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R E P O R T

ON PROGRAMME OF

PELTY MINERALS SYNDICATE

Submitted to Syndicate Members

November 24, 1962

A. E. Aho  
Syndicate Manager

CONTENTS

	<u>Page</u>
INTRODUCTION . . . . .	1
GENERAL CONDITIONS . . . . .	1
Location and Access . . . . .	1
Topography and Overburden . . . . .	2
Timber . . . . .	2
Water . . . . .	2
Climate . . . . .	2
Facilities . . . . .	2
Costs . . . . .	2
BACKGROUND . . . . .	2
PROPERTY . . . . .	3
MINERALIZATION . . . . .	4
White Creek . . . . .	4
Seagull Lake . . . . .	9
McConnell River . . . . .	11
CONCLUSIONS . . . . .	17
RECOMMENDATIONS . . . . .	17

MAPS

Figure 1 Mineralization and claims at Upper White Creek, Y.T. . . . .	5
Figure 2 Plan of Mineralized Float Location, Rain No. 7 Claim . . . . .	6
Figure 3 Plan of Shorty Showing . . . . .	7
Figure 4 Map showing Cone and Tet Claims . . . . .	In Back Cover
Figure 5 Mineral Showings on Cone Claims . . . . .	15
Figure 6 Cross Section on Main Showing on Cone Claims . . . . .	16

PHOTOGRAPHS

Photo No. 1 Boulders of galena in float locality on Rain No. 7 & 8 Claims . . . . .	8
Photo No. 2 Trenches across massive pyrrhotite and pyrite with galena, Shorty Showing . . . . .	8
Photo No. 3 3½ feet of massive galena, 50 oz/ton silver, Tet No. 9 Showing . . . . .	10

## SUMMARY

Pelly Minerals Syndicate, formed to prospect the Ketz River district of south central Yukon in 1962, has been successful in making a promising new gold-silver-lead discovery and also in acquiring two other British Yukon Exploration properties, one of which contains considerable float suggesting possibility of a sizeable low-grade silver-lead deposit.

It is proposed that <sup>subject to examination of the discoveries,</sup> \$100,000 be allotted to next season's programme to consist of: (a) a prospecting party and a geologic mapping party to continue covering the favourable district for an additional 2 year period, and (b) stripping, trenching and drilling on the new gold-silver-lead discovery and bulldozer trenching on the main British Yukon Exploration property.

## INTRODUCTION

Current increases in prices of silver and an attractive future for both gold and silver have stimulated exploration for these metals.

The Ketz River district, discovered in 1954, is a relatively unprospected and undeveloped district of silver and gold mineralization in the Pelly Mountains of south central Yukon.

A promising discovery has been made in this district by Pelly Minerals Syndicate and another promising property has been acquired.

## GENERAL CONDITIONS

### Location and Access (See Geologic Map of Yukon 1048A)

The Ketz River district is an oval shaped mineral bearing area, 30 miles NW to SE and 12 miles wide, centered at about latitude  $61^{\circ}35'$  N and longitude  $132^{\circ}16'$  W on the Quiet Lake map sheet (105F), about 110 air miles NE of Whitehorse, in the Watson Lake Mining District, Yukon.

The Pelly Minerals Syndicate showings can be reached best by flying from Whitehorse to Grayling or Seagull Lakes. The Rain and Grey claims on the south side 8 miles up White Creek can be reached by hiking up White Creek about 12 miles east from Grayling Lake, or about 10 miles south from the end of the road up Ketz River. The Tet claims 2 miles due west of lower Seagull Lake can be reached by hiking 3 miles west from the lake or 10 miles east from the Canol road at Groundhog Creek. The new gold-silver-lead discovery (cone claims), situated at the headwaters of McConnell River 5 miles SE of lower Seagull Lake, can be reached by hiking 6 miles from Seagull Lake or 10 miles from Grayling Lake.

Road access to the district would be from three possible routes depending on developments: (a) 10 to 20 miles south or west

from the Ketz River road, (b) 28 to 30 miles east from the Canol road at Upper Sheep Creek or, (c) northeast from Quiet Lake up Nisutlin River 40 miles to the White Creek claims and 45 miles to the Cone claims.

#### Topography and Overburden

Topography in the area as a whole is mountainous with the White Creek showings situated at about 3700 feet elevation on steep to gentle slopes, the Tet showings situated at about 5800 feet elevation on steep to moderate slopes, and the Cone showings located at 5000 feet elevation on a steep slope.

Overburden in each area is a few feet in depth and consists of talus with permafrost.

#### Timber

Local spruce and balsam timber of medium to poor quality can be obtained in most of the nearby valleys; better timber exists down Nisutlin River Valley.

#### Water

Water for drilling would be available at most of the showings early in the season but later on, only Rain No. 7 showing would be close to water. Supplies adequate for drilling lie within 2 miles of each showing.

#### Climate

Climate is somewhat rainier and snowier than average for the Yukon plateau and snow covers the area from late September until mid-June. However, this would present no unusual difficulties to year-around underground operation.

#### Facilities

No facilities or roads exist in the area, the closest settlement is Ross River 30 miles due north; the distance to Whitehorse, capital of the Yukon, is about 180 miles by road from the Canol Road.

#### Costs

Costs would probably be less than those in the Mayo silver district because of different rock conditions and lesser transportation distance.

#### BACKGROUND

Low grade silver-lead mineralization is first reported to have been discovered in the Ketz River district about 1948, but in 1954 a high grade discovery made near the river led to the first

staking rush. This activity was followed by two to three seasons of sporadic prospecting while the original option, taken up by Conwest Exploration, was dropped.

A gold discovery was made at this time by Conwest prospectors, the showing was drilled, and is being held.

Between 1954 and 1957 several silver-lead discoveries were made by Harry Versluce, prospecting for British Yukon Exploration under the writer's direction. Limited manual trenching was done on the White Creek showings, the Seagull Lake showing (Tet claims) was drilled, and in 1957 these two properties were placed in good standing for 5 years. In 1960 and 1961 Ted Case (Ketzakey Silver Mines) built an access road to the original Ketzakey River discovery. With improved access and improved economic outlook for silver and gold, the writer organized Pelly Minerals Syndicate in 1962 and Harry Versluce resumed prospecting the district with James Cox as partner and Taylor Magundy as packer.

A promising new gold-silver-lead discovery was made on September 3 at the end of the 1962 season, and three other silver-lead showings have been acquired from British Yukon Exploration Company Limited.

PROPERTY ( See Quiet Lake map 7-1960 )

Pelly Minerals Syndicate owns three properties as follows:

<u>Location and Name</u>	<u>Grant No.</u>	<u>Expiry Date</u>
① At White Creek: Rain 7 and 8 Grey 1-16	79545-79560	July 19, 1963
② At Seagull Lake Tet 3, 5, 8 and 9 Rio 1-8	72817, 72819, 72822, 72823 79561-79568	July 19, 1963
③ At McConnell River Cone 1-16	79878-79893	October 9, 1963

Note: \*British Yukon Exploration Co. Ltd. holds a non-assessible 10% interest in the White Creek and Seagull Lake properties.

## MINERALIZATION

### White Creek (See Figure 1)

Several silver-lead showings occur along the south side of White Creek where a band of south dipping Lower Cambrian limestone is cut at intervals by mineralized northwest faults or fractures. The limestone is overlain and underlain by phyllitic rocks of lesser competence and the silver-lead showings tend to occur near the top of the limestone section as if dammed by the overlying phyllite.

Mineralization consists of two types: (a) pyrite-pyrrhotite or siderite replacements of breccia zones with galena, and (b) siderite and quartz veins with galena and with or without silver-rich tetrahedrite. These two types tend to grade into one another.

On Rain No. 7 claim (see Figure 2 and Photo No. 1) in a low-lying forested area of overburden, numerous boulders of replacement-type siderite and pyrite-pyrrhotite mineralization occur as angular float over a sizeable area. Over a more restricted area, still several hundred feet across, these boulders carry galena from which a composite chip sample assayed 9.4 oz/ton silver and 12.8% lead. In one spot within the galena-bearing area one angular boulder up to 18 inches long contained abundant tetrahedrite which assayed 3.8% copper and 498 oz/ton silver. From the large amount of mineralized boulders found, it would appear that a sizeable deposit of the lower grade silver-lead mineralization might be found by trenching. Hand trenching to depths of a few feet in 1956 failed to reveal the source of this abundant float but bulldozer trenching may expose it in spite of probable permafrost which would slow down the trenching.

Lesser amounts of similar mineralization have been found about 1000 feet to the southwest and 2500 feet to the west.

About 4000 feet still farther east, the Shorty showing (see Figure No. 3 and Photo No. 2) consists of an irregular body of pyrrhotite and pyrite with sample lengths of 6.3 and 13.3 feet in two separate exposures apparently unconnected at surface but perhaps connecting at depth. Three channel samples and one sample of loose sulfide boulders averaged 11.4% lead, 7.9 oz/ton silver and .03 oz/ton gold. The shallow overburden could be easily stripped to determine the shape and size of the showing which may be a manto-like deposit localized at the top of the south-dipping limestone where it is cut by a northwest fault.

A few pieces of similar mineralization found on an overburden-covered hillside about 2000 feet to the east of the Shorty showing suggest another such showing. One of the pieces assayed 23.9% lead, 18.2 oz/ton silver and a trace of gold.

Other silver-lead showings occur up White Creek, and Verslucé has reported finding other signs of mineralization down the creek.



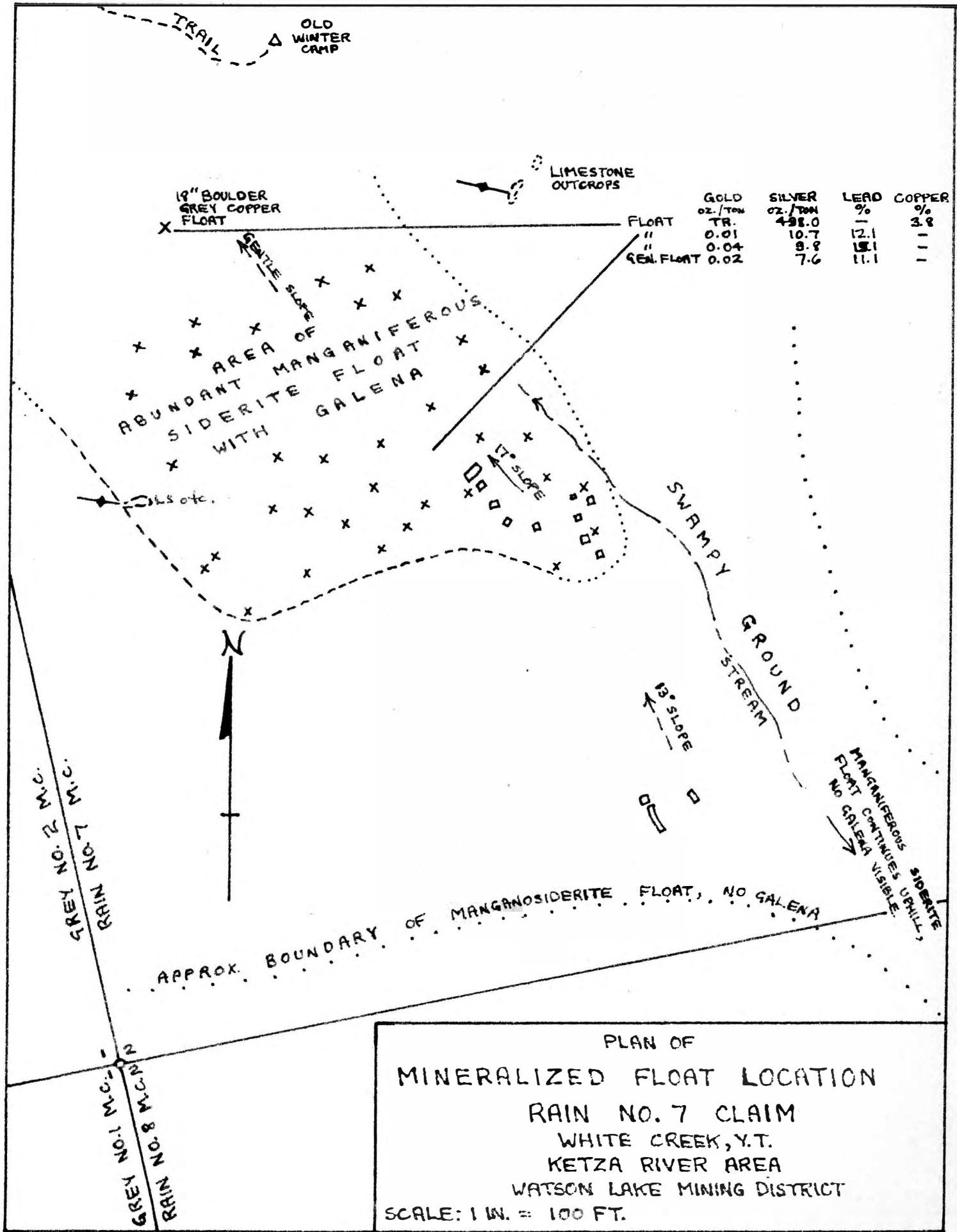


Fig. 2

RAIN NO. 13 MC  
LOCATION LINE

RAIN NO 14 MC.  
(GREY # 12 M.C.)

CREEK

SOME FLOAT AT INTERVALS  
FOR 100' ALONG HILLSIDE

25° SLOPE

////// SULFIDES  
- - - - ALTERED DIKE  
+ + + + LIMESTONE

PYRITIC, SIMILAR  
TO 55-31

SAMPLE NO.		GOLD OZ/TON	SILVER OZ/TON	LEAD %	COPPER
55-27	Float	0.02	9.6	13.1	—
55-30	6.3' channel	0.04	4.8	6.7	—
55-31	3.5' channel	0.04	10.0	15.5	—
55-32	19.3' channel	0.03	7.9	11.4	TR.

80  
DIKE

SHALL FAULT,  
2" CALCITE

60

SKETCH PLAN  
OF  
**SHORTY SHOWING**  
(LOCALITY 'B')  
WHITE CREEK, Y.T.

SCALE 1 IN. = 10 FT.

SEPT. 12/55

S.I.A. AND

Fig. 3

7.

Photo No. 1

Boulders of galena in float locality on Rain No. 7 & 8 claims.

Photo No. 2

Trenches across massive pyrrhotite and pyrite with galena,  
Shorty showing.

A dip needle or magnetometer survey over select localities may be useful in detecting the pyrrhotite-bearing silver-lead showings.

In view of the increased price of silver, the general trends to improved conditions and access, and particularly the amount of float on Rain No. 7 claim and the occurrence of silver-rich tetrahedrite, bulldozer trenching and other exploratory work are definitely warranted, especially on Rain No. 7 claim.

As is often the case, trenching may reveal more than suspected from surface float indications.

Seagull Lake (See Figure 4 and Photo No. 3)

On the Tet and Rio claims west of Seagull Lakes massive galena with tetrahedrite occurs with or without quartz in several vein zones that cut dolomite, limestone and slates. The main showing on Tet No. 9 claim is a vein up to 3.2 feet wide of massive galena assaying 50 oz/ton silver. It strikes N 12 to 20° E, dips 85 - 90° W, and has been traced about 75 to 100 feet along strike in dolomite. Two packsack diamond drill holes under it showed that it pinches out and is probably a lens localized near the upper contact of the dolomite. It is possible that this sulfide body could plunge to the north but even so, it is too small to be of much economic interest except possibly on a very limited scale.

On Tet No. 5 claim up to 100 lb. of massive galena of similar grade has been found. Trenching should reveal the source of this float.

Several other similar vein or float occurrences are known to the north and south.

The Tet and Rio claims warrant some closer examination in view of the number of vein occurrences even though the tetrahedrite in this locality is low in silver (4 oz/ton).

Photo No. 3

3½ feet of massive galena, 50 oz/ton silver,  
Tet No. 9 showing.

McConnell River (See Figures 4, 5 and 6)

The writer was notified of this new discovery in mid September by James Cox who had hiked out some 30 miles to the Canol road and thence to Whitehorse. Assays of specimens brought in showed a relatively low silver-lead ratio with little or no gold but the showing itself was reported to be impressive with a width of 25 feet and float traced for almost 300 feet. An attempt to get in by helicopter was aborted by bad weather and Ray Wesemann was engaged to examine the discovery in the writer's place. Wesemann spent only part of one day on the property; consequently all the showings were not examined and no additional claims were staked. The amount of mineralization and its gold content were not fully known until after Wesemann's examination, by that time other claims had been tied onto the original 16 claims, so no more have been staked. However, such deposits are usually confined to an area of a few claims in extent and it is felt that the best ground is adequately covered.

Both Wesemann's report and Versluce's diary account of the discovery are given below.

Versluce's diary from September 3 to 9 is quoted below - after this discovery the area was covered with snow and no further work could be done.

"Sept. 3 - Fine day. Prospect area W of McConnell River and Seagull Creek divide, find well mineralized outcrop 20' x 20 feet of pyrrhotite, galena, pyrite, some sphalerite, take sample of outcrop. A second outcrop of this type was located later on my way to camp on the McConnell River Valley slope also on the west side. This appears to be in place, 2 feet wide and maybe a small pocket. Pyrrhotite, chalcopyrite sample assayed, no values.

"Sept. 4 - Rain, snow below timber line. James and I go to investigate this outcropping and see if we can locate more, one boulder 100 feet to the NW appears to have grey copper (?) this was later exposed and is a 25 foot outcropping and sample taken by Ray Wesemann. More mineral to the east of similar type 175 feet but there was more sphalerite seen there so it is 275 feet from east to NW showing a total of three outcrops to-date. Since the horses are at Grayling Lake and will be there until Sept. 6 we have to wait for them to return and move camp up to the showing, it takes 2 hours walking from this camp now. James thinks it the best showing he has ever seen. We are within 10 miles from Seagull area Rio M.C., and can only stake 4 claims apiece but the Packer can stake 8 M.C.

"Sept. 5 - Snow frost. Snowing most of the morning somewhat clearing at noon. Stake 4 claims: Cone M.C. 1, 2, 3, 4 to protect the showings.

"Sept. 6 - Fine day, heavy frost. Prospect and trace mineralization which is now from 200 feet to 275 feet from NW to SE and 3 separate veins. Overburden appears not to be heavy, from 2 feet to 4

feet, but it will have to be removed by hand, or high-pressure water pump, since it is too steep for bulldozer, but a mechanical way may be found after some study is made. There is a mineralized zone somewhat higher, perhaps 200 feet striking in similar direction, it contains minor galena, considerable siderite; no mineral was found in place, only in the talus, one piece massive galena  $\frac{1}{2}$  lb. or more. This zone appears 25' to 30 feet in width but may only be 15 feet in place in length 75' to 100 feet and appears to be disappearing in overburden and timber over this ridge. There is considerable rust on contact rocks. No sample was taken of this zone, since it did not look interesting at that time.

"Sept. 7 - Snowing. James Cox goes to Grayling Lake and will go out to Whitehorse, by Canal road, and will contact the head office for party to investigate this new showing, he is taking small samples along for assay. The Packer and horses have returned from Grayling Lake, and we will move to the discovery which is at 5000 feet elevation. Set up camp in the snow.

"Sept. 8 - Snowing most of the day and night. Stay in camp.

"Sept. 9 - Snow, heavy frost. Still some snow falling, but somewhat clearing in afternoon, there is not much we can do but keep the fire going, take a stroll around in afternoon. There is about 4 inches of snow now. Trying to find a way to stake here so I don't have to cut so much brush but with all this snow here now it does not make any difference, there is nothing else we can do anyway. The Packer is getting homesick and is complaining, the horses will not stay here in this snow and will move down McConnell River Valley, there is little or no snow there."

Wesemann's report is inserted in its entirety below along with his plan and section.

Preliminary Report - Cone Claims, McConnell Creek, Yukon Terr.

## Pelly River Syndicate

The Cone claims, staked for the Pelly River Syndicate by prospectors Verslucce and Cox, were checked on the 21st of September, 1962 by this writer. The claims are located on a small tributary to the McConnell River near its headwaters. They are accessible by twelve miles of pack horse trail from Greyling Lake to the south or by backpacking over the mountain from Seagull Lake six miles to the northwest. Greyling and Seagull Lakes are both accessible by float aircraft from Whitehorse.

The ridge between Seagull and McConnell creeks on which the Cone claims are located is primarily felsitic tuffs and breccias with stocks of related hornblende syenite. The discovery area is largely covered by slide and vegetation. Within the limited time available for the inspection little could be done other than sample and examine the outcrops exposed by the prospectors trenching.

An area of approximately forty feet in length along the general strike of the mineral showing had been exposed. This was sampled for twenty-five feet perpendicular to the strike of the overlying beds. The upper ten feet was mainly massive galena. This was followed by approximately ten feet pyrrhotite with disseminated galena. The final five feet was disseminated galena with minor bands of massive galena. The assay results were as follows:

	Au.	Ag.	Pb.	Width
15026	.02	24.0	38.0	5'
15027	.30-.30	18.7	26.6	5'
15028	.34-.50	7.12	10.9	5'
15029	.54-.52	4.00	6.2	5'
15030	.06	6.04	8.5	5'
Ave	.252	11.97	18.04	

$$\text{Ratio oz Ag / \%Pb} = 1 / 1.5$$

Another outcrop of massive galena was exposed approximately one hundred feet to the northwest. Not enough of this showing had been opened up to sample effectively but a previously assayed grab sample gave the following results:

A.

Au	Ag	Pb
.03	32.3	53.1

Float and smaller galena showings are present to the southeast above the main showing but were not sampled at this time.

The width and number of showings together with the gold and silver values obtained make the Cone claims a good prospect for a mine and certainly merits more work. The showings thus far exposed are located on steep hillside. It is doubtful that a bulldozer could work effectively on the claims. Hand trenching together with detailed geologic mapping will be the most effective way initially to determine the extent and size of ore bodies present. It is suggested a program along these lines be initiated for the next year.

*R.D. Wesemann*

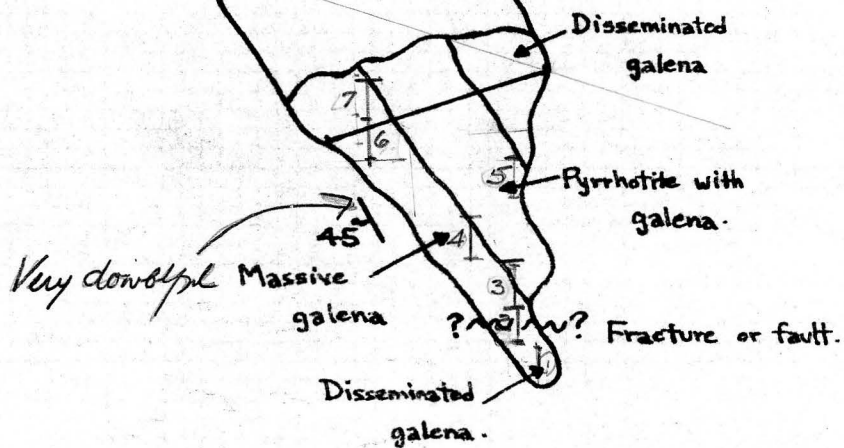
October 23, 1962

R.D. Wesemann, Geol. Eng.

⑧ Massive galena

Talus Covered Hillside

Talus Slide



# MINERAL SHOWINGS ON CONE CLAIMS

PELLY MINERALS SYNDICATE

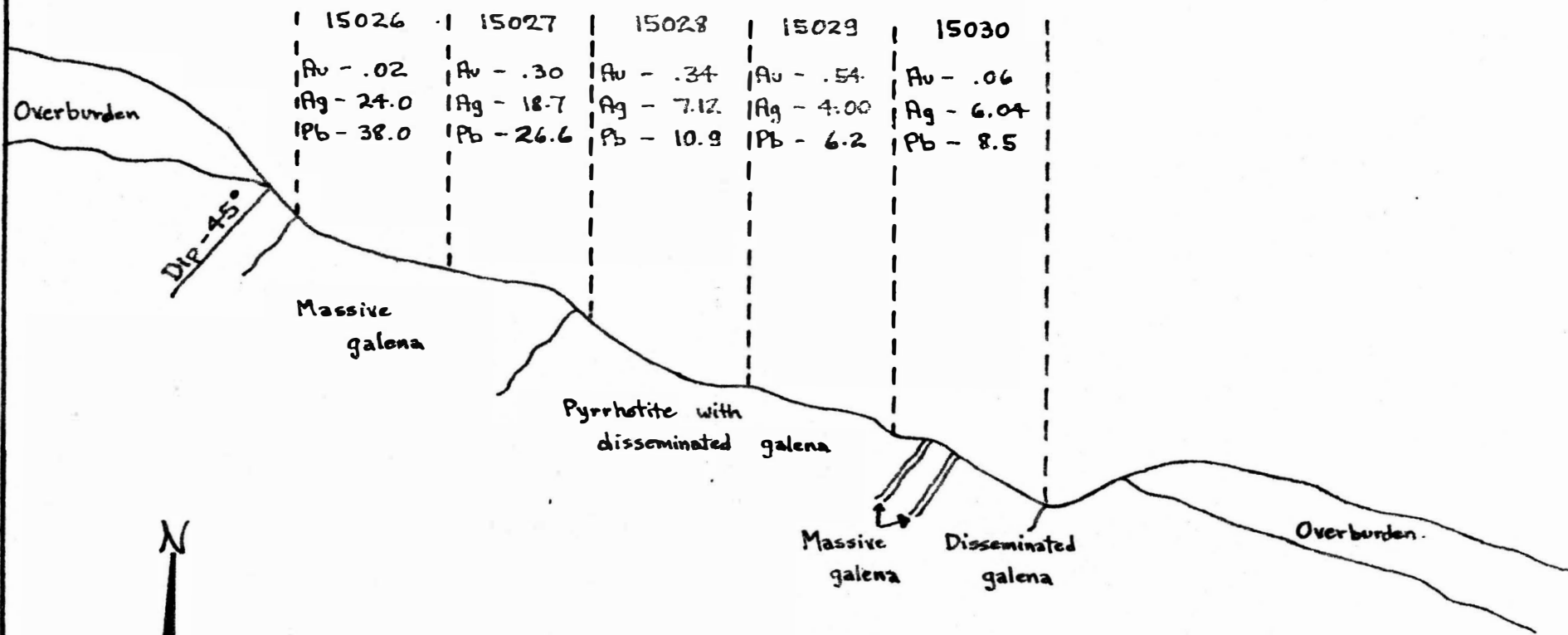
SEPT. 21, 1962

R. WESEMANN

SCALE: 1 INCH = 20 FT. (approx.)

Fig. 5

15.



CROSS SECTION OF MAIN SHOWING  
ON CONE CLAIMS

KETZA RIVER DISTRICT  
YUKON

SEPT. 21, 1962

R. WESEMANN

SCALE: 1 INCH = 5 FT.

This itself is a sizeable showing and Verslucce's description and sketch map of the main mineralized locality show that there are five separate showings or areas of float, three on Cone No. 1 claim and two on Cone No. 2 claim. The main 25-foot wide zone is paralleled to the southeast about 100 feet away by another reported to be 20 feet wide, and about 275 feet away by another on which no width is given. Little or nothing is known yet of the continuity or extent of these deposits.

The gold, silver and lead contents of the main showing total about \$65.00 per ton, an attractive grade for this locality and size of showing.

Further exploration of this new discovery is therefore warranted.

#### CONCLUSIONS

Results of the 1962 prospecting season are very gratifying and completely vindicate the premises upon which the Pelly Minerals Syndicate was organized.

The British Yukon Exploration showings, originally discovered by Verslucce under my guidance, have been acquired by the Syndicate and one of these, the Rain No. 7 locality, has float which suggests possibility of containing a sizeable deposit.

The new gold-silver-lead discovery on the Cone claims has both promising width and value and considerable mineralization is indicated in the vicinity, with extent unknown as yet.

The Ketzia district is a favourable anomalous structural district which is proving to be mineralized more extensively than previously supposed, so more intensified prospecting as well as work on the known showings is warranted.

#### RECOMMENDATIONS

It is proposed that a two-fold programme be carried out as follows:

(a) Prospecting accompanied by mapping of the district for stratigraphy, structure and mineralization, to be done on a Ph.D. student level over a period of at least 2 years.

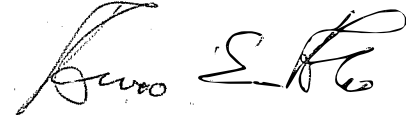
Required - 2 parties @ \$12,500 each per season,  
total - \$25,000 per season

(b) Stripping, trenching, and probably drilling of the new Cone showings at an estimated minimum cost of \$50,000; and bulldozer trenching of Rain No. 7 claims plus other work at an estimated cost

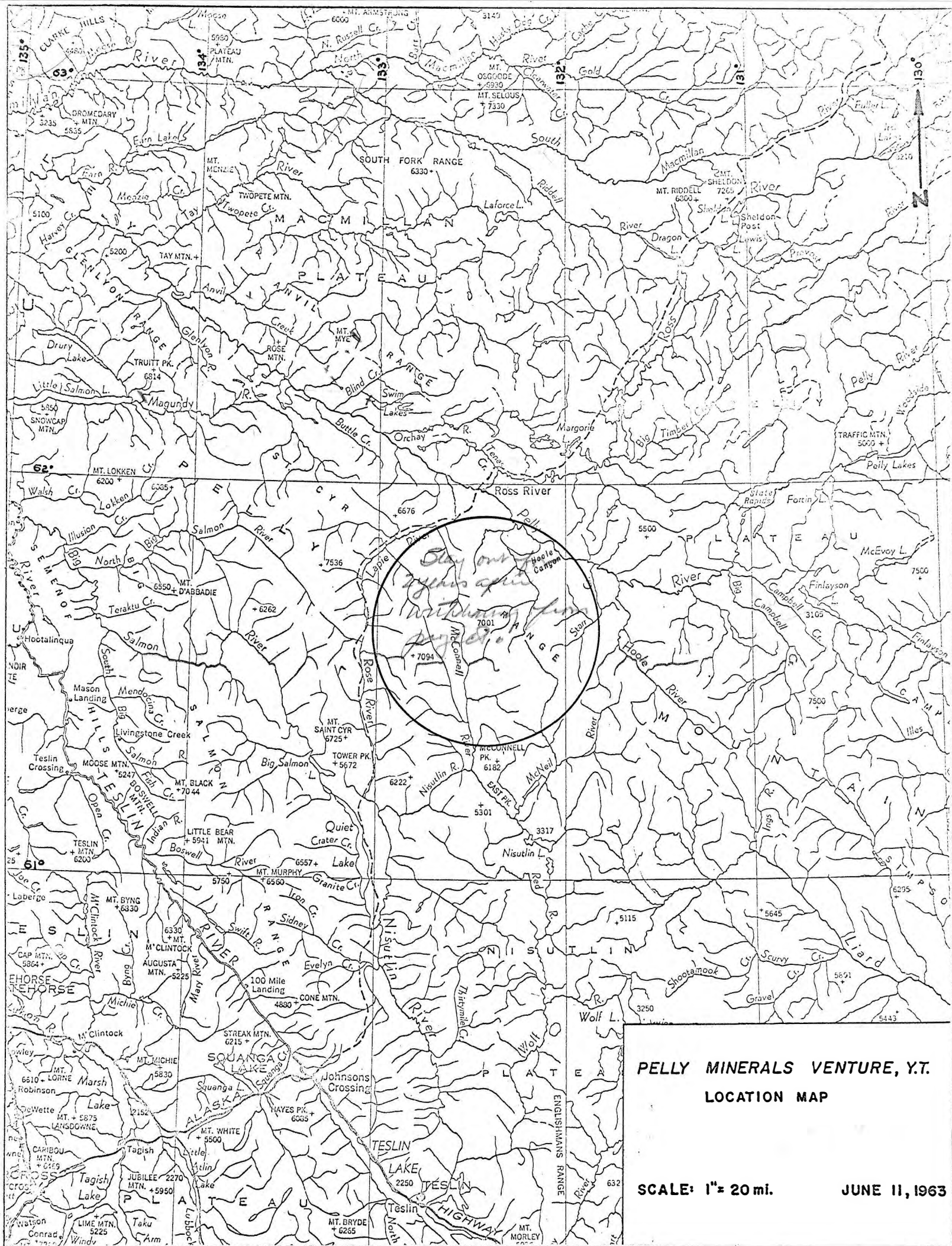
of \$25,000.

Total cost of the programme proposed is therefore about \$100,000 subject to approval upon closer examination of the new discovery.

Respectfully submitted

A handwritten signature in cursive script, appearing to read 'Aho', followed by a large, stylized flourish or initial.

Dr. A. E. Aho,  
Syndicate Manager.



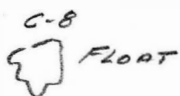
PULLY MINERAL SYNDICATE

CONG. NO. 1 MINERAL CLAIM

SCALE 1" = 20'

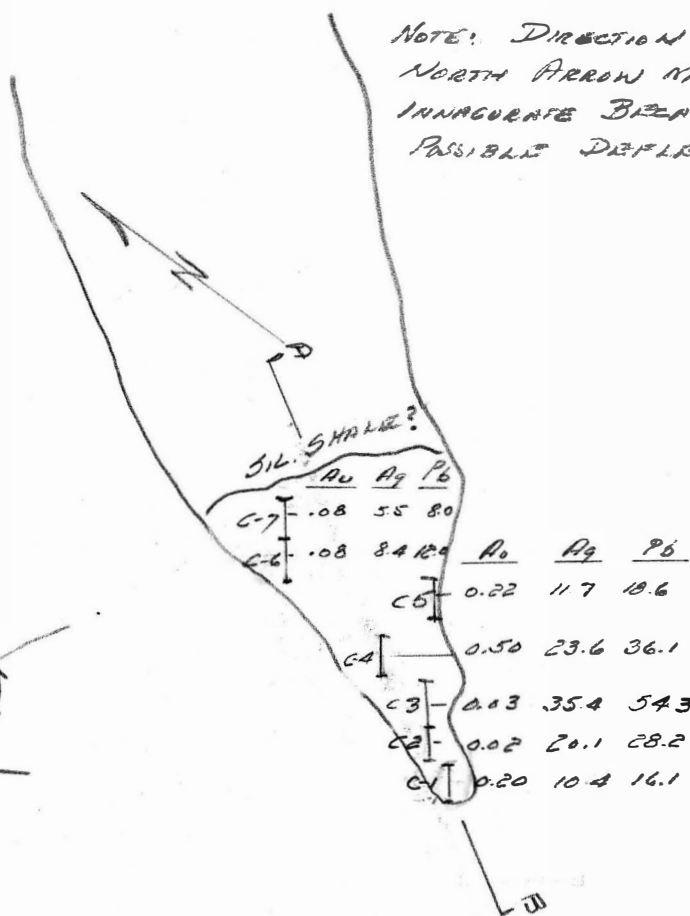
ASSAY DATA

<u>SAMPLE NO.</u>	<u>K.A. NO.</u>	<u>SAMPLE LENGTH</u>	<u>OZ. Au.</u>	<u>OZ. Ag.</u>	<u>%Pb.</u>	<u>DESCRIPTION</u>
C-1	723	5.0	0.20	10.4	16.1	GALENA, ARSENO. Pyrr.
C-2	724	5.0	0.02	20.1	28.2	GALENA, Pyrr.
C-3	725	5.0	0.03	35.4	54.3	LARGELY GALENA, MINOR Pyrr.
C-4	726	5.0	0.50	23.6	36.1	GALENA, Pyrr. ARSENO.
C-5	727	5.0	0.22	11.7	18.6	OXIDIZED GALENA, ARSENO. Pyrr.
C-6	728	5.0	0.08	8.4	12.0	LARGELY GOSSAN, STALS Pb.
C-7	729	5.0	0.08	5.5	8.0	GOSSAN.
C-8	730	GRAB	0.05	13.6	21.0	OXIDIZED FLINT MOSTLY GALENA.



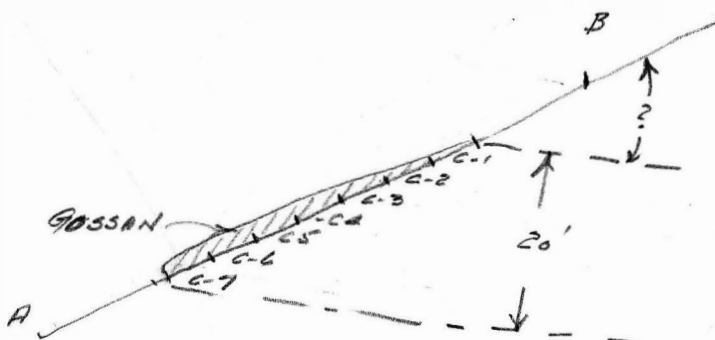
PLAN

NOTE: DIRECTION OF NORTH ARROW MAY BE INACCURATE BECAUSE OF POSSIBLE DEFLECTION.



SEC A-B Looking S.E.

DIP PROBABLY SHALLOW AS SHOWN BUT NOT ACTUALLY OBSERVED



W.M. J.  
JUNE 27/63.