



**Ministry of Transportation and
Infrastructure**

Geotechnical and Materials Engineering

Southern Interior Region

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Campbell Pit No. 0298

Area B – 2018 Technical Information Report

Location: The pit is located approximately 19 km east of Kamloops via the Trans-Canada Highway then approximately 2.75 km south on Bregoliss Road.



Legal Description: Ministry of Transportation and Infrastructure Section 16 Map Reserve legally described as those portions of Sections 30 and 31, Township 19, Range 15, West of the Sixth Meridian, Kamloops Division of Yale District, containing 146.00 hectares, more or less. UTM coordinates are Grid Zone 10, 5,613,500 Northing, 707,500 Easting.

Gradation: The average and range of laboratory samples as well as oversize rock field estimates for material within Suitability Area B from the 1998 testing program are as follows:
(NOTE: fine material overlying sands and gravel have not been included.)

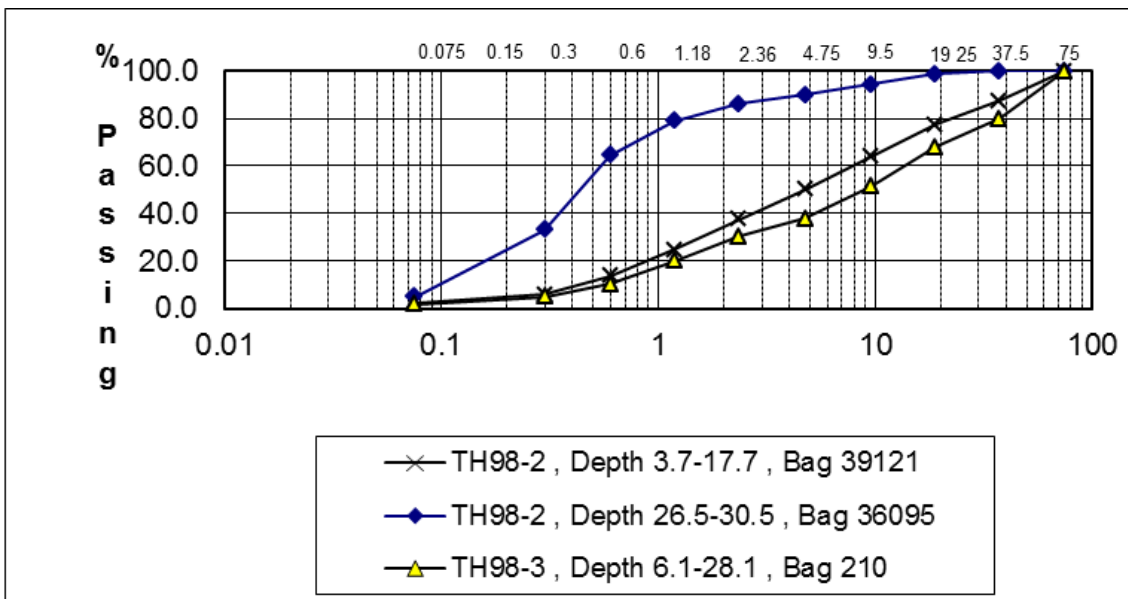
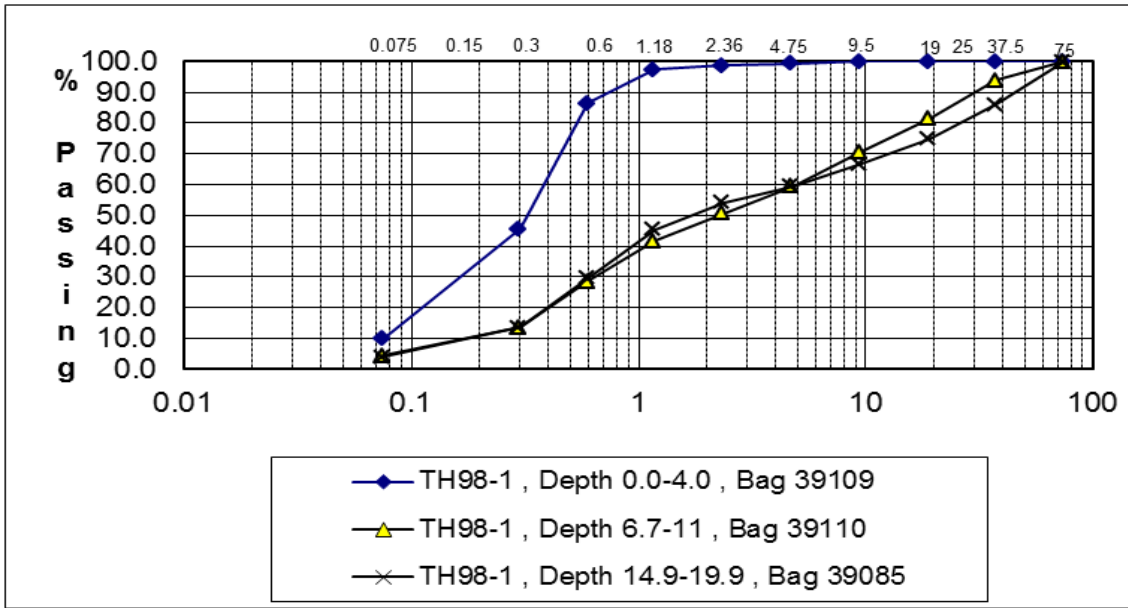
Laboratory Samples

Classification:	Average (%)	Range (%)
Gravel (4.75-75mm)	40	25 – 65
Sand (0.075-4.75mm)	56	32 – 92
Fines (<0.075mm)	4	2 – 8

Oversize Field Estimates:

The maximum size rock observed was 200 mm. There is approximately 5% material greater than 75 mm.

Aggregate Gradation Charts:



Test Hole Logs are located in the appendix.

Aggregate Quality: A summary of historical aggregate quality tests performed on pit run samples from the tested area are as follows:

TEST	AVERAGE	RANGE
Degradation	70.8	59.4-86.6
Sand Equivalent	59.9	59.7-65.9
Magnesium Sulfate (Coarse)	4.95	3.94-5.97
Magnesium Sulfate (Fine)	11.65	11.42-11.87
Specific Gravity (Coarse)	2.737	2.718-2.744
Specific Gravity (Fine)	2.668	2.585-2.699
Absorption (Coarse)	0.71	0.55-0.86
Absorption (Fine)	1.10	0.91-1.21

Petrographic Analysis:

Material contained within Campbell Pit is comprised of approximately 35% well rounded, slightly to moderately weathered granitics and 65% sub-rounded to sub angular volcanics.

Granular Volume:

Estimated Volume 120,000 m³

The Estimated Volume has been determined by mining the suitability area (20,000 m²) to an average depth of 6 meters.

Pit Development and Recommendations:

- The crusher is to set up on the pit floor south east of TP 98-01 with mining proceeding in a southerly direction.
- Existing piles of aggregate cannot be utilized during production (noted on Pit Development Plan).
- The pit has been developed previously by the Ministry. If additional development is required it shall conform to the requirements of the Pit Development Plan or be completed as directed by the Ministry Representative.
- Due to the high relief of the deposit, it will be necessary to utilize a bulldozer to push material to the production area in order to avoid an excessively high vertical pit face.
- At the completion of mining, all slopes shall be trimmed to a consistent, minimum slope of 1 ½:1 with native granular material.

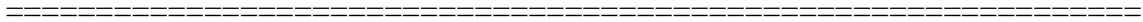
- If surplus unsuitable material from the Cherry Creek project site is off-sited to Campbell pit it must adhere to any Ministry of Environment stipulations regarding material movement and storage. Any material disposed in the pit must be placed at a 2:1 slope and seeded.
- **All reject materials resulting from aggregate production are to be placed in separate stockpiles free from deleterious material and in an easily accessible location. No stockpiling against the pit face is permitted without the permission from the Aggregate Resource Manager.**

Photographs:



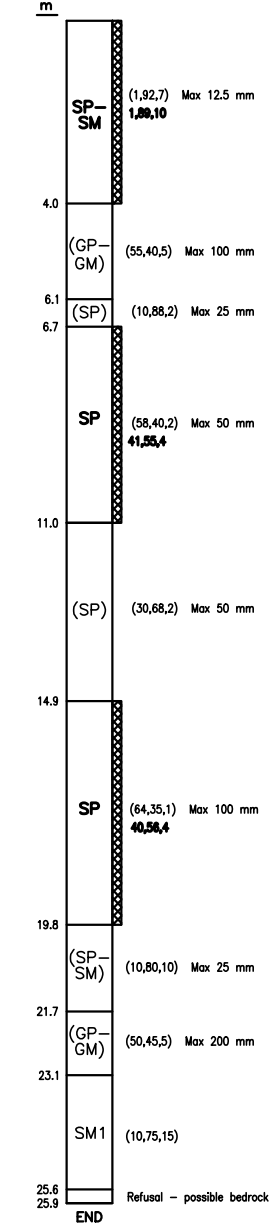
Crusher and stockpile area in foreground, mining area in background.

Steven Lee
Senior Aggregate Resource Specialist

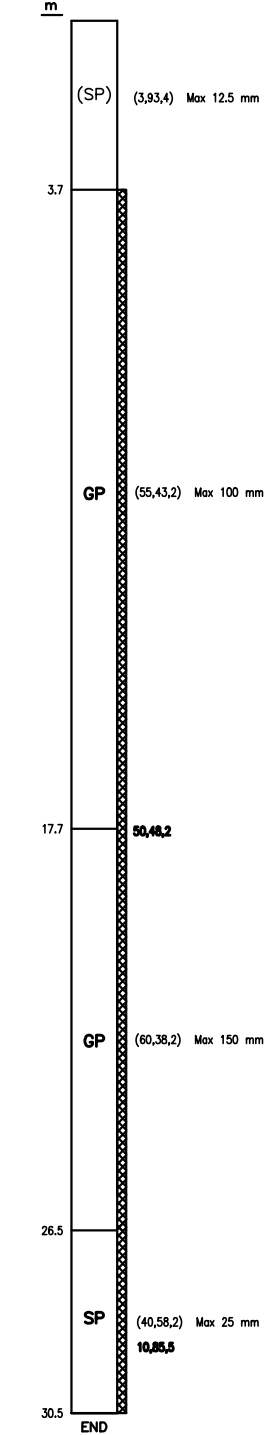


APPENDIX

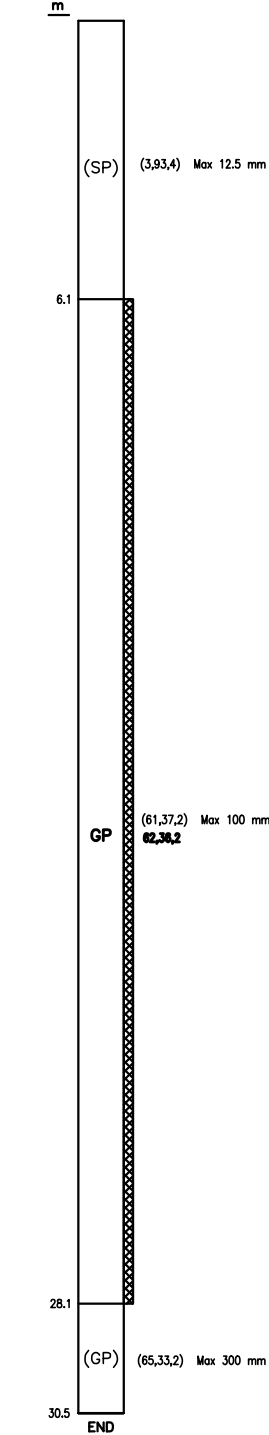
TH 98-01



TH 98-02



TH 98-03



KEY

- INFORMATION IN BRACKETS INDICATE FIELD ESTIMATES
 - ESTIMATED OVERSIZE (O/S) IS SEPARATED INTO THREE CATEGORIES:
75-150mm, 150-375mm, >375mm
 - LABORATORY SIEVE ANALYSIS: 50,48,2
 - SAMPLED SOIL ZONE
 - DEPTH IN METERS
- gravel — sand — fines



Date	REVISIONS Description	Initial

REVIEWED BY:	Date
A.T.A.	
APPROVED BY:	
G.R.M.	

SCALE: 1:100
DRAWN: CNL
DATE: FEB'02
AutoCAD: F40298

CAMPBELL PIT NO. 0298
1998 BECKER TEST HOLE LOGS
FILE NO. 50-15-0298