

## Source Detail

AIMS

Selection Criteria: Othello (0235)

### Othello

<b>Source ID</b>	0235	<b>File Num</b>	39100-20-Othello	<b>UTM Zone</b>	10
<b>Type</b>	Gravel Pit	<b>Service Area</b>	7: Fraser Valley	<b>UTM Easting</b>	618000
<b>Licensed</b>	Yes	<b>Tenure Status</b>	Section 16	<b>UTM Northing</b>	5471000
<b>Hectares</b>	40	<b>Dev Status</b>	Active	<b>NTS Map Num</b>	92H/6
<b>Location</b>	4.0km East of Hope, on and south of Othello Road. Access from Hwy 5 Exit 183 Othello Road then 4.7 km west along Othello Road.				
<b>Comments</b>	Phase 1 development to be depleted prior to development of Phase 2. Frequency of Ministry of Energy and Mines inspections: 2010, 2014 Recommend extension of reserve south to include existing pit operations and quarry potential. 185 pieces of barrier are stockpiled above the SE pit face of Area A.				

### Geotech Information (by Source Area)

<b>A</b>	<b>Gravel</b>	57	<b>Degradation</b>	67	<b>Microdev - Coarse</b>	8	<b>Spec. Gravity - Coarse</b>	2.583
	<b>Sand</b>	41	<b>Sand Equiv</b>	82	<b>Microdev - Fine</b>	14	<b>Spec. Gravity - Fine</b>	2.577
	<b>Fines</b>	2	<b>MgSO4 - Coarse</b>	4	<b>Microdev - Avg</b>		<b>Absorption - Coarse</b>	1.1
	<b>Oversize</b>	6	<b>MgSO4 - Fine</b>	8	<b>Petrographic Num</b>		<b>Absorption - Fine</b>	1.4
<b>B</b>	<b>Gravel</b>	57	<b>Degradation</b>		<b>Microdev - Coarse</b>	9	<b>Spec. Gravity - Coarse</b>	2.606
	<b>Sand</b>	40	<b>Sand Equiv</b>	79	<b>Microdev - Fine</b>	10	<b>Spec. Gravity - Fine</b>	2.608
	<b>Fines</b>	3	<b>MgSO4 - Coarse</b>	10	<b>Microdev - Avg</b>		<b>Absorption - Coarse</b>	1.0
	<b>Oversize</b>	8	<b>MgSO4 - Fine</b>	14	<b>Petrographic Num</b>		<b>Absorption - Fine</b>	1.1
<b>C</b>	<b>Gravel</b>	62	<b>Degradation</b>	0	<b>Microdev - Coarse</b>		<b>Spec. Gravity - Coarse</b>	
	<b>Sand</b>	28	<b>Sand Equiv</b>	0	<b>Microdev - Fine</b>		<b>Spec. Gravity - Fine</b>	
	<b>Fines</b>	10	<b>MgSO4 - Coarse</b>	0	<b>Microdev - Avg</b>		<b>Absorption - Coarse</b>	
	<b>Oversize</b>	17	<b>MgSO4 - Fine</b>	0	<b>Petrographic Num</b>		<b>Absorption - Fine</b>	
<b>D</b>	<b>Gravel</b>	0	<b>Degradation</b>	0	<b>Microdev - Coarse</b>		<b>Spec. Gravity - Coarse</b>	
	<b>Sand</b>	0	<b>Sand Equiv</b>	0	<b>Microdev - Fine</b>		<b>Spec. Gravity - Fine</b>	
	<b>Fines</b>	0	<b>MgSO4 - Coarse</b>	0	<b>Microdev - Avg</b>		<b>Absorption - Coarse</b>	
	<b>Oversize</b>	0	<b>MgSO4 - Fine</b>	0	<b>Petrographic Num</b>		<b>Absorption - Fine</b>	

### Legal Land Description

	Description
<b>PIN</b>	LEGAL: Portion of LS2, Sec13, LS15, Sec12, & W1/2 of LS16, Sec12, TP5, R26, W6M
<b>File Num</b>	0311777
<b>Reserve Num</b>	71316
<b>Property File</b>	R2716
<b>PIN</b>	Part of Legal Subdivision 2, Section 13, Township 5, Range 26, West of the Sixth Meridian, Yale Division of Yale District, containing 9.15 ha.
<b>File Num</b>	0248395
<b>Reserve Num</b>	R132015
<b>Property File</b>	R962
	Expires June 14, 2023

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**Othello****Development Information**

<b>Pit Dev Plan Month/Year</b>	Jan 2018	<b>Dev Comments</b>	Phase 1 development area as shown on the plan is to be utilized first (Area A).
<b>Update Required</b>	No		Primary crusher required for all projects.
<b>Last Evaluated Month/Year</b>	Mar 2014		Selective mining and screening may be required for some products
			Pit floor clean up and prep required for Area B (Mar 22, 2010)
			Steel casing was unable to be retrieved and left behind in TH14-4 roughly between elevations 222 m and 234 m on March 19, 2014.
		<b>Dev History</b>	Testing and use dates back to 1979 with favourable use as Base Coarse, SGSB and Asphalt mixes.
		<b>Constraints</b>	Park/hiking trails skirt pit area and will need to be accommodated in some fashion. Notification of local residents is required prior to activation. Sue VandeVelde-Savola (kw'o:kw'e:hala eco retreat B&B) (604) 869-3799, sue@eco-retreat.com
		<b>FN Consult</b>	No archaeological sites were found in the main pit area, see AIA report on findings in the other two Othello properties.

**Material Quantities**

Area	Proven	Potential	Approved Usage
A	532,000	2,804,000	25WGB, 50WGB, 75WGB, MAMA, SGSB
B		906,000	25WGB, 50WGB, MAMA, SGSB
C	50,000		25HFS, MAMA, PIT
D		100,000	

**Current Aggregate Inventory**

Material		Volume
PIT	pit-run granular aggregate	-88,981
RJS	reject sand	15,000

**Exploration History**

Month/Year	Completed by	Details
Oct 1990	MoT	28 test pits where excavated to an average depth of 5 metres
Oct 1997	MoT	16 test pits where excavated to an average depth of 5 metres in order to expand pit to the west.
Nov 2009	MoT	35 test pits were completed to an average depth of 6.0 metres
Dec 2013	MoT	12 test pits were excavated to a depth range of 4.5 to 6.0 m.
Mar 2014	MoT	4 Sonic drill holes were completed. Depths from TH14-1 to TH14-4 are as follows: 26 m, 35 m, 20 m, and 20 m.

**Site Surveys**

Month/Year	Type
Jan 2010	GPS
Aug 2012	DEM (ortho)
May 2017	DEM (ortho)
Mar 2003	DEM (ortho)

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**Othello****Summary Information**

<b>Comments</b>	Phase 1 development to be depleted prior to development of Phase 2. Frequency of Ministry of Energy and Mines inspections: 2010, 2014 Recommend extension of reserve south to include existing pit operations and quarry potential. 185 pieces of barrier are stockpiled above the SE pit face of Area A.
<b>Site Reclamation</b>	Topsoil and overburden should be stockpiled separately and seeded to prevent erosion, these stockpiles are to be used for final pit reclamation. All interim sloping is to be left at 1 1/2H to 1V. Final sloping shall be 2H to 1V All reclamation works shall be in accordance with Ministry of Mines regulations and MoT Reclamation and Environmental Protection Handbook for Sand, Gravel and Quarry Operations in British Columbia.
<b>Geology/ Geomorphology</b>	Is part of a major Glacial outwash deposit and consists of interbedded cobble, gravels, sands and silts