

Ministry of Transportation and Infrastructure

Geotechnical and Materials Engineering

Southern Interior Region

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Carver Road Quarry No. 2834

2018 Technical Information Report

Location: Carver Road Quarry is located 17.4km east of Enderby, BC, on the north side of Enderby Mabel Lake Road at the junction with Carver Road.



<u>Legal Description:</u> Carver Road Quarry is legally described as That part of Section 28, Township 18, Range 7, West of the Sixth Meridian, Kamloops Division of Yale District, containing 2.2 hectares, more or less. UTM coordinates are 11U, 364612m E, 5601654m N.

Summary of Overburden Testing Logs:

	AGGREGATE LOG													
PROJE	CT:		Carv		SAMPLED BY:				Samantha Kinniburgh					
PIT #:								METHOD:				Excavator		
		Okanagan Shuswap						DATE:				October 29th 2018		
				,		-		-						
TEST PIT	DEPTH		SAMPLE	SOILS	ESTIMATED GRADATION			ESTIMATED ROCK 75mm				SAND TYPE	REMARKS	
NO.	FROM	TO	BAG NO.	CLASS	G	S	F	MAX SIZE	75mm - 150mm	150mm 375mm	>375m m	F M C	Lab Sieve	
	0	0.15		ОВ									Sandy to bedrock	
18-01	0.15	0.6		SP										
10-01	0.6			BR										
	0	0.0											Running east rock to west till-like	
18-02	0.2	0.2 1.5		OB SM		·	ļ						material at 1.5m	
~	1.5	!		BR/T	~~~~			***********						
}-							ļ							
	0	0.15		ОВ									Silty fines with some rock	
18-03	0.15	1.1		SM										
10-03	1.1			BR/T										
· -	0	0.1		OB			ļ						Sandy with some fines	
18-04	0.1	1.5		SM		ļ	ļ		ļ					
ŀ	1.5			BR/T				•						
	0	0.2		ОВ									Packed silts and clays, some rock	
	0.2	1.2		ML				•				***********	and sand	
18-05	1.2			BR/T										
~			•••••	•••••					••••					
	0	0.1		ОВ									Clays to 1.1m then fines for another 1m	
18-06	0.1	1.1		ML		ļ	ļ							
_	1.1	2.2		SM		ļ	ļ		ļ					
	2.2			BR/T		<u> </u>								
ļ-	0	0.2		OB		ļ	ļ						Clays, rock and fines to 1.3m	
18-07	0.2 1.3	1.3		SM1 BR/T		ļ	ļ		ļ					
				Dr(/ I		ļ								
	0	0.2		ОВ									Clay and till with some bedrock	
·	0.2	1		ML		l	ļ	†	·····				fragments	
18-08	1			BR/T		·····	ļ	†	·					
~				**********										

AGGREGATE LOG														
PROJE	ECT:	Carver Quarry						S	AMP	LED	BY:	Samantha Kinniburgh		
PIT#:		2834						METHOD:				Excavator		
DISTRICT:		Okanagan Shuswap						DATE:				October 29th 2018		
TEST PIT NO.	DEI FROM	РТН ТО	SAMPLE BAG NO.	SOILS CLASS	ESTIMATED GRADATION G S F		ESTIMATED ROCK 75mm MAX SIZE 75mm - 150mm 150mm 375mm m			>375m	SAND TYPE F M C	REMARKS Lab Sieve		
18-09	0 0.15	0.15 1.1		OB SM	~~~								Clays, fragment rock under OB	

Metal Leaching and Acid Rock Drainage

2017

Based on the Metal Leaching and Acid Rock Draining (ML/ARD) Assessment (see Appendix – Carver Quarry ML/ARD Assessment) and the guidelines outlined in the Ministry of Transportation and Infrastructure's Technical Circular (T-04/13), the rock material at Carver Quarry presents a low risk of acid rock drainage or metal leaching, however once 5,000m³ of rock is produced from this quarry, the geochemistry and geology should be reassessed by a Qualified Professional to confirm the results of the ML/ARD Assessment are still valid.

Pit Development and Recommendations:

- The quarry shall be worked in accordance with Section 204 of the MoTI Standard Specifications for Highway Construction.
- The Ministry of Transportation and Infrastructure has developed the immediate mining and stockpile area of Carver Road Quarry; however, it may require additional stripping prior to blasting. Any additional development work will be the responsibility of the contractor and shall be completed in accordance with the pit development plan or as directed by the Ministry Representative.
- If more than 5,000m³ of rock is blasted from the upper rock cut into the face, blasting must be stopped and a secondary ML/ARD assessment is recommended to be done.
- Overburden depths increase as you move towards the north (TP 18-02, 18-04, 18-06).
- Processed rock may be stockpiled west of the excavation area, where space permits and where it will not impede future blasting and rock extraction.
- At the completion of mining, overburden must be stripped a minimum of 2 metres back from active quarry faces.
- 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 quarry face is permitted without the permission from the Aggregate Resource Manager.

Site Photographs:



Looking west from side of quarry face, September 2018.



Looking east from in front of quarry face, September 2018.



Looking north towards quarry face, September 2018.



Looking southwest from top of quarry face to base of face, Enderby Mabel Lake Road. October 2018.

Samantha Kinniburgh Senior Aggregate Resource Specialist