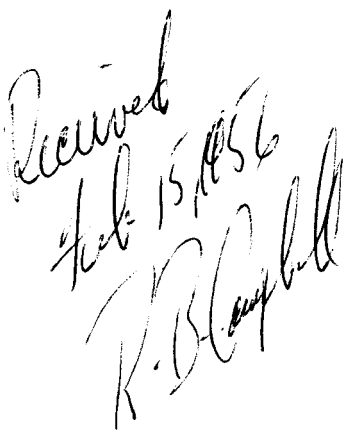
KETZA RIVER AREA

Yukon Territory.

COMINCO EXPLORATION COMPANY LIMITED.

1955 Field Season

J. R. WOODCOCK



KETZA RIVER AREA

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THE KETZA RIVER AREA

INTRODUCTION

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CLAIMS AND THEIR LOCATION:

The Ketza River Area lies at the head of the Ketza River at latitude 61°35', longitude 132°15', in the Yukon Territory. It is 120 air miles from Whitehorse, 30 miles east of the Canol Road, and 20 miles south of Bruce Lake--its nearest float-plane base.

The head of the Ketza River is in the northeast part of the rugged Pelley Mountains. Relief within the mapped area is 4000 feet; and the highest peak lies at an elevation of 7500 feet. Most of the claims are at or above timberline.

Conwest's interests in this area consist of 113 full mineral claims and 8 fractional mineral claims. These claims are as follows:-

Jan 1 - 6 (inclusive) claims
Key 1 - 37 claims; Key 1 - 5 fractional claims
Strike 4, 6, 8, 10, 12 claims
Brush 1 - 5 claims; Brush 1 fractional claim
Eagle 1 - 4 claims; Eagle 1 fractional claim
Peg 15 - 24 claims
Elsie 1 - 4 claims
Fury 29, 30, 32 claims; Fury 1 fractional claim
Goat 1 - 8 claims
Peel 1 - 6 claims
Ann 1, 2 claims
Pioneer 1, 2, 4 claims
Penguin 1 - 6 claims
Moon 1 - 8 claims
Poy 1 - 6 claims

The Key Mineral Claims 1 to 37 inclusive are under option to Comwest Exploration. The remaining claims are owned by Comwest.

WORK ACCOMPLISHED:

A topographical base map on the scale of one inch to 1000 feet was made by Photographic Survey Corporation Ltd. in Vancouver. The mineral showings, the mineral claims, and the geology have been plotted on the base map. The aerial photographs from which the topographical map was made, had large areas of cloud cover and large areas in which the contrasts in shading were poor. Consequently, the topographical map is not accurate in places. In tracing the map, I have made dashed contours in areas of cloud cover.

Most of the claims were surveyed by transit and stadia; and elevations and co-ordinates of the claims posts and of the stations used in the survey have been calculated. A separate claims map has been drawn.

In mapping the individual deposits, the closest contour picked from the topographical map was used as a base for the 10-feet contours. Thus, the 10-foot contours correspond with the 100-foot contours on the large topographical map; but they may not agree with the station elevations that were calculated later by the surveyor.

The claims were prospected; and the showings which yielded good assays were worked on. Digging was done on arsenopyrite showings on Peal 3 Mineral Claim and Fury 30 Mineral Claim, and on many of the showings on the Key Mineral Claims. This work is described under individual descriptions of the showings.

A base camp (Ketza Camp) consisting of three log buildings (cookhouse, assay lab, and storehouse) and five tent frames is situated at the mouth of Silver Creek (N60000, E58800)*.

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* The co-ordinate numbers refer to the grid on the topographical map

The equipment and remaining food were left at this camp and a separate inventory was made.

A winter aeroplane landing strip has been cleared one mile upstream from Kotzs Camp. Rows of 7-foot spruce trees mark the east boundary and both ends of the landing strip.

In order to facilitate the transmission of ideas, both verbal and written, names have been applied to topographic features and stratigraphic formations by members of Conwest's crew. The names, when needed, have been used in this report.

GENERAL GEOLOGY.

STRATIGRAPHY:

Sedimentary rocks representing a large part of the Paleozoic Era have been mapped in the Ketza River area. A stratigraphic column, based partly on fossil evidence, has been drawn. Although the section appears to hold for the map area, it does not preclude possibilities of additional members or of complication by overturning. Structure in the incompetent members is complex in places; and correlation across some of the valleys is very difficult.

Stratigraphic Column:

Volcanics: volcanic rubble
volcanic flow breccias and lavas

---------unconformity??----------

Ridge Formation: intercalated limy phyllites and greenstones

Ketza Formation: slates, argillites, cherts greywacke, quartzite

---------unconformity----------

Devonian Sediments: massive fossiliferous limestone quartzite and slate

---------unconformity ??--------

Hoey Quartzite: massive quartzite

Mt.Misery Formation: dolomite (Ordivician or Silurian) massive quartzite

---------unconformity----------

Cambrian Limy Sediments:
Phyllites, slates, thinly-bedded dolomite:
(brown limy slates and dolomite)
(brown limy slates and phyllites)
(grey to black limy slates and phyllites)
Massive fossiliferous limestone (Lower Cambrian)
Thinly-bedded phyllitic limestone.

Mt.Fury Formation: thinly-bedded quartzites, slates, argillites, cherts.

Descriptions of Formations:

Mt. Fury Formation: Over 1000 feet of rusty-weathering, siliceous sediments form the ridge which projects eastward from Mt.Fury. The sediments consist of slates, greyish argillites, thinly-bedded cherty quartzites, and phyllites. A few small areas of black slate, of limestone, and of relatively massive quartzite are included in this formation.

Cambrian Limy Sediments: This formation, which consists of over 3000 feet of limy sediments, can be subdivided into three units. The units, from the top downward, are as follows:-

limy slates and phyllites and thinly-bedded dolomites (2000 feet)
massive limestone (1000 feet)
thinly-bedded phyllitic limestone (200 - 300 feet).

The thinly-bedded phyllitic limestone, which forms the lower part of the formation, crops out in the creek banks at N42500, E46500. It is very thinly banded, the individual bands having a thickness of a fraction of an inch.

The massive limestones form a prominent cliff along the south side of the head of Cache Creek. The limestone, where unaltered, is grey in color. In places, it has been dolomitized and weathers a rusty color. The dolomitization usually cuts across the bedding; and, in places, is related to the mineralization which formed the sulphide bodies. Metamorphism has, in places, produced sericite in the impure limestone, thus making it phyllitic.

Fossils identified by V. Okulitch indicate that the limestone is Lower Cambrian. Collections of fossils were made in the following places:

N41700	E36850	--	Pleospongs
N54000	E36000	--	Coscinocyathus, sp.
N42100	E48850	--	Ethmophyllum, sp. Syringocnema, sp.

In addition to the above occurrences, Pleospongea were recognized at (N44500, E44500) and (N40700, E45400). The fossils are common in the unaltered limestone; but they also occur in the massive dolomite as remnants of grey calcite.

The upper part of the Cambrian Formation consists of black limy slates and limy phyllites, brownish limy phyllites, and thinly-bedded dolomites. The limy phyllites are cut by numerous small dikes or lenses of greenstone.

In general, there is a gradation from black slates and phyllites at the bottom to brownish phyllites in the middle to brownish phyllites and thinly-bedded dolomites at the top. This gradation shows up on the top and northern slopes of the mountain southeast of the Goat Mineral Claims.

The contorted black phyllites found on the Goat Mineral Claims are thought to be equivalent to the unaltered black slates found on the peak of Mount Fury and to the black slates and phyllites found on the hill southeast of the Foy Mineral Claims.

Mt. Misery Formation: Mt.Misery is underlain by massive quartzite which grades upwards into dolomite. The quartzite is white to dark grey in color; and occurs in beds between one foot and twenty feet thick. The dolomite member is siliceous near the bottom; and contains numerous chert lenses throughout.

Fossils found in the dolomite at (N58100, E46250) were identified by V. Okulitch as Halysites (Ordivician to Silurian).

Hoey Quartzite: The mountain peak to the south of Hoey's claims (Galena and Prep groups) is underlain by very massive quartzite of unknown thickness. It seems to rest unconformably on the Cambrian limy sediments; and is overlain unconformably by Devonian limestone. This formation may be equivalent to the lower part of the Mt. Misery Formation.

Devonian Sediments: Limestone containing Devonian corals has been mapped in a couple of places:

N54500,	E51300 --	Coenites) Favosites)	Middle to Upper Devonian
N47700,	E61300 --	Favosites	Probably Middle Devonian

South of Cache Creek, the Devonian limestone is unconformably underlain by the Hoey quartzite.

South of Star Mountain, the Devonian limestone is overlain unconformably by the Ketza Formation, and is underlain by some quartzite and slate which has been included in the Devonian formation.

Ketza Formation: Rusty-weathering siliceous sediments underlie most of the northeast quarter of the map area. Greenish-grey and black slates, brownish-grey argillites, and grey cherts are abundant throughout the formation, especially near the top of it. Relatively massive beds of greywacke, tuff and quartzite occur in places.

Towards the northeast, this formation thickens greatly, and the grain size of some of the clastic sediments increases.

Ridge Formation: Most of the upper part of Silver Ridge is underlain by interealated limy phyllites and greenstones. The limy phyllites are very thinly bedded, and often highly crumpled. The greenstones consist of tuffs and basic intrusives. Most of the intrusions are concordant with the bedding in the phyllites; but some of them are plum-shaped and cut across the bedding.

Volcanics: Disconformably overlying the phyllites and greenstones of the Ridge Formation, are andesitic volcanic rocks, some of which are flow breccias.

Minor thinly-banded, greyish-green cherts are found in places in the volcanic formation.

Volcanic rubble covers the southern slope of Silver Ridge. It consists of the volcanic rock in loose blocks up to 20 feet across. In places, a skree 1000 feet long will be composed of blocks, all of which are over three feet across. A few outcrops of the volcanic rock can be found within the area of rubble. In many places, the fracture surfaces of adjacent blocks can be matched, thus showing that the blocks are practically in their original position. Around the #1 post of the Strike #4 Mineral Claim, there is a pile of diorite rubble about 500 feet square. This is surrounded by coarser volcanic rubble; but no volcanic rubble can be found within the area of diorite rubble.

Any theory on the origin of this rubble must be in accordance with the fact that it was formed practically in place. Moreover, since the glaciers which moved down Cache Creek Valley would have removed any loose debris, the brecciation must be post-glacial.

STRUCTURE:

The structure in the map area is complicated by gentle folds, numerous faults, several unconformities, local metamorphism, and local dolomitization of the limestone.

Folds with a NW-SE trend are common. Anticlinal axes have been plotted just to the north of Peel Creek and nor th of Star Mountain. Another anticlinal fold just to the south and west of Pioneer Tarn may be the crest of an overturned fold formed by over thrusting from the southwest.

Faults, both major and minor, cross the area in all directions. Because rocks of any one type occur in great thicknesses, the faults are very hard to trace. Only some of the major faults have been plotted on the geological map; and these have been inferred because of displacement of strata or because of lack of correlation of rock types on different ridges.

For instance, the strata on Silver Ridge and Star Mountain do not correlate with the rocks found on the hills to the southeast and southwest. To account for this lack of correlation, a fault parallel to Cache Creek, and faults parallel to the one mapped on Mount Misery have been assumed.

Unconformities, which are shown in the stratigraphic column, are indicated by marked differences in attitudes of adjacent formations and by great variations in thickness of a formation.

Metamorphism, related to the pressures which caused folding and faulting, has locally altered the sediments. Thus the black limy slates found on Mt.Fury are thought to be the equivalent of the dark limy phyllites found on the Goat Mineral Claims.

Dolomitization of the Lower Cambrian limestone, has not been controlled by bedding, but cuts across it forming large masses of rusty-weathering dolomite.

Slightly aluminous limestone, during metamorphism, will become phyllitic; but the dolomite will remain unaltered. Thus, phyllitic limestone with good parting can suddenly change along strike to dolomite in which only a crude cleavage has formed. This was observed in several places on the Moon Mineral Claims.

MINERALIZATION:

Mineralization in the map area can be divided into three major types: silver-lead, gold-arsenopyrite-pyrrhotite, and pyrrhotite-ankerite.

The main silver-lead deposits of the area are those belonging to Canwest Exploration Co.,Ltd. and those belonging to F. Hoey. These deposits are confined to an area 4000 feet by 16000 feet which strikes N35°W (Showing Tem 3A and the showing on the Onyx Mineral Claims are not included in this zone). The deposits of the zone are replacement veins along minor faults; and they occur in the Hoey Quartzite, the Ketza Formation, and the Volcanics.

The mineralization consists of galena with minor amounts of ankerite, pyrite, argentiferous tetrahedrite, and chalcopyrite. Most of the silver is carried by the tetrahedrite. The silver/lead ration of the deposits varies between 3/4 and 6. No consistent relationship could be found between the silver/lead ratio of the deposits and their spacial distribution.

The main gold-arsenopyrite deposits lie along the north side of the head of Cache Creek in a zone 1000 feet wide and 8000 feet long. They are irregular replacement bodies at or near minor faults in the flat-lying Lower-Cambrian limestone. The ore consists of pyrrhotite, arsenopyrite, pyrite, and quartz. The gold is confined to the arsenopyrite. Gold assays on the sulphides vary between trace and 2.1 ounces.

Most of the pyrrhotite-ankerite bodies occur in the gently-dipping Lower-Cambrian limestones south of the head of Cache Creek. Mineralization consists of ankerite, pyrrhotite, pyrite, and arsenopyrite; and the bodies vary from those in which pyrrhotite is the major constituent to those in which ankerite is accompanied by minor pyrite and pyrrhotite. Arsenopyrite is a minor constituent in some of the bodies and sometimes carries a small amount of gold. The pyrrhotite-ankerite bodies are of no economic importance.

Zinc is only found in very small amounts in the map area; and none was found in assays from the silver-lead deposits. Traces of zinc occur on the southern slope of Silver Ridge (Showings Key 7A, Key 13A, and Key 16B). These deposits consist of ankerite, arsenopyrite, and pyrite with minor galena and sphalerite.

SILVER-LEAD DEPOSITS ON KEY AND STRIKE MINERAL CLAIMS

Conwest's silver-lead showings of the Ketza River Area are confined to Silver Ridge (see Sketches 12 & 14). This ridge is underlain by three rock formations:

3. Volcanics -- flow breccias and lavas
2. Ridge Formation -- intercalated limy phyllite, and greenstones
1. Ketza Formation -- argillites, slates, cherts, greywacke, quartzite.

The main galena showings occur in the upper part of the Ketza Formation. Several small veins have been found in the volcanics.

SHOWING KEY 3A: (N56080, E54000)

This showing, which is the main one in the area, consisted of two occurrences of galena float about 130 feet apart (P_1 and P_2 of sketch 1). It was described by Wm. V. Smitheringale in his initial report; and worked on by Breakey's crew in September, 1954.

Rock Types:

The rocks in the vicinity of Showing Key 3A have been divided into three members (see Sketch 1). The lowest member consists of at least 300 feet of black slates and slightly graphitic schists. The black slates form a rugged, dark-colored cliff just above the bed of Silver Creek.

The Strike 3, 5, 7, 9, 11 Mineral Claims have been restaked as the Brush 1, 2, 3, 4, 5 Mineral Claims respectively.

The middle member consists of about 300 feet of rusty-weathering argillites, slates, and cherts. In places, there are also some black slates. This member forms two series of small cliffs, and two steep slopes covered with talus. The galena deposits occur in this member.

The two members described above belong to the upper part of the Ketza Formation of the geological map.

Above these two sedimentary members, are intercalated bands of greenstone and limy phyllite which belong to the lower part of the Ridge Formation. The greenstone bands are basic intrusives and volcanic tuffs. This member forms a prominent rugged cliff about 500 feet high.

Structure:

The rocks of the slate and argillite horizon dip southerly at angles between 20 and 50 degrees. One main fault crosses the hillside, its trace striking northwest from the showings. To the northwest of the showings, the fault runs along the base of a cliff; and forms the boundary between the two lower sedimentary members.

Large blocks of cemented breccia are found on the talus slope just below the cliff. One large piece of the breccia (at P_5 of Sketch 1) consists of loosely cemented fragments of black slate and a few fragments of galena. The breccia is coming from the fault at the foot of the cliff; a small amount of work would expose the fault at P_5 (as it was exposed at point C) and might expose the source of the galena fragments.

Galena Showings (see Sketches 1 & 6)

On July 7, work was started on the two occurrences of galena float

(P_1 and P_2). It was soon discovered that the two occurrences represented two separate veins. A drift was started on the vein at P_2; and an adit was started at P_1 with the hope of cross-cutting the other vein.

The drift at P_2 (Adit #2) follows the vein for 24 feet. The vein follows a definite fault; and consists of a replacement of the gouge and rock adjacent to the fault. The fault dips 30 degrees west; and cuts sediments which dip 20 to 25 degrees southerly. Its hanging wall is buff-weathering slate and argillite; and its footwall is cherty quartzite. Drag on fractures in the footwall indicate that the hanging wall has moved down and northward relative to the footwall.

Drag on bedding adjacent to the accessory fault (see Sketch 6) 130 feet northwest of Adit #2 indicates the same relative movement. This accessory fault branches off from the main fault and curves southward until it has a strike of 163 degrees azimuth. The mineralized fault in Adit #2 is probably a similar accessory fault branching off from the main fault.

The mineralized zone along the fault of Adit #2 contains one or more veins of massive galena adjacent to the fault. In places, the vein of massive galena splits into two smaller veins separated by a remnant of rock. The total thickness of massive galena varies, along strike, between two and twelve inches. Disseminated galena, which occurs in the silicified footwall, peters out with increasing distance from the fault. At the face of the drift, there is an increase in thickness of the mineralized zone. This is due to the occurrence of a second fault which, at its position of intersection with the first fault, has an attitude of S25°E/48°SW, and is mineralized.

Mineralisation in the drift consists of galena with minor ankerite, pyrite, and tetrahedrite. Near the face, there is an increase in the amount of ankerite and pyrite in the vein.

An assay plan for Adit #2 accompanies the report. The average grade over a 3-foot width for the first 24 feet of drifting is: Ag - 39.2 oz; Pb - 17.8%; Ag/Pb ratio - 2.20

Adit #1 was started beside the cut made by Breakey's crew. It crossed a mineralised zone and entered barren rock extending a total distance of 23 feet underground. The adit was placed too high, and only the top of the mineralised zone was intersected. In order to get the attitude of the zone, and a good sample of the ore, a winze was started in the floor of the adit. The winze was about three feet deep on August 20th when work on Adit #1 ceased.

The ore deposit encountered in the adit is not a definite vein; but, rather a fractured zone in which lenses of vein material are separated by remnants of the argillite host rock. The lenses consist of masses of galena up to six inches across or larger masses of brownish quartz up to two feet across. The so-called quartz is silicified argillite, and contains ankerite, pyrite, galena, chalcopyrite, and tetrahedrite.

The muck from the winze was divided into two lots (see Sketch 5) and sampled by cone-and-quartering. The assays are as follows:

Sample A: from SW half of 7-foot-long, 2½-foot-deep winze
Cu- 0.5%; Zn- tr; Pb- 7%; Ag- 48 oz; Au- tr; AgPb ratio - 6.9

Sample B: from NE 3½ feet of winze; 1½ feet deep.
Cu- 0.2%; Zn- tr; Pb- 2.6%; Ag- 15 oz; Ab/Pb ratio - 5.8

Because the mineralised zone, where cut by Adit #1, was right at the surface of the ground, it was highly fractured. Consequently, very little information on the correct attitude of the vein could be obtained. It is thought

that the sparse sulphides found in Adit #1 represent minor mineralisation in the rock adjacent to and above the vein, and that the ore obtained in the winse was part of the vein.

From a consideration of the special relationships shown on Sketch 6, it is concluded that the vein will probably dip gently westward. If the vein strikes 170° azimuth and dips 25° southwest (approximately parallel to the vein of Adit #2), the seven feet of ore found in the winse will represent ~~2.7~~ feet of the true vein width.

The above attitude is in accordance with the fact that, although the muck from the winse was richer in sulphides than that found in the adit, it did not contain the large pieces of sulphides that were found in Breakey's cut. The attitude is also in accordance with the general attitude of the exposed galena veins on Silver Ridge. All the galena veins which have been exposed (Strike 8A, Strike 4A, Key 9A, and vein #2 of Key 3A) have westerly dips of less than 35 degrees.

Adit #3 and the open cut below Adit #1 were located by Heshka; and are in contorted slates and argillites.

About 170 feet north of Adit #2, iron-rich springs issue from the talus at the top of the cliffs and give the water of Rill "C" its high iron content (Sketch 1). The iron may come from oxidising pyrite in or near the Main Fault.

SKETCH 1

P2 Galena Occurrence

× Spring of Fe sulfate water

△152 5560' Survey Station & Elevation

Rock Outcrop

Greenstone & Phyllite

Argillite, Slate, Chert

Black slates

Cemented ~~Talus~~ Fault breccia

Rivulet

Contour

SHOWING KEY 3A

SCALE: 1" = 200'

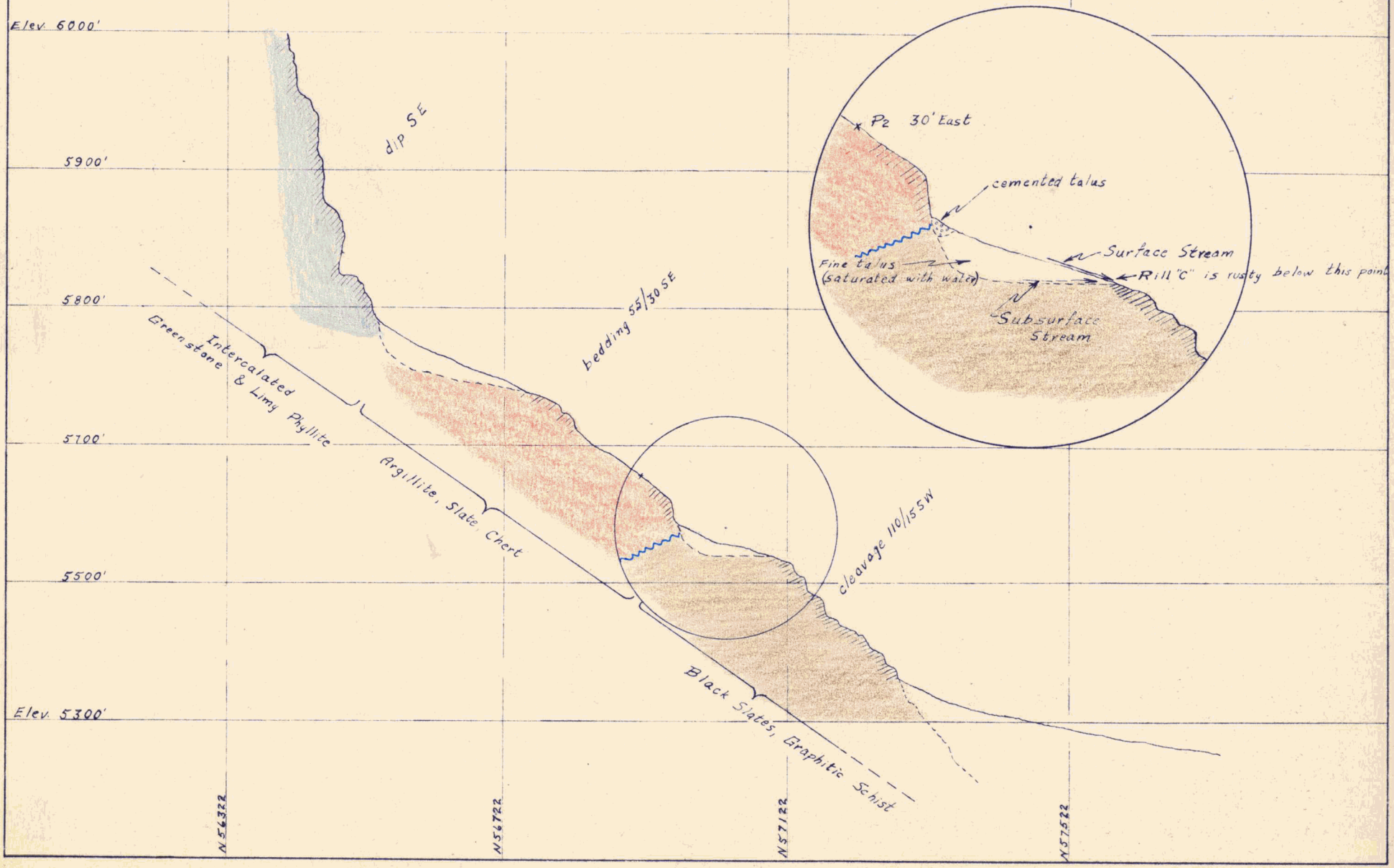
July 5, 1955

J. R. Woodcock

SHOWING KEY 3A

VERTICAL SECTION XX'

Scale: 1" = 200'



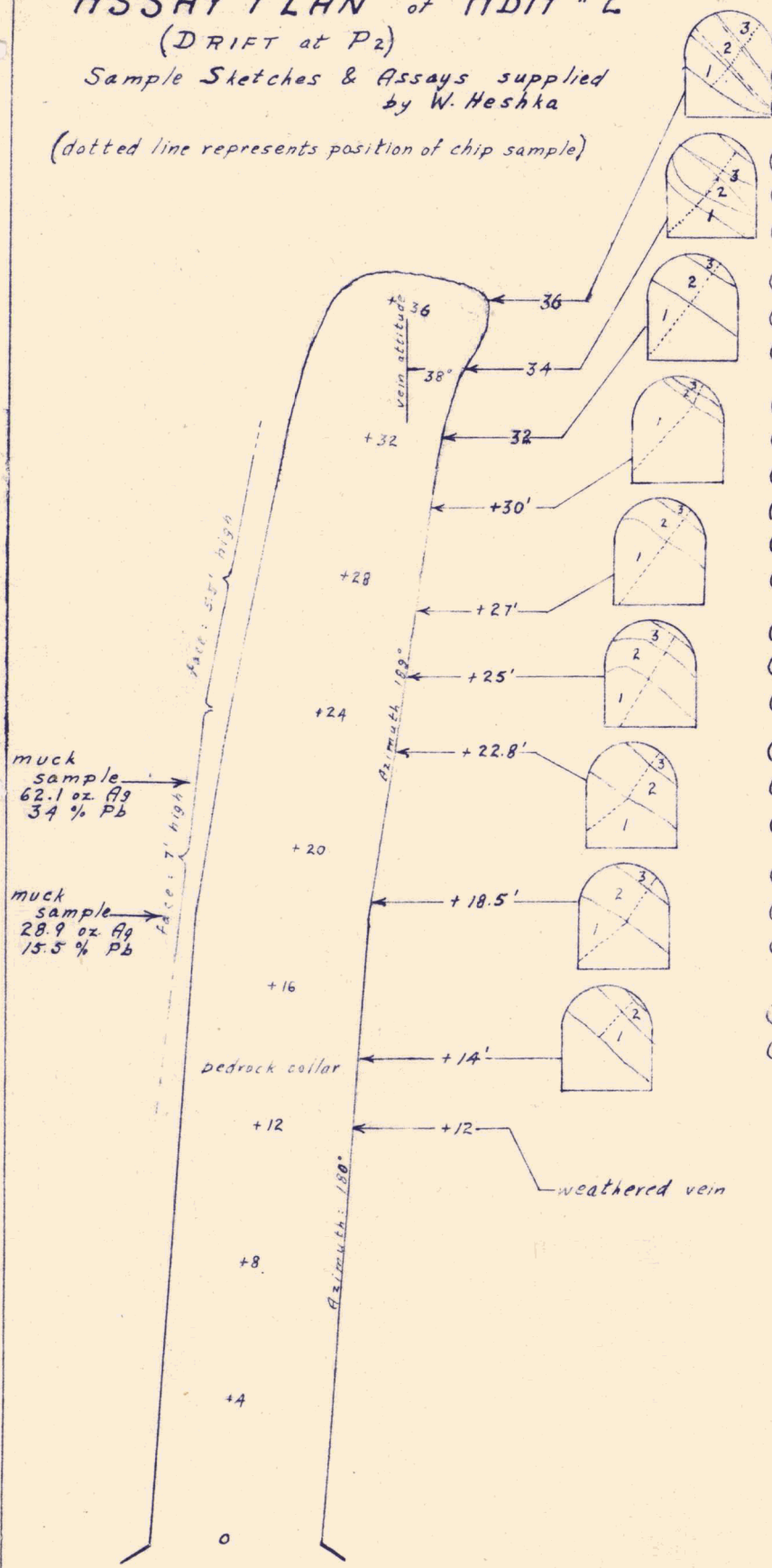
SKETCH 2

ASSAY PLAN of ADIT #2

(DRIFT at P2)

Sample Sketches & Assays supplied by W. Heshka

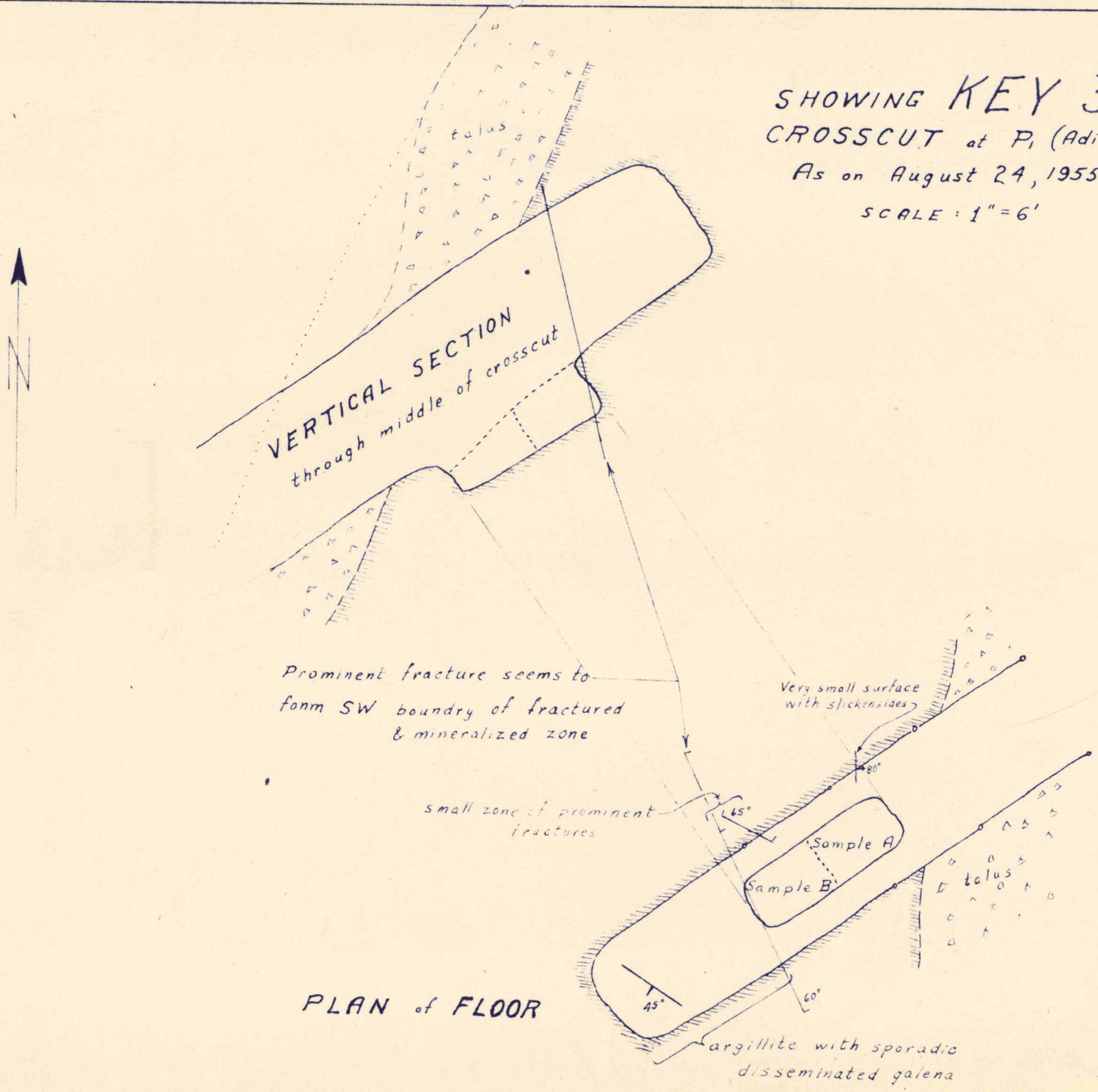
(dotted line represents position of chip sample)



	sample width		Ag/Pb ratio
(3)	0.7'	17.9 oz. Ag / 5.7 % Pb	3.14
(2)	1.2'	61.3 oz. Ag / 31.0 % Pb	1.97
(1)	2.8'	7.9 oz Ag / 1.8 % Pb	4.40
(3)	1.1'	60.8 oz Ag / 25.0% Pb	2.43
(2)	0.6'	24.0 oz. Ag / 14.8 % Pb	3.00
(1)	4.5'	3.0 oz. Ag / 1.5 % Pb	2.00
(3)	0.6'	116.2 oz. Ag / 48 % Pb	2.42
(2)	1.6'	48.9 oz. Ag / 24.8 % Pb	1.97
(1)	4.0'	2.3 oz Ag / 1.0 % Pb	2.30
(3)	0.5'	33.5 oz. Ag / 11.4 % Pb	2.94
(2)	0.3'	34.4 oz Ag / 12.5 % Pb	2.75
(1)	4.2'	2.6 oz. Ag / 1.6 % Pb	1.62
(3)	1.0'	64.9 oz Ag / 40.8 % Pb	1.59
(2)	1.2'	9.0 oz. Ag / 4.4 % Pb	2.04
(1)	3.2'	2.6 oz. Ag / 2.3 % Pb	1.13
(3)	1.3'	82.3 oz. Ag / 41.6 % Pb	1.97
(2)	2.2'	5.4 oz. Ag / 2.6 % Pb	2.08
(1)	3.2'	1.5 oz. Ag / 0.9 % Pb	1.67
(3)	1.2'	5.9 oz. Ag / 1.9 % Pb	3.10
(2)	2.8'	99.0 oz. Ag / 40.0 % Pb	2.47
(1)	3.0'	1.1 oz. Ag / 0.6 % Pb	1.84
(3)	0.6'	13.3 oz. Ag / 2.8 % Pb	4.75
(2)	1.6'	54.2 oz. Ag / 29.2 % Pb	1.86
(1)	3.8'	3.2 oz Ag / 2.1 % Pb	1.52
(2)	1.5'	83.2 oz. Ag / 26.5 % Pb	3.14
(1)	2.4'	3.1 oz. Ag / 1.8 % Pb	1.72
	0.9'	250 oz Ag / 48.0 % Pb Cu = 1.7 %	5.2

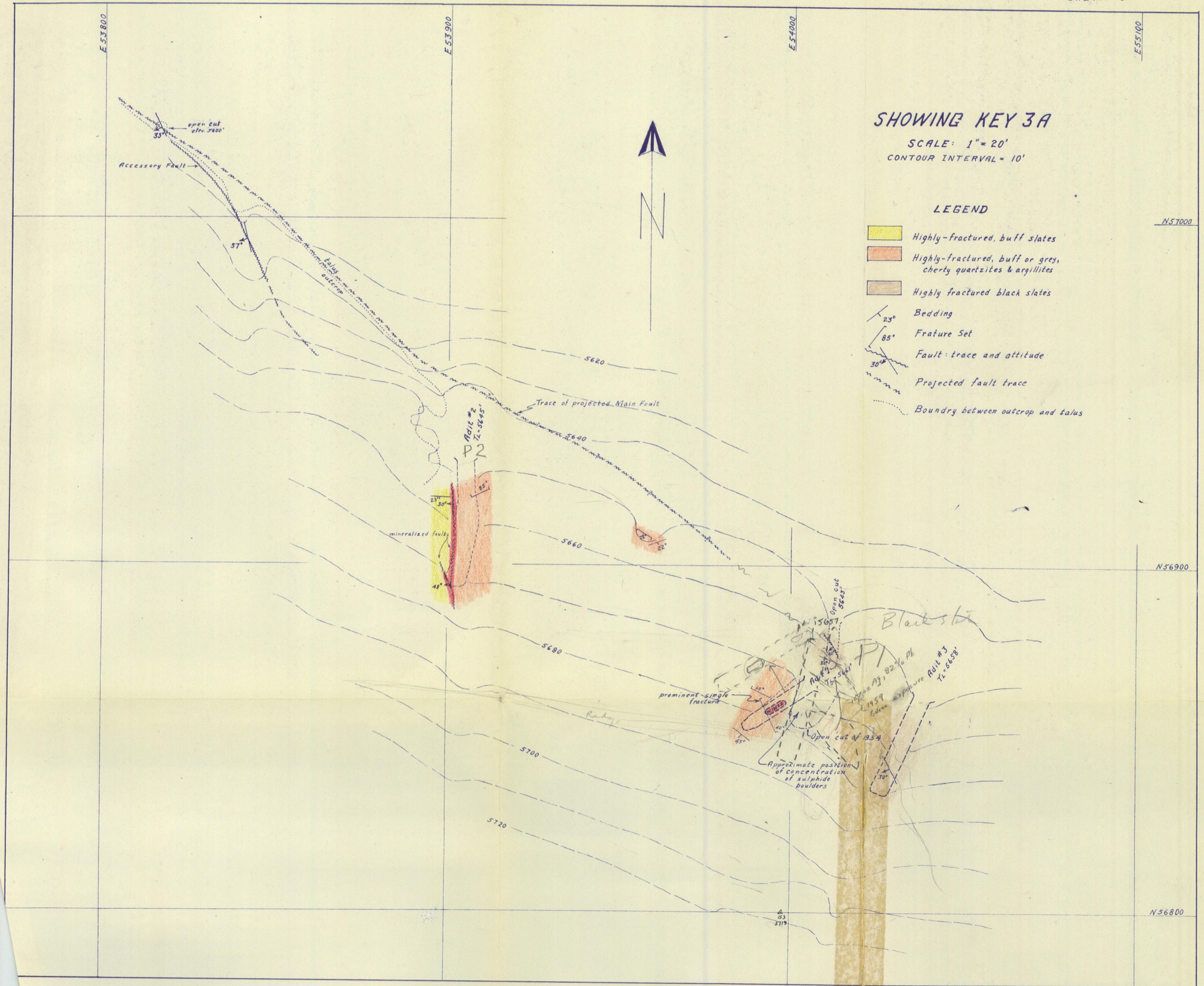
SHOWING KEY 3A
CROSSCUT at P_1 (Adit #1)
As on August 24, 1955

SCALE : 1" = 6'



PLAN of FLOOR

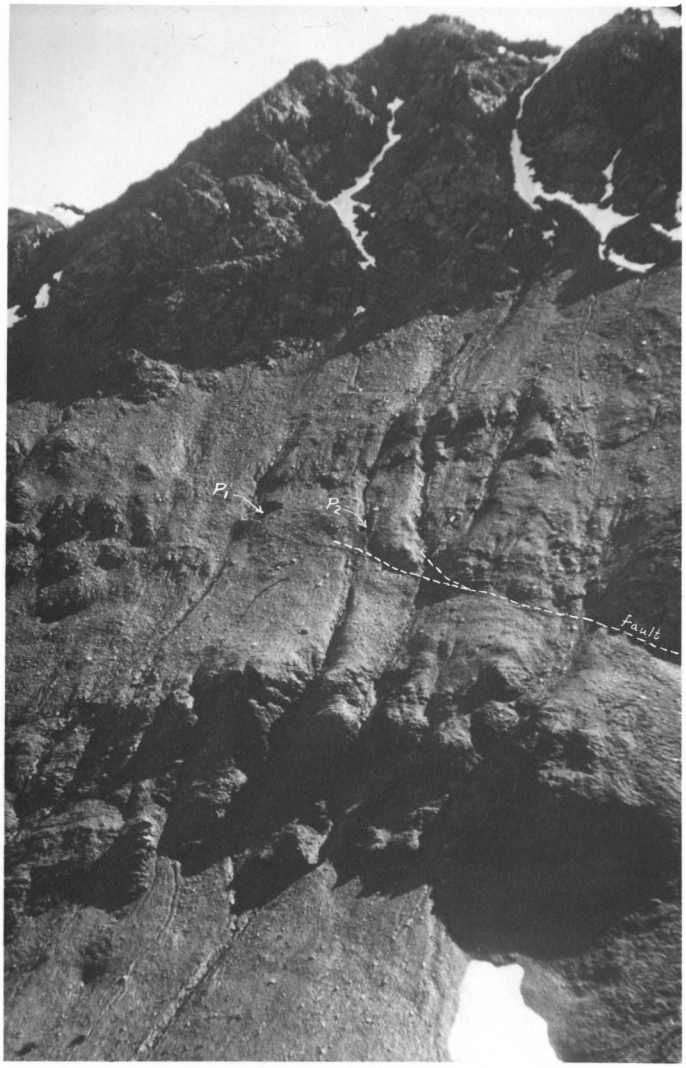
SKETCH 5


SHOWING KEY 3A
SCALE: 1" = 20'
CONTOUR INTERVAL = 10'
LEGEND
Highly-fractured, buff slates
Highly-fractured, buff or grey, cherty quartzites & argillites
Highly fractured black slates
Bedding
Frature Set
Fault: trace and attitude
Projected fault trace
Boundry between outcrop and talus
E53800
E53900
E54000
E55100
N57000
N56900
N56800
open cut elev. 5600'
Accessory Fault
talus
outcrop
Trace of projected Main Fault
Adit #2 Tz 5645'
P2
mineralized faults
5620
5640
5660
5680
5700
5720
Open cut 5645'
Black slate
P1
prominent single fracture
Adit #1
Adit #3 Tz 5658'
Open cut of 1954
Approximate position of concentration of sulphide boulders
N

SKETCH B

SHOWING KEY 3A

PHOTOGRAPH



Intercalated phyllites and greenstones

Rusty-weathering slates and argillites

Black slates

SHOWING STRIKE 8A: (N53040, E53700)

This showing is on a low rounded spur which projects southwesterly from Silver Ridge. The rocks on the spur are rusty-weathering, buff and grey, slates; and on the west and north side of the spur have a very uniform dip to the southeast. Near the showing, the slates have been distorted and the bedding is not uniform like it is on the north side of the spur. The slates are cut by a few minor low-angle faults that dip to the northwest. Drag on bedding indicates that the hanging wall of the faults has moved down relative to the footwall.

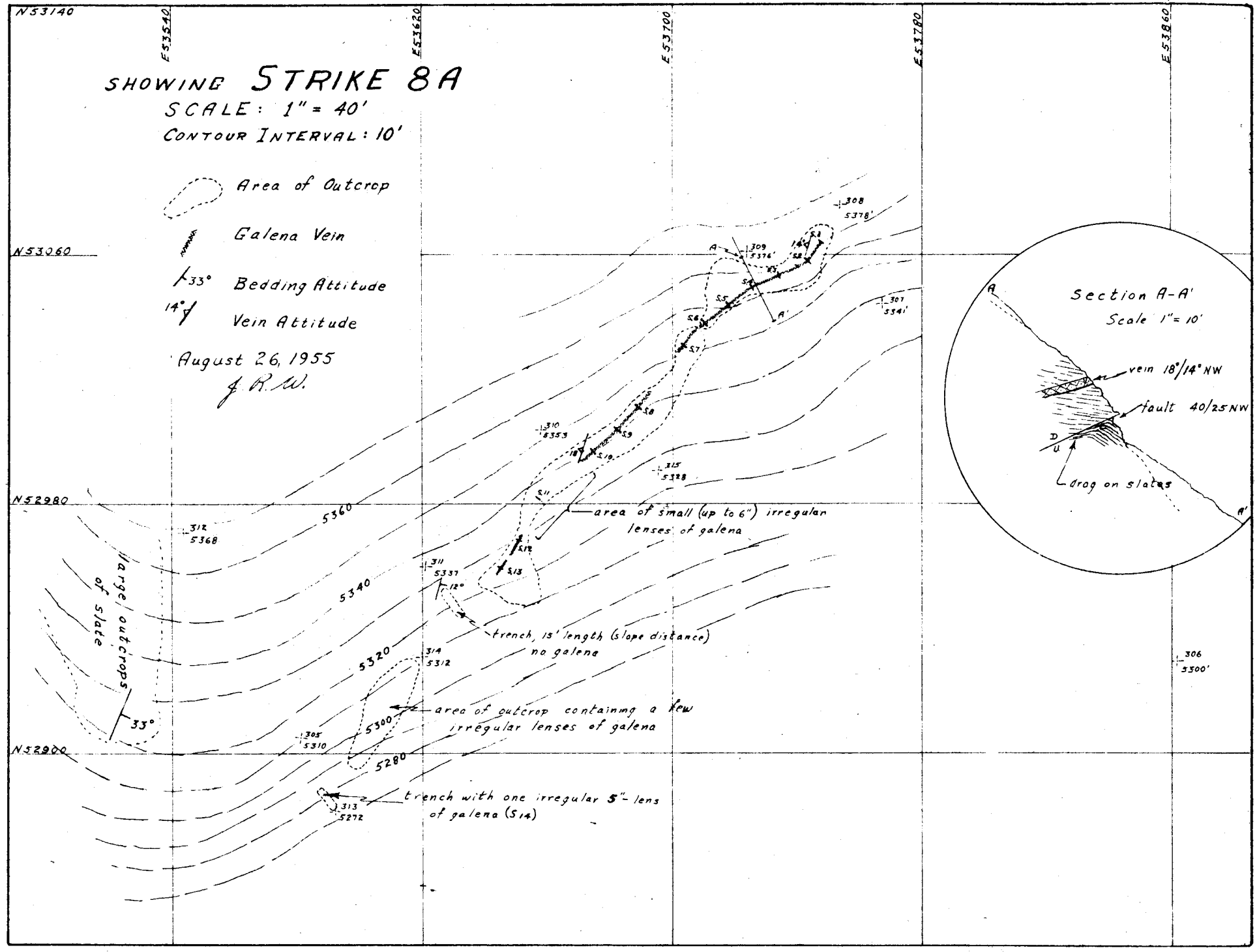
A 1-foot galena vein, which can be traced for 100 feet, has been formed by replacement of the footwall of one of the faults. The vein dips 15 degrees west-northwest. It pinches out to the northeast; and branches and becomes discontinuous to the southwest. For an additional 140 feet to the southwest of the continuous vein, there is a zone in which short lenses of galena follow fractures in the slates in various directions. For instance, in the trench near Station 313, a galena vein with a maximum thickness of 5 inches follows a low angle fracture for two feet and then a vertical fracture for about three feet.

Chip samples were taken across the vein in the places shown on sketch 7. The assays and the widths are as follows:-

Showing Strike 8A (Assays):

All samples were assayed for gold, but results were nil.

Number on Sketch	Assay Number	Width in feet	Pb %	Ag oz	Ag/Pb ratio
--	2015	grab sample along vein	66.0	51.50	0.77
# 1	2214	1.0	5.5	3.60	0.66
# 2	2215	2.0	17.5	15.20	0.87
# 3	2216	2.0	1.3	1.20	0.92
# 4	2217	1.0	48.0	40.60	0.85
# 5	2218	1.0	40.8	35.10	0.86
# 6	2219	1.0	46.5	38.30	0.83
# 7	2220	4.0	27.0	31.90	1.18
# 8	2221	1.5	40.8	42.00	1.03
# 9	2222	1.0	31.0	52.10	1.68
# 10	2223	1.5	42.2	38.80	0.92
# 11	2224	4.0	21.6	19.40	0.90
# 12	2225	1.0	32.0	29.00	0.90
# 13	2226	1.2	46.0	41.60	0.90
# 14	2228	0.4	64.8	52.10	0.80


N53140
N53060
N52980
N52900
E53540
E53620
E53700
E53780
E53860
SHOWING STRIKE 8A
SCALE: 1" = 40'
CONTOUR INTERVAL: 10'
Area of Outcrop
Galena Vein
33° Bedding Attitude
14° Vein Attitude
August 26, 1955
J.R.W.
Section A-A'
Scale 1" = 10'
vein 18°/14° NW
fault 40/25 NW
drag on slates
area of small (up to 6") irregular lenses of galena
trench, 15' length (slope distance) no galena
area of outcrop containing a few irregular lenses of galena
trench with one irregular 5"- lens of galena (S14)
large outcrops of slate
33°
12°
5360
5340
5320
5300
5280
308 5378'
309 5376'
307 5341'
310 5353
315 5328
312 5368
311 5337
314 5312
305 5310
313 5272
306 5300'

SKETCH 7

OTHER GALENA SHOWINGS OF SILVER RIDGE:

Showing Key 9A: (N53100, E57000)

At this place, remnants of what was once an irregular galena coating up to five inches thick, can be found on a gently-dipping (135°/35°SW) fault surface. Pieces of the massive galena are dropping off an overhanging cliff into a short steep gulley to the west of the fault surface. A grab sample of the galena float found in the gulley assayed: Pb- 75.8%; Ag- 135.00 oz; Ag/Pb ratio - 1.8

Showing Strike 4A: (N51150, E55650)

At the top of one of the large slopes of greenstone rubble, there is a small knob where the volcanic rock crops out. Galena float can be found for 40 feet across the southern slope of this knob; and a 4-inch galena vein is exposed in one place. It strikes 130° azimuth and dips 10° southwest. A grab sample from the float assayed: Pb - 70.0%; Cu - 0.5%; Au - 0.2 oz, Ag - 135.4 oz; Ag/Pb ratio - 1.9

Showing Key 11A: (N52785, E58120)

At this point, pieces of massive galena up to six inches across can be found on the greenstone talus for about 200 feet across the hillside (Smitheringale's Showing #3). The galena is coming from an old soil horizon which is overlain by about twelve feet of coarse greenstone talus. Although the vein was not exposed, it is thought that the galena forms a thin irregular coating on a fault surface similar to that seen at Showing Key 9A. A grab sample of the galena float assayed: Pb - 47.5%; Ag - 39.6 oz; Ag/Pb ratio - 0.83.

Showing Key 1A: (N56465, E52246)

At this point, float was found in the vicinity of a supposed fault. An open cut was made in the hillside; but the source of the galena was not reached.

The pieces of galena are up to four inches across; and some contained small remnants of the argillite host rock. A grab sample from the small pile beside the cut assayed: Pb - 70%; Ag - 75.0 oz; Ag/Pb ratio - 1.07

Showing Key 6A: (N55800, E56054)

A lens of massive galena ten inches wide and four feet long is exposed in the cliff face on the west side of a gulley. The lens has been formed by replacement of the argillite; and no controlling fracture or fault is visible. A few smaller stringers of galena were found near the lens. A channel sample across the 10-inch lens assayed: Pb - 75.0%; Ag - 91.40 oz.

Showing Key 13A: (N50950, E59900)

In the north bank of Cache Creek, a heavily oxidized zone containing some pyrite and galena (Smitheringale's #4 Showing) was opened up; and the opening was lagged to prevent slumping from above. This revealed two diverging faults with attitudes 128°/80°NE (west fault) and 155°/90° (east fault). The faults are two feet apart at the portal entrance and five feet apart nine feet from the entrance; and the sedimentary rock between these two faults is completely replaced by pyrite and ankerite. Near the intersection of the faults, there are small lenses of vein material which contain considerable galena and some sphalerite.

A chip sample across the 5-foot face of pyrite and ankerite assayed: Pb - nil; Zn - nil; Cu - nil; Au - 0.04 oz; Ag - 0.16 oz.

A grab sample from the galena-rich lenses assayed: Pb - 24.0%; Zn - 1.0%; Cu - 1.5%; Au - 0.02 oz; Ag - 9.08 oz.

Showing Key 16A: (N51450, E61900)

In a 40-foot cliff face on the south side of Cache Creek, there is

a 2-foot zone of oxidation with a N-S strike and a vertical dip (Smitheringale's Showing #5). In this zone, there are small stringers and lenses composed of ankerite, quartz, arsenopyrite, pyrite, and galena.

Showing Key 16B: (N51800, E62100)

On the south bank of Cache Creek, a weathered and slumped 6-foot vein was exposed. The boulder remnants in the vein consist of ankerite, arsenopyrite, pyrite and quartz; and assay: Au - 0.08 oz; Ag - 0.70 oz.

Showing Key 7A: (N54200, E55700)

On a steep southwesterly slope at this point, a dike-like body of greenstone projects through the phyllite talus. Over a 15-foot width along the western side of the intrusion, are blocks of arsenopyrite containing minor ankerite, pyrite, and sphalerite. (Smitheringale's Showing #2). A grab sample of the fresh sulphides assayed: Pb - tr; Zn - 0.8%; Au - 0.18 oz; Ag - 0.42 oz.

A few small pieces of material containing galena and sphalerite were found around the intrusion.

Minor Galena Occurrences:

Disseminated galena and small stringers of galena were found in many places in argillite on the Key M.C's. Small occurrences of disseminated galena were found on Key 19 M.C. at N59310, E51940; on the cliffs on Key 2 M.C. at N58000, E58300 (across from the main showing); along the cliffs on Key 3 M.C. at the same elevation as and west of the main showing; on Key 6 M.C. near N56200, E55600; and at N59430, E49680 on the Will 16 M.C.

In the small saddle at N54950, E54650 on Key 5 M.C. a 6-inch-long piece of massive sulphides was found. It consisted of pyrite, sphalerite, and galena; and probably came from a 2-inch vein.

CONCLUSIONS (silver-lead deposits):

Conwest's silver-lead showings of the Ketza River Area are confined to the Key and Strike mineral claims on Silver Ridge. They occur in slates and argillites of the Ketza Formation and in the uppermost volcanic formation.

Four galena veins have been exposed; and these all dip less than 35 degrees westerly. The galena veins, which have been exposed in the volcanics, are small and discontinuous. The galena veins found in the argillites and slates are replacements along definite faults, and seem to have better continuity than the veins found in the volcanic rocks. However, of all the silver-lead veins exposed to date, only those of Showing Key 3A merrit further attention.

At Showing Key 3A, the following structure has been inferred. A main fault with a NW-SE strike and a SW dip of 33° cuts the slates and argillites. Accessory faults branch off the main fault and curve away from it towards the south until they have a N-S strike and a gentle westerly dip. The direction of movement found along the accessory faults indicates that they could probably be called tension faults. The two showings of galena represent mineralization along two of the accessory faults.

The vein of Adit #2 was drifted along for 24 feet; and for this length had an average value over three feet of: Pb - 17.8%; Ag - 39.2 oz; Ag/Pb ratio - 2.2

The vein of Adit #1 was not properly exposed; but for reasons stated on page it is assumed that the vein dips approximately 25° west. Muck from a 7-foot-long winze, which was sunk into the upper part of the vein, assayed: Pb - 4.8%; Ag - 31 oz; Ag/Pb ratio - 6.4. If the assumed attitude is correct, the muck from the winze will represent ~~2.7~~ 4.0 feet of the true vein width.

RECOMMENDATIONS (silver-lead deposits):

The galena deposit at P_1 (Adit #1) of Showing Key 3A, yields the best silver/lead ratio found in the Ketza River Area. The deposit has been exposed but inadequate work has been done to determine its possibilities. The vein should be re-exposed and a new drift started on it. As a guide for future work, the values 170°/25°SW could be used for the attitude of the vein.

Large blocks of fault breccia are found downslope from the Main Fault. These masses of breccia are coming from the Main Fault; and in one place (P_5 of Sketch 1) contain a few small fragments of galena. The fault should be exposed at P_5 so that the source of the galena fragments can be observed.

The source for the galena float of Showing Key 1A has not been reached. Because the host rock is similar to that found on the main showing, and because the locality is in the vicinity of some faulting, the source of the float should be found.

The Key mineral claims south of Cache Creek are largely covered by overburden and have not been thoroughly prospected. More prospecting on Key 15, 16, 17, 18, 36, 37 mineral claims is needed.

GOLD-ARSENOPYRITE DEPOSITS OF KETZA RIVER AREA

The gold-bearing sulphide deposits in the Ketza River Area lie in a narrow belt which strikes N70°E, and which lies along the NW side of the head of Cache Creek (see Sketch 14). These deposits are covered by the mineral claims: Peel 3 & 5; Penguin 2, 4 & 6; Fury 29, 30 & 32; and Pioneer 2.

The sulphides are replacement bodies in flat-lying, Lower-Cambrian limestone; and consist of pyrrhotite, auriferous arsenopyrite, pyrite, and minor chalcopyrite. Most of the deposits contain some quartz; and some of the deposits have an envelope of dolomitized limestone. The individual deposits are probably related to minor faults. The control for the belt as a whole is not apparent.

SHOWING PEEL 3B (Sketch 22):

Size and Structure:

This deposit is the main gold showing of the area. It differs from the numerous other sulphide bodies in that it is elongated (N45°E), and it does not have any associated dolomitisation of the limestone. The showing consists of an elongated zone in which interconnected bodies of massive sulphides are interspersed with large remnants of limestone. The main portion of the zone is 500 feet long. The northeast half of this portion is about 100 feet wide, and the southwest half consists of two narrower (40 feet wide) zones separated by about 40 feet of limestone. Sulphide float has been picked up in places for an additional 200 feet to the southwest, and also in two places about 200 feet northeast of the main portion of the zone.

The work done so far indicates that the main part of the zone consists of over 50% massive sulphides in bodies which will have maximum widths of 50 feet. Widths of over 20 feet have been exposed in trenches in several places. The limestone host-rock is flat-lying or gently-dipping; and the bedding is an important small-scale control. Many of the trenches (A, G, H, of Sketch 22) seem to indicate that the lenses in the zone are flat-lying.

In order to illustrate the irregularity expected in the deposit, a hypothetical X-section has been drawn (Sketch 26). This is based partly on examination of the well-exposed pyrrhotite-ankerite deposits south of Cache Creek and partly on examination of the few exposed places of this deposit.

The X-section shows that the deposit is marked by a bench in the limestones about 400 feet above Cache Creek, and that Cache Creek is underlain by thinly-bedded phyllitic limestone. The sulphide replacement will probably stop abruptly at the contact between the massive limestone and the underlying phyllitic limestone. Thus the ore zone will have a maximum vertical dimension of 400 feet.

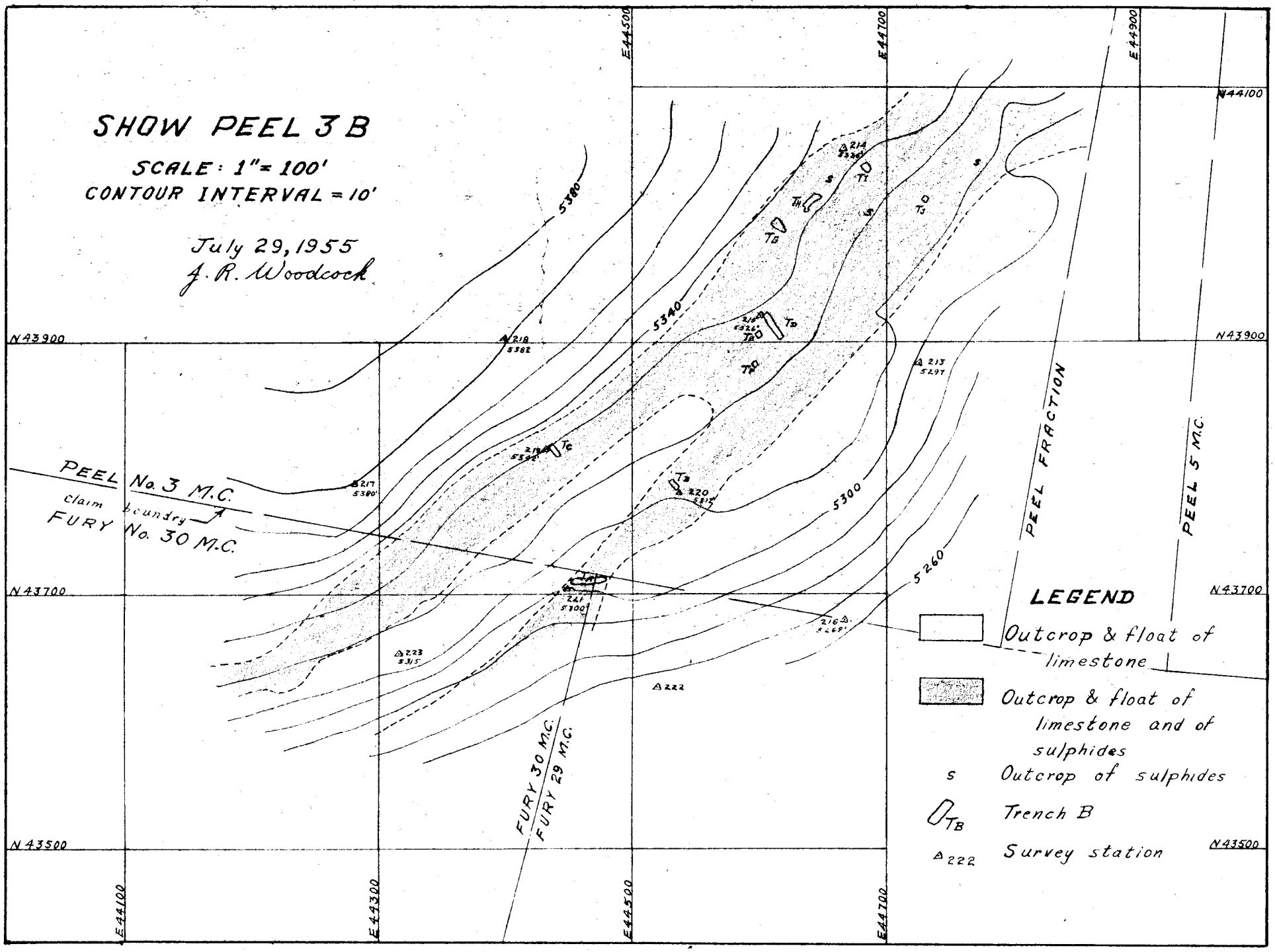
Mineralization:

The sulphides, in order of abundance, are: pyrrhotite, arsenopyrite, pyrite, and minor scattered chalcopyrite. The massive sulphides exposed in the trenches have an average assay of about 0.4 ounces gold; and the gold is associated with the arsenopyrite.

Because the pyrrhotite oxidizes much faster than does the arsenopyrite, there is an enrichment of gold in weathered material. Thus, any

float on the surface of the ground will be a remnant high in arsenopyrite and it will give an erratically high gold assay.

In a few of the trenches, there seems to be a horizontal structure in the sulphides. A 6-inch band of fresh sulphides will be underlain by a smaller band of porous limonite. The porous limonite was originally a pyrrhotite-rich layer. Thus, sampling the fresh material in the bottom of the trenches may have given a slightly high average result.


SHOW PEEL 3B
SCALE: 1" = 100'
CONTOUR INTERVAL = 10'
July 29, 1955
J. R. Woodcock
E44500
E44700
E44900
N44100
N43900
N43700
N43500
E44100
E44300
5380
5340
5300
5260
PEEL No. 3 M.C.
claim boundry
FURY No. 30 M.C.
PEEL FRACTION
PEEL 5 M.C.
FURY 30 M.C.
FURY 29 M.C.
LEGEND
Outcrop & float of limestone
Outcrop & float of limestone and of sulphides
s Outcrop of sulphides
TB Trench B
△222 Survey station

SKETCH 21

PEEL GOLD DEPOSIT

SHOWING PEEL 3B

KETZA RIVER AREA

LEGEND

- Outcrop & float of limestone
- Outcrop & float of limestone and of sulphides
- Exposures of sulphides
- Trench B
- Survey station
- Position of Sample
- Attitude of Fractures
- Attitude of Bedding

SCALE: 1" = 40'
CONTOUR INTERVAL = 10'

October 20, 1955
J. R. Woodcock

declination = 32°

N 44100
N 43900
N 43700
N 43500
E 43900
E 44100
E 44300
E 44500
E 44700
E 44900

5380
5360
5340
5320
5300
5280
5260

PEEL 3 M.C.
FURY 30 M.C.
FURY 29 M.C.
PEEL INTERNAL FRACTION
PEEL 5 M.C.
FURY 30 M.C.
FURY 29 M.C.

To FURY 30B

1860 – 0.08 oz.
1864 – 2.1 oz.
1865 – 0.7 oz.
1866 – 0.34 oz.
1868 – 0.36 oz.
1870 – 0.52 oz.
1871 – 0.34 oz.
1872 – Tr.
1874 – 0.78 oz.
2075 – 1.5 oz.
2080 – 0.4 oz.
2246 – 0.36 oz.
2249 – 0.38 oz.
2250 – 0.42 oz.
1875 – 0.16 oz.

SKETCHES of TRENCHES

SCALE: 1" = 10'

TRENCH A

1868 – 30 oz.
1871 – 58 oz.
2247 – 70 oz.
1869 – 60 oz.
2248 – 20 oz.
2245 – 44 oz.
2244 – 08 oz.

Limestone with seams & pockets of sulphides
Oxidized sulphides Limestone in bottom of pit
Limonite with sulphide remnants

PLANS:

SECTIONS:

Soil

TRENCH D:

Sulphides from contact 2083 – 0.94 oz.
chip sample along trench 1874 – 0.78 oz.
Float of arsenopyrite 2082 – 0.32 oz. (above soil)

TRENCH G:

N.W. boundry of sulphide zone

TRENCH H:

TRENCH I:

TRENCH M:

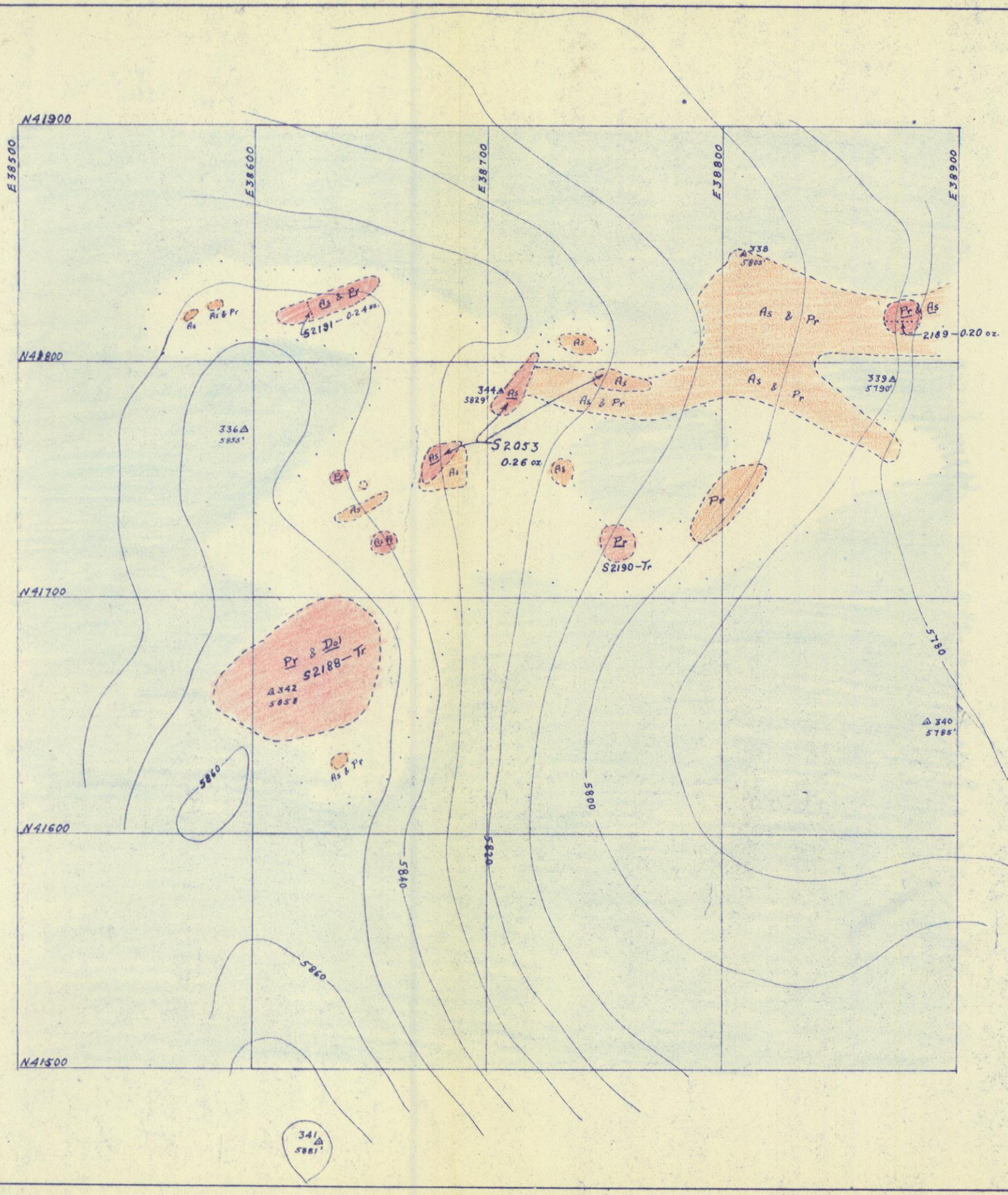
SHOWING: PENGUIN 6A

SCALE: 1" = 50'

CONTOUR INTERVAL: 10'

LEGEND

- Limestone (flat-lying)
- As, Pr — Arsenopyrite, Pyrrhotite, float
- As Pr — Arsenopyrite, Pyrrhotite, outcrop
- S2191 – 0.24 oz. — Position of Sample and Gold Assay
- △ 336 5855' — Survey Station with Elevations based on an approx. value picked from topographical map

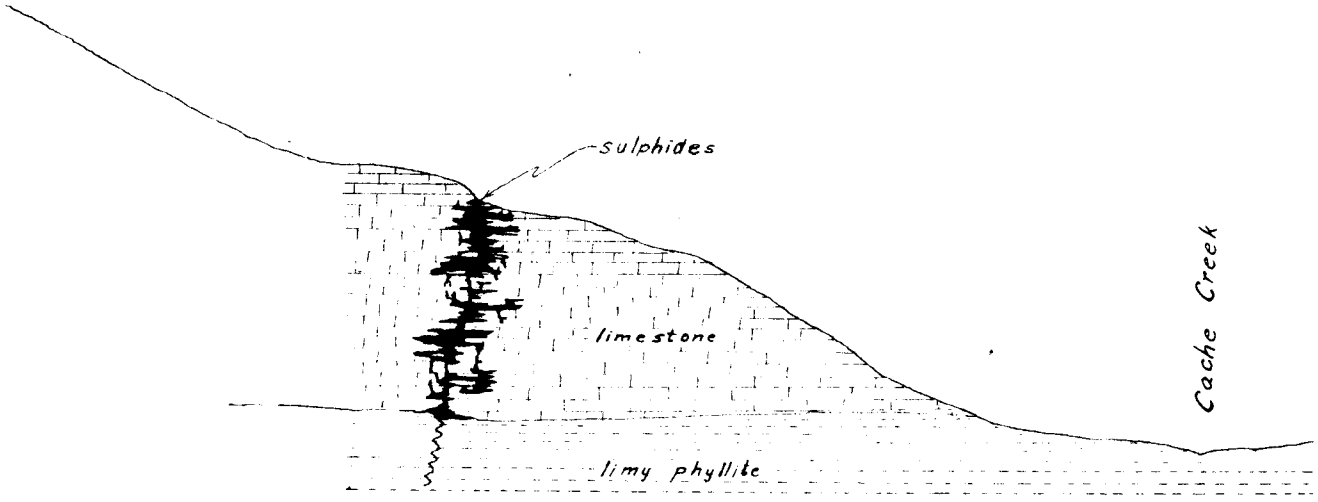


SHOW PEEL 3B

HYPOTHETICAL X-SECTION

LOOKING NORTHEAST

SCALE : 1"=400'



SHOWING FURY 30B (N43670, E43940) (Sketch 22)

Several loose pieces of arsenopyrite found at this point assayed 0.48 ounces gold. Digging exposed a deposit of sulphides which is in contact on its west side with a 3-foot lens of barren quartz. Small lenses of white quartz occur near the boundaries of several of the sulphide deposits.

SHOWING FURY 30A (N43530, E43100, Elev. 5480) (Sketch 24)

At this point, a lens of white quartz was seen at the foot of a limestone bluff. Search for sulphides near the quartz led to the discovery of the showing.

Sulphides have been exposed over an area about 15 feet square; and a chip sample taken across the exposure assayed 0.52 ounces of gold. Several boulders of sulphides were seen in the creek bed about 100 feet north of the exposure.

A potentiometer was used to measure the self potential around the deposit. The results, when plotted, show a definite anomaly over the sulphide body; but the anomaly does not extend in any direction and it does not include the source of the sulphide boulders found in the stream 100 feet to the north.

SHOWINGS ON PENGUIN 2, 4, & 6 M.C.'S:

Sulphide boulders which carry gold have been found in several places on the Penguin 2, 4, and 6 M.C.'s. In some cases, sulphide boulders, which have no exposed source, are found scattered over areas up to 200 feet long. On the whole, there is considerably more overburden here than there is around showing Peel 3B. Grab samples from these occurrences were taken by Trettin; and the locations with assay results have been plotted on Sketch 14.

The occurrences are as follows:

Sample No.	Location Lat.	Dep.	Elevation	Assay(oz) Au	Ag	Remarks
2181	42440	40350	5630	.22	.10	Scattered small boulders of heavily-oxidised arsenopyrite in dolomite talus.
2187	42390	40420	5610	.50	.20	Small outcrop of arsenopyrite (50%) and pyrrhotite. Sample from arsenopyrite only.
2186	42490	40400	5600	.50	.10	Boulders of arsenopyrite and of pyrrhotite. Sample from arsenopyrite only.
2185	42060	40550	5555	Tr	Tr	Small patch of float of heavily oxidised arsenopyrite.

The above four occurrences are in the same depression on Penguin No.4 M.C.; and are probably from the same sulphide body.

2170	46000	40150	5530	.16	.15	A few pieces of float of oxidised arsenopyrite in limestone and dolomite rubble.
2434	45500	40250	5500	Tr	Tr	A couple of 2-foot boulders of pyrrhotite containing minor arsenopyrite.
2440	41720	40950	5380	.16	.05	An 80-foot wide, nor therly-trending zone of sulphide float (arsenopyrite, pyrrhotite, pyrite).
2450	46080	39300	5750	Tr	Tr	Zone of scattered float of arsenopyrite and pyrrhotite in dolomite on hillside

Sample No.	Location Lat.	Dep.	Elevation	Assay(os) Au.	Ag.	Remarks
2449	45930	39379	5745	.04	.05	Very small area of pyrrhotite and arsenopyrite.
2182	47500	41610	5445	.04	.05	Area about 100 feet wide in Creek bed with float of pyrrhotite and arsenopyrite.
2183	47670	42100	5430	.08	.05	Boulders up to 2 feet across composed of pyrrhotite, arsenopyrite, and minor chalcopyrite.
2184	47650	42290	5420	.14	.25	Float of pyrrhotite with minor arsenopyrite. Grab sample from area about 50 feet square.

Samples 2182, 2183, and 2184 are from a zone about 800 feet long. Sulphide float can be found almost anywhere along this zone.

2447	46850	42520	5210	.08	.20	Small outcrops of pyrrhotite with minor arsenopyrite.
2448	46770	42460	5200	Tr	Tr	Mainly pyrrhotite. On hillside.

SHOWING PENGUIN 6A: (Sketch 25)

Along the boundary between the Pioneer #2 and Penguin #6 mineral claims is a low, elongated, dark red, limestone hill. This is very impressive from a distance and also after a quick glance when walking over the ground. However, much of the overall rusty color is due to weathering of dolomite; and the darker patches are due to oxidization of small scattered irregular lenses of sulphides. The sulphides are pyrrhotite with minor arsenopyrite.

Showing Penguin 6A is the only part of the hill that contains considerable arsenopyrite. The arsenopyrite comprises about 50% of the sulphides; but it is not intimately mixed with the pyrrhotite. There are outcrops containing only arsenopyrite, and outcrops containing only pyrrhotite. The

sulphide bodies seem to be in horizontal lenses; and the largest arsenopyrite lens is estimated to be under four feet thick and very discontinuous horizontally. Sample 2053 which is from this lens assayed 0.26 ounces of gold.

SHOWING PEEL 5A:

The most easterly outcrop of sulphides in the arsenopyrite belt is showing Peel 5A. The mineralization consists of pyrrhotite, quarts, and arsenopyrite. The samples carried no gold.

CONCLUSIONS (Arsenopyrite Belt)

The Ketza River gold-arsenopyrite deposits occur along a belt which is about 1½ miles long. At both ends of this belt are outcrops of the sulphides (pyrrhotite, arsenopyrite, and pyrite); and, between these two occurrences, sulphide float is found in several places over some fairly large areas.

Showing Peel 3B, which is at the northeast end of the belt, is the best showing and the only showing on which work has been done. The main part of this showing is a 500-foot-long, 100-foot-wide zone in which interconnected bodies of massive sulphides are interspersed with large remnants of limestone. The zone is estimated to contain about 50% massive sulphides which have an average gold assay of about 0.4 ounces. No good vertical exposures of the deposit exist; but the exposures in the trenches indicate that the deposit will probably be very irregular in vertical section.

RECOMMENDATIONS

Further work is warranted, especially on Showing Peel 3B. Vertical drill holes on this showing, guided by a 25-foot grid, are needed to get a clear picture of the exact outline and distribution of the sulphide bodies and the exact grade of these sulphide bodies.

A pack-sack drill run by a competent person will give satisfactory performance in the massive sulphides and limestones of these deposits. A pack-sack drill, run by a Prospector Airways crew, was used to drill a deposit on the Dak Mineral Claims of the Ketza River Area. The deposit consisted of pyrrhotite in dolomitized limestone; and a good 7/8 inch core was recovered. As a preliminary step in the investigation of Showing Peel 3B and Fury 30A, 50-foot vertical holes

should be drilled with a pack-sack drill. A two-man crew should be easily able to average one hole every two days. The overburden is, in most places, less than five feet thick; and a water supply can be found less than 1500 feet away from any of the showings. Water for drilling Showing Peel 3B can be pumped without vertical lift from the stream at Showing Fury 30A.

The best site for a camp for this work is below Showing Peel 3B at N42800, E44500, elevation 5000'. This location has the best supply of wood to be found in the upper part of Cache Creek Valley. Small springs seep out of the ground all along the bottom of the valley. The ground is very damp, and board floors will be needed in the tents.

The southern hillside at Showing Peel 3B is one of the first places to lose its snow in the spring. Work could have started there about June 12 in 1955. However, the spring thaw of 1955 was two to three weeks later than normal

CONQUEST'S REMAINING KETZA RIVER CLAIMS.

MOON, POY*, PENGUIN, PIONEER, QUANCHU, BOOM M.C.'s

The claims included in this group lie on the small limestone plateau south of the head of Cache Creek, on the debris-covered pass between the Ketza River and McConnell River drainage systems, and on the limestone ridge south of the pass (see Sketch 14).

The claims have been prospected and the assays of the numerous sulphide showings are included in the appendix. None of the showings found are of economic importance; and only the Poy M.C.'s, the Moon M.C.'s, and three of the Pioneer M.C.'s have been kept in good standing.

The showings are irregular replacement bodies in limestone, and seem to lack any consistent control. Most of the deposits consist of pyrrhotite and ankerite with minor pyrite; but a few of them consist of ankerite cut by small irregular lenses of fine-grained pyrite. A few of the deposits contain minor arsenopyrite; and many of them have an envelope of dolomitized limestone.

---

* The Poy M.C.'s cover ground which was originally covered by the Willa M.C.'s

FURY, PEEL, PEG, GOAT, ELSIE*, ANN*, EAGLE M.C.'s

The claim groups included under this section include claims situated on several different hills and claims underlain by several different rock types (see Sketch 11 - geological map). Many of the sulphide deposits found on these claims are of no economic importance; but have been included in the list of table 1. Several unique showings, although not economic, merit separate mention.

Showing Peg 18A: (N49820, E60650, Elev. 4950)

At this point, an erratic angular block of arsenopyrite over three feet across occurs in the soil and ash mantle. The rock consists of arsenopyrite, quartz, and scorodite; and resembles some of the ore found on Showing Peel 3B. It assays: Au- 0.08 oz; Ag- 1.3 oz.

Galena-Arsenopyrite Vein (Showing Ann 1A):

This showing is at the head of a steep gulley at N45900, E42250, elevation 6100'. A vertical 6-inch quartz vein, which carries some arsenopyrite, cuts the argillites or slatey rocks. At the foot of the exposure, the vein widens, over a short distance, to 1½ feet; and contains considerable galena. Across 1½ feet it assayed: Pb- 0.5%; Au- 0.02 oz; Ag- 4.60 oz. This is the vein represented by sample #52 in Breakey's report.

Peel 4 Pyrrhotite Bodies:

On a northern slope in the south half of the Peel 4 M.C. is a row of pyrrhotite exposures in a 1500'-long zone. Samples 2235, 2403, 2404, 2405

---

* The Ann and Elsie M.C.'s cover ground that was formerly covered by Fury M.C.'s

marked on Sketch 21 are the positions of grab samples from this zone. The zone seems to dip steeply southwest.

The sulphide bodies consist of pyrrhotite with minor pyrite and with scattered finely-disseminated chalcopyrite. Sample 2235 is a chip sample across a 6-feet width of the best exposure. It assayed: Cu- Tr; Au- Tr; Ag- 0.40 oz.

These occurrences and some more a little further up Peel Creek are the ones mentioned by Breakey.

Pyrrhotite boulders, which slide down the steep slope, come to rest in Peel Creek and give the water its very high iron content.

Limonite Conglomerate of Fury 26 M.C.

On the north side of Cache Creek at the foot of a steep hill, are some very impressive rusty banks of "limonite conglomerate". The red banks extend along the north side of Cache Creek for about 4000 feet; and cross the Fury 25, Fury 26, and Peg 19 M.C.'s (see Sketch 21). Where best developed, they have a vertical thickness of 300 feet and a horizontal width of over 500 feet.

The limonite conglomerate is formed by iron-rich water which seeps through gravel and soil, and deposits limonite in the interstices. The result is a very hard rock composed of limonite-cemented debris. The water carrying the iron has two possible sources. It may be water which drains off the hillside and passes over a sulphide body situated along the upper margin of the red banks; or it may be water which comes out of fault lying along the upper margin of the red banks.

Part of the iron-rich water of Peel Creek enters the ground near a bend in the Creek (N46050, E47200) and then seeps out through the talus that forms

the west wall of Peel Creek at N46200, E47700. As the water issues from the talus of the canyon side, it leaves limonite which cements the talus and forms the western-most part of the largest deposit of limonite conglomerate.

Part of the iron-rich water of Peel Creek may be entering a fault at the bend mentioned, and then seeping out of the fault along the upper margin of the red banks. (See Sketch 14)

Tetrahedrite-Pyrite Float:

A piece of float consisting of pyrite and tetrahedrite was found in the Ketza River Area by two independent prospectors. A sample from the piece of float was given to an outside geologist who got a silver assay of 300 ounces from it. The prospectors report that the float was found on the hillside south of Cache Creek in the vicinity of the Oxo* or Peg mineral claims. They could not re-locate the piece of float.

The claims south of Cache Creek are largely covered by overburden and so are not easily prospected. Possibly the mineral claims Peg 19 to 24 inclusive should be more thoroughly prospected.

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* The Oxo claims belong to Erick Erickson and Pete Veraluce

PENNY, STAR, FLY, KETZA M.C.'s

Because nothing of importance was found in the prospecting of the claims of this section, they were allowed to lapse.

Many quarts-carbonate veins and quarts-hemitite veins occur in the Limy phyllites of the Ketza River Area; and, in places, these veins contain sporadic amounts of chalcopyrite. Float and outcrops of this type of deposit have been seen on the Penny, Peg and Tom mineral claims on the slopes of Mount Misery; but the veins are too small and too low in average grade to be of economic importance.

DEPOSITS NOT OWNED BY CONWEST

HOEY'S CLAIMS (GALENA and PROP GROUPS):

These claims were under option to Cypress Exploration Corporation Limited in the 1955 field season. A small amount of work was done on some of the showings. The showings which were described in Smitheringale's initial report have been marked on Sketch 14.

ERICKSON'S PYRRHOTITE-GALENA LENS:

At N35000, E51000, Elevation 5800' on the Onyx* claims, there is an occurrence of galena in pyrrhotite. The pyrrhotite body is similar to those found on the Pey mineral claims in that it contains pyrite and it is an irregular pod formed by replacement of limestone. It is unique amongst the pyrrhotite bodies in that it contains galena. It has a probable length of 100 feet, an average width of less than 20 feet, and a probable average depth of about 20 feet. A chip sample across 8 feet of massive sulphides in one of the trenches assayed: Pb- 12.0%; Ag- 9.6 oz.

This deposit is too small to be of economic importance at present. However, float of similar material was found about 1000 feet downstream from the showing. (The showing is at the head of a branch of Cache Creek).

Fifty feet southeast of the trench, there is an irregular quartz lens containing sporadic amounts of arsenopyrite and chalcopyrite.

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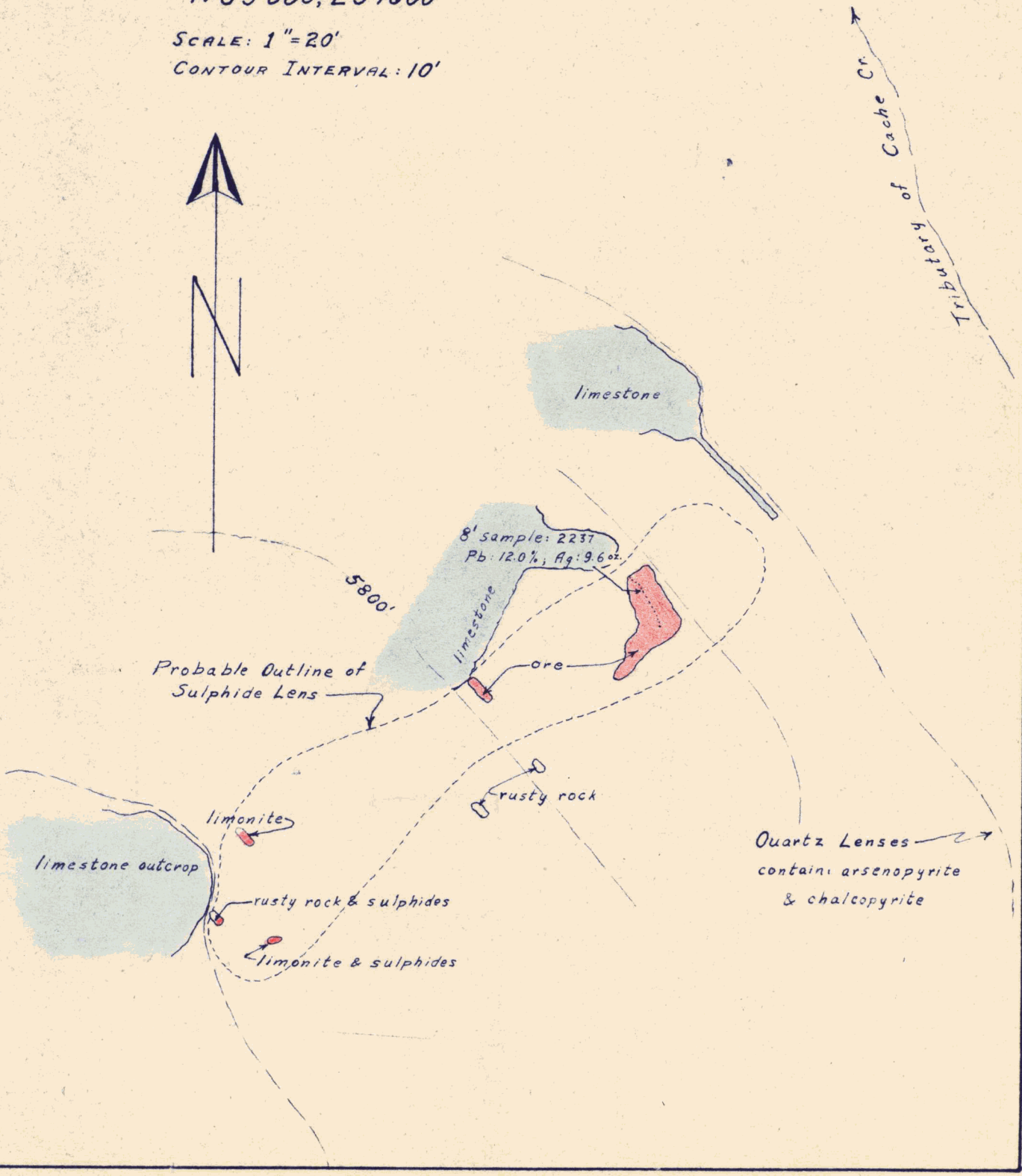
* The Onyx claims belong to Erick Erickson and Pete Veraluce

ERIKSON'S PYRRHOTITE-GALENA ONYX CLAIMS

N35000, E51000

SCALE: 1"=20'

CONTOUR INTERVAL: 10'



SHOWING TOM 3A: (N59350, E43670, Elev. 7180')

This showing is on the northern edge of the Tom #4 M.C. and beside the Number 2 Post of the Neil #1 M.C. The Tom Group has been optioned by Gordon Griffiths of Northern Mountains Prospecting Syndicate. The following report is based on the examination of August 16, 1955.

The showing is in a pass at an elevation of 7180 feet on Mount Misery. The rocks on the northeast side of the pass are silicous dolomites grading to the northeast into quartzite and the rocks on the southwest side are massive quartzites. The pass, which seems to represent a 170'-wide fault zone, is underlain by brecciated rock. The gulley running nor th from the pass forms a sharp contact between dolomite talus on the east and quartzite talus on the west and may be close to the fault between the two rock types. Examination of cliffs below this talus slope would probably help in locating the fault accurately.

The brecciated rock in the west side of the pass has been replaced by ankerite, galena, and pyrite. Many remnants of unreplaced rock occur in the vein. A shallow trench was dug across 15 feet of the part showing the best galena float. The best nine feet of this assayed: Pb- 18.2%; Ag- 9.68 oz; Au- 0.02 oz; Ag/Pb = 0.53.

Although no galena float was found in the talus below the trench, many pieces of float of the ankerite, which accompanies galena in the vein, were found for a distance of fifty feet down slope from the trench. A narrow band of rusty fault gouge shows up in the trench and along the western boundary of the ankerite float.

The mineralization is confined to the western boundary of the wide fault zone. Very little work has been done on the showing, but the work so far

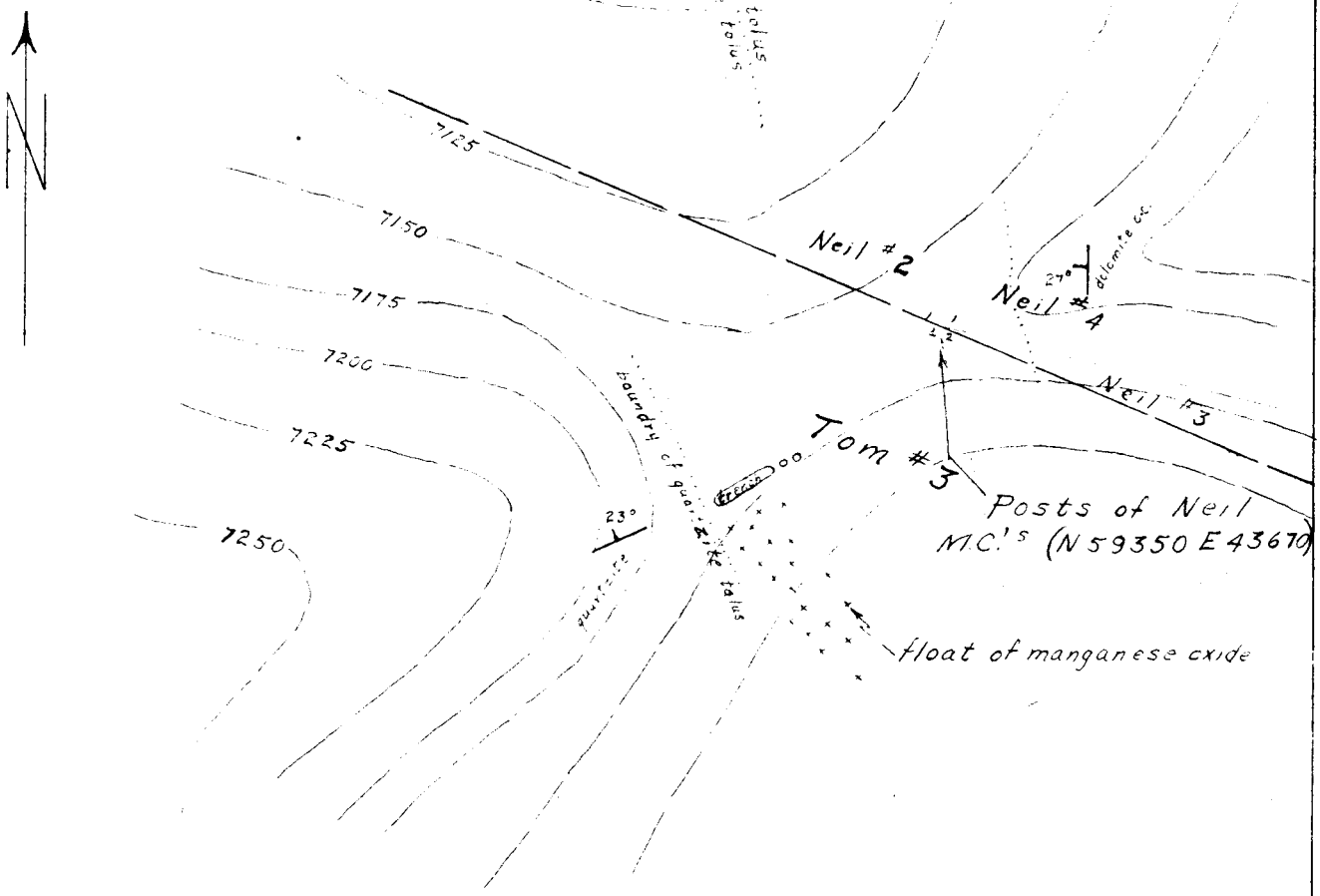
indicates that the mineralisation is sporadic; and that much unaltered breccia occurs in the ore.

SHOW TOM 3A

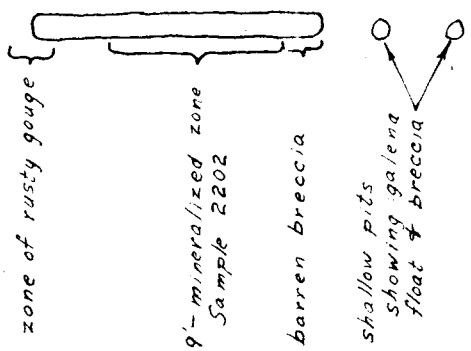
SCALE: 1"=50'

August 16, 1955

J. P. W.



TRENCH: (Scale: 1"=10')



APPENDIX OF ASSAYS ON MINOR SULPHIDE BODIES

GRAB SAMPLES FROM IRON SULPHIDES DEPOSITS

CLAIM	ASSAY NO.	LOCATION LAT.	LOCATION DEP.	ELEVATION	ASSAY(OZ) AU.	ASSAY(OZ) AG	MINERALIZATION	SIZE AND SHAPE
Moon 1	2417	38600	39520	6250	Tr	Tr	Pyrrhotite	Zone about 50' long on hillside. Mineralized along fractures & bedding planes.
Moon 1	2418	38400	39600	6250	Tr	Tr	Pyrrhotite	Zone of blebs 50' wide, on hillside
Moon 1	2416	39800	40000	6280	Tr	Tr	Pyrrhotite, arsenopyrite	Zone 20' high and 4' long on gentle hillside.
Moon 2	2419	38200	39900	6160	Tr	Tr	Pyrrhotite	Continuation of 2418
Moon 3	2432	39550	41800	6260	.52	.40	Arsenopyrite and Pyrrhotite	Small zone of scattered showings on steep hillside (60' long)
Moon 3	2433	39800	41630	6260	.08	.10	Pyrrhotite; minor arsenopyrite	Scattered showings on steep hillside; zone about 30' long
Moon 5	2424	39140	43680	6155	Tr	.40	Mostly ankerite; some pyrrhotite	Zone 60' long & 20' high on hillside
Poy 1	2429	40100	43550	5850	.36	.25	Mainly ankerite; some pyrite & pyrrhotite. Less than 1% arsenopyrite (Most of sample from this)	Zone about 30' square on hillside
Poy 1	2175	40250	44820	5700	.08	.20	Arsenopyrite & ankerite; some pyrite	About 100' long and 100' high on steep slope. Related to a fault
Poy 1	2176	39660	44800	5880	Tr	Tr	Mainly ankerite; some arsenopyrite, pyrite.	About 20' wide & 20' high on gentle hillside
Poy 1	2177	38900	44170	6040	.02	1.6	Mainly ankerite; some pyrrhotite & arsenopyrite; minor pyrite	Several bodies in zone 90' by 300' on small knolls & depression

CLAIM	ASSAY NO.	LOCATION LAT.	LOCATION DEP.	ELEVATION	ASSAY(OZ) AU.	ASSAY(OZ) AG.	MINERALIZATION	SIZE AND SHAPE
Poy 1	2420	39400	44400	5900	.04	.35	Mainly ankerite; scattered arsenopyrite, pyrrhotite, pyrite	Zone 4 ft. across 3' high
Poy 2	2174	40250	48620	5600	Tr	.10	Arsenopyrite & pyrite	15' across, 10' high on steep slope
Poy 2	2178	39200	45060	5730	Tr	Tr	Mainly ankerite, pyrrhotite and arsenopyrite	Exposure about 50' square on steep slope
Poy 3	2414	38160	44980	5970	Tr	.30	Pyrrhotite and pyrite	Exposure 5' square on steep hillside
Poy 3	2413	37400	44240	6345	Tr	Tr	Pyrrhotite; minor pyrite and arsenopyrite	On gentle hillside; partly covered by overburden; Exposure 40' across, 20' high.
Poy 4	2411	38150	45900	5730	Tr	.50	Mainly ankerite; scattered arsenopyrite, pyrite, pyrrhotite	Zone 16' by 90', on hillside, containing several showings.
Poy 4	2415	38250	45750	5730	Tr	.30	Upper zone mainly pyrrhotite. Lower zone has some arsenopyrite	Upper zone 6' square; Lower zone 15' by 6'; on hillside
Poy 4	2179	37800	45580	5950	.02	.20	Mainly ankerite; some arsenopyrite, pyrrhotite, pyrite.	Zone about 50' square on hillside
Poy 4	2180	37720	46300	5910	.02	Tr	Mainly ankerite & pyrrhotite; Minor arsenopyrite, pyrite	Body is about 20' square and surrounded by more ankerite
Open Ground (N.of Moons)	2423	39500	42320	6270	.04	.25	Mainly pyrrhotite; about 10% arsenopyrite	Zone of 3 bodies on very steep slope. One body 3' by 60'; other two about 15' by 15'
Open	2430	40050	42940	5970	.08	.05	Mainly pyrrhotite; some arsenopyrite	Exposure about 60' square on steep slope
Open	2431	40270	43020	5810	.04	.25	Mainly ankerite; minor pyrrhotite	Exposure about 60' square on steep slope
Penguin 5	2421	40370	39750	6020	Tr	Tr	Pyrrhotite	Exposure 60' by 25' on very steep slope

CLAIM	ASSAY NO.	LOCATION LAT.	LOCATION DEP.	ELEVATION	ASSAY(OZ) AU.	ASSAY(OZ) AG.	MINERALIZATION	SIZE AND SHAPE
Penguin 5	2422	40220	39820	6120	-	Tr	Pyrrhotite; about 15% arsenopyrite	Exposure 10' by 15' on very steep slope
Quanchu 1	2442	42580	36370	5995	Tr	Tr	2/3 arsenopyrite 1/3 pyrrhotite	Exposure 15' square on steep slope
Quanchu 1	2443	42150	30900	6000	Tr	.20	Arsenopyrite, pyrrhotite, pyrite	20' square on steep slope
Quanchu 1	2444	41750	30150	5950	.04	Tr	Pyrrhotite (90%); minor arsenopyrite and pyrite	Zone about 100' long & 4' high at contact between dark slate and dolomitic limestone
Boom 7	2445	SW corner of claim			.12	.30	Float from quartz vein	
Open Ground E Boom #1					Tr	1.60	Minor galena with pyrite and ankerite	On W-facing limestone cliff. Replacement of a 1-foot bed of flat-lying limestone. About 50' along cliff face.
Pioneer 2	2426	42240	37390	5950	Tr	0.10	Mainly pyrrhotite; About 20% arsenopyrite	Zone about 100' long and 3' to 25' wide on gentle hillside.
Pioneer 3	2441	43280	36830	5970	Tr	Tr	Float of arsenopyrite containing some pyrrhotite	Zone about 100' square in dolomite
Peel 4	2402 & 2235	45590	43870	5670	Tr	Tr	These four occurrences are massive pyrrhotite containing minor pyrite and traces of chalcopyrite. The showings probably belong to same vein in Fury Formation. It dips steeply SW source of float mentioned by Brenkey (Sample 51)	2 Showings each about 5'wide 30'long
Peel 4	2403	45750	44370	5450	0.02	Tr		Massive boulders 3'-4' in diameter
Peel 4	2404	45680	44700	5400	0.02	Tr		Zone of float 5'wide,50'down hillside
Peel 6	2405	45830	45250	5220	0.04	Tr		Outcrops 5' high exposed for 18' along hillside
Goat 3	2171	44850	38950	4500	0.02	0.90	Arsenopyrite, pyrite, pyrrhotite in a quartz vein	Vein 1' wide, exposed for 20'; about 20' above creek; in limy slate

CLAIM	ASSAY NO.	LOCATION LAT.	LOCATION DEP.	ELEVATION	ASSAY(OZ) AU.	ASSAY(OZ) AG.	MINERALIZATION	SIZE AND SHAPE
Fury	2401	48180	41330	6680	0.02	0.08	Pyrrhotite, pyrite	Float in dolomite
Fury 11	2428	47140	41330	6050	0.04	Tr	Pyrrhotite with minor chalcopyrite and arsenopyrite (Breakey's Sample 51)	Several boulders about 1' across lying on limy slate
Fury 14	2406	45100	41120	6245	Tr	Tr	Malachite, Azurite, disseminated chalcopyrite (1.4% Cu)	In quartz veinlets or disseminated through limestone over area about 12' square
Fury 14	2425	45500	41450	6530	Tr	0.10	Scorodite (from arsenopyrite)	Float in zone 6' wide and 30' down slope on both sides of ridge
Fury 15	2235 2236	45930	42100	5580	0.06 0.02	N.55 4.60	Arsenopyrite, pyrite, galena in quartz vein	(Breakey's Sample 52) See Showing Ann 1A
Fury 15	2436	46050	42180	5450	Tr	0.20	Arsenopyrite in quartz vein	Exposure 5' wide, 50' down hill in slate
Fury 13	2437	46190	41920	5450	Tr	Tr	Arsenopyrite, pyrite	Boulders about 2' in diameter
Fury 19	2409 2472	49310	46080	6380	.08 Tr	.12 Tr	Scorodite Arsenopyrite	Disseminated in quartz vein in Fury Slate 2'-3' wide. About 60' long. Mostly horizontal
Fury 20	2165	49120	44940	6400	0.18	0.32	Pyrrhotite in quartz	Lens in crest of minor fold
Fury 20	2161	49120	45280	6450	Tr	0.20	Pyrrhotite in quartz	Vein 2'-3' wide; exposed at 2 places about 30' apart
Fury	2410	50620	37520	6090	Tr	Tr	Pyrrhotite, pyrite	Zone of float 200' square. North of upper part of Creek
Fury 27	2173	46930	46630	5330	Tr	Tr	Arsenopyrite & scorodite in quartz	Float over zone 4' wide, 30' long

CLAIM	ASSAY NO.	LOCATION LAT.	LOCATION DEP.	ELEVATION	ASSAY(OZ) AU.	ASSAY(OZ) AG.	MINERALIZATION	SIZE AND SHAPE
Peg	2166	54780	50980	5280	0.09	Tr	Pyrite	E-W zone between two branches of the Creek, containing quartz with disseminated sulphides
	2164	54890	51720	5180	Tr	Tr	Pyrrhotite, pyrite, arsenopyrite	
Peg 16(a)		49750	50250	5050	Tr	2.10	Scattered galena in quartz (4.0% Pb in selected specimens)	Small outcrop of white drusy quartz

KETZA RIVER AREA

N 60000 E 60000 = LAT. 61°34.8' LONG 132°10.1'

DECLINATION = 34°E

CONTOUR INTERVAL = 100'

Dashed Contours Indicate Cloud-Covered Areas of Photographs

SCALE : 1" = 1000'

GEOLOGICAL MAP

1955 Field Season

LEGEND

TABLE of FORMATIONS

Overburden

VOLCANICS:
- (a) Flow breccias and lavas, minor banded cherts
- (b) Volcanic rubble

— unconformity —

RIDGE FORMATION:
- (a) Intercalated greenstones & limy phyllites
- (b) Limy phyllites
- (c) Greenstones

KETZA FORMATION:
- (a) Slates, argillites, cherts, quartzites, etc.
- (b) Greywacke
- (c) Quartzites (massive)

— unconformity —

DEVONIAN SEDIMENTS:
- (a) Fossiliferous Limestone
- (b) Quartzite and slate

— unconformity —

HOEY QUARTZITE:
- Massive quartzite

— unconformity —

MT. MISERY FORMATION:
- (a) Dolomite
- (b) Massive Quartzite

— unconformity ? —

CAMBRIAN LIMY SEDIMENTS:
- (a) Limy slates & phyllites, minor dolomite
- (b) Thinly-bedded dolomite, brown slates
- (c) Brown limy slates & phyllites
- (d) Grey to black limy slates & phyllites
- (e) Massive Lower-Cambrian limestone
- (f) Thinly-banded phyllitic limestone

MT. FURY FORMATION:
- Thinly-bedded quartzites, slates, argillites

SYMBOLS

- Fault
- Assumed Fault (approximate position)
- Anticlinal Axis
- 33° Attitude of Bedding
- ⊕ Horizontal Bedding
- Ⓕ Fossil Locality

Ketza River

Mount Misery

Star Mountain

Silver Ridge

Mount Fury

Peel Creek

Cache Creek

Phoenix Tarn

E 35000 E 40000 E 45000 E 50000 E 55000 E 60000 E 65000

N 65000 N 60000 N 55000 N 50000 N 45000 N 40000 N 35000 N 70000 N 75000

KETZA RIVER AREA

N 60000, E 60000 = LAT. 61°34.8', LONG 132°10.1'

DECLINATION = 34° E

MINERAL CLAIM MAP

Based on Transit & Stadia Survey
by R.J. Murphy

Claim Posts

Overlapping Claim Line

Obsolete Claim Line

The following claims were not surveyed:
The following claims were not surveyed:
Moon 1-8 Fly 1-10
Pay 1-6 Prop 1, 2
Key 15-18, 36, 37

E 35000 E 40000 E 45000 E 50000 E 55000 E 60000 E 65000 E 70000

N 70000 N 65000 N 60000 N 55000 N 50000 N 45000 N 40000 N 35000

SKETCH 14

KETZA RIVER AREA

N 60000 E 60000 = LAT 61°34.8' LONG 132°10.1'

DECLINATION = 34° E

CONTOUR INTERVAL = 100'

Dashed Contours Indicate Cloud-Covered Areas of Photograms

SCALE: 1" = 1000'

CLAIMS & SULPHIDE DEPOSITS

CONWEST EXPLORATION CO. LTD.

LEGEND

- Claim Posts
- Claim Line
- Overlapping Claim Line
- Fury 30 B — Mineral Deposit
- 2170 / 0.16 oz. — Sulphide Position with Assay
- Approximate Boundry of Claim Group
- Pack-horse Trails

E 35000 E 40000 E 45000 E 50000 E 55000 E 60000 E 65000

N 70000 N 65000 N 60000 N 55000 N 50000 N 45000 N 40000 N 35000

Mount Misery

Mount Fury

Star Mount

Silver Cage

Ketza River

Ketza Camp

Silver Creek

Cache Creek

Peel Creek

Pioneer Tarn

0&O CLAIMS

DAK CLAIMS

ONYX CLAIMS