

TERRITORY OF ALASKA
DEPARTMENT OF MINES
JUNEAU, ALASKA

Aug. 2, 1940

Nome (C)

MR 192-5

Mr. B. D. Stewart
Territorial Department of Mines
Juneau, Alaska

Dear Mr. Stewart,

To date Shallit and I have covered most of the mining districts more or less generally and visiting most of the operations. Since we are visiting a few more places together, and have considerable more to learn, I am not taking the time to write a summary on districts covered, but will upon my return to Juneau. Am submitting this letter which I hope will give you a picture of the ground covered and some of the problems encountered. The areas covered are in order of itinerary, the Artic slope north of the Kougarok River, The upper Kougarok, the Krugruk drainage, Innachuk, Lower Kougarok, and Lower Solomon.

Reindeer Creek Ad

The origin of the placer gold found in the upper Kougarok and including the adjacent creeks on the Artic Slope is definitely related to the Hot Springs Granite and surrounding mineralized schists. This granite is classified as a soda granite with hot soda springs still in existence. The extent of erosion within the area has been considerable and the gold has migrated a considerable distance from its source, mainly along the prevailing north and south structures. The largest and most important structure is the limestone-schist contact or fault structure now occupied by the Kougarok River below Macklin Creek. The direct field evidence, which indicates the migration of the gold and bears strongly as to its origin, is the presence of considerable soda granite sand found in the lower gravels of upper Macklin Creek, Schlitz and Reindeer Creeks, whose heads cut across this structure. The later two creeks flow into the Artic drainage, and mining is about to begin by Bodis. The main migration of gold along the old structure enters the Kougarok River in the vicinity of Macklin Creek. As a result of intersection of north

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Commissioner of Mines

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and south faults with east and west faults in the vicinities Macklin Creek, Taylor and the mouth of Henry Creek, large S bends were formed in the course of the Kongrook River. The effects produced among which was slight movement east² west on the east²west faults, four known levels of placer gold deposition has occurred. The lowest level is represented by a frozen old channel on bedrock a few feet below the present river channel. The next is the present river level on which most of the past mining has been done. Above the present creek level there are known two higher bench levels on which there has been some recent mining. The amount of ground mined compares very small in comparison to that remaining. Due to the gradual movement of loose mantle rock and material on the sloping banks toward the present river bed, these benches are obscure and have been covered, until the present topography over the benches conforms with the gradual slopes above to the creek bank. The bedrock on the benches is worn comparatively flat and shows the downstream grade to the south. All four levels appear to contain economic gold values, based on the mining already done.

This situation is not recognized by the present operators, and it was suggested to Shallit that if a detail map could be made extending from possibly Fox Bar, which appears to be the southern limit of pay, north to Macklin Creek, showing topography and contours and the four levels of pay outlined, it would be of considerable help to the operators. Naturally only segments of these four levels remain, due to one channel cutting parts of the other, except the lower, and a couple of spots in this has been mined. Some study is necessary, however in the vicinity of the S bends all four levels appear to be intact with the exception of the center crossing. This intersection of channel crossings accounts for the erratic pay found in the early mining in or along the present creek bed, and accounts for the high grade pay areas. The old dredging made good money in the high pay areas and failed in the inbetween stretches. This condition is only one of the many problems encountered, and due to the present activity in the district, the most important. Shallit is undertaking this with the aid of his wife within a few days unless otherwise instructed.

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A gravel road is under construction from Bunker Hill to Taylor which is completed a distance of eighteen miles. This built section is under use by the mining companies, and the freight rates to the Kougarok have been considerably reduced. The continuation of this road from Taylor to Hot Springs is herewith recommended for future development of placer mining on the Arctic Slope. In fact a detail map of topography with geology extending from Macklin Creek north to Serpentine River would be a great aid in locating buried placer deposits.

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KX 44-97

A small amount of cassiterite was noted in the Walsh Bros. operation on Humbolt creek. The amount was very small and due to this fact a search for lode possibilities was not attempted.

The Krugruk River and its tributaries offers one of the best potential placer areas on Seward Peninsula. This opinion is based upon a trip up the river and the occurrence of a large monzonite intrusive on the left limit above Mina Creek, and the existence of three small granitic intrusives at the heads of the upper right limit tributaries. Aerial photographing this area with detail topography and geology would aid considerably in developing. The lower portion of the Krugruk River was before a slight uplift a downward valley.

KX 44-135

Considerable drilling was done last year by the Krugruk Mines Inc., good returns were reported. The mining operation beginning this year consists of operating a hydraulic lift, using bulldozer and hydraulic to move material to lift.

Candle AS

KX 45-16

Candle Creek was not visited. John Havenstrite reports that he has all the ground leased on Candle from Blank Creek up to the head. Further stated that he has spent over seven thousand dollars already this year, and only has one hole drilled. The Candle creek company were reported operating full capacity, and they have an option, are engaged in drilling on Bear Creek on the Buceland drainage, southeast of Candle.

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A trip was made up the Inmichuk River and the placer operations were visited including the property of the Inmichuk Sub-Lava co. Future potential ground is limited and mainly confined to one old bench channel near the present creek bed. The geologic history appears to be such that the gold concentration is limited mainly to the present valley floor.

KX 44-149

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The gravel deposits and some of the placer operations were visited on the Lower Kougarok river in the vicinity of Coffee Dome. The extensive gravel deposits found at the mouth of Coffee and Dahl Creeks, were deposited as outwash plain the direct result of glaciation. The upper sections of the extensive deposits are the result of a shallow lake which formed during glacial times, and the lake has since drained via a new channel of the Kuzitrin River in the vicinity of Bunker Hill. The gravel deposits have no relation to the gold placer deposits found on Coffee and Dahl Creeks, except to act as a cover of the already deposited gold gravels near the mouths forming mixed outwash and creek gravels containing only low values. The placer gold deposits of Coffee and Dahl Creeks are mainly residual and alluvial deposits and small creek concentrations, all covered with considerable black muck of lake origin. The gold in the deposits originated in the immediate vicinity from irregular distributed localities of hydro-thermal action, in the graphitic slates and tuffs. Evidence of this type deposition was noted in the bedrock at the Hoven operation on Wonder Girl Gulch on upper Coffee Creek. Here under 15 to 20 feet of black muck, angular broken bedrock is being mined. Gravel is lacking in the gulch. Cinnabar with considerable yellow amorphous powder is found in the fractures of the bedrock and with which the gold is associated. Several of these occurrences in the vicinity have produced the gold which formed the placer deposits. Due to the highly disseminated nature of these deposits, and the apparent lack of structure, it is very improbable that mineable lode deposits were formed.

KX 44-83

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KX 53-155

*Solomon
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The Silvers Lode Property and the Big Hurrah Mine was visited along with several other minor showings in the vicinity. The gold precipitation in these deposits is associated with hydro-thermal action at low temperature, and mainly limited to the graphitic Hurrah Slate.

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 Solomon
 The greatest thickness of the Hurrah slate was noted in the vicinity of the Big Hurrah Mine, while at the Silver's property the thickness is less than a hundred feet. Step block faulting and the present eroded surface accounts for this difference. No definite structures have as yet been proven, however the veins appear to be fault fissures associated with folding, some of which represent the channels used by the hydro-thermal solutions. Thus if the stratigraphic position of the Hurrah slate as given by P. S. Smith in U. S. G. S. Bull. 483, page 62 is correct, and such seems to appear the condition, the Hurrah slate exists at the present time as scattered remnants represented by the scattered black hills in the vicinity. The extensive area mapped as Hurrah Slate on the geologic map accompanying the above report, is in reality only a very limited amount. The change of mineralization of the present veins from the Hurrah Slate in depth to the limestone and the underlying schists is sufficiently great for the deposits to change from a profitable deposit to an unprofitable one. Then with the veins in the schist it is a problem of finding one of these deposits in a competent bed. Whether or not this type of bed occurs in the various schists is unknown. Even with such a condition present, the highly folded nature of the schists together with the amount of folding, further limits the lode possibilities.

I am not at the present time, taking the time to write a complete summary report. However for future work the Solomon River drainage warrants detail mapping and the geology done more in detail from a placer point of view. The present river has made several new channels through the various limestone reefs, and the present drainage is considerable different from the past. There has been considerable damming action, and there appears to be several scattered gravel deposits unassociated with the present creek deposits.

Shallit and I are leaving tomorrow for a trip up the road and will visit the Mc Duffy Lode and others enroute. Thence on Aug. 7 or 8 John Cross of Deering has asked me to fly with him up to a lake high up in the Bendeleben Range at the head of the Koyuk River. Thence will fly to Russian Mission on the Yukon. The trader there has asked me to look over his samples, and some stibnite outcrops. Will then

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proceed to Flat. There is still a chance that I may have to go to Ruby, as Purkeypile has sent another bunch of samples in which he claims tin. Expect to hear from Glover regarding. I should be in Flat about Aug. 15 and back to Anchorage by Sept. 1. Please look up my itinerary for last Sept or Oct., and forward to me the date that I visited The Old Prospector prospect on Craigie Creek, Willow Creek District. This can be forwarded to Anchorage and marked Hold, Care Parson Hotel.

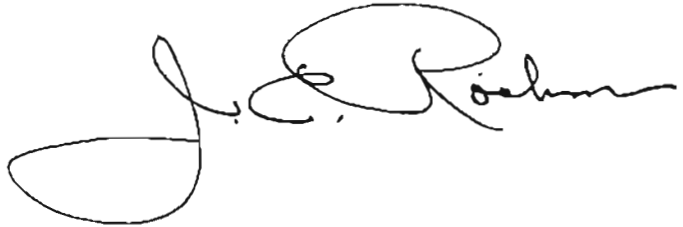
Harry has just finished courses at the Lee Brothers Camp at Solomon, and is at present in town. He has the Ungalik Dredge lined up, and I think Castleton and Keenans Camp, and I have suggested the Krugruk Mines and Candle Creek.

Our mutual friend Mr Silvers has again resumed his crutches since returning to town and while at the property they were forgotten. His gold is still very much in tact.

Mr. Walsh has been very helpful and regrets not seeing more of you.

Hope this finds both you and Mrs. Stewart well and my best regards to Mrs. Botsford and R. L.

Yours very sincerely,

A handwritten signature in cursive script, appearing to read "J. C. Roehm". The signature is written in dark ink on a white background.