



Ministry of Transportation and  
Infrastructure  
Geotechnical and Materials Engineering

## Southern Interior Region

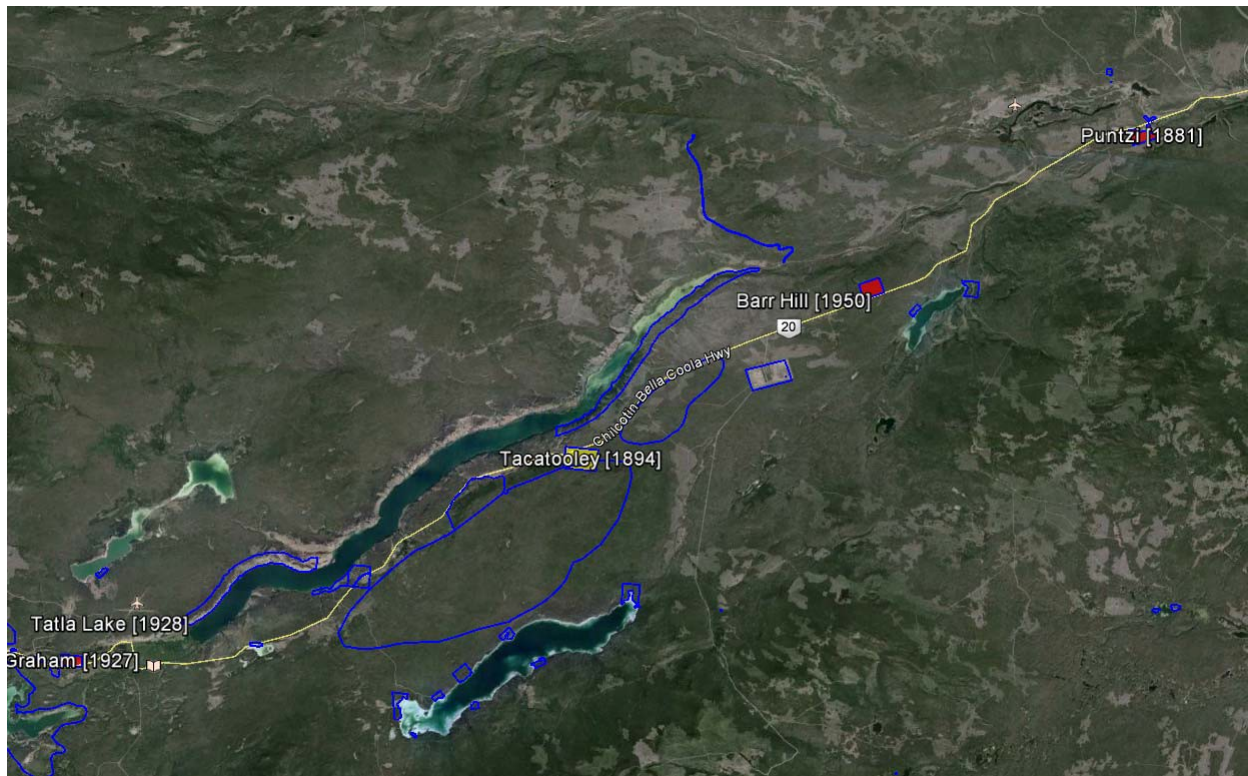
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# Puntzi Pit # 1881

## 2017 Technical Information Report

**Location:** Located approximately 47 km east of Tatla Lake on Highway 20.

**Legal Description:** That parcel or tract of land situated adjacent to DL 1844, Range 3, Cariboo District, containing 42.05 hectares, more or less. UTM Coordinates – 10U 426645 E, 5773759 N.



**Gradation:** The average gradations of the lab tested material contained within or near the suitability boundary as tested in 1988 are as follows:

| Classification:     | Average (%) | Range (%) |
|---------------------|-------------|-----------|
| Gravel (4.75-75mm)  | 74.0        | 11 - 85   |
| Sand (0.075-4.75mm) | 22.2        | 13 - 39   |
| Fines (<0.075mm)    | 2.5         | 2 - 4     |

**Test Pit Logs**

| TH / TP | DEPTH |     | SAMPLE<br>BAG No. | SOILS<br>CLASS | ESTIMATED GRADATION |    |     | ESTIMATED ROCK<br>75mm |                        |                         |           | SAND<br>TYPE<br>F M<br>C | REMARKS    |
|---------|-------|-----|-------------------|----------------|---------------------|----|-----|------------------------|------------------------|-------------------------|-----------|--------------------------|------------|
|         | FROM  | TO  |                   |                | G                   | S  | F   | MAX<br>SIZE            | 75mm<br>-<br>150m<br>m | 150m<br>m-<br>375m<br>m | 375m<br>m |                          |            |
| 88-01   | 0.0   | 0.1 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 4.7 |                   | GP             | 80                  | 18 | 2   |                        | 5                      | 5                       | 0         |                          |            |
| 88-02   | 0.0   | 0.3 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.3   | 1.1 |                   | GP             | 55                  | 41 | 4   |                        | 3                      | 1                       | 0         |                          |            |
|         | 1.1   | 4.1 |                   | SP             | 10                  | 86 | 4   |                        |                        |                         |           |                          |            |
|         |       |     |                   | SP             | 27                  | 70 | 3   |                        |                        |                         |           |                          | LAB TESTED |
| 88-03   | 0.0   | 0.1 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 0.7 |                   | SM3            | 10                  | 55 | 35  |                        |                        |                         |           |                          |            |
|         | 0.7   | 4.0 |                   | SP/SM          | 32                  | 60 | 8   |                        |                        |                         |           |                          | LAB TESTED |
| 88-04   | 0.0   | 0.1 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 0.8 |                   | SM3            | 10                  | 51 | 39  |                        |                        |                         |           |                          |            |
|         | 0.8   | 4.3 |                   | GP             | 55                  | 42 | 3   |                        | 5                      | 6                       | 1         |                          | LAB TESTED |
| 88-05   | 0.0   | 0.2 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.2   | 4.0 |                   | GP             | 89                  | 9  | 2   |                        | 5                      | 7                       | 1         |                          | LAB TESTED |
| 88-06   | 0.0   | 0.1 |                   |                |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 2.2 |                   | GP/GM          | 85                  | 9  | 6   |                        | 5                      | 9                       | 2         |                          |            |
|         | 2.2   | 3.9 |                   | GP/GM          | 70                  | 20 | 10  |                        | 5                      | 6                       | 1         |                          |            |
| 88-07   | 0.0   | 0.1 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 3.8 |                   | GP/GM          | 80                  | 14 | 6   |                        | 6                      | 10                      | 2         |                          |            |
| 88-08   | 0.0   | 0.2 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.2   | 2.0 |                   | GM2            | 60                  | 19 | 21  |                        | 5                      | 5                       | 1         |                          |            |
|         | 2.0   | 3.0 |                   | SM3            | 20                  | 49 | 31  |                        | 1                      | 0                       | 0         |                          |            |
|         | 3.0   | 4.8 |                   | GM3            | 50                  | 17 | 33  |                        | 5                      | 4                       | 0         |                          |            |
| 88-09   | 0.0   | 0.1 |                   | TS             |                     |    |     |                        |                        |                         |           |                          |            |
|         | 0.1   | 3.9 |                   | GP             | 71                  | 26 | 2   |                        | 6                      | 6                       | 1         |                          | LAB TESTED |
| 88-10   | 0.0   | 0.1 |                   | TS             |                     |    | 100 |                        |                        |                         |           |                          |            |
|         | 0.1   | 4.5 |                   | GP             | 81                  | 17 | 2   |                        | 5                      | 4                       | 0         |                          | LAB TESTED |



|       |     |     |  |       |    |    |     |  |   |   |   |    |            |
|-------|-----|-----|--|-------|----|----|-----|--|---|---|---|----|------------|
| 88-22 | 0.0 | 0.1 |  |       |    |    |     |  |   |   |   |    |            |
|       | 0.1 | 5.7 |  | GP    | 71 | 17 | 2   |  | 6 | 9 | 1 | 16 | LAB TESTED |
| 88-23 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 5.5 |  | GP    | 58 | 39 | 2   |  | 5 | 6 | 0 | 11 | LAB TESTED |
| 88-24 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 6.0 |  | GP    | 59 | 37 | 4   |  | 3 | 3 | 1 | 7  |            |
| 88-25 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 4.2 |  | GP    | 72 | 25 | 2   |  | 5 | 7 | 2 | 14 | LAB TESTED |
|       | 4.2 | 6.1 |  | GP    | 55 | 41 | 4   |  | 5 | 6 | 0 | 11 |            |
| 88-26 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 6.0 |  | GP/GM | 64 | 30 | 6   |  | 4 | 7 | 2 | 13 |            |
| 88-27 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 3.9 |  | GP    | 77 | 20 | 3   |  |   |   |   |    | LAB TESTED |
| 88-28 | 0.0 | 0.1 |  | TS    |    |    | 100 |  | 6 | 7 | 1 | 14 |            |
|       | 0.1 | 6.1 |  | GP    | 84 | 13 | 2   |  |   |   |   |    | LAB TESTED |
| 88-29 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 6.2 |  | GP/GM | 54 | 38 | 8   |  | 5 | 7 | 1 | 13 |            |
| 88-30 | 0.0 | 0.1 |  | TS    |    |    | 100 |  |   |   |   |    |            |
|       | 0.1 | 5.9 |  | GP    | 82 | 14 | 4   |  | 5 | 7 | 2 | 14 | LAB TESTED |
| 88-31 | 0.0 | 6.1 |  | GP    | 75 | 22 | 3   |  | 3 | 1 | 0 | 4  | LAB TESTED |
| 88-32 | 0.0 | 5.6 |  | GP    | 55 | 41 | 4   |  | 4 | 6 | 1 | 11 |            |
| 88-33 | 0.0 | 4.3 |  | GP/GM | 80 | 13 | 7   |  | 5 | 6 | 2 | 13 |            |

There is an estimated 13% oversize (>75mm) within the suitability boundary.

| <b>Classification:</b> | <b>Average (%)</b> | <b>Range (%)</b> |
|------------------------|--------------------|------------------|
| Boulders (>300mm)      | 2                  | 0 - 6            |
| Cobbles (150-300mm)    | 6                  | 1 - 12           |
| Cobbles (75-150mm)     | 5                  | 0 - 6            |

**Aggregate Quality:** A summary of aggregate quality tests performed on selected samples obtained from within the suitability boundaries area as follows:

| TP    | Micro-Deval<br>(%)<br>C/F | Sand<br>Equivalent<br>(%) | Bulk<br>Relative<br>Density<br>(C/F) | Absorption<br>(%)<br>(C/F) |
|-------|---------------------------|---------------------------|--------------------------------------|----------------------------|
| 88-17 |                           |                           | 2.70/2.67                            | 0.81/1.38                  |
| 88-20 |                           | 63                        |                                      |                            |
| 88-22 |                           | 68                        |                                      |                            |
| 88-28 | 4.8/10.1                  |                           | 2.72/2.67                            | 0.66/1.38                  |
| 88-30 |                           | 64                        |                                      |                            |
| 88-31 |                           | 66                        |                                      |                            |

**Granular Volume:**

Estimated volume = 3.0 m x 25,000 m<sup>2</sup> = 75,000 m<sup>3</sup>

The estimated volume has been calculated by multiplying the developed suitability area to an average depth of 3 meters.

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**Pit Development and Recommendations:**

- The mining area will be developed by the Ministry of Transportation and Infrastructure. Any additional development will be the responsibility of the contractor and shall be completed as per the pit development plan or as directed by the Ministry Representative.
- Relocation of some small stockpiles may be necessary to facilitate the extraction of gravel and stockpiling.
- The crusher should be set up at the base of the slope near Test Pit 88-13 with mining in a westerly direction.
- Processed aggregate may be stockpiled on the pit floor east of the crusher.
- At the completion of mining, active pit faces shall be sloped to a minimum of 1 ½:1 with granular material. **Reject material from aggregate production is not to be used to slope or infill pit faces without the prior approval of the Ministry Gravel Resource Manager.**