

EXELON VICTORIA - OFFSET Boring B3131 (40.5'-42' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME75 (Miller)
Test date: 28-Jan-2009

AR: 1.22 in²
LE: 45.00 ft
WS: 16,807.9 f/s

SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

CSX: Max Measured Compr. Stress
TSX: Tension Stress Maximum
VMX: Maximum Velocity
FMX: Maximum Force
FVP: Force/Velocity proportionality

BPM: Blows per Minute
EF2: Energy of F²
ETR: Energy Transfer Ratio
EMX: Max Transferred Energy

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
3	21.3	15.7	15.2	26	0.8	62.3	0.256	73.4	0.257
4	22.7	17.5	15.1	28	0.8	60.8	0.274	77.2	0.270
5	22.4	14.8	15.9	27	0.8	62.1	0.280	80.1	0.280
6	23.0	15.2	15.6	28	0.8	60.0	0.280	78.9	0.276
7	22.2	15.3	16.1	27	0.8	60.9	0.272	77.2	0.270
8	22.8	14.9	15.8	28	0.8	60.7	0.280	80.5	0.282
9	23.0	15.4	15.5	28	0.8	60.3	0.281	80.9	0.283
10	22.2	13.9	16.4	27	0.8	60.3	0.277	79.7	0.279
11	23.0	14.1	15.6	28	0.8	60.8	0.279	78.7	0.275
12	22.4	13.5	16.4	27	0.7	59.9	0.281	79.9	0.280
13	22.8	13.2	15.9	28	0.8	61.7	0.277	80.3	0.281
14	22.4	12.3	16.2	27	0.7	59.8	0.277	80.2	0.281
15	22.4	12.7	16.1	27	0.8	61.1	0.275	79.8	0.279
16	22.5	13.2	15.2	27	0.8	59.9	0.273	80.4	0.282
17	22.2	13.2	15.4	27	0.7	60.7	0.269	77.7	0.272
18	22.0	12.8	16.5	27	0.7	59.6	0.277	80.3	0.281
19	22.1	12.6	14.9	27	0.7	60.7	0.272	76.7	0.268
20	21.4	13.1	16.6	26	0.7	61.2	0.269	77.3	0.270
21	22.2	12.5	15.5	27	0.8	59.6	0.274	79.5	0.278
22	22.3	12.6	15.2	27	0.8	61.1	0.269	77.0	0.269
23	22.3	12.9	16.1	27	0.7	59.1	0.279	81.0	0.284
24	21.7	12.3	17.6	26	0.6	61.2	0.271	80.1	0.280
Average	22.3	13.8	15.8	27	0.8	60.6	0.275	78.9	0.276

Total number of blows analyzed: 22

Time Summary

Drive 42 seconds

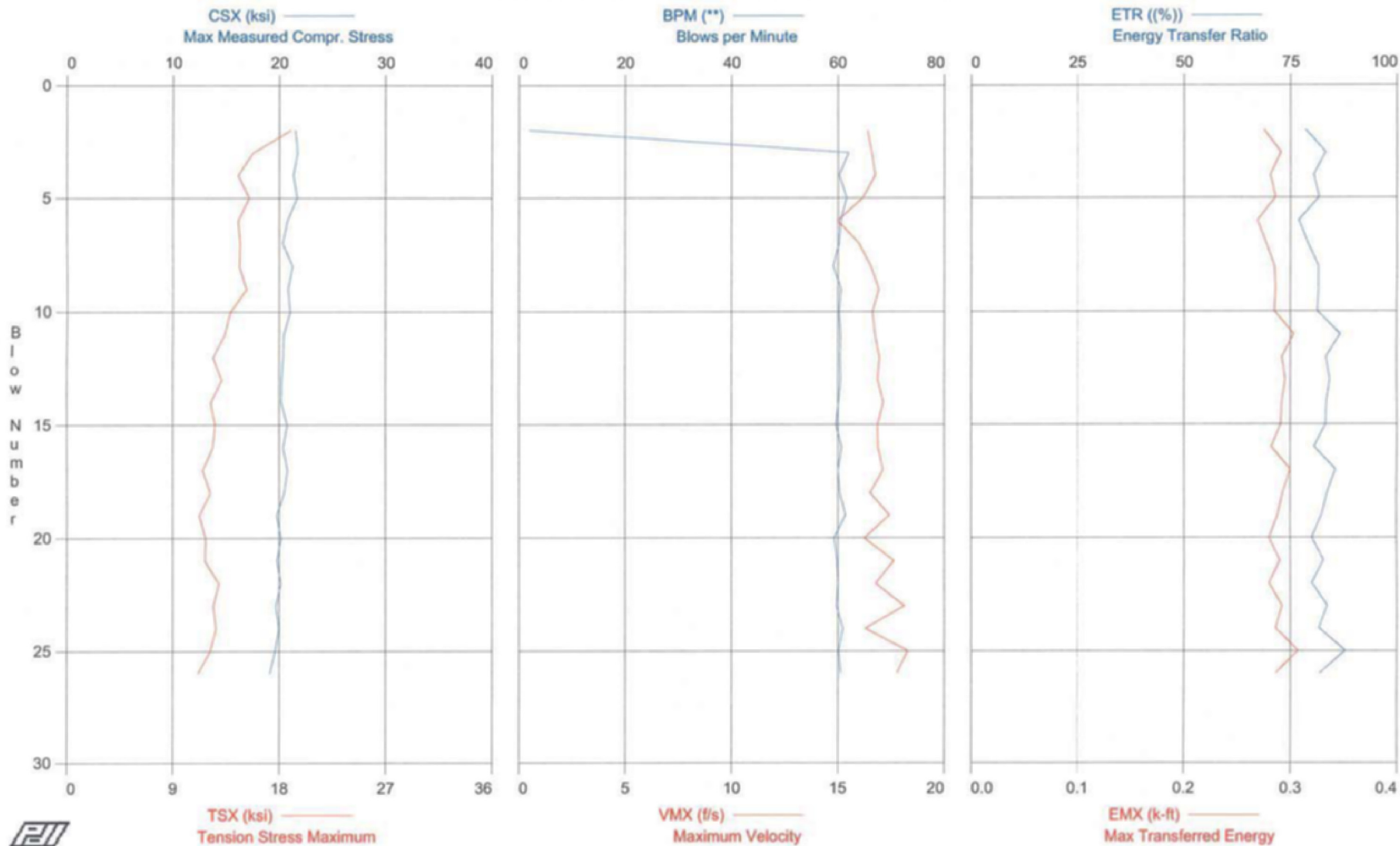
10:47:02 AM - 10:47:44 AM (1/28/2009) BN 1 - 24

PDIPLOT Ver. 2008.2 - Printed: 5-Mar-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 28-Jan-2009

EXELON VICTORIA - OFFSET Boring B3131 (45.2'-46.7' sample)



EXELON VICTORIA - OFFSET Boring B3131 (45.2'-46.7' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME 75 (Miller)
Test date: 28-Jan-2009

AR: 1.22 in² SP: 0.492 k/ft³
LE: 51.00 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

CSX: Max Measured Compr. Stress
TSX: Tension Stress Maximum
VMX: Maximum Velocity
FMX: Maximum Force
FVP: Force/Velocity proportionality

BPM: Blows per Minute
EF2: Energy of F²
ETR: Energy Transfer Ratio
EMX: Max Transferred Energy

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
2	21.5	19.0	16.4	26	0.7	1.9	0.256	78.5	0.275
3	21.7	15.8	16.6	26	0.7	62.0	0.276	83.2	0.291
4	21.3	14.5	16.8	26	0.7	60.2	0.266	80.4	0.281
5	21.7	15.4	16.2	26	0.8	61.6	0.274	81.7	0.286
6	20.7	14.5	15.0	25	0.8	60.5	0.256	76.9	0.269
7	20.3	14.7	16.0	25	0.7	60.2	0.265	79.0	0.277
8	21.2	14.6	16.6	26	0.7	59.1	0.268	81.5	0.285
9	20.8	15.2	16.9	25	0.7	60.6	0.271	81.6	0.286
10	21.0	13.9	16.6	26	0.7	60.2	0.265	81.3	0.285
11	20.4	13.4	16.7	25	0.7	60.5	0.270	86.7	0.303
12	20.4	12.4	17.0	25	0.7	60.4	0.264	83.3	0.292
13	20.2	13.1	16.9	25	0.7	60.5	0.270	84.2	0.295
14	20.2	12.2	17.1	25	0.7	60.1	0.265	83.4	0.292
15	20.7	12.6	16.9	25	0.7	59.6	0.268	83.2	0.291
16	20.4	12.4	16.9	25	0.7	60.7	0.262	80.6	0.282
17	20.8	11.5	17.1	25	0.7	60.0	0.271	85.6	0.300
18	20.5	12.2	16.5	25	0.6	60.3	0.265	83.7	0.293
19	19.8	11.2	17.4	24	0.6	61.4	0.260	82.3	0.288
20	20.2	11.8	16.2	25	0.6	59.3	0.262	80.0	0.280
21	19.8	11.7	17.6	24	0.6	59.8	0.264	82.7	0.290
22	20.2	12.9	16.8	25	0.7	60.0	0.261	80.0	0.280
23	19.7	12.4	18.1	24	0.6	59.7	0.262	83.6	0.292
24	20.0	12.7	16.3	24	0.6	60.9	0.259	81.7	0.286
25	19.6	12.2	18.3	24	0.6	60.1	0.268	87.8	0.307
26	19.1	11.1	17.8	23	0.6	60.5	0.256	81.8	0.286
Average	20.5	13.3	16.8	25	0.7	58.0	0.265	82.2	0.288

Total number of blows analyzed: 25

Time Summary

Drive 34 seconds

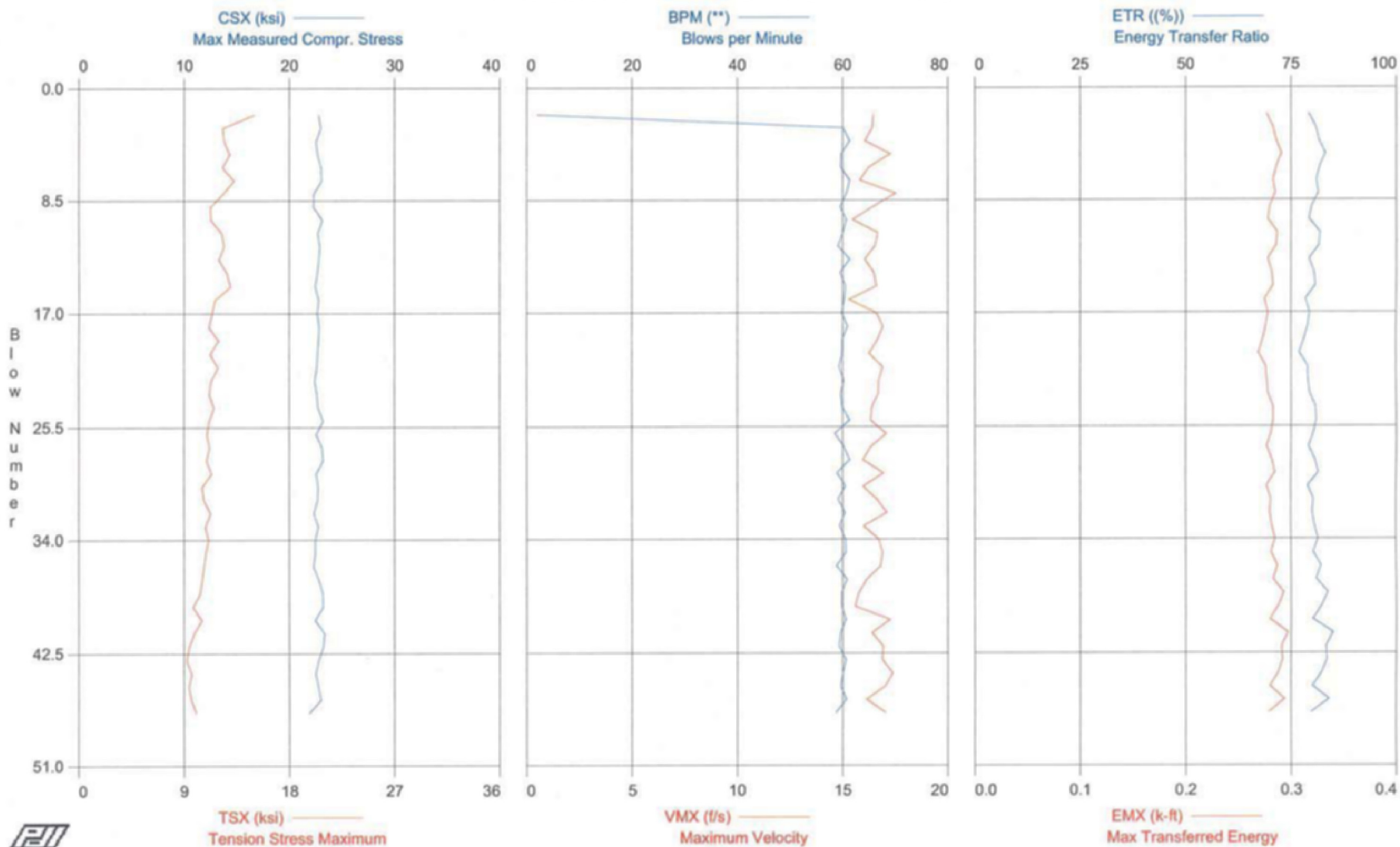
11:22:17 AM - 11:22:51 AM (1/28/2009) BN 1 - 26

PDIPLOT Ver. 2008.2 - Printed: 12-Mar-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 28-Jan-2009

EXELON VICTORIA - OFFSET Boring B3131 (50.2'-51.7' sample)



EXELON VICTORIA - OFFSET Boring B3131 (50.2'-51.7' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME 75 (Miller)
Test date: 28-Jan-2009

AR: 1.22 in² SP: 0.492 k/ft³
LE: 56.00 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

CSX: Max Measured Compr. Stress
TSX: Tension Stress Maximum
VMX: Maximum Velocity
FMX: Maximum Force
FVP: Force/Velocity proportionality

BPM: Blows per Minute
EF2: Energy of F²
ETR: Energy Transfer Ratio
EMX: Max Transferred Energy

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
2	22.8	15.0	16.5	28	0.7	1.9	0.284	79.2	0.277
3	23.0	12.3	16.4	28	0.7	60.0	0.283	80.9	0.283
4	22.5	12.4	16.1	27	0.8	61.3	0.276	81.6	0.286
5	22.7	12.9	17.3	28	0.7	59.7	0.292	83.2	0.291
6	23.0	12.3	16.2	28	0.8	59.6	0.285	81.8	0.286
7	23.0	13.3	15.8	28	0.7	61.3	0.286	81.0	0.283
8	22.3	12.3	17.5	27	0.7	60.7	0.283	81.5	0.285
9	22.3	11.3	16.4	27	0.8	59.5	0.284	79.9	0.280
10	23.1	11.3	15.5	28	0.7	60.7	0.279	79.3	0.278
11	22.7	12.2	16.7	28	0.8	60.0	0.279	81.9	0.287
12	22.9	12.4	16.5	28	0.8	59.1	0.288	81.6	0.286
13	22.8	12.0	16.0	28	0.8	61.3	0.281	79.3	0.278
14	22.7	12.7	16.5	28	0.8	59.5	0.285	80.5	0.282
15	22.4	13.0	16.6	27	0.8	60.5	0.281	80.8	0.283
16	22.8	11.6	15.3	28	0.7	60.3	0.269	78.5	0.275
17	22.6	11.4	16.6	28	0.7	59.8	0.278	79.4	0.278
18	22.8	11.1	16.9	28	0.7	60.9	0.274	79.0	0.276
19	22.8	12.0	16.6	28	0.8	59.9	0.279	78.0	0.273
20	22.7	11.2	16.3	28	0.8	59.9	0.275	76.9	0.269
21	22.6	11.9	16.9	28	0.7	59.3	0.281	78.9	0.276
22	22.4	11.3	16.7	27	0.7	60.2	0.277	79.0	0.277
23	22.6	11.2	16.7	28	0.8	59.6	0.281	79.4	0.278
24	22.7	11.6	16.4	28	0.8	59.9	0.281	80.8	0.283
25	23.2	11.1	16.3	28	0.7	61.3	0.285	81.0	0.283
26	22.5	11.0	17.1	28	0.7	58.5	0.285	80.3	0.281
27	23.1	11.2	16.3	28	0.7	60.2	0.281	79.2	0.277
28	23.2	10.9	16.0	28	0.7	61.3	0.281	80.6	0.282
29	22.5	11.4	16.9	28	0.7	58.9	0.281	81.5	0.285
30	22.7	10.5	16.0	28	0.8	60.5	0.277	79.0	0.277
31	22.7	10.7	16.6	28	0.7	59.1	0.278	80.3	0.281
32	22.3	11.3	17.1	27	0.7	60.4	0.276	80.1	0.280
33	22.7	10.8	16.0	28	0.8	59.4	0.280	80.6	0.282
34	22.5	11.1	16.7	27	0.8	60.5	0.276	81.4	0.285
35	22.5	10.9	16.9	27	0.7	60.6	0.279	80.2	0.281
36	22.3	10.7	16.8	27	0.7	58.8	0.280	82.1	0.287
37	22.8	10.5	16.1	28	0.8	60.8	0.277	80.9	0.283
38	23.2	10.4	15.8	28	0.7	59.8	0.282	83.7	0.293
39	23.2	9.8	15.6	28	0.7	59.8	0.282	82.2	0.288
40	22.4	10.5	17.3	27	0.7	60.6	0.279	80.1	0.280
41	23.3	9.9	16.4	28	0.7	59.6	0.288	84.9	0.297
42	23.2	9.4	16.9	28	0.7	59.3	0.288	83.3	0.291
43	22.8	9.2	16.9	28	0.8	60.6	0.280	83.5	0.292
44	22.5	9.7	17.4	27	0.7	60.0	0.281	82.3	0.288
45	22.7	9.4	17.0	28	0.7	59.6	0.278	80.1	0.280
46	23.0	9.6	16.1	28	0.7	60.7	0.282	84.0	0.294
47	21.9	10.1	17.0	27	0.7	58.7	0.273	79.7	0.279
Average	22.7	11.3	16.5	28	0.7	58.8	0.281	80.7	0.283

Total number of blows analyzed: 46

Time Summary

Drive 8 minutes 20 seconds

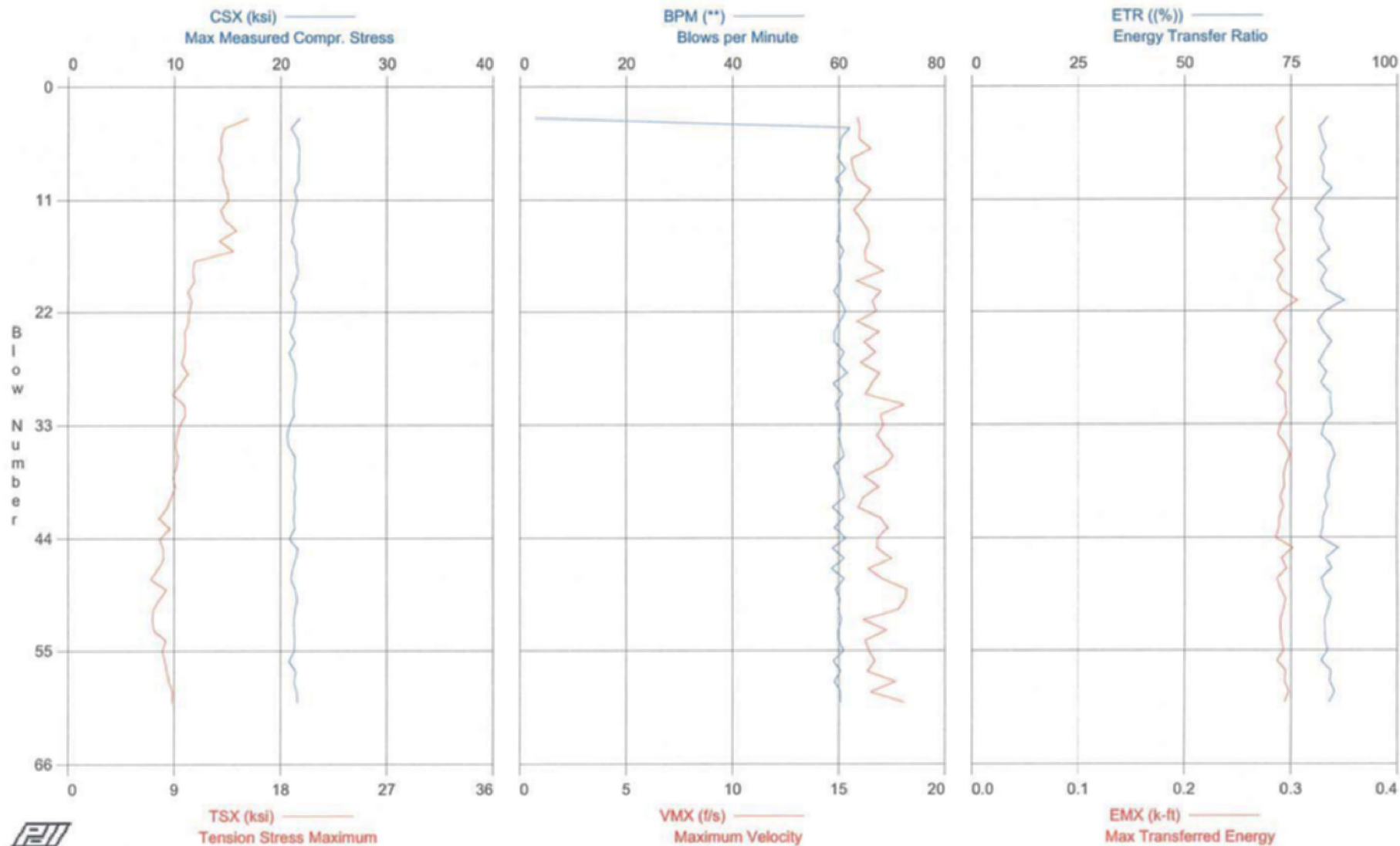
11:27:16 AM - 11:35:36 AM (1/28/2009) BN 1 - 47

PDIPLOT Ver. 2008.2 - Printed: 5-Mar-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 28-Jan-2009

EXELON VICTORIA - OFFSET Boring B3131 (55.2'-56.7' sample)



EXELON VICTORIA - OFFSET Boring B3131 (55.2'-56.7' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME 75 (Miller)
Test date: 28-Jan-2009

AR: 1.22 in² SP: 0.492 k/ft³
LE: 61.00 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

CSX: Max Measured Compr. Stress BPM: Blows per Minute
TSX: Tension Stress Maximum EF2: Energy of F²
VMX: Maximum Velocity ETR: Energy Transfer Ratio
FMX: Maximum Force EMX: Max Transferred Energy
FVP: Force/Velocity proportionality

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
3	21.8	15.2	15.9	27	0.8	2.8	0.271	83.7	0.293
4	21.0	13.2	16.0	26	0.7	62.0	0.266	81.6	0.286
5	21.6	12.9	15.9	26	0.7	60.4	0.272	82.3	0.288
6	21.7	13.0	16.5	27	0.7	60.1	0.273	83.3	0.291
7	21.7	12.8	15.6	26	0.8	59.8	0.274	81.8	0.286
8	21.7	13.1	15.7	26	0.7	61.2	0.274	82.8	0.290
9	21.7	13.1	15.9	26	0.7	59.4	0.275	82.3	0.288
10	21.3	13.5	16.5	26	0.7	60.6	0.275	84.5	0.296
11	21.5	13.6	16.2	26	0.7	59.9	0.274	82.3	0.288
12	21.3	12.9	15.7	26	0.7	60.1	0.269	80.6	0.282
13	21.1	13.3	16.1	26	0.7	60.1	0.275	82.6	0.289
14	21.3	14.3	16.4	26	0.7	60.2	0.272	81.8	0.286
15	21.0	12.8	16.4	26	0.7	59.6	0.278	82.6	0.289
16	21.5	14.0	16.2	26	0.7	60.9	0.271	84.1	0.294
17	21.5	10.7	16.3	26	0.7	60.0	0.266	81.2	0.284
18	21.6	10.5	17.1	26	0.7	60.3	0.272	83.4	0.292
19	21.4	10.7	15.8	26	0.7	60.3	0.267	81.9	0.287
20	21.0	10.1	17.0	26	0.7	59.1	0.277	83.2	0.291
21	21.4	10.5	16.6	26	0.7	60.3	0.277	87.5	0.306
22	21.4	10.2	16.8	26	0.7	61.3	0.271	83.2	0.291
23	21.3	10.2	15.8	26	0.7	60.2	0.266	81.2	0.284
24	20.9	9.9	16.9	25	0.7	59.2	0.268	82.5	0.289
25	21.4	9.9	16.2	26	0.7	59.2	0.273	84.5	0.296
26	20.8	9.9	16.7	25	0.7	61.0	0.269	82.9	0.290
27	21.3	9.6	16.0	26	0.7	59.8	0.267	81.5	0.285
28	21.5	10.2	16.9	26	0.7	61.6	0.271	83.4	0.292
29	21.4	9.5	16.5	26	0.7	59.0	0.267	82.0	0.287
30	21.3	8.9	16.3	26	0.7	60.7	0.272	84.3	0.295
31	21.2	9.9	18.1	26	0.7	59.4	0.273	84.3	0.295
32	21.3	10.0	17.0	26	0.7	60.2	0.265	84.7	0.296
33	20.8	9.5	17.1	25	0.7	60.4	0.266	82.8	0.290
34	20.6	9.3	16.8	25	0.7	60.0	0.268	82.2	0.288
35	20.8	9.1	17.2	25	0.7	60.4	0.269	84.4	0.295
36	21.4	9.3	17.6	26	0.7	61.0	0.269	85.3	0.299
37	21.4	9.2	17.2	26	0.7	59.1	0.270	84.2	0.295
38	21.3	8.9	16.2	26	0.7	60.0	0.269	83.7	0.293
39	21.4	9.1	16.9	26	0.7	60.5	0.269	84.0	0.294
40	21.3	8.7	16.2	26	0.7	61.1	0.267	83.0	0.290
41	21.4	8.4	15.9	26	0.8	58.8	0.270	83.6	0.293
42	21.2	7.7	17.0	26	0.7	60.9	0.266	82.6	0.289
43	21.4	8.7	17.3	26	0.7	59.2	0.268	82.5	0.289
44	20.8	7.8	16.8	25	0.7	61.3	0.264	81.8	0.286
45	21.6	8.1	16.8	26	0.7	58.8	0.274	86.2	0.302
46	21.5	8.1	17.5	26	0.7	61.0	0.270	83.2	0.291
47	21.1	7.6	16.4	26	0.7	58.6	0.270	84.5	0.296
48	21.0	7.0	17.1	26	0.7	61.0	0.265	82.1	0.287
49	21.4	8.3	18.2	26	0.7	59.4	0.271	82.8	0.290
50	21.6	7.7	18.1	26	0.7	60.2	0.275	84.3	0.295
51	21.4	7.2	17.8	26	0.7	59.9	0.268	83.7	0.293
52	21.3	7.1	16.1	26	0.7	60.5	0.268	82.9	0.290
53	21.3	7.3	17.2	26	0.7	59.9	0.264	82.9	0.290
54	21.3	8.3	16.3	26	0.7	59.9	0.269	83.0	0.291
55	21.3	8.0	16.4	26	0.7	60.9	0.270	83.6	0.293
56	20.8	8.2	16.7	25	0.7	59.0	0.266	82.0	0.287
57	21.5	8.4	16.3	26	0.7	60.3	0.274	84.3	0.295
58	21.3	8.6	17.7	26	0.7	59.2	0.272	84.1	0.294
59	21.5	8.9	16.5	26	0.7	60.3	0.277	85.2	0.298
60	21.6	8.8	18.1	26	0.7	60.3	0.276	83.9	0.294
Average	21.3	10.0	16.7	26	0.7	59.1	0.270	83.2	0.291

Total number of blows analyzed: 58

Time Summary

Drive 3 minutes 53 seconds

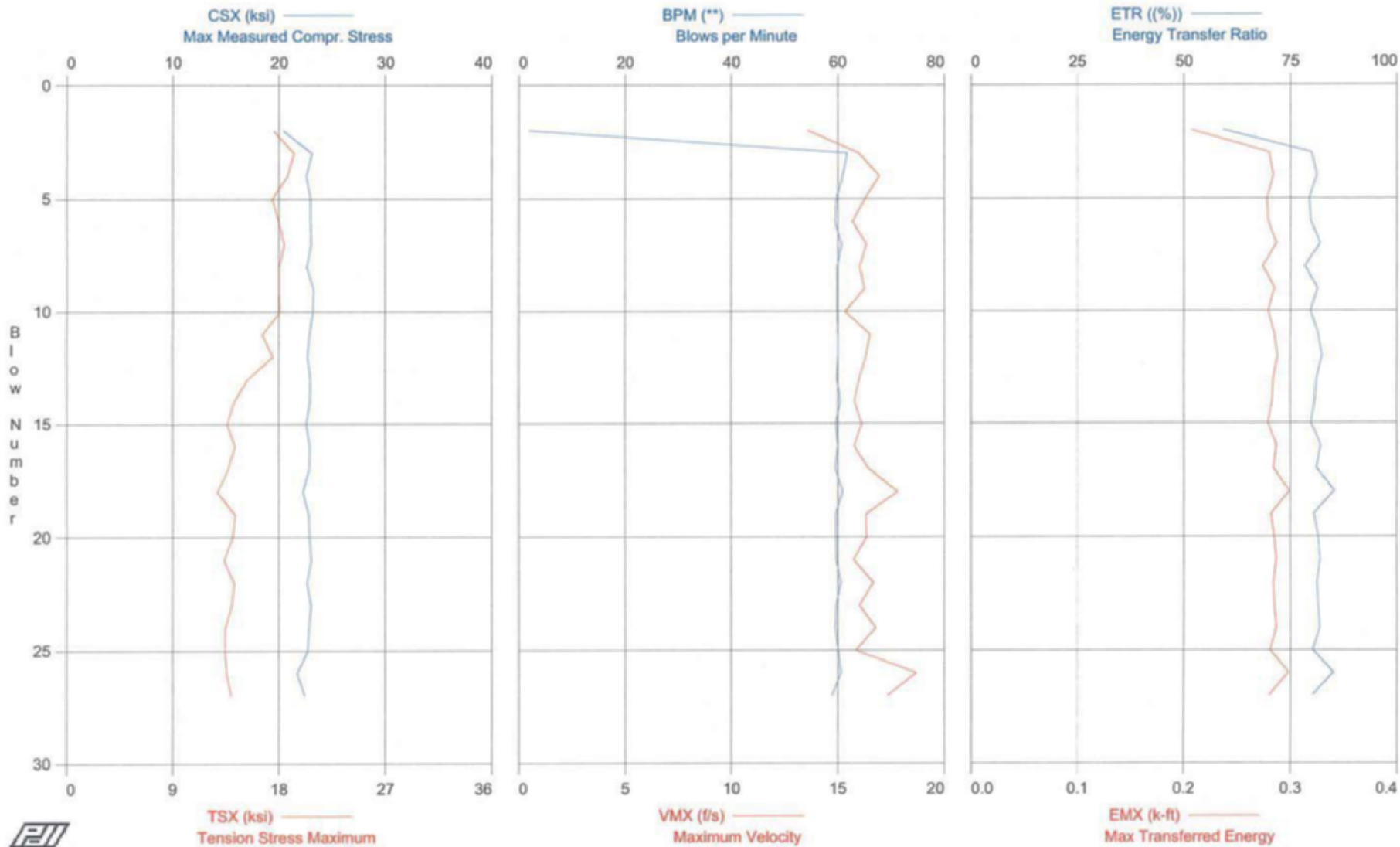
11:42:36 AM - 11:46:29 AM (1/28/2009) BN 1 - 60

PDILOT Ver. 2008.2 - Printed: 5-Mar-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 28-Jan-2009

EXELON VICTORIA - OFFSET Boring B3131 (60.2'-61.7" sample)



EXELON VICTORIA - OFFSET Boring B3131 (60.2'-61.7' sample)
OP: JNH

Hammer ID:100; Driller: J.COOK CME 75 (MACTEC)
Test date: 28-Jan-2009

AR: 1.22 in² SP: 0.492 k/ft³
LE: 66.00 ft EM: 30.000 ksi
WS: 16,807.9 f/s JC: 0.70

CSX: Max Measured Compr. Stress BPM: Blows per Minute
TSX: Tension Stress Maximum EF2: Energy of F²
VMX: Maximum Velocity ETR: Energy Transfer Ratio
FMX: Maximum Force EMX: Max Transferred Energy
FVP: Force/Velocity proportionality

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
2	20.4	17.5	13.6	25	0.8	1.9	0.203	59.2	0.207
3	23.1	19.3	16.0	28	0.7	61.7	0.278	80.0	0.280
4	22.5	18.7	16.9	28	0.7	60.9	0.281	81.1	0.284
5	22.9	17.4	16.3	28	0.8	59.7	0.280	79.4	0.278
6	23.0	18.0	15.7	28	0.7	59.4	0.279	79.7	0.279
7	23.0	18.4	16.3	28	0.7	60.7	0.283	82.0	0.287
8	22.6	18.0	16.0	28	0.8	59.9	0.275	78.3	0.274
9	23.2	18.0	16.2	28	0.7	59.9	0.291	81.3	0.285
10	23.2	18.1	15.3	28	0.8	59.9	0.282	79.7	0.279
11	22.9	16.6	16.5	28	0.7	60.0	0.290	81.5	0.285
12	22.7	17.5	16.3	28	0.8	60.0	0.291	82.4	0.288
13	22.9	15.4	16.0	28	0.8	59.8	0.283	81.1	0.284
14	22.9	14.2	15.8	28	0.7	60.5	0.283	80.7	0.283
15	22.6	13.6	16.1	28	0.8	59.6	0.282	79.8	0.279
16	22.9	14.3	15.8	28	0.8	60.0	0.287	82.1	0.287
17	22.8	13.7	16.5	28	0.7	59.5	0.287	81.0	0.284
18	22.2	12.8	17.8	27	0.7	60.9	0.286	85.3	0.299
19	22.8	14.3	16.3	28	0.7	59.6	0.281	80.5	0.282
20	22.9	14.1	16.4	28	0.7	59.6	0.285	81.5	0.285
21	23.0	13.4	15.7	28	0.8	59.7	0.293	82.0	0.287
22	22.6	14.2	16.7	28	0.8	60.6	0.285	81.1	0.284
23	23.0	14.0	16.0	28	0.8	59.7	0.292	81.5	0.285
24	22.8	13.5	16.8	28	0.7	59.5	0.290	81.9	0.287
25	22.7	13.4	15.9	28	0.7	60.1	0.285	80.2	0.281
26	21.7	13.6	18.7	26	0.6	60.6	0.286	85.0	0.298
27	22.4	14.0	17.3	27	0.7	58.9	0.276	80.1	0.280
Average	22.7	15.6	16.3	28	0.7	57.8	0.281	80.3	0.281

Total number of blows analyzed: 26

Time Summary

Drive 3 minutes 18 seconds

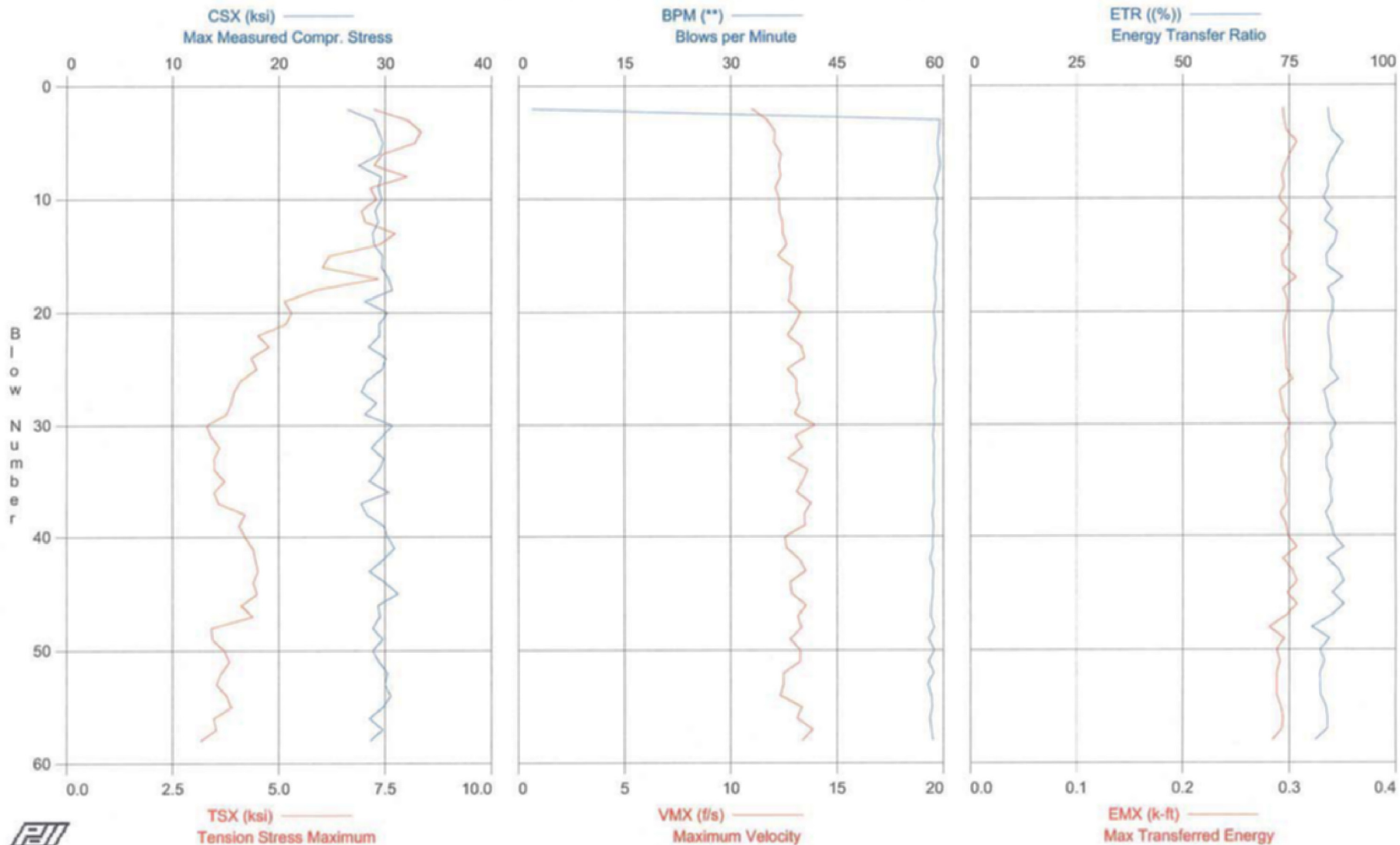
11:53:41 AM - 11:56:59 AM (1/28/2009) BN 1 - 27

PDIPLOT Ver. 2008.1 - Printed: 23-Feb-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 24-Jan-2009

EXELON COL VICTORIA - Boring B3131 (318'-319.5' sample)



EXELON COL VICTORIA - Boring B3131 (318'-319.5' sample)
OP: JNH

Hammer ID:100; Driller: J.COOK CME 75 (Miller)
Test date: 24-Jan-2009

AR: 1.43 in² SP: 0.492 k/ft³
LE: 324.00 ft EM: 30,000 ksi
WS: 16,807.9 f/s JC: 0.70

CSX: Max Measured Compr. Stress BPM: Blows per Minute
TSX: Tension Stress Maximum EF2: Energy of F²
VMX: Maximum Velocity ETR: Energy Transfer Ratio
FMX: Maximum Force EMX: Max Transferred Energy
FVP: Force/Velocity proportionality

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
2	26.4	7.2	11.0	38	1.3	1.9	0.339	84.1	0.294
3	28.9	8.0	11.7	41	1.4	59.5	0.349	84.3	0.295
4	29.4	8.3	12.1	42	1.4	59.4	0.349	85.0	0.297
5	29.8	8.2	12.0	43	1.4	59.2	0.354	87.6	0.307
6	29.5	7.4	12.4	42	1.3	59.3	0.351	86.0	0.301
7	27.5	7.2	12.3	39	1.2	59.5	0.346	84.5	0.296
8	29.6	8.0	12.4	42	1.3	59.2	0.344	83.8	0.293
9	29.4	7.1	12.1	42	1.4	58.7	0.349	84.2	0.295
10	29.6	7.3	12.3	42	1.4	59.2	0.344	82.9	0.290
11	29.1	6.9	12.3	42	1.3	59.0	0.342	85.0	0.298
12	29.3	7.0	12.4	42	1.3	59.1	0.346	83.2	0.291
13	28.8	7.7	12.4	41	1.1	58.7	0.350	86.2	0.302
14	29.0	7.4	12.6	41	1.3	59.1	0.353	85.6	0.300
15	29.7	6.2	12.2	43	1.4	58.9	0.349	83.6	0.293
16	29.7	6.0	12.9	42	1.3	58.9	0.347	83.9	0.294
17	30.3	7.3	12.8	43	1.3	58.7	0.349	87.4	0.306
18	30.6	5.9	12.8	44	1.3	58.9	0.354	84.0	0.294
19	28.1	5.1	12.7	40	1.2	58.9	0.353	85.2	0.298
20	30.2	5.3	13.3	43	1.3	58.6	0.349	85.2	0.298
21	29.4	5.2	13.0	42	1.1	58.8	0.351	84.2	0.295
22	29.5	4.5	12.7	42	1.1	58.9	0.349	84.1	0.295
23	28.5	4.8	13.3	41	1.1	58.7	0.346	84.6	0.296
24	30.1	4.3	13.5	43	1.2	58.6	0.355	84.8	0.297
25	29.7	4.5	12.7	42	1.0	58.7	0.348	84.7	0.297
26	28.3	4.1	13.1	40	1.2	58.9	0.350	86.5	0.303
27	27.7	4.0	13.1	40	1.2	58.7	0.348	83.1	0.291
28	29.2	3.9	13.3	42	1.1	58.7	0.352	83.8	0.293
29	28.1	3.8	13.0	40	1.2	58.6	0.349	84.3	0.295
30	30.7	3.3	14.0	44	1.2	58.7	0.357	85.9	0.301
31	29.7	3.4	13.0	42	1.3	58.5	0.354	84.6	0.296
32	28.7	3.6	13.4	41	1.1	58.7	0.352	85.0	0.297
33	29.9	3.5	12.7	43	1.3	58.6	0.351	83.7	0.293
34	29.4	3.5	13.6	42	1.1	58.7	0.355	83.8	0.293
35	28.5	3.7	13.4	41	1.2	58.6	0.353	84.9	0.297
36	30.3	3.5	13.1	43	1.0	58.6	0.351	84.6	0.296
37	27.7	3.6	13.8	40	1.1	58.7	0.344	85.0	0.298
38	28.3	4.2	13.5	40	1.2	58.4	0.349	83.5	0.292
39	29.9	4.1	13.5	43	1.1	58.6	0.350	84.9	0.297
40	30.2	4.2	12.5	43	1.3	58.5	0.350	85.5	0.299
41	30.9	4.4	12.6	44	1.4	58.5	0.350	87.8	0.307
42	29.8	4.4	13.2	43	1.0	58.1	0.352	83.9	0.294
43	28.5	4.5	13.5	41	1.1	58.6	0.351	86.6	0.303
44	30.0	4.4	12.8	43	1.0	58.5	0.352	87.8	0.307
45	31.2	4.5	12.9	45	1.4	58.5	0.352	85.1	0.298
46	29.3	4.1	13.5	42	1.2	58.3	0.352	87.7	0.307
47	29.5	4.4	13.1	42	1.1	58.2	0.348	84.8	0.297
48	28.8	3.4	13.3	41	1.2	58.7	0.341	80.2	0.281
49	29.8	3.4	12.8	43	0.9	57.9	0.341	84.4	0.295
50	28.8	3.7	13.3	41	1.1	58.7	0.347	82.2	0.288
51	29.4	3.8	13.3	42	1.1	57.9	0.344	83.1	0.291
52	30.2	3.6	12.5	43	1.4	58.6	0.344	82.2	0.288
53	30.0	3.5	12.5	43	1.4	57.8	0.340	82.2	0.288
54	30.5	3.8	12.3	44	1.0	58.3	0.343	82.3	0.288
55	29.8	3.9	13.3	43	1.0	58.4	0.344	83.5	0.292
56	28.5	3.5	13.1	41	1.2	58.1	0.349	83.9	0.294
57	29.8	3.5	13.9	43	1.0	58.3	0.346	83.9	0.293
58	28.5	3.2	13.4	41	1.1	58.5	0.341	81.0	0.284
Average	29.3	5.0	12.9	42	1.2	57.7	0.349	84.5	0.296

Total number of blows analyzed: 57

Time Summary

Drive 8:40:54 AM - 8:40:54 AM (1/24/2009) BN 1 - 1
Stop 17 minutes 50 seconds 8:40:54 AM - 8:58:44 AM
Drive 58 seconds 8:58:44 AM - 8:59:42 AM BN 2 - 58

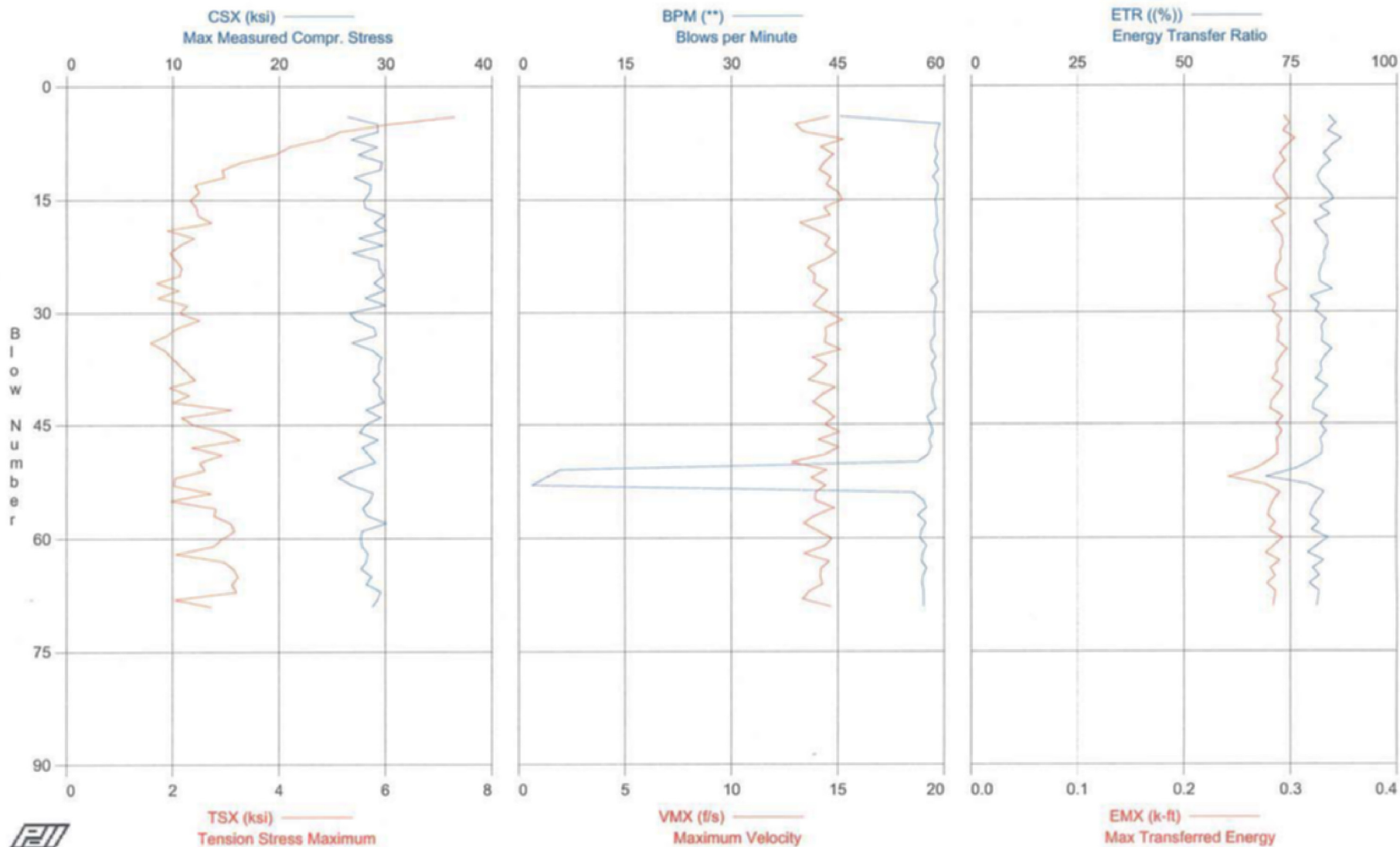
Total time [0:18:48] = (Driving [0:00:58] + Stop [0:17:50])

PDIPLOT Ver. 2008.2 - Printed: 8-Apr-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 24-Jan-2009

EXELON COL VICTORIA - Boring B3131 (328.5'-329.25' sample)



EXELON COL VICTORIA - Boring B3131 (328.5'-329.25' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME 75 (Miller)
Test date: 24-Jan-2009

AR: 1.43 in²
LE: 334.00 ft
WS: 16,807.9 f/s

SP: 0.492 k/ft³
EM: 30,000 ksi
JC: 0.70

CSX: Max Measured Compr. Stress
TSX: Tension Stress Maximum
VMX: Maximum Velocity
FMX: Maximum Force
FVP: Force/Velocity proportionality

BPM: Blows per Minute
EF2: Energy of F²
ETR: Energy Transfer Ratio
EMX: Max Transferred Energy

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
4	26.4	7.3	14.6	38	1.0	45.3	0.353	83.9	0.294
5	29.2	6.1	13.0	42	1.3	59.4	0.359	85.6	0.299
6	29.3	5.1	13.4	42	0.9	59.0	0.356	83.7	0.293
7	26.8	4.8	15.3	38	1.0	58.8	0.347	86.9	0.304
8	29.2	4.2	14.2	42	0.9	58.7	0.353	84.5	0.296
9	27.4	3.9	14.8	39	1.0	59.1	0.351	82.8	0.290
10	29.7	3.3	14.4	42	0.9	58.6	0.354	84.3	0.295
11	29.5	2.9	14.1	42	0.9	59.2	0.353	82.2	0.288
12	27.0	3.0	14.7	39	1.0	58.4	0.350	81.2	0.284
13	28.6	2.4	14.5	41	0.9	59.1	0.354	82.0	0.287
14	28.5	2.5	15.0	41	0.9	59.1	0.352	83.9	0.294
15	27.9	2.3	15.2	40	1.0	58.7	0.353	85.2	0.298
16	28.1	2.5	14.4	40	1.1	58.9	0.355	81.8	0.286
17	29.9	2.5	14.6	43	0.9	58.9	0.355	84.2	0.295
18	28.9	2.7	13.2	41	0.9	59.1	0.352	80.5	0.282
19	30.1	1.9	14.0	43	0.9	58.6	0.353	81.9	0.287
20	27.5	2.4	14.6	39	1.0	58.7	0.357	83.4	0.292
21	29.8	2.1	14.4	43	0.9	59.0	0.356	83.8	0.293
22	26.9	1.9	14.9	38	1.0	59.1	0.352	82.9	0.290
23	29.4	2.1	14.4	42	1.1	58.7	0.357	83.0	0.291
24	29.4	2.2	13.6	42	0.9	58.6	0.356	82.1	0.287
25	29.8	2.1	13.9	43	1.2	58.7	0.353	81.6	0.286
26	28.9	1.7	13.9	41	0.9	59.1	0.353	81.9	0.287
27	29.9	2.1	14.5	43	0.9	58.1	0.361	84.8	0.297
28	28.1	1.7	14.2	40	1.1	58.8	0.355	79.7	0.279
29	30.0	2.3	13.9	43	0.9	58.8	0.355	81.7	0.286
30	26.6	2.1	14.6	38	1.0	58.6	0.349	80.8	0.283
31	27.2	2.5	15.2	39	1.0	58.6	0.340	83.3	0.292
32	28.9	2.1	14.4	41	1.1	58.6	0.353	82.3	0.288
33	29.1	1.9	14.4	42	0.9	58.7	0.355	82.6	0.289
34	26.9	1.6	14.4	38	1.0	58.1	0.357	82.4	0.288
35	28.7	1.8	15.1	41	0.9	58.2	0.355	84.8	0.297
36	29.6	2.0	13.8	42	1.2	58.8	0.358	83.0	0.291
37	29.4	2.1	14.5	42	1.1	58.2	0.356	82.1	0.287
38	29.4	2.3	14.2	42	1.2	58.7	0.358	82.4	0.288
39	28.8	2.4	13.6	41	1.2	58.8	0.357	81.0	0.283
40	29.5	1.9	14.9	42	0.9	58.4	0.358	83.7	0.293
41	29.4	2.3	14.3	42	1.2	58.3	0.350	82.2	0.288
42	29.8	2.0	13.8	43	1.2	58.5	0.355	80.6	0.282
43	28.2	3.1	14.4	40	1.1	58.8	0.353	80.2	0.281
44	29.6	2.2	14.9	42	0.9	57.6	0.358	83.6	0.293
45	28.1	2.4	14.4	40	1.1	58.1	0.354	82.0	0.287
46	27.6	3.0	15.1	39	1.0	58.4	0.354	83.4	0.292
47	29.3	3.3	14.1	42	0.9	57.9	0.358	82.0	0.287
48	27.8	2.4	15.1	40	1.0	58.2	0.359	82.4	0.288
49	28.4	2.9	14.4	41	1.1	57.8	0.353	82.3	0.288
50	29.0	2.5	12.8	42	0.8	56.3	0.350	79.7	0.279
51	27.0	2.6	14.5	39	1.0	5.8	0.325	76.0	0.266
52	25.6	2.0	13.7	37	1.0	3.8	0.305	69.3	0.242
53	26.9	2.0	14.4	38	1.0	1.9	0.338	79.2	0.277
54	28.8	2.7	13.9	41	0.9	55.6	0.353	82.9	0.290
55	28.6	2.0	13.9	41	1.1	57.0	0.358	81.5	0.285
56	27.9	2.8	14.8	40	1.1	57.5	0.348	80.3	0.281
57	28.3	2.8	13.9	40	1.1	56.3	0.346	79.6	0.279
58	30.1	3.1	13.4	43	0.9	57.4	0.350	81.7	0.286
59	27.8	3.2	14.1	40	1.0	56.8	0.344	80.0	0.280
60	27.7	2.9	14.7	40	1.1	56.6	0.357	83.8	0.293
61	27.8	2.8	14.4	40	1.1	57.5	0.348	81.3	0.285
62	28.3	2.1	13.4	41	1.0	57.0	0.348	79.1	0.277
63	28.2	3.0	14.6	40	1.0	56.8	0.355	82.8	0.290
64	27.7	3.1	14.2	40	1.1	57.5	0.337	80.2	0.281
65	28.7	3.2	14.2	41	1.1	57.0	0.348	81.7	0.286
66	28.2	3.1	14.3	40	1.0	56.9	0.334	79.5	0.278
67	29.5	3.2	13.6	42	1.2	57.1	0.353	81.6	0.286
68	29.3	2.0	13.4	42	0.9	57.1	0.345	81.4	0.285

EXELON COL VICTORIA - Boring B3131 (328.5'-329.25' sample)
OP: JNH

Hammer ID: 100; Driller: J.COOK CME 75 (Miller)
Test date: 24-Jan-2009

BL#	CSX ksi	TSX ksi	VMX f/s	FMX kips	FVP []	BPM **	EF2 k-ft	ETR (%)	EMX k-ft
69	28.7	2.7	14.7	41	1.1	57.1	0.349	81.1	0.284
Average	28.5	2.7	14.3	41	1.0	55.5	0.351	82.0	0.287

Total number of blows analyzed: 66

Time Summary

Drive 10:07:11 AM - 10:07:11 AM (1/24/2009) BN 1 - 1
 Stop 14 minutes 55 seconds 10:07:11 AM - 10:22:06 AM
 Drive 2 minutes 34 seconds 10:22:06 AM - 10:24:40 AM BN 2 - 69
 Total time [0:17:29] = (Driving [0:02:34] + Stop [0:14:55])

PDIPLOT Ver. 2008.1 - Printed: 23-Feb-2009

MACTEC Engineering and Consulting, Inc. - Case Method Results

Test date: 25-Jan-2009

EXELON COL VICTORIA - Boring B3131 (338.4'-339.9' sample)

