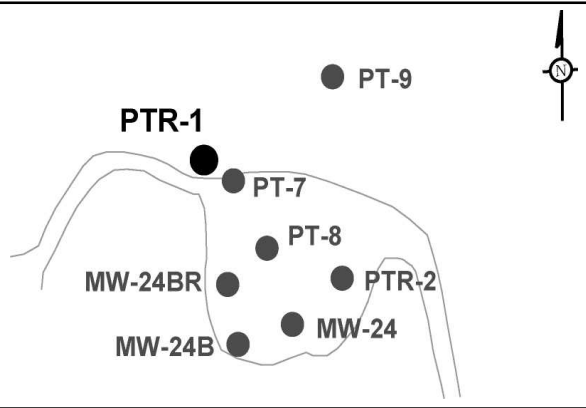


LOG OF BORING PTR-1

PG&E Topock Site Needles, California

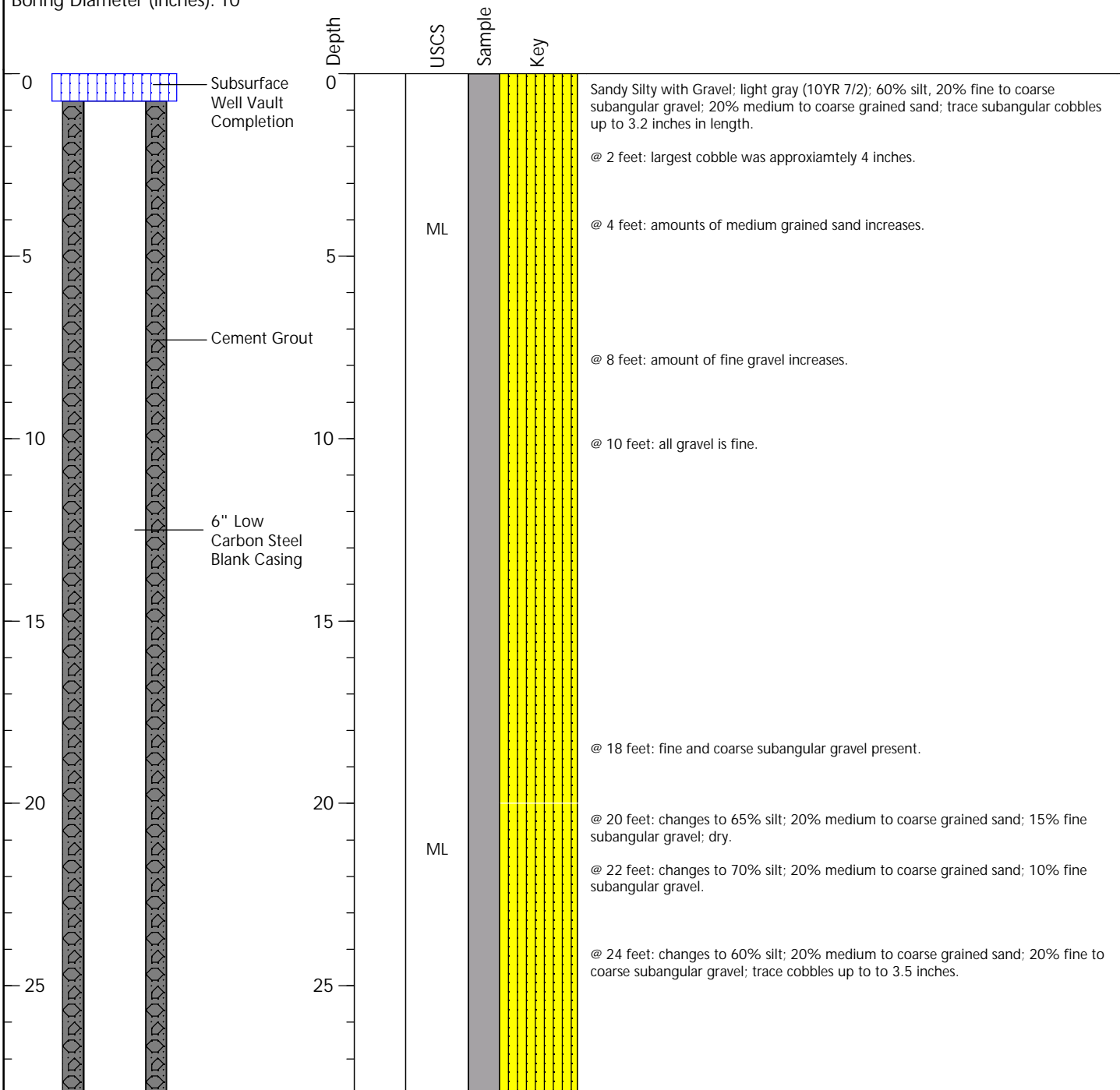


Project No.: RC000689.0004 Date Started: 24 April 2007
 Logged by: Brett Bardsley Date Completed: 2 May 2007
 Drilling Co.: WDC Drilling Method: Rotosonic/Mud Rotary
 Drillers: Rivera, West, Sakioka, Villegas Sample Method: 4" x 6" Core Rod
 Well Permit #2007040409 Driller's License: C57-283326

WELL CONSTRUCTION

LITHOLOGIC DESCRIPTION

Boring Diameter (inches): 10



LOG OF BORING PTR-1 (Continued)

WELL CONSTRUCTION

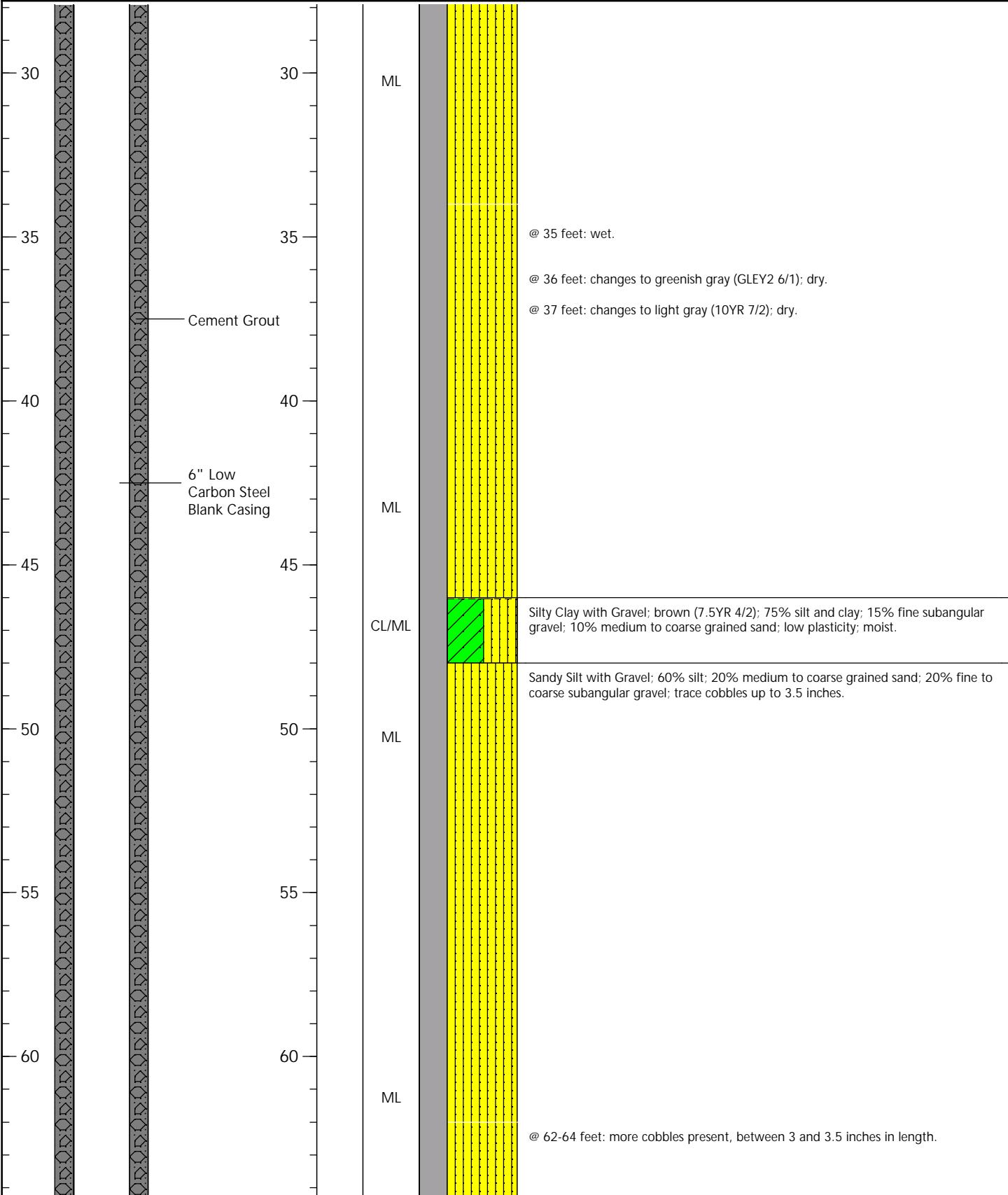
Depth

USCS

Sample

Key

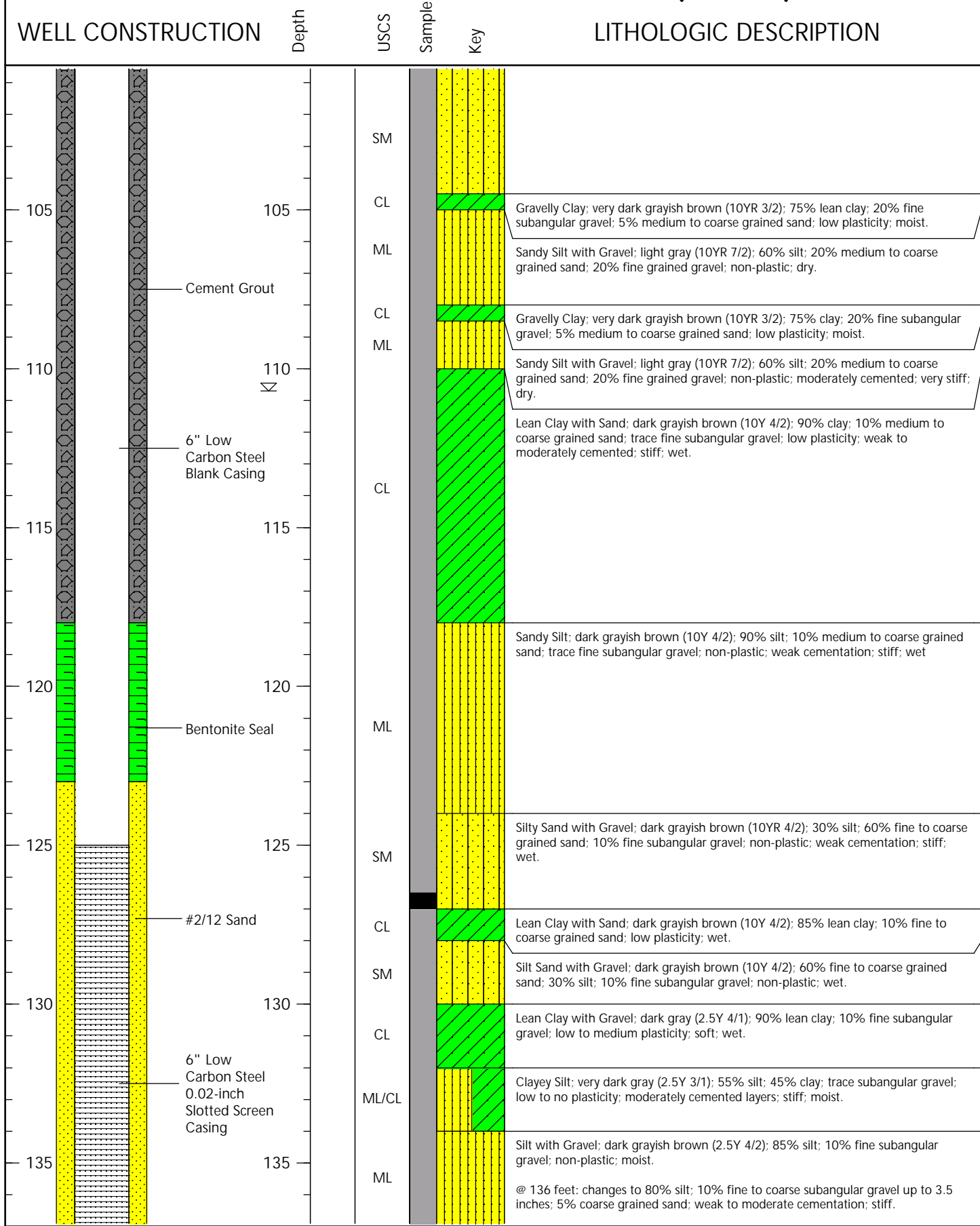
LITHOLOGIC DESCRIPTION



LOG OF BORING PTR-1 (Continued)

WELL CONSTRUCTION	Depth	USCS	Sample	Key	LITHOLOGIC DESCRIPTION
	65 70 75 80 85 90 95 100	ML ML CL ML ML SM			<p>@ 66 feet: changes to Gravelly Silt; 60% silt, 30% fine to coarse subangular gravel; 10% fine to coarse grained sand; non-plastic; dry.</p> <p>@ 68 feet: changes to Sandy Silt with Gravel; 60% silt; 20% medium to coarse grained sand; 20% fine to coarse subangular gravel.</p> <p>Gravelly Clay; very dark grayish brown (10YR 3/2); 60% clay; 35% fine subangular gravel; 5% medium to coarse grained sand; low plasticity; stiff; moist.</p> <p>Sandy Silt with Gravel; light gray (10YR 7/2); 60% silt; 20% medium to coarse grained sand; 20% fine to coarse subangular gravel; non-plastic; dry.</p> <p>@ 88 feet: moderately cemented layers; stiff.</p> <p>@ 90 feet: trace cobble up to 3.5 inches.</p> <p>Silty Sand with Gravel; very dark grayish brown (10YR 3.2); 20% silt; 60% fine to coarse grained sand; 20% fine subangular gravel; non-plastic; moist.</p>

LOG OF BORING PTR-1 (Continued)



Cement Grout

6" Low Carbon Steel Blank Casing

Bentonite Seal

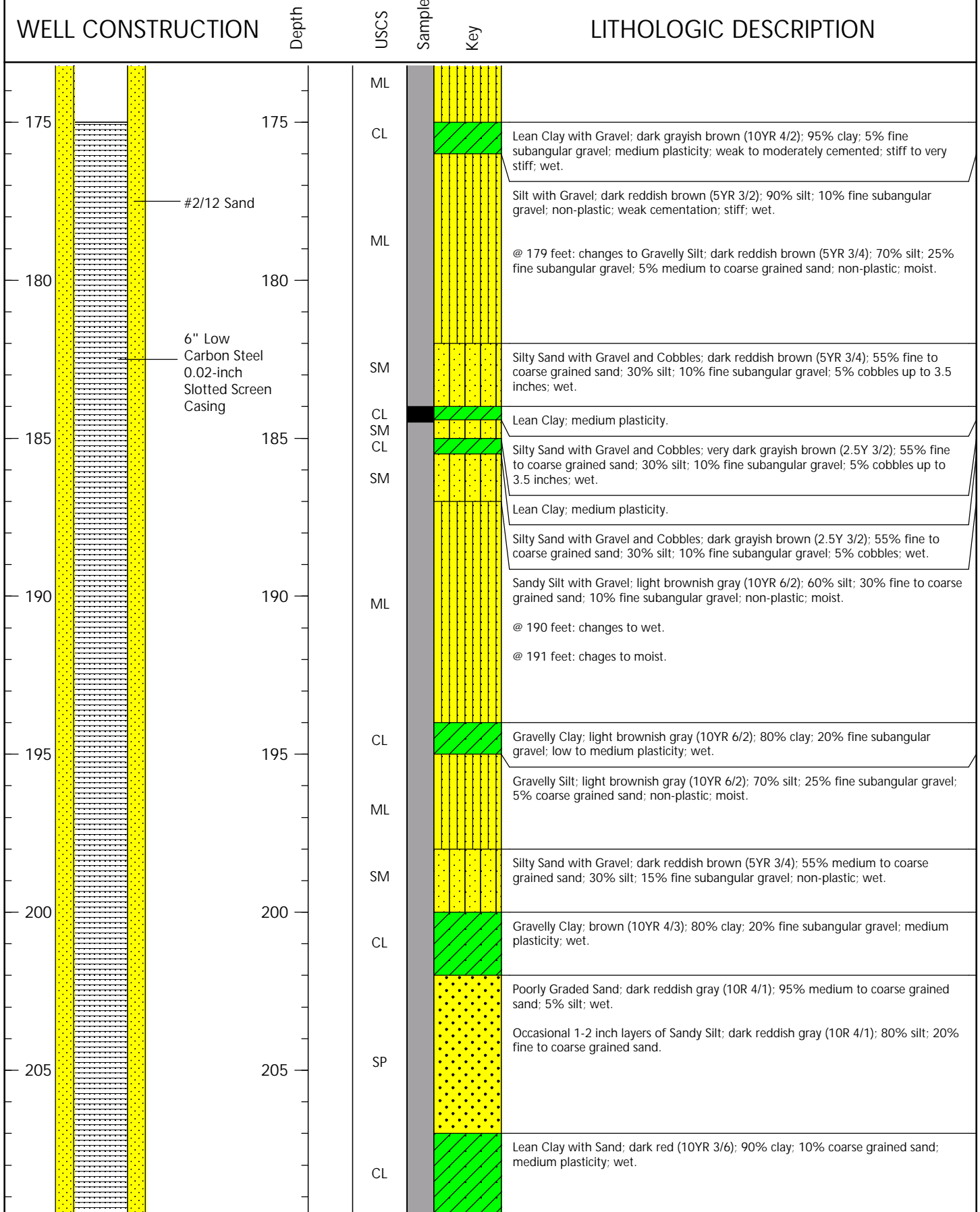
#2/12 Sand

6" Low Carbon Steel 0.02-inch Slotted Screen Casing

LOG OF BORING PTR-1 (Continued)

WELL CONSTRUCTION	Depth	USCS	Sample	Key	LITHOLOGIC DESCRIPTION
<p>#2/12 Sand</p> <p>6" Low Carbon Steel 0.02-inch Slotted Screen Casing</p> <p>6" Low Carbon Steel Blank Casing</p> <p>Bentonite Seal</p>	140	ML			
	140	CL			Lean Clay with Gravel; dark grayish brown (2.5Y 4/2); 85% clay; 10% fine to coarse subangular gravel; 5% medium to coarse grained sand; low plasticity; moist.
	145	ML			Gravelly Silt; dark grayish brown (2.5Y 4/2); 80% silt; 20% fine to coarse subangular gravel; non-plastic; moderate cementation; very stiff; moist. @ 144 feet: changes to weak cementation; wet.
	150	CL			Sandy Clay; dark clay (5Y 4/1); 70% clay; 25% medium to coarse grained sand; 5% fine subangular gravel; low plasticity; weak cementation; medium stiff; wet.
	150	SM			Silty Sand with Gravel; dark gray (5YR 4/1); 60% fine to coarse grained sand; 30% silt; 10% fine to coarse subangular gravel; trace of cobbles; non-plastic; wet.
	155	ML			Sandy Silt with Gravel; dark gray (5Y 4/1); 60% silt; 30% fine to medium grained sand; 10% fine to coarse subangular gravel; non-plastic; stiff; wet.
	155	SM			Silty Sand with Gravel; brown (10YR 4/3); 60% medium to coarse grained sand; 30% silt; 10% fine subangular gravel; non-plastic; moist. @ 158 feet: changes to wet. @ 159 feet: thin zone of lean clay (~3 inches).
	160	ML			Silt with Sand; very dark grayish brown (10YR 3/2); 90% silt; 10% coarse grained sand; non-plastic; moderate cementation; moist. @ 162 feet: changes to dark reddish brown (2.5YR 3/4); moderate cementation; hard; medium dry strength.
	165	GM			Fine Silty Gravel; subangular gravel with some silt; moist.
	165	ML			Silt with Sand; very dark grayish brown (10YR 3/2); 90% silt; 10% coarse grained sand; no plasticity; moderate cementation; moist. @ 167 feet: changes Sandy Silt with Gravel; light gray (10YR 7/1); 60% silt; 20% coarse grained sand; 10% fine subangular gravel; non-plastic; weak cementation; stiff; dry. @ 169 feet: changes to moderate cementation.
	170	CL			Lean Clay with Gravel; dark grayish brown (10YR 3/2); 95% clay; 5% medium to coarse grained sand; medium plasticity; wet.
	170	ML			Silt; dark grayish brown (10YR 3/2); 95% clay; 5% coarse grained sand; no plasticity; moderate cementation; very stiff; moist.

LOG OF BORING PTR-1 (Continued)



LOG OF BORING PTR-1 (Continued)

WELL CONSTRUCTION

Depth

USCS

Sample

Key

LITHOLOGIC DESCRIPTION

