

KEY TO SYMBOLS



The Wallace Group
62915 NE 18th Street, Suite 1
Bend, OR 97701
(541) 382-4707

CLIENT Jensen Drilling

PROJECT NAME OSU Cascades Geo-Exchange Pilot Study

PROJECT NUMBER 11095-3

PROJECT LOCATION Bend, Oregon

LITHOLOGIC SYMBOLS (Unified Soil Classification System)



BASALT: Basalt



PUMICE: Pumice



SW: USCS Well-graded Sand



TUFF: Tuff

SAMPLER SYMBOLS



Grab Sample

WELL CONSTRUCTION SYMBOLS



16" Diameter Bentonite Surface Seal



Capped Riser



10" Diameter Stainless Steel (S.S.) Casing
In Existing Formation



Bottom Of Hole



Screened Interval In Existing Formation

ABBREVIATIONS

LL - LIQUID LIMIT (%)
PI - PLASTIC INDEX (%)
MC - MOISTURE CONTENT (%)
DD - DRY DENSITY (PCF)
NP - NON PLASTIC
FINES - PERCENT PASSING NO. 200 SIEVE
PP - POCKET PENETROMETER (TSF)
OC - ORGANIC CONTENT (%)

TV - TORVANE
PID - PHOTOIONIZATION DETECTOR
UCCS- UNCONFINED COMPRESSION
ppm - PARTS PER MILLION
▽ Water Level at Time of
Drilling, or as Shown
▽ Water Level at End of
Drilling, or as Shown
▽ Water Level After 24
Hours, or as Shown

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Figure: 3

CLIENT Jensen Drilling **PROJECT NAME** OSU Cascades Geo-Exchange Pilot Study
PROJECT NUMBER 11095-3 **PROJECT LOCATION** Bend, Oregon
DATE STARTED 10/28/19 **COMPLETED** 11/21/19 **GROUND ELEVATION** _____
DRILLING CONTRACTOR Jensen Drilling Co. **GROUND WATER LEVELS:**
DRILLING METHOD Dual Rotary/Air Rotary **AT TIME OF DRILLING** 270.00 ft
LOGGED BY SMW **CHECKED BY** SC **24HRS AFTER DRILLING** 248.00 ft
NOTES _____

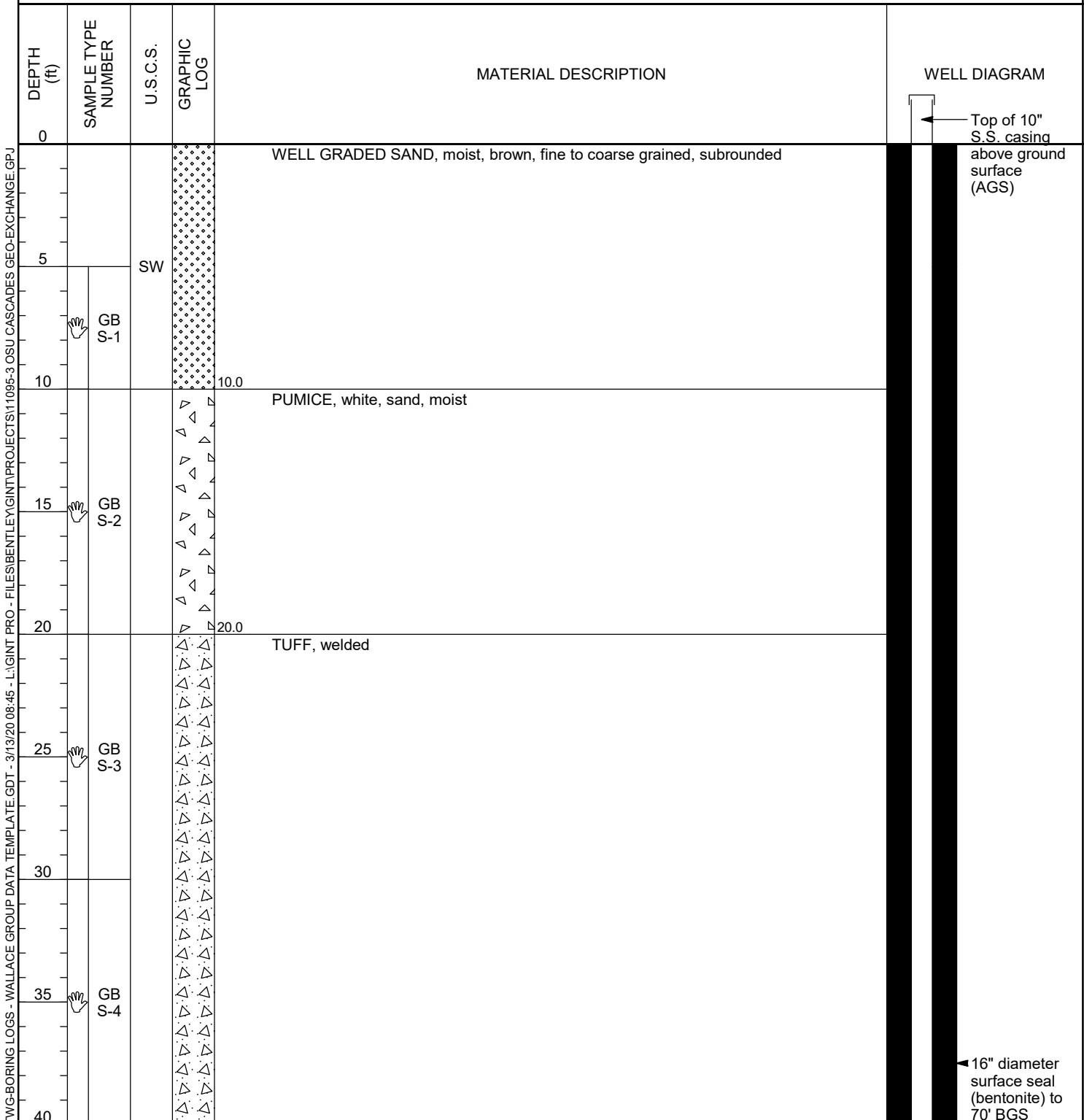


Figure: 3.1

CLIENT Jensen Drilling **PROJECT NAME** OSU Cascades Geo-Exchange Pilot Study
PROJECT NUMBER 11095-3 **PROJECT LOCATION** Bend, Oregon

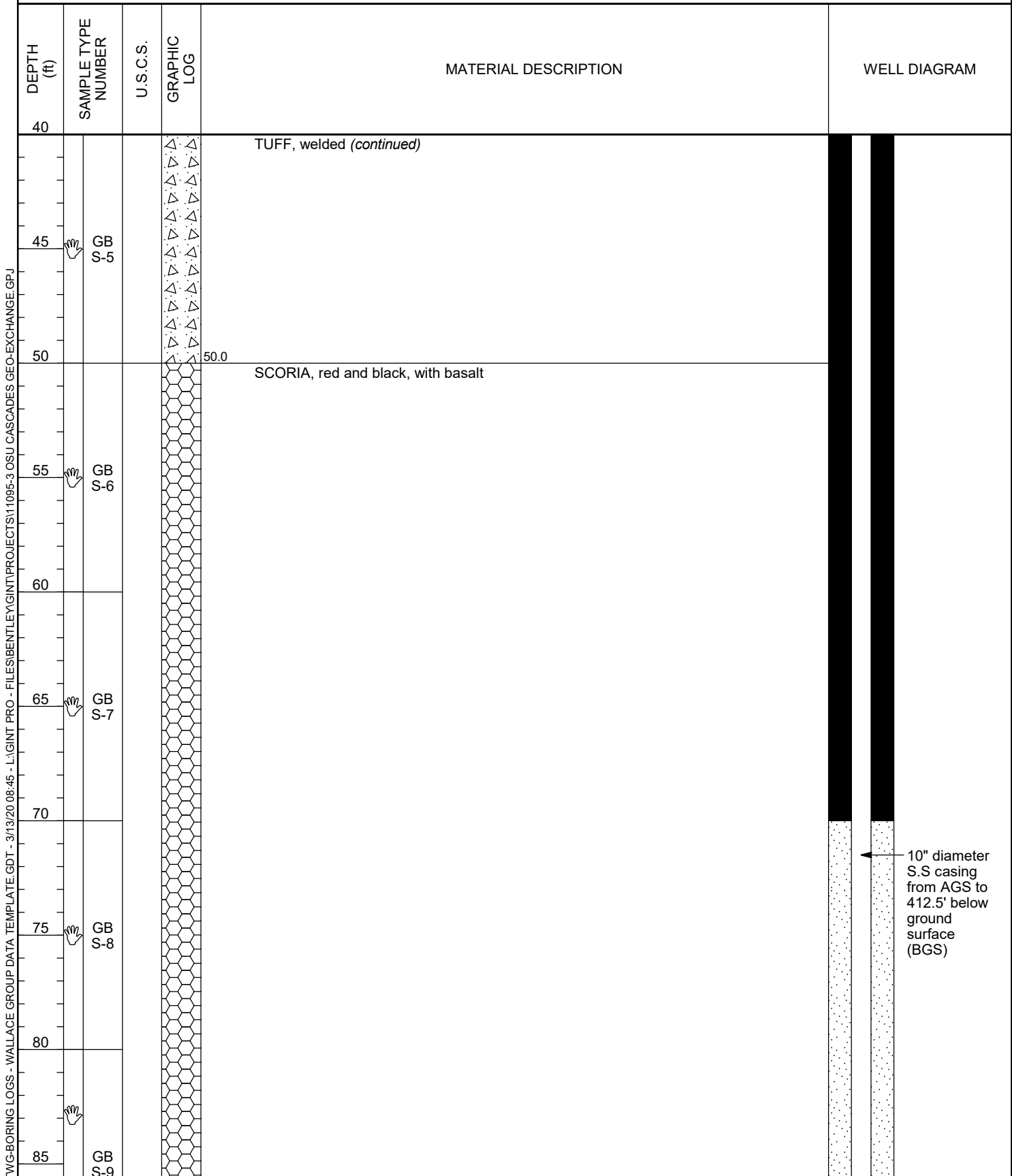


Figure: 3.2

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
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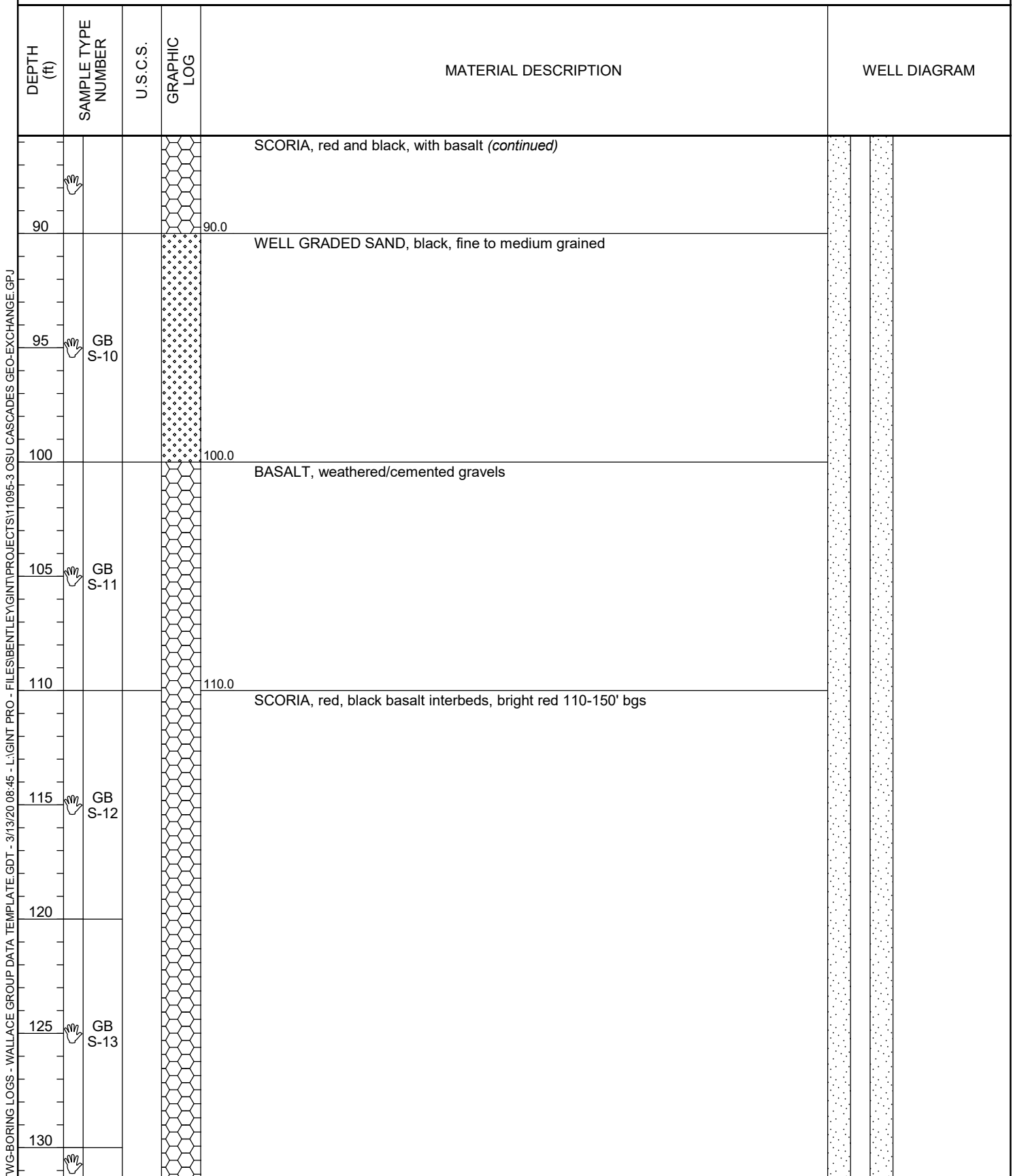
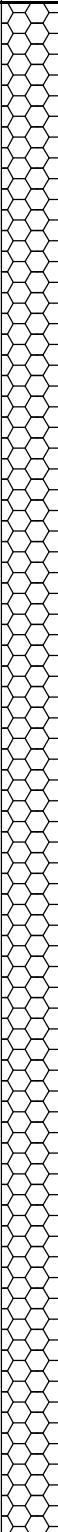
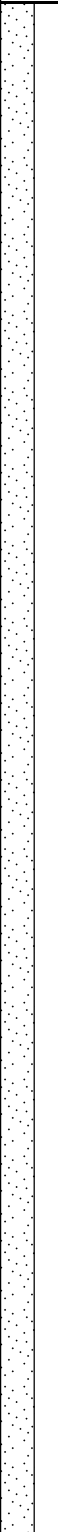


Figure: 3.3

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
 PROJECT NUMBER 11095-3 PROJECT LOCATION Bend, Oregon

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
135	GB S-14			SCORIA, red, black basalt interbeds, bright red 110-150' bgs (continued)	
140					
145	GB S-15				
150					
155	GB S-16				
160					
165	GB S-17				
170					
175	GB S-18				

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Figure: 3.4

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
 PROJECT NUMBER 11095-3 PROJECT LOCATION Bend, Oregon

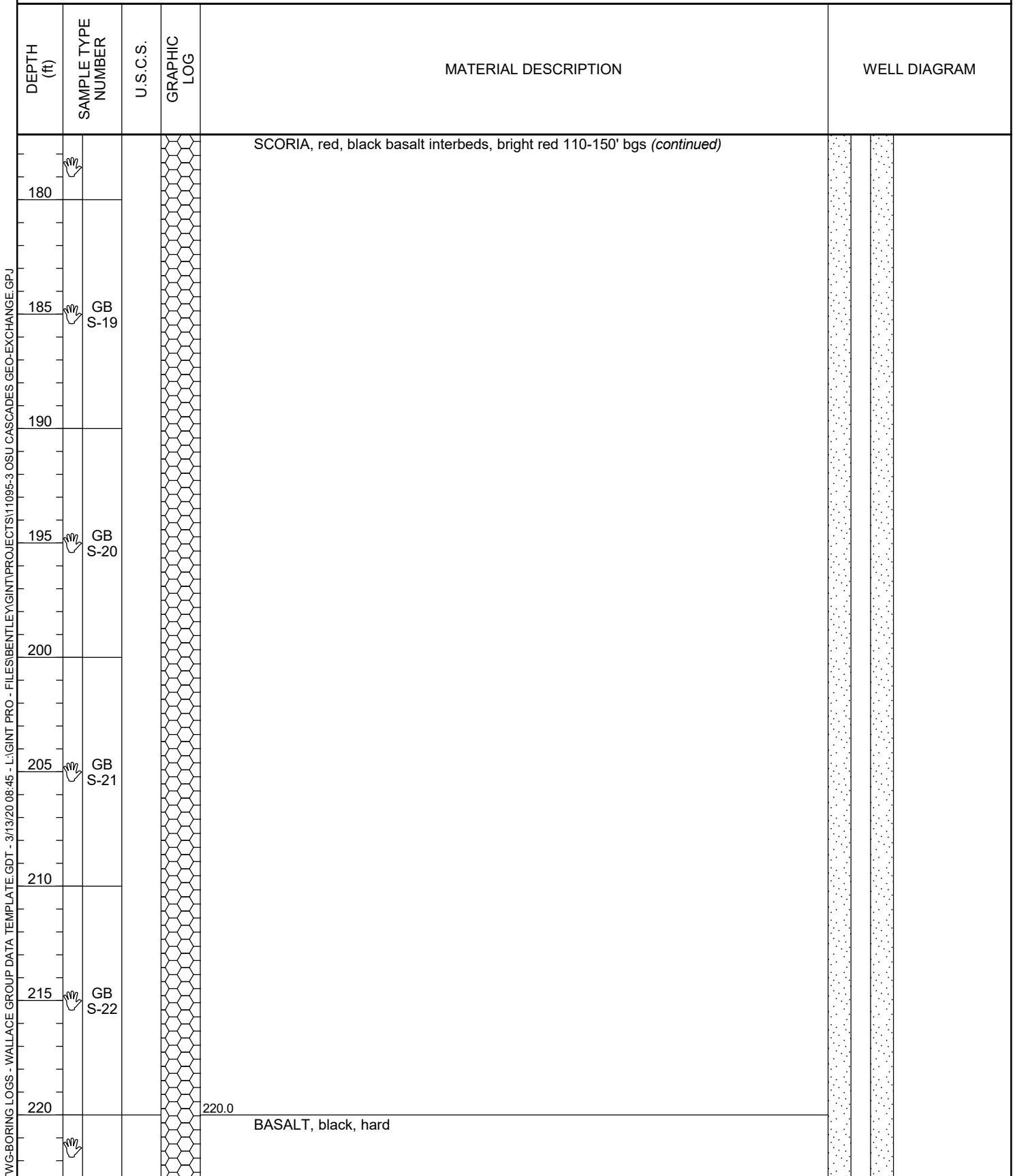


Figure: 3.5

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
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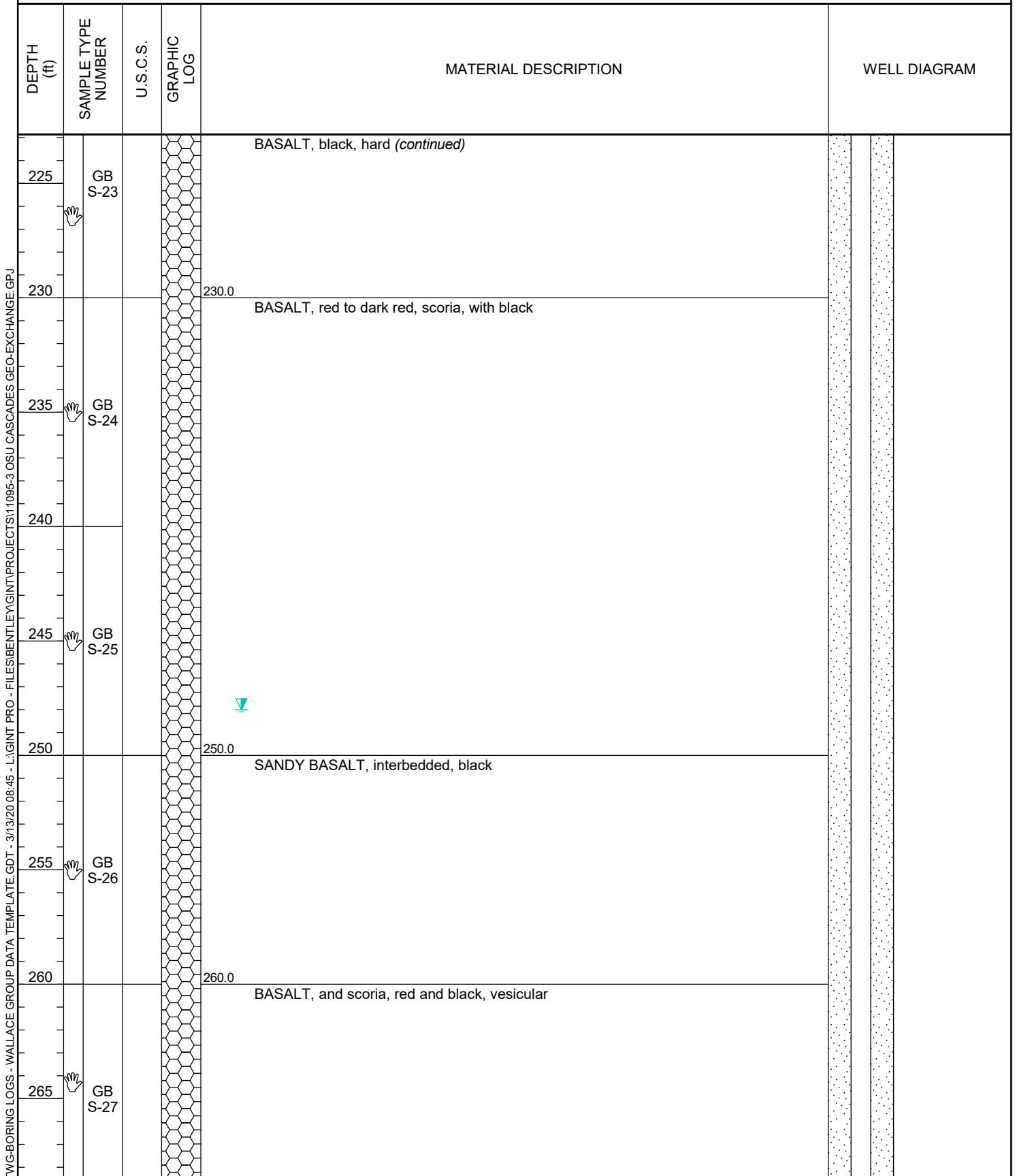

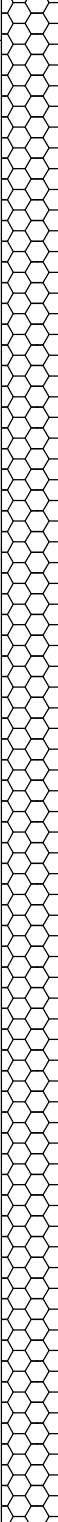

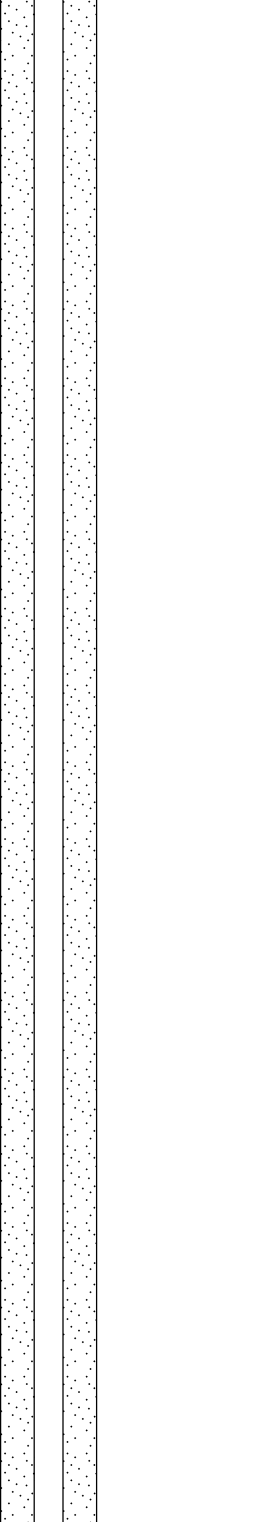







Figure: 3.6

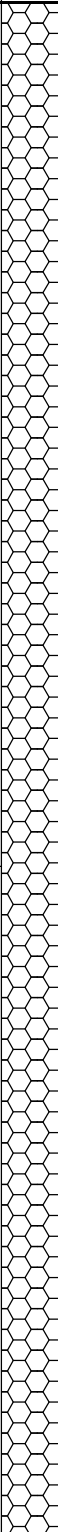
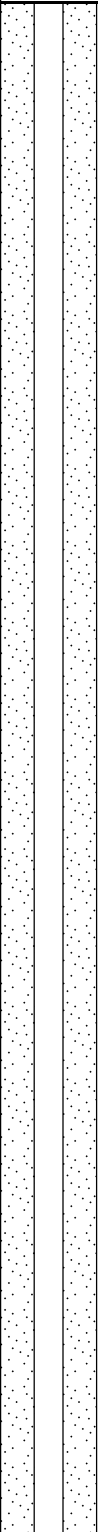
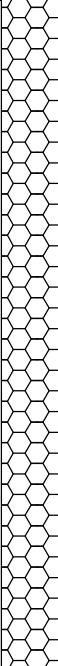
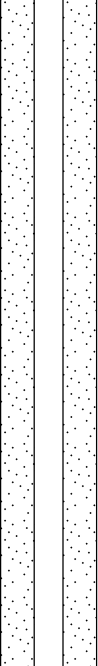
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DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
270				BASALT, and scoria, red and black, vesicular (continued) 270.0 	
275	 GB S-28			BASALT, dark gray, very hard	
280					
285	 GB S-29				
290					
295	 GB S-30				
300					
305	 GB S-31				
310					
					

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Figure: 3.7

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
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DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
315	GB S-32			BASALT, dark gray, very hard (continued)	
320					
325	GB S-33				
330					
335	GB S-34				
340		340.0			
345	GB S-35			BASALT, interbedded, dark gray to dark red, with scoria	
350					
355	GB S-36				
360					

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Figure: 3.8

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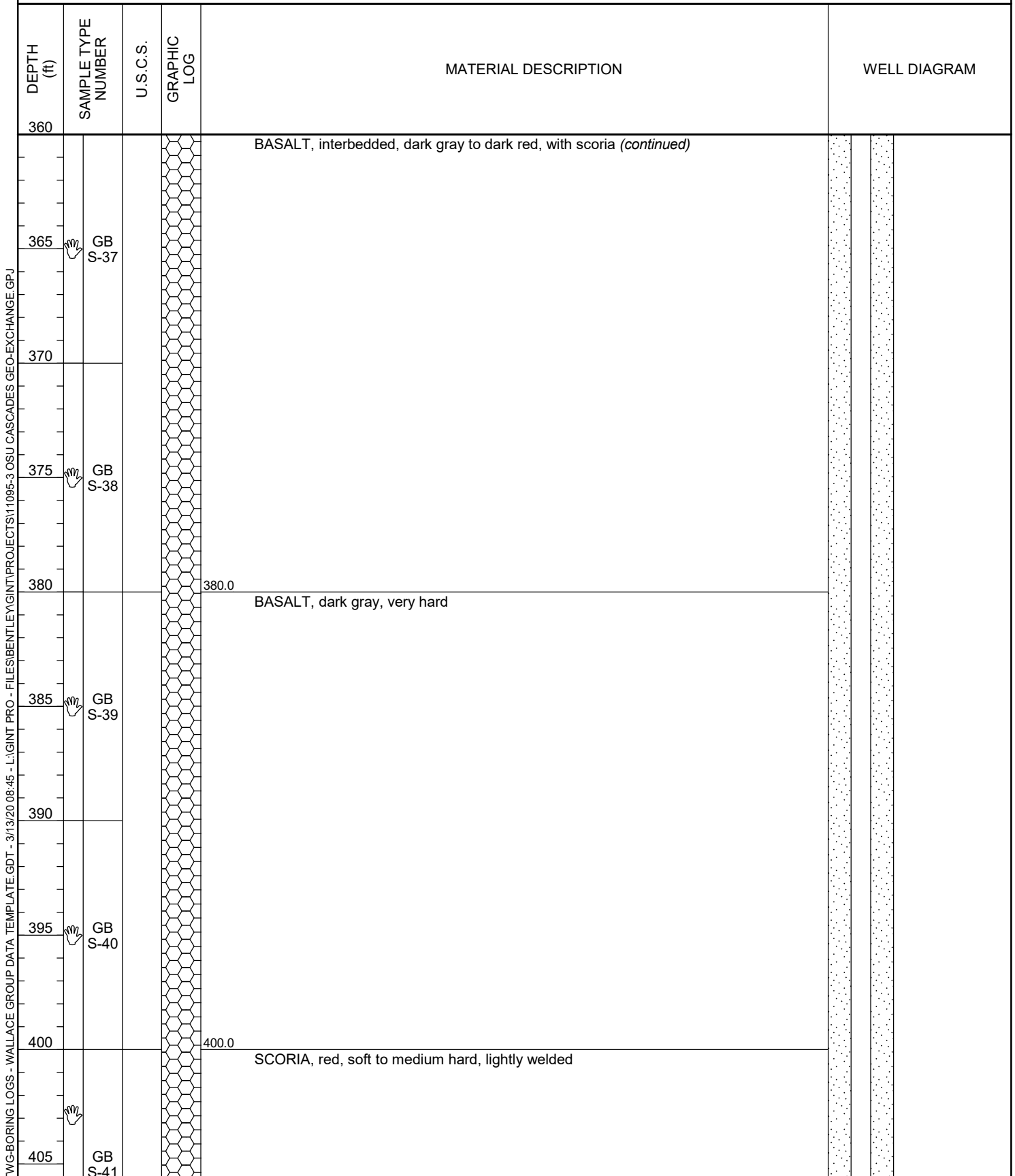


Figure: 3.9

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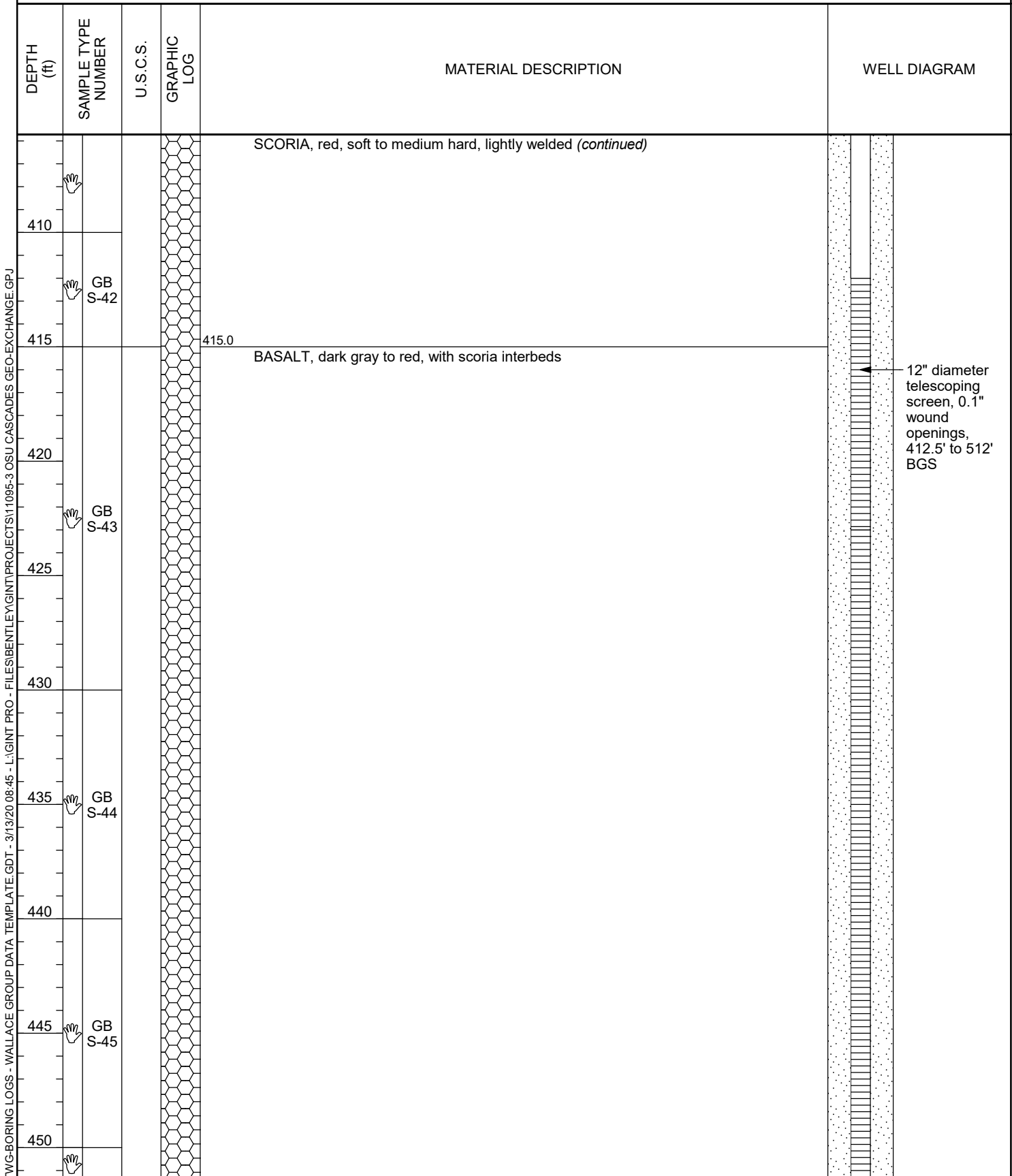


Figure: 3.10

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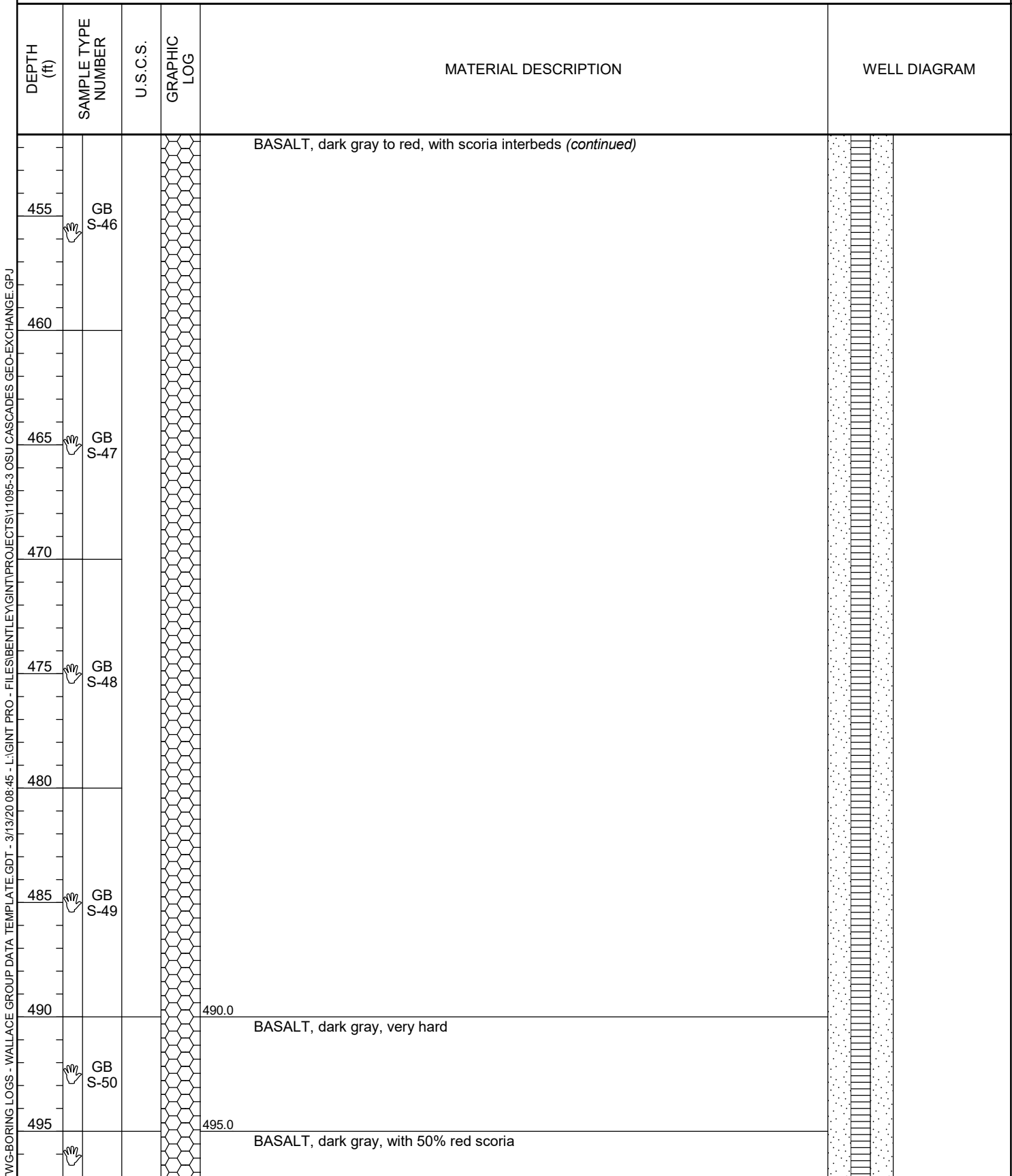
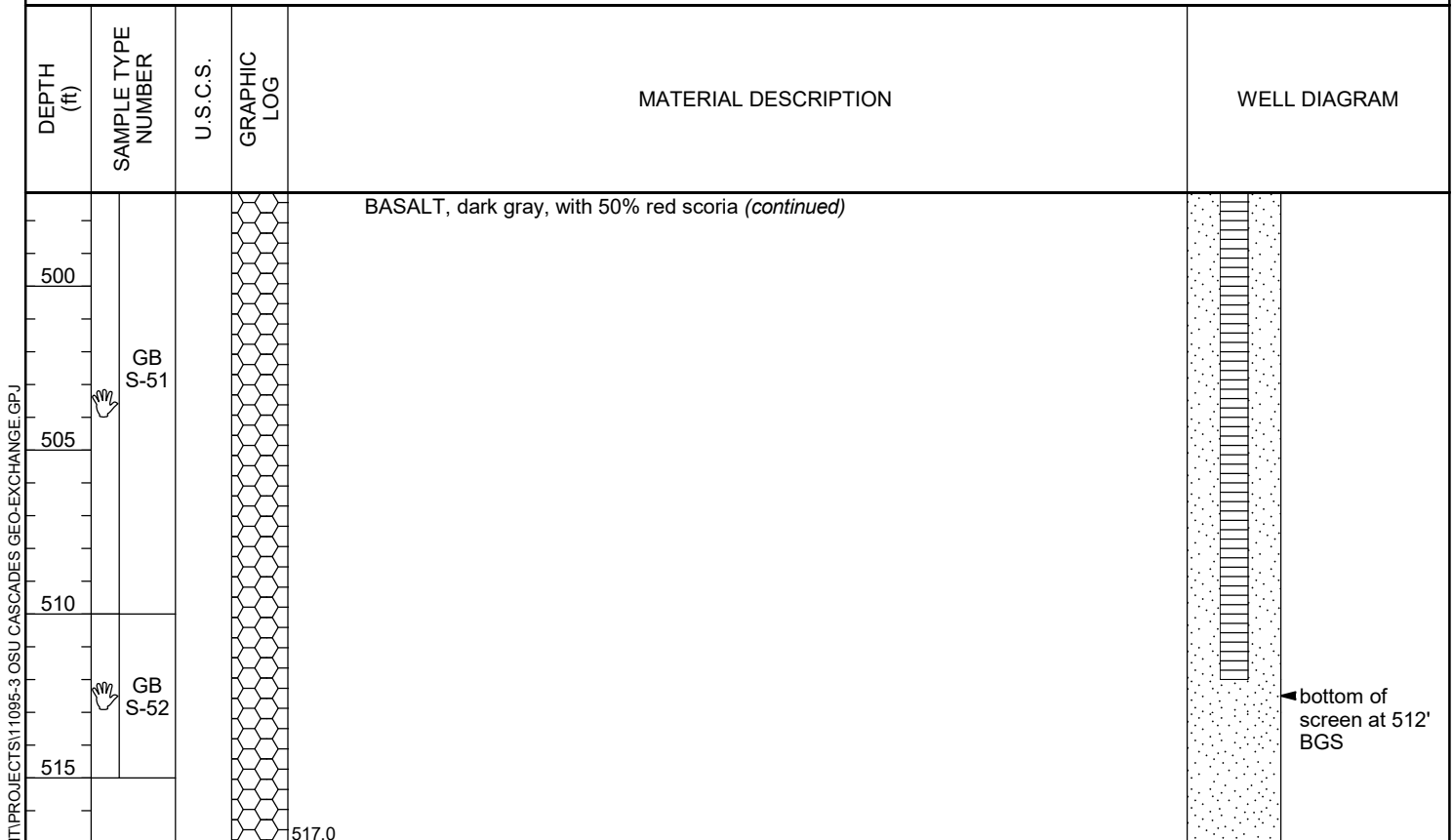


Figure: 3.11

CLIENT Jensen Drilling PROJECT NAME OSU Cascades Geo-Exchange Pilot Study
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Bottom of borehole at 517.0 feet.

bottom of screen at 512' BGS

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Figure: 3.12