COMPANY:	Enerfin Resources Northwest
WELL:	Columbia County 11-34-75 Stegosaur
FIELD:	Mist Gas
COUNTY:	Columbia
STATE:	Oregon

COUNTY:	Columbia
Field:	Mist Gas
Location:	1034.2' E & 556.76' S f/ NW Cor
Well:	Columbia County 11-34-75 Steg
Company:	Enerfin Resources Northwest

Schlumberger

Platform Express
Array Induction
BHC Sonic

LOCATION

1034.2' E & 556.76' S f/ NW Corner
Section 34 T7N-R5W

Elev.:		
	K.B.	1676.74 ft
	G.L.	1666.74 ft
	D.F.	1775.74 ft

Permanent Datum:	Ground Level	Elev.:	1666.74 ft
Log Measured From:	Kelly Bushing	10.0 ft	above Perm. Datum
Drilling Measured From:	Kelly Bushing		

5" LOG

API Serial No.	SECTION	TOWNSHIP	RANGE
	34	7N	5W

FINAL PRINT

Logging Date	19-JUN-1999		
Run Number	One		
Depth Driller	3230 ft		
Schlumberger Depth	3232 ft		
Bottom Log Interval	3224 ft		
Top Log Interval	518 ft		
Casing Driller Size @ Depth	7.000 in	@	518 ft
Casing Schlumberger	518 ft		
Bit Size	6.250 in		
Type Fluid In Hole	Accu-Gauge -- Gel/ PolyCarb-KCL		
MUD Density / Viscosity	9.2 lbm/gal	41 s	
Fluid Loss / PH	4.8 cm3	9.5	
Source Of Sample	Mud Tank		
RM @ Measured Temperature	1.130 ohm.m	@	76 degF
RMF @ Measured Temperature	0.970 ohm.m	@	76 degF
RMC @ Measured Temperature	1.390 ohm.m	@	76 degF
Source RMF / RMC	Calculated	Calculated	
RM @ MRT / RMF @ MRT	0.710 @ 125	0.609 @ 125	
Maximum Recorded Temperatures	125 degF		
Circulation Stopped / Time	19-JUN-1999	8:00	
Logger On Bottom / Time	19-JUN-1999	11:00	
Unit Number / Location	2105	Casper, Wyoming	
Recorded By	S. Kinney		
Witnessed By	R. Lucas, D. Huggins		

	Run 1	Run 2	Run 3	Run 4
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	@		@	
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
MUD Density / Viscosity				
Fluid Loss / PH				
Source Of Sample				
RM @ Measured Temperature	@		@	
RMF @ Measured Temperature	@		@	
RMC @ Measured Temperature	@		@	
Source RMF / RMC				
RM @ MRT / RMF @ MRT	@	@	@	@
Maximum Recorded Temperatures				
Circulation Stopped / Time				
Logger On Bottom / Time				
Unit Number / Location				
Recorded By				
Witnessed By				

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 INTERPRETATIONS, 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 CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

OTHER SERVICES1	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Neutron run without bowspring due to hole size	
Sonic and AIT run with .5" standoffs to minimize sticking	
Matrix = Sandstone	
MDEN = 2.65 g/cc	
DTM = 56 uSec/ft	
Raymer-Hunt Porosity	
Your Crew: Ted Bearce	

RUN 1		RUN 2	
SERVICE ORDER #:	6066544	SERVICE ORDER #	
PROGRAM VERSION	9C0-413	PROGRAM VERSION	
FLUID LEVEL:	0 ft	FLUID LEVEL	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

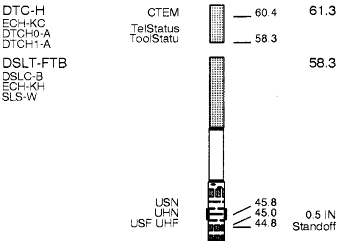
RUN 1	RUN 2

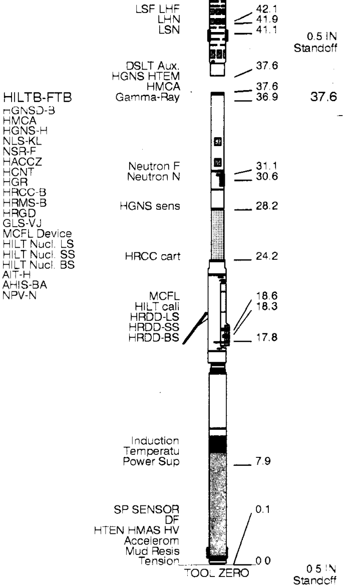
SURFACE EQUIPMENT

GSR-UY
NCT-B
CNB-AB
NCS-VB

WITM (DTS)-A

DOWNHOLE EQUIPMENT





MAXIMUM STRING DIAMETER 4.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Input DLIS Files

DEFAULT	HILTD .004	FN:3	PRODUCER	19-Jun-1999 13:17	3240.0 FT	63.5 FT
DEFAULT	HILTD .003	FN:2	PRODUCER	19-Jun-1999 12:55	3234.0 FT	2732.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 613.33 ft3

Cement Volume = 489.96 ft3 (assuming 2.88 in casing O.D.)

Computed from 3230.0 ft to 493.5 ft

OP System Version: 9C0-413

MCM

HILTD	OP9-KP1	DSLT-BB	OP9-KP1
DTCH	9C0-413		

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3

⊢ Integrated Hole Volume Major Pip Every 100 F3

⊣ Integrated Cement Volume Minor Pip Every 10 F3

⊣ Integrated Cement Volume Major Pip Every 100 F3

■ Time Mark Every 60 S

AIT-H 90 Inch Investigation (AHO90) 0.2 (OHMM) 20

SP (SP) -100 (MV) 0

AIT-H 60 Inch Investigation (AHO60) 0.2 (OHMM) 20

RWA (RWA) 0 (OHMM) 3

AIT-H 30 Inch Investigation (AHO30) 0.2 (OHMM) 20

Caliper (HCAL) 6 (IN) 16

AIT-H 20 Inch Investigation (AHO20) 0.2 (OHMM) 20

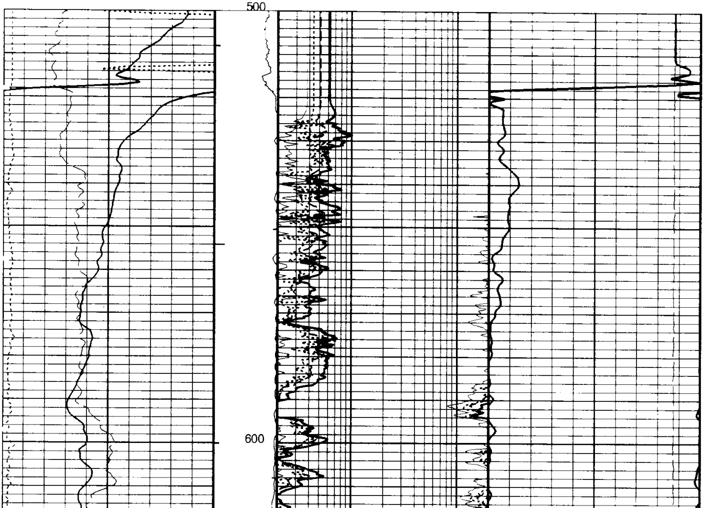
Tension (TENS) 10000 (LBF) 0

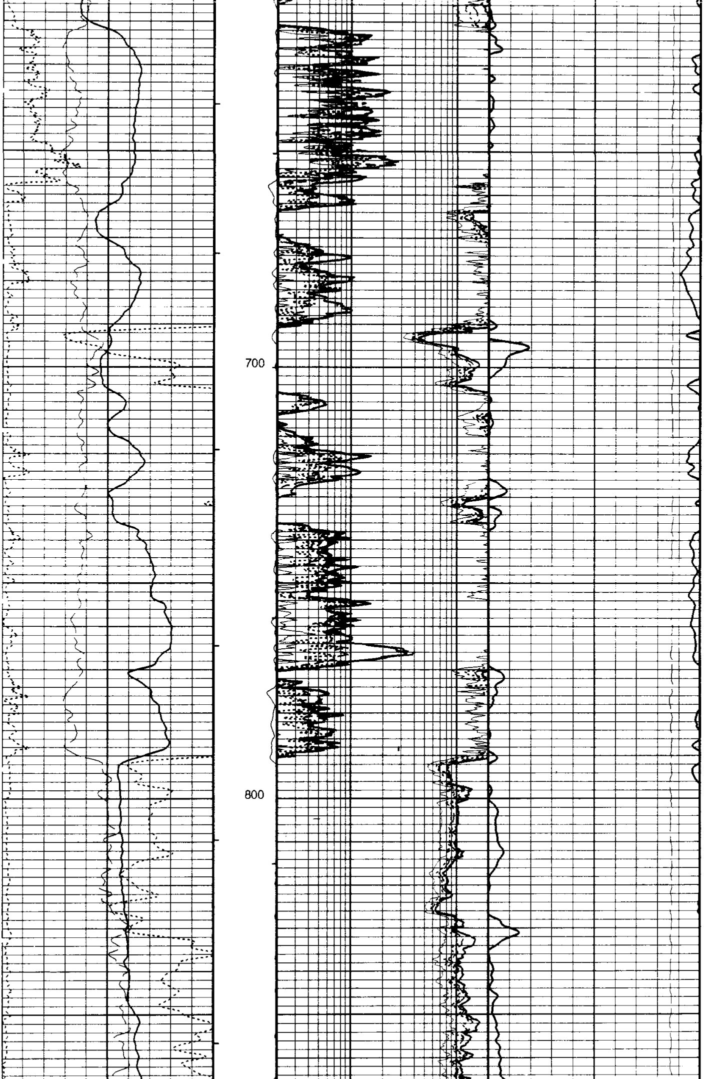
Gamma Ray (GR) 0 (GAPI) 150

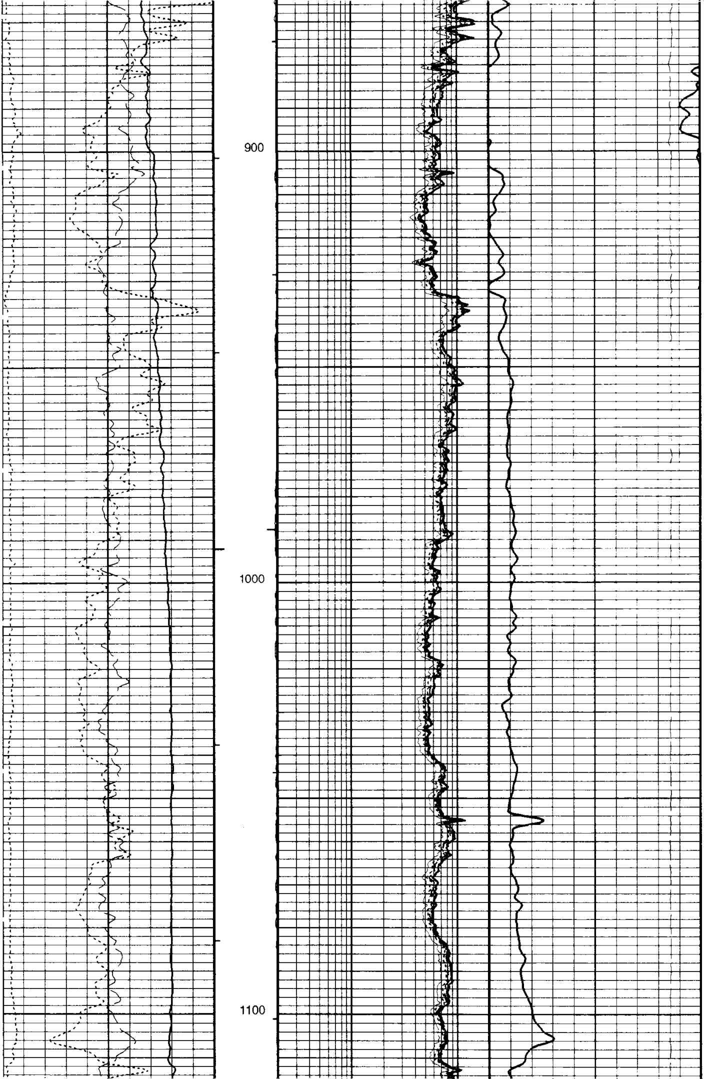
Density Stand-off (DSOZ) 2 (IN) 0

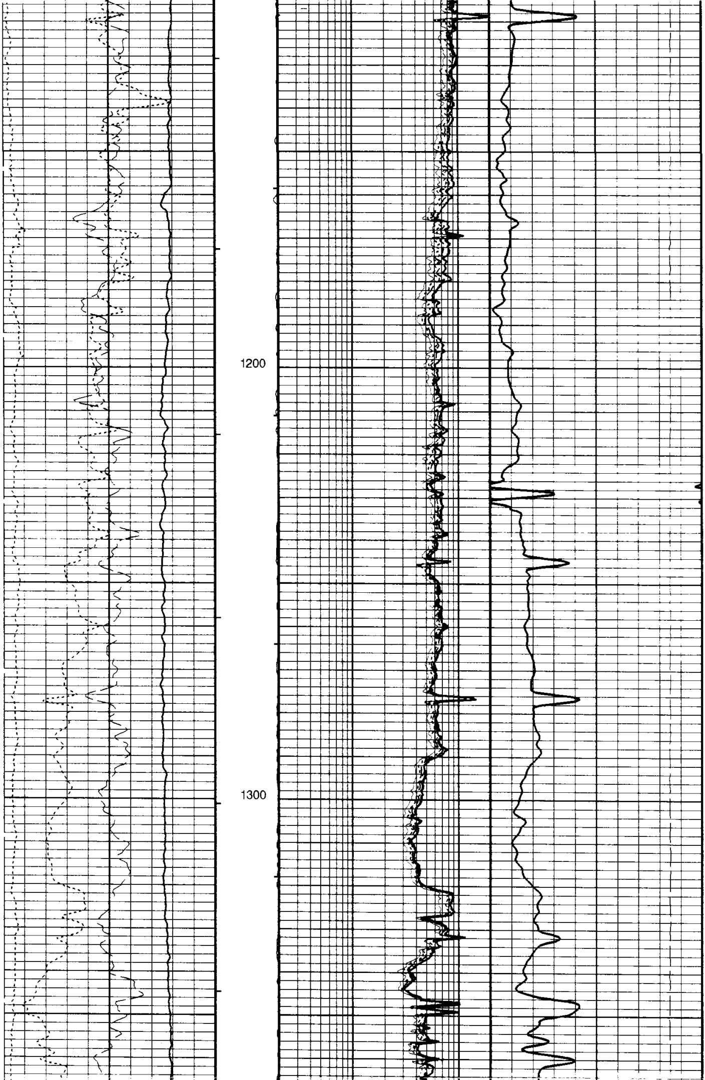
AIT-H 10 Inch Investigation (AHO10) 0.2 (OHMM) 20

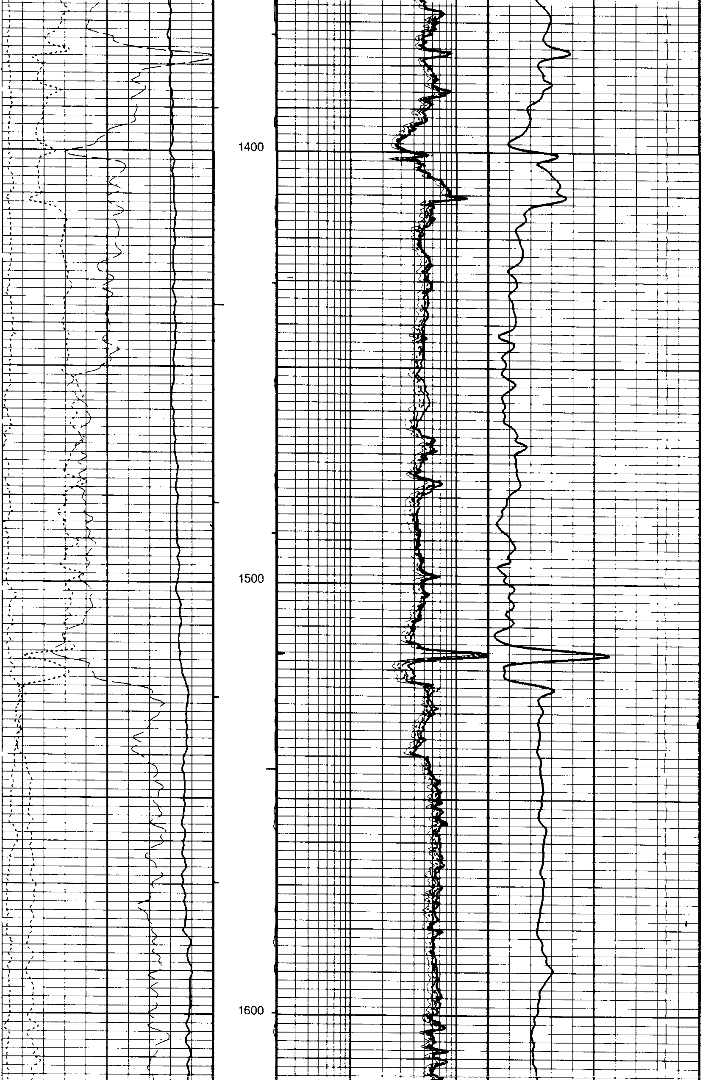
Delta-T (DT) 150 (US/F) 50

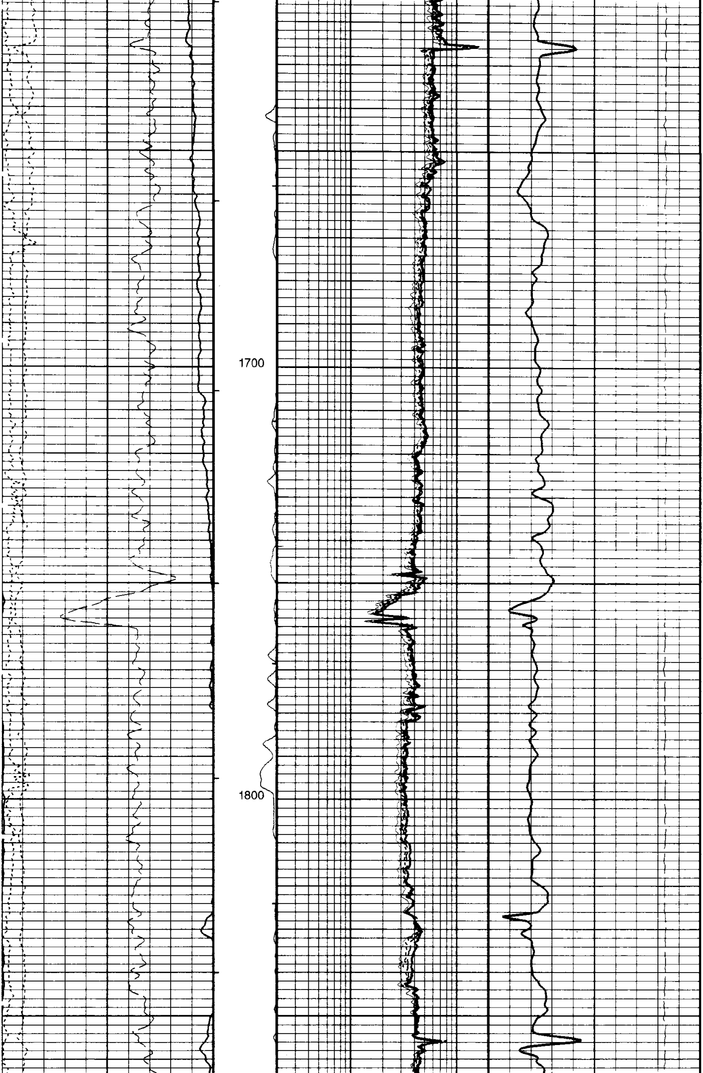


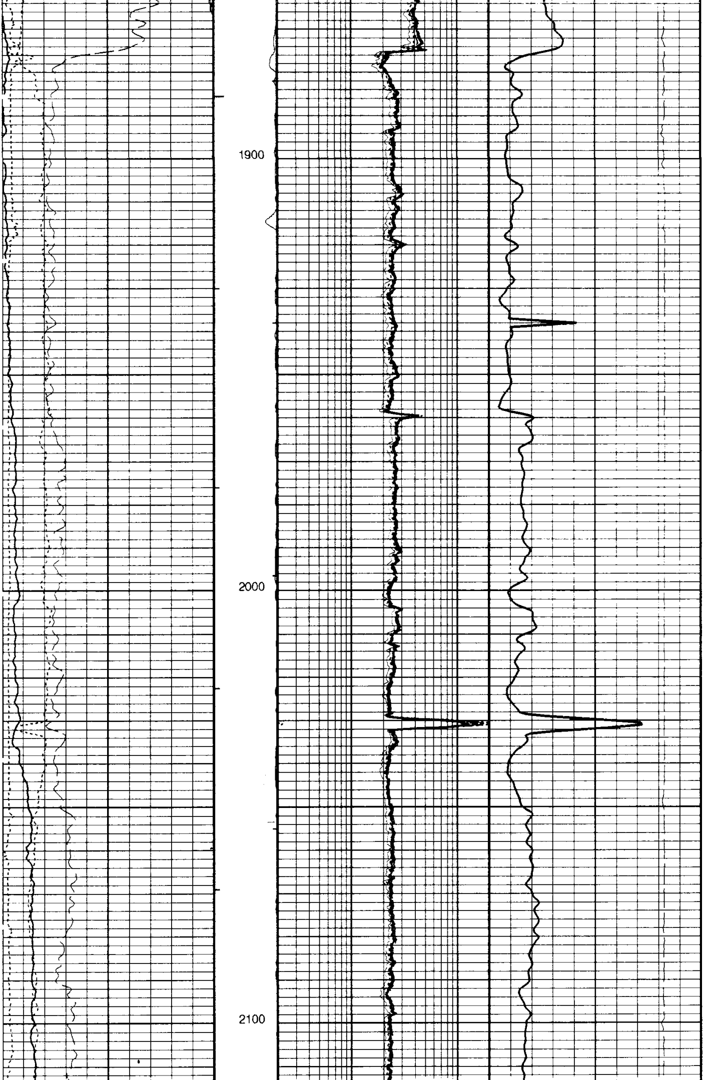


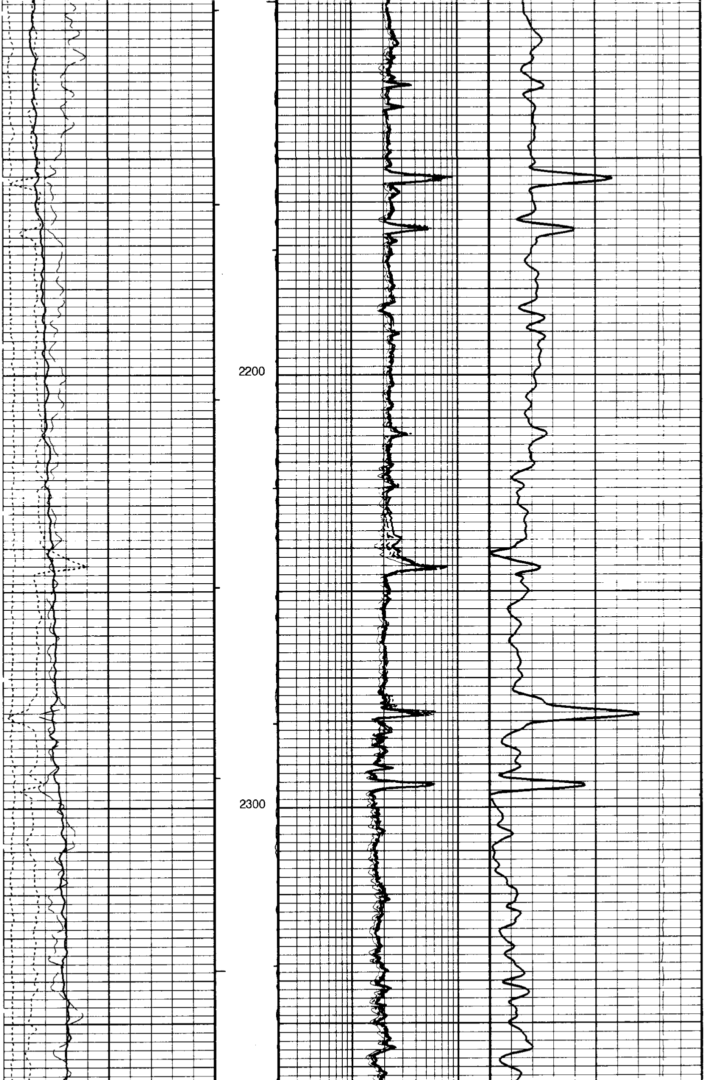


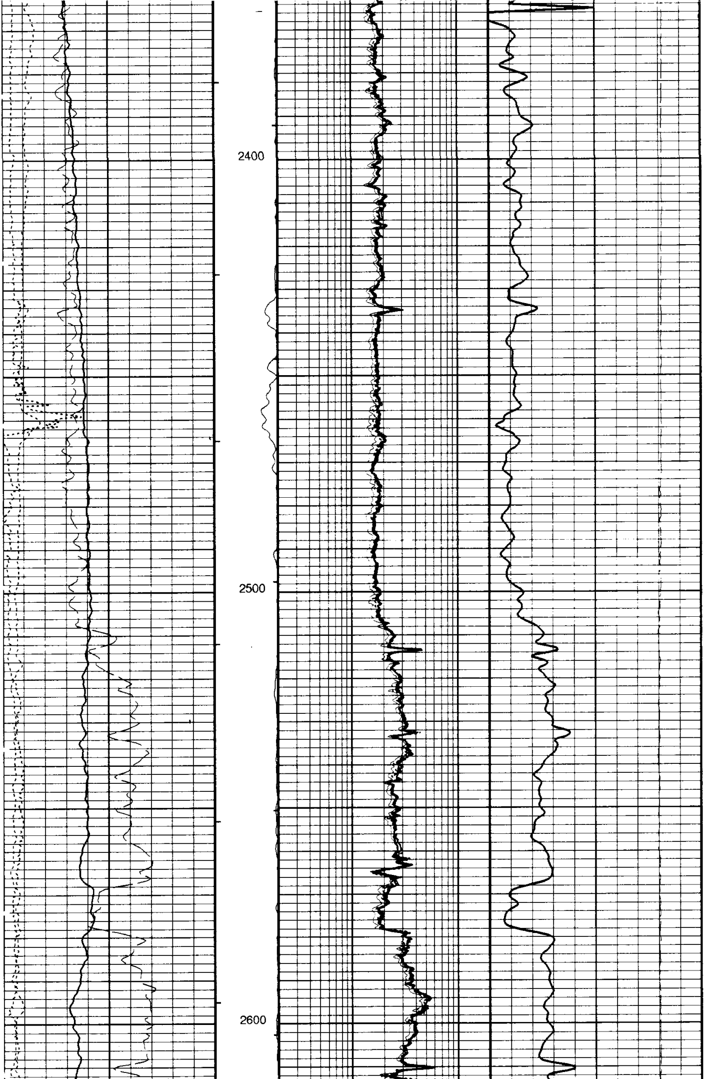


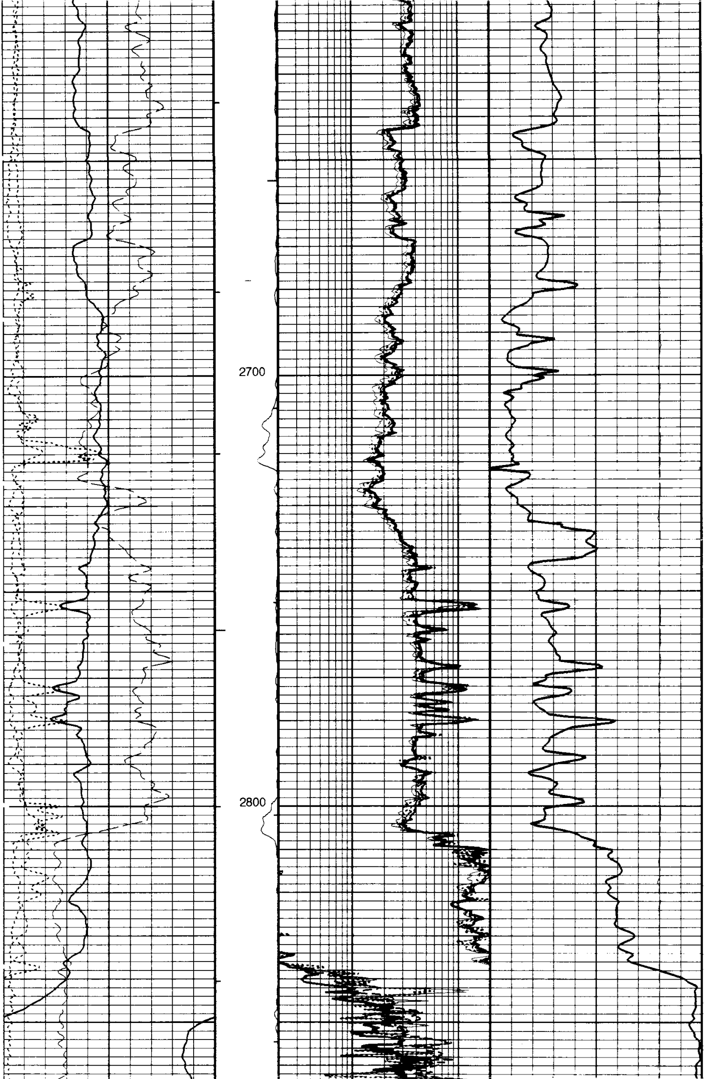


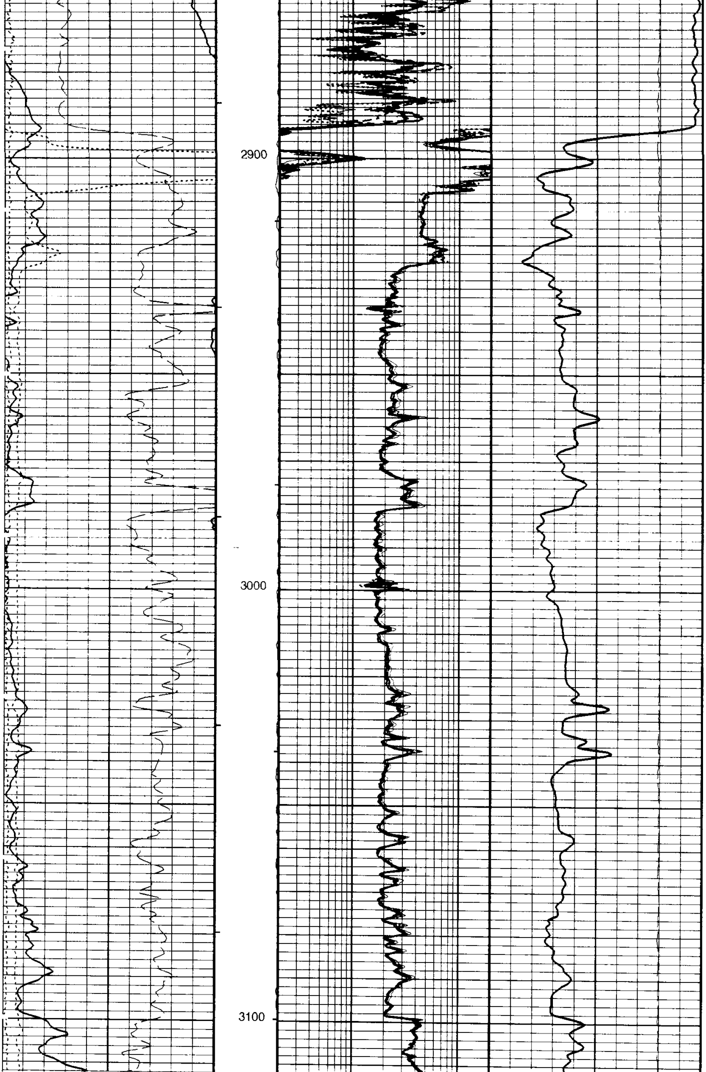


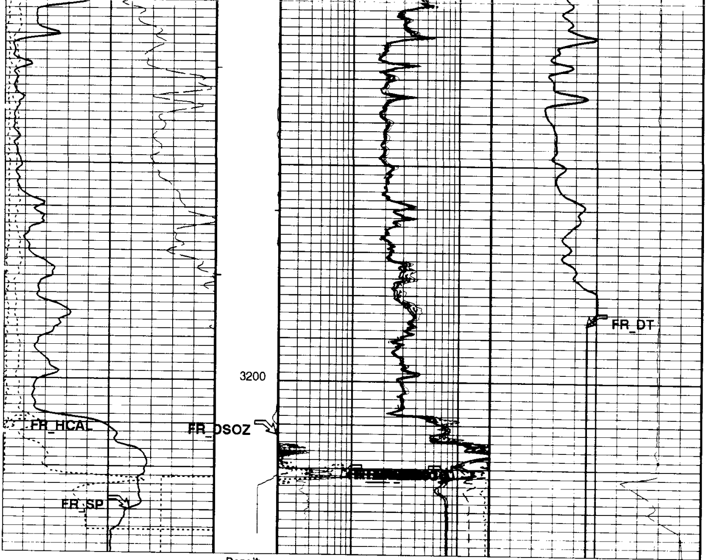












Gamma Ray (GR) 0 (GAPI) 150

Density Stand-off (DSOZ) 2 (IN) 0

AIT-H 10 Inch Investigation (AHO10) 0.2 (OHMM) 20

Delta-T (DT) 150 (US/F) 50

Caliper (HCAL) 6 (IN) 16

AIT-H 20 Inch Investigation (AHO20) 0.2 (OHMM) 20

Tension (TENS) 10000 (LBF) 0

RWA (RWA) 0 (OHMM) 3

AIT-H 30 Inch Investigation (AHO30) 0.2 (OHMM) 20

SP (SP) -100 (MV) 0

AIT-H 60 Inch Investigation (AHO60) 0.2 (OHMM) 20

AIT-H 90 Inch Investigation (AHO90) 0.2 (OHMM) 20

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3

⊨ Integrated Hole Volume Major Pip Every 100 F3

⊣ Integrated Cement Volume Minor Pip Every 10 F3

⟞ Integrated Cement Volume Major Pip Every 100 F3

■ Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AHBHM	AIT-H Bhole Correction Mode	2_COMPUTESTANDOFF	
AHBLM	AIT-H Basic Logs Mode	6_ONE_TWO_AND_FOUR	
AHBPO	AIT-H Basic Logs Processing Option	STANDARD_PROCESSING	
AHCDE	AIT-H Casing Detection Enable	YES	
AHCEN	AIT-H Tool Centering Flag (in Borehole)	ECCENTERED	
AHMRF	AIT-H Mud Resistivity Factor	1.000	
AHSAP	AIT-H Suspend Answer Product Processing	0_NOSUSPENSION	
AHSTA	AIT-H Tool Standoff	0.500	in
ARTS	AIT Rt Selection (for ALLRES computation)	13_AHT90	
BHT	Bottom Hole Temperature (used in calculations)	125.0	degF
BS	Bit Size	6.250	in
DFD	Drilling Fluid Density	9.200	lbm/gal
DHC	Density Hole Correction	BS	
DTCM	Delta-T Computation Mode	FULL	

FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
FPHI	Form Factor Porosity Source	DPHZ	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	AHMF	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCM	HILT Speed Correction Mode	NO_SC	
HSTI	STI Uses HILT Acceleration	NO	
MODE	Sonic Firing Mode	BHC	
MST	Mud Sample Temperature	76.000	degF
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	STDRES	
NSAR	HRDD Depth Sampling Rate	1.000	in
RMFS	Resistivity of Mud Filtrate Sample	0.970	ohm.m
RTCO	RTCO - Rt Invasion Correction	YES	
RW	Resistivity of Connate Water	1.000	ohm.m
SHT	Surface Hole Temperature	68.000	degF
SPDR	SP Drift	0.000	mV/ft
SPNV	SP Next Value	0.000	mV
TD	Total Depth	3230.0	ft
TWS	Temperature of Connate Water Sample	100.0	degF

Format: AITSON Vertical Scale: 5" per 100' Graphics File Created: 19-Jun-1999 17:49

OP System Version: 9C0-413

MCM

HILTD	OP9-KP1	DSLT-BB	OP9-KP1
DTCH	9C0-413		

Input DLIS Files

DEFAULT	HILTD .004	FN:3	PRODUCER	19-Jun-1999 13:17	3240.0 FT	63.5 FT
DEFAULT	HILTD .003	FN:2	PRODUCER	19-Jun-1999 12:55	3234.0 FT	2732.5 FT

Schlumberger

Main Pass

MAXIS 500 Field Log

Input DLIS Files

DEFAULT	HILTD .004	FN:3	PRODUCER	19-Jun-1999 13:17	3240.0 FT	63.5 FT
DEFAULT	HILTD .003	FN:2	PRODUCER	19-Jun-1999 12:55	3234.0 FT	2732.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 613.33 ft3

Cement Volume = 489.96 ft3 (assuming 2.88 in casing O.D.)

Computed from 3230.0 ft to 493.5 ft

OP System Version: 9C0-413

MCM

HILTD	OP9-KP1	DSLT-BB	OP9-KP1
DTCH	9C0-413		

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3
⊢ Integrated Hole Volume Major Pip Every 100 F3
⊣ Integrated Cement Volume Minor Pip Every 10 F3
⊣ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

SP_REP Curve (SP_REP)
-100 (MV) 0

RWA_REP Curve (RWA_REP)
0 (OHMM) 3

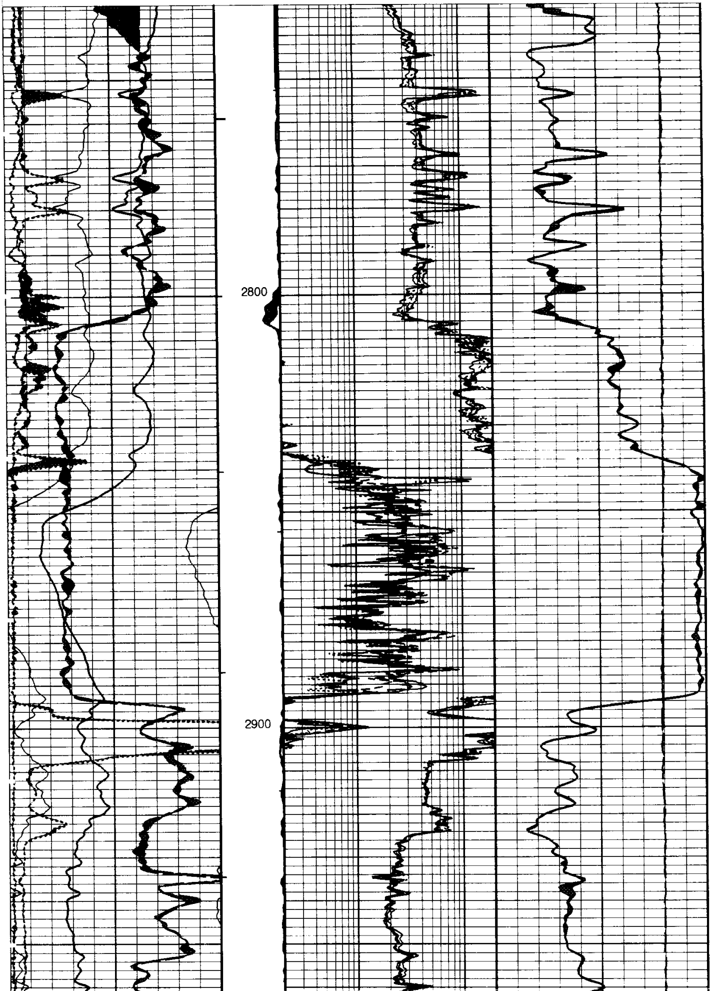
HCAL_REP Curve (HCAL_REP)
6 (IN) 16

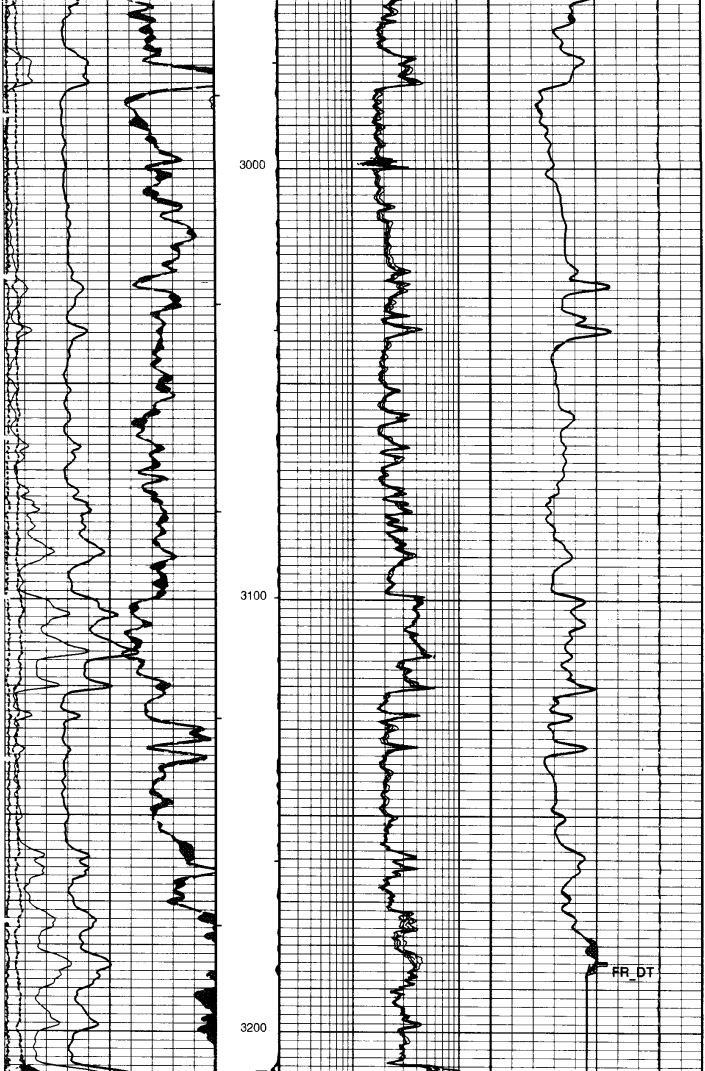
GR_REP Curve (GR_REP)
0 (GAPI) 150

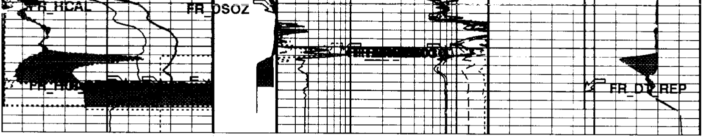
DSOZ_REP Curve (DSOZ_REP)
2 (IN) 0

TENS_REP Curve (TENS_REP)
10000 (LBF) 0

DT_REP Curve (DT_REP)
150 (US/F) 50







GR_REP Curve (GR_REP)
0 (GAPI) 150

DSOZ_REP Curve (DSOZ_REP)
2 (IN) 0

DT_REP Curve (DT_REP)
150 (US/F) 50

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

TENS_REP Curve (TENS_REP)
10000 (LBF) 0

RWA_REP Curve (RWA_REP)
0 (OHMM) 3

SP_REP Curve (SP_REP)
-100 (MV) 0

PIP SUMMARY

⊢ Integrated Hole Volume Minor Pip Every 10 F3
⊢ Integrated Hole Volume Major Pip Every 100 F3
⊣ Integrated Cement Volume Minor Pip Every 10 F3
⊣ Integrated Cement Volume Major Pip Every 100 F3

▶ Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AHBHM	AIT-H Bhole Correction Mode	2_COMPUTESTANDOFF	
AHBLM	AIT-H Basic Logs Mode	6_ONE_TWO_AND_FOUR	
AHBPO	AIT-H Basic Logs Processing Option	STANDARD_PROCESSING	
AHCDE	AIT-H Casing Detection Enable	YES	
AHCEN	AIT-H Tool Centering Flag (in Borehole)	ECCENTERED	
AHMRF	AIT-H Mud Resistivity Factor	1.000	
AHSAP	AIT-H Suspend Answer Product Processing	0_NOSUSPENSION	
AHSTA	AIT-H Tool Standoff	0.500	in
ARTS	AIT Rt Selection (for ALLRES computation)	13_AHT90	
BHT	Bottom Hole Temperature (used in calculations)	125.0	degF
BS	Bit Size	6.250	in
DFD	Drilling Fluid Density	9.200	lbm gal
DHC	Density Hole Correction	BS	
DTCM	Delta-T Computation Mode	FULL	
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
FPHI	Form Factor Porosity Source	DPHZ	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	AHMF	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCM	HILT Speed Correction Mode	NO_SC	
HSTI	STI Uses HILT Acceleration	NO	
MODE	Sonic Firing Mode	BHC	
MST	Mud Sample Temperature	76.000	degF
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	STDRES	
NSAR	HRDD Depth Sampling Rate	1.000	in
RMFS	Resistivity of Mud Filtrate Sample	0.970	ohm.m
RTCO	RTCO - Rt Invasion Correction	YES	
RW	Resistivity of Connate Water	1.000	ohm.m
SHT	Surface Hole Temperature	68.000	degF
SPDR	SP Drift	0.000	mV/ft
SPNV	SP Next Value	0.000	mV
TD	Total Depth	3230.0	ft
TWS	Temperature of Connate Water Sample	100.0	degF

Format: AITSON_REP Vertical Scale: 5" per 100' Graphics File Created: 19-Jun-1999 17:49

OP System Version: 9C0-413

MCM

HILTD	OP9-KP1	DSLT-BB	OP9-KP1
DTCH	9C0-413		

Input DLIS Files

DEFAULT	HILTD .004	FN:3	PRODUCER	19-Jun-1999 13:17	3240.0 FT	63.5 FT
DEFAULT	HILTD .003	FN:2	PRODUCER	19-Jun-1999 12:55	3234.0 FT	2732.5 FT

Schlumberger

Repeat Section

MAXIS 500 Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase Master: 20-APR-1999 9:53 Before: 19-JUN-1999 12:26							
Thru Cal Magnitude - 0	0	0.6120	0.6261	N/A	N/A	N/A	V
Thru Cal Magnitude - 1	0	1.256	1.285	N/A	N/A	N/A	V
Thru Cal Magnitude - 2	0	0.6231	0.6375	N/A	N/A	N/A	V
Thru Cal Magnitude - 3	0	0.7035	0.7198	N/A	N/A	N/A	V
Thru Cal Magnitude - 4	0	1.320	1.350	N/A	N/A	N/A	V
Thru Cal Magnitude - 5	0	1.914	1.958	N/A	N/A	N/A	V
Thru Cal Magnitude - 6	0	1.915	1.959	N/A	N/A	N/A	V
Thru Cal Magnitude - 7	0	1.374	1.405	N/A	N/A	N/A	V
Phase - 0	0	55.57	56.09	N/A	N/A	N/A	DEG
Phase - 1	0	54.45	54.98	N/A	N/A	N/A	DEG
Phase - 2	0	50.61	51.13	N/A	N/A	N/A	DEG
Phase - 3	0	49.81	50.33	N/A	N/A	N/A	DEG
Phase - 4	0	43.35	43.86	N/A	N/A	N/A	DEG
Phase - 5	0	41.41	41.91	N/A	N/A	N/A	DEG
Phase - 6	0	41.39	41.89	N/A	N/A	N/A	DEG
Phase - 7	0	37.47	37.92	N/A	N/A	N/A	DEG
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Electronics Calibration Check - Auxiliary Master: 20-APR-1999 9:53 Before: 19-JUN-1999 12:26							
AIT-H SPA Plus	990.5	989.9	990.4	N/A	N/A	N/A	MV
AIT-H SPA Zero	0	0.1047	0.08591	N/A	N/A	N/A	MV
AIT-H Temperature Plus	0.9150	0.9170	0.9175	N/A	N/A	N/A	V
AIT-H Temperature Zero	0	0.00009620	0.00009136	N/A	N/A	N/A	V
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Test Loop Gain Correction Master: 20-APR-1999 9:53							
Test Loop Gain Magnitude - 0	0	1.015	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 1	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 2	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 3	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 4	0	0.9927	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 5	0	0.9862	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 6	0	0.9945	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 7	0	1.010	N/A	N/A	N/A	N/A	V
Phase - 0	0	0.3978	N/A	N/A	N/A	N/A	DEG
Phase - 1	0	0.4417	N/A	N/A	N/A	N/A	DEG
Phase - 2	0	-0.06962	N/A	N/A	N/A	N/A	DEG
Phase - 3	0	0.03532	N/A	N/A	N/A	N/A	DEG
Phase - 4	0	-0.04528	N/A	N/A	N/A	N/A	DEG
Phase - 5	0	-0.09732	N/A	N/A	N/A	N/A	DEG
Phase - 6	0	0.3081	N/A	N/A	N/A	N/A	DEG
Phase - 7	0	-0.01814	N/A	N/A	N/A	N/A	DEG
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Sonde Error Correction Master: 20-APR-1999 9:53							
R Sonde Error Correction - 0	0	-56.96	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 1	0	167.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 2	0	103.7	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 3	0	61.99	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 4	0	25.47	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 5	0	10.98	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 6	0	9.621	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 7	0	-0.6192	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 0	0	-226.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 1	0	-590.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 2	0	-92.54	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 3	0	-55.47	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 4	0	-27.06	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 5	0	14.05	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 6	0	2.934	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 7	0	8.288	N/A	N/A	N/A	N/A	MM/M

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Mud Gain Correction
Master: 20-APR-1999 9:53

Coarse - Mag, Real, Imag - 0	0	0.9220	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 1	0	0.9220	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 2	0	0.9220	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 0	0	0.9197	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 1	0	0.9197	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 2	0	0.9197	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Stab Measurement Summary
Before: 19-JUN-1999 10:13

BS Window Ratio	0.9937	N/A	0.9947	N/A	N/A	N/A	
BS Window Sum	19110	N/A	19090	N/A	N/A	N/A	CPS
SS Window Ratio	0.4739	N/A	0.4750	N/A	N/A	N/A	
SS Window Sum	10510	N/A	10500	N/A	N/A	N/A	CPS
LS Window Ratio	0.2981	N/A	0.2983	N/A	N/A	N/A	
LS Window Sum	1407	N/A	1402	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations
Before: 19-JUN-1999 10:12

BS PM High Voltage (Command)	1873	N/A	1873	N/A	N/A	N/A	V
SS PM High Voltage (Command)	2169	N/A	2162	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1976	N/A	1968	N/A	N/A	N/A	V

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Crystal Quality Resolutions Calibration
Before: 19-JUN-1999 10:12

BS Crystal Resolution	12.75	N/A	12.75	N/A	N/A	N/A	%
SS Crystal Resolution	9.868	N/A	9.871	N/A	N/A	N/A	%
LS Crystal Resolution	9.698	N/A	9.603	N/A	N/A	N/A	%

High resolution Integrated Logging Tool-DTS Wellsite Calibration - MCFL Calibration
Before: 19-JUN-1999 10:07

Raw B0 Resistivity	3875	N/A	3872	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3819	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3828	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool-DTS Wellsite Calibration - HILT Caliper Calibration
Before: 19-JUN-1999 10:09

HILT Caliper Zero Measurement	8.000	N/A	8.382	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.57	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Detector Calibration
Before: 19-JUN-1999 10:07

Gamma Ray Background	30.00	N/A	36.37	N/A	N/A	N/A	GAPI
Gamma Ray (J/g - Bkg)	180.0	N/A	180.0	N/A	N/A	16.36	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Zero Measurement
Master: 9-APR-1999 11:25 Before: 19-JUN-1999 11:17

CNTC Background	24.10	24.10	24.73	N/A	N/A	3.615	CPS
CFTC Background	27.48	27.48	30.69	N/A	N/A	4.122	CPS

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Accelerometer Calibration
Before: 19-JUN-1999 12:21

Z-Axis Acceleration	32.19	N/A	32.14	N/A	N/A	N/A	F/S2

The GLS-VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT-B Water Temperature	60.0	DEGF.
Thermal Housing Size	3.355	IN.

High resolution Integrated Logging Tool-DTS / Equipment Identification

Primary Equipment:

Array Induction Tool - H	AIT - H	
Array Induction Sonde	AHIS - BA	
HILT high-Resolution Mechanical Sonde	HRMS - B	859
HILT Rxo Gamma-ray Device	HRGD -	860
HILT Nuclear Back-Scatter Detector	HILT -	
HILT Nuclear Short-Spacing Detector	HILT -	
HILT Nuclear Long-Spacing Detector	HILT -	
Micro Cylindrically Focused Log Device	MCFL -	

Auxiliary Equipment:

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Electronics Calibration Check - Thru Cal Mag. & Phase

Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6120		0.6050	55.57		71.00
	Before	0.6261			56.09		
1	Master	1.256		1.270	54.45		70.00
	Before	1.285			54.98		
2	Master	0.6231		0.6230	50.61		66.00
	Before	0.6375			51.13		
3	Master	0.7035		0.7040	49.81		65.00
	Before	0.7198			50.33		
4	Master	1.320		1.337	43.35		59.00
	Before	1.350			43.86		
5	Master	1.914		1.955	41.41		57.00
	Before	1.958			41.91		
6	Master	1.915		1.955	41.39		57.00
	Before	1.959			41.89		
7	Master	1.374		1.415	37.47		53.00
	Before	1.405			37.92		
			60.00 % (Minimum) (Nominal) 140.0 % (Maximum)			Nom -60.00 (Minimum) (Nominal) Nom - 60.00 (Maximum)	

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Before: 19-JUN-1999 12:26

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Electronics Calibration Check - Auxilliary

Phase	AIT-H SPA Plus MV	Value	Phase	AIT-H SPA Zero MV	Value
Master		989.9	Master		0.1047
Before		990.4	Before		0.08591
	941.0 (Minimum) 990.5 (Nominal) 1040 (Maximum)			-50.00 (Minimum) 0 (Nominal) 50.00 (Maximum)	

Phase	AIT-H Temperature Plus V	Value	Phase	AIT-H Temperature Zero V	Value
Master		0.9170	Master		9.620E-00
Before		0.9175	Before		9.136E-00
	0.8700 (Minimum) 0.9150 (Nominal) 0.9600 (Maximum)			-0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

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Before: 19-JUN-1999 12:26

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Test Loop Gain Correction

Idx	Value	Test Loop Gain Magnitude V	Value	Phase DEG
0	1.015		0.3978	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
1	1.014		0.4417	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
2	1.014		-0.06962	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
3	1.014		0.03532	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
4	0.9927		-0.04528	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
5	0.9862		-0.09732	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
6	0.9945		0.3081	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
7	1.010		-0.01814	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration

Sonde Error Correction

Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
		(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
0	-56.96	-231.0	-56.00	119.0	-226.2	-2250	0	2250
1	167.3	114.0	159.0	204.0	-590.6	-625.0	0	625.0
2	103.7	66.00	111.0	156.0	-92.54	-350.0	0	350.0
3	61.99	39.00	64.00	89.00	-55.47	-250.0	0	250.0
4	25.47	15.00	25.00	35.00	-27.06	-63.00	0	63.00
5	10.98	4.000	14.00	24.00	14.05	-50.00	0	50.00
6	9.621	5.000	10.00	15.00	2.934	-30.00	0	30.00
7	-0.6192	-5.000	0	5.000	8.268	-30.00	0	30.00

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High resolution Integrated Logging Tool-DTS Wellsite Calibration

Mud Gain Correction

Idx	Value	Coarse - Mag, Real, Imag			Value	Fine - Mag, Real, Imag		
		(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
0	0.9220	0.6000	1.000	1.400	0.9197	0.6000	1.000	1.400
1	0.9220	0.6000	1.000	1.400	0.9197	0.6000	1.000	1.400
2	0.9220	0.6000	1.000	1.400	0.9197	0.6000	1.000	1.400

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High resolution Integrated Logging Tool-DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value	Phase	LS Window Ratio			Value
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)	
Before	0.9440	0.9937	1.043	0.9947	Before	0.4502	0.4739	0.4976	0.4750	Before	0.2832	0.2981	0.3130	0.2983

Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)	
Before	18160	19110	20070	19090	Before	9986	10510	11040	10500	Before	1337	1407	1477	1402

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High resolution Integrated Logging Tool-DTS Wellsite Calibration

Photo-multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)	
Before	1773	1873	1973	1873	Before	2069	2169	2269	2162	Before	1876	1976	2076	1968

Before: 19-JUN-1999 10:12

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value	Phase	LS Crystal Resolution %			Value
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)	
Before	11.75	12.75	13.75	12.75	Before	8.868	9.868	10.87	9.871	Before	8.698	9.698	10.70	9.603

Before: 19-JUN-1999 10:12

High resolution Integrated Logging Tool-DTS Wellsite Calibration

MCFL Calibration

Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
	(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)			(Minimum)	(Nominal)	(Maximum)	
Before	3565	3875	4185	3872	Before	3524	3830	4136	3819	Before	3524	3830	4136	3828

Before: 19-JUN-1999 10:07

High resolution Integrated Logging Tool-DTS Wellsite Calibration

HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN	Value	Phase	HILT Caliper Plus Measurement IN	Value
Before		8.382	Before		12.57
	6.000 (Minimum) 8.000 (Nominal) 10.00 (Maximum)			9.000 (Minimum) 12.00 (Nominal) 15.00 (Maximum)	

Before: 19-JUN-1999 10:09

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		36.37	Before		180.0	Before		165.0
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			163.6 (Minimum) 180.0 (Nominal) 196.3 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 19-JUN-1999 10:07

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		24.10	Master		27.48
Before		24.73	Before		30.69
	5.000 (Minimum) 24.10 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 27.48 (Nominal) 40.00 (Maximum)	

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High resolution Integrated Logging Tool-DTS Wellsite Calibration

Accelerometer Calibration

Phase	Z-Axis Acceleration F/S2	Value
Before		32.14
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	

Before: 19-JUN-1999 12:21

COMPANY:	**Enerfin Resources Northwest**
WELL:	**Columbia County 11-34-75 Stegosaur**
FIELD:	**Mist Gas**
COUNTY:	**Columbia**
STATE:	**Oregon**

BOTTOM LOG INTERVAL	3224 ft
SCHLUMBERGER DEPTH	3232 ft
DEPTH DRILLER	3230 ft
KELLY BUSHING	1676.74 ft
DRILL FLOOR	1775.74 ft
GROUND LEVEL	1666.74 ft

Schlumberger

Platform Express
Array Induction
BHC Sonic