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TERRITORY OF ALASKA

DEPARTMENT OF MINES

ROCKY MOUNTAIN SCHEELITE PROSPECT - 12 x 52-77

SEWARD PENINSULA, ALASKA

by

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Assayer--Engineer

June 1953

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ROCKY MOUNTAIN SCHEELITE PROSPECT

SEWARD PENINSULA, ALASKA

INTRODUCTION

Mr. Hugo Lindfors, a Placer Miner from the Rocky Mountain Creek Area near Nome on the Seward Peninsula, requested the Engineer from the Nome Office of the Territorial Department of Mines to visit his prospect and assist him in outlining a program for exploration work. The prospect is located in the Nome Mining District.

The Rocky Mountain Scheelite Prospect was visited on September 6, 1951 and again on July 1, 1952. During the first examination samples were taken along the vein and photographs taken of the surrounding area. A Brunton Survey was also made on the vein at this time. On the Second visit photographs were taken of the snow conditions and of the work then in progress.

This report deals with those visits and is limited in scope to the observations made during those visits with the exception of information gained from previous reports and some information of the work done by the Alaska Copper Corporation during the 1952 season.

SUMMARY

The property consists of seven lode claims. The prospect is comprised of a main vein system of 100 feet in length in a pod or lens shape block. There are considerable scheelite bearing stringers in the immediate vicinity and much quartz-scheelite float on the adjacent hillsides. Samples taken in the fall of 1951 show that the

vein ran between 13.30% and 32.62% WO_3 and measured in width between 6 and 14 inches; however, it is believed that an average of 5% WO_3 would be a fair estimate for the ore. It is impossible with the present showings to give a positive statement of reserves or vein extentions.

The strike of the vein is N10°E and dips 55°E; the schist country rock in the vicinity of the vein has an apparent strike of N15°E and a dip of 35°E; however, it is difficult to determine the true structure of the country rock for it is intensely folded and intrastratified with small limestone beds.

During the 1952 season the Alaska Copper Corporation did some exploration work in the area but not on the vein. They also constructed an airfield near the prospect. The results of their work is not known and can be secured only through DMEA in Juneau, Alaska.

It is recommended that as small an expenditure as possible be made to determine the extent and limits of the ore body. This could be best done by trenching at each end of the vein and by sinking a shallow shaft alongside of the vein where the ore is at present most persistent.

LOCATION and ACCESSIBILITY

The prospect is approximately one mile from the Rocky Mountain Creek Siding of the Seward Peninsula Railroad. This siding is 22 miles from Nome on the Railroad. The Alaska Copper Corporation built a 1500 foot airfield about 1,000 feet from the prospect. This field can handle any of the small Bush Planes that operate out of Nome.

Vicinity Map showing general location of

Rocky Mountain Creek Scheelite Prospect.

Plate 1.

At present, the Nome River Highway has been extended 10 miles from Nome. During the 1953 season, the Alaska Road Commission plans to extend the road to the Nome River Railroad Bridge, 14 miles from Nome. Mr. Herb Engstrom who works on Basin Creek, 17 miles from Nome and 5 miles from Rocky Mountain Creek Siding, plans on constructing a good tractor trail to join with the Nome Road. Plates 1 and 2 show the prospect.

The City of Nome is the main supply point for the whole Seward Peninsula. Located near the town are two airfields, the Municipal Airport and the City Airport, the former handles most of the Bush Planes while the latter takes care of the larger aircraft. From this field Nome has daily air service with the Outside. The City is also the main seaport for the area with good warehouse facilities and many commercial and business enterprises and is served by steamship from June through October.

HISTORY of AREA

The Pioneer Mining Company of Nome had a crew on Rocky Mountain Creek during 1917 trying to recover placer scheelite. They also prospected for a lode and one of their pits missed the vein by barely 500 feet. Eskil Anderson mentions in the Territorial Department of Mines Pamphlet No. 5, entitled "Mineral Occurrences in Northwestern Alaska", that an attempt was made to mine scheelite on Rocky Mountain Creek during 1943, but that it was not a success. The writer has been unable to find out any further information on this attempt. The occurrence of scheelite float in the area was described by Robert P. Coats in the U.S.G.S. Report No. 44865, entitled "Lode Scheelite

Deposits of the Nome Area, Seward Peninsula Alaska", printed July 17, 1944.

During the Placer Gold Mining operations in Rocky Mountain Creek from 1946 to 1949, Mr. Hugo Lindfors recovered over 3,000 pounds of placer scheelite. This was recovered as a byproduct of the gold mining work although no specific attempt or special equipment was used to save the scheelite. On June 19, 1951, Mr. Lindfors who was prospecting for a scheelite lode found a small outcrop at an elevation of about 950 feet and about 1,500 feet west of Rocky Mountain Creek. This was sampled by the writer and assays were run by Mr. Art Glover at the Ketchikan Office of the Territorial Department of Mines. The samples taken Assayed as follows:

Sample No.	Assay No.	WO_3	Sample Width
113	9930	trace	3 inches
114	9931	trace	8 inches
115	9932	3.01	3 inches

The strike of this quartz vein or stringer was approximately N80°W and it dipped 65°N. The stringer appeared to lie along a schist limestone contact, but it did not have the appearance of any extent. Mr. Lindfors continued prospecting in the area and on July 8th, 1951 found the present lode. He requested information from the Nome Office of the Territorial Department of Mines on how to go about exploring the prospect. This information was given and Mr. Lindfors continued work. He also asked that when he had gone as far as he could, a visit be made to his prospect for further advise on exploration work. This visit was made on September 6, 1951. The prospect was examined at that time by the writer in company of Mr. Robert Thorne of the U.S. Bureau of

Territory of Alaska

DEPARTMENT OF MINES

Assay Office

Ketchikan XXXXX, Alaska, October 19, 1951, 19....

REPORT OF ASSAY

On samples received from Dan Jones for Hugo Lindfors

Address Nome, Alaska

Assay No.	Mark on Sample	OUNCES PER TON		Value Per Ton	PERCENTAGE OF
		Gold	Silver		Tungsten trioxide
			(Width°)		
10019	117		8 inches		13.30
10020	118		14 "		17.90
10021	119		6 "		30.62
10022	120		12 "		32.62
10023	121		10 "		13.47
10024	122		7 "		15.76

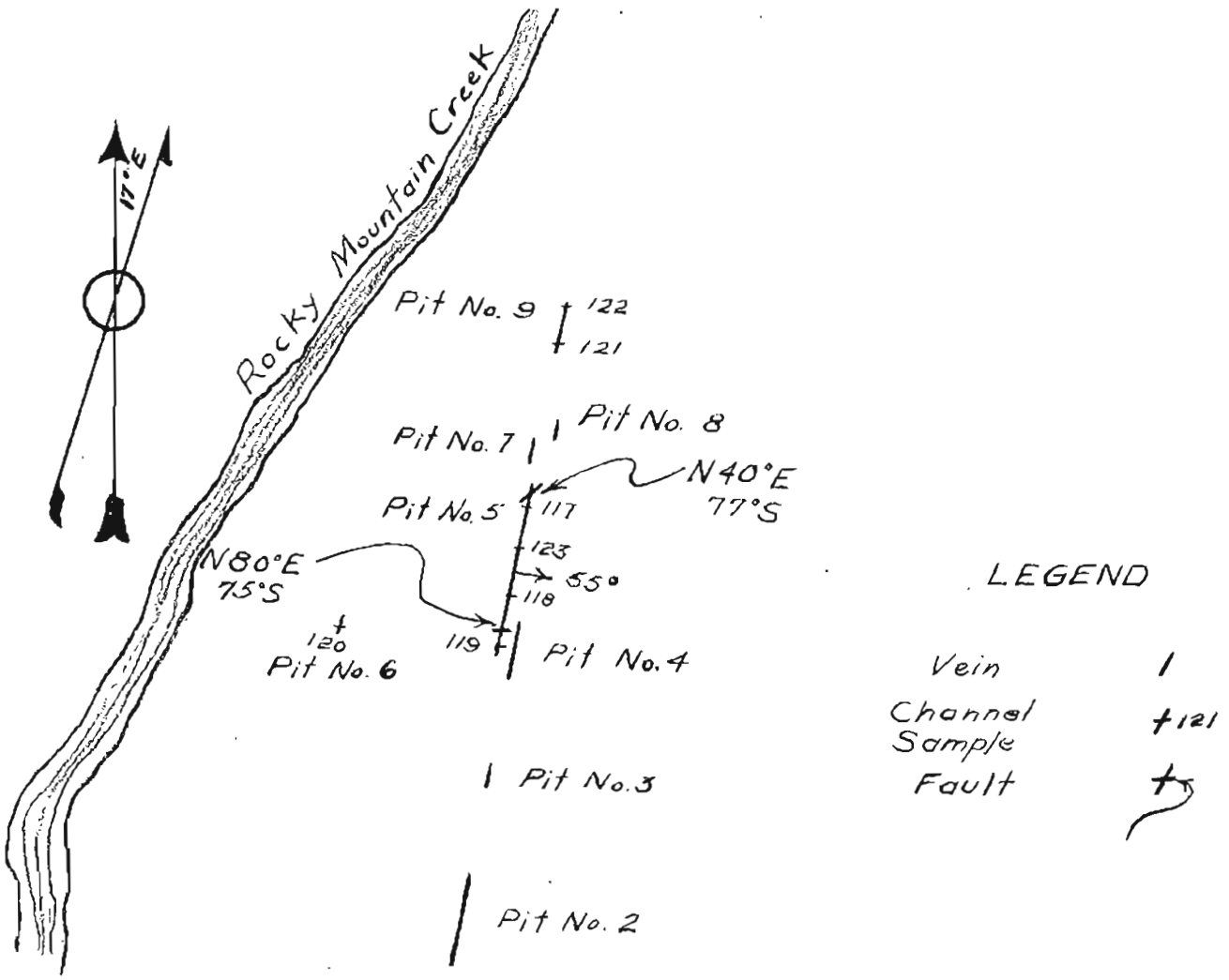
(°The figures for the width have been placed in the report and do not constitute part of the original report.)

Plate 3.

s/ A. E. Glover/s

Art Glover ASSAYER.

Brunton Compass Survey of Vein.



Rocky Mountain Scheelite Prospect

TERRITORY OF ALASKA DEPARTMENT OF MINES
SURVEY OF VEIN BY BRUTON COMPASS
Scale: 1" = 20' D.A. Jones — July Terr. Dept. of Mines — 1953

Plate 4.

Mines, out of Juneau, Alaska. Samples were taken at that time on the exposed vein and a Brunton Compass Survey was made of the vein structure. The results of the Assays on these Samples are tabulated in Plate 3 and the Brunton Survey is shown in Plate 4. A discussion of the samples and the sampling method is given in the section of Geology.

Mr. Charles Herbert of the Alaska Copper Corporation became interested in the property during the winter of 1951-52 and in the spring of 1952, with the aid of DMEA, started an exploration program in the area of Rocky Mountain Creek. Mr. Herbert visited the property in April of 1952; however, his crew did not get started working until late June. DMEA made available nearly $38,000.00 for the project, but only $15,000.00 was used for exploration purposes. This work consisted of bulldozing 1700 linear feet of trenches, driving 30 feet of drift, surveying the area for scheelite float, and constructing a 1500 foot airfield approximately 1,000 feet from the prospect and a road from the airfield to the prospect. Although the Alaska Copper Corporation did considerable work in the area, they did not at any time do any work on the vein itself. By late summer of 1952, Mr. Herbert felt that there was not enough scheelite in the area to justify further exploration work so he abandoned his lease on the property and removed his camp and equipment.

The seven lode claims in the area of the Rocky Mountain Creek Scheelite Prospect are owned by the Partnership of Hugo Lindfors, May Bale and Charles Jones. The claims consist of the Lucky Shot, Nugget, Irish, Nome, Rocky Mountain, Good, and Coffee. Their approximate location and dimensions are shown in the sketch of the claims on Plate 5.

Sketch of claims belonging to the partnership

of Lindfors, Bale, and Jones.

Plate 5.

The Lode Claims have been recorded in the Office of the Cape Nome Recording Precinct located in Nome and are listed as follows:

Lode Claims	Date of Filing	Volume	Page
Lucky Shot	June 25, 1951	228	122
Nome	July 30, 1951	228	133
Nugget	August 20, 1951	228	136
Irish	August 20, 1951	228	137
Rocky Mountain	August 20, 1951	228	137
Good	September 24, 1951	228	167
Coffee	September 24, 1951	228	168

Since the original discovery, many other claims have been staked in the area by various individuals; however, this report does not include any of these claims. Claim coordinates are 165°11' W Long, 64°47' N Lat.

TOPOGRAPHY and CLIMATE

The prospect is located at about an elevation of 500 feet above sea level in the bank and near Rocky Mountain Creek on the left limit. Its location and relationship to the Creek and hillside can be seen in Figures 1 through 4. The country is in an area of gentle rolling hills, well worn by errosion and covered with talus and vegetation. The Nome River Valley which Rocky Mountain Creek feeds into is a glacierated valley about one-half mile wide at the mouth of the Creek. Rocky Mountain, which lies at the head of Rocky Mountain Creek, Figure 5, is the highest mountain in the area with an elevation of 2,368 feet. Most of the hillsides in the area have frozen sections in them and typical frost creep action is noticed on these hillsides.

As seen in Figures 5 and 6, the snow hangs in the Creek late into the summer season. Although the average precipitation for the year is about 18 inches, high winds in the winter cause considerable drifting

Figure 1. Rocky Mountain Scheelite Prospect facing South. Prospect pits are seen along the strike of the vein.

Figure 2. Rocky Mountain Scheelite Prospect facing Southwest. Taken on the Sixth of September, 1951.

Figure 3. Rocky Mountain Scheelite Prospect facing West.

Figure 4. Closeup of vein facing North. In the background is Rocky Mountain Creek.

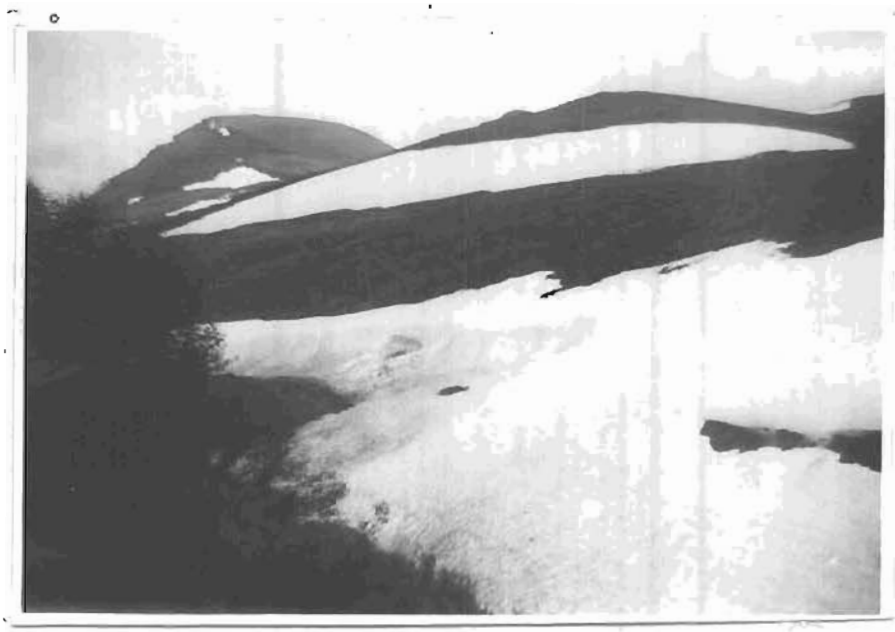


Figure 5. Snow conditions in the valley. The prospect is approximately in the center of the picture while in the upper background is Rocky Mountain.

Figure 6. Snow conditions on the hillside. Taken on July 1, 1952 showing trenches dug by Alaska Copper Corporation.

and the Creek is usually drifted completely across from bank to bank. This makes the snow twenty or more feet deep immediately above the prospect. The temperature in the area averages about plus 26°F. The winters are fairly mild, but as stated before rather windy, while the summers are generally cool with most of the rain falling in late July and in August. Many springs are found throughout the countryside so that in the years of light snow, hillside and stream glaciers form in many places. These naturally effect the transportation systems and the various Placer Mining Operations in the region.

GEOLOGY

In most places, from 4 to 6 feet of overburden covers the bedrock; a few feet of tundra, some gravels and then a highly weathered, decomposed schist. This is a mica schist that has been heavily iron stained or oxidized and much decomposed. The schist bedrock lies in composition somewhere between a chloritic and a feldspathic schist. The country rock in the area consists of interbedded schists and limestones intensly folded. This rock is considerably faulted and cut in places by joint planes. In the immediate vicinity of the vein the schist has a strike of N15°E and a dip of 35°E; however, in general the schist throughout the area appears to vary in strike between N40°-50°W and in dip between 25°-50°E. As to the geologic age of the schist and the limestone, there is some doubt; nevertheless, Fred H. Moffit states in U.S.G.S. Bulletin No. 533, entitled "Geology of the Nome and Grand Central Quadrangles, Alaska", that, "It seems probable that a middle Paleozoic age for the limestones and schists of the

Nome group may some day be established".

DEVELOPMENT

The scheelite vein has been uncovered along the surface for over one hundred feet. It varies in width from 7 inches up to 14 inches. It appears to taper at the ends and swell slightly in the center of the block that has been exposed. This gives it somewhat of a pod or lens shape appearance. The vein strikes N10°E and dip 55°E. With the present work that has been done it has been impossible to determine the true depth of the vein. According to the reports of the work done by the Alaska Copper Corporation, their tunnel or adit did not find any extension of the vein at a depth of 30 feet below the vein; however, the writer has not visited the property since this tunnel was run so this fact cannot be confirmed. As stated before the Corporation did not do any work on the vein itself although they had permission to do so. They did considerable float survey work with the bulldozer in their trenching operations and they expose many small stringers carrying scheelite bearing quartz.

Mr. Lindfors reports that he has dug down alongside of the vein and that it is persistent for eight feet below the present ground level; however, he states that is seems to be dipping more to the horizontal. During the 1952 season, Mr. Lindfors continued working on the vein. He started in by digging through the snow to the prospect. This hole is shown in Figure 7. Here he rolled out some of the vein material. During the summer he broke up the rock in the vein by hand, ran this through some sluice boxes and saved, dried and sacked the

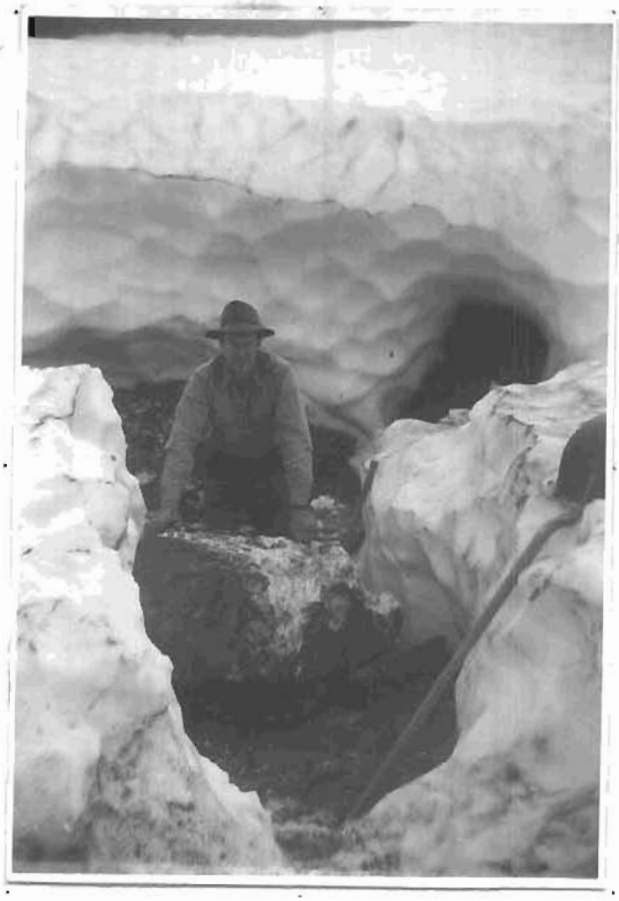


Figure 7. Snow conditions over Prospect. The writer is standing behind a piece of vein material rolled out of place.

Figure 8. View of vein structure facing South. The blocky appearance is seen as well as the overburden.

final scheelite concentrate. Over 1,400 pounds of this material was collected by late fall. Plate 6, shows the Assay of this lot as compared to General Services Administration's material purchase specification for natural scheelite.

From what work that has been done and the limited amount of structure visible, it is impossible to determine the tonnage of ore available or accurately extimate the true percent of WO_3 in the ore. The vein exposed appears to be in place although it has been fractured horizontally perpendicular to the dip and vertically perpendicular to the strike giving it a block like structure as seen in Figure 8. The scheelite occurs along these fracture planes and on both the hanging and foot walls of the vein. In the pits along the vein as in Figure 10, the relationship of the mineralization to the vein was found to be persistent and regular.

In sampling the vein it is difficult to get a fair and representative channel sample. In regards to this as to the estimated percentage of WO_3, Mr. Robert L. Thorne, Mining Engineer for the Bureau of Mines in Region I, wrote on October 31, 1951 as follows:

> "The results do appear to be high which can be fairly well explained by the nature of the mineralization. I would feel fairly safe in guessing that central block of quartz to run better than 5 percent WO_3 and it might run considerably better. The nature of the mineralization does make the normal type channel sample about the poorest type of sample that could be taken. Actually a channel cut parallel to the strike would give a more accurate result in this case."

From the above, the extimate of 5 percent WO_3 was given as a "fairly safe guess" for the average of the vein quartz. It would appear that the best possible way to determine the true average would be to take

ASSAY COMPARISON SHEET

for

ABBOT A. HANKS, INC.
and
GENERAL SERVICES ADMINISTRATION

Report of Assay					Material Purchase Specification	
ABBOT A. HANKS, INC. 624 Sacramento Street San Francisco, California					GENERAL SERVICES ADMINISTRATION Federal Supply Service Washington 25, D. C.	
Sample of: Scheelite					Natural Scheelite Chemical Requirements:	
Labty. No.	Mark	Percentages			Percentages	
48757	Rocky Mountain Creek-Composite	Tungsten Trioxide	61.15	: Min.		60.00
		Tin	0.01	: Max.		0.10
		Copper	Trace	: Max.		0.05
		Arsenic	0.01	: Max.		0.10
		Antimony	0.11	: Max.		0.10
		Bismuth	Trace	: Max.		0.25
		Molybdenum	0.02	: Max.		0.40
		Phosphorus	0.03	: Max.		0.05
		Sulphur	0.13	: Max.		0.50
		Manganese	0.06	: Max.		1.00
		Lead	0.01	: Max.		0.10
		Zinc	Trace	: Max.		0.10

Figure 9. View of vein structure facing North.

Figure 10. Pit dug on vein. Near the North end showing the vein and overburden.