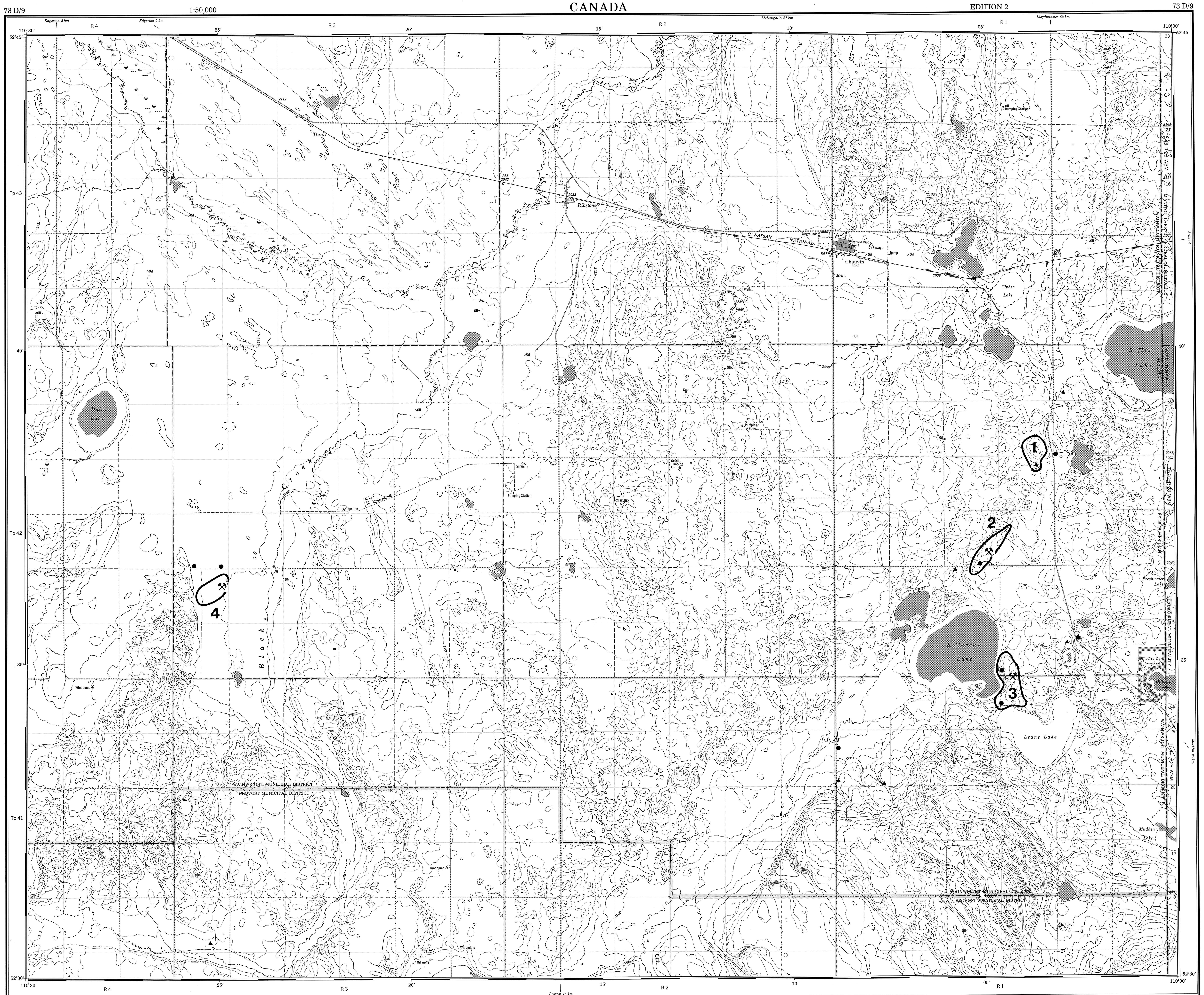
73 D / 9 Chauvin

73D/9

73 D/9 1:50,000 CANADA EDITION 2 73 D/9



Produced by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Updated from aerial photographs taken in 1975. Culture check 1976. Information current as of 1976.

Copies may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, or your nearest map dealer.

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Roads:	Routes:	2 lanes or more / 2 voies ou plus	less than 2 lanes / moins de 2 voies
loose or stabilized surface, all weather	gravier, aggloméré, toute saison		
loose surface, dry weather	de gravier, temps sec		
unclassified streets	rues hors classe		
cart track	de terre		
trail, cut line or portage	sentier, percée ou portage		

FOR COMPLETE REFERENCE SEE REVERSE SIDE   POUR UNE LISTE COMPLÈTE DES SIGNES, VOIR AU VERSO

CHAUVIN
ALBERTA-SASKATCHEWAN

Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Milles
Metres 1000 0 1000 2000 3000 4000 Mètres
Yards 1000 0 1000 2000 3000 4000 Verges

CONVERSION SCALE FOR ELEVATIONS   ÉCHELLE DE CONVERSION DES ÉLÉVATIONS
Metres 30 20 10 0 50 100 150 200 250 300 Mètres
Feet 100 50 0 100 200 300 400 500 600 700 800 900 1000 Pieds

CONTOUR INTERVAL 25 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

ÉQUIDISTANCE DES COURBES 25 PIEDS
Élévations en pieds au-dessus du niveau moyen de la mer
Système de référence géodésique nord-américain, 1927
Projection transverse de Mercator

Établie par la DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES. Mise à jour à l'aide de photographies aériennes prises en 1975. Vérification des ouvrages en 1976. Renseignements à jour en 1976.

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GENERAL COMMENTS / DEPOSIT CHARACTERISTICS

Deposit Number	Material Description	Reserves (1000 m³) Gravel	Reserves (1000 m³) Sand	Additional Comments	Texture (%) Gravel	Texture (%) Sand	Texture (%) Fines	(%) Wear	Overburden Thickness (m)	Deposit Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional Comments
1	Dirty, gravelly sand	140	700	Limited extent. Not suitable for concrete uses unless washed and screened. Variable thickness and texture. Difficult to extract. No local markets.	15	75	10	-	0.2-2.3	1.0-3.0	46.6	Kame moraine	Dirty to very dirty material. Poorly sorted, well graded.
2	Dirty, gravelly sand	255	510	Not concrete quality. Used for local roads.	30	60	10	-	0.1	1.5-2.5	42.5	Kame moraine	Slightly dirty to dirty. Moderate percentage of deleterious material.
3	Dirty, gravelly sand	735	1150	Fairly extensive deposit but variable thickness, therefore difficult to extract.	≐35	≐55	≐10	-	0.1-1.0	0.5-4.0	84.1	Glaciofluvial outwash	Dirty, variable texture, poorly sorted, well graded.
4	Dirty, slightly gravelly sand	170	1360	Limited uses. Variable thickness.	10	80	10	-	0.5	2.5-4.5	48.6	Outwash	Slightly dirty to dirty. Principally medium to coarse sand.

Deposit Number — Granular deposits shown on this map may have commercial possibilities. That assumption followed from two criteria used in the mapping process: study of the area considered only granular deposits greater than one metre thick, and covering an area more than one hectare; and it only considered deposits where the mineral-aggregate thickness was greater than the overburden thickness. Although the scale of mapping did not permit investigation of all small deposits, many small deposits containing existing pits are indicated.

Material Description — Sand and gravel has a variety of applications, such as concrete for construction, asphalt concrete, subbase and base course aggregate for roads, gravel and sand for road surfaces, and pit run for fill. Gradation, rock hardness, and binding characteristics, are some of the specific qualities that are considered in aggregate towards determining its end use. This map indicates these, and other, geological qualities of the sand and gravel within each deposit, but does not indicate their potential uses. The terms used in the table are defined in the figure below.

Reserves — The method of calculating in cubic metres the aggregate reserves of deposits took four basic steps. First, the area, in hectares, of each deposit was determined using aerial photographs. Second, geological interpretation, sometimes supported by subsurface information, was assumed in determining the geometry of each deposit, to estimate an overall, average deposit thickness in metres. Third, geological study and limited sample analyses determined the texture (gradation) of sediments in the deposit, and an overall average percentage of gravel and sand. Finally, the volume was calculated as follows: reserve gravel (m³) = area (ha) × thickness (m) × 10,000 × % gravel; the same formula was used for sand.

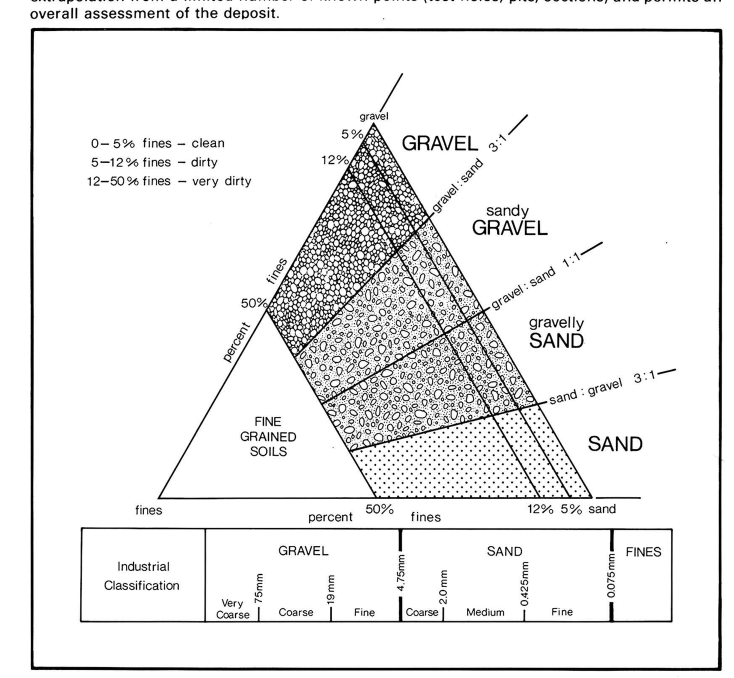
Texture — The texture of the sediment refers to the percentage of particles of various sizes. For mineral aggregate, the most important fractions are the gravel and sand. The actual dimensions of the clasts and particles in these fractions are given in the figure. The values given for a particular deposit were determined from a field estimate, or from laboratory analysis, of one or more samples from that deposit. Where more than one sample is taken the tabulated number is the mean value.

Wear — The resistance of gravel-size clasts to wear or abrasion can be measured in a laboratory test (ASTM-C131, Los Angeles Abrasion Testing). The amount of material that breaks down into smaller sizes is measured and related to the original sample weight in terms of percent wear. The higher the percentage wear the more susceptible the gravel is to breakdown under stress. Gravel with a percentage wear of less than 40 is considered very resistant.

Overburden Thickness — The thickness of non-economic material, or overburden, covering a deposit, sometimes is a limiting factor in the exploitation of an aggregate deposit. The tabulated values given are approximate overburden thicknesses as determined from geological investigations and subsurface testing.

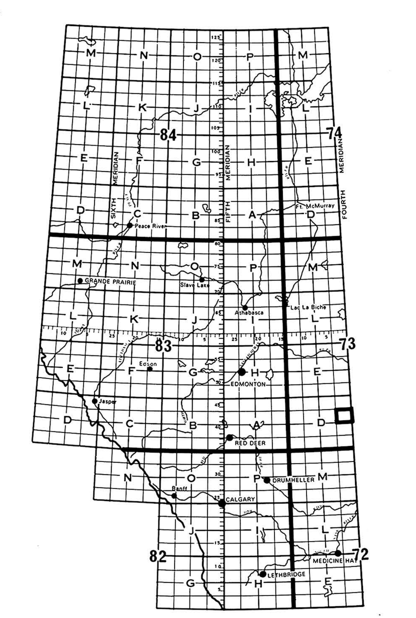
Deposit Area — Deposits in this study were delineated by interpretation of aerial photographs and the contacts should be considered approximate. Information is precise only where test holes, or geological sections, are indicated.

Deposit Genesis — The genesis, or formation, of deposits is vital to the understanding of the gradational nature, extent and geometry of the deposit. This understanding forms the basis for extrapolation from a limited number of known points (test holes, pits, sections) and permits an overall assessment of the deposit.



Map Legend

- 3 Deposit number
- Assumed boundary
- ⚒ Active or inactive pit
- ● Alberta Geological Survey test hole
- ▲ Sand or gravel exposure
- ⁄⁄ Buried sand or Gravel deposit



Alberta RESEARCH COUNCIL
Natural Resources Division

Alberta Geological Survey

This is a sand and gravel resource map prepared by the Alberta Geological Survey as part of a series at a scale of 1:50,000. The series represents an ongoing aggregate inventory of Alberta which provides data for general land-use planning, land management or aggregate exploration. Please note that the delineation of deposits and calculation of reserves are approximations only.

REFERENCES

Geology and compilation by N.K. Jones, 1980. Additional information from L.A. Bayrock, 1967.

AGGREGATE RESOURCES
CHAUVIN 73D/9