



## List of Sites in District 9

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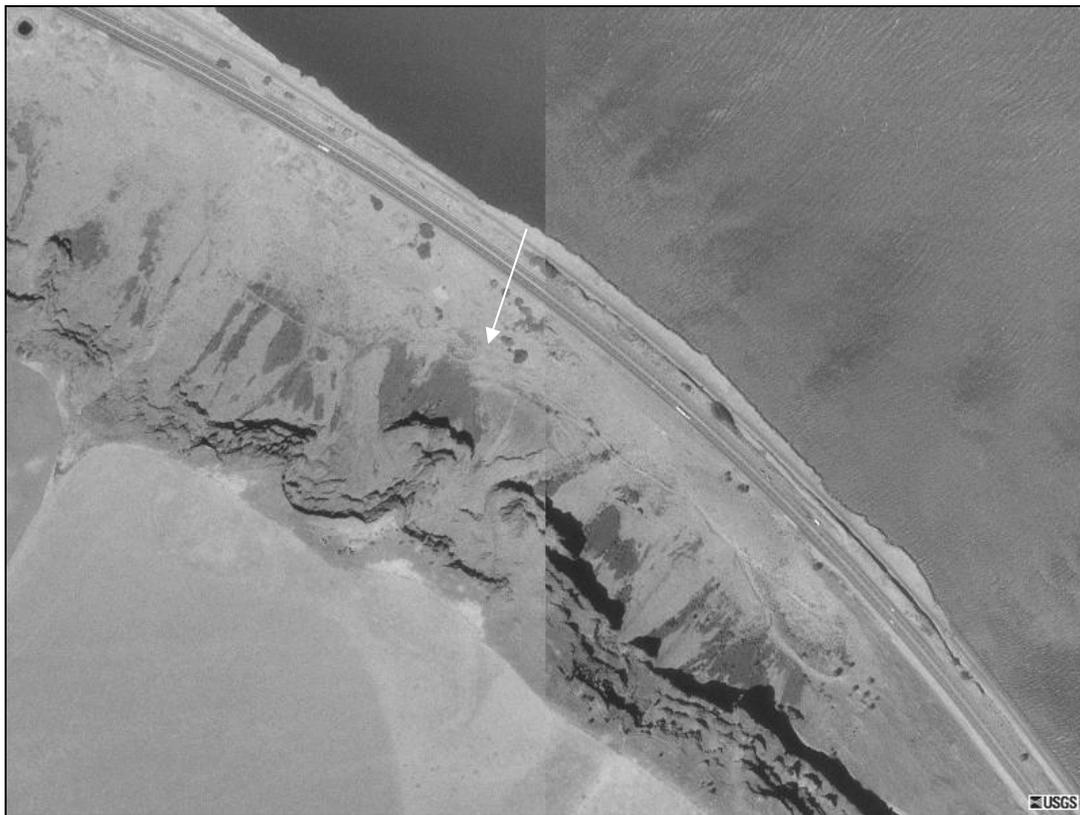
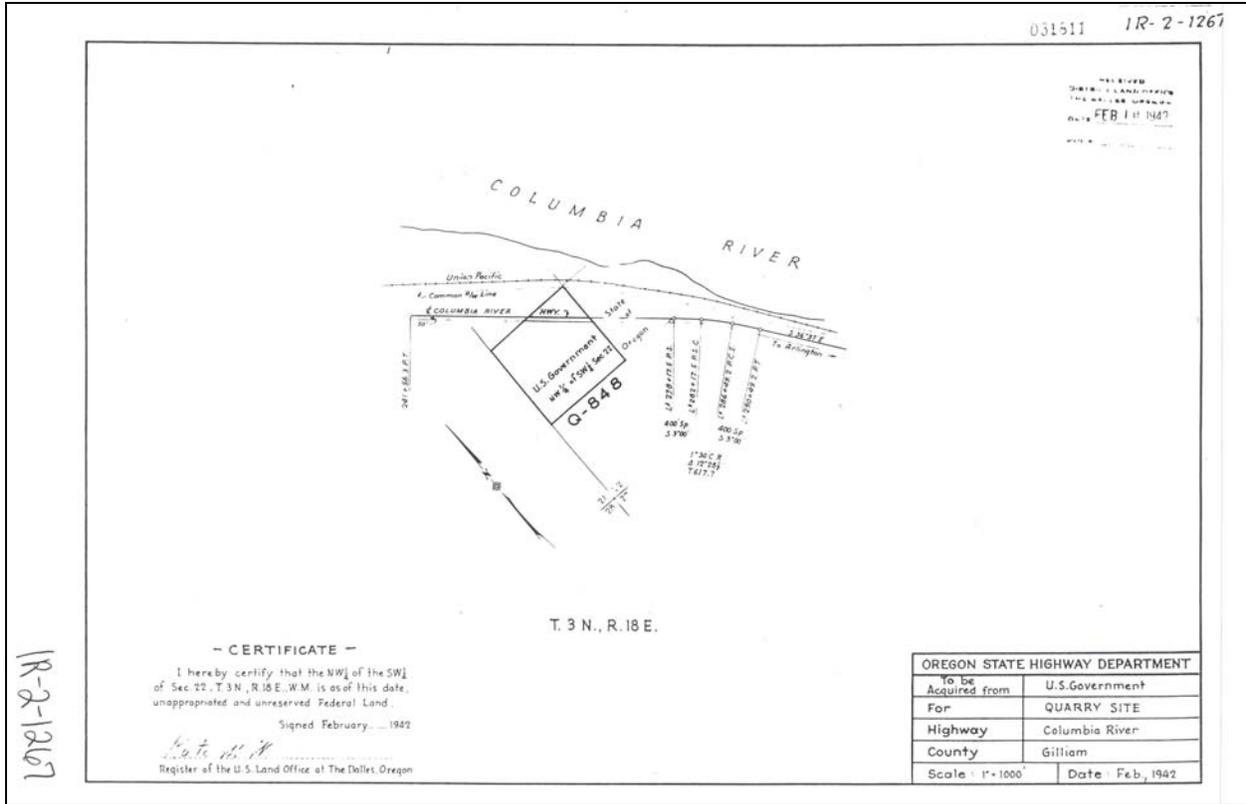
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County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	118.1	03N	18.0E	22
File ID		Source #	Date Visited	Map #			Type of Site		
10139		11-001-4	7/21/1999	1R-2-1267			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°43'40.73000"	120°33'26.83000"	82	40	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Fresh			Variable		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	120					
Potentially Significant Site	Why	Open/Closed		Direction					
No	USA Ground	Closed		To the north across I-84 is the Columbia River.					
Adjacent Land Use									
Open space									
Remarks									
This site is along Interstate 84 in the Columbia River Gorge but out of the Scenic Gorge Commission area. The relief is very steep to vertical with a large talus slope along the property. There is no screening from the highway, with no apparent easement to this site. The mile point is suspect and would need to be re-evaluated. There is some past disturbance along the base of the talus slope here. There would be plenty of room to work here, between I-84 and the cliffs. This is leased property from the USA. There could be a large reserve amount of aggregate at this location. A complete site plan would need to be developed at this site and other sites along I-84 in the Gorge Area.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.88	21.8							
Material Use									
BASEAG (1957)									

SW



Looking to the southwest at the talus slope and the gorge cliffs along Interstate 84.



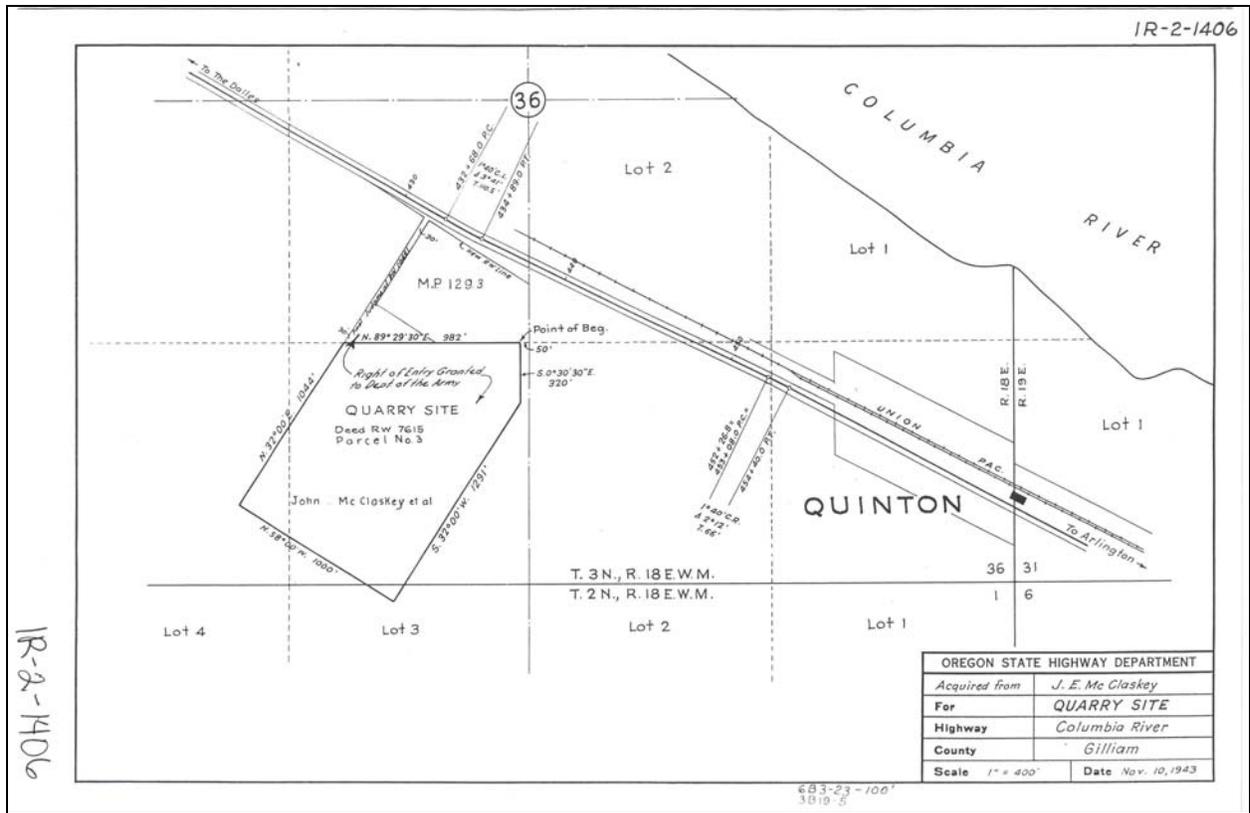
Aerial view of the raw land site within the gorge. The arrow points to the past disturbance.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	121.1	03N	18.0E	36
File ID		Source #	Date Visited	Map #			Type of Site		
10306		11-002-4	7/21/1999	1R-2-1406			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'44.05000"	120°30'50.58000"	122	31.12	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Fresh			Variable		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	120					
Potentially Significant Site	Why	Open/Closed		Direction					
No	NA	Closed		To the north across I-84 is the Columbia River.					
Adjacent Land Use									
Open space									
Remarks									
This site is along Interstate 84 in the Columbia River Gorge but out of the Scenic Gorge Commission area. The relief is very steep to vertical with a large talus slope along the property. There is no screening from the highway, with no apparent easement to this site. The mile point is suspect and would need to be re-evaluated. There is limited room to work along the highway at this location. This property is leased from the USA. There is potential of a large reserve amount of aggregate at this location. A complete site plan would need to be developed at this and other sites along I-84 in the gorge.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
		15.7			18.3	.8			
Material Use									
(1968)									

SE



Looking to the southeast along I-84 at the location of the aggregate site.



Aerial view of the site along I-84.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	123	02N	19.0E	06
File ID		Source #	Date Visited	Map #			Type of Site		
Q0518		11-003-4	7/21/1999	1R-1-1720			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'11.29137"	120°29'18.74999"	105.227	8	<4		11-0051			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Olive Black (5Y 2/1)		Slight to Moderate			Massive to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	183	40,000	98,820			
Potentially Significant Site	Why		Open/Closed	Direction					
No	This site is almost depleted.		Closed	To the north across I-84 is the Columbia River.					
Adjacent Land Use									
Open space/Ranch to the south about 1000 meters.									
Remarks									
This site is south of I-84. The material here at this location is a fine-grain basalt. There is little to no screening from the interstate. You would need to drill and blast with minor amounts of ripping. There is plenty of room to work with little to no overburden. A major portion of this site is dedicated to a stock pile site and bone yard. The county road above this site restricts expanding the pit to the south. You could lower the pit floor about 20 to 30 feet to acquire more aggregate. This is USA ground. There is no gate to this site and the public is using it for a dumping ground.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.660	2.76	20.8	3	.6			22.3	.4	
Material Use									
AC (1990)									

SE

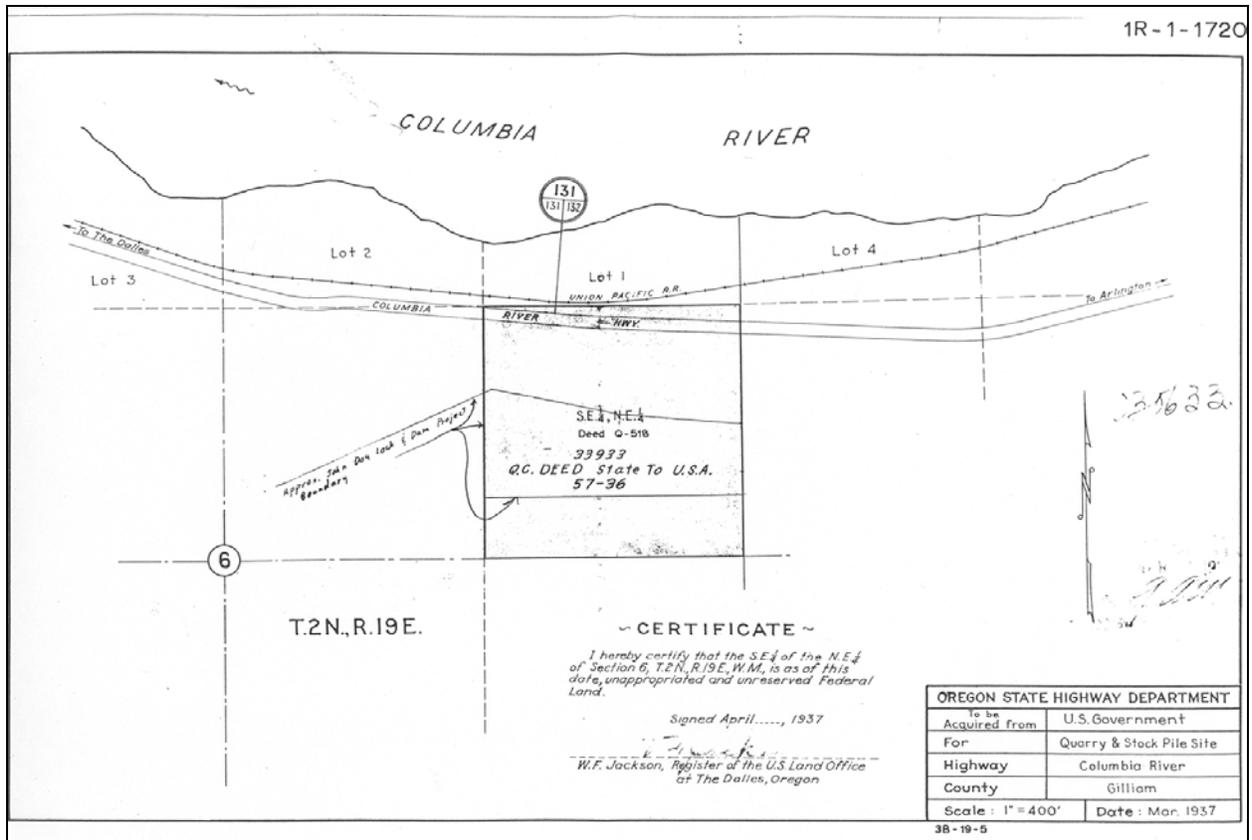
W



Panoramic view of the upper pit.



Close-up of the fracture pattern with the 4 lb. maul for scale.



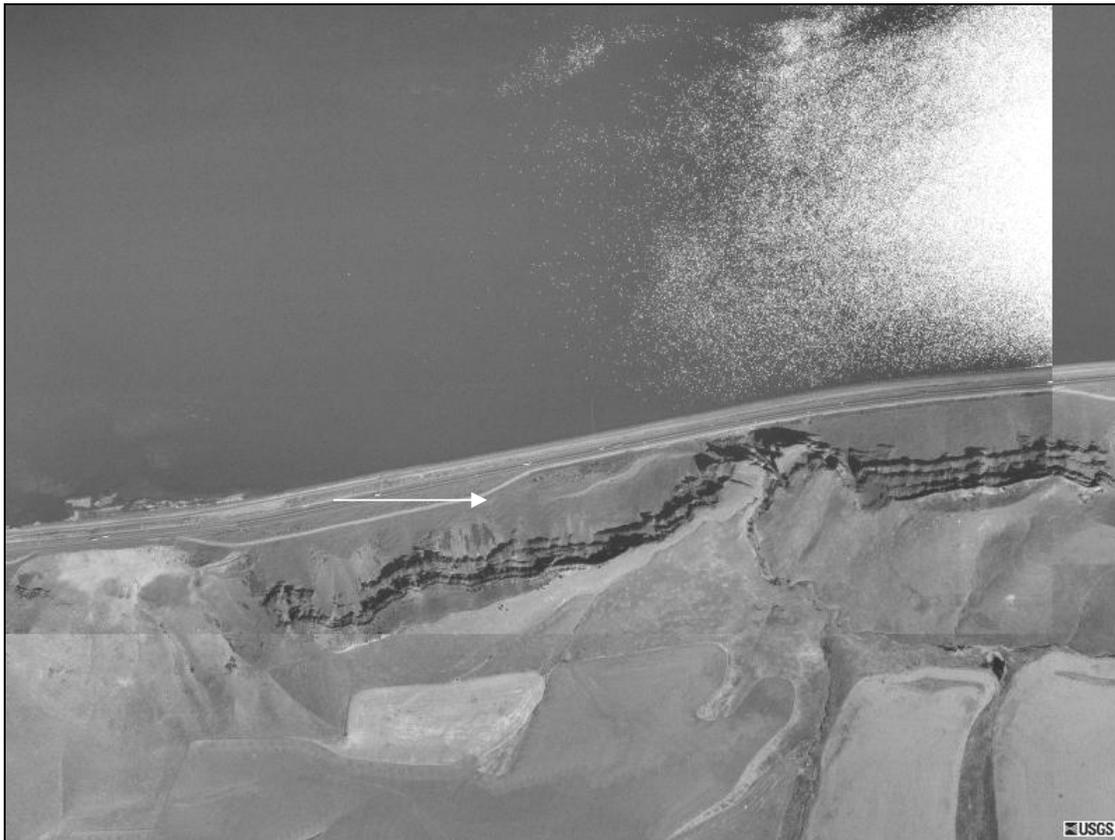
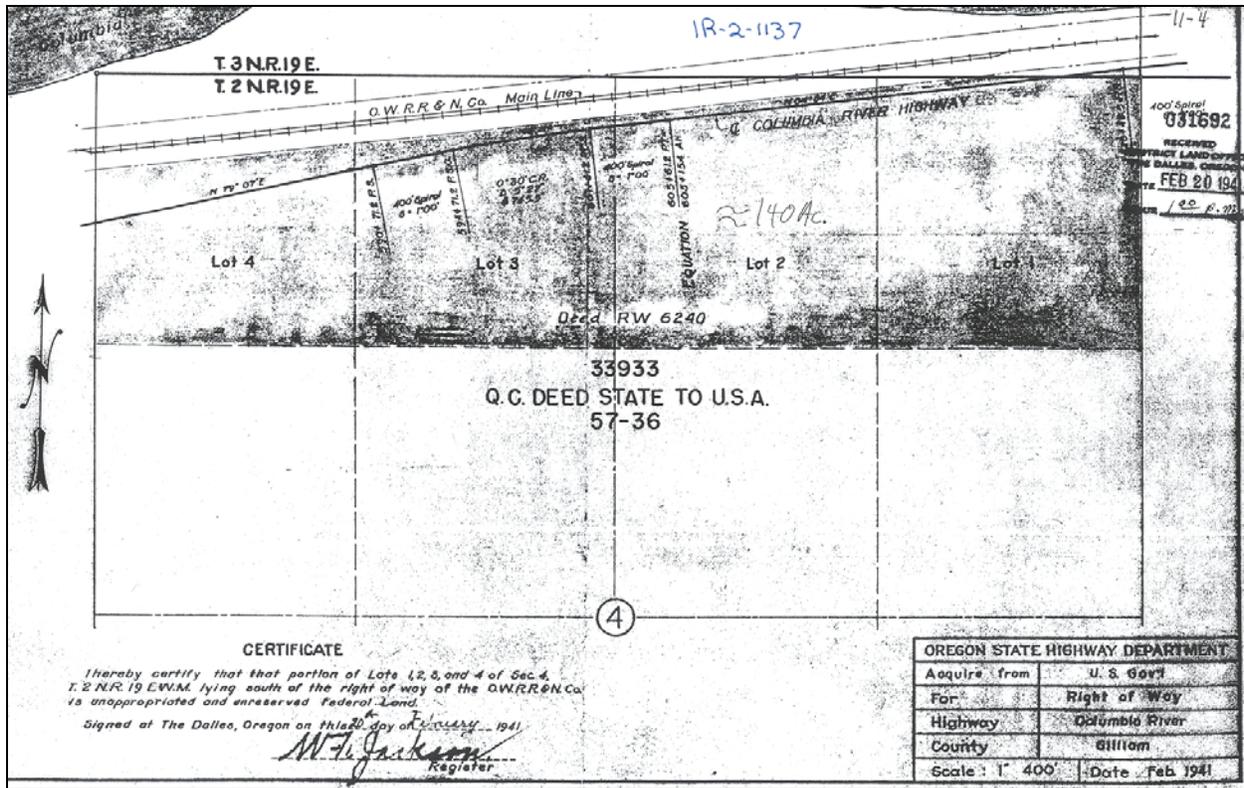
Aerial view of the quarry site along Interstate 84.  
The arrow points to the county road just above the pit.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	125.5	02N	19.0E	04
File ID		Source #	Date Visited	Map #			Type of Site		
09032		11-004-4	7/21/1999	1R-2-1137			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'22.06000"	120°27'02.21000"	122	140	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Fresh			Variable		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	120					
Potentially Significant Site	Why	Open/Closed		Direction					
No	USA Ground	Closed		To the north across I-84 is the Columbia River.					
Adjacent Land Use									
Open space									
Remarks									
This site is along Interstate 84 in the gorge but out of the gorge commission area. The relief is very steep to vertical with a large talus slope along the property. There is no screening from the interstate, with no apparent easement to this site. The mile point is suspect and would need to be re-evaluated. There is no room to work here between the interstate and the cliffs. This property is leased from the USA. There is potential of a large reserve amount of aggregate at this location. A complete site plan would need to be developed at this and other sites along I-84 in the gorge.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

E



Looking east along I-84 at the raw land site.

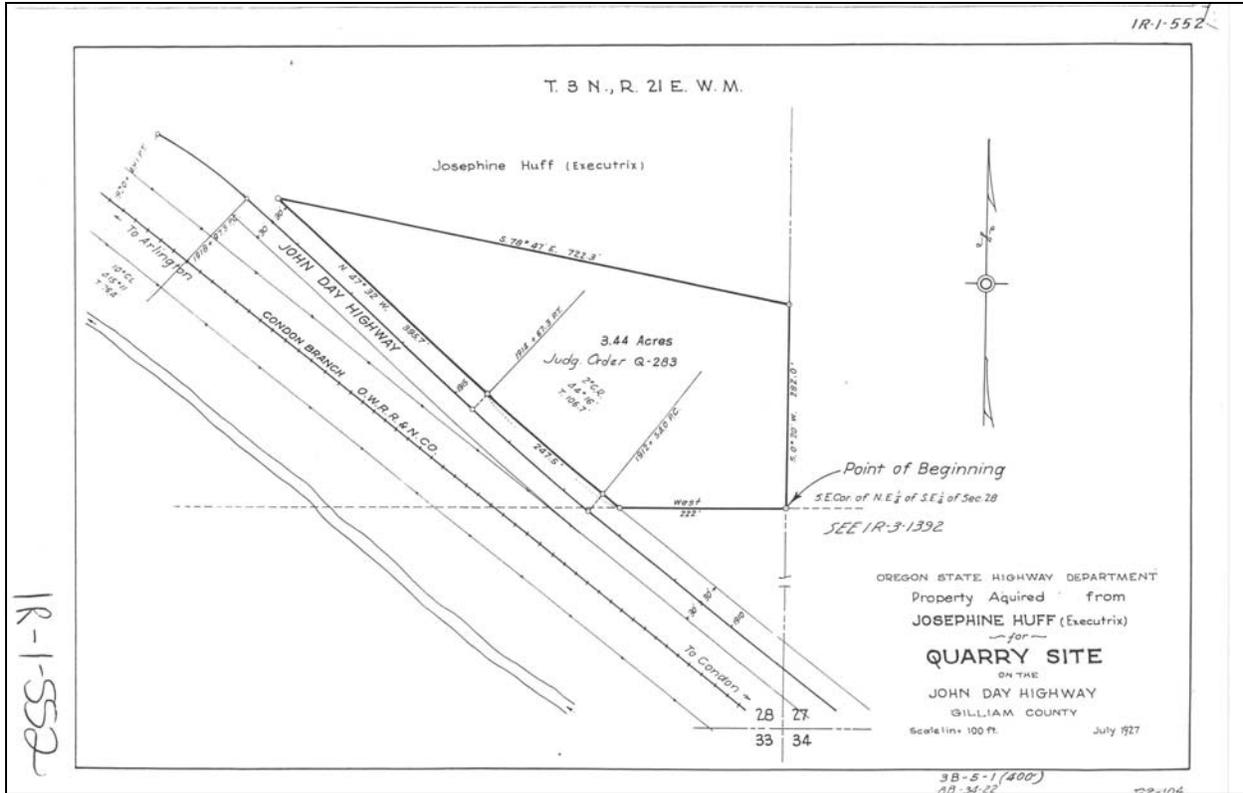


Aerial view of the raw land site along Interstate 84.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	1.3	03N	21.0E	28
File ID		Source #	Date Visited	Map #			Type of Site		
Q0283		11-009-4	7/21/1999	1R-1-552			Borrow		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°42'33.68000"	120°11'15.06000"	132	3.44	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Volcanic Gravel	Ts	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Poor			NA	120					
Potentially Significant Site	Why	Open/Closed	Direction						
No	Too small	Closed	China Creek is to the southwest across Highway 19 approximately 100 meters.						
Adjacent Land Use									
In the town of Arlington/Residential/Commercial									
Remarks									
This site is composed of an unconsolidated alluvial deposit. This would consist of a heterogeneous mix of volcanic gravel and ash/silt/caliche. There is no screening at all, and no room to work here at this location. The terrain is gradual, about 5 degrees. There is fencing here that appears to be on the property. There was a property dispute in the past but I believe it has been straightened out. A truck turn-out is now in place here at this location. There is a Maintenance Yard within 200 meters of this site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.75	16.8							
Material Use									
BASEAG (1940)									



Looking east at the small site along Highway 19.  
The arrow points to the road going to the Maintenance yard.

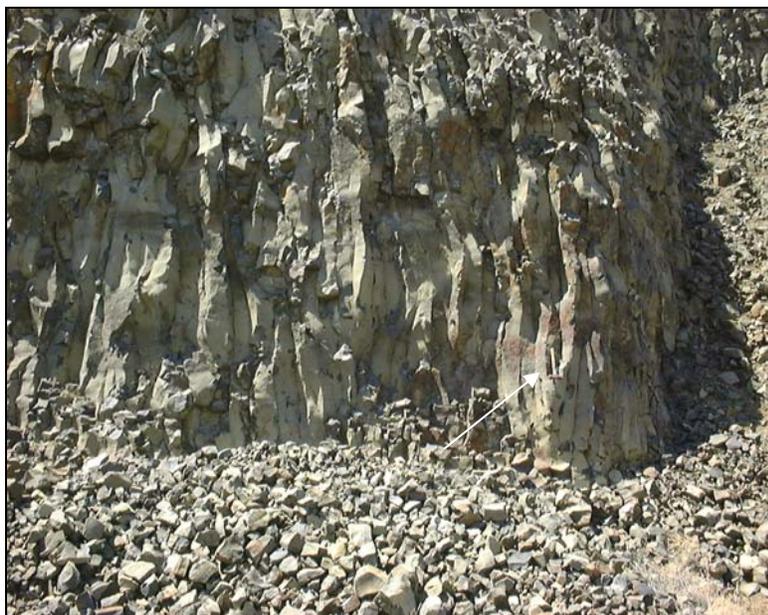


Aerial view of the small borrow site.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	2.1	03N	21.0E	34
File ID		Source #	Date Visited	Map #			Type of Site		
49499, 00693		11-010-4	7/21/1999	1R-1-1250			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'33.93457"	120°10'47.87173"	210.851	12.84	<2 acres		11-0007			
Comments									
GPS acquired in the pit									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcs	Medium Dark Grey (N4)		Fresh			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Very Good to Good			R4	183	200,000	494,100			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Good quality/quantity rock, close to Highway 19.			Closed	NA				
Adjacent Land Use									
Open space/One residence about 800 meters to the northeast.									
Remarks									
This site is adjacent to the northwest of Rattlesnake County Road. The rock is a fine-grain basalt. There is good size dice rock to crush from this location. There is no screening from the county road and there is limited room to work here. The top 5 feet of this exposure is very vesicular and would be of fair quality. You can get a small percentage of rip rap from this site. This site is not fenced.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.770	2.79	14.7	3.3	.8			10.8	.1	
Material Use									
AC Base (1992)									

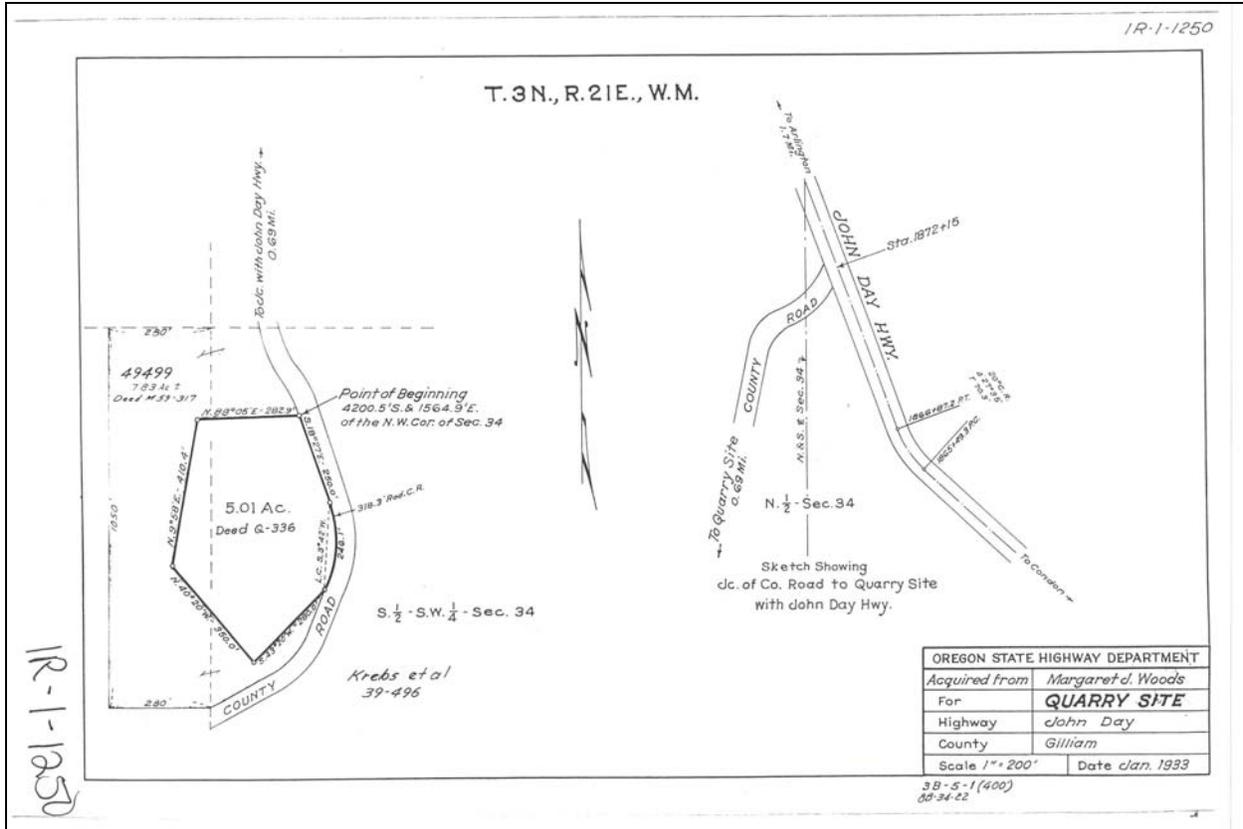
SW

N



Looking northwest at the small quarry site just outside of Arlington, Oregon.

Close-up view of the jointing pattern at the pit face.

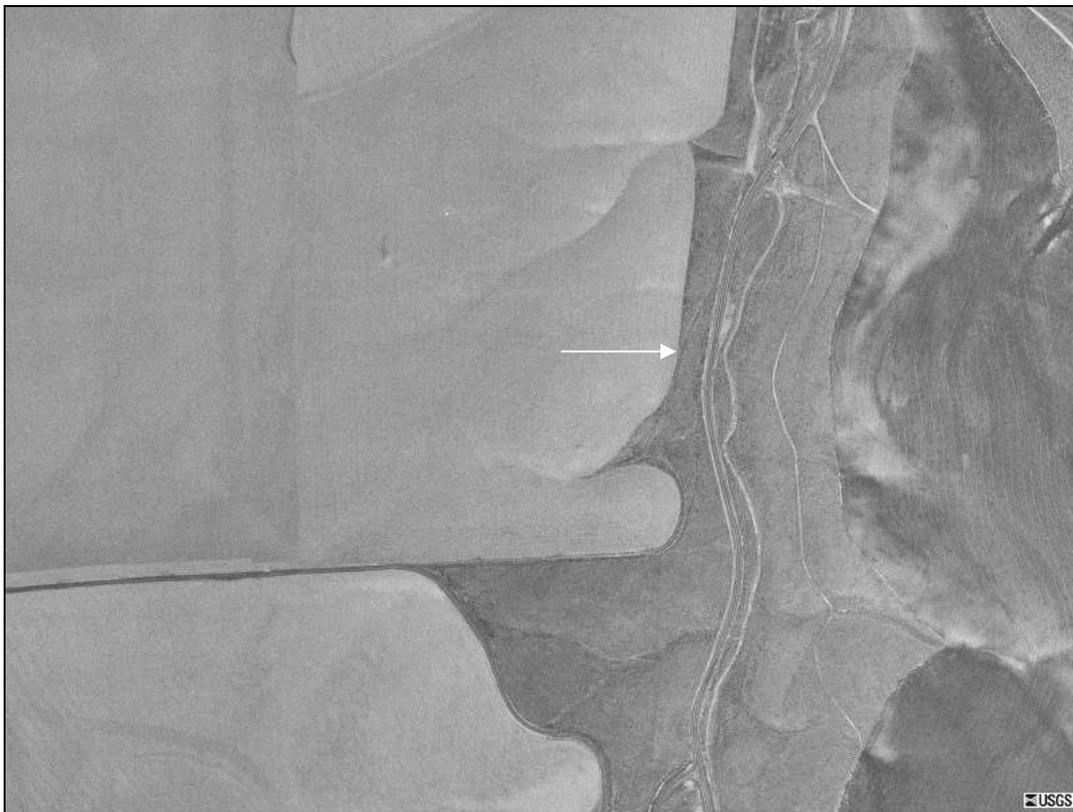
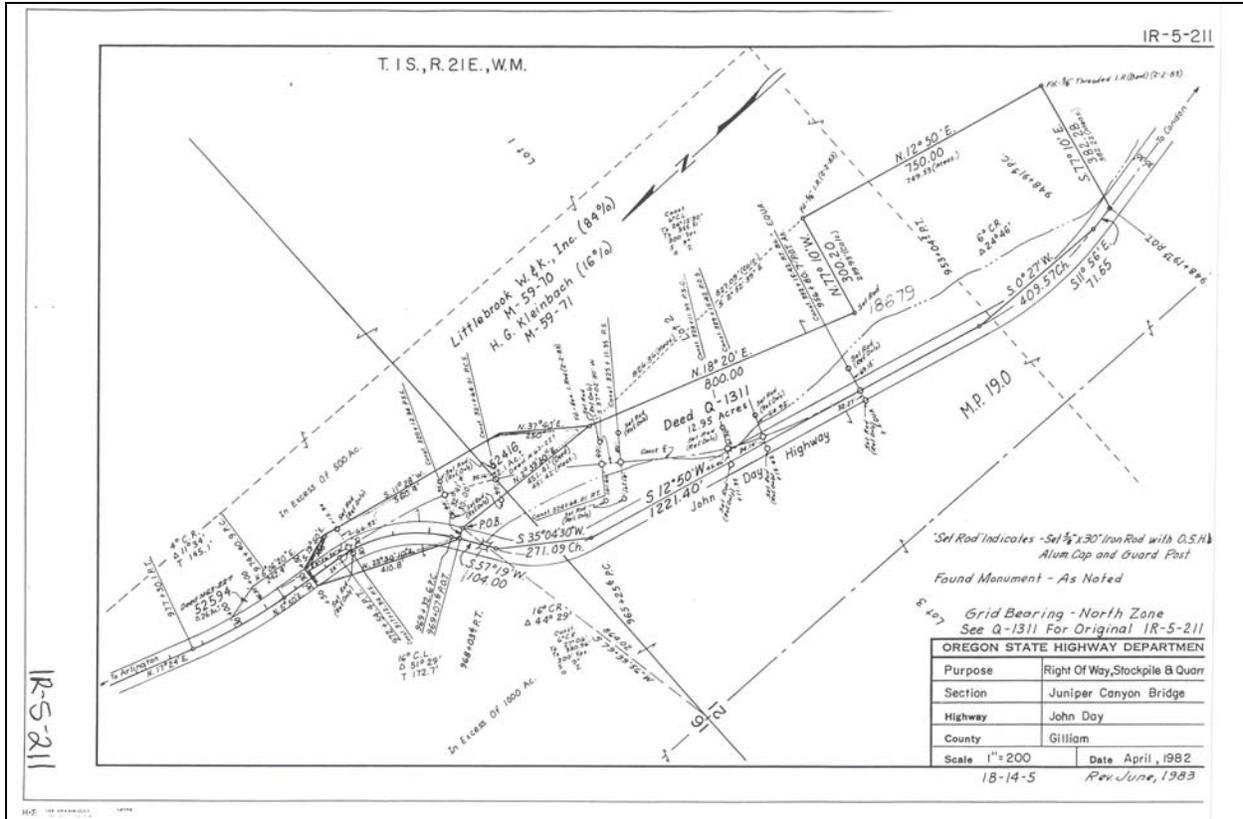


Aerial view of the quarry site along Rattlesnake County Road.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	19.4	01S	21.0E	21
File ID		Source #	Date Visited	Map #			Type of Site		
18679		11-012-4	7/21/1999	1R-5-211			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°28'12.02301"	120°11'51.40501"	432.173	14.38	NA					
Comments									
GPS acquired along Highway 19 and the site.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh			Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	120	20,000	32,400			
Potentially Significant Site	Why					Open/Closed	Direction		
No	Large acreage, room to work, adjacent to the highway and good rock, but the quantity does not meet the classification of aggregate sites for Goal 5.					Closed	NA		
Adjacent Land Use									
Open space/Farming. There is one ranch about 350 meters to the north.									
Remarks									
This site is raw land that has never been developed and is adjacent to and east of Highway 19. There is no screening, with limited room to work. The property is narrow and long. There can be up to 5 feet of overburden. From the exposures at this site the rock looks to be of good quality. There is a site just south of here that has had past disturbance, and could be used as a staging area. The draw along the highway can carry a lot of water in the winter time. The future pit would need to be up and away from this potential water source. This site would need a development plan for future work.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.95	15.59	4.42	1.66	18	.7	16	.4	
Material Use									
(1975)									



Looking east along Highway 19 at the raw land site.



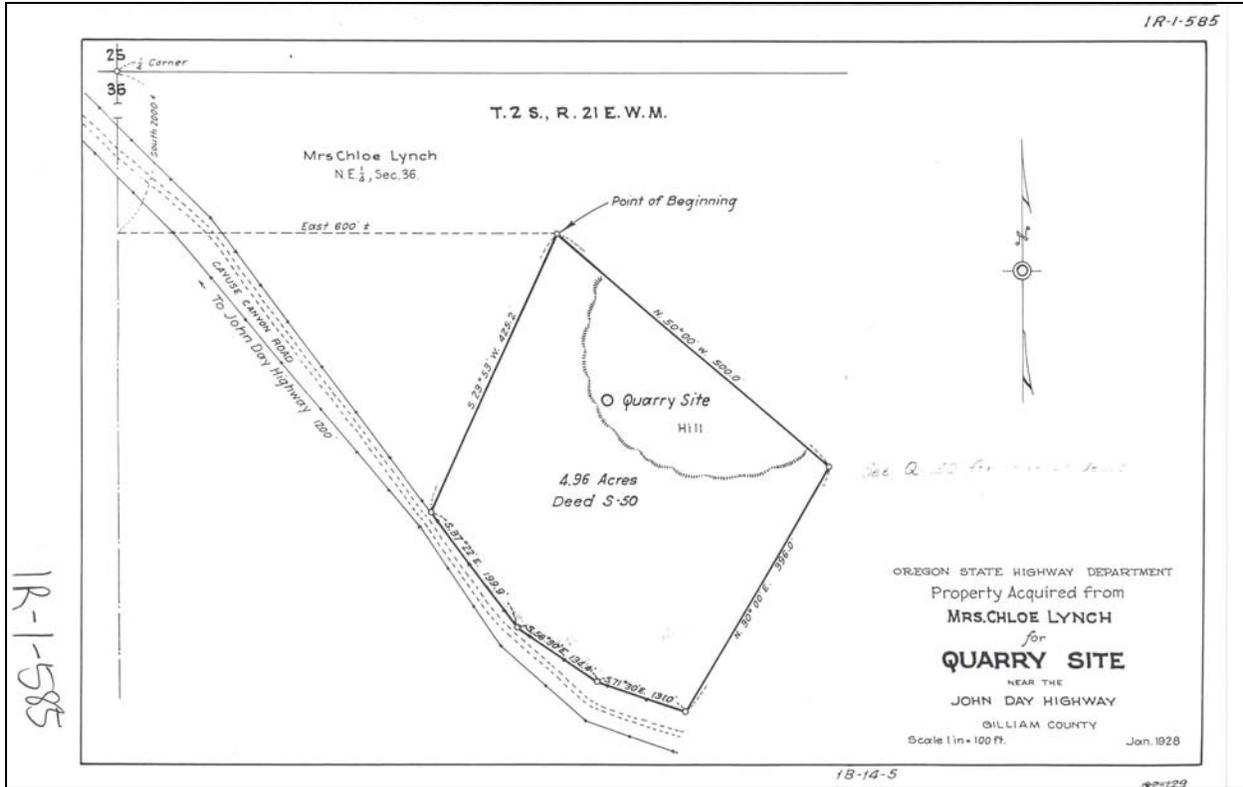
Aerial view of the site and the surrounding farm land.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	Gwendolen Quarry Site			09	0005	29.18	02S	21.0E	36
File ID		Source #	Date Visited	Map #			Type of Site		
Q0150		11-013-4	7/22/1999	1R-1-585			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°21'10.51933"	120°08'06.00015"	739.865	5.53	<7 acres					
Comments									
GPS acquired in the upper pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Olive Grey (5Y 4/1)		Fresh to Poor			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Poor			R3	150	32,000	64,800			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Small ground that is almost depleted of material.			Closed	NA				
Adjacent Land Use									
Farming									
Remarks									
This site is east of Highway 19 about 200 to 300 meters. The rock is a fine-grain vesicular basalt, with some highly weathered to decomposing igneous dikes that crosscut the basalt flows. You can rip the material, but most likely it would need to be drilled and blasted. There is fair screening from Highway 19 with plenty of room to work here. The overburden can be up to 5 feet thick. It appears that there is more disturbed ground than the 1R map shows. There is no gate or fencing. Gwendolen is to the southwest approximately 500 to 600 meters. There are multiple pits at this site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.46	31.42					17.6	.4	
Material Use									
(1974)									



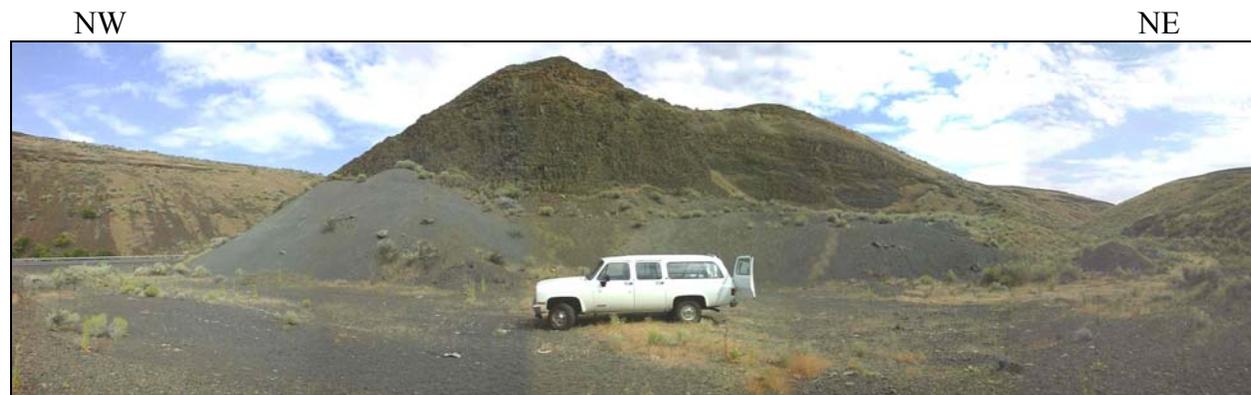
Looking northeast up to the small pit.

Close-up of the pit face with the hammer for scale.

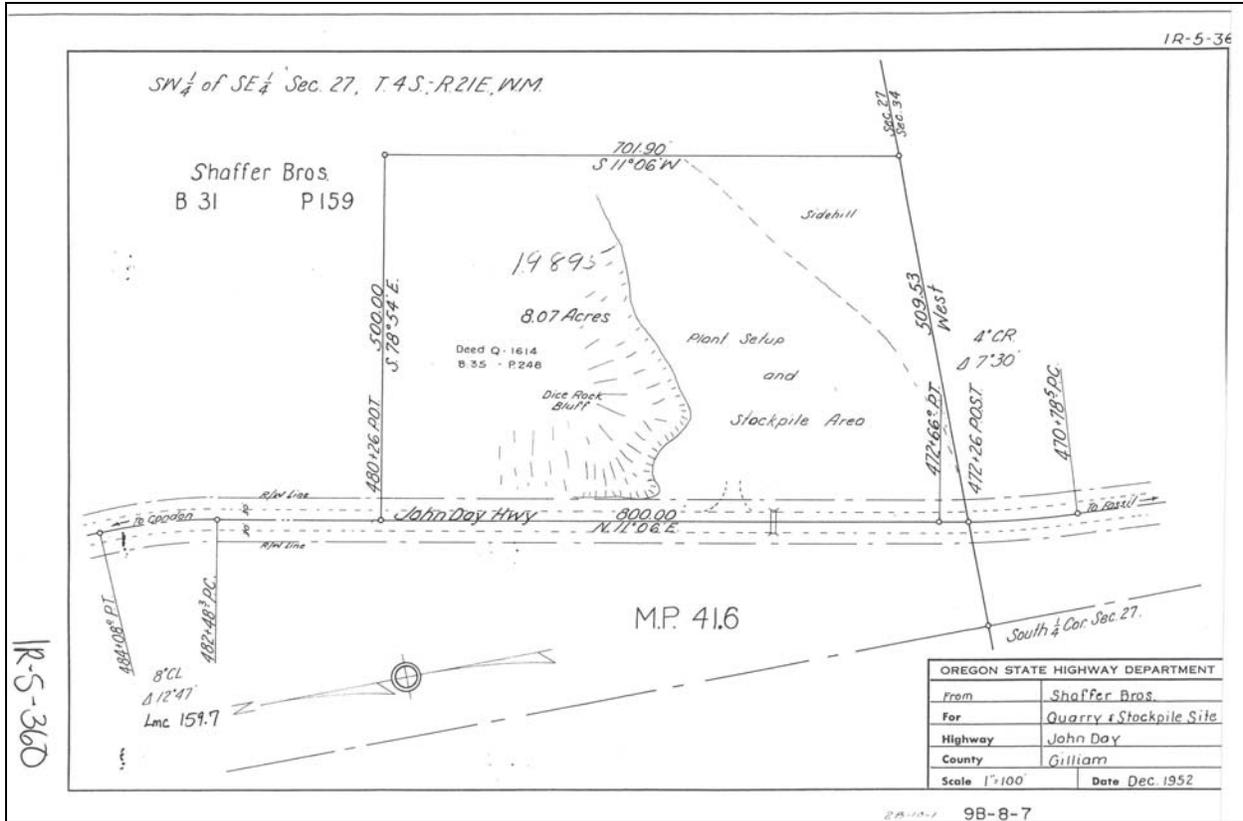


Aerial view of the quarry site east of Highway 19.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	30 Mile Creek			09	0005	42.04	04S	21.0E	27
File ID		Source #	Date Visited	Map #			Type of Site		
19895		11-014-4	8/11/1999	1R-5-360			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°11'05.49685"	120°10'59.44068"	689.89	8.07	<1 acres	11-0039				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	173	96,000	224,208			
Potentially Significant Site	Why			Open/Closed	Direction				
Maybe	Good rock, room to work, adjacent to Highway 19.			Closed	Dry creek bed bisects the property.				
Adjacent Land Use									
Open space									
Remarks									
This site is located adjacent to the east along Highway 19. The rock here is a fine-grain vesicular basalt with some zones of scoriaceous basalt. The rock exposed at the top of the flows is highly weathered. The rock would need to be drilled and blasted. There is some partial screening from the highway with room to work here. The terrain is steep (25 degrees) to moderately steep, with some benches that are too tall. There is no gate or fence at this site and it is open to all. There would be little to no overburden here. When you come into the site there is a very dangerous cliff (north side) with large cracks parallel to the cooling joints. This could slump off at any time and should be addressed to alleviate any future problems.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.47	2.70	18.02	13.15	1.27	11.9	.4	15.0	.4	
Material Use									
COLD AG, CHIP AG, AC (1995)									



Looking north at the site along Highway 19. Crushed aggregate is just beyond the vehicle.



Aerial view of the quarry site along Highway 19.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	Mayville Quarry			09	0005	51.2	06S	21.0E	03
File ID		Source #	Date Visited	Map #		Type of Site			
09748		11-015-4	8/11/1999	1R-2-1217		Quarry			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°04'46.39791"	120°11'20.57105"	912.487	6.31	<2 acres	11-0040				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tcg	Medium Dark Grey (N4)		Fresh		Highly Fractured to Massive			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	168	50,000	113,400			
Potentially Significant Site	Why			Open/Closed	Direction				
Maybe	Good quality, room to work, close to Highway 19.			Closed	Adjacent to the west is North Fork Creek.				
Adjacent Land Use									
Adjacent to the town of Mayville.									
Remarks									
This site is located east of the town of Mayville, OR. This is a fine-grain basalt with some intermixed vesicular lenses. There is plenty of room to work, with fair screening from the highway. You would need to drill and blast the rock. There is limited overburden at this location. Some of the flows are massive. This site is used as a stock pile site. Part of the pit appears to have reached the boundary of the ground. There is no gate or fencing around the property.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.670	2.73	15.3	2.5	.7			11.6	.3	
Material Use									
AC BASE (1992)									

NE

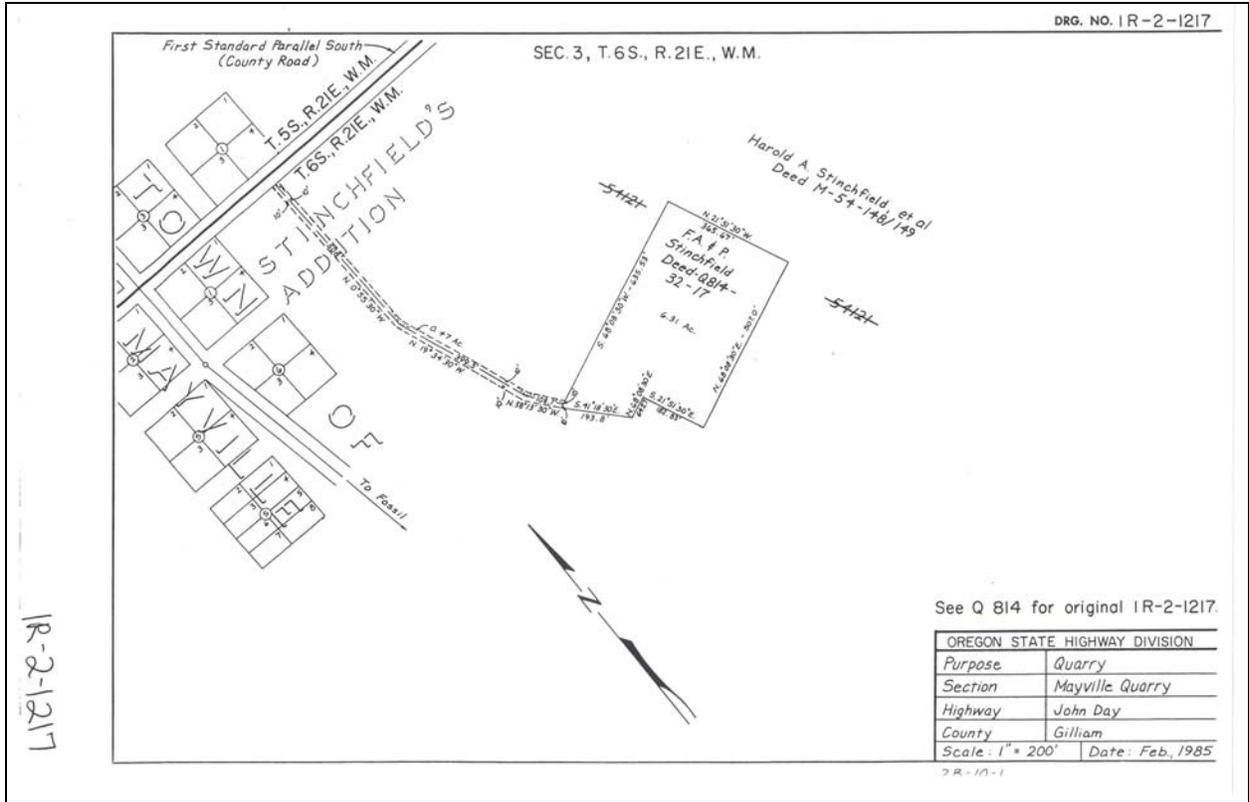
S



Looking east at the quarry site near Mayville, OR.



Close-up view of the pit face and the jointing pattern in the basalt.



Aerial view of the quarry site that is east of Highway 19.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	Willow Creek Quarry			09	0052	3.3	03N	22.0E	12
File ID		Source #	Date Visited	Map #			Type of Site		
35463		11-016-4	8/11/1999	10C-42-13			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°45'00.31709"	120°01'10.22933"	118.148	20	<1 acre	11-0049				
Comments									
GPS acquired in the pit									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcs	Medium Grey (N5)		Fresh			Massive to Highly Fractured		
Quality			Hardness	Lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	168	50,000	113,400			
Potentially Significant Site	Why	Open/Closed			Direction				
No	Leased property	Closed			To the south about 250 meters is Willow Creek.				
Adjacent Land Use									
Farming									
Remarks									
This site is east of Highway 74 about 200 meters. There is a new easement to this site off of Highway 74. This is a fine to medium-grain basalt/basaltic andesite. There is limited screening from the highway with plenty of room to work. You could stock pile material at this location. Access to and from this site is difficult to get on and off of at the highway. You would need to drill and blast the rock. This is a good site for rip rap. There is limited overburden. The terrain is fairly steep, to flat on top. This is leased ground from the BLM. About 130,000 cubic meters of aggregate was used from this site for the overlay project on I-84 from Arlington to Boardman.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.719	2.745	18.0	15.0	10.0	17.8	25.0	16.9	21.0	
Material Use									
QUARRY ROCK (1999)									

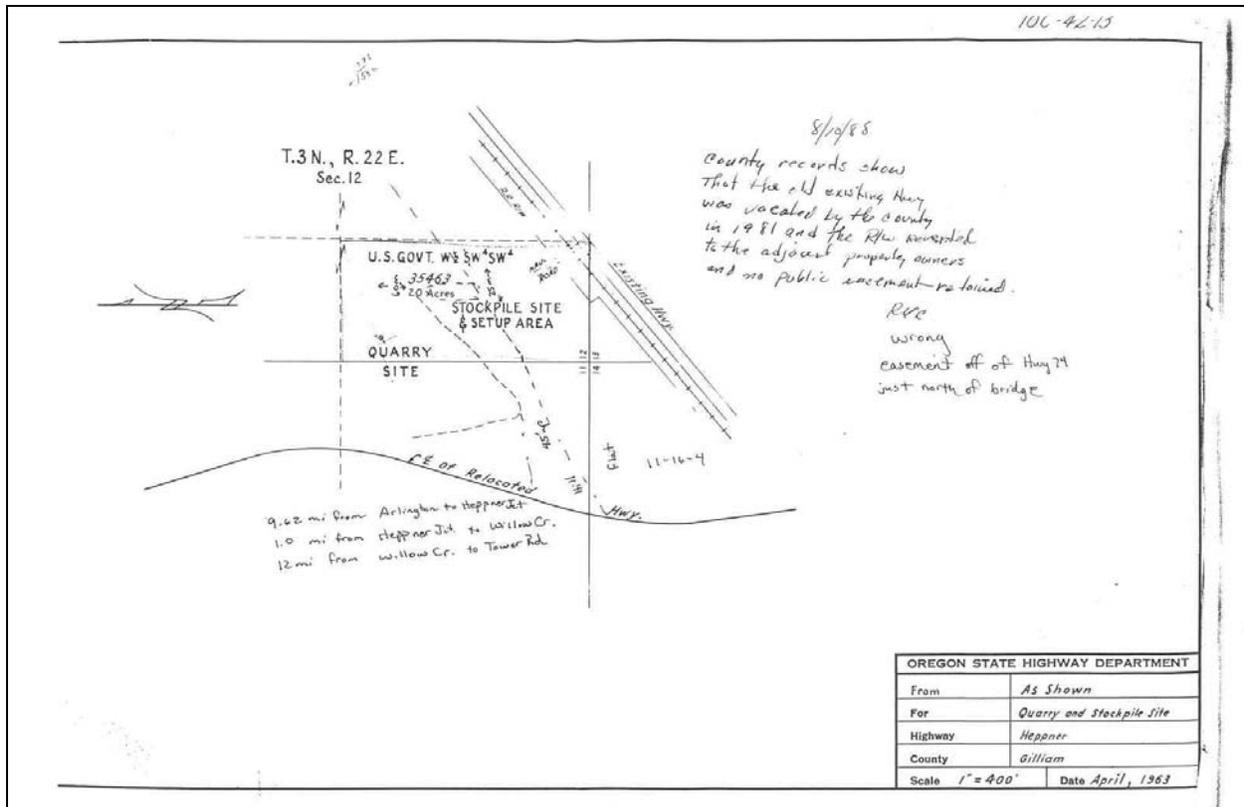
NE

SE



Looking east at the quarry site and work area for the overlay project on I-84 in the summer of 2000. The arrow points to the area where the aggregate was removed.

Close-up of the fracture pattern in the pit.



Aerial view of the quarry site along Willow Creek and Highway 74.  
Arrow points to the work area and the stockpiles.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0300	15.5	01S	19.0E	20
File ID		Source #	Date Visited	Map #			Type of Site		
17902, 26591		11-017-4	8/11/1999	1R-5-1043, 1R-5-168			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°28'21.44583"	120°27'48.96944"	201.346	80	<1 acre					
Comments									
GPS acquired in the pit along Highway 206.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh to Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Very Good			R4	161	1,210,000	2,629,935			
Potentially Significant Site	Why	Open/Closed		Direction					
No	USA ground	Closed		North about one-half mile is the John Day River.					
Adjacent Land Use									
Open space									
Remarks									
This site is just southeast of the Sherman-Gilliam County line on Highway 206. The rock here is a fine-grain basalt, with no screening from the highway, and limited room to work. You would need to drill and blast the rock. This property is in a very steep narrow canyon (25 to 35 degrees). It would be difficult to develop this site because of the relief. This ground would need a very good development plan. The property is leased from the USA. The Right of Way database has one of the 1R maps listed incorrectly. It should read 1R-5-168 not 1R-5-1668.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

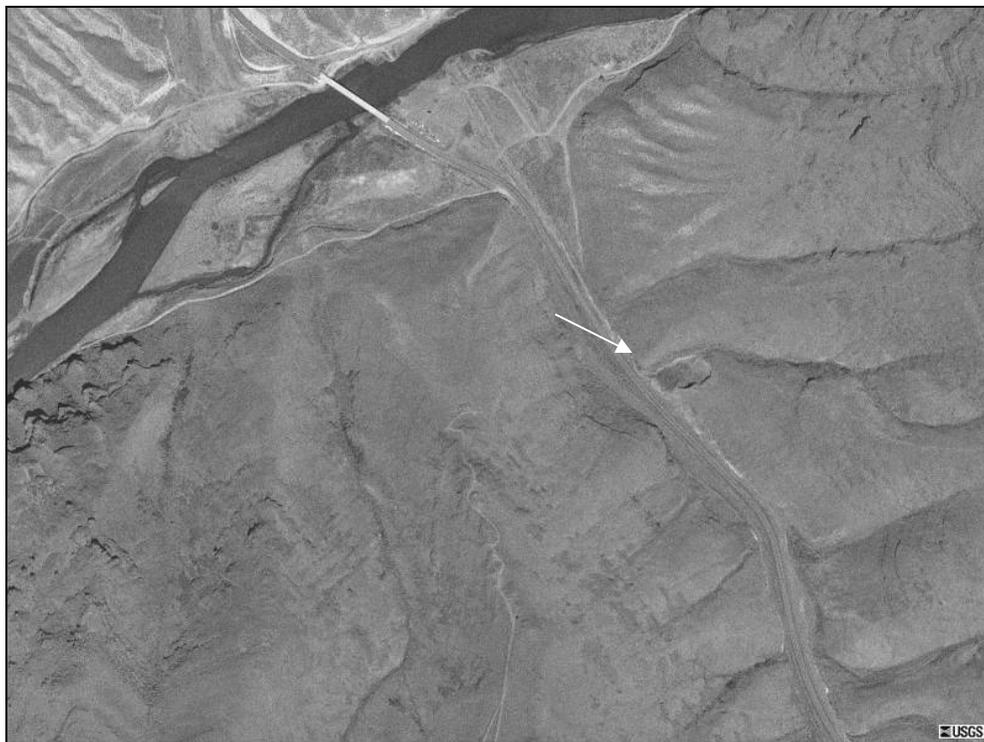
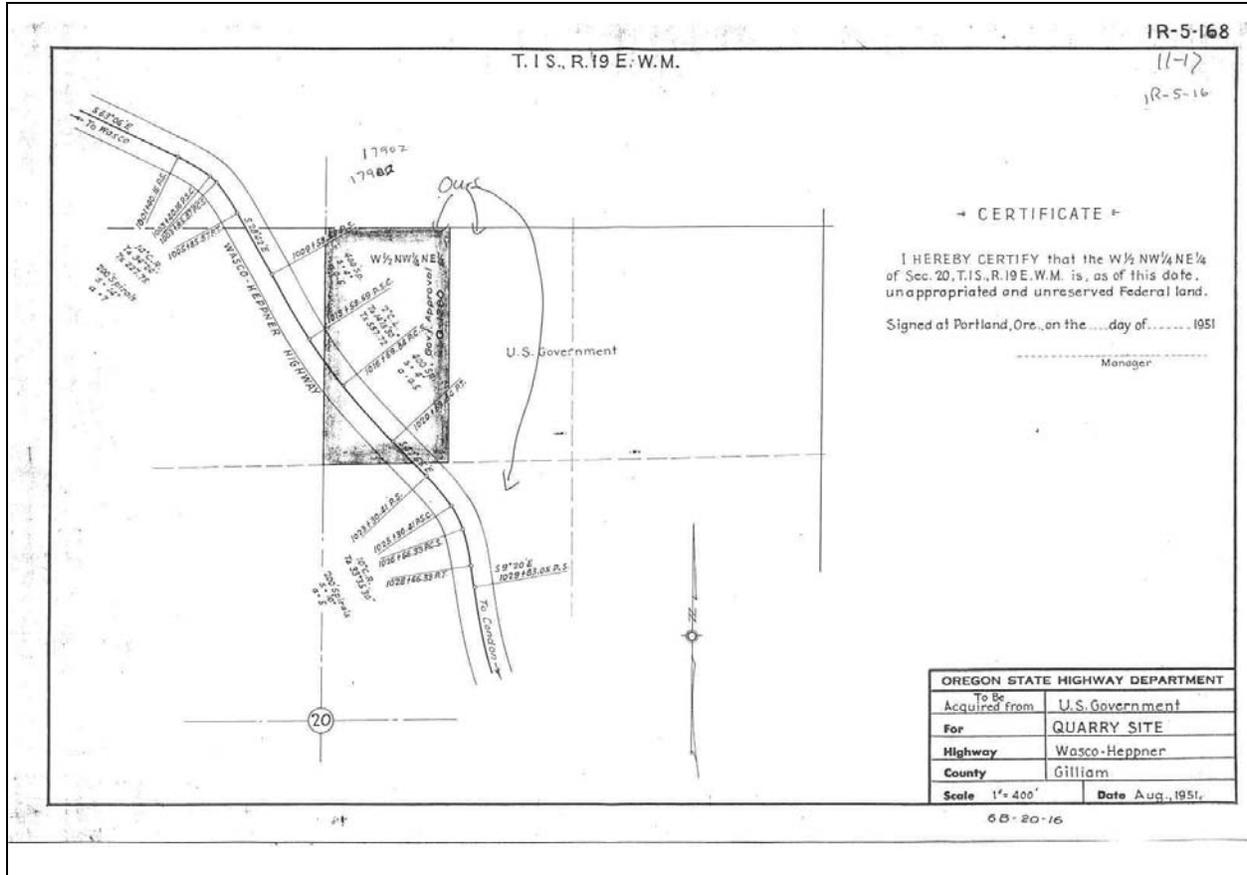
NE

S



Looking east at the small disturbance along Highway 206.

Close-up view of the jointing pattern of the basalt at this site.

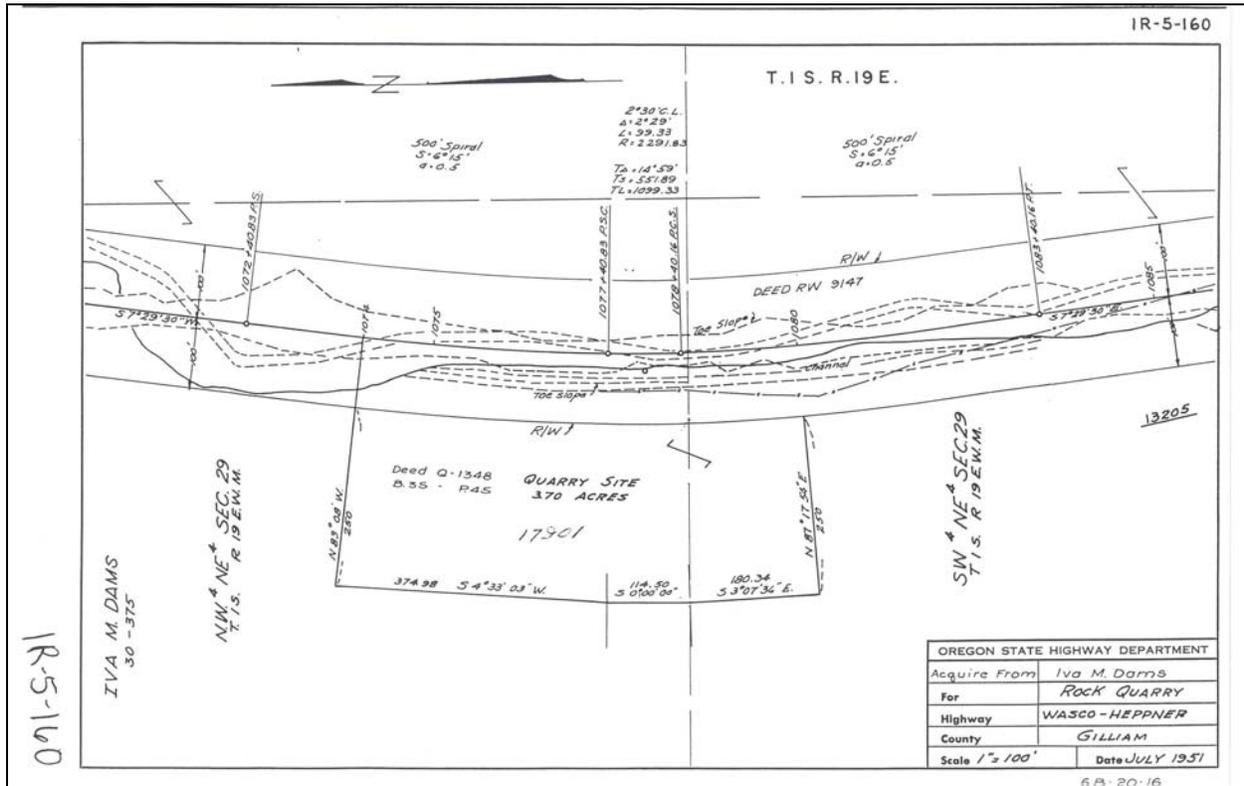


Aerial view of the site located just east of Highway 206. The John Day River is in the upper portion of the photograph.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0300	16.6	01S	19.0E	29
File ID		Source #	Date Visited	Map #			Type of Site		
16747, 17901		<b>11-018-4</b>	8/11/1999	1R-5-49, 1R-5-160			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°27'24.48000"	120°27'36.37000"	396	4.6	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	NA	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
NA			NA	120	70,000	113,400			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too narrow of acreage in this steep canyon.			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is in a very narrow and steep canyon along Highway 206. There is no room to work and no screening. We can utilize site 11-017-4 just to the north, rather than this small narrow site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Aerial view of the small raw land site along Highway 206 within Cottonwood Canyon.



IR-5-160

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	Ajax Quarry			09	0300	24.4	02S	19.0E	25
File ID		Source #	Date Visited	Map #			Type of Site		
16752		11-019-4	8/11/1999	1R-5-52			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°22'25.88141"	120°23'17.60914"	808.112	40	<1 acre					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Slight			Highly to Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3	173	500,000	1,167,750			
Potentially Significant Site	Why					Open/Closed	Direction		
No	USA ground					Closed	NA		
Adjacent Land Use									
Open space/Farming									
Remarks									
This site is adjacent to and west of Highway 206. The rock is a medium-grain vesicular basalt. There is some slight weathering of the rock. The terrain is moderately flat and occupies the head wall of a small canyon. From the fairly flat terrain up by the road the ground falls away to the south at about 25 degrees to the canyon on the southern property boundary. There is no screening from the highway, but there is plenty of room to work. You would need to drill and blast the rock. There is little to no overburden. This is leased ground from the USA.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.54	2.58	23.1	7.0	3.8	14.4	0.3			
Material Use									
AC (1986)									

W

NE



Looking north from the pit at the quarry face.

Close-up view of the fracture pattern along the pit face.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0300	33.2	03S	20.0E	22
File ID		Source #	Date Visited	Map #			Type of Site		
19185, 29234		<b>11-020-4</b>	7/22/1999	1R-5-271			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°17'22.50693"	120°17'41.14553"	853.895	21.59	<4 acres		11-0038			
Comments									
GPS acquired at the edge of the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	172	200,000	464,400			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Good location, good rock, room to work.			Closed	NA				
Adjacent Land Use									
Farming/Open space									
Remarks									
This site is located adjacent to and southwest of Highway 206. The rock is a fine-grain basalt, with up to 5 feet of overburden. There is no screening from the highway, but room to work. You would need to drill and blast. Gilliam County had their portable crushing plant here. They were producing aggregate for themselves and us to use on the roads. The terrain here is flat with a gradual incline away from the highway. There is a minor amount of rip rap at this site. There is no gate or fencing. ODOT Maintenance was setting up for cold mix production.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.94	18.1			21.5	.5			
Material Use									
COLD AG, CHIP AG (1965)									

SW

E



Looking at the pit with Gilliam County workers crushing rock for future projects.

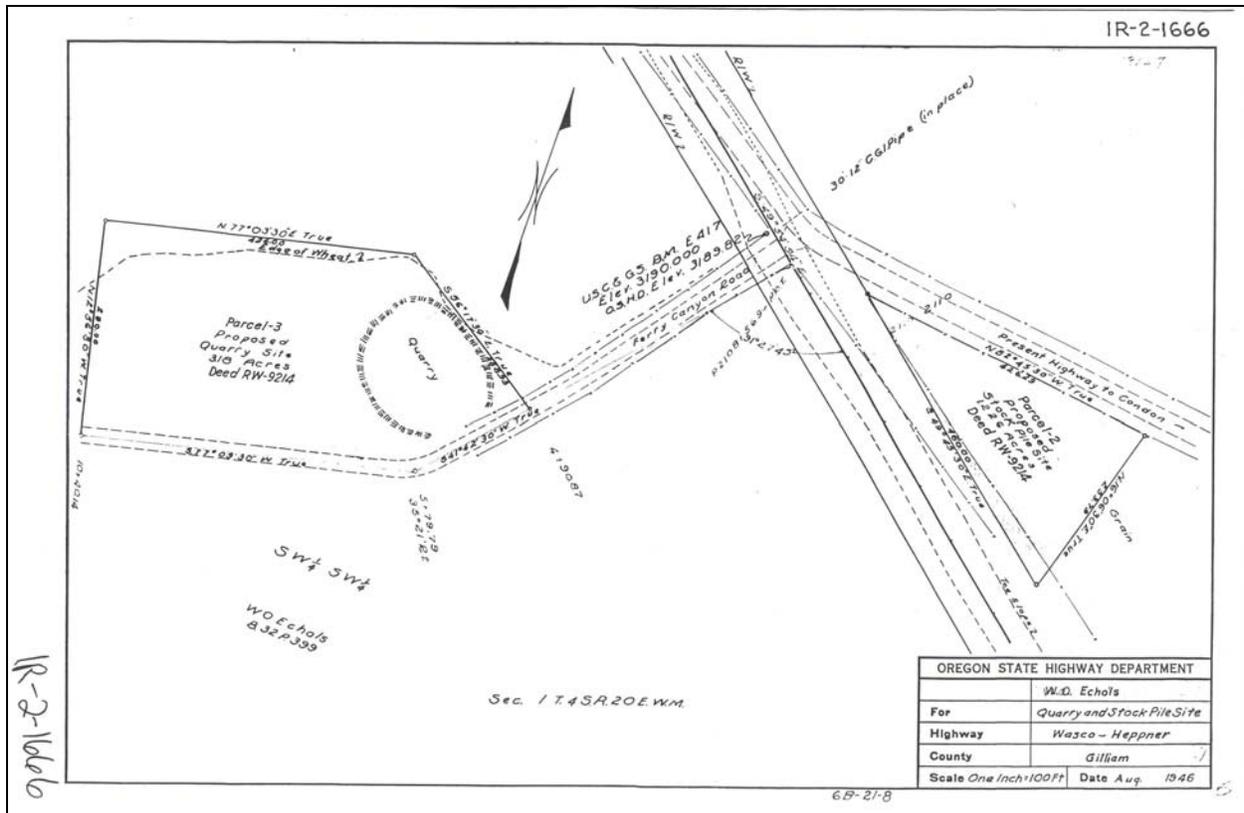
Close-up of the fracture pattern along the pit face.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0300	36.1	04S	20.0E	01
File ID		Source #	Date Visited	Map #			Type of Site		
13127		11-021-4	7/22/1999	1R-2-1666			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°14'45.7793"	120°16'28.8645"	985.249	5.3	<3 acres					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3	177	35,000	83,633			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too small			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is located about 100 meters west of Highway 206. The material is a fine-grain, highly fractured basalt, with some fair weathering. You can rip the rock for pit run material. There is no screening from the highway with a small amount of room to work. There is little overburden. There is no fencing or gate and this site is being used as a local landfill. The terrain is fairly flat and there is no fencing or gate at the site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.94	14.5			22.86	.9			
Material Use									
BASEAG, OIL AG (1965)									



Panoramic view of the quarry site located west of Highway 206.



Aerial view of the quarry site.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam					09	0300	46.4	04S	22.0E	16
File ID		Source #	Date Visited		Map #			Type of Site		
09743		11-022-4	8/11/1999		1R-2-1216			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°13'28.70827"	120°05'05.30662"	793.336	6.57	<1 acre						
Comments										
GPS acquired at the access point to the site.										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tcw	Medium Dark Grey (N4)		Fresh			Highly to Moderately Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Very Good to Good			R4	177	100,000	238,950				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Small acreage			Closed	NA					
Adjacent Land Use										
Open space/Farming										
Remarks										
This site is located adjacent to and northwest of Highway 206. The rock is a fine-grain vesicular basalt. You can rip the material but most likely you would need to drill and blast. There is no screening and some room to work. The top 3 feet of the rock is a poor quality, weathered basalt. The terrain is fairly flat. This site is used as a waste site now. There is no gate and our sign has been painted over.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
	2.94	16.3			20.38	.7				
Material Use										
BASE AG, OIL AG (1965)										

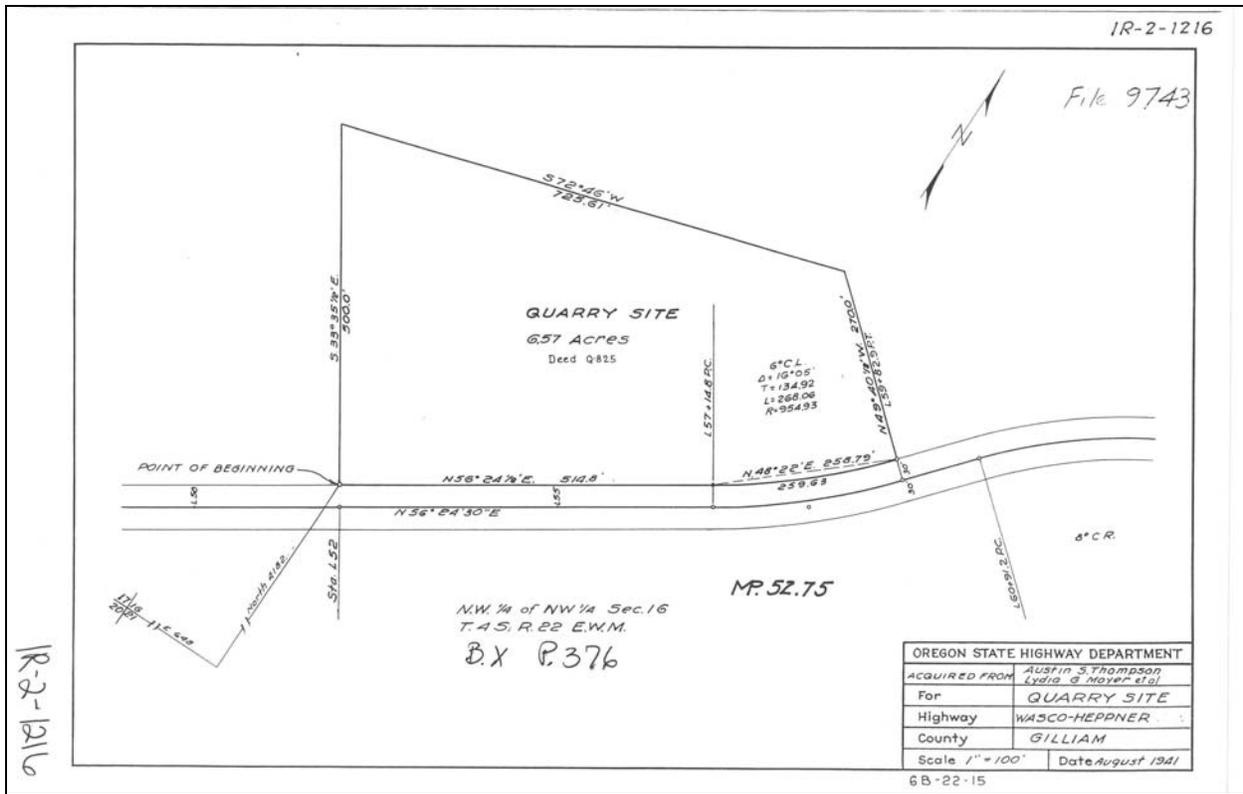
NW

NE



Looking north at the disturbance along Highway 206.

Close-up view of the jointing pattern of the basalt.



Aerial view of the small quarry site along the highway.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	0	03S	21.0E	24
File ID		Source #	Date Visited	Map #			Type of Site		
48147		11-023-4	7/22/1999	1R-4-553			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°17'34.99564"	120°08'38.51917"	822.097	8.45	<8 acres					
Comments									
GPS acquired at the easement gate and highway 19.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	155	225,000	470,813			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Leased ground			Closed	NA				
Adjacent Land Use									
Farming									
Remarks									
This leased site is west of Highway 19 about 350 meters. The rock is a fine-grain basalt that can produce a lot of fines. There is limited to no screening from Highway 19 but plenty of room to work. You can rip the rock. The terrain is flat with little overburden. There is a locked gate at the easement road to this site. The quantity calculation is based on 20 foot lifts for 7 acres. The lease on this site expired 2-11-1999. This site is also used as a stock pile site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.831	11.4	7.0	2.0	13.3	0.3			
Material Use									
EAC (1996)									



Looking north at the quarry site along Highway 19.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	Shutler Station			09	0005	19.82	01S	21.0E	21
File ID		Source #	Date Visited	Map #			Type of Site		
05388		11-024-4	7/21/1999	1R-2-513			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°27'51.81477"	120°11'55.10276"	451.669	2.86	<2 acres					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R4	172	20,000	46,440			
Potentially Significant Site	Why			Open/Closed	Direction				
No	This site is too small and is in use as a stock pile site.			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site occupies the middle of a intersection along Highway 19 and the County Road to Mikkalo. The rock here is a fine-grain slightly weathered basalt. There can be heavy staining in the basalt near the surface. There is little room to work at this location with no screening from Highway 19. There can be up to 5 feet of overburden here. You could rip the material but most likely it would need to be drilled and blasted. The terrain is flat. This property is used as a stockpile site and has little value as a quarry site now. There is no fence or gate. There is a larger site to the north ( 11-012-4 ) of this area that has greater possibilities.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.95	15.49	4.42	1.66	18	.4	16	.4	
Material Use									
(1975)									

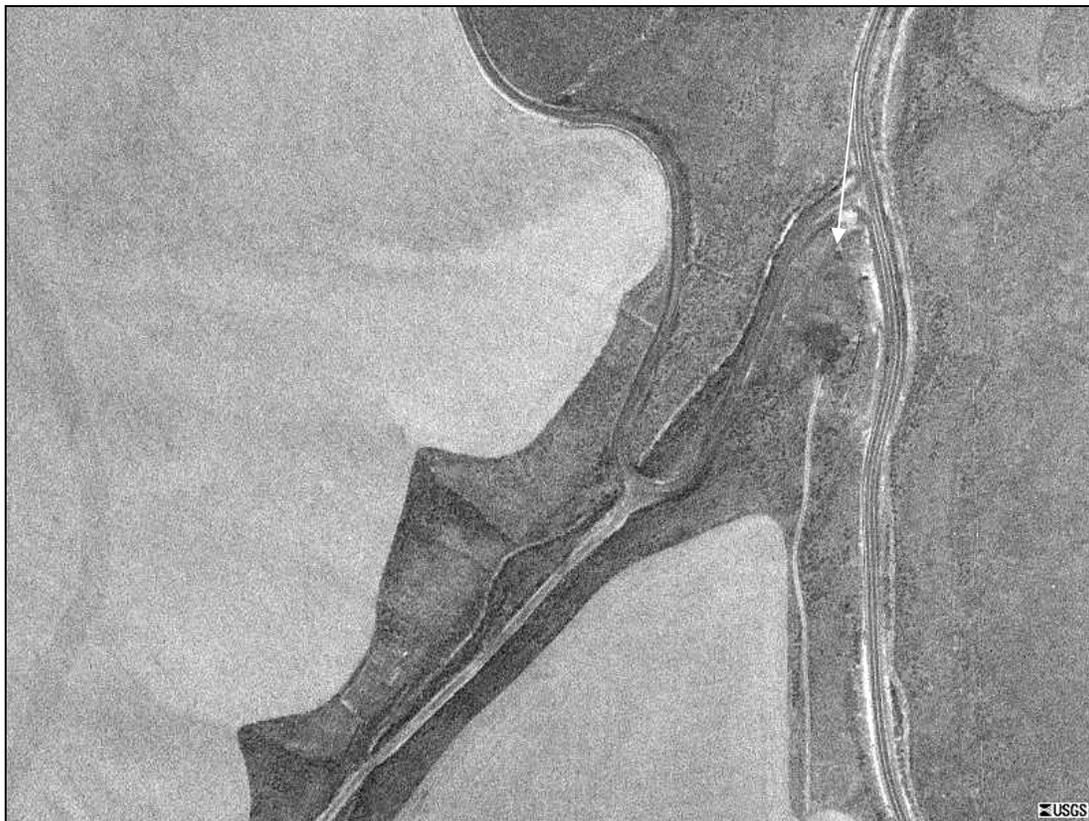
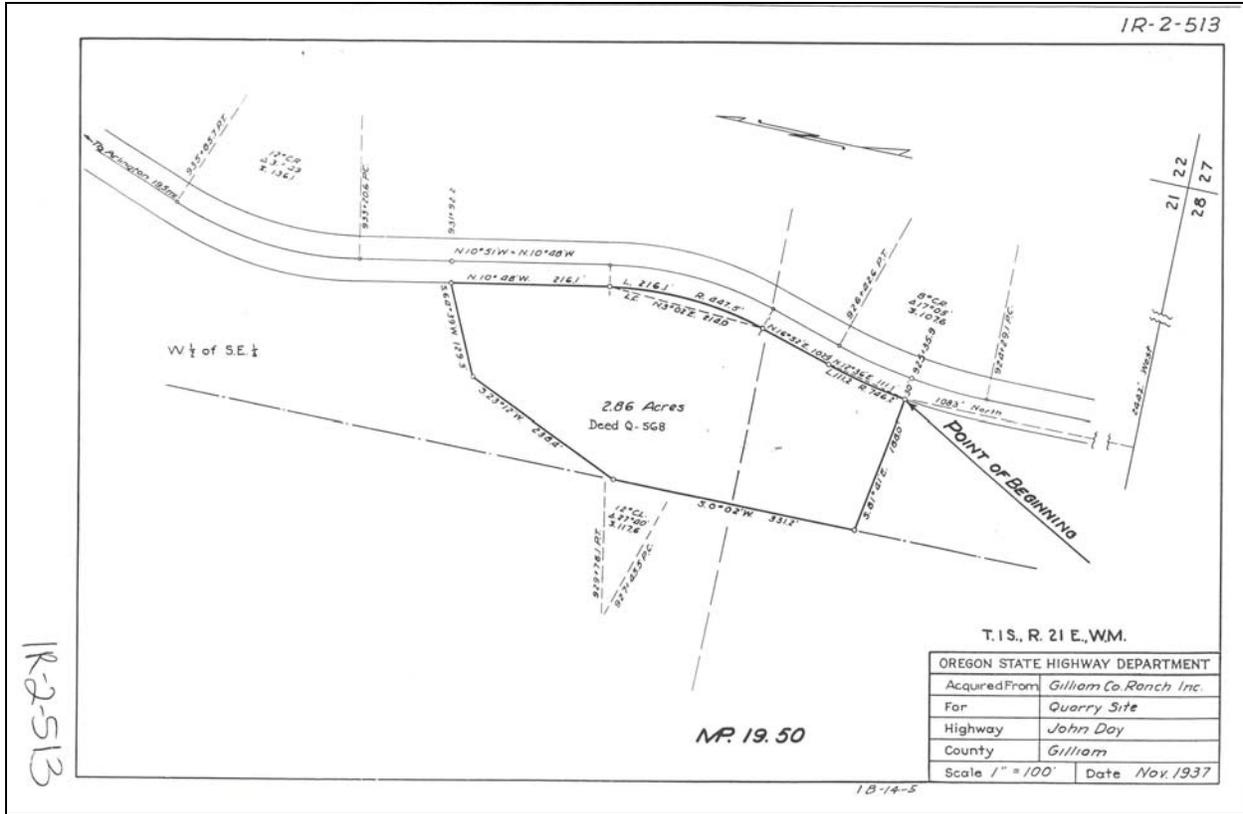
SE

SW



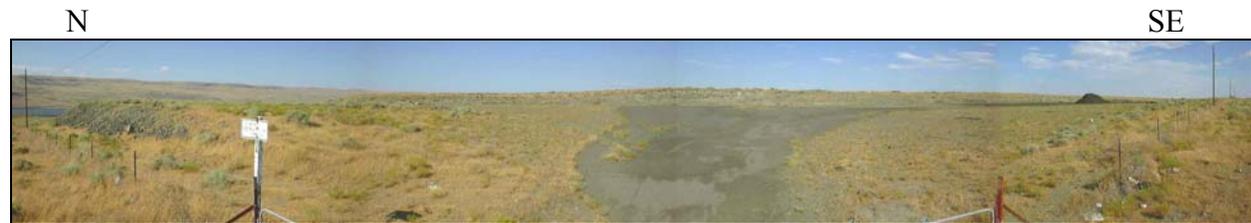
Looking south at the small quarry/ stock pile site along Highway 19.

Close-up view of the fracture pattern of the basalt at this site.

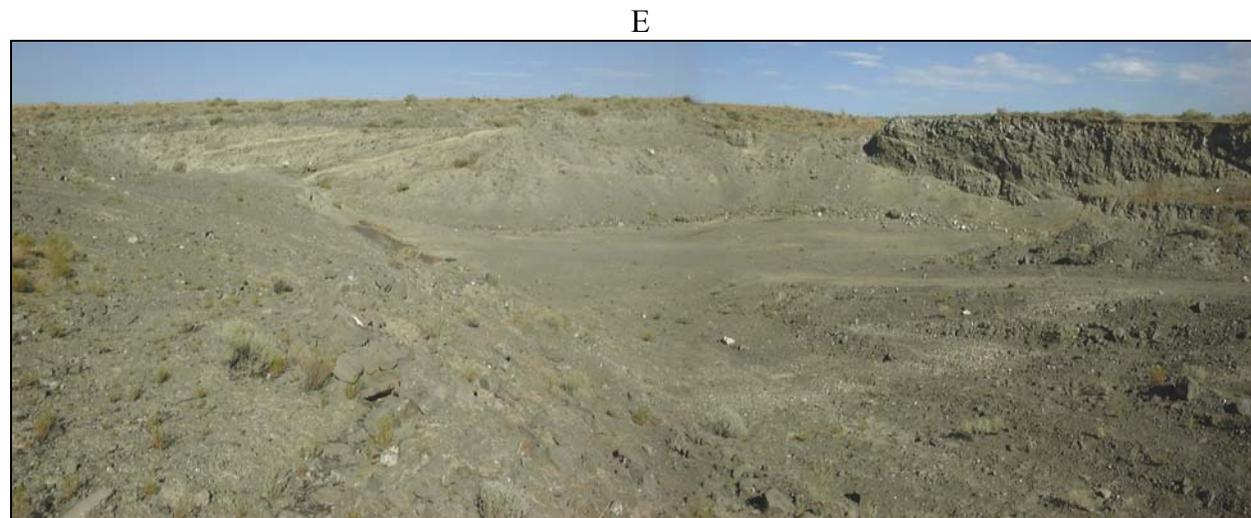


Aerial view of the quarry and small stock pile site along the highway.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam					09	0052	0.5	04N	22.0E	35
File ID		Source #	Date Visited	Map #		Type of Site				
36538		11-026-4	8/11/1999	1R-4-28		Borrow				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°46'55.62338"	120°02'11.45297"	138.778	13.09	<1 acre						
Comments										
GPS acquired at the locked gate.										
Rock Type	Unit	Color	Weathering		Jointing					
Gravel	Ts	NA	NA		NA					
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair to Poor			NA	120	150,000	243,000				
Potentially Significant Site	Why	Open/Closed		Direction						
No	This is used as a stock pile site.	Closed		The Columbia River is about 1 mile to the north.						
Adjacent Land Use										
Open space										
Remarks										
This site is located adjacent to and east of Highway 74. The material is composed of a heterogeneous mix of unconsolidated sediments. The size range of the material is from silt to boulder. With the proportions about 10% gravel and 90% sand/silt. The property is being used as a waste site/bone-yard/stock pile site. There is one small pit that had approximately 10,000 cubic yards of fill material removed. The overall site appears to have had about 6 to 8 feet of material removed. This has brought the pit floor to within 4 or 5 feet of the road elevation. The property is fenced and has a locked gate.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



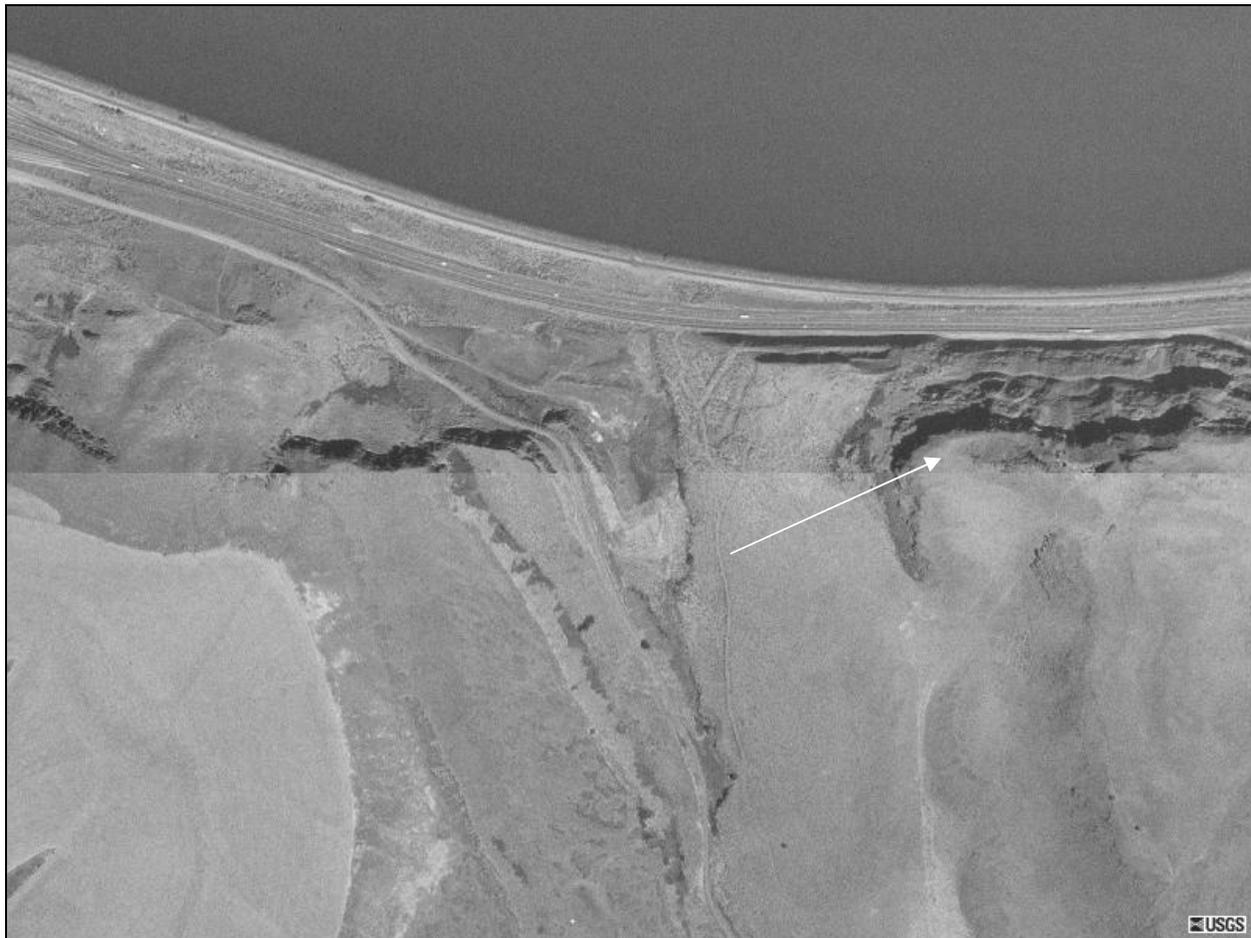
Looking east from the locked gate at the borrow site along Highway 73.



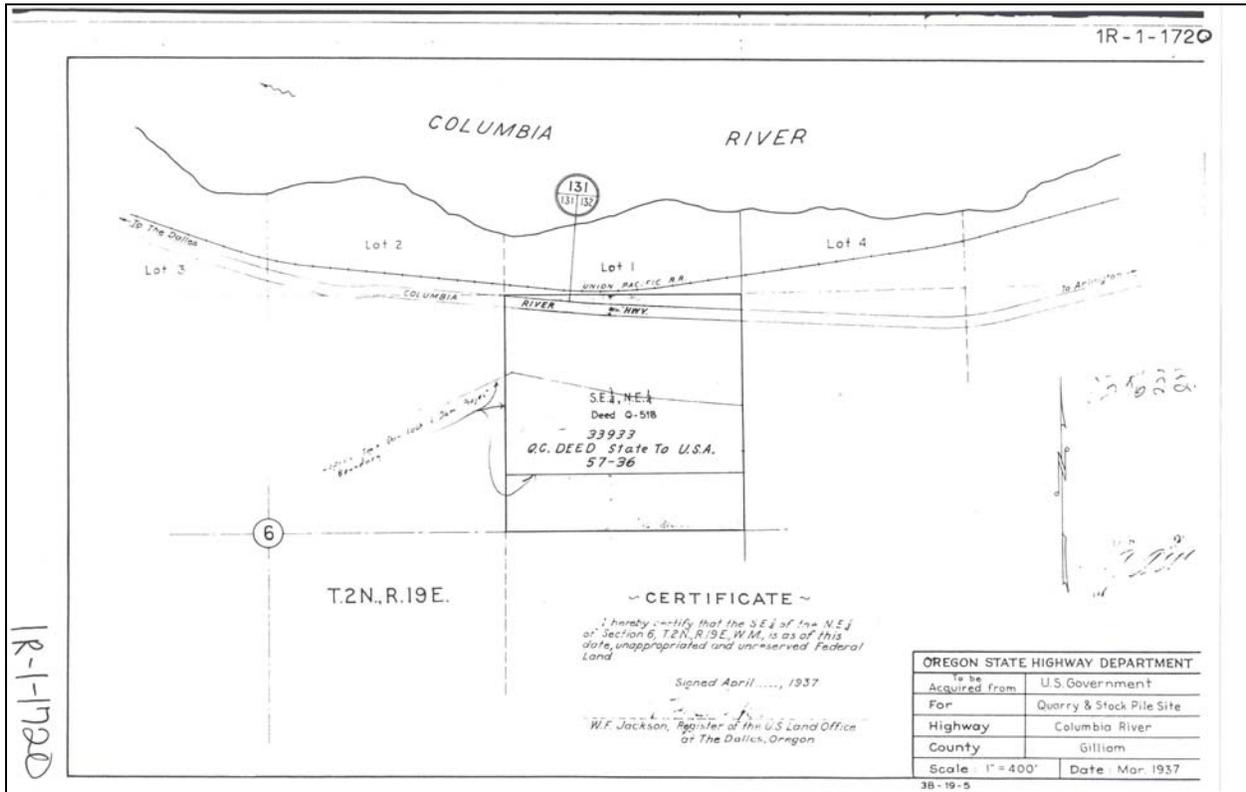
View of the borrow pit located on the south side of the property.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	123	02N	19.0E	06
File ID		Source #	Date Visited	Map #			Type of Site		
Q0518		11-032-4	07/21/1999	1R-1-1720			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'43.81000"	120°29'18.63000"	122	17	NA					
Comments									
GPS acquired to the west at site 11-003-4.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
0			NA	120					
Potentially Significant Site	Why	Open/Closed		Direction					
No	USA ground.	Closed		To the north across I-84 is the Columbia River.					
Adjacent Land Use									
Open space									
Remarks									
This is raw land south of I-84. USA ground. We would need a site plan and a new access to the ground.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Aerial view of the raw land site that is east of site 11-003-4 and south of I-84.

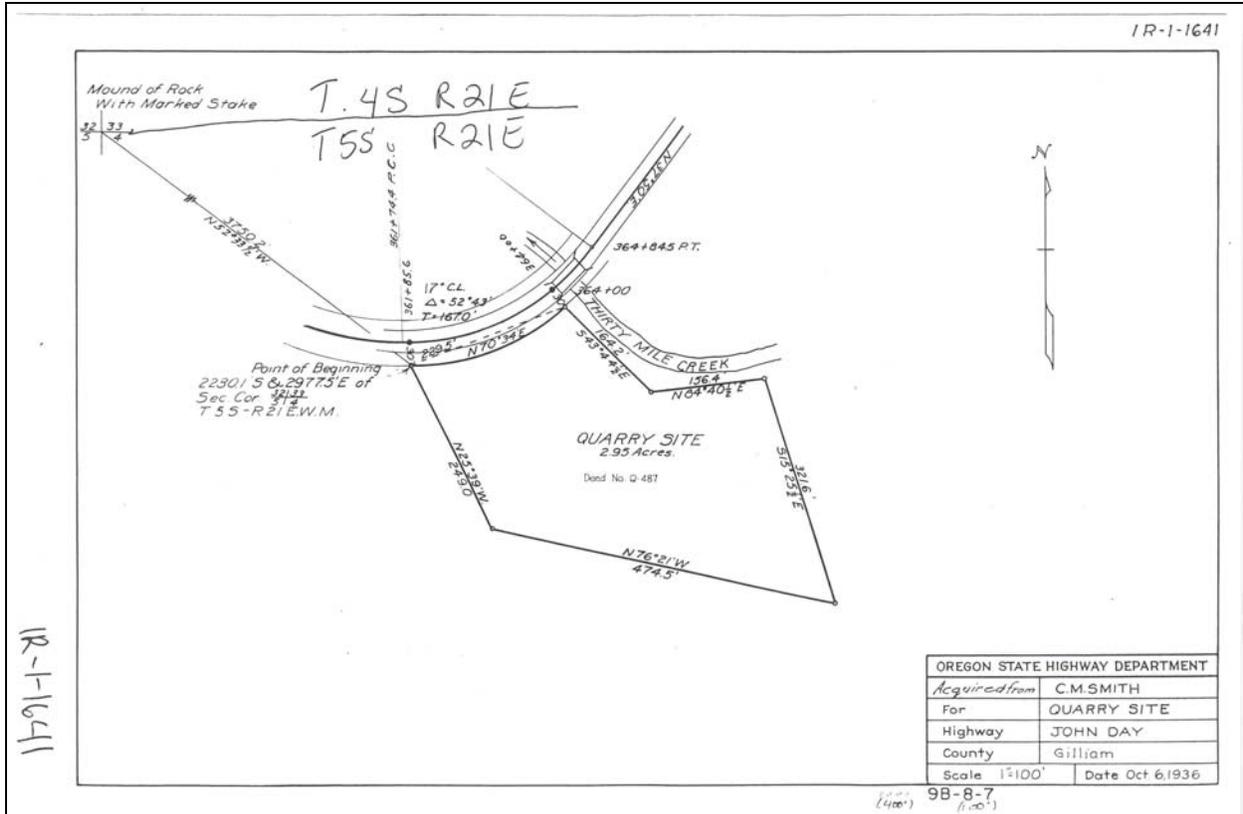


County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	0	05S	21.0E	04
File ID		Source #	Date Visited	Map #			Type of Site		
03923		11-901-4	8/11/1999	1R-1-1641			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°09'48.92000"	120°12'17.56000"	609	2.95	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	155					
Potentially Significant Site	Why		Open/Closed	Direction					
No	Too small, no access.		Closed	To the west about 100 meters is Thirtymile Creek.					
Adjacent Land Use									
Farming									
Remarks									
This is a fine-grain basalt with limited room to work. There is some screening from Highway 19. This is very steep terrain with some vertical cliffs. There is no access to this site any more. You would have to cross the farmers land to get to it. The old alignment looks as if it has been reverted to the adjacent landowners. They use our property for grazing purposes. This property should be evaluated for surplus. This area has some good quality/quantity rock. There should be some sort of understanding with the property owners about our property and theirs.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

SE



Looking southeast at the small talus slope on our property.



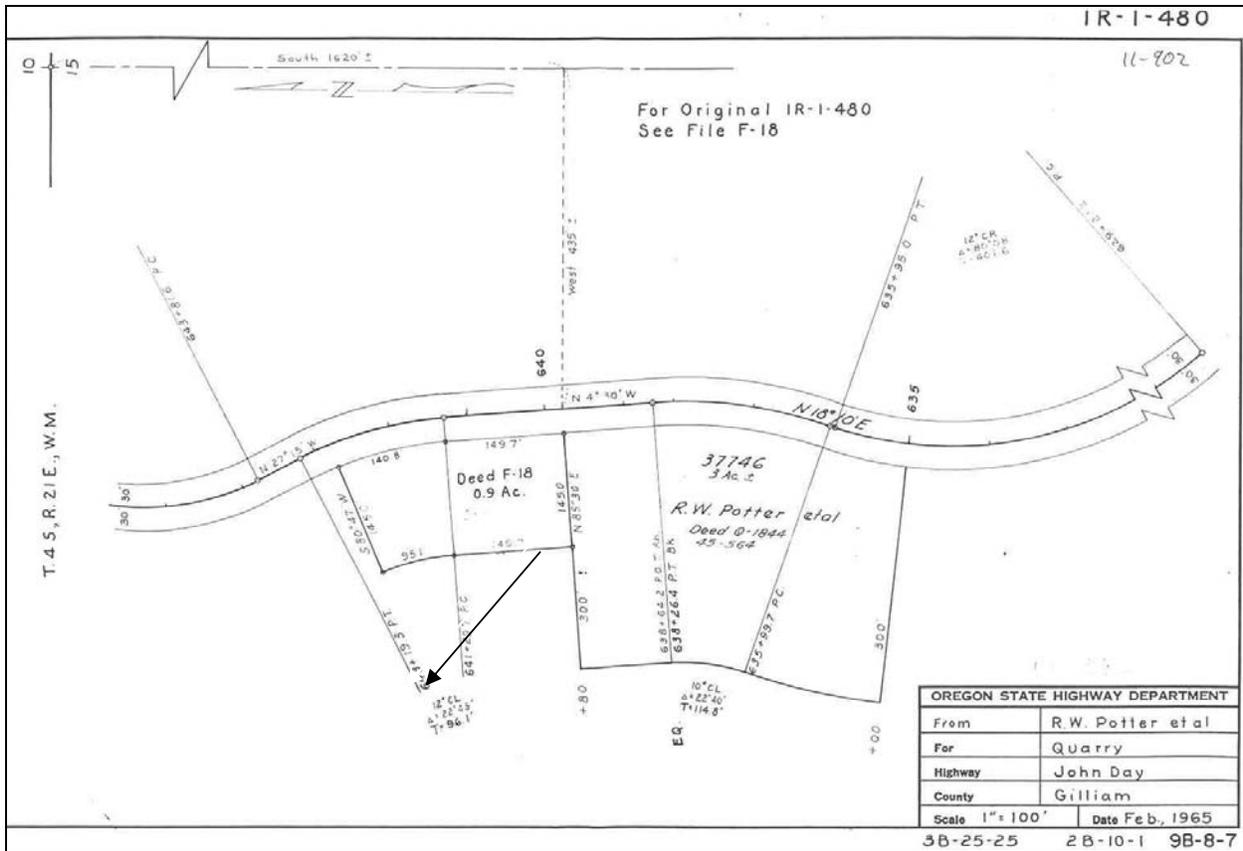
Aerial view of the quarry site in relation to Highway 19.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam	1st National Bank Filler Pit				09	0005	0	04S	21.0E	15
File ID		Source #	Date Visited	Map #		Type of Site				
37746, F0018		11-902-4	8/11/1999	1R-1-480		Raw Land				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°13'28.89000"	120°11'13.94000"	829	3.9	NA						
Comments										
Lat. and Long. acquired using Terrain Navigator Software										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tcg	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
NA			NA	NA						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Too small			NA	NA					
Adjacent Land Use										
Farming/open space										
Remarks										
This site has been consumed by the new alignment of Highway 19.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

N



Looking to the north along Highway 19 at the location of the raw land site.  
Note the old highway alignment on the right side of the image.



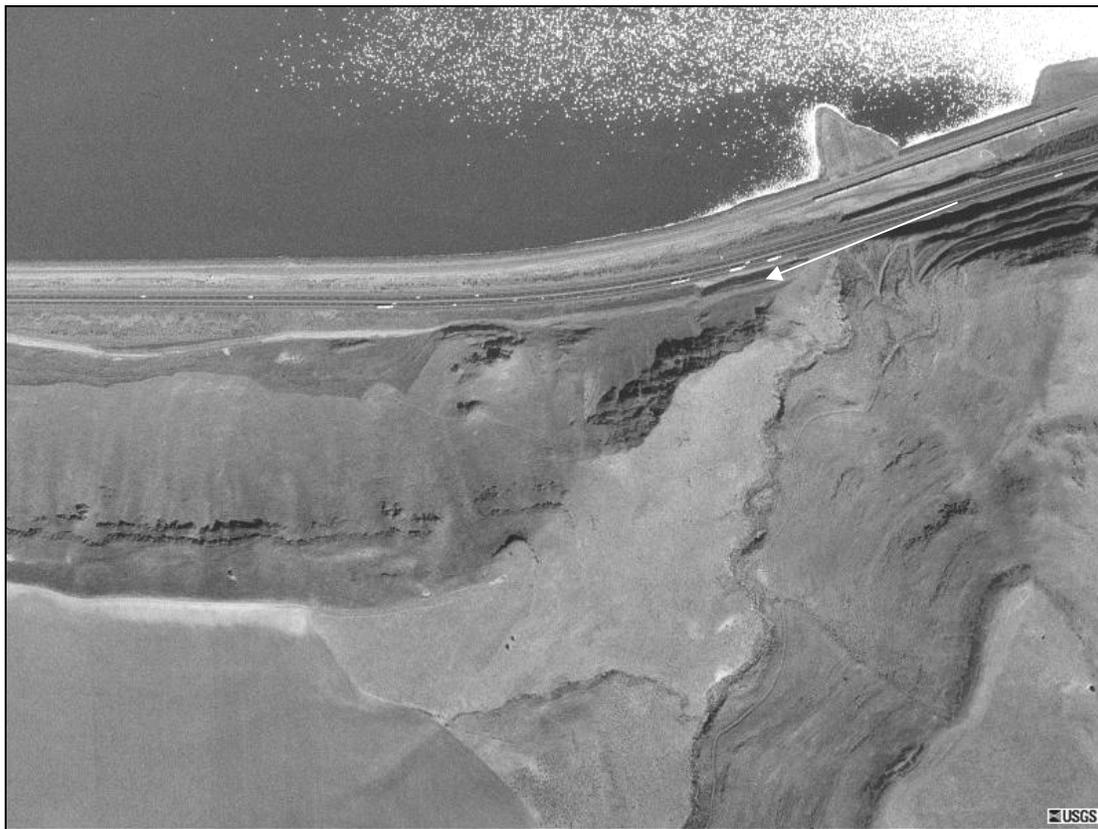
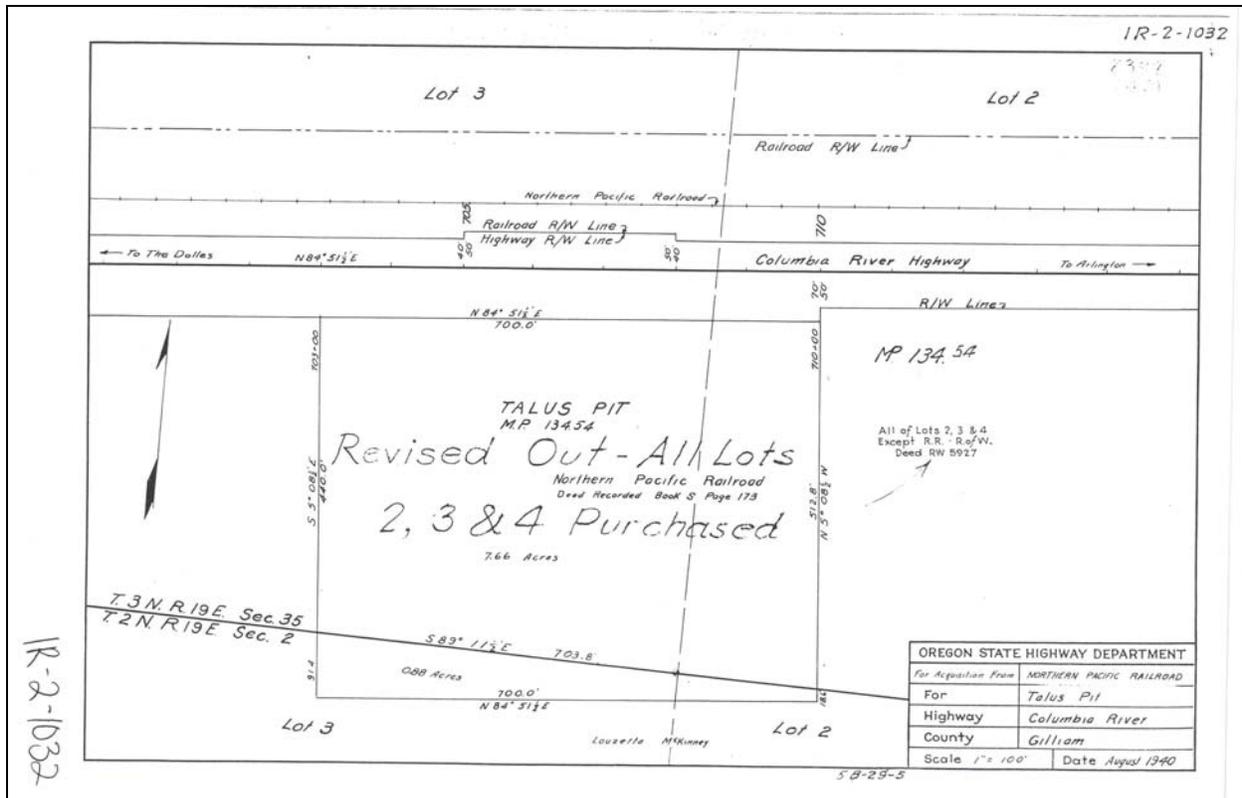
Aerial view of Highway 19 and the location of the raw land site south of Condon, OR

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	0	03N	19.0E	35
File ID		Source #	Date Visited	Map #			Type of Site		
08398		11-903-4	7/21/1999	1R-2-1032			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°41'32.90000"	120°24'19.71000"	122	8.54	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Fresh			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	120					
Potentially Significant Site	Why	Open/Closed			Direction				
No	Too small	Closed			To the north across I-84 is the Columbia River.				
Adjacent Land Use									
Open space									
Remarks									
This is a small very steep area adjacent to I-84. There is no access to this site from I-84. There is no room to work, or screening from the Interstate. The mile point is suspect for all of these sites in the Gorge.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

W



Looking west at the raw land site that is adjacent to Interstate 84.



Aerial view of the terrain around the raw land site.

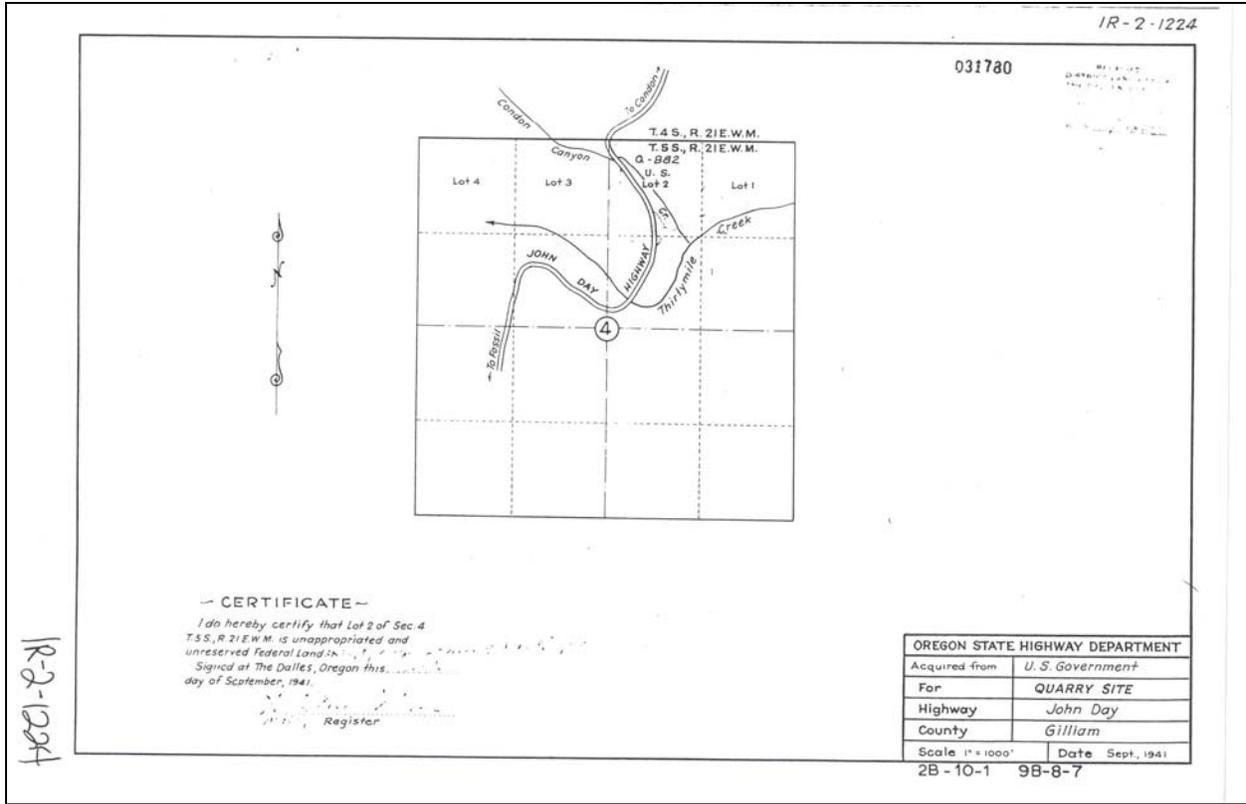
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0005	0	05S	21.0E	04
File ID		Source #	Date Visited	Map #			Type of Site		
09783		11-904-4	8/11/1999	1R-2-1224			Raw Land		
Latitude	Longitude	Elev. (m)	Acreeage	Pit Size		DOGAMI Permit #			
45°10'5.33501"	120°12'10.90993"	615.216	40	NA					
Comments									
GPS acquired along Trail Fork Road.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Variable		Fresh to Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R4	174	484,000	1,136,916			
Potentially Significant Site	Why			Open/Closed	Direction				
No	USA Ground			Closed	Condon Creek bisects the property.				
Adjacent Land Use									
Farming/Ranching adjacent to the site.									
Remarks									
This site is adjacent to Highway 19. The rock at this leased ground is a fine-grain vesicular basalt. There is little to no room to work here and no screening from Highway 19. Along the northeast side of the property is a moderate size talus slope. This area would need a site plan to develop it from the top down. Some of the interbedded flows of basalt would fall in the poor quality category. The terrain can be and is steep in this area. The adjacent property owners have fenced the southwest portion of this property. The old alignment bisected this ground. The BLM removed one of our bridges along this old alignment per conversation with the landowner. USA ground. This area has very steep terrain. The adjacent landowners have fenced the ground on both sides of Highway 19.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking northwest at the raw land site adjacent to the County Road.

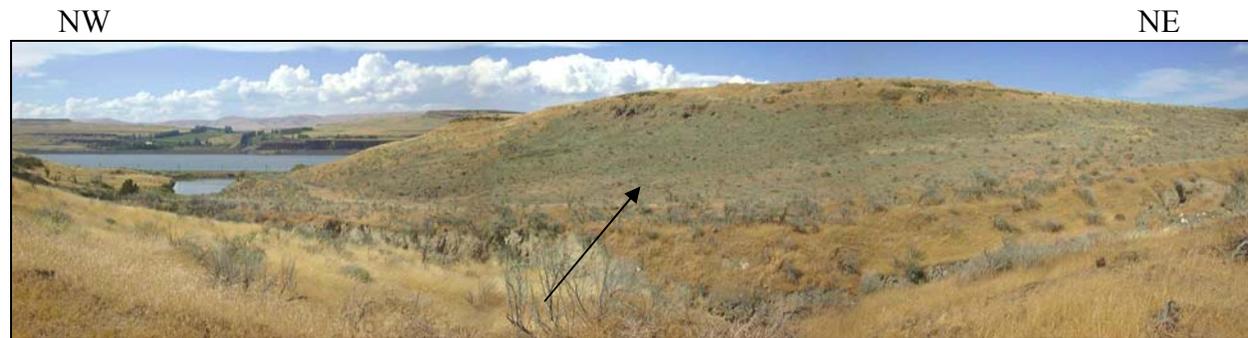


Close-up view of the loose colluvium on the talus slope at this location.

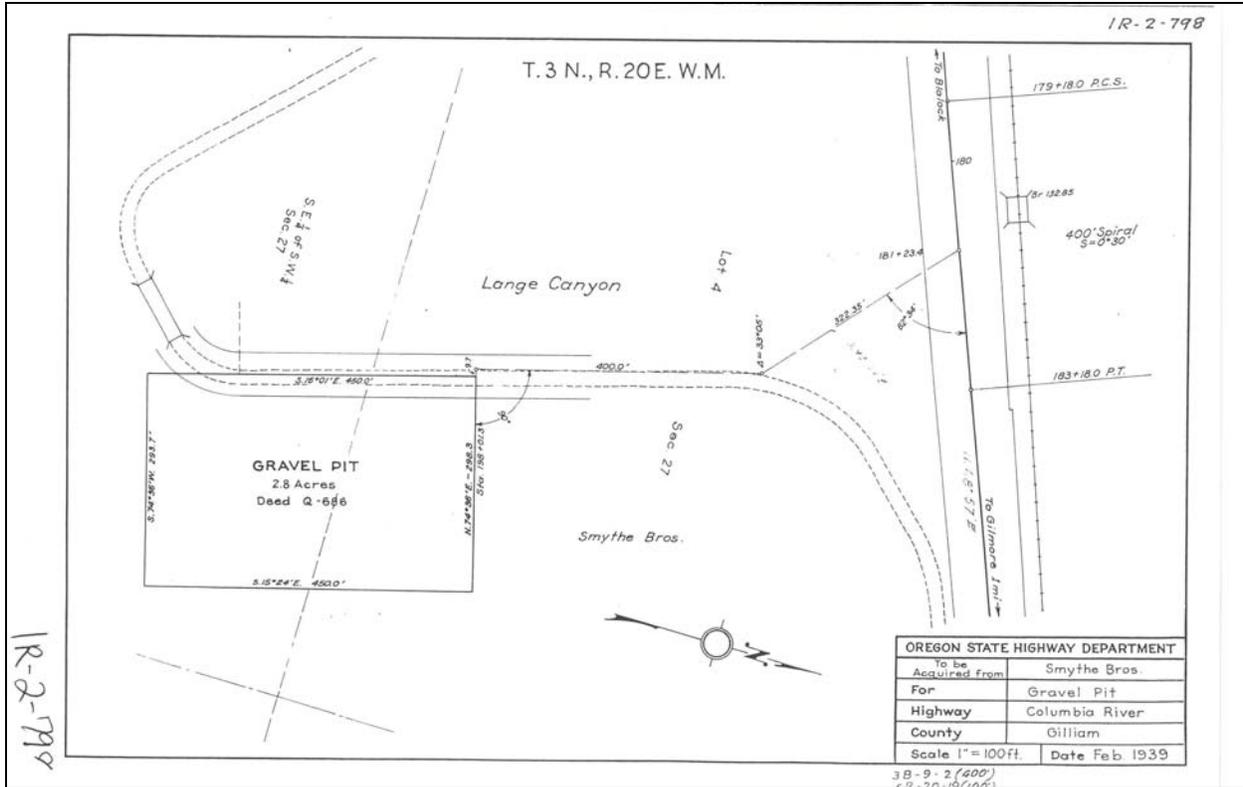


Aerial view of the site in relation to the surrounding terrain.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0002	0	03N	20.0E	27
File ID		Source #	Date Visited	Map #			Type of Site		
06708		11-905-4	7/21/1999	1R-2-798			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°42'27.82000"	120°17'59.76000"	122	3.06	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Slight to Fresh			Variable		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R4	155					
Potentially Significant Site	Why	Open/Closed	Direction						
No	Too small	Closed	There is a slough approximately 150 meters to the north at the base of the hill. It was created by the rail line that is adjacent to the Columbia River.						
Adjacent Land Use									
Open space									
Remarks									
This site is north of Interstate 84 and is in a difficult location to get too. The underpass below the Interstate is very narrow and one lane only. The road to the site has been abandoned and is in poor condition. The acreage is small, there is room to work, but no screening from the Interstate. The past disturbance looks as if it has been reclaimed. There is some overburden here of undetermined depth. The terrain is fairly flat and should pose no problems. This site should be evaluated for surplus.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking north at the old quarry site along I-84.

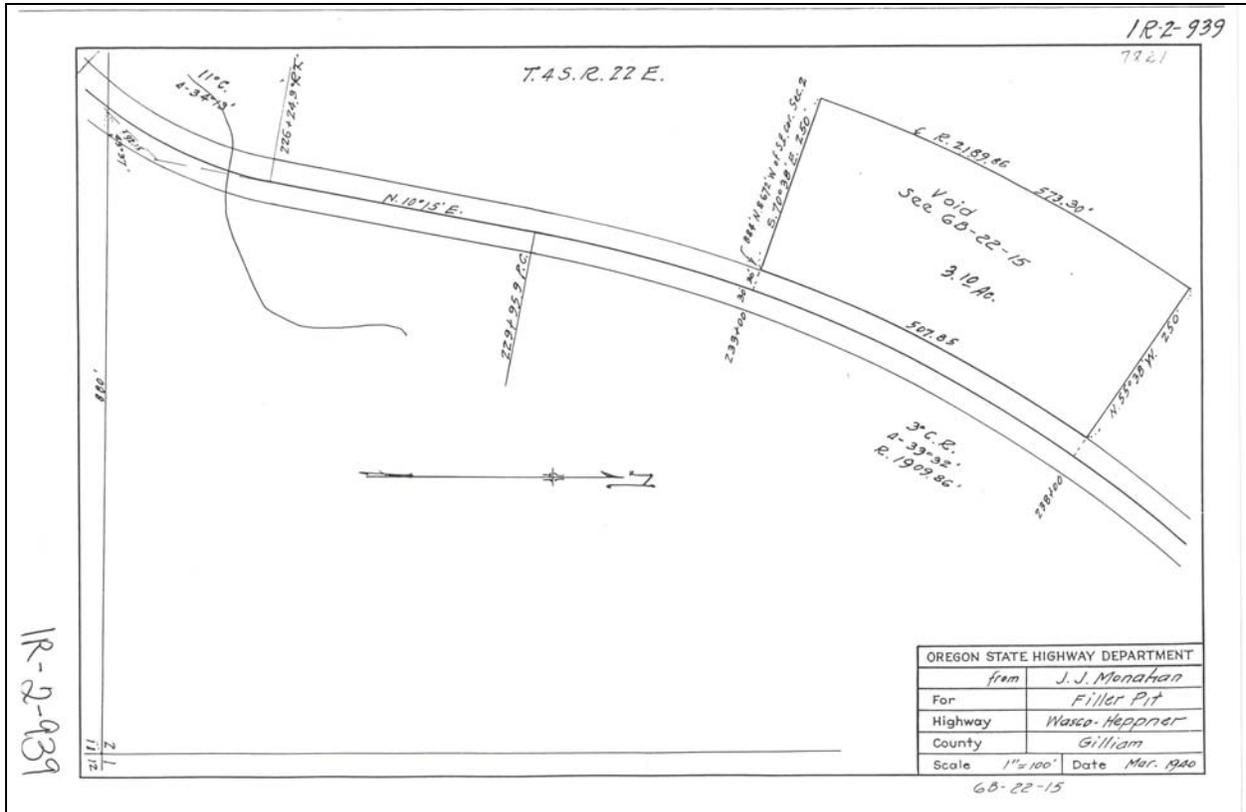


Aerial view of the small quarry site.

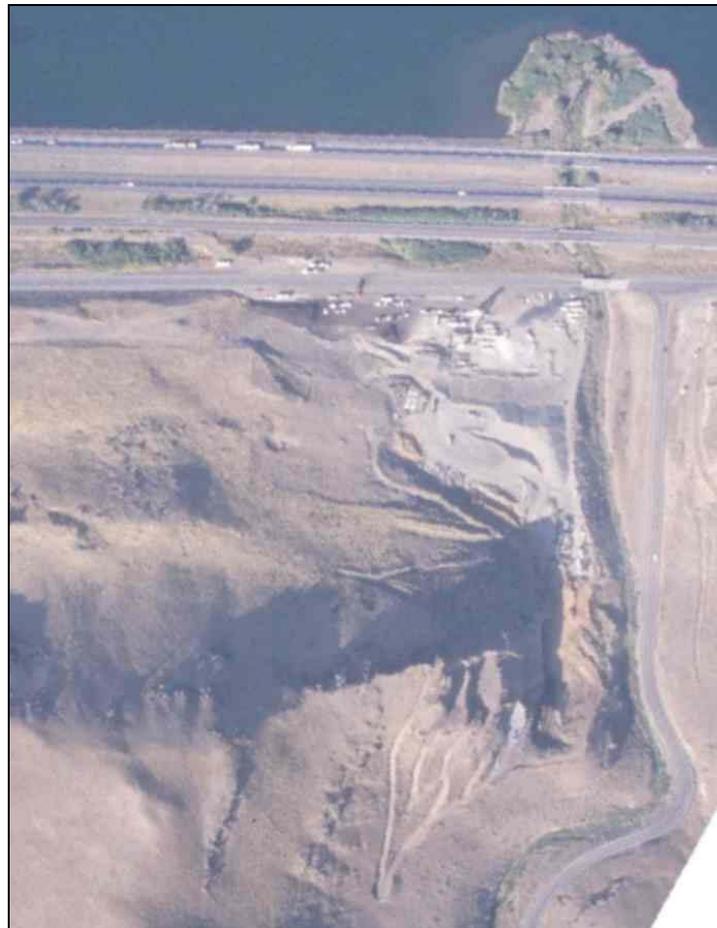
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Gilliam				09	0300	0	04S	22.0E	02
File ID		Source #	Date Visited	Map #			Type of Site		
37826, 7821		11-906-4	8/11/1999	1R-2-939			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°14'48.57000"	120°01'43.15000"	610	3.1	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			NA	120					
Potentially Significant Site	Why		Open/Closed		Direction				
No	Too small, difficult area to develop.		Closed		Rock Creek is to the northeast about 1500 meters.				
Adjacent Land Use									
Open space									
Remarks									
I did not find the exact site, but was in the general area. The area has good looking basalt rock. It is in an area of very steep terrain with no room to work and no screening from Highway 206. This site should be evaluated for surplus.									
Final Comments									
NA									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



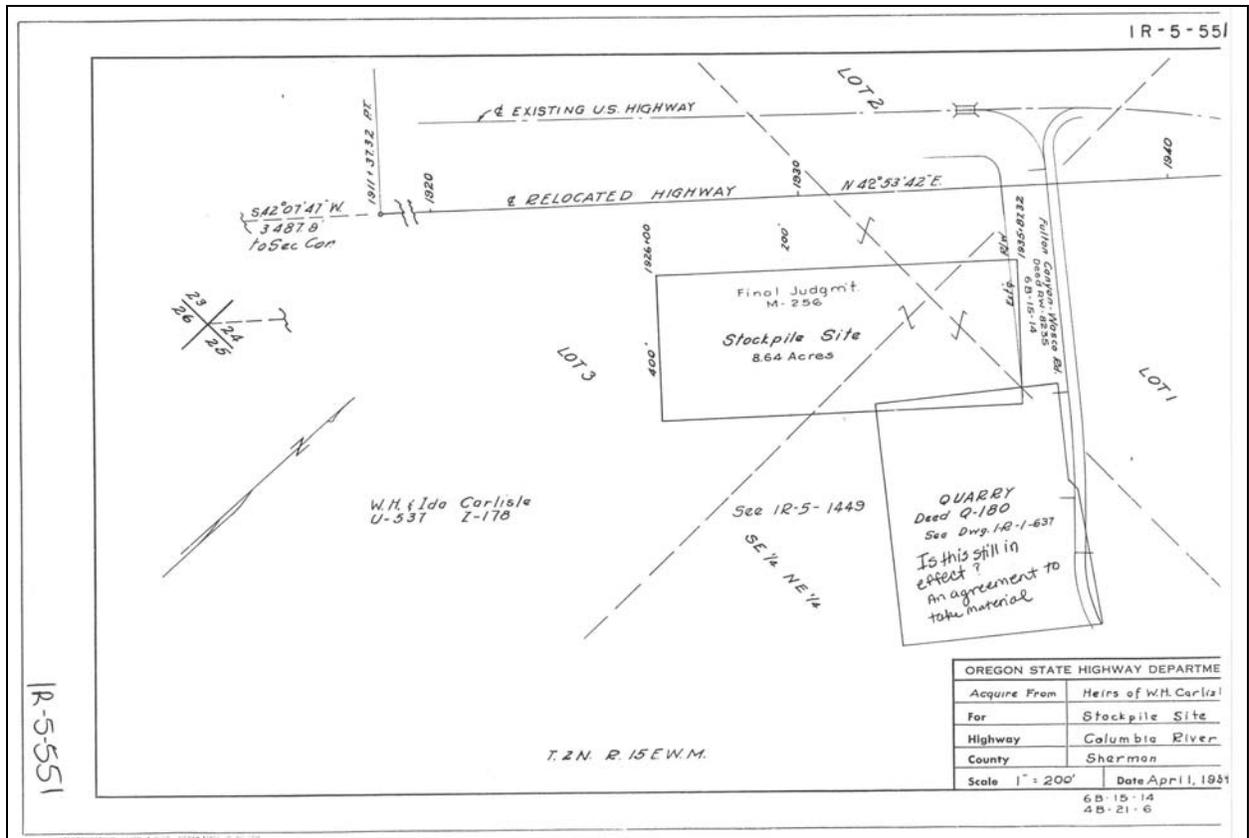
Aerial view of the site and the surrounding terrain along Highway 206.



County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman	Fulton Canyon Quarry				09	0002	100.3	02N	15.0E	24
File ID		Source #	Date Visited	Map #			Type of Site			
22023		28-001-4	7/20/1999	1R-5-551			Quarry			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°38'41.45258"	120°52'44.40862"	77.926	8.64	<3 acres						
Comments										
GPS acquired at adjacent site 28-002-4.										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tcw	Medium Dark Grey (N4)		Fresh			Massive to Highly Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good to Very Good			R4	194						
Potentially Significant Site	Why	Open/Closed	Direction							
No	Too small	Closed	To the north approximately 300 meters is the Columbia River.							
Adjacent Land Use										
Open space										
Remarks										
This site is adjacent to 28-002-4 and the quantity has been recorded in that record. This ground is used for a stock pile site and a bone yard by Maintenance. We have acquired more land for this site but still need access. If you used I-84 as base level you could lower the pit floor another 20 feet or more for additional material. This site is associated with PMFILEID Q0180 (28-002-4)										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.71										
Material Use										
(1959)										



Air photo from DOGAMI of the quarry site at the intersection of Highway 206 and I-84.

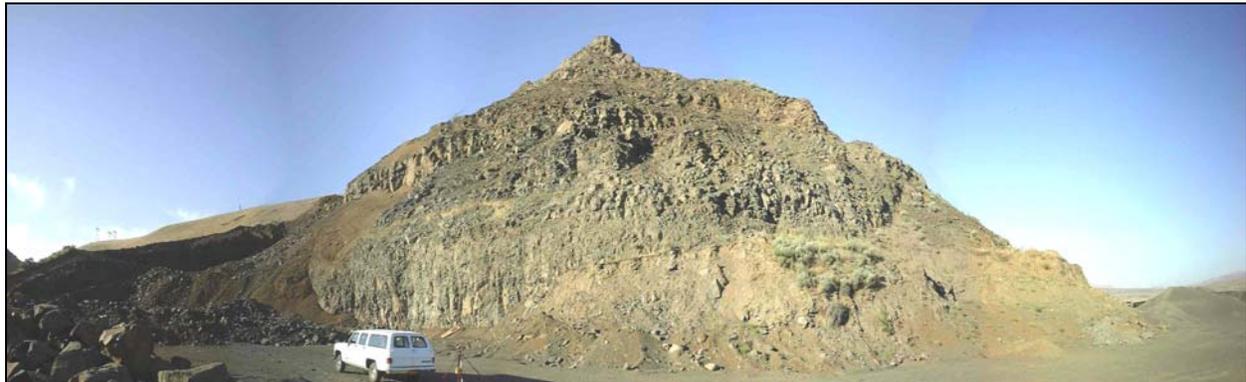


Aerial view of the quarry site at the intersection of I-84 and Highway 206.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman	Fulton Canyon Quarry			09	0002	100.3	02N	15.0E	23
File ID		Source #	Date Visited	Map #			Type of Site		
Q0180		28-002-4	7/20/1999	1R-1-637			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°38'41.45258"	120°52'44.40862"	77.926	7.4	<2 acres		28-0006			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh			Massive to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Very Good			R4	194	110,000	288,090			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Good quality, close to I-84, room to work, moderate size quantity.			Closed	To the north across I-84 approximately 400 meters is the Columbia River.				
Adjacent Land Use									
Open space									
Remarks									
This is a fine-grain basalt, with multiple flows, some of them are very vesicular. You can rip some of the rock but most likely would need to drill and blast. There is no screening from the Interstate and Highway 206. There is plenty of room to work here at this location and at the adjacent stock pile site. The terrain is steep and so there is little to no overburden to accumulate. There is a modest supply of rip rap at this site. The fine-grain nature of the basalt could produce elongated pieces and could be an issue after crushing. The steepness of the terrain and the number of benches make this a dangerous area. This site is associated with PMFILEID 22023 (28-001-4).									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.799	2.795	18.4	5.0		14.7	5.0	13.8	5.0	
Material Use									
AC AGG									

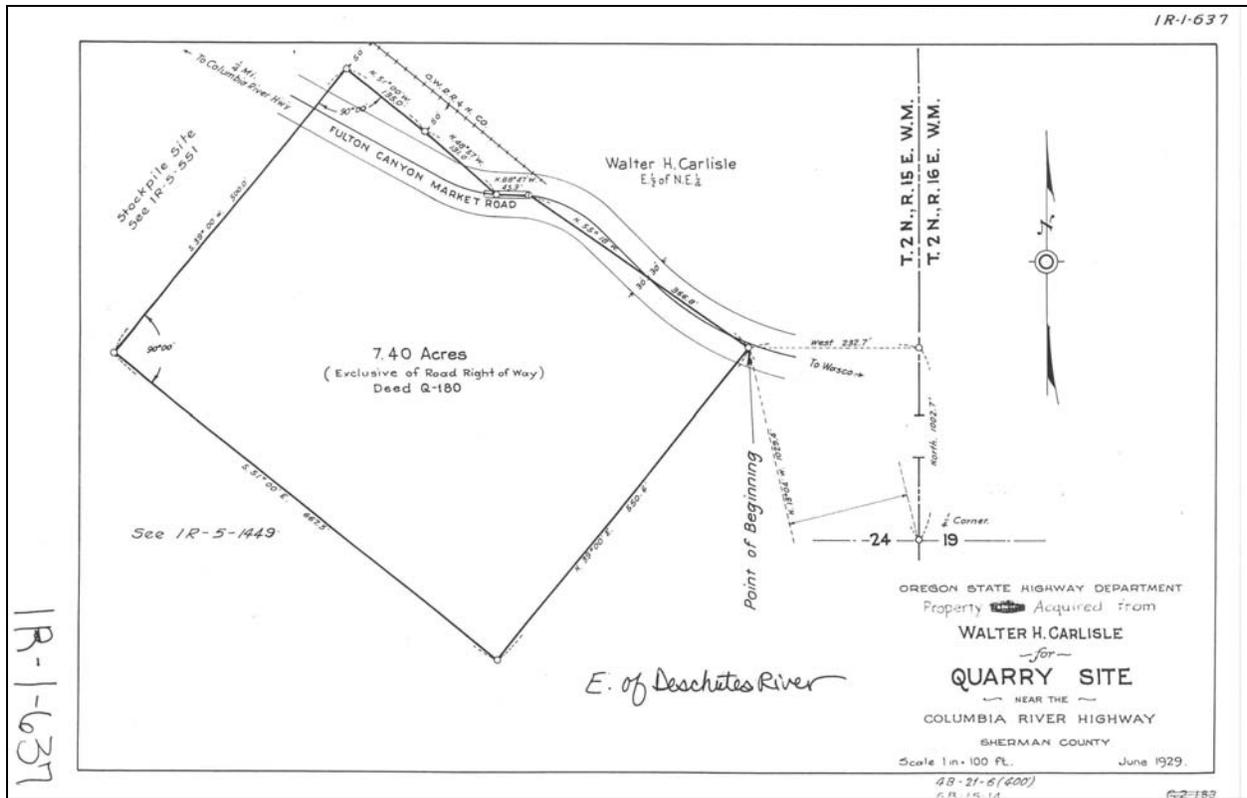
S

W



Looking southwest at the pit face from the stockpile site. There is a small pile of rip rap to the left of the image.

Close-up of the fracture pattern with the hammer for scale.

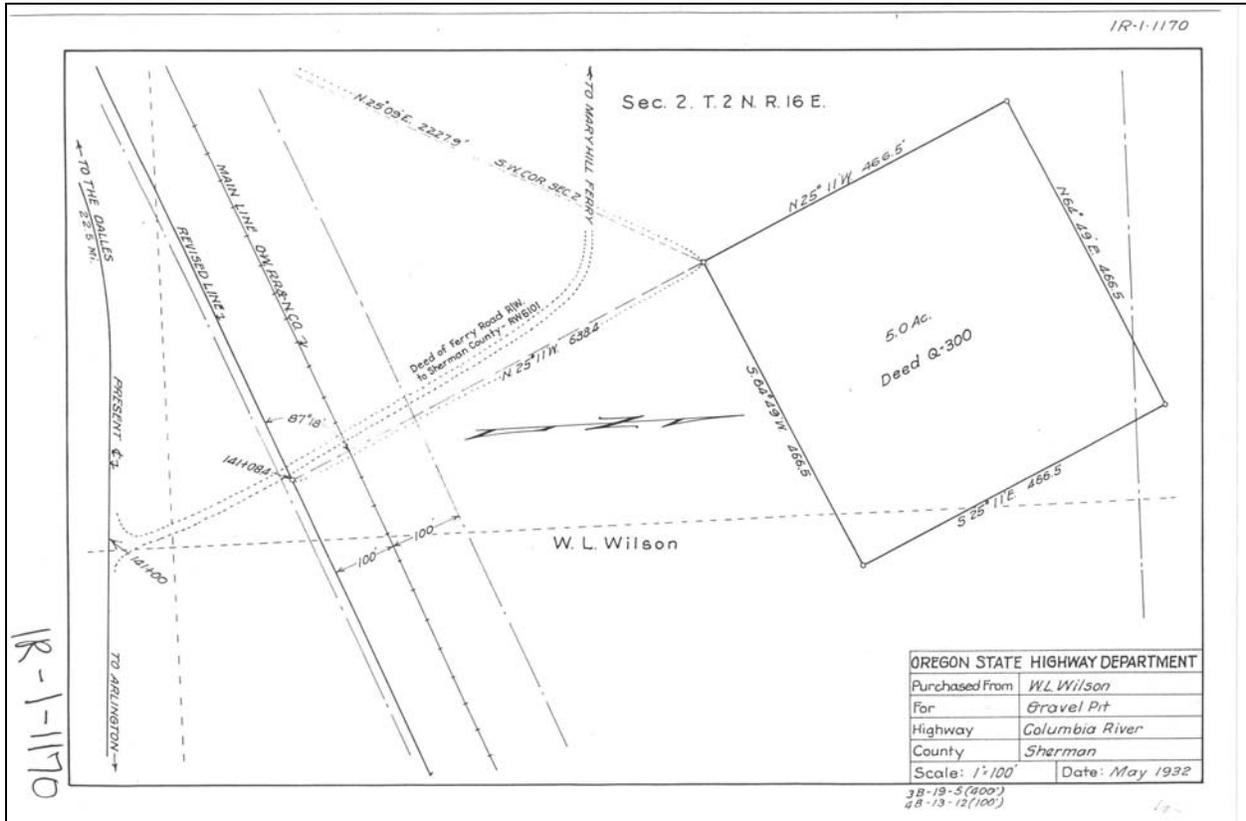


Aerial view of the quarry site. Interstate 84 is in the upper left hand corner of the image.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman				09	0002	105.57	02N	16.0E	02
File ID		Source #	Date Visited	Map #		Type of Site			
Q0300		28-004-4	7/20/1999	1R-1-1170		In the Columbia River			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°41'04.84000"	120°47'20.85000"	61	5	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering		Jointing			
NA	NA	NA		NA		NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
NA			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	Under water			NA	NA				
Adjacent Land Use									
NA									
Remarks									
This site along Interstate 84 and is underwater close to the bank of the Columbia River.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Aerial view of the gravel site under water in the Columbia River north of Interstate 84.



<b>County</b>	<b>Site Name</b>				<b>Dist</b>	<b>Hwy</b>	<b>Mile Pt</b>	<b>TWP</b>	<b>RGE</b>	<b>Sect</b>
Sherman					09	0042	2.5	02N	16.0E	22
<b>File ID</b>		<b>Source #</b>	<b>Date Visited</b>	<b>Map #</b>			<b>Type of Site</b>			
15213		28-007-4	7/20/1999	1R-2-1868			Road Cut			
<b>Latitude</b>	<b>Longitude</b>	<b>Elev. (m)</b>	<b>Acreage</b>	<b>Pit Size</b>	<b>DOGAMI Permit #</b>					
45°38'50.5379"	120°48'04.91369"	168.398	10.15	<1 acre						
<b>Comments</b>										
GPS acquired south of the roadcut at the turn-out on Highway 97.										
<b>Rock Type</b>	<b>Unit</b>	<b>Color</b>		<b>Weathering</b>			<b>Jointing</b>			
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Massive to Highly Fractured			
<b>Quality</b>			<b>Hardness</b>	<b>lbs./cu ft.</b>	<b>Reserve (cy)</b>	<b>Reserve (Tons)</b>				
Good			R4	183	50,000	123,525				
<b>Potentially Significant Site</b>	<b>Why</b>	<b>Open/Closed</b>		<b>Direction</b>						
No	This is a road-cut.	Closed		Adjacent to this site is the South Spanish Hollow Creek						
<b>Adjacent Land Use</b>										
Open space										
<b>Remarks</b>										
This location is along Highway 97 and is no more than a road cut. There is no screening and no room to work. This is a fine-grain basalt that has some platy fractures with some very large and blocky structure to the flows. You can rip some but most likely would need to drill and blast. The rock would need to be processed at another location. Due to the steep nature of the terrain there is little to no overburden. This site would be a difficult site to develop. The property is located in a narrow steep canyon. The highway has a large volume of traffic in this section of the road. There is a small section of ground on the south west side of the road where someone has been removing material.										
<b>202B</b>	<b>203B</b>	<b>211</b>	<b>206 Fine</b>	<b>206 Coarse</b>	<b>208 F</b>	<b>208 F Ht.</b>	<b>208 C</b>	<b>208 C Ht.</b>		
	2.94	18.1								
<b>Material Use</b>										
Surfacing Base Rock, Oiling Aggregate and AC (1960)										

NW

NE



Looking north at the road cut along Highway 206.

Close-up view of the massive fracture pattern in the basalt.

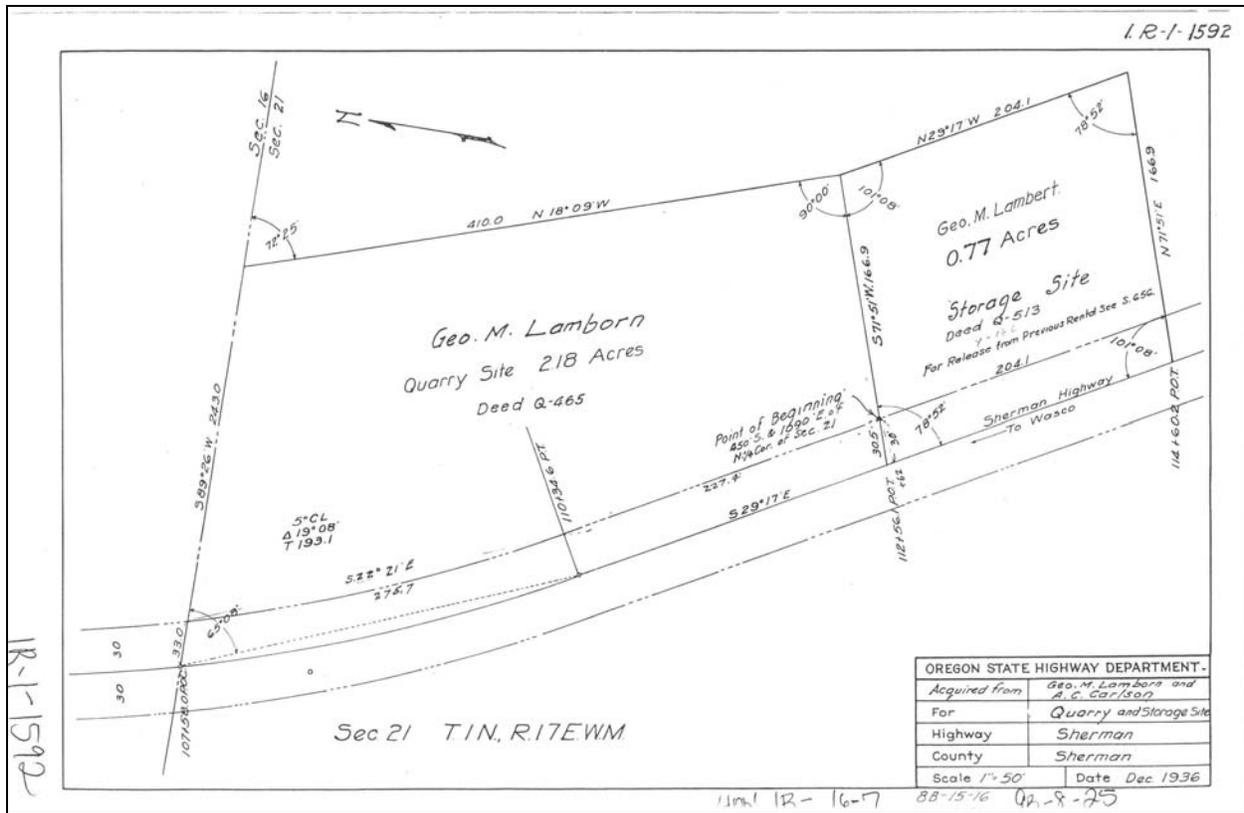


County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman				09	0042	11.5	01N	17.0E	21
File ID		Source #	Date Visited	Map #			Type of Site		
03113, 04336		28-009-4	7/20/1999	1R-1-1592			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°33'43.09000"	120°41'35.53000"	470	2.95	<1 acre					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	NA		Fresh to Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3	155	20,000	41,850			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too small			Closed	NA				
Adjacent Land Use									
Farming/One residence to the west approximately 100 meters.									
Remarks									
This is a fine-grain basalt with up to 3 feet of overburden here. There is some good screening from Highway 97, but limited room to work at this small site. You can rip the material but it will produce a lot of fines. The dominant fracture here is platy within the structure of the flow. The property is along the old alignment and would need a new easement to this location. The new highway is on the eastern boundary of this property. This site should be evaluated for surplus. Approximately 3,000 cubic yards have been removed to date. Possibly a good location for a stock pile site.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.91	16.3			18.69	.3			
Material Use									
(1963)									



Looking east at the small pit. Highway 97 is just beyond the knoll of the pit.

Close-up view of the platy fracture with the hammer for scale.

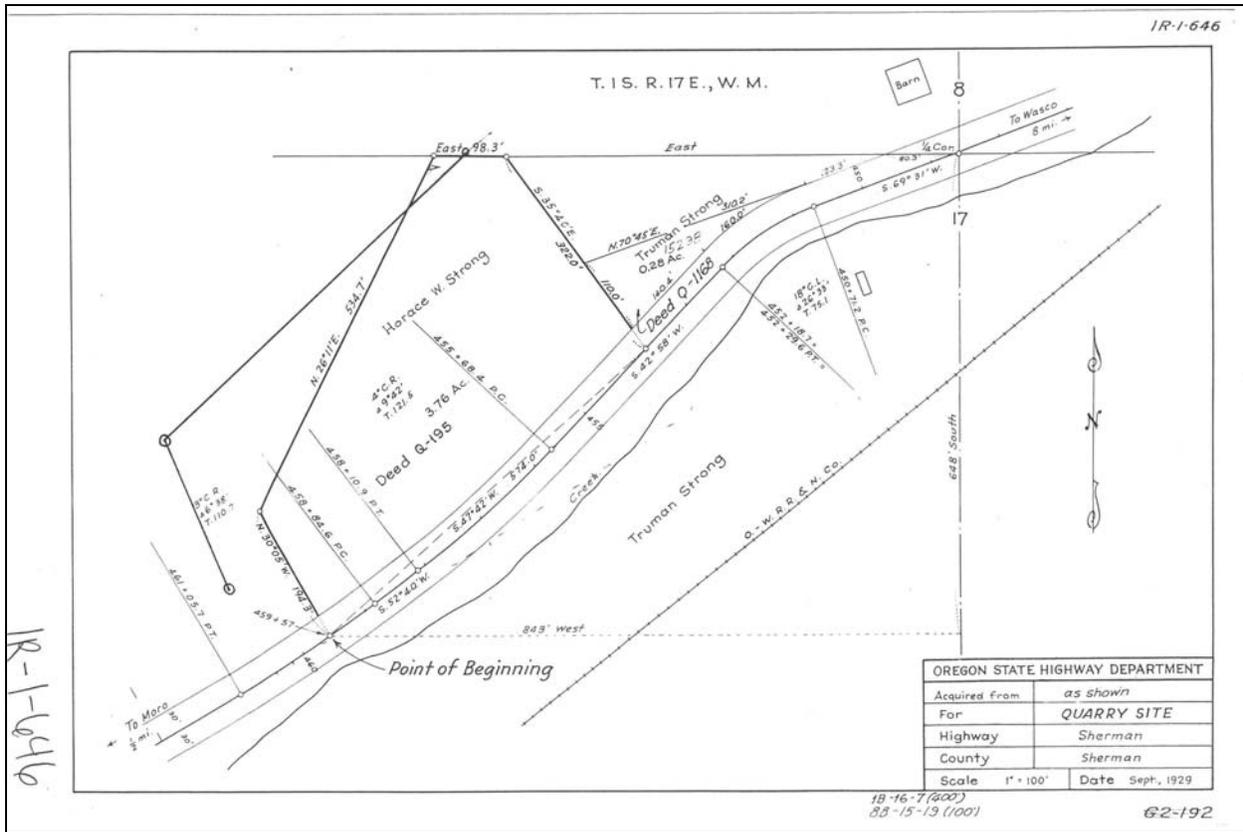


Aerial view of the small quarry site along Highway 97.

<b>County</b>	<b>Site Name</b>				<b>Dist</b>	<b>Hwy</b>	<b>Mile Pt</b>	<b>TWP</b>	<b>RGE</b>	<b>Sect</b>
Sherman	Strong Quarry				09	0042	17.6	01S	17.0E	17
<b>File ID</b>		<b>Source #</b>	<b>Date Visited</b>	<b>Map #</b>		<b>Type of Site</b>				
15298, Q0195		28-011-4	7/20/1999	1R-1-646		Maintenance Yard				
<b>Latitude</b>	<b>Longitude</b>	<b>Elev. (m)</b>	<b>Acreage</b>	<b>Pit Size</b>		<b>DOGAMI Permit #</b>				
45°29'21.30000"	120°43'17.26000"	547	2.69	NA						
<b>Comments</b>										
Lat. and Long. acquired using Terrain Navigator Software										
<b>Rock Type</b>	<b>Unit</b>	<b>Color</b>		<b>Weathering</b>			<b>Jointing</b>			
NA	NA	NA		NA			NA			
<b>Quality</b>			<b>Hardness</b>	<b>lbs./cu ft.</b>	<b>Reserve (cy)</b>	<b>Reserve (Tons)</b>				
NA			NA	0						
<b>Potentially Significant Site</b>	<b>Why</b>			<b>Open/Closed</b>	<b>Direction</b>					
NA	Maintenance Yard			NA	NA					
<b>Adjacent Land Use</b>										
NA										
<b>Remarks</b>										
This is an ODOT Maintenance Yard.										
<b>202B</b>	<b>203B</b>	<b>211</b>	<b>206 Fine</b>	<b>206 Coarse</b>	<b>208 F</b>	<b>208 F Ht.</b>	<b>208 C</b>	<b>208 C Ht.</b>		
2.65	2.73	20.1	3.6	2.4	0.3			14.2		
<b>Material Use</b>										
AC BASE (1989)										

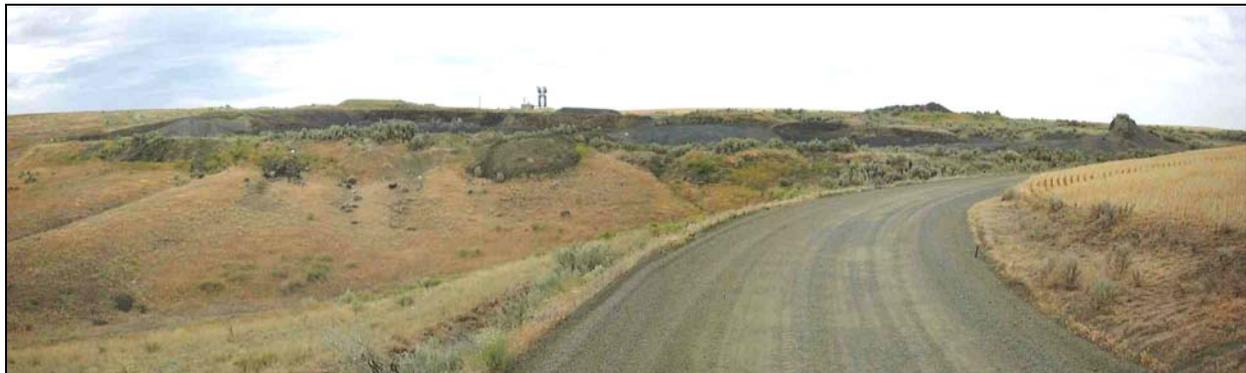


Aerial view of the Maintenance yard in Moro, OR.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman	Balsinger Quarry			09	0042	24.76	02S	16.0E	10
File ID		Source #	Date Visited	Map #			Type of Site		
23876		28-014-4	7/20/1999	1R-5-782			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°24'27.01677"	120°48'32.52536"	730.777	22.96	<9 acres	28-0003				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Very Good to Good.			R4	176	415,000	986,040			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Good quality, quantity, room to work, close to Highway 97.			Closed	NA				
Adjacent Land Use									
Farming/Open space									
Remarks									
This site is located about one mile west of Highway 97 off of King Lane/Sayrs Road. The rock is a fine-grain highly fractured basalt. You would need to drill and blast the rock with minor ripping. There is some screening from the County road and plenty of room to work. There is no gate or fencing at this site. To get to this site off of Highway 97, go to King Lane then to Sayrs (spelling?) Road. County road sign could be misspelled.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.766	2.794	25.2	4.0	2.0	12.1	5.0	18.3	8.0	
Material Use									
QUARRY ROCK (2000)									

N



Looking north at the quarry site from Sayrs County road.



Close-up view of the jointing pattern in the basalt.



<b>County</b>	<b>Site Name</b>			<b>Dist</b>	<b>Hwy</b>	<b>Mile Pt</b>	<b>TWP</b>	<b>RGE</b>	<b>Sect</b>
Sherman	Adams Quarry			09	0042	35.55	03S	17.0E	31
<b>File ID</b>		<b>Source #</b>	<b>Date Visited</b>	<b>Map #</b>		<b>Type of Site</b>			
10800, Q0130		28-016-4	8/12/1999	1R-1-580		Quarry			
<b>Latitude</b>	<b>Longitude</b>	<b>Elev. (m)</b>	<b>Acreage</b>	<b>Pit Size</b>	<b>DOGAMI Permit #</b>				
45°15'43.46166"	120°44'17.2745"	714.723	19.3	<5 acres	28-0017				
<b>Comments</b>									
GPS acquired in the southeast pit.									
<b>Rock Type</b>	<b>Unit</b>	<b>Color</b>		<b>Weathering</b>		<b>Jointing</b>			
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight		Massive to Moderately Fractured			
<b>Quality</b>			<b>Hardness</b>	<b>lbs./cu ft.</b>	<b>Reserve (cy)</b>	<b>Reserve (Tons)</b>			
Good to Very Good			R4	178	100,000	240,300			
<b>Potentially Significant Site</b>	<b>Why</b>			<b>Open/Closed</b>	<b>Direction</b>				
Yes	Good quality, room to work, adjacent to Highway 97.			Closed	NA				
<b>Adjacent Land Use</b>									
Open space									
<b>Remarks</b>									
This site is located adjacent to and east of Highway 97. The rock is a fine to medium-grain basalt which is very blocky and can produce a moderate amount of rip rap. There is no screening from Highway 97 and plenty of room to work here. The terrain is gentle to flat. The top 5 feet of the rock unit is weathered moderately. You would need to drill and blast the rock. The pit floor is 8 feet below Highway 97. This site is also used to stock pile. There has been approximately 50,000 cubic yards removed from this site.									
<b>202B</b>	<b>203B</b>	<b>211</b>	<b>206 Fine</b>	<b>206 Coarse</b>	<b>208 F</b>	<b>208 F Ht.</b>	<b>208 C</b>	<b>208 C Ht.</b>	
2.476	2.779	21.3	4.0	1.0	17.8	12.7	17.3	10.2	
<b>Material Use</b>									
QUARRY ROCK (1998)									

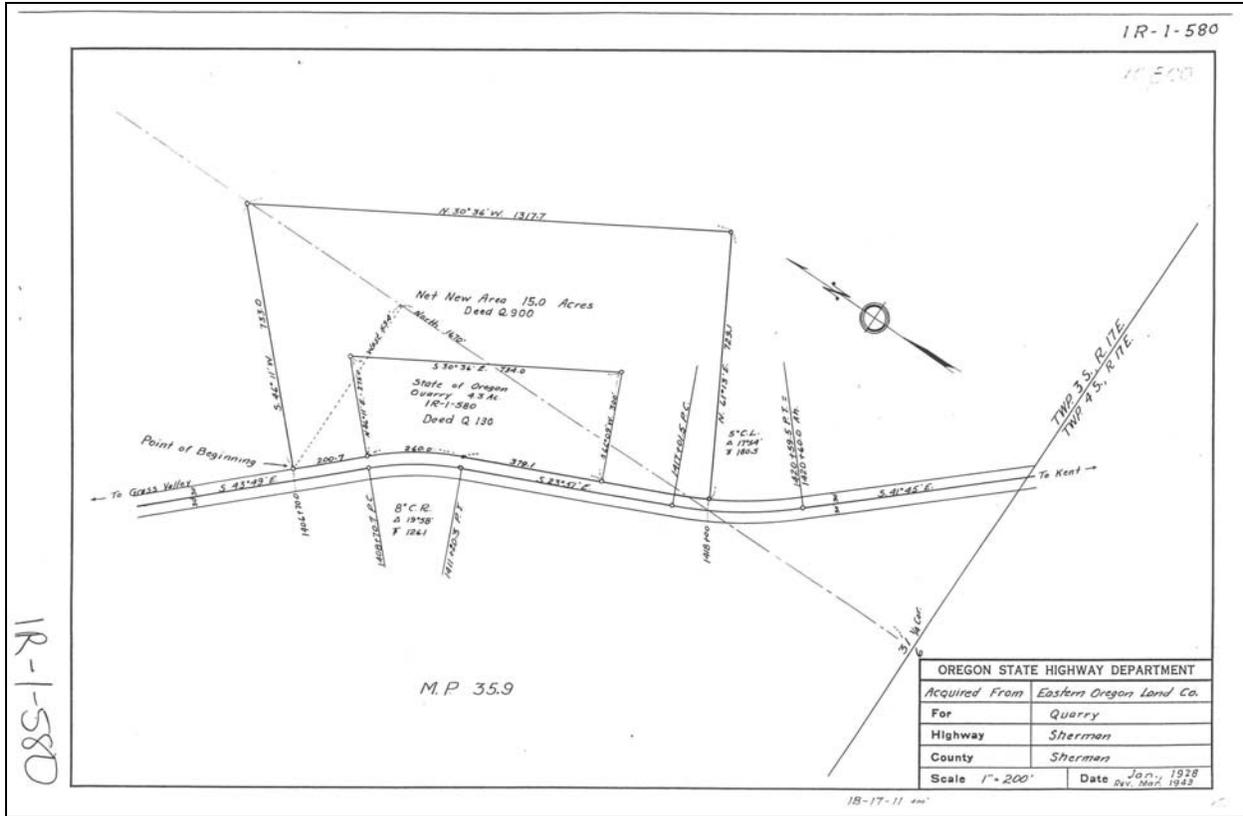
SW

N



Looking northwest at the quarry site. Highway 97 is in the background. Note the pile of rip rap on the right side of the image.

Close-up view of some of the rip rap at the site with the hammer for scale.



Aerial view of the quarry site along Highway 97.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman	Finnegan Quarry			09	0290	25.95	03S	16.0E	14
File ID		Source #	Date Visited	Map #			Type of Site		
17817, 17808, 15292		28-018-4	7/20/1999	1R-2-1885			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°18'12.2813"	120°47'20.46091"	724.772	11.55	<4 acres					
Comments									
GPS acquired at the locked gate and the County Road.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Moderate			Massive to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3 to R4	178	80,000	192,240			
Potentially Significant Site	Why					Open/Closed	Direction		
No	Quality is variable, site is situated on a gravel County road.					Closed	NA		
Adjacent Land Use									
Open space									
Remarks									
This site is located about one mile west of Highway 97. The rock is composed of a fine-grain basalt that produces large blocks and small fines. There is good screening from the road and plenty of room to work. The terrain is fairly flat. You can rip some of the material but most likely would need to drill and blast the rock. There is moderate weathering of the rock at the surface and overburden can be up to 3 feet thick here. Someone is using this site to store materials and waste items. The County has a pit adjacent to ours. This site has a locked gate.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

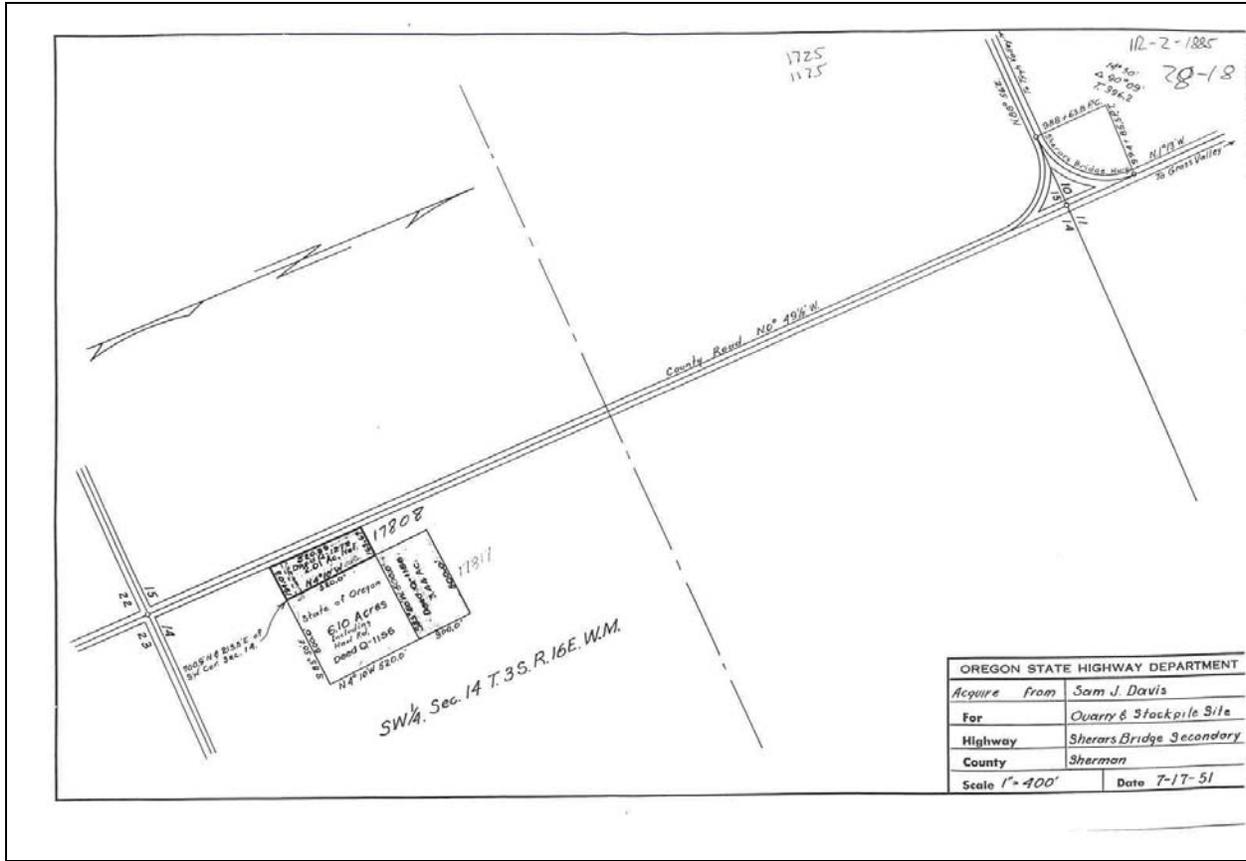
SW

NE



Panoramic image of the small quarry site off of Finnegan Rd.

Close-up of the fracture pattern with the 4 lb. maul for scale.



Aerial view of the quarry site that is adjacent to Finnegan Road.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman	Hay Creek Canyon Quarry			09	0300	4.7	01N	18.0E	30
File ID		Source #	Date Visited	Map #			Type of Site		
30138		28-019-4	7/20/1999	1R-5-1213			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°32'42.25416"	120°37'27.58341"	451.091	12.8	<5 acres		28-0020			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Olive Grey (5Y 3/2)		Slight to Decomposed			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Poor			R1 to R3	146	100,000	197,100			
Potentially Significant Site	Why					Open/Closed	Direction		
No	Quality is variable, room to work, and the site is adjacent to the highway.					Closed	NA		
Adjacent Land Use									
Open space/Farming									
Remarks									
This site is located adjacent to and east of Highway 206. The rock is a fine-grain decomposing basalt with spheroidal weathering. There is room to work here but no screening from the highway. The terrain is fairly flat in this area. You can rip the material but at some time in the future you would need to drill and blast. There is no fencing or gate here. This property is not very deep, and adding to this site might be advisable. This site had a stock pile of grindings.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.81	2.83	18.1	3.3	3.0			17.2	0.3	
Material Use									
CHIP SEAL (1993)									

NE

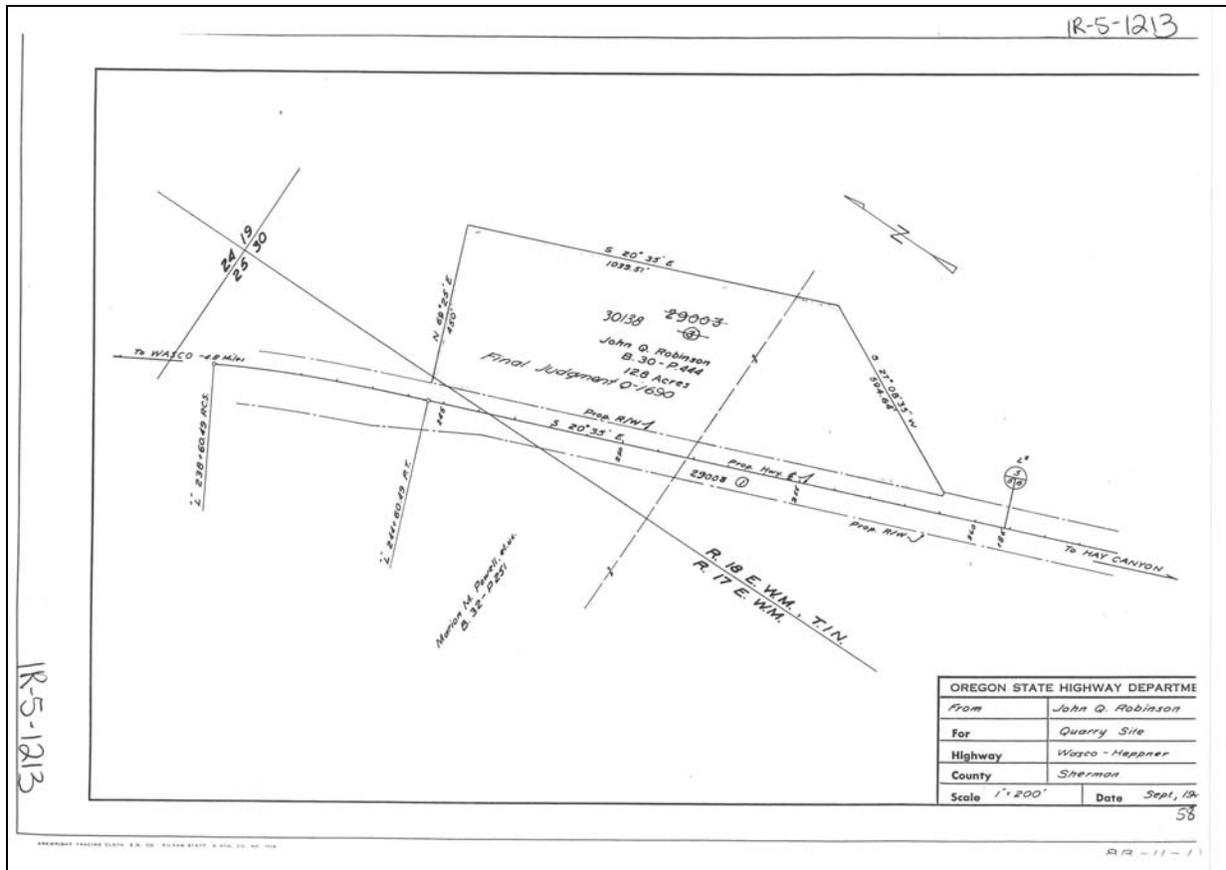
SE



Looking east at the quarry and stockpile site along Highway 206.



Close-up view of the fracture pattern along the bench cut.



Aerial view of the quarry site along Highway 206.

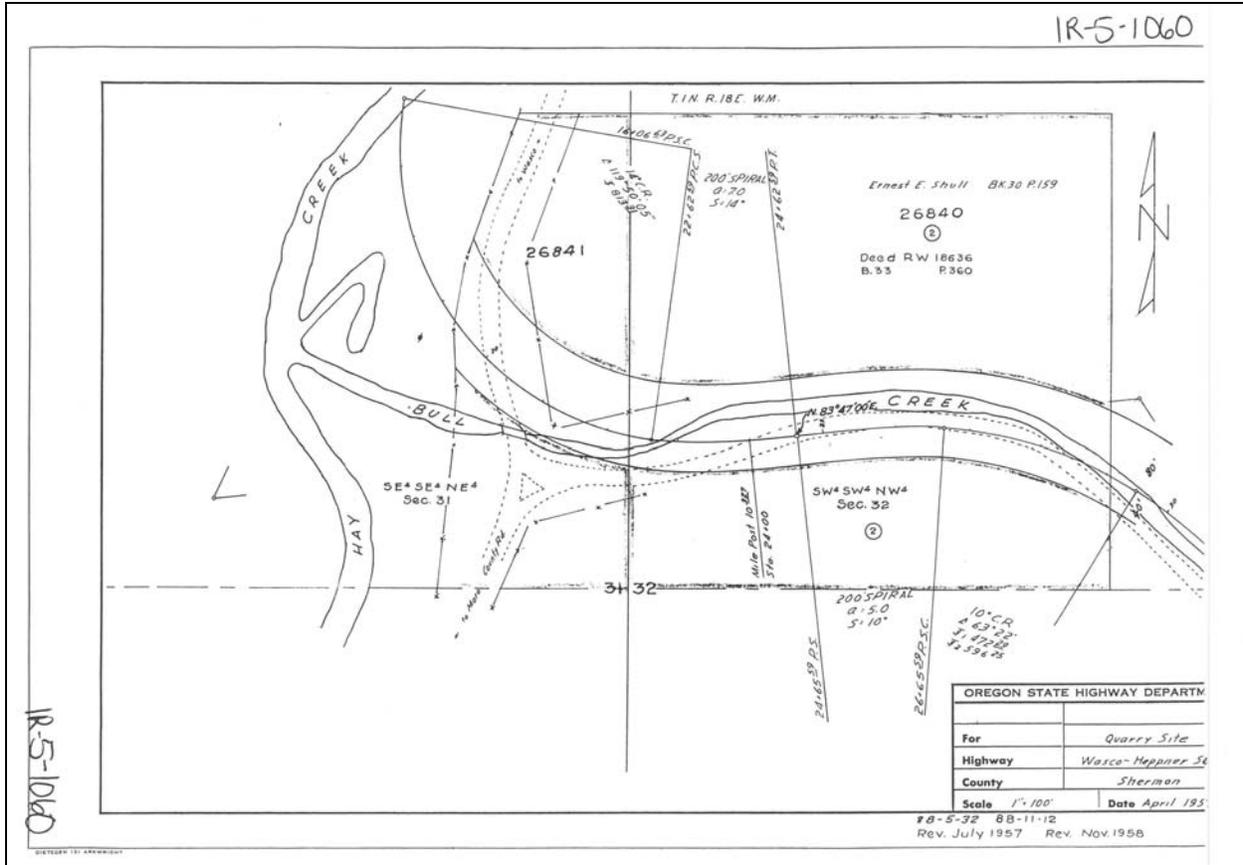
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman				09	0300	10.32	01N	18.0E	31
File ID		Source #	Date Visited	Map #			Type of Site		
26841, 26840		28-020-4	7/20/1999	1R-5-1060			Road Cut		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°31'36.04273"	120°36'07.6126"	400.62	9.3	<1 acre					
Comments									
GPS acquired along Highway 206.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcw	Medium Dark Grey (N4)		Fresh to Slight			Highly Fractured to Massive		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Very Good			R4	183	160,000	395,280			
Potentially Significant Site	Why			Open/Closed	Direction				
Maybe	Good aggregate, adjacent to Highway 206.			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is located adjacent to and northeast of Highway 206. The rock is a fine-grain basalt with a very sharp fracture pattern. There is no room to work and no screening from Highway 206. The highway bisects this property and this site can be construed as a road cut at this radius. You would definitely drill and blast this rock. You would also crush this aggregate so as to not produce elongated pieces. The terrain is gradual to fairly steep. If in the future if we should want to realign the highway here this would be a good source of aggregate. This site is more of a road cut than a quarry. Very limited room to work along this stretch of road. There are some power lines over the property.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.8	24.5							
Material Use									
Base and Oil Rock (1957)									



Looking north at the road cut along Highway 206.



Close-up of the jointing pattern along the road cut with the hammer for scale.



Aerial view of the site and the surrounding area.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Sherman				09	0300	15	01S	19.0E	17
File ID		Source #	Date Visited	Map #			Type of Site		
14079		28-021-4	7/20/1999	1R-2-1770			Gravel		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°28'35.30000"	120°28'09.64000"	183	4.15	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Volcanic Gravel	NA	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	Adjacent to the Wild and Scenic John Day River.			Closed	Adjacent to the John Day River.				
Adjacent Land Use									
Open space/Ranch across the river to the northwest approximately 300 meters.									
Remarks									
This site is located along the John Day River and has clean gravel that is well-rounded cobble size and less. There is up to 30 % sand intermixed. This site is within the flood plane near the footings of the Highway 206 bridge over the river. There is no access to this site here. Possible wetland mitigation. There is approximately 25,000 cubic yards of material here. This site should be evaluated for surplus. The source number is for Sherman County, but the property is in Gilliam County. No access to this site except by foot.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

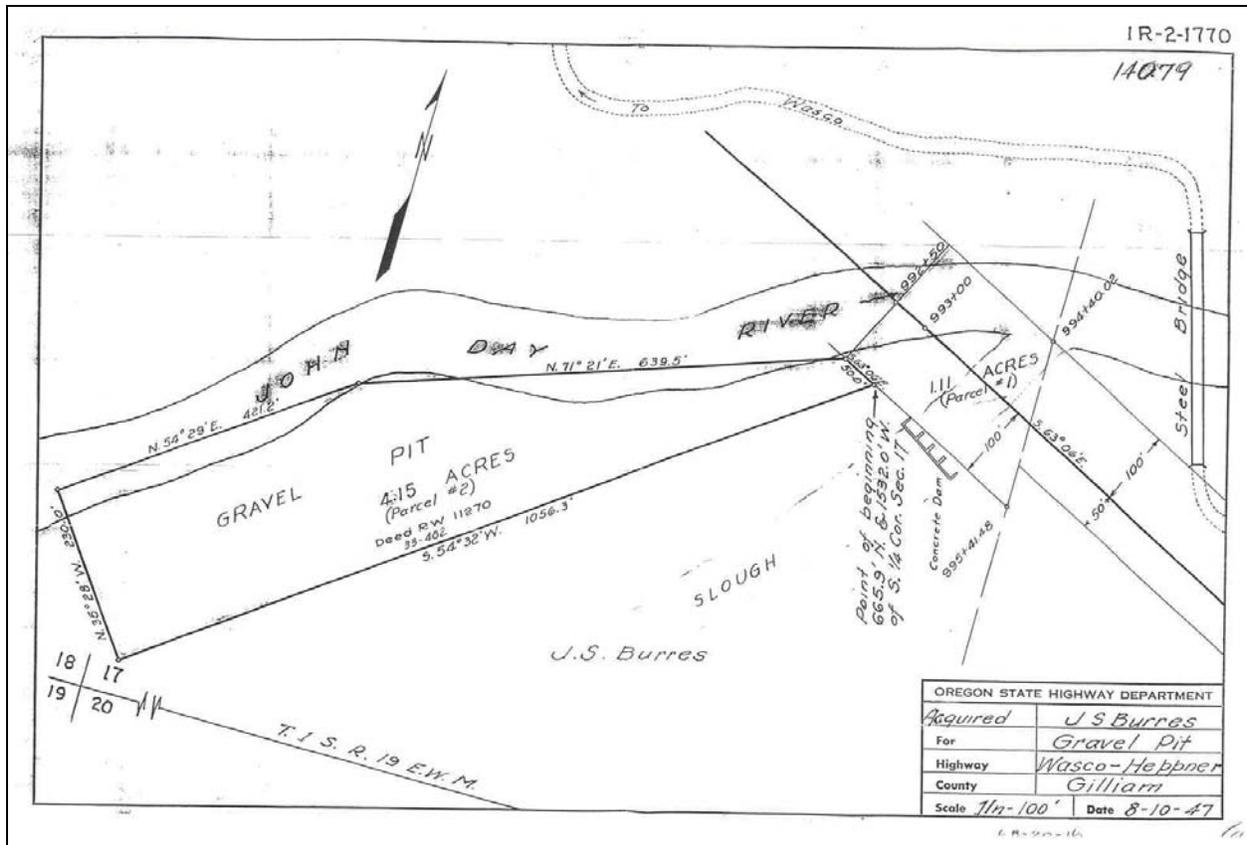
E

SW



Looking to the southeast at the gravel site along the John Day River.

Close-up view of the gravel at the site with the 4 lb. maul for scale.



Aerial view of the gravel site along Highway 206 and adjacent to the John Day River.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Mosier Quarry				09	0002	68.08	02N	11.0E	02
File ID		Source #	Date Visited	Map #		Type of Site				
17634, 19913		33-001-4	7/12/1999	1R-5-371, 1R-5-135		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°40'54.15679"	121°24'19.6633"	38.719	74.35	<23 acres	33-0057					
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcs	Medium Dark Grey (N4)		Fresh		Highly Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			R3 to R4	163	3,000,000	6,601,500				
Potentially Significant Site	Why			Open/Closed	Direction					
Yes	Good quality, great location.			Closed	Adjacent to Rock Creek					
Adjacent Land Use										
Adjacent to Mosier and within the Columbia River Gorge National Scenic Area.										
Remarks										
This site is south of Interstate 84 about 450 meters. The rock is a fine-grain highly fractured basalt. There is up to 20% vesicular basalt here. The rock breaks into very angular pieces that range in size from cobble to boulder. The dominant size is around 10 centimeters. There is plenty of room to work here, with some screening from the surrounding area. You can rip the material but the best results would be from drilling and blasting the rock. Most of the past disturbance has been restricted to the northern most portion of the property. This terrain is fairly flat to gradual. It might be possible to lower the pit floor to acquire more material. This site has land use issues that need to be addressed. The County has a quarry site adjacent to our property. This site has a locked gate and apparently you cross over City property to get to our property. Apparently the southern 40 acres of our ground are within the Columbia River Gorge National Scenic Area. The northern 34.35 acres we own are adjacent and in the urban growth boundary of the City of Mosier. This property is the only piece of ground that is available to us for rock production within the National Scenic Area.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.8	2.86	13.1	2.2	0.3			13.5	0.1		
Material Use										
AC (1990)										

NE

SE



Looking to the east at the Mosier Quarry with the town of Mosier on the left side of the image.

Close-up of some of the rock from a talus slope at the site.



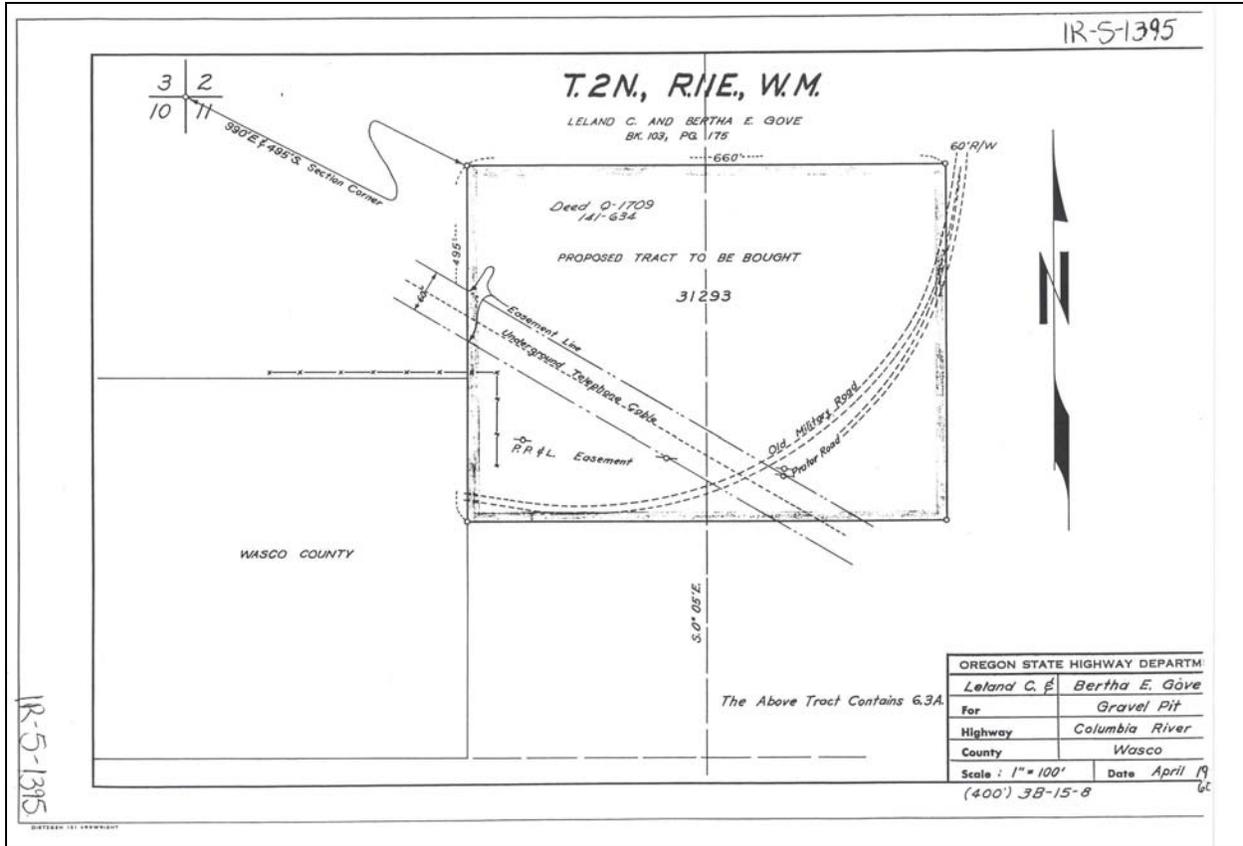
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Cove Gravel Pit			09	0002	68.4	02N	11.0E	11
File ID		Source #	Date Visited	Map #			Type of Site		
31293		33-004-4	7/12/1999	1R-5-1395			Borrow		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°40'34.80236"	121°24'54.36185"	148.115	6.3	<4 acres	33-0060				
Comments									
GPS acquired in the pit off of Old Military Road									
Rock Type	Unit	Color	Weathering			Jointing			
Volcanic Gravel	Tcs	NA	NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			NA	120	70,000	113,400			
Potentially Significant Site	Why	Open/Closed	Direction						
No	Too small	Closed	Rock Creek is to the south and east approximately 350 meters.						
Adjacent Land Use									
Open space/ranching with one residence about 450 meters to the west.									
Remarks									
This site appears to be a glacial outwash from the flanks of Mt. Hood. It is composed of an unconsolidated volcanic mix of sand and angular gravel that is less than 1 centimeter in size. There appears to be approximately 60% gravel and 40% sand. There is some room to work and no screening from the surrounding area. The terrain is fairly flat and should pose no problems. There is no fencing or gate at this site. It is used as a motto cross and gun range now. This site is in a windy area and dust control would be a high priority. You could possibly process this material at the Mosier Pit if the need arose.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.86	14.3			17.6	1.4			
Material Use									
Gravels and Sand Pit Run (1968)									

NW



Looking northwest at the small borrow site along Hood River Rd.

Close-up of the out wash material from Mt. Hood that comprises the site.



Aerial view of the borrow site along the County Rd.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Chenowith Quarry				09	0002	80.61	02N	13.0E	29
File ID		Source #	Date Visited	Map #		Type of Site				
Q0232		33-007-4	7/12/1999	1R-1-677		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°38'09.83843"	121°12'54.12346"	48.79	11.04	<2 acres						
Comments										
GPS acquired in the pit along Highway 30.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcw	Olive Grey (5Y 4/1)		Slight		Highly Fractured to Massive				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair to Good			R4	170						
Potentially Significant Site	Why		Open/Closed	Direction						
No	Within the National Gorge Scenic Area		Closed	The Columbia River is to the northeast about 1000 meters.						
Adjacent Land Use										
Open space										
Remarks										
This is a fine-grain basalt along Highway 30 just west of The Dalles. This site may produce some large blocky rip rap. Like many others within the gorge this site has multiple igneous flows that varies the quality of the rock slightly. There is no screening from the highway, but you have some room to work. The terrain is moderately steep to steep. You would need to drill and blast the rock. This site is within the National Scenic Gorge Area. There are about 350,000 cubic yards of material here. This site is not fenced and is used as a gun range.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.628	2.667	22	6	2	17.8	0.2	13	.3		
Material Use										
Quarry Rock (1996)										

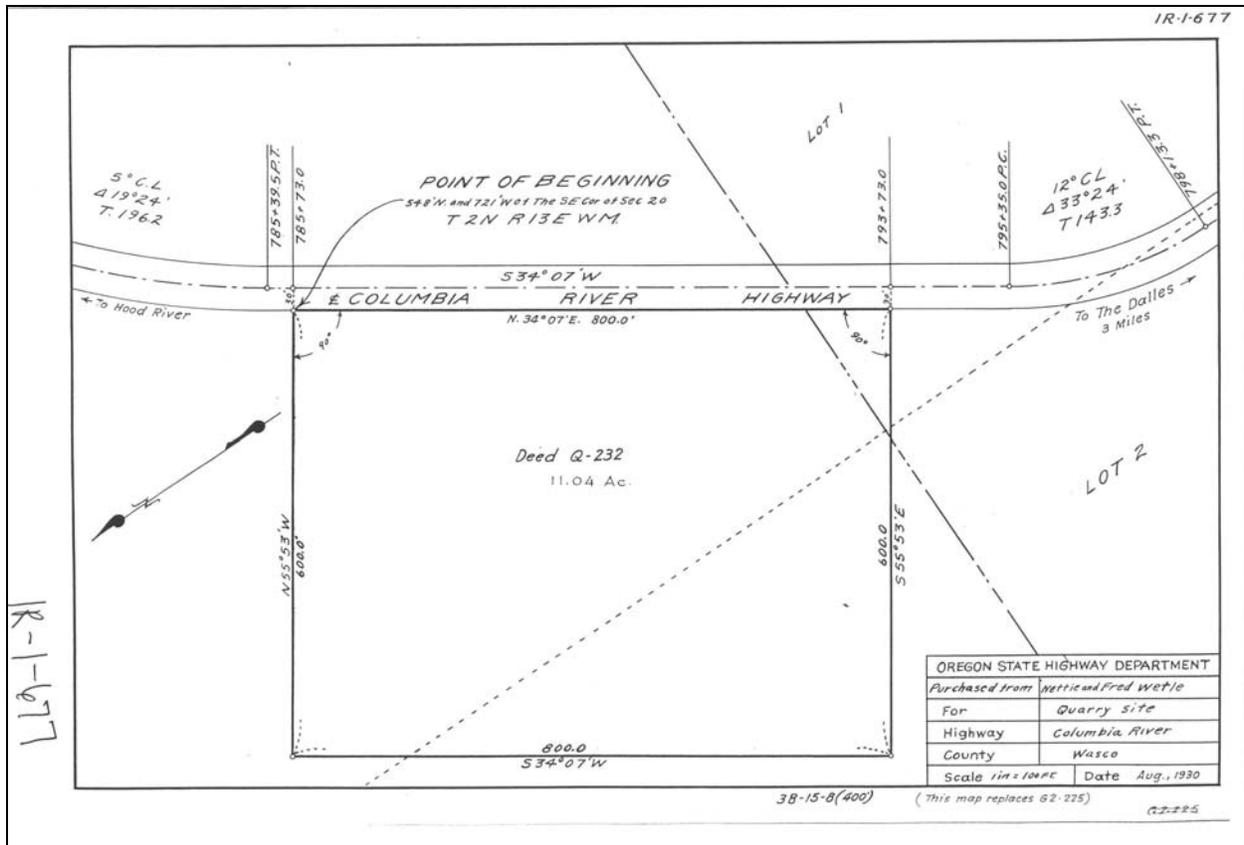
SW

NW



Looking west across Highway 30 at the quarry site. This site is a couple miles west of The Dalles.

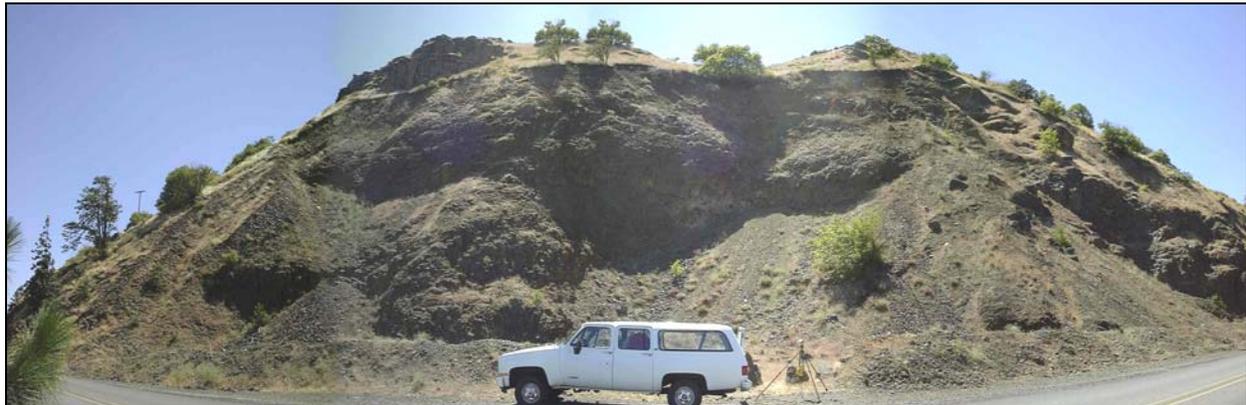
Close-up view of the fracture pattern with the hammer for scale.



Aerial view of the quarry site along Highway 30.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco					09	0002	80.61	02N	13.0E	21
File ID		Source #	Date Visited	Map #		Type of Site				
04497		33-008-4	7/12/1999	1R-1-1698		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°38'32.69689"	121°12'38.19202"	54.508	4.23	<1 acre						
Comments										
GPS acquired in the small pit adjacent to Highway 30.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcw	Olive Grey (5Y 4/1)		Slight to Moderate		Highly Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair to Good			R3 to R4	170						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Within the National Gorge Scenic Area			Closed	To the north approximately 500 meters is the Columbia River.					
Adjacent Land Use										
There is a Trailer Park across the highway about 200 meters.										
Remarks										
This small site is adjacent to and south of Highway 30. The rock is a fine to medium-grain basalt with up to 5% of it, vesicular. There is no screening here and definitely no room to work. The terrain is moderately steep to steep. This site is about 1000 meters west of site 33-007-4 and is within the National Gorge Scenic Area. If we ever get to remove material here in the future it should be done from the top down. There are about 90,000 cubic yards of material here. If there was ever a realignment of the highway, then we could capitalize on the material here.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

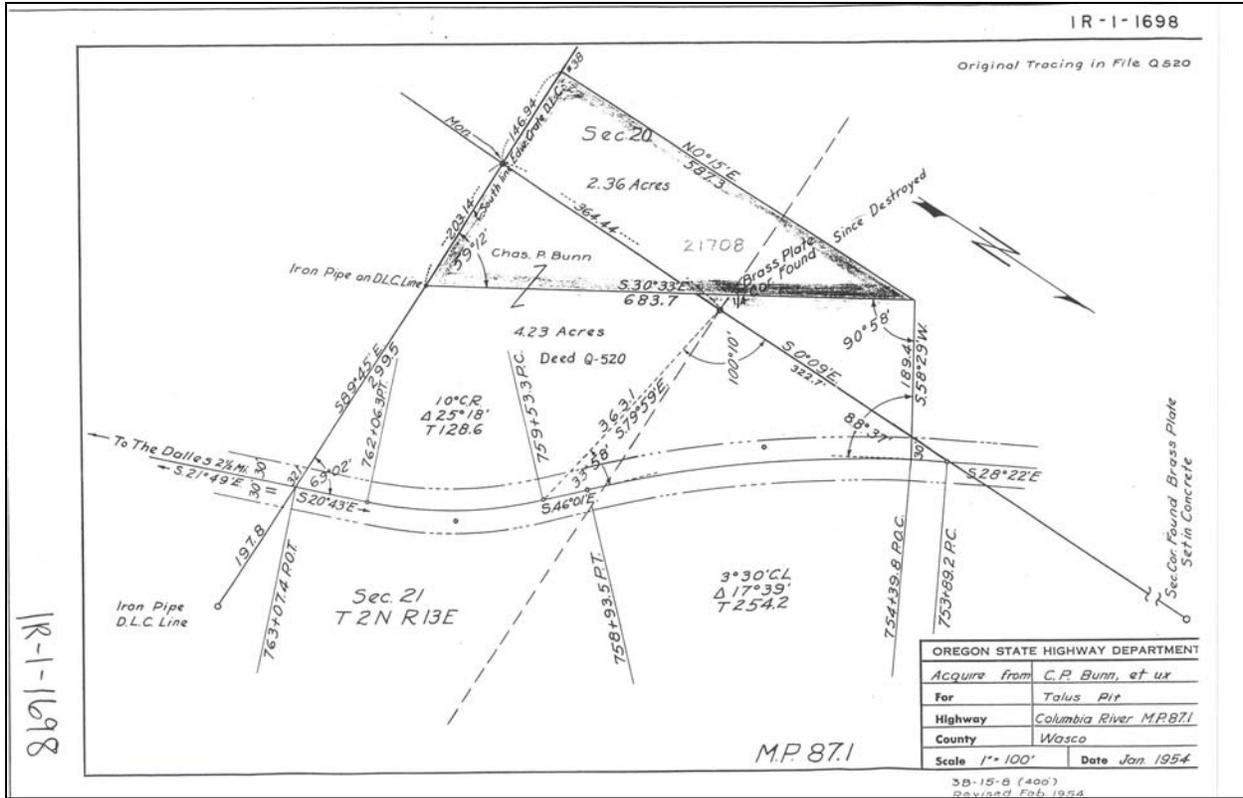
S



Looking south at the very small pit along Highway 30.



Close-up view of the fracture pattern in the basalt.



Aerial view of the quarry site and the surrounding area.

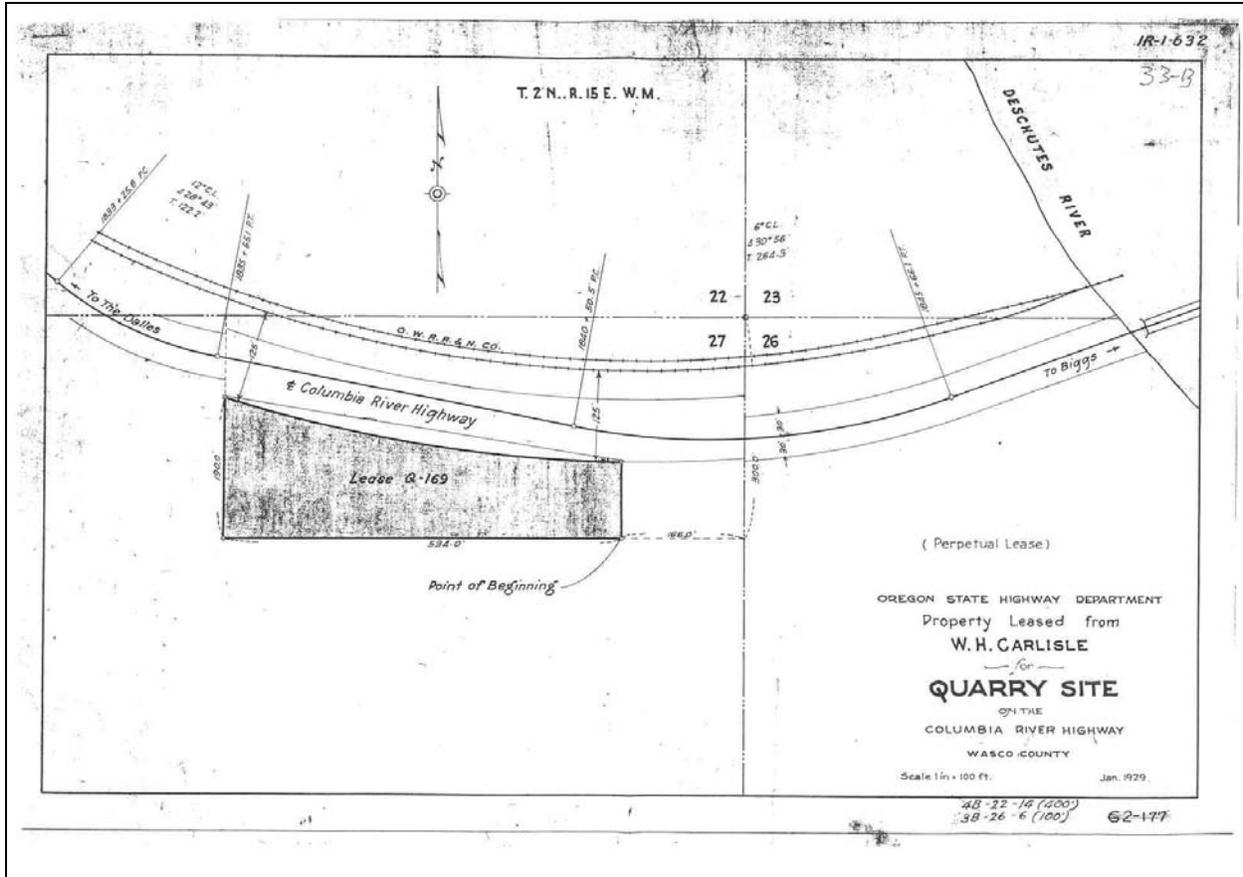
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco				09	0002	98.25	02N	15.0E	27
File ID		Source #	Date Visited	Map #			Type of Site		
Q0169		33-013-4	7/19/1999	1R-1-632			Borrow		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°38'01.88000"	120°55'07.04000"	61	1.5	<2 acres					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Colluvium/Volcanics	Tcw	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			NA	120					
Potentially Significant Site	Why	Open/Closed	Direction						
No	Too small	Closed	The Deschutes River is to the east approximately 400 meters, and the Columbia River is to the north about 300 meters.						
Adjacent Land Use									
State Park adjacent east/Open space									
Remarks									
This small site is composed of colluvium/alluvium from the Columbia and Deschutes Rivers and the hills adjacent to this site. The ground is composed of unconsolidated sand/silt and angular gravel up to boulder in size. The dominant gravel size is around large pebble to small cobble. There is no screening from I-84 and little room to work. This is a small narrow piece of ground adjacent to the State Park at the mouth of the Deschutes River. Leased ground. There are new rail tracks above this site now. Also there is no fence or gate at this site. Parks has posted a sign informing everyone about, "No OverNight Camping". The 1R map has this property as Leased, the data base has no information about this.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.78	21.8							
Material Use									
Gravel and Talus (1953)									

W



Looking west at a very small borrow site adjacent to the State Park at the mouth of the Deschutes River.

Close-up of the material at this location.



Aerial view of the site in relation to the mouth of the Deschutes River, I-84 and the State Park.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Boyd Quarry				09	0004	13.15	01S	14.0E	20
File ID		Source #	Date Visited	Map #		Type of Site				
34667		33-021-4	7/13/1999	1R-5-1579		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°28'12.6155"	121°05'02.52856"	397.192	9.4	<2 acres						
Comments										
GPS acquired in the pit next to Boyd Loop County Road.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcw	Medium Bluish Grey (5B 5/1)		Moderate to Fresh		Highly Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair			R3	178	50,000	120,150				
Potentially Significant Site	Why		Open/Closed	Direction						
No	NA		Closed	To the west about 300 meters is Fifteenmile Creek						
Adjacent Land Use										
Farming										
Remarks										
This site is located east and adjacent to Boyd Loop County Road. The material here is a medium-grain highly fractured basalt. The jointing pattern produces a very platy basalt. You can rip the material for pit run. There is little to no overburden. There is no screening from the County road, and plenty of room to work. There is no fence or gate at this site. The terrain has a gradual slope of about 8 degrees. This site is located about 1 mile east of Highway 197.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.72	2.81	19.2	8.3	3.70			19.2	0.4		
Material Use										
(1976)										

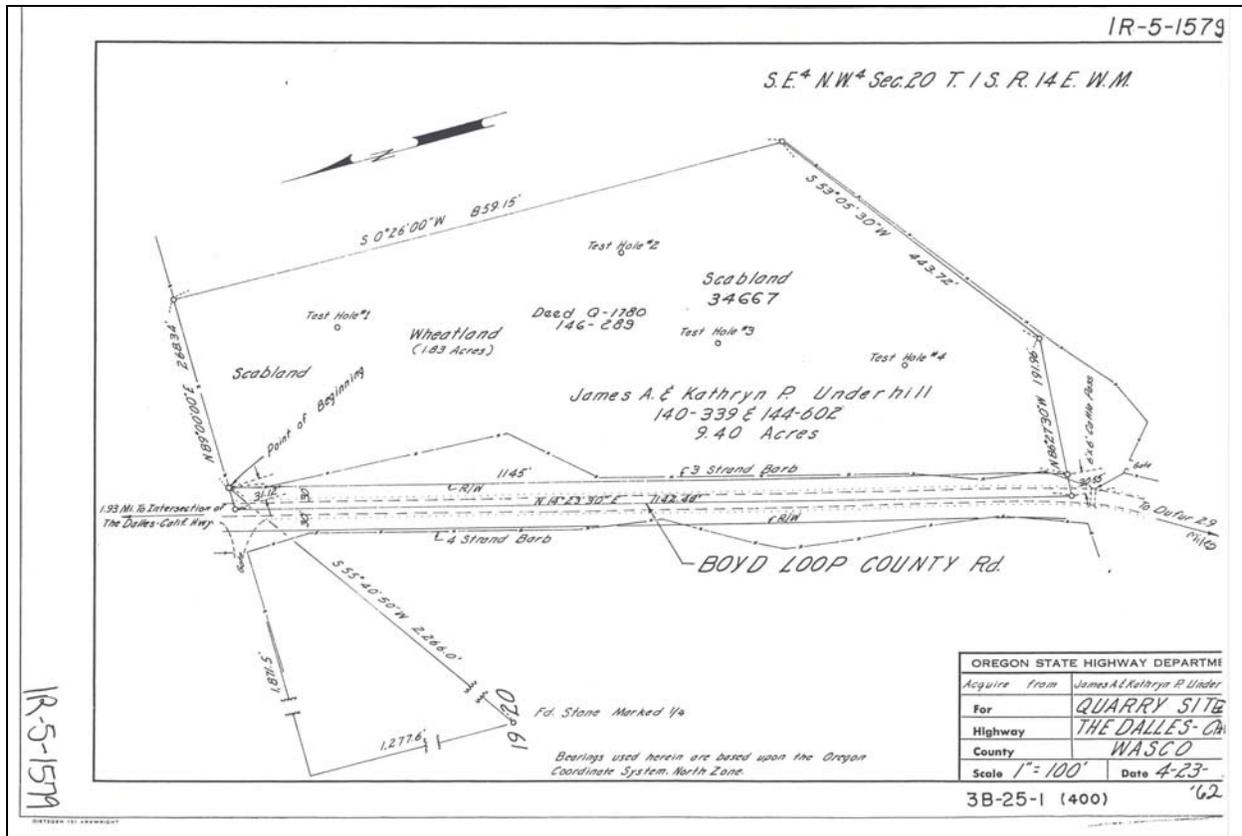
N

S



Looking east at the narrow site along Boyd Loop Rd.

Close-up view of the platy fracture pattern in the basalt at this location.



Aerial view of the quarry site along the County Road.  
Fifteenmile Creek is in the left side of the image.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Tygh Ridge Rock Pit			09	0004	21.25	02S	13.0E	35
File ID		Source #	Date Visited	Map #			Type of Site		
21695		33-025-4	7/13/1999	1R-5-502			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°20'50.33141"	121°08'45.63538"	755.281	19.12	<3 acres		33-0071			
Comments									
GPS acquired in the pit									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3	170	400,000	918,000			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Location, quantity, quality.			Closed	NA				
Adjacent Land Use									
Ranching/Rodeo Arena across the County road from this site									
Remarks									
This site is located west of Highway 197 about 150 meters. The rock is a fine to medium-grain basalt with a high percentage of biotite. The biotite helps to promote the platy fracture pattern. There is little to no overburden at this location near the top of Tygh Ridge. There is some screening from Highway 197 with plenty of room to work. You can rip some, but most likely would need to drill and blast the rock. The terrain is flat. It appears that about 96,000 cubic yards of material has been removed. The site has a large quantity of 3/4 minus crushed aggregate in the pit. There is no gate to this site. You could lower the pit floor another 20 feet or so to match the County road elevation.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.664	2.738	19.2	3.0	5.0	13.6	.3			
Material Use									
EMUL ASPH AGGR (1996)									

NW

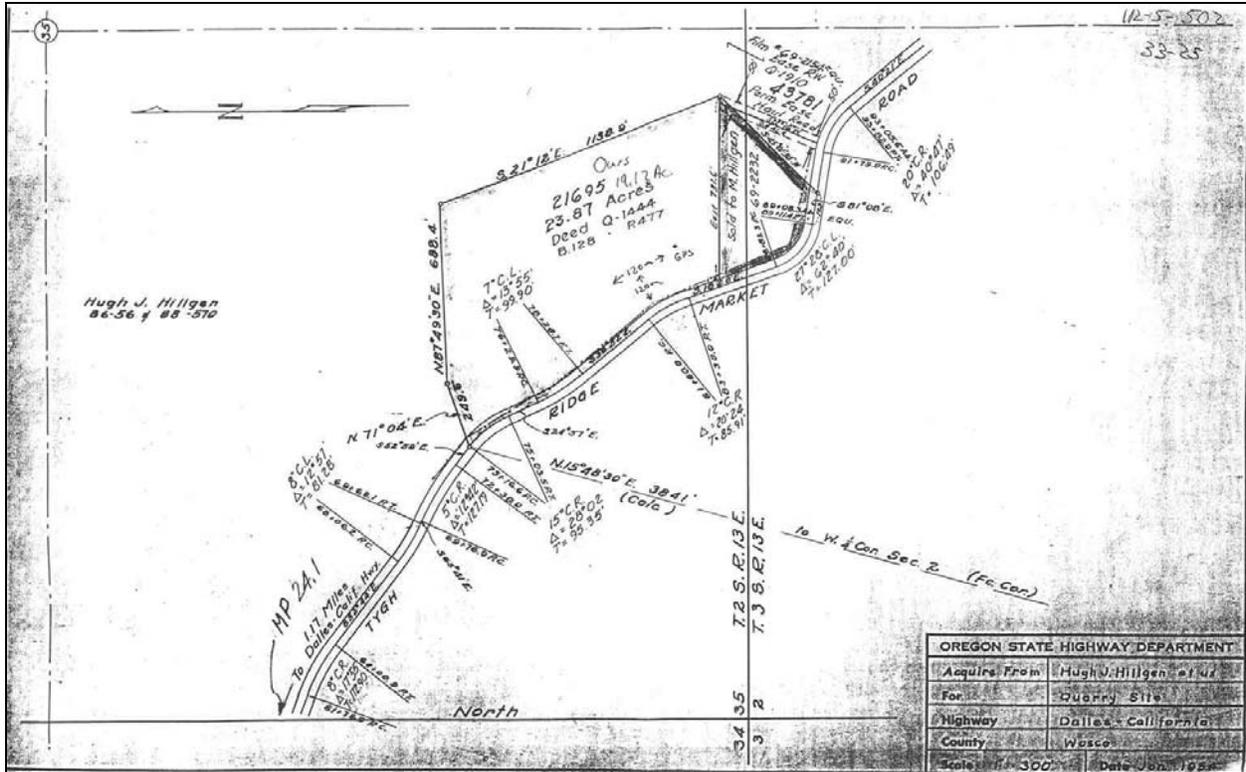
SE



Looking northeast at the pit face. Note the crushed aggregate in left side of the image.



Close-up view of the fracture pattern in the basalt.



Aerial view of the quarry site along Tygh Ridge Road.  
Highway 197 is in the right side of the image.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Butler Canyon Quarry			09	0004	32.53	03S	13.0E	33
File ID		Source #	Date Visited	Map #			Type of Site		
Q0128		33-028-4	7/14/1999	1R-1-530			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
45°16'12.92989"	121°11'20.8722"	407.343	3.58	<2 acres	33-0062				
Comments									
GPS acquired at the locked gate.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Grey (N5)		Fresh to Slight			Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			R4	169	30,000	68,445			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too small			Closed	Butler Canyon Creek is adjacent.				
Adjacent Land Use									
Open space/Tygh Valley Rodeo Arena is to the south about 600 meters.									
Remarks									
This site is located east of Highway 197 a short distance. The rock is composed of a fine-grain slightly weathered basalt. There can be up to 50% vesicular basalt within this location. There is no screening from the highway with plenty of room to work. You will need to drill and blast the rock. The site is in an area that has very steep terrain. The pit has multiple benches and looks as if it has reached the property boundaries. This site should have a boundary survey done if we intend to add ground or remove more material. This location might produce some rip rap. The access over the dry draw needs improvement. The bridge over the creek bed will need to be replaced if this site is to be used in the future. Since this site is almost depleted, we should consider adding to this acreage for future production.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.52	2.78	17.2	4.4	1.5			14.8	0.2	
Material Use									
(1975)									

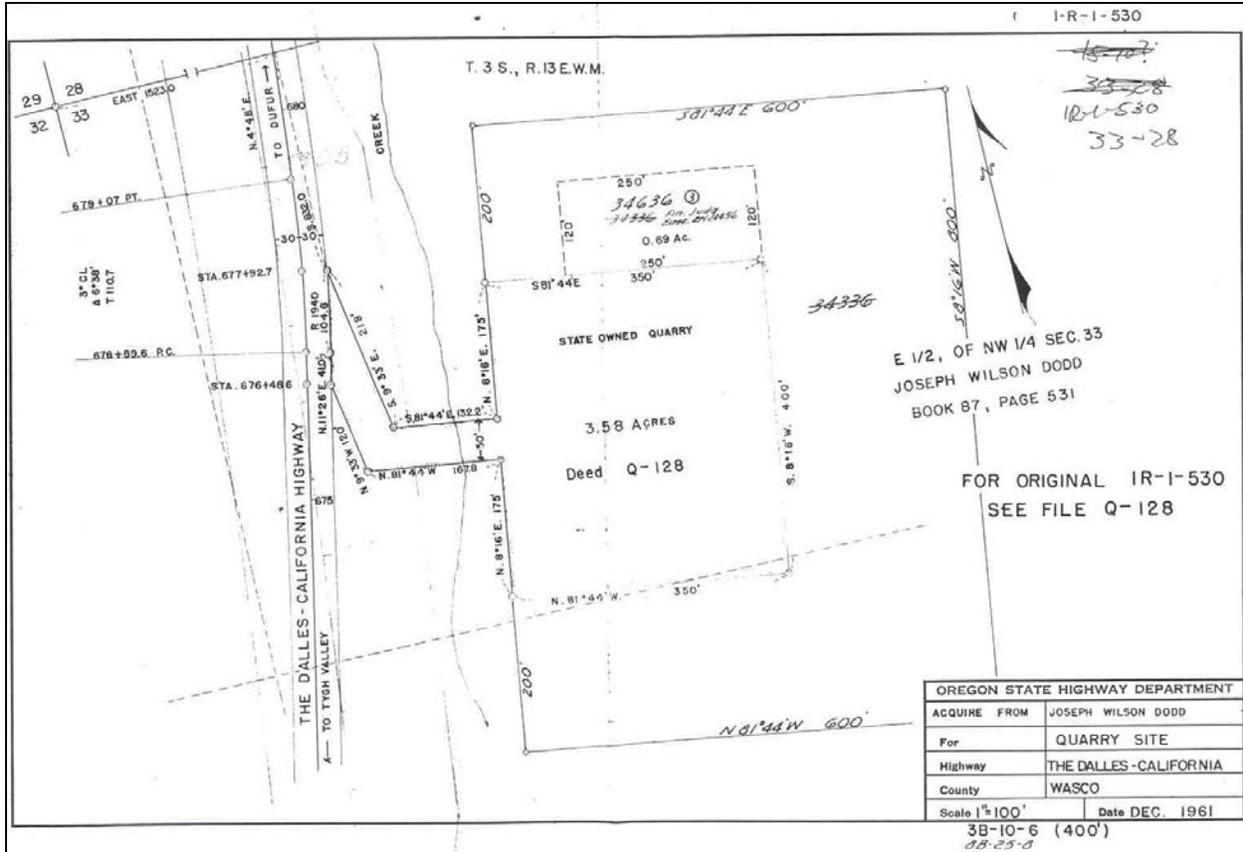
NE

SE



Looking east at the small quarry site along Highway 197.

Close-up view of the columnar jointing pattern at this location with the 4 lb. maul for scale.

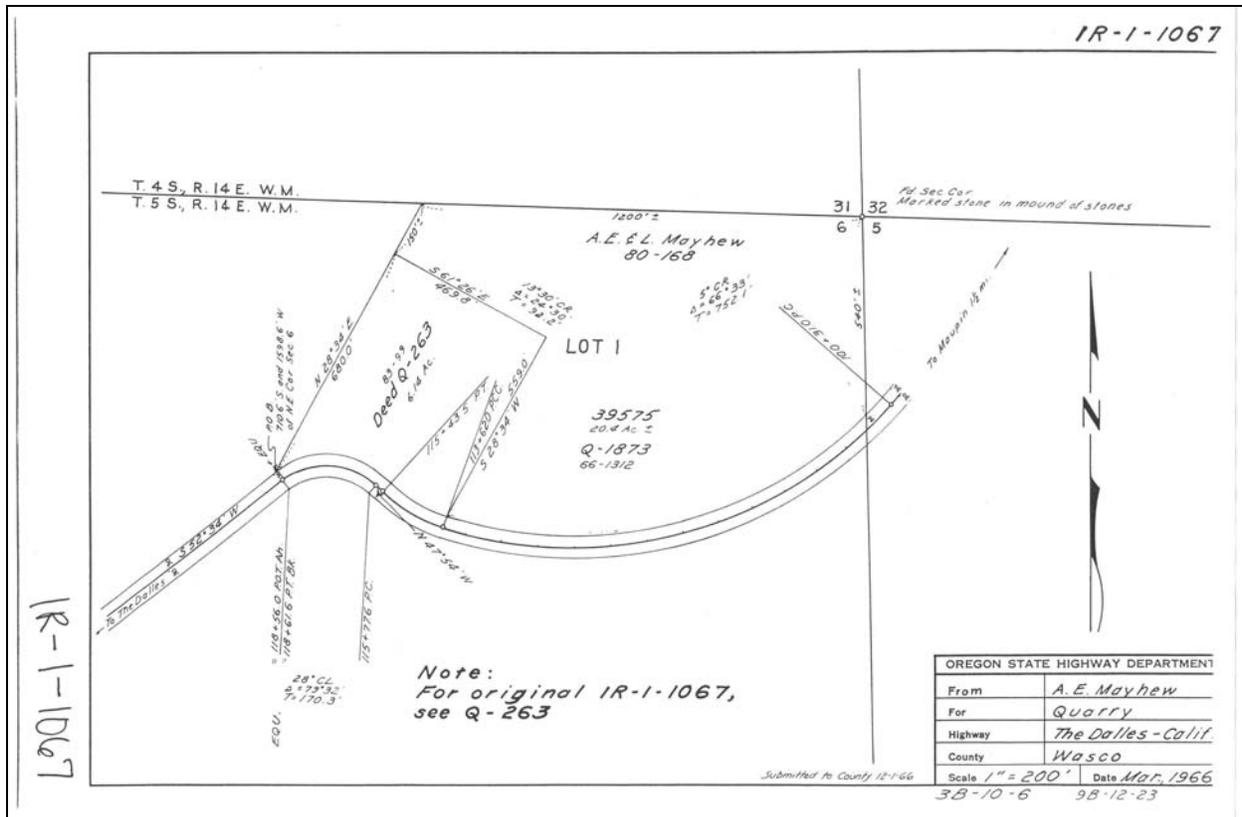


Aerial view of the quarry site that is adjacent to Highway 197.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Mayhew Quarry				09	0004	43.7	05S	14.0E	06
File ID		Source #	Date Visited	Map #		Type of Site				
39575, Q0263		33-032-4	7/13/1999	1R-1-1067		Maintenance Yard				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°10'09.50000"	121°05'48.09000"	387	26.54	NA						
Comments										
Lat. and Long. acquired using Terrain Navigator Software										
Rock Type	Unit	Color		Weathering			Jointing			
Tuffs/Colluvium	Tob	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
NA			NA	0						
Potentially Significant Site	Why		Open/Closed	Direction						
No	This site is part of the Maintenance Yard.		Closed	To the south about 1/2 a mile is the Deschutes River.						
Adjacent Land Use										
Rural Residential/Commercial										
Remarks										
This site is part of the Maintenance Yard at Maupin. There are no exposures here to evaluate the rock. There are just volcanic ash deposits intermixed with river rock. There could be a basalt flow below the surface at an undetermined depth. Highway 197 is adjacent to this site just before you enter Maupin from the north. There is no screening and there is no room on the property to do any type of processing. You would need to move the material to another location to process it. The terrain is moderately sloped around 10 degrees. This site has the potential of about 180,000 cubic yards of material from this location. Since there are no exposures to evaluate the rock this material could be used for fill.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



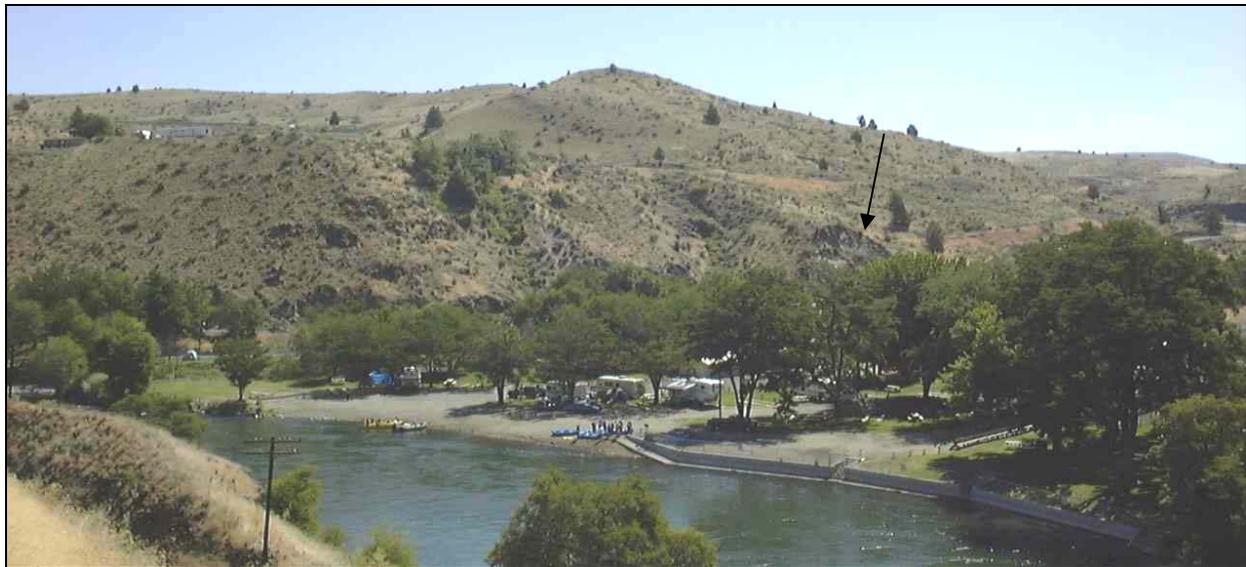
Looking northwest at the site along Highway 197 just outside of Maupin, OR.



Aerial view of the Maintenance yard in relation to the highway and the town of Maupin, OR.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Maupin Quarry				09	0004	46.12	04S	14.0E	33
File ID		Source #	Date Visited	Map #			Type of Site			
26571		33-033-4	7/14/1999	1R-1-590			Raw Land			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°10'19.46000"	121°04'20.61000"	304	25	<3 acres						
Comments										
Lat. and Long. acquired using Terrain Navigator Software										
Rock Type	Unit	Color		Weathering			Jointing			
Colluvium/Volcanics	Tcg	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair to Poor			NA	120						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Leased ground.			Closed	Bakeoven Creek bisects this site.					
Adjacent Land Use										
Town of Maupin										
Remarks										
This site is located adjacent to the town of Maupin. This is raw land with little to no past disturbance. Bakeoven Creek and Bakeoven County Road bisect the property. This is leased ground from the USA.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
	2.8	25.4								
Material Use										
Surfacing Oil Rock (1958)										

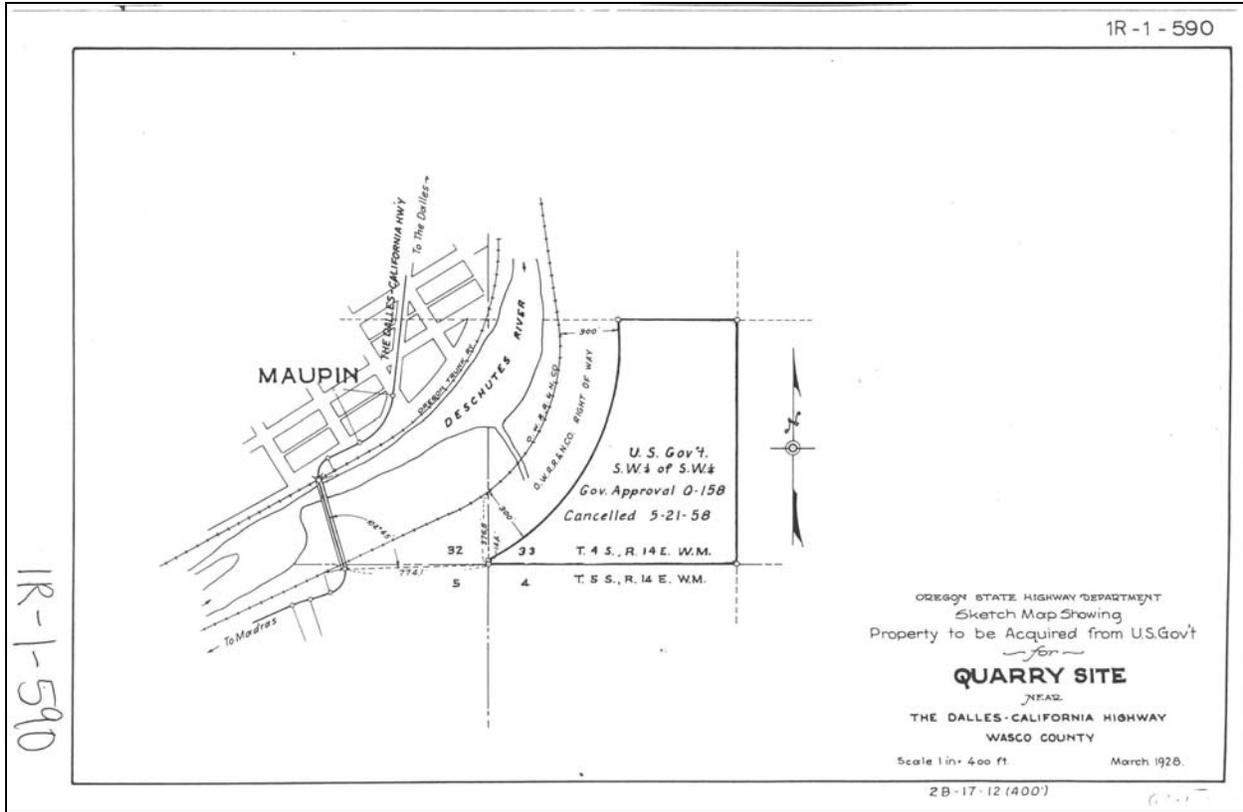
E



Looking east across the Deschutes River at the raw land site. Arrow points to the road cut.



Looking northeast at the material along Bakeoven Rd.



Aerial view of the ground on both sides of Bakeoven Creek

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco					09	0004	54	05S	14.0E	35
File ID		Source #	Date Visited	Map #		Type of Site				
11726, 02023, 37836		33-036-4	04/30/2001	1R-1-1450		Stock Pile Site				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°05'11.74687"	121°01'39.14574"	811.77	3	<1 acres	33-0004					
Comments										
GPS acquired on site.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcg	NA		NA		NA				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good to Fair			NA	150	70,000	141,750				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Too Small			Closed	NA					
Adjacent Land Use										
Open Space										
Remarks										
This site is adjacent to and west of Highway 197. This site is primarily a stockpile and waste rock site. There is minor room to work and no screening from the highway. The terrain is flat up here near the summit. There are no exposures to evaluate the basalt. From the surrounding area there could be up to 3 feet of overburden. The weathered zone could be up to 10 feet deep. Variable flows in the area, some of fair quality. 8,000 cubic yards removed.										
Final Comments										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

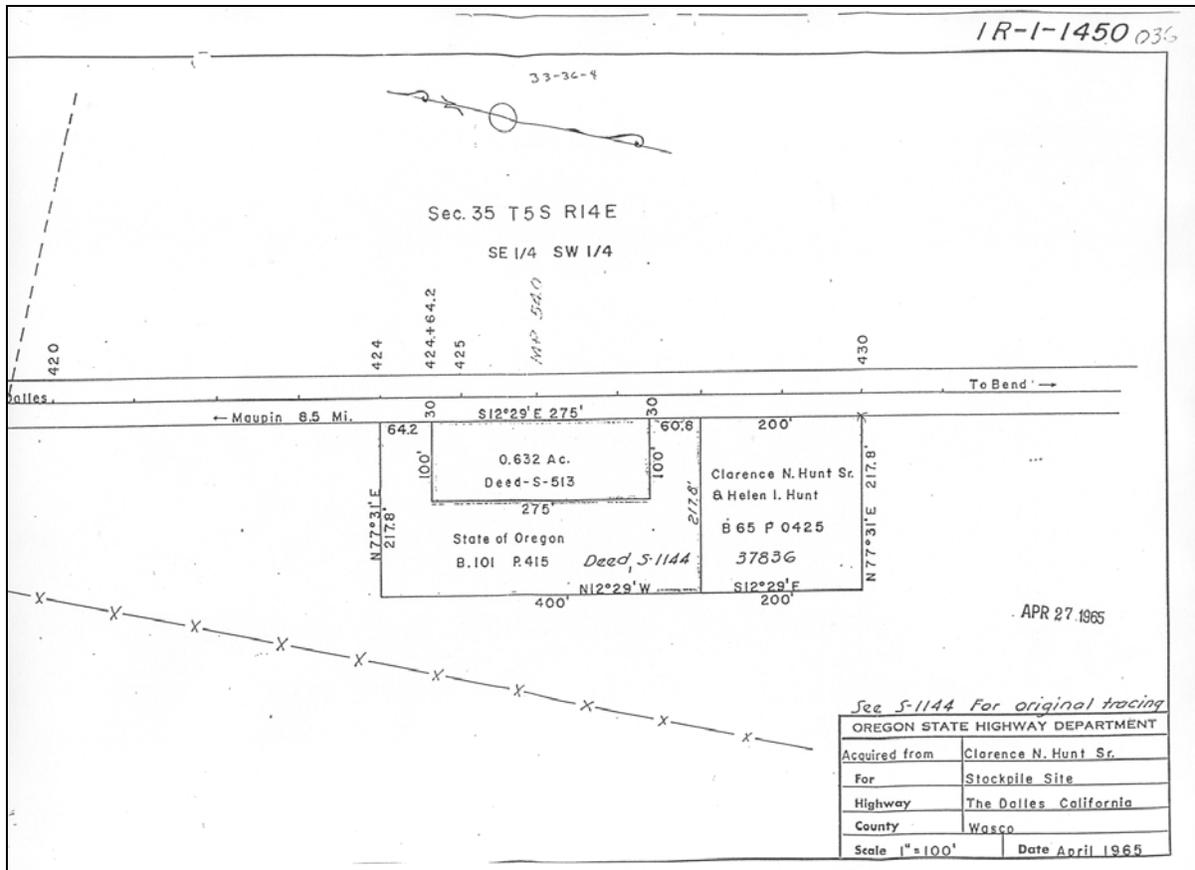
NW

E



Looking to the northeast at the small pit (arrow) and the stock pile site.

Close-up view of the loose basalt in the pit with the hammer for scale.



Aerial view of the small pit adjacent to Highway 197.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco				09	0004	56.12	06S	14.0E	11
File ID		Source #	Date Visited	Map #			Type of Site		
20206		33-037-4	7/14/1999	1R-1-1451			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°03'30.03411"	121°01'21.86566"	914.069	4.26	<5 acres					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg/Tcw	Medium Dark Grey (N4)		Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			R4	174	10,000	23,490			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Small acreage			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is located adjacent to Highway 197. The rock is a fine-grain basalt with heavy staining. There is fair screening from the highway with plenty of room to work here. There is little to no overburden. You can rip the material but most likely would need to drill and blast the rock. The property gradually slopes away from the highway to the north. The site is near the top of the grade on Highway 197. There have been about 56,000 cubic yards removed to date.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.4	2.57	17.9	7.7	1.6			12.5	1.1	
Material Use									
(1980)									

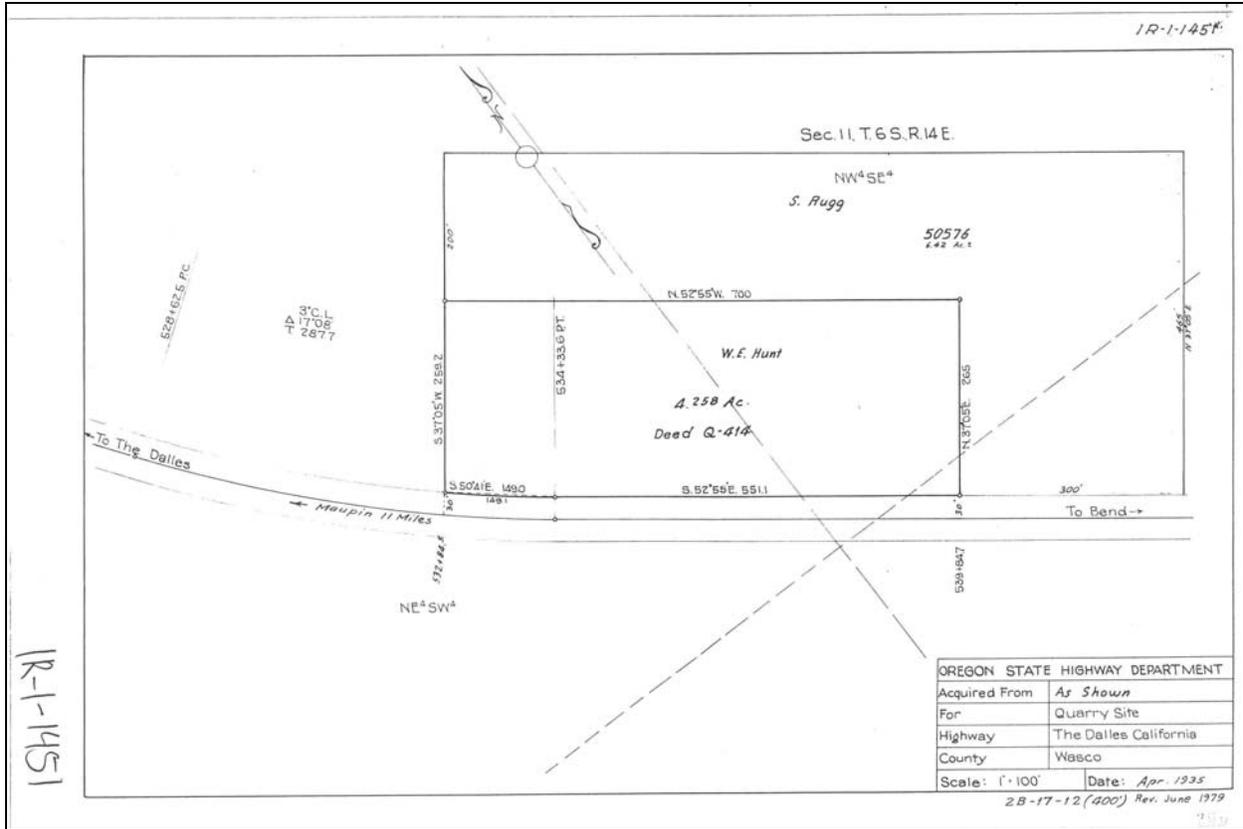
SE

NW



Looking to the southwest at the quarry site along Highway 197.

Close-up view of the fracture pattern of the pit face in the basalt.



Aerial view of the quarry site along Highway 197.

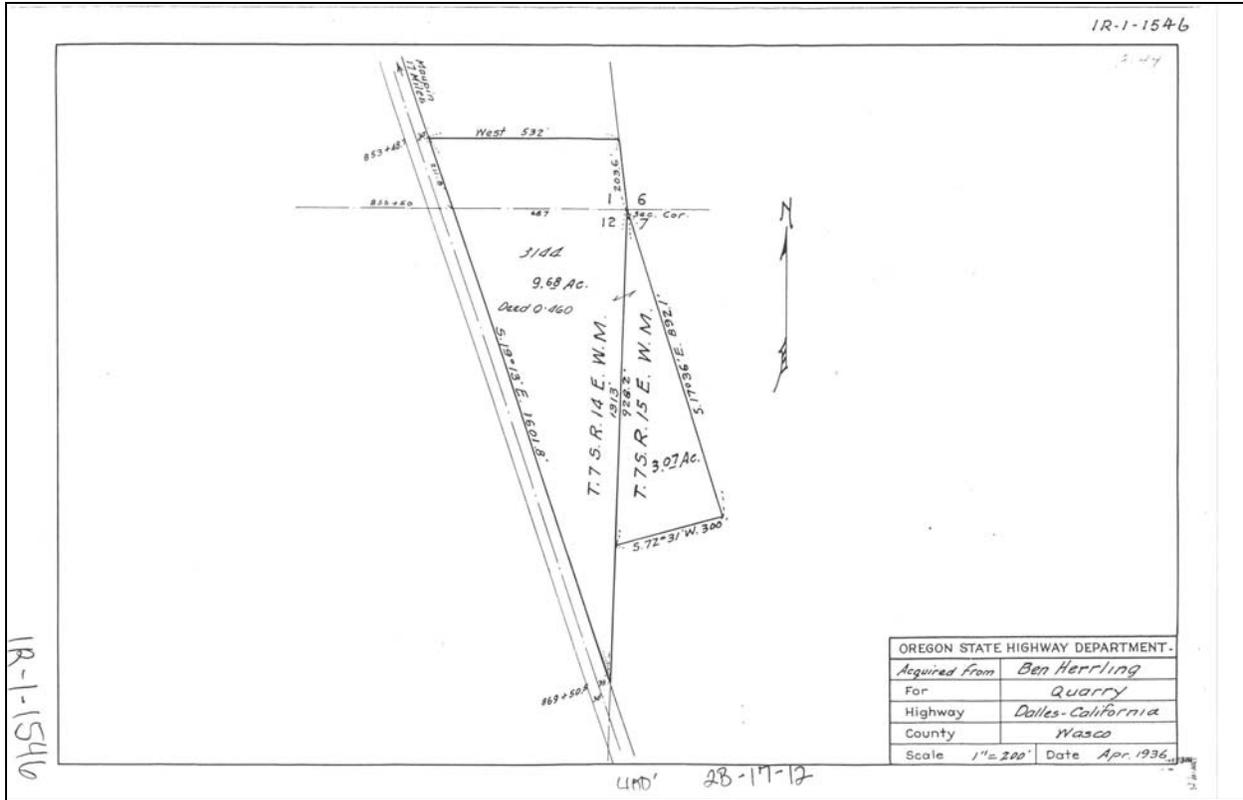
County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco					09	0004	62.2	07S	14.0E	12
File ID		Source #	Date Visited		Map #			Type of Site		
03144		33-038-4	7/14/1999		1R-1-1546			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44°58'56.02368"	120°59'23.40338"	1017.611	12.75	<1 acres	33-0078					
Comments										
GPS acquired in the northern pit.										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tcg	Medium Dark Grey (N4)		Slight to Moderate			Highly Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Poor to Fair			R3	160	100,000	216,000				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Quality of rock is lacking.			Closed	NA					
Adjacent Land Use										
Open space										
Remarks										
This site is adjacent to and east of Highway 197. The rock is a fine-grain basalt that is weathering out spheroidally. There is no overburden at this location up near Criterion Summit. There is fair screening from Highway 197 with plenty of room to work. You can rip the material here due to the soft nature of the basalt. The topography is fairly flat around this site. This site is used as a stock pile location.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.8	2.85	18.5	5.0	3.1			21.4	.4		
Material Use										
AAC and Chip Seal (1994)										

NW

NE



Looking to the north at the pit face from the pit floor.



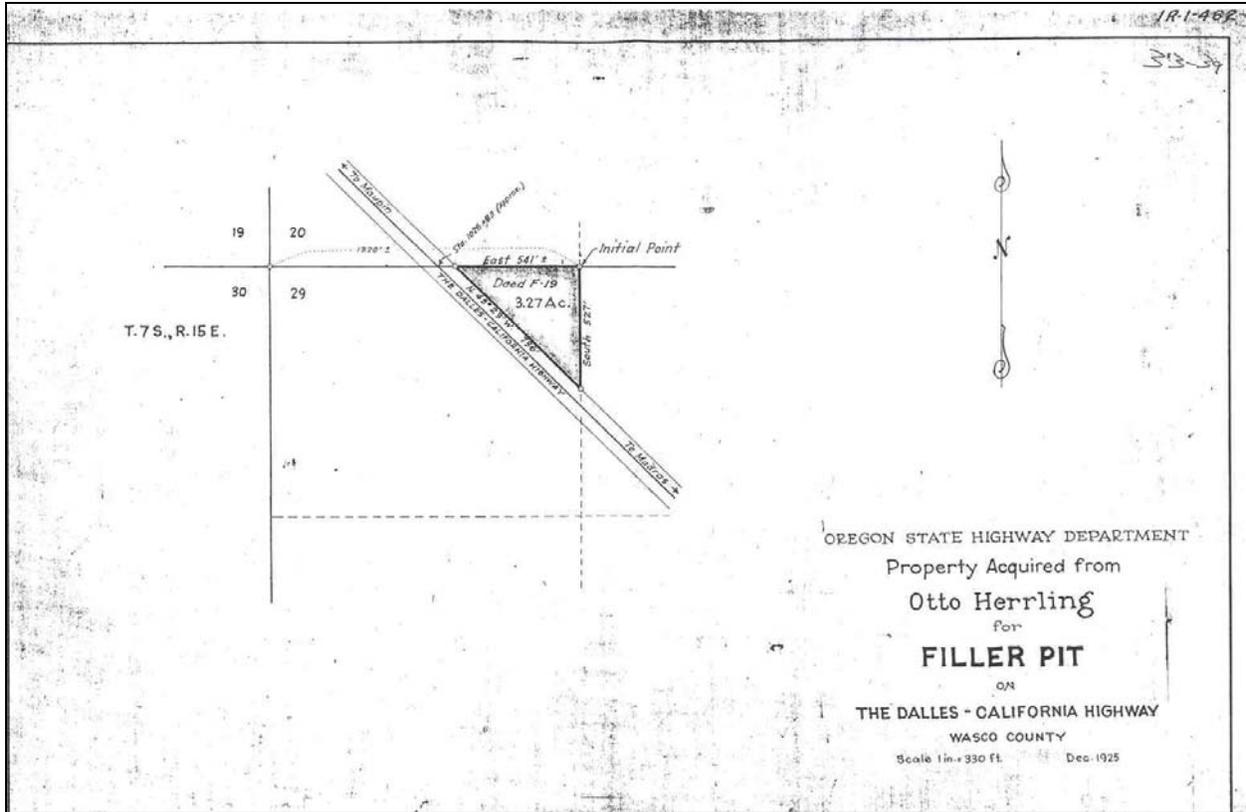
Aerial view of the quarry site along Highway 197 near the Criterion Summit.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Herrling Filler Pit				09	0004	65.47	07S	15.0E	29
File ID		Source #	Date Visited	Map #			Type of Site			
F0019		33-039-4	7/15/1999	1R-1-482			Raw Land			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44°56'20.40000"	120°58'01.73000"	974	3.27	NA						
Comments										
Lat. and Long. acquired using Terrain Navigator Software										
Rock Type	Unit	Color		Weathering			Jointing			
NA	NA	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
NA			NA	120						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Too small			Closed	NA					
Adjacent Land Use										
Open space										
Remarks										
This site is adjacent to and east of Highway 197. There is no aggregate value that is evident. There is no screening and little room to work. The terrain is flat and would work well as a stock pile site.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

SE



Looking southeast at the raw land site that is adjacent to Highway 197.



Aerial view of the small site along the highway.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Abbott Quarry Site				09	0044	13.13	05S	11.0E	36
File ID		Source #	Date Visited	Map #		Type of Site				
Q0270A		33-045-4	7/13/1999	1R-1-1091		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°05'17.19837"	121°22'44.35975"	795.913	3.28	<2 acres	33-0074					
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tcg	Dark Grey (N3)		Fresh		Highly Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Very Good to Good.			R3 to R4	177	75,000	179,212				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Too small			Closed	NA					
Adjacent Land Use										
Forest with a few residences 400 to 500 meters away.										
Remarks										
This site is south of Highway 216 a couple of miles. The rock is a very fine-grain highly fractured basalt. There is ample room to work and plenty of screening. There is little to no overburden. You can rip the material quite easily for good pit run material. The County has an aggregate site adjacent to ours. The material is good in this area and this property is small. We should think about expanding our ground for future work in the area. The disturbance is greater than our acreage size. About 85,000 cubic yards have been removed to date. This site is off of the beaten path approximately 2 miles south of Highway 216.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.69	2.72	12.9	1.0	0.7						
Material Use										
AC (1984)										

E

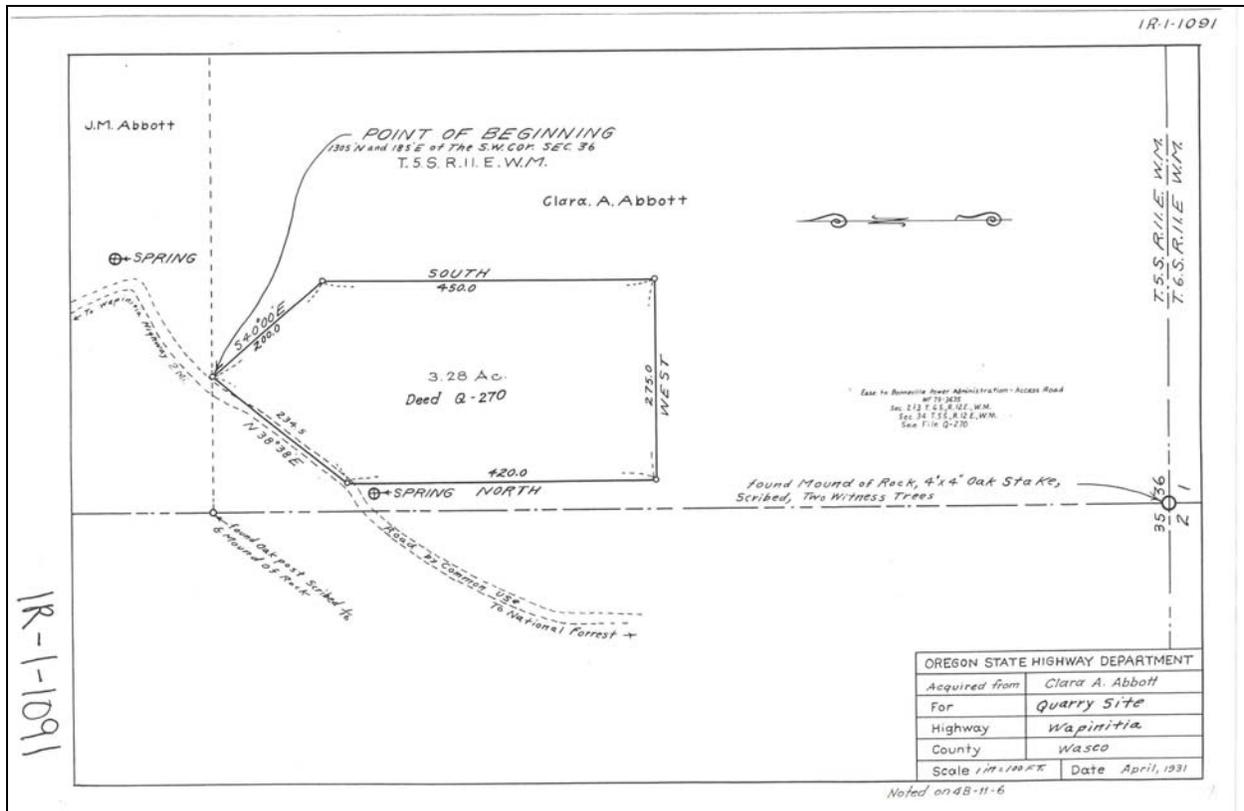
SW



Looking south at the pit and the stockpiles to the left.



Close-up view of the jointing pattern within the basalt.



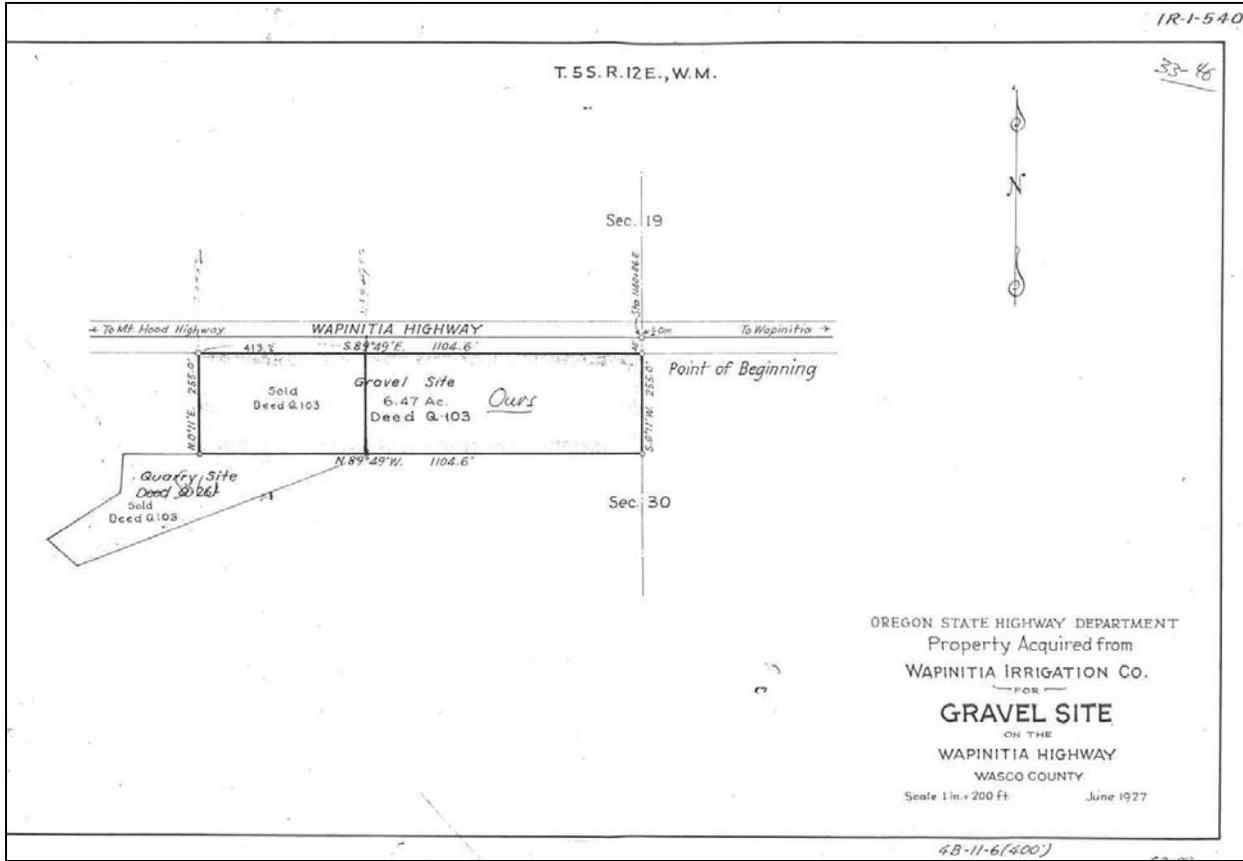
Aerial view of the quarry site and the surrounding terrain. High power lines are in the upper right corner of the image.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Cox Quarry				09	0044	13.82	05S	12.0E	30
File ID		Source #	Date Visited	Map #			Type of Site			
11008, Q0261		33-046-4	7/13/1999	1R-1-540, 1R-1-1097			Stock Pile Site			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
		0	4.05	NA						
Comments										
No GPS acquired.										
Rock Type	Unit	Color		Weathering			Jointing			
NA	QTs	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
NA			NA	0						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Stock pile site.			Closed	NA					
Adjacent Land Use										
Open space/Rural Residences greater than 750 meters away.										
Remarks										
This is flat ground and is used for a stock pile site adjacent to Highway 216. We could use this site as a quarry if we need the aggregate from here in the future otherwise this is a stock pile site. The right of way database has part of this property sold and should be checked for which part.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

S



Looking south at the stockpile site along Highway 216.



Aerial view of the site adjacent to Highway 216.

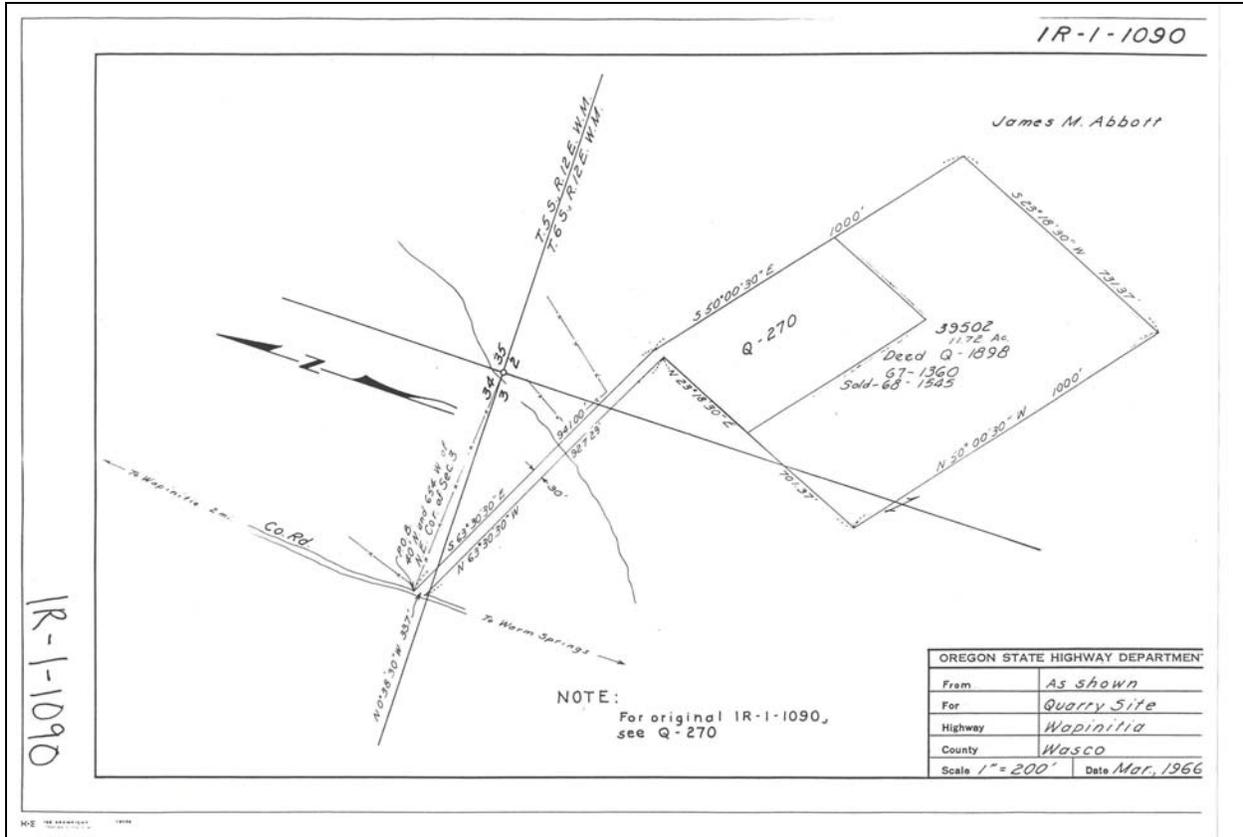
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Abbott Quarry Site			09	0044	18.79	06S	12.0E	02
File ID		Source #	Date Visited	Map #			Type of Site		
Q0270B		33-048-4	7/14/1999	1R-1-1090			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°04'58.90697"	121°16'33.87226"	671.726	5.01	<5 acres		33-0101			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tcg/Tcw	Medium Dark Grey (N4)		Fresh		Highly to Moderately Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Very Good to Good.			R4	173	100,000	233,550			
Potentially Significant Site	Why				Open/Closed		Direction		
Maybe	Good rock, some quantity, location could be important.				Closed		NA		
Adjacent Land Use									
Rural residential									
Remarks									
This site is located east of Wapinita Road about 400 meters. The easement will need to be verified. The rock is a fine-grain highly fractured basalt. There is limited to no screening from the road with plenty of room to work. You can rip the material. This is good dice rock within this unit, just like 33-045-4. The terrain is fairly flat and there is no overburden to speak of. This site has disturbance on most of the acreage. If you need more material the pit floor could be lowered other wise this site is almost depleted. This site is south of Highway 216 about 3.5 miles.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.75	15.72			14.4	0.3	15.2	0.3	
Material Use									
B-mix AC – Surfacing (1974)									



Looking to the east from the pit floor at the past disturbance.

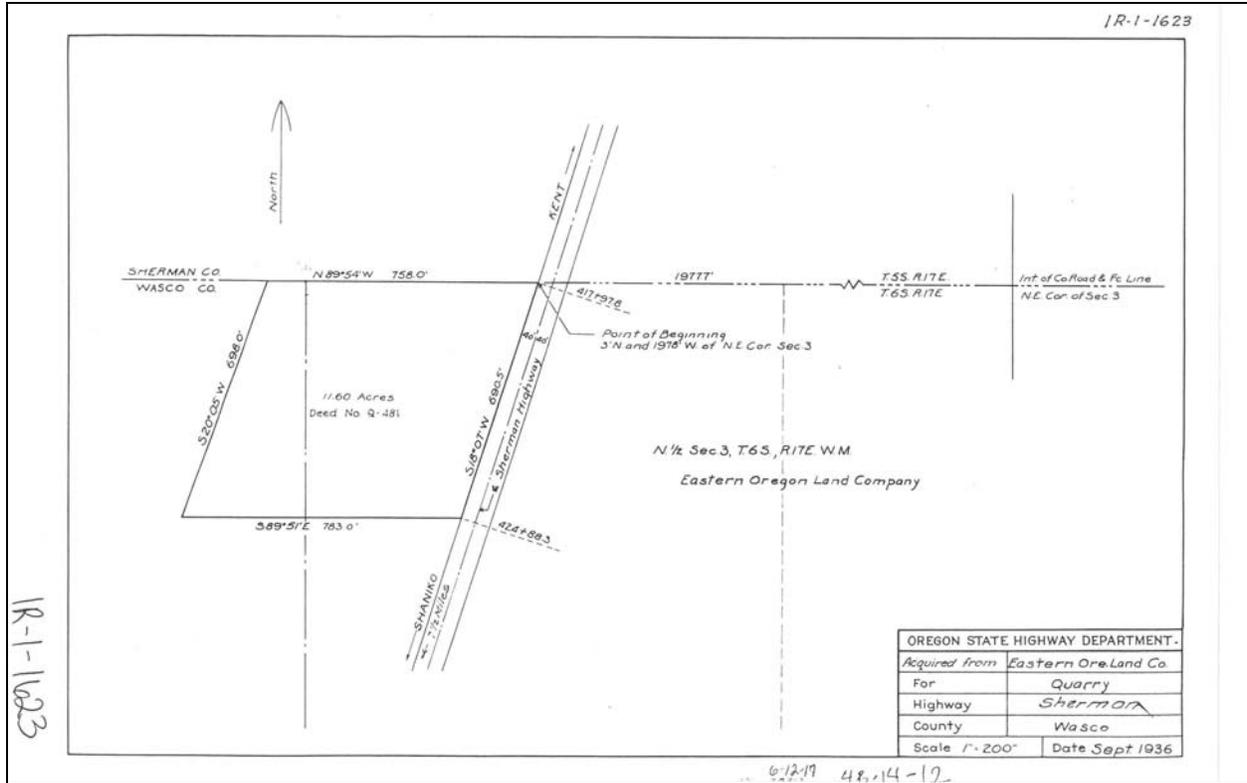


Close-up view of the fracture pattern in the basalt.



Aerial view of the quarry and Wapinitia Market Road (left side of the image).





Aerial view of the quarry site and the surrounding terrain.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco					09	0042	54.86	06S	17.0E	19
File ID		Source #	Date Visited		Map #			Type of Site		
19675		33-050-4	7/15/1999		1R-5-580			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45°01'42.63888"	120°43'45.01689"	974.331	10	<1 acre	33-0100					
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tcg	Medium Dark Grey (N4)		Fresh			Moderate Fracture to Massive			
Quality				Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Very Good				R4	174	200,000	469,800			
Potentially Significant Site	Why			Open/Closed		Direction				
No	Good quality, but on a small piece of ground.			Closed		A stock pond is adjacent to the north.				
Adjacent Land Use										
Open space										
Remarks										
This site is located southeast of Highway 97 about 300 meters. The rock is a fine-grain basalt of good to very good quality. The terrain is flat and there is no screening from the highway. There is ample room to work, with little to no overburden. There is some good rip rap material here. Someone has built a stock pond that backs water up into our ground. Access to the site is through the edges of the pond. Per Region 4, we have traded some of our ground, for ground away from the stock pond. The water table is close to the surface in this area.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.69	2.77	13.0	6.0	0.8			15.1	0.3		
Material Use										
(1979)										

NW

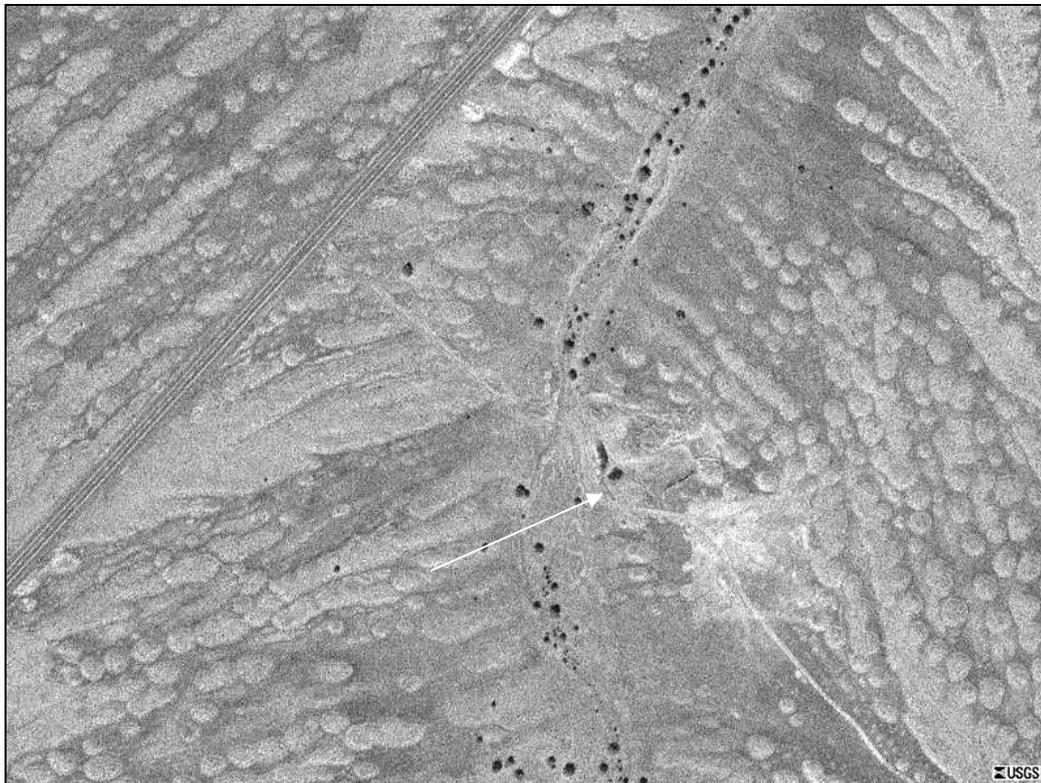
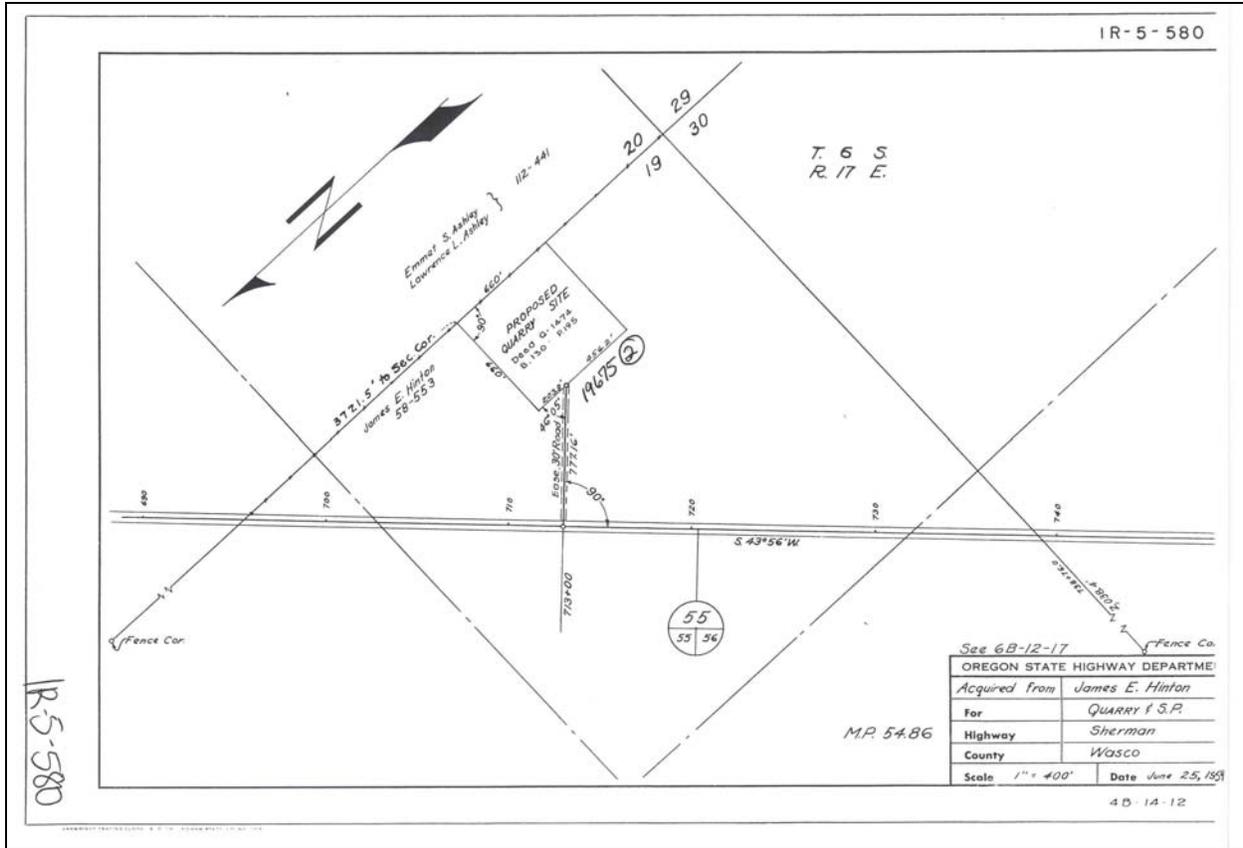
E



Looking north at the small disturbance with the stock pond in the left sided of the image.



Close-up view of the fractured basalt at this site with the hammer for scale.



Aerial view of the quarry site in relation to Highway 97.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Hinton Quarry Site			09	0042	58.13	06S	16.0E	21
File ID		Source #	Date Visited	Map #			Type of Site		
38339		33-051-4	7/15/1999	1R-4-164			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°02'12.65004"	120°48'46.61839"	1054.532	9.23	<2 acres		33-0017			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh to Slight			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	192	80,000	207,360			
Potentially Significant Site	Why			Open/Closed	Direction				
Maybe	Location, quantity, quality.			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is adjacent to and west of Bakeoven County Road near the intersection of it and Highway 97. The rock is a fine-grain basalt that has a pronounced spheroidal weathering pattern. There is also some minor platy fracture exposed. The top 10 to 15 feet are more weathered and would produce more fines. There is good screening at this site with plenty of room to work. There is no overburden to deal with. You can rip the basalt but most likely would need to drill and blast. The terrain is flat to sloping away to the west from the county road. High power lines traverse the ground.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.68	18.09			18.1	.7			
Material Use									
(1973)									

NW

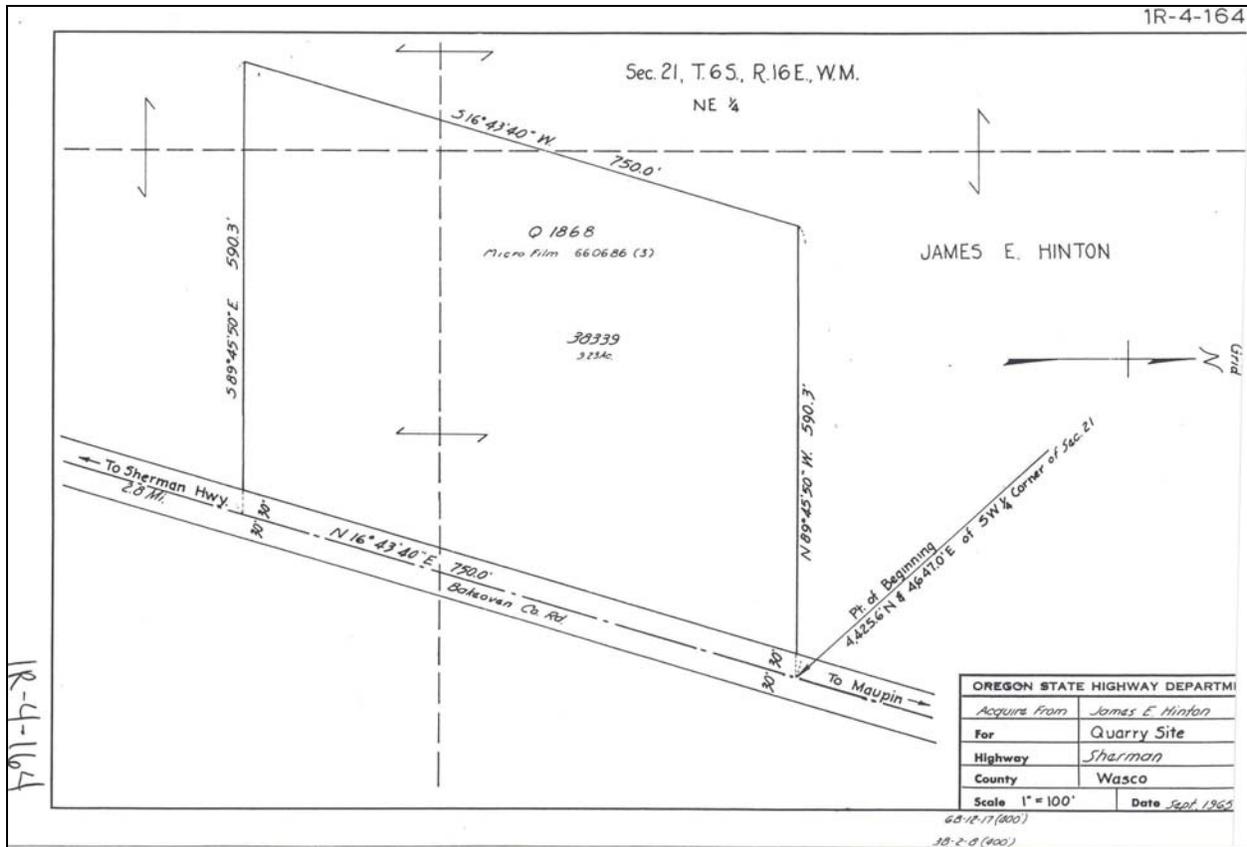
SE



Panoramic view of the quarry along Bakeoven Road.



Close-up view of the fracture pattern of the basalt with the hammer for scale.



Aerial view of the quarry site along the County Road.

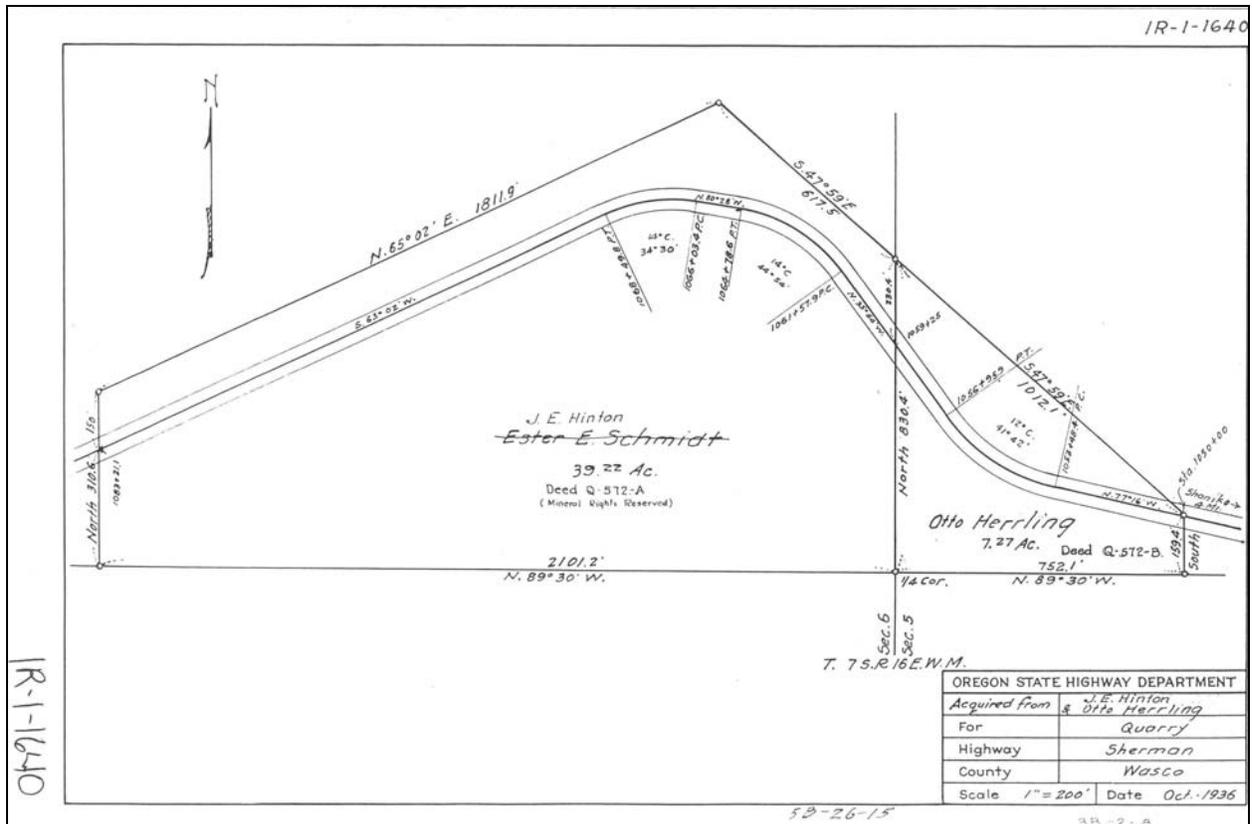
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Hinson/Schmidt Quarry			09	0042	61.8	07S	16.0E	06
File ID		Source #	Date Visited	Map #			Type of Site		
03896, 03897		33-053-4	7/15/1999	1R-1-1640			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°59'24.77541"	120°51'04.17512"	1044.218	46.49	<3 acres	33-0024				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Fresh			Highly to Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	167	200,000	450,900			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Location, quantity, quality.			Closed	NA				
Adjacent Land Use									
Open space/Turn-out across the highway									
Remarks									
This is a fine-grain basalt that is adjacent to and south of Highway 97. There is little overburden at this location. There is no screening from the highway with ample room to work. The terrain gradually slopes away from the highway. Maintenance was producing a cold mix for a resurfacing job on Highway 197, ten miles south of Maupin. The new alignment of Highway 97 has removed some of the ground from this site. Previously the site has produced about 60,000 cubic yards of material. There should be a large berm between the pit below and the highway to the south. This helps to protect anyone driving off of the highway going into the pit.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.64	2.73	15.8	4.9	1.6			8.2	.3	
Material Use									
AC (1993)									



Looking west down into the pit, where Maintenance was processing the basalt.



Close-up view of the fracture pattern of the basalt at this site.



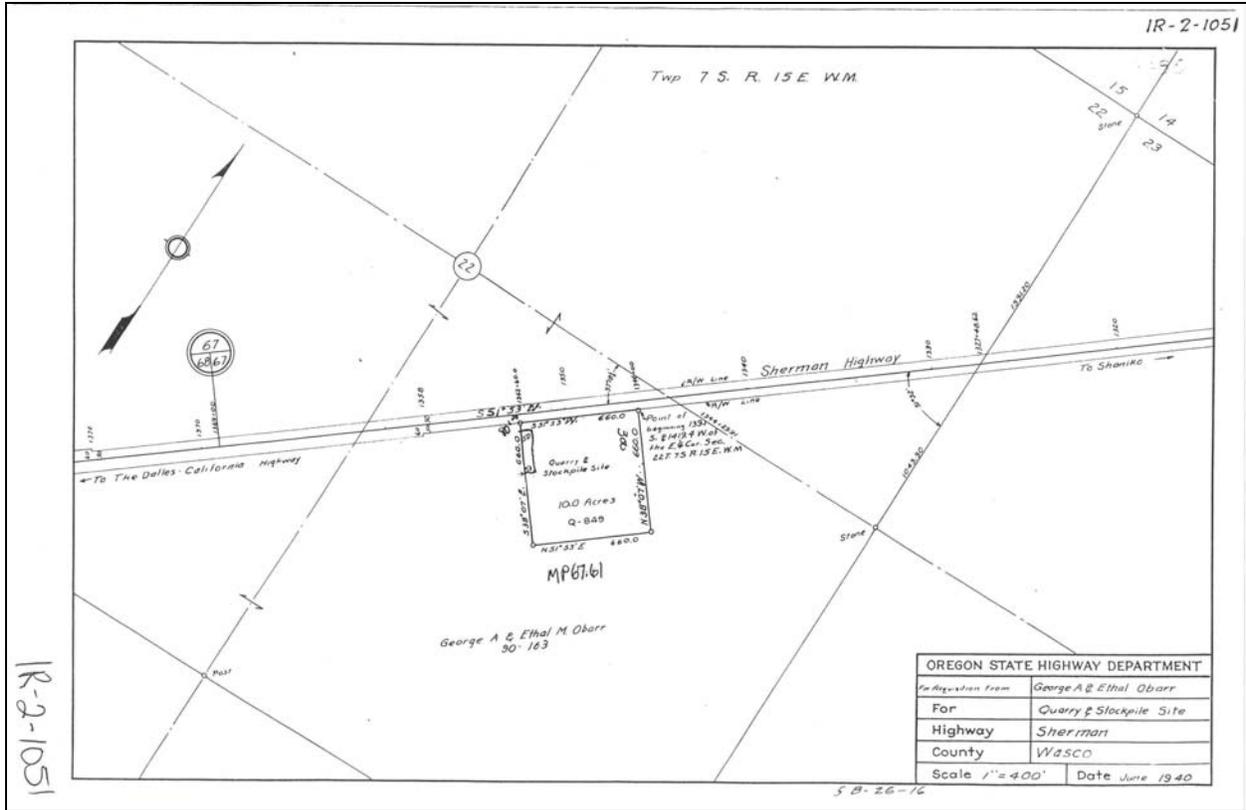
Aerial view of the quarry site that is adjacent to Highway 97.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco				09	0042	66.3	07S	15.0E	22
File ID		Source #	Date Visited	Map #			Type of Site		
08486A		33-054-4	7/15/1999	1R-2-1051			Borrow		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°56'40.41132"	120°55'00.44895"	969.12	10	<1 acre					
Comments									
GPS acquired at the locked gate.									
Rock Type	Unit	Color		Weathering			Jointing		
Volcanic Gravel	Tcg	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			NA	120	100,000	162,000			
Potentially Significant Site	Why			Open/Closed	Direction				
No	This is a borrow site.			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This is a borrow pit on flat ground adjacent to Highway 97. There are no exposures here to evaluate any of the rock at depth. There is a small pit near the southern corner that produced about 20,000 cubic yards of material. There would be approximately 80% fill material left over after processing the loose material. There is no screening from the highway but with plenty of room to work. This site is used as range land. Past use of the area has been for a land fill for the town of Shaniko. The site is fenced and there is a locked gate. Good location for a stock pile site adjacent to the highway.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.84	20.0							
Material Use									
Surfacing-Base, A/C , Oiling Aggregate (1961)									

W

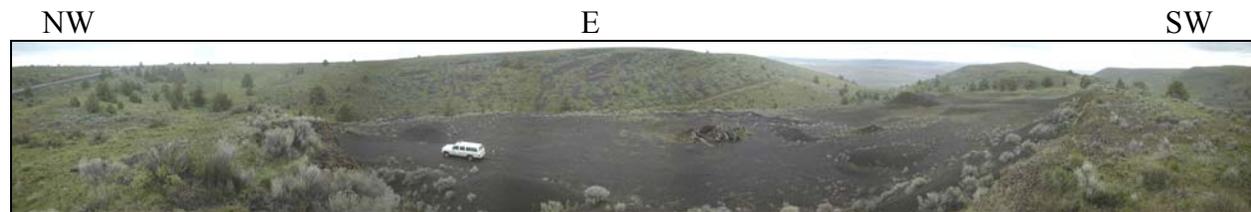


Looking west at the reclaimed borrow pit along Highway 97.



Aerial view of the borrow pit that is adjacent to Highway 97 before it had been reclaimed.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco				09	0291	0	07S	17.0E	20
File ID		Source #	Date Visited	Map #			Type of Site		
25924		33-062-4	04/30/2001	1R-5-953			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44°56'26.52899"	120°43'21.74752"	1063.597	12.23	<3 acres		33-0065			
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	Medium Dark Grey (N4)		Slight to Fresh			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R3+	183	200,000	494,100			
Potentially Significant Site	Why			Open/Closed	Direction				
No	NA			Closed	NA				
Adjacent Land Use									
Open Space									
Remarks									
This site is adjacent to and east of Highway 218. The rock here is a fine-grain, highly fractured, slightly weathered basalt. There is room to work with limited screening from the road. The terrain slopes away from the highway and is approximately 10 degrees. You can rip the material. Approximately 60,000 cubic yards has been removed.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.67	2.77	15.2	1.3	0.6			10.7	0.3	
Material Use									
SANDING (1989)									



Panoramic view of the quarry site along Highway 218.



Close-up view of the fracture pattern with the hammer for scale.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Taylor Quarry			09	0291	13.8	08S	18.0E	06
File ID		Source #	Date Visited	Map #			Type of Site		
34576		33-064-4	7/15/1999	1R-5-1558			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°54'19.95551"	120°37'04.22941"	1167.077	9.11	<1 acre					
Comments									
GPS acquired in the first pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tc	Medium Dark Grey (N4)		Fresh to Slight		Highly Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R4	175	150,000	354,375			
Potentially Significant Site	Why			Open/Closed		Direction			
Maybe	There are not many sites along this stretch of the road.			Closed		NA			
Adjacent Land Use									
Open space									
Remarks									
This site is located north of Highway 218 about 150 meters. The rock is a fine-grain basalt that can be ripped. There are some talus slopes at higher elevations above the first pit that can produce good size crushing rock. There is no screening from the highway with limited room to work here. The terrain can be steep, around 20 degrees. There are multiple benches that rock has been produced from. If this site is to be used in the future a site plan should entail working from the top down. It looks as if they are pushing the talus down the hill, from pit to pit. This site has a locked gate. The easement road needs some work to decrease the angle of entry back on to the highway. It might be possible to move the access point to a safer location.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.52	2.72	16.70	4.0	.7	11.9	.2	8.8	.3	
Material Use									
COLDMIX, SANDAG, CHIPSEAL, OILING AG (1983)									

SW

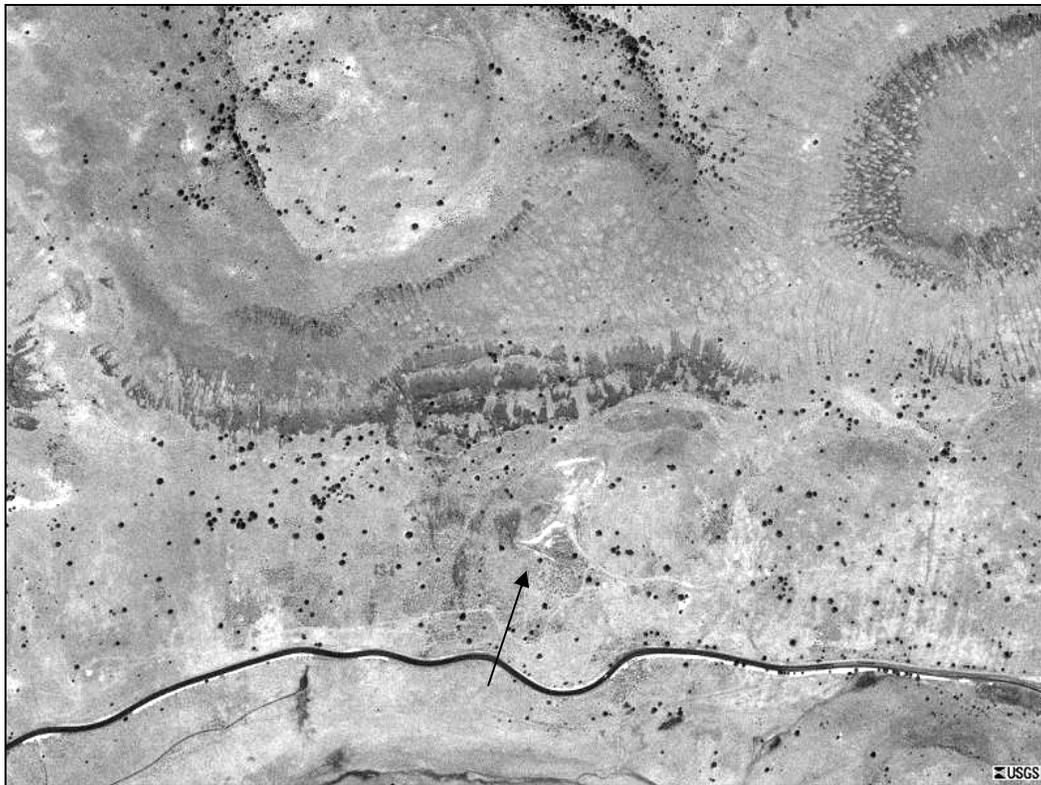
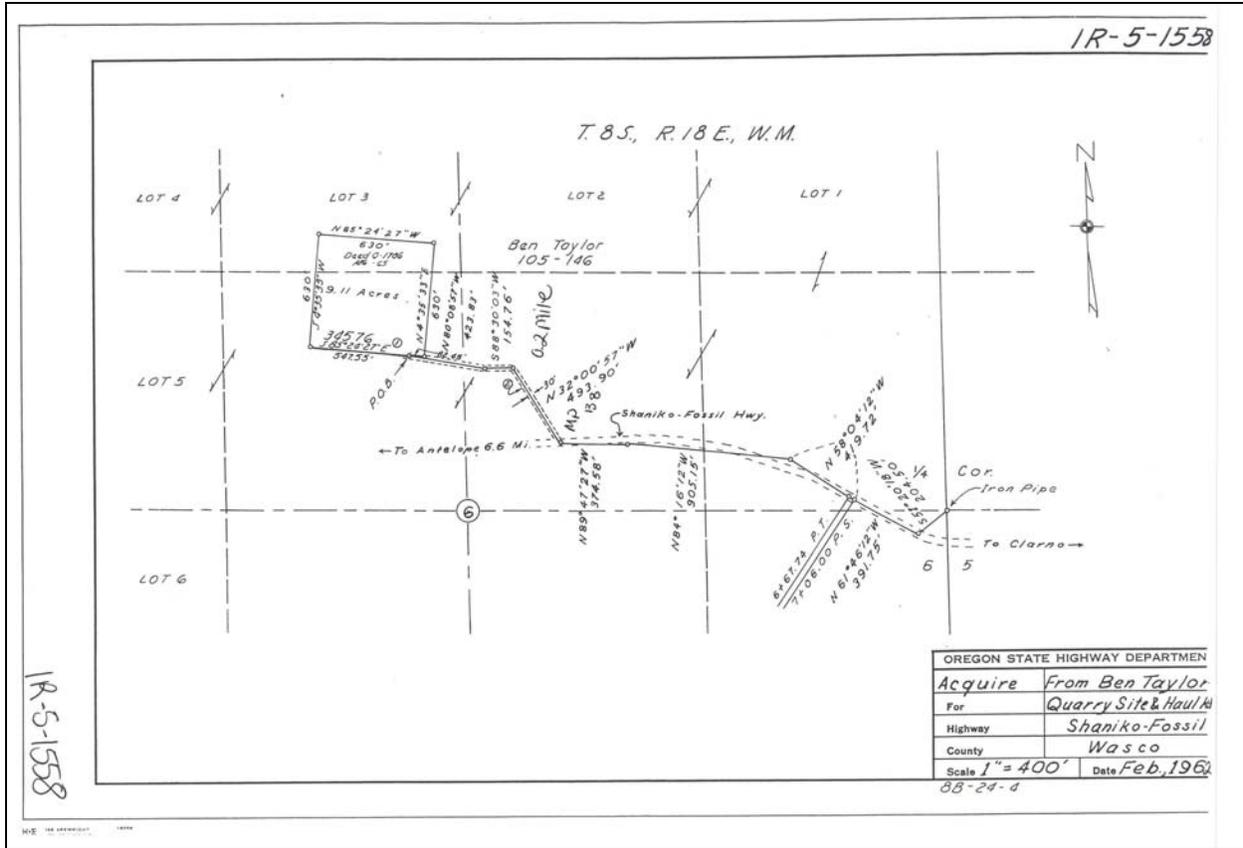
NE



Looking northwest at the small disturbance at this location.



Close-up view of the talus slope material with the hammer for scale.



Aerial view of the small quarry site north of Highway 218.

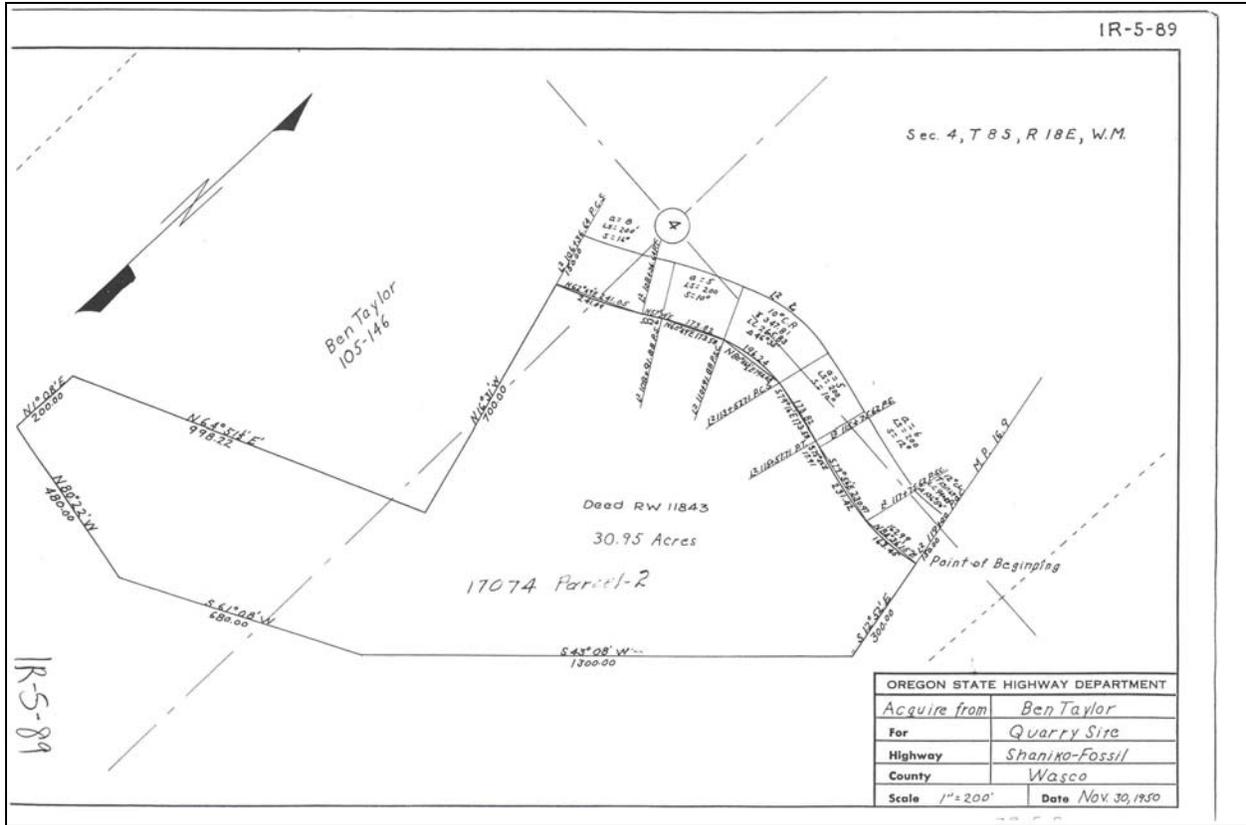
County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Quarry Site- Shaniko-Fossil Highway			09	0291	16.9	08S	18.0E	04
File ID		Source #	Date Visited	Map #			Type of Site		
17074		33-065-4	7/15/1999	1R-5-89			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°54'00.12738"	120°34'24.71707"	971.186	30.95	<5 acres	33-0069				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Q1s	Dark Grey (N3)		Fresh to Decomposing			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Poor to Fair			R2 to R4	175	250,000	590,625			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Quality is lacking.			Closed	NA				
Adjacent Land Use									
Open space/Ranch to the northwest about 900 meters									
Remarks									
This site is located south of and adjacent to Highway 218. The rock exposed at this location is a highly weathered fine-grain basalt. There is good screening at this site with plenty of room to work. The terrain has a moderate slope of around 10 degrees. The state geology map listed this site within a landslide area. If we should ever want to acquire more property in this area, I suggest that we look at the uplands. They have much better material for road construction. This site as also used as a stockpile location. There is a locked gate here.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.52	2.72	16.7	4.0	0.7	0.2			11.9	
Material Use									
BASE AC (1983)									

NW



Looking northwest at one of the small pits.

Close-up view of the fracture pattern in the basalt at this location.



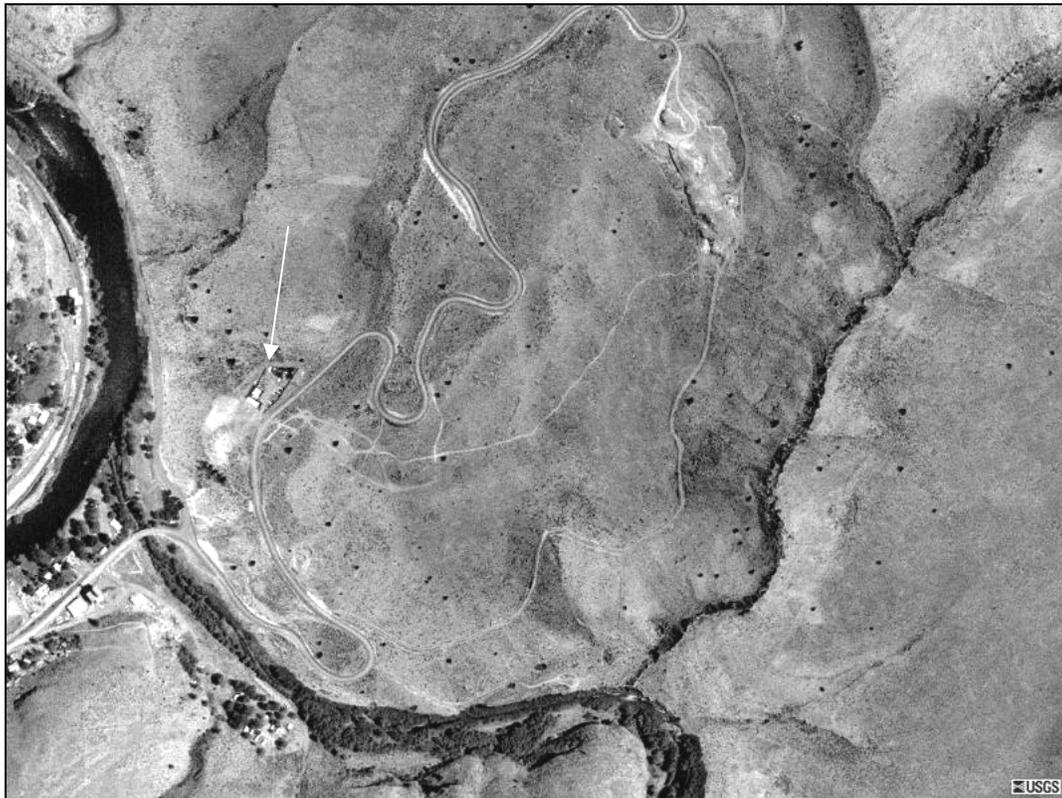
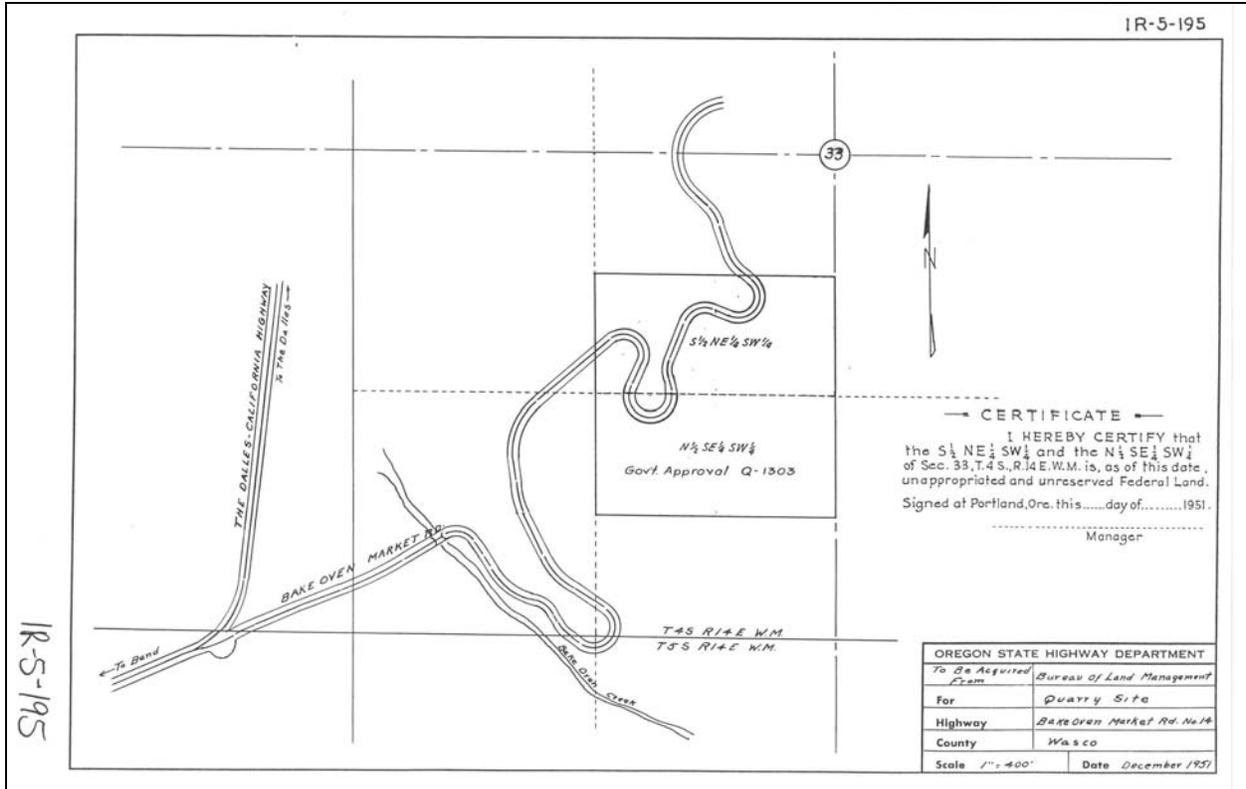
Aerial view of the quarry site along Highway 218.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco				09	0004	45.9	04S	14.0E	33
File ID		Source #	Date Visited	Map #			Type of Site		
18388		33-070-4	7/13/1999	1R-5-195			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°10'33.19000"	121°04'08.35000"	309	40	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcg	NA		Slight			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	This ground is owned by the BLM.			Closed	NA				
Adjacent Land Use									
City of Maupin is to the west approximately 500 meters and a BLM office is adjacent to the property.									
Remarks									
There are no exposures to view the rock at this site. There would be no screening from the county road or the town of Maupin. There is no room too work in this area. From the road cut the soils appear to be up to 10 feet thick here. This site is owned by the BLM and has been released back to them.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.8	22.7							
Material Use									
Topping and Oil rock (1951)									

E



Looking to the east at the undisturbed ground above the town of Maupin, OR.

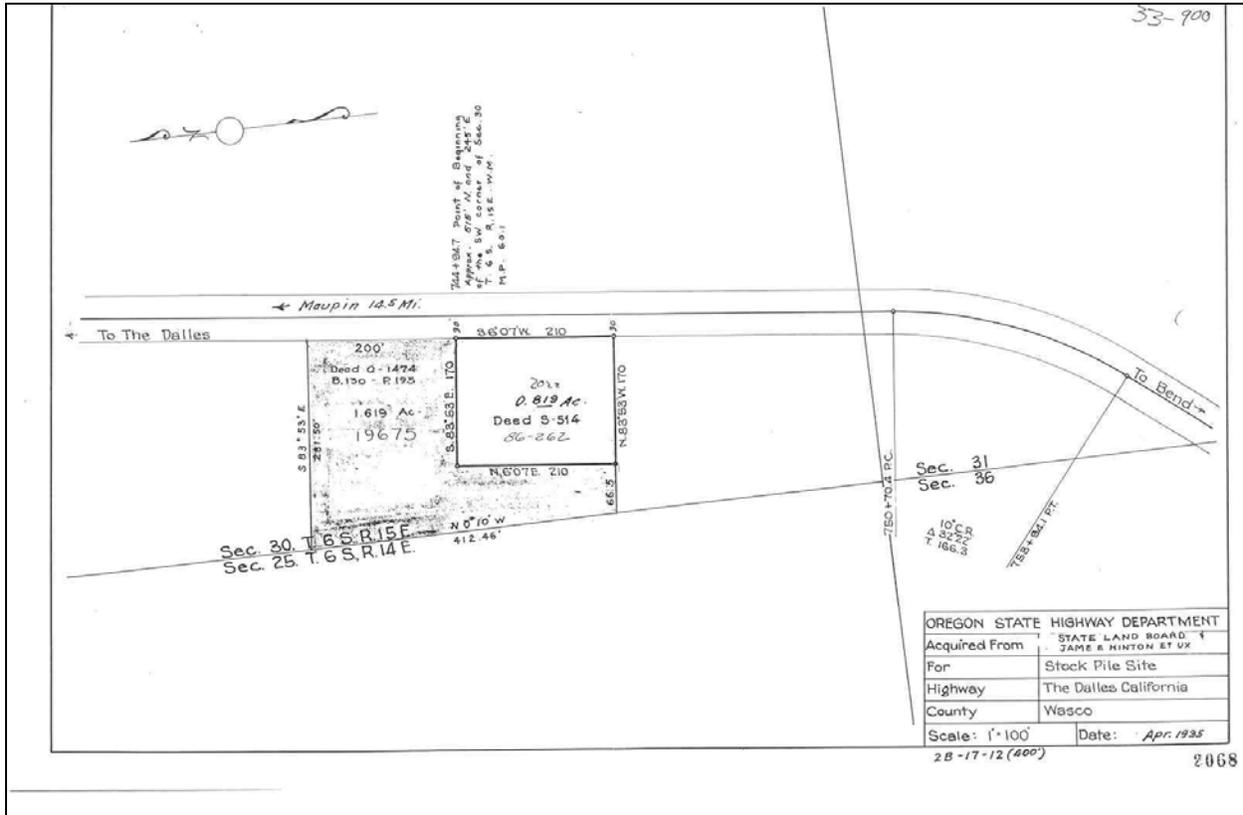


Aerial view of the site along Bakeoven Road.  
The arrow points to the BLM office in the area.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wasco	Criterion Quarry Site			09	0004	0	06S	15.0E	30
File ID		Source #	Date Visited	Map #			Type of Site		
19675, 02022		33-900-4	7/15/1999	1R-1-1453			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°00'38.77000"	120°59'27.54000"	968	2.44	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Tuff	Tcg	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
NA			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too small			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is too small and has the wrong lithology for aggregate production. It would make a good stock pile site since it is adjacent to Highway 197. This is fairly flat ground. The rock lithology is Ash at the surface.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Aerial view of the site that is adjacent to Highway 197.



County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wheeler				09	0005	54	06S	21.0E	16
File ID		Source #	Date Visited	Map #			Type of Site		
30852		35-001-4	06/14/2000	1R-5-1373			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45°02'22.44803"	120°12'22.89898"	1030.926	32.71	<7 acres					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tc	Medium Dark Grey (N4)		Fresh			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Very good			R3+	165	400,000	891,000			
Potentially Significant Site	Why			Open/Closed	Direction				
No	NA			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is located west of Highway 19 about 100 meters and up about 160 feet. The access to the site via an easement road under the power lines. The rock is a very good fine-grain basalt with little staining. There is plenty of room to work with fair screening. The access would need to be developed to the site for future work. You can rip the material. There is no overburden. Most of the past work was from the talus slope at this location. There were few igneous flows evident. The material here is perfect sized rock to crush (cobble and less).									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.84	14.5					23.47	1.2	
Material Use									
Surfacing (1962)									

NW

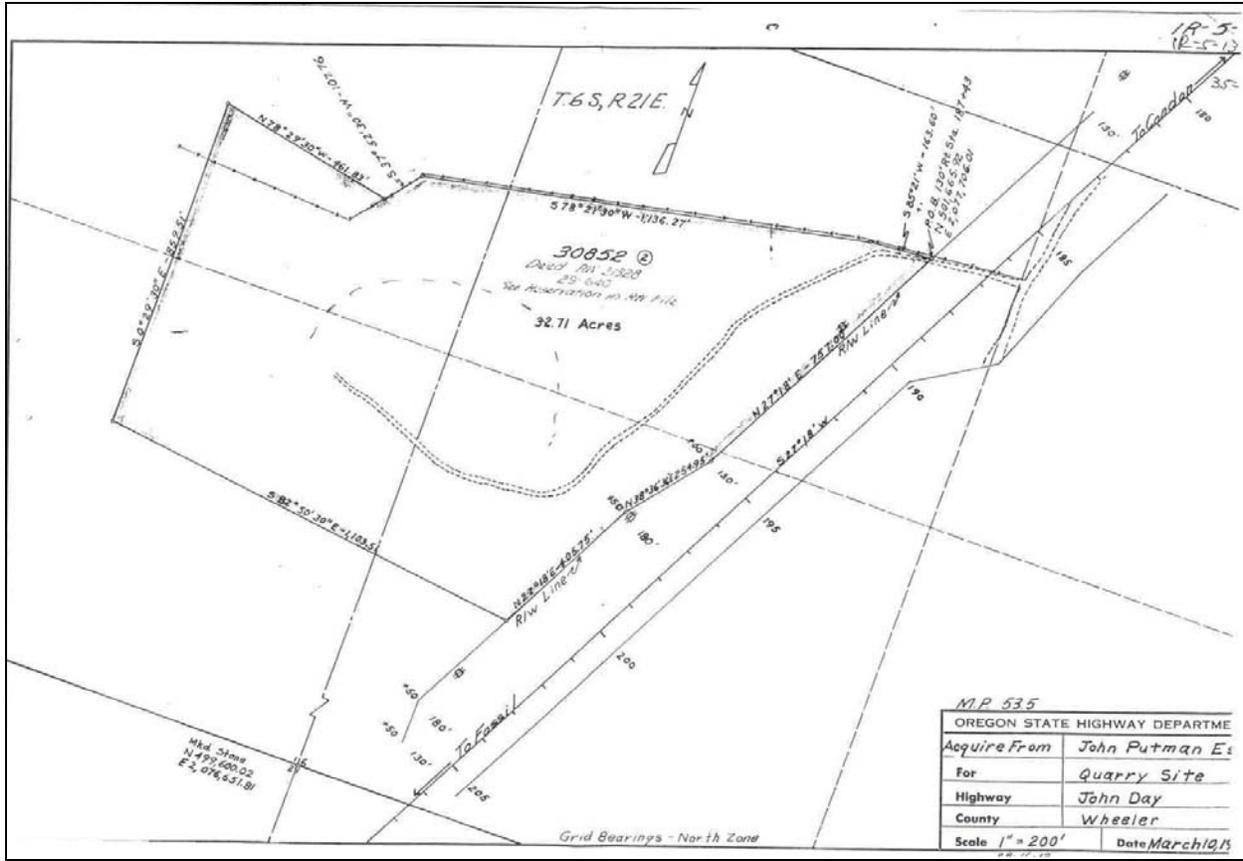
NE



Looking north at the quarry site and the talus slope.



Close-up view of the talus rock at this quarry site.



Aerial view of the quarry site and Highway 19.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wheeler				09	0291	29.10	07S	20.0E	31
File ID		Source #	Date Visited	Map #			Type of Site		
34504		35-024-4	06/14/2000	1R-5-1550			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44°54'35.22992"	120°21'46.02175"	562.186	9.79	<1 acre		35-0002			
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tct	Medium Dark Grey (N4)		Fresh to Slight			Moderately Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			R3+	163	110,000	242,055			
Potentially Significant Site	Why			Open/Closed	Direction				
No	NA			Closed	South about 300m is Pine Creek.				
Adjacent Land Use									
Open space									
Remarks									
This site is adjacent to the north of Highway 218. The rock is a medium to coarse-grain basalt. There are tuffs in contact with this columnar basalt. Part of the ground is a stock pile site. There is plenty of room to work, but no screening from Highway 218. The terrain is moderately steep to steep, about 20 to 25 degrees. You can rip the material. This site is also used for a waste rock site. In the future we should not mix our waste rock in with the quarry. The pit floor is about 30 feet above Highway 218.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.78			0.2	3.4	0.3	15.15	0.8	
Material Use									
RIP RAP AGGREGATE (1998)									

W

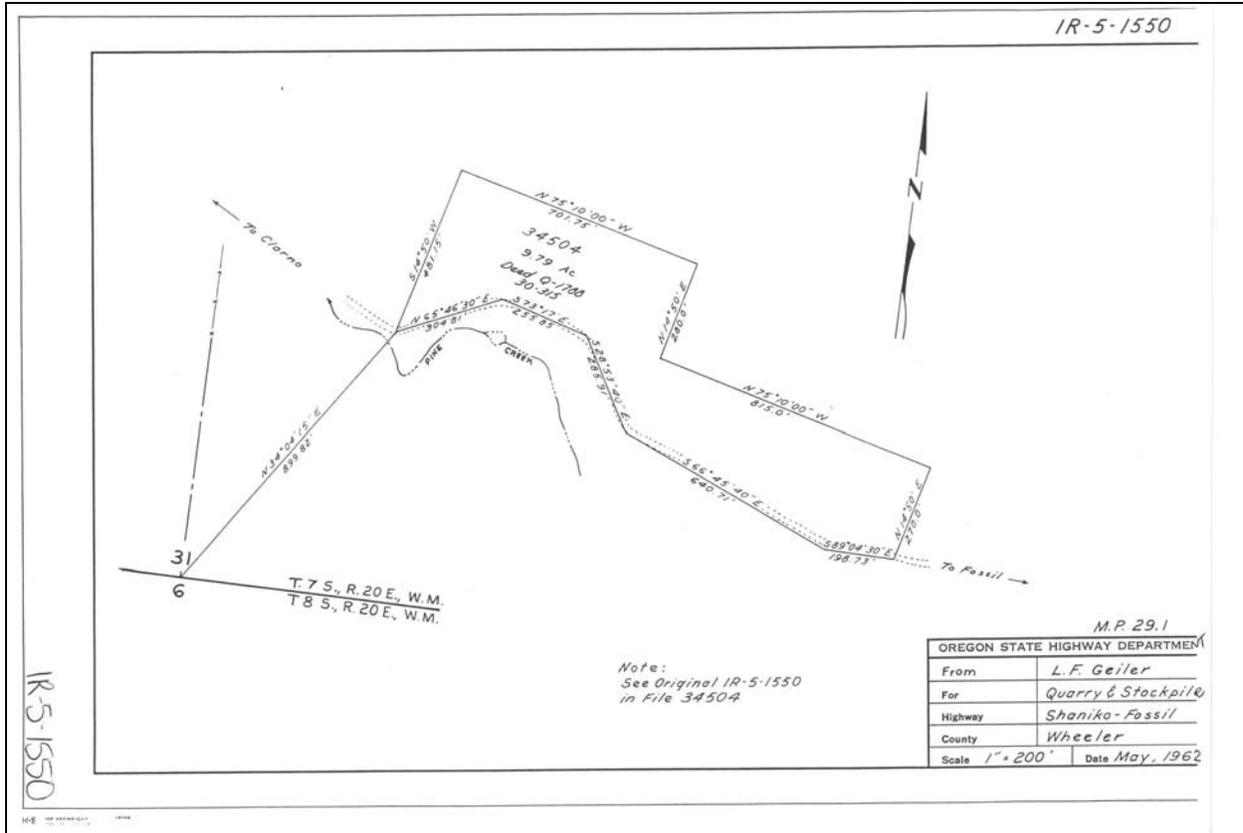
E



Looking north at the quarry site along Highway 218.



Close-up of the jointing pattern at this site. Note the perpendicular fracture of the basalt here.



Aerial view of the quarry site along the highway and the surrounding terrain.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wheeler	Prindle Hill			09	0291	37.5	07S	21.0E	19
File ID		Source #	Date Visited	Map #			Type of Site		
35541, 35542		35-026-4	06/14/2000	1R-5-1654			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°56'31.08965"	120°14'17.83990"	1195.633	24.3	<3 acres	35-0006				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tca	Medium Grey (N5)		Slight			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3	169	130,000	296,595			
Potentially Significant Site	Why			Open/Closed	Direction				
No	NA			Closed	NA				
Adjacent Land Use									
Open space/one ranch to the southeast about 600 meters									
Remarks									
This site is located west of Highway 218 about 300 meters. The rock is a fine-grain very platy basalt. It is highly fractured and brittle. There are lenses of rock in the flow that can be massive. You can rip the rock. There is plenty of room to work, and good screening. The basalt sits on top of a lapilli tuff. That would make the thickness of the basalt around 20 to 30 feet. This site sits atop a hill with the stock pile site down the hill and adjacent to the highway. The rock can produce a lot of fines. The gate was locked at the time of the visit.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.513	2.552	14.5	5	1			10.7	.9	
Material Use									
Quarry Rock (1996)									

SW

NE



Looking to the west at the pit face from the pit floor.

Close-up view of the platy fracture of the basalt.

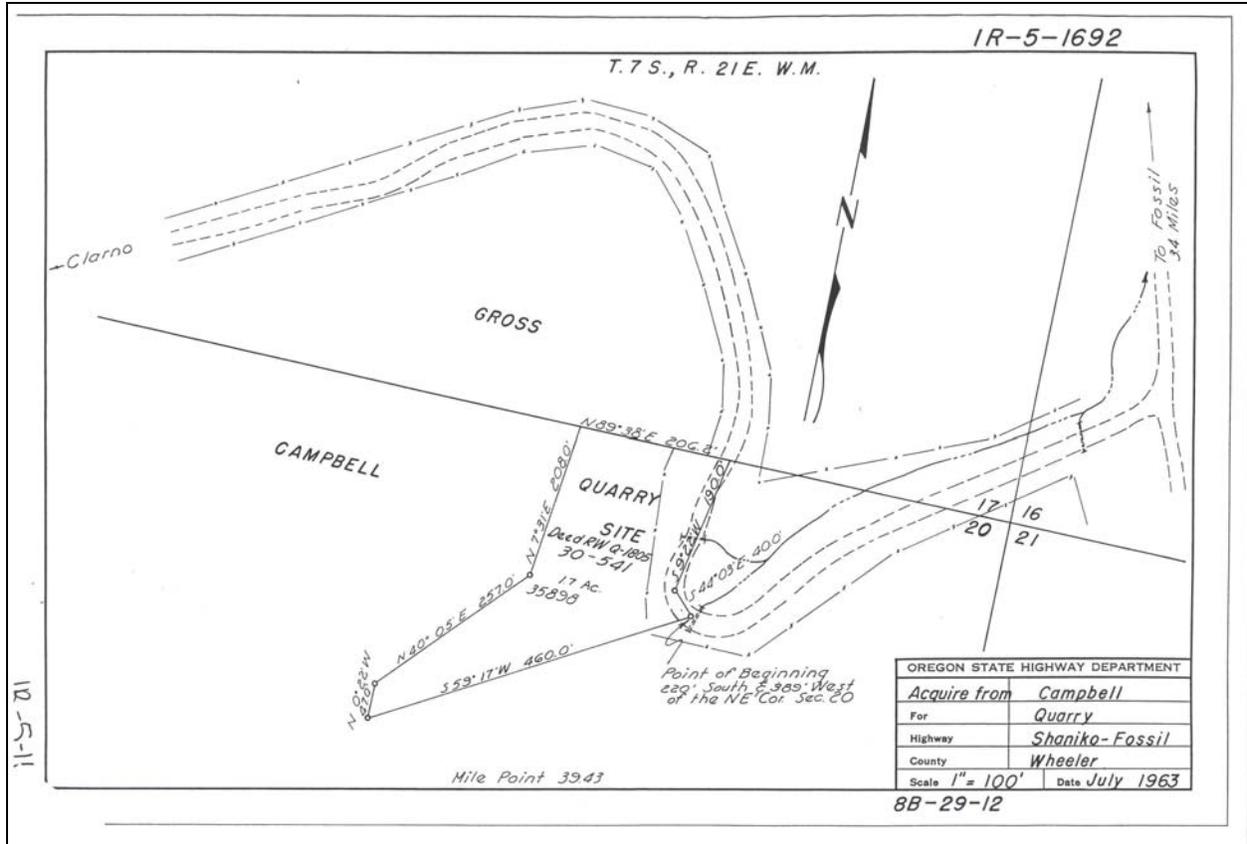


County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Wheeler				09	0291	34.9	07S	21.0E	20
File ID		Source #	Date Visited	Map #			Type of Site		
35898		<b>35-027-4</b>	06/14/2000	1R-5-1692			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44°56'50.45000"	120°12'57.99000"	974	1.7	<1 acre					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tcp	NA		Slight to Moderate			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair			R2 to R3	155	15,000	31,388			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Too small			Closed	NA				
Adjacent Land Use									
Open space									
Remarks									
This site is adjacent to and west of Highway 218. The property is too small to evaluate (1.7ac). I had to pass by on my way to 35-027-4 and acquired images and pit size. This quarry is best used by Maintenance for small quantities of fill or shoulder material.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

W



Looking west from Highway 218 at the very small quarry site.



Aerial view of the site along Highway 218.