPEN FILE

X
X

DOCUMENT NO.:
MINING DISTRICT:
TYPE OF WORK:
I.S.N. 134689

092041
DAWSON
GEOLOGICAL EVALUATION

REPORT FILED UNDER: Cody Hawk Resources Inc

DATE PERFORMED: 1983

DATE FILED: June 6, 1983

LOCATION: LAT.: 64°17.5'N

AREA: Antimony Mountain

LONG.: 138°15'W

VALUE \$:

CLAIM NAME & NO.: AJ 3-6, 15-16
JA 1-36

WORK DONE BY: H.J. Hodge

WORK DONE FOR: Cody Hawk Resources Inc

DATE TO GOOD STANDING | REMARKS: #81 THOR

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1.00 INTRODUCTION

During the period September 27 to October 2, 1983, a program of Very Low Frequency (VLF) Electromagnetic, Vertical Loop Electromagnetic, and Magnetometer surveying was carried out on behalf of Cody Hawk Resources Inc.

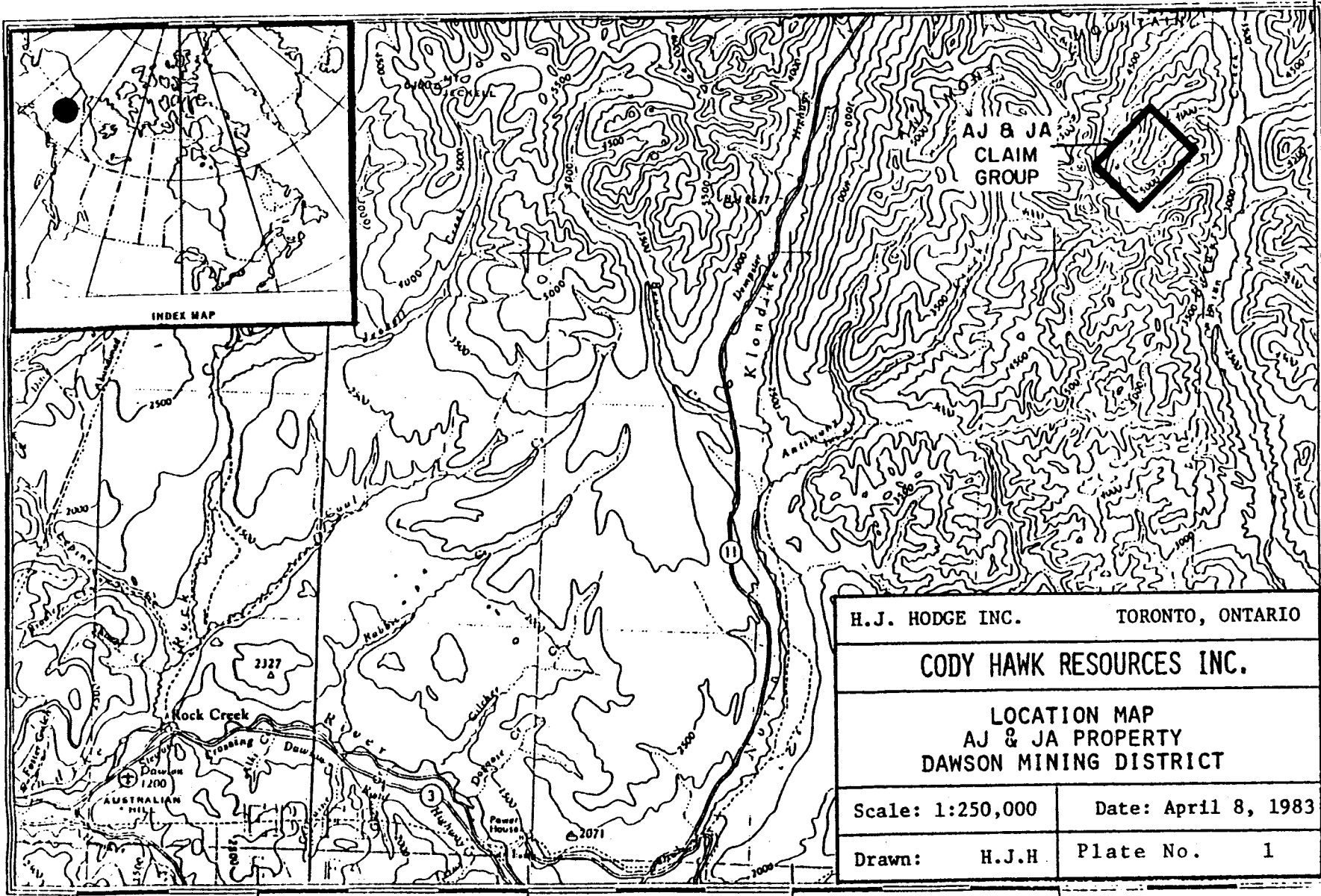
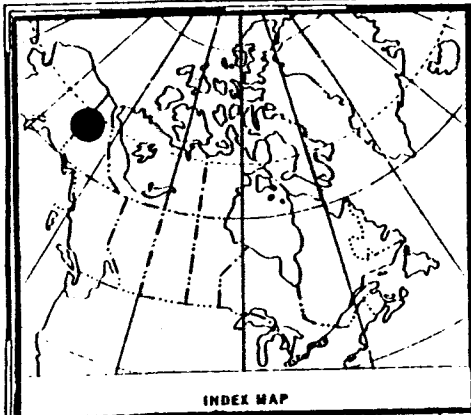
The program was under the overall supervision of the writer, G.W. Grant, Exploration Geologist, and the geophysical readings were largely taken by Mr. F.W. Hussey, Geophysical Technician, of Floyd Hussey and Associates, Geophysical Surveys. Assistant was Ms. Susan Yeates of Dawson City, Y.T.

The purpose of the surveys was to attempt to investigate and trace under overburden gold-bearing massive arsenopyrite veins, as recommended by Mr. H.J. Hodge, P.Eng., in a report on the property prepared for Cody Hawk Resources Inc. in June, 1983.

2.00 LOCATION AND ACCESS

The AJ-JA mineral claims are located in the Dawson Mining District, east of Antimony Mountain, on NTS sheet 116-B-8 and are largely drained by a creek which is a northeast flowing tributary of Brewery Creek (once known as O'Brien Creek), which in turn flows south into the Klondike River. Geographical co-ordinates are approximately $64^{\circ}17.5'$ north and $138^{\circ}00'$ west. (Plate 1)

Access to the property is from Dawson City, either by helicopter directly, a distance of some 40 air miles, or by road from Dawson City to the government maintenance camp at the North Fork Pass at Mile 41 of the Dempster Highway (62 miles) and thence some 15 miles by helicopter following the easiest ground access route.



H. J. HODGE INC.		TORONTO, ONTARIO	
CODY HAWK RESOURCES INC.			
LOCATION MAP AJ & JA PROPERTY DAWSON MINING DISTRICT			
Scale: 1:250,000		Date: April 8, 1983	
Drawn: H.J.H.		Plate No. 1	

139°00'

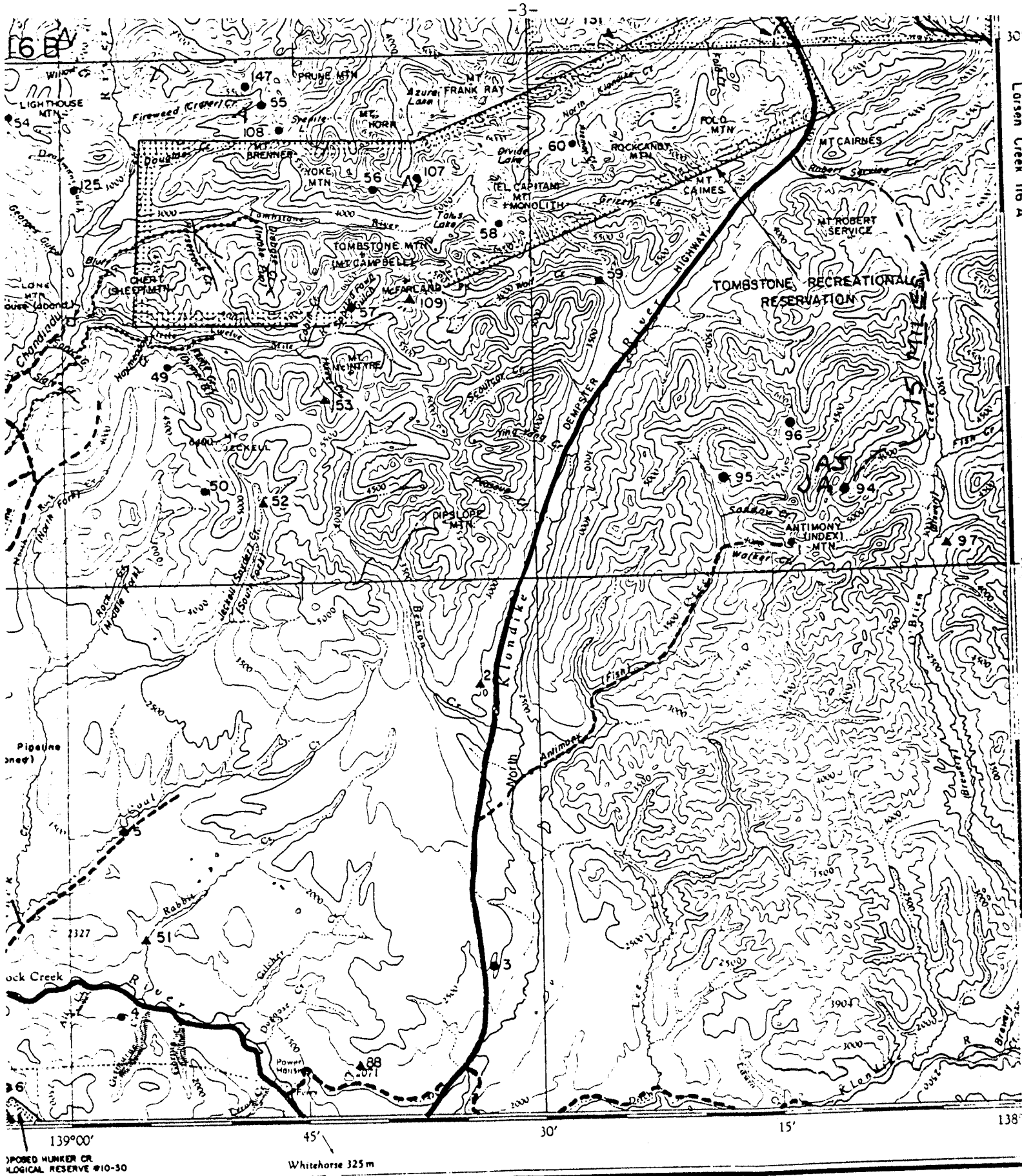
45'
Whitcarse 325 m

30'

15'

138°00'

64°00'



139°00' 45' 30' 15' 138°

30' 15' 30' 45' 60'

SPROED HUNKER CR
OLOGICAL RESERVE #10-30

Whitehorse 325 m

Plate 2

From Archer & Catthro

ACCURACY OF LOCATION

- Within 1/2 mile ●
- 1/2 to 2 miles ▲
- Less than 2 miles ■

CLASSIFICATION OF DEPOSITS

3.00 PROPERTY

The following 42 contiguous unpatented quartz mineral claims are held by Cody Hawk Resources Inc. under an outright purchase agreement with Conwest Exploration Company Limited. Conwest retains a royalty interest in the claims. (Plate 3)

<u>Claim Name</u>	<u>Record No.</u>
AJ 3-6	87572-87575
AJ 15 & 16	87584 & 87585
JA 1-36	YA 65342-65377

4.00 PHYSIOGRAPHY

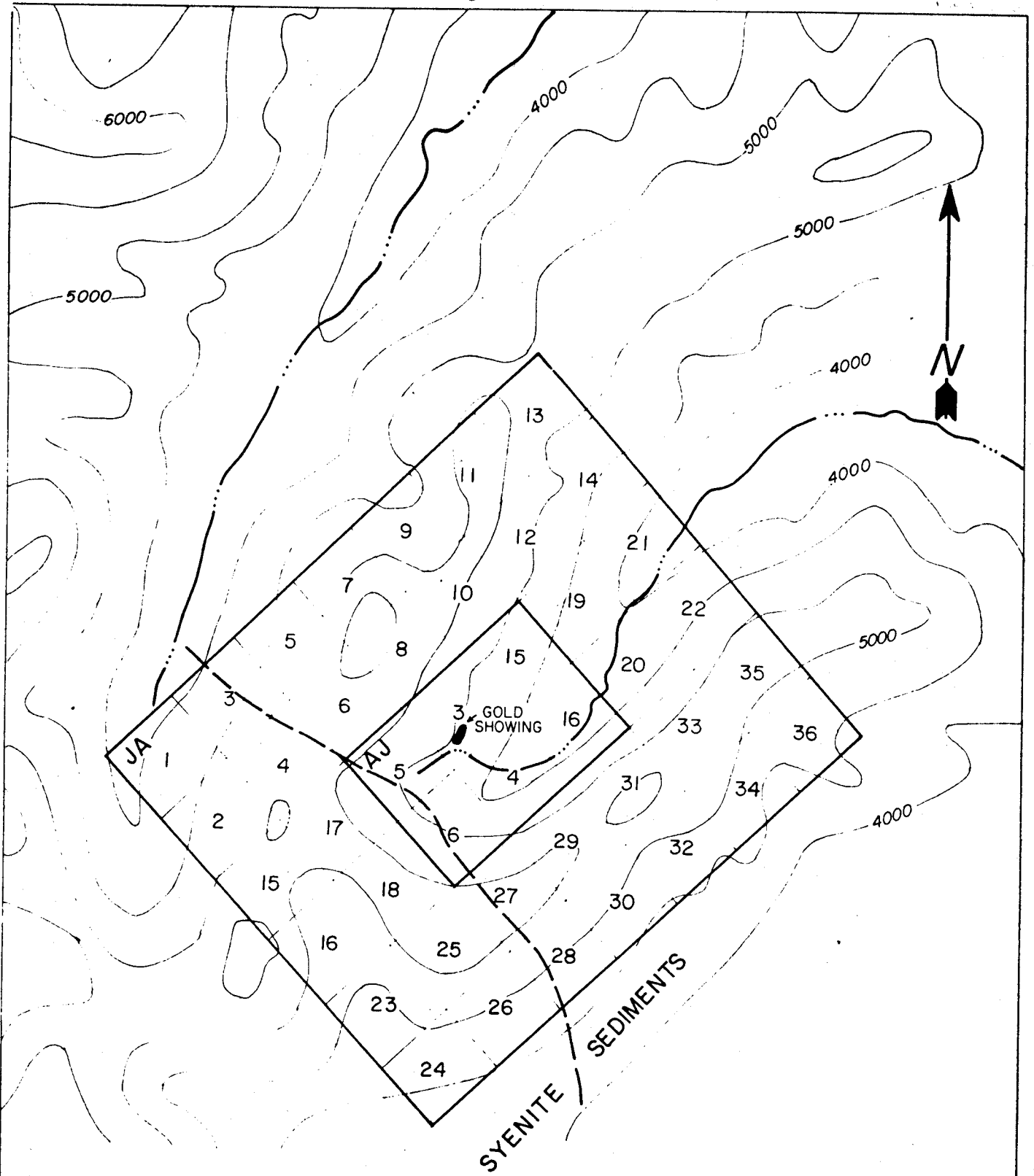
The property is located within the Ogilvie Mountain range with elevations ranging from 3500 to 6000 feet above sea level. The valley in which the most important gold deposits occur, at an elevation of about 5000 feet, appears to have experienced mountain glaciation. Evidence includes a U-shaped profile, cirque development at the head of the valley, and lateral moraines, arretes at crests of intervalley ridges, etc.

Overburden in the area of the geophysical grid consists of coarse talus and morainal material and outcrop is sparse except in the immediate area of the gold showings where the creek has cut down through unconsolidated material to expose bedrock. Overburden depth is estimated to be from 25, to 50 feet.

Vegetation consists largely of alpine grasses, shrubs, etc. with wetter areas supporting dwarf willow thickets up to five or six feet high. Soil development is poor. Permafrost is most likely present except in the immediate area of the creek.

5.00 HISTORY

The AJ mineral claims were originally staked by Conwest Exploration Co.Ltd. in 1966 following the discovery of gold-bearing arsenopyrite veins by Arthur John during a helicopter-supported regional prospecting program directed by the writer.



CODY HAWK RESOURCES INC.

CONWEST EXPLORATION COMPANY LTD.

SKETCH PLAN
SHOWING CLAIM DETAIL, GEOLOGY AND
MINERAL OCCURRENCES.

Scale : 1" = 1/2 mile

Plate 3

During the same year an exploration program consisting of surface trenching and sampling, geological mapping, prospecting and limited diamond drilling of four short holes was completed by Conwest Exploration Co. Ltd. Testing by geophysics (vertical loop 2000Hz and horizontal loop 2400Hz electromagnetic methods) showed that the sulphide zones did not respond to the frequencies employed.

Teck Corporation in 1975 carried out a one line survey using the self-potential method along the creek, cross-cutting the gold showings. Results suggest the sulphides give a self-potential response.

In 1975 Acheron Mines Ltd., under an option agreement with Conwest, carried out a program of resampling, some additional trenching, orientation geochemical surveying, detailed geological mapping in the showing areas and three short diamond drill holes. Geochemical results were inconclusive. Additional drilling was recommended but apparently due to financing difficulties Acheron could not meet all their obligations under the option agreement and the property reverted to Conwest.

In 1980 Riocanex Limited carried out six short lines of vertical loop EM over the gold showings using a fixed transmitter located on or near the sulphide veins, utilizing two frequencies, 3555 and 888 Hz. Results indicated that at least one zone of sulphides gave conductive responses to this method and a previously unknown conductor was discovered.

In June 1983 the writer and assistants, on behalf of Cody Hawk Resources Inc. took bulk samples from four separate veins in the two main gold-bearing zones for mineralogical and metallurgical sampling. Samples were shipped to Lakefield Research at Lakefield, Ontario. Polished section analyses

and electron microprobe studies were carried out by Dr. Claudia Gasperini in Toronto. Conductivity tests were done on one sample. Sutherland, 1983.

Regional geological studies have been carried out by Templeman-Kluit and Green of the Geological Survey of Canada and more detailed geological surveys in the immediate area have been carried out by Templeman-Kluit and others for the Geological Section, Department of Indian Affairs and Northern Development. The claim group has been covered by an airborne magnetic survey flown for the Geological Survey of Canada in 1967 and 1968.

Jim Morin, Regional Geologist, Department of Indian Affairs and Northern Development, has visited the AJ-JA claims and sampled them in connection with a study of significant Yukon lode gold deposits.

6.00 GEOLOGY

6.10 REGIONAL GEOLOGY

The property lies about 20 miles northeast of the Tintina Trench which here separates sedimentary, volcanic and intrusive rocks ranging in age from Proterozoic to Mesozoic on the northeast, comprising the Selwyn Basin, from metamorphic rocks of uncertain age on the southwest making up the Yukon Cataclastic Terrane. (Plate 4)

The rocks northeast of the Trench consist predominantly of sedimentary rocks. The sedimentary rocks have been intruded by sills of diorite and gabbro, and stocks of granitic rocks ranging from granodiorite to syenite, all of probable Cretaceous age. (Green)

The sediments in the area of the AJ-JA claims have been classified as belonging to the "Grit Unit" (late Proterozoic). (Plate 5). A northwest - southeast trending belt of granitic

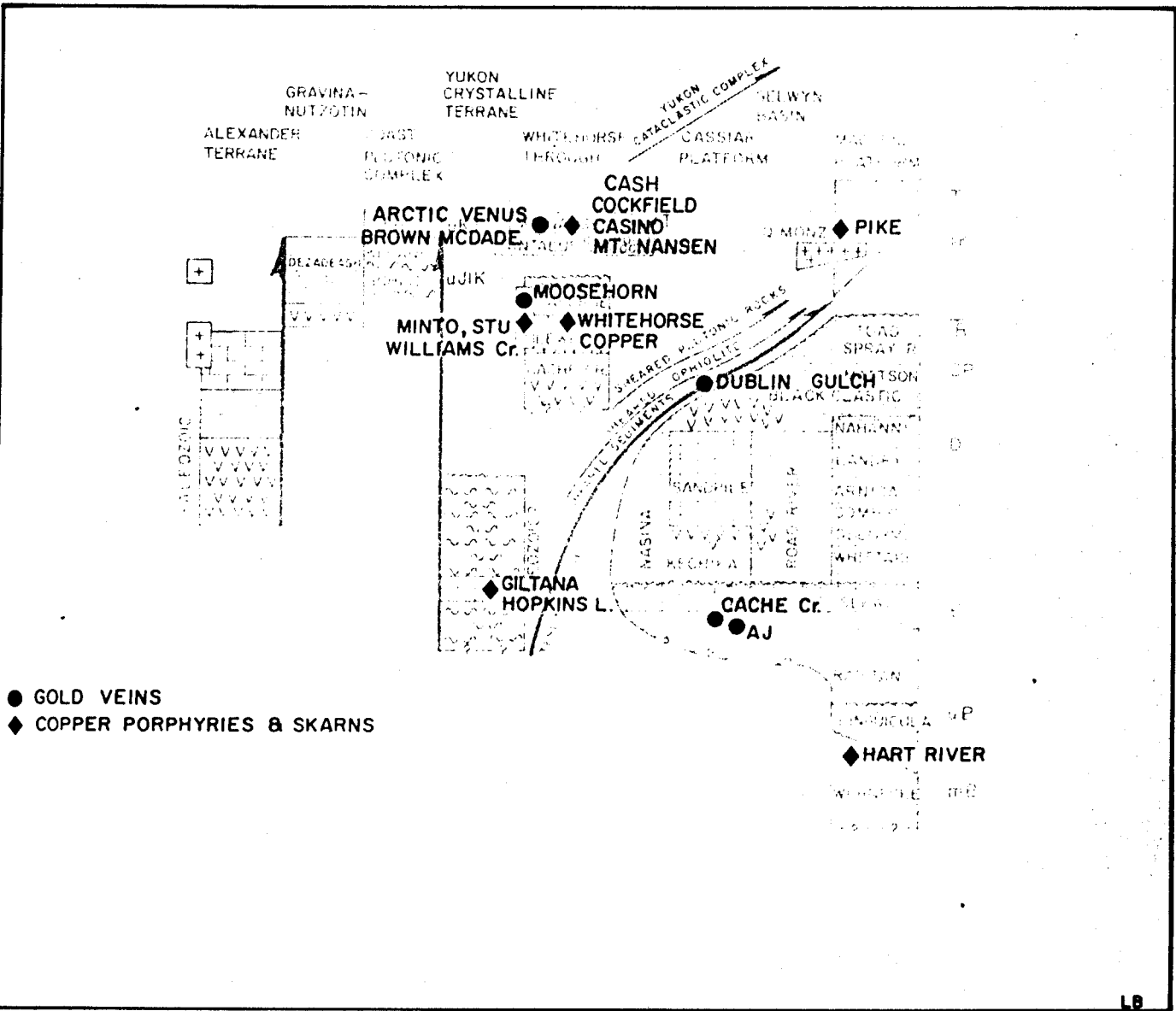
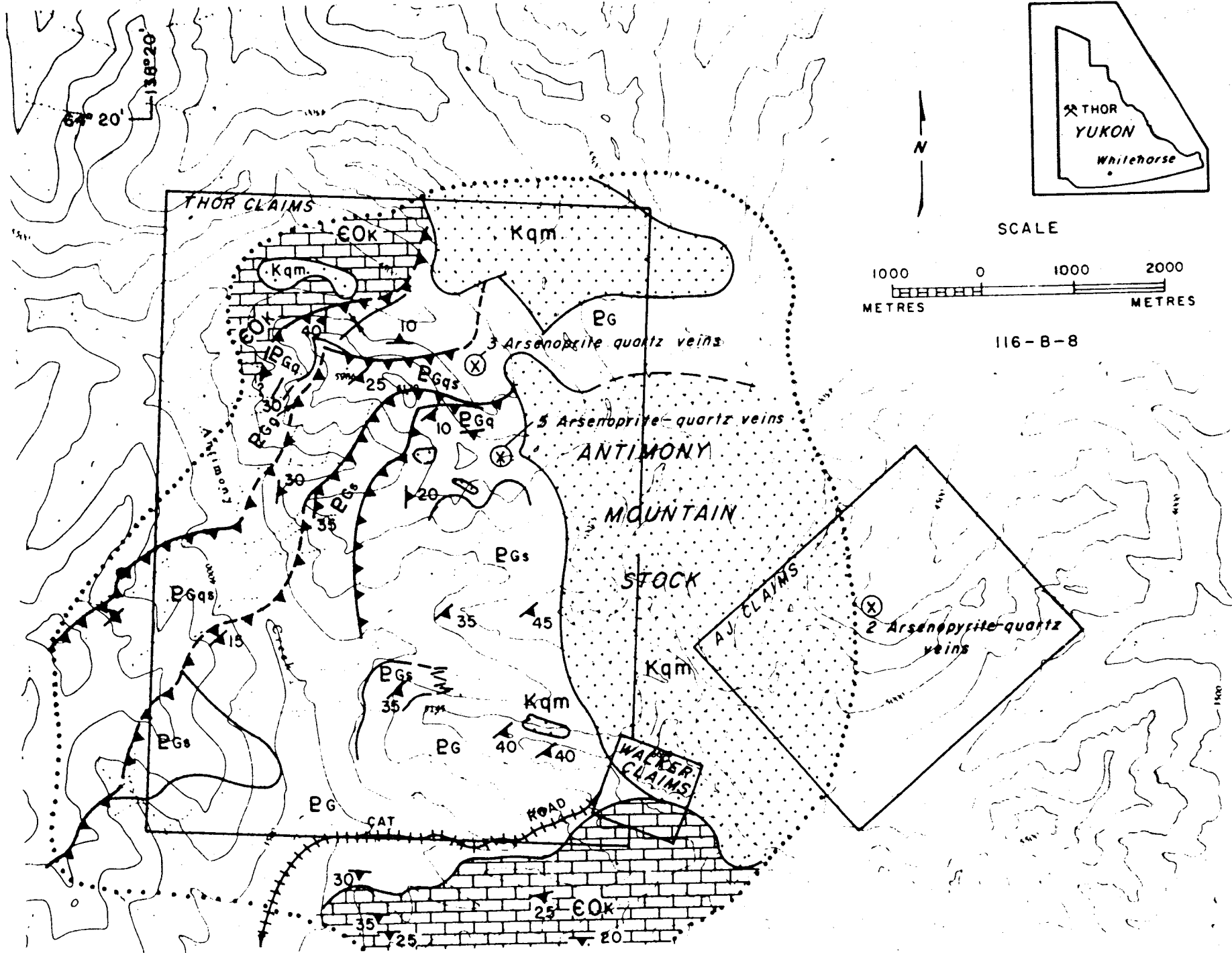


Plate 5



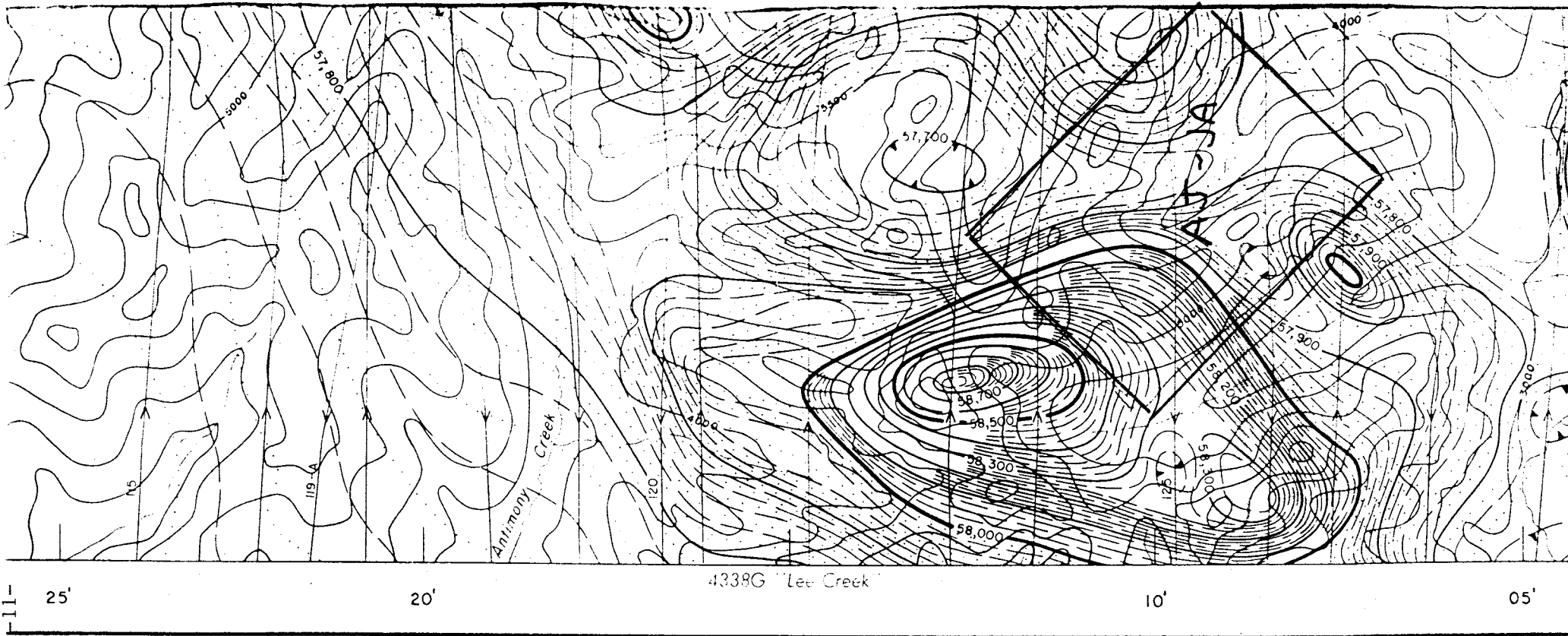
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Note: 1979 - 1980, page 290

Plate 6

Templeman-Kluitt, DIAND, Canada



MAP 4339 G

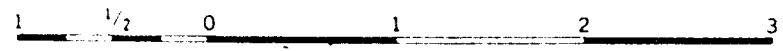
Plate 9

UPPER KLONDIKE RIVER

YUKON TERRITORY

- ISOMAGNETIC LINES (absolute total field)
- 500 gammas
 - 100 gammas
 - 20 gammas
 - 10 gammas
 - Magnetic depression
 - Flight lines
- Flight altitude nominally 1000 feet above ground level where terrain permitted

Scale: One Inch to One Mile = $\frac{1}{63,360}$
Miles



Magnetic survey, March 1967 to May 1968 by Aeromagnetic Survey Unit, Geological Survey of Canada
No correction has been made for regional variations
The planimetry for this map was obtained from advance information supplied by the Department of Energy, Mines and Resources

THIS MAP MAY BE OBTAINED FROM THE DIRECTOR, GEOLOGICAL SURVEY OF CANADA, OTTAWA

stocks known as the Tombstone intrusives cut the sediments in the Ogilvie Mountains. They are stated to be Cretaceous. The Antimony Mountain intrusive which covers part of the AJ-JA claims has been partially mapped by Templeman-Kluit of the DIAND as part of a study of the Thor claims of Anaconda. The exact location of the contact between this intrusive and the Grit Unit is largely obscured by talus and morainal debris over most of the AJ-JA claims. This contact where exposed is said to exhibit gradational changes from a basic fine-grained phase to coarser porphyritic syenites. (Plate 6)

6.20 STRUCTURAL GEOLOGY

The main observable structural features consist of shear and fracture zones trending N 70° E to E and dipping to the south. These zones on the AJ-JA claims are normally associated with strongly gossanized quartzites. The arsenopyrite veins occur as filling within shears or faults. Slickensides and gouge seams are common. The quartzites exhibit changes in strike and dip near some of the veins. Small dioritic dykes have been observed parallel to the shear direction.

6.30 DETAILED GEOLOGY

The AJ and JA claims have not been mapped in detail. Limited geological mapping has been carried out by Conwest and Acheron Mines in the areas immediately adjacent to the gold showings and also around a separate sulphide showing located some 1400' southwest and about 1000' higher in elevation than the creek gold showings. (Plate 7, in pocket) This work has been summarized and discussed by Hodge and is quoted directly in Section 6.40.

One previously unmapped outcrop located near the western portion of the geophysical grid was noted by the writer during the geophysical survey. It consists of well-bedded quartzites striking about N 80° W and dipping south at 45°.

6.40 DISCUSSION OF RESULTS AND CONCLUSIONS BY HODGE

As summarized by Hodge, " Exploration carried out to date on the AJ gold showings has been limited to surface trenching along very short strike lengths and to five shallow diamond drill holes representing essentially one cross section of the zones underneath the trenches.

Results of surface sampling indicate three zones of fracturing and shearing with multiple veins of arsenopyrite rich sulphides. These veins range from one half foot up to seven feet (and more), in width. Gold values are erratic, ranging from nil up to 3.50 ounces per ton over 4.3 feet. Gold is confined to the veins. The quartzite wall rocks, though fractured, sheared and altered, appear to carry low to negligible gold values.

Results of diamond drilling indicate that two zones, the North Zone and the South Zone, persist at least to shallow depth. Gold concentration, though erratic, is persistent. Furthermore, the best assays were co-incident with the best core recovery, suggesting that actual gold concentration may be higher than core assays indicate.

The zones are open both along strike and down dip.

Results of limited geophysical surveys carried out over the mineralized zones indicated that at least portions of the sulphide-shear zones are conductive. Limited geophysical coverage indicate that the North Zone may extend for a minimum strike length of 600 feet, and a previously undetected conductor, 200 feet north of the North Zone, may reflect an additional parallel zone of mineralization.

CONCLUSIONS

In attempting to evaluate the economic potential of the gold mineralization on the AJ-JA property, the following

must be considered.

- 1) Gold mineralization occurs in at least three separate zones on the property.
- 2) These zones consist of disseminated and massive sulphide veins consisting of arsenopyrite, pyrrhotite and pyrite in highly fractured, sheared, and altered quartzites of assumed PreCambrian age.
- 3) Surface samplings and limited diamond drilling on the North and South Zones indicate high grade gold values over minable widths. The best sections averages 3.50 ounces per ton gold over 4.3 feet in the North Zone; and 1.92 ounces per ton gold over 5.8 feet in the South Zone.
- 4) Although gold values are erratic, the zones are open along strike and down dip.
- 5) Core recoveries in the drilling program were very low in the mineralized zones due to fracturing, shearing and near surface oxidation. Generally less than 50% of the core was recovered in these zones, and as low as 11% in specific intersections. Gold values were generally directly proportional to core recovery, i.e. the highest gold values occurred with the best core recovery. Furthermore, sludge samples were generally higher in gold than core samples. This would indicate that average grades of the zones are significantly higher than core sample assays indicate.
- 6) Limited geophysical (electromagnetic) surveys carried out over the showings and immediately adjacent areas indicate that the North Zone, at least, is conductive and extends for a strike length of 600 feet. In addition, a conductor was picked up approximately 200 feet north of the North Zone in an overburden covered area. In all probability this conductor is caused by a sulphide/shear zone similar

to the North and South zones.

- 7) Limited geochemical soil sampling surveys for zinc and arsenic carried out over the showings were essentially negative, indicating that the application of soil sampling may not be practicable in this area. This is probably due to the nature and thickness of the overburden and to poor soil development.

In summary this property holds excellent potential for high grade vein type economic gold deposits, and merits a comprehensive program of further exploration."

Since the date of Mr. Hodge's report bulk samples have been taken for metallurgical testing and mineralographic studies. Conductivity tests were done on one sample. Studies by Gasperini using reflected light microscopy and electron microprobe studies on two polished section mounts indicate that arsenopyrite makes up between 40 to 50% and 75% of the sulphides. Pyrite is next in abundance with some marcasite, chalcopyrite up to at least 5% and very scarce pyrrhotite. Minor native copper and native gold were identified occurring in gaps in the arsenopyrite filled by iron-arsenic oxides. It is suggested by the writer that the oxides are the result of rapid weathering of the surface sulphides which is observable megascopically. The massive sulphides studied are poor conductors. (Sutherland)

7.00 GEOPHYSICS

7.10 DISCUSSION OF METHODS EMPLOYED

As indicated the only electromagnetic method previously used which seemed to be effective in picking up the AJ massive sulphide veins was the Apex Maxmin II unit used as a fixed transmitter vertical loop with the transmitter set up on the sulphides. Thus the Apex Maxmin II was chosen to be employed in the survey. It was also thought that the VLF method, employing very high frequencies, might be effective in picking up these poorly conductive sulphides. Because the Antimony Mountain intrusive is expressed as a positive

magnetic high it was felt that employment of a magnetometer should be able to locate the contact between this intrusive and the largely non-magnetic sediments hosting the arsenopyrite veins. (Plate 8)

The employment of the self-potential and induced-potential methods, while considered, was ruled out because of suspected permafrost conditions away from the creek.

7.20 SURVEY CONTROL

Following Mr. Hodge's recommendation a grid employing lath for pickets was laid out. The baseline was oriented at approximately N 80° W to pass about midway between the north and south zones and originally intended to extend a minimum of 1000 feet to the east and west of, and 500 feet north and south of the showings. Lines were laid out at right angles to this grid at 100 foot intervals and pickets placed every 100 feet. Where slopes so required corrections were applied to ensure that pickets were 100 feet horizontally apart. The baseline was arbitrarily given a latitude of 100+00 north and a location just west of the creek was chosen as 10+00 W.

Due to freezing and thawing conditions at the time of the survey and the presence of eight to ten inches of new snow, safety considerations precluded extending the grid further east than Line 6+00 W. The grid was completed to 20+00 W. Except for Lines 15+00 W and 20+00 W all lines were chained and picketed for 500 feet north and south of the baseline. Line 15+00 W was extended to 1000 feet and Line 20+00 W to 1500 feet south of the baseline. Including the baseline a total of 17,900 feet of grid was chained and picketed. A surface profile was measured across the valley along the baseline at 100+00 N and at 95+00 N. Known drill hole locations were tied in to the new grid. (Plate 7)

7.30 GEOPHYSICAL SURVEY COVERAGE

The north-south grid lines were initially covered by the Geonics EM 16 VLF unit employing United States Navy Station Seattle, Washington which transmits on a frequency of 24.8 kilohertz.

All the VLF conductors obtained were detailed by an Apex Maxmin II with transmitter used in the vertical loop configuration. The transmitter locations were initially placed on the VLF crossovers where feasible. Power was supplied by rechargeable battery packs.

All north-south grid lines were covered by the magnetic survey employing a Sharpe MF 1 fluxgate magnetometer with a sensitivity of ± 20 gammas per scale division. Readings were taken at fifty foot intervals.

Subsequently two VLF sections were run east-west across the grid on Lines 100+00N and 95+00 N employing United States Navy Station Annapolis, Maryland which transmits on a frequency of 21.0 kilohertz.

7.40 GEOPHYSICAL SURVEY RESULTS

7.41 VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY

Three distinct conductors were obtained by the VLF survey on the grid.

- 1) Conductor "A" (north zone) - It extends east 300 feet from approximately 101+00 N on Line 9+00 W to 101+50 N on Line 6+00 W from where it extends off the grid. The crossover on Line 9+00 W coincides with massive gold-bearing sulphides of the north zone exposed in a trench on the east side of the creek. Maximum peak to peak dip angles are approximately 35° . The dip angle profiles suggest a dip to the south.
- 2) Conductor "B" (south zone) - It extends west from approximately 99+00 N on Line 9+00 W to about 95=25 N on Line 14+00 W, a distance of about 580 feet. Due to the angle at which the conductor crosses the grid

the crossover on Line 9+00 W lies in the creek near massive gold-bearing sulphides exposed by trenching on the west bank of the creek. Maximum peak to peak dip angles (on Line 10+00 W) are 48° . Dip angle profiles suggest a near vertical attitude for this conductor.

- 3) Conductor "C" - This somewhat arcuate conductor extends from about 101+25 N on Line 13+00 W to about 101+10 N on Line 16+00 W, a distance of 300 feet. Maximum peak to peak dip angle is about 26° and dip angle profiles suggest a near vertical dip. There is no outcrop exposed in this area and overburden is estimated at from 25 to 50 feet of morainal debris.

Two east-west traverses utilizing the Annapolis, Maryland transmitter indicated only a reverse crossover coinciding with the center of the valley with dip angles increasing away from this point toward the ridges.

7.42 VERTICAL LOOP ELECTROMAGNETIC SURVEY (Apex Maxmin II Plus)

This method was used primarily to confirm, detail and if possible further evaluate the results of the VLF survey. Only the 3555 herz frequency was employed. Presumably due to the poor conductivity of the sulphides nulls were extremely broad. In most cases Mr. Hussey was unable to effectively read the signal from the transmitter more than 500 feet away, presumably because the battery packs employed did not provide sufficient power even though fully charged.

The results of the detailing of the VLF conductors, using the previous VLF identification of them are as follows:

- 1) Conductor "A" extends from about 101+00 N on Line 9+00 W (0° dip angle from 102+00 N to 100+00 N on this line), to about 101+75 N on Line 6+00 W extending east off the grid. Maximum peak to peak dip angle (on Line 6+00 W) is 24° . Dip angle profiles suggest

a near vertical dip. Crossovers coincide \pm 25 feet north or south of the VLF crossovers.

- 2) Conductor "B" - For the most part conductor axes of both EM surveys coincide very closely except that the Maxmin survey extends this conductor an additional 100 feet east to about 99+75 N on Line 8+00 W, east of the creek.

One major discordance is on Line 14+00 W where the Maxmin crossover occurs at about 95+00 N some 125 feet south of the VLF crossover. In addition the Maxmin survey appears to extend VLF Conductor "B" an additional 100 feet west to about 95+25 N on Line 15+00 W. Maximum peak to peak dip angle occurs on Line 10+00 W where it is 25° . Dip angle profiles indicate a near vertical dip.

- 3) Conductor "C" - Conductor axes of both VLF and Maxmin coincide closely except that the Maxmin survey extends this conductor a further 100 feet west with a crossover at 100+00 N on Line 17+00 W. Maximum peak to peak dip angle is about 10° and no pronounced dip is indicated.

7.43 MAGNETIC SURVEY

All readings were taken with the magnetometer oriented along the magnetic meridian and the operator facing magnetic north.

Base stations were established every 100 feet along the baseline and corrected to 100+00 N, 10+00 W. This station was given a value of 515 gammas and all readings taken were related to this station for the baseline and cross lines.

Cross lines were corrected to the baseline stations by time readings taken at intervals no longer than ten minutes with no single loop exceeding fifty minutes. All readings were corrected for calculated diurnal effects and/or temperature drift of the instrument. The magnetometer (except for

battery pack) was always left outside the heated tent to minimize temperature shock. A magnetic storm was observed on October 1, 1983 following a display of Northern Lights (Aurora Borealis) observed during the night. A diurnal effect of up to 600 gammas per hour was noted and no survey readings were taken during this day.

During the rest of the survey diurnal variations seldom exceeded 60 gammas per hour and were usually much less.

The total magnetic relief over the main part of the grid was some 500 gammas. On the main part of the grid corrected readings were contoured with an interval of 100 gammas. Extensions of Lines 15+00 W and 20+00 W to the south were profiled.

No significant magnetic correlation with any of the conductors was observed. The only anomaly located by the survey was found at the north-east part of the grid from 105+00 N on Line 9+00 W to 104+00 N on Line 6+00 W where it apparently extends east off the grid. This anomaly has a minimum width of 150 feet with maximum values of about 300 to 400 gammas above background.

Lines 20+00 W and 15+00 W were extended south to 90+00 N and 85+00 N respectively in an attempt to define the contact of the Antimony Mountain intrusive which is expressed as a magnetic high on the aeromagnetic map. Results are profiled. At the north end of Line 15+00 W values declined to about 200 gammas, the lowest value on the grid.

7.50 CONCLUSIONS

1) Although relatively poor conductors the massive gold-bearing arsenopyrite vein zones respond to both VLF and vertical loop methods using higher frequencies than those previously applied. Neither system discriminates individual veins within the two known zones.

The north zone Conductor "A" extends for a minimum strike length of 300 feet and continues east off the grid. To the west it appears to terminate at the creek. It strikes about 100° .

The south zone Conductor "B" has a strike length of 800 feet plus and at the east end appears to cross the creek. It strikes about 265° .

The third Conductor "C" is arcuate in plan, about 400 feet long, and changes in strike from about 305° at the east end to about 275° at the west end. Due to lack of any rock exposures its cause is unknown but the short strike length suggests it is not likely to be caused by a stratigraphic horizon and could well be a sulphide zone similar to conductors "A" and "B".

2) The magnetic survey did not indicate any significant magnetic anomalies associated with the conductors and the minor amount of pyrrhotite seen in polished sections is the only magnetic mineral noted to be associated with the known gold-bearing sulphides. The only significant magnetic anomaly picked up in the survey is probably caused by a dioritic dyke related to the Antimony Mountain syenite intrusive. Narrow dioritic dykes have been noted in outcrops along the creek near the showings. Results of Line 15+00 W indicate that the Antimony Mountain intrusive lies at least 1500 feet southwest of the baseline.

3) The geophysical surveys have demonstrated a minimum total strike length of 1100 feet for the two known gold-bearing sulphide zones. The north zone is open to the east. A third conductor, obscured by overburden, has a strike length of 400 feet and could reflect another gold-bearing sulphide zone.

7.60 RECOMMENDATIONS

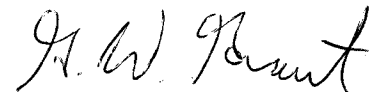
- 1) The entire property should be covered by a helicopter-borne high frequency electromagnetic method and combined magnetometer survey. The purpose of this work would be to search for similar gold-bearing sulphide zones and to more closely establish the location of the Antimony Mountain intrusive.

- 2) Ground follow-up should employ VLF surveys and detailing by a vertical loop system employing a high frequency and a motor generator powered transmitter such as the McPhar 5000 herz unit.

- 3) Additional drilling to that previously recommended should be considered to adequately test the extended strike lengths of the known gold-bearing zones and the unexplained third conductor.

- 4) Given normal breakup conditions there would be adequate water supply and climatic conditions to commence drilling west of the creek about May 1 and about June 15 on the steeper north-facing slopes east of the creek where possible snowslides could be a hazard at an earlier date.

Respectfully submitted,



G.W. Grant,
Exploration Geologist

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1975: Report on the AJ Claim Group, O'Brien Creek, Dawson Mining District, Yukon Territory, private report for Acheron Mines Ltd. (N.P.L.).
- Lakefield Research Ltd.
1983: Head Fire Assays for Gold and XRF Semi-quantitative Analyses on four twenty-five pound bulk samples from the AJ Sulphide Veins, Yukon Territory, Reference 2718.
- McCrea, J. Bailey
1984: Comments re Cody Hawk Resources Inc. AJ-JA Group of Claims for G.W. Grant.
- Morin, J.A.
1979-80: Element Distribution in Yukon Gold-Silver Deposits, Page 68, Yukon Geology and Exploration 1979-80, Department of Indian Affairs and Northern Development.
- Sutherland, D.B.
1983: Personal communications re sample of AJ sulphides tested for conductivity.

Templeman-Kluit, D.

1979-80: Report on the Thor Claims of Anaconda Canada Exploration Limited, 116 B 8, Antimony Mountain Area, Page 289, Yukon Geology and Exploration 1979-80, Department of Indian Affairs and Northern Development, Canada.

Templeman-Kluit, D.

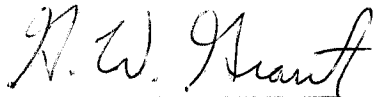
1979-80: Geology and Mineral Deposits of the Southern Yukon, Page 7, Yukon Geology and Exploration, 1979-80, Department of Indian Affairs and Northern Development, Canada.

CERTIFICATE OF QUALIFICATIONS

I, Gerald W. Grant, of the City of Toronto, in the Province of Ontario, do hereby certify that:

- 1) I am a principal of Cody Hawk Resources Inc., for whom this report was written.
- 2) I am an exploration geologist, president of G.W. Grant Associates Inc.
- 3) I attended McGill University from 1950 to 1953 and successfully completed the required course in Geophysics offered to B.Sc. candidates.
- 4) I attended Michigan Technological University from 1953 to 1957 and successfully completed the required course in Geophysics offered to B.Sc. candidates.
- 5) Since 1953, as a consequence of my employment as an exploration geologist, I have had considerable training and experience with applied geophysics throughout Canada and abroad, and more particularly, in the Yukon Territory where I have carried out geophysical surveys on behalf of my then employer, Conwest Exploration Co. Ltd. I have trained crews of the same company in electro-magnetic techniques and advised the company on specific adaptation of both ground and airborne techniques to Yukon conditions.
- 6) I first visited the showings now covered by the AJ-JA Group in July of 1966 when, in my capacity of Project Manager of a regional prospecting program for Conwest Exploration Co. Ltd., I recommended and directed the ground acquisition program for Conwest following the discovery by Arthur John of the AJ gold showings.
- 7) I carried out the original test vertical loop electromagnetic surveys on the AJ Group and recommended to the company in 1974 VLF EM surveys.
- 8) I have known and worked with Mr. Floyd Hussey, geophysical technician, of Floyd Hussey Associates since 1964 and assess his competence as among the best in his field.
- 9) My report is based on all data which to my knowledge is available on this property.

Toronto, Ontario, Canada
October 31, 1983


Gerald W. Grant,
Exploration Geologist

COST OF AJ-JA GEOPHYSICAL SURVEY

RENTALS

<u>Item</u>	<u>Supplier</u>	<u>Cost</u>
Vehicle	Hertz, Whitehorse, Y.T.	\$ 494.05
Magnetometer	Ron Granger, Whitehorse, Y.T.	225.00
Apex Maxmin II	Apex Parametrics, Uxbridge, Ontario	1,057.35
VLF Geonics EM 16	Sherto Explorations, Bracebridge, Ontario	234.85

SUPPLIES

Batteries & Ammunition	Hudson Bay Co. Whitehorse, Y.T.	17.90
Hardware	Monte Carlo Hardware, Dawson City, Y.T.	213.60
Groceries	Farmers Market, Dawson City, Y.T.	319.48
Fuel (Naptha)	Whitepass, Dawson City, Y.T.	25.00
Chains	Langridge Marshall, Toronto, Ontario	89.90

PERSONNEL

Susan Yeats, Geophysical Helper, c/o General Delivery, Dawson City, Y.T.	Sept. 26 - Oct. 3, 1983	650.00
Floyd Hussey, Geophysical Technician & Drafting, Floyd Hussey Associates 31 Garden Rd., Toronto, Ontario	Sept. 26 - Oct. 3, 1983 Oct. 5 - Oct. 7, 1983	1,410.55
	Sub-total	<hr/> \$4,737.68

Sub-total brought Fwd. \$4,737.68

G.W. Grant,
Exploration Geologist,
Report, Drafting,
G.W. Grant Associates Inc.,
6 Monarch Park Avenue,
Toronto, Ontario

September 26 - Oct. 3, 1983 \$1,750.00
Oct. 25 - Oct. 31, 1983 1,750.00


Patricia Grant,
Typist,
G.W. Grant Associates Inc.,
6 Monarch Park Avenue,
Toronto, Ontario

October 30 & 31, 1983
Typing Report 200.00

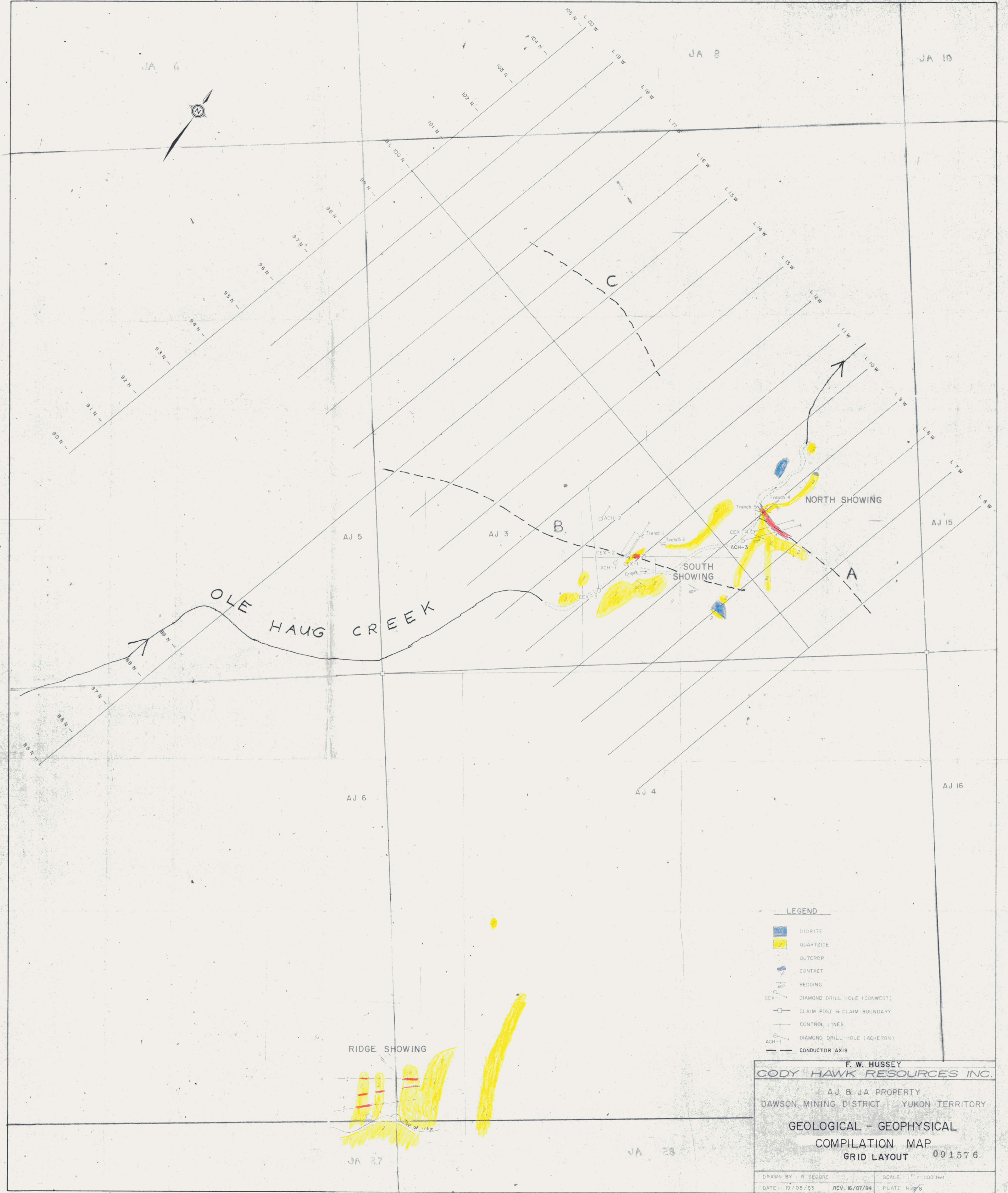
Total Cost:

\$8,437.68











Toronto, Ontario, Canada
October 31, 1983



Gerald W. Grant,
Consulting Geologist



LEGEND

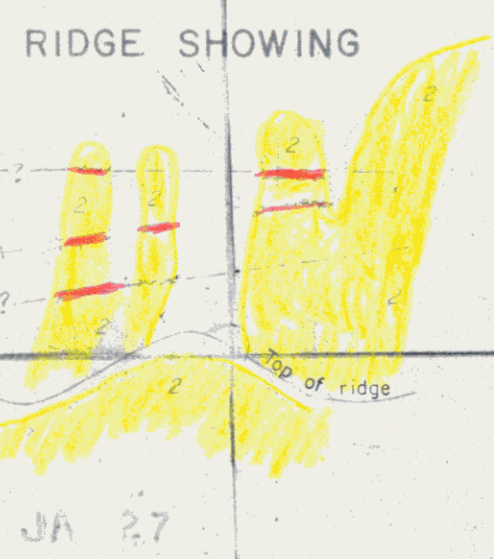
-  DIORITE
-  QUARTZITE
-  OUTCROP
-  CONTACT
-  BEDDING
-  DIAMOND DRILL HOLE (CONWEST)
-  CLAIM POST & CLAIM BOUNDARY
-  CONTROL LINES
-  DIAMOND DRILL HOLE (ACHERON)
-  CONDUCTOR AXIS

F. W. HUSSEY
CODY HAWK RESOURCES INC.

AJ & JA PROPERTY
 DAWSON MINING DISTRICT YUKON TERRITORY

**GEOLOGICAL - GEOPHYSICAL
 COMPILATION MAP
 GRID LAYOUT 091576**

DRAWN BY: R. SEDORE SCALE: 1" = 100 feet
 DATE: 19/05/83 REV. 16/07/84 PLATE No. 7/8



JA 6 JA 8 JA 10

105 N - L 20 W
 104 N - L 19 W
 103 N - L 18 W
 102 N - L 17 W
 101 N - L 16 W
 100 N - L 15 W
 99 N - L 14 W
 98 N - L 13 W
 97 N - L 12 W
 96 N - L 11 W
 95 N - L 10 W
 94 N - L 9 W
 93 N - L 8 W
 92 N - L 7 W
 91 N - L 6 W
 90 N - L 5 W

AJ 5 AJ 3 AJ 15

AJ 6 AJ 4 AJ 16

OLE HAUG CREEK

NORTH SHOWING

SOUTH SHOWING

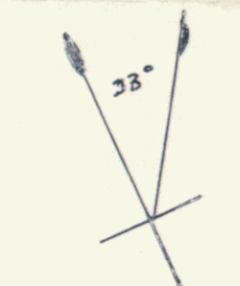
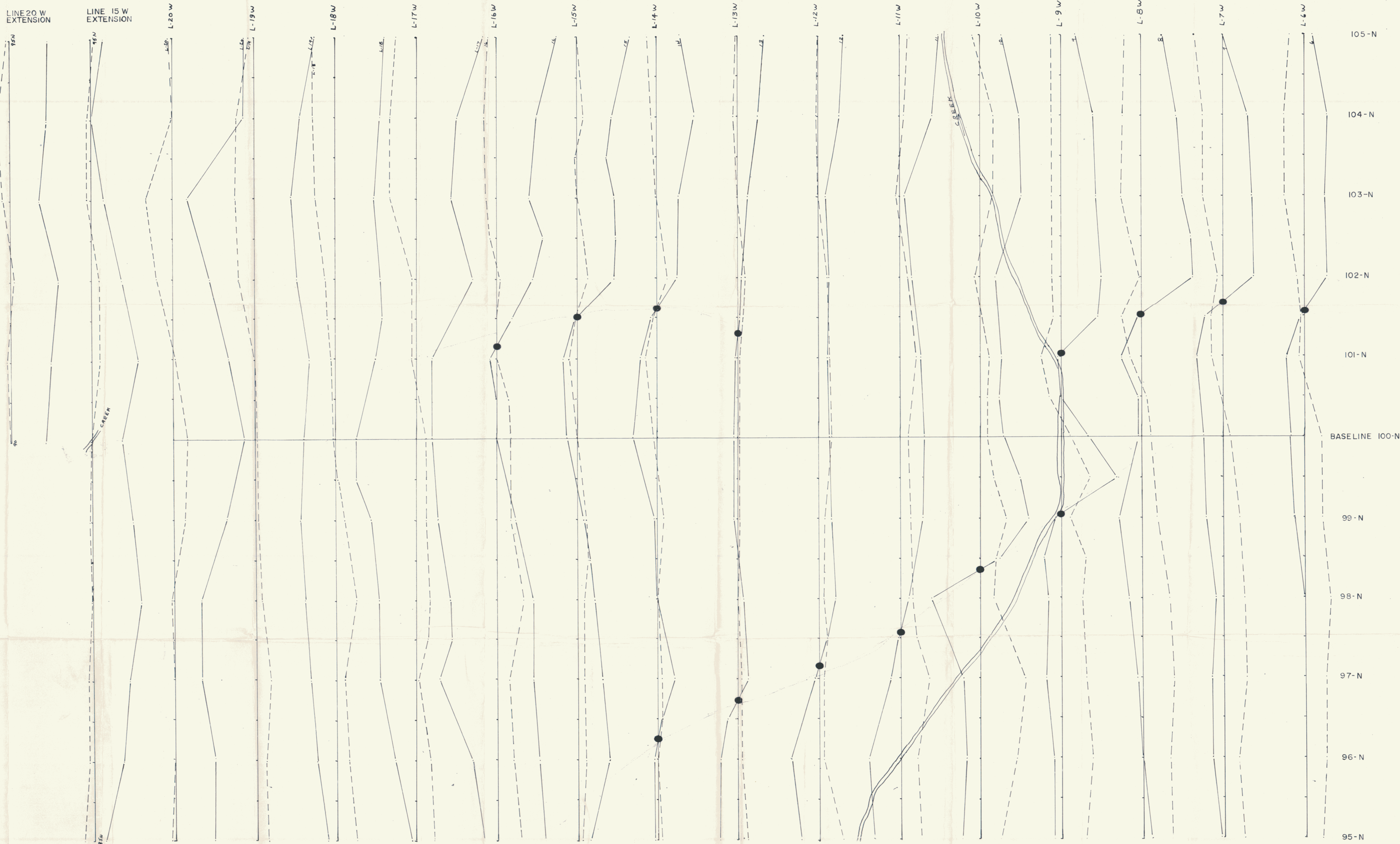
A B C

ACH-1 ACH-2 ACH-3

CEX-1 CEX-2 CEX-3 CEX-4

Trench 1 Trench 2 Trench 3 Trench 4 Trench 5

JA 27 JA 28

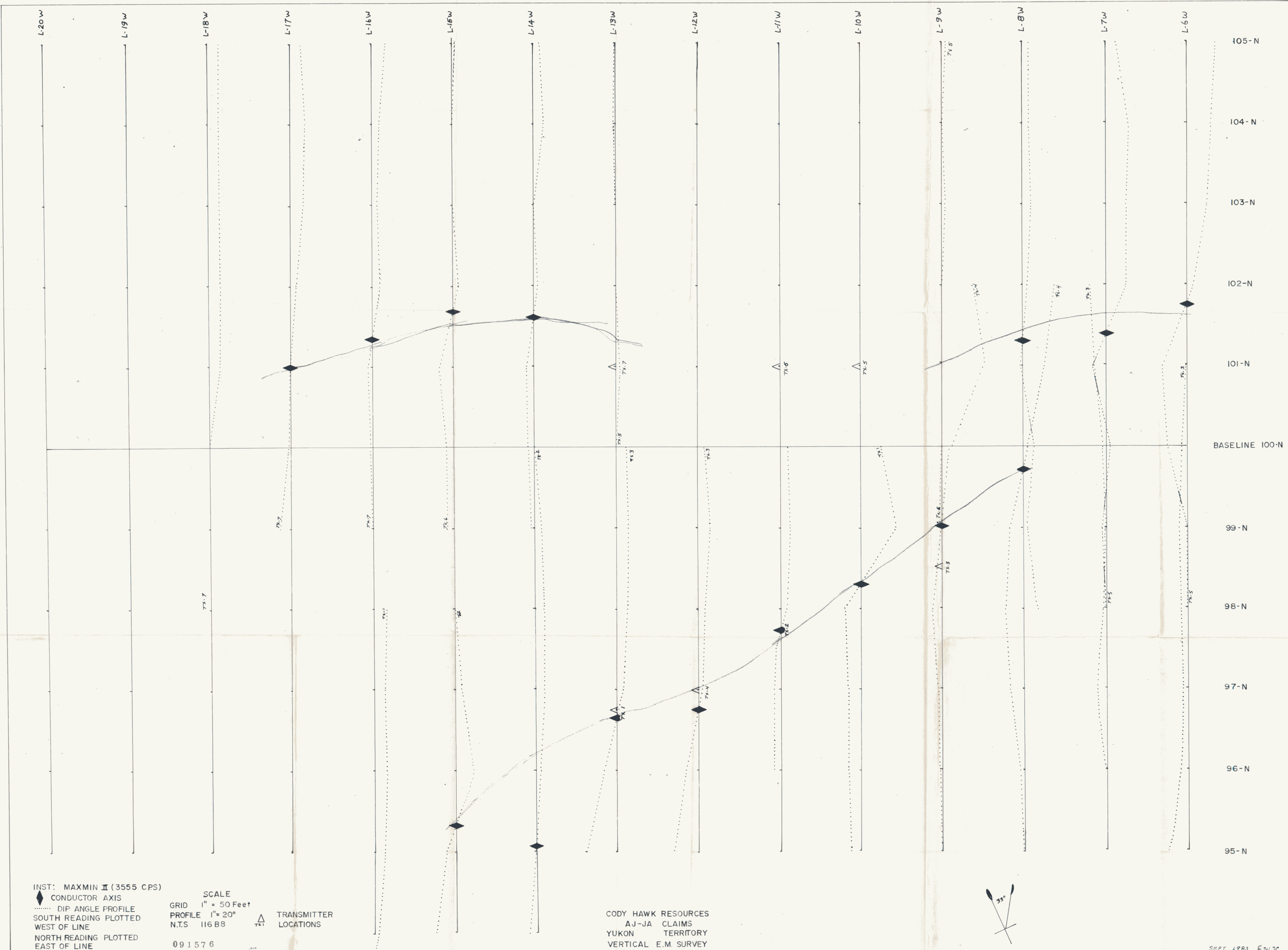


091576
LEGEND
 INST: E.M. 16
 STATION: SEATTLE
 ● CONDUCTOR AXIS
 — DIP ANGLE PROFILE
 - - - OUT OF PHASE
 SOUTH READING PLOTTED WEST OF LINE
 NORTH READING PLOTTED EAST OF LINE
 SCALE
 GRID 1" = 50 Feet
 PROFILE 1" = 20°
 N.T.S. 11688

091576

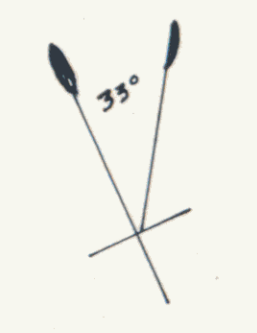
PLATE 10

CODY HAWK RESOURCES
 AJ-JA CLAIMS
 YUKON TERRITORY
 VLF SURVEY



INST: MAXMIN II (3555 C.P.S)
 ◆ CONDUCTOR AXIS
 DIP ANGLE PROFILE
 SOUTH READING PLOTTED WEST OF LINE
 NORTH READING PLOTTED EAST OF LINE
 SCALE 1" = 50 Feet
 GRID PROFILE N.T.S 116 B8
 △ TRANSMITTER LOCATIONS
 091576

CODY HAWK RESOURCES
 AJ-JA CLAIMS
 YUKON TERRITORY
 VERTICAL E.M. SURVEY



LINE 20 W EXTENSION
LINE 15 W EXTENSION



091576
 -LEGEND-
 Scale = 1" = 50 feet
 Map: Sharpe mf I
 Contours: 100 Gammas
 NTS: 116 BS

CODY HAWK RESOURCES
 AJ-JA CLAIMS
 YUKON TERRITORY
 MAGNETOMETER SURVEY

SEPT 1983 F.W.X



091576

CODY HAWK RESOURCES INC.
 AJ-JA GROUP
 116 B/8
 YUKON

VLF EM PROFILES 95N, 100N
 SCALE 1" = 100' VERT, HORIZ.

VLF EM 16 (GEONICS)
 USN STATION ANNAPOLIS, MARYLAND 21.0 KILOHERZ
 LEGEND
 DIP ANGLE PROFILE 1" = 20° DIP
 OUT OF PHASE 1" = 10%
 TOPOGRAPHIC PROFILE 1" = 100' 1/1

95N G.W.G.

OCT. 1983

320°

MORaine

AJ #3

ELEVATION 44'

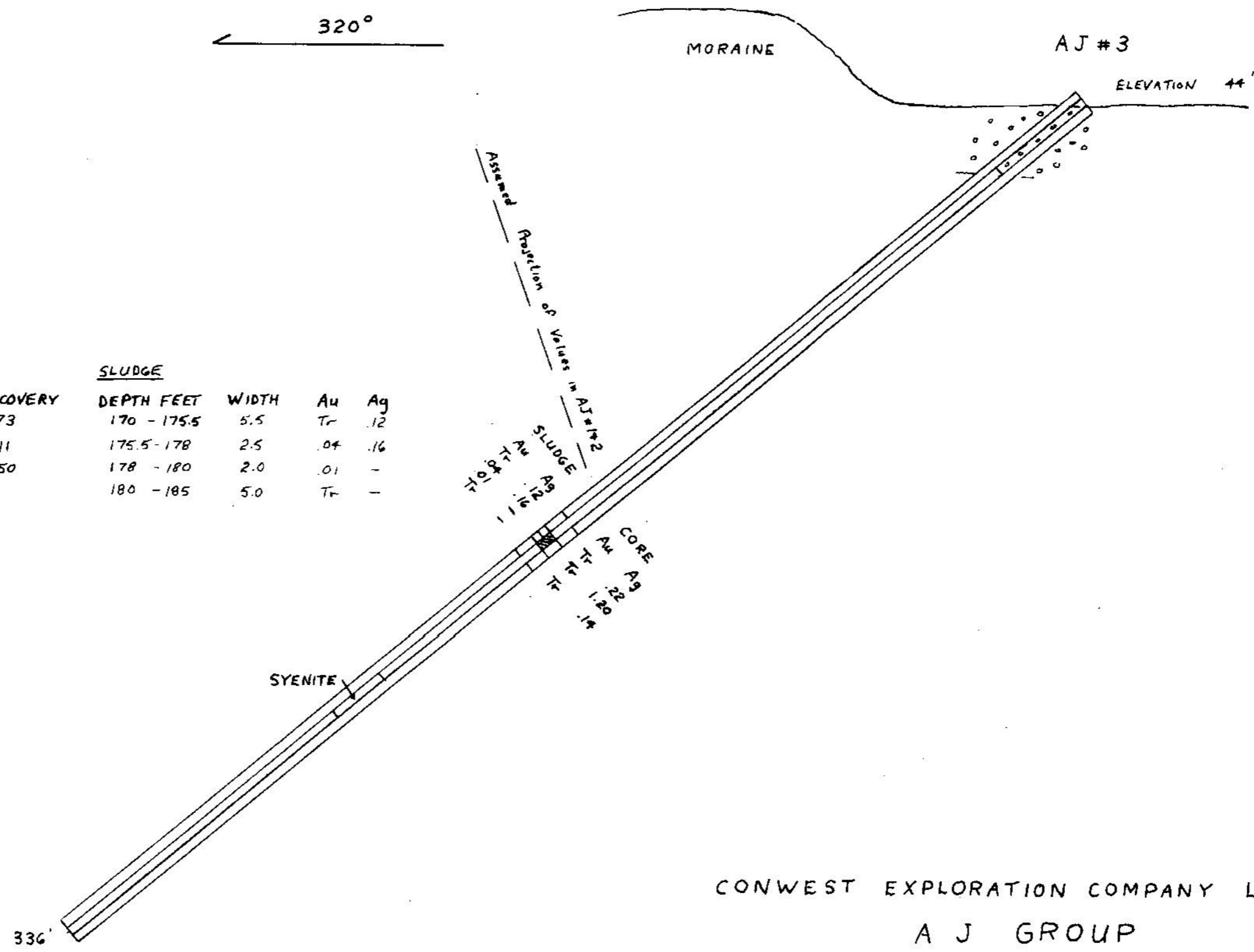
HOLE AJ # 3

CORE

DEPTH FEET	WIDTH	Au	Ag	% RECOVERY
171.5 - 175.5	4.0	Tr	.22	73
175.5 - 180.0	4.5	Tr	1.20	11
180.0 - 185.0	5.0	Tr	.14	50

SLUDGE

DEPTH FEET	WIDTH	Au	Ag
170 - 175.5	5.5	Tr	.12
175.5 - 178	2.5	.04	.16
178 - 180	2.0	.01	-
180 - 185	5.0	Tr	-



Assumed Position of Values in AJ #12

SLUDGE

CORE

SYENITE

336'

CONWEST EXPLORATION COMPANY LIMITED

A J GROUP

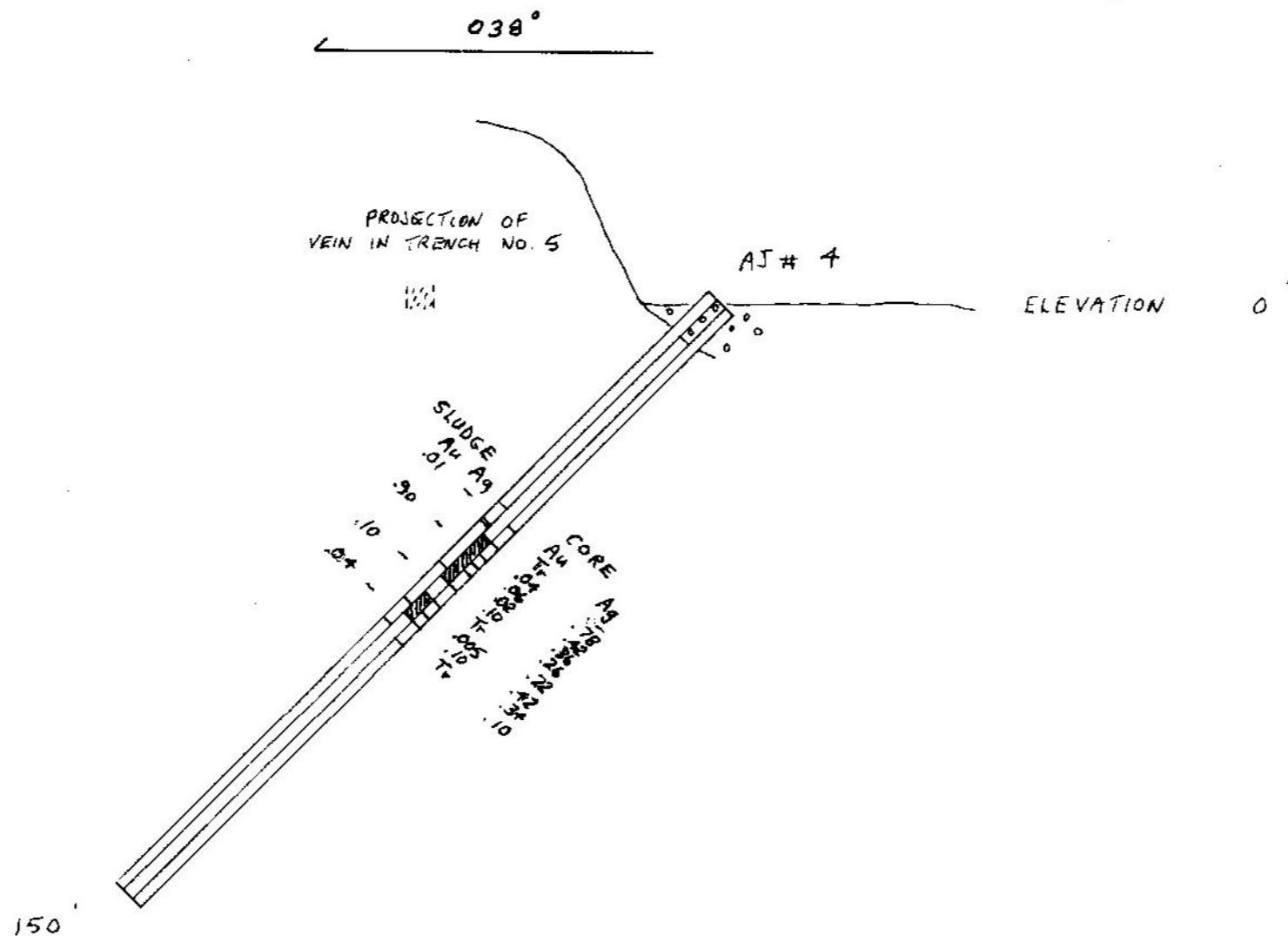
O'BRIEN CREEK, YT

SECTION - DRILL HOLE AJ # 3 LOOKING NE

SCALE 1" = 30'

G.W.G.

MARCH '67



HOLE AJ#4

CORE					SLUDGE			
DEPTH FEET	WIDTH	Au	Ag	% RECOVERY	DEPTH FEET	WIDTH	Au	Ag
55.0 - 59.0	4.0	Tr	-	12	53.0 - 57.0	4.0	.01	-
59.0 - 62.0	3.0	.04	.78	51	57.0 - 58.0	1.0	NO SLUDGE	
62.0 - 64.0	2.0	.06	.42	55	58.0 - 68.0	10.0	.90	-
64.0 - 66.0	2.0	.02	.36	30	68.0 - 77.0	9.0	.10	-
66.0 - 70.0	4.0	.10	.26	65	77.0 - 82.0	5.0	.04	-
70.0 - 74.0	4.0	Tr	.22	48				
74.0 - 77.0	3.0	.005	.42	100				
77.0 - 79.0	2.0	.10	.34	85				
79.0 - 83.5	4.5	Tr	.10	60				

CONWEST EXPLORATION COMPANY LIMITED

A J GROUP
O'BRIEN CREEK, YT

SECTION - DRILL HOLE AJ#4 LOOKING SE

SCALE 1" = 30'

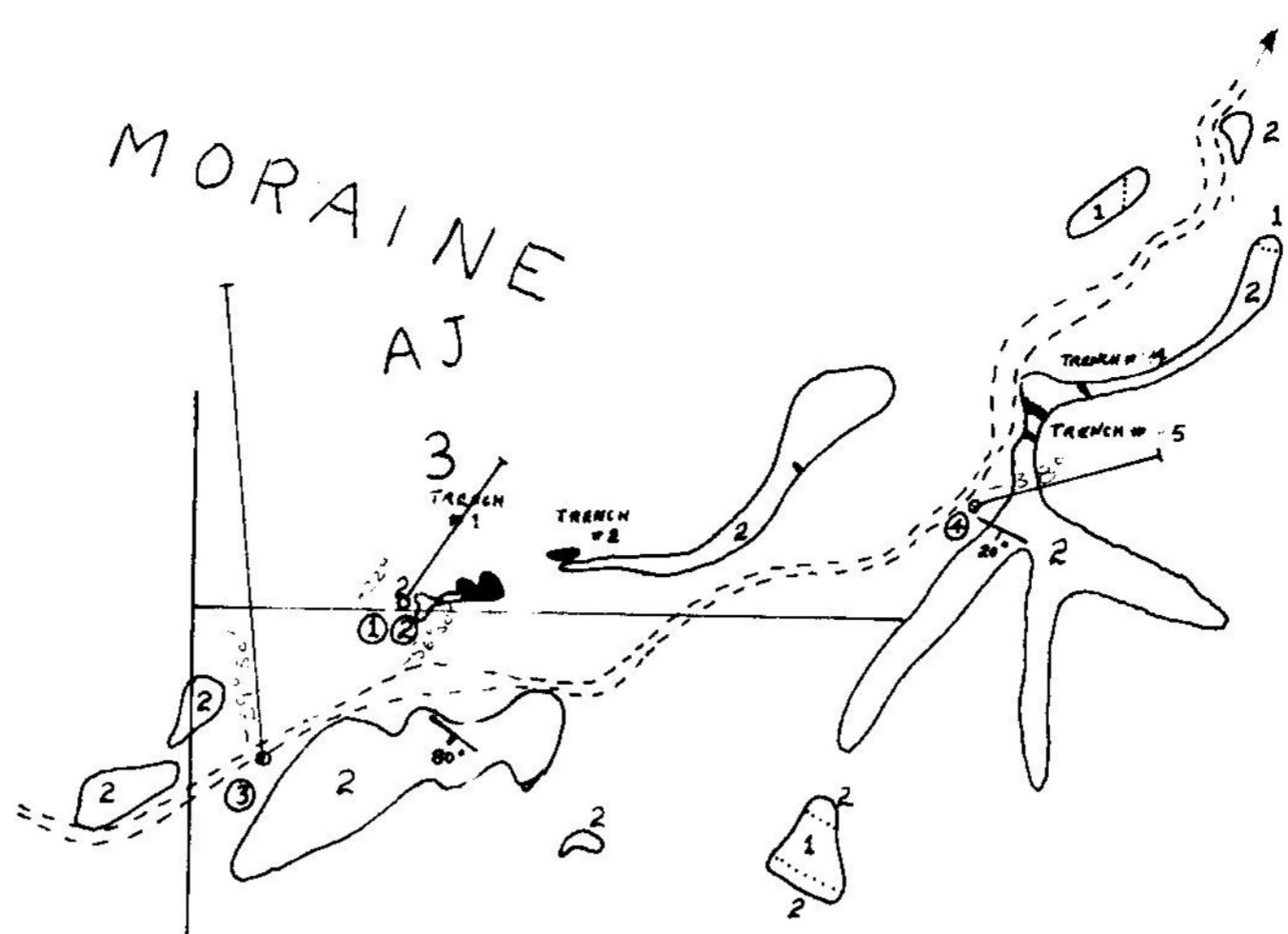
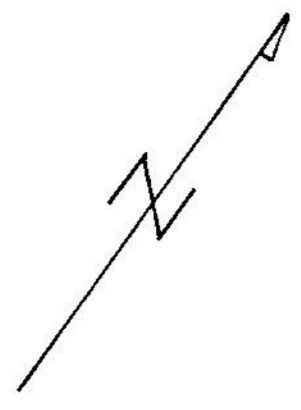
G.W.G.

MARCH '67

AJ
5

AJ
15

MORaine
AJ



TALUS

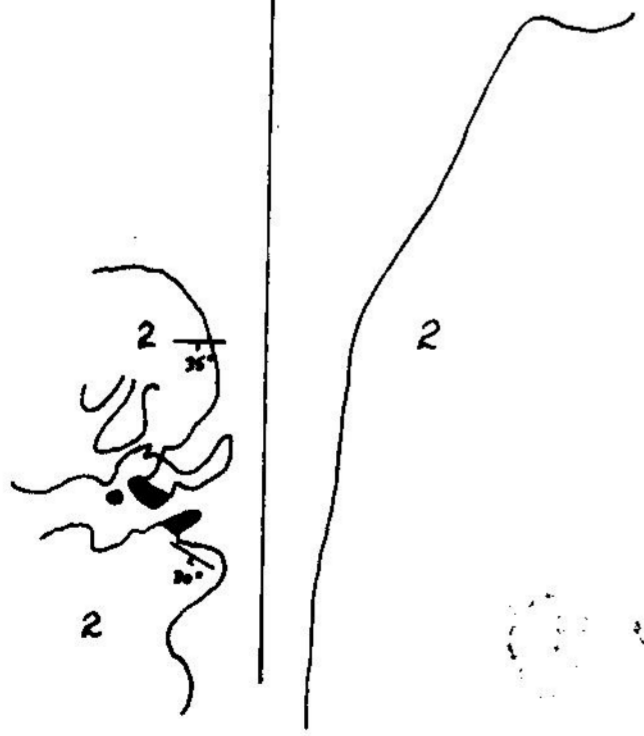
AJ
6

AJ
16

AJ
4

LEGEND

- 1 DIORITE
- 2 QUARTZITE
- HEAVY SULPHIDES
- OUTCROP
- CONTACT
- BEDDING
- - - - - STREAM COURSE
- ⊕ DIAMOND DRILL HOLE
- CLAIM POST
- CLAIM BOUNDARY
- CONTROL LINE



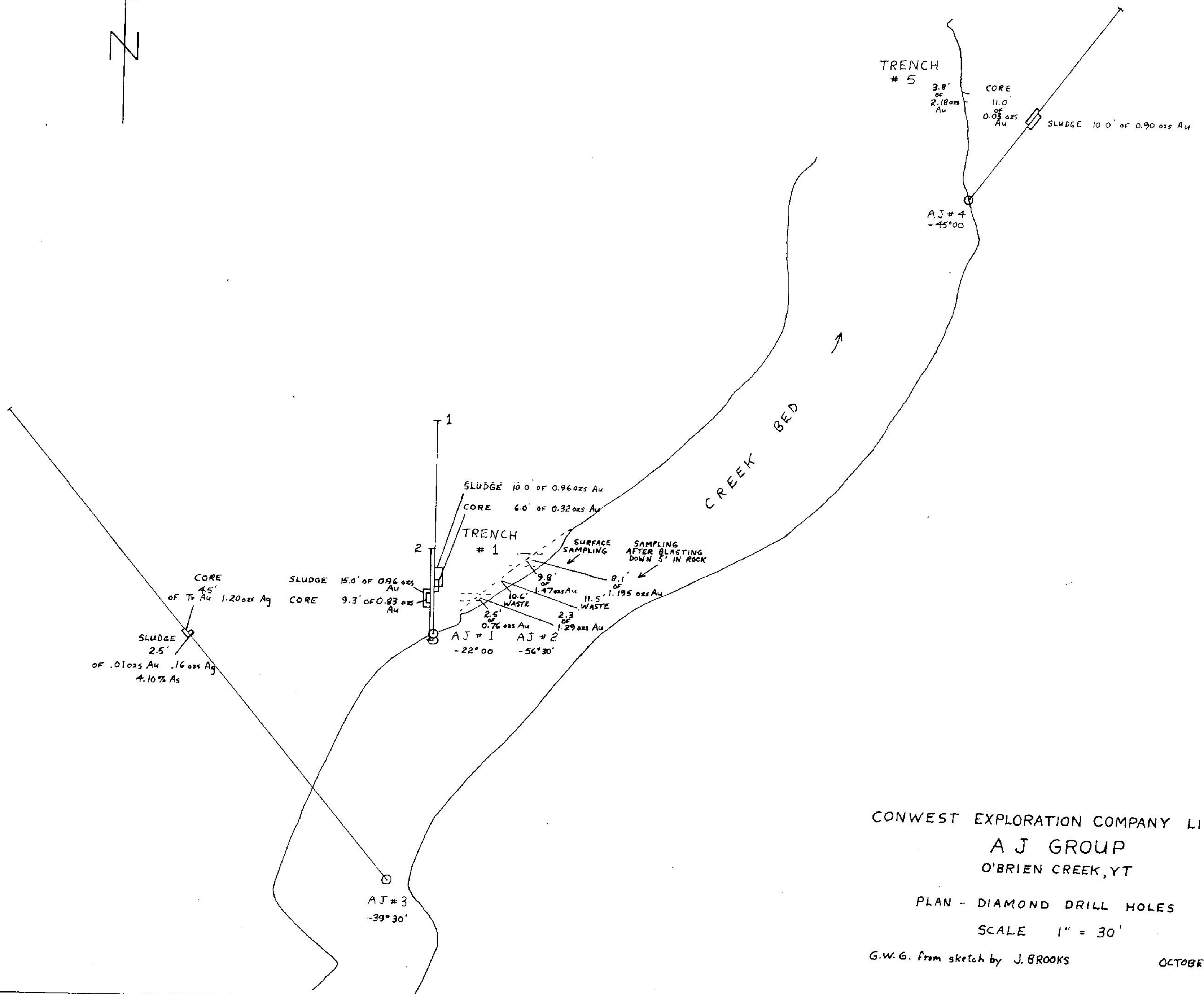
CONWEST EXPLORATION COMPANY LIMITED
AJ GROUP
GEOLOGY, AREA OF SHOWINGS

SCALE 1" = 100'

W.J.

JULY 1966

091576



CONWEST EXPLORATION COMPANY LIMITED
A J GROUP
O'BRIEN CREEK, YT
PLAN - DIAMOND DRILL HOLES
SCALE 1" = 30'
G.W.G. from sketch by J. BROOKS
OCTOBER '66