STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

DRY CREEK COPPER PROSPECT FAIRBANKS, ALASKA

by

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PROSPECT EXAMINATION 58-16, 67-3A

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PE-067-03A

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INTRODUCTION

On June 15, 1972, I made a brief examination of mineral showings on claims owned by Bob Buzby of 46 Mile Richardson Highway, Fairbanks, Alaska. Mr. Buzby provided air transportation from Fairbanks to an airstrip on the claims and transportation with an all terrain vehicle to the sample locations. The area was visited again on September 15, 1972 but snow covered the area and no attempt was made to do any additional field work.

LOCATION

The prospect is located on Dry Creek about 70 miles southeast of Fairbanks on the north side of the Alaskan Range in Fairbanks A-1 and Healy D-1 quadrangles. It is less than 30 miles in a direct line from the Alaska Highway between Fairbanks and Delta Junction, Alaska, and approximately 60 miles from the Alaska Railroad at Ferry. (Figure 1).

TOPOGRAPHY AND CLIMATE

The prospect is located on low hills north of the very rugged mountains of the Alaska Range. The climate is arctic. Temperatures vary from 80° in the summertime to -60° in the wintertime. The area should normally be free of snow from the first of June to the first of September.

GEOLOGY

The area north of the low hills is covered by recent sediments. The exposed bedrock in all areas examined is a schist. No attempt was made to classify the schist. Wahrhaftig, 1968, has classified the schists of the Alaska Range in the quadrangles immediately west, Fairbanks (A-2) and Healy (D-2). Pewe, and others, 1966, have tentatively identified the schist as Totatlanika of Mississippian age on the geologic map of the Fairbanks quadrangle.

MINERALS

The metal minerals that were identified in hand specimens included the lead minerals, galena and cerussite, and the copper minerals chalcocite, chalcopyrite, azurite and malachite. Galena was exposed at the surface with very little alteration to cerussite. The dark copper sulphides were difficult to determine in a hand specimen. The presence of copper was easily detected by the blue and green minerals, azurite and malachite. The high copper values in samples 10 and 11 were used as an indicator of chalcocite.

LOCATION MAP - DRY CREEK PROSPECT

Figure 1

GEOPHYSICS

The Alaska Division of Geological and Geophysical Surveys completed an airborne magnetometer survey of the Fairbanks (A-1) quadrangle in 1971. The contours have been plotted on the Figure 2. The magnetic high may indicate an intrusive rock north of the sample locations. The magnetic low may indicate the intrusive dips to the south and is under the mineralized area. This may be significant as representing a source for mineralization in the overlaying schist.

SAMPLES

A total of 12 samples were collected in the area. The approximate location is indicated on Figure 2. All samples were analyzed by the Division Laboratory in Fairbanks and the analyses are included with this report as Table 1. The samples are described as follows:

Sample 1. A copper showing under water in a trench immediately northwest of the airport. It was difficult to get a good channel sample of this area because of water.

Sample 2. A streak of galena, approximately 8 inches wide, that is exposed in two cuts, for a horizontal distance of about 50 feet.

Sample 3a. Copper veinlets in schist.

Sample 3b. Copper veinlets in schist about 10 feet away from 3a.

Sample 4. A chip sample, 4 to 5 feet wide on the back of an old tunnel.

Sample 5. A chip sample on the same structure in a dozer cut.

Sample 6. A 12-inch channel sample of copper mineralization dissiminated in the schist.

Sample 7. Mineralization in quartz veins in the schist.

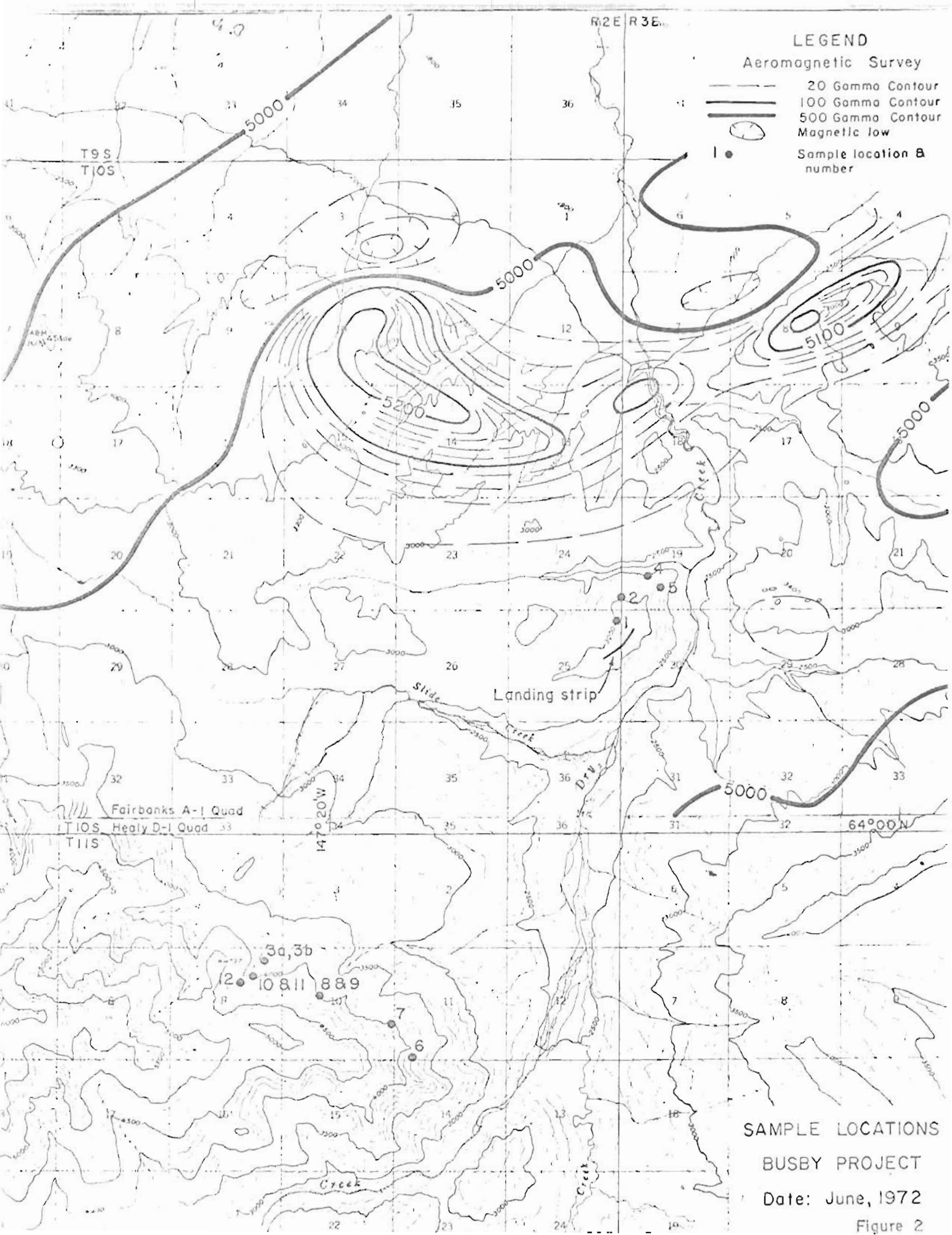
Sample 8. A copper mineral dissiminated in veinlets through the schist over a 4-foot outcrop.

Sample 9. Ditto No. 8, about 20 feet south along the same outcrop.

Sample 10. A selected piece containing copper minerals. The outer layer minerals are azurite and malacite. On a fresh surface chalcocite appears to be present.

Sample 11. A 2-inch veinlet of same material as No. 10 consisting of several chips taken laterally along the veinlet.

Sample 12. A gossan zone, poorly exposed but probably 3 to 4 feet wide.



SAMPLE LOCATIONS

BUSBY PROJECT

Date: June, 1972

Figure 2

PRESENT DEVELOPMENT

Mr. Buzby has exposed copper mineralization in several cuts near the landing strip. A short tunnel had been driven many years ago at sample location 4. Mr. Buzby farther exposed this structure by dozer cuts near sample location 5. At the time of examination the galena streak was exposed in 2 dozer cuts. After the examination Mr. Buzby worked along the vein and reportedly mined about 14 tons of lead ore which should analyze about the same as sample 2.

RECOMMENDATIONS

The widespread occurrence of copper mineralization and the high silver value of the galena warrant additional work on this prospect. The recommendations are divided as separate for the lead and the copper prospects.

The galena vein is small. The value of lead, silver and gold is sufficient to consider this vein for a small mining operation of direct shipping ore. On this basis the following recommendations are made:

1. Continue to explore the vein along the strike by open cuts. The cuts should be closely spaced or even a trench on the vein.

2. If the vein can be traced down the slope of the hill, explore at a vertical depth of at least 100, by a drift along the vein.

3. Save the ore that can be recovered on the surface and drifting, by hand sorting for a shipment.

4. Diamond drilling on a small vein of this type is not recommended.

The copper mineralization covers a large area (about 6 square miles). The areal extent of copper mineralization and grade is sufficient to warrant additional exploration. Additional exploration should include:

1. Accurately map and locate each showing of copper mineralization.

2. Sample and map each area of copper mineralization separately.

3. Examine and map the fracture patterns on good rock exposures in the area covered by figure 2.

4. Investigate the trend indicated by the magnetic high to locate an intrusive rock.

5. If an intrusive rock is located, evaluate the intrusive as a possible source for copper mineralization.

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STATE OF ALASKA
Department of Natural Resources
DIVISION OF MINES AND GEOLOGY
Box C, College, Alaska 99701

Date of Report July 31, 1972

LABORATORY ANALYSIS REPORT

For Cle Conwell Address Division of Geological Survey - College

Number of Samples 13 Date Sample Received 6/26/72

Work Done: (for Analyst see below)
A. X-ray fluorescence quant. ☐ semi-quant. ☐
B. X-ray diffraction ☐
C. Spectrographic quant. ☐ semi-quant. ☐
D. Spectroscopic ☐
E. Atomic absorption quant. ☐ semi-quant. ☐
F. Fire assay ☐ G. Microscopic examination ☐
H. Other (Specify) ☐
I. Ultraviolet light ☐

LABORATORY NUMBER	SAMPLE MARKED	ANALYSIS OR IDENTIFICATION				
		E. Ounces Per Ton		E. Weight Per Cent		
		Gold	Silver	Copper	Lead	Zinc
40582	1	0.006	0.80	10.0	0.058	0.080
40583	2	0.22	60.0	0.019	67.0	0.25
40584	3A	Nil	0.060	1.23	0.085	0.103
40585	3B	Nil	0.099	1.20	0.136	0.105
40586	4	0.012	0.90	6.50	0.033	0.049
40587	5	0.002	0.60	8.80	0.035	0.056
40588	6	Nil	0.040	0.200	0.005	0.020
40589	7	Nil	0.140	2.10	0.028	0.055
40590	8	Nil	0.42	1.00	0.133	0.270
40591	9	0.004	0.024	0.240	0.008	0.230
40592	10	0.012	9.8	43.0	0.033	0.016
40593	11	0.002	6.0	35.0	0.028	0.040
40594	12	0.246	0.035	0.026	0.008	0.019

Your sample(s) was tested for radioactivity, and significant radioactivity was detected.

Nil gold means less than 0.001 troy ounces per ton.

Accuracy of the atomic absorption analysis for gold, silver, copper, lead, and zinc is ±10% of the reported value.

E. Donald R. Stein Donald R. Stein
ANALYST & WORK DONE

ANALYST & WORK DONE

ANALYST & WORK DONE

APPROVED: Thomas C. Trible
LABORATORY SUPERVISOR

Thomas C. Mowatt

NOTE: Samples discarded after 60 days and pulps after 6 months unless instructed otherwise.

REFERENCES CITED

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Wahrhaftig, C., 1968, Schists of the central Alaska Range: U. S. Geological Survey Bull. 1254-E, p. E1-E22