

GENERAL COMMENTS

DEPOSIT CHARACTERISTICS

Deposit Number	Material Description	Reserves (1000 m³)		Additional Comments	Texture (%)			Wear	Overburden Thickness (m)	Deposit Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional Comments
		Gravel	Sand		Gravel	Sand	Fines						
1	Dirty gravelly sand	710	890	Good for concrete uses if crushed and screened. Mainly granites and gneiss, also abundant hard sandstones. Moderately extensive.	40	50	10		0.4	1.5-3.0	89.1	Outwash Terrace	Slightly dirty. Only economically important deposit on this map sheet. Much of the area is covered with an outwash and/or aeolian fine 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 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 analysis 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.

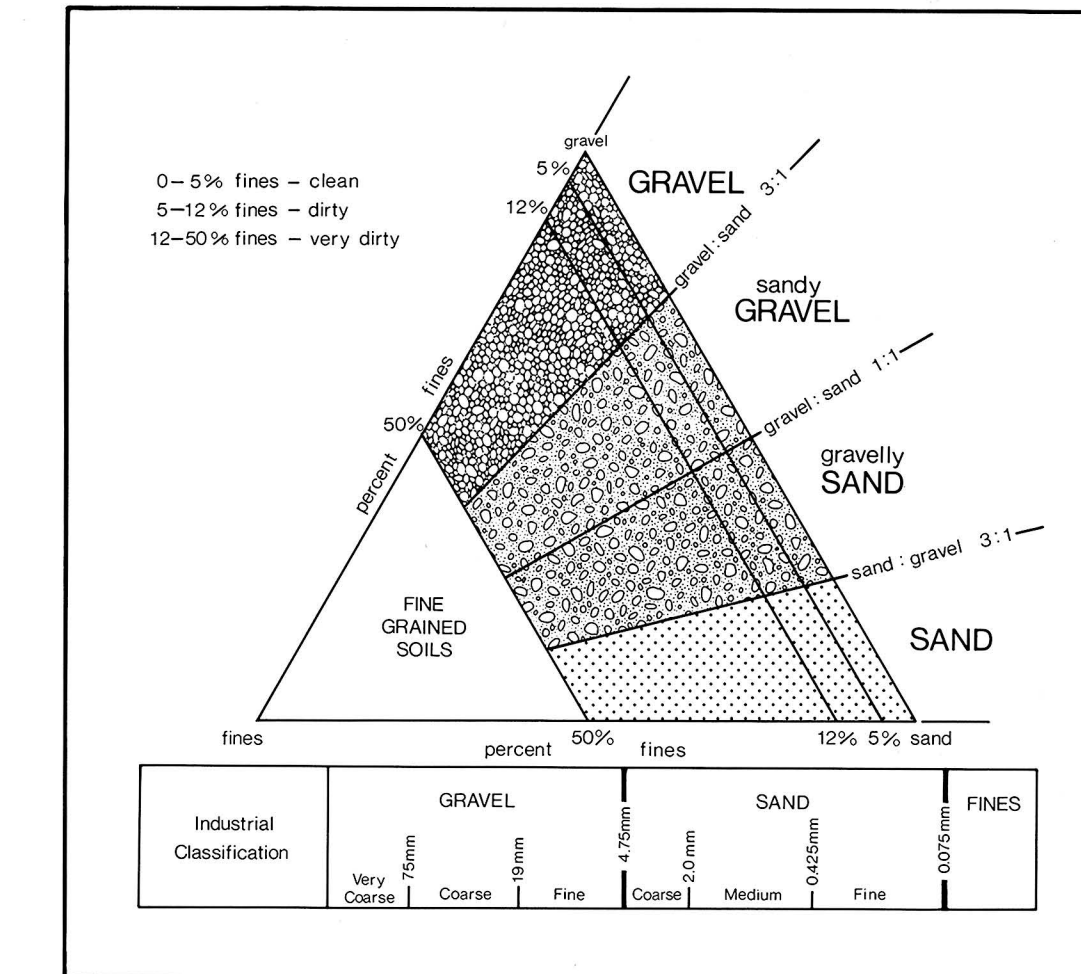
Texture — The texture of the sediment refers to the percentage of particles of various sizes. For mineral aggregate, the most important fractions are the gravel and sand. The actual dimensions of the clasts and particles in these fractions are given in the figure. The values given for a particular deposit 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-C-131, 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.

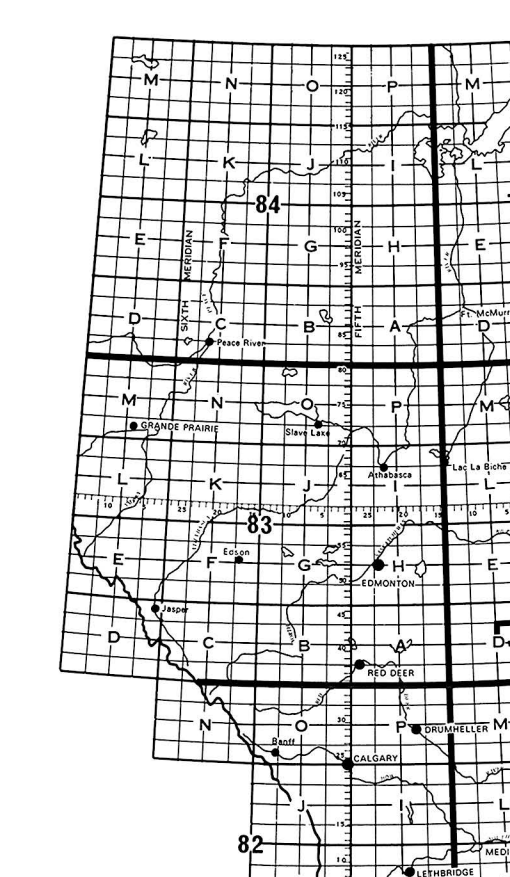
Deposit Area — Deposits in this study were delineated by interpretation of aerial photographs and the contacts should be considered approximate. Information is precise only where test holes, or geological sections, are indicated.

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 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 by B.N. Peterson, 1980. Compilation by N.K. Jones, 1980. Additional information from L.A. Bayrock, 1967.

AGGREGATE RESOURCES HUGHENDEN 73D/10

HUGHENDEN
 WEST OF FOURTH MERIDIAN-OUEST DU QUATRIÈME MÉRIDIEN
 Scale 1:50,000 Échelle

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

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

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CONVERSION SCALE FOR ELEVATIONS
 Metres 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000

ÉCHELLE DE CONVERSION DES ÉLEVATIONS
 Mètres 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800 820 840 860 880 900 920 940 960 980 1000

CONVERSION TABLE, 25 FEET
 Elevations in Feet above Mean Sea Level
 North American Datum 1927
 Transverse Mercator Projection

TABLEAU DES COEFFICIENTS DE PIED
 Élévations en Pieds au-dessus du Niveau de la Mer
 Système de référence géodésique nord-américain, 1927
 Projection transverse de Mercator

Draught by the DIRECTION DES LEVÉS ET DE LA CARTOGRAPHIE, MINISTÈRE DES MINES, DES MÉTIERS ET DES RESSOURCES. Mise à jour de l'état d'interprétation des données en 1975. Vérification des données en 1975. Informations actuelles à jour en 1975.

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