

GENERAL COMMENTS

DEPOSIT CHARACTERISTICS

Deposit Number	Material Description	Reserves (1000 m³) Gravel Sand	Additional Comments	Texture (%)			Overburden Thickness (m)	Deposit Thickness (m)	Deposit Area (ha)	Deposit Genesis	Additional Comments
				Gravel	Sand	Fines					
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 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.

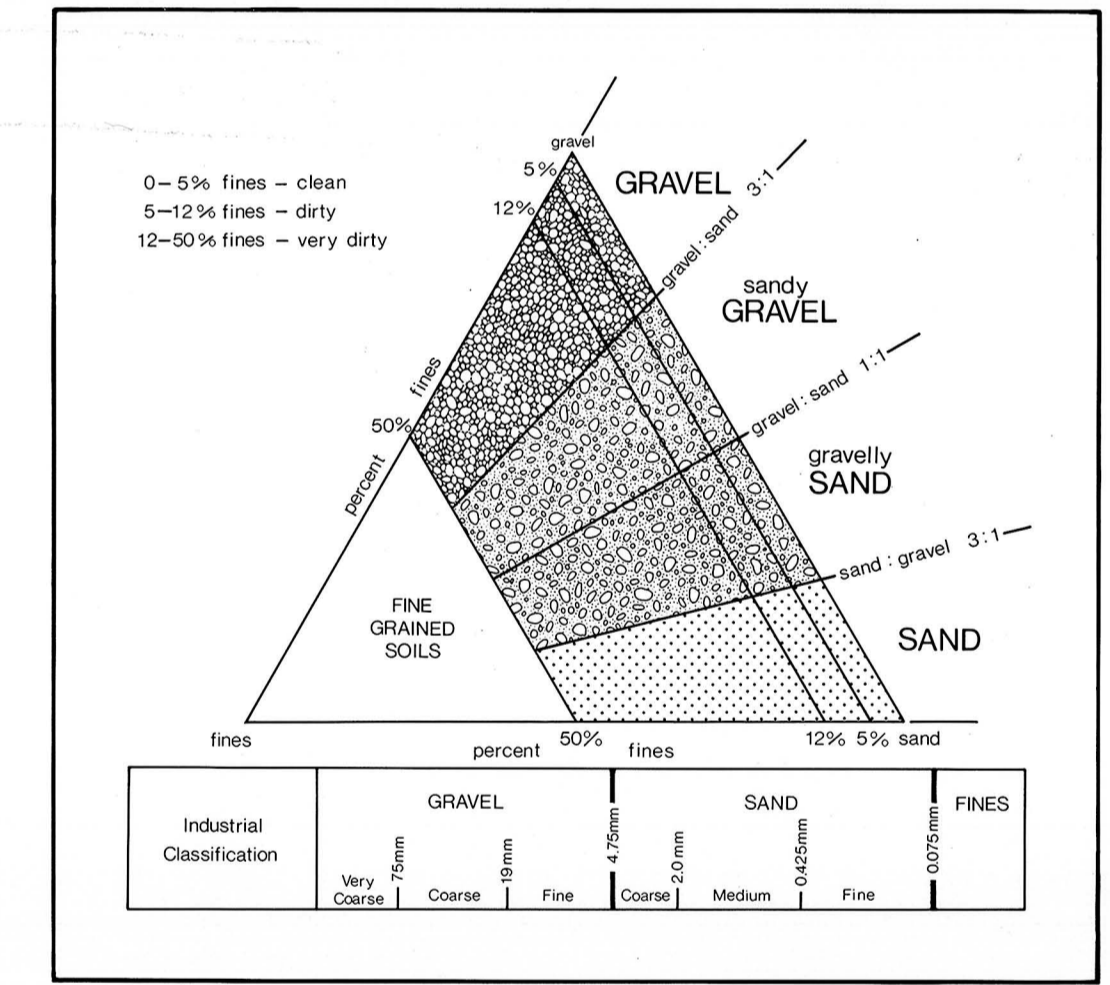
Texture — The texture of the sediment refers to the percentage of particles of various sizes. For mineral aggregate, the most important fractions are the gravel and sand. The actual dimensions of the classes and particles in these fractions are given in the figure. The values given for a particular deposit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

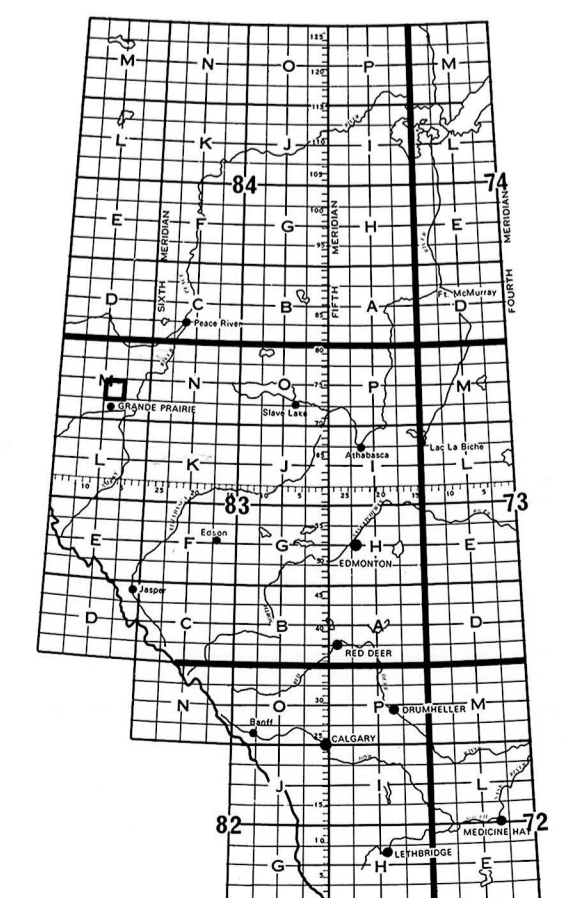
Overburden Thickness — The thickness of non-economic material, or overburden, covering a deposit, sometimes is a limiting factor in the exploitation of an aggregate deposit. The tabulated values given are approximate overburden thicknesses as determined from geological investigations and subsurface testing.

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

REFERENCES
Geology by B.N. Peterson, 1977 and 1978. Compilation by W.A.D. Edwards and M. Price, 1982. Additional information from J.F. Jones, 1961 and M.E. Holter, 1972.

AGGREGATE RESOURCES

SEXSMITH 83M/7

83M/7

Prepared by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND REVENUE. Updated from aerial photographs taken in 1976. Culture check 1978. Printed 1979.
Copies may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, or your nearest map dealer.
© Canada Copyright Reserved 1979

Roads: hard surface, all weather; gravel, four seasons; loose or stabilized surface, all weather; loose surface, dry weather and unclassified drives; cart track; trail, cut line or portage.
Routes: paved, four seasons; gravel, all seasons; dirt, four seasons; dirt, two seasons; dirt, one season; dirt, no season.
Overburden: none to 100m; 100 to 200m; 200 to 300m; 300 to 400m; 400 to 500m; 500 to 600m; 600 to 700m; 700 to 800m; 800 to 900m; 900 to 1000m; 1000 to 1100m; 1100 to 1200m; 1200 to 1300m; 1300 to 1400m; 1400 to 1500m; 1500 to 1600m; 1600 to 1700m; 1700 to 1800m; 1800 to 1900m; 1900 to 2000m; 2000 to 2100m; 2100 to 2200m; 2200 to 2300m; 2300 to 2400m; 2400 to 2500m; 2500 to 2600m; 2600 to 2700m; 2700 to 2800m; 2800 to 2900m; 2900 to 3000m; 3000 to 3100m; 3100 to 3200m; 3200 to 3300m; 3300 to 3400m; 3400 to 3500m; 3500 to 3600m; 3600 to 3700m; 3700 to 3800m; 3800 to 3900m; 3900 to 4000m; 4000 to 4100m; 4100 to 4200m; 4200 to 4300m; 4300 to 4400m; 4400 to 4500m; 4500 to 4600m; 4600 to 4700m; 4700 to 4800m; 4800 to 4900m; 4900 to 5000m; 5000 to 5100m; 5100 to 5200m; 5200 to 5300m; 5300 to 5400m; 5400 to 5500m; 5500 to 5600m; 5600 to 5700m; 5700 to 5800m; 5800 to 5900m; 5900 to 6000m; 6000 to 6100m; 6100 to 6200m; 6200 to 6300m; 6300 to 6400m; 6400 to 6500m; 6500 to 6600m; 6600 to 6700m; 6700 to 6800m; 6800 to 6900m; 6900 to 7000m; 7000 to 7100m; 7100 to 7200m; 7200 to 7300m; 7300 to 7400m; 7400 to 7500m; 7500 to 7600m; 7600 to 7700m; 7700 to 7800m; 7800 to 7900m; 7900 to 8000m; 8000 to 8100m; 8100 to 8200m; 8200 to 8300m; 8300 to 8400m; 8400 to 8500m; 8500 to 8600m; 8600 to 8700m; 8700 to 8800m; 8800 to 8900m; 8900 to 9000m; 9000 to 9100m; 9100 to 9200m; 9200 to 9300m; 9300 to 9400m; 9400 to 9500m; 9500 to 9600m; 9600 to 9700m; 9700 to 9800m; 9800 to 9900m; 9900 to 10000m; 10000 to 10100m; 10100 to 10200m; 10200 to 10300m; 10300 to 10400m; 10400 to 10500m; 10500 to 10600m; 10600 to 10700m; 10700 to 10800m; 10800 to 10900m; 10900 to 11000m; 11000 to 11100m; 11100 to 11200m; 11200 to 11300m; 11300 to 11400m; 11400 to 11500m; 11500 to 11600m; 11600 to 11700m; 11700 to 11800m; 11800 to 11900m; 11900 to 12000m; 12000 to 12100m; 12100 to 12200m; 12200 to 12300m; 12300 to 12400m; 12400 to 12500m; 12500 to 12600m; 12600 to 12700m; 12700 to 12800m; 12800 to 12900m; 12900 to 13000m; 13000 to 13100m; 13100 to 13200m; 13200 to 13300m; 13300 to 13400m; 13400 to 13500m; 13500 to 13600m; 13600 to 13700m; 13700 to 13800m; 13800 to 13900m; 13900 to 14000m; 14000 to 14100m; 14100 to 14200m; 14200 to 14300m; 14300 to 14400m; 14400 to 14500m; 14500 to 14600m; 14600 to 14700m; 14700 to 14800m; 14800 to 14900m; 14900 to 15000m; 15000 to 15100m; 15100 to 15200m; 15200 to 15300m; 15300 to 15400m; 15400 to 15500m; 15500 to 15600m; 15600 to 15700m; 15700 to 15800m; 15800 to 15900m; 15900 to 16000m; 16000 to 16100m; 16100 to 16200m; 16200 to 16300m; 16300 to 16400m; 16400 to 16500m; 16500 to 16600m; 16600 to 16700m; 16700 to 16800m; 16800 to 16900m; 16900 to 17000m; 17000 to 17100m; 17100 to 17200m; 17200 to 17300m; 17300 to 17400m; 17400 to 17500m; 17500 to 17600m; 17600 to 17700m; 17700 to 17800m; 17800 to 17900m; 17900 to 18000m; 18000 to 18100m; 18100 to 18200m; 18200 to 18300m; 18300 to 18400m; 18400 to 18500m; 18500 to 18600m; 18600 to 18700m; 18700 to 18800m; 18800 to 18900m; 18900 to 19000m; 19000 to 19100m; 19100 to 19200m; 19200 to 19300m; 19300 to 19400m; 19400 to 19500m; 19500 to 19600m; 19600 to 19700m; 19700 to 19800m; 19800 to 19900m; 19900 to 20000m; 20000 to 20100m; 20100 to 20200m; 20200 to 20300m; 20300 to 20400m; 20400 to 20500m; 20500 to 20600m; 20600 to 20700m; 20700 to 20800m; 20800 to 20900m; 20900 to 21000m; 21000 to 21100m; 21100 to 21200m; 21200 to 21300m; 21300 to 21400m; 21400 to 21500m; 21500 to 21600m; 21600 to 21700m; 21700 to 21800m; 21800 to 21900m; 21900 to 22000m; 22000 to 22100m; 22100 to 22200m; 22200 to 22300m; 22300 to 22400m; 22400 to 22500m; 22500 to 22600m; 22600 to 22700m; 22700 to 22800m; 22800 to 22900m; 22900 to 23000m; 23000 to 23100m; 23100 to 23200m; 23200 to 23300m; 23300 to 23400m; 23400 to 23500m; 23500 to 23600m; 23600 to 23700m; 23700 to 23800m; 23800 to 23900m; 23900 to 24000m; 24000 to 24100m; 24100 to 24200m; 24200 to 24300m; 24300 to 24400m; 24400 to 24500m; 24500 to 24600m; 24600 to 24700m; 24700 to 24800m; 24800 to 24900m; 24900 to 25000m; 25000 to 25100m; 25100 to 25200m; 25200 to 25300m; 25300 to 25400m; 25400 to 25500m; 25500 to 25600m; 25600 to 25700m; 25700 to 25800m; 25800 to 25900m; 25900 to 26000m; 26000 to 26100m; 26100 to 26200m; 26200 to 26300m; 26300 to 26400m; 26400 to 26500m; 26500 to 26600m; 26600 to 26700m; 26700 to 26800m; 26800 to 26900m; 26900 to 27000m; 27000 to 27100m; 27100 to 27200m; 27200 to 27300m; 27300 to 27400m; 27400 to 27500m; 27500 to 27600m; 27600 to 27700m; 27700 to 27800m; 27800 to 27900m; 27900 to 28000m; 28000 to 28100m; 28100 to 28200m; 28200 to 28300m; 28300 to 28400m; 28400 to 28500m; 28500 to 28600m; 28600 to 28700m; 28700 to 28800m; 28800 to 28900m; 28900 to 29000m; 29000 to 29100m; 29100 to 29200m; 29200 to 29300m; 29300 to 29400m; 29400 to 29500m; 29500 to 29600m; 29600 to 29700m; 29700 to 29800m; 29800 to 29900m; 29900 to 30000m; 30000 to 30100m; 30100 to 30200m; 30200 to 30300m; 30300 to 30400m; 30400 to 30500m; 30500 to 30600m; 30600 to 30700m; 30700 to 30800m; 30800 to 30900m; 30900 to 31000m; 31000 to 31100m; 31100 to 31200m; 31200 to 31300m; 31300 to 31400m; 31400 to 31500m; 31500 to 31600m; 31600 to 31700m; 31700 to 31800m; 31800 to 31900m; 31900 to 32000m; 32000 to 32100m; 32100 to 32200m; 32200 to 32300m; 32300 to 32400m; 32400 to 32500m; 32500 to 32600m; 32600 to 32700m; 32700 to 32800m; 32800 to 32900m; 32900 to 33000m; 33000 to 33100m; 33100 to 33200m; 33200 to 33300m; 33300 to 33400m; 33400 to 33500m; 33500 to 33600m; 33600 to 33700m; 33700 to 33800m; 33800 to 33900m; 33900 to 34000m; 34000 to 34100m; 34100 to 34200m; 34200 to 34300m; 34300 to 34400m; 34400 to 34500m; 34500 to 34600m; 34600 to 34700m; 34700 to 34800m; 34800 to 34900m; 34900 to 35000m; 35000 to 35100m; 35100 to 35200m; 35200 to 35300m; 35300 to 35400m; 35400 to 35500m; 35500 to 35600m; 35600 to 35700m; 35700 to 35800m; 35800 to 35900m; 35900 to 36000m; 36000 to 36100m; 36100 to 36200m; 36200 to 36300m; 36300 to 36400m; 36400 to 36500m; 36500 to 36600m; 36600 to 36700m; 36700 to 36800m; 36800 to 36900m; 36900 to 37000m; 37000 to 37100m; 37100 to 37200m; 37200 to 37300m; 37300 to 37400m; 37400 to 37500m; 37500 to 37600m; 37600 to 37700m; 37700 to 37800m; 37800 to 37900m; 37900 to 38000m; 38000 to 38100m; 38100 to 38200m; 38200 to 38300m; 38300 to 38400m; 38400 to 38500m; 38500 to 38600m; 38600 to 38700m; 38700 to 38800m; 38800 to 38900m; 38900 to 39000m; 39000 to 39100m; 39100 to 39200m; 39200 to 39300m; 39300 to 39400m; 39400 to 39500m; 39500 to 39600m; 39600 to 39700m; 39700 to 39800m; 39800 to 39900m; 39900 to 40000m; 40000 to 40100m; 40100 to 40200m; 40200 to 40300m; 40300 to 40400m; 40400 to 40500m; 40500 to 40600m; 40600 to 40700m; 40700 to 40800m; 40800 to 40900m; 40900 to 41000m; 41000 to 41100m; 41100 to 41200m; 41200 to 41300m; 41300 to 41400m; 41400 to 41500m; 41500 to 41600m; 41600 to 41700m; 41700 to 41800m; 41800 to 41900m; 41900 to 42000m; 42000 to 42100m; 42100 to 42200m; 42200 to 42300m; 42300 to 42400m; 42400 to 42500m; 42500 to 42600m; 42600 to 42700m; 42700 to 42800m; 42800 to 42900m; 42900 to 43000m; 43000 to 43100m; 43100 to 43200m; 43200 to 43300m; 43300 to 43400m; 43400 to 43500m; 43500 to 43600m; 43600 to 43700m; 43700 to 43800m; 43800 to 43900m; 43900 to 44000m; 44000 to 44100m; 44100 to 44200m; 44200 to 44300m; 44300 to 44400m; 44400 to 44500m; 44500 to 44600m; 44600 to 44700m; 44700 to 44800m; 44800 to 44900m; 44900 to 45000m; 45000 to 45100m; 45100 to 45200m; 45200 to 45300m; 45300 to 45400m; 45400 to 45500m; 45500 to 45600m; 45600 to 45700m; 45700 to 45800m; 45800 to 45900m; 45900 to 46000m; 46000 to 46100m; 46100 to 46200m; 46200 to 46300m; 46300 to 46400m; 46400 to 46500m; 46500 to 46600m; 46600 to 46700m; 46700 to 46800m; 46800 to 46900m; 46900 to 47000m; 47000 to 47100m; 47100 to 47200m; 47200 to 47300m; 47300 to 47400m; 47400 to 47500m; 47500 to 47600m; 47600 to 47700m; 47700 to 47800m; 47800 to 47900m; 47900 to 48000m; 48000 to 48100m; 48100 to 48200m; 48200 to 48300m; 48300 to 48400m; 48400 to 48500m; 48500 to 48600m; 48600 to 48700m; 48700 to 48800m; 48800 to 48900m; 48900 to 49000m; 49000 to 49100m; 49100 to 49200m; 49200 to 49300m; 49300 to 49400m; 49400 to 49500m; 49500 to 49600m; 49600 to 49700m; 49700 to 49800m; 49800 to 49900m; 49900 to 50000m; 50000 to 50100m; 50100 to 50200m; 50200 to 50300m; 50300 to 50400m; 50400 to 50500m; 50500 to 50600m; 50600 to 50700m; 50700 to 50800m; 50800 to 50900m; 50900 to 51000m; 51000 to 51100m; 51100 to 51200m; 51200 to 51300m; 51300 to 51400m; 51400 to 51500m; 51500 to 51600m; 51600 to 51700m; 51700 to 51800m; 51800 to 51900m; 51900 to 52000m; 52000 to 52100m; 52100 to 52200m; 52200 to 52300m; 52300 to 52400m; 52400 to 52500m; 52500 to 52600m; 52600 to 52700m; 52700 to 52800m; 52800 to 52900m; 52900 to 53000m; 53000 to 53100m; 53100 to 53200m; 53200 to 53300m; 53300 to 53400m; 53400 to 53500m; 53500 to 53600m; 53600 to 53700m; 53700 to 53800m; 53800 to 53900m; 53900 to 54000m; 54000 to 54100m; 54100 to 54200m; 54200 to 54300m; 54300 to 54400m; 54400 to 54500m; 54500 to 54600m; 54600 to 54700m; 54700 to 54800m; 54800 to 54900m; 54900 to 55000m; 55000 to 55100m; 55100 to 55200m; 55200 to 55300m; 55300 to 55400m; 55400 to 55500m; 55500 to 55600m; 55600 to 55700m; 55700 to 55800m; 55800 to 55900m; 55900 to 56000m; 56000 to 56100m; 56100 to 56200m; 56200 to 56300m; 56300 to 56400m; 56400 to 56500m; 56500 to 56600m; 56600 to 56700m; 56700 to 56800m; 56800 to 56900m; 56900 to 57000m; 57000 to 57100m; 57100 to 57200m; 57200 to 57300m; 57300 to 57400m; 57400 to 57500m; 57500 to 57600m; 57600 to 57700m; 57700 to 57800m; 57800 to 57900m; 57900 to 58000m; 58000 to 58100m; 58100 to 58200m; 58200 to 58300m; 58300 to 58400m; 58400 to 58500m; 58500 to 58600m; 58600 to 58700m; 58700 to 58800m; 58800 to 58900m; 58900 to 59000m; 59000 to 59100m; 59100 to 59200m; 59200 to 59300m; 59300 to 59400m; 59400 to 59500m; 59500 to 59600m; 59600 to 59700m; 59700 to 59800m; 59800 to 59900m; 59900 to 60000m; 60000 to 60100m; 60100 to 60200m; 60200 to 60300m; 60300 to 60400m; 60400 to 60500m; 60500 to 60600m; 60600 to 60700m; 60700 to 60800m; 60800 to 60900m; 60900 to 61000m; 61000 to 61100m; 61100 to 61200m; 61200 to 61300m; 61300 to 61400m; 61400 to 61500m; 61500 to 61600m; 61600 to 61700m; 61700 to 61800m; 61800 to 61900m; 61900 to 62000m; 62000 to 62100m; 62100 to 62200m; 62200 to 62300m; 62300 to 62400m; 62400 to 62500m; 62500 to 62600m; 62600 to 62700m; 62700 to 62800m; 62800 to 62900m; 62900 to 63000m; 63000 to 63100m; 63100 to 63200m; 63200 to 63300m; 63300 to 63400m; 63400 to 63500m; 63500 to 63600m; 63600 to 63700m; 63700 to 63800m; 63800 to 63900m; 63900 to 64000m; 64000 to 64100m; 64100 to 64200m; 64200 to 64300m; 64300 to 64400m; 64400 to 64500m; 64500 to 64600m; 64600 to 64700m; 64700 to 64800m; 64800 to 64900m; 64900 to 65000m; 65000 to 65100m; 65100 to 65200m; 65200 to 65300m; 65300 to 65400m; 65400 to 65500m; 65500 to 65600m; 65600 to 65700m; 65700 to 65800m; 65800 to 65900m; 65900 to 66000m; 66000 to 66100m; 66100 to 66200m; 66200 to 66300m; 66300 to 66400m; 66400 to 66500m; 66500 to 66600m; 66600 to 66700m; 66700 to 66800m; 66800 to 66900m; 66900 to 67000m; 67000 to 67100m; 67100 to