PE-049-18

PE 49-18

EXAMINATION OF TRENCHES ON THE FAIRBANKS-WOLF CREEK DIVIDE

In the Fall of 1962, some bulldozer trenches were dug on the Fairbanks-Wolf Creek divide by William Basham, one of the owners of the Hi-Yu property, and Eugene Schreiber, owner of the McCarty group of claims. Both the Hi-yu property and the McCarty property have been placed under control of Keystone Mines, Inc. The trenches were examined during July and August, 1963.

Kx 49-96

Plate I shows the locations of the trenches and of the shaft being sunk by Keystone Mines, Inc. (Kx49-69) The Keystone shaft is represented by the numeral 1; trenches on the McCarty property are represented by the numerals 2 and 3; and trenches on the Hi-Yu property are represented by the numeral 4. Details of the trenches are shown on Plates II and III. Geochemical surveys were run near each of the trenches on the McCarty property to determine whether or not the veins could be traced by soil sampling. Results of the geochemical surveys are shown on Plate III.

Trenches on the Hi-Yu Property.

One of the trenches on the Hi-Yu property exposes a vein that strikes N 55° W and dips 75° S. In line with this vein to the southeast is a caved shaft, which apparently is the McNeil shaft described by James M. Hill in U. S. Geological Survey Bulletin 849-B, LODE DEPOSITS OF THE FAIRBANKS DISTRICT, ALASKA, page 104. The shaft was not accessible when examined by Hill, but in a cabin on the claim he found sacks of ore consisting of quartz, arsenopyrite, jamesonite, and galena. The vein now exposed in the southeast end of the trench is quartz with no sulfides readily visible. Toward the northwest the quartz grades into a shear zone consisting of gouge and broken schist. Near the northwest end of

Kx49-40
Kx49-96

the trench this vein, or shear zone, apparently is faulted, and, in the extreme northwest end of the trench another vein striking east-west is exposed. Between the two vein exposures, a second trench has been dug across the first, and excavated material from the second trench has covered part of the first one.

Table I shows the assay results of samples taken from these trenches. The only sample that appears to be of economic interest (No. 44) was taken from a small mass of float exposed near the ground surface in the second trench lying almost in line with the east-west striking vein.

Trenches on the McCarty Property. RI 49-103

Veins have been exposed in two trenches on the McCarty property. Table II shows the assay results of samples taken from the two trenches. The vein material in both trenches is quartz carrying metallic sulfides.

Soil samples were taken from augur holes at 15-ft intervals on both sides of the trench near the northeast corner of the Pennsylvania claim. The samples were tested for heavy metal content using a solution of dithizone in carbon tetrachloride. No anomaly was detected, although material taken from the vein itself reacted strongly with the dye solution. In another trench (not shown on the map) about 150 feet to the southwest, no vein is exposed, but some iron-stained material in the wall of the trench reacted strongly with the dye solution.

In the trench near the southwest corner of the Pennsylvania claim, a vein at one time was exposed in a small hand-dug pit. At the time of the examination, this pit was filled with water; the vein could not be seen in place, but a dump beside the pit contained pieces of the vein material.

Soil samples were taken from augur holes at 15-ft intervals along

both sides of the trench, and the samples were tested for heavy metal content. On the northeast side of the trench no definite anomaly was detected. On the southwest side of the trench a weak anomaly was detected, but, in a third line of soil samples 30 feet farther to the southwest, no anomaly was detected. Vein material from the dump in the trench reacted strongly with the dye solution.

In a draw at the head of Wolf Creek, a vein known as the "jamesonite lead" has been exposed by trenching. This exposure is about midway between the Keystone shaft and trenches represented by the numeral 2 on Plate I. A soil sample from an augur hole a few feet downslope from the "jamesonite lead" reacted strongly with the dye solution.

Summary.

Some of the veins on the Fairbanks-Wolf Creek divide can be traced by testing soil samples, but it appears that this method would not be reliable for tracing the veins exposed in the trenches shown on Plate III. It appears likely, however, that, in conjunction with trenching, analysis with a dithizone solution could be used to advantage for immediate, on-the-spot tests of gossans or other material encountered in trenches, even where geochemical anomalies in the soil are lacking or nonpersistent.

Fairbanks, Alaska
December, 1963

Robert H. Saunders
State Mining Engineer

TABLE I. Assay Results of Samples from Trenches on the Hi-Yu Property.

Sample Number	Width Sampled	Ounces per Ton Gold	Ounces per Ton Silver	Remarks
40	2 inches	0.02	0.88	Green-stained quartz.
41	7 inches	0.04	2.06	Quartz.
42	3 inches	0.06	0.60	Gouge on footwall beside sample 41.
44	Grab	0.08	16.46	Green-stained quartz float.
44A	7 inches	0.10	0.22	Quartz.
45	10 inches	0.04	0.46	Quartz.

TABLE II. Assay Results of Samples from Trenches on the McCarty Property.

Sample Number	Width Sampled	Ounces per Ton Gold	Ounces per Ton Silver	Remarks
72	Grab	0.06	52.34	Quartz with sulfides.
73	Grab	0.04	22.12	Quartz with sulfides.

NOTES TO ACCOMPANY PROSPECT MAP OF THE FAIRBANKS-WOLF CREEK DIVIDE

The trench near the road on the Marigold and "I. B." claims was started by Arctic Alaska Fisheries and Enterprises, Inc., but was not dug to bedrock. Except for that trench, all the bulldozer trenches shown on the map east of the Kawalita claim were made by the U.S.S.R.& M. Co. when it had the McCarty Mine under lease. A.A.F.& E. dug several bulldozer trenches a few hundred yards west of the Kawalita that are not shown on the map, and several bulldozer trenches dug by U.S.S.R.& M. Co. on the Willie, Pennsylvania, and Pioneer claims are not shown on the map. All of the production of the A.A.F.& E. to date (approx. 800 tons) have been mined from the open-cut on the Kawalita.

The narrow excavation designated "Old Trench" south of the Kawalita open-cut pre-dates activities of U.S.S.R.& M. Co. in the area. A few remnants of rotted or rusted rigging along the trench indicate that it was dug by winch and scraper. The long bulldozer cut north of the "Old Trench" shows only an east-west trending, iron-stained zone, which should be investigated further.

The "Jamesonite lead", which was uncovered in June, 1960, was known at least 20 years ago. The short northwest-southeast trench downhill from, and adjacent to, the bulldozer cut near the "Jamesonite lead" was dug by hand by Hugh M. Henton in following that lead at some time prior to 1940. Excavation by A.A.F.& E. after that area was mapped has obliterated part of the Henton trench and part of the U.S.S.R.& M. Co. bulldozer cut. It is unlikely that the vein on the Kawalita and the "Jamesonite lead" are the same vein.

The U.S.S.R.& M. Co. bulldozer trenches between the "Jamesonite lead" and the branch road on the Pioneer claim were dug in 1951, or

thereabouts. They have sloughed somewhat, but iron-stained zones and other signs of mineralization are discernible. A.A.F.& E. plans to clean out those trenches for further investigation. The trenches farther east and south were dug in 1949, or thereabouts, and were mapped and sampled by U.S.S.R.& M. Co.

On the Pioneer claim, near the fork in the branch road, a stibnite vein was mined during World War I through an inclined shaft, which has become inaccessible. During the Korean War, U.S.S.R.& M. Co. exposed the tops of the old World War I stopes by digging bulldozer trenches, and also exposed a narrow lens of stibnite in the footwall of the mined-out ore-shoot and parallel to it. A shaft was sunk 20 feet to see if the narrow lens widened enough to be minable. It did not widen in that depth, and no further work was done on it. Bulldozer trenches were dug to trace the stibnite vein a few hundred feet in both directions along the strike from the old inclined shaft, but no other ore-shoots were found.

Nearly all, if not all, of the mining done by U.S.S.R.& M. Co. during the years that it had the McCarty Mine under lease (1939-1958) was done through the American Eagle shaft on the Henry Ford claim. The long trench extending southeast from the Fairbanks Creek road exposed the tops of old stopes not shown on U.S.S.R.& M. Co. maps, and, therefore, probably mined prior to 1939. Some small, unmined segments of the American Eagle vein were also exposed. Apparently there has been no mining on the American Eagle vein northwest of the main road. In the area between the branch road and the main road on the Pioneer and Henry Ford claims, U.S.S.R.& M. Co. enlarged the two bulldozer trenches shown on the map and exposed the American Eagle vein. Trenching along the

vein showed that it extends two hundred feet or so west of the branch road, where it is cut by a northeast-southwest trending fault. From exposures in other bulldozer trenches not shown on the map, this fault appears to be the structure that served as a host for the stibnite deposition on the Pioneer claim. The shaft between the branch road and the main road is 30 feet deep; it was sunk on the American Eagle vein by U.S.S.R.& M. Co. in 1952, or thereabouts. The location of the shaft on the map may be in error by a few tens of feet, having been determined by a survey with open-sight alidade which began at the west end of the Kawalita claim.

Part of the ore mined through the American Eagle shaft came from the Henry Ford vein, which strikes northeast-southwest (at right angles to the American Eagle) and has been displaced a few hundred feet by the American Eagle vein. The northeast segment (Upper Henry Ford) has moved southeast relative to the southwest segment (Lower Henry Ford).

The underground workings south of the head of Fairbanks Creek on the Henry Ford Nos. 1 and 3 and Little Jim claims are on the McCarty vein. This vein was mined in 1929-30. All of the veins or veinlets shown in the bulldozer trenches along the McCarty vein were sampled by U.S.S.R.& M. Co., and none of the samples contained any appreciable amounts of gold or silver.

At least fifteen mineralized veins have been discovered on the Fairbanks-Wolf Creek divide; at least seven have been productive at one time or another.

College, Alaska
December, 1960

Robert H. Saunders
State Mining Engineer

MAP OF FAIRBANKS-WOLF CREEK DIVIDE

Adapted from U. S. Geological Survey
Map of the Livengood A-1 Quadrangle

1 - Shaft being sunk by Keystone Mines, Inc.

2- Trench near the southwest corner of the Pennsylvania claim.

3 - Trench near the northeast corner of the Pennsylvania claim.

4 - Trenches on the Hi-Yu property.

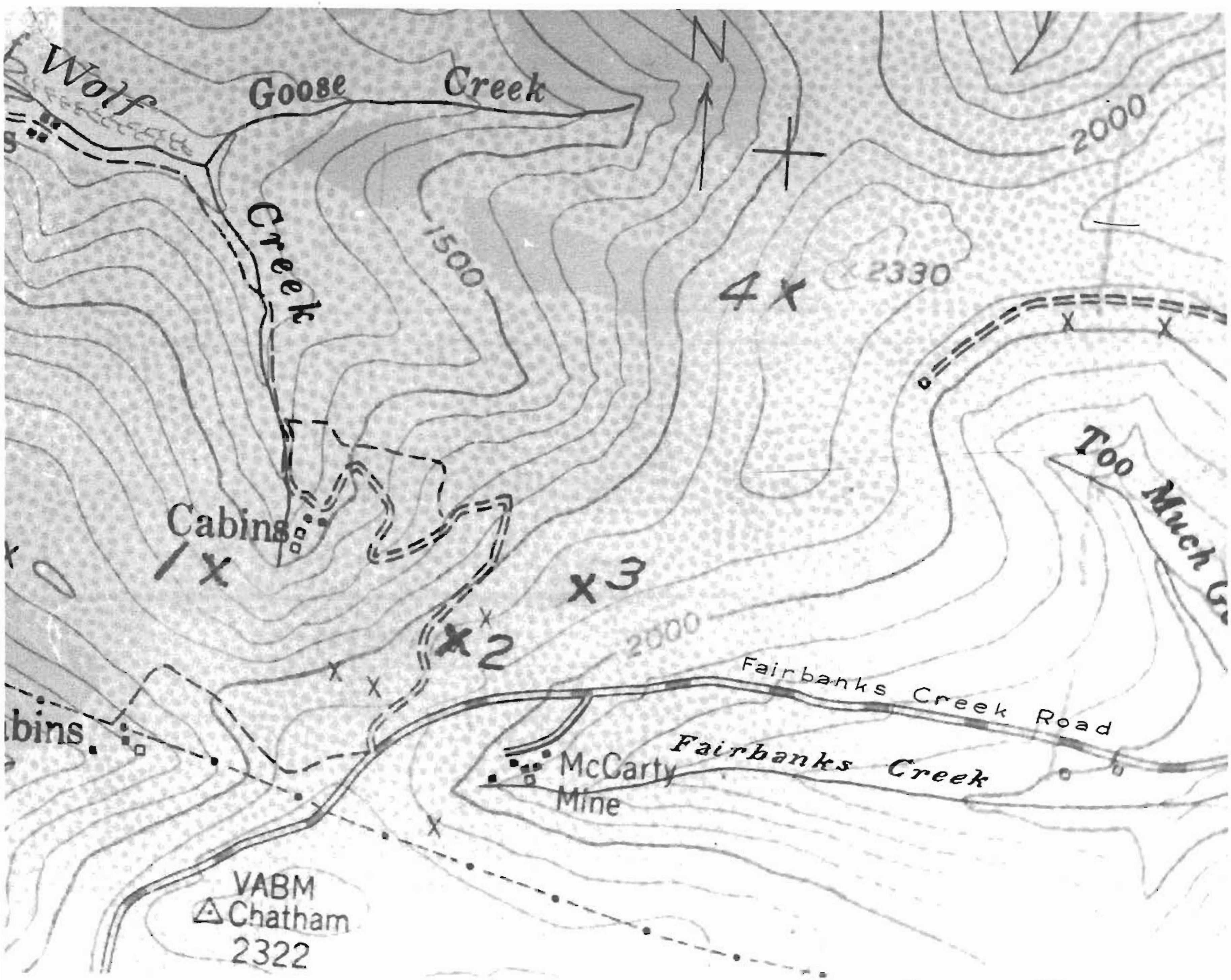
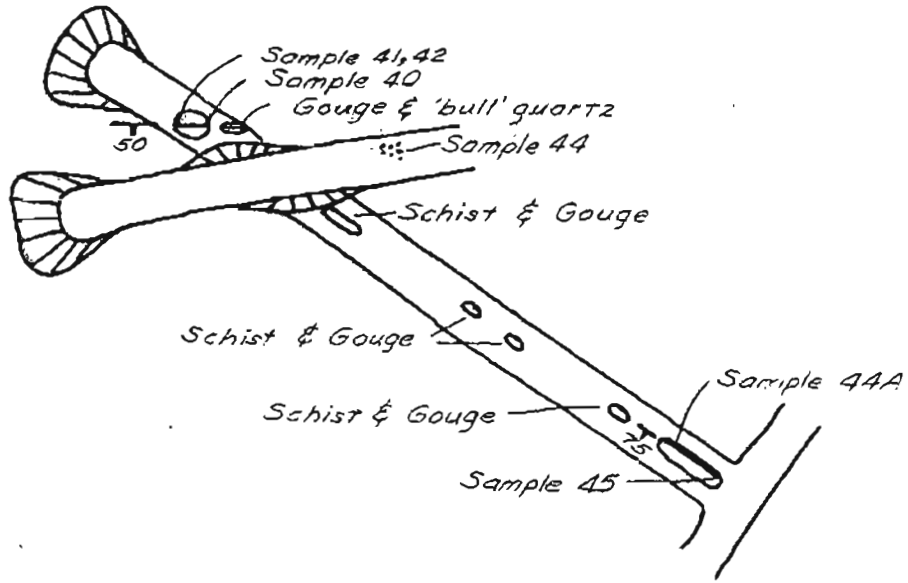

Wolf
Goose
Creek
Creek
N
2000
1500
4
2330
Cabins
1
3
2
2000
Too Much G
Fairbanks Creek Road
Fairbanks Creek
McCarty
Mine
bins
VABM
Chatham
2322

PLATE I



N

SCALE
1" = 40'

◇ McNeil Shaft (coved)

STATE OF ALASKA
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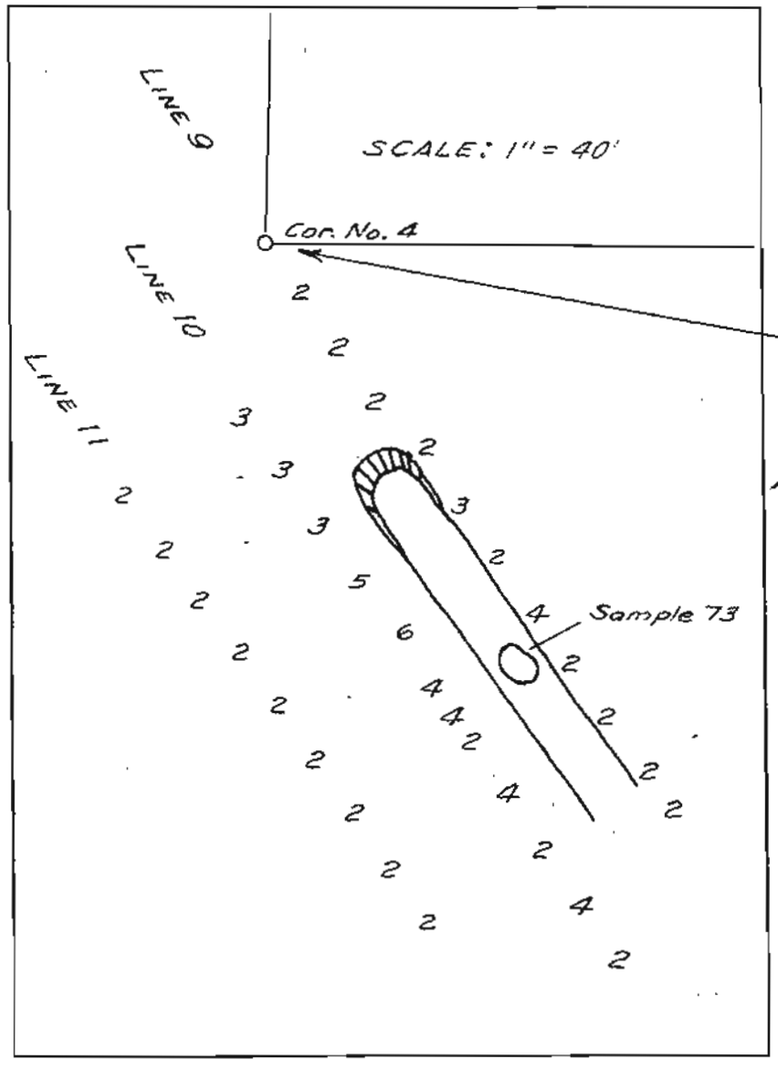
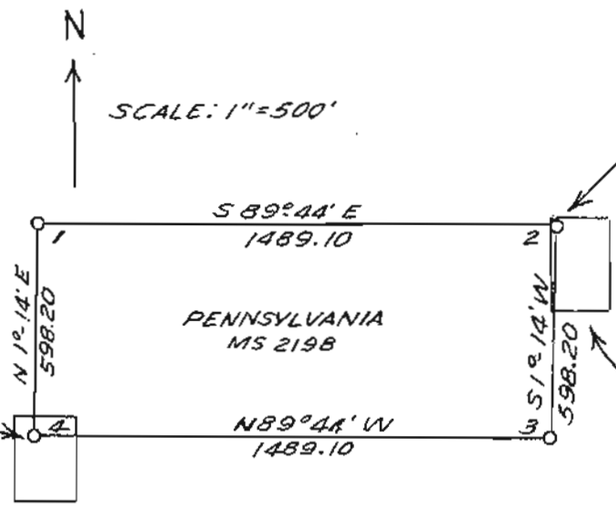
TRENCH NEAR THE McNEIL SHAFT
HI-YU PROPERTY

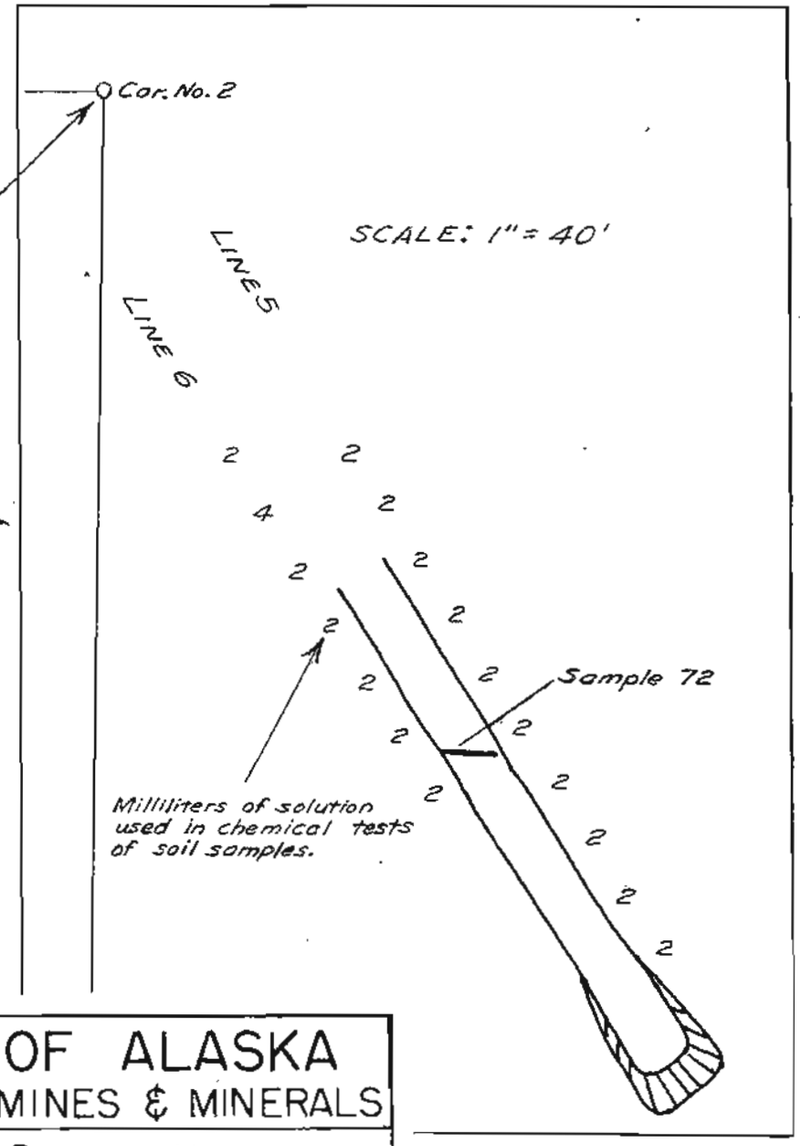
From compass survey.

R. H. Saunders — November 1963

PLATE II







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Geochemical Surveys Near Trenches on the McCarty Property

R.H. Saunders — November 1963

PLATE III