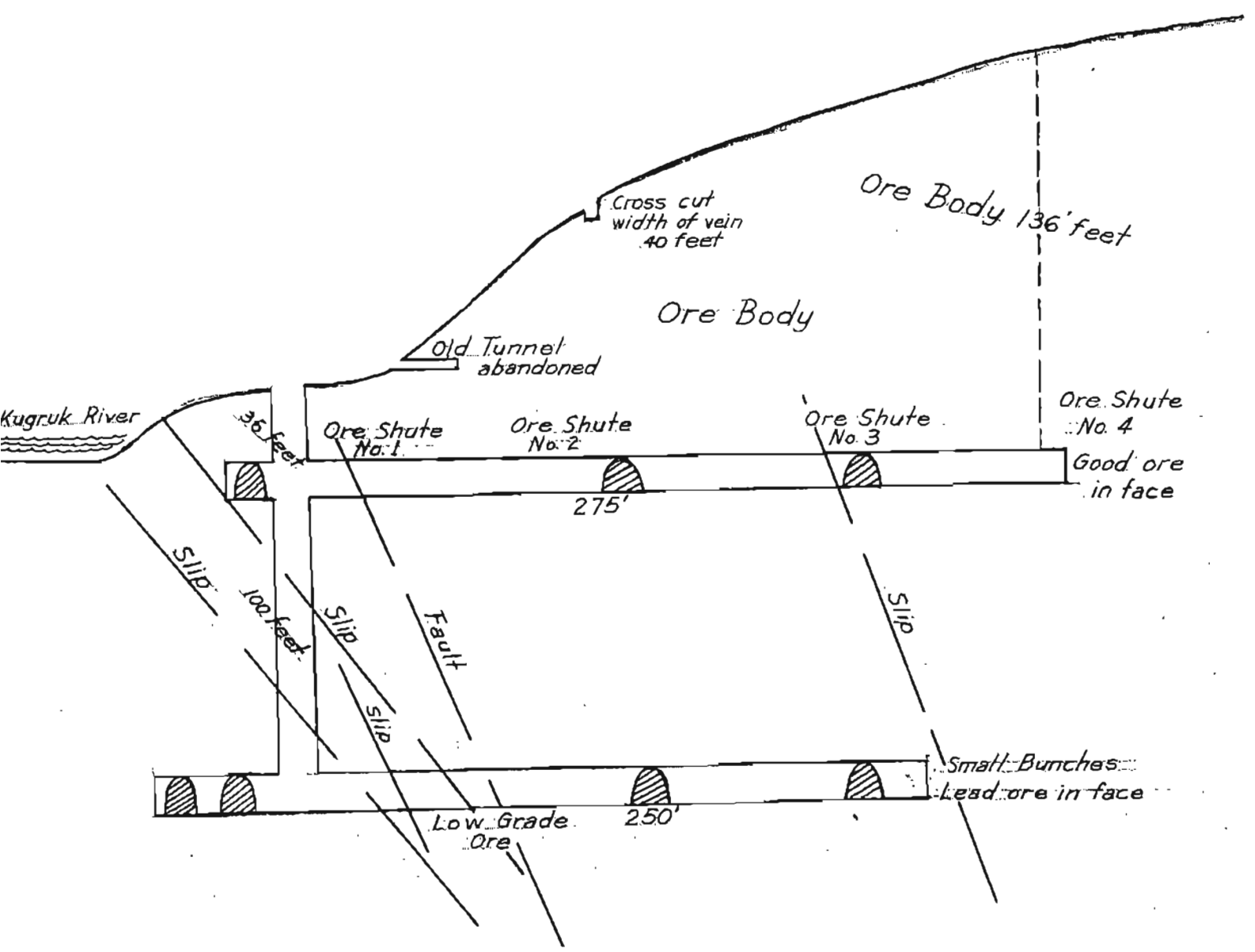
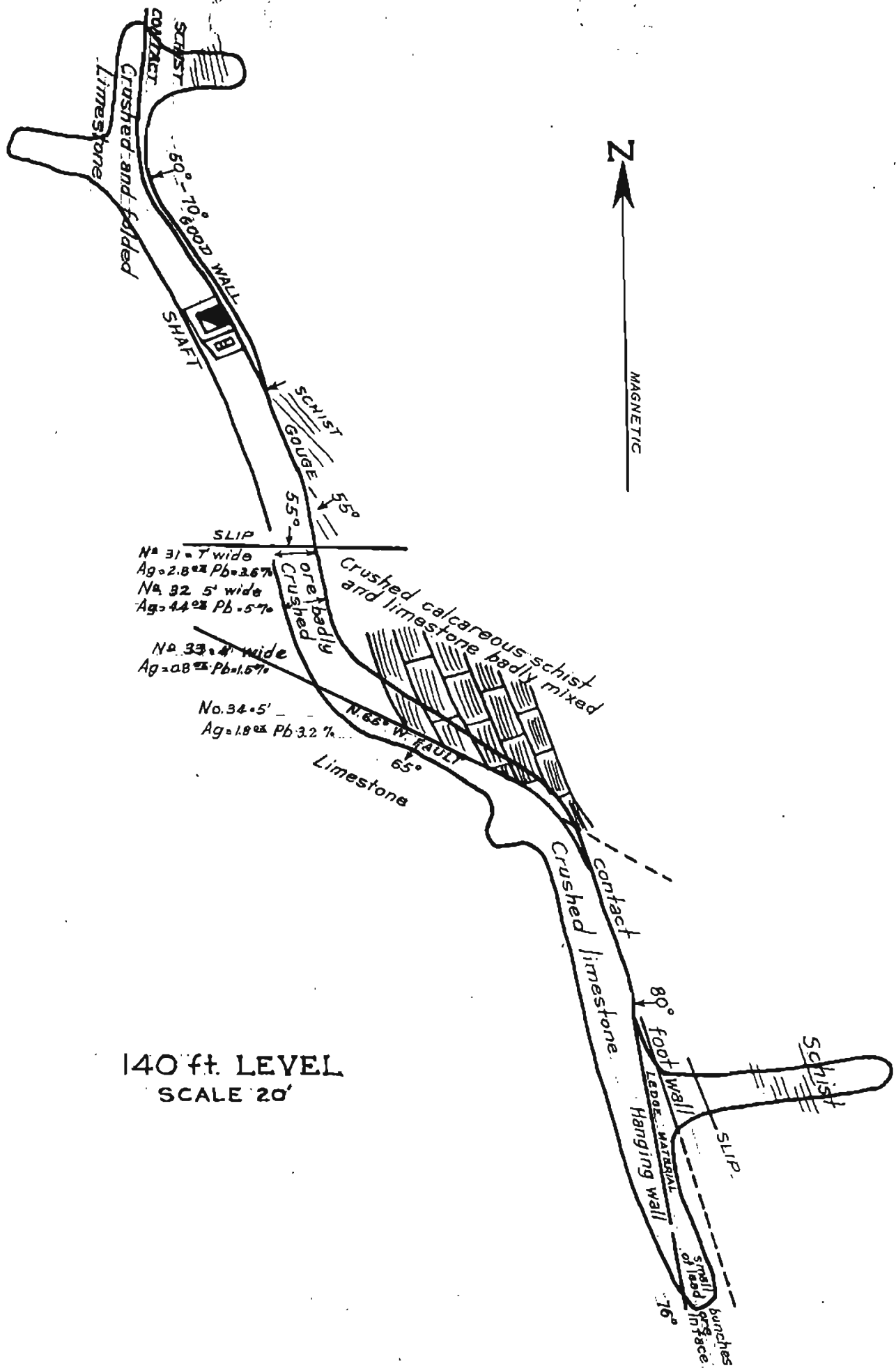


# KUGRUK GALENA MINES

Fairhaven Mining District

Seward Peninsula, Alaska





No. 31 - 7' wide  
 Ag = 2.8% Pb = 3.6%  
 No. 32 - 5' wide  
 Ag = 4.4% Pb = 5.7%  
 No. 33 - 4' wide  
 Ag = 0.8% Pb = 1.5%  
 No. 34 - 5' -  
 Ag = 1.8% Pb = 3.2%

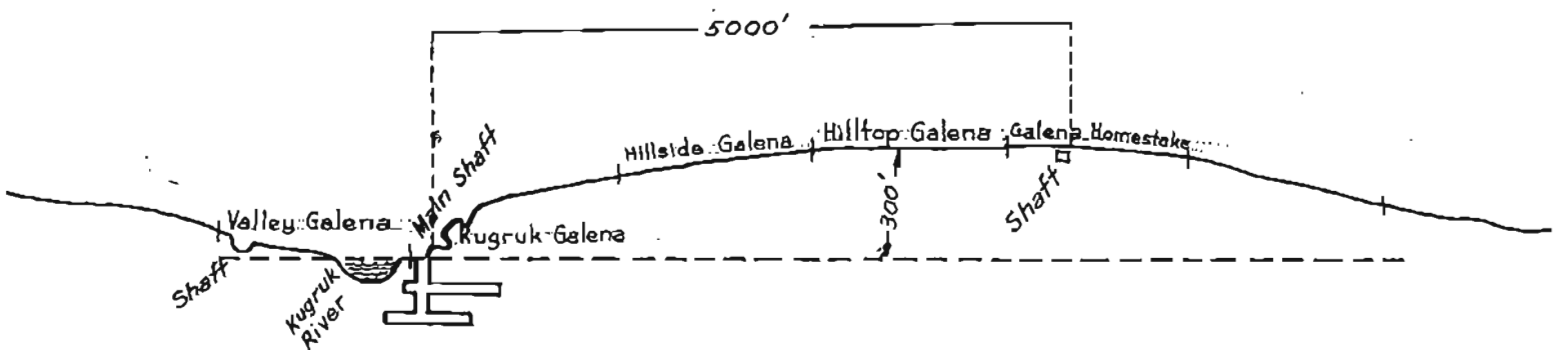
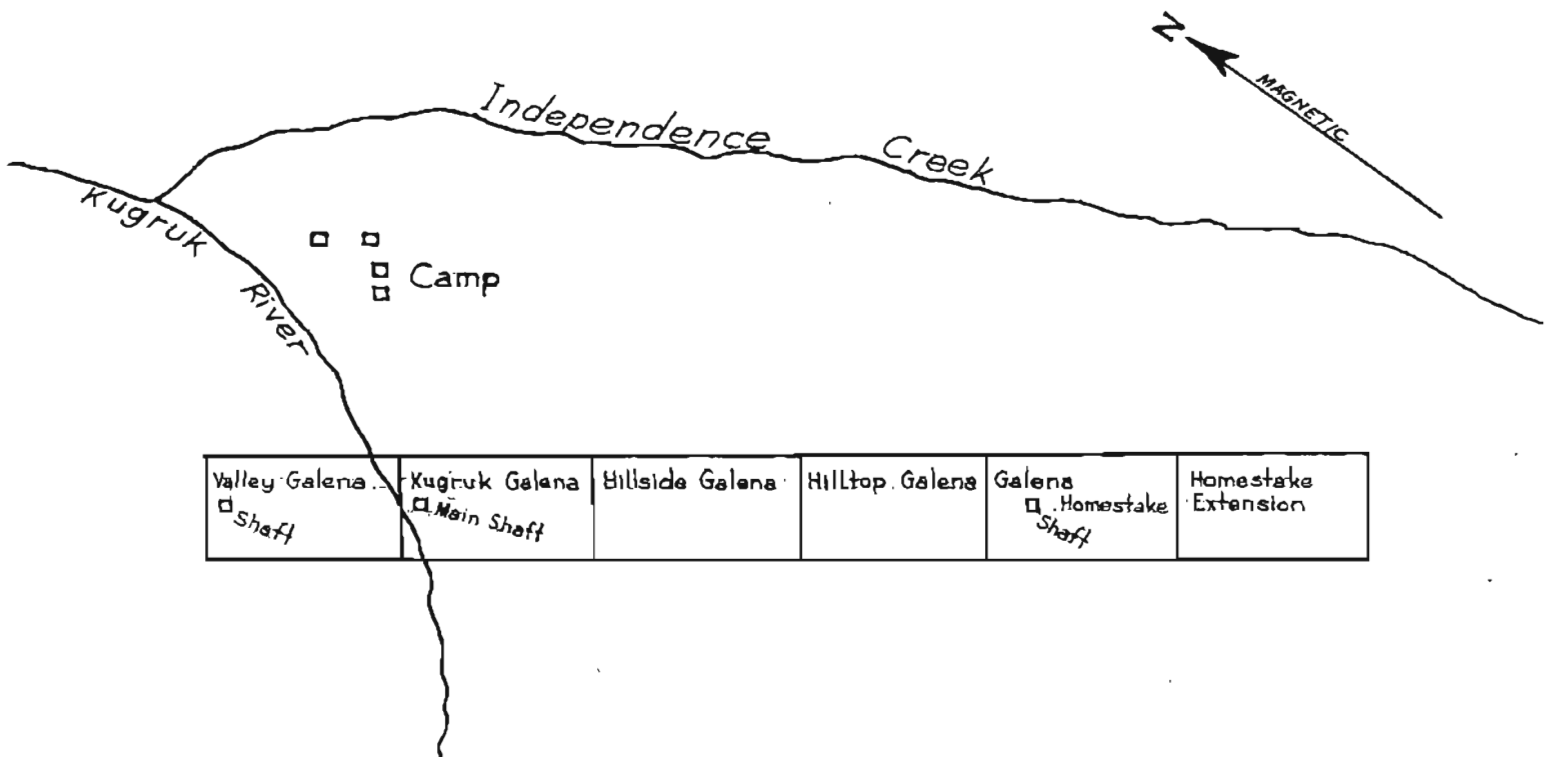
140 ft. LEVEL  
 SCALE 20'



# KUGRUK GALENA MINES

Fairhaven Mining District

Seward Peninsula, Alaska



KUGRUK GALENA MINE  
AND  
ASSOCIATED PROPERTIES, SEWARD PENINSULA, ALASKA

SILVER LEAD PROPERTY

STATEMENT OF DEVELOPMENT

PROPERTY AND  
LOCATION

The Kugruk Galena Mine and Associated properties comprise six lode claims situated on the North drainage of Seward Peninsula, Alaska, at the junction of the Kugruk and Independence Rivers. Elevation about 200 ft. above sea level. The property is about thirty two miles from tidewater, across low gently rolling hills.

GEOLOGY

The mineral belt upon which these claims are located has been traced for a distance of one and one quarter miles. The general strike is North and South, with a fairly steep westerly dip. The hanging wall is limestone and the footwall schist. The ore is made up of argentiferous Galena, Zinc Blend, Gray Copper and a small amount of Pyrite. The veins or contact shear zones are filled with fault material containing bodies of Siderite (Iron Carbonite) replacing limestone to a more or less extent. Galena and Zinc Blend, the principal ore materials, are later than the Siderite and occur as replacement of both Limestone and Siderite.

DEVELOPMENT

The development work consists of a main shaft at the North End of the Kugruk Galena Claim, 136 feet deep, from which two levels 275 and 250 feet long have been driven in a southerly direction along the strike of the vein. A prospect shaft 1200 feet North of the main shaft near the northerly end of the Valley Galena Claim: A shallow cross cut on the exposed face, about 100 feet south of the main shaft and fifty feet higher elevation and a shaft 30 feet deep on the contact, situated 5000 feet South of the main shaft on the Galena Homestake Claim. This shaft is at a point 300 feet higher elevation than the main shaft.

The main shaft is located about 60 feet from the Kugruk River and 25 feet higher elevation. It was sunk on an outcropping of good lead ore. A sample, 18 feet down the shaft, returned 30.5% Lead and 27.8 Oz. Silver per ton ACROSS A WIDTH OF FIVE FEET. A drift has been started about thirty six feet down, known as the First or Forty Foot Level. This drift extends 15 feet North and about 260 feet South along the strike of the vein.

This FIRST LEVEL shows four separate ore bodies.

No. 1 Averages 10 x 75 feet, Value 6.8% Lead and 10 Oz. Silver per Ton.

No. 2 Averages 38 feet across and possibly 20 feet long, value 7% Lead and 10 Oz. Silver per Ton.

No. 3 Averages 7 x 75 feet value 6% Lead and 6.4 Oz Silver per ton.

No. 4 Averages 10 feet wide and is only defined for a distance of 25 feet. Value 6% Lead and 6.8 Oz. Silver per Ton. The face of this ore body, which is the extreme south breast of the First of Forty Foot Level, IS STRONGER AND BETTER DEFINED THAN OTHER EXPOSURES IN THE MINE. In fact the workings seem to be getting into a less broken up country to the South.

On the Second or Lower Level only one ore body has been defined. This will average five feet wide for a length of 35 feet and contains 3.4% Lead and 2.5 Oz. Silver per Ton. The face of this level is just entering a well defined Siderite Body, showing an occasional bunch of good lead ore.

The prospect shaft on the Valley Galena Claim which is about 1200 feet North of the main shaft, shows a seven foot width of low grade ore.

THE CROSS CUT on the exposed face 100 feet South of and 500 feet higher elevation than the main shaft, indicates an Apex width of the vein at that point of about Forty FEET and at one spot is of sufficient depth to show high grade Galena ore.

The Prospect Shaft on the GALENA HOMESTAKE CLAIM, which is located 5000 feet southerly from the main shaft, along the strike of the vein and 300 feet higher elevation, definitely locates the contact of the vein and the dump shows some high grade oxidized ore. A sample taken therefrom shows 39.7% Lead and 45.2 Oz. Silver.

SUMMARY From the list of values and dimensions of ore bodies in the FIRST LEVEL ( SEE CHART ) it is calculated that about twenty percent of the ore at that level will class as "BETTER GRADE MINE RUN". About three tons of this ore will produce one ton of High Grade Shipping Ore. There should be no difficulty in securing hand sorted ore that would average 35% lead and 40 Oz. Silver per ton. The balance of the ore in this level will concentrate at a seven to one ratio to a concentrate averaging 40% Lead and 45 Oz. Silver per ton.

ORE SHIPMENTS: A shipment of thirty three tons of ore was received at the Selby Smelter on Oct. 28th, 1921, with values as follows:

Silver	33.25 Oz.	Zinc	4.8%
Lead	29.9 %	Sulphur	7.7%
Silica	5.8 %	Arsenic	0 %
Iron	20.8 %	Antimony	0 %

On Dec. 6th, 22, a shipment of one and three quarters tons was received at the Bunker Hill Smelter, Kellogg, Idaho, showing values as follows:

Silver	29.4 Oz.	Zinc	6.3%
Lead	33.5%	Sulphur	8.7%
Iron	12.3%	Insoluble	10.2%

FUEL About midway between the Coast and the Kugruk Galena Mine is situated the KUGRUK COAL MINE. This property shows an unlimited quantity of high grade Lignite Coal. The U. S. Gov't. reports estimate the vein of Lignite at from fifty to sixty feet in thickness and further states that it is of excellent quality. Coal from the property has been used in placer mining on Candle Creek and the Immachuck River for the past fifteen years and the incline now reaches an extent of 300 feet.

ELECTRIC POWER from this coal mine is perfectly feasible and development for use in placer mining on Candle Creek and the Immachuck River is now under consideration.

OPERATING COSTS Actual mining has shown the following conditions.

The ore is a very easy working product.

The rock is frozen. Temperature about 28 above zero. No pumping is necessary. The mine has so far, required no timbering. The conditions are ideal for underground work and it may be carried on during the entire year.

As to the "per ton" cost of operating, such costs should be no higher than in the majority of western mining camps. Considering the low fuel and power costs at the Kugruk Galena Mine; the absence of pumping costs and the low figure which should show for timbering I see no reason why the "per ton" cost of mining should not compare very favorably with costs at the large, low grade, properties all over the West.

TRANSPORTATION The Kugruk Galena Mine is situated thirty two miles from tide water, by sled trail over low gently rolling hills. Freight direct from Seattle can be unloaded in Kotzebue Sound, directly opposite the property. The first plant, capable of handling from 1000 to 10,000 tons per season, should be Caterpillar Tractors with sled trailers and would be entirely confined to winter hauling. The cost of handling ore and merchandise should be well within \$4.00 per ton. Loading ore at the coast and landing merchandise, would be at first with lighters. Increase in the tonnage handled would warrant the building of a jetty and wharf, which would greatly reduce such costs. The high point of land jutting out at the coast, together with good depth of water (22) feet and plenty of rock material right at hand makes such work perfectly feasible.

CONCLUSIONS The nature of this deposit; the extent and value of the ore shoots, the fuel and water supply and the favorable conditions generally, amply justify development of this property. It will show sufficient high grade, oxidized ore at the apex of the vein to pay for the opening up and blocking out of the main ore body.

There is every probability of much greater replacement of the Siderite by Galena wherever the main shoots or chimneys which fed this deposit are defined.

Respectfully submitted,

## INDEPENDENCE MINE

(Notes by Eskil Anderson, Associate Mining Engineer, who visited property in 1943 when returning from Kobuk.)

The ore on the dump at present consists of several hundred tons of limonitic material containing disseminated patches of galena and lead carbonates. Some of the ore is in boulders as much as two feet in diameter. Galena and limonite float is present in pits about  $\frac{1}{4}$  mile northeast and southwest of the shaft.

George Wallin, of Candle, and Alfred S. Kepner shipped two tons of twice hand-picked high-grade in August 1922. The shipment was first hand-picked at the mine and taken downstream on a small scow to the Kugruk River Coal Mine where it was left sacked on the bank. Some of the ore was carried out during the winter by ice. It was sorted again the next spring and two tons were shipped to the smelter.

Another load of ore was said to have been lost when a scow overturned in the Kugruk River near the Independence Mine.

According to Mr. Wallin: "At a depth of 40 feet a drift was run several hundred feet on the vein, which averaged from eight to ten feet in width. No stoping was done. The shaft was continued to a depth of 140 feet and some drifting was done on that level but no ore was encountered. The habit of the ore was lenticular going down and the vein pinched and swelled as the shaft was deepened. The wall rock was schist on one side and a grey limestone on the other."

The mine is located in a region of moderate relief. There are no high mountains in the area and only low, rounded hills are present between the mine and the coast. Caterpillar transportation from Candle is the easiest means of transportation to the district. A landing field could be built near the mine.

Alfred S. Kepner (1924--314 Haller Bldg., Seattle), (1941 address--A. S. Kepner, 10037 - 37th SW, Seattle, Wash.) at present operates chicken ranch near Seattle. Has assay map and other information on the deposit.



EXTRACTS FROM U. S. GEOLOGICAL SURVEY  
PUBLICATIONS WITH REFERENCE TO THE INDEPENDENCE  
MINE ON INDEPENDENCE CREEK, A TRIBUTARY OF  
KUGRUK RIVER, ALASKA

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Bulletin 712, p. 194:  
(1918)

Perkypile & Ford propose to do considerable work on a silver-lead lode on Kugruk River, a quarter of a mile east of the mouth of Independence Creek. Six men were employed during the summer under the direction of Edwin Elge. The force was increased to 10 men in the fall, and it is the intention to work 20 men during the winter. A 30-foot shaft has been sunk on the ore body, and a 40-foot tunnel driven. The operators propose to continue the shaft to a depth of 200 feet and to crosscut the ore body. Mr. Ford states that assay returns from an average sample show 150 ounces of silver and \$2.45 in gold to the ton, 30 per cent of lead and a trace of zinc. The locality was not visited by the writer, but the deposit is said to occur in marbled limestone along a limestone-granite contact, to be from 7 to more than 12 feet wide where opened, and to be traceable for 2,000 feet on the surface. About 50 tons of ore is ready for shipment. The ore must be hauled about 50 miles to Willow Bay and lightered to ships.

Bulletin 714, p. 236:

(1919)

The silver-lead prospect on Kugruk River near Independence Creek was further developed during 1919, a crew of 6 to 14 men working throughout the year. The work appears to have consisted mainly in sinking the shaft. Data regarding the amount of lateral development are not at hand. A considerable amount of ore has been mined during the development work but has not been shipped owing to difficulties of transportation. An effort is said to have been made to get a shipment of ore down the Kugruk in small scows. Low water during the spring when a high stage was expected prevented these boats from getting down the river. Additional development work was to be done during the winter of 1919-1920.

The principal difficulty in operating this property seems to lie in the transportation of supplies to the mine and of the ore from the mine. The experience in 1919 indicates that shipments of ore down the river will probably not prove feasible, and it will doubtless be necessary to haul the ore to Candle or Deering. The Candle road has been con-

structed from Candle as far up Candle Creek as claim No. 16, and it will probably prove most economical to extend this road to the mine rather than to build all the way to Deering. An aerial tram may prove more economical than road haulage, should it be found that a large tonnage will have to be handled. The possibility of developing power for the operation of the tram from the coal found on the Kugruk may make this method of haulage the most economical.

Bulletin 722, p. 65:

(1920) Twenty men were employed during the winter and eight during the summer in prospecting the lead-silver property on Kugruk River. The developments on the property now consist of a 140-foot shaft and of 250 feet of drift on the 40-foot and 150 feet of drift on the 140-foot levels. The showing is considered favorable by the owners. Work was discontinued in September.

Bulletin 739, p. 43:

(1921) The Independence mine, in the Fairhaven district was developed, and some galena ore was shipped. The owners of the property report that the underground work includes a 136-foot shaft and 250 feet of drifts on two levels. This is the only producing lode mine on the peninsula.

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(1922) At the Independence mine, in the Fairhaven district, no new ore was mined, but a small production was made by working over the dumps of the preceding year. This was the only producing lode mine on the peninsula in 1922.

File

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2

TERRITORY OF ALASKA  
DEPARTMENT OF MINES

Antimony (Contd.)

U. S. G. S. records of additional occurrences.

Christopherson property -- stibnite -- hd. of Waterfall Cr., trib. East Chance,  
trib. Snake R.

Shoulder Cr., trib. Snake R. -- stibnite from open cut

Anvil Cr., trib. Snake R. -- stibnite lenses in several tunnels

Head of Benita Cr., trib. Osborne Cr., trib. To <sup>NOME</sup> Snake R. -- high-grade auriferous  
stibnite

Goldbottom Cr., trib. Snake R. -- narrow seams of auriferous stibnite in California  
Lode

Head of Tin Creek, west side of Brooks Mountain, and other minor occurrences of  
stibnite -- York District

Chilik Mine -- stibnite -- Chilik Cr., trib. High R., Council District

T. Moon, Unalakleet -- stibnite and chalcocyanite -- *stibnite and chalcocyanite*  
*found on high ridge between Unalakleet and Snake R. - ungalak*  
*side of ridge*

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C  
O  
P  
Y

I. W. PURKEYPILE  
General Merchandise  
Poorman, Alaska

Dec. 5, 1946

J. C. Roehm  
Associate Mining Engineer  
Department of Mines  
Juneau, Alaska

Dear Mr. Roehm:

Your letter of Nov. 21 received. I am glad to know that you are still on the look-out for a partner for me, and that your department will lend such assistance as funds will allow.

In regard to the lead and silver prospect that you wanted information on, I am sending you the blue prints of the workings and also some snapshots. I would like them returned after you have gotten copies or gotten the information desired. I did have the full report but haven't been able to find it. However, the report was made by Levensailer, a mining engineer in Seattle. If you could contact him, he still might have a copy of his Report on the Kugruk Silver Mine.

When development work was going on, the property was owned by Purkeypile, Ford and Kepner. Afterwards we turned it into a stock company, which later became defunct. I was the last one of the company to hold on to the property, but it finally became too much of a financial drain on me to hold on. I understand that the property has been stopped several times since I let it go. However, I do lay claim to all the machinery that is there.

I always had great hopes for that property, and I still believe that it will be a great mine some day. We use to call it the Independence Mine, as it is near the mouth of Independence Creek.

As I remember, at the end of his report, Levensailer recommended further development of the property. (I don't know if I have spelled the engineer's name right, but that is the way it is pronounced.)

And, by the way, there is no zinc in that ore. It was lead, silver, gold and iron. It ran about 1% lead to each ounce of silver.

We shipped about 30 tons of hand picked ore to Selby Smelter. It averaged about \$76 per ton. We just about broke even on expense of shipping.

With best regards,  
Sincerely,

/s/ I. W. PURKEYPILE

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/s/ I. W. PURKEYPILE





Picture Taken 1920  
Independence mine on  
Kuyuk River  
Galena outcroppings  
in foreground.

Note: Copied from  
print furnished  
by Mr. Purkpile of  
Ruby, former part  
owner of property.

4/29/47

A.W.S.