MV Geophysical

Company Florida Design Drilling Corp.
Well PW-5
Field Davie
County Broward
State/Prv Florida

FLUID CONDUCTIVITY TEMPERATURE LOG

Company Florida Design Drilling Corp.
Well PW-5
Field Davie
County Broward
State/Prv Florida
Location Production Wellfield Expansion
Town of Davie - UF Test Site
AECOM

Permanent Datum: G.L.
Elevation: G.L.
K.B.
D.F.
G.L.

Log Measured From: G.L.
Drilling Measured From: G.L.

Run Number: 1
Depth Driller: 4,000
Depth Logger: 4,000
Bottom Logged Interval: 4,000
Top Logged Interval: 1,400
Open Hole Size: 6.875
Casing Driller: 8.625 @ 1,400
Casing Logger: 1,400
Bit Size: 6.875
Type Fluid in Hole: Water
Density / Viscosity: 8.4 / 28
Max Rec. Temperature: 76.8 °F
Estimated Cement Top:
Time Since Circulation: 1.5 Hours
Time Logger on Bottom: 18:00 4-Mar-2012
Unit Number: 2012
Location: Davie, FL
Recorded By: S.Eslam / M.Cohen
Witnessed By: M.Myers

Run Number: 2
Depth Driller: 4,000
Depth Logger: 4,000
Bottom Logged Interval: 4,000
Top Logged Interval: 1,400
Open Hole Size: 6.875
Casing Driller: 8.625 @ 1,400
Casing Logger: 1,400
Bit Size: 6.875
Type Fluid in Hole: Water
Density / Viscosity: 8.4 / 28
Max Rec. Temperature: 76.8 °F
Estimated Cement Top:
Time Since Circulation: 1.5 Hours
Time Logger on Bottom: 18:00 4-Mar-2012
Unit Number: 2012
Location: Davie, FL
Recorded By: S.Eslam / M.Cohen
Witnessed By: M.Myers

Run Number: 3
Depth Driller: 4,000
Depth Logger: 4,000
Bottom Logged Interval: 4,000
Top Logged Interval: 1,400
Open Hole Size: 6.875
Casing Driller: 8.625 @ 1,400
Casing Logger: 1,400
Bit Size: 6.875
Type Fluid in Hole: Water
Density / Viscosity: 8.4 / 28
Max Rec. Temperature: 76.8 °F
Estimated Cement Top:
Time Since Circulation: 1.5 Hours
Time Logger on Bottom: 18:00 4-Mar-2012
Unit Number: 2012
Location: Davie, FL
Recorded By: S.Eslam / M.Cohen
Witnessed By: M.Myers

	Run 1	Run 2	Run 3
Service Order	20133063		
Logging Engineer	M.Cohen		
Logging Truck	2012		
Tool Type	FCT-MV		
Tool Serial No.	1		
Tool Length	16.7 Feet		
Tool Weight	40 Lbs		
Sensor Offset	4.46 Feet		
Weight Bar	0 Lbs		
Centralizer	Yes		
Sinker Bar	0 Lbs		
Cable Type	7-46		
Cable Length	9,000 Feet		
Cable Weight	0.27 Lbs/Ft		
Cable Head Tension	1,000 Lbs		
Max Cable Speed	60 Ft/Min		
Max Logging Speed	30 Ft/Min		
Measure Point Offset	0 Feet		
Run Number	1	2	3
Date	4-Mar-12		
Time	18:00		
Max Recorded Temperature	76.8 °F		
Equipment Number	2012		
Base Station Location	Davie, FL		
Recorded By	S.Eslam / M.Cohen		
Witnessed By	M.Myers		
Bottom Driller	4,000 Feet		
Bottom Logger	4,000 Feet		
Top Log Interval	1,400 Feet		
Open Hole Size	6.875		
Type Fluid in Hole	Water		
Density / Viscosity	8.4 / 28		
Max Recorded Temperature	76.8 °F		
Estimated Cement Top			
Casing Driller	8.625 @ 1,400		
Casing Logger	1,400		
Bit Size	6.875		
Time Since Circulation	1.5 Hours		
Time Logger on Bottom	18:00 4-Mar-2012		
Unit Number	2012		
Recorded By	S.Eslam / M.Cohen		
Witnessed By	M.Myers		

Equipment Specifications	Type	Serial No.	Length	Weight	OD
Sensor	FCT-MV	1	4.46	40	1.9
Weight Bar				0	
Centralizer				0	
Sinker Bar				0	
Cable Head				0	
Cable	7-46		9,000	2,430	0.322
Total			9,004.46	2,470	

Logging Equipment: XYCR-FCT, DL, BHC, DLL, DIT-E, SP, Caliper, Gamma Ray

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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

STATIC and DYNAMIC down passes were performed.
Cw =7690 uS/cm @ 22.1 degC @ Q=1000 gpm.

FLUID RESISTIVITY CALIBRATION REPORT (Performed: 28-MAR-12 09:15)

uS/cm	CPS
1,220.7	2510.25
20,370	1901.11
149,410	1548.35

TEMPERATURE CALIBRATION REPORT (Performed: 28-MAR-12 09:45)

DEG-F	CPS
38.5	147.851
148.8	2690.21

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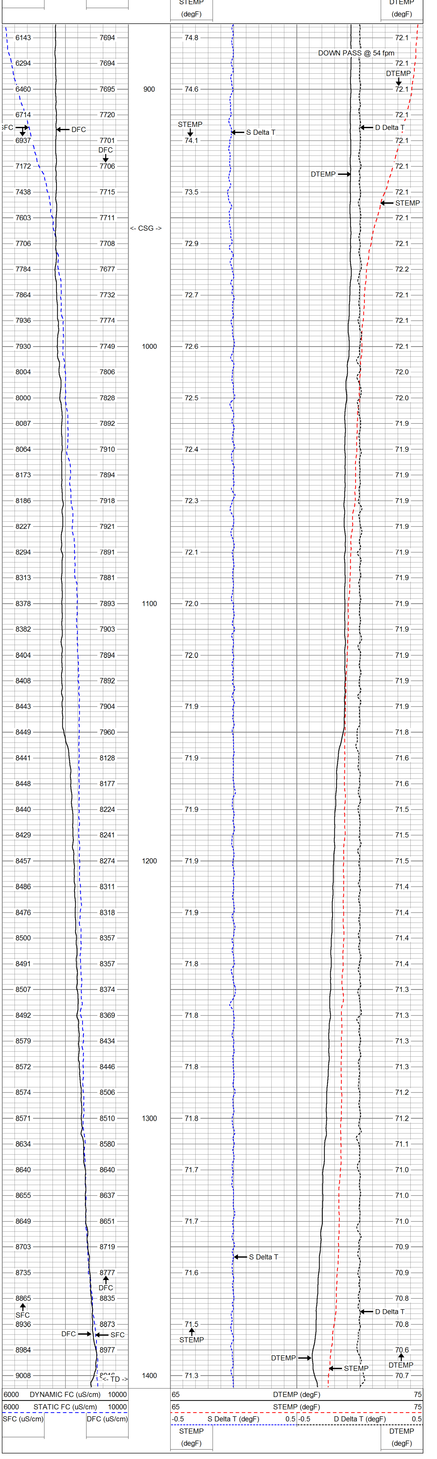
S/D Merged FCT

Database File: fddavie5.db
Dataset Pathname: run4/SDFCT
Presentation Format: fctsdm2
Dataset Creation: Tue Sep 18 17:18:45 2012
Charted by: Depth in Feet scaled 1:240



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	4.46		CCL-MVGS 1.9 (MV01)	1.33	1.90	8.00
			GR #2 -RTSB (MV01B)	3.33	1.90	10.00
GR#2	1.15					
TEMP	0.10		TEMP-RTS (MV01)	0.46	1.90	2.00

Dataset: fddavie5 .db: field/well/run4/pass3
Total Length: 5.12 ft
Total Weight: 20.00 lb
O.D. 1.90 in

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Company Florida Design Drilling Corp.
Well PW-5
Field Davie
County Broward
State Florida
Country USA