

OREGON DEPARTMENT OF TRANSPORTATION

AGGREGATE SITES

DISTRICT 4

LEGEND

JUNE 2002

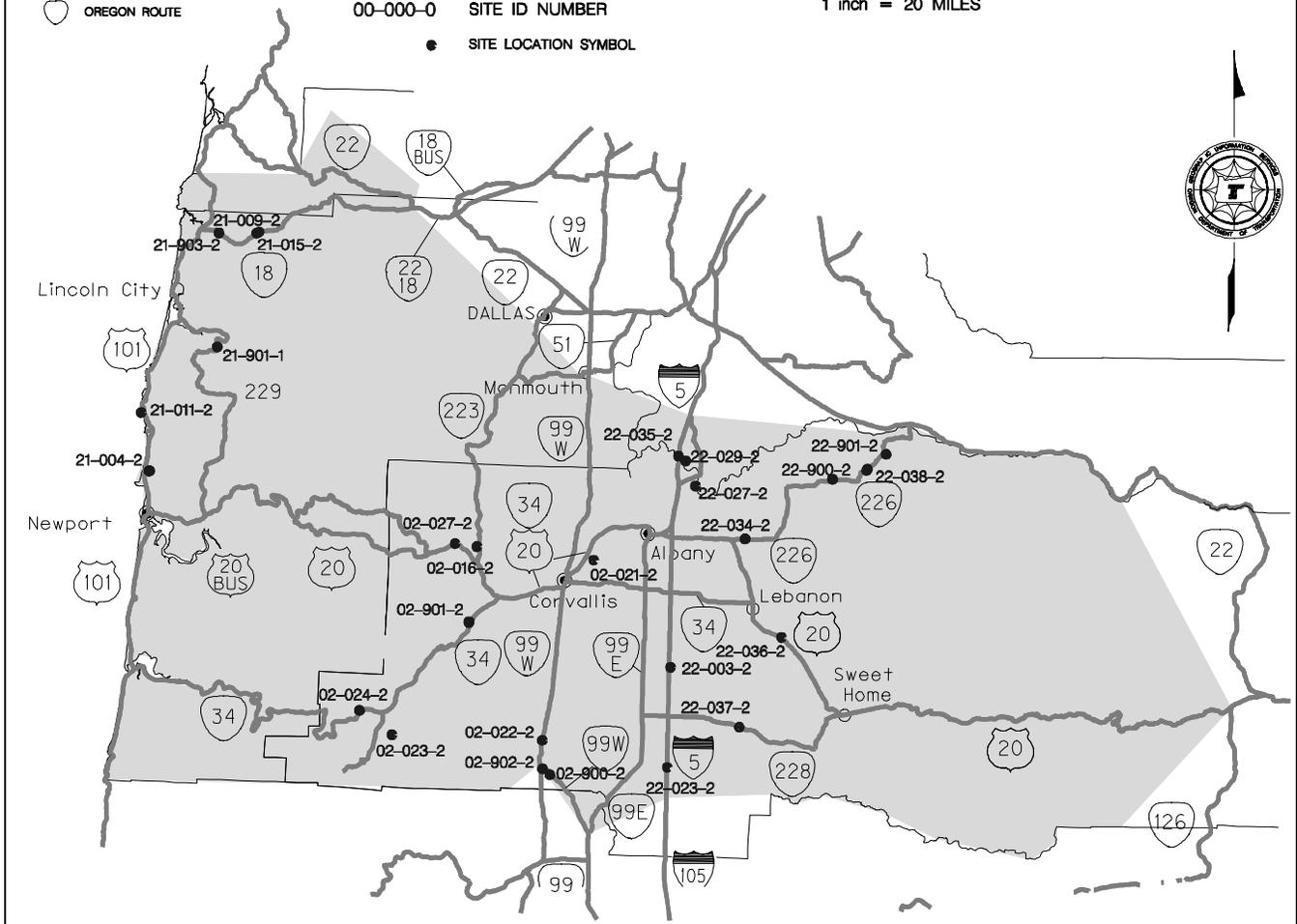
ROUTE AND HIGHWAY NUMBERS

-  INTERSTATE
-  U.S. ROUTE
-  OREGON ROUTE

LEGEND

-  COUNTY BOUNDARY
-  00-000-0 SITE ID NUMBER
-  SITE LOCATION SYMBOL

SCALE
0 2 4 6 8 10 20 MILES
1 inch = 20 MILES



List of Sites in District 4

Source Number	
02-016-2	2
02-021-2	4
02-022-2	6
02-023-2	8
02-024-2	10
02-027-2	12
02-900-2	14
02-901-2	16
02-902-2	18
21-004-2	20
21-009-2	22
21-011-2	24
21-015-2	26
21-901-1	28
21-903-2	30
22-003-2	32
22-023-2	34
22-027-2	36
22-029-2	38
22-034-2	40
22-035-2	42
22-036-2	44
22-037-2	46
22-038-2	48
22-900-2	50
22-901-2	52

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Reed Creek Quarry			04	0191	23.9	11S	06.0W	16
File ID		Source #	Date Visited	Map #			Type of Site		
Q0755		02-016-2	1/25/1999	1R-2-1102			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44 36'29.80131"	123 25'42.22807"	175.678	5.05	<2					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tsr	Medium Dark Grey (N4)		Slight to Moderate			Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R3 to R4	174	25,000	58,725			
Potentially Significant Site	Why		Open/Closed	Direction					
No	Site almost depleted of rock		Closed	Drainage from homes to the east bisects southern 1/3 of the ground					
Adjacent Land Use									
Forest/Residential									
Remarks									
This site is located adjacent to and east of Kings Valley Highway. The rock here is a fine-grain, highly fractured basalt. There is no screening from the highway, but there is room to work. This site is almost depleted of rock and should be evaluated for future production. You could rip the material for pit run, but most likely would need to drill and blast. This would be a good location for a waste site, bone-yard, or stockpile site. There is no gate or fence for this property. There are new homes to the east of this pit that could be of concern. They are approximately 250 feet from the high wall at our property boundary. I feel there should be a fence to protect anyone or thing from falling off the high wall to the pit below. This site should be evaluated for safety reasons. It might be possible to squeeze more rock from this site than otherwise thought.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
	2.84	16.82		5.93			19.0	0.8	
Material Use									

NE

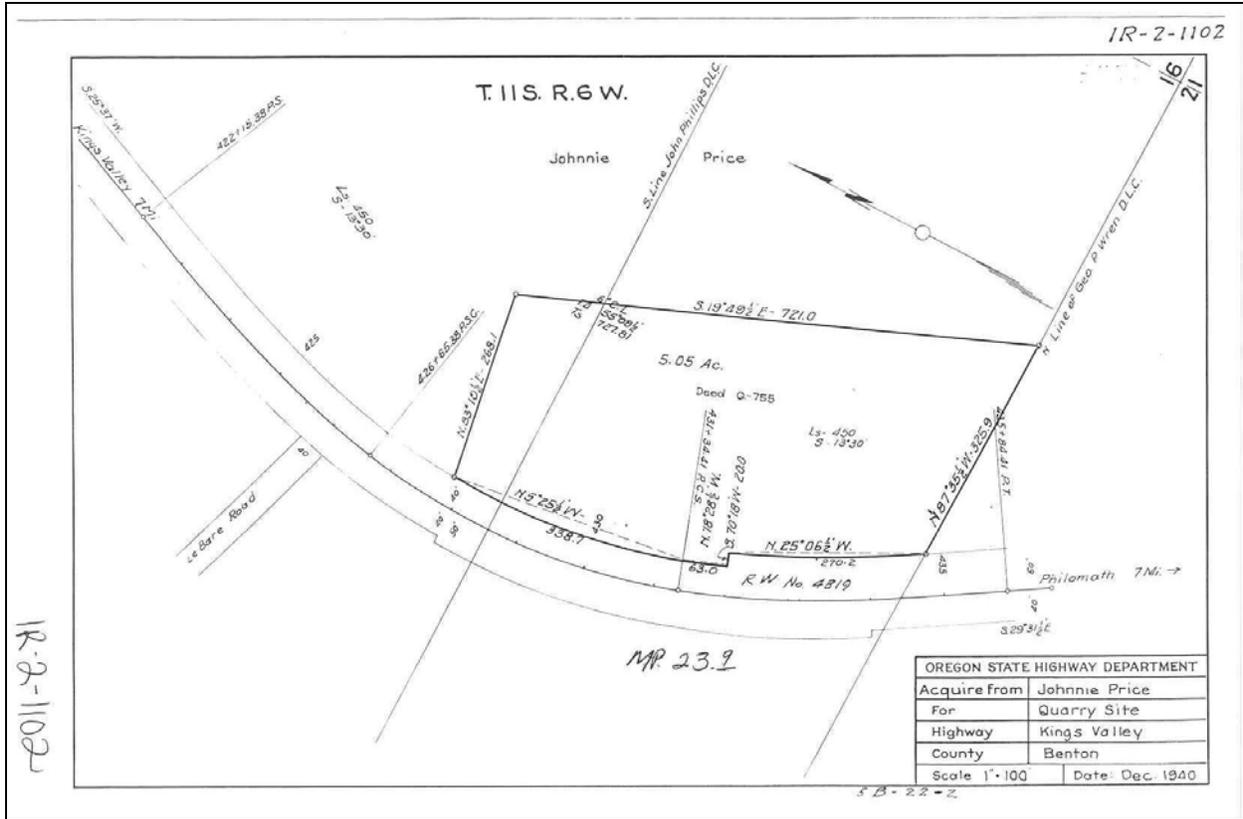
S



View to the east looking at the pit.



Close-up view of the basalt rock and the fracture pattern.



Aerial view of the site along Highway 223.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Robison Pit/ Belknap Quarry				04	0031	2.6	11S	04.0W	20
File ID		Source #	Date Visited	Map #		Type of Site				
10308, 20339		02-021-2	4/20/1999	1R-2-1297		Gravel				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 35'43.98356"	123 12'26.24043"	66.732	13.26	<6						
Comments										
GPS acquired at the easement and Garden Road.										
Rock Type	Unit	Color		Weathering			Jointing			
Volcanic Gravel	NA	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			NA	120	75,000	121,500				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Most of the gravel has been removed and it appears that maintenance is wanting to use the site for waste rock material.			Closed	The Willamette River is to the south approximately .5 mile.					
Adjacent Land Use										
Farming										
Remarks										
This site is located within a farmers field approximately 500 meters north of the Willamette River. The gravel is composed of a homogeneous size and distribution. It ranges in size from sand up to 10 centimeters with the dominant size around 3 centimeters. There is about 40% sand/silt and 60% gravel at this location. This site is a good site for PCC quality rock. There is good screening from all directions and ample room to work. This site also has potential for wetland mitigation with the water table so close to the surface. The quantity is based on lowering or expanding the pit.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

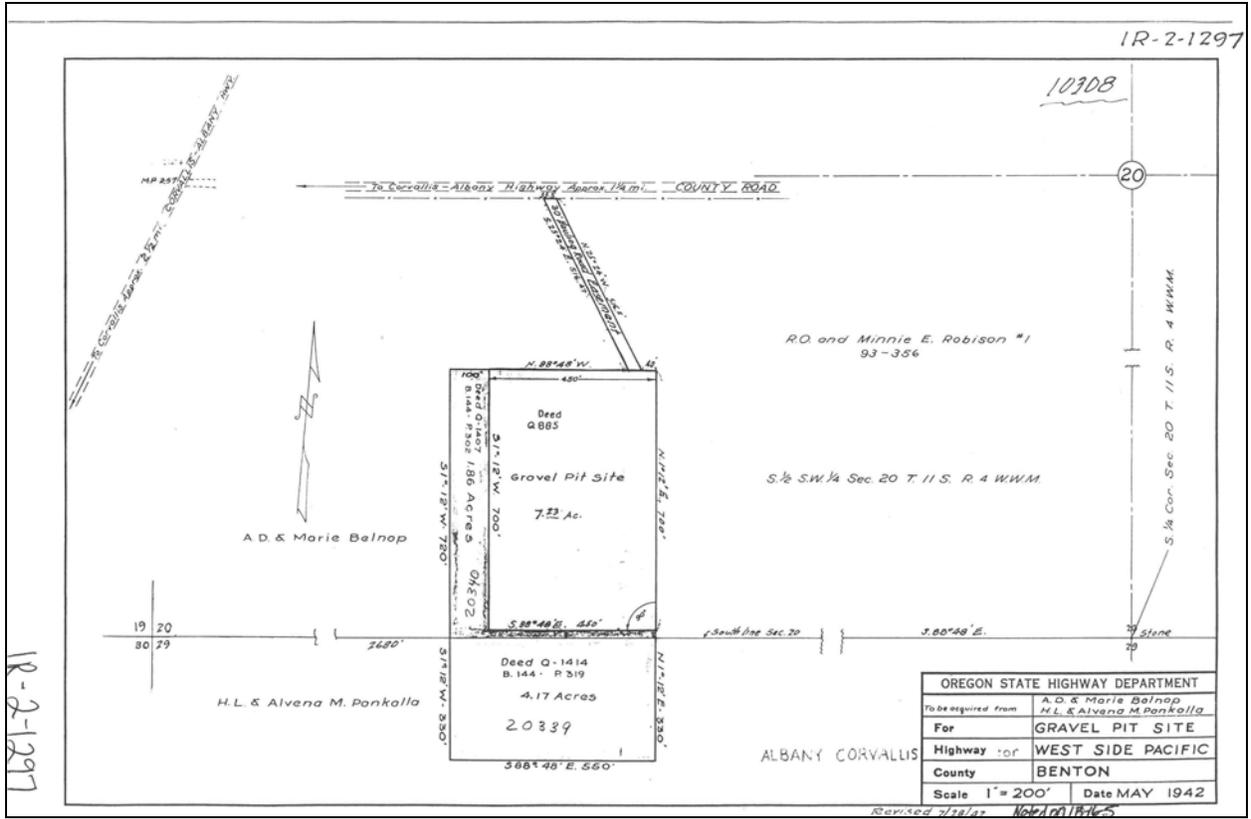
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NW



View of the borrow site looking west.

Close-up view of the gravel size.

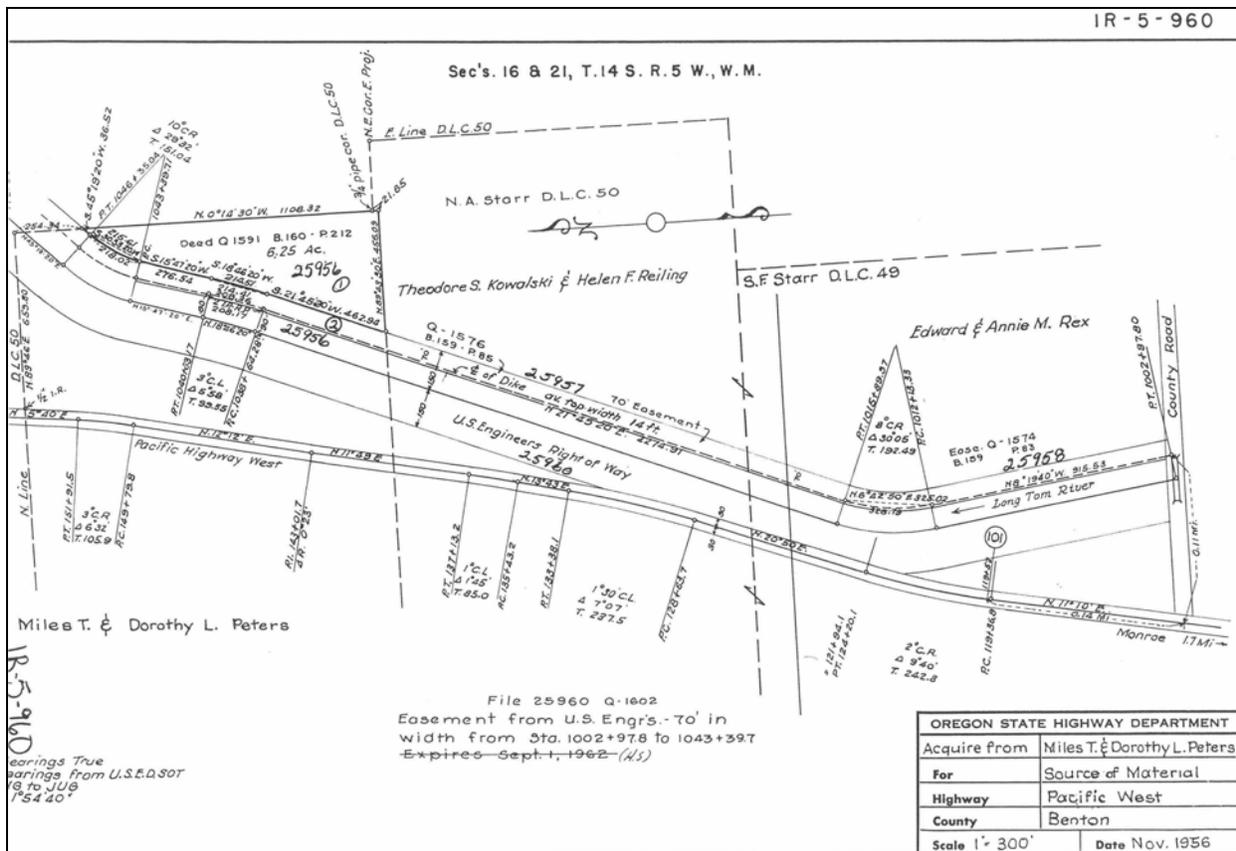


Aerial view of the gravel site and surrounding farm land.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Rex Pit			04	0091	0	14S	05.0W	16
File ID		Source #	Date Visited	Map #			Type of Site		
25956, 25957, 25958		02-022-2	4/20/1999	1R-5-960			Gravel		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 21'02.28000"	123 17'33.91000"	95	11.09	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color		Weathering			Jointing		
Alluvium	NA	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
NA			NA	120	80,000	129,600			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Wetland potential			Closed	Adjacent to the Long Tom River.				
Adjacent Land Use									
Residential/Farming									
Remarks									
This location along the Long Tom River was in flood stage when I visited it in April of 1999. This ground has potential for wetland mitigation. There are homes adjacent to this site now. The access point is not evident any more and would need to be located if we wish to use this property. I revisited this site May of 2000 to evaluate the ground. The site is adjacent to the river with the easement along the east side dike to the site. The gravel comprises about 40% by volume and is in the size range of 6 centimeters and less. There is limited room to work with some screening. This ground has mitigation potential.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.513									
Material Use									
Fine PCC rock (96)									

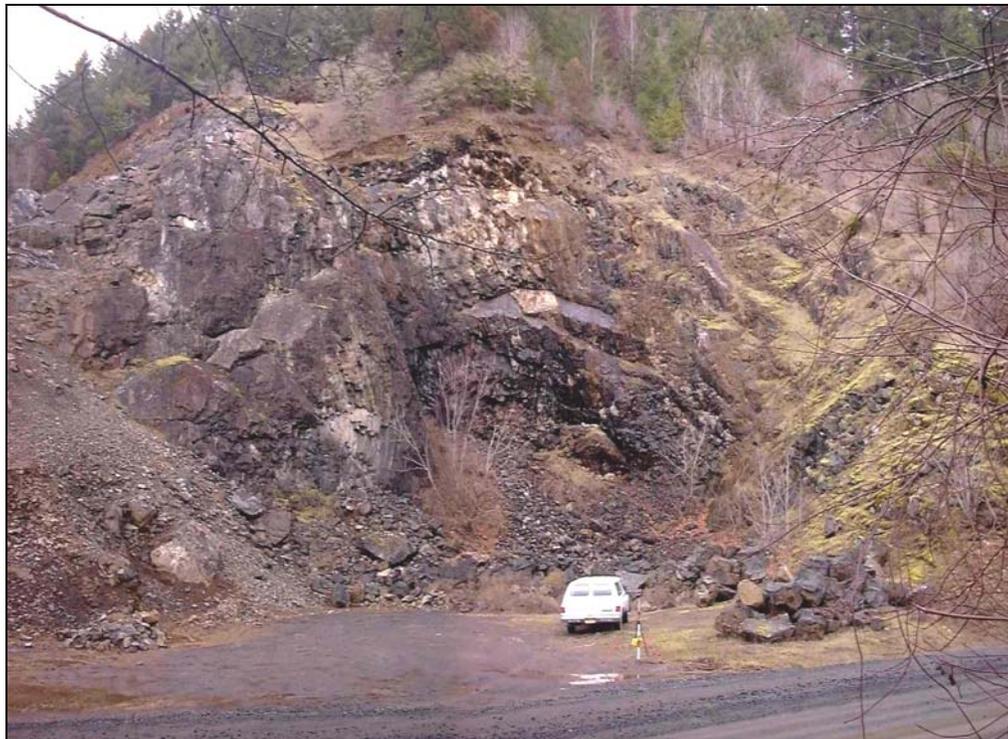


Aerial view (lower center) of the site along the Long Tom River. Upper arrow is the access road.

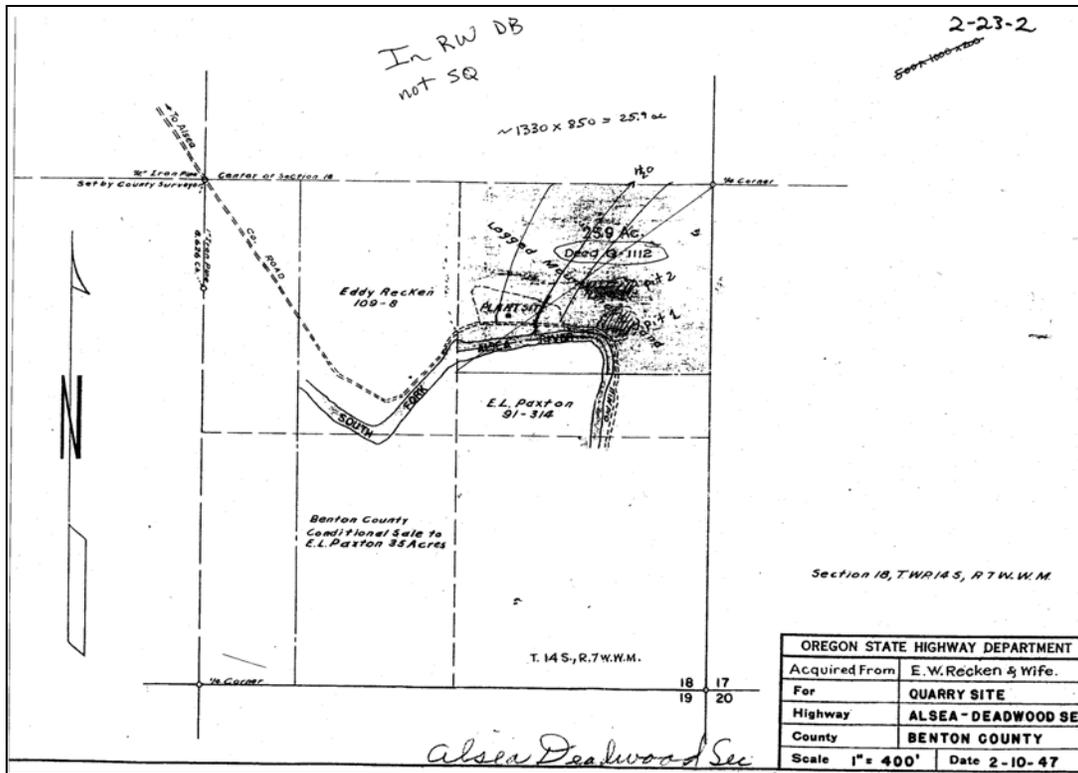


Close-up view of the gravel along the river.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Alesa Quarry				04	0201	0.95	14S	07.0W	18
File ID		Source #	Date Visited	Map #		Type of Site				
13504		02-023-2	1/26/1999	1R-2-1705		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 21'03.39508"	123 34'30.77719"	112.395	25.9	<1	02-0034					
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering			Jointing			
Basalt	Tsr	Medium Dark Grey (N4)		Fresh			Moderate Fracture to Massive			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			R4	166	400,000	896,400				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Large acreage, good quality rock, fairly close to Highway 34 but the quantity does not meet the Willamette Valley classification of aggregate site for Goal 5.			Closed	South Fork of the Alesa River is across the gravel road to the south about 50 meters.					
Adjacent Land Use										
Forest										
Remarks										
This site is adjacent to and north of South Fork County Road. The rock here is a medium-grain basalt with moderate mineral alteration along joint boundaries to zeolites. There is limited room to work due to the steep nature of the terrain. This site has some screening from the county road if you remove rock from the upper pit. There are large rip rap boulders from this site that could be used in the future. The bench cut or small pit adjacent to the county road is too tall (up to 55 feet) and should be cut down to a safer height. The upper pit appears to have been used the last time rock was removed from this location and it is well screened from the road. This site is categorized in the Right of Way data base as RW and should be changed to SQ. This area has very steep terrain and could pose problems in removing rock safely next to the county road. All work should be from the top down to maximize this site and make it a safe work place. You would definitely need to drill and blast the rock. This site needs a good survey and development plan for future work. With the steep terrain a site plan should have most of the work proceed from the top down.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
		17.9	47	12.0	20.9	80.0	75	30.8		
Material Use										
Quarry Rock (2001)										



View to the northeast, looking at the lower pit along the county road



Close-up view of the rip rap in the lower pit.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Seely Quarry				04	0027	38.3	14S	08.0W	03
File ID		Source #	Date Visited		Map #			Type of Site		
Q0061, Q0197, Q0196		02-024-2	3/30/1999		1R-1-651, 1R-1-473			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #				
44 22'55.40603"	123 38'16.05501"	84.104	4.58	<1						
Comments										
GPS acquired along Highway 34 and the easement.										
Rock Type	Unit	Color		Weathering			Jointing			
Gabbro	Tsr	Dark Greenish Grey (5G 4/1)		Slight to Moderate			Massive			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Fair to Good			R3+ to R4	146	80,000	157,680				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Small ground, not much room to work and residential homes across the highway.			Closed	Alsea River 3.8 miles across Highway 34 to the south east.					
Adjacent Land Use										
Farming/Residences across the highway.										
Remarks										
This site is located adjacent to and northwest of Highway 34. The rock here is a coarse-grain massive gabbro. The exposures are very blocky and massive. This rock can be soft due to the weathering. There is no screening from the highway and very limited room to work. The terrain is steep and could pose some access problems. There is little to no disturbance at this site. You would need to drill and blast this rock which could produce some good rip rap. The GPS is suspect and a current boundary survey is advised to locate the exact boundaries. This site has been worked from the bottom up and makes it more difficult to come in and work safely here. If we come back to this site, it should be worked from the top down.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
		26.0	43.0	19.0	24.0	53.0	24.2	46.0		
Material Use										
Quarry Rock (2001)										

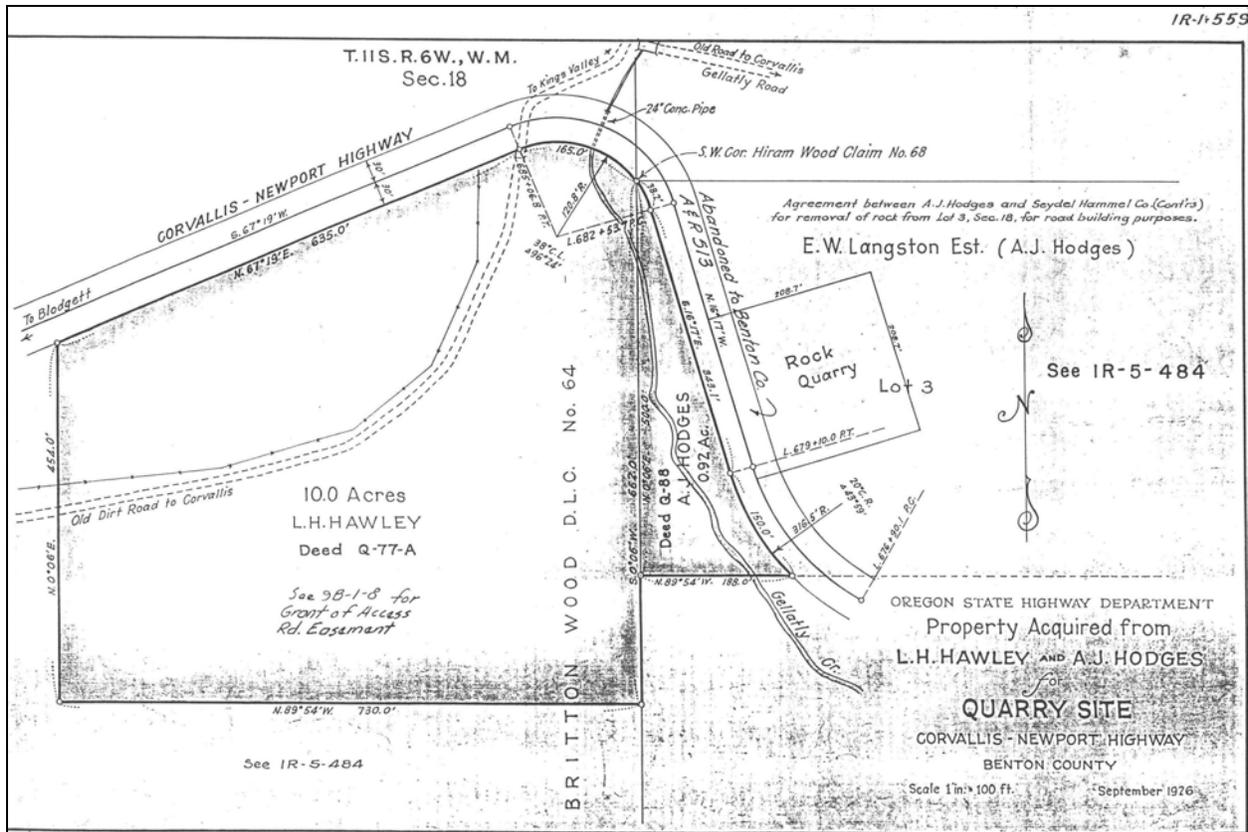


View to the northwest of the area along Highway 34.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Gellately Quarry/Lemon Quarry/Blodgett Quarry				04	0033	2.8	11S	06.0W	18
File ID		Source #	Date Visited		Map #			Type of Site		
21552		02-027-2	1/26/1999		1R-5-484, 1R-1-559			Stock Pile Site		
Latitude		Longitude		Elev. (m)	Acreage		Pit Size		DOGAMI Permit #	
44 36'41.19000"		123 28'11.73000"		245	10		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	0					
Potentially Significant Site		Why			Open/Closed		Direction			
No		No rock value.			Closed		NA			
Adjacent Land Use										
Forest										
Remarks										
The new alignment of Highway 20 has bisected this property and left two sections that are not conducive for rock production. The value here is for a stock pile site, or staging area for future projects. This property is right of way now along Highway 20. This has turned into a dumping ground for truckers after the new alignment of Highway 20.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



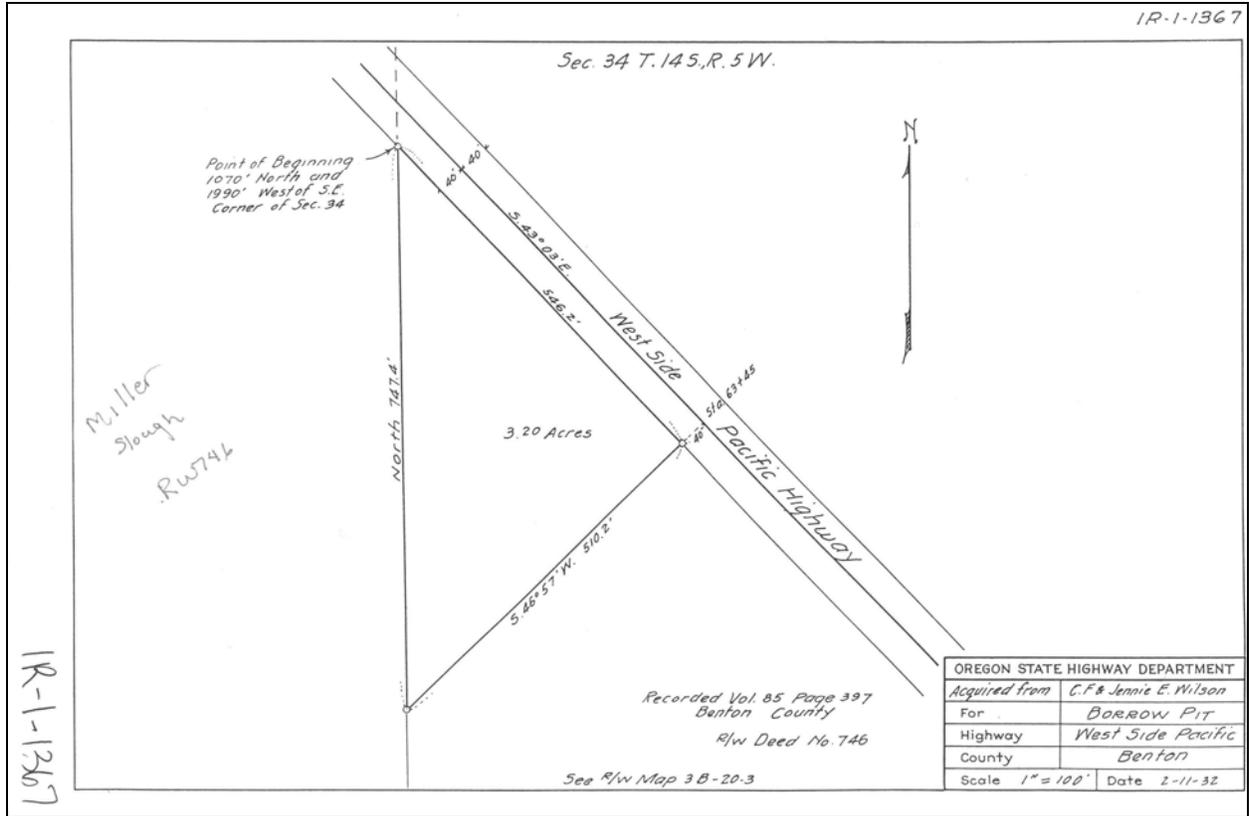
Aerial view of the stockpile site along the old highway alignment.



County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Wilson Borrow				04	0091	0	14S	05.0W	34
File ID		Source #	Date Visited	Map #			Type of Site			
34661		02-900-2	1/26/1999	1R-1-1367			Gravel			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 18'19.84000"	123 16'39.34000"	90	3.2	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)				
Depleted			NA	120						
Potentially Significant Site	Why	Open/Closed		Direction						
No	Depleted	Closed		The Long Tom River is to the southwest about 200 meters.						
Adjacent Land Use										
Farming										
Remarks										
This is a depleted gravel site south of Monroe on Highway 99. This property is now a wetland site.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



View of the pit looking south along Highway 99.



Aerial view of the site in relation to Highway 99.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Henkle Quarry Site			04	0027	0	12S	06.0W	20
File ID		Source #	Date Visited	Map #		Type of Site			
Q0101		02-901-2	4/20/1999	1R-1-525		Quarry			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44 30'20.79372"	123 26'18.3429"	112.758	3	<1					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tsr	Medium Dark Grey (N4)		Slight to Moderate		Unknown			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair			R2 to R3-	161	55,000	119,543			
Potentially Significant Site	Why	Open/Closed	Direction						
No	Small acreage.	Closed	To the east about 250 meters across Highway 34 is a small creek.						
Adjacent Land Use									
Residential									
Remarks									
This site is located northwest of Highway 38 about 200 meters. There are no good exposures to evaluate the rock. All I can say is that it is a basalt. This is a small site in an area of homes on acreage. The ground has good to fair screening and a fair amount of room to work. The rock exposed at the surface is weathered and there could be up to 10 feet of overburden here. This site is important to the District for Maintenance purposes and should be retained for future use. The easement has been cross fenced and there is no access to this property. The adjacent property owners are using the site for storage of materials, trailers, vehicles, etc. This issue has been addressed by the District and the site now has an easement and is fenced for future work at the property.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

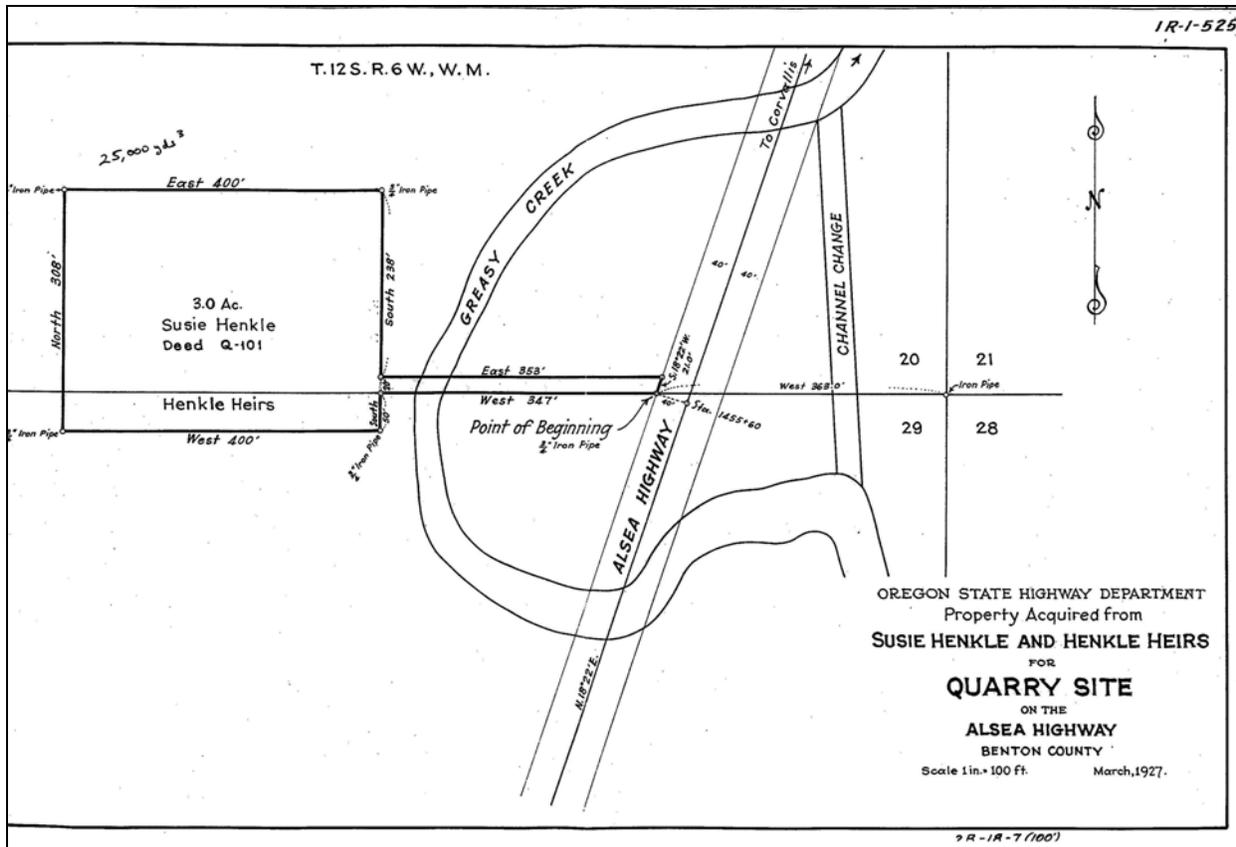
NW

E



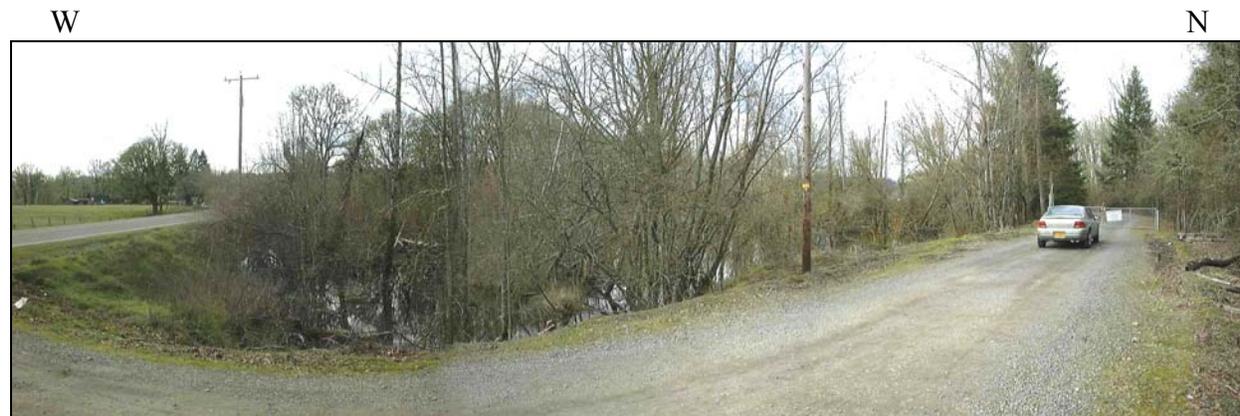
View to the north looking at the pit and the local terrain.

Close-up view of the basalt on the surface.

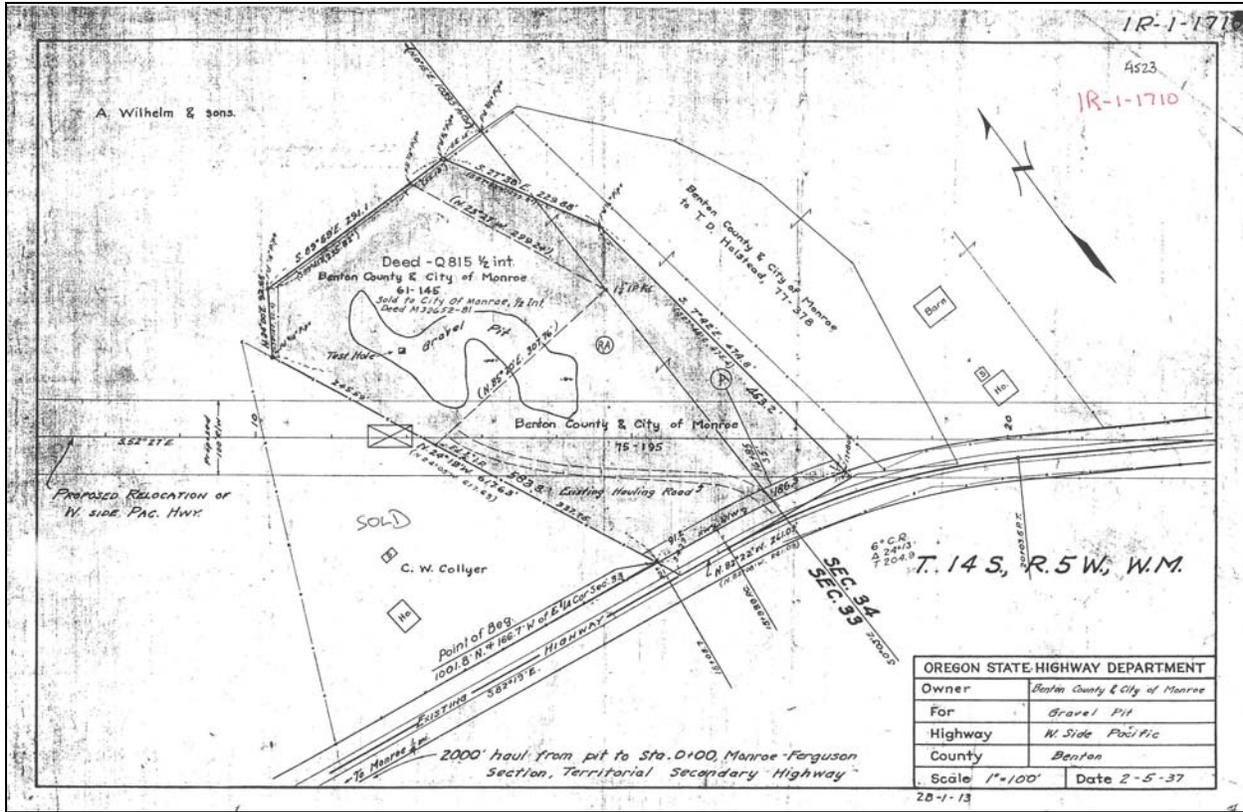


Aerial view of the site along Highway 34.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Benton	Monroe Pit Quarry				04	0001	0	14S	05.0W	33
File ID		Source #	Date Visited	Map #			Type of Site			
04523		02-902-2	4/20/1999	1R-1-1710			Gravel			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 18'44.68000"	123 17'25.43000"	90	12.52	NA						
Comments										
Lat. and Long. acquired using Terrain Navigator Software										
Rock Type	Unit	Color		Weathering			Jointing			
Alluvium	NA	NA		NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Depleted			NA	120						
Potentially Significant Site	Why			Open/Closed	Direction					
No	It appears the site might depleted			Closed	Adjacent to the Long Tom River.					
Adjacent Land Use										
Commercial/Residential										
Remarks										
This site is just south of Monroe on Highway 99. We are co-owners with the town of Monroe and Benton County. This site appears to be the transfer station now. The gravel here is depleted. The river was in flood stage and it appears that the site is depleted.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



View looking northwest at the access point into the transfer station south of Monroe, OR. The site is the brushy area on the other side of the road.



Aerial view of the site and surrounding area along Highway 99.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln	Iron Mountain Quarry			04	0009	136.8	10S	11.0W	20
File ID		Source #	Date Visited	Map #		Type of Site			
10176		21-004-2	3/30/1999	1R-2-1274		Quarry			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44 41'33.84848"	124 03'08.83627"	141.959	49.35	<4	21-0006				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tim	Medium Dark Grey (N4)		Fresh		Moderate to Highly Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			R4	177	5,000,000	11,947,500			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Good rock, large ground, room to work, good screening.			Closed	Pacific Ocean to the west 3/4 of a mile.				
Adjacent Land Use									
Forest/Industrial/Residential on southwest side of property.									
Remarks									
This site is located just north of Newport off of Highway 101 about 400 meters. The rock here is a very good, fine-grain basalt that fractures into a dice rock of about 15 centimeters. The fine texture of the basalt can produce sharp elongated pieces and would take a special type of a crusher for production. You could rip some of the material but most likely you would need to drill and blast. There are minor amounts of rip rap available here and should be saved for future work projects. The screening is excellent with plenty of room to work. Access to the site is through a residential and industrial area that is just starting to be developed. This property is used as a waste site now with most of the refuse put up in the pit. This could pose problems when we want to remove rock in the future. We need a good location at this quarry for a place to put all of the waste material that maintenance acquires. There is some timber on the property. The access to this site is through a residential/industrial area.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
2.52	1.31	16.5	15.8	7.3	14.8	0.9	16.0	3.5	
Material Use									
Quarry Rock (1998)									

NW

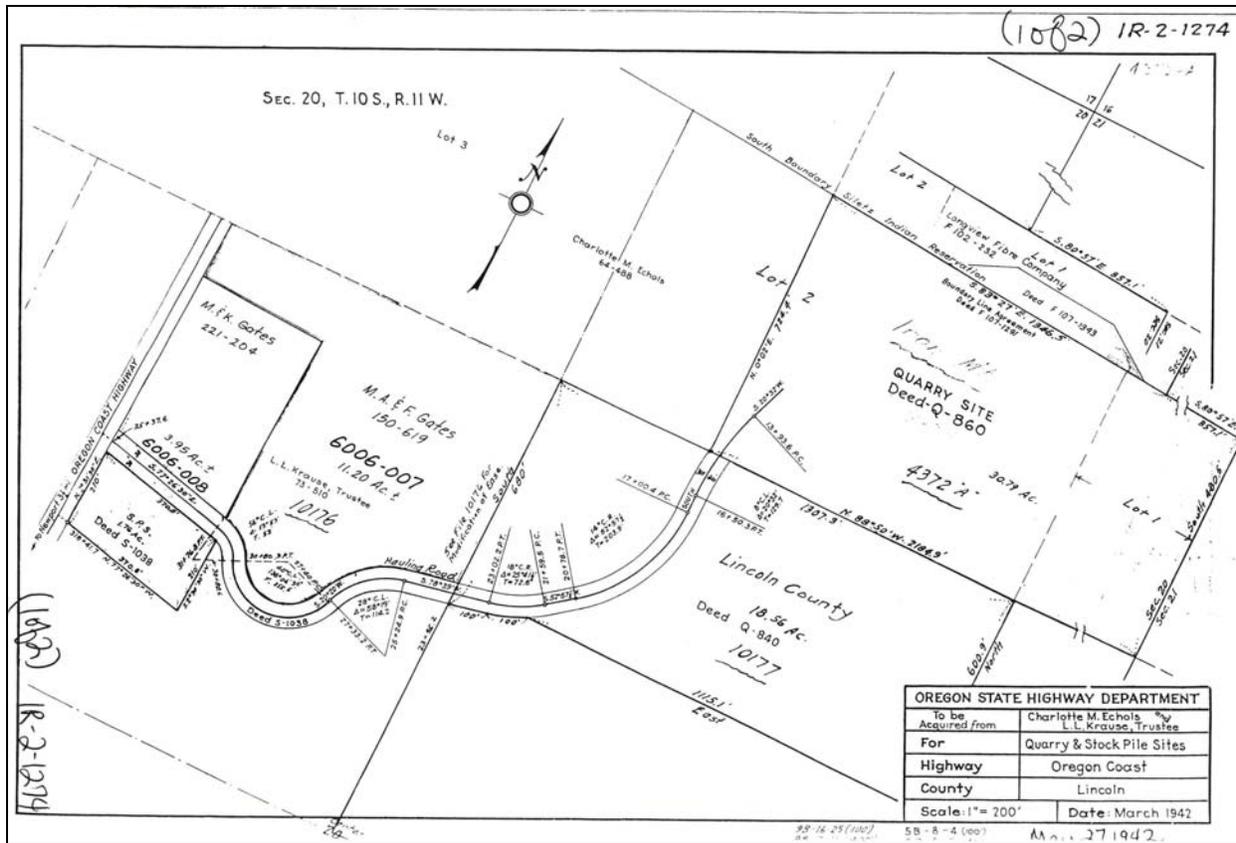
SE



180 degree view of the pit on Iron Mountain.



Close-up view of some rip rap in the pit. Notice the jointing pattern.



Aerial view of the site, taken in 1994.

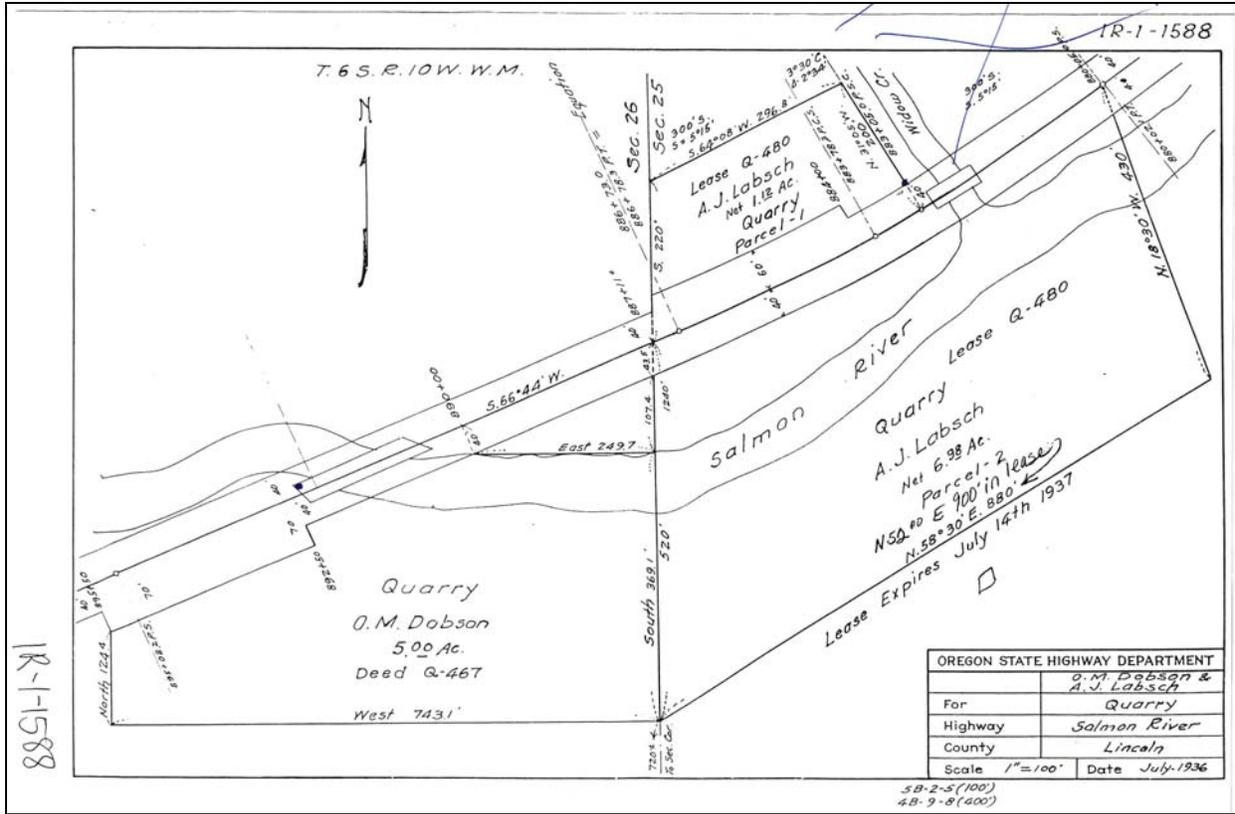
County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln	Dobson Quarry				04	0039	6.3	06S	10.0W	26
File ID		Source #	Date Visited	Map #		Type of Site				
03286, 03234		21-009-2	3/04/1999	1R-1-1588		Raw Land				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45 01'08.01435"	123 52'03.33306"	72.698	5	NA						
Comments										
GPS acquired at the site.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tsr	Medium Dark Grey (N4)		Fresh		Moderate to Highly Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good to Fair			R4	120	120,000	194,400				
Potentially Significant Site	Why			Open/Closed	Direction					
Maybe	Good rock, possible room to work.			Closed	Salmon River is adjacent to the north.					
Adjacent Land Use										
Private quarry to the east/Residential homes adjacent										
Remarks										
This site is located adjacent to and south of Highway 18. The description of the rock is from the adjacent private quarry. The rock is a fine-grain vesicular basalt with amygdules (<10%) of zeolites. This pillow basalt can produce a lot of fines during the crushing process and could lower the lab results for the ACC specifications. The terrain is gradually steep and all overgrown with vegetation. There can be up to 5 feet of overburden here and no room to work at this site. There is no screening from Highway 18 either and the property is surrounded by rural residential homes. We leased the adjacent property to the east at one time. It is now a private quarry and is just about depleted. This private quarry would make a good site to access our quarry in the future. Maybe able to work with the owner of the adjacent quarry to open our quarry from the east boundary of our property. Rose Lodge Maintenance site is a half of a mile east from this site.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

S



View to the south looking across Highway 18 at the site. The bridge to the right crosses over the Salmon River.

Close-up view of the jointing pattern in the adjacent quarry.



Aerial view of the site (arrow), and the adjacent quarry to the east.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln	Otter Crest Quarry			04	0009	130.6	09S	11.0W	19
File ID		Source #	Date Visited	Map #		Type of Site			
Q0346		21-011-2	4/26/2000	1R-1-511		Quarry			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44 46'13.85502"	124 04'20.42011"	62.135	2.92	<2					
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tc	Medium Dark Grey (N4)		Fresh to Decomposing		Massive to Moderately Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Poor			R3 to R1	155	25,000	52,313			
Potentially Significant Site	Why	Open/Closed	Direction						
No	Too small	Closed	To the west about 250 meters and down 200 feet is the Pacific Ocean.						
Adjacent Land Use									
Residential about 200 meters to the north/Forest.									
Remarks									
This site is situated along the old Highway 101 alignment at Cape Foulweather. The rock is a fine-grain basalt with a large portion of the site composed of a decomposing igneous breccia. The breccia is very soft with secondary minerals and would not be good for many rock purposes. Most of the good hard basalt has been removed at some time in the past. There is no screening from the old alignment and little room to work in the pit. The terrain is moderately steep, around 10 to 25 degrees. The pit is used for waste material at this time. There is no gate or fence to protect this site. There have been some large landslides within this area.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking east at the quarry site along the old highway alignment.

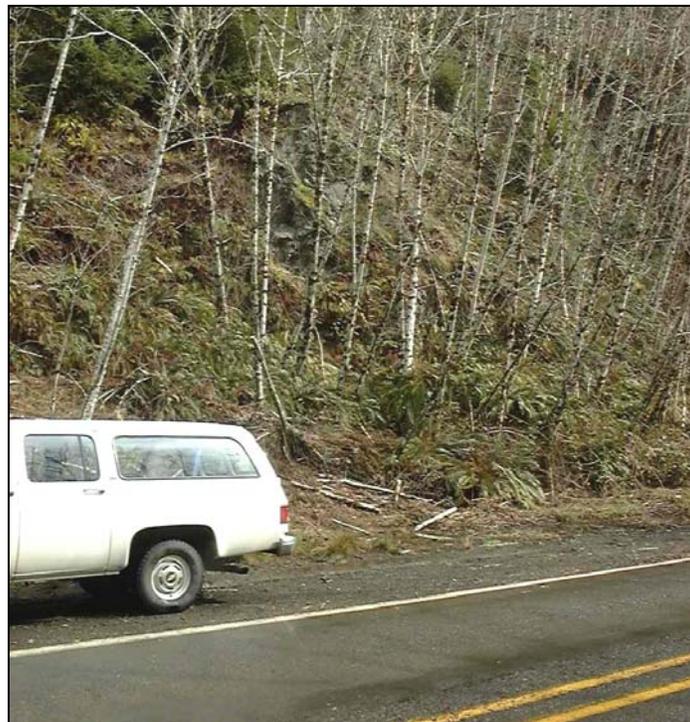
Close-up view of some of the rip rap at the site.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln	Widow Creek Quarry				04	0039	6.4	06S	10.0W	25
File ID		Source #	Date Visited	Map #			Type of Site			
02241		21-015-2	3/04/1999	1R-2-2534			Gravel			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
45 01'13.99000"	123 51'47.95000"	111	5	<5						
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)				
NA			NA	120						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Depleted gravel			Closed	Adjacent to Widow Creek					
Adjacent Land Use										
Rural residential										
Remarks										
This site is adjacent to and north of Highway 18 about one half of a mile east of the Rose Lodge Maintenance Yard. It is adjacent to Widow Creek. All of the gravel is depleted and the property is used as a waste site now. Possible stock pile site or a waste site for maintenance.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

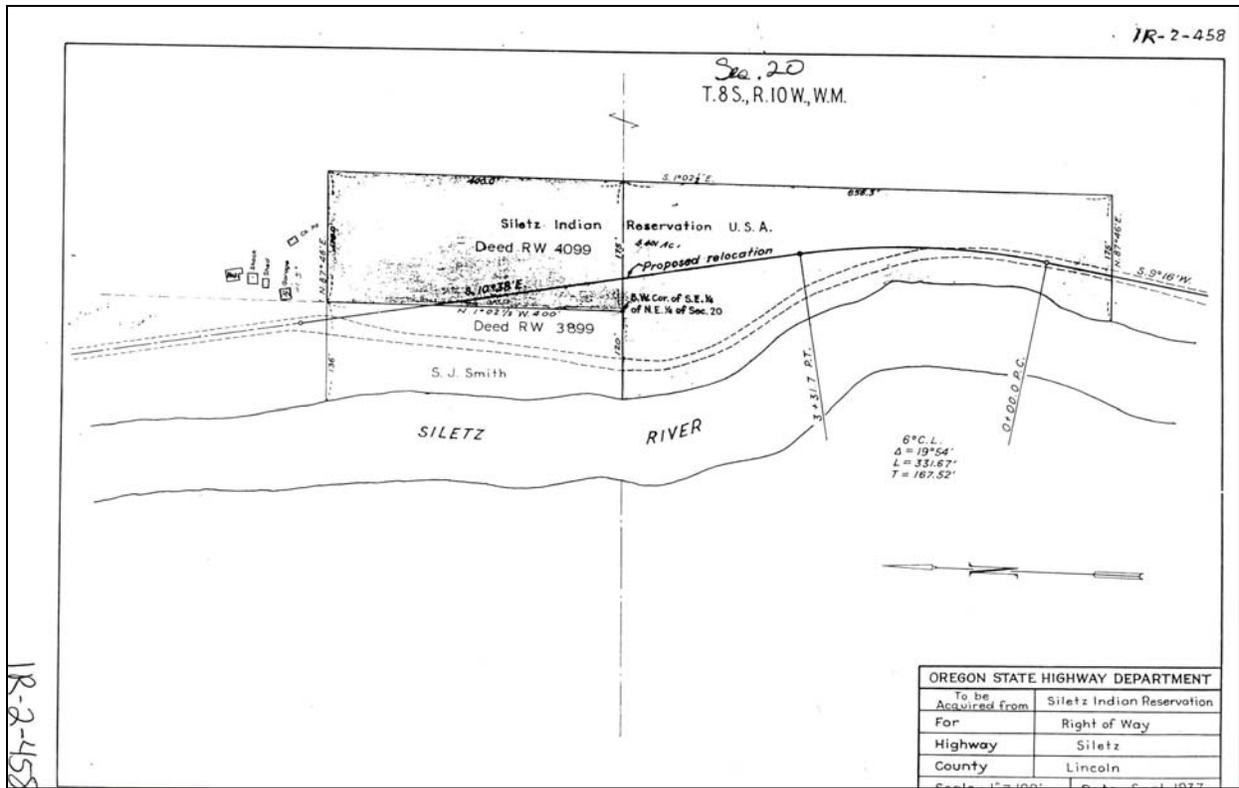


Looking northeast at the depleted gravel site along Widow Creek. The creek is to the left out of view. Highway 18 is along the right side of the image.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln				04	0181	0	08S	10.0W	20
File ID		Source #	Date Visited	Map #			Type of Site		
05040		21-901-1	3/30/1999	1R-2-458			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 51'48.71000"	123 56'00.08000"	61	4.4	NA					
Comments									
Lat. and Long. acquired using Terrain Navigator Software									
Rock Type	Unit	Color	Weathering			Jointing			
Intrusive	Ti in Tt	NA	NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
NA			NA	155	20,000	41,850			
Potentially Significant Site	Why				Open/Closed	Direction			
No	From the Right of Way map it appears to be too narrow to develop.				Closed	Near the Siletz River.			
Adjacent Land Use									
Forest/Residential									
Remarks									
This property is adjacent to the Siletz Highway and near the Siletz River. The ground was not located but I was in very close proximity to the old quarry site. The highway has a new alignment through here, and the map has no reference points to use as control. I did locate a good looking intrusive rock that had some past disturbance and I feel that this is most likely our ground. From the 1R map the property is long and narrow and would have minimal quantity. The ground is approximately 8 miles from Highway 101 at Kernville.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



View to the southeast of the small disturbance along Highway 229.



1R-2-458

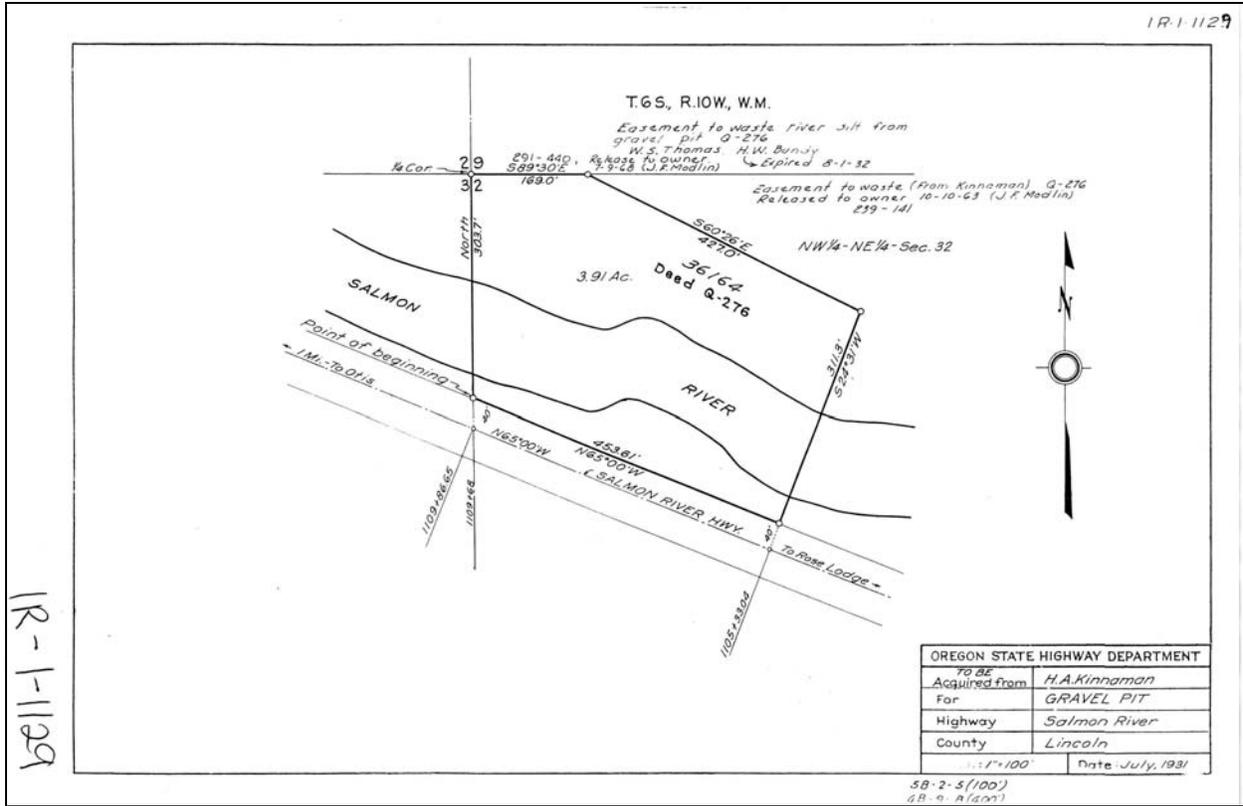


Aerial view of the property.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Lincoln	Kinneman Quarry			04	0039	2	06S	10.0W	32
File ID		Source #	Date Visited	Map #			Type of Site		
Q0276		21-903-2	3/04/1999	1R-1-1129			Gravel		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
45 00'57.43000"	123 56'13.46000"	61	3.91	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)			
NA			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	Depleted gravel			Closed	Salmon River bisects the property.				
Adjacent Land Use									
Mobile home park to the east and north of the ground.									
Remarks									
This property is located on the Salmon River southeast of Ottis. The Oregon Department of Fish and Wildlife has a fish hatchery adjacent to our ground. There is a trailer park adjacent to the north. The site is depleted of all rock. The property would make a good wetland site, or salmon recovery site. Maybe an access point for fishing. The ground is over grown in vegetation, it is a small piece of ground, and it is depleted of rock.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking north across the Salmon River at the gravel site.



Aerial view of the gravel bar along the Salmon River.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Saddle Butte Quarry			04	0001	221	13S	03.0W	09
File ID		Source #	Date Visited	Map #			Type of Site		
03812, 09876, 22158, 27506, 27640		22-003-2	1/25/1999	1R-5-561, 1R-5-1327, 1R-1-1627, 1R-5-1326			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #				
44 27'16.29403"	123 03'22.37073"	109.508	132.18	<5	22-0001				
Comments									
GPS acquired in the pit.									
Rock Type	Unit	Color		Weathering		Jointing			
Basalt	Tub	Medium Dark Grey (N4)		Fresh to Slight		Moderate to Highly Fractured			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Fair to Good			R4	170	3,500,000	8,032,500			
Potentially Significant Site	Why			Open/Closed	Direction				
Yes	Large acreage, close to I-5, and large volume of igneous rock.			Closed	Sodom Creek and irrigation ditch bisects the southwest corner of the property.				
Adjacent Land Use									
Farming/Gun Club									
Remarks									
This site is located east of I-5 about 200 meters. The basalt at this location is composed of a heterogeneous mix of igneous flows that produce some soft rock. The lithology is variable, depending on which lava flow you analyze. Some of the basalt at this location is a fine-grain good quality rock. Then you get other flows that are brecciated and very vesicular. This type of a site is difficult to work with in picking and choosing the good rock within poor rock. The terrain is moderately steep and past work has over steepened the south facing bench. If we wish to remove rock in the future you would need to develop a site plan for removal from the top down. The south facing bench is too tall (approximately 70 feet) and should be cut to a height of about 30 feet. You would need to drill and blast at this site. There is no screening from Interstate 5 unless you work on the eastside of the Butte. There is ample room to work. This site has a locked gate, and is used predominately for a waste site now. The northern 26 or so acres is leased to the Albany Gun Club and should pose no problems. The southern 40 or so acres are wetland and could be used for mitigation. The latitude and longitude for the access point is 44 27 24.94306, 123 03 34.37543. There has been approximately 115,000 cubic yards removed to date.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
			13.0	9.0			11.1	50.0	
Material Use									
Quarry Rock (2001)									



Looking northeast at Saddle Butte, the pit is just beyond the tree line.

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

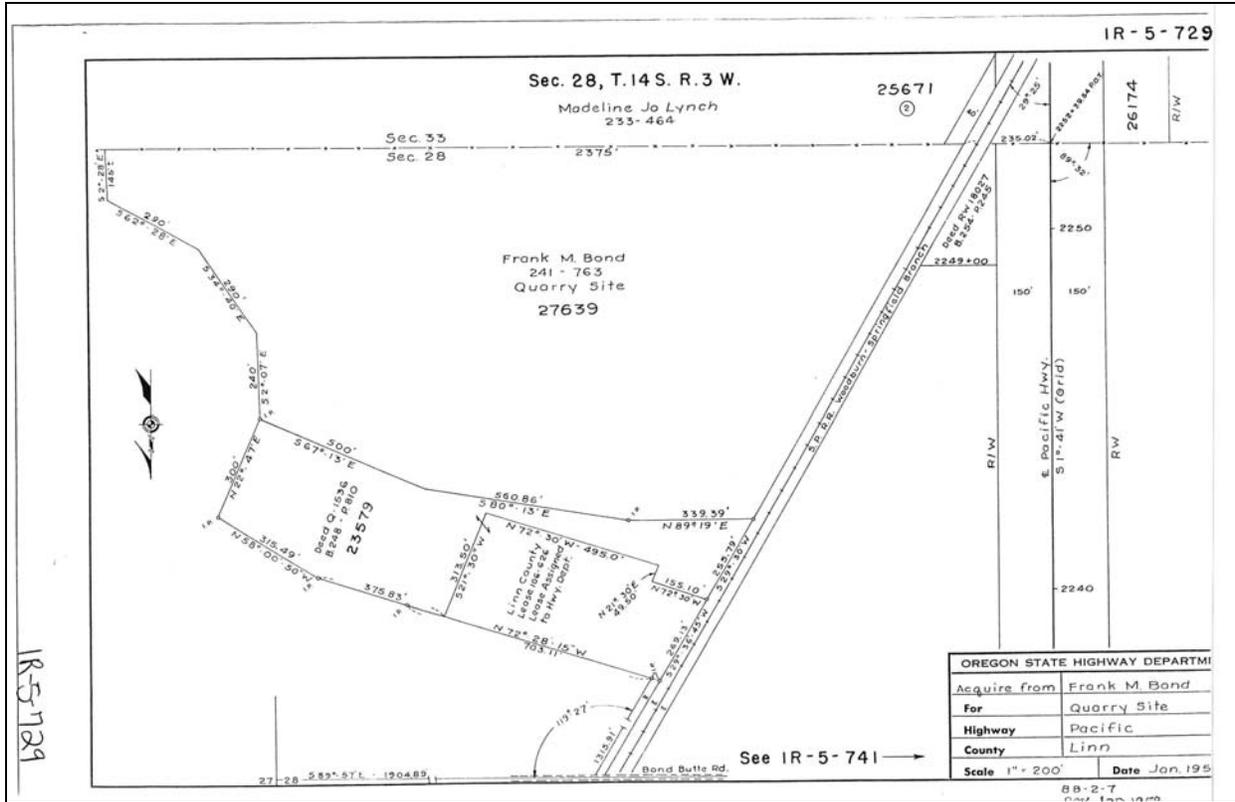
County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Bond Butte Quarry				04	0001	211.8	14S	03.0W	28
File ID		Source #	Date Visited	Map #		Type of Site				
23579		22-023-2	1/25/1999	1R-5-729		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 19'11.1174"	123 03'23.22313"	102.246	12	<1	22-0082					
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tib	Medium Dark Grey (N4)		Fresh		Massive to Moderately Fractured				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			R4	179	240,000	579,960				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Good location, good quality rock but the quantity does not meet the Willamette Valley classification of aggregate sites for Goal 5..			Closed	NA					
Adjacent Land Use										
Farming										
Remarks										
This site is located east of I-5 about 200 meters. The rock at this site is composed of a medium-grain columnar basalt. There is no screening from I-5 with plenty of room to work. There is minor weathering at the periphery of the pit. Columnar jointing at this site would produce a good quality rip rap. You would need to drill and blast the rock at this location. This site is long and narrow. We sold the adjacent quarry to the east. This is a great site for strong blocky basalt. The latitude/longitude for the access point is 44 19 24.02539, 123 03 16.32251. There is now a locked gate at this site.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.68	3	17.7	8.8	3.2	17.9	1.2	16.2	0.7		
Material Use										
AC Base (1993)										



Looking east at the pit area at Bond Butte.

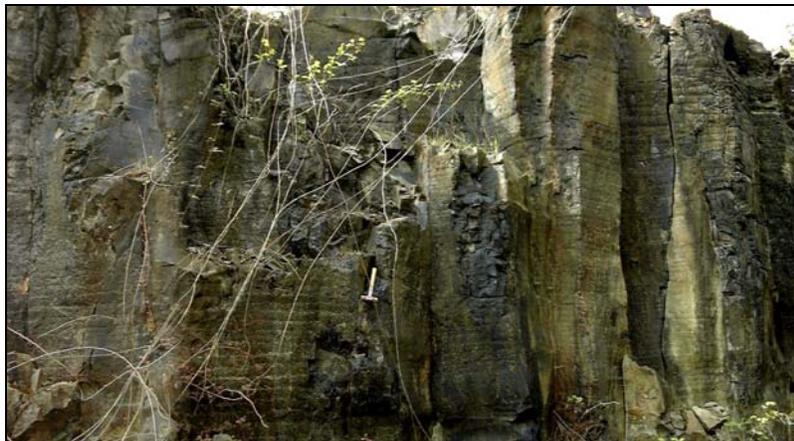


Close-up view of the columnar jointing within the pit. Hammer for scale.



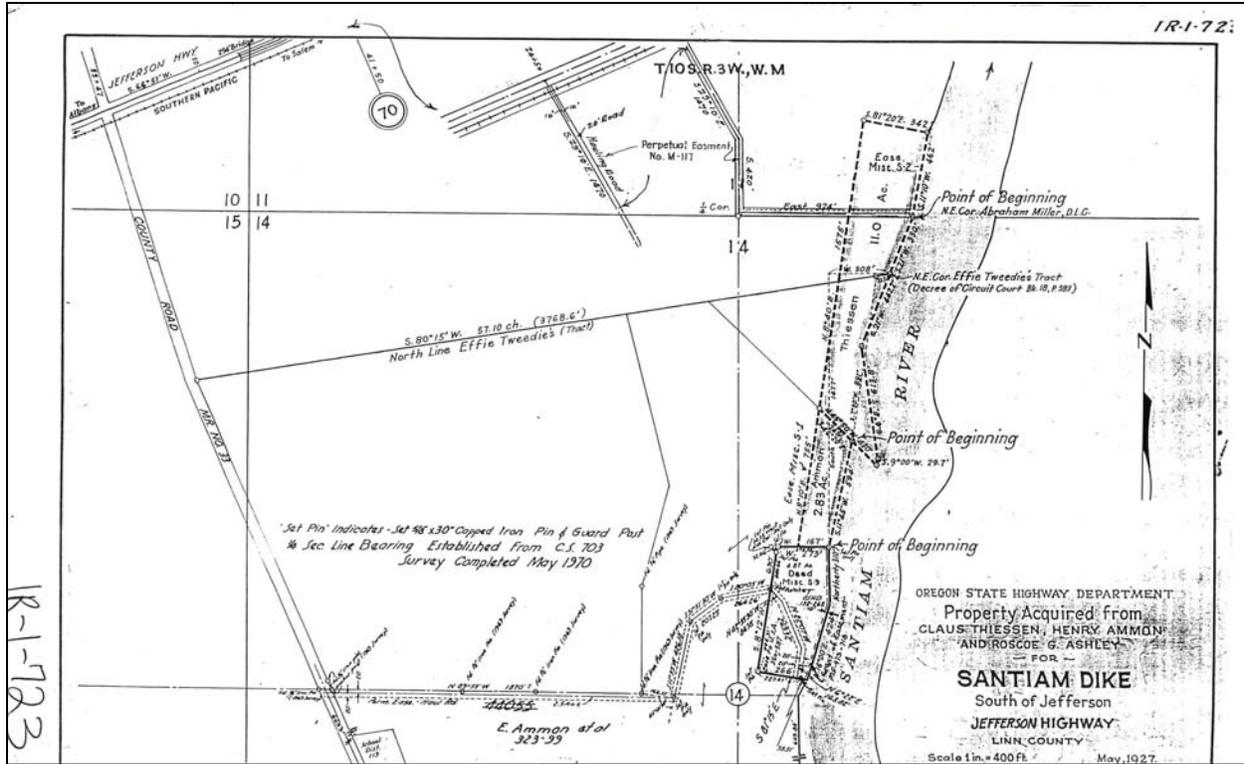
Aerial view of Bond Butte, arrow points to the pit on the west side.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Ashley Quarry				04	0211	0	10S	03.0W	14
File ID		Source #	Date Visited	Map #		Type of Site				
MS009		22-027-2	4/20/1999	1R-1-723		Quarry				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 41'58.15874"	123 01'11.42395"	74.946	4.87	<2						
Comments										
GPS acquired in the pit.										
Rock Type	Unit	Color		Weathering		Jointing				
Basalt	Tc	Medium Dark Grey (N4)		Fresh		Massive				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			R4 : 151	151	50,000	101,925				
Potentially Significant Site	Why				Open/Closed	Direction				
No	Small acreage, limited amount of rock. The site is surrounded by homes on acreage.				Closed	Adjacent to the Santiam River.				
Adjacent Land Use										
Residential										
Remarks										
This site is east about 700 meters from Scrael Hill County Road. The easement is not evident anymore. There are a lot of new homes in this area now. The rock at this site is a fine-grain basalt with a very distinct platy habit. You would need to drill and blast at this site. The haul road is a narrow lane and passes many homes. If we were to open this site back up we would need to develop a better access. There is fair to good screening at this site. There is also ample room to work. This site is adjacent to the Santiam River and the pit floor could be lowered to acquire more rock at our disposal. There is one home that happens to be on the edge of the pit. Past information suggests that this rock is from an igneous dike in this area.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



View to the west of the pit floor and the bench cuts. Total height of the pit wall is approximately 35 feet.

Close-up view of the unique jointing pattern along the pit face. Hammer for scale.

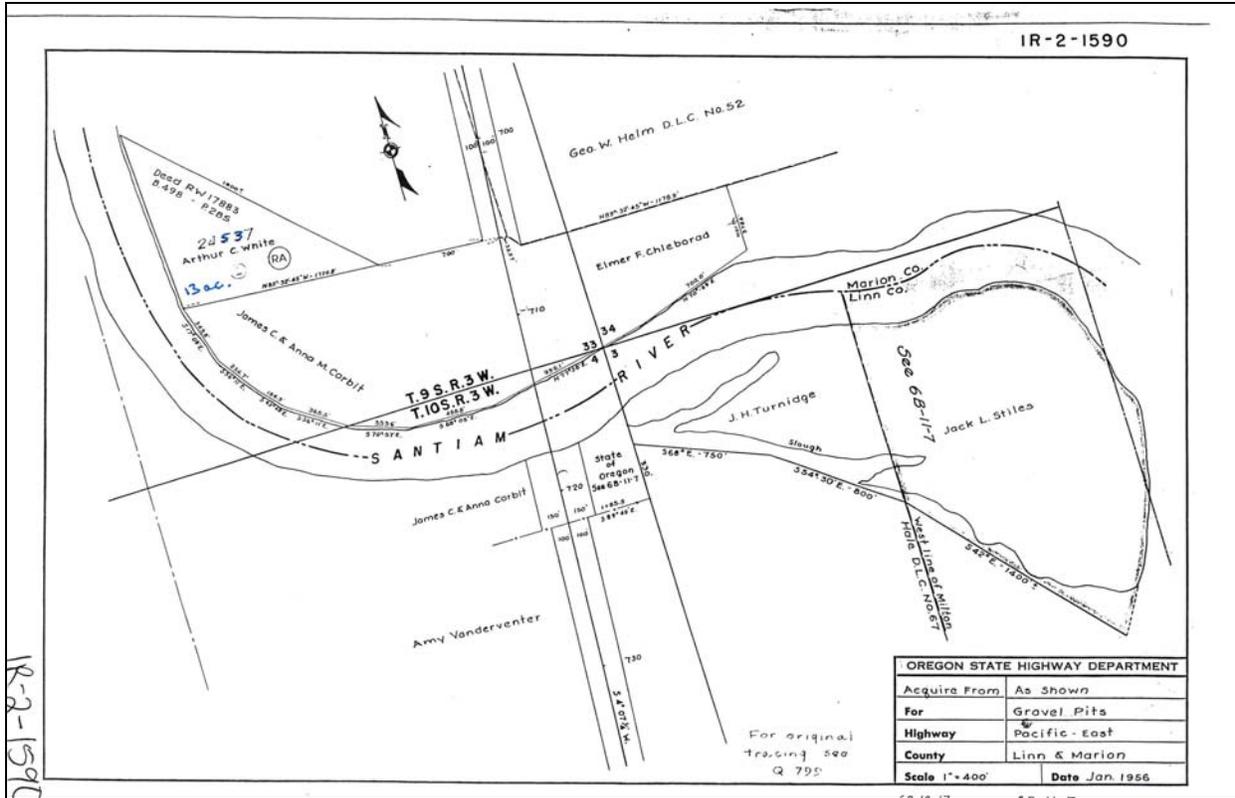


Aerial view of the quarry site along the Santiam River.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Santiam River Gravel Pit				04	0001	241	10S	03.0W	03
File ID		Source #	Date Visited	Map #		Type of Site				
24539, 24540		22-029-2	4/20/1999	1R-2-1590		Gravel				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 44'03.59000"	123 02'33.73000"	61	67	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)				
NA			NA	120	300,000	486,000				
Potentially Significant Site	Why			Open/Closed	Direction					
No	No access, in the river, land use issues.			Closed	In and adjacent to the Santiam River					
Adjacent Land Use										
Farming										
Remarks										
This site is located in the Santiam River. It is south of the north bound I-5 rest area. The easement was from I-5 and is now landlocked. If we ever want to develop this property for rock production we will need a new way to get to the ground. The property is on the inside radius of the river. In the winter time the property becomes an island and access would be restricted. This site has no visible disturbance and is over grown in vegetation. There are some ownership questions with the Division of State Lands. They think that they own the property in question and have leased out part of the ground for 10 years. This site would be good for wetland mitigation.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										

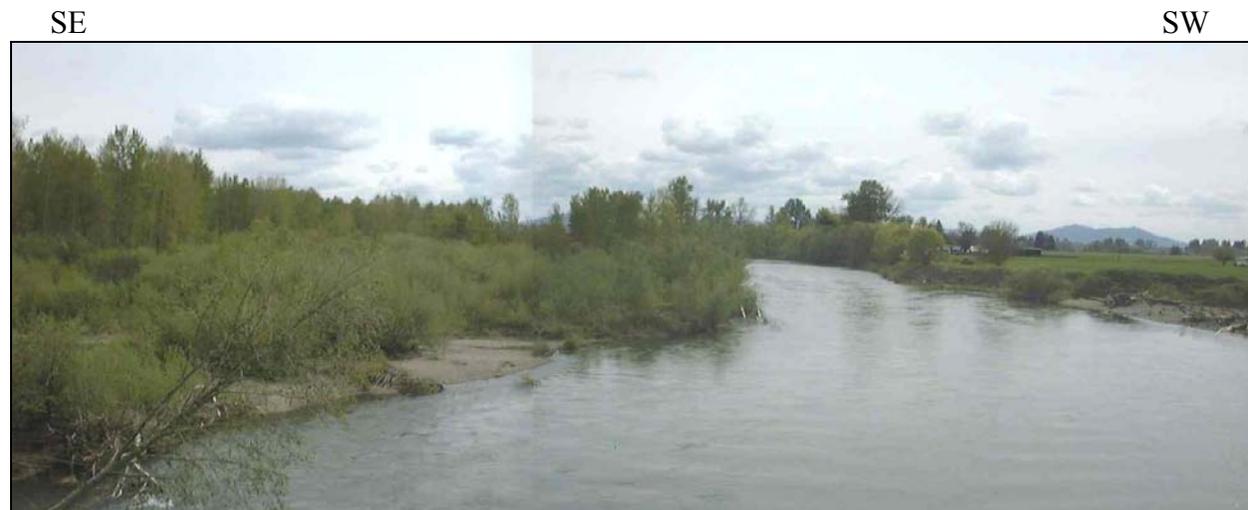


Looking south across the Santiam River at the gravel site.

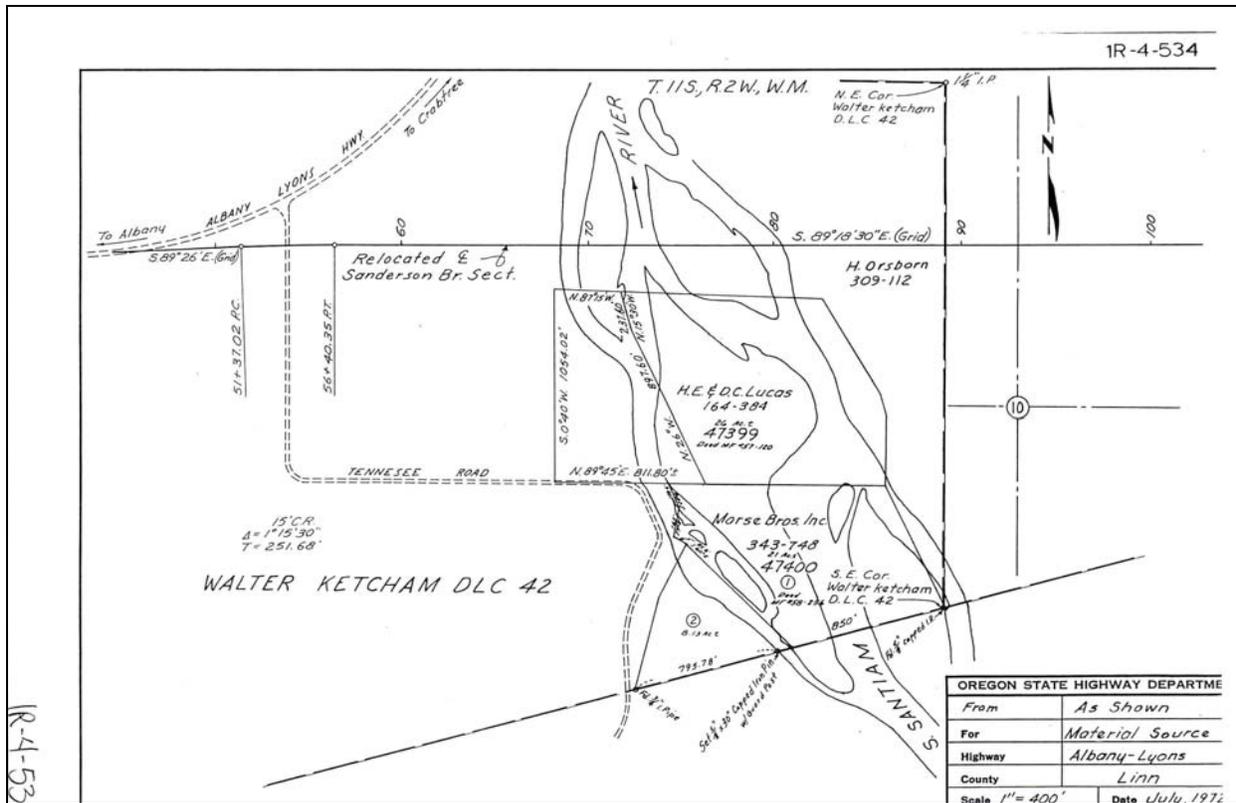


Aerial view of the gravel bar along the Santiam River.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Sanderson Bridge Quarry				04	0211	1.4	11S	02.0W	10
File ID		Source #	Date Visited	Map #		Type of Site				
47399		22-034-2	4/20/1999	1R-4-534		Gravel				
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 37'49.32000"	122 55'23.71000"	82	21	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)				
NA			NA	120	50,000	81,000				
Potentially Significant Site	Why			Open/Closed	Direction					
No	Limited access to the site and part of the property is in the river.			Closed	In and adjacent to the Santiam River					
Adjacent Land Use										
Farming										
Remarks										
This is a site south of Sanderson Bridge on either side of and in the Santiam Rver. The access to the property would need to be developed. The ground is all over grown and could make a good wetland mitigation site. Our property on the west side of the river needs to be evaluated for encroachment by the adjacent property owner. There is limited room to work and no screening. The property should be evaluated for a boundary survey.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
	2.84	17.44					14.5	0.3		
Material Use										
1973										



View to the south of the Santiam River and the potential gravel bar located on either side of the river.

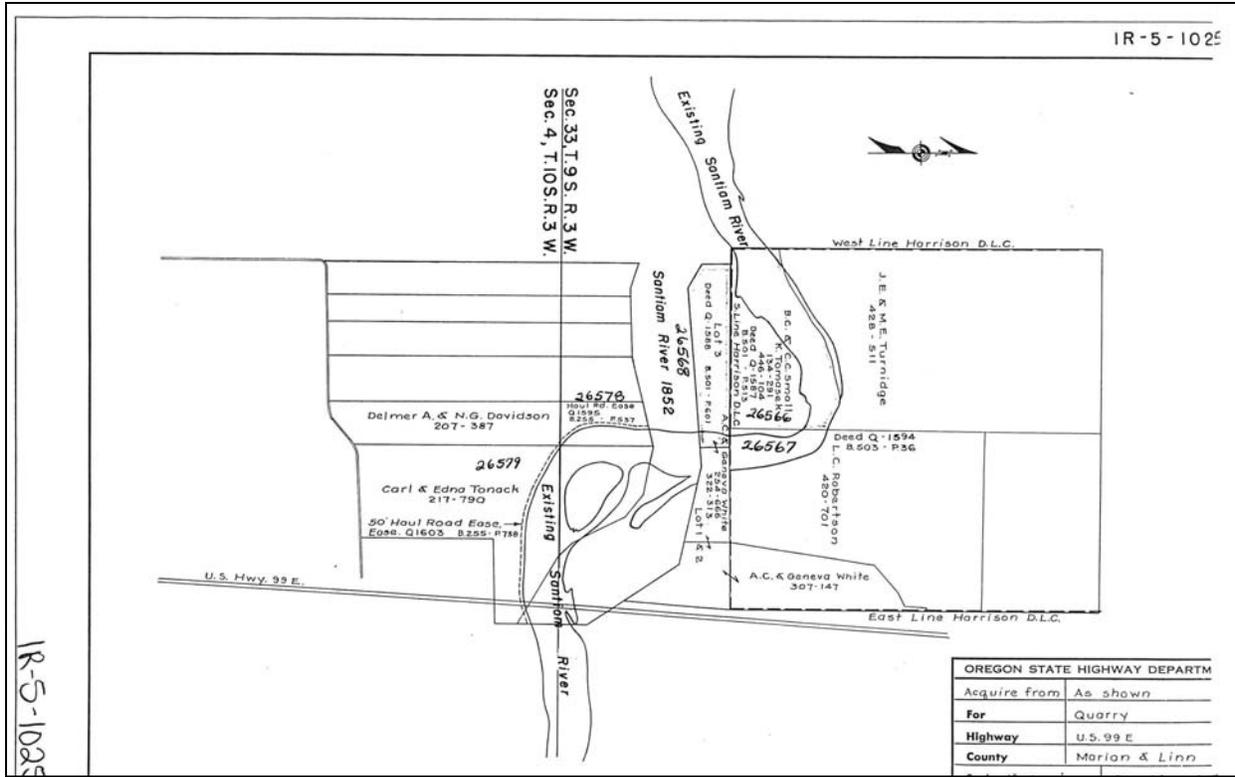


Aerial view of the site and surrounding area.
Sanderson Bridge and Highway 226 are in the upper portion of the image.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Santiam River at I-5				04	0001	240.7	09S	03.0W	33
File ID		Source #	Date Visited	Map #			Type of Site			
26566, 26568, 26567, 24537		22-035-2	4/20/1999	1R-5-1025, 1R-2-1590			Gravel			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 44'21.52918"	123 03'14.56952"	55.581	139.76	NA						
Comments										
GPS acquired at the access gate south of the southbound I-5 rest area.										
Rock Type	Unit	Color	Weathering			Jointing				
Volcanic Gravel	NA	NA	NA			NA				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
Good			NA	120	300,000	486,000				
Potentially Significant Site	Why				Open/Closed	Direction				
No	Large acreage, room to work, close to I-5, but the quantity does not meet the Willamette Valley classification of aggregate sites for Goal 5.				Closed	Adjacent to and in the Santiam River.				
Adjacent Land Use										
Farming										
Remarks										
This site is located west of I-5 about 300 meters. The gravel is well-rounded cobble size and less with pockets of sand. There could be up to 40% sand/organics at this location. The property is on the inside of the river radius. You could scrap 3 to 6 feet of material from this site. There is some hummocky terrain within the site due to the flooding of the river during the winter of 1998. This property is in both Marion and Linn Counties. The access to the property in Linn County is from the county road just south of the river. I saw no evidence of the easement through the fields. The access to the site in Marion County is adjacent to the southbound I-5 rest area. This is a large amount of acreage within this area for potential wetland mitigation.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
Material Use										



Looking northwest at the gravel bar along the Santiam River.



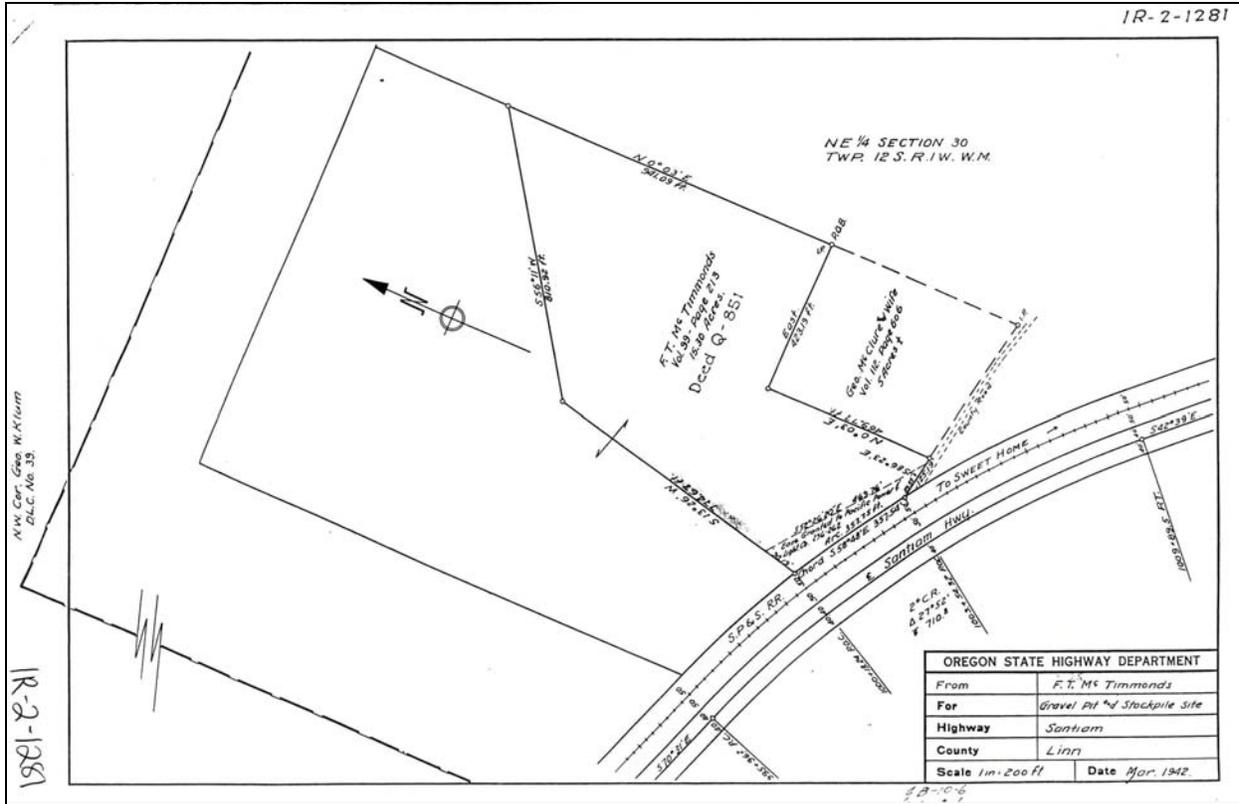
Aerial view of the gravel bars along the Santiam River.
Interstate 5 and the rest areas are in the right center of the image.

County	Site Name				Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	McTimmonds Gravel Pit				04	0016	17.6	12S	01.0W	30
File ID		Source #	Date Visited	Map #			Type of Site			
10258		22-036-2	12/17/1999	1R-2-1281			Stock Pile Site			
Latitude	Longitude	Elev. (m)	Acreage	Pit Size	DOGAMI Permit #					
44 29'58.22449"	122 50'56.66303"	124.003	15.4	NA						
Comments										
GPS acquired at gate.										
Rock Type	Unit	Color	Weathering			Jointing				
Volcanic Gravel	NA	NA	NA			NA				
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)				
NA			NA	0						
Potentially Significant Site	Why			Open/Closed	Direction					
No	Waste rock site now			Closed	Vail Creek is to the north.					
Adjacent Land Use										
Residential										
Remarks										
This site is located southeast of Lebanon on the north side of Highway 20. The property is being used as a waste site/stock pile site and appears to be depleted of gravel.										
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.		
2.62	3	21.0	2.9	1.2	16.4	0.3	21.9	0.5		
Material Use										
AC Base (1991)										

N



Looking north at the Maintenance stockpile site.



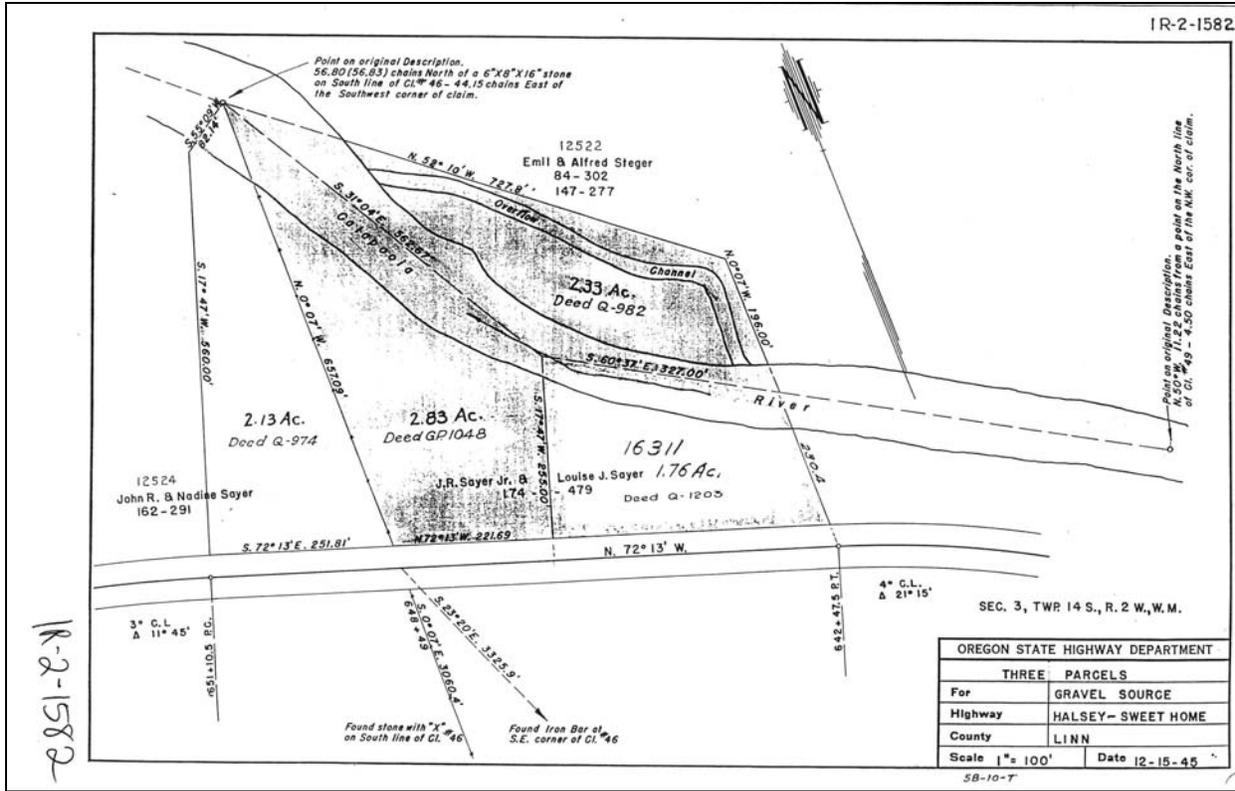
Aerial view of the stockpile site along Highway 20.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Sayer Pit			04	0212	0	14S	02.0W	03
File ID		Source #	Date Visited	Map #			Type of Site		
12524		22-037-2	1/22/1999	1R-2-1582			Gravel		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 22'37.12876"	122 55'24.39977"	117.653	9.05	NA					
Comments									
GPS acquired at the access point to the site.									
Rock Type	Unit	Color		Weathering			Jointing		
Volcanic Gravel	NA	NA		NA			NA		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good			NA	120	65,000	105,300			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Limited amount of rock. Site used as a waste/bone yard now.			Closed	Calapooia River is adjacent to the north.				
Adjacent Land Use									
Farming									
Remarks									
This site is about 4 miles east of Brownsville. The pit floor of the site is approximately 8 feet below Highway 228. There is no gravel exposed at the surface. The site has been used as a minor waste site. The property is all over grown with blackberries and I was not able to evaluate all of the ground. There is no screening from the highway. The property is not fenced nor is there a gate to restrict access. The site has plenty of room to work. Possible wetland/salmon recovery site. This is the only site along this stretch of the highway.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

E



Looking east at the gravel site along the Calapooia River.



Aerial view of the gravel site along Highway 228.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Endre's Quarry			04	0211	18.9	10S	01.0E	04
File ID		Source #	Date Visited	Map #			Type of Site		
09986		22-038-2	1/21/1999	1R-2-1251			Quarry		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 43'38.39141"	122 41'52.22234"	168.831	2.05	NA					
Comments									
GPS acquired at the northeast corner of property.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tu	Medium Dark Grey (N4)		Fresh to Slight			Moderate to Highly Fractured		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Good to Fair			R4	160	24,000	51,840			
Potentially Significant Site	Why			Open/Closed	Direction				
No	Small acreage, limited room to work, limited quantity.			Closed	Thomas Creek is east across Highway 226.				
Adjacent Land Use									
Residential									
Remarks									
This site is along Highway 226 adjacent to the west. The rock is a fine-grain highly fractured basalt. It is a very small site for rock production and might be better suited for a stock pile site. There is a minor amount of overburden. You would need to drill and blast the rock here. There is no screening from the highway with limited room to work. The terrain is almost flat. The site is in a rural residential area.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									

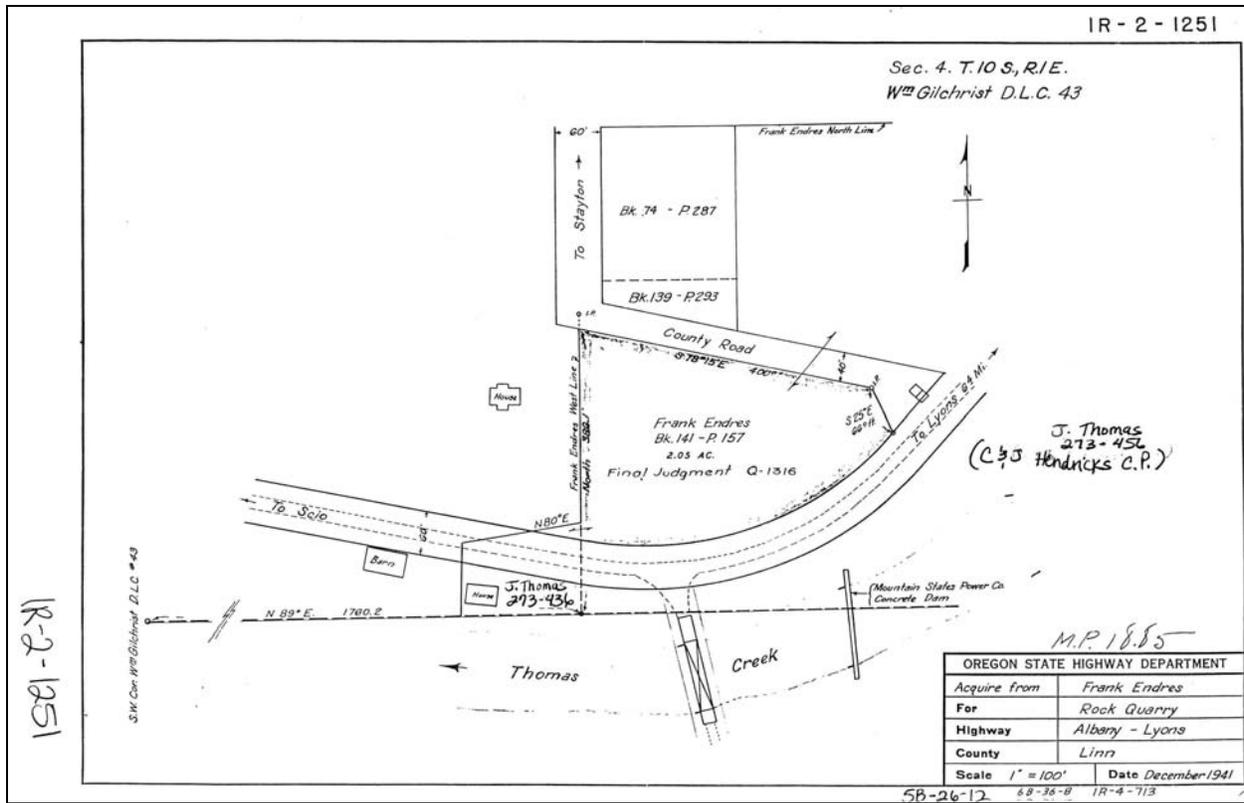
W

NE



View to the northwest of the site along Highway 226.

Close-up view of the fracture pattern of the basalt along the highway.

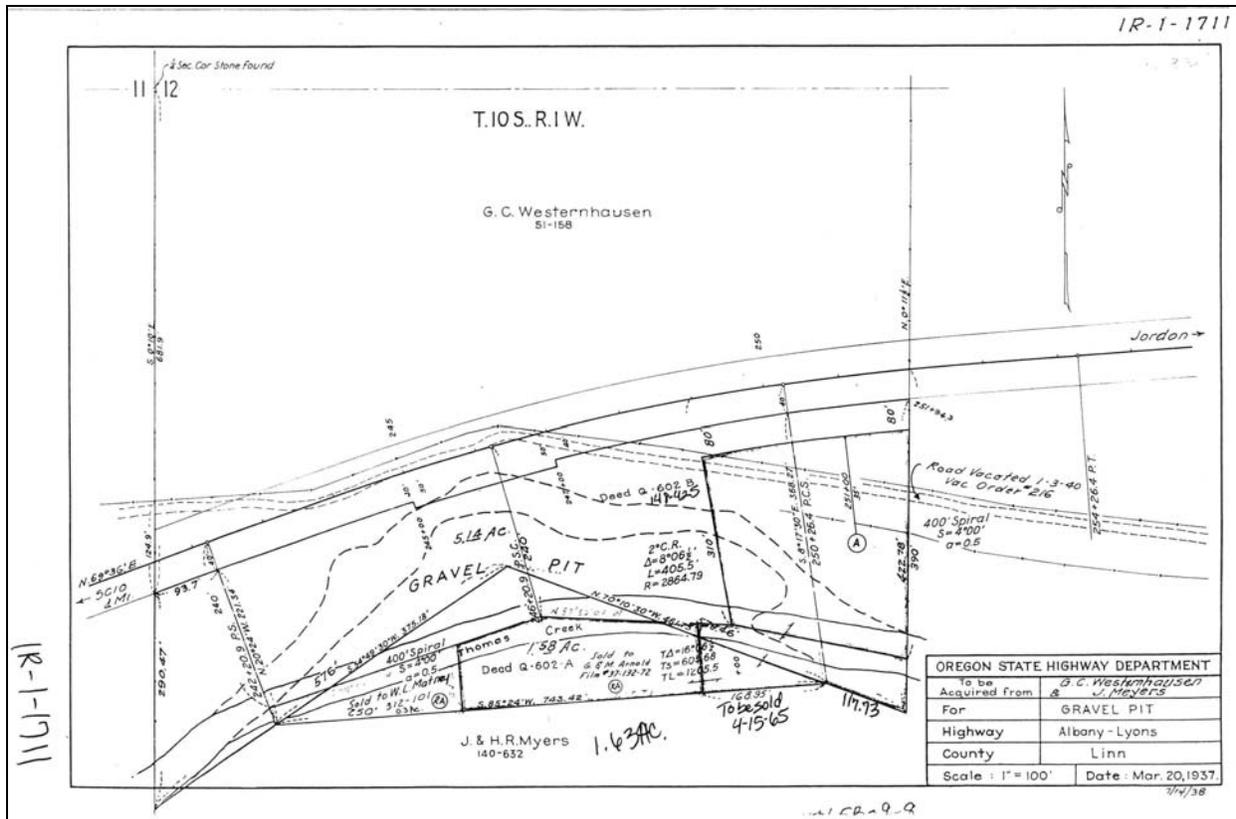


Aerial view of the site in relation to the surrounding property.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Myers Pit			04	0211	0	10S	01.0W	12
File ID		Source #	Date Visited	Map #			Type of Site		
04532, 03991		22-900-2	1/21/1999	1R-1-1711			Gravel		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 42'50.42828"	122 45'41.96279"	126.95	3.6	NA					
Comments									
GPS acquired at the eastside of property.									
Rock Type	Unit	Color	Weathering			Jointing			
Alluvium	NA	NA	NA			NA			
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Poor			NA	120					
Potentially Significant Site	Why			Open/Closed	Direction				
No	Small acreage, with no rock.			Closed	Adjacent to Thomas Creek				
Adjacent Land Use									
Residential/Farming									
Remarks									
This site is along Highway 226 about 5 miles east of Scio. The property is on the outside of the stream radius along Thomas Creek. The site is narrow and has no gravel just sand size particles. This site is in the flood plane of Thomas Creek. There is no access to this site off of the highway and no screening. That means there is no room to work either. We might at some time in the future need to put rip rap along this site to protect our highway.									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking east at the site along Thomas Creek.

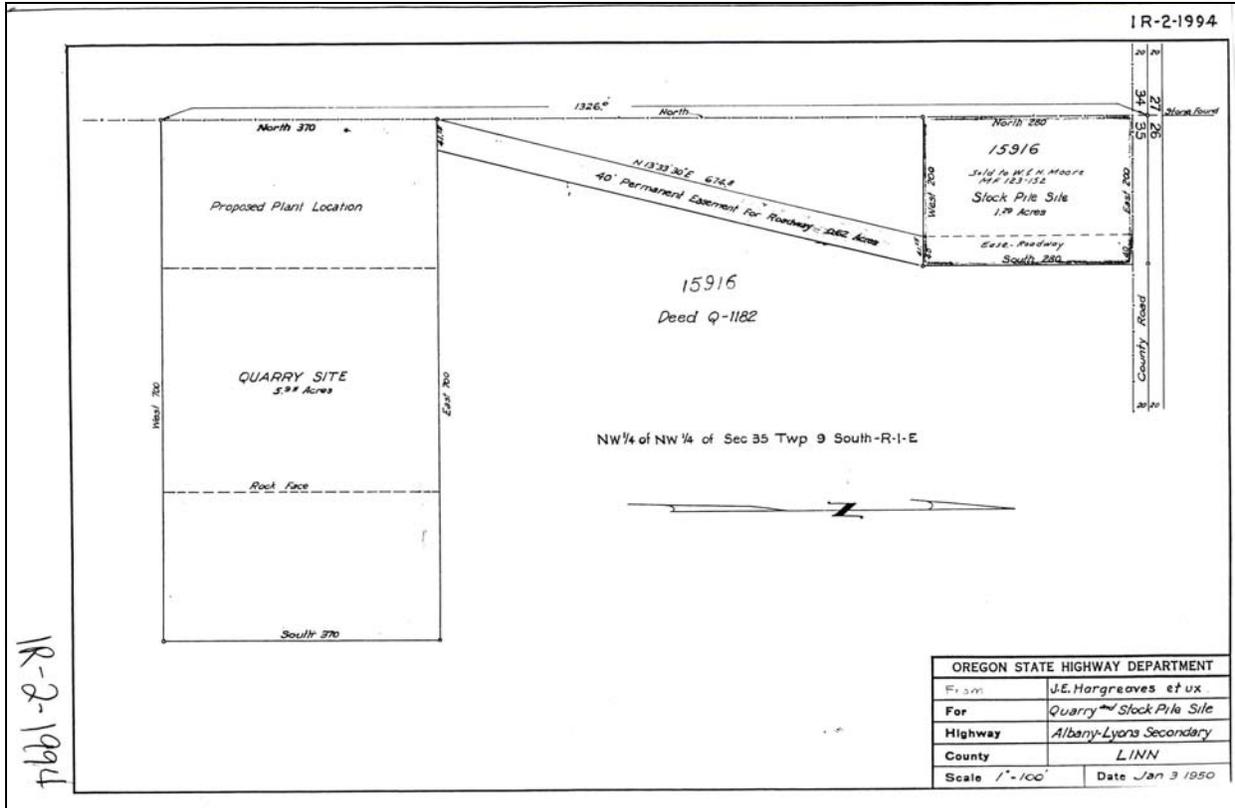


Aerial view of the site and surrounding property.

County	Site Name			Dist	Hwy	Mile Pt	TWP	RGE	Sect
Linn	Hargreaves Quarry			04	0211	0	09S	01.0E	35
File ID		Source #	Date Visited	Map #			Type of Site		
15916		22-901-2	1/21/1999	1R-2-1994			Raw Land		
Latitude	Longitude	Elev. (m)	Acreage	Pit Size		DOGAMI Permit #			
44 44'55.4836"	122 39'32.86975"	355.316	6.57	NA		22-0152			
Comments									
GPS acquired at the top of the property.									
Rock Type	Unit	Color		Weathering			Jointing		
Basalt	Tu	NA		Moderate			Not visible		
Quality			Hardness	lbs./cu ft.	Reserve (cy)	Reserve (Tons)			
Unknown			R3	165	60,000	133,650			
Potentially Significant Site	Why				Open/Closed		Direction		
No	Small acreage, limited room to work, sold stockpile site, rock is not proven.				NA		NA		
Adjacent Land Use									
Farming/Residential.									
Remarks									
This site is off of Highway 226 to the east about 1000 meters. The stockpile site was sold and a modular home occupies that ground. The easement is still in place but has been obstructed by a wood privacy fence. If we still wish to use this site we need to secure our access. This is virgin ground with limited exposures. The ground here is very steep terrain with overburden of up to 5 feet thick. There is limited room to work and some screening from the highway. Ground water is bisecting our property from the springs above. Past rock fall/landslides are evident at this location at the base of the hill. There is some timber value at this site. The coordinates for the access point are Latitude 44 45 05.86809, Longitude 122 39 40.22080, Elevation 207.902									
202B	203B	211	206 Fine	206 Coarse	208 F	208 F Ht.	208 C	208 C Ht.	
Material Use									



Looking east at the site.



Aerial view of the surrounding ground.
The site and access road are highlighted by arrows.