

PE-116-04

PRELIMINARY REPORT OF ZINC-LEAD SHOWING,
KEKU GROUP OF CLAIMS, KUIU ISLAND, ALASKA,
May 16, 1937.

Location:

The Keku group of 32 lode claims is located along the east shore of the most northerly peninsula of Kuiu Island. This peninsula lies between Keku Strait and Saginaw Bay, and the claim group lies 5 miles southeast of Point Cornwallis, the most northerly point of Kuiu Island. The zinc-lead showing is located near the center of Keku Claim No. 9 and approximately 600 feet inland from the beach following a small creek and at an elevation less than 100 feet. This island is accessible by large boats to the mouth of the small creek on which this showing is located. This creek is shown on U. S. C. & G. S. Chart 8214. The claims are staked at right angles to the beach, two claim lengths back and 16 claim widths in length along the beach.

Owners:

The locators of this group are I. M. & A. C. Hofstad, Lewis & Hilda Dyrdaahl, and Helen Hawkes.

History and Development:

The discovery of galena in the limestone formation along this east shore was made by Ted Hungerford of Petersburg a few years ago. The outcrop showing of the lead-zinc, as shown on the accompanying sketch, was also reported to have been discovered by Hungerford, who not realizing the value of his discovery, did not stake this showing, but showed the outcrop to I. M. Hofstad. The latter showed the outcrop to Messrs. L. Dyrdaahl and J. C. B. Hawkes in the spring of 1937, thus the present group was staked under the above ownership.

No development work had been done prior to the writer's visit, other than some stripping on the steep bank alongside the creek on the outcrop itself. The extent of this deposit could not be determined, but from the outcrops of the formations in the creek bed and the surface conditions, the following estimates were made contained in this report.

This property was later examined by Mr. D. C. Sharpstone for R. R. Brown of Juneau, who has become interested in this property. Mr. J. Williams of the Alaska Juneau Gold Mining Company examined the property for Bunker Hill & Sullivan interests.

Geology and Showings:

The geology of the area contained in this group consists of andesitic lavas, dolomitic limestones, conglomerates and greenish basaltic lavas. These have a general strike N. 30 to 40° W. and low dips to the northeast. The lavas, limestones and conglomerates appear all to be conformable as bedded formations which were, no doubt, laid down under water. They have since become folded and are at present contained in a small synclinal structure which is contained in and a part of the Keku synclinarium. # The limestone beds have been determined as Permian beds of Carboniferous age. These range from beds of limestone, fossil beds, chert beds and jasperoid beds to dolomite. Samples of ore found in this section are apparently associated with the fossil and dolomitic chert beds. The conglomerates are cemented with a calcareous cement and appear to consist of mainly rounded and irregular lava and limestone boulders and jasper and chert nodules of small size. A stratum of dolomitic limestone, which contains the zinc-lead ore on this group, parallels the beach line and is situated approximately 600 feet back at an elevation less than a hundred feet. It outcrops in the beds of two small parallel creeks that flow to the beach approximately 700 to 800 feet apart. Between the creeks, a mantle of moss, vegetation and timber covers the formation. It has a strike of N. 45° W. and dips 31° NE. The thickness was estimated between 30 and 40 feet. A greenstone calcareous conglomerate forms the hanging wall or overlies this stratum while the footwall is an andesite lava. The orebodies are contained in this stratum. Their extent and the potential possibilities have not been determined. The showing along the No. 1 creek on claim No. 9 can only be traced 150 feet and the extent of the ore in this distance could not be determined. The outcrop of ore along the south bank (note sketch) shows a thickness of nearly 20 feet, and this appears to be all ore, but how much of the remaining thickness of the stratum is ore was not determined.

The ore, which contains disseminated sphalerite and galena is a partial replacement of the dolomitic limestone stratum. The surface or weathered portion of the outcrop is encrusted with iron oxides and has a reddish brown to black color. The black encrustation is on the very outside. Chert of a grayish color both as nodules and brecciated pieces, occurs in this ore. These were not evidently attacked by the ore solution and remain intact and unaltered. The disseminated galena in the fractures and crystals through the ore, helps to identify this ore in hand specimens.

U.S.G.S. Bull. 800, "Geology and Mineral Deposits of Southeastern Alaska", by Buddington & Chapin, pp. 302-303.

together with its high specific gravity. Fractures cut across the ore outcrop and faults showing horizontal movement were noted in the bed of this creek, 300 feet west. These fractures strike N. 20° E. and have nearly a vertical dip. There has not been sufficient surface work to determine the result of the fracturing or faulting nor to obtain other than surface samples. This outcrop warrants considerable work to determine its dimensions.

Located on creek No. 2, approximately 800 feet south of the outcrop on No. 1 creek, the same or a parallel stratum of dolomitic limestone outcrops in the bed of the creek. This was discovered by the writer, in an attempt to locate the continuation of the No. 1 creek stratum. Here the width of the stratum could not be determined, however, it is exposed over 15 feet. Small disseminated crystals of galena were seen. No doubt some sphalerite was associated with it, but apparently not as much as contained in the ore of No. 1 creek. No satisfactory samples could be obtained. Surface work to the extent of opening up this outcrop and tracing it through to No. 1 is warranted.

Mineralization:

A thin section of the ore taken three feet below the contact of the conglomerate above, shows considerable sphalerite of a very fine nature grouped in masses of anhedral form, with an occasional crystal of galena in a matrix of calcite and dolomite. Euhedral crystals of dolomite are very evident. A magnification over 200 diameters is necessary to obtain the form and color of the sphalerite, which is the ruby variety having a reddish to brown color. It suggests with its massive groups of small rounded anhedral form to have been a replacement of the original rounded particles of limestone. This suggests a colloidal origin. Further, with the gangue minerals of calcite, dolomite and some silica, mainly chert, the latter in colloidal form, a low temperature origin is suggested for this deposit. However, more detail study of different occurrences of the mineralization will be necessary to give definite conclusions as to its origin. Nevertheless, this type of mineralization is important and no doubt has its source from intrusive activity. This source may be related to the volcanic flows which are very much in evidence further inland from this deposit. Galena was found distributed as disseminated particles in fresh unaltered andesite lava.

A thin section made of the conglomerate which overlies the limestone stratum of this deposit, shows widely scattered small groups of sphalerite with an occasional crystal of galena. This conglomerate contains both rounded and fragmental pieces of greenstone lavas, limestone and chert which are cemented with a calcareous cement. Also considerable siderite is contained in masses and contained in the cementing matrix of the conglomerate. The amount of sphalerite and galena contained in the latter does not appear

to be commercial, however, at other localities, it may contain sufficient amounts to make an ore.

Samples from other localities on the strike of this stratum and what appears to be the same stratum show various amounts of galena, which is silver-bearing and associated with massive fossils. This latter represents a fossil bed.

Assays:

Samples were taken only across the exposed sections of the outcrop. They contain some of the oxidization products, due to the fact the deposit had not been opened up or even shot into. Four channel samples were taken over a distance of 17½ feet across the outcrop. The results ran from a trace to 0.07 ounces per ton gold; 0.6 to 5.9 ounces per ton silver and 5 to 6 per cent lead. Other tests for nickel, cobalt and manganese were made with nil results. These samples were not assayed for zinc, which they contain. Results of zinc assays made from both grab and channel samples by the owners range from nearly 4 per cent to 18 per cent.

Thus, if this stratum of Permian limestone, extends with its present width for any great distance and contains the known chert and fossil beds, with the same ratio of values of this one outcrop, this would make a worth-while low grade zinc-lead deposit.

The extent of this deposit or succession of like deposits with values remains to be proved.

Timber and Water Power:

The island is densely timbered with medium to small size trees. However, sufficient timber for mining purposes could be obtained.

Water power is lacking on this island other than very small creeks which would furnish water for milling purposes only.

SUPPLEMENTARY REPORT TO PRELIMINARY REPORT OF
KEKU GROUP OF CLAIMS, KUIU ISLAND, ALASKA
July 10, 1938

The annual assessment work has been done on the Keku group of claims, located along the northeast shore of Kuiu Island, opposite Keku Islands, according to a notice posted on the beach at the camp site on Keku claim No. 9. This group consists of 32 lode claims, and all are being held. Assessment work has been concentrated on Keku claims Nos. 8 and 9. The work has consisted of blasting the face off the zinc outcrop showing along the south side of the creek, approximately 600 feet inland from the beach. This rock cut measures 30x40 feet in length and width and exposes the zinc ore across a width of 30 feet. This ore is exposed, measured along the creek on the dip, for a distance of 200 feet, with two small rock cuts on the lower portion of this outcrop. Approximately 150 to 200 tons of ore and rock have been removed from these cuts and the ore is piled in the creek. A trail has been constructed from the camp site on the beach to the former workings and thence 700 feet south to No. 2 showing on a parallel creek. Along this trail two pits were sunk in an effort to pick up the ore, but no ore is exposed in them.

The same dolomitic limestone strata crosses No. 2 creek at No. 2 showing, and is exposed over a width of 30 feet. Two rock cuts into this band shows some sphalerite and galena.

Sample 449 consists of a composite sample of several pieces taken from these cuts. Returns of 0.35 per cent zinc were obtained.

Sample 447 consists of a channel sample taken across 5 feet of exposure 50 feet above the large cut, No. 1 showing. Returns in zinc of 0.18 per cent were received.

Sample 448 was taken above No. 447 on the same exposure across 5 feet. Returns of 0.29 per cent zinc were received.

Sample 450 consisted of picked pieces taken from the dump of 150-200 tons. Returns of 2.75 per cent zinc were obtained.

The lead content of this ore appears less than the zinc. (Refer to former lead assays). Small amounts of gold and silver are also found in this ore.

A SUGGESTION FOR FURTHER EXPLORATORY WORK
ON THE ZINC-LEAD SHOWING
IN THE
KEKU GROUP OF CLAIMS,
KUIU ISLAND,
ALASKA.

This geological sketch represents a surface outcrop of a low grade zinc-lead replacement ore confined within a stratum of cherty dolomitic limestone, believed to be of Lower Permian Age and located on Kuiu Island, Alaska. Very little is known regarding the mineralization found in this age of sediments in Alaska. Further exploratory work is recommended in order to determine the extent and value of this mineralization.

This sketch was drawn shortly after the discovery of this outcrop with no development work done. This kind of ore deposition is of the replacement type and subject to change in short distances. This type of dolomitic limestone is a favorable receiving rock for this type of mineralization, and further exploratory work at least to the extent of uncovering its extremities on the surface is warranted.

As a suggestion for further work in an effort to gain more information regarding this occurrence and to establish its value in contents, it is suggested that the dolomitic limestone stratum be traced on the surface by trenching or stripping, as the case may be, at regular short intervals in the two directions marked on the sketch by red arrows along the strike of the stratum. Trenching and stripping should be to the extent to reveal both the length and width of the ore and to allow the taking of samples to determine the contents.

September 19, 1938

Mr. J. C. B. Hawkes,
Juneau, Alaska,

Dear Mr. Hawkes,

The following is a copy of the statement furnished me by Mr. J. Coehm, associate mining engineer covering the observations made by him at the Keku Group of claims during his visit to the property in July, together with descriptions of samples taken by him and the assay results on same, which have just been received.

" According to a notice posted on the beach at the campsite on Keku Claim No. 9 annual assessment work has been done on the Keku group of mining claims which are located on the northeast shore of Kuiu Island opposite Keku Islands.

The work, which has been concentrated on Keku claims Nos. 8 and 9, includes the blasting off the face of the showing of zinc ore the occurs along the south side of the creek approximately 600 feet from the beach. Removal of an area 40 by 30 feet and the excavation of two rock cuts in the lower portion of this outcrop were accomplished. Approximately 150 to 200 tons of ore has been removed from this cut and is piled up in the creek bed. A trail has been constructed from the camp site on the beach to a showing in the creek and southerly therefrom parallel to the creek. Two cuts were seen alongside the trail but no ore was seen in them. Two rock cuts were made in the limestone bed in the next creek south. Some sphalerite shows here across a width of 30 feet but the ore appears to be rather low grade. Eight men were reported employed during the month of June.

Assays from Samples taken by S. C. Ruckman

By Lauchs Laboratories Seattle

Qualitative Spectrographic Test

Lead Pp Zinc Pp Manganese Pp

			Lead Pp	Zinc Pp	Manganese Pp		
A	JCR	780	0.008	0.58	5.2		
B	"	789	0.006	0.60	2.4		
C	"	777	0.006	0.38	2.5		
D	"	781	0.007	0.58	5.4		
E	"	782	0.006	0.72	6.0		
F	"	779	0.005	0.46	2.0		
G	"	786	0.006	1.35	2.8		
H	"	783	0.009	0.47	10.8		
I	"	785	0.006	1.90	16.0		
J	"	776	0.007	Trace	7.7		
K	"	778	0.007	0.56	2.7		
L	"	787	0.006	0.82	4.5		

TERRITORY OF ALASKA
DEPARTMENT OF MINES
CERTIFICATE OF ORE ASSAY

Ketchikan, Alaska, 9/29/41., 1941

Specimen of Ore deposited at this office by _____
for determination, by assay, of Gold and Silver contents, with percentage of base metals.

[illegible]

Remarks	Assayer
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15.0, 18.2
56° 53'
134° 06'
TERRITORY OF ALASKA

PE 116-4

DEPARTMENT OF MINES

JUNEAU, ALASKA

Report of Investigations at Kuiu Zinc Mines, Inc.,
Keku Straits, Kuiu Island, Alaska

At 116-7

By
J. C. Roehm
Nov. 9-15, 1946.

The purpose of this investigation, which was at the request of company officials, was to examine the core taken from D. D. Hole No. 13, which was in progress; to locate a site for Hole No. 14, which would penetrate the altered dolomite formation containing the lead, zinc and manganese minerals; and to search for a fossilized limestone bed reportedly found by I. Myre Hofstad of Petersburg below average tide level in the vicinity of the mouth of Hungerford Creek. This fossilized bed, as indicated by specimens, contains commercial amounts of lead and silver. Directly in front of the mouth of Hungerford Creek there are two islands, members of the Keku group. These islands, according to Buddington,* are made up of rocks, mainly limestones of Silurian age. They have an east-west strike, with low dips to the north, which is an unusual structure for this section. The location of the fossil bed at the mouth of Hungerford Creek, if the location is correct as reported, below medium low tide, would give it a position overlying the Silurian massive limestones and below greenstone lavas of either Devonian or Carboniferous age. A search was made during three periods of minus tides and the fossil bed was not found. The extensive gravel wash from Hungerford Creek may have covered this discovery. Since the strike of these formations continues in an east-west direction onto the mainland of Kuiu Island, the contact, which apparently follows along the bed of Hungerford Creek and is covered, could be drilled on the mainland of the island at the south end of the Keku group of claims. However, there appears to be some conflict as to existing prior claim rights between the Kuiu Zinc Mines, Inc., and Ted Hungerford of Petersburg in the section of the mainland of the island north of Hungerford Creek. Therefore no drilling was recommended in this section due to existing uncertainties.

The zinc ladder vein, as described by A. F. Buddington in U. S. G. S. Bull. 773, "Mineral Resources of Alaska," pp. 138-139, was examined to observe the geological association in regard to the zinc ore occurring on Claim No. 9 of the Kuiu Zinc Mines, Inc. The zinc in both discoveries occurs as the mineral sphalerite. The sphalerite, which is contained in the cross-fractures of a basaltic dike and due to its peculiar distribution called a ladder vein, is a very dark variety. The sphalerite that occurs on Claim No. 9 on Kuiu Island is a gray to light ruby color, and it is contained in an altered dolomitic bed. The basalt dike containing the zinc on the Keku Island is of either Mesozoic or Tertiary age, according to Buddington. (Note reference above). The formations containing

*U. S. G. S. Bull. 800.

this dike are a green agglomerate overlying a brown siliceous limestone of dolomite similar in appearance to the altered dolomite containing the zinc on Claim No. 9 on Kuiu Island. Buddington regards these beds on the island, due to their geographic position, as Carboniferous in age. The occurrence of sphalerite in both places in fractures is below the green overlying agglomerate. This indicates that the agglomerate may have been the source in both instances, and the fractures filled by solutions carrying zinc as secondary deposition. The presence of marcasite, small amounts of pyrite, traces of lead and flamboyant quartz suggests a secondary deposition.

While searching for the silver-lead ore near the mouth of Hungerford Creek, a limestone stratum containing some chert was noted, in which the surface was exceedingly rough and full of fine round holes. The weathered surface resembled the appearance of an ordinary sponge. Upon breaking into the formation a very dense white to gray limestone was noted. Between the dense interior and the rough weathered surface, the rock was perforated with numerous round holes approximately one-sixteenth of an inch in diameter. Many of the holes contained small red worms ranging from one-half inch to three-quarters of an inch in length. The worms show a corrugated exterior surface made up of parallel rings, which stand out as ridges circling the body. These worms appeared to have attacked this rock much in the same manner that teredoes attack wood in salt water. Of interest is how these soft fleshy worms can bore into this solid and dense limestone rock. Second as to whether they find some element, which they utilize as food from the limestone rock, and if so what is the element, or are they boring, simply utilizing the hole as a protective habitat, and obtaining nourishment from sea water. Rock-boring worms of the species *Sphaeroma* are known to bore into mud and soft rock as also are certain species of mollusca. Certain types have been known to bore into concrete by an abrasive action of corrugations on the shell and others by secreting a fluid which acts as a solvent on the rock. These soft worms apparently must secrete some fluid that acts as a solvent on the limestone, which is aided by the salt water and enlarges the holes and causes rapid weathering of the surface. Small pieces of chert contained in the limestone were undisturbed. The limestone is Silurian in age and crystalline in structure. The range of occurrence of the worm action is from low tide to a known depth of minus 3.5-foot tide and possibly lower. The location is the mouth of Hungerford Creek on the Keku side of the peninsula between Keku Straits and Saginaw Bay, Kuiu Island. One specimen is retained in the Juneau office showing the borings in fresh rock and the weathered outside surface, and a few dried remains of the worms.

Progress of the diamond drilling for Kuiu Zinc Mines, Inc. by W. Peterson has been slow due in part to lack of adequate help, and in part to delays in supplies and parts. Drilling began this year early in September on No. 13 hole, twelve holes having previously been drilled by Lynch Bros. of Seattle. The light diamond drill owned by Louis Dyrdaahl was found to be too light and inadequate below 150 feet in depth. The hoisting capacity is too small to pull rods below this depth. This month a larger drill, powered by 30-H. P. gas engine, was taken to the property and the hole had a depth of 212 feet on date of visit. A fault was encountered between 210 and 212 feet in depth and a cementing job had to be undertaken. (Note attached sketch for log of hole and position of fault). The rock encountered thus far in the hole appears to be mainly lava with limy phases and some pyrite mineralization between 65 and 92 feet. The lava below 92 feet to the fault at 210 feet is orbicular lava with some chert and jasper. A few inches of core obtained on the opposite wall of the fault, before the hole sloughed, shows chert with some limestone. This indicates that there has been some displacement. Since chert is abundant in the limestone above the creek, this same stratum may be encountered here, although further drilling will reveal its nature. Samples of the core were taken in the mineralized section, as indicated on the hole projection sketch.

Another hole location was spotted at a point 20 feet south of Station No. 9, as shown on sketch of workings. This location is 300 feet northwest of the adit location and 200 feet northwest of the last ore outcrop along the creek bank. This location is on the continuation of the plunge and strike of the fold to the northwest, which contains the altered dolomitic stratum in which the zinc and lead occur at discovery outcrop.

Observations on some of the northwest islands of the Keku Group reveal stakings by Fred Bahovec for oil and gas. The peninsula between Keku Straits and Saginaw Bay was also reported to have been staked by the same party for oil and gas.

JOHN H. BANKS LABORATORIES
INCORPORATED
ANALYTICAL AND RESEARCH LABORATORIES
28 JOHN STREET, NEW YORK

REPORT OF ANALYSIS

DEPT. OF ALASKA, DEPARTMENT OF
JUNEAU, ALASKA.

No. 88744

June 24, 1941

*Kuiu Zinc Claims
Outcrop Face*

In the sample of ----- Ores -----

Marked ----- as below -----

Submitted for assay we find:

Mark		Silver, oz. per ton		Lead (Pb)		Zinc (Zn)		Manganese (Mn)
A-#1	-	0.56 oz.	-	0.14%	-	2.15%	-	15.91%
A-#2	-	0.24 oz.	-	0.04%	-	1.05%	-	12.04%
B-#1	-	1.34 oz.	-	0.58%	-	2.35%	-	9.28%
B-#2	-	0.38 oz.	-	0.11%	-	1.89%	-	9.18%
C-#1	-	2.79 oz.	-	1.67%	-	5.24%	-	9.05%
D-#1	-	3.54 oz.	-	2.90%	-	7.45%	-	9.28%
D-#2	-	3.85 oz.	-	2.98%	-	8.62%	-	7.51%
E-#1	-	2.08 oz.	-	1.22%	-	6.42%	-	14.29%
E-#2	-	2.25 oz.	-	1.29%	-	6.81%	-	14.41%
E-#3	-	2.08 oz.	-	1.04%	-	6.29%	-	14.49%
F-#1	-	3.51 oz.	-	2.93%	-	8.08%	-	16.15%
F-#2	-	1.35 oz.	-	2.23%	-	5.12%	-	16.34%
F-#3	-	3.30 oz.	-	3.10%	-	5.45%	-	16.78%
G-#1	-	0.50 oz.	-	0.16%	-	2.51%	-	16.59%
G-#2	-	2.06 oz.	-	1.65%	-	5.78%	-	7.05%
P-#1	-	0.54 oz.	-	0.48%	-	0.32%	-	8.25%
R-#1	-	1.52 oz.	-	2.56%	-	3.51%	-	16.68%
S-#1	-	0.56 oz.	-	0.72%	-	0.28%	-	16.48%
Picked Specimen Waterfall-		0.84 oz.	-	1.08%	-	0.59%	-	15.06%

To John C. Hawkes
Juneau
Alaska

J. H. Banks

JOHN H. BANKS LABORATORIES
INCORPORATED
ANALYTICAL AND RESEARCH LABORATORIES
26 JOHN STREET, NEW YORK

REPORT OF ANALYSIS

Kuna Zinc Claims
Outcrop face.

No. 66745

June 25, 1941

In the sample of ----- Ores -----

Marked ----- as below -----

Submitted for assay we find:

<u>Mark</u>		<u>Zinc (Zn)</u>		<u>Manganese (Mn)</u>
H-#1	-	5.39%	-	4.25%
H-#2	-	5.45%	-	4.18%
I-#1	-	5.50%	-	3.50%
I-#2	-	5.39%	-	3.59%
J-#1	-	1.46%	-	11.13%
J-#2	-	0.78%	-	3.41%
K-#1	-	0.75%	-	3.36%
K-#2	-	3.24%	-	10.08%
L-#1	-	2.10%	-	9.22%
M-#1	-	3.18%	-	10.16%
N-#1	-	4.29%	-	8.27%
N-#2	-	2.10%	-	10.52%
O-#1	-	1.16%	-	10.08%
O-#2	-	3.52%	-	9.02%
350°	-	1.06%	-	2.51%
800°	-	0.56%	-	16.36%

To John C. Hawkes
Juneau
Alaska

JHB Lt 2

LOG of DIAMOND DRILL HOLE
DREDAHL NO. 1
KUIU ZINC MINES, INC.
KUIU ISLAND, ALASKA

*Copy to
Dredahl -
7/27/47
By J. H. R.*

Location: Keku Claim No. 9
194°2" S 46° W from adit in creek

Date : August to November 1946

Elevation: 148' - Direction S 58° W. Dip of hole 51°
Depth : 210'

<u>From</u>	<u>To</u>	<u>Amount of Core</u>	<u>Description</u>
0	26.5	None	Gravel and clay seams
26.5'	33'	3'	Light green soft calcareous material containing rounded jasper nodules.
33	59	14.5'	Green agglomerate pyrite seams of jasper slightly oxidized.
59	77'.2"	6'	Agglomerate to dolomitic. Small amount of galena shows at 65'.
77'.2"	82'	4'	Oolitic limestone with jasper cores. Brownish color.
82'	87'	4½'	Same as above with larger oolites. Pea size. Brown color.
87'	92'	4'	Same as above, change brown to light green.
92'	97'	3'	Oolitic with greater amount of green.
97'	102'	2'	Fine gravel green. Lava.
102'	104'	1'	Limestone and green. Lava mixed.
104'	108'	2½'	Green lava.
108'	118'	3'	Green lava & limestone mixed.
118'	121	3'	Thinly banded lava. Jasper seams.
121	125'	3'2"	Thinly banded lava.
125'	127'	20"	Brownish gray lava.
127'	134	6'6"	Same.
134	157	17'9"	Same

LOG DIAMOND DRILL HOLE
DEMDAHL No. 1 (Continued)

<u>From</u>	<u>To</u>	<u>Amount of Core</u>	<u>Description</u>
157	208	30'	Brownish gray lava. 1' chert at fault.
	208	Fault and hole abandoned	

RESULTS of SAMPLES TAKEN FROM CORE

<u>Sample No.</u>	<u>Depth in Hole</u>		<u>Description</u>	<u>Percentages</u>		
	<u>From</u>	<u>To</u>		<u>Pb</u>	<u>Zn.</u>	<u>Mn</u>
1241	65'	77'	Dolomitic Ls-Gray	N11	0.2	0.27
1242	77'	82'	Oolitic Ls-Gray	N11	N11	0.23
1243	82'	87'	Oolitic Ls.	N11	N11	0.23
1244	92	97	Oolitic Ls with green color.	N11	0.4	0.20

(Handwritten signature)

LOG of DIAMOND DRILL HOLE
DYRDAHL NO. 2
KUIU ZINC MINES, INC.
Kuiu Island, Alaska

Location: Kaku Claim No. 9
90' SW from Dyrdahl Hole No. 1

Date : January to July 1947

Elevation: Direction of Hole SW. Dip of hole 45°

Total depth: 417'

<u>From</u>	<u>To</u>	<u>Amount of Core</u>	<u>Description</u>
0	47'	No core	Unconsolidated material.
47'	53'	35½"	Cherty lava with veinlets of calcite- occasional crystal of galena showing. Brown to light green color.
53'	58'	42"	Brown cherty lava. Pyrite.
58'	62'	38"	Brown cherty lava with jasper veinlets.
62	71'6"	31"	Brown spotted lava -64' change to green lava. 70' change back to brown lava.
71'6"	78'5"	53"	Light brown lava - agate and quartz. Green & brown speckled
78'5"	85'5"	51"	Light greenish brown mottled lava.
85'5"	91'9"	49"	Mottled green and brown lava.
91'9"	95'	23"	Green brown lava - mixed and speckled.
95'	96'	2"	Reddish brown jasper
96	99'8"	22"	Light grayish brown lava.
99'3"	101'3"	16"	Brownish gray
101'3"	108'9"	66"	"Slightly" banded.
108'9"	111'4"	18"	Brownish gray lava - green seams.
111'4"	115'9"	35"	Light brown lava galena showing at 113'.
115'9"	119'	26"	Greenish brown speckled lava.
119'	122'6"	37"	Bluish brown banded lava.
122'6"	127'6"	48"	same.

Log of Diamond Dr 1 Hole - Dyrdaahl No. 2 (Continued)

<u>From</u>	<u>To</u>	<u>Amount of Core</u>	<u>Description</u>
127'	132'	32"	Bluish brown lava - iron oxide and jasper.
132'	135'	34½"	Light brown lava - agatized speckled.
135'	137'3"	23½"	Greenish brown dark banded.
137'3"	137'8"	8"	Grayish with jasper veinlets.
137'8"	138'10"	16"	Pink soft clay material.
138'10"	140'6"	17"	Pink soft clay speckled banded lava.
140'6"	144'10"	40"	Purplish brown lava calcite veinlets.
144'10"	146'	14"	Mixed speckled gray to gray with calcite.
146'	148'10"	7½"	Bluish gray lava.
148'10"	150'7"	17"	Purplish gray speckled lava.
150'7"	152'10"	31½"	Banded grayish brown lava.
152'10"	156'7"	37"	Brownish gray green spots.
156'7"	161'8"	31"	Speckled grayish brown lava.
161'8"	174'8"	131"	Light brown speckled lava.
174'8"	183'	72"	Light brownish gray lava-green bands.
183'	190'10"	76"	Light brown speckled lava.
190'10"	203'9"	119"	Light brown lava.
203'9"	210'	76"	Purplish brown to greenish brown lava.
210'	218'9"	121"	Light brown lava.
218'9"	230'	71"	Greenish brown lava.
230'	232'4"	19"	Dark gray porphyritic lava.
232'4"	240'	71"	Dark gray to grayish blue lava.
240'	246'	80"	Agglomerate cherty - brownish gray.
246'	249'6"	33"	Brown speckled lava.
249'6"	258'4"	111"	Mottled greenish brown lava.
258'4"	282'	255"	Green to brown agglomerate

Log of Diamond Drill Hole - Dyrdaahl No. 2 (Continued)

<u>From</u>	<u>To</u>	<u>Amount of Core</u>	<u>Description</u>
282'	301'7"	200"	Purplish brown agglomerate
301'7"	304'4"	36	Agglomerate shows small amount of galena.
304'4"	318'2"	146"	Green agglomerate
318'2"	322'	31"	Galena showing in brown calcareous lava.
322'	326'8"	49"	Brownish green agglomerate - fine grained.
326'8"	335'7"	87"	Mixed colored agglomerate.
335'7"	354'9"	168"	Greenish brown agglomerate.
354'9"	379'11"	249"	Green to brown agglomerate.
379'11"	389'3"	112"	Coarse green agglomerate
389'3"	391'	16"	Green slightly banded lava showing some pyrite.
391'	399'	102"	Green lava changing to brown at 396' Veinlets of red and white.
399'	401'3	31"	Dark gray fine grained lava.
401'3"	406'8"	65"	Narrow band of green and light colored lava.
406'8"	417	50	Dark gray massive lava.

Samples taken for check only.
Cores to be assayed by Kuiu Zinc Co. Inc.

Sample No.

		<u>Au.</u>	<u>Ag.</u>	<u>Pb</u>	<u>Zinc</u>
1320	Green agglomerate 300-305 depth	0.04	TR	0.37%	4.7%
1321	Dark gray massive lava 406'8" & 417	Nil	0.30	0.57%	4.2%

Territory of Alaska
DEPARTMENT OF MINES

CERTIFICATE OF ONE ASSAY
Ketchikan, Alaska

12/5/46

Specimen of Ore deposited at this office by

for determination, by assay, of Gold and Silver contents, with percentage of base
metals.

Assay No.	Description	PERCENTAGE		
		Mn	Pb	Zn
8372	1241 (D.C.R. No.)	0.27	Nil	0.2
8373	1242	0.23	Nil	Nil
8374	1243	0.23	Nil	Nil
8375	1244	0.20	Nil	0.4

TERMINAL OF ALASKA, DEPARTMENT OF MINES,
NINEAS, ALASKA

ASSAY RESULTS

OF

SAMPLES TAKEN IN Keku TUNNEL, Keku CLAIM NO. 9 AND SERIES
OF CHANNEL SAMPLES ACROSS FACE OF ZINC-MANGANESE
OUTCROP.

KUIU ISLAND

ALASKA

May 6 1941

Sample No.	Location	Description	Width	Percentage		
				Mn.	Zn.	Pb.
776	Face of Keku Tunnel	Grayish dolomite across flat lying beds. Shows fine galena	5' 3"	1.5	0.4	1.7
777	Same. 10' back from face. NE wall	Same	5' 6"	2.2	1.1	0.8
778	Same. 20' back from face. NE wall	Same; slightly oxidized to brownish color.	6'	2.0	0.8	0.2
779	Same. 30' back from face. NE wall	Same; brown oxides	5' 3"	2.7	Nil	Trace
780	Same. 40' back from face. NE wall	Same; brown and black oxides	7' 6"	4.5	0.2	Nil
781	Same. 50' back from face. NE wall	Same; brown and black oxides	5' 6"	6.6	0.2	Nil

Sample No.	Location	Description	Width	Percentage		
				Mn.	Zn.	Pb.
782	Same. Portal; NE side	Same; brown and black oxides	6'	7.9	0.2	Nil
783	Face of outcrop 25' above tunnel Top to 5' down from conglomerate contact	Dolomitic limestone with chert showing brown and black oxides.	5'	2.4	0.2	Nil
784	Same. 5' to 10' down from contact	Same	5'	3.3	0.25	Nil
785	Same. 10' to 15' down from contact	Same	5'	13.8	0.45	Nil
786	Same. 15' to 20' down from contact	Same	5'	6.0	0.3	Nil
787	Same. 20' to 25' down from contact; 10' west of tunnel	Same; show fine galena.	5'	3.5	0.25	1.3

TERRITORY OF ALASKA, DEPARTMENT OF MINES
 JUNEAU, ALASKA.

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A SUGGESTION FOR FURTHER EXPLORATORY WORK
ON THE ZINC-LEAD SHOWING
IN THE
KEKU GROUP OF CLAIMS,
KUIU ISLAND, ALASKA.

This geological sketch represents a surface outcrop of a low grade zinc-lead replacement ore confined within a stratum of cherty dolomitic limestone, believed to be of Lower Permian Age and located on Kuiu Island, Alaska. Very little is known regarding the mineralization found in this age of sediments in Alaska. Further exploratory work is recommended in order to determine the extent and value of this mineralization.

This sketch was drawn shortly after the discovery of this outcrop with no development work done. This kind of ore deposition is of the replacement type and subject to change in short distances. This type of dolomitic limestone is a favorable receiving rock for this type of mineralization, and further exploratory work at least to the extent of uncovering its extremities on the surface is warranted.

As a suggestion for further work in an effort to gain more information regarding this occurrence and to establish its value in contents, it is suggested that the dolomitic limestone stratum be traced on the surface by trenching or stripping, as the case may be, at regular short intervals in the two directions marked on the sketch by red arrows along the strike of the stratum. Trenching and stripping should be to the extent to reveal both the length and width of the ore and to allow the taking of samples to determine the contents.

10-7-46 Copy to Sanford
for US Bureau.
msc

SUPPLEMENTARY REPORT TO PRELIMINARY REPORT OF
KEKU GROUP OF CLAIMS, KUTU ISLAND, ALASKA
July 10, 1938

The annual assessment work has been done on the Keku group of claims, located along the northeast shore of Kutu Island, opposite Keku Islands, according to a notice posted on the beach at the camp site on Keku claim No. 9. This group consists of 32 lode claims, and all are being held. Assessment work has been concentrated on Keku claims Nos. 8 and 9. The work has consisted of blasting the face off the zinc outcrop showing along the south side of the creek, approximately 600 feet inland from the beach. This rock cut measures 30x40 feet in length and width and exposes the zinc ore across a width of 30 feet. This ore is exposed, measured along the creek on the dip, for a distance of 200 feet, with two small rock cuts on the lower portion of this outcrop. Approximately 150 to 200 tons of ore and rock have been removed from these cuts and the ore is piled in the creek. A trail has been constructed from the camp site on the beach to the former workings and thence 700 feet south to No. 2 showing on a parallel creek. Along this trail two pits were sunk in an effort to pick up the ore, but no ore is exposed in them.

The same dolomitic limestone strata crosses No. 2 creek at No. 2 showing, and is exposed over a width of 30 feet. Two rock cuts into this band shows some sphalerite and galena.

Sample 449 consists of a composite sample of several pieces taken from these cuts. Returns of 0.35 per cent zinc were obtained.

Sample 447 consists of a channel sample taken across 5 feet of exposure 50 feet above the large cut, No. 1 showing. Returns in zinc of 0.18 per cent were received.

Sample 448 was taken above No. 447 on the same exposure across 5 feet. Returns of 0.29 per cent zinc were received.

Sample 450 consisted of picked pieces taken from the dump of 150-200 tons. Returns of 2.75 per cent zinc were obtained.

The lead content of this ore appears less than the zinc. (Refer to former lead assays). Small amounts of gold and silver are also found in this ore.

NOTED

APR 11 1939

B. D. STEWART
Commissioner of Mines

Mr. Hawkes - 2.

Re Keku Group.

The following are descriptions of samples taken and assay results obtained therefrom:

Sample No. 447:

Taken from upper showing on south side of creek on Keku No. 9 claim at a point 50 feet west of large showing. Width of sample 5 feet.

Zinc content 0.18 %.

Sample No. 448:

Taken immediately above Sample No. 447. Width of sample, 5 feet.

Zinc content 0.29 %

Sample No. 449:

Grab sample of pieces taken from cuts in creek next south of main showing.

Zinc content:..... 0.35 %

Sample No. 450:

Grab sample of pieces taken from ore dump at main showing.

Zinc content:..... 2.75 %.

Very truly yours,

B. D. Stewart,
Commissioner of Mines

June 1941
BUREAU OF ALASKA, DEPARTMENT OF MINES,
JUNEAU, ALASKA.

Assay chart of representative
channel samples from Kuiu Island
Alaska.

Note: In making reference to the footwall in connection with the following samples, this is used only to denote the lowest part of the exposure as in no place has the actual footwall been reached.

- A no. 1- South 6 feet from tunnel, footwall 10 feet wide.
A no. 2- 10 to 20 feet.
No samples taken from 20 to 30 feet due to leached out condition of exposure.
- B no. 1- 21 feet south from tunnel, footwall 12 feet wide.
B no. 2- 12 to 24 feet.
- C no. 1- 30 feet south from tunnel, footwall 18 feet wide.
- D no. 1- 46 feet south from tunnel, footwall 10 feet wide.
D no. 2- 10 to 20 feet.
- E no. 1- 56 feet south from tunnel, footwall 6 feet wide.
E no. 2- 6 to 12 feet.
E no. 3- 12 to 18 feet.
- F no. 1- 66 feet south from tunnel, footwall 6 feet wide.
F no. 2- 6 to 12 feet.
F no. 3- 12 to 20 feet.
- G no. 1- 76 feet south from tunnel, footwall 9 feet wide.
G no. 2- 9 to 12 feet.
- H no. 1- 86 feet south from tunnel, footwall 8 to 16 feet wide. (zn-mn only
h no. 2- footwall 8 feet wide. (heavy capping) (heavy capping)
- I no. 1- 93½ feet south from tunnel, footwall 8 feet wide, (zn-mn only,
I no. 2- 8 to 16 feet wide, (zn-mn only heavy capping) heavy capping
I no. 3- Piece of capping only. (mn only)
- J no. 1- 101 feet south from tunnel, footwall 4 to 8 feet wide, (zn-mn only
J no. 2- footwall 4 feet wide (rest of cut covered with heavy capping)
- K no. 1- 107 feet south from tunnel, footwall 4 feet wide. (zn-mn only)
K no. 2- 4 to 9 feet wide. (zn-mn only)
- L no. 1- 113 feet south from tunnel, footwall 4 feet wide (zn-mn only)
- M no. 1- 10 feet north from tunnel on face, footwall 6 feet wide. (zn-mn)
- N no. 1- 26 feet north from tunnel, footwall 7½ feet to 15 feet wide. (zn-mn)
N no. 2- footwall 7½ feet wide. (zn-mn only)
- Hand picked specimen, waterfall 800 feet east from tunnel, Creek A.
Grab sample from waterfall, west side, (zn-mn only)
Grab sample, 350 north from waterfall, Creek A. (zn-mn only)
Special-- Wad manganese, 200 feet north from tunnel. (mn only)

O no. 1- 41 feet north from tunnel, footwall 6 feet wide. (zn-mn only)
O no. 2- 6 to 11 feet wide. (zn-mn only)

P no. 1- 300 feet south from tunnel, small exposure from small open-cut.

R no. 1- 175 feet north from tunnel, same side, small open-cut, small exposure

S no. 1- 175 feet north from tunnel, opposite side of creek from R no. 1,
small exposure, small open-cut.