IN ANSWERING REFER TO No.

MR-066-01

UNITED STATES
DEPARTMENT OF COMMERCE
BUREAU OF MINES
Fairbanks, Alaska,
Oct. 22, 1949.

Mr. E. R. Pilgrim,
Territorial Engineer,
Fairbanks, Alaska.

Dear Mr. Pilgrim;

Your sample marked "Panning Concentrate, Banjo Claim, Quigley", submitted today for identification, has been tested with the following result;

The sample consists mainly of scheelite, calcium tungstate.

Very truly yours,

Paul Hopkins

Paul Hopkins,
Assoc. Anal. Chemist.

3819

MR 66-1

Alaska Agricultural College and School of Mines

In Cooperation with
U. S. Bureau of Mines, Department of Commerce

College, Alaska

Oct. 30, 1929

REPORT OF ASSAY

On samples received from Mr. E. R. Pilgrim, Territorial Mining Engineer

Assay No.	Mark on Sample	OUNCES PER TON		Value Per Ton	PERCENTAGE OF		
		Gold	Silver		Tungstic Oxide WO_3		
01037	Sample #4			0.45			

Assayed by,

Paul Hopkins

Paul Hopkins,
Associate Anal. Chemist,
U. S. Bureau of Mines.

Official

Total charges for above assays.....

Amount received from sender.....

Alaska Agricultural College and School of Mines

In Cooperation with
U. S. Bureau of Mines, Department of Commerce

College, Alaska

Oct. 9, 1929

REPORT OF ASSAY

On samples received from Mr. E. R. Pilgrim, Territorial Mining Engineer

Assay No.	Mark on Sample	OUNCES PER TON		Value Per Ton	PERCENTAGE OF			
		Gold	Silver		Lead	Copper	Zinc	
0987	No. 1 Lead Claim	Trace	49.80		68.6	2.2		
0988	" 2 Catena Claim	Trace	60.90		57.5	0.3		
0989	" 3	0.03	82.40		8.4	0.4		
0990	" 4 Banjo Lode	0.04	3.20		Trace			
0991	" 5	0.52	10.00		2.1			
0992	" 6	0.10	1.60		0.6			
0993	" 7	0.04	27.20		0.5			
0994	" 8	0.66	1.00		0.2			
0995	" 9	0.10	0.60		Trace			
0996	" 10	0.04	0.20		0.0			
0997	" 11 Jupiter-Mars	0.21	8.60		1.6			
0998	" 12	0.09	3.00		1.1			
0999	" 13 A	0.06	3.10		0.3			
01000	" 13 B	0.20	4.60		1.0			
01001	" 14 Merry Widow	0.01	1.20		0.0	0.0		
01002	" 15	0.04	31.40		0.6	Trace		
01003	" 16 Lena Lode	Trace	0.60		0.0	0.0	0.2	
01004	" 16 A	0.07	149.60		12.9	0.1		
01005	" 17 A North Star	0.08	1.40		0.4			
01006	" 17 B	2.58	2.80		0.9			
01007	" 18 Spruce Pass No 1+2	0.16	141.00		10.7			

Assayed by,

Paul Hopkins

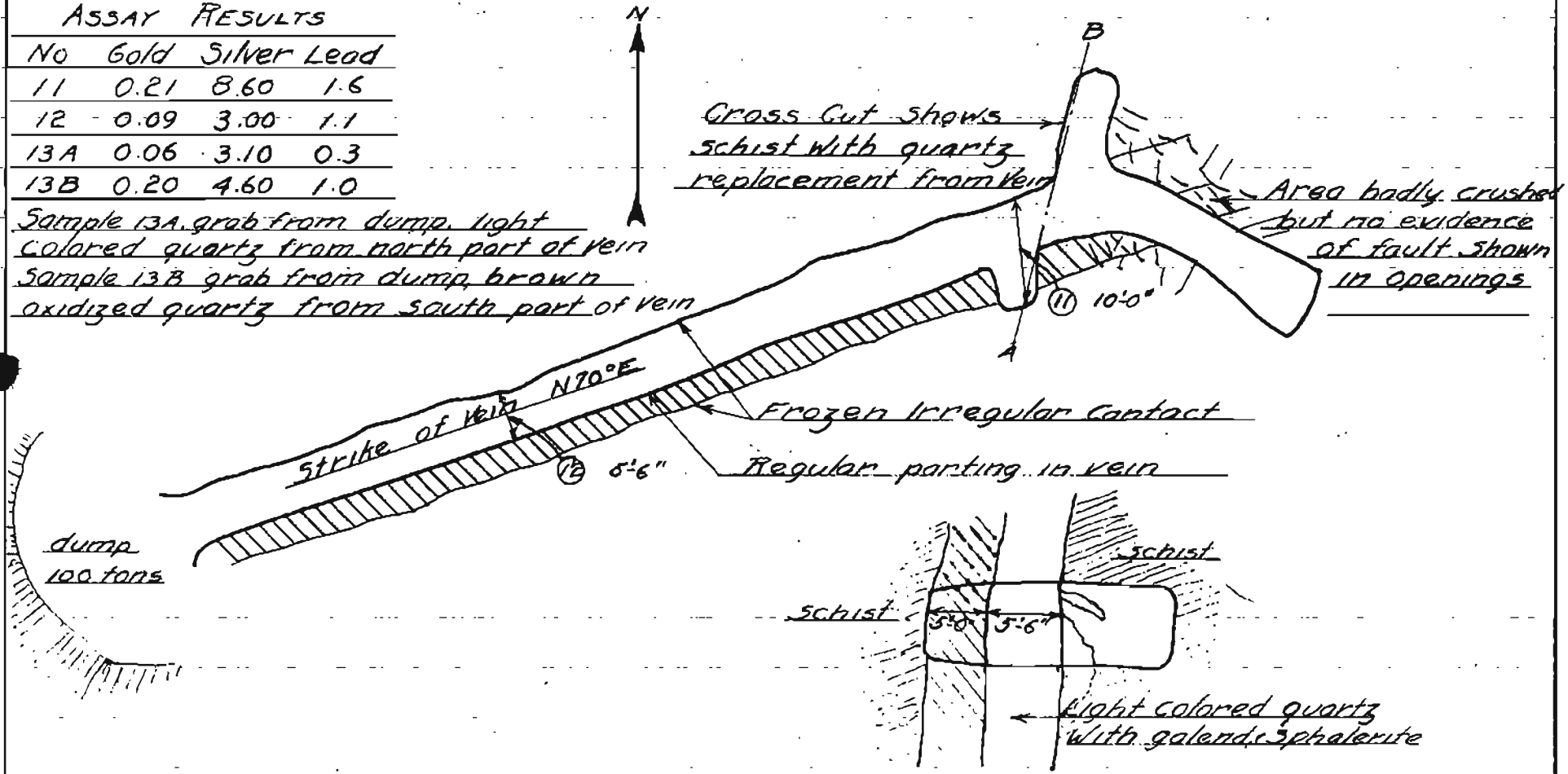
Paul Hopkins,
Assoc. Anal. Chemist,
U. S. Bureau of Mines.

Total charges for above assays..... Official

Amount received from sender.....

ASSAY RESULTS			
No	Gold	Silver	Lead
11	0.21	8.60	1.6
12	0.09	3.00	1.1
13A	0.06	3.10	0.3
13B	0.20	4.60	1.0

Sample 13A grab from dump, light colored quartz from north part of vein
Sample 13B grab from dump, brown oxidized quartz from south part of vein

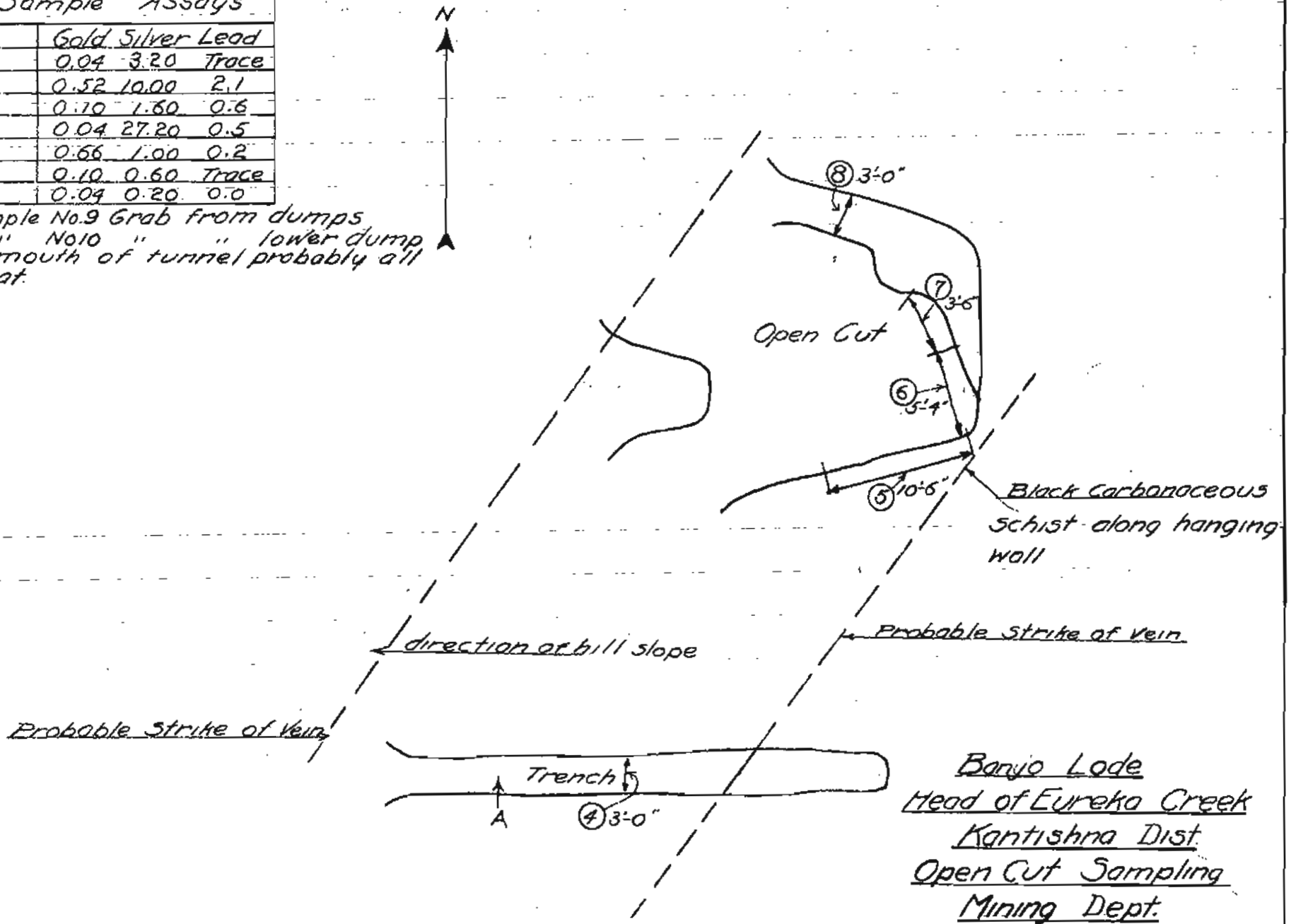


Section on A-B

Jupitor-Mars Lode
Head of Eureka Creek
Kantishna Dist.
Tunnel Examination
Mining Dept.
Territory of Alaska
Oct. 15, 1929 Earl R. Pilgrim

Sample Assays			
No	Gold	Silver	Lead
4	0.04	3.20	Trace
5	0.52	10.00	2.1
6	0.10	1.60	0.6
7	0.04	27.20	0.5
8	0.66	1.00	0.2
9	0.10	0.60	Trace
10	0.09	0.20	0.0

Sample No.9 Grab from dumps
" No10 " " lower dump at mouth of tunnel probably all float



Banjo Lode
Head of Eureka Creek
Kantishna Dist.
Open Cut Sampling
Mining Dept.
Territory of Alaska
Oct. 14 1929 Earl R. Pilgrim

. IN ANSWERING REFER TO No.

UNITED STATES
DEPARTMENT OF COMMERCE
BUREAU OF MINES
Fairbanks, Alaska,
Oct. 22, 1929.

Mr. E. R. Pilgrim,
Territorial Engineer,
Fairbanks, Alaska.

Dear Mr. Pilgrim:

Your sample marked "Panning Concentrate, Banjo Claim, Quigley", submitted today for identification, has been tested with the following result:

The sample consists mainly of scheelite, calcium tungstate.

Very truly yours,

Paul Hopkins

Paul Hopkins,
Assoc. Anal. Chemist.

3819

IR Mt. McKinley 66

Aug-1929

REPORT ON
PROPERTIES IN THE LOWER KANTISHNA

By

Earl R. Pilgrim

October 24, 1929

NOTED
NOV 14 1929
B. D. STEWART

Fairbanks Alaska
October 24, 1929

Mr. B. D. Stewart
Territorial Mining Department
Alaska Territory
Juneau, Alaska

Dear Sir:

I herewith enclose report of properties examined in The Lower Kantishna during August of this year. There has been very little new work done in lode development in this section during the past year other than annual assessment work. One group of silver lead claims was optioned to a group of California and Nevada Mining People but no work was done. Some work was performed at the Stampede Antimony Property by Sylvestor Howell, William Taylor, and associates. A winter freighting trail was cleared out last winter from the property to the railroad about 50 miles in length and it is planned to freight some ore by tractors during the present winter.

The Lead Claim K466-29

The lead claim owned by Mr. Sylvestor Howell is located on the left limit ridge of the left or WestFork of Glacier Creek at an approximate elevation of 3450 feet. The vein strikes N. 15° E. A shaft about 10 feet deep and five shallow pits are all caved so it was impossible to examine the vein in place. The vein is said to be from 2 to 3 feet wide and is nearly vertical. The walls are light colored micaceous schist. A grab sample taken from the dump and representing about ½ ton of ore assayed;

Sample No.	Gold	Silver	Lead	Copper
1.	Trace	49.80	68.6	2.2

The dump ore shows high grade galena with lessor amounts of copper carbonates and some chalcopyrite finely disseminated through the galena and quartz gangue. No work has been done on this vein for some time and there is only a few hundred pounds of ore on the dump so no estimate can be made as to ore available.

Mt. McKinley 66

The Galena Claim K466-29

The Galena Claim owned by Mr. Sylvestor Howell of Fairbanks is located on the left limit of Glacier Creek one half mile up stream from Taylor's Camp and at an elevation of 2400 feet.

Work done on this claim consists of one shaft down 20 feet and six pits scattered along the strike of the vein for 150 feet down hill. All openings are caved in to a considerable extent and the shaft, although timbered, is partly filled with ice so it was impossible to examine the vein in place.

The vein filling is a white milky quartz with considerable galena, slight amounts of chalcopyrite, and copper carbonate. The vein is said to be over 4 feet wide and has a strike of N.40° E. and a dips steeply to the northeast. The strike of the vein runs down hill towards Glacier Creek and there is a good tunnel and millsite. The walls of the vein are both quartzite schist.

Mt. McKinley 66

Two grab samples were taken from the surface dumps;

Sample No.2 Grab sample taken from pile of sorted coarse ore near shaft, ½ ton in pile.

No.3. Grab sample of 1¼ tons fine material containing much quartz.

Sample No.	Gold	Silver	Lead	Copper
2.	Trace	60.90	57.5	0.3
3.	0.03	82.40	8.4	0.4

The Banjo Lode K466-8

The Banjo Lode owned by Joseph Quigley is located on the right limit of Eureka Creek about three miles above its mouth and at an elevation of about 3200 feet. This lode is a large quartz vein striking northeast and throwing a considerable amount of float along the hillside. A cross-cut tunnel has been driven in about 40 feet and partly timbered but has not apparantly reached the

vein. An open cut 150 feet higher in elevation is described in sketch accompanying this report. This cut does not expose the walls so the width is not known but apparantly is well over 12 feet, and dipping to the south east. The quartz gangue is white and massive with small amounts of galena and occasional patches of sphalerite. Pans of decomposed vein material taken at point marked -A- in floor of trench east of the open cut, showed considerable free gold and a cream colored concentrate which was tested in Fairbanks and proved to be Sheelite. This is close to the hanging wall of the vein.

There is an excellent tunnel site on this property and a good mill site several hundred feet lower on Eureka Creek.

Five channel samples were taken from this open cut and two grab samples from the dumps;

Sample No. 4. 3'-0" East trench shows fine broken quartz, slight amount of sulphides and considerable sheelite.

5. 10'-6" along edge of open cut probably close to direction of strike of vein and several feet from hanging wall. Shows considerable galena scattered through quartz.

6. 5'-4" crosscutting vein near its middle shows slight amount of galena, no sheelite.

7. 3'-6" cross-cutting vein, slight amount of galena, no sheelite.

8. 3'-0" across deeper trench on north side of open-cut shows very little galena, no sheelite, probably close to foot wall.

9. Grab sample of quartz on dump representing large quantity of float and quartz from open-cut.

10. Grab sample of pile of quartz at mouth of tunnel 300 feet below cut, mostly float from vein picked up in tunnel.

Sample No.	Gold	Silver	Lead	Copper	Zinc	Tungstic Oxide WO_3
4.	0.04	3.20	Trace	---	---	0.45
5.	0.52	10.00	2.1			
6.	0.10	1.60	0.60			
7.	0.04	27.20	0.5			
8.	0.66	1.00	0.2			
9.	0.10	0.60	Trace			
10.	0.04	0.20	0.0			

The Jupitor -Mars Lode

The Jupitor-Mars Lode owned by William Taylor and associates is located on the right limit of Eureka Creek about 3 miles from its mouth at an elevation of approximately 2900 feet. The vein is southeast of the Banjo Lode described above, and strikes N. 70° E. There are four claims located on the strike of the vein running in the following order from North to South; Chlorine, Jupitor-Mars, Chloride, Waterloo. A tunnel has been driven in on the Jupitor-Mars Claim for 127 feet following the northwest side of the vein. The vein dips nearly vertical and is composed of two distinct parts. The northwest portion is a light colored quartz with some galena, pyrite, and sphalerite. It shows no parting along the north wall in contact with the schist but shows a smooth regular parting between it and the other portion of the vein. The southeast portion is broken up iron stained quartz and shows some copper carbonate. The south wall in contact with the schist is irregular and frozen to the schist.

At a distance of 100 feet in the tunnel, the vein and walls are much crushed and broken. The tunnel there turned toward the southeast for the last 27 feet probably with the belief that a cross vein had been encountered.

Four samples were taken of this vein. They are described

below and also on sketch accompanying this report;

Sample No. 11. 10'-0" channel at point 90 feet from portal of tunnel and across both portions of vein.

12. 5'-6" channel at point 33 feet fromportal of tunnel and across both portions of vein.

13.A. Grab sample of dump representing light colored quartz from northwest portion of vein.

13 B. Grab sample of dump representing brown oxidized quartz from southeast portion of vein.

Sample No.	Gold	Silver	Lead
11.	0.21	8.60	1,6
12.	0.09	2.00	1.0
13. A.	0.06	3.10	0.3
~~14.~~ 13-B.	0.20	4.60	1.0

The Merry Widow Lode.

The Merry Widow Lode owned by William Taylor and associates is located on the right limit of Eureka Creek about 2¼ miles from its mouth at an elevation of about 2600 feet and extends across the Merry Widow and Silver King Claims. The vein strikes N.50° E. with a dip of 70° N.W. An opencaut in 10 feet does not expose the complete width of vein. This cut is about 200 feet above the creek and at an elevation of about 2550 feet. A splendid tunnel and mill-site is available on Eureks Creek.

Two samples taken across the vein at open cut are listed;

Sample No. 14. 5'-5" channel from hanging-wall towards foot-wall iron-stained quartz much soft leached material.

15. 5'-0" channel from Sl.No.14 towards foot-wall, leached quartz with few copper stains.

Sample No.	Gold	Silver	Lead	Copper
14	0.01	1.20	0.0	0.0
15	0.04	31.40	0.6	Trace.

Spruce Creek Lodes 66-18

Mr. Charles Trundy (U.S.Comissioner Kantishna Dist) has been opening up three veins at the heads of Spruce and Caribou Creeks. He has the following claims located;

North Star	Lena Lode 66-23	Spruce Pass No.1
Evening Star	Silver Wire	Spruce Pass No.2
Morning Star		

These claims were not visited and all information and samples were obtained from Mr. Trundy.

The North Star Prospect consists of several open cuts on a vein 5 feet wide with a strike of northeast and a dip of about 60°. Vein contains white milky quartz, with galena, sphalerite, pyrite, and arsenopyrite. Vein was discovered several years ago and openings are caved.

The Lena Lode Prospect consists of several open cuts at the head of Spruce Creek and east of Glacier Peak. The vein is 5 feet wide strikes northeast. Ore is galena, sphalerite, with some copper stains in a quartz gangue.

The Spruce Pass Prospect is located at the head of Spruce Creek and has several open cuts. The vein is 12 feet wide has a strike of northeast and dips to the southeast. The ore is quartz with galena.

Sample No.	Gold	Silver	Lead	Copper	Zinc
16.	Trace	0.60	0.0	0.0	0.2
16.A.	0.07	149.60	12.9	0.1	
17.A.	0.08	1.40	0.4		
17 B.	2.58	72.80	0.9		
18.	0.16	141.00	10.7		

Samples No. 16 and 16 A. represent Lena Lode Vein. Samples No. 17 A. and 17 B. represent the North Star Vein. Samples No. 18 represents Spruce Pass Lode.

Respectfully Submitted,

Fairbanks Precinct

College, Alaska
November 6, 1945

Kantishna District

Howard G. Wilcox
Professional Mining Engineer

Mr. Fred D. Crane
c/o McLaughlin Securities Co.
25 Broad Street
New York, New York

Dear Mr. Crane:

Notwithstanding the assays obtained by the U. S. Bureau of Mines and the estimates of ore reserves made by the United States Geological Survey; the mining of the irregular orebodies would be attended by dilution and resultant lowered metal content, and the difficulties encountered in concentrating the ore would lower the recovery so that these orebodies could not be mined at a profit at this time.

I appreciate having had the opportunity of examining this property for you and regret that circumstances have delayed sending the report at an earlier date.

Sincerely yours,

(Sgd) Howard G. Wilcox

GRANT LODE CLAIMS
Mount McKinley National Park, Alaska

The group consists of 20 unpatented lode claims situated on the north slope of Mount Eielson and Copper Mountain at an elevation ranging from approximately 2400 to 4700 ft. The claims are across Thorofare river flats, 2 miles from Camp Eielson which is on the McKinley Park Highway. McKinley Park Station on the Alaska Railroad is 70 miles from Camp Eielson.

There is no timber within several miles of the property; the mountain slopes are fairly steep but a cat trail could be constructed to most parts of the claims.

Twelve claims are owned by O. M. Grant and eight claims by Mr. Lis McCarvey. The Grant claims are named: Zelma, Lois, Florence, Venora, Ruth, Dee, Mary, Lillian, Eva, Wolf, Churchill and Radio. The McCarvey claims are named: Seal, Mink, Martne Weasel, Wolverine, Fox, Beaver and Bear.

Title to some of the claims appears to have changed between Mr. Grant and Mrs. McCarbey lately. The listing above is according to Mr. Grant's records at the time of the examination. The claims owned by Mrs. McCarvey are marked on the accompany- blueprint. The unmarked claims are Mr. Grants.

The first claims were staked on Mount Eielson in 1920. In 1921, Grant and Giles located 22 claims which they leased to Tom Aitken in 1922. In 1923, Aitken subleased to the American Smelting and Refining Co, and in 1925 the property reverted to O. M. Grant who has held most of the ground since then. There has been no production from this area.

The geology of the district has been described by John C. Reed in U. S. Geol. Survey Bull. 849-D. Clyde Wahrhaftig made some detailed geologic maps of mineralized areas on these claims for the U. S. Geol. Survey in 1945, and the U. S. Bureau of Mines took 26 samples. Wahrhaftig's report and the U. S. Bureau of Mines assay returns are included with this report.

The granodiorite mass that comprises Mt. Eielson is covered on the north flank by a series of sedimentary beds composed principally of thin bedded limestones with minor beds of shale and graywhacke. Numerous granitic dikes and sills have intruded the sediments. More recent fine grained acid and basic dikes also have been intruded into the sediments. Locally, the limestones have been replaced by epidote and locally, the epidote has been replaced by metallic sulfides.

The valuable sulfide minerals in order of decreasing amounts are sphalerite, galena, chalcopyrite and tetrahedrite. Minor amounts of malachite and azurite are present and minor silver and gold values accompany the sulfides.

The country rock has been spotily replaced along bedding planes and along the borders of dikes, by the sulfide minerals. Plate 3-A of Wahrhaftig's report shows such irregular replacement, and the irregularity of the mineralization in the replacement area is indicated by the direction of samples E 17, E 18, E 19 and E 22. Irregularity of mineralization is also indicated by the samples shown on plate 4-B.

The large area in which the numerous outcrops occur does not indicate a large orebody. The individual bodies are small and irregular and the mineral occurrences do not follw a definite pattern. No definite relationship is apparent between the sulfides and the gold-silver values.

The arithmetical average of 26 U. S. Bureau of Mines samples shows silver 1.72 ounces, copper 0.46%, lead 4.04%, zinc 5.36%. The Virginia claim shows the highest arithmetical average values of any claim, 5.5% lead, 6.4% zinc, 215 ounces silver, 0.5% copper with a trace of gold, U.S.B.M. figures. The weighted average would be somewhat lower. A sample but by the writer on the west side of Grant Creek where the U.S.B.M. grab sample E24 was taken, assayed 0.08 ounces gold, 8.02 ounces silver, 1.62% lead, 3.13% zinc. Four samples were cut as checks on U.S.B.M. samples and our checks ran somewhat under the U.S.B.M. assays on lead, zinc and silver, but the sample past noted ran higher in gold.

The development work that has been done on the property has consisted of several open cuts and four short tunnels, three of which are caved. A body of ore that would be large enough to be considered as mineable has not been developed. While the mineralized showings have been shown over considerable horizontal and vertical range, no one body has shown a continuity of width or values that would make an estimation of ore reserves for mining purposes justifiable. And further, more, exploration to determine the probable continuation in depth of any of the showings that are now visible is not warranted. An outcrop near the southern boundary of the Lillian claim is shown on Fig. 2 U.S.G.S. map. An orebody about 8 ft.

wide is exposed intermittently for 150 to 200 ft. up the mountain and a relatively high percentage of sulfides is exposed in the outcrops. This body cuts across the formation and the metal content and extent make it worthy of investigation if any development work is to be undertaken.

A small cabin is located at the edge of Thorofare River flats about a mile from the claims. A few hand tools, blacksmith forge, etc., are on the property.

The property could be connected with the road to Mt. McKinley Park Station by building six miles of road. The road crosses Thorofare river flats which could be crossed except for a short time when the river is unusually high. A cat road could be constructed for $1500 but an automobile road with a span acrossthe river would cost $40,000 to $50,000. Haulage by cat would cost about $0.50 a ton mile and auto freighting about $0.10 a ton mile.

The table of freight rates indicates that total transportation charges to East Helena are about $55.00 per ton of concentrates.

A copy of U. S. Bureau of Mines metallurgical tests that were made on a composite sample from the Grant prospect is included with this report. The rejects from 18 of the 28 samples taken were used for the test. The samples which were not used ran under 7% combined lead and zinc. Previous tests by other laboratories had indicated concentration of the ore was unsatisfactory.

The test showed grinding to 150 to 200 mesh released about 95% of the sulfides but grinding to minus 325 mesh gave only slightly better recovery than grinding to minus 65 mesh. The composite sample assayed 4.22% lead and 5.27% zinc, but recoverable percentages were 2.51% lead and 4.02% zinc.

Recoverable values are $5.26 a ton in lead and $6.60 in zinc with possible $1.00 a ton in silver which would give a gross value per ton of $10.86. However, the lead concentrate only carries $47.29 in lead and the transportation and smelting charges nearly equal this amount. The zinc concentrate assays $51.67 per ton.

It is apparent from the above figures that an improvement in metallurgy is necessary before even a large body of the grade indicated would be profitable.

Wahrhaftig's U. S. Geol. Survey report on the "Zinc Deposits of the Mount Eielson District", the U. S. Bureau of Mines report, "Concentration of Lead-Zinc Ore from the Grant Prospect", and a copy of the assay certificate with widths of veins noted, a copy of assay return on samples taken by Wilcox, a table of freight rates, five blueprints, and photographs of the property are included as a part of this report.

JUN 2 - 1947

J. D. STEWART
Commissioner of Mines

Art!
I found copy of Wilson
Report on M T Edison,
Please give to Mr Stewart
for his files. Fred

memo by
[illegible]