SPT Energy Measurements Data Sheet

Drill Rig: Raleigh Diedrich D-50
Hammer: Autohammer
Operator Walker/Medlin
Boring ID: B-66

Date: 6/2/2011
Project Name/No.: 1051-11-015 / Bridge 11 on NC 12
Location: Bridge over Oregon Inlet
Drilling Method: Mud Rotary

Rod Type/ID: AWJ

AR: 1.21 in^2

Depth: 38.5 ft	**Depth:** 43.5 ft	**Depth:** 48.5 ft	**Depth:** 53.5 ft
LE: 44.3 ft	LE: 49.3 ft	LE: 54.3 ft	LE: 59.3 ft
Blow Count: 3, 2, 1	Blow Count: 4, 3, 3	Blow Count: 4, 7, 12	Blow Count: 4, 5, 6

Blow #	EFV Energy	Blow #	EFV Energy	Blow #	EFV Energy	Blow #	EFV Energy
1	0.29	1	0.29	1	0.29	1	0.30
2	0.30	2	0.30	2	0.29	2	0.31
3	0.31	3	0.32	3	0.30	3	0.30
4	0.30	4	0.32	4	0.31	4	0.31
5	0.31	5	0.31	5	0.30	5	0.32
6	0.30	6	0.30	6	0.30	6	0.31
		7	0.31	7	0.31	7	0.30
		8	0.31	8	0.31	8	0.30
		9	0.30	9	0.30	9	0.32
		10	0.31	10	0.29	10	0.32
				11	0.30	11	0.34
				12	0.30	12	0.32
				13	0.30	13	0.32
				14	0.30	14	0.34
				15	0.31		
				16	0.30		
				17	0.30		
				18	0.30		
				19	0.29		
				20	0.29		
				21	0.30		
				22	0.29		
				23	0.29		

Avg. Energy:	0.30 ft-kips	0.31 ft-kips	0.30 ft-kips	0.32 ft-kips
Max. Rated Energy:	0.35 ft-kips	0.35 ft-kips	0.35 ft-kips	0.35 ft-kips
Efficiency:	86%	88%	85%	90%
Std. Deviation:	0.01 ft-kips	0.01 ft-kips	0.01 ft-kips	0.01 ft-kips

Average efficiency from all tests 87%

Comments LE = length from gages to end of sampler. EFV method used for energy.
The maximum rated energy of 0.35 ft-kips is calculated based on an assumed hammer weight of 140 lbs (0.14 kips) and an assumed drop height of 30 in. (2.5 ft).