

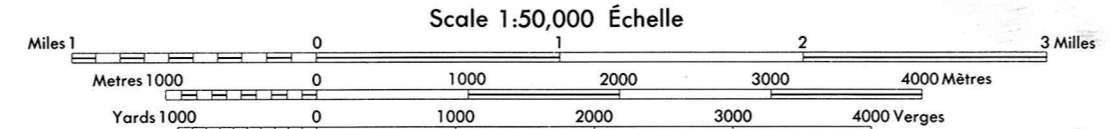
CANADA

EDITION 2

83 G/15

SANGUDO ALBERTA

WEST OF FIFTH MERIDIAN - OUEST DU CINQUIÈME MÉRIDIEN



Deposit Number	Material Description	Reserves (1000 m³)		Additional Comments	Texture (%)			Overburden Thickness (m)	Deposit Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional Comments
		Gravel	Sand		Gravel	Sand	Fines					
1	Clean to dirty sand	1,785	7,905	Hummocky topography, mainly fine sand with clay lenses	17	78	>5	-	Very variable	3.0	340	Glaciofluvial Outwash deposit.
2	Clean sandy gravel	394	213	Abandoned pit; high water table.	63	34	3	-	2.0	2.5	25	Glacially thrust Thrust gravel is glaciofluvial; fractured class common; no Precambrian clast - maximum size up to 15 cm; sand medium to fine.
3	Dirty sand	135	2,430	Mainly fine sand, gravelly sand exposed along road cut.	5	90	5	-	1.5	3.0	90	Recent alluvium High terrace; graded bedding.
4	Clean sand to clean gravelly sand	259	446	Discontinuous patches of sand and gravel. Abandoned pit.	35	62	2	-	1.0	2.0	90	Glaciofluvial Poorly sorted; Precambrian clast common; subangular.
5	Clean sand	-	233	Nearly depleted.	-	97	3	-	2.5	4.0	6	Recent alluvium High terrace.
6	Clean gravelly sand	274	682	Small deposit; inactive.	28	71	>1	-	4.0	8.0	12.0	Recent alluvium Terrace; overbank silty material lying on top of the deposit.
7	Clean sand	140	553	Mainly fine sand; not an important deposit.	20	79	1	-	0.5	2.0	35	Recent alluvium High terrace.

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 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) x thickness (m) x 10,000 x % gravel; the same formula was used for sand.

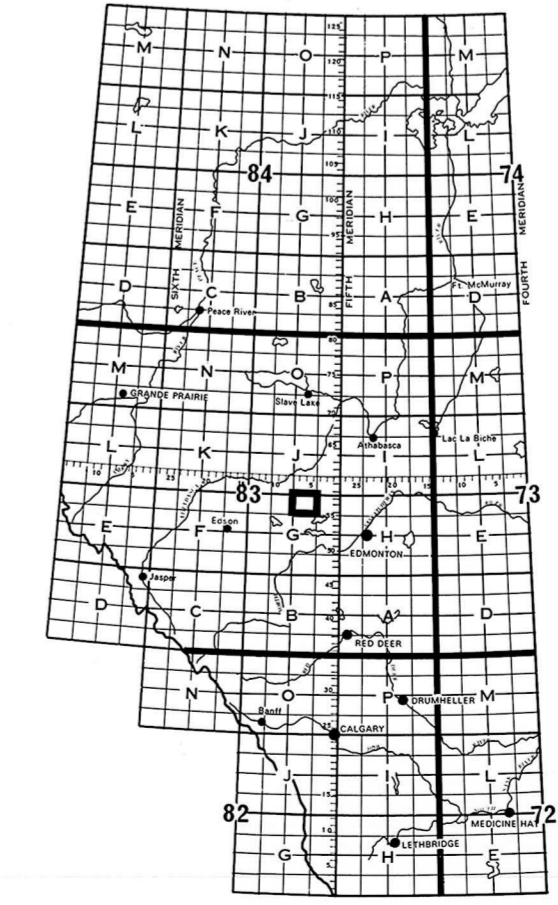
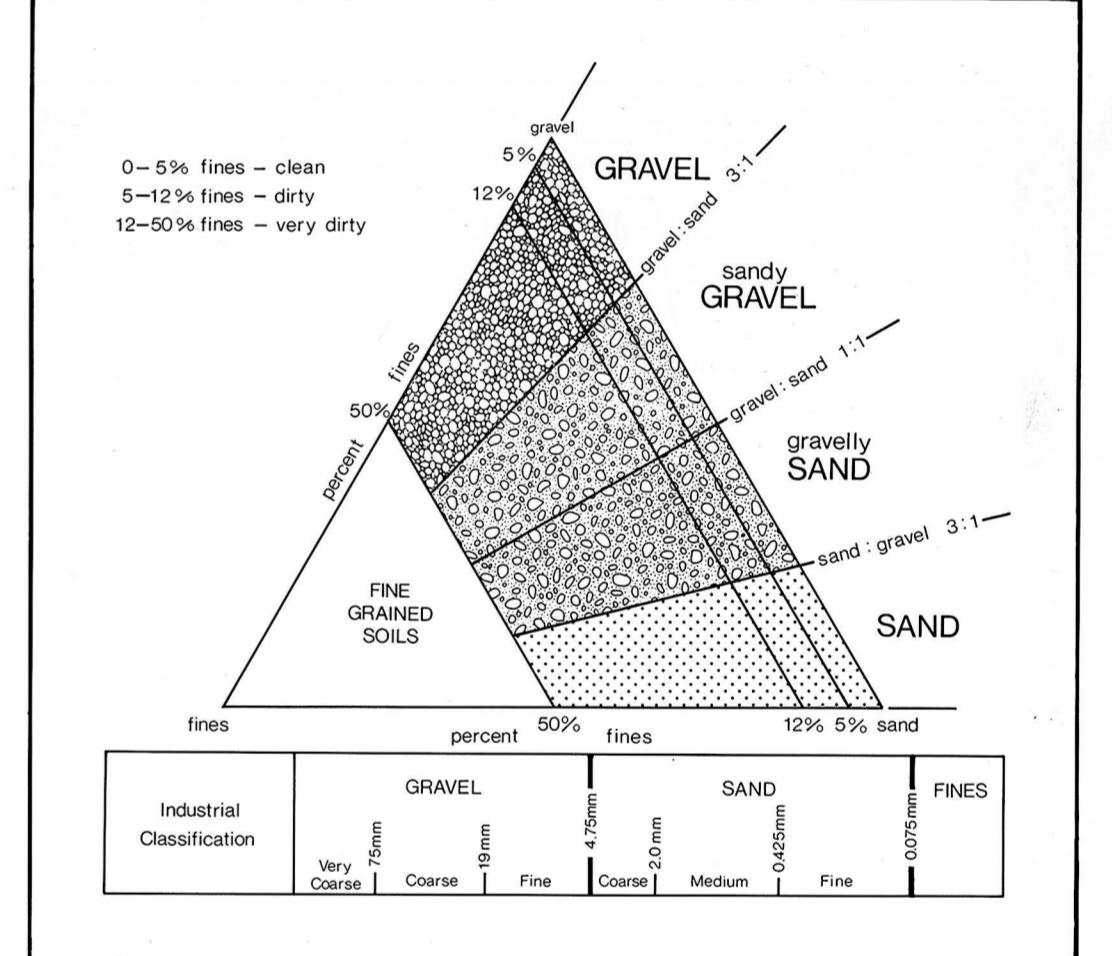
Texture — The texture of the sediment refers to the percentage of particles of various sizes. For mineral aggregate, the most important fractions are the gravel and sand. The actual dimensions of the clasts and particles in these fractions are given in the figure. The values given for a particular deposit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

Aggregate Resources

83G/15 Sangudo

P. Sham
Published 1984
Geology and compilation 1982. Additional information from L.D. Andriashuk, 1976.

This is a sand and gravel resource map prepared by the Alberta Geological Survey as part of a series of maps 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. Alberta Energy and Natural Resources provides financial support for the Aggregate Inventory.



Prepared by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND REVENUE. Updated from aerial photographs taken in 1970. Colour class 1972, revised 1975.

Roads: hard surface, all weather; gravel, loose season; paved, loose season; loose or stabilized surface, all weather; gravelly aggregate, loose season; loose surface, dry weather and unclassified streets; dirt roads, heavy use; cart tracks; trail, cut time or portage.

Some names on this map are not yet official. Canadian or official names are marked by the Survey of Canada.

Carte de la Direction des Levés et de la Cartographie, Ministère de l'Énergie, des Mines et des Ressources. Mise à jour à partir de photographies aériennes prises en 1970. Vérification des coupures en 1975. Révisé en 1975.

Cette carte est en vente au Bureau des Cartes du Canada, Ministère de l'Énergie, des Mines et des Ressources, Ottawa, au tarif de quatre-vingt-cinq cents.

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