

Metres 1000 0 1000 2000 3000

Yards 1000 0 1000 2000 3000 4000 Verges

unclassified streets.....

..... rues hors classe......

cart track...... de terre..... de terre......

GENERAL COMMENTS DEPOSIT CHARACTERISTICS

- 1.	Deposit Number	Material Description	Reserves (1000 m³) Gravel Sand		Additional Comments	Texture (%) Gravel Sand Fines		(%) Wear	Overburden Thickness (m)	Deposit Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional	Comments	
	1	Sand	10	171	Sand medium anf fine grained, clean and moderately clean; gravel fine and coarse.	5	90	5	-	0	1.8	12	Outwash		
,	2	Sandy gravel and gravelly sand.	55	240	O to 1.2 m Gravel coarse/ 1.2 to 3.7 m Sand and gravel; sand coarse and medium grained, gravel coarse and fine.	74.9	23.9 vver layer 59.9	1.2	ī	0	4 to 9 Avg. 7.6	4	Outwash		, 3 H
	3	Gravel	237	32	Gravel coarse and fine; sand medium grained.	87.8	11.7	0.5	-	=	5.6	8	Valley train		
	4	Sandy gravel	247	114	Gravel fine and coarse; sand coarse and medium grained.	≃65	≃30	≃5	-	0.3-0.5	2.7-3.7	20	Valley train		
	5	Sandy gravel	76	380	O to 1.5 m Gravel coarse and fine; sand fine to coarse grained/ 1.5 to 5.8 m Sand medium and coarse grained with fine gravel.	61.3 to 67.5	gravel 31.5 to 35.1	1.0 to 3.6	-	0.3 to 1	1.2-5.8 Avg. 4.6	20	Valley train		
	6	Sandy gravel and sand	132	456	O to 1.5 m Gravel coarse; sand coarse to fine grained/ 1.5 to 4.6 m Sand medium grained with lenses of fine gravel and coarse fine sand.		gravel 15 - 47 sand 66-100		-	0.3-1	4 to 7 Avg. 4.6	26	Valley train		
	7	Sand	35	316	Sand medium grained with lenses of fine gravel, coarse and fine grained sand.	9.7	87.9	2.4		0.6-1.2	6	12	-		
	8	Gravel and sand	31	67	O to 1.5 m Gravel coarse; sand fine to coarse grained/ 1.5 to 5 m Sand medium grained with fine gravel.	75.6 12.7	gravel 22.6 sand 86.2	1.8	-	0.3 to 1.2	5.2	4	Valley train		
	9	Sandy gravel	10	441	Gravel coarse and fine; sand fine to coarse grained.	67-71	29 -30	0.9-2.6	,-	0.6	2.4	1.2	Valley train		
	10	Gravel	617	126	Gravel coarse and fine; sand fine to coarse grained.	81.2	16.6	2.2	-	-	2.1	3.6	Recent alluvial		
4I	11	Sandy gravel	1068	399	Gravel fine and coarse; sand fine to coarse grained.	71.2	26.6	2.2	-	2.1-4.2	6.1	100	Recent alluvial		
	12	Gravelly sand	24	36	Gravel coarse and fine; sand fine grained.	≃40	≃60	≃0	-	-	2.1	20	Recent alluvial		
	13	Sandy gravel	4763	2460	Gravel coarse and fine; sand fine to coarse grained.	48-79	20-46	1-6.4	7,	0 to 2.1	2.4-7.6 Avg. 4.6	485	Recent alluvial		
	14	Sandy gravel	207	128	Gravel coarse; sand fine grained.	60.9	37.7	1.4	-	0.6	More than 1.5	24	Recent alluvial	Deposit continues on	
	15	-	π.		Assumed by airphoto interpretation.	:		-"	- /	. '	*	-	Recent alluvial		
	16		-	-	Recorded in testholes and well logs.	-		-	-	>3	^ =	-	,		
	17		-	-	Gravel	75-1:00	0-25	0-10	-	<3	-	-	- ,		
	18		-	-,	Assumed by association.	_	- "	-	-	>3	* - 1 270	-	-		

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.

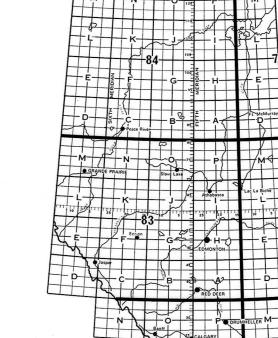
Material Description — Sand and gravel has a variety of applications, such as concrete for construction, asphalt concrete, subbase and base course aggregate for roads, gravel and sand for road surfaces, and pit run for fill. Gradation, rock hardness, and binding characteristics, are some of the specific 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.

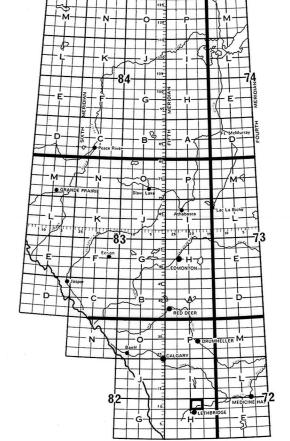
Reserves — The method of calculating in cubic metres the aggregate reserves of deposits took four basic steps. First, the area, in hectares, of each deposit was determined using aerial photographs. Second, geological interpretation, sometimes supported by subsurface information, was assumed in determining 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.

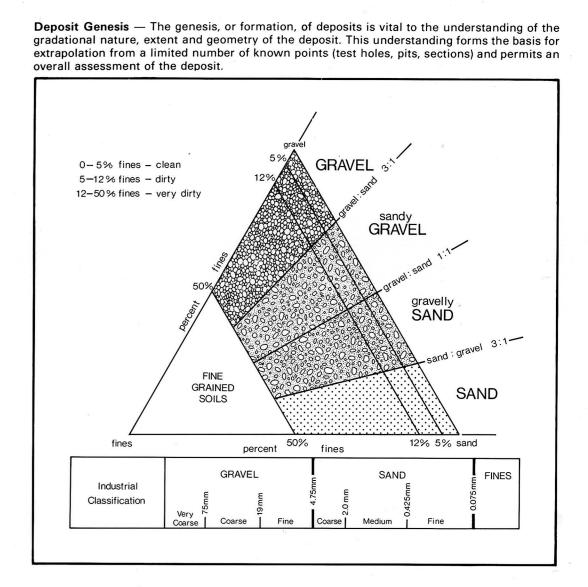
Wear — The resistance of gravel-size clasts to wear or abrasion can be measured in a laboratory test (ASTM-C131, Los Angeles Abrasion Testing). The amount of material that breaks down into smaller sizes is measured and related to the original sample weight in terms of percent wear. The higher the percentage 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.





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. Alberta Energy and Natural Resources provides financial support for the Aggregate Inventory.

REFERENCES:

Geology and compilation by I. Shetsen; revised from Earth Sciences

AGGREGATE RESOURCES

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