

Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041  
 L-2011-307 Enclosure 1 Page 88 of 103

# FLUID CONDUCTIVITY TEMPERATURE LOG

Company Layne Christensen Company  
 Well Turkey Point EW-1  
 Field Florida City  
 County Miami-Dade  
 State/Prv Florida

Company **Layne Christensen Company**  
 Well **Turkey Point EW-1**  
 Field **Florida City**  
 County **Miami-Dade** State/Prv **Florida**

Location  
**FPL Turkey Point Power Plant**  
**LAT: 25 25' 19" N LONG: 80 20' 08" W**  
**McNabb Hydrogeologic Consulting, Inc.**

Other Services  
 XY/GR,FCT  
 DIL,BHC  
 FLO,TDS

Permanent Datum Pad Level  
 Log Measured From Pad Level  
 Drilling Measured From Pad Level

Elevation

Elevation  
 K.B.  
 D.F.  
 G.L.

Date	12-JUL-2011		
Run Number	SIX-e		
Depth Driller	1655'		
Depth Logger	1654'		
Bottom Logged Interval	1654'		
Top Log Interval	1045'		
Open Hole Size	12.25"		
Type Fluid	H2O		
Density / Viscosity	NA/NA		
Max. Recorded Temp.	see FCT log		
Estimated Cement Top	SURFACE		
Time Well Ready	18:15 7/12/2011		
Time Logger on Bottom	19:30 7/12/2011		
Equipment Number	MVGS-1		
Location	Ft. Myers		
Recorded By	S.Miller		
Witnessed By	S.Durall (MHC)	K.Greuel (LCC)	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12.25"	SURFACE	255'				1655'
TWO	62.5"	SURFACE	259'				
THREE	12.25"	255'	1090'				
FOUR	52.5"	255'	1095'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	64"	0.375" WT	SURFACE	33'
Prot. String	54"	0.375" WT	SURFACE	255'
Production String	44"	0.375" WT	SURFACE	1090'
Liner				LTP1.db
Invoice No.	2011103	P.O. #:	8fld/las/pdf	* FINAL PRINT *

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

DYNAMIC & STATIC down passes were performed.  
 Cw =19,660 uS/cm @ 81.1 degC (from 1600'); Q=300 gpm.  
 FLUID RESISTIVITY CALIBRATION REPORT (Performed: 19-JUN-11 10:45)

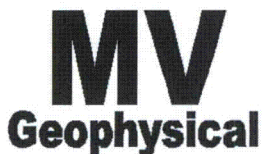
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uS/cm	CPS
237.1	3060.32
2578.54	2945.87
4410.24	2673.25

TEMPERATURE CALIBRATION REPORT (Performed: 19-JUN-11 10:15)

DEG-F	CPS
34.9	143.18
139.2	2600.14

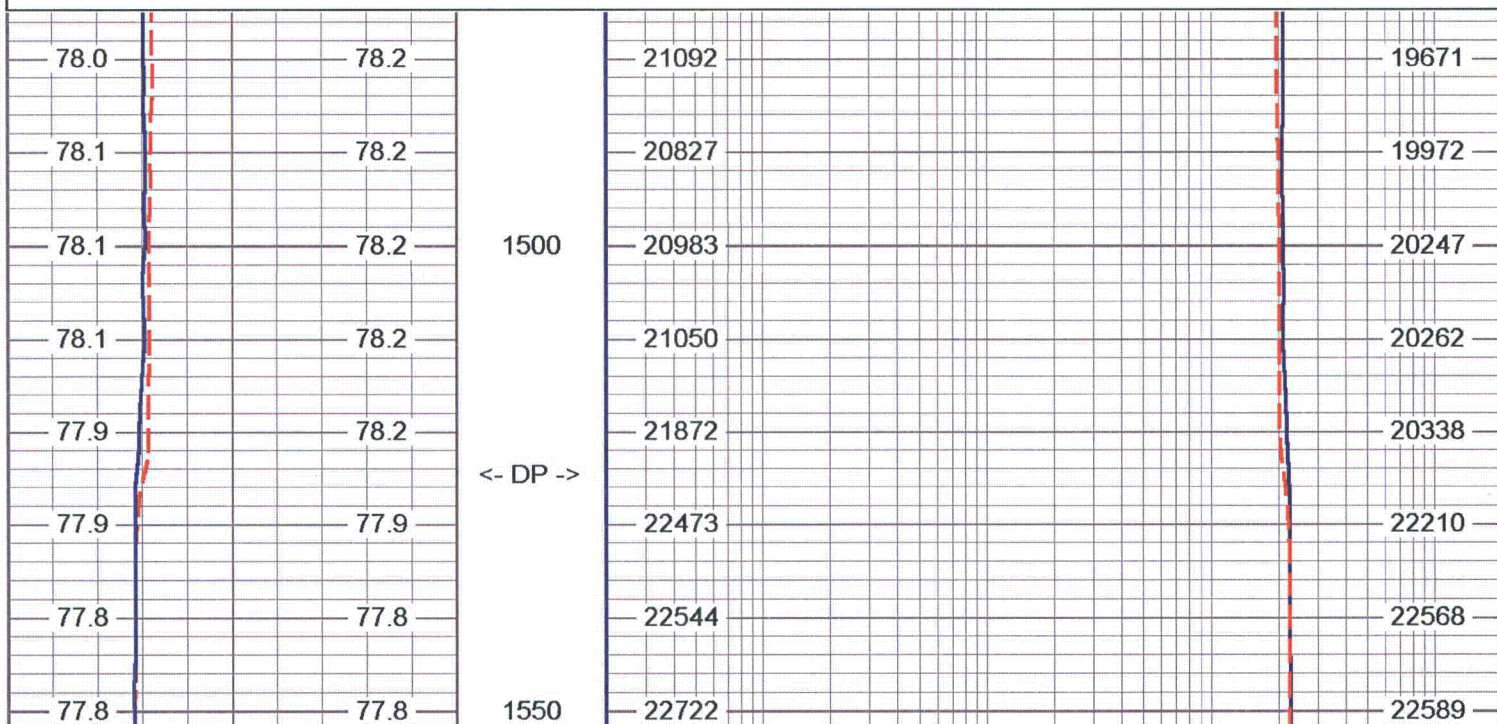
Drill Pipe set to 1098'

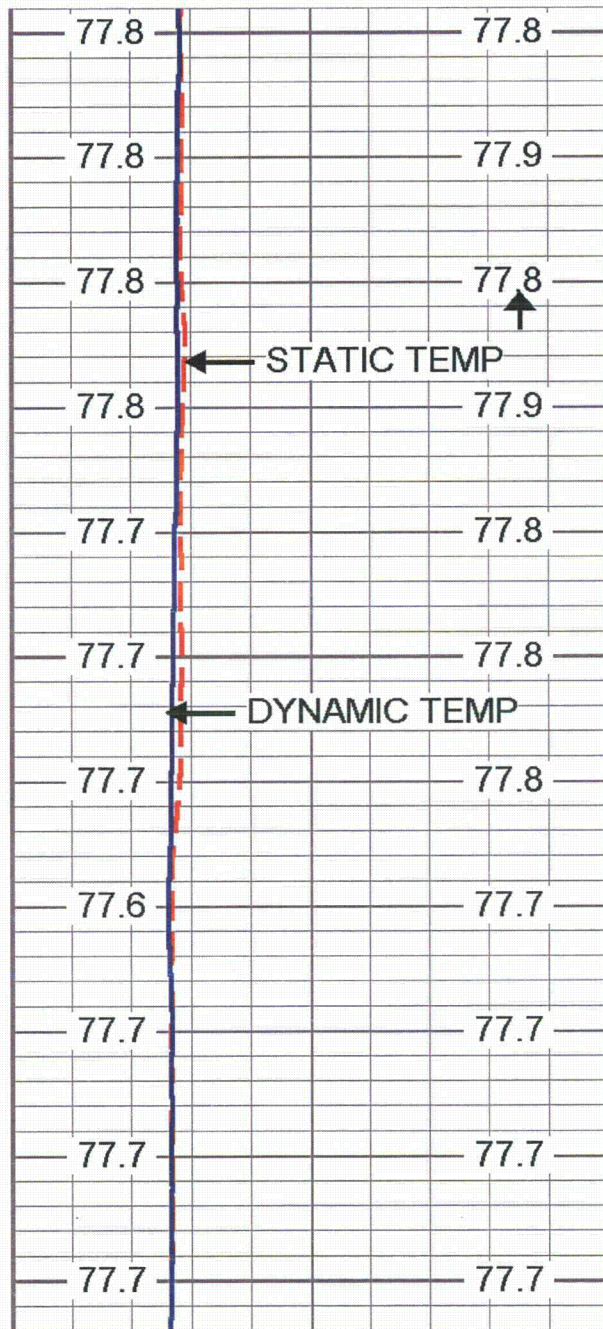


# S/D FCT MERGE

Database File: ltp1.db  
 Dataset Pathname: run7/FCT6E  
 Presentation Format: FCTTP2  
 Dataset Creation: Tue Jul 12 20:30:01 2011  
 Charted by: Depth in Feet scaled 1:240

75	STATIC TEMP (degF)	85	20	STATIC FLUID CONDUCTIVITY (uS/cm)	200000
75	DYNAMIC TEMP (degF)	85	20	DYNAMIC FLUID CONDUCTIVITY (uS/cm)	200000





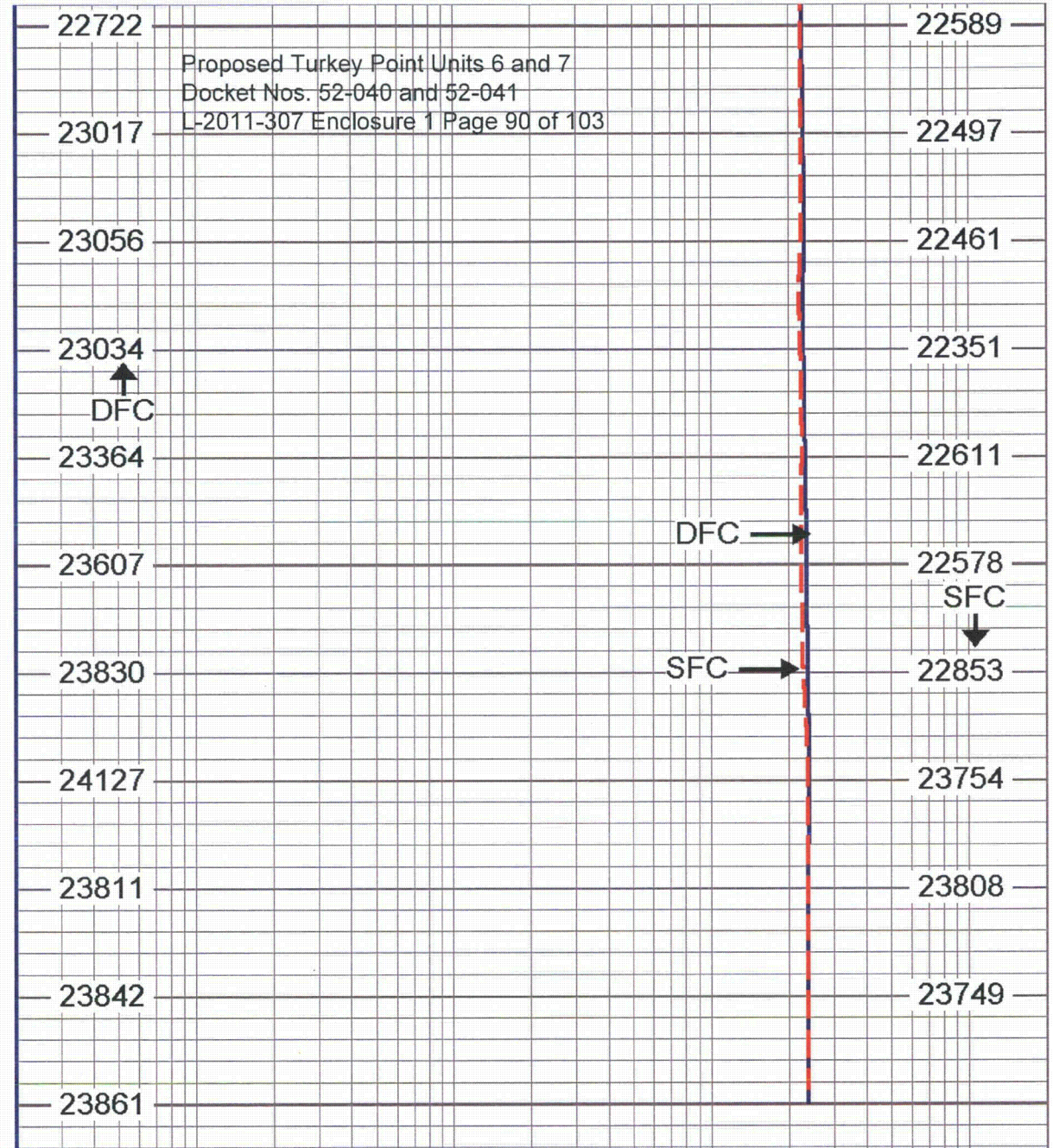
1550

1600

1650

< TD >

75	STATIC TEMP (degF)	85
75	DYNAMIC TEMP (degF)	85



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20	STATIC FLUID CONDUCTIVITY (uS/cm)	200000
20	DYNAMIC FLUID CONDUCTIVITY (uS/cm)	200000

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CCL 4.46 ft

CCL-MVGS 1.9 (MV01)  
8.00 lb 1.90 in OD 1.33 ft

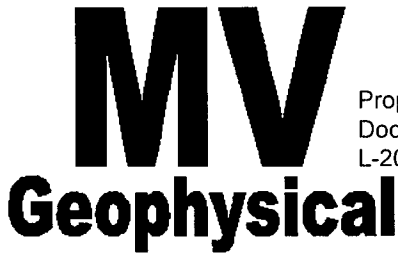
GR#2 1.15 ft

GR #2 -RTSB (MV01B)  
10.00 lb 1.90 in OD 3.33 ft

TEMP 0.10 ft

TEMP-RTS (MV01)  
2.00 lb 1.90 in OD 0.46 ft

Dataset: run7/pass18  
Total Length: 5.12 ft  
Total Weight: 20.00 lb  
O.D. 1.90 in



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# FLOWMETER LOG

Company Layne Christensen Company Well Turkey Point EW-1 Field Florida City County Miami-Dade State/Prv Florida	Company <b>Layne Christensen Company</b> Well <b>Turkey Point EW-1</b> Field <b>Florida City</b> County <b>Miami-Dade</b> State/Prv <b>Florida</b>	
	Location <b>FPL Turkey Point Power Plant</b> <b>LAT: 25 25' 19" N LONG: 80 20' 08" W</b> <b>McNabb Hydrogeologic Consulting, Inc.</b>	Other Services XY/GR,FCT DIL,BHC FLO,TDS
	Permanent Datum Pad Level Elevation Log Measured From Pad Level Drilling Measured From Pad Level	Elevation K.B. D.F. G.L.

Date	12-JUL-2011
Run Number	SIX-d
Depth Driller	1655'
Depth Logger	1654'
Bottom Logged Interval	1590'
Top Log Interval	1045'
Open Hole Size	12.25"
Type Fluid	H2O
Density / Viscosity	N/A/N/A
Max. Recorded Temp.	see FCT log
Estimated Cement Top	SURFACE
Time Well Ready	01:15 7/12/2011
Time Logger on Bottom	04:30 7/12/2011
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	S.Durall (MHC) K:Greuel (LCC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12.25"	SURFACE	255'				1655'
TWO	62.5"	SURFACE	259'				
THREE	12.25"	255'	1090'				
FOUR	52.5"	255'	1095'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	64"	0.375" WT	SURFACE	33'
Prot. String	54"	0.375" WT	SURFACE	255'
Production String	44"	0.375" WT	SURFACE	1090'
Liner				LTP1.db
Invoice No.	2011102	P.O. #:	8fld/las/pdf	* FINAL PRINT *

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Comments

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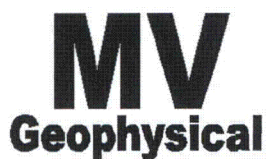
STATIC and DYNAMIC down passes were made at 82 fpm.

NO station performed.

Q ≈ 285 gpm

Drill Pipe set to 1098'

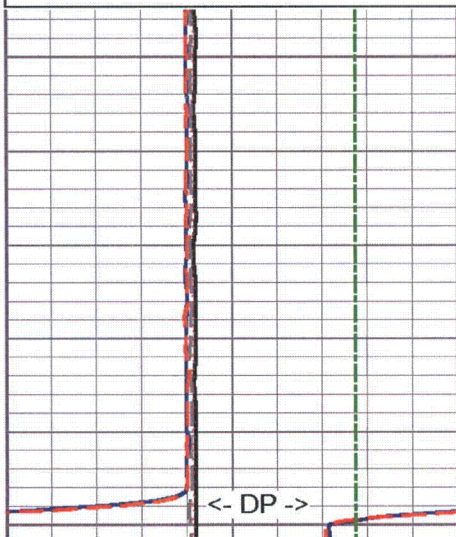
Full Riser / Hydraulic Packoff



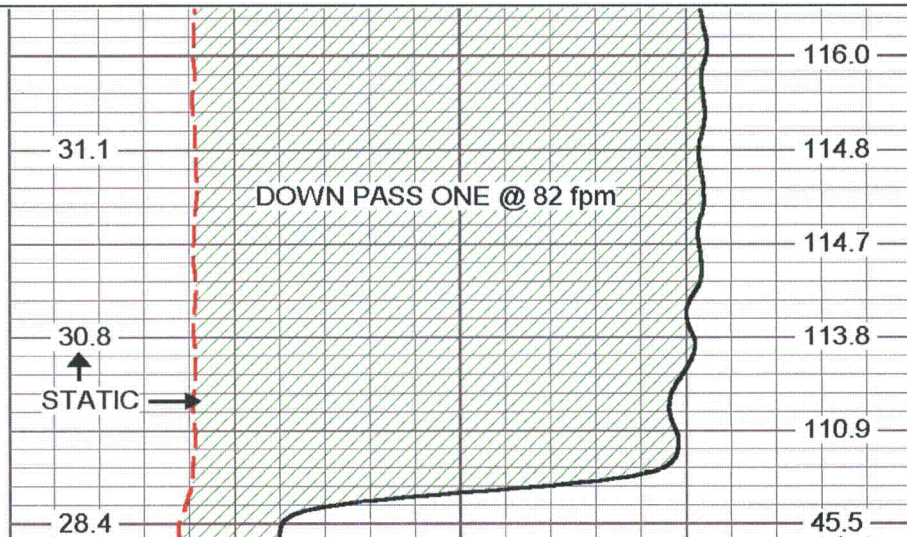
# S/D DOWN @ 82 fpm

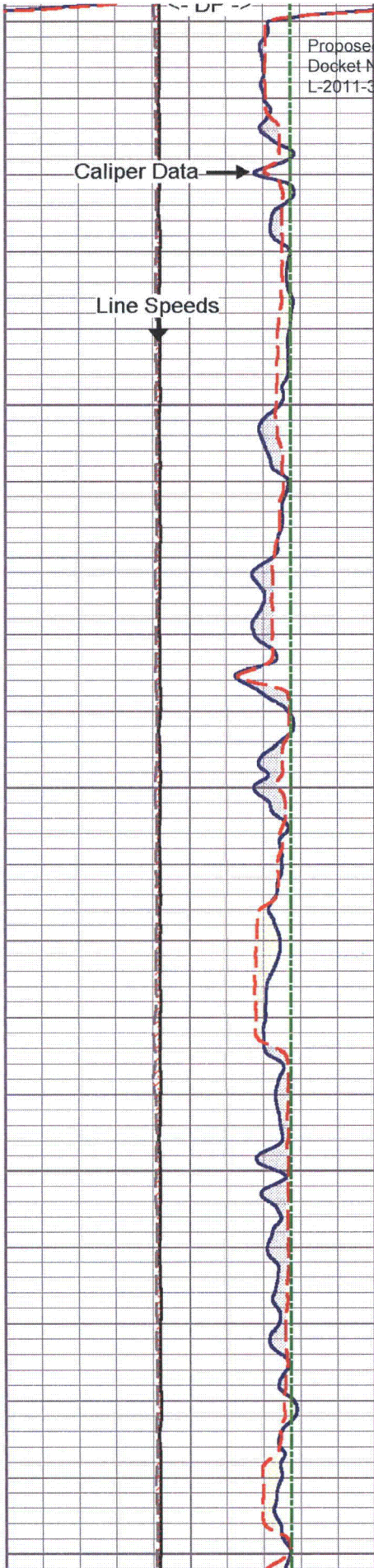
Database File: ltp1.db  
 Dataset Pathname: run7/SD82  
 Presentation Format: QTP1  
 Dataset Creation: Tue Jul 12 05:56:36 2011  
 Charted by: Depth in Feet scaled 1:240

0 DYNAMIC LINE SPEED (ft/min)00	0	DYNAMIC (cps)	150
0 STATIC LINE SPEED (ft/min)200	0	STATIC (cps)	150
20 X-CALIPER (in) 10			
20 Y CALIPER (in) 10			
20 BIT SIZE (in) 10			



1100

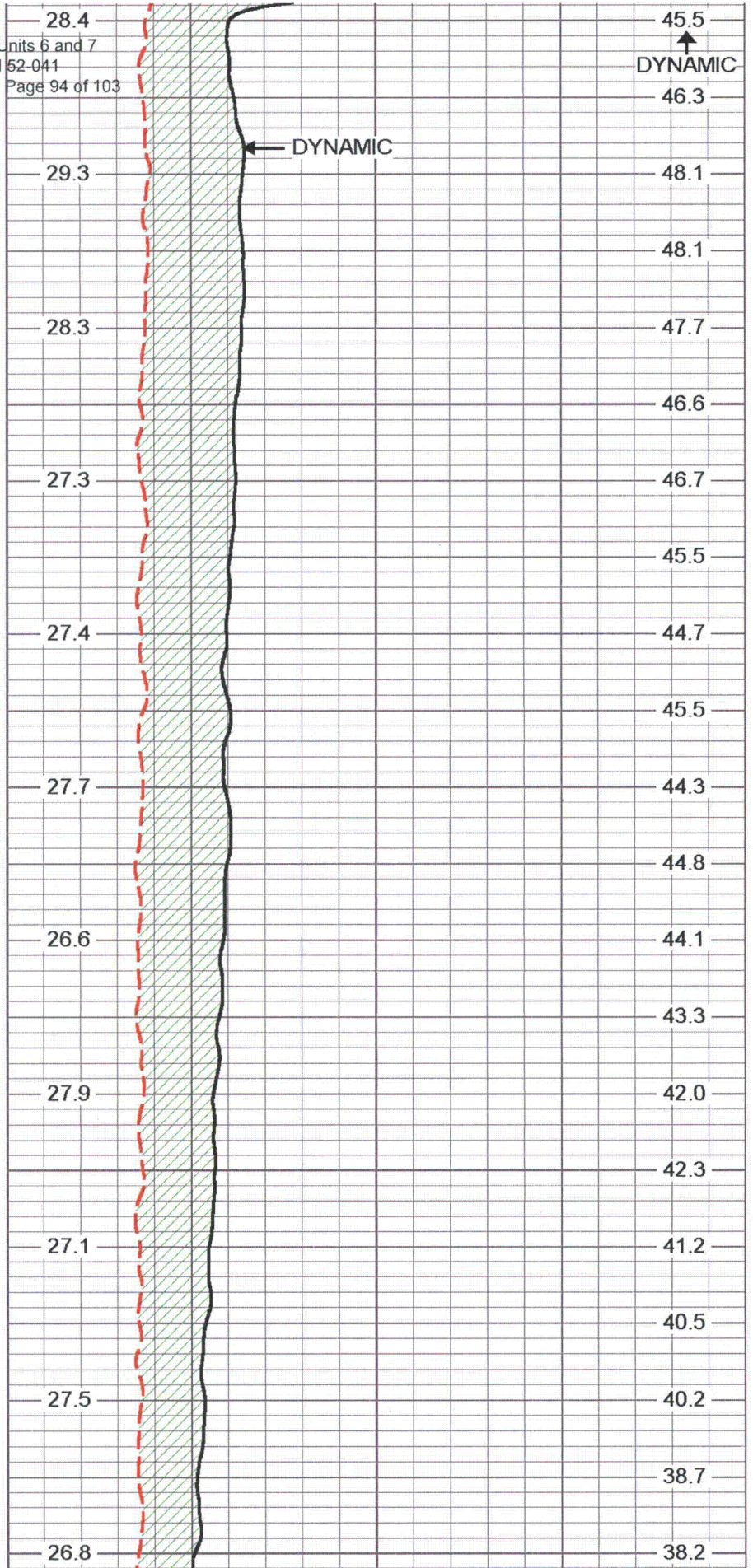




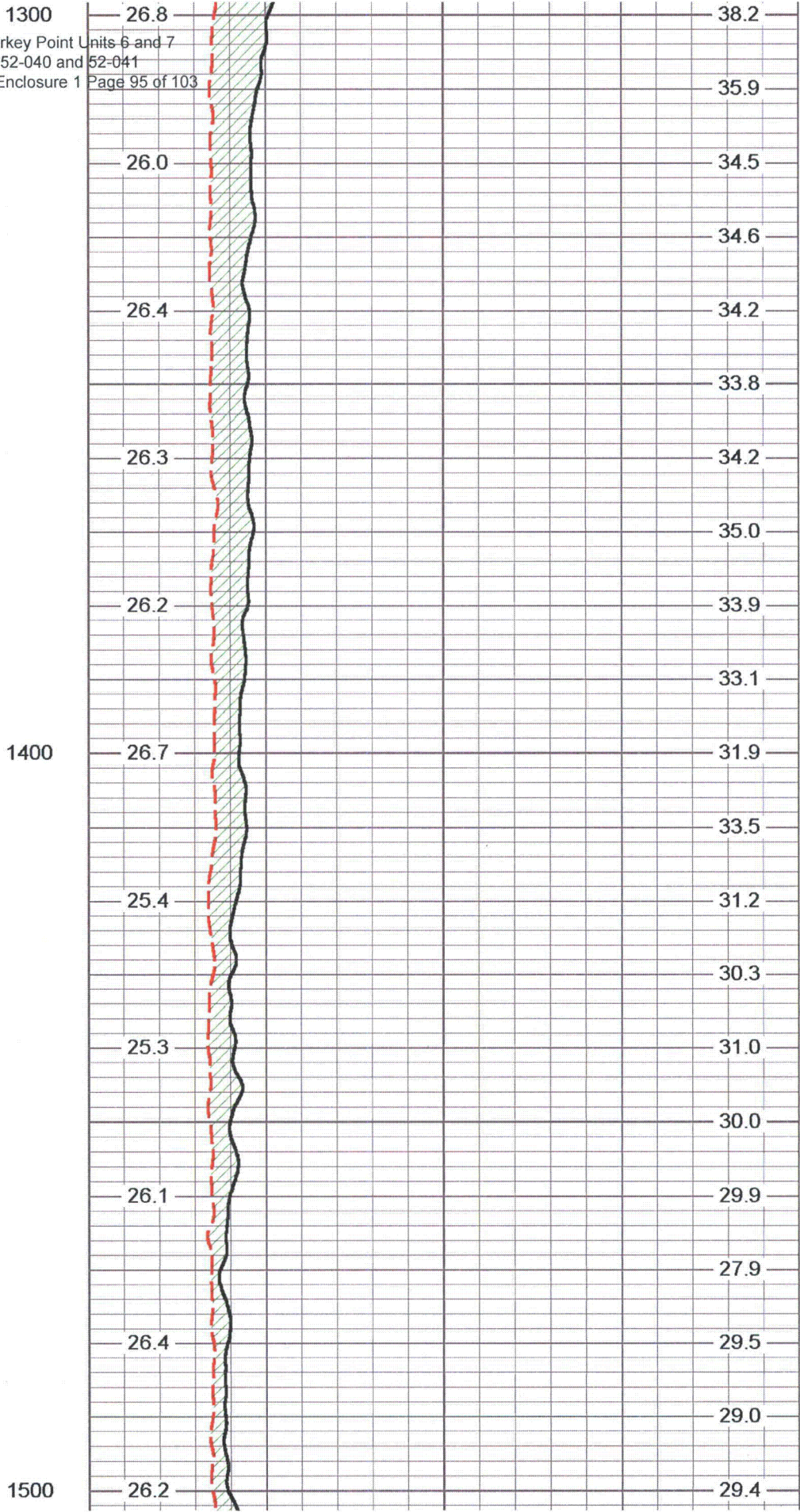
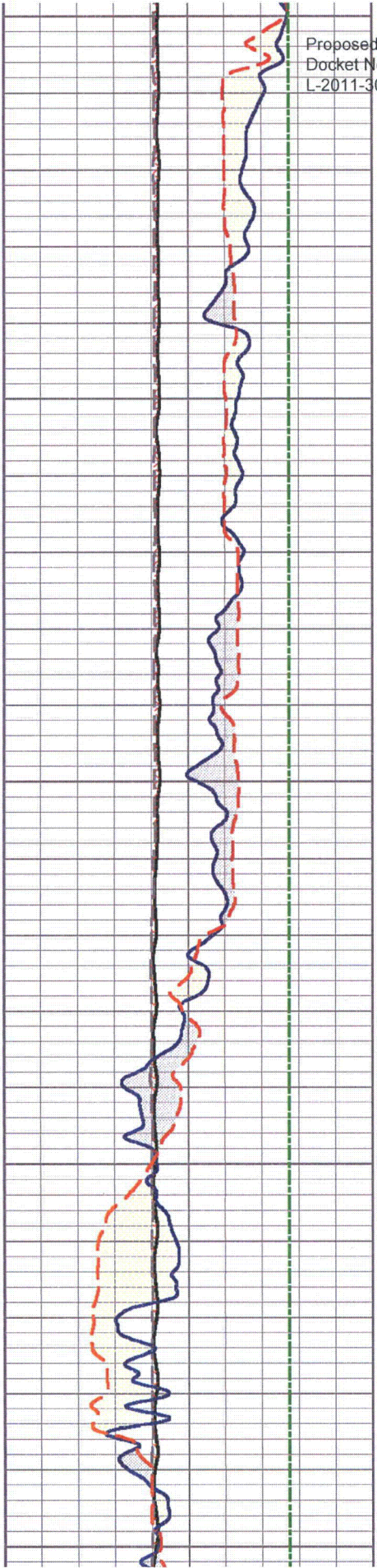
1100  
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1200

1300



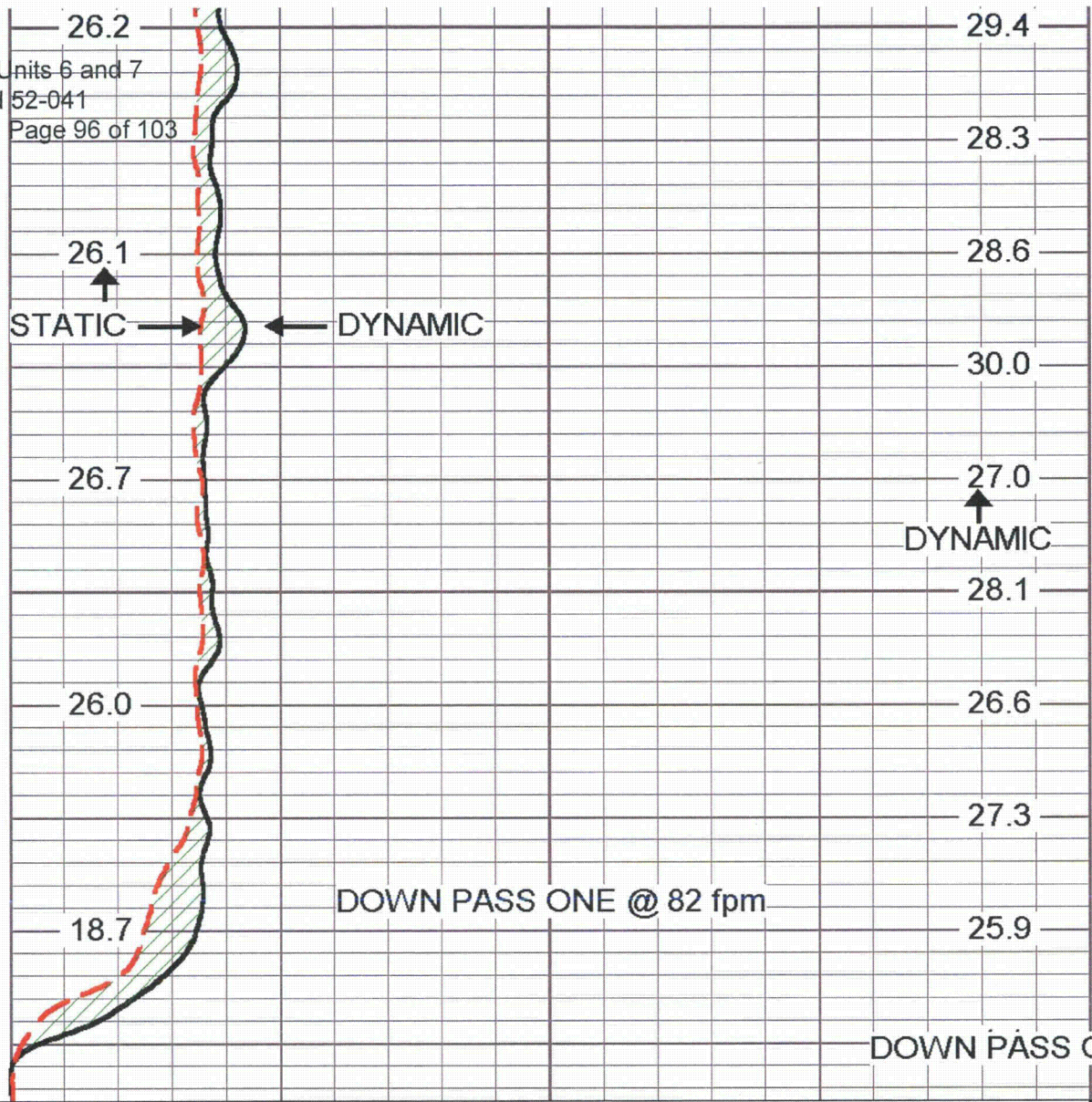
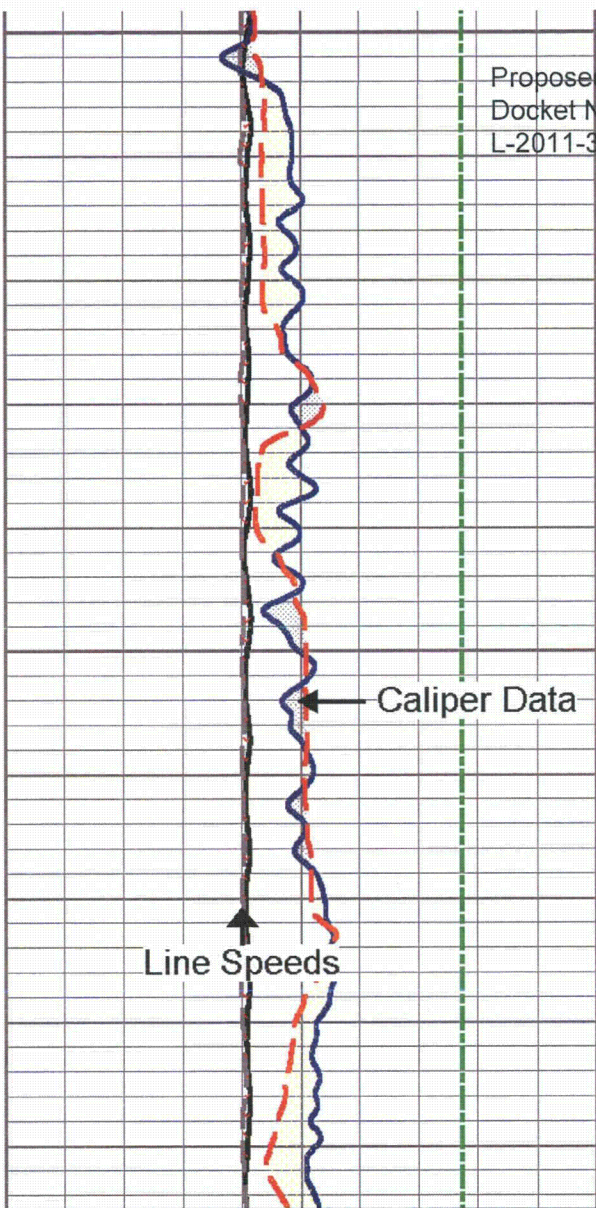
1300  
 Proposed Turkey Point Units 6 and 7  
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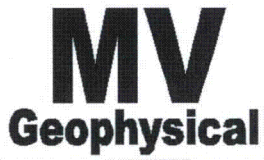
1500

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0	DYNAMIC LINE SPEED (ft/min)	00
0	STATIC LINE SPEED (ft/min)	200
20	X-CALIPER (in)	10
20	Y CALIPER (in)	10
20	BIT SIZE (in)	10

0	DYNAMIC (cps)	150
0	STATIC (cps)	150



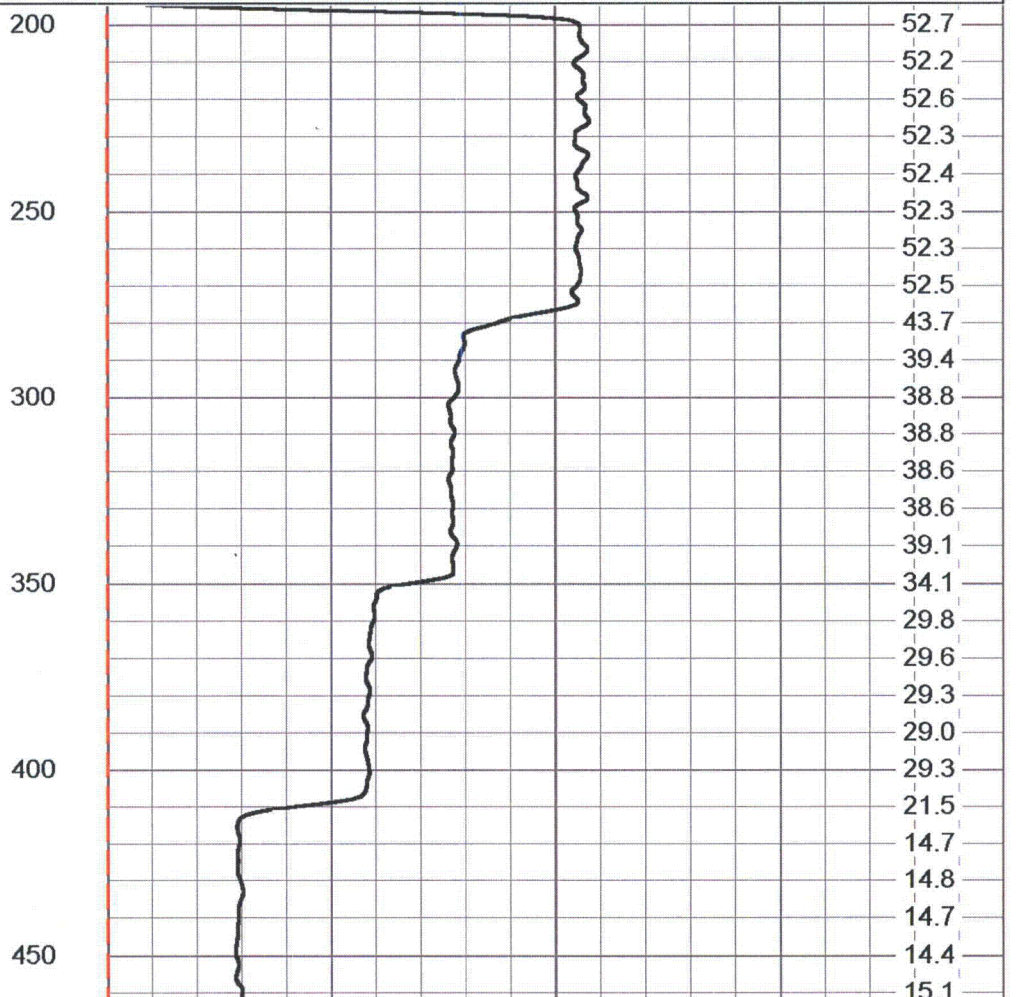
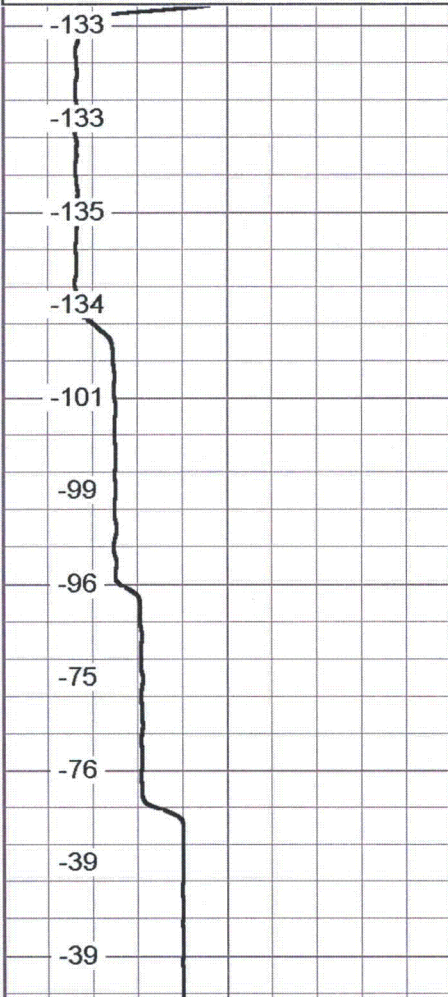
# Q Calibration Down

Database File: ltp1.db  
 Dataset Pathname: run6/pass6  
 Presentation Format: FLOW  
 Dataset Creation: Fri Jul 08 23:20:45 2011 by Log VER\_5.3  
 Charted by: Depth in Feet scaled 1:600

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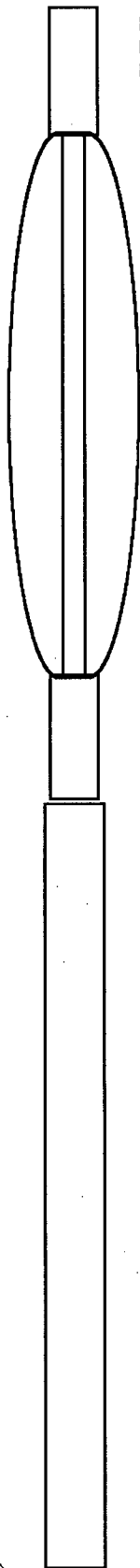
-200 LINE SPEED (ft/min) 200  
 30 BOREID (in) 100

0 CCW Spin (cps) 100  
 0 CW Spin (cps) 100



-200 LINE SPEED (ft/min) 200  
 30 BOREID (in) 100

0 CCW Spin (cps) 100  
 0 CW Spin (cps) 100

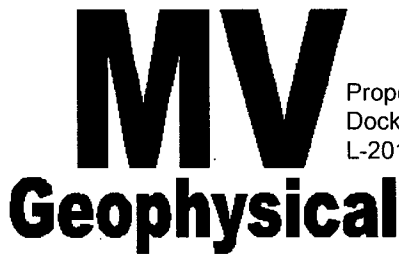


CENT-5FOOTSB (5FTSB)  
50.00 lb 1.69 in OD 5.00 ft

FLOW-LARGE (65)  
35.00 lb 3.75 in OD 4.80 ft

FLOWP 0.00 ft  
FLOWN 0.00 ft

Dataset: run7/pass10  
Total Length: 9.80 ft  
Total Weight: 85.00 lb  
O.D. 3.75 in



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# FLOWMETER LOG

Company Layne Christensen Company Well Turkey Point EW-1 Field Florida City County Miami-Dade State/Prv Florida	Company <b>Layne Christensen Company</b> Well <b>Turkey Point EW-1</b> Field <b>Florida City</b> County <b>Miami-Dade</b> State/Prv <b>Florida</b>	
	Location <b>FPL Turkey Point Power Plant</b> <b>LAT: 25 25' 19" N LONG: 80 20' 08" W</b> <b>McNabb Hydrogeologic Consulting, Inc.</b>	Other Services XY/GR,FCT DIL,BHC FLO,TDS
	Permanent Datum Pad Level Elevation Log Measured From Pad Level Drilling Measured From Pad Level	Elevation K.B. D.F. G.L.

Date	12-JUL-2011
Run Number	SIX-e
Depth Driller	1655'
Depth Logger	1654'
Bottom Logged Interval	1650'
Top Log Interval	1475'
Open Hole Size	12.25"
Type Fluid	H2O
Density / Viscosity	N/A/N/A
Max. Recorded Temp.	see FCT log
Estimated Cement Top	SURFACE
Time Well Ready	18:15 7/12/2011
Time Logger on Bottom	18:45 7/12/2011
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	S.Durall (MHC) K.Greuel (LCC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	12.25"	SURFACE	255'				1655'
TWO	62.5"	SURFACE	259'				
THREE	12.25"	255'	1090'				
FOUR	52.5"	255'	1095'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	64"	0.375" WT	SURFACE	33'
Prot. String	54"	0.375" WT	SURFACE	255'
Production String	44"	0.375" WT	SURFACE	1090'
Liner				LTP1.db
Invoice No.	2011103	P.O. #:	8fld/las/pdf	* FINAL PRINT *

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Comments

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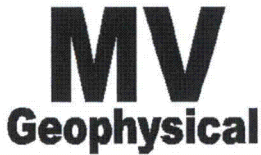
STATIC and DYNAMIC down passes were made at 82 fpm.

NO station performed.

Q = ~300 gpm

Drill Pipe set to 1524'

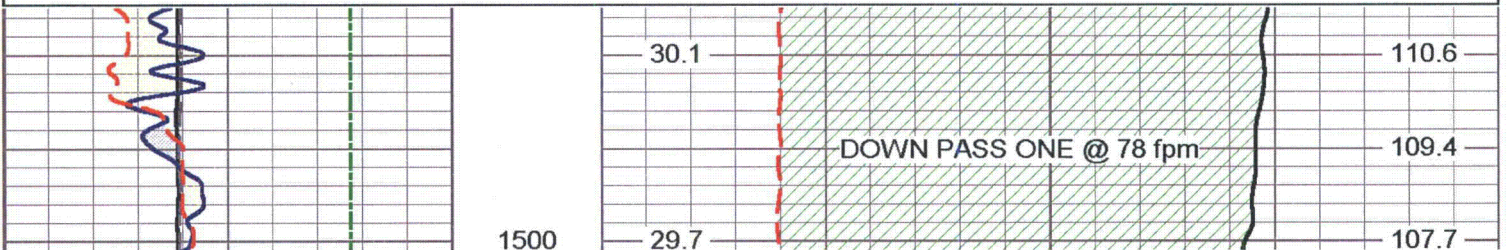
Full Riser / Hydraulic Packoff

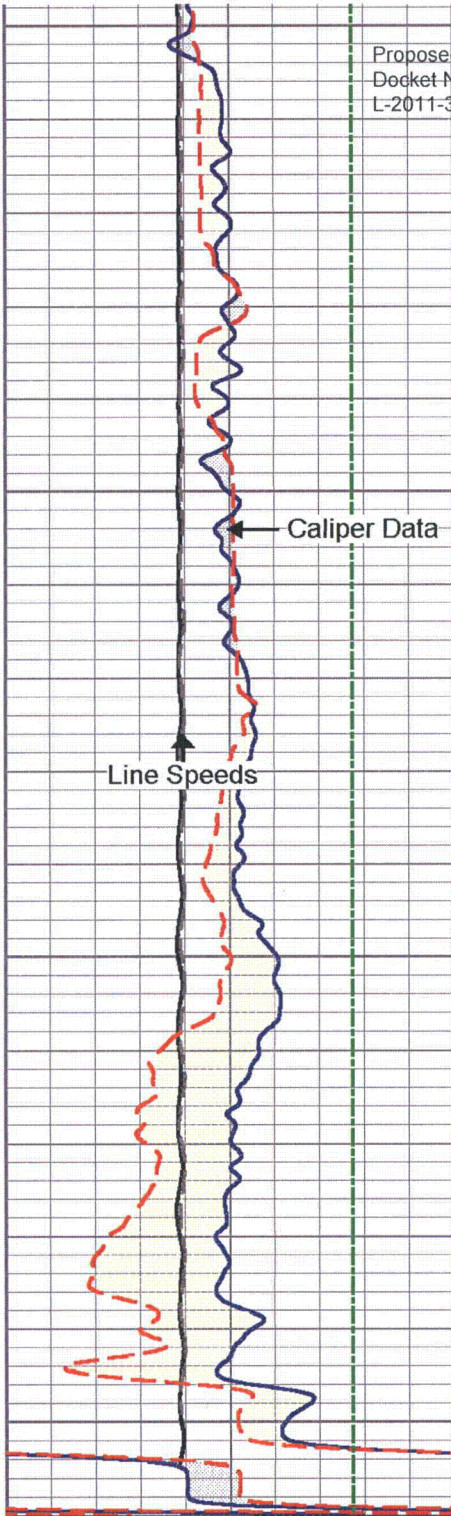


# S/D DOWN @ 78 fpm

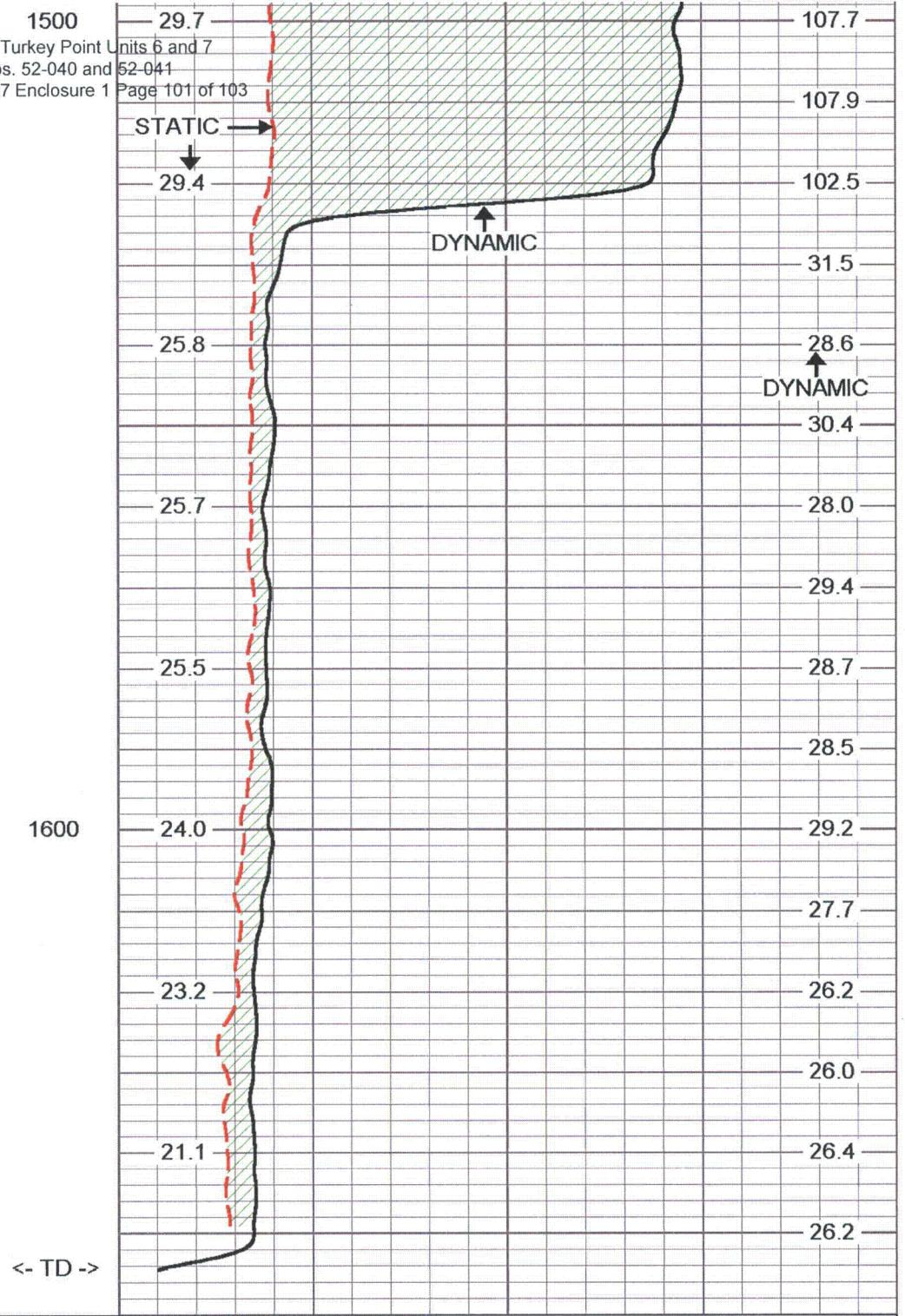
Database File: ltp1.db  
 Dataset Pathname: run7/SD78  
 Presentation Format: QTP1  
 Dataset Creation: Tue Jul 12 19:11:42 2011  
 Charted by: Depth in Feet scaled 1:240

0	DYNAMIC LINE SPEED (ft/min)	00	0	DYNAMIC (cps)	150
0	STATIC LINE SPEED (ft/min)	200	0	STATIC (cps)	150
20	X-CALIPER (in)	10			
20	Y CALIPER (in)	10			
20	BIT SIZE (in)	10			

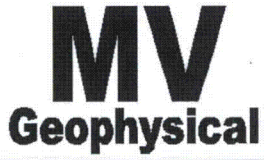




0	DYNAMIC LINE SPEED (ft/min)	00
0	STATIC LINE SPEED (ft/min)	200
20	X-CALIPER (in)	10
20	Y CALIPER (in)	10
20	BIT SIZE (in)	10



0	DYNAMIC (cps)	150
0	STATIC (cps)	150



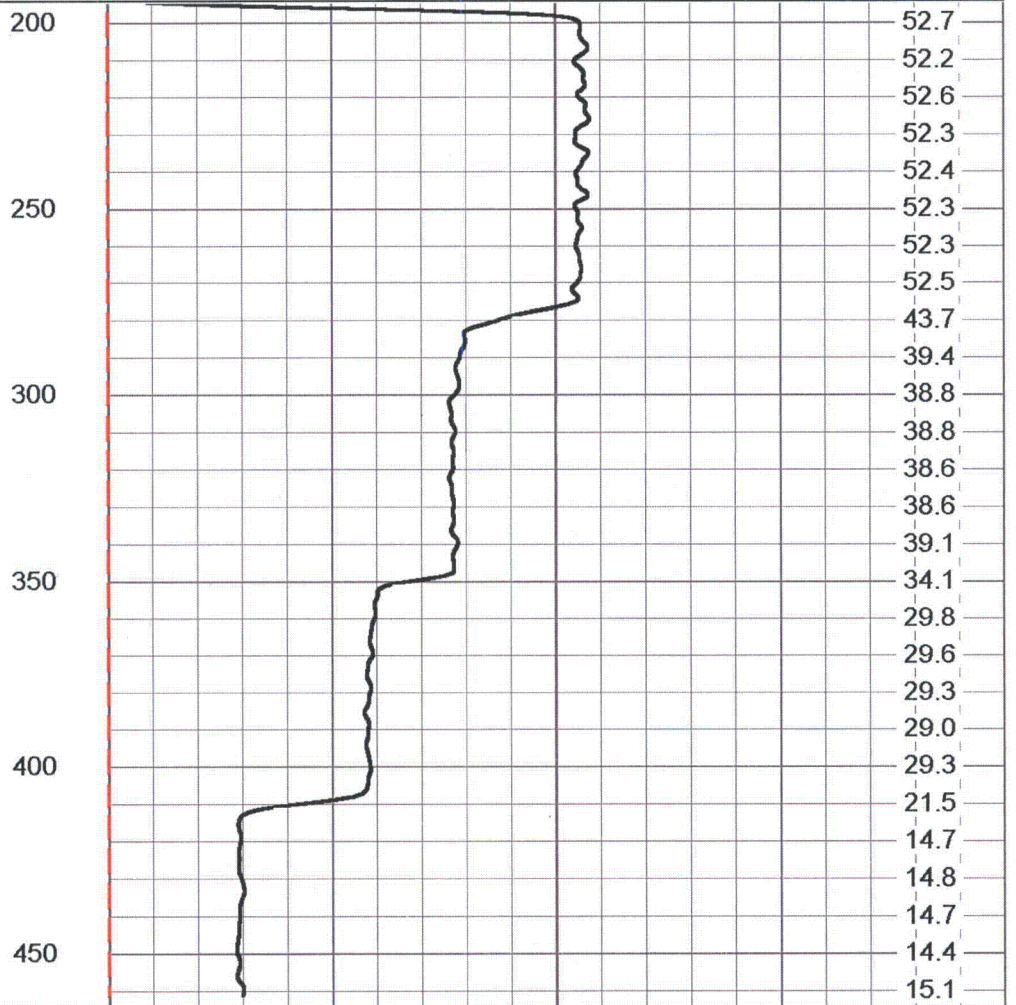
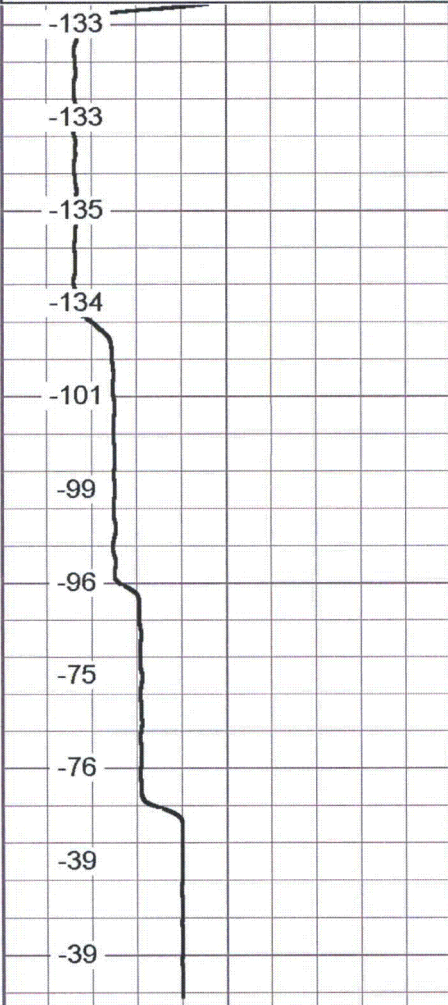
# Q Calibration Down

Database File: ltp1.db  
 Dataset Pathname: run6/pass6  
 Presentation Format: FLOW  
 Dataset Creation: Fri Jul 08 23:20:45 2011 by Log VER\_5.3  
 Charted by: Depth in Feet scaled 1:600

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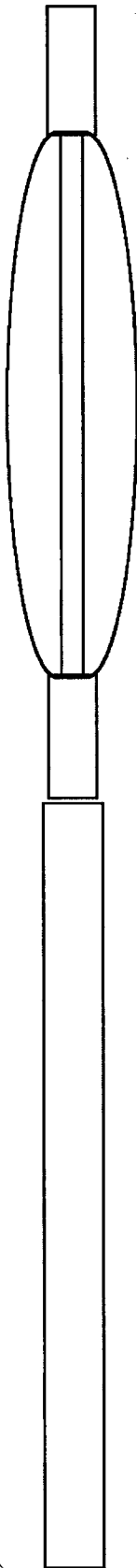
-200	LINE SPEED (ft/min)	200
30	BOREID (in)	100

0	CCW Spin (cps)	100
0	CW Spin (cps)	100



-200	LINE SPEED (ft/min)	200
30	BOREID (in)	100

0	CCW Spin (cps)	100
0	CW Spin (cps)	100



CENT-5FOOTSB (5FTSB)  
50.00 lb 1.69 in OD 5.00 ft

FLOW-LARGE (65)  
35.00 lb 3.75 in OD 4.80 ft

FLOWP 0.00 ft  
FLOWN 0.00 ft

Dataset: run7/pass10  
Total Length: 9.80 ft  
Total Weight: 85.00 lb  
O.D.: 3.75 in



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## **Enclosure 2**

Florida Power & Light Company Turkey Point Units 6 & 7  
Exploratory Well Project; Permit #0293962-001-UC  
Weekly Construction Summary #11 dated July 22, 2011

## WEEKLY CONSTRUCTION SUMMARY



**McNabb Hydrogeologic Consulting, Inc.**

601 Heritage Drive, Suite 110  
Jupiter, Florida 33458  
Phone: 561-891-0763  
Fax: 561-623-5469

July 22, 2011

MHCDEP-11-310

Mr. Joseph May, P.G.  
Florida Department of Environmental Protection  
400 N. Congress Ave, Suite 200  
West Palm Beach, FL 33401

**RE: Florida Power & Light Company Turkey Point Units 6 & 7 Exploratory Well  
Project; Permit #0293962-001-UC  
Weekly Construction Summary #11**

Dear Mr. May:

This is the eleventh weekly construction summary for the above referenced project. The reporting period for this weekly construction summary began at 7:00 AM, Thursday, July 14, 2011 and ended at 7:00 AM, Thursday, July 21, 2011. Consultant and drilling contractor daily reports were prepared for this reporting period. Copies of the consultant and drilling contractor daily construction logs are attached.

During the previous reporting period the drilling contractor completed geophysical logging of the pilot hole drilling to a depth of 1,655 feet below pad level (bpl) and was preparing to perform the first of four packer test on selected interval of the pilot hole.

The drilling contractor spent this reporting period performing packer testing on the intervals from 1,505 to 1,535 feet bpl, 1,400 to 1,430 feet bpl, 1,225 to 1,285 feet bpl, and 1,102 to 1,162 feet bpl. Water samples were collected at the end of each packer test and analyzed in the field for specific conductance. Samples for chlorides, total dissolved solids (TDS), ammonia, and total kjeldahl nitrogen (TKN) were sent to Florida Spectrum Environmental Services, Inc. for analysis. A packer test summary sheet, providing water level, pumping rate data and analyses required by the construction permit for each of the packer tests is attached. The pilot hole was killed with a mixture of barite and bentonite during the reporting period. A daily kill material log providing a summary of daily kill material and kill volume is attached.

There was no coring, casing installation, cementing, geophysical logging or exploratory well development during this reporting period. There were no construction related issues during this reporting period.

During the next reporting period, it is anticipated that the drilling contractor will backplug the pilot hole with cement (following receipt of Florida Department of Environmental Protection approval of the 34-inch diameter casing seat recommendation of 1,535 feet bpl) and begin reaming the backplugged hole using a 42 1/2-inch diameter reaming bit.

In addition, sampling of the pad monitor wells began on April 21, 2011 and has been taking place on a weekly basis since the initial sampling. The pad monitor wells were most recently sampled on July 21, 2011. The most recent set of pad monitoring well sample results available is for samples collected on July 14, 2011. Sampling of the pad monitor wells around EW-1 will continue until drilling and testing of EW-1 has been completed. Copies of the pad monitor wells data summary sheets are attached.

Please note, the chloride concentration of 55.1 mg/L reported in last week's construction summary for the pilot hole water sample collected at a depth of 1,345 feet bpl has been rechecked by the laboratory and found to be a typographical error. The actual chloride concentration for the pilot hole water sample from the depth of 1,345 feet bpl is 551 mg/L. A revised pilot hole water summary sheet is attached.

Should you have any questions regarding the above weekly construction summary, please contact David McNabb at (561) 891-0763.

Sincerely,

McNabb Hydrogeologic Consulting, Inc.



David McNabb, P.G.

Attachments: Consultant Daily Construction Logs  
Drilling Contractor Daily Construction Logs  
Pad Monitor Well Summary Sheets  
Packer Test Summary Sheet  
Daily Kill Material Log  
Pilot Hole Water Quality Summary Sheet

Cc: George Heuler/FDEP-Tallahassee  
Steve Anderson/SFWMD  
Matthew Raffenberg/FPL  
David Holtz/HCE

Joe Haberfeld/FDEP-Tallahassee  
Ron Reese/USGS  
David Paul/FGS



## Daily Construction Log

---

**Date:** July 14, 2011

**Project:** FPL Turkey Point EW

**Contractor:** Layne Christensen Company

**Starting Depth:** 1,655 feet bpl

**Weather Day:** Partly Cloudy, Warm

**Weather Night:** Rain Early, then Clear

**Activity:** Packer Testing

**FDEP UIC Permit #:** 0293962-001-UC

**Well No.:** EW-1

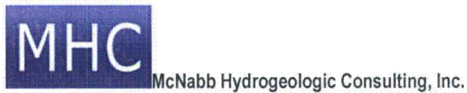
**Bit Diameter:** not applicable

**Ending Depth:** 1,655 feet bpl

**Recorded By:** Eric Meyer/Sally Durall

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor continues preparations for packer test #1 for the interval of 1,505 feet to 1535 feet below pad level (bpl).
- 0809 The static head for the packer interval is 23.3 feet above pad levels as measured inside of the drill pipe. The drilling contractor has killed the backside of the drill pipe with bentonite and barite which has depressed the head to 6 feet bpl. A short-term specific capacity test was run to establish the flow rate and water level drawdown within the drill pipe. The pump was started at 08:09; flow was measured at 77 gallons per minute (gpm) with 30 feet of drawdown (specific capacity is 2.5 gallons per minute per foot [gpm/ft]). The pump was shut off at 08:23 after pumping approximately 1,670 gallons. The period of background monitoring was initiated following the specific capacity test. Water levels are being recorded by pressure transducers installed in the drill pipe at a depth of 178.96 feet bpl and the annular space outside the drill pipe at a depth of 50.0 feet bpl. The pump intake is installed to a depth of 183.96 feet bpl.
- 1042 Pumping resumed for packer test #1 at a rate of 77 gpm.
- 1330 Florida Spectrum Environmental Services, Inc. is onsite to sample the drilling pad monitor wells.
- 1445 Collected final water samples for packer test #1. The water samples will be analyzed by Florida Spectrum Environmental Services, Inc. as applicable. The groundwater samples were collected after a volume of 18,468 gallons of groundwater had been pumped from the interval.
- 1507 Stopped pumping for packer test #1 and closed valves to prevent artesian flow; collecting water level data during recovery period.
- 1715 Stopped water level data collection. The drilling contractor will release pressure from the straddle packers in preparation for moving the packers to the packer test #2 test interval which will be performed on the depth interval from 1,400 feet to 1,430 feet bpl.
- 2015 The drilling contractor begins to trip the pump and transducer out of the drill pipe.



- 2230 The drilling contractor begins to trip the straddle packers to the packer test #2 testing interval.
- 2335 The drilling contractor begins to inflate the packers.
- 0025 The drilling contractor has pressured the packers up to 420 pounds per square inch (psi).
- 0030 The drilling contractor begins to trip in the drill pipe with 187 feet of air-line to begin conditioning the test interval.
- 0050 Begin conditioning the test interval for packer test #2 (1,400 - 1,430 feet bpl).
- 0335 Complete conditioning the test interval for packer test #2. The drilling contractor begins to trip the air line out of the drill pipe.
- 0405 The drilling contractor prepares to trip inside the drill pipe with a 5 horse pump at the base of 187 feet of drop pipe (air-line tubing) and the transducer. The transducer will be 5 feet above the pump.
- 0445 The drilling contractor has completed tripping inside the drill pipe with the pump and transducer. The transducer is installed at a depth of 177.96 feet bpl. The transducer in the annulus has been installed at a depth of 50.0 feet bpl. The pump intake is located at a depth of 182.96 feet bpl.
- 0600 The drilling contractor has determined that the submersible pump needs servicing prior to running the preliminary test for packer test #2. The drilling contractor is waiting on the arrival of an electrician to service the pump



## Daily Construction Log

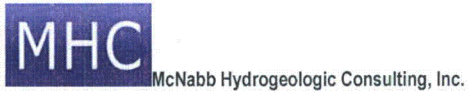
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**Date:** July 15, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Warm  
**Weather Night:** Partly Cloudy  
**Activity:** Packer Testing

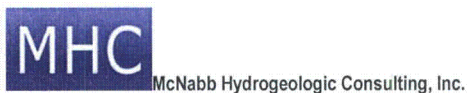
**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** Mark McNeal/Eric Meyer

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor continues preparations for packer test #2 for the interval of 1,400 feet to 1,430 feet below pad level (bpl). They are preparing to pull the pump to land surface for servicing.
- 0830 The pump has been removed from the well.
- 1200 The submersible pump has been serviced and is operational. The drilling contractor is working on other electrical maintenance on the rig.
- 0230 The submersible pump and transducer have been lowered into the well. The transducer is set to a depth of 177.96 feet bpl. Pressure on the packer has been steady at approximately 420 psi. The pump has been installed to a depth of 182.96 feet bpl.
- 1523 The drilling contractor turns on the pump for the preliminary test for packer test #2. Totalizer reading is 22,055 gallons. Water column in the annulus is 41.53 feet above the transducer. Water column in the drill pipe is 208 feet above the transducer.
- 1526 A flow rate of 77 gpm has been measured twice from the pump discharge. It appears to be pumping at a stable rate.
- 1529 Water column above the pressure transducer is 169 feet.
- 1532 Water column above the pressure transducer is 169 feet. Pump shut off and well will be allowed to recover for two hours. Preliminary specific capacity of this zone is 77 gpm/39 feet of drawdown, or 2.0 gpm/foot. The totalizer reading at the end of the preliminary test is 22,772 gallons, therefore 717 gallons were purged during the preliminary test.
- 1806 Begin pumping for packer test #2 (1,400 feet to 1,430 feet bpl). The packer elements inflation pressure is being maintained at approximately 420 psi. Pre-pumping static artesian head for the packer interval is approximately 30 feet above pad level. The annulus water level is approximately 8 feet bpl.
- 2210 Water samples were collected while pumping groundwater from the packer interval. Samples will be analyzed by Florida Spectrum Environmental Services, Inc. as applicable. The groundwater samples were collected after a volume of 18,674 gallons of groundwater had been pumped from the interval.



- 2309 The pump was shutoff; recording of groundwater levels during the recovery period commenced. The total volume of groundwater pumped from the packer interval during testing is 23,906 gallons.
- 0210 The groundwater recovery period ended. The drilling contractor killed the well by adding a mixture of barite and bentonite. The transducer and submersible pump were removed from inside the drill pipe. The pressure was released from the packer elements in preparation for removal from the borehole.
- 0400 The drilling contractor will spend the rest of the shift preparing for packer test #3.



## Daily Construction Log

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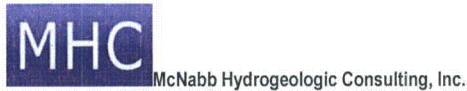
**Date:** July 16, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Warm  
**Weather Night:** Partly Cloudy, Lightning  
**Activity:** Packer Testing

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** Mark McNeal/Eric Meyer

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor is continuing to wait for the packers to deflate fully before removing the packers from the well. They will kill the well some more by adding additional barite and bentonite mixture before beginning to pull the packers from the well to adjust the spacing between the packers for the two remaining packer tests.
- 1000 The drilling contractor is preparing to add more kill to the well and will begin removing the packers from the well after the well is killed.
- 1130 Joe May/FDEP arrives at the site for a site visit.
- 1345 Joe May/FDEP leaves site. The drilling contractor is killing the well with a mixture of barite and bentonite. The header materials have all been removed from the drill stem and they are ready to start tripping pipe out of the well once the well is fully killed.
- 1445 The drilling contractor begins bringing the packer assembly out of the well.
- 1530 The packer assembly has been removed from the well and is hanging in the derrick. The packer appears to be in good condition.
- 1900 The drilling contractor completed changes to the straddle packer spacing to provide 60 feet of separation between the inflatable elements. Subsequently, the packer assembly was run back into the well.
- 2110 Running the last stand of drill pipe into the well.
- 2200 The packer elements were inflated to isolate the 1,225 feet to 1,285 feet bpl interval for packer test #3.
- 0350 The drilling contractor is preparing to run airline into the drill pipe.
- 0405 The drilling contractor begins conditioning the test interval.
- 0645 Conditioning of the packer test #3 test interval continues.





## Daily Construction Log

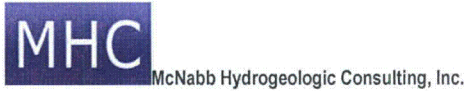
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**Date:** July 17, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Warm  
**Weather Night:** Thunderstorm  
**Activity:** Packer Testing

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** Mark McNeal/Eric Meyer

### CONSTRUCTION ACTIVITIES

- 0745 Conditioning of the 1,225 feet to 1,285 feet below pad level (bpl) interval for packer test #3 was terminated by the drilling contractor. Air-line will be removed from the well and the submersible pump will be installed.
- 0930 The submersible pump and transducers are set in the well to depths of 182.96 feet bpl and 177.96 feet bpl, respectively. The drilling contractor is setting up the discharge line, sampling equipment, and flowmeter.
- 1045 Start preliminary test pumping for packer test #3 at a pumping rate of 77 gpm.
- 1200 The drilling contractor terminated the preliminary test pumping and is allowing water levels to recover.
- 1330 Start packer test #3 pumping from well. Initial totalizer reading is 51,650 gallons.
- 1403 A flow rate of 78 gpm is maintained at the well. The drawdown is 33 feet and specific capacity is 2.36 gpm/foot. Totalizer reading is 54,200.
- 1730 Water samples were collected for packer test #3. Water samples will be analyzed by Florida Spectrum Environmental Services, Inc. as applicable. A volume of 21,117 gallons were purged from the testing interval prior to sample collection.
- 1801 Pumping was terminated from packer test #3. Water level data is being recorded during the recovery period. The packer pressure is 410 psi.
- 2000 Recording of water level recovery continues.
- 1230 Stop data logger recording water level data. The drilling contractor prepares to move the straddle packer assembly to the packer test #4 test interval of 1,102 to 1,162 feet bpl; bleeding pressure from packer elements.
- 0200 Killing artesian flow from drill pipe with bentonite and barite mixture.
- 0225 Submersible pump and tubing were removed from the drill pipe.
- 0300 The drilling contractor is tripping drill pipe to packer test #4 depth interval from 1,102 feet to 1,162 feet bpl.
- 0450 The straddle packer assembly is in position and the drilling contractor begins inflation of the packer elements.
- 0630 Begin conditioning the packer test #4 interval.



## Daily Construction Log

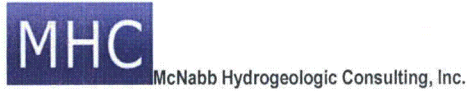
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**Date:** July 18, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Warm  
**Weather Night:** Thunderstorm  
**Activity:** Packer Testing

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** David McNabb/Eric Meyer

### CONSTRUCTION ACTIVITIES

- 0700 Conditioning of the 1,102 feet to 1,162 feet below pad level (bpl) interval for packer test #4 is taking place.
- 1000 Conditioning of the packer test #4 interval continues.
- 1120 Conditioning of the packer test #4 interval continues.
- 1230 Conditioning of the packer test #4 interval continues. The amount of solids in the water coming from the test interval is decreasing as conditioning continues.
- 1300 Switch from air-lifting to surging the test interval.
- 1430 Condition of the test interval has ceased and the drilling contractor has begun installing the test pump and transducer in preparation for running preliminary test.
- 1615 The pump has been installed to a depth of 183.96 (bottom of pump) and the transducer is set to a depth of 178.96 feet bpl in preparation for running a preliminary test on the packer test #4 interval.
- 1705 Begin preliminary test to establish pumping rate for packer test #4.
- 1740 Completed preliminary test for packer test #4. A pumping rate of 16 gpm will be used for the test; flow totalizer is 73,893 gallons.
- 1800 Background water level data is being collected prior to the commencement of pumping for packer test #4.
- 2000 Pumping commences for packer test #4 at a rate of 16 gallons per minute (gpm).
- 0100 Groundwater samples are collected before the pump is turned off. The water level drawdown was 161 feet prior to shutting off the pump. The specific capacity is 0.10 gpm/foot. Samples will be analyzed by Florida Spectrum Environmental Services, Inc. as applicable.
- 01:30 The submersible pump was turned off; the flowmeter totalizer is 78,998 gallons. A total of 5,105 gallons of groundwater were removed during the packer test. Water levels continued to be recorded during the recovery period.
- 0347 The water level recovery data collection has ceased. The drilling contractor began bleeding off pressure from the packers.
- 0700 The pressure on the packers has been bled off and the drilling contractor is preparing to begin removing the packers from the well.



## Daily Construction Log

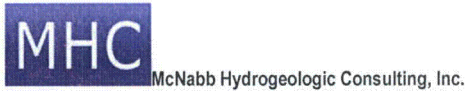
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**Date:** July 19, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Rain, Warm  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Pull Packers, Site Clean Up

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** David McNabb/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The pressure on the packers has been bled off and the drilling contractor is preparing to begin removing the packers from the well.
- 0740 The drilling contractor has started to trip the packers out of the well.
- 0930 Tripping the packers out of hole continues.
- 1040 Tripping the packers out of hole continues.
- 1130 The packers have been brought to surface.
- 1220 The upper packer has been unscrewed from the pup joint that is between the packers and has been placed on the rig floor.
- 1345 The pup joint on the second packer has been removed and the lower packer has been removed from the well and placed on the rig floor. The drilling contractor will spend the rest of the day moving the packers off the rig floor and storing equipment.
- 1625 The drilling contractor continues to store equipment.
- 1740 The drilling contractor continues to store equipment.
- 2330 The drilling contractor continues to store equipment.
- 0130 The drilling contractor continues to store equipment.
- 0330 The drilling contractor continues to store equipment.
- 0530 The drilling contractor continues to store equipment.
- 0700 The drilling contractor is servicing the rig. They will continue servicing the rig and store equipment until approval for the 34-inch diameter casing setting depth has been received.



## Daily Construction Log

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**Date:** July 20, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Rain, Warm  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Store Equipment and Servicing the Rig

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** David McNabb/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor is servicing the rig. They will continue servicing the rig and storing equipment until approval for the 34-inch diameter casing setting depth has been received.
- 0940 The drilling contractor continues servicing the rig.
- 1100 The drilling contractor continues servicing the rig.
- 1310 The drilling contractor continues servicing the rig.
- 1430 The drilling contractor continues servicing the rig.
- 1555 The drilling contractor continues servicing the rig.
- 1730 The drilling contractor continues servicing the rig.
- 2030 The drilling contractor continues to perform maintenance tasks at the project site and on the drilling rig.
- 0030 The drilling contractor continues to perform maintenance tasks at the project site and on the drilling rig.
- 0330 The drilling contractor continues to perform maintenance tasks at the project site and on the drilling rig.
- 0530 The drilling contractor continues to perform maintenance tasks at the project site and on the drilling rig.
- 0700 The drilling contractor continues to perform maintenance tasks at the project site and on the drilling rig.



**LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT**

Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
L-2011-307 Enclosure 2 Page 14 of 33

CLIENT F.P.L.DATE 7-14-2011JOB # 11771JOBSITE NAME EW-1THURS NJOBSITE LOCATION T.P.

## PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
MLR	BOSIT GULOMOV	X	12		12
VL	VLAD TSHIMOV	X	12		12
DL	JOAN LOPEZ	X	12		12
IP	IGOR POPOV	X	12		12
MP	MARCO PEREZ CESAR	X	12		12

## EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WK	Mobilization
Standby	SD	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DN	Available on Job

## DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	10000	Short Duration Job	
2	11100	Onsite Mob/Demob	
3	11150	Job Preparation	
4	11200	Safety Meeting	
5	0005	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Chargeable	
9	11300	Site Clean up	
10	11350	Install Sound Walls	
11	11400	Install Decon Pad	
12	11450	Install Surface Casing	
13	11500	Install Roadway & Drill Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Borehole Abandonment	
18	13050	Production Well Installation	
19	13100	Install Conductor Pipe	
20	13150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
22	13250	Aquifer Zone Testing	
23	13300	Borehole Abandonment/Cement Plugs	
24	13350	Reaming	
25	13400	Under Reaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Watching	
31	14050	Well Development All LDI and Swab	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	19100	Shop	
39	19150	Administration	
40	19200	Other Activities Standby	
41	19600	Fishing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	88000	Equipment Repairs	
44	90170	Damages	
45	90700	Job Superintendent	
		Lunch	
TOTAL HOURS			

## MATERIALS USED TODAY

Quantity	Description
①	SAFETY MTG! FUSING SAFETY WITH WELDING!
②	NO SECOND CHANCES WITH H2S!

## TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
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		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	

## COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

Bleed of the Packer for 1 hour. Wait for IDS to finish up electrical work on the Rig. Tripped out the water pump. Pull back one stand. Set packer at 1433ft. Air develop the whole for 3 hours. Put the pump back into the hole. Ready for the test but the pump isn't working. waiting for electrician.

Installer's Signature

Date

Client's Signature

Date

Supervisor's Signature

Date





CLIENT F.P.L. Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
JOB SITE NAME EW - L-2011-307 Enclosure 2 Page 16 of 33

DATE 7-15-2011  
FRI NIGHTS

JOB # 11771  
JOB SITE LOCATION T.P.

## PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (K)	Onsite Hours	Offsite Hours	Total Hours
DRILLER	BOSI + GULOMOV	X	12		12
VI	VLAD ISHIMOV	X	12		12
JL	JOAN LOPEZ	X	12		12
JG	IGOR POPOV	X	12		12
MP	MARKO PEREZ CESAR	X	12		12

## EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WK	Mobilization MB
Standby	SB	Demobilization DM
Down in Shop	DS	Available in Yard AY
Down on Site	DN	Available on Job AV

## DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	10000	Short Duration Job	
2	11100	Onsite Mob/Demob	
3	11150	Job Preparation	
4	11200	Safety Meeting	
5	0005	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Chargeable	
9	11300	Site Clean up	
10	11350	Install Sound Walls	
11	11400	Install Decan Pad	
12	11450	Install Surface Casing	
13	11500	Install Roadway & Drill Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Borehole Abandonment	
18	13050	Production Well Installation	
19	13100	Install Conductor Pipe	
20	13150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
22	13250	Aquifer Zone Testing	
23	13300	Borehole Abandonment/Content Plugs	
24	13350	Reaming	
25	13400	Under Reaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Watching	
31	14050	Well Development Air Lift and Swab	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	10100	Shop	
39	19150	Administration	
40	19550	Other Activities Standby	
41	19600	Fishing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	88000	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendent	
		Lunch	
		TOTAL HOURS	

## MATERIALS USED TODAY

Quantity	Description
	SAFETY MTG.
①	HAZMA REGISTRATION REQUIREMENT.
②	USE SOLID SAFETY WHEN WORKING WITH CONCRETE.

## TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
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		AM PM	
		AM PM	
		AM PM	

## COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

STOP TEST 11:10 PM, RECOVERY @ 1:10 AM. BLEED OF THE PACKER; T.O. WATER PUMP; Kill N.P. 3" Kill Well 16" MIX BOUR 1 BAG.
--

Installer's Signature

*[Signature]* 7-15-11

Date

Client's Signature

POLYBOL

Date

Supervisor's Signature

*[Signature]*

Date







CLIENT F.P.I.L Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041  
 JOBSITE NAME EW-1 L-2011-307, Enclosure 2, Page 18 of 33

DATE 7-16-2011  
SAT NIGHT

JOB # 11771  
 JOBSITE LOCATION T.P

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
DRILLER	BOSIL GULOMOV	X	12		12
V.T.	VLAD ISHIMOV	X	12		12
JL	JOAN LOPEZ	X	12		12
TG	TGOR POPOV	X	12		12

EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WK	Mobilization
Standby	SB	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DN	Available on Job

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	1000	Short Duration Job	
2	1100	Onsite Mob/Demob	
3	1150	Job Preparation	
4	11200	Safety Meeting	
5	0005	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Chargeable	
9	11300	Site Clean up	
10	11350	Install Round Wells	
11	11400	Install Decon Pad	
12	11450	Install Surface Casing	
13	11500	Install Roadway & Drill Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Borehole Abandonment	
18	13050	Production Well Installation	
19	13100	Install Conductor Pipe	
20	13150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
22	13250	Aquifer Zone Testing	
23	13300	Borehole Abandonment/Cement Plugs	
24	13350	Reaming	
25	13400	Under Reaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Watching	
31	14050	Well Development Air Lift and Swab	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	19100	Shop	
39	19150	Administration	
40	19550	Other Activities Standby	
41	19600	Fishing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	88000	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendent	
		Lunch	
TOTAL HOURS			

MATERIALS USED TODAY

Quantity	Description
①	SAFETY MTG; (PPE)
②	WANT TO EARN \$250 IN GIFT CARDS?
①	LIGHTNING: 8:40pm TO 9:30pm.
②	LIGHTNING: 5:15AM TO 6:30AM.

TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
		AM PM	
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		AM PM	
		AM PM	

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

T.I.H. PACKER - 1225-1285/C/G; PUMP SLURRY PIT WATER TO CANAL @ 11:05<sup>pm</sup> TO 3:45 AM. START AIR DEVELOP 4:05 AM TO 5:05 AM. PUMP 15750 GAL WATER; MIX KILL 1 BAG. CAR 3 BAG. BOR.

Installer's Signature  
 LCC (201) 042220

*[Signature]* 7-16-2011 Date

Client's Signature

*[Signature]* Date

Supervisor's Signature

*[Signature]* Date

Date



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT: FPL Proposed Turkey Point Units 6 and 7  
 Docket Nos: 52-040 and 52-041  
 JOBSITE NAME: EW L-2011-307 Enclosure 2 Page 19 of 33

DATE: 7/17/11  
Sun days

JOB #: 11271  
 JOBSITE LOCATION: Turkey Point

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
Driller	George Hags	X	12		12
MAR	Mike Ramirez	X	13		12
M.P.	MAVRO PEREZ CESAR	X	12		12
A.P.	Andrew Popov	X	12		12
DRILLER	DANNY KEELEY	X	12		12

EQUIPMENT DEPLOYED TODAY

Description	UNIT #	Status
Working	WK	Mobilization
Standby	SB	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DN	Available on Job

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	1000	Short Duration Job	
2	1110	Onsite Mobil/Demob	
3	1115	Job Preparation	
4	1120	Safety Meeting	
5	0005	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	1125	Training - Job Chargeable	
9	1130	Site Clean up	
10	1135	Install Bound Walls	
11	1140	Install Decan Pad	
12	1145	Install Surface Casing	
13	1150	Install Roadway & Drill Pad	
14	1205	Test Hole Drilling	
15	1210	Geophysical Logging & Other Testing	
16	1215	Aquifer Zone Testing	
17	1220	Borehole Abandonment	
18	1305	Production Well Installation	
19	1310	Install Conductor Pipe	
20	1315	Drill Pilot Hole	
21	1320	Geophysical Logging & Other Testing	
22	1325	Aquifer Zone Testing	
23	1330	Borehole Abandonment/Cement Plugs	
24	1335	Reaming	
25	1340	Under Reaming	
26	1345	Install Casing	
27	1350	Install Screen	
28	1355	Gravel Pack The Well	
29	1360	Install Annular Seal	
30	1365	Water Watching	
31	1405	Well Development Air Lift and Swab	
32	1410	Disposal of Fluids & Cuttings	
33	1415	Furnish & Install Test Pump and Discharge	
34	1420	Development Pumping	
35	1425	Test Pumping	
36	1430	Disinfection and Chlorination	
37	1905	Offsite Activities Mobil/Demob	
38	1910	Shop	
39	1915	Administration	
40	1950	Other Activities Standby	
41	1960	Fishing for Lost/Broken Tooling	
42	1965	Change Order Activities	
43	8500	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendents	
		Lunch	
		TOTAL HOURS	

MATERIALS USED TODAY

Quantity	Description
	1st Safety Meeting: Material Handling
	2nd Safety Meeting: Moving Faster Safely
	6pm Stop for Lighting.
	7pm Return to work from lighting break

TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
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		AM PM	

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

0700 AIR Develop well, tripoint air line, trip in submersible, pump pre-pump test, 1328 steptest start pump test catch samples every 30 minutes. Start pumping down slurry pit catch sample every hour. Change filters in Attrition System, 1800 stop test start recovery, 1800 shut down for lighting, 1900 lighting breaker

Installer's Signature  
(1772) 24 1366

Date

Client's Signature

DAVID R I

Date

Supervisor's Signature

Date



CLIENT F.P.L Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041  
 JOBSITE NAME EW-1 L-2011-307 Enclosure 2 Page 20 of 33

DATE 7-17-2011  
SUN NIGHT.

JOB # 11771  
 JOBSITE LOCATION T.P.

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
Driller	BOSIT GULOMOV	X	12		12
VT	VLAD ISHIMOV	X	12		12
W/L	JOAN LOPEZ	X	12		12
IP	TGOR POPOV	X	12		12

EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WR	Mobilization
Standby	SB	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DN	Available on Job

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	10000	Short Duration Job	
2	11100	Onsite Mob/Demob	
3	11150	Job Preparation	
4	11200	Safety Meeting	
5	0005	Training - Overhead	
6	0000	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Chargeable	
9	11300	Site Clean up	
10	11350	Install Sound Walls	
11	11400	Install Decom Pad	
12	11450	Install Surface Coating	
13	11500	Install Roadway & Drill Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Borehole Abandonment	
18	13050	Production Well Installation	
19	13100	Install Conductor Pipe	
20	13150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
22	13250	Aquifer Zone Testing	
23	13300	Borehole Abandonment/Cement Plugs	
24	13350	Reaming	
25	13400	Under Beaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Watching	
31	14050	Well Development Air Lift and Swab	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	19100	Shop	
39	19150	Administration	
40	19550	Other Activities Standby	
41	19600	Fishing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	88000	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendent	
		Lunch	
		TOTAL HOURS	

MATERIALS USED TODAY

Quantity	Description
①	SAFETY MTC: (LIGHTING:)
②	HOUSEKEEPING:
	7pm. STOP FOR LIGHTING TO 12:30 AM

TOTAL WT  
37672

TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
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COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

STOP TEST 12:30pm. BLEED OF THE PACKER FOR 1/2 HOUR.  
 T.O. WATER pump! PULL BACK & STAND A.P, DOWN 45' D.P.  
 SET PACKER 1102'-TO-1162'. KILL D.P 4" KILL!  
 PUMP SLURRY PIT TO CANAL - SET PACKER @ 420 psi  
 T.I.N AIR LINE FOR AIR DEVELOP:

Installer's Signature [Signature] 7-17-11 Date

Client's Signature PAYROLL Date

Supervisor's Signature [Signature] Date







CLIENT FPL  
JOB SITE NAME EWI

Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
L-2011-307 Enclosure 2 Page 23 of 33

DATE 7/19/2011  
day

JOB # 11771  
JOB SITE LOCATION Turkey point

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
Driller	George Haya	X	12		12
MR	MIKE RAMIREZ	X	13		13
MP	Marko Perez Cesar	X	12		12
AP	Andrey Popov	X	12		12

EQUIPMENT DEPLOYED TODAY

Description		Unit #	Status
Working	WK	Mobilization	MB
Standby	SB	Demobilization	DM
Down in Shop	DS	Available in Yard	AY
Down on Site	DN	Available on Job	AV

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	HOURS
1	10000	Short Duration Job	
2	11100	Onsite Mob/Demob	
3	11150	Job Preparation	
4	11200	Safety Meeting	
5	0005	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Chargeable	
9	11300	Site Clean up	
10	11350	Install Sound Walls	
11	11400	Install Decor Pad	
12	11450	Install Surface Casing	
13	11500	Install Roadway & Drill Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Borehole Abandonment	
18	13050	Production Well Installation	
19	13100	Install Conductor Pipe	
20	13150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
22	13250	Aquifer Zone Testing	
23	13300	Borehole Abandonment/Cement Plugs	
24	13350	Reaming	
25	13400	Under Reaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Watching	
31	14050	Well Development Air Lift and Swap	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	19100	Shop	
39	19150	Administration	
40	19550	Other Activities Standby	
41	19600	Fishing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	88000	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendent	
		Lunch	
		TOTAL HOURS	

MATERIALS USED TODAY

Quantity	Description
	(1) Safety meeting: Hearing protection
	(2) Safety meeting: Safety Compliance procedures.
	Shut down Pw Lighting @ 1420 - 1530

TIME OF ACTIVITY BY ITEM #

From	To	Circle One	Item #
		AM PM	
		AM PM	
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COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

0645: bleed or packer tip out or hole. 1420 Shut down Pw Lighting Run in 1 stand w/ Caw seal in well w/ 6" valve clean floor and tools rig up trash pump to pump off rain for vent feet tank into slurry pit. Slurry pit is 5' foot down.









**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Southeast Pad Monitoring Well  
(SE-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1311	10.10	-1.51	81,600	30,200	57,800	29.9	Background Sampling
4/29/2011	1349	10.40	-1.81	86,700	33,100	55,000	30.4	
5/5/2011	1008	11.10	-2.51	83,000	29,500	54,700	29.9	
5/11/2011	1228	10.65	-2.06	78,200	30,100	52,600	30.1	
5/19/2011	1039	10.12	-1.53	75,200	30,000	51,100	29.8	
5/26/2011	1235	10.47	-1.88	73,890	31,200	53,800	29.9	
6/2/2011	1056	10.50	-1.91	74,200	29,400	57,400	29.6	
6/9/2011	1210	10.32	-1.73	72,200	32,100	51,000	29.6	
6/16/2011	1035	10.00	-1.41	71,300	32,200	54,000	29.8	
6/23/2011	1109	10.10	-1.51	71,900	31,600	55,650	29.8	
6/30/2011	1009	9.85	-1.26	72,800	27,600	53,050	29.5	
7/8/2011	1138	9.12	-0.53	73,150	29,800	54,450	29.9	
7/14/2011	1414	9.48	-0.89	79,700	29,000	55,350	29.8	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.59 feet NAVD 88

**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Northeast Pad Monitoring Well  
(NE-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1108	10.49	-1.61	78,700	32,200	57,000	29.8	Background Sampling
4/29/2011	1157	10.68	-1.80	80,400	29,900	53,800	30.4	
5/5/2011	1157	11.40	-2.52	81,400	27,500	52,350	31.2	
5/11/2011	1309	11.00	-2.12	76,800	31,600	51,200	29.7	
5/19/2011	0958	10.48	-1.60	72,600	35,600	51,200	29.5	
5/26/2011	1050	10.76	-1.88	71,360	29,500	52,900	29.7	
6/2/2011	1134	10.78	-1.90	71,700	29,000	55,700	29.6	
6/9/2011	1128	10.61	-1.73	69,700	32,300	50,650	29.3	
6/16/2011	0958	10.35	-1.47	69,300	33,000	53,450	29.5	
6/23/2011	1028	10.41	-1.53	69,400	30,600	55,600	29.5	
6/30/2011	0928	10.15	-1.27	70,300	27,600	51,950	29.2	
7/8/2011	1210	9.00	-0.12	72,570	30,100	54,150	29.9	
7/14/2011	1338	9.75	-0.87	76,400	27,200	54,550	29.9	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.88 feet NAVD 88



**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1

**EW-1 Pad Monitoring Well Water Quality Data  
Northwest Pad Monitoring Well  
(NW-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1221	10.50	-1.66	84,300	33,500	59,900	30.8	Background Sampling
4/29/2011	1120	10.65	-1.81	86,300	33,700	56,400	30.0	
5/5/2011	1051	11.40	-2.56	87,400	31,300	57,650	31.1	
5/11/2011	1034	12.40	-3.56	79,100	33,500	55,650	30.4	
5/19/2011	1113	13.90	-5.06	80,000	36,000	53,700	30.4	
5/26/2011	1125	10.73	-1.89	75,130	32,300	55,450	30.4	
6/2/2011	1215	10.75	-1.91	75,900	30,700	59,500	30.3	
6/9/2011	1248	10.60	-1.76	72,500	32,200	51,950	29.9	
6/16/2011	1118	10.25	-1.41	72,500	31,500	54,550	30.0	
6/23/2011	1143	10.37	-1.53	73,300	31,600	57,750	30.3	
6/30/2011	1049	10.10	-1.26	75,700	27,400	54,300	30.0	
7/8/2011	1112	9.38	-0.54	74,100	30,700	53,950	30.3	
7/14/2011	1524	9.75	-0.91	79,900	27,600	56,350	30.3	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.84 feet NAVD 88

**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Southwest Pad Monitoring Well  
(SW-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1414	10.50	-1.62	72,500	26,400	51,500	30.6	Background Sampling
4/29/2011	1025	10.60	-1.72	77,400	28,300	51,600	29.8	
5/5/2011	0930	11.85	-2.97	75,200	29,000	49,400	28.7	
5/11/2011	1124	16.40	-7.52	78,100	28,300	51,050	31.6	
5/19/2011	1202	15.95	-7.07	73,100	29,700	48,450	32.6	
5/26/2011	1155	11.20	-2.32	66,630	27,800	48,350	29.4	
6/2/2011	1035	11.25	-2.37	68,500	26,000	52,600	29.4	
6/9/2011	1319	11.05	-2.17	65,400	26,300	44,150	29.5	
6/16/2011	1154	10.75	-1.87	64,900	27,000	48,450	29.5	
6/23/2011	1214	10.85	-1.97	65,500	30,400	50,800	29.6	
6/30/2011	1119	10.60	-1.72	68,500	24,300	46,650	29.4	
7/8/2011	1045	9.85	-0.97	64,950	25,600	47,650	29.6	
7/14/2011	1445	10.22	-1.34	69,900	24,800	48,300	29.6	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.88 feet NAVD 88

**Florida Power & Light Company  
Turkey Point  
Exploratory Well EW-1  
Packer Test Summary Table**

Test #	Test Interval (ft. bpl)	Pumping Rate (gpm)	Drawdown (feet)	Specific Capacity (gpm/foot)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	TKN (mg/L)	Ammonia (mg/L)	Temperature (Celsius)	pH (standard units)
1	1,505 - 1,535	76	31.3	2.43	22,420	7,990	13,890	0.22	0.18	25.8	7.55
2	1,400 - 1,430	77	40.6	1.90	9,850	3,230	5,780	0.13	0.11	24.4	7.55
3	1,225 - 1,285	78	33.2	2.35	5,340	1,500	3,120	0.16	0.08	26.8	7.80
4	1,102 - 1,162	16	161	0.10	4,980	1,130	2,984	0.34	0.32	24.9	7.86

ft. bpl = feet below pad level  
gpm = gallons per minutes  
umhos/cm - micromhos per centimeter  
mg/L = milligrams per liter  
TDS = total dissolved solids  
TKN = total Kjeldahl nitrogen

<b>Florida Power &amp; Light Company</b>			
<b>Turkey Point</b>			
<b>Exploratory Well EW-1</b>			
<b>Daily Kill Material Log</b>			
Date	Depth (feet bpl)	Kill Used	Approximate Volume (gallons)
7/7/2011	1655	Bentonite /Barite	569
7/8/2011	1655	Bentonite /Barite	6,064
7/9/2011	1655	Bentonite /Barite	2,085
7/10/2011	1655	Bentonite /Barite	1,137
7/11/2011	1655	Bentonite /Barite	9,475
7/12/2011	1655	Bentonite /Barite	759
7/13/2011	1655	Bentonite /Barite	4,548
7/15/2011	1655	Bentonite /Barite	1,925
7/16/2011	1655	Bentonite /Barite	2,200
7/17/2011	1655	Bentonite /Barite	284
7/18/2011	1655	Bentonite /Barite	275
7/19/2011	1655	Bentonite /Barite	275
feet bpl = feet below pad level			



**Florida Power & Light Company  
Turkey Point  
Exploratory Well EW-1  
Pilot Hole Water Quality**

Sample Date	Depth (ft bpl)	Specific Conductance (umhos/cm)	Total Dissolved Solids (mg/L)	Chlorides (mg/L)	Ammonia (mg/L)	Total Kjeldahl Nitrogen (mg/L)
6/30/2011	1,100	1,228	610	61.3	0.04	0.55
7/1/2011	1,190	1,177	768	85.5	0.06	0.59
7/1/2011	1,255	1,167	776	97.3	0.03	0.56
7/1/2011	1,345	2,420	1,428	551	0.06	0.42
7/1/2011	1,435	2,900	1,736	640	0.08	0.44
7/2/2011	1,525	6,760	4,168	2,045	0.09	0.35
7/3/2011	1,615	5,660	3,548	1,670	0.08	0.45

ft bpl = feet below pad level  
umhos/cm - micromhos per centimeter  
mg/L = milligrams per liter

Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
L-2011-307 Enclosure 3 Page 1 of 31

### **Enclosure 3**

Florida Power & Light Company Turkey Point Units 6 & 7  
Exploratory Well Project; Permit #0293962-001-UC  
Weekly Construction Summary #12 dated July 29, 2011

## WEEKLY CONSTRUCTION SUMMARY



**McNabb Hydrogeologic Consulting, Inc.**

601 Heritage Drive, Suite 110  
Jupiter, Florida 33458  
Phone: 561-891-0763  
Fax: 561-623-5469

July 29, 2011

MHCDEP-11-0327

Mr. Joseph May, P.G.  
Florida Department of Environmental Protection  
400 N. Congress Ave, Suite 200  
West Palm Beach, FL 33401

**RE: Florida Power & Light Company Turkey Point Units 6 & 7 Exploratory Well  
Project; Permit #0293962-001-UC  
Weekly Construction Summary #12**

Dear Mr. May:

This is the twelfth weekly construction summary for the above referenced project. The reporting period for this weekly construction summary began at 7:00 AM, Thursday, July 21, 2011 and ended at 7:00 AM, Thursday, July 28, 2011. Consultant and drilling contractor daily reports were prepared for this reporting period. Copies of the consultant and drilling contractor daily construction logs are attached.

During the previous reporting period the drilling contractor performed packer testing on the intervals from 1,505 to 1,535 feet below pad level (bpl), 1,400 to 1,430 feet bpl, 1,225 to 1,285 feet bpl, and 1,102 to 1,162 feet bpl.

The drilling contractor spent this reporting period backplugging the pilot hole over the interval from 1,655 feet bpl to 1,094 feet bpl with 107 barrels of 12% bentonite blend cement. After allowing the cement to set, the drilling contractor began reaming the backplugged pilot hole using a 42 ½-inch diameter reaming bit. The interval from the base of the 44-inch diameter casing to 1,394 feet bpl had been reamed by the end of the reporting period. Florida Department of Environmental Protection (FDEP) approval of the recommended 34-inch diameter intermediate casing setting depth of 1,535 feet bpl was received on July 22, 2011. Deviation surveys were performed at 90-foot intervals. A copy of the deviation survey summary sheet along with a pilot hole backplug cement summary sheet is attached.

There was no coring, casing installation, packer testing, geophysical logging or exploratory well development during this reporting period. Salt or other materials were not used to suppress well flow and there were no construction related issues during this reporting period.

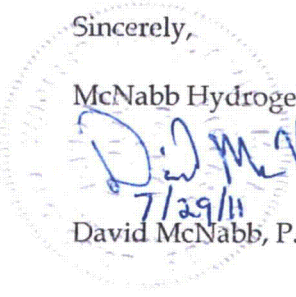
During the next reporting period, it is anticipated that the drilling contractor complete reaming the hole using a 42 ½-inch diameter reaming bit to a depth of 1,540 feet bpl and install the 34-inch diameter intermediate casing to a depth of 1,535 feet bpl. The 34-inch diameter intermediate casing will then be cemented from the base of casing to land surface.

In addition, sampling of the pad monitor wells began on April 21, 2011 and has been taking place on a weekly basis since the initial sampling. The pad monitor wells were most recently sampled on July 28, 2011. The most recent set of pad monitoring well sample results available is for samples collected on July 21, 2011. Sampling of the pad monitor wells around EW-1 will continue until drilling and testing of EW-1 has been completed. Copies of the pad monitor wells data summary sheets are attached.

Should you have any questions regarding the above weekly construction summary, please contact David McNabb at (561) 891-0763.

Sincerely,

McNabb Hydrogeologic Consulting, Inc.



7/29/11  
David McNabb, P.G.

Attachments: Consultant Daily Construction Logs  
Drilling Contractor Daily Construction Logs  
Pad Monitor Well Summary Sheets  
Deviation Survey Summary Sheet  
Pilot Hole Backplug Cement Summary Sheet

Cc: George Heuler/FDEP-Tallahassee  
Steve Anderson/SFWMD  
Matthew Raffenberg/FPL  
David Holtz/HCE

Joe Haberfeld/FDEP-Tallahassee  
Ron Reese/USGS  
David Paul/FGS



McNabb Hydrogeologic Consulting, Inc.



## Daily Construction Log

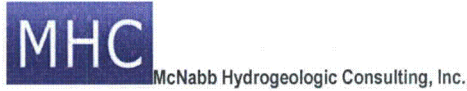
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**Date:** July 21, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Rain, Warm  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Rig Maintenance

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** not applicable  
**Ending Depth:** 1,655 feet bpl  
**Recorded By:** Sally Durall/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor is performing maintenance tasks on the drill rig. They will continue performing maintenance tasks on the drill rig until approval for the 34-inch diameter casing setting depth has been received.
- 0900 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 1035 Florida Spectrum Environmental Services, Inc. is on site to sample the pad monitor wells.
- 1200 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 1500 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 1800 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 2100 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 0100 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 0200 The drilling contractor night shift leaves the site for the remainder of the shift.



## Daily Construction Log

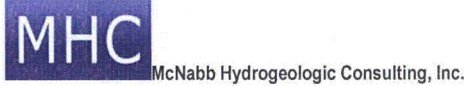
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**Date:** July 22, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,655 feet bpl  
**Weather Day:** Partly Cloudy, Hot  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Pilot Hole Backplugging

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** 42 ½-inch  
**Ending Depth:** 1,094 feet bpl  
**Recorded By:** Sally Durall/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor is performing maintenance tasks on the drill rig. They will continue performing maintenance tasks on the drill rig until approval for the 34-inch diameter casing setting depth has been received.
- 0900 The drilling contractor continues to perform maintenance tasks on the drilling rig.
- 1055 The approval of the 34-inch diameter casing setting depth of 1,535 feet below pad level (bpl) has been received from the Florida Department of Environmental Protection (FDEP). The drilling contractor is preparing to backplug the pilot hole using cement. The drilling contractor plans to backplug the pilot hole using 107 barrels of 12% bentonite blend cement for cement stage #1. The theoretical fill is to 1,090 feet bpl which is the base of the 44-inch diameter casing.
- 1345 The drilling contractor begins to trip the cement tubing inside the borehole.
- 1515 The drilling contractor has tripped the cement tubing in the borehole to a depth of 1,649 feet bpl.
- 1540 Begin pumping cement stage #1.
- 1625 Complete cement stage #1 using 107 barrels of 12% bentonite blend cement. Wait for cement to cure prior to tagging the top of cement.
- 2230 The drilling contractor begins running the cement tubing in the borehole to tag the top of the cement plug.
- 2310 The drilling contractor tags the top of cement plug at 1,094 feet bpl. Begin tripping the cement tubing out of the borehole.
- 0030 The drilling contractor has completed tripping out of the borehole with the cement tubing. The contractor will now prepare to trip into the borehole with the 42 ½ inch diameter bit to begin reaming the pilot hole from a depth of 1,095 feet bpl.
- 0300 The drilling contractor continues preparing to begin tripping into the borehole with the 42 ½ inch diameter bit.
- 0700 The drilling contractor begins tripping in the borehole with the 42 ½-inch diameter bit.



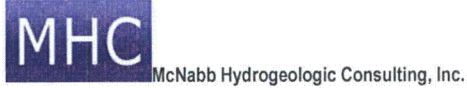
## Daily Construction Log

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<b>Date:</b> July 23, 2011	<b>FDEP UIC Permit #:</b> 0293962-001-UC
<b>Project:</b> FPL Turkey Point EW	<b>Well No.:</b> EW-1
<b>Contractor:</b> Layne Christensen Company	<b>Bit Diameter:</b> 42 ½-inch
<b>Starting Depth:</b> 1,094 feet bpl	<b>Ending Depth:</b> 1,135 feet bpl
<b>Weather Day:</b> Mostly Cloudy, Hot	<b>Recorded By:</b> Sally Durall/Deborah Daigle
<b>Weather Night:</b> Rain, Warm	
<b>Activity:</b> Reaming	

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor tagged the top of the cement plug at a depth of 1,094 feet below pad level (bpl) during and has began tripping in the borehole with the 42 ½-inch diameter bit during the night shift.
- 0900 The drilling contractor continues tripping in the borehole with the 42 ½-inch diameter bit.
- 1150 The drilling contractor has tripped inside the drill pipe with approximately 300 feet of air line and is preparing to begin reaming the pilot hole from a depth of 1,095 feet bpl.
- 1205 The drilling contractor is circulating drilling fluids inside the casing.
- 1335 The drilling contractor begins reaming out residual cement on the inside of the 44-inch diameter casing wall.
- 1545 The drilling contractor continues reaming out residual cement and is currently reaming at a depth of 1,092 feet bpl.
- 1645 Begin reaming the pilot hole from a depth of 1,095 feet bpl.
- 1745 Reaming the pilot hole at a depth of 1,099 feet bpl.
- 1930 Reaming the pilot hole at a depth of 1,106 feet bpl.
- 2100 Reaming the pilot hole at a depth of 1,112 feet bpl.
- 2300 The drilling contractor prepares to run a deviation survey at a depth of 1,080 feet bpl. The reamed hole is at a depth of 1,114 feet bpl.
- 2330 The drilling contractor completes the deviation survey. The survey result is 0.1 degrees.
- 0030 Reaming the pilot hole at a depth of 1,117 feet bpl.
- 0300 Reaming the pilot hole at a depth of 1,123 feet bpl.
- 0500 Reaming the pilot hole at a depth of 1,129 feet bpl.
- 0615 Reaming the pilot hole at a depth of 1,134 feet bpl.
- 0700 Reaming the pilot hole at a depth of 1,135 feet bpl.



## Daily Construction Log

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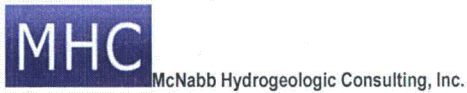
**Date:** July 24, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,135 feet bpl  
**Weather Day:** Mostly Cloudy, Hot  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Reaming

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** 42 ½-inch  
**Ending Depth:** 1,207 feet bpl  
**Recorded By:** Sally Durall/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor reamed the pilot hole to a depth of 1,135 feet below pad level (bpl) during the night shift.
- 0730 Reaming the pilot hole at a depth of 1,138 feet bpl.
- 0835 Reaming the pilot hole at a depth of 1,143 feet bpl.
- 1000 Reaming the pilot hole at a depth of 1,150 feet bpl.
- 1130 Reaming the pilot hole at a depth of 1,158 feet bpl.
- 1300 Reaming the pilot hole at a depth of 1,165 feet bpl.
- 1440 Reaming the pilot hole at a depth of 1,175 feet bpl.
- 1555 Reaming the pilot hole at a depth of 1,183 feet bpl.
- 1715 Reaming the pilot hole at a depth of 1,188 feet bpl.
- 1900 Reaming the pilot hole at a depth of 1,192 feet bpl.
- 2100 Reaming the pilot hole at a depth of 1,196 feet bpl.
- 2300 Reaming the pilot hole at a depth of 1,198 feet bpl.
- 0200 Reaming the pilot hole at a depth of 1,204 feet bpl. The kelly is down and the drilling contractor is breaking the drill pipe in preparation for a deviation survey at 1,170 feet bpl. The reamed borehole depth is 1,204 feet bpl.
- 0230 The drilling contractor has completed the deviation survey. The result is 0.4 degrees. The drilling contractor will add a string of drill pipe and resume reaming the pilot hole.
- 0430 Reaming the pilot hole at a depth of 1,206 feet bpl.
- 0600 The drilling contractor has been drilling in a hard formation. The drilling contractor has added an additional 60 feet of air line.
- 0620 Resume drilling the pilot hole from a depth of 1,206 feet bpl.
- 0700 Reaming the pilot hole at a depth of 1,207 feet bpl.





## Daily Construction Log

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**Date:** July 25, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,207 feet bpl  
**Weather Day:** Mostly Cloudy, Hot  
**Weather Night:** Partly Cloudy, Warm  
**Activity:** Reaming

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** 42 ½-inch  
**Ending Depth:** 1,288 feet bpl  
**Recorded By:** Sally Durall/Deborah Daigle

### CONSTRUCTION ACTIVITIES

0700 The drilling contractor reamed the pilot hole to a depth of 1,207 feet below pad level (bpl) during the night shift.

0730 Reaming the pilot hole at a depth of 1,211 feet bpl.

0900 Reaming the pilot hole at a depth of 1,218 feet bpl.

1025 Reaming the pilot hole at a depth of 1,225 feet bpl.

1140 Reaming the pilot hole at a depth of 1,230 feet bpl.

1305 Reaming the pilot hole at a depth of 1,234 feet bpl.

1425 Reaming the pilot hole at a depth of 1,239 feet bpl.

1610 Reaming the pilot hole at a depth of 1,249 feet bpl.

1745 Reaming the pilot hole at a depth of 1,254 feet bpl.

1900 Reaming the pilot hole at a depth of 1,255 feet bpl.

2200 Reaming the pilot hole at a depth of 1,266 feet bpl.

2330 Reaming the pilot hole at a depth of 1,270 feet bpl.

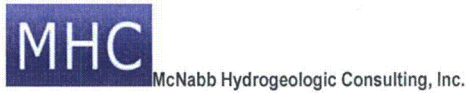
0130 Reaming the pilot hole at a depth of 1,276 feet bpl.

0330 Reaming the pilot hole at a depth of 1,280 feet bpl.

0500 Reaming the pilot hole at a depth of 1,284 feet bpl.

0600 Reaming the pilot hole at a depth of 1,287 feet bpl.

0700 Reaming the pilot hole at a depth of 1,288 feet bpl.



## Daily Construction Log

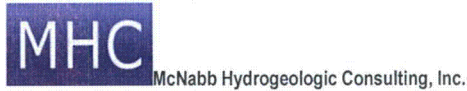
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**Date:** July 26, 2011  
**Project:** FPL Turkey Point EW  
**Contractor:** Layne Christensen Company  
**Starting Depth:** 1,288 feet bpl  
**Weather Day:** Clear, Hot  
**Weather Night:** Cloudy, Warm  
**Activity:** Reaming

**FDEP UIC Permit #:** 0293962-001-UC  
**Well No.:** EW-1  
**Bit Diameter:** 42 ½-inch  
**Ending Depth:** 1,383 feet bpl  
**Recorded By:** Sally Durall/Deborah Daigle

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor reamed the pilot hole to a depth of 1,288 feet below pad level (bpl) during the night shift.
- 0800 Reaming the pilot hole at a depth of 1,293 feet bpl.
- 0815 The kelly is down at 1,294 feet bpl. The drilling contractor is circulating the borehole clean and preparing to perform a deviation survey.
- 0930 The drilling contractor runs the deviation tool to a depth of 1,260 feet bpl.
- 0950 The deviation survey is completed. The deviation result is 0.5 degrees.
- 1015 The drilling contractor makes a drill pipe (45 foot) connection and resumes drilling from a depth of 1,294 feet bpl.
- 1100 Reaming the pilot hole at a depth of 1,297 feet bpl.
- 1300 Reaming the pilot hole at a depth of 1,303 feet bpl.
- 1445 Reaming the pilot hole at a depth of 1,312 feet bpl.
- 1610 Reaming the pilot hole at a depth of 1,318 feet bpl.
- 1740 Reaming the pilot hole at a depth of 1,331 feet bpl.
- 1900 Reaming the pilot hole at a depth of 1,338 feet bpl.
- 2000 Reaming the pilot hole at a depth of 1,339. The drilling contractor will trip out the 45 foot section of drill pipe, connect a 90 foot drill pipe stand, and continue reaming.
- 2100 Reaming the pilot hole at a depth of 1,340 feet bpl.
- 0200 Reaming the pilot hole at a depth of 1,361 feet bpl.
- 0500 Reaming the pilot hole at a depth of 1,374 feet bpl.
- 0600 Reaming the pilot hole at a depth of 1,379 feet bpl.
- 0700 Reaming the pilot hole at a depth of 1,383 feet bpl.



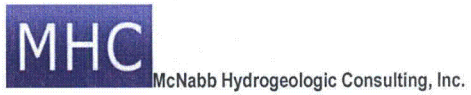
## Daily Construction Log

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<b>Date:</b> July 27, 2011	<b>FDEP UIC Permit #:</b> 0293962-001-UC
<b>Project:</b> FPL Turkey Point EW	<b>Well No.:</b> EW-1
<b>Contractor:</b> Layne Christensen Company	<b>Bit Diameter:</b> 42 1/2-inch
<b>Starting Depth:</b> 1,383 feet bpl	<b>Ending Depth:</b> 1,394 feet bpl
<b>Weather Day:</b> Cloudy, Hot	<b>Recorded By:</b> Sally Durall/Deborah Daigle
<b>Weather Night:</b> Mostly Cloudy, Warm	
<b>Activity:</b> Reaming	

### CONSTRUCTION ACTIVITIES

- 0700 The drilling contractor reamed the pilot hole to a depth of 1,383 feet below pad level (bpl) during the night shift.
- 0705 The kelly is down at 1,384 feet bpl. The drilling contractor is circulating the borehole clean and preparing to perform a deviation survey.
- 0755 The drilling contractor runs the deviation tool to a depth of 1,350 feet bpl.
- 0810 The deviation survey is complete. The deviation result is 0.2 degrees.
- 0825 The drilling contractor makes a drill pipe (45 foot) connection and begins circulating the hole.
- 0910 Resume drilling from 1,384 feet bpl.
- 0945 The drilling contractor has lost air circulation and has currently stopped drilling while determining if the bit is plugged off.
- 1330 The drilling contractor is unable to break circulation and begins to trip out with drill pipe and bottom hole assembly (BHA) to approximately 300 feet bpl. The plan is to attempt to blow out the bit with the air line to avoid tripping the BHA out of the hole.
- 1450 The drilling contractor has determined that the drill pipe near the base of the drill pipe string (bottom 3 drill pipe stands) has become plugged with cuttings and is currently cleaning out the drill pipe.
- 1630 The drilling contractor begins to trip back in the borehole with the BHA and drill pipe.
- 1720 The drilling contractor has tripped the BHA in the borehole to approximately 1,100 feet bpl and has stopped to clean out the mud pit.
- 2030 The drilling contractor is tripping in to the borehole with the BHA and circulating down to clean the borehole.
- 2330 The drilling contractor resumes tripping into and circulating the borehole.
- 0010 The drilling contractor continues to circulate and clean the borehole.
- 0130 The drilling contractor continues to circulate and clean the borehole.
- 0230 The drilling contractor continues to circulate and clean the borehole.
- 0330 The drilling contractor begins reaming the pilot hole at a depth of 1,384 feet bpl.



- 0410 The drilling contractor continues to ream the pilot hole at a depth of 1,386 feet bpl.
- 0530 Continue reaming the pilot hole at a depth of 1,393 feet bpl.
- 0700 Reaming the pilot hole at a depth of 1,394 feet bpl.



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT FPL Proposed Turkey Point Units 6 and 7
Docket Nos. 52-040 and 52-041
L-2011-307 Enclosure 3 Page 12 of 31

DATE 7/20/11 THURSDAY
PERSONNEL EMPLOYED TODAY

JOB # 11771
JOB SITE LOCATION Turkey Point
DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

PERSONNEL EMPLOYED TODAY

Table with columns: Crew Assignment, Employee - Full Name, Per Diem?, Onsite Hours, Offsite Hours, Total Hours. Includes names like George Haga, Mike Ramirez, Marko Perez Cesar, Audrey Popov, Josh Brown.

Table with columns: Description, Unit #, Status. Includes sub-tables for Working, Standby, Down in Shop, Down on Site.

Main activity log table with columns: Item #, Cost Code, Labor Activity, Hours. Lists various activities like 'Short Duration Job', 'Drake Mob/Demob', 'Job Preparation', etc.

MATERIALS USED TODAY

Table with columns: Quantity, Description. Includes entries for '1st Safety meeting: Flammables & Solvents', '2nd Safety Meeting: Overhead Safety', and welder logs.

TIME OF ACTIVITY BY ITEM #

Table with columns: From, To, Code One, Item #. Shows time intervals for various items.

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

Repair Drum remove kick plate. work on Air Line winch seat and unseat air line still swagging up take entire assembly of Ellis recut flanges to make level. Lockout tag out Air line winch, pick up trash on location hook up cementer. help welder fit stabilizer from 37" to 41" and roll casing to back on legs.

Installer's Signature LCC 0581 082202

Client's Signature

PAYROLL

Supervisor's Signature

Date











### LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

DRIFT F.P.L. Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041

DATE 7-23-2011  
SAT DAYS

JOB # 11771  
 T.P.

JOB SITE NAME E.W. L-2011-307 Enclosure 3 Page 16 of 31

JOB SITE LOCATION

FINANCIAL REPORTING UNIT

EQUIPMENT REPORTING UNIT

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
Killer	Bosir Gullamov	X	12		12
VI	VLAD ISHIMOV	X	12		12
JL	KOAN LOPEZ	X	12		12
IP	COR POPOV	X	12		12
JB	JOSH BROWN	X	14		14

Description	Unit #	Status
Walking	WK	Mobilization MB
Standby	SB	Demobilization DM
Down In Shop	DS	Available in Yard AY
Down on Site	DN	Available on Job AV

Item #	Comp Code	Label/Activity	Hours
1	10000	Hourly Payroll	
2	11000	Drill Bits/Consumables	
3	11100	Lost Circulation	
4	11200	Drill Pipe	
5	11300	Training - General	
6	11400	Utility - General	
7	11500	Maintenance - General	
8	11600	Training - Specific	
9	11700	Maintenance - Specific	
10	11800	Material and Waste	
11	11900	Material and Waste	
12	12000	Material and Waste	
13	12100	Material and Waste	
14	12200	Material and Waste	
15	12300	Material and Waste	
16	12400	Material and Waste	
17	12500	Material and Waste	
18	12600	Material and Waste	
19	12700	Material and Waste	
20	12800	Material and Waste	
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32	14000	Material and Waste	
33	14100	Material and Waste	
34	14200	Material and Waste	
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38	14600	Material and Waste	
39	14700	Material and Waste	
40	14800	Material and Waste	
41	14900	Material and Waste	
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47	15500	Material and Waste	
48	15600	Material and Waste	
49	15700	Material and Waste	
50	15800	Material and Waste	
51	15900	Material and Waste	
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101	20900	Material and Waste	
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134	24200	Material and Waste	
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147	25500	Material and Waste	
148	25600	Material and Waste	
149	25700	Material and Waste	
150	25800	Material and Waste	
151	25900	Material and Waste	
152	26000	Material and Waste	
153	26100	Material and Waste	
154	26200	Material and Waste	
155	26300	Material and Waste	
156	26400	Material and Waste	
157	26500	Material and Waste	
158	26600	Material and Waste	
159	26700	Material and Waste	
160	26800	Material and Waste	
161	26900	Material and Waste	
162	27000	Material and Waste	
163	27100	Material and Waste	
164	27200	Material and Waste	
165	27300	Material and Waste	
166	27400	Material and Waste	
167	27500	Material and Waste	
168	27600	Material and Waste	
169	27700	Material and Waste	
170	27800	Material and Waste	
171	27900	Material and Waste	
172	28000	Material and Waste	
173	28100	Material and Waste	
174	28200	Material and Waste	
175	28300	Material and Waste	
176	28400	Material and Waste	
177	28500	Material and Waste	
178	28600	Material and Waste	
179	28700	Material and Waste	
180	28800	Material and Waste	
181	28900	Material and Waste	
182	29000	Material and Waste	
183	29100	Material and Waste	
184	29200	Material and Waste	
185	29300	Material and Waste	
186	29400	Material and Waste	
187	29500	Material and Waste	
188	29600	Material and Waste	
189	29700	Material and Waste	
190	29800	Material and Waste	
191	29900	Material and Waste	
192	30000	Material and Waste	
193	30100	Material and Waste	
194	30200	Material and Waste	
195	30300	Material and Waste	
196	30400	Material and Waste	
197	30500	Material and Waste	
198	30600	Material and Waste	
199	30700	Material and Waste	
200	30800	Material and Waste	
201	30900	Material and Waste	
202	31000	Material and Waste	
203	31100	Material and Waste	
204	31200	Material and Waste	
205	31300	Material and Waste	
206	31400	Material and Waste	
207	31500	Material and Waste	
208	31600	Material and Waste	
209	31700	Material and Waste	
210	31800	Material and Waste	
211	31900	Material and Waste	
212	32000	Material and Waste	
213	32100	Material and Waste	
214	32200	Material and Waste	
215	32300	Material and Waste	
216	32400	Material and Waste	
217	32500	Material and Waste	
218	32600	Material and Waste	
219	32700	Material and Waste	
220	32800	Material and Waste	
221	32900	Material and Waste	
222	33000	Material and Waste	
223	33100	Material and Waste	
224	33200	Material and Waste	
225	33300	Material and Waste	
226	33400	Material and Waste	
227	33500	Material and Waste	
228	33600	Material and Waste	
229	33700	Material and Waste	
230	33800	Material and Waste	
231	33900	Material and Waste	
232	34000	Material and Waste	
233	34100	Material and Waste	
234	34200	Material and Waste	
235	34300	Material and Waste	
236	34400	Material and Waste	
237	34500	Material and Waste	
238	34600	Material and Waste	
239	34700	Material and Waste	
240	34800	Material and Waste	
241	34900	Material and Waste	
242	35000	Material and Waste	
243	35100	Material and Waste	
244	35200	Material and Waste	
245	35300	Material and Waste	
246	35400	Material and Waste	
247	35500	Material and Waste	
248	35600	Material and Waste	
249	35700	Material and Waste	
250	35800	Material and Waste	
251	35900	Material and Waste	
252	36000	Material and Waste	
253	36100	Material and Waste	
254	36200	Material and Waste	
255	36300	Material and Waste	
256	36400	Material and Waste	
257	36500	Material and Waste	
258	36600	Material and Waste	
259	36700	Material and Waste	
260	36800	Material and Waste	
261	36900	Material and Waste	
262	37000	Material and Waste	
263	37100	Material and Waste	
264	37200	Material and Waste	
265	37300	Material and Waste	
266	37400	Material and Waste	
267	37500	Material and Waste	
268	37600	Material and Waste	
269	37700	Material and Waste	
270	37800	Material and Waste	
271	37900	Material and Waste	
272	38000	Material and Waste	
273	38100	Material and Waste	
274	38200	Material and Waste	
275	38300	Material and Waste	
276	38400	Material and Waste	
277	38500	Material and Waste	
278	38600	Material and Waste	
279	38700	Material and Waste	
280	38800	Material and Waste	
281	38900	Material and Waste	
282	39000	Material and Waste	
283	39100	Material and Waste	
284	39200	Material and Waste	
285	39300	Material and Waste	
286	39400	Material and Waste	
287	39500	Material and Waste	
288	39600	Material and Waste	
289	39700	Material and Waste	
290	39800	Material and Waste	
291	39900	Material and Waste	
292	40000	Material and Waste	
293	40100	Material and Waste	
294	40200	Material and Waste	
295	40300	Material and Waste	
296	40400	Material and Waste	
297	40500	Material and Waste	
298	40600	Material and Waste	
299	40700	Material and Waste	
300	40800	Material and Waste	
301	40900	Material and Waste	
302	41000	Material and Waste	
303	41100	Material and Waste	
304	41200	Material and Waste	
305	41300	Material and Waste	
306	41400	Material and Waste	
307	41500	Material and Waste	
308	41600	Material and Waste	
309	41700	Material and Waste	
310	41800	Material and Waste	
311	41900	Material and Waste	
312	42000	Material and Waste	
313	42100	Material and Waste	
314	42200	Material and Waste	
315	42300	Material and Waste	
316	42400	Material and Waste	
317	42500	Material and Waste	
318	42600	Material and Waste	
319	42700	Material and Waste	
320	42800	Material and Waste	
321	42900	Material and Waste	
322	43000	Material and Waste	
323	43100	Material and Waste	



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT FPL Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041  
 L-2011-307 Enclosure-3 Page 17 of 31

DATE 7/23/11  
SMT 456 MTS

JOB # 11771  
 JOBSITE LOCATION TP

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (X)	Onsite Hours	Offsite Hours	Total Hours
PF/ELC	Danny Keeley	X	12		12
JP	James Poyne	X	12		12
I.V.	L. Saad Vaca	X	12		12
RKF	Bob Feetham	X	12		12

EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WK	Mobilization
Standby	SD	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DM	Available on Job

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Code	Description	Hours
1	10000	Start Operation	
2	11200	Gravel Area Cleanup	
3	11150	Site Preparation	
4	11200	Gravel Area Cleanup	
5	0000	Drilling - Onsite	
6	0000	Drilling - Onsite	
7	0000	Drilling - Onsite	
8	11250	Drilling - Onsite	
9	11300	Site Cleanup	
10	11150	Site Cleanup	
11	11250	Drilling - Onsite	
12	11250	Drilling - Onsite	
13	11250	Drilling - Onsite	
14	11250	Drilling - Onsite	
15	11250	Drilling - Onsite	
16	11250	Drilling - Onsite	
17	11250	Drilling - Onsite	
18	11250	Drilling - Onsite	
19	11250	Drilling - Onsite	
20	11250	Drilling - Onsite	
21	11250	Drilling - Onsite	
22	11250	Drilling - Onsite	
23	11250	Drilling - Onsite	
24	11250	Drilling - Onsite	
25	11250	Drilling - Onsite	
26	11250	Drilling - Onsite	
27	11250	Drilling - Onsite	
28	11250	Drilling - Onsite	
29	11250	Drilling - Onsite	
30	11250	Drilling - Onsite	
31	11250	Drilling - Onsite	
32	11250	Drilling - Onsite	
33	11250	Drilling - Onsite	
34	11250	Drilling - Onsite	
35	11250	Drilling - Onsite	
36	11250	Drilling - Onsite	
37	11250	Drilling - Onsite	
38	11250	Drilling - Onsite	
39	11250	Drilling - Onsite	
40	11250	Drilling - Onsite	
41	20000	Drilling - Onsite	
42	20000	Drilling - Onsite	
43	20000	Drilling - Onsite	
44	20000	Drilling - Onsite	
45	20000	Drilling - Onsite	
46	20000	Drilling - Onsite	
47	20000	Drilling - Onsite	
48	20000	Drilling - Onsite	
49	20000	Drilling - Onsite	
50	20000	Drilling - Onsite	
TOTAL HOURS			

MATERIALS USED TODAY

Quantity	Description
#1	SAFETY MEETING
#1	HOUSE CLEANUP
#2	DRIVE SAFELY

TIME OF ACTIVITY BY ITEM #

From	To	Code One	Item #
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

Rem 11:02 BPL TO 11:14 BPL LIGHTNING  
 STOP CONNECTION AND SURVEY 11:09 PM 0.1"  
 CONTINUE REMAINING 11:14 BPL TO 11:35 BPL

*John Doe*



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

PROJ: F.P.L. Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
DATE: 7-24-11  
SUN DAYS.  
JOB SITE LOCATION: T.P.

DATE: 7-24-11  
SUN DAYS.

JOB # 11771  
JOB SITE LOCATION T.P.

PERSONNEL EMPLOYED TODAY

Table with columns: Crew Assignment, Employee - Full Name, Per Diem? (X), Onsite Hours, Offsite Hours, Total Hours. Includes entries for BOSS + GUNOMAX, JOAN LOPEZ, IGOR POPOV, and Josh Brown.

EQUIPMENT DEPLOYED TODAY

Table with columns: Description, Unit #, Status. Includes sub-tables for Working, Standby, Down in Shop, Down on Site and Mobilization, Demobilization, Available in Yard, Available on Job.

DATE ACQUISITION OF EQUIPMENT BY ITEM #

Large table with columns: Item #, Cost Code, Labor Activity, Hours. Lists various activities from 1 to 45, including Short Duration Job, Onsite Mob/Demob, Job Preparation, Safety Meeting, Training, Shop Overhead, Maintenance, etc.

MATERIALS USED TODAY

Table with columns: Quantity, Description. Contains handwritten notes: SAFETY MTRG; MATERIALS HANDLING; SAFE LIFTING PROCEDURES.

TIME OF ACTIVITY BY ITEM #

Table with columns: From, To, Cycle One, Item #. Grid for recording activity times.

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

DRILL 4 1/2" BIT FROM 1135' BPL TO 1192' BPL  
SITE CLEAN UP: Tally 34" casing. Organize the dog houses.

Signature: [Handwritten Signature] DATE: 7-24-11

Client's Signature

PAYROLL

Supervisor's Signature

Date





LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT - FPL Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
JOB SITE NAME - EWI L-2011-307 Enclosure-3-Page-20-of-31

DATE 7-25-11  
MON DAY

JOB # 11776  
JOB SITE LOCATION T.P.

PERSONNEL EMPLOYED TODAY

Table with columns: Crew Assignment, Employee - Full Name, Per Diem? (X), Onsite Hours, Offsite Hours, Total Hours. Rows include Danny Keeley, James PAYNE, Juan Lopez, IGOR POPOV, and Josh Brown.

EQUIPMENT DEPLOYED TODAY

Table with columns: Description, Unit #, Status. Includes sub-tables for Working, Standby, Down in Shop, Down on Site, Mobilization, Demobilization, Available in Yard, Available on Job.

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Main activity log table with columns: Item #, Cost Code, Labor Activity, Hours. Lists various tasks like Short Duration Job, Safety Meeting, Training, etc.

MATERIALS USED TODAY

Table with columns: Quantity, Description. Includes entries for SAFETY MEETING, DRIVEN SAFETY, TIRE SAFETY, and ELLIS & 8:00 AM - 4:00 PM.

TIME OF ACTIVITY BY ITEM #

Table with columns: From, To, Circle One (AM/PM), Item #. Grid for tracking activity times.

COMMENTS - EVENTS - CONDITIONS - CHANGES & OTHER INFORMATION

RESUME DRILLING 1207 BPL TO 1255  
HELP WELDER BOUL CASSELM MAX AVULUM PLAYS  
MAKS SPANER WRENCH, LOAD DUMP TRUCK!

Handwritten signature



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT FPL Proposed Turkey Point Units 6 and 7  
 Docket Nos. 52-040 and 52-041  
 JOBSITE NAME EWI L-2011-307-Enclosure-3-Page-21-of-31

DATE 7/25/11  
Monday Night

JOB # 11771  
 JOBSITE LOCATION Turkey Point

PERSONNEL EMPLOYED TODAY

Crew Assignment	Employee - Full Name	Per Diem? (K)	Onsite Hours	Offsite Hours	Total Hours
Drillers	George Haga	X	12		12
MW	Mike Ramirez	X	12		12
MP	Marko Perez Cesar	X	12		12
AP	Audrey Popov	X	12		12

EQUIPMENT DEPLOYED TODAY

Description	Unit #	Status
Working	WD	Mobilization
Standby	SD	Demobilization
Down in Shop	DS	Available in Yard
Down on Site	DN	Available on Job

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Item #	Cost Code	Labor Activity	Hours
1	10000	Short Duration Job	
2	11100	Onsite Mob/Demob	
3	11150	Job Preparation	
4	11200	Safety Meeting	
5	0002	Training - Overhead	
6	0006	Shop - Overhead	
7	0007	Maintenance - Overhead	
8	11250	Training - Job Charges/bk	
9	11300	Site Clean up	
10	11350	Install Sound Walls	
11	11400	Install Decon Pad	
12	11450	Install Surface Casing	
13	11500	Install Roadway & Drive Pad	
14	12050	Test Hole Drilling	
15	12100	Geophysical Logging & Other Testing	
16	12150	Aquifer Zone Testing	
17	12200	Gravel Abandonment	
18	13000	Production Well Installation	
19	11100	Install Conductor Pipe	
20	11150	Drill Pilot Hole	
21	13200	Geophysical Logging & Other Testing	
21	13250	Aquifer Zone Testing	
23	13300	Gravel Abandonment/Cement Plugs	
24	13350	Reaming	
25	13400	Under Reaming	
26	13450	Install Casing	
27	13500	Install Screen	
28	13550	Gravel Pack The Well	
29	13600	Install Annular Seal	
30	13650	Water Washing	
31	14050	Well Development Air Lift and Swab	
32	14100	Disposal of Fluids & Cuttings	
33	14150	Furnish & Install Test Pump and Discharge	
34	14200	Development Pumping	
35	14250	Test Pumping	
36	14300	Disinfection and Chlorination	
37	19050	Offsite Activities Mob/Demob	
38	19100	Shop	
39	19150	Admin/Installation	
40	19550	Other Activities Standby	
41	19600	Flushing for Lost/Broken Tooling	
42	19650	Change Order Activities	
43	68000	Equipment Repairs	
44	90170	Damages	
45	90200	Job Superintendent	
		Lunch	
		<b>TOTAL HOURS</b>	

MATERIALS USED TODAY

Quantity	Description
	1st Safety Meeting: Lighting
	2nd Safety Meeting: preventive maint.

TIME OF ACTIVITY BY ITEM #

From	To	Circle On	Item #
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
		AM PM	
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		AM PM	
		AM PM	
		AM PM	
		AM PM	

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

CONTINUE to ream from 1255 bbl to 1288 bbl / 4 1/2 bit  
 Organize yard, paint drill house, paint all rubber caws. Organize parts houses pick up empty trash cans. Paint back ladder on derrick. Clean up around cementer.

*[Handwritten Signature]*



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT F.P.L. Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
JOB SITE NAME EW- L-2014-307-Enclosure-3 Page 22 of 31

DATE 7-26-2011  
TUE DAYS

WELL # 11771  
JOB SITE LOCATION T.P.

PERSONNEL EMPLOYED TODAY

Table with columns: Emp. Assignment, Name, Pay (Hours), Other Hours, Total Hours. Includes names: BOBIL GULOMOV, VLAD ISHIMOV, IGOR POPOV, JOAN LOPEZ, JOSH BROWN.

EQUIPMENT DEPLOYED TODAY

Table with columns: Description, Unit #, Status. Includes sub-tables for Working, Standby, Down in Shop, Down on Site.

DAILY ACCOUNTING OF ACTIVITIES BY ITEM

Large table with columns: Item #, Cost Code, Labor Activity, Hours. Lists activities from 1 to 45, including 'Short Duration Job', 'Job Preparation', 'Safety Meeting', etc.

MATERIALS USED TODAY

Table with columns: Quantity, Description. Includes handwritten entries: SAFETY MTG, HAZARD COMMUNICATION, ELECTRICAL SAFETY, Ellis - 11:00am to 5:00pm.

TIME OF ACTIVITY BY ITEM #

Table with columns: From, To, Cycle One, Item #. Grid for tracking activity times.

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

Drill 42 1/2 BIT. From 1288' BPL TO 1293' BPL. RUN SURVEY  
@ 5. MAKE CONNECTION BACK DRILL 1293' BPL  
TO 1333' bpl. Haul 6 Dump Trucks, Help  
Ellis build or pull back for the Drill collar's Grid  
off the line cut plates. Work on the Wash Pipe, Pressure Wash Rig.

Inspector's Signature

Signature and date 7-26-11

Client's Signature

PAYROLL

Date

Signature

Rate



LAYNE CHRISTENSEN COMPANY - DRILLING SHIFT REPORT

CLIENT: FPL Proposed Turkey Point Units 6 and 7  
Docket Nos. 52-040 and 52-041  
JOB SITE NAME: SW1 I-2011-307 Enclosure 3 Page 23 of 31

DATE: 7/26/11  
Tues Night

JOB #: 11771  
JOB SITE LOCATION: Turkey Point

PERSONNEL EMPLOYED TODAY

Table with columns: Crew/Assignment, Employee - Full Name, Per Diem?, Onsite Hours, Offsite Hours, Total Hours. Rows include George Haga, Mike Ramirez, Marko Perez Cesan, and Andrey Popov.

EQUIPMENT DEPLOYED TODAY

Table with columns: Description, Unit #, Status. Includes sub-tables for Working, Standby, Down in Shop, Down on Site, and Mobilization/Demobilization/Available in Yard/Available on Job.

DAILY ACCOUNTING OF ACTIVITIES BY ITEM #

Large table with columns: Item #, Cost Code, Labor Activity, Hours. Lists various activities from 1 to 45, including Short Duration Job, Safety Meeting, Training, and Drilling activities.

MATERIALS USED TODAY

Table with columns: Quantity, Description. Handwritten entries: 1st Safety Meeting: Vehicle load Securement, 2nd Safety Meeting: Electrical Safety.

TIME OF ACTIVITY BY ITEM #

Table with columns: From, To, Cycle One, Item #. Grid for tracking activity times.

COMMENTS - EVENTS - CONDITIONS - CHANGES - OTHER INFORMATION

Continue to Ream w/ 42 1/2 bit from 1333 bpl to 1338 bpl  
take out single trip bar stand make connection.  
Resume drilling 1338 bpl to 1383 bpl. Clean axle and brake  
system on dump truck for mechanic. Grind casing jacks  
and give out plates. pressure washing.







**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Southeast Pad Monitoring Well  
(SE-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1311	10.10	-1.51	81,600	30,200	57,800	29.9	Background Sampling
4/29/2011	1349	10.40	-1.81	86,700	33,100	55,000	30.4	
5/5/2011	1008	11.10	-2.51	83,000	29,500	54,700	29.9	
5/11/2011	1228	10.65	-2.06	78,200	30,100	52,600	30.1	
5/19/2011	1039	10.12	-1.53	75,200	30,000	51,100	29.8	
5/26/2011	1235	10.47	-1.88	73,890	31,200	53,800	29.9	
6/2/2011	1056	10.50	-1.91	74,200	29,400	57,400	29.6	
6/9/2011	1210	10.32	-1.73	72,200	32,100	51,000	29.6	
6/16/2011	1035	10.00	-1.41	71,300	32,200	54,000	29.8	
6/23/2011	1109	10.10	-1.51	71,900	31,600	55,650	29.8	
6/30/2011	1009	9.85	-1.26	72,800	27,600	53,050	29.5	
7/8/2011	1138	9.12	-0.53	73,150	29,800	54,450	29.9	
7/14/2011	1414	9.48	-0.89	79,700	29,000	55,350	29.8	
7/21/2011	1119	9.36	-0.77	74,100	34,000	54,100	30.0	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.59 feet NAVD 88

**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Northeast Pad Monitoring Well  
(NE-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1108	10.49	-1.61	78,700	32,200	57,000	29.8	Background Sampling
4/29/2011	1157	10.68	-1.80	80,400	29,900	53,800	30.4	
5/5/2011	1157	11.40	-2.52	81,400	27,500	52,350	31.2	
5/11/2011	1309	11.00	-2.12	76,800	31,600	51,200	29.7	
5/19/2011	0958	10.48	-1.60	72,600	35,600	51,200	29.5	
5/26/2011	1050	10.76	-1.88	71,360	29,500	52,900	29.7	
6/2/2011	1134	10.78	-1.90	71,700	29,000	55,700	29.6	
6/9/2011	1128	10.61	-1.73	69,700	32,300	50,650	29.3	
6/16/2011	0958	10.35	-1.47	69,300	33,000	53,450	29.5	
6/23/2011	1028	10.41	-1.53	69,400	30,600	55,600	29.5	
6/30/2011	0928	10.15	-1.27	70,300	27,600	51,950	29.2	
7/8/2011	1210	9.00	-0.12	72,570	30,100	54,150	29.9	
7/14/2011	1338	9.75	-0.87	76,400	27,200	54,550	29.9	
7/21/2011	1039	9.35	-0.47	72,200	32,600	49,760	29.7	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.88 feet NAVD 88

**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Northwest Pad Monitoring Well  
(NW-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1221	10.50	-1.66	84,300	33,500	59,900	30.8	Background Sampling
4/29/2011	1120	10.65	-1.81	86,300	33,700	56,400	30.0	
5/5/2011	1051	11.40	-2.56	87,400	31,300	57,650	31.1	
5/11/2011	1034	12.40	-3.56	79,100	33,500	55,650	30.4	
5/19/2011	1113	13.90	-5.06	80,000	36,000	53,700	30.4	
5/26/2011	1125	10.73	-1.89	75,130	32,300	55,450	30.4	
6/2/2011	1215	10.75	-1.91	75,900	30,700	59,500	30.3	
6/9/2011	1248	10.60	-1.76	72,500	32,200	51,950	29.9	
6/16/2011	1118	10.25	-1.41	72,500	31,500	54,550	30.0	
6/23/2011	1143	10.37	-1.53	73,300	31,600	57,750	30.3	
6/30/2011	1049	10.10	-1.26	75,700	27,400	54,300	30.0	
7/8/2011	1112	9.38	-0.54	74,100	30,700	53,950	30.3	
7/14/2011	1524	9.75	-0.91	79,900	27,600	56,350	30.3	
7/21/2011	1226	9.60	-0.76	76,200	32,600	54,500	29.7	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.84 feet NAVD 88

**Project:** Florida Power & Light Company  
Miami-Dade County, Florida  
Exploratory Well EW-1



**EW-1 Pad Monitoring Well Water Quality Data  
Southwest Pad Monitoring Well  
(SW-EW PMW)**

Date	Time (hours)	Depth to Water (ft. btoc)	Water Elevation (ft. NAVD 88)	Specific Conductance (umhos/cm)	Chloride (mg/L)	TDS (mg/L)	Temperature (degrees C)	Remarks
4/21/2011	1414	10.50	-1.62	72,500	26,400	51,500	30.6	Background Sampling
4/29/2011	1025	10.60	-1.72	77,400	28,300	51,600	29.8	
5/5/2011	0930	11.85	-2.97	75,200	29,000	49,400	28.7	
5/11/2011	1124	16.40	-7.52	78,100	28,300	51,050	31.6	
5/19/2011	1202	15.95	-7.07	73,100	29,700	48,450	32.6	
5/26/2011	1155	11.20	-2.32	66,630	27,800	48,350	29.4	
6/2/2011	1035	11.25	-2.37	68,500	26,000	52,600	29.4	
6/9/2011	1319	11.05	-2.17	65,400	26,300	44,150	29.5	
6/16/2011	1154	10.75	-1.87	64,900	27,000	48,450	29.5	
6/23/2011	1214	10.85	-1.97	65,500	30,400	50,800	29.6	
6/30/2011	1119	10.60	-1.72	68,500	24,300	46,650	29.4	
7/8/2011	1045	9.85	-0.97	64,950	25,600	47,650	29.6	
7/14/2011	1445	10.22	-1.34	69,900	24,800	48,300	29.6	
7/21/2011	1154	10.10	-1.22	67,800	27,400	47,900	29.6	

ft. btoc: feet below top of casing  
TOC: Top of Casing  
ft. NAVD 88: North American Vertical Datum of 1988  
umhos/cm: micromhos per centimeter  
mg/L: milligrams per liter  
C: Celsius  
Note: TOC elevation is: 8.88 feet NAVD 88

Pilot Hole			Reamed Hole		
Date	Depth (feet bpl)	Inclination (degrees)	Date	Depth (feet bpl)	Inclination (degrees)
5/13/2011	90	0.2	5/20/2011	90	0.5
5/14/2011	180	0.4	5/24/2011	180	0.4
6/3/2011	270	0.5	6/6/2011	270	0.0
5/29/2011	345	0.3	6/8/2011	360	0.1
5/29/2011	435	0.4	6/9/2011	450	0.2
5/30/2011	524	0.4	6/10/2011	540	0.3
5/30/2011	614	0.0	6/12/2011	630	0.5
5/31/2011	704	0.2	6/14/2011	720	0.4
5/31/2011	794	0.3	6/15/2011	810	0.4
5/31/2011	884	0.3	6/16/2011	900	0.3
6/1/2011	974	0.5	6/18/2011	990	0.4
6/1/2011	1,064	0.5	7/23/2011	1,080	0.1
7/1/2011	1,154	0.6	7/25/2011	1,170	0.4
7/1/2011	1,244	0.3	7/26/2011	1,260	0.5
7/1/2011	1,334	0.4	7/27/2011	1,350	0.2
7/2/2011	1,424	0.4			
7/2/2011	1,514	0.5			
7/3/2011	1,604	0.5			

bpl = below pad level



Florida Power & Light Company  
 Turkey Point  
 Exploratory Well EW-1  
 Deviation Survey Summary



**Florida Power & Light Company**  
**Turkey Point**  
**Exploratory Well EW-1**  
**Pilot Hole to 1,655 feet bpl Backplug Cementing Summary**



Cementing Stage	Date	Base of the Cemented Interval (feet bpl)	Volume of Cement			Theoretical		Actual Interval Cemented (feet bpl)	Actual / Theoretical Filled Interval (percent)	Type of cement (including additives)
			Planned (barrels)	Actual Pumped (barrels)	Pumped (cubic feet)	Depth (feet bpl)	Fill (feet)			
1	7/22/2011	1,655	107	107	600	565	1,090	1,094	99.6	12%
	Final tag:	1,094								

"Theoretical Interval Cemented" is the theoretical linear feet of cement fill based on the volume of cement pumped for that stage (calculated using XY caliper log).

"Actual/Theoretical Filled Interval" refers to the "Actual Interval Cemented" divided by the "Theoretical Interval Cemented" as a percentage.

"bpl" denotes below pad level.