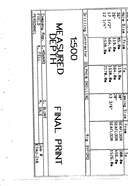

Bit Run No.	4	8	10	12	14
Resistivity Phase Data					
Run Number	4	8	10	12	14
Run Interval	0.4442-85	0.2261-92	0.2261-92	0.2761-92	0.2761-92
Surface Gear	19.792388	19.792388	19.792388	19.792388	19.792388
Tool ID/ Type	8.25/GPR	8.25/GPR	8.25/GPR	8.25/GPR	8.25/GPR
Run Data					
Bit Diameter	12.25"	12.25"	12.25"	12.25"	12.25"
Measured Depth In	1538.8m	1722.5m	1805.5m	1913.5m	1989.8m
Measured Depth Out	1722.5m	1805.5m	1913.5m	1989.8m	2178.8m
Drilling Interval	183.7m	83.0m	108.0m	76.3m	189.0m
Bha Interval Logged	1538.8m	1611.8m	1845.5m	1984.5m	1989.8m
Min/Max Inclination	2.1/3.2 deg	3.3/3.5deg	3.3 deg	3.3 deg	3.5/3.5 deg
Max Gamma Ray	84.1/85	87.1/85	85.1/85	85.1/85	85.1/85
Begin Log - Date	04-18-03	04-18-03	05-19-03	05-19-03	11-19-03
Begin Log - Time	23:45 hrs	13:35 hrs	11:45 hrs	14:35 hrs	06:18 hrs
End Log - Time	13:35 hrs	11:45 hrs	14:35 hrs	06:18 hrs	23:45 hrs
Run Data + Depth	1538.8m	1538.8m	1805.8m	1989.8m	2988.8m
Run Type	4C1-PPD,VPER	4C1-PPD,VPER	4C1-PPD,VPER	4C1-PPD,VPER	4C1-PPD,VPER
Gamma Ray Inversion	Normal	Normal	Normal	Normal	Normal
Bit Orientation	2588Gamma	4588Gamma	4588Gamma	4588Gamma	4588Gamma
Orientation Ratio	8/180	8/180	8/180	8/180	8/180
Pwr Cntr Temp	55.0	48	52.5	54.5	58.5
Company Rep.	G. Howard	G. Howard	G. Hunt	G. Howard	G. Hunt
Client Rep.	M. Farrell	M. Farrell	M. Farrell	M. Farrell	M. Farrell

Remarks

LOG MNEMONICS
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GRAM = Natural Gamma Ray, API Calibrated (MWD)
GRAX = Natural Gamma Ray (MWD)
RACH = Resistivity Phase Compensated, Borehole Corrected (MWD)
RACL = Resistivity Amplitude Ratio, Borehole Corrected (MWD)
RPCH = Resistivity Phase Compensated, Borehole Corrected (MWD)
RPCL = Resistivity Amplitude Ratio, Borehole Corrected (MWD)
ROPA = Rate Of Penetration, Averaged
ROPE = Resistivity Logs Depths Integrated
TVDE = Tvd Depths Integrated
TVDS = Tvd Depths Surface
ROPS = Resistivity Per Minute (Surface)

LOG ENVIRONMENTAL CORRECTIONS
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Gamma Ray: Normalized for Tool Size, Borehole Size, Sensor Type. Correction has been made for mud attenuation constants.

Resistivity: Normalized for Tool Size, Borehole Size, Run Resistivity, Mud Type. Correction has been applied for formation properties.

Remarks

TOOL & DATA ACQUISITION INFORMATION
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TELECO RUN NUMBER	1	2	3	4	* 5
Sensor to bit distance (ft)					
Distance to Gamma Sensor	9.358	9.358	9.358	9.358	9.358
Battery of Teleco Tool	9.358	9.358	9.358	9.358	9.358
Gamma Ray	9.358	9.358	9.358	9.358	9.358
Resistivity	9.358	9.358	9.358	9.358	9.358
Run Circulating Hours	27.00	13.00	1.75	5.00	16.00
Mud Pasamp Usable Data					
• Resistivity	5.00	5.00	5.00	5.00	5.00
• Gamma Ray	5.00	5.00	5.00	5.00	5.00
• Directional	5.00	5.00	5.00	5.00	5.00

MWD Transmission Data Rate: 1 or 2 Bit Stones/Bit & Interbeacon
Surface Logging System & Software: • Sperry-Sun EDR
• Software 2.80
• Hardware

Surface data processed by: • Mrk Depth
Client Hardcopy to: • Rate Of Penetration
• Gamma Ray Units
• Resistivity Units

Remarks

REMARKS
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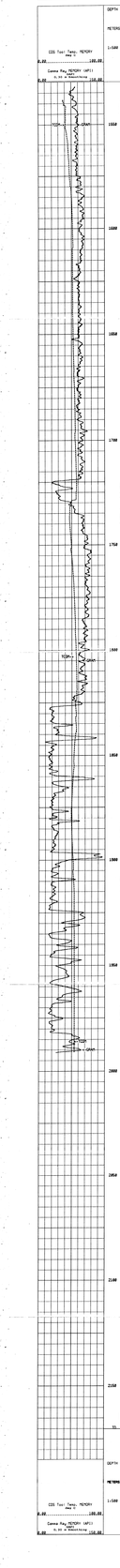
No data due to resistivity/gamma failure.

Disclaimer: Any interpretation, research and analysis operations to which consent is given by recipients in accordance with the contract for services are opinions based on inferences from measurements, empirical formulae and assumptions, which inferences and assumptions are not infallible, and with respect to which professional well log analysts may reasonably disagree. Accordingly, Sperry-Sun Drilling Services cannot and does not guarantee the accuracy or correctness of any interpretation, and cannot, and does not, guarantee the results obtained, recommended, reservoir evaluations or recommended reservoir development plans are within the operating parameters of the particular equipment or conditions.