

Mineral Exploration Activity, La Ronge Mining District and the Wollaston Lake Area, Reindeer Mining District

by A. J. Gracie

Prompted by three new uranium discoveries, mineral exploration activity, almost exclusively for uranium, has continued to expand at a high rate and drilling programs have set new records. The exploration companies have concentrated on the perimeter of the Athabasca Sandstone and immediately adjacent shield areas. Permits and claim blocks now cover most of the Athabasca basin. Mineral dispositions also cover the Wollaston Belt from the north part of Wollaston Lake to the Foster Lakes.

Uranerz Exploration and Mining Limited, Saskatchewan Mining Development Corporation (SMDC), Canadian Longyear Ltd., Kenting Exploration Services Ltd. and D. W. Coates Enterprises Ltd. now have offices in La Ronge. The highways to Stanley Mission and Pinehouse have been completed. Highway 155 is complete to the Clearwater River. The Department of Highways bridged the river and construction crews are working north of it. The Department of Northern Saskatchewan may start building a road from Pinehouse to Key Lake this fall.

La Ronge - Reindeer Lake Belt

Most activity in this belt is in base metals. Little attention has so far been paid to the gold prospects: International Mogul Mines Ltd. flew an Input survey over part of this greenstone belt, staked the favourable areas and ran Max Min surveys on the ground. The company ran a similar program in the Brownell Lake area (63 M-4), east of the La Ronge-Reindeer Lake belt. SMDC ran a small drill program in the May Lake area on CBS 2972 (64 D-5 N).

Wollaston Lake Belt

E and B Explorations Ltd. has attempted to prove the extension of the Gulf Minerals A and B zones by drilling a thrust plane conductor under Wollaston Lake. Dension Mines Ltd. diamond drilled an area close to the edge of the Athabasca Formation.

Athabasca Sandstone Perimeter

Development of the Key Lake orebody preparatory to mining was continued during the year by the Uranerz Exploration and Mining Company, operator for the consortium

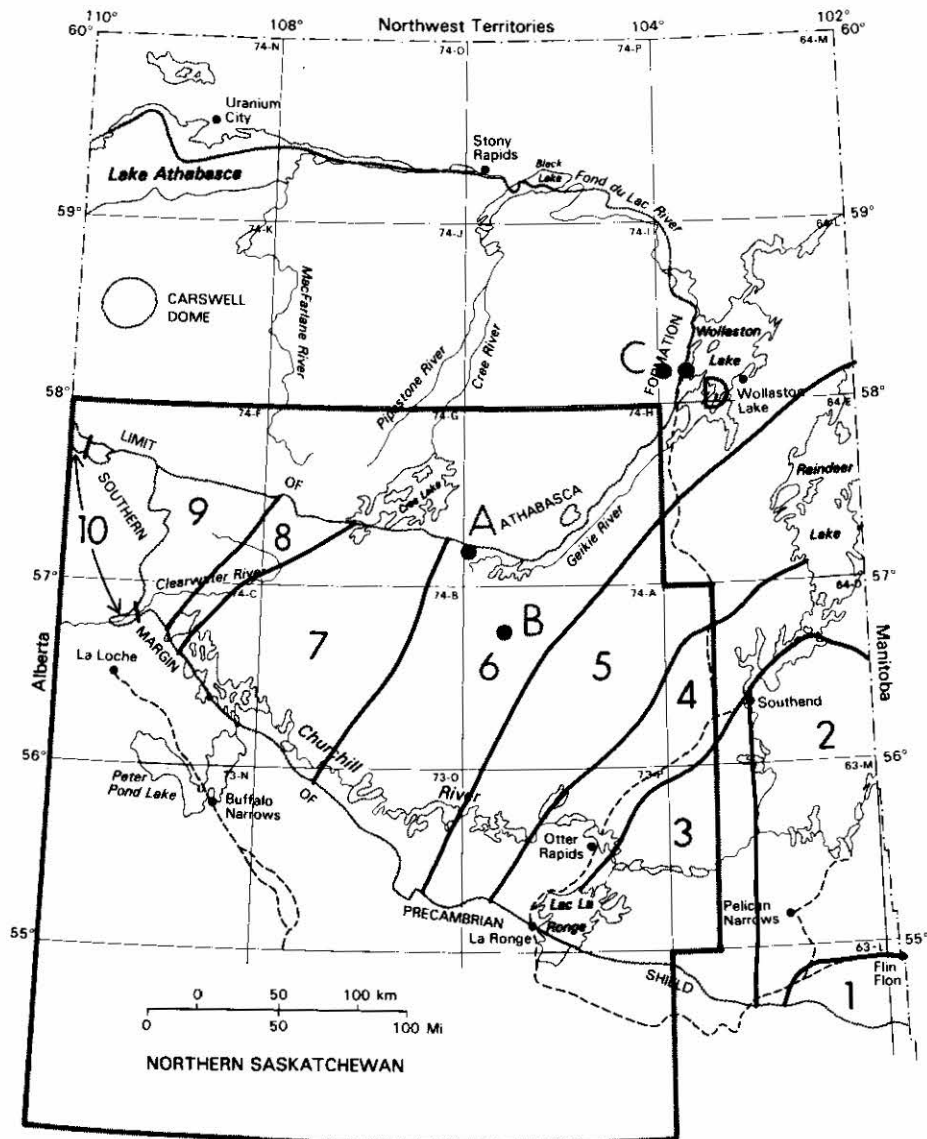


Fig. 1. - Location of the La Ronge Mining District in relation to geological domains in the Precambrian Shield (after Sibbald et. al. 1976).
 Numbered domains: 1, Flin Flon; 2, Kisseynew; 3, Glennie Lake; 4, La Ronge-Reindeer; 5, Rottenstone; 6, Wollaston; 7, Mudjatik; 8, Virgin River; 9, Western Granulite; 10, Clearwater; 11, Firebag.
 Current major exploration locations: A, Key Lake; B, Foster Lakes; C, Asamera and Imperial discoveries; D, Collins Bay A and B Zones.

that includes S.M.D.C. and Eldorado Nuclear Ltd.

The Gaertner orebody is 1,400 m long, 10-40 m wide and has a vertical thickness that ranges from a few metres to 80 m. Reserves are estimated as 52.8×10^6 lbs. U_3O_8 in ore averaging 2.84% U_3O_8 and 49.5×10^6 lbs. Ni in ore averaging 2.67% Ni. Total tonnage of the orebody is 930,000 averaging 2.84% U_3O_8 and 2.67% Ni.

The Deilman orebody is 1,200 m in length and open-ended. It is 10 to more than 100 m wide and up to 100 m deep. Reserves are estimated as 49.6×10^6 lbs. U_3O_8 in ore averaging 2.11% U_3O_8 and 24.5×10^6 lbs. Ni. in ore averaging 1.21% Ni. Total tonnage exceed 1,100,000 averaging 2.11% U_3O_8 and 1.21% Ni.

Imperial Oil Limited made a uranium discovery at Midwest Lake on ML 5115 (74-I-8-E) in 1978 that was prompted by an airborne radiometric anomaly of 1969 and the consequent discovery of a train of sandstones. Individual boulders assayed up to 4% U_3O_8 . Only the upper part of the Athabasca Sandstone was tested in the early drilling, but later, by drilling to the basement mineralization over a length of 1765 m and a width of up to 60 m to 185 m has been encountered. Fifty-one of the 75 holes drilled have intersected radioactive zones. The length of the intersections are as great as 58m and the grade varies from 0.5 to 5.73 lbs U_3O_8 per ton. The upper mineralized zone, which occurs in the Athabasca Formation, averages 1.0 kg (2.2 lbs) U_3O_8 per tonne, and the lower mineralized zone, which occurs at the contact of the Athabasca Sandstone and the metamorphic basement, averages 30 kg (66 lbs.) per tonne.

Gulf Minerals Canada Limited discovered a deposit on the eastern side of Collins Bay, Wollaston Lake which it has designated Collins Bay B zone. Gulf has also increased the reserves at the Collins Bay A zone.

Asamera Oil Corpoartion Ltd. has announced the results of DDH 11, which was one of the 17 holes drilled to test four Input anomalies close to Imperial's Midwest Lake property. DDH 11 intersected a 1.75 m zone below 103 m, which gave a weighted average assay of 24.95 lbs U_3O_8 per ton. A longer section of DDH 11, which includes the 1.75 m zone, gave a weighted average assay of 12.89 lbs U_3O_8 per ton.

Athabasca Basin Interior

Permits and claim blocks cover most of the Athabasca Formation in the La Ronge Mining District. Only one area north of Cree Lake is still open. Mineral dispositions cover basic dykes, linear and circular fault structures and available ground

closest to the edge of the Sandstone. Work on many of these dispositions is in a preliminary stage.

Haultain River Belt, and all Basement Rocks West of the Wollaston Belt

The Precambrian Shield west of the Wollaston Belt, has been divided into the Clearwater, Western Granulite, Virgin River and Mudjatik Domains (see map). The amount of work done on these rocks last year was small. E and B Explorations Ltd. did work on their Permit No. 3 immediately west of the Haultain River Belt (74-B) and on their claim blocks, which are grouped on the Virgin River trend. Scurry-Rainbow drilled two at sites on the Haultain River metasedimentary belt south-west of Key Lake.

Phanerozoic Cover

Canadian Occidental Petroleums Ltd. drilled on Permit Nos. 3 and 4 (73-I) during the fall of 1977 and has lately renewed this activity. They have also taken out Permit Nos. 5 and 6 (73-0) southwest of Pinehouse. Missi Island Mines Ltd. drilled the limestone body at the southern end of Lac La Ronge, but the company is now more interested in their new limestone prospect on the road south of Pinehouse (73-I).

La Ronge Office Activities

The Mines Branch at La Ronge (Precambrian Geological Laboratory) provides information and services to the mineral industry. These include the recording of dispositions, the sale of publications, and the maintenance of a library of assessment work for the Reindeer and La Ronge Mining District and a core library with examination facilities.

