

GENERAL COMMENTS

DEPOSIT CHARACTERISTICS

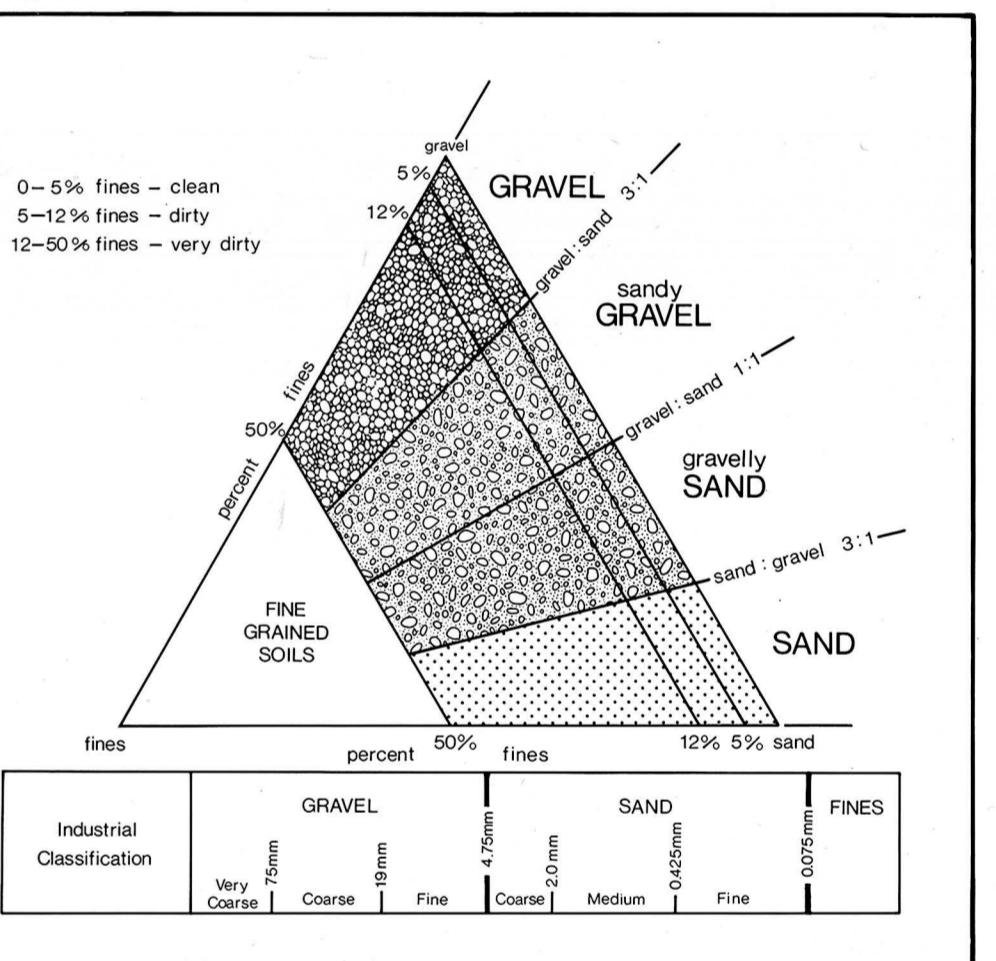
Deposit Number	Material Description	Reserves (1000 m³)	Additional Comments		Texture (%)	Overburden Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional Comments
			Gravel	Sand					
									NO DEPOSITS

NO DEPOSITS

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 as a whole, and the presence of test holes or pits. Deposits are delineated in hectares; 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.

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 gradation, texture, and geometry of the deposit. This understanding forms the basis for extrapolations from a limited number of known points (test holes, pits, sections) and permits an overall assessment of the deposit.



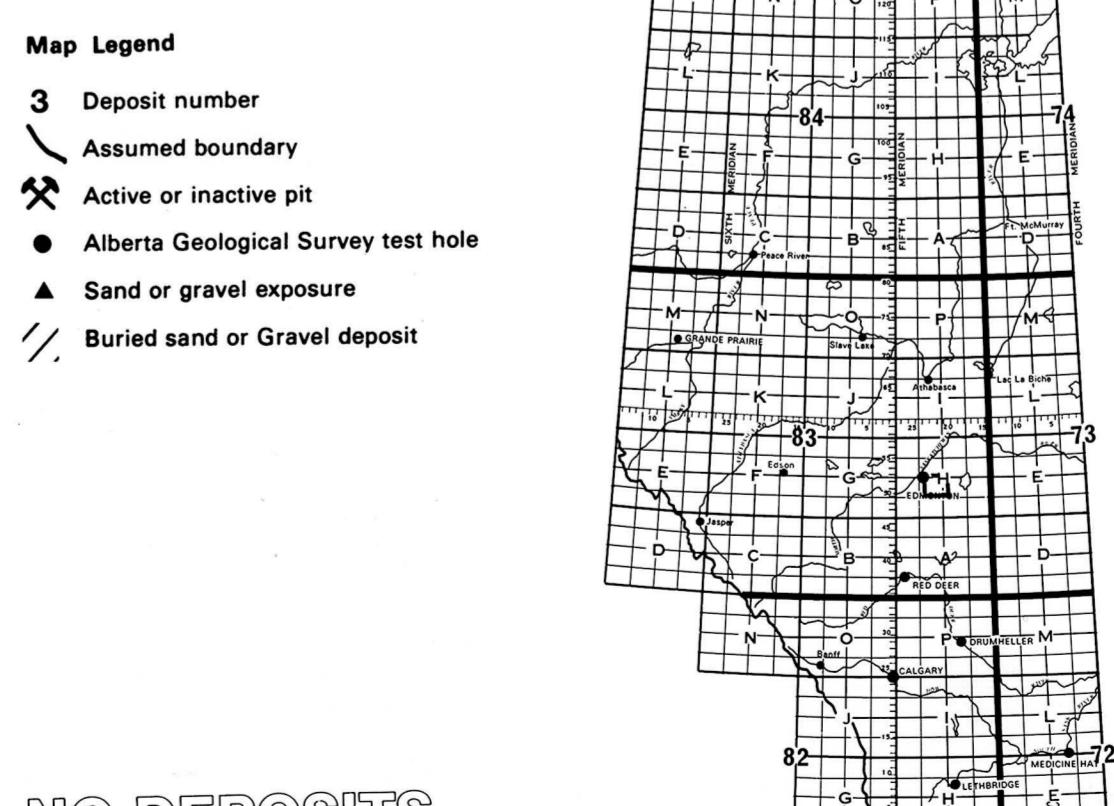
Material Description — Sand and gravel has a variety of applications, such as concrete for construction, aggregate for asphalt pavements, aggregate for roads, gravel and sand for road surfaces, and gravel for fill. Gradient, rock hardness, and mineral characteristics are the specific qualities that are 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 surface information, was assumed in determining the area of each deposit, to estimate an overburden and deposit thickness in metres. Third, geological study and limited sample analyses determined the texture (gradation) of sediments in the deposit, an overall average percentage of gravel and sand. Finally, the volume was calculated as follows: $\text{Volume of gravel (m}^3\text{)} = \text{area (ha)} \times \text{thickness (m)} \times 10,000 \times \% \text{ gravel}$; 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.



NO DEPOSITS

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.

AGGREGATE RESOURCES

COOKING LAKE 83H/6