PLAN VIEW
COMPU-LOG DEVIATION

CLIENT: ATRUM COAL
LOCATION: GROUNDHOG
HOLE ID: DHGH-14-19
DATE OF LOG: 06/26/14
PROBE: 9411A 4504

MAG DECL: 19.5

SCALE: 2 M/CM
TRUE DEPTH: 293.64 M
AZIMUTH: 37.1
DISTANCE: 10.9 M
+ = 50 M INCR
○ = BOTTOM OF HOLE

* * * * * * * COMPU-LOG - VERTICAL DEVIATION * * * * * * *

CLIENT	: ATRUM COAL	HOLE ID.	: DHGH-14-19
FIELD OFFICE	: CENTURY GEO	DATE OF LOG	: 06/26/14
DATA FROM	: N/A	PROBE	: 9411A 4504
MAG. DECL.	: 19.500	DEPTH UNITS	: METERS

LOG: DHGH-14-19_06-26-14_17-42_9411A_005_9.00_294.00_DEVI.log

CABLE DEPTH	TRUE DEPTH	NORTH DEV.	EAST DEV.	DISTANCE	AZIMUTH	SANG	SANGB
9.00	9.01	0.00	0.00	0.00	10.9	1.5	7.1
10.00	10.00	0.01	0.01	0.00	39.8	1.3	14.2
11.00	11.00	0.03	0.02	0.00	38.6	1.4	19.1
12.00	12.00	0.04	0.03	0.00	36.2	1.0	24.3
13.00	13.00	0.05	0.04	0.01	35.9	1.0	46.2
14.00	14.00	0.06	0.05	0.01	35.7	1.0	37.4
15.00	15.00	0.08	0.05	0.01	35.9	1.2	36.5
16.00	16.00	0.09	0.06	0.01	36.7	1.0	24.9
17.00	17.00	0.10	0.08	0.01	37.9	0.7	36.8
18.00	18.00	0.11	0.09	0.01	39.0	1.7	24.3
19.00	19.00	0.12	0.10	0.02	40.3	0.8	54.2
20.00	20.00	0.13	0.12	0.02	41.4	1.0	42.7
21.00	21.00	0.14	0.13	0.02	41.8	1.2	45.4
22.00	22.00	0.16	0.14	0.02	42.1	1.2	46.0
23.00	23.00	0.18	0.16	0.02	41.3	1.6	9.4
24.00	24.00	0.19	0.17	0.03	40.9	1.2	36.4
25.00	25.00	0.21	0.18	0.03	40.3	1.0	54.5
26.00	26.00	0.23	0.19	0.03	39.6	0.9	46.4
27.00	27.00	0.25	0.20	0.03	39.1	1.1	33.4
28.00	28.00	0.27	0.21	0.03	38.5	1.4	36.2
29.00	29.00	0.28	0.22	0.04	38.2	0.6	32.9
30.00	30.00	0.30	0.23	0.04	37.9	0.9	35.0
31.00	31.00	0.32	0.25	0.04	37.9	1.7	55.6
32.00	32.00	0.33	0.26	0.04	38.6	1.1	31.5
33.00	33.00	0.35	0.27	0.04	38.3	0.9	42.3
34.00	34.00	0.37	0.29	0.05	38.3	1.5	31.5
35.00	34.99	0.38	0.30	0.05	38.3	0.8	81.0
36.00	35.99	0.39	0.31	0.05	38.6	0.9	58.1
37.00	36.99	0.40	0.32	0.05	39.2	1.1	44.2
38.00	37.99	0.41	0.34	0.05	39.3	1.4	40.4
39.00	38.99	0.43	0.35	0.06	39.1	1.2	37.1
40.00	39.99	0.44	0.36	0.06	39.0	1.2	36.4
41.00	40.99	0.46	0.37	0.06	39.1	1.2	36.7
42.00	41.99	0.48	0.39	0.06	39.2	1.1	40.4
43.00	42.99	0.49	0.40	0.06	39.2	1.1	46.0
44.00	43.99	0.51	0.42	0.07	39.4	1.3	31.5
45.00	44.99	0.53	0.43	0.07	39.4	1.3	38.7
46.00	45.99	0.54	0.45	0.07	39.4	1.3	36.9
47.00	46.99	0.56	0.46	0.07	39.3	1.3	36.3
48.00	47.99	0.58	0.48	0.08	39.3	1.2	35.4
49.00	48.99	0.60	0.49	0.08	39.0	1.3	42.2
50.00	49.99	0.62	0.50	0.08	38.5	1.4	36.6
51.00	50.99	0.65	0.52	0.08	38.5	2.0	39.5
52.00	51.99	0.67	0.53	0.09	38.5	1.2	31.5
53.00	52.99	0.69	0.54	0.09	38.2	1.3	39.4
54.00	53.99	0.71	0.56	0.09	38.2	1.3	51.8
55.00	54.99	0.73	0.57	0.09	37.9	1.2	39.8
56.00	55.99	0.75	0.58	0.09	37.8	1.6	20.3
57.00	56.99	0.77	0.59	1.00	37.7	1.2	39.8
58.00	57.99	0.79	0.61	1.00	37.6	1.4	34.8
59.00	58.99	0.81	0.62	1.00	37.6	1.4	37.5
60.00	59.99	0.83	0.64	1.00	37.6	1.6	40.0
61.00	60.99	0.85	0.65	1.01	37.6	1.4	40.4
62.00	61.99	0.87	0.67	1.01	37.7	1.4	41.9
63.00	62.99	0.89	0.69	1.01	37.7	1.5	32.8
64.00	63.99	0.91	0.70	1.01	37.7	1.2	50.5
65.00	64.99	0.92	0.72	1.02	38.2	1.4	52.9
66.00	65.99	0.93	0.74	1.02	38.6	1.3	51.8
67.00	66.99	0.95	0.76	1.02	38.6	1.5	38.5
68.00	67.99	0.97	0.78	1.02	38.6	1.4	34.2
69.00	68.98	1.00	0.79	1.03	38.4	1.6	32.8
70.00	69.98	1.02	0.81	1.03	38.2	1.6	36.5
71.00	70.98	1.04	0.82	1.03	38.2	1.6	31.6
72.00	71.98	1.07	0.84	1.04	38.3	1.6	30.2
73.00	72.98	1.09	0.85	1.04	38.0	1.6	31.7
74.00	73.98	1.11	0.86	1.04	37.7	1.6	29.5
75.00	74.98	1.14	0.88	1.04	37.7	1.6	29.5
76.00	75.98	1.16	0.89	1.05	37.6	1.6	29.4
77.00	76.98	1.19	0.91	1.05	37.4	1.6	29.7
78.00	77.98	1.21	0.92	1.05	37.3	1.5	31.5
79.00	78.98	1.23	0.94	1.06	37.3	1.6	32.3
80.00	79.98	1.26	0.95	1.06	37.3	1.6	33.1
81.00	80.98	1.28	0.97	1.06	37.2	1.6	35.2
82.00	81.98	1.31	0.98	1.07	37.1	1.8	33.2
83.00	82.98	1.33	1.00	1.07	37.1	1.7	36.9
84.00	83.98	1.35	1.02	1.07	36.9	1.6	34.1
85.00	84.98	1.38	1.03	1.07	36.9	1.6	34.2
86.00	85.98	1.40	1.05	1.08	36.9	1.7	37.6
87.00	86.98	1.42	1.07	1.08	36.9	1.8	36.4
88.00	87.98	1.45	1.09	1.08	36.9	1.8	39.0
89.00	88.98	1.47	1.11	1.09	36.9	1.9	37.5
90.00	89.98	1.50	1.13	1.09	37.0	1.8	39.2
91.00	90.98	1.52	1.15	1.10	37.0	2.0	39.7
92.00	91.98	1.55	1.17	1.09	37.0	2.2	42.6
93.00	92.97	1.58	1.19	2.00	37.0	1.9	43.8
94.00	93.97	1.60	1.20	2.00	36.9	1.9	32.9
95.00	94.97	1.63	1.22	2.00	36.9	1.9	35.4
96.00	95.97	1.66	1.24	2.01	36.8	1.8	32.0
97.00	96.97	1.68	1.26	2.01	36.8	1.7	33.4
98.00	97.97	1.71	1.28	2.01	36.7	1.9	33.0
99.00	98.97	1.74	1.29	2.02	36.7	1.9	33.2
100.00	99.97	1.76	1.31	2.02	36.6	1.9	33.2
101.00	100.97	1.79	1.33	2.02	36.6	2.0	37.5
102.00	101.97	1.82	1.35	2.03	36.6	2.0	31.3
103.00	102.97	1.85	1.37	2.03	36.6	1.8	40.4
104.00	103.97	1.87	1.38	2.03	36.5	2.0	34.5
105.00	104.97	1.90	1.40	2.04	36.4	1.9	36.0
106.00	105.97	1.93	1.42	2.04	36.4	1.8	36.5
107.00	106.97	1.95	1.44	2.04	36.4	1.9	36.1
108.00	107.97	1.98	1.46	2.05	36.4	1.9	41.8
109.00	108.97	2.00	1.48	2.05	36.5	2.0	39.4
110.00	109.97	2.03	1.50	2.05	36.5	1.9	40.3
111.00	110.96	2.05	1.53	2.06	36.7	1.9	41.0
112.00	111.96	2.08	1.55	2.06	36.7	1.9	42.2
113.00	112.96	2.11	1.57	2.06	36.7	2.1	39.4
114.00	113.96	2.14	1.60	2.07	36.7	2.1	36.5
115.00	114.96	2.17	1.62	2.07	36.7	2.2	34.2
116.00	115.96	2.20	1.64	2.07	36.7	2.2	34.6
117.00	116.96	2.23	1.66	2.08	36.7	2.1	33.6
118.00	117.96	2.26	1.69	2.08	36.7	2.1	33.6
119.00	118.96	2.29	1.71	2.09	36.7	2.2	34.2
120.00	119.96	2.32	1.73	2.09	36.6	2.0	31.9
121.00	120.96	2.36	1.75	2.09	36.6	2.2	31.7
122.00	121.96	2.39	1.77	3.00	36.6	2.2	31.7
123.00	122.96	2.42	1.79	3.00	36.5	2.0	35.5
124.00	123.96	2.45	1.81	3.00	36.5	2.1	34.3
125.00	124.96	2.48	1.83	3.01	36.5	2.0	37.2
126.00	125.95	2.51	1.85	3.01	36.4	2.0	34.8
127.00	126.95	2.54	1.87	3.02	36.4	2.1	33.8
128.00	127.95	2.57	1.90	3.02	36.5	2.0	36.0
129.00	128.95	2.60	1.92	3.02	36.5	2.0	36.0
130.00	129.95	2.62	1.94	3.03	36.5	2.1	40.5
131.00	130.95	2.65	1.97	3.03	36.6	2.2	43.3
132.00	131.95	2.68	1.99	3.03	36.6	2.3	41.5
133.00	132.95	2.71	2.02	3.04	36.7	2.4	40.5
134.00	133.95	2.74	2.05	3.04	36.7	2.4	39.3
135.00	134.95	2.78	2.07	3.05	36.7	2.5	38.4
136.00	135.95	2.81	2.10	3.05	36.7	2.4	32.7
137.00	136.95	2.85	2.12	3.05	36.7	2.4	36.2
138.00	137.94	2.88	2.15	3.06	36.7	2.4	36.9
139.00	138.94	2.91	2.17	3.06	36.7	2.4	36.5
140.00	139.94	2.95	2.19	3.07	36.7	2.4	35.5
141.00	140.94	2.98	2.22	3.07	36.6	2.4	35.4
142.00	141.94	3.01	2.24	3.08	36.6	2.4	37.5
143.00	142.94	3.05	2.26	3.08	36.6	2.2	37.6
144.00	143.94	3.08	2.29	3.08	36.6	2.5	32.8
145.00	144.94	3.11	2.31	3.09	36.6	2.2	36.5
146.00	145.94	3.14	2.33	3.09	36.6	2.3	36.5
147.00	146.94	3.17	2.36	4.00	36.6	2.4	37.3
148.00	147.94	3.21	2.38	4.00	36.6	2.4	35.0
149.00	148.94	3.24	2.41	4.00	36.6	2.4	40.6
150.00	149.93	3.27	2.44	4.01	36.7	2.5	39.3
151.00	150.93	3.31	2.46	4.01	36.7	2.5	38.5
152.00	151.93	3.34	2.49	4.02	36.7	2.6	38.0
153.00	152.93	3.38	2.52	4.02	36.7	2.6	38.2
154.00	153.93	3.41	2.54	4.03	36.7	2.5	34.6
155.00	154.93	3.45	2.57	4.03	36.7	2.6	34.6
156.00	155.93	3.49	2.60	4.03	36.7	2.5	34.6
157.00	156.93	3.52	2.62	4.04	36.7	2.5	37.1
158.00	157.93	3.56	2.65	4.04	36.6	2.4	33.1
159.00	158.93	3.59	2.67	4.05	36.6	2.4	35.4
160.00	159.93	3.63	2.69	4.05	36.6	2.4	35.1
161.00	160.92	3.66	2.72	4.06	36.6	2.4	33.0
162.00	161.92	3.69	2.74	4.06	36.6	2.4	33.0
163.00	162.92	3.73	2.76	4.06	36.6	2.4	33.1
164.00	163.92	3.76	2.79	4.07	36.6	2.4	39.3
165.00	164.92	3.79	2.81	4.07	36.6	2.5	38.6
166.00	165.92	3.83	2.84	4.08	36.6	2.5	38.6
167.00	166.92	3.86	2.87	4.08	36.6	2.4	38.6
168.00	167.92	3.89	2.90	4.09	36.7	2.7	39.6
169.00	168.92	3.93	2.92	4.09	36.7	2.6	39.6
170.00	169.92	3.96	2.96	4.09	36.7	2.6	40.1
171.00	170.92	4.00	2.98	5.00	36.7	2.6	39.6
172.00	171.91	4.03	3.01	5.00	36.8	2.8	37.8
173.00	172.91	4.07	3.04	5.01	36.8	2.7	37.2
174.00	173.91	4.11	3.07	5.01	36.8	2.7	36.2
175.00	174.91	4.14	3.10	5.02	36.8	2.7	36.2
176.00	175.91	4.18	3.13	5.02	36.8	2.7	37.2
177.00	176.91	4.22	3.15	5.03	36.8	2.8	36.2
178.00	177.91	4.26	3.18	5.03	36.8	2.6	36.5
179.00	178.91	4.29	3.21	5.04	36.8	2.6	36.5
180.00	179.91	4.33	3.23	5.04	36.8	2.5	34.3
181.00	180.90	4.37	3.26	5.04	36.7	2.5	35.5
182.00	181.90	4.40	3.29	5.05	36.7	2.5	37.0
183.00	182.90	4.44	3.31	5.05	36.7	2.5	36.2
184.00	183.90	4.47	3.34	5.06	36.7	2.6	36.4
185.00	184.90	4.51	3.36	5.06	36.7	2.6	36.4
186.00	185.90	4.54	3.39	5.07	36.7	2.5	38.0
187.00	186.90	4.58	3.42	5.07	36.7	2.6	37.6
188.00	187.90	4.62	3.45	5.08	36.7	2.6	40.0
189.00	188.90	4.65	3.47	5.08	36.7	2.7	39.6
190.00	189.90	4.69	3.50	5.09	36.8	2.7	38.8
191.00	190.89	4.72	3.53	5.09	36.8	2.7	41.1
192.00	191.89	4.76	3.57	5.09	36.8	2.7	41.9
193.00	192.89	4.79	3.60	6.00	36.8	2.8	39.2
194.00	193.89	4.83	3.63	6.00	36.8	2.8	39.2
195.00	194.89	4.87	3.66	6.01	36.9	2.9	39.2
196.00	195.89	4.91	3.69	6.01	36.9	2.9	37.1
197.00	196.89	4.95	3.72	6.02	36.9	3.0	37.1
198.00	197.89	4.99	3.75	6.02	36.9	2.8	35.8
199.00	198.88	5.03	3.78	6.03	36.9	2.8	36.6
200.00	199.88	5.07	3.81	6.03	36.9	2.8	36.6
201.00	200.88	5.11	3.84	6.04	36.9	2.8	35.8
202.00	201.88	5.15	3.87	6.04	36.9	2.8	35.8
203.00	202.88	5.19	3.90	6.05	36.9	2.8	35.2
204.00	203.88	5.23	3.92	6.05	36.9	2.8	35.2
205.00	204.88	5.27	3.95	6.06	36.9	2.8	35.3
206.00	205.88	5.31	3.98	6.06	36.9	2.7	35.3
207.00	206.88	5.35	4.01	6.07	36.9	2.8	35.6
208.00	207.87	5.39	4.04	6.07	36.9	2.8	35.6
209.00	208.87	5.43	4.07	6.08	36.8	2.8	37.0
210.00	209.87	5.47	4.09	6.08	36.8	2.9	37.0
211.00	210.87	5.51	4.12	6.09	36.8	2.8	35.8
212.00	211.87	5.55	4.15	6.09	36.8	2.9	36.2
213.00	212.87	5.59	4.18	7.00	36.8	2.8	36.2
214.00	213.87	5.62	4.21	7.00	36.8	2.8	36.7
215.00	214.87	5.66	4.24	7.01	36.8	2.7	34.8
216.00	215.86	5.70	4.27	7.01	36.8	2.7	34.0
217.00	216.86	5.74	4.29	7.02	36.8	2.7	35.6
218.00	217.86	5.78	4.32	7.02	36.8	2.7	35.9
219.00	218.86	5.82	4.35	7.03	36.8	2.6	35.1
220.00	219.86	5.85	4.38	7.03	36.8	2.6	35.1
221.00	220.86	5.89	4.41	7.04	36.8	2.6	35.9
222.00	221.86	5.93	4.43	7.04	36.8	2.6	36.5
223.00	222.86	5.96	4.46	7.04	36.8	2.6	36.5
224.00	223.86	6.00	4.49	7.05	36.8	2.7	39.1
225.00	224.85	6.04	4.52	7.05	36.8	2.8	39.1
226.00	225.85	6.07	4.55	7.06	36.8	2.8	39.9
227.00	226.85	6.11	4.58	7.06	36.8	2.8	41.4
228.00	227.85	6.15	4.61	7.07	36.8	2.8	40.5
229.00	228.85	6.19	4.65	7.07	36.8	2.9	39.5
230.00	229.85	6.23	4.68	7.08	36.8	2.9	39.2
231.00	230.85	6.27	4.71	7.08	36.8	2.9	39.2
232.00	231.85	6.31	4.74	7.09	36.9	3.0	36.7
233.00	232.84	6.35	4.77	7.09	36.9	2.9	35.3
234.00	233.84	6.39	4.80	8.00	36.9	3.0	37.0
235.00	234.84	6.43	4.83	8.00	36.9	2.9	36.5
236.00	235.84	6.47	4.86	8.01	36.9	2.9	36.5
237.00	236.84	6.51	4.89	8.01	36.9	2.9	36.8
238.00	237.84	6.55	4.92	8.02	36.9	2.9	36.8
239.00	238.84	6.59	4.95	8.02	36.9	2.9	36.8
240.00	239.84	6.63	4.98	8.03	36.9	2.8	36.0
241.00	240.83	6.67	5.01	8.03	36.9	2.8	36.0
242.00	241.83	6.71	5.04	8.04	36.9	2.8	37.1
243.00	242.83	6.75	5.07	8.04	36.9	2.8	37.1
244.00	243.83	6.79	5.10	8.05	36.9	2.8	36.7
245.00	244.83	6.83	5.13	8.05	36.9	2.8	36.7
246.00	245.83	6.87	5.16	8.06	36.9	2.8	36.5
247.00	246.83	6.91	5.19	8.06	36.9	2.8	36.5
248.00	247.83	6.95	5.22	8.07	36.9	2.8	36.5
249.00	248.82	6.99	5.25	8.07	36.9	2.8	36.3
250.00	249.82	7.03	5.28	8.08	36.9	2.8	36.3
251.00	250.82	7.07	5.30	8.08	36.9	2.8	35.6
252.00	251.82	7.11	5.33	8.09	36.9	2.8	35.6
253.00	252.82	7.15	5.36	8.09	36.9	2.8	35.8
254.00	253.82	7.19	5.39	8.10	36.9	2.8	35.8
255.00	254.82	7.23	5.42	9.00	36.9	2.8	35.8
256.00	255.82	7.27	5.45	9.01	36.9	2.8	36.1
257.00	256.82	7.31	5.48	9.01	36.9	2.8	36.1
258.00	257.81	7.35	5.51	9.02	36.9	2.8	36.9
259.00	258.81	7.39	5.54	9.02	36.9	2.8	36.9
260.00	259.81	7.42	5.56	9.03	36.9	2.8	36.6
261.00	260.81	7.46	5.59	9.03	36.9	2.8	36.6
262.00	261.81	7.50	5.62	9.04	36.8	2.8	36.1
263.00	262.81	7.54	5.65	9.04	36.8	2.8	36.1
264.00	263.81	7.58	5.68	9.05	36.8	2.8	36.5
265.00	264.81	7.62	5.71	9.05	36.8	2.8	36.5
266.00	265.81	7.66	5.74	9.06	36.8	2.8	36.5
267.00	266.80	7.70	5.77	9.06	36.8	2.8	38.2
268.00	267.80	7.74	5.80	9.07	36.8	2.9	37.2
269.00	268.80	7.78	5.83	9.07	36.8	2.9	37.2
270.00	269.80	7.82	5.86	9.08	36.8	2.8	37.6
271.00	270.80	7.86	5.89	9.08	36.9	2.8	37.6
272.00	271.80	7.90	5.92	9.09	36.9	2.8	37.6
273.00	272.80	7.93	5.95	9.09	36.9	2.7	37.7
274.00	273.79	7.97	5.98	10.00	36.9	2.8	39.1
275.00	274.79	8.01	6.01	10.00	36.9	2.8	38.0
276.00	275.79	8.05	6.04	10.01	36.9	2.8	38.0
277.00	276.79	8.09	6.07	10.01	36.9	2.8	37.8
278.00	277.79	8.13	6.10	10.02	36.9	2.8	38.3
279.00	278.79	8.17	6.13	10.02	36.9	2.8	37.2
280.00	279.79	8.20	6.16	10.03	36.9	2.8	38.4
281.00	280.79	8.24	6.19	10.03	36.9	2.8	38.4
282.00	281.78	8.28	6.22	10.04	36.9	2.8	38.2
283.00	282.78	8.32	6.25	10.04	36.9	2.8	38.2
284.00	283.78	8.36	6.28	10.05	36.9	2.8	38.4
285.00	284.78	8.40	6.31	10.05	36.9	2.8	38.2
286.00	285.78	8.43	6.34	10.06	36.9	2.8	37.2
287.00	286.78	8.47	6.38	10.06	37.0	2.9	40.1
288.00	287.78	8.51	6.41	10.07	37.0	2.9	41.2
289.00	288.78	8.55	6.44	10.07	37.0	2.9	42.7
290.00	289.78	8.58	6.48	10.08	37.0	2.9	42.7
291.00	290.77	8.62	6.51	10.08	37.1	2.9	41.7
292.00	291.77	8.66	6.55	10.09	37.1	2.9	42.3
293.00	292.77	8.70	6.58	10.09	37.1	3.0	43.7
294.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0
293.87	293.64	8.73	6.61	11.0	37.1	3.1	42.3