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CHICAGO CREEK COAL INVESTIGATION: SUMMARY OF FIELD TRIP,  
SEPTEMBER 8-13, 1980

By

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The Chicago Creek coal project calls for an evaluation of the coal resources at the old abandoned Chicago Creek Coal Mine on the Seward Peninsula and an evaluation of the feasibility of producing sufficient quantities of coal to replace or supplement fuel oil being used in the villages in northwestern Alaska. The lateness of receiving RSA funds for the investigation has put us in a difficult position, because the summer was almost over before any money was available for travel. This locality has been selected for a coal resource study as a result of early reports of a coal bed as much as 88 feet in thickness and a record of substantial production from an underground mine. A second mine, the Wallin Coal Mine, located about four miles south of the Chicago Creek Mine also produced coal. The Chicago Creek Mine apparently is on Native selected land, and the Wallin Mine is reported to belong to Rinehart Berg. Both mines reached a depth of 200 feet and had considerable underground workings.

In an effort to map the geology of the coal-bearing Tertiary beds we visited the area from September 8 through the 13th. The Trans-Alaska helicopter under contract to DGGs was utilized during this time. Our findings are summarized in the following notes and on the attached map.

The greatest problem facing this project is the lack of sufficient exposures to make any kind of a judgement of the coal reserves. The surface is almost entirely tundra-covered in this region but exposures of the bedrock are present along the Kugruk River and some of the tributaries. A shovel is indispensable for field work. The bedrock is predominantly Precambrian York Slate (Sainsbury, 1974). The coal was discovered by gold prospectors in 1902. The Chicago Creek mine was operated from 1908 through 1911 and may have produced from 60,000 to 100,000 tons. The Wallin mine continued operating on a very limited scale into the 1940's, but both tunnels are completely caved and the sites are overgrown. Some coal can be seen over a distance of about 100 feet along the stream bank at the Chicago Creek mine, though the exposure is so poor that the attitude and thickness of the bed cannot be determined until trenching is done. Cleland Conwell and P.D. Rao estimated the thickness to be about 3 feet when they made a one-day visit to the property in August and collected a sample. No coal is exposed at the Wallin mine, but the Tertiary beds crop out in a bluff at the old tunnel site.

When Conwell and Rao visited the area they arranged for Virgil Vial who is operating a placer mine on the Kugruk River just one mile from the Chicago Creek coal mine, to make a small cut with his bulldozer so they could get a sample of the coal. They also discussed the possibility of contracting Vial to do some trenching to aid in determining the attitude and thickness of the coal bed. Vial said he is interested. This would be the most efficient arrangement because Vial and his equipment are already there, and the expense of getting another contractor to bring equipment in to the area would be high. Vial has a backhoe which can dig to a depth of 20 feet and a small bulldozer. Also, Vial has been cooperative by allowing us to use the landing strip at his mine for work in the area.

We are presently waiting for word from Juneau on a request for a bid waiver so that we can hire the trenching before the miners leave the area this fall. It is important to the project that this work be done as soon as possible so that we can decide what additional work (drilling) will be necessary to make an evaluation of the deposit.

A listing of some of our findings follows:

1. The Tertiary coal-bearing unit is very restricted in aerial extent in the Kugruk River area and considerably more restricted than shown on the geologic maps by Sainsbury and (1974) and Hudson (1977). The largest patch of Tertiary shown on Sainsbury's map, south of Chicago Creek, does not seem to be present. The two faults bounding the Kugruk River valley and Tertiary beds shown on both maps could not be verified, though evidence of faulting in the area is common.
2. The extent of the Tertiary coal-bearing unit cannot be determined by ground observations or photogeology. Drilling and trenching will be required to make an evaluation of the coal resources. Shallow reflection seismic surveys may be useful in determining the extent and thickness of the coal-bearing section.
3. The only reported evidence of the projection of the Chicago Creek coal bed for any distance is that drilling during 1908, encountered coal at 69 feet, 1/2 mile N. 12° W. from the mine (Henshaw, 1908). Early miners speculated that the coal was a pocket in the eroded older bedrock. The attitude of the coal bed which dips from 45° to 70° west, restricts the aerial extent. A map of the underground workings is not available.
4. Other localities visited in the area where coal was reported: We visited with people in Candle and Deering to learn what we could about the presence of coal in that area. Two natives of Deering, Alfred Karman and Mr. Barr, had both obtained coal from the Wallin mine before it was closed on a self-service basis at \$.50 a bag. They could tell us little about the thickness or extent of the coal, but they had the idea that the coal from the Wallin mine was of better quality than that from the Chicago Creek mine.

Local people told us that coal had been collected at the bluff on the south of Elephant Point, northeast of Candle. We inspected the area and found a 3-inch seam interbedded with clay near the base of the bluff. The coal is flat lying and may be traced for about 200 feet as indicated by rubble.

A native of Candle said that coal was present on the Kiwalik River, 8 to 10 miles upstream from Candle. We flew to this locality but could not locate any coal outcrops from the air.

A long-time placer miner in the Inmachuk River district, Jack Hoogendorn, told us that he had exposed a coal bed between 2 and 4 feet thick when trenching on a hillside on Perry Creek, a tributary of the Inmachuk, about 20 years ago. Hoogendorn accompanied us to the site, but due to slumping and overgrowth the coal could not be located.

A report by Moffit (1905) states that coal had been found on French Creek, a tributary at the head of the Kugruk River drainage, which is 25 to 30 miles south of Chicago Creek. This area was not visited by us because the exact location was not given.

The person who might be able to provide the most information on the Chicago Creek and Wallin mines is said to be Dave Escholt of Deering; but at present he is living in Anchorage.

5. Miscellaneous mining activities visited.

- a) Alaska Gold dredge No. 5. We had a conducted tour of this operating dredge at Nome.
- b) Virgil Vial and six partners working placer ground leased from Riny Berg on the Kugruk River.
- c) G.E.M. Company has a 16-man crew at Utica Camp on the Inmachuk River; Victor Lovejoy camp manager; Mardy Jensen of California - owner.
- d) Allen Jensen of California has two washing plants and 16 men working tailings at Candle; ground leased from R. Berg.
- e) R. Berg and Thorley Whittleston are working on the Kiwalik River and are preparing an area on the Kugruk River for mining. They have a portable drill rig on the Kugruk for testing the ground.
- f) Jack Hoogendorn is working on the Inmachuk.
- g) Bud Meyers reportedly had 4 men working on the Mud Creek near Candle.
- h) Visited the lead-silver lode on Independence Creek at the head of the Kugruk River where Placid Oil has a lease from R. Berg. There is an adit and equipment at the site, but no one was present at the time of our visit.
- i) Visited Houston Oil and Minerals exploration camp on the east flank of the Darby Mountains. They had 15 men in the camp and were drilling and conducting geological investigations, primarily for uranium. Jim Adler in Anchorage is in charge of Alaskan operations.

Recommendations for the Chicago Creek project:

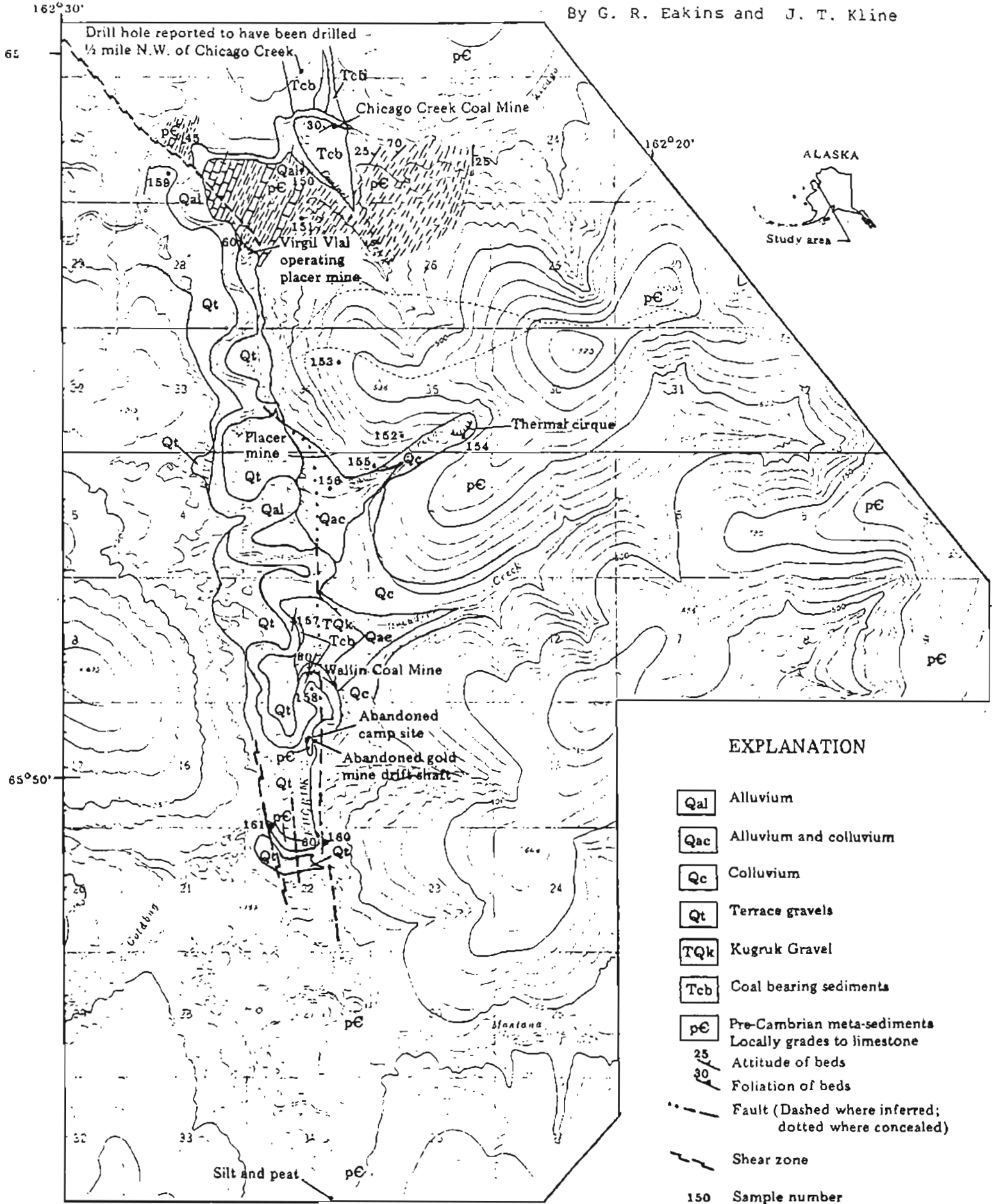
1. Hire Virgil Vial's crew to dig east-west trenches above the old Chicago Creek coal mine on the south side of Chicago Creek. Trenching could begin immediately above the coal bed from the location where Cleland and P.D. collected their sample and extend westward to a point above the old adit or where the coal can no longer be reached with the equipment available. A series of parallel trenches should be continued southward as above.

2. Drill a test hole in the above area to determine the depth, thickness, and attitude of the coal at a depth beyond the trenches. Judging from old reports a hole 300 feet deep might be required.
3. Drill at least <sup>3</sup> test holes in the relatively flat area northwest of the old Chicago Creek mine on the north side of Chicago Creek to check the reported presence of coal one-half mile northwest of the mine. These holes would probably need to be 200 feet or more in depth.
- 4) Check with R. Berg about the use of the drill rig he has on the Kugruk River. We did not find out what the capabilities of this rig are.

Hopefully the trenching and drilling can be done soon, because waiting until next spring would make preparation of a report by July 1 difficult. It is critical that we get authorization to hire the work done immediately. Cle Conwell will be directing the trenching and any drilling and map the exposures and log the drill holes.

Preliminary Geologic Map of the Chicago Creek Mine area.

By G. R. Eakins and J. T. Kline



EXPLANATION

- Qal Alluvium
- Qac Alluvium and colluvium
- Qc Colluvium
- Qt Terrace gravels
- TQk Kugruk Gravel
- Tcb Coal bearing sediments
- pE Pre-Cambrian meta-sediments  
Locally grades to limestone
- 25 Attitude of beds
- 30 Foliation of beds
- - - Fault (Dashed where inferred; dotted where concealed)
- - - Shear zone
- 150 Sample number

Chicago Creek Coal Study  
By Cleland N. Conwell  
August 18, 1980

The Chicago Creek coal field is still in part an unknown. The helicopter trip was a loss. Clouds prevented reaching the destination and the pilot left Nome returning to Fairbanks. In the afternoon we were able to travel by fixed wing to Chicago Creek. P.D. and I collected his sample, stayed overnight and returned to Nome Thursday afternoon.

Briefly:

- 1) The Chicago Creek Coal Mine as shown on the quad map is a placer gold mine.
- 2) The Chicago Creek Coal Mine is actually the small mine symbol in sec. 22, R. 18 W., T. 6 N.
- 3) We met Rinehart Berg and he may be placer mining where the coal mine is shown in sec. 33, R. 18 W., T. 6 N.
- 4) According to Berg there was coal at the Wallin Coal Mine, sec. 10, T. 5 N., R. 18 W.
- 5) The coal mining had stopped before 1930.
- 6) Except for a few outcrops along the Kugruk River, there is almost total tundra cover. The outcrops near camp were metamorphic or limestone.
- 7) There is an airstrip large enough for a 180 to land at the placer mine and arrangements can be made to stay there. The operators name is Virgil Vial. Arrangements can be made to rent his equipment.
- 8) The coal bed we samples was about 3 feet thick.

My suggestion is that the first thing we do is to research the mining claims and land status in the area.

Next is to consider an approach to completing the project. These are some of my thoughts.

- 1) Geologic approach. Hire a local miner to expose the outcrop for a better examination.
- 2) A geophysical approach to outline the possible extent of the coal bearing formation.
- 3) A blind drilling program.
- 4) Combine a small amount of dozer work to obtain a better feeling for the drilling program and contract the drilling.

On sheet 1 are notes in relation to gold mines and the location of the Chicago Creek Coal Mine. On sheet 2 the possible limit extend of the Chicago Creek coal field.