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KERR ALDISON MINES LIMITED

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To D.A. Lowrie From W.M. Sirola

Subject BIG SALMON COAL PROJECT - CARMACKS AREA, Y.T. Date October 20, 1977
GERRY NOEL'S GEOLOGICAL REPORT

In early June of this year we engaged Gerry Noel & Associates to map coal licences 58, 59 and 60 located 80 km. east south east of Carmacks. We had applied for these licences because we had been asked to select a coal area in the Yukon Territory with the thought of supplying coal to the Grum operation if and when that operation became viable. The Big Salmon area was chosen not because there were any impressive showings of coal, but because coal had been found in the Tantalus formation and because the area was relatively close to the Robert Campbell Highway. We also knew that bedrock exposure in this area was limited and it was therefore possible that more coal existed than could possibly be seen in outcrop.

Gerry Noel, in his written text and in his accompanying sections, depicts a basinal structure in which the youngest sedimentary rocks are Tantalus shales, sandstones and conglomerates. He feels that this Tantalus basin has a length of 500 meters, a width of 1000 meters and a depth of 100 to 200 meters. Coal occurs in the shale in narrow bands 1 - 5 cm. wide and in places a thickness of 1 meter of shaly coal was found.

From personal observation, I find it difficult to agree with the sections as they are drawn. The field evidence indicates a homoclinal section dipping gently eastward and probably truncated by a fault where the Tantalus rocks are in contact with the under-lying loose river limestones. I believe Gerry Noel has derived the full-basin concept by finding westerly dips on the limestone on the east end of the area mapped and to me this is a questionable procedure.

One of the problems I had in interpreting rock types on the coal licences arose from the fact that some of the rocks looked distinctly tuffaceous and if indeed they were tuffaceous, then they belonged with the Laberge formation which normally underlies the Tantalus. I put this problem to Dirk Tempelman-Kluit who looked at the rocks and told me that he had done microscopic work on specimens from that area and found that the appearance was deceiving and that the rocks were not really tuffaceous. In the light of Dirk's observations, we can rule out the presence of the Laberge formation. If it is present in some form, and it might well be, it is nowhere visible in outcrop.

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Perhaps the most favourable aspect of this partial basin is the fact that all of the dips appear to be very gentle and if indeed mineable coal does exist at some depth, it would probably be amenable to open pit mining. The shaly coal-bearing member would not be difficult to drill since it is unlikely to be more than 200 meters. However, as I have mentioned over the telephone, I don't think we should launch into a drilling programme next season because the Geological Survey people will be extending their mapping into this area next summer and we would then have their version of the geology and structure. Quite apart from that, we have spent enough money to hold the licences for two years. Unless there is some urgency in this matter, I would suggest that we hold off doing any further work for at least one year.

agreed
D.H.L.
Macswell

W.M. Sirola
W.M. Sirola

Encl.: Report on the Geology of Coal Licences 58, 59 and 60
by G.A. Noel, September 12, 1977.

WMS:mcb