BLM-39 CONVENTIONAL CASING DEVELOPMENT LOG

DTW PRE DEVELOPMENT: 350 FT

DTW POST DEVELOPMENT: 356 FT

DATE (1999)	TIME	METHOD	RATE (GPM)	DELTA VOLUME (GALLONS)	TOTAL VOLUME (GALLONS)	Ph	TEMP (° C)	COND (µMHOS/CM)	TURBIDITY (NTU)	INITIALS	COMMENTS
25-Apr	1645	Bail		94	94					MR	light brown, soapy
25-Apr	1800	Bail		14	108					MR	light brown, soapy
26-Apr	1800	Swab		380	488					GCG	First screen. Water light brown. Periodically runs dry.
27-Apr	1800	Swab		230	718					GCG	First screen. Water light brown. Periodically runs dry.
28-Apr	1500	Swab		110	828					GCG	First screen. Water light brown. Periodically runs dry.
29-Apr	1300	Swab		30	858					JWP	First screen. Water light brown. Periodically runs dry.
4-May	1400	Pump		120	978					GCG	Ran pump in. Swabbing not possible on upper two screens due to low production.
6-May	0700	Pump	4	40	1018					Stewart Bros.	
6-May	0800	Pump	4	130	1148					Stewart Bros.	
6-May	1557	Pump	4	114	1262	7.41	23.6	1135	4.32	MGC	One turbid slug at about 40 gallons. Cleared up quickly.
7-May	1130	Pump	4	150	1412					GCG	Slightly turbid. Pumping about 4 gpm.
7-May	1430	Pump	4	130	1542					JWP	Appears clear.
11-May	1612	Pump	6	0	1542	5.1	24.3	1146	6.1	MGC	Rusty early on then clearing.
11-May	1630	Pump		90	1632					MGC	Turbid slug initially. Clears quickly.
11-May	1730	Pump			1632					MGC	Stewart Bros. pumped well.
11-May	1820	Pump		230	1862					MGC	Stewart Bros. pumped well.
12-May	0715	Pump	6	120	1982	7.19	20.5	1184	4..2	MGC	Stewart Bros. pumping well when ATSC arrives on site.
12-May	1030	Pump		73	2055					MGC	R. Stewart pumped well.
12-May	1113	Pump	6	75	2130	7.11	24.1	1141	1.7	MGC	Flowmeter = 72118
12-May		Pump	6	89	2219					MGC	Flowmeter = 72207. Stewart Bros. pumped well.
12-May	1552	Pump	6	114	2333	7.24	23	1136	1	MGC	Flowmeter rdg = 72321.
12-May	1800	Pump	6	93	2426					MGC	Stewart Bros. pumped well.

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13-May	0700	Pump	6	110	2536					MGC	Stewart Bros. pumped well.
13-May	1020	Pump		0	2536					MGC	
13-May	1023	Pump	6			7.3	22.7	1144	2.7	MGC	Flowmeter = 72523.7
13-May	1027	Pump	6			8.3	22.5	1130	9.9	MGC	Turbid, lots of air bubbles.
13-May	1030	Pump	6			10			2.2	MGC	Clearing.
13-May	1032	Pump	6			7.2	23.5	1123	2.1	MGC	
13-May	1035	Pump	6			7.2	23.5	1125	1.2	MGC	
13-May	1037	Pump	6			7.1	23.8	1126	0.9	MGC	
13-May	1038	Pump		115	2651					MGC	Flowmeter = 72639.
13-May	1328	Pump	6			7.5	22.7	1114	1	MGC	
13-May	1332	Pump	6			7.7	22.8	1130	4.2	MGC	
13-May	1335	Pump	6			8.1	22.7	1117		MGC	
13-May	1338	Pump	6			7.7	23.7	1125	1.4	MGC	
13-May	1339	Pump off		114	2765					MGC	
13-May	1606	Pump	6	0	2765					MGC	Flowmeter = 72753
13-May	1610	Pump	6				25	1115	1.1	MGC	Clear.
13-May	1614	Pump	6				23.2	1124	4.8	MGC	Turbid slug.
13-May	1617	Pump	6				23.4	1134	1.6	MGC	Cleared.
13-May	1619	Pump	6				24.4	1135	0.8	MGC	Clear.
13-May	1624	Pump off		113	2878					MGC	Flowmeter = 72866.
14-May	0935	Pump	6				23.3	1075	15.2	GCG	Water initially slightly yellow with increased turbidity.
14-May	0940	Pump	6				19.8	1068	69.8	GCG	Water initially slightly yellow with increased turbidity.
14-May	0945	Pump	6				21.6	1103	3.7	GCG	Water clears after about 60 gallons.

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14-May	0950	Pump off		109	2987		22.1	1108	2.4	GCG	Water clear with slight yellow hue.
17-May	0725	Pump	6				20.6	1120	16.6	GCG	Rusty red slug in first 5 seconds, then clear.
17-May	0730	Pump	6				22.2	1154	12.9	GCG	
17-May	0735	Pump	6				23	1143	9.2	GCG	
17-May	0740	Pump	6				23	1148	7.5	GCG	
17-May	0745	Pump off		97	3084		23.2	1145	6.4	GCG	Water slightly yellow, clearing up.
17-May	1355	Pump	6			7.37	23.5	1125	9.8	GCG/MR	Turbid slugs still visible. Yellow hue to water. Clearing up toward end of pumping.
17-May	1400	Pump	6			7.38	22.5	1130	36.8	GCG/MR	
17-May	1405	Pump	6			7.51	22.3	1121	>99.9	GCG/MR	
17-May	1410	Pump off		118	3202	7.37	22.2	1116	3	GCG/MR	
18-May	0800	Pump	6			7.02	19.5	1188	19.1	GCG	Yellow hue to water. Clears up to low turbidity after about 60 gallons.
18-May	0805	Pump	6			7.26	20.9	1145	18.6	GCG	
18-May	0810	Pump	6			7.16	21.5	1128	5.3	GCG	
18-May	0815	Pump off		116	3318	7.04	22.1	1143	4.5	GCG	
18-May	1155	Pump	6			7.5	23.9	1127	5.2	GCG	Slight yellow hue.
18-May	1200	Pump	6			7.36	22.3	1128	4.2	GCG	
18-May	1205	Pump	6			7.29	22.3	1133	12.6	GCG	
18-May	1210	Pump off		117	3435	7.2	22.5	1130	1.4	GCG	Turbidity reading = 3.8 with 3.75 standard.
18-May	1428	Pump	6							MGC	Water yellowish. Flowmeter = 73423.
18-May	1429	Pump	6			7.3	23.8	1113	1.7	MGC	Water is yellowish.
18-May	1432	Pump	6			7.24	22.8	1119	4.6	MGC	Water is yellowish.
18-May	1435	Pump	6			7.28	22.6	1126		MGC	Water is yellowish.
18-May	1440	Pump	6			7.19	23.4	1136	1.3	MGC	Water is clearing.

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18-May	1443	Pump	6			7.15	23.8	1146	1	MGC	Water is clearing.
18-May	1445	Pump	6			7.14	24	1121	1.2	MGC	
18-May	1446	Pump off		113	3548					MGC	
18-May	1648	Pump	6							MGC	
18-May	1653	Pump	6			7.3	23	1131	2.5	MGC	
18-May	1657	Pump	6			7.28	23	1117	1.9	MGC	
18-May	1701	Pump	6			7.42	23.3	1140	1.3	MGC	
18-May	1705	Pump	6			7.18	23.9	1137	1.1	MGC	
18-May	1706	Pump off		110	3658					MGC	
19-May	0710	Pump	6							MGC	
19-May	0713	Pump	6			7.72	20.7	1128	25.4	MGC	Water is "rusty" from pipe.
19-May	0718	Pump	6			7.3	21.5	1115	>99.9	MGC	Cloudy/rusty.
19-May	0719	Pump	6			7.13	22.3	1115	3.6	MGC	Clearing.
19-May	0723	Pump	6			7.04	22.5	1139	3.1	MGC	Clearing.
19-May	0727	Pump	6			7.01	23.1	1122	2	MGC	Still slightly yellow.
19-May	0728	Pump off		118	3776					MGC	
19-May	1044	Pump								MGC	
19-May	1049	Pump				6.9	23.9	1103	17.4	MGC	Water yellowish, had been sitting in pipe.
19-May	1053	Pump				7.05	23.1	1111	2.8	MGC	Water yellowish, had been sitting in pipe.
19-May	1059	Pump				7	23.5	1129	1	MGC	Clearing.
19-May	1101	Pump				6.95	23.9	1134	0.8	MGC	
19-May	1103	Pump off		117	3893					MGC	
19-May	1325	Pump								MGC	
19-May	1333	Pump				7.1	23.3	1103	2.9	MGC	

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19-May	1337	Pump				7.04	23.5	1133	1.1	MGC	Some entrapped air bubbles.
19-May	1341	Pump				7.04	23.9	1130	0.8	MGC	No yellow tint noted.
19-May	1343	Pump off		114	4007	7.02	24.3	1137	0.7	MGC	No yellow tint noted.
19-May	1343	Pump								MGC	
19-May	1554	Pump								MGC	
19-May	1602	Pump				7	23.4	1103	4.4	MGC	Entrapped air bubbles. Clears quickly.
19-May	1607	Pump				6.97	23.6	1139	1.2	MGC	Clear.
19-May	1610	Pump				6.99	24.2	1139	0.7	MGC	
19-May	1613	Pump off		112	4119					MGC	Looks good.
20-May	1000	Pump				7.32	23.1	1079	17.3	GCG/JWP	Yellow hue to water. Turbid slug after 50 gal. Clearing toward end.
20-May	1005	Pump						1110	38	GCG/JWP	pH meter battery dead.
20-May	1010	Pump						1126	4.9	GCG/JWP	
20-May	1015	Pump off		117	4236			1131	3.4	GCG/JWP	Clear
20-May	1236	Pump						1141	3.1	JWP	Flowmeter start = 74224
20-May	1242	Pump						1142	22.4	JWP	Flowmeter reading = 74264
20-May	1247	Pump						1160	1.4	JWP	Flowmeter reading = 74294
20-May	1252	Pump						1179	0.9	JWP	Flowmeter reading = 74324
20-May	1255	Pump off		114	4350			1172	1	JWP	Flowmeter reading = 74338
20-May	1612	Pump				7.3	27.6	1055	3.2	JWP	Flowmeter reading = 74338
20-May	1618	Pump				7.3	23.2	1036	19.8	JWP	Flowmeter reading = 74378
20-May	1622	Pump				7.2	23.4	1045	1.2	JWP	Flowmeter reading = 74400
20-May	1627	Pump off		96	4446	7.2	24.2	1147	1	JWP	Flowmeter reading = 74434
21-May	0735	Pump						1110	22.5	JWP	Flowmeter reading = 74450
21-May	0740	Pump						1130	69.4	GCG	Flowmeter reading = 74480

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21-May	0745	Pump						1135	3.6	GCG	Flowmeter reading = 74510
21-May	0750	Pump off		116	4562			1127	3.2	GCG	Flowmeter reading = 74550
21-May	1115	Pump				7.17	23.2	1124	2.9	GCG	74580. Water clears up well following turbid slug from drop pipe after about 60 gallons.
21-May	1120	Pump				7.09	23.9	1107	10.5	GCG	Flowmeter reading = 74605
21-May	1125	Pump				7.11	24.1	1119	1.4	GCG	Flowmeter reading = 74635
21-May	1130	Pump off		117	4679	7.14	23.4	1133	1.2	GCG	Flowmeter reading = 74667
21-May	1413	Pump						1120	6.01	JWP	Flowmeter reading = 74667
21-May	1422	Pump						1098	1.84	JWP	Flowmeter reading = 74720
21-May	1431	Pump off		114	4793			1127	1.07	JWP	Flowmeter reading = 74781
22-May	0850	Pump				7.1	21.8	1124		LHM	Flowmeter reading = 74870
22-May	0855	Pump				6.93	23.2	1135	5.47	LHM	
22-May	0900	Pump				6.94	22.9	1150	3.81	LHM	Flowmeter reading = 74890
22-May	0905	Pump off		120	4913	6.91	23.2	1162	4.31	LHM	Flowmeter reading = 74901
22-May	1205	Pump				7.08	26.2	1151	7.34	LHM	
22-May	1210	Pump				7.08	23.6	1155	4.32	LHM	
22-May	1215	Pump				7.13	23.4	1156	30.9	LHM	Flowmeter reading = 74942
22-May	1220	Pump				7.07	23.6	1161	4.55	LHM	Flowmeter reading = 74960
22-May	1225	Pump				7.04	23.8	1176	3.21	LHM	Flowmeter reading = 74924
22-May	1230	Pump off		115	5028				3.35	LHM	Flowmeter reading = 75017
22-May	1445	Pump				6.92	25.6	1166	5.61	LHM	Flowmeter reading = 75017
22-May	1450	Pump				7.09	24.6	1156	3.53	LHM	
22-May	1455	Pump				6.94	24.6	1145	32.5	LHM	Flowmeter reading = 75060
22-May	1500	Pump				7.07	24.7	1150	6.27	LHM	Flowmeter reading = 75086
22-May	1505	Pump off		113	5141	6.91	25.6	1165	5.69	LHM	Flowmeter reading = 75130

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22-May	1750	Pump				7.21	23.3	1132	5.56	LHM	Flowmeter reading = 75130
22-May	1755	Pump				7.19	22.5	1136	1.97	LHM	Flowmeter reading = 75153
22-May	1800	Pump				7.21	22.7	1138	8.59	LHM	Flowmeter reading = 75180
22-May	1803	Pump off		115	5256	7.21	23.7	1147	1.51	LHM	Flowmeter reading = 75245
23-May	0715	Pump				7.22	21.7	1112	21	LHM	Flowmeter reading = 75245
23-May	0718	Pump				7.22	20.9	1111	62	LHM	Flowmeter reading = 75283
23-May	0722	Pump				7.11	22.3	1148	7.31	LHM	Flowmeter reading = 75310
23-May	0726	Pump				7.09	22.6	1151	7.19	LHM	Flowmeter reading = 75332
23-May	0729	Pump				7.09	22.7	1158	3.62	LHM	Flowmeter reading = 75348
23-May	0731	Pump off		118	5374	7.07	23.3	1145	3.32	LHM	Flowmeter reading = 75363
23-May	0735									LHM	Move pump 20 feet lower to clean out sump.
23-May	0955	Pump							36.6	LHM	Pump in sump. 75365
23-May	0956	Pump							92.8	LHM	Flowmeter reading = 75381
23-May	1000	Pump								LHM	Very red muddy brown.
23-May	1007	Pump							43.7	LHM	Flowmeter reading = 75420
23-May	1009	Pump							17.4	LHM	Flowmeter reading = 75429
23-May	1010	Pump							11.4	LHM	Flowmeter reading = 75438
23-May		Pump							5.9	LHM	
23-May	1014	Pump off		132	5506	7.11	24.5	1162	5.85	LHM	Flowmeter reading = 75497
23-May	1213	Pump								LHM	
23-May	1215	Pump				7.13	23	1151	4.34	LHM	
23-May	1220	Pump				7.17	22.4	1137	3.84	LHM	Flowmeter reading = 75535
23-May	1223	Pump				7.14	22.8	1138	9.13	LHM	Flowmeter reading = 75562
23-May	1227	Pump				7.22	23	1159	3.14	LHM	Flowmeter reading = 75586

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23-May	1231	Pump				7.09	23.3	1167	1.64	LHM	Flowmeter reading = 75607
23-May	1234	Pump off		127	5633	7.09	23.5	1162	2.8	LHM	Flowmeter reading = 75622
23-May	1450	low flow pump				7.21	23.3	1126	2.35	LHM	75622. Water clear, still pumping from sump.
23-May	1455	Pump				7.18	22.5	1142	5.57	LHM	Flowmeter reading = 75661
23-May	1500	Pump				7.18	22.9	1131	1.82	LHM	Flowmeter reading = 75690
23-May	1503	Pump				7.14	23.5	1134	1.24	LHM	Flowmeter reading = 75713
23-May	1509	Pump off		131	5764				1.05	LHM	Flowmeter reading = 75753. Pull pump.
25-May	1145	Jet								MGC	Jetting with Well J water, bottom screen.
25-May	1155	Jet								MGC	Turbid dark grey slug clears fairly quickly.
25-May		Jet								MGC	6400 gallons - Screen 1.
25-May	1415	Jet								MGC	2nd screen - 6400 gal. Each jetting has turbid slug.
25-May	1500	Jet								MGC	3rd screen -6400 gal. Greenish yellow slug early on.
25-May	1555	Jet								MGC	4th screen 6400 gal. (Jetted 8 x 3200 gal. total)
26-May	1400	Jet								MGC	Bennett pump installed. Meter at 5200. 1 gpm.
26-May	1800	Pump	1	284	6048					MGC	Pump stopped.
27-May	0835	Pump	1	0	6048					MGC	Pump on. Meter at 5500.
27-May	1021	Pump	1	79	6127	6.5	24.6	1152	1.24	MGC	Pumping from about 20 feet below water level.
27-May	1250	Pump	1	94	6221				9.34	MGC	pH meter not working.
27-May	1618	Pump	1	117	6338	7.3	26	1152	1.35	MGC	Flowmeter = 5790.
28-May	1100	Pump	1	659	6997	7.4	26.1	1142	0.48	GCG	Flowmeter = 6449. Clear water. DTW about 121.1 m.
1-Jun	0900	End		2018	9015					MGC	Flowmeter = 8467. Pulled pump.