

GEOLOGY AND EXPLORATION

MACAULEY CREEK PROPERTY

Ridge and Goat Claims  
Whitehorse Mining Division  
Yukon Territory  
NTS 105D-3W

for

ADASTRAL RESOURCES LTD.

EIP 89-046

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## MACAULEY CREEK PROPERTY - EXPLORATION

### SUMMARY

The Bennett Lake Cauldron Subsidence Complex lies southwest of the West Arm of Bennett Lake at the head of the Wheaton River in southern Yukon Territory. Prospecting for precious metals in 1972 and 1973 disclosed a number of showings which were obtained for Adastral Mining Corporation Ltd. and in turn optioned to Dome Exploration (Canada) Ltd. and Jorex Ltd. The claims were mapped and sampled with surface sampling. No further work was done for Adastral until 1988; however three claims were kept by paying cash in lieu of work.

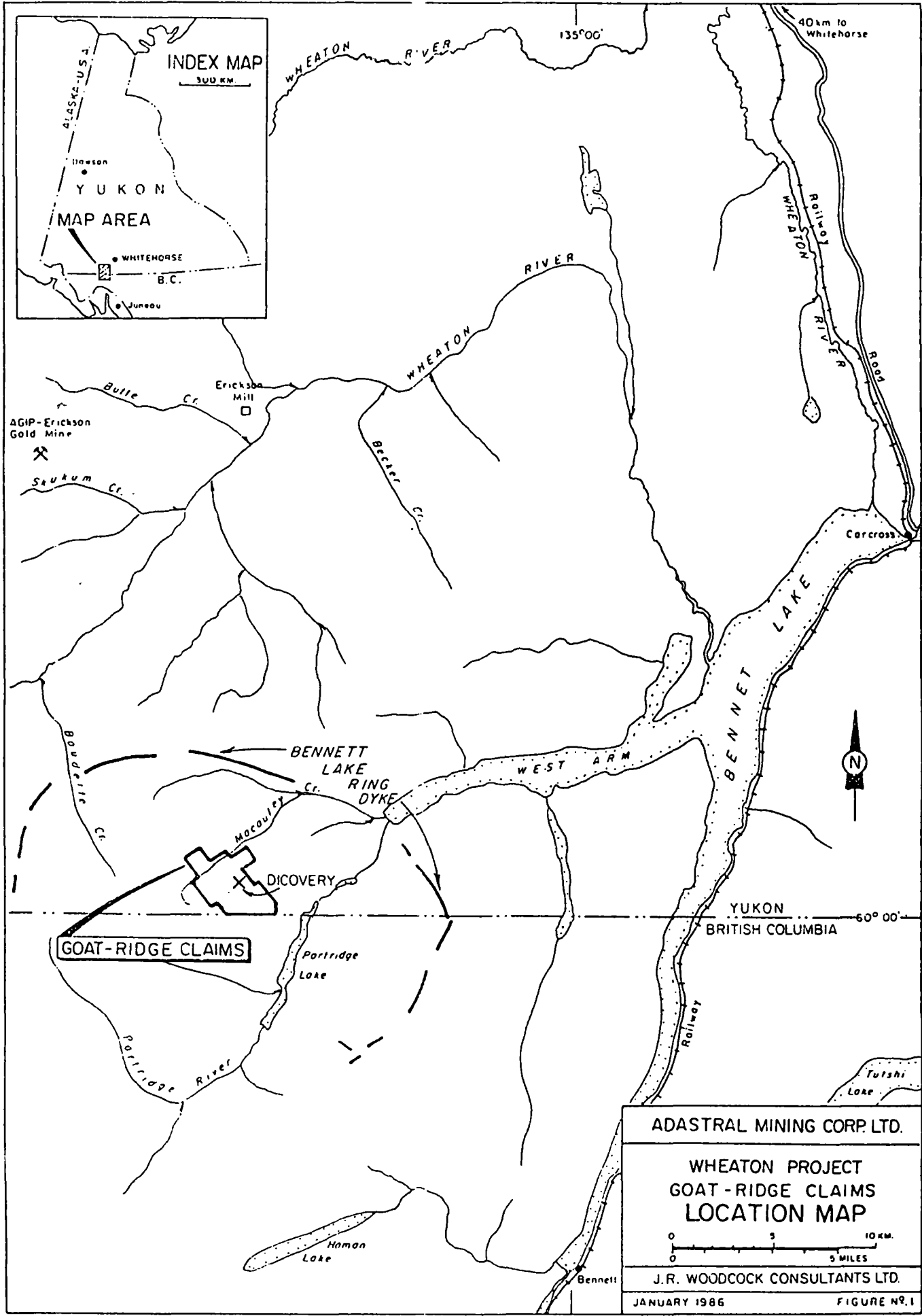
In 1981, Kennco Explorations (Western) Ltd. staked a large block of claims around the Adastral claims. These were prospected and mapped resulting in the discovery of six sites with veins or float carrying precious metals. Kennco has kept 52 claims mostly by paying cash in lieu of work. These claims were optioned in 1987 by Adastral Resources Ltd.

The three most extensive vein systems found to date include the West Vein System, the Discovery prospect, and the Mouse prospect. The Mouse prospect, found late in the 1988 season, is the better exposed with the fresher and relatively unfaulted veins. Two veins have been mapped on this system which is exposed over a vertical interval of 100 meters and has been traced over a horizontal interval of 200 meters. Polished section work indicates three stages of mineralization. The first stage included arsenopyrite with minor pyrite, the second stage included sphalerite, galena and ruby silvers; and the third stage included argentite and sulphur.

The two veins sampled and mapped on the Mouse prospect include the vertical Steve Vein and the Connie Vein which dips 60° westward towards the Steve Vein. Sampling at four places along the exposures on the Steve Vein and at five places along the Connie Vein indicate very good silver values, in places extremely high, and in places accompanied by good gold values.

The West Vein System consists of some specific veins of alteration with arsenopyrite stringers and lenses lying within the veins. This extends over a distance of more than 400 meters. Sampling in 1971 showed that these arsenopyrite veins contain negligible precious metal values; however in places where there is some minor galena some silver values have been noted. Thus this appears to be mainly the first stage of mineralization.

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ADASTRAL MINING CORP. LTD.

WHEATON PROJECT  
GOAT - RIDGE CLAIMS  
LOCATION MAP

0 5 10 KM.  
0 5 MILES

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JANUARY 1986 FIGURE NO. 1

50803

ADASTRAL RESOURCES LTD.

GOAT-RIDGE-WET CLAIMS

# CLAIM MAP

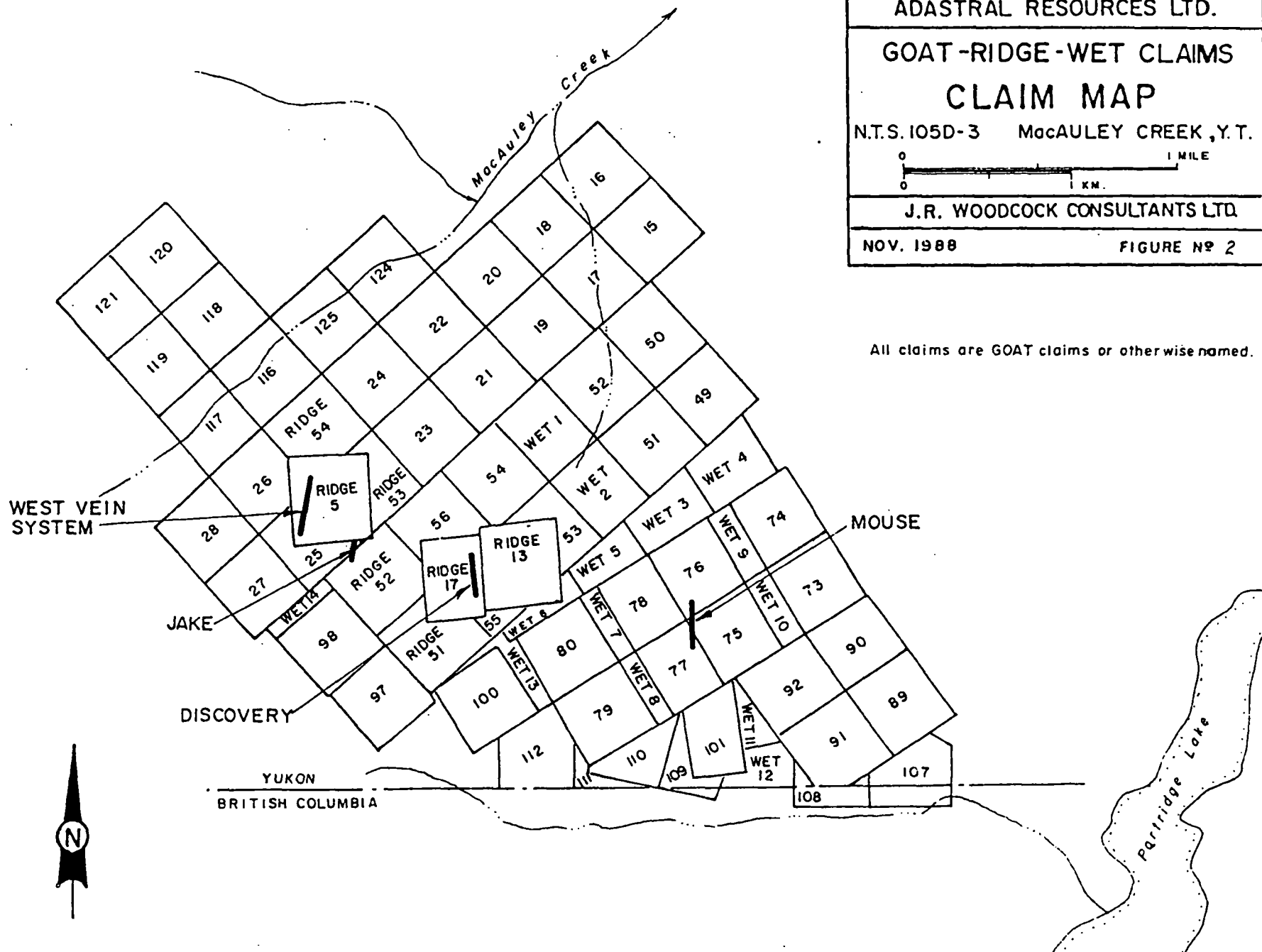
N.T.S. 105D-3 MacAULEY CREEK, Y.T.



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NOV. 1988

FIGURE NO 2



All claims are GOAT claims or other wise named.

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The Discovery showing is an alteration zone which lies between two northerly trending faults, both dipping easterly. Alteration includes silicification, sericitization and some pyrite. Mineralization includes abundant arsenopyrite through parts of the alteration zone accompanied along the eastern contact in places by a breccia-sulphide stockwork. The sulphides include arsenopyrite, argentite, chalcopyrite, and minor galena. A yellowish oxidation product has been identified as scorodite. Sampling done in 1973 indicated very good grade silver values, in places accompanied by high gold values along the eastern part of this faulted alteration zone.

Mineralization here appears to belong to the first and the last stages with little or none of the ruby silvers and sphalerite noted at the Mouse prospect.

Drilling in 1988 from two pads on the east side of the Discovery prospect failed to intersect the high values that were encountered at the surface.

A four-phase exploration program is recommended for the Mouse prospect including construction of some access roads on the property in addition to some trenching (Phase I), an initial drilling phase of 2000 feet (Phase II), a follow-up drilling program of 2500 feet (Phase III) and a post season phase to include some flotation tests and preliminary feasibility estimates (Phase IV). The cost estimates for these phases include \$60,000 for Phase I, \$231,000 for Phase II, \$205,000 for Phase III, and \$6,000 for Phase IV.

## INTRODUCTION

Prospecting in the Wheaton district and adjacent parts of the Bennett Lake area began with the gold rush, became quite active during the first part of this century and has continued intermittently. Numerous showings with precious metals were discovered and prospected, some with small underground workings. The first mine to go into full production was the Total Erickson Mine for the gold-bearing veins discovered about 1982 on Mount Skukum. This mine has recently closed; however Omni Resources Inc. is preparing another deposit for production along the south side of the same mountain.

In 1972 the writer prospected the Bennett Lake Cauldron Complex for precious metals and discovered high grade mineralization along the south branch of MacAuley Creek for Adastral Mining Corporation Ltd. This report describes the subsequent exploration done on the precious metal veins in the MacAuley Creek Volcanic Complex.

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### LOCATION AND ACCESS

The MacAuley Creek Complex lies just north of the British Columbia boundary, 50 miles (83 kilometers) south of Whitehorse and 14 miles (23 kilometers) south of Mount Skukum townsite. Access at present must be by helicopter and in the past several years a helicopter has been based in the vicinity of Mount Skukum. Carcross, a small town on the White Pass & Yukon Railway and the highway between Whitehorse and Skagway, is 25 miles (42 kilometers) northeast of the Discovery prospect.

The region is above timber line and the area of the claims is quite rugged with elevations ranging from about 4500 feet (1350 meters) to almost 7000 feet (2100 meters). The Discovery showing and the veins on the Mouse prospect lie at elevations of about 6300 feet (1900 meters).

MacAuley Creek has a source at the British Columbia-Yukon Territory boundary and drains northeasterly into the West Arm of Bennett Lake. The West Arm is 7 miles (11 kilometers) from the Discovery. Carcross lies on Bennett Lake. Another creek, Boudette Creek, also starts in the same general area and flows northerly into the Wheaton River. Any access for production would have to be down Boudette Creek and Wheaton River to the Omni camp area, a distance of about 17 miles (28 kilometers).

High grade float from both the Discovery prospect and the Mouse prospect were found on the moraine in the upper parts of East Branch of MacAuley Creek. This branch, with two small glaciers at its head, flows northerly into MacAuley Creek. The Discovery prospect is on a northerly trending ridge west of this branch and the Mouse prospect is on a westerly trending ridge to the south or at the head of the cirques. Float from the Mouse prospect also occurs on the south side of the ridge on the slopes above Tough Creek. In addition, float and veins have been discovered other places on the property.

### CLAIMS AND OWNERSHIP

In 1972 and 1973, 30 claims were staked for Adastral to cover the mineral showings. All claims were transferred to Adastral Mining Corporation Ltd.\* Subsequently all claims were allowed to lapse except for three key claims (Ridge 5, 13, 17) and these were maintained by work credits and cash in lieu of work.

\*The name has been changed to Adastral Resources Ltd.

The logo consists of the letters 'JRW' in a stylized, bold, outlined font. The 'J' and 'R' are connected at the top, and the 'W' is positioned to the right of the 'R'.



In 1980 and 1981 Kennco Explorations (Western), Ltd. acquired 131 claims around the Ridge claims. This claim block was subsequently reduced to 52 Goat claims which were maintained by work credits and cash in lieu of work. In 1986 an additional four claims (Ridge 51-54) were staked to cover four large fractions adjacent to the Adastral claims. In 1988, 14 Wet claims and fractions were staked within the Kennco claim block to cover open ground. The Ridge 51-54 claims and the Wet 1-14 claims have been transferred to Kennco to become part of the ground under option by Adastral.

The claim relationships are shown in Figure 2 and the claim data is given in Table I.

TABLE I

CLAIM DATA

Kennco Ground

<u>Claim</u>	<u>Name</u>	<u>Grant Number</u>	<u>Record Date</u>
Goat	15- 28	YA51954 - YA51967	Sept. 25, 1980
Goat	49- 56	YA51988 - YA51995	Sept. 25, 1980
Goat	73- 80	YA52012 - YA52019	Sept. 25, 1980
Goat	89- 92	YA52028 - YA52031	Sept. 25, 1980
Goat	97- 98	YA52036 - YA52037	Sept. 25, 1980
Goat	100-101	YA52039 - YA52040	Sept. 25, 1980
Goat	107-112	YA52046 - YA52051	Sept. 25, 1980
Goat	116-121	YA59674 - YA59679	Mar. 26, 1981
Goat	124-125	YA59682 - YA59683	Mar. 26, 1981
Ridge	51- 54	YA95352 - YA95355	July 31, 1986
Wet	1 Fr.	YB20551	July 25, 1988
Wet	2- 6	YB20552 - YB20556	July 25, 1988
Wet	7 Fr.	YB21181	Aug. 16, 1988
Wet	8	YB21182	Aug. 16, 1988
Wet	9- 10	YB20557 - YB20558	July 25, 1988
Wet	11- 14	YB21183 - YB21186	Aug. 16, 1988

Adastral Ground

Ridge	5	Y67031	Sept. 5, 1972
Ridge	13	Y67089	Sept. 5, 1972
Ridge	17	Y76051	July 23, 1973

The Ridge 5, 13, 17 claims are 100% owned by Adastral Resources Ltd. The remainder of the claims are owned by Kennco Explorations (Western), Ltd. and are subject to an option agreement with Adastral Resources Ltd. dated April 6, 1987. According to this agreement Adastral has the exclusive right to explore the Kennco claims subject to completion of the option before placing the property in production or before April 6, 1992. To complete the option Adastral must pay Kennco \$250,000. In addition Kennco is entitled to receive 2% net smelter return from any production from its claims and 2% net smelter return from any production from the three Adastral claims. The royalty from the Adastral claims is cumulative up to a maximum of \$500,000.

### HISTORY

The Bennett Lake ring dike was discovered in 1951 by Dr. J.O. Wheeler, geologist with the Geological Survey of Canada. This unusual structure has been called the "Bennett Lake Cauldron Subsidence Complex" by Dr. M.B. Lambert. His report describing the geology is Bulletin 227 of the Geological Survey of Canada.

In 1972, the writer conducted a very brief program of geochemical exploration for precious metals within the subsidence complex and discovered oxidized float on moraines along the south branch of MacAuley Creek. A number of pieces of the float carried precious metal values; the highest value obtained included 1192 oz/ton Ag plus 1.42 oz/ton Au. Claims were staked for Adastral Mining Corporation.

In 1973 Dome Exploration (Canada) Ltd. and Jorex Limited optioned the property and contracted J.R. Woodcock Consultants Ltd. to conduct a mapping program on and around the claims. This data was compiled into the writer's report of September 4, 1973. Because of the difficult terrain and the relative low prices of precious metals, these companies relinquished their option without doing any drilling.

Late in 1980 and 1981 Kennco Explorations (Western), Ltd. acquired a block of 131 claims around the Ridge claims and in 1981 this company supported a program of prospecting and mapping with the discovery of additional precious metal veins. The data is compiled in the report of April 16, 1982 by Mr. Robert W. Stevenson and Mr. R.S. Pegg. The claim block has subsequently been reduced to 52 claims that are being maintained by this company.

About 1982 AGIP Corp. discovered veins with good precious metal values on Skukum Mountain. Exploration on these veins led to a production decision; however ore reserves were not sufficient to maintain this production and the mine closed in the summer of 1988. In addition Omni Resources Inc. acquired

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ground adjacent to the AGIP property and over a period of about five years outlined sufficient reserves of gold-silver base metal mineralization to make a production decision. The mine is presently under preparation for production.

In 1988 Adastral Resources Ltd. completed seven short drill holes from two pads on the Discovery prospect. Total amount drilled was 1251 feet (381.3 m). In addition, prospecting on the Mouse prospect late in the summer revealed showings at the head of the cirque on the north side of the ridge and also mineralized exposures in the talus slopes on the south side of the ridge.

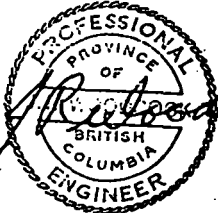
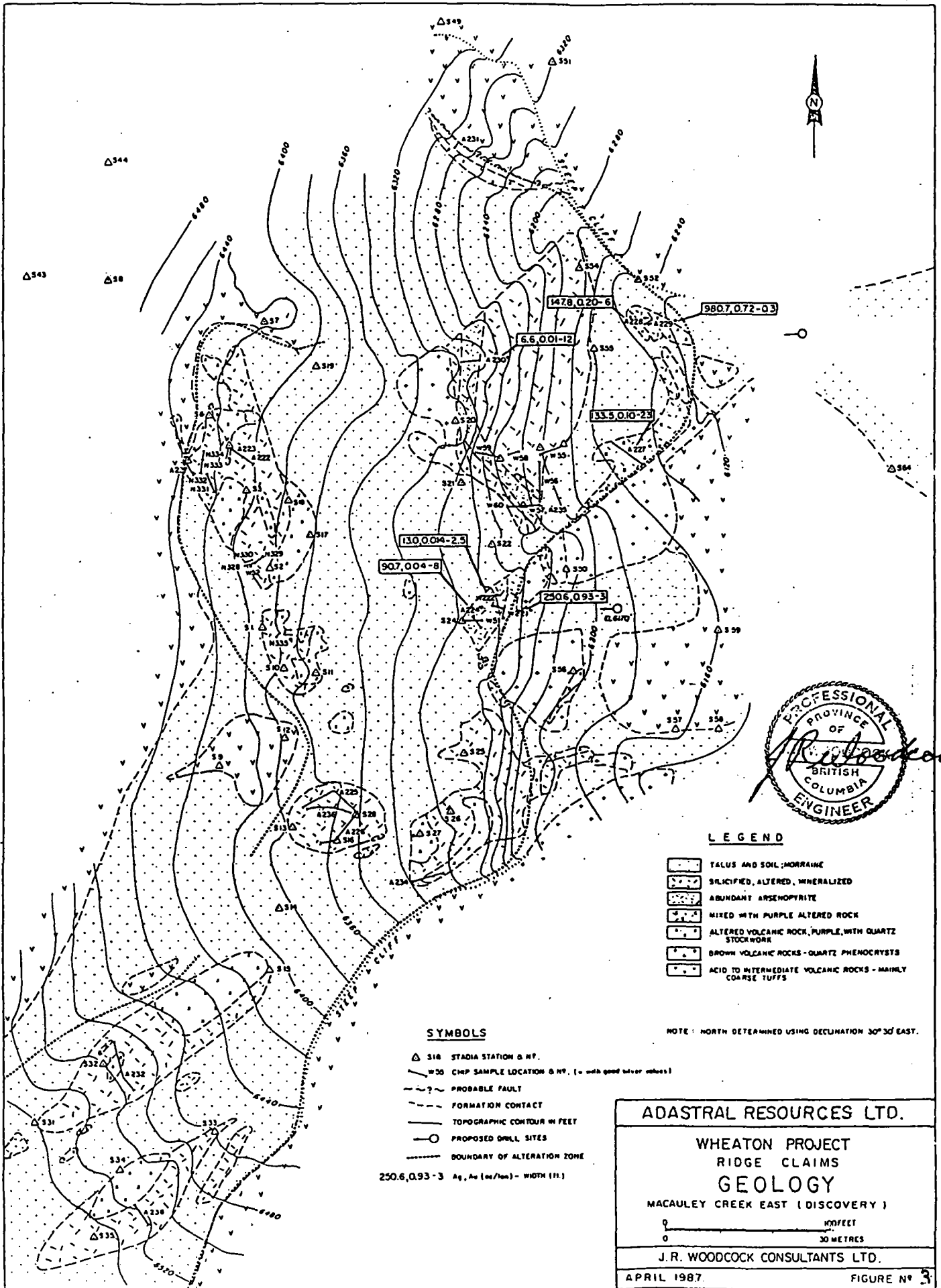
### GEOLOGY

Lying within the northeastern part of the Coast Crystalline Complex in southern Yukon Territory are two centers of Tertiary volcanic rocks of the Skukum Group, the Mount Skukum Block and the Bennett Lake Cauldron Complex. This is the Wheaton River region, an area where numerous epithermal precious metal prospects have been explored over the past 50 years. The most important to date are the new veins found on Skukum Mountain.

The Bennett Lake center represents a cauldron subsidence, marked by a discontinuous ring dike with diameter 23 km. This is just outside of the volcanic complex and within the batholithic rocks of the Coast Range Complex. It marks one of the bounding subsidence faults. Descriptions from M.B. Lambert indicate that the cauldron subsidence area, with a history of explosive acidic volcanism and rapid sedimentation, resulted in the accumulation of great thicknesses of tuffs, breccias, ignimbrites and conglomerates.

Early products of explosive volcanism, which includes a variety of light-coloured breccias and tuffs, accumulated on an irregular granitic terrain to a maximum thickness of about 500 meters. Later products of this volcanism formed an overlying sequence of ignimbrites with a maximum thickness of about 700 meters.

Granitic and metamorphic rocks completely surround the layered rocks of the Skukum Group of this cauldron subsidence complex. Isolated masses of pre-Mesozoic metamorphic rock consist of quartz-feldspar schists and gneisses, quartz-biotite schists, quartzites and gneissic granodiorite. These rocks are shattered and brecciated in the vicinity of known fault zones, generally around the periphery of the central volcanic rocks, and in breccia pipes of the complex.



**LEGEND**

- TALUS AND SOIL MORaine
- SILICIFIED, ALTERED, MINERALIZED
- ABUNDANT ARSENOPYRITE
- MIXED WITH PURPLE ALTERED ROCK
- ALTERED VOLCANIC ROCK, PURPLE, WITH QUARTZ STOCKWORK
- BROWN VOLCANIC ROCKS - QUARTZ PHENOCRYSTS
- ACID TO INTERMEDIATE VOLCANIC ROCKS - MAINLY COARSE TUFFS

**SYMBOLS**

- STADIA STATION & N.P.
  - CMP SAMPLE LOCATION & NO. (— with good silver values)
  - PROBABLE FAULT
  - FORMATION CONTACT
  - TOPOGRAPHIC CONTOUR IN FEET
  - PROPOSED DRILL SITES
  - BOUNDARY OF ALTERATION ZONE
- 250,6,093-3 Ag, Au (wt/ton) - WIDTH (11.)

NOTE: NORTH DETERMINED USING DECLINATION 30° 30' EAST.

**ADASTRAL RESOURCES LTD.**

**WHEATON PROJECT  
RIDGE CLAIMS  
GEOLOGY**

MACAULEY CREEK EAST (DISCOVERY)

0 100 FEET  
0 30 METRES

J.R. WOODCOCK CONSULTANTS LTD.

APRIL 1987. FIGURE No 3

TABLE II

## GEOCHEMICAL RESULTS

<u>Sample Number</u>	<u>Intersection (meters)</u>	<u>Ag ppm</u>	<u>As ppm</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Sb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>
88-2- 1	6.3 - 6.7	1.49 oz/t						0.006 oz/t
88-2- 7	6.7 - 9.14							0.009 oz/t
88-2-10	3.6 - 9.35*	.5	996	8	33	2	253	2
88-2- 2	9.35- 9.55	0.43 oz/t						0.001 oz/t
88-2- 3	9.55-10.0	0.06 oz/t						0.001 oz/t
88-2-13	10.0 -11.28	2.8	1519	8	25	5	190	25
88-2-14	11.28-11.89	2.0	1390	8	44	4	201	5
88-2-15	11.89-13.11	2.7	984	8	31	5	242	14
88-2-16	13.11-14.33	10.3	528	64	106	5	371	9
88-2-17	14.33-15.85	3.5	557	16	37	5	217	6
88-2-19	15.85-17.68	9.8	616	81	133	4	327	24
88-2-20	17.68-18.59	1.7	83	7	38	2	180	3
88-2-21	18.59-19.51	4.4	665	12	46	5	222	37
88-2-22	19.51-20.73	2.6	332	6	39	6	168	11
88-2-23	20.73-21.34	7.4	530	98	59	6	184	4
88-2-24	21.34-22.25	6.1	537	60	72	5	211	2
88-2-25	22.25-23.77	2.2	148	19	32	5	145	3
88-2-26	23.77-25.30	1.2	55	8	56	3	170	9
88-2-27	25.30-25.80	.6	62	7	47	3	158	2
88-2- 4	25.80-27.34	0.8						4
88-2-28	27.34-28.19	1.3	205	6	45	3	134	5
88-2-29	28.19-29.72	.9	132	7	32	5	93	6
88-2-30	29.72-30.86	.6	62	7	29	5	105	1
88-2- 5	30.86-31.39	1.0						2
88-2-31	31.39-33.22	1.2	156	7	38	3	152	3
88-2-32	33.22-34.44	.9	75	6	31	4	114	2
88-2-33	34.44-36.27	1.3	55	7	109	4	187	6
88-2-34	36.27-37.80	.6	120	6	37	3	258	2
88-2-35	37.80-39.44	2.9	456	17	151	5	457	142
88-2- 8	39.44-40.72	0.5						3
88-2- 9	40.72-41.76	2.3						2
88-2- 6	41.76-43.28	0.4						2

\*Note: in places, the geochem samples overlapped the prior assay samples.

Tuff and breccia pipes, composite tuff-rhyolite and tuff-dacite dikes, and ignimbrite dikes are considered to be the sources of the pyroclastic rock. One unusual type of intrusive breccia which forms dikes, consists of numerous granitic fragments within a volcanic matrix.

The mapping and prospecting of 1973 disclosed a sill of felsite exposed along the southwest side of MacAuley Creek where it underlies the pyroclastic rocks. In places dike-like extensions extend from the felsite horizon a short distance upward into the volcanics and in other places dikes of similar rock cut higher volcanic units. Similar felsite rocks are reported in the vicinity of gold prospects around Mount Skukum.

Numerous faults occur throughout the complex in the vicinity of MacAuley Creek and short discontinuous gossan zones occur along some of these faults. In the northern part of the ring-shaped complex, a pipe of breccia within the volcanic sequence contains abundant altered and pyritized rock. Also the granite terrain to the west and south of the volcanic complex weathers a rusty colour and probably contains more than normal amounts of pyrite.

#### MINERAL SHOWINGS

In addition to the widespread small gossan zones that occur within the volcanic complex, there are northerly striking vein systems that contain sulphides such as arsenopyrite, galena and precious metals. A number of these are associated with the larger pyritized zones. The most extensive vein systems found to date include the Discovery prospect on the ridge between MacAuley Creek and East Branch and the Mouse prospect at the head of East Branch.

#### Discovery Prospect

The source of much of the high grade float discovered in 1972 is a conspicuous gossan that occurs in the steep hillsides and cliffs at the southwest corner of the cirque.

The gossan area is up to 100 meters wide and over 300 meters long (Figure 3). It may be faulted off on the south side. To the north it extends over a ridge and under another cirque glacier. Rugged cliffs bound the gossan area on the west and the northeast and cliffs of volcanic rock drop away below the mineralized area into the cirque to the east.

The east contact is a fault zone with a dip of about 70° E and the west contact is another fault zone with a dip of about 60° E. Thus this zone of alteration and mineralization could be thinning with depth. There are numerous complexities including sub parallel faults within the zone and possible rolls in the eastern hanging wall contact.

Much of the mineralized gossan zone is a slope covered by fine talus with continuous volcanic outcrops bounding the mineralized and altered rock. This altered zone and the surrounding volcanic rock was mapped in detail in 1972.

Mineralization within the zone included abundant silicification and widespread arsenopyrite with pyrite, chalcopyrite, and galena along the eastern contact and with chalcedony and fluorite near the western contact.

Good grade silver values were obtained in brecciated rock at three localities along the eastern contact of the zone.

Assays from three sites along a strike length of 100 meters are as follows:

	<u>Width</u> <u>(feet)</u>	<u>Silver</u> <u>oz/T</u>	<u>Gold</u> <u>oz/T</u>
	8	90.7	0.04
	23	33.5	0.10
	6	197.8	0.20
including	0.3	980.7	0.72
continuous (	3.0	250.6	0.93
sampling (	2.5	13	0.014

The breccia has a network of fine-grained grey sulphides in stringers and cavity fillings. A sulphide-rich specimen of this type of rock was examined by Dr. John Paine who reported that the sulphides included arsenopyrite, chalcopyrite, covellite, and minor galena with the silver mineral, argentite. Scorodite is present from the oxidation of the arsenopyrite.

To the north of the silver-rich area, the strike trends slightly west of north and in the small pass between the two cirques epithermal quartz veining with drusy cavities and banding is exposed. Samples over the exposed width of 5.0 meters yielded only low values in silver and gold (0.07 oz/ton Ag, 0.002 oz/ton Au).

Drilling in 1988 was done from two pads constructed on the steep hillsides. Four short holes were drilled from the south pad and three holes were drilled from the north pad. The location of these holes is shown on the accompanying plan (Figure 4) and the two sections (Figures 5 and 6).

The south pad is only 15 meters easterly from a high grade outcrop that had been trenched and sampled several times. The No. 1 drill hole was directed due west to pass slightly south of the high grade exposure. It remained in badly broken and oxidized rock with only minor amounts of the favourable looking breccia. The suspicion that DDH #1 was in a fault breccia dictated that DDH #2 drill directly under the high grade outcrop. This also intersected similar material, slightly less broken but also with very little of the favourable mineralized breccia.

The results of the drilling from the No. 1 pad can be summarized. The oxidation, almost complete with abundant widespread dark brown to yellowish brown limonite extends for more than 100 feet of depth over the entire width of the alteration zone. The altered and oxidized rock is somewhat variable with dark brown oxides on the eastern part and yellowish oxide, clay-rich alteration on the western parts and with a mixture between. These probably represent alteration of the two different volcanic rocks logged in the upper part and the lower part of the drill holes, i.e. at the eastern and western contacts. In places small sections of siliceous breccia with grey sulphides were encountered. Other interesting mineralization included chalcedony and hematite. Highest silver value was 1.53 oz/ton.

The holes collared in the lower north pad passed through a section of highly siliceous ignimbrites before entering the oxidized alteration zone. Alteration exposed at surface was also cut by the three drill holes; it is decreasing in width with depth. A zone of mineralized breccia was also encountered, but its width decreases sharply with depth. It does not carry the high silver content noted in the surface exposure where assays of more than 100 ounces of silver occur across six feet. Highest silver value obtained in the three drill holes from the north pad was 2.03 oz/ton.

Several explanations are possible for the sharp decrease in values between the surface showings and the shallow drill holes. However, such sharp lower cutoffs of the precious metals within epithermal veins are common (e.g. Black Dome). Buchanan (1961) attributed this phenomenon to a sharp boiling

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level for the hydrothermal solutions above which the precious metals form and below which base metals predominate. Such a model is probably complicated by stratigraphic changes and by faulting.

In addition to the better looking rock of the oxidized drill core all of DDH #2 was sampled and analyzed geochemically for Ag, As, Cu, Pb, Zn and Au. The results are given in Table III. Arsenic is very anomalous, but the other metals are background or only slightly anomalous.

### Mouse Prospect

At the Mouse prospect the Kennco staff discovered high grade mineralized float on the south facing slope of the ridge between Tough Creek and East Branch. In addition a few pieces of high grade float were found in the cirque to the north of this ridge. The 1988 program included prospecting on the south talus-covered slope in late July and on the steep north slope in late August. On the north slope, this led to the discovery of a vertical north striking vein, (the Steve Vein) and a second vein which also strikes northerly but dips  $60^{\circ}$  west (the Connie Vein). Sample results from five continuous chip samples across the Steve Vein and from five continuous chip samples across the Connie Vein are given in Table III and the locations shown on Figure 7. Both of these veins consist of altered rock containing bands or stringers and lenses of sulphides up to eight centimeters thick in zones that are up to two meters wide.

Some altered rock occurs in the loose rock and talus of the small pass above the exposures of the Connie Vein and numerous pieces of completely leached white rock occur slightly down slope and on strike (Sample D26-R). This sample assayed 1.22 oz/ton Ag and 0.003 oz/ton Au.

In the small pass on strike to the south of the exposed parts of the Steve Vein (at the 1900-meter elevation station) is a small amount of altered rock in the loose rubble. Thus the Steve Vein either pinches out before it reaches this elevation or it is obscured by the rubble in this little pass. However, on strike to the south, about 80 meters from the ridge crest is an exposure of altered rock which is on strike with the Connie Vein and also on strike with the Steve Vein. This should be the place of intersection of the two veins. This altered rock has been trenched over a width of about ten meters and in the uppermost trench a continuous chip sample over 11.5 feet (3.5 meters) assayed 32.5 oz/ton Ag and 0.001 oz/ton Au.

TABLE III  
MOUSE PROSPECT

Steve Vein

<u>Site</u>		<u>Width (feet)</u>	<u>Silver (oz/ton)</u>	<u>Gold (oz/ton)</u>
1		3.3	153.4	0.031
2		7.0	178.2	0.475
	including	1.5	691.2	1.986
3		4.3	49.4	0.122
	including	1.0	187.8	0.439
4		8.0	27.9	0.027

Connie Vein

<u>Site</u>		<u>Width (feet)</u>	<u>Silver (oz/ton)</u>	<u>Gold (oz/ton)</u>
1		2.46	207.4	0.022
2		5.3	340.2	0.026
	including	0.8	1408.7	0.115
3		5.1	3.8	0.01
4		5.1	15.4	0.044

Examinations of polished thin sections were made by Dr. Jeff Harris of a specimen from the high grade site on the Connie Vein and from the high grade site on the Steve Vein. Both veins consist of silicified breccia of a felsic volcanic. Mineralization occurred in three stages: arsenopyrite and minor pyrite in stage I; sphalerite, galena, minor chalcopyrite, minor tetrahedrite and ruby silvers in stage II; and late hydrothermal stage III with native sulphur and minor argentite. Dr. Harris's report is appended.

One should note the easterly-trending cross fault that slightly offsets the Steve Vein. The sampling was done below this fault in a steep gully. Immediately above the fault snow covered the vein; however a knot of mineralized rock occurs along the cross fault between the lower sampled part of the Steve Vein and the projected upper part of the Steve

Vein. Also just below the cross fault, the Steve Vein is thicker and higher grade than it is away from the cross fault. Thus it is possible that this cross fault is pre ore and acted as a damming control for mineralization along the Steve Vein.

A number of other structures on both the north and south sides of this ridge have some mineralization. A grab sample a short distance east of the Steve Vein from an unexplored structure (Sample D16) assayed 72.3 oz/ton Ag and 0.174 oz/ton Au. Another wider altered place to the west of the Steve Vein (Sample D36) assayed 0.72 oz/ton Ag and 0.04 oz/ton Au. Other structures have been noted along the ridge and some of these have precious metal values.

#### The West Vein System

The West Vein System consists of a north-south zone of parallel and sub parallel veins and mineralized structures which has been traced for over 400 meters along the west side of the mountain, just above MacAuley Creek. This zone extends to the overburden on the south and to the north. The overall width of the exposed vein system is about 130 meters; however subsidiary veins could also extend an unknown distance under the overburden to the west.

The cliffs east of the vein system are composed of grey, hard, glassy tuffaceous rock. This is underlain and probably intruded by a rusty-weathering white felsite. Small dike-like projections of this underlying felsite intrusion extend short distances up into the overlying grey volcanic rock. Also in places the grey volcanic rock is cut by persistent vertical felsite dikes.

The West Vein System consists of one strong zone exposed in the volcanic rocks plus smaller parallel or intersecting subsidiary veins which occur within the volcanic rock and extend into the adjacent underlying felsite.

The structures consist of altered rock, silicified in places, along fracture zones. These fracture zones contain narrow vertical veins of arsenopyrite mineralization which can form up to 50% of the vein over widths of up to one meter. Small concentrations of galena occur occasionally on the outer parts of these mineralized structures. The altered volcanic host rock can also contain little stringers of galena or arsenopyrite. It weathers an orange colour from the minor disseminated pyrite.

The volcanic rocks of the West Vein System are fairly resistant and thus the mineralized veins weather out to form small vertical-sided troughs or guts.

In 1973 chip samples were taken across the arsenopyrite veins and the adjacent altered volcanic rocks in 17 places and these were analyzed for lead, silver, and gold. Values in most cases were low for all metals, even in places of abundant arsenopyrite. A few narrow widths with some galena do contain silver and gold. Mineralization is mainly Stage I.

Miscellaneous Veins

Kennco prospecting in 1981 disclosed numerous other showings, especially mineralized float, in the area. One of these, called the Jake, occurs in the cliffs southeast of the West Vein System. Three assays of chalcedonic vein are quoted in the Kennco report. They include:

<u>Width</u> <u>(m)</u>	<u>Cu</u> <u>(%)</u>	<u>Pb</u> <u>(%)</u>	<u>Zn</u> <u>(%)</u>	<u>Ag</u> <u>(OPT)</u>	<u>Au</u> <u>(OPT)</u>
2.5	0.022	0.66	0.48	1.39	0.410
3.3	0.013	0.02	0.04	0.11	0.002
0.6	0.246	12.25	0.62	17.5	0.190

Two pieces of float picked up in 1971 could have come from this vein. The galena-rich specimen taken off the talus southeast of the West Vein System assayed 15 ounces of silver and 0.92 ounces of gold per ton. A scorodite-rich specimen from the same locality assayed 10 ounces silver and 0.29 ounces gold per ton.

No work was done on the West Vein System or the Jake showing in the 1988 program.

CONCLUSIONS AND RECOMMENDATIONS

1. Precious metal mineralization is widespread in the central parts of the Bennett Lake Cauldron Complex; most of the mineralized structures occur on the ground controlled by Adastral Resources Ltd.
2. Of the many showings, mapping has been restricted to three showings, the West Vein System, the Discovery prospect, and the Mouse prospect.
3. Polished section worked by Dr. Jeff Harris on specimens from the Connie Vein and the Steve Vein of the Mouse prospect indicate the probability of three stages of mineralization. The first stage included mainly arsenopyrite and some pyrite; the second stage included galena, sphalerite, and ruby silvers; the third stage included some argentite and some sulphur. Succeeding stages of mineralization become increasingly



epithermal or lower temperature, possibly also corresponding to reduced vertical ranges of deposition. In addition to these varying stages of mineralization in the different prospects, there could also be some control by differing host rocks in these horizontal volcanic formations.

4. Of the three prospects mapped, each one has differing emphasis on the various stages of mineralization. The West Vein System was mainly the first stage which carried negligible precious metals. The Mouse prospect has three stages of mineralization with mainly the first and the second stage and with minor argentite from the third lower temperature stage. The Discovery prospect, at surface, appears to have had mainly the first stage and the third stage of mineralization with little or none of the tellurides and sphalerite and galena found in the second stage.

5. Drilling on the Discovery prospect failed to intersect the high grade values that have been noted in surface exposures. This could indicate that the drill holes are below the level of original boiling of the hydrothermal solutions and its related bonanza precious metal mineralization.

Petrographic studies should be done to identify alteration zoning in an attempt to establish the merits of deeper drilling to search for a deeper base metal-precious metal vein.

6. The Discovery prospect also differs considerably in structure from the West Vein System and the Mouse Veins in that the Discovery is a wide zone of abundant faulting and alteration with high grade values exposed only along the one side. This contrasts with the specific sharp veins in the Mouse prospect where alteration is restricted to the veins and where mineralization and precious metal values appear to occur across the width of the veins.

7. On the Mouse prospect a number of mineralized structures are present. The best ones to date are the Steve Vein and the Connie Vein where good grade silver values occur across mineable widths. The mineralization width increases at intersections of other structures and should increase in width at the intersection of the Steve Vein and the Connie Vein. Mineralization in this system is exposed for a strike length of 200 meters and over a vertical range of 100 meters.

8. Road access for production should be simple as a bulldozer can readily move through the sparsely treed outwash deposits of the Wheaton River and Boudette Creek for 12 miles to within about five miles of the known mineralized structures. Beyond this the road would encounter some talus slopes and some rock outcrop. Thus, although access for production would be relatively simple for a Cordilleran area, access for exploration will be mostly by helicopter.

9. Because of the cold weather in July and August of 1988, the drainage in the small gully that crosses the Discovery prospect was insufficient to maintain the drilling and therefore a pumping problem ensued. In addition the late snow melt precluded placing the camp near the drill site and therefore the crews had to be mobilized twice a day with a helicopter based at the Omni camp, 14 miles to the north. This lack of ready access and the water problem greatly increased costs and time for the small drill program on the Discovery prospect.

10. In preparation for the 1989 drill program, an access road should be constructed from the camp site and water source to the drill sites. This would be done by an excavator, walked to the property up Wheaton River and Boudette Creek. The workers could then use a small 4-wheel drive recreation vehicle to gain access to the work sites. This will also facilitate installation of the water line. The excavator would then be used for exposing the mineralized structures on the talus covered south slope.

11. The recommended work is divided into four phases; Phase I involves excavator work for road access and trenching; Phase II is a 2000-foot (610 meters) drill program; Phase III is a 2500-foot (820 meters) drill program; and Phase IV involves additional flotation tests and preliminary feasibility estimates. Phase IV would be done after the field program and would follow either Phase II or Phase III, depending on the amount of drilling completed in 1989.

Phase I - Excavator, Prospecting

Camp construction	\$ 2,000
Excavator for roads and stripping	28,000
Geology and prospecting	7,000
Helicopter	9,000
Travel	2,000
Freight, Transportation	2,000
Food, Supplies, Rentals	3,000
Misc. and Contingency	<u>7,000</u>
Total	\$ 60,000 =====

Phase II - Drilling 2000 Feet

Direct drill costs (\$35/foot)		\$ 70,000
Extra drill costs (water line, mob, consumables) 30%		21,000
Helicopter (mob, demob, install water line, service)		40,000
Drill pads		15,000
Geologist @ \$250 for 40 days		10,000
Helper @ \$185/day		6,000
Engineering, consulting, report		17,000
Travel		3,000
Freight/Transportation		2,000
Rentals		2,000
Assays		14,000
Food and camp supplies		7,000
	Sub Total	<u>\$207,000</u>
Miscellaneous and contingency		<u>24,000</u>
	Total	\$231,000 =====

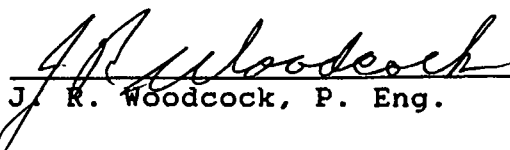
Phase III - Drilling 2500 Feet

Direct drill costs		\$ 87,500
Extra drill costs 15%		13,500
Helicopter for servicing		25,000
Drill pads		10,000
One man @ \$185/day		4,500
Geologist for 40 days		10,000
Engineering		12,000
Travel		2,500
Freight/Transportation		2,000
Rentals		2,000
Assays		7,500
Food		6,000
Supplies		1,000
	Sub Total	<u>183,500</u>
Contingency		<u>21,500</u>
	Total	\$205,000 =====

Phase IV - Post Field Program

More flotation tests		\$ 4,000
Preliminary feasibility data		<u>2,000</u>
	Total	\$ 6,000 =====

JRW:me

  
 J. R. Woodcock, P. Eng.



APPENDIX I

PETROGRAPHIC REPORT



*Harris*  
**EXPLORATION  
SERVICES**

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6

TELEPHONE (604) 929-5867

Report for: Dick Woodcock,  
J.R. Woodcock Consultants Ltd.,  
806-602 West Hastings St.,  
Vancouver, B.C.

Job 88-126

October 19th, 1988

Samples

2 mineralized specimens from the McCauley Property were submitted for mineralogical study.

The samples were un-numbered but, according to verbal information, the larger sample (arbitrarily designated A) comes from the Steve Vein, and the smaller one (designated B) from the Connie Vein. Both were prepared as polished thin sections: corresponding slide numbers are 88-335X and 336X respectively.

In order to complement the mineralogical observations, the small cut-off portions - representing the closest possible approximation to the material observed in the polished thin sections - were submitted for Au and Ag assay (by Chemex Labs). Results were as follows:

Steve sample (slide 88-335X)	Au 0.114 oz/ton,	Ag 39.1 oz/ton
Connie sample (slide 88-336X)	Au 0.060 oz/ton,	Ag 1727.1 oz/ton

In addition, the polished section of the Connie sample was submitted for scanning electron microprobe analysis, to provide confirmation of identification of the various Ag-bearing phases observed in the optical study.

Summary:

The two samples show very similar petrographic features. Both are the result of wholesale silicification and assimilation of brecciated host rock by quartz, with associated sulfide mineralization dominated by arsenopyrite. Accessory sulfides are sphalerite and galena, with minor pyrite.

Principal differences between the two samples (as represented by the polished thin sections) are that the sample from the Connie Vein contains 6 - 7% of recognizable silver minerals - principally ruby silvers. By comparison, the sample from the Steve Vein contains relatively abundant galena, but no recognizable silver minerals. This difference is clearly reflected in the assays.

The observed abundance of silver minerals in Slide 336X approaches that required to explain the extremely high assay value of 1727 oz/ton. The lack of specific silver minerals in 335X (except galena - of probable argentiferous type - and a trace of tetrahedrite) fails to explain the 39 oz/ton Ag found in assaying the corresponding cut-off piece from this sample. Probably this specimen exhibits small-scale mineralogical heterogeneities in terms of the distribution of Ag minerals: this correlates with the reported occurrence of similar high-grade intersections in the Steve Vein as in the Connie.

In view of the close resemblance in the mineralogy of the two slides, it seems reasonable to conclude that the mineralization in the two veins is of essentially the same type, with bonanza silver values being highly localized within the veins.

Using Slide 88-336X as an example of the high-grade variant, the silver minerals occur in reasonably coarse-grained, well-segregated form - such that physical liberation by grinding should not be a problem. Assuming that flotation conditions can be devised to achieve quantitative rejection of arsenopyrite, a highly argentiferous - and readily saleable - Pb/Zn concentrate could be produced.

It is unlikely that the Ag could be extracted from this material by cyanidation. Ruby silvers are generally not leachable, and the presence of substantial amounts of native sulfur (a strong cyanicide) in the ore would constitute an additional problem.

Assays indicate the presence of low but significant Au values, but no gold could be found in the microscopic examination, so its mineralogical association is not known. This will become apparent in the course of metallurgical test work. It is to be hoped that a good proportion of the gold will report with the Pb-Zn-Ag concentrate rather than follow the arsenopyrite.

The paragenesis exemplified by these samples appears to be arsenopyrite and pyrite (earliest), followed by sphalerite, galena and ruby silver, with argentite and native sulfur as the latest stage.

The samples lack any evidence of oxidation. Limonite is not seen, minor chalcopyrite shows no alteration, and arsenopyrite is also essentially fresh. Much of the scorodite noted by John Payne in previous work could have been native sulfur.

There is no reason to believe that the ruby silvers are anything other than primary. They appear contemporaneous with galena and sphalerite. The argentite, by comparison, is clearly developing by marginal replacement of the other Ag minerals, and sometimes shows a close association with the native sulfur, where the latter is in contact with ruby silvers or galena.

The native sulfur and argentite are tentatively interpreted as representing a final, high-level, S-rich/metal-poor hydrothermal (fumarolic?) phase which has caused minor redistribution of the previously deposited metals. There is no evidence that it is related to oxidation and/or secondary enrichment or is, in itself, the cause of the high Ag values.

The extension of the Ag values in depth will obviously be governed by the usual P-T/zonation factors and by the geometry of the plumbing system, as regards the access of particular pulses of mineralizing solutions. There is no evidence from the present study, however, to predict any sudden diminution with depth.

Individual petrographic descriptions and photomicrographs are attached.

A handwritten signature in cursive script, appearing to read "J.F. Harris".

J.F. Harris Ph.D.

## Sample A: Steve Vein (Slide 88-335X)

### Estimated mode

Altered host rock	
fragments	33
Quartz	12
Sericite	4
Arsenopyrite	34
Galena	9
Sphalerite	6
Chalcopyrite	1
Tetrahedrite	trace
Pyrite	trace
Native sulfur	1

This sample consists of a strongly altered rock of probable felsic volcanic origin. This has been brecciated and cemented - with partial replacement - by quartz and abundant polymetallic sulfides.

The host rock remnants are in the form of angular fragments, 1 - 10mm in size. They consist of turbid felsitic material - probably representing a partially devitrified glass. This is pervasively dusted with very fine-grained sericite, and shows varying degrees of diffuse silicification.

Quartz, as anhedral mosaics of grain size 0.05 - 0.5mm, forms a network of veinlets, pockets and diffuse replacements throughout the brecciated host. Selvedges of sericite are sometimes present at the quartz/host rock contacts.

Sulfides form dense clusters and impregnations throughout the quartz.

The predominant constituent is arsenopyrite. This occurs as interconnected clumps of euhedral grains, 0.1 - 1.0mm in size.

Galena and sphalerite are prominent accessory sulfides. They form irregular patches, 0.05 - 1.0mm or more in size, intergrown with the arsenopyrite, often as cores to arsenopyrite clumps (or pockets fringed by arsenopyrite crystals).

Locally the accessory sulfides - especially galena - show penetrative or cementing relationships with respect to the arsenopyrite, suggesting a later (or overlapping) position in the paragenesis.

Chalcopyrite is a minor component, occurring as small inclusions, intergrown with galena or independent, within arsenopyrite. It also occurs extensively as minute exsolution blebs, oriented laths and small segregations, 1 - 50 microns in size, throughout the sphalerite.

Sample A cont.

Galena and sphalerite are generally well-segregated, though some areas of coarse, emulsion-type intergrowth, on the scale 100 - 500 microns, are seen.

Pyrite and tetrahedrite are trace components. The first occurs as scattered subhedra, intergrown with arsenopyrite and often showing core replacement by galena or sphalerite. The second forms rare tiny inclusions and coarser marginal segregations in galena.

Localized hairline veinlets and intergranular threads of native sulfur are seen, chiefly in association with sphalerite and galena, but sometimes as peripheral flecks and partial rims to arsenopyrite (at the contact with quartz).

**Sample B: Connie Vein (Slide 88-336X)**

Estimated mode

Quartz	35
Altered host rock remnants	2
Arsenopyrite	42
Scorodite	1
Sphalerite	8
Native sulfur	3
Galena	1
Pyrite	2
Pyrargyrite	2.5
Pearcite	2.5
Argentite	1
Tetrahedrite	trace
Chalcopyrite	trace

This is a strongly mineralized sample consisting of an intimate impregnation of a totally silicified breccia by sulfides.

The gangue is largely quartz, much of it as an aggregate of tiny, elongate, prismatic crystals, sometimes with a diffuse interstitial phase of wispy, brownish material. This clearly represents the product of pervasive silicification of some pre-existing rock. Occasional, distinct, angular fragments of more or less intensely silicified brownish felsite or altered glass are also seen.

Irregular pockets of clear granular quartz occur throughout the silicified matrix.

Sulfides are principally arsenopyrite. This occurs as interconnecting clumps of subhedral grains, 0.05 - 1.5mm or more in size. These range from massive, aggregates, up to several mm in extent, to areas of intimate dissemination of tiny grains, 0.05 - 0.2mm in size, in a fine-grained silicified matrix. Scattered patches of subhedral pyrite are intergrown with the arsenopyrite.

Sphalerite is the principal accessory. It occurs as small patches, 0.1 - 0.5mm in size, within arsenopyrite or, less commonly, in gangue. The sphalerite is a deep red-brown (marmatitic) variety, typically containing micron-sized exsolution blebs of chalcopyrite.

A striking feature of the sphalerite is that it consistently shows strong rims and veinlet networks of a high relief, locally colloform material which is shown, by SEM microanalysis, to be native sulfur.

Sample B cont.

Where these veinlet networks pass from sphalerite into the adjacent arsenopyrite, the infilling changes to scorodite or, more commonly, to an irregular tracery of empty fractures. Local development of crustified pockets and micro-veinlets of scorodite is occasionally seen in quartz adjacent to arsenopyrite.

This sample contains several well-defined Ag-bearing phases. The two commonest of these are a blue-grey ruby silver, showing strong overall orange-red internal reflections - probably pyrargyrite; and a less blue grey phase, strongly anisotropic, with a lanceolate or parallel aggregate texture and occasional dark red internal reflections - probably pearcite.

Argentite and tetrahedrite (almost certainly an argentiferous variety) are less abundant constituents.

These identifications are supported by SEM microprobe analyses. The pyrargyrite yields peaks of Ag and lesser Sb and S; the pearcite yields peaks for Ag, S and minor Sb and Cu; the argentite yields peaks for Ag and S. None of the Ag minerals contains As.

The ruby silvers mainly form rather discrete pockets, up to 1mm or more in size, within arsenopyrite. Sometimes they occur in simple intergrowth with each other and/or with galena. Sometimes they contain small inclusions of arsenopyrite.

Ruby silvers are occasionally seen as exsolved blebs and laths in galena and, with argentite, as clusters of inclusions (core replacements?) in pyrite.

Argentite principally forms partial rims and veinlets in the ruby silvers, apparently slightly later in the paragenetic sequence, and tending to replace them.

Tetrahedrite forms marginal segregations in galena, and occasional, more extensive patches of intimate intergrowth with chalcopyrite.

## PHOTOMICROGRAPHS

All photos are of Slide 88-336X (Connie Vein), and are taken by reflected light (except where otherwise stated) at a scale of 1cm = 85 microns.

**Neg. 134-0** Shows the two principal Ag minerals in simple contact. The bluer phase (left) is pyrargyrite and the greyer one (right) is probably pearcite. The small, lighter grey strip on the contact (bottom left) is galena. Argentite (darker grey, poorly polished; e.g. upper right) is a marginal development to the ruby silver, associated with native sulfur (unpolished, black). Field also includes minor arsenopyrite (creamy white). Some black areas are polishing imperfections.

**Neg. 134-1** Same field as 134-0 but cross-polarized light. Shows the strong overall red translucency of the pyrargyrite, and the anisotropy of the pearcite, revealing a lamellar/lanceolate grain structure. Note occasional isolated red internal reflections in the pearcite. Arsenopyrite shows blue/olive anisotropic colours.

**Neg. 134-2** Similar subject to previous photo pair. Bluish pyrargyrite in simple intergrowth with greyer pearcite. Note strings of fine-grained (re-crystallized?) arsenopyrite along the contact (centre). Field also includes minor argentite (grey, similar to pearcite, but strongly pitted; right) as partial rim to pyrargyrite, along contact with quartz (very dark grey/black). Arsenopyrite (creamy white) has a little interstitial galena (light grey) at top right. Area at upper left (medium dark grey with tiny yellow flecks) is sphalerite, with exsolved chalcopyrite blebs. Black zones traversing the sphalerite - and extending into the silver minerals - are native sulfur (soft, and partly plucked in polishing).

**Neg. 134-3** Same field as 134-2, but cross-polarized light. Red translucency readily distinguishes the pyrargyrite. Native sulfur recognizable in the sphalerite area (isotropic, black) by its speckling of whitish internal reflections. It can also be seen as pockets and veinlets in the pyrargyrite and demarking the contact with argentite (e.g. upper right, adjacent to the white area of quartz).

**Neg. 134-4** Shows euhedral pyrite grain (cream, left) in contact with pearcite (grey, centre). Note minor marginal replacement of pyrite by pearcite, and cluster of inclusions (core replacements?) of pearcite and galena in the pyrite. Lighter cream-coloured phase is arsenopyrite. Darkest grey is quartz, sometimes showing euhedral aggregate texture (bottom).

**Neg. 134-25** Transmitted light. Shows Fe-rich sphalerite (translucent, dark red-brown) veined and partially replaced by native sulfur (yellowish, high relief, translucent, finely granular). Crustified texture of the sulfur locally recognizable. White is quartz.



YRG-5J9  
△ 1957.2

4  
△ 1929

HELIPAD 5  
△ 1932.6

6  
△ 1918.6 DDH-2,3,4  
11  
△ 1901.8  
1906.6  
DDH-1

PINNACLE x  
12  
△ 1870.7  
1877.2

9  
△ 1870.9

8  
△ 1877.6

13  
△ 1874.1

7  
△ 1900.4

14  
△ 1854.0

10  
△ 1864.9

15  
△ 1840.15

16  
△ 1820.1

17  
△ 1821.76

DDH 5,6,7

18  
△ 1813.84

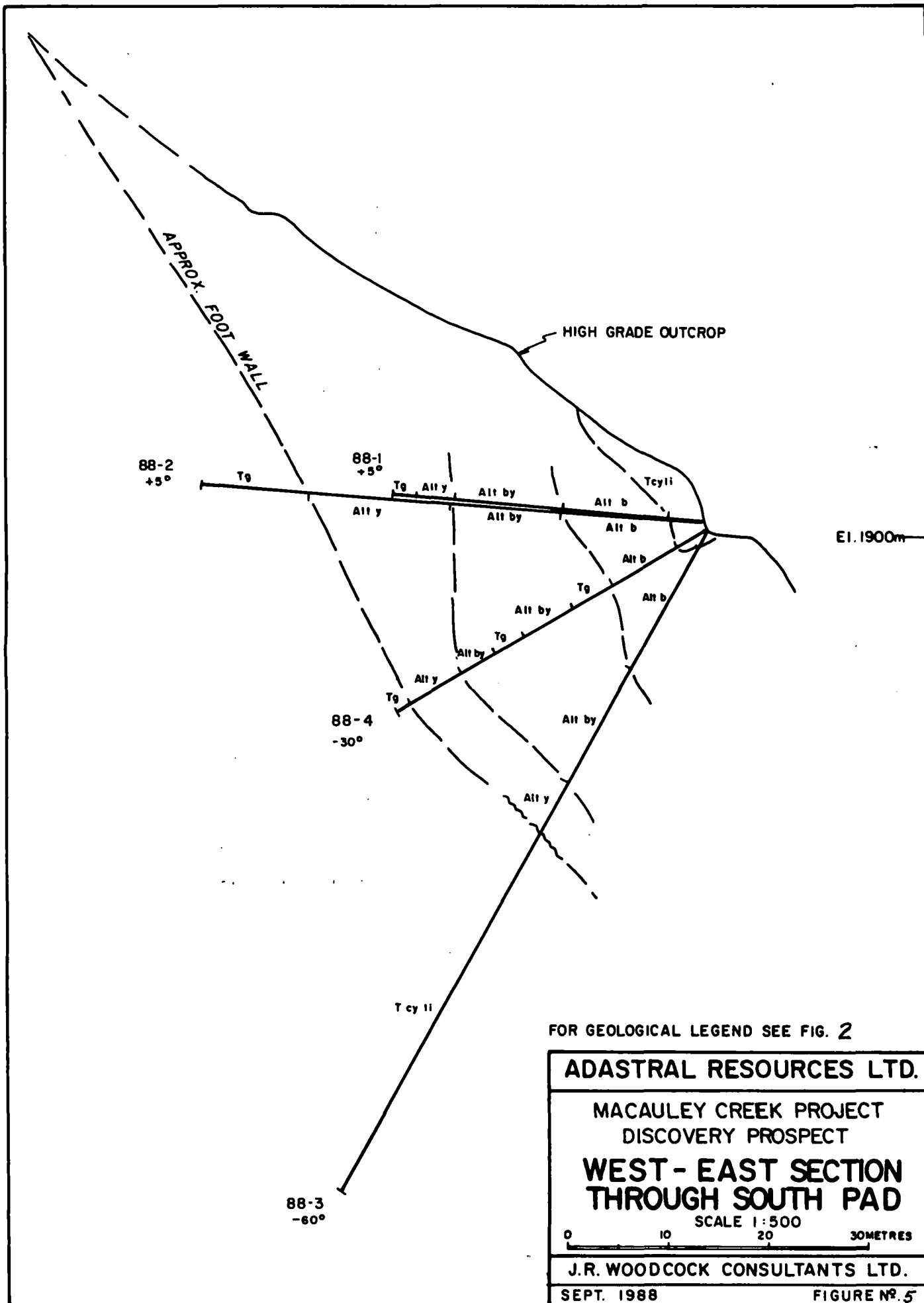
19  
△ 1799.06

**LEGEND**

- 17  
△ 1821.76 Survey No.  
Survey station, elevation in metres
- Drill hole



ADASTRAL RESOURCES LTD.	
MacAULEY CREEK PROPERTY	
<b>DISCOVERY PROSPECT</b>	
N.T.S. 105D-3	YUKON
0 10 20 METRES	
J.R. WOODCOCK CONSULTANTS LTD.	
NOV. 1988	FIGURE No. 4



88-2  
+5°

88-1  
+5°

88-4  
-30°

88-3  
-60°

HIGH GRADE OUTCROP

APPROX. FOOT WALL

EI. 1900m

FOR GEOLOGICAL LEGEND SEE FIG. 2

**ADASTRAL RESOURCES LTD.**

MACAULEY CREEK PROJECT  
DISCOVERY PROSPECT

**WEST - EAST SECTION  
THROUGH SOUTH PAD**

SCALE 1:500

0 10 20 30 METRES

J.R. WOODCOCK CONSULTANTS LTD.

SEPT. 1988

FIGURE NO. 5

APPROX. FOOT WALL OF ALTERATION ZONE

HIGH GRADE PINNACLE

debris

HANGING WALL

88-7  
+20°

Alt

Ig dg

Ig dg

Alt

Ig dg

T wld

88-5  
-30°


T cy li

T li as

Ig g

88-6  
-80°

LEGEND

- Ig dg Ignimbrite, dark grey
- Ig g " , green grey
- T wld Welded lapilli tuff
- T li as Lithic, ash tuff
- T cy li Grey crystal, lithic tuff
- Tg Green grey tuff
- Alt Altered, mineralized zone
- Alt b " , brown oxides
- Alt y " , yellow "
- Alt by " , mixed "
-  Sulfide stockwork

ADASTRAL RESOURCES LTD.

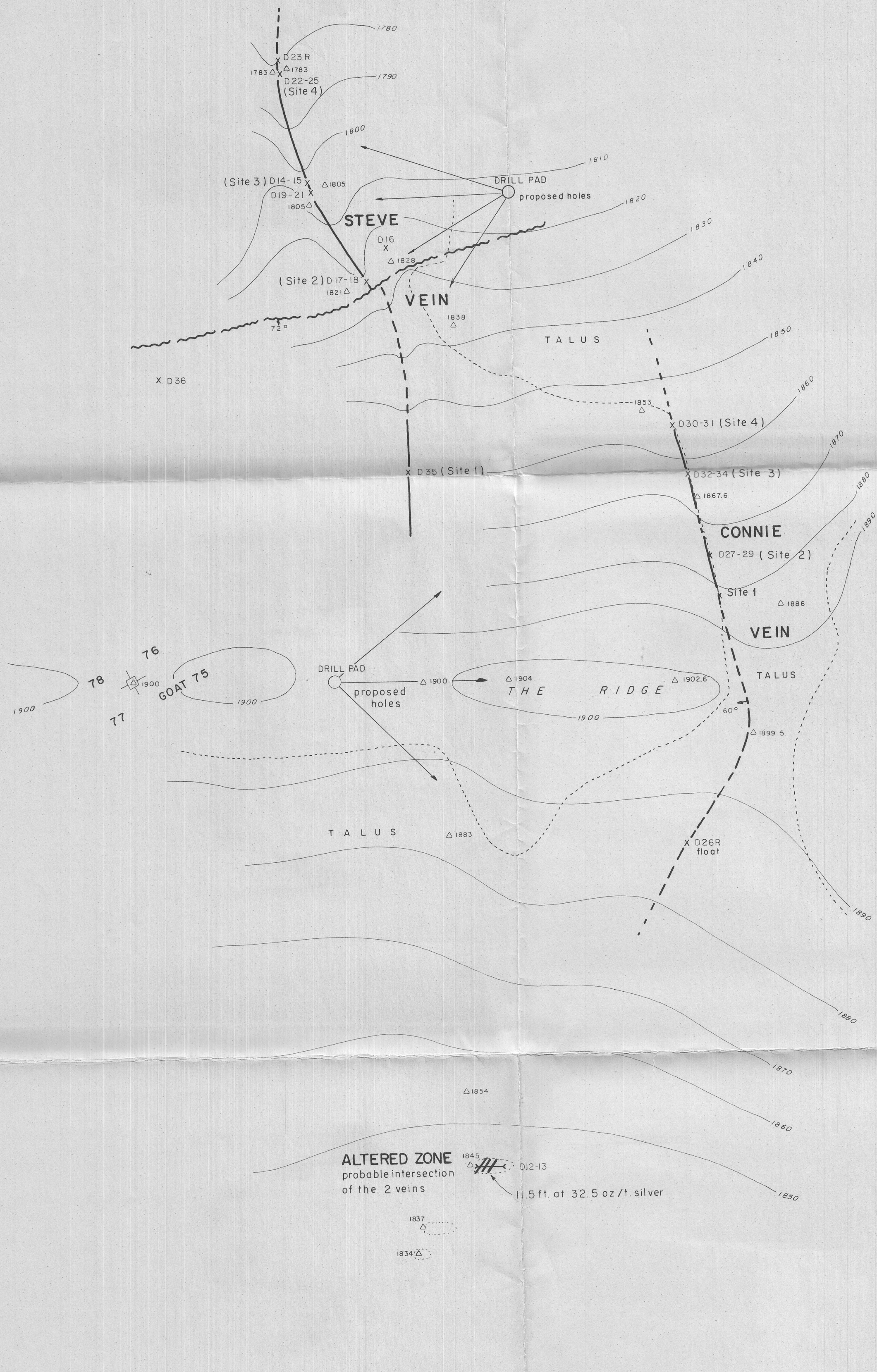
MACAULEY CREEK PROJECT  
DISCOVERY PROSPECT  
WEST - EAST SECTION  
THROUGH NORTH PAD

SCALE 1 : 500  
0 10 20 30 METRES

J. R. WOODCOCK CONSULTANTS LTD.

SEPT. 1988

FIGURE NO. 6



**LEGEND**

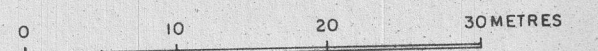
- D26 X Sample location & No.
- △1853 Survey point with elevation in metres
- - - - - Outcrop area
- - - - - Vein - exposed, projected
- 1810 Contour interval 10m. - representational
- Claim post



ADASTRAL RESOURCES LTD.

MACAULEY CREEK  
MOUSE PROSPECT

SCALE 1:500



J. R. WOODCOCK CONSULTANTS LTD.

AUGUST 1988

FIGURE No. 7