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REPORT ON SEARCH FOR COAL DEPOSITS,
CHURCHILL, MANITOBA AREA, AUGUST, 1964

by

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A report submitted to
Sogepet Limited
(Societie Generale des Petroles)

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INTRODUCTION

The existence of coal deposits in the Churchill, Manitoba area has been rumored for many years. Little evidence was available as to their location and because of economic factors very little interest was aroused.

With the finding of oil shale on Southampton Island, the possibility that this "coal" may actually be oil shale could not be discounted, especially since no geologist had actually seen the samples or visited the deposits. Further old newspaper clippings and rumor described the coal as rich in paraffin and pitch, and that it was adjacent to oil or gas seeps.

Accordingly, the writer was directed to find out as much as possible regarding the so-called coal. This work was done on his return from Southampton Island, between August 11 and 14, 1964. Much of the time was spent questioning the inhabitants and checking their information by flying over the likely areas, and in some cases checking on the ground. No coal or sign of coal was found although the areas in which it may occur are shown on figure 2 (in pocket).

The principal sources of information were Mrs. E. Krenlund, Mr. Art Anderson, Joe Chambers and his son, Jim Chambers.

SOURCES OF INFORMATION

Mrs. E. Kronlund

Mrs. Kronlund is the widow of the late pioneer resident, Mr. Ed ("Pete") Kronlund. She kindly showed the writer a sketch map Mr. Kronlund made of the coal deposits, a hurried copy of which is shown on figure 1. According to information on the map Mr. Kronlund staked (or registered) the claims on October 3, 1946. A Mr. W.M. Buckholz was also noted on the maps as having staked the same area on September 24 and 30, 1946; no information is available on the latter individual. The map also locates the deposits at latitude 58 degrees 27 minutes north and longitude 93 degrees 47 minutes west, and as being 26 miles northwest to Churchill and 13 miles east of Dylot.

Mrs. Kronlund very kindly showed the writer a letter received from the University of Saskatchewan and from Milton Hershey Company (address unknown) regarding analysis of the coal.

The University of Saskatchewan letter was dated January 15, 1947, and gave the following data:

Moisture as received	59.3%
Ash as received	5.12%
Heating Value as received	4350 B.T.U./lb.

This letter was written by G.C. Bailey (Analyst) and noted that no work was done on oil or by-products.

The Milton Hershey letter was more complete. It was dated

January 18 but no year was given. Data given is tabulated below:

	<u>Air dried</u>	<u>As received</u>
Air drying loss	45.00	
Moisture	31.60	62.38
Volatile Matter	28.20	15.51
Fixed Carbon	33.70	18.54
Ash	6.50	9.57
Sulphur	1.19	0.65
B.T.U./lb.	7643	4205
Coking qualities	-	non-coking
Colour of ash	-	light brown

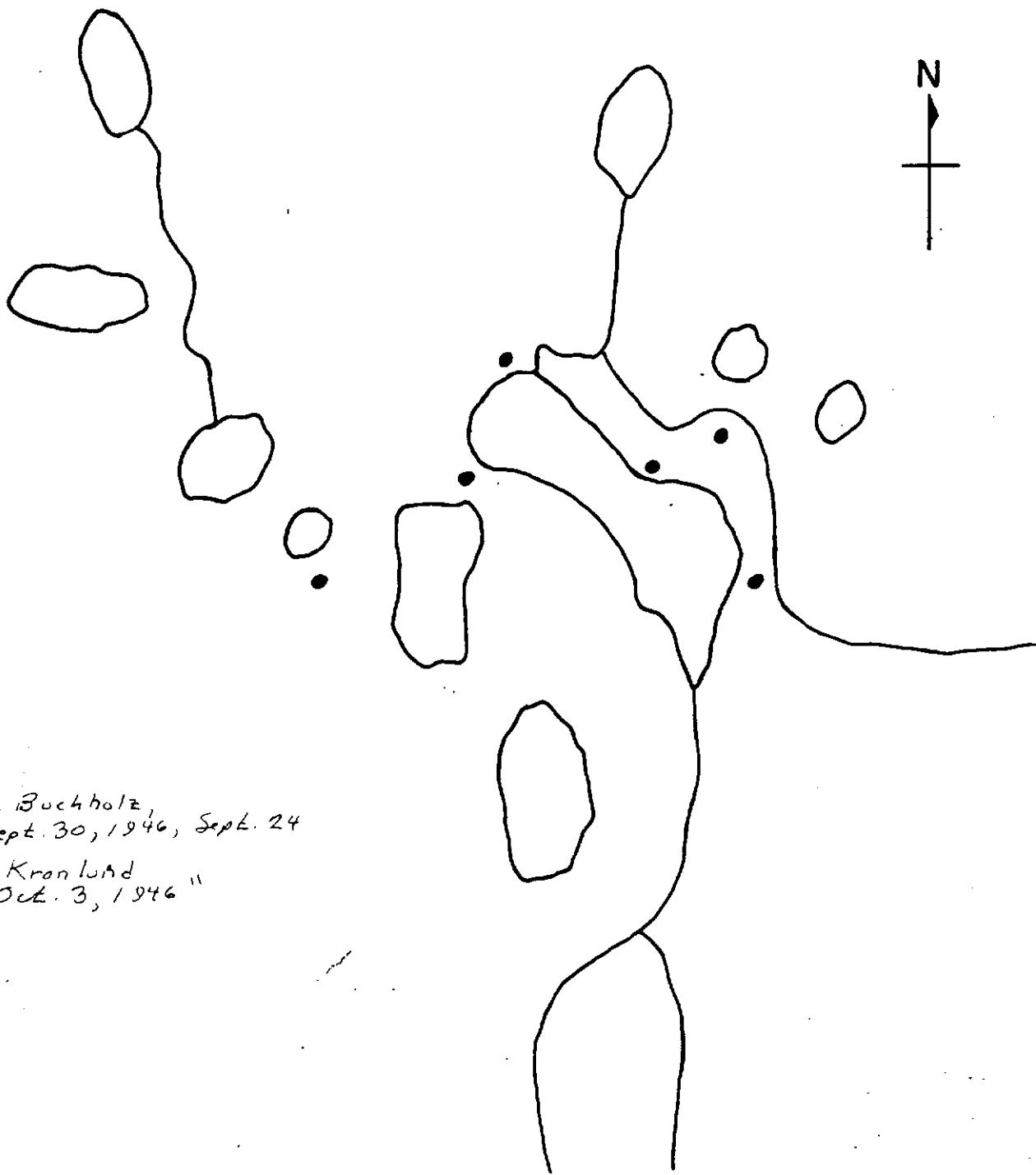
Both the directional data on Kronlund's map and the map itself strongly suggest that the area of the coal deposits is within that indicated as "Kronlund's Area" on figure 2. Two flights were accordingly made to see if any diggings could be found and two landings made near possible prospects. One was at latitude 58 degrees 24½ minutes and longitude 93 degrees 50½ minutes and the other at 58 degrees 27 minutes and longitude 93 degrees 46 minutes (see figures 2, 4, 5, 6). Both turned out to be black organic muck. Its colour closely mimicked coal diggings from the air.

Mr. Art Anderson

Mr. Anderson, the owner of Empress Lumber Company, is a person of standing and repute in Churchill and went to a considerable amount

"1 inch = 1 mile"

"26 miles NW to Churchill"
"13 miles E. of Bylot"
"58° 27' N 93° 47' W"



"W.M. Buchholz
Sept. 30, 1946, Sept. 24
Ed. Kronlund
Oct. 3, 1946"

Figure 1. E. KRONLUND'S Claim Map-presumably submitted to the Manitoba Government in 1946. Black dots are Coal prospects. Copy of hurried sketch map made the writer.

of trouble to help the writer. He is the brother-in-law of Mr. Ed Kronlund and once had occasion to visit the coal deposit in winter. Apparently samples were collected but lost on the way out. Mr. Anderson's description would place the deposit on a knoll between the north end of two fairly small lakes. The deposit may have a reddish colour because of fire.

Mr. Anderson originally placed the deposit in the "Twin Lakes" area (see figure 2) some 15 miles east of Churchill and 10 miles south of the coast. When he visited this region with the writer, however, it did not look familiar to him. Instead he felt from the lie of the land that the deposit might be some 10 miles further south. The actual direction pointed out was about 140 degrees southeast of "Twin Lakes". This would put the deposit very close to Kronlund's Area. It should be noted that Mr. Anderson continually stressed the importance of the knoll being near the deposit. Apparently it is fairly prominent.

Mr. Joe Chambers

Mr. Chambers or "Trapper Joe" is a grand old man of 86 years living along the C.N.R. tracks at Mile 499 about 10 miles south of Churchill. Since Mr. Chambers had recently suffered a stroke the writer was cautioned regarding his accuracy. For his age, however, he is a very lucid and entertaining person.

Mr. Chambers said he had never been to the coal deposit²

² Jim Chambers said he and Joe Chambers once visited the deposit.

but had seen samples. He thought they looked more like shale than coal. He placed the deposit about 12 miles east of Churchill and 4 to 5 miles south from the coast. This would not be too far from the "Twin Lakes Area" of Mr. Anderson.

Mr. Jim Chambers

Mr. Jim Chambers is the son of Mr. Joe Chambers. He is about 40 years old and works at the National Harbour Board. Jim Chambers placed the deposit between Warkworth and Twin Lakes and said he visited it with his father while trapping.

Mr. Jim Chamber's positioning would put the deposit in an area devoid of lakes. This does not agree with either Ed Kronlund's or Art Anderson's description who both had it near a fairly large body of water.

CONCLUSIONS

Although the deposit has not been found the writer is of the opinion that it is more likely coal than oil shale, and is probably lignite of Cretaceous or Cenozoic age. He bases this opinion upon analyses submitted by the University of Saskatchewan and Hiltner Harsco Company. The latter, in particular, suggest the deposit is a low grade lignite. He also feels that the analysts at both institutions were probably technically competent to distinguish between coal and oil shale, and would have noted the latter if it was such.

The actual area in which the deposit occurs is still in doubt. Although the writer has spent most time searching both in the air and on the ground over Kronlund's Area on figure 1, he still is of the opinion that this is the most favourable site. This opinion is based upon the fact that Kronlund's claim map closely tallies with the actual geography there. A point that should be remembered, however, is that it may tally too closely. Kronlund may have thought he was in this area, borrowed a topographic map, copied the lake outlines and distribution, and submitted it as a claim map.

If further work is done in locating the coal deposit it is recommended that helicopter be used. Relatively few of the landing lakes can be trusted in this region because of their shallow nature.

MISCELLANEOUS

Mr. Joe Chambers informed the writer that there was a salt spring at the bridge over Markworth River at Mile 499. This spring is on the northwest corner of the bridge and was supposedly started some years ago when footings were being drilled for the bridge.

According to Mr. Chambers the spring never freezes in winter and is salty. The writer checked the spring. It is very cold and he suspects that it may have a deep source in rock rather than a surficial one. This is because the abundant fresh rock rubble about the area collected when blasting for the bridge suggests that outcrop is nearby.

The water had only a slight brackish taste, not the saline one described by Joe Chambers. However, because of the possibility that it might reflect a subsurface evaporate deposit a sample was taken and later analyzed for potassium and sodium by the University of Alberta.

The analysis showed the water to be high in sulphate and carbonate (amounts not stated), with 39 parts per million of potassium and 260 parts per million of sodium. Apparently these are not extraordinarily high concentrations.

One other isolated fact is that the rocks about the Markworth River bridge are Silurian limestone and dolomite often with a pronounced bituminous odour.

Figure 4. Aerial view of suspected coal deposit at latitude 94 degrees 27½ minutes and longitude 93 degrees 50½ minutes. See figure 5.

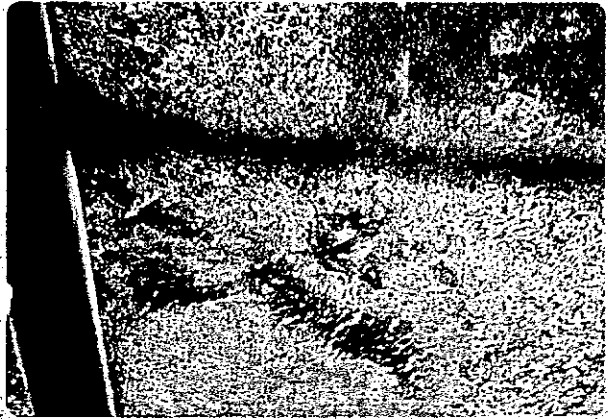


Figure 5. View of prospect (see figure 4) on ground. This turned out to be black organic muck, possibly from a dried-up pond.

Figure 6. View of suspected coal deposit at latitude 58 degrees 27 minutes and longitude 93 degrees 46 minutes. This also turned out to be the same organic muck as shown in figure 5.



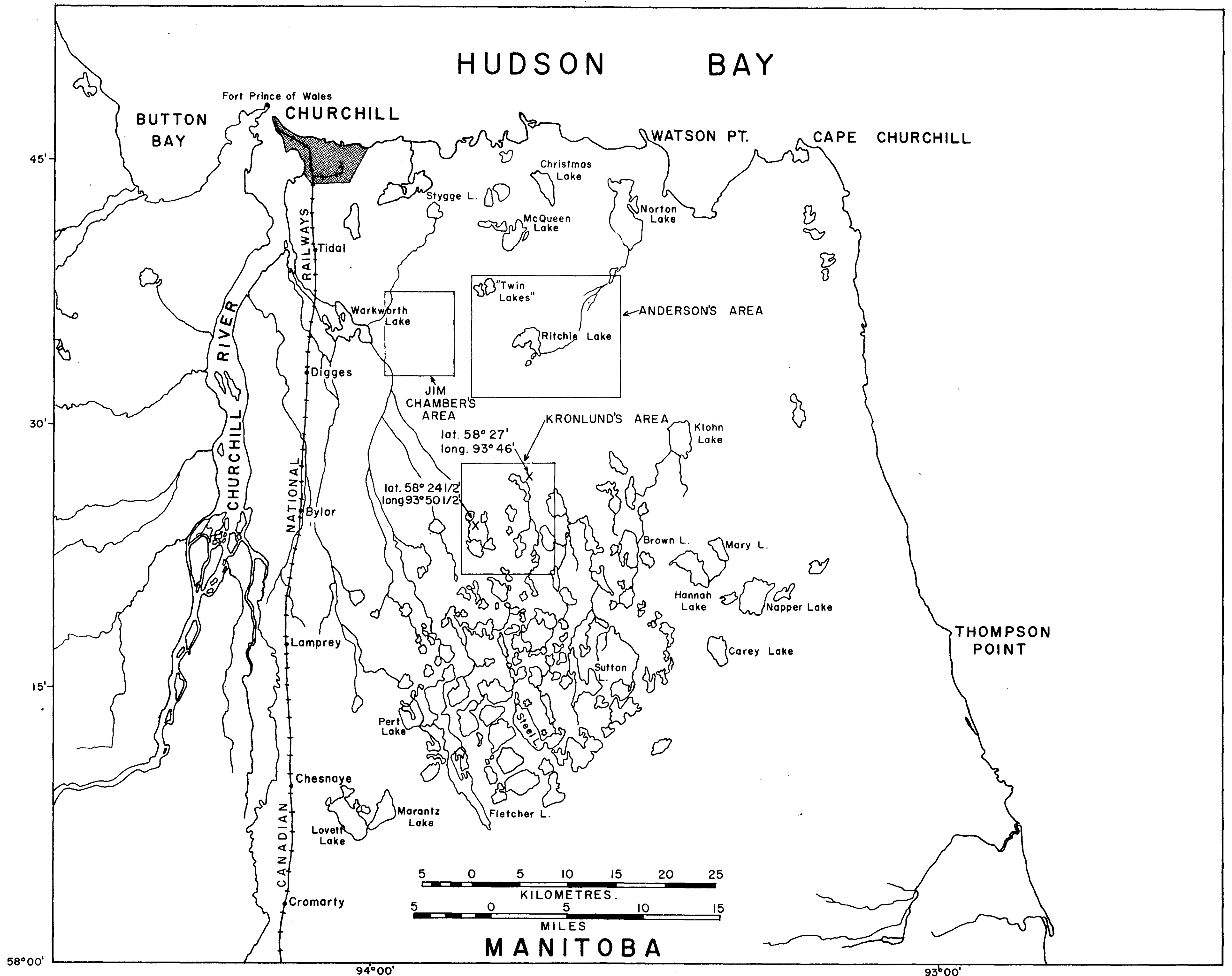


Figure 2. CHURCHILL REGION, Showing the three probable areas in which the Coal Deposits might be located. Crosses with latitude and longitude are areas examined on the ground.