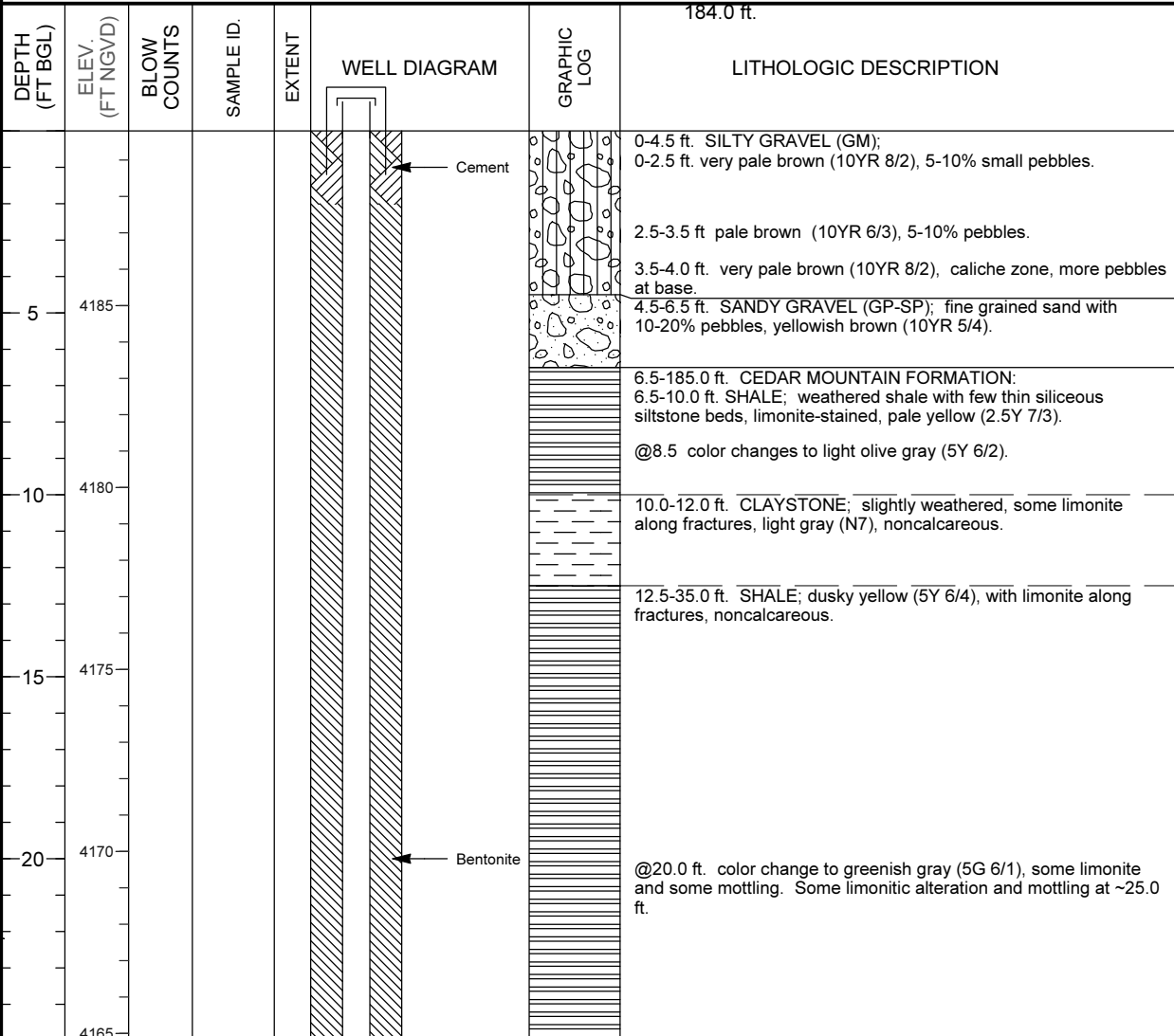


MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT <u>UMTRA GROUND WATER</u>	NORTH COORD. (FT) <u>237094.00</u>	DATE DRILLED <u>06/20/2002 to 06/24/2002</u>
LOCATION <u>GREEN RIVER, UT</u>	EAST COORD. (FT) <u>2388555.47</u>	SURFACE ELEV. (FT NGVD) <u>4189.80</u>
SITE <u>GREEN RIVER</u>	HOLE DEPTH (FT) <u>187.00</u>	TOP OF CASING (FT) <u>4192.98</u>
WELL NUMBER <u>0184</u>	WELL DEPTH (FT) <u>184.00</u>	MEAS. PT. ELEV. (FT) <u>4192.98</u>

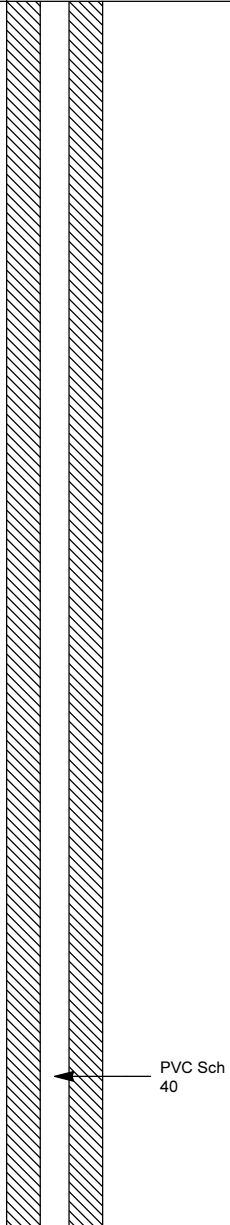
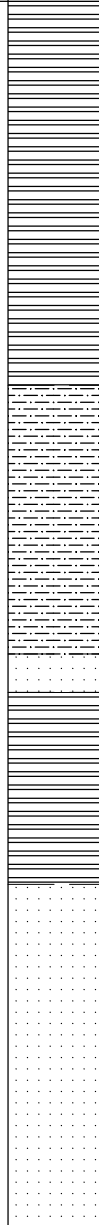
	WELL INSTALLATION	INTERVAL (FT)	
SURFACE CASING:			DRILLING METHOD <u>ROTASONIC</u>
BLANK CASING:	4 in. PVC Sch 40	-3.18 to 169.0	SAMPLING METHOD <u>ROTASONIC CORE</u>
WELL SCREEN:	4 in. 0.02 Slotted PVC	169.0 to 184.0	DATE DEVELOPED _____
SUMP/END CAP:			WATER LEVEL (FT BGS) _____
SURFACE SEAL:	Cement	0.0 to 2.0	LOGGED BY <u>Goodknight, C.</u>
GROUT:	Bentonite	2.0 to 156.0	REMARKS <u>Saved core from 47.0 ft. in middle sand unit of Cedar Mtn Fm to TD through the rest of the Fm. Well installed on 6/24 Centralizers at 94.0 ft. and 184.0 ft.</u>
SEAL:	Bentonite Pellets	156.0 to 162.0	
UPPER PACK:	20-40 Silica Sand	162.0 to 164.0	
LOWER PACK:	10-20 Silica Sand	164.0 to 184.0	



MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0184</u>
SITE <u>GREEN RIVER</u>	DATES DRILLED <u>06/20/2002 to 06/24/2002</u>

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
30	4160				 <p style="text-align: center;">PVC Sch 40</p>		<p>@32.0 ft. becomes calcareous and color changes to more of a yellowish gray (5Y 8/1), some calcareous nodules, trace fine pyrite.</p>
35	4155						<p>35.0-42.0 ft. SILTSTONE; hard, calcareous, with fine grained calcareous nodules (almost porcelaneous in appearance, yellowish gray to light gray (N7), with trace of pyrite blebs.</p>
40	4150						<p>42.0-43.0 SANDSTONE; hard, very fine to fine grained, greenish gray (5GY 6/1), with pyrite blebs. 43.0-48.0 ft. SHALE; calcareous shale with nodules (hard).</p>
45	4145						<p>@44.0 ft. shale is slightly calcareous, soft, light gray (N7), some limonitic stain at 45.5 and 47.5 ft.</p>
50	4140						<p>48.0-72.0 ft. SANDSTONE; hard, calcareous cemented, fine grained, light gray (N7) to medium light gray (N6), trace of pyrite blebs.</p>
55	4135					<p>@53.0 ft. Limonite staining along fractures. Horizontal to low angle fractures at 53.0-54.0 ft.</p>	

MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0184
SITE GREEN RIVER **DATES DRILLED** 06/20/2002 to 06/24/2002

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
60	4130						@59.0 ft. vertical, limonite coated fracture.
65	4125						@62.0 ft. steeply inclined fractures coated with limonite at 62.0 63.0 ft. 64.0-67.0 ft. is darker colored, medium grained, calcareous, and higher porosity (vugs), not as hard, medium gray (N5). @67.0 and 68.0 ft. Hard, calcareous cemented, fine grained sandstone with vertical fractures.
70	4120						@70.0 ft. highly crossbedded. 71.0-72.0 ft. some conglomerate (pebbles up to 3/4" diameter). 72.0-80.5 ft. MUDSTONE; soft, greenish gray (5G 6/1), calcareous.
75	4115						75.0-76.0 ft. zone of lighter colored material and calcareous nodules, greenish gray (5GY 6/1). Gray nodular shale/siltstone, calcareous.
80	4110						80.5-95.0 ft. SILTSTONE; platy, hard, slightly calcareous, light bluish gray (5B 7/1), some disseminated pyrite and pyrite blebs. Horizontal fracturing.
85	4105						85.0-86.0 ft. vertical jointing with calcite coatings is obvious.
							@88.0 ft. vertical fractures coated with calcite.

MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0184</u>
SITE <u>GREEN RIVER</u>	DATES DRILLED <u>06/20/2002 to 06/24/2002</u>

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
90	4100						@90.0 ft. platy, hard shale, ranges from light bluish gray (5B 7/1), to medium bluish gray (5B 5/1), non to slightly calcareous.
95	4095						95.0-100.5 ft. SHALE; alternating beds of platy, hard shale/siltstone, greenish gray (5G 6/1), and claystone, dark greenish gray (5G 4/1), noncalcareous, some vertical fractures.
100	4090						100.0-100.5 ft. color change-grayish red (5R 4/2), noncalcareous. 100.5-101.5 ft. CLAYSTONE; light gray (N7) with light brownish gray (5YR 6/1) calcareous nodules. 101.5-103.5 ft. calcareous shale, some vug porosity, trace of pyrite, hard, brittle, light greenish gray (5G 8/1).
105	4085						103.5-106.5 SILTY SHALE; non to slightly calcareous, soft, platy, greenish gray (5GY 6/1).
110	4080						106.5-108.0 ft. SILTSTONE; hard, brittle, shaley siltstone, noncalcareous, medium gray (N5), trace pyrite. 108-111.5 ft. SHALE; softer shale and silty shale, medium light gray (N6).
115	4075						111.5-112.5 ft. SILTSTONE; hard, brittle, calcareous, medium gray (N5). 112.5-116.0 ft. SILTY SHALE; soft, medium light gray (N6), noncalcareous.
120	4070						116.0-120.0 ft. SHALE; with calcareous infillings of septarian-like concretions, vugs. 117.0-120.0 ft. hard, brittle, noncalcareous, medium gray (N5) to greenish gray (5G 6/1).
							120.0-122.0 ft. CLAYSTONE; soft, noncalcareous, grayish brown

MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT UMTRA GROUND WATER **WELL NUMBER** 0184
SITE GREEN RIVER **DATES DRILLED** 06/20/2002 to 06/24/2002

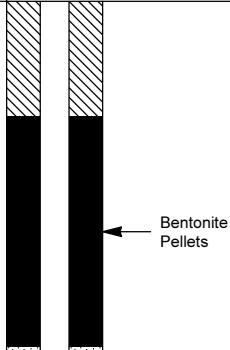

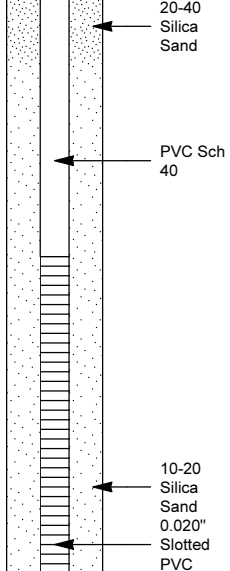
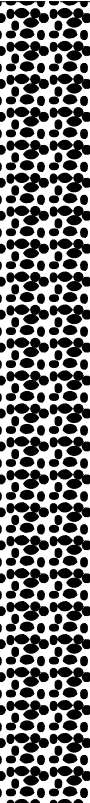
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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
							(5YR 3/2).
125	4065						122.0-125.0 ft. SHALE; medium gray (N5), noncalcareous, alternating with siliceous nodules, greenish gray (5G 6/1) and hard brittle shale, noncalcareous, grayish red (5R 4/2).
130	4060						125.0-130.0 ft. CLAYSTONE; soft, noncalcareous, grayish red (5R 4/2) to pale brown (5YR 5/2) and calcareous. Some mottling with lighter gray silty material.
135	4055						130.0-133.0 ft. SHALE; hard, medium gray (N5) slightly calcareous with calcareous nodules and trace of pyrite.
140	4050						133.0-135.5 ft. CLAYSTONE; soft, pale brown (5YR 5/2), calcareous.
145	4045						135.5-137.0 ft. SILTSTONE; siltstone and shale, medium light gray (N6), calcareous, with some nodules.
150	4040						137-138.5 ft. CLAYSTONE; silty, soft, grayish red (5R 4/2), noncalcareous.
							138.5-139.0 ft. SHALE; hard, medium light gray (N6), slightly calcareous.
							139.0-141.5 ft. SANDSTONE; very fine grained, noncalcareous, grayish red (5YR 4/2). Vertical fractures.
							141.5-143.5 ft. CLAYSTONE; soft, pale brown (5YR 5/2), calcareous.
							143.5-148.0 ft. SANDSTONE; very fine grained, light greenish gray (5GY 8/1), calcareous, mottled, some limonite stain, vugs, trace pyrite and high angle fractures.
							148.0-151.0 ft. CLAYSTONE; soft, medium gray (N5), with some harder shale layers.
							151.0-164.0 ft. SANDSTONE; very fine grained to fine grained, light greenish gray (5GY 8/1), to greenish gray (5GY 6/1), calcareous, some limonite staining near top. Some vertical calcite

MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0184</u>
SITE <u>GREEN RIVER</u>	DATES DRILLED <u>06/20/2002 to 06/24/2002</u>

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
-155	4035				 <p style="margin-left: 40px;">Bentonite Pellets</p> <p style="margin-left: 40px;">20-40 Silica Sand</p>		<p>filled fractures. Sandstone is fine to medium grained in places, with vug porosity and porosity along crossbedding planes. Color varies to light gray (N7). Dark chert fragments (up to 1/2" diameter). Sandstone highly crossbedded @162.0 to 164.0 ft.</p>
-160	4030					 <p style="margin-left: 40px;">PVC Sch 40</p> <p style="margin-left: 40px;">10-20 Silica Sand 0.020" Slotted PVC</p>	
-165	4025						
-170	4020						
-175	4015						
-180	4010						
4005							

MONITORING WELL COMPLETION LOG GRN01-0184

PROJECT <u>UMTRA GROUND WATER</u>	WELL NUMBER <u>0184</u>
SITE <u>GREEN RIVER</u>	DATES DRILLED <u>06/20/2002 to 06/24/2002</u>

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DEPTH (FT BGL)	ELEV. (FT NGVD)	BLOW COUNTS	SAMPLE ID.	EXTENT	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">190</div> <div style="margin-bottom: 20px;">195</div> <div style="margin-bottom: 20px;">200</div> <div style="margin-bottom: 20px;">205</div> <div style="margin-bottom: 20px;">210</div> <div style="margin-bottom: 20px;">215</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">4000</div> <div style="margin-bottom: 20px;">3995</div> <div style="margin-bottom: 20px;">3990</div> <div style="margin-bottom: 20px;">3985</div> <div style="margin-bottom: 20px;">3980</div> <div style="margin-bottom: 20px;">3975</div> </div>				<div style="display: flex; align-items: center;"> <div style="width: 100%; height: 100%; background-color: black; margin-right: 5px;"></div> <div style="font-size: small;">Bentonite Pellets</div> </div>		<p style="font-size: small;">185.0-187.0 ft. MORRISON FORMATION, BRUSHY BASIN MEMBER: 185.0-186.0 ft. MUDSTONE; soft, grayish red (10YR 4/2), noncalcareous. 186.0-187.0 ft. MUDSTONE/SILTSTONE; soft, light greenish gray (5G 8/1) to greenish gray (5G 6/1), noncalcareous. Total Depth 187.0 ft.</p>