AG CLAYTON 1

COMPANY: SOFREGAZ US INC.

WELL: Jefferson Gas LLC "Clayton" well #1

FIELD: Wildcat

COUNTY: Linn STATE: Oregon

COUNTY: Linn
Field: Wildcat
Location: 2235' FEL & 2466' FNL of Sectio
Well: Jefferson Gas LLC "Clayton" we
Company: SOFREGAZ US INC.

Schlumberger

Platform Express
Compensated Neutron
Three Detector Density

LOCATION

2235' FEL & 2466' FNL of Section 58

Elev.: K.B. 219 F
G.L. 207 F
D.F.

Permanent Datum: Ground Level Elev.: 207 F
Log Measured From: Kelly Bushing 12.0 F above Perm. Datum
Drilling Measured From: Kelly Bushing

API Serial No	SECTION	TOWNSHIP	RANGE
036-043-00019	58	10S	3W

Logging Date		30-SEP-1998			
Run Number		1			
Depth Driller		1356 F			
Schlumberger Depth		1356 F			
Bottom Log Interval		1348 F			
Top Log Interval		500 F			
Casing Driller Size @ Depth		9.625 IN @ 500 F		@	
Casing Schlumberger		500 F			
Bit Size		8.500 IN			
Type Fluid In Hole		Gel			
MUD Density	Viscosity	9 LB/G	42 S		
Fluid Loss	PH	6 C3	9.5		
Source Of Sample		Tank			
RM @ Measured Temperature		2.790 OHMM @ 82 DEGF		@	
RMF @ Measured Temperature		2.420 OHMM @ 71 DEGF		@	
RMC @ Measured Temperature		2.370 OHMM @ 71 DEGF		@	
Source RMF	RMC	Press	Press		
RM @ MRT	RMF @ MRT	3.201 @ 71	2.433 @ 71	@	@
Maximum Recorded Temperatures		71 DEGF			
Circulation Stopped	Time	30-SEP-1998	12:30		
Logger On Bottom	Time	30-SEP-1998			
Unit Number	Location	3152	Sacramento		
Recorded By		Clayton Campbell			
Witnessed By		Jerome Jacquemont/Bob Pinotti			

		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: BHC Sonic	OS1:
OS2: Array induction	OS2:
OS3: 4 arm Caliper	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
1.0 inch standoffs used on array induction	
Rig: John Taylor 7190	
Dispatch ID 7190	

RUN 1	RUN 2
SERVICE ORDER #: 6009856	SERVICE ORDER #:
PROGRAM VERSION: 8C1-205	PROGRAM VERSION:
FLUID LEVEL:	FLUID LEVEL:

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

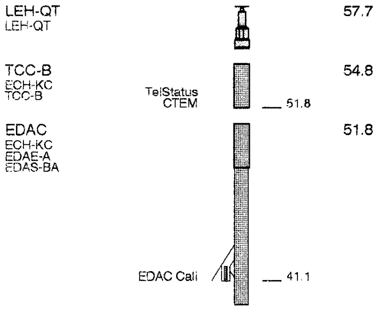
EQUIPMENT DESCRIPTION

RUN 1

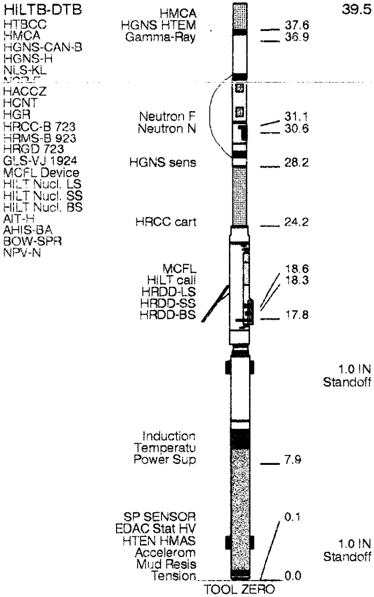
SURFACE EQUIPMENT

GSR-U/Y
NCT-B
CNB-AB
NCS-VB
WITM (CTS)-A

DOWNHOLE EQUIPMENT



RUN 2



MAXIMUM STRING DIAMETER 5.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Input DLIS Files

DEFAULT	HILTB .007	FN:4	FIELD	30-Sep-1998 16:27	1368.0 FT	362.0 FT

Output DLIS Files

DEFAULT	HILTB .047	FN:40	FIELD	30-Sep-1998 22:36	1368.0 FT	450.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 362.90 F3

Cement Volume = 221.59 F3 (assuming 5.50 IN casing O.D.)

Computed from 1356.0 FT to 500.0 FT using data channel(s) HCAL

OP System Version: 8C1-205

MCM

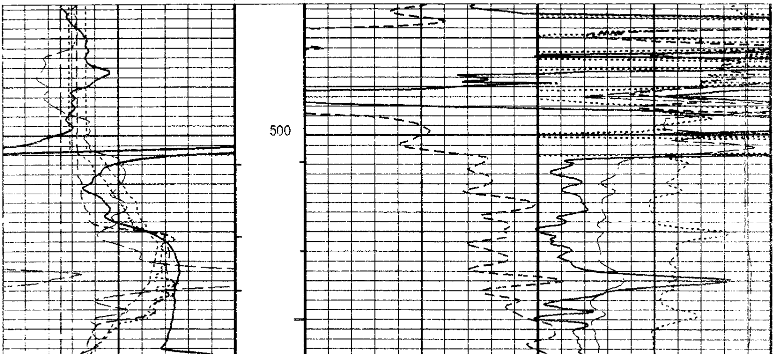
HILTB-DTB	APCW-98Q1	EDAC	8C1-205
TCC-B	APCW-98Q1		

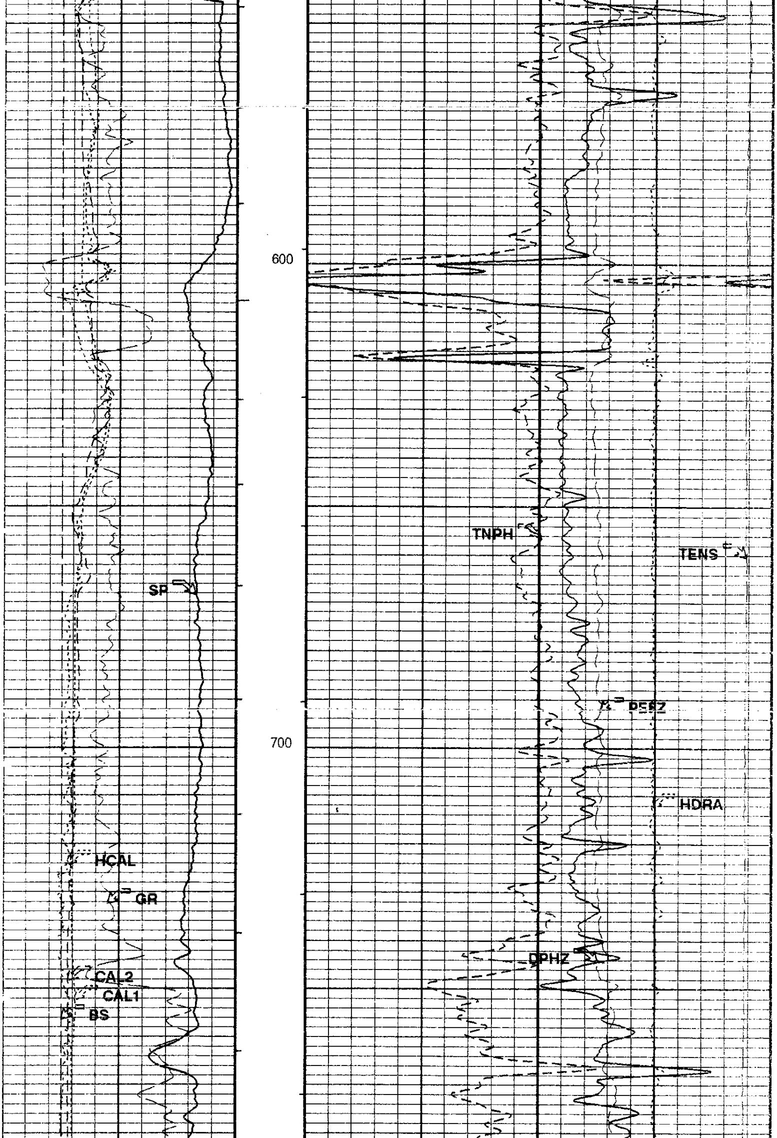
PIP SUMMARY

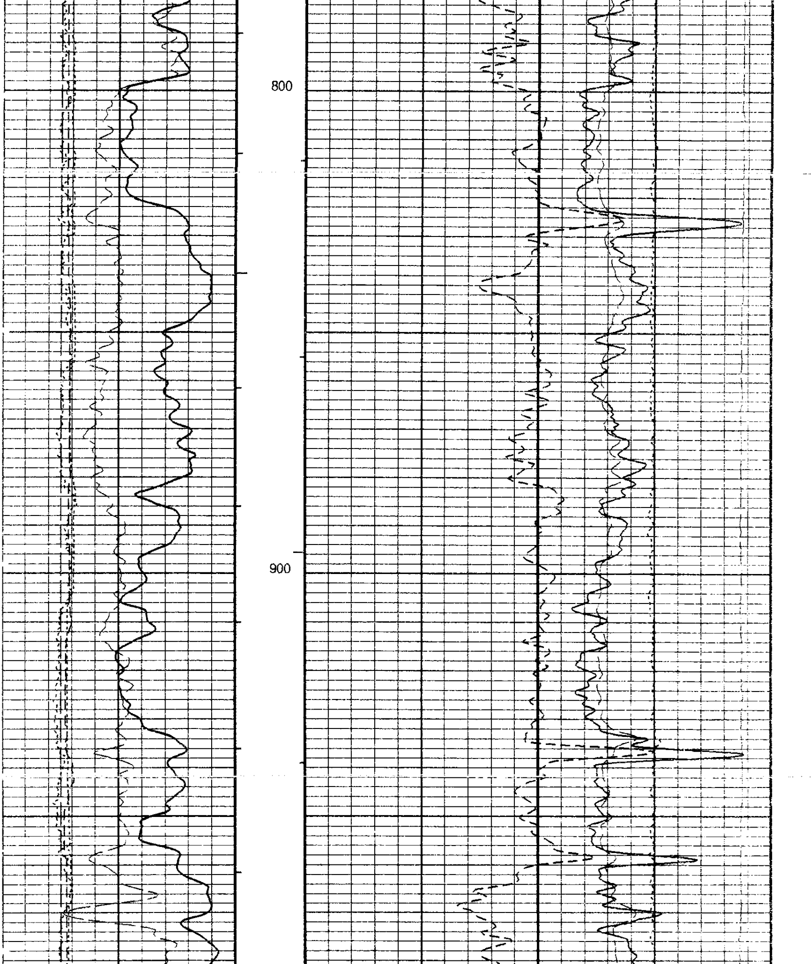
⊢ Integrated Hole Volume Minor Pip Every 10 F3
⊢ Integrated Hole Volume Major Pip Every 100 F3
⊣ Integrated Cement Volume Minor Pip Every 10 F3
⊣ Integrated Cement Volume Major Pip Every 100 F3

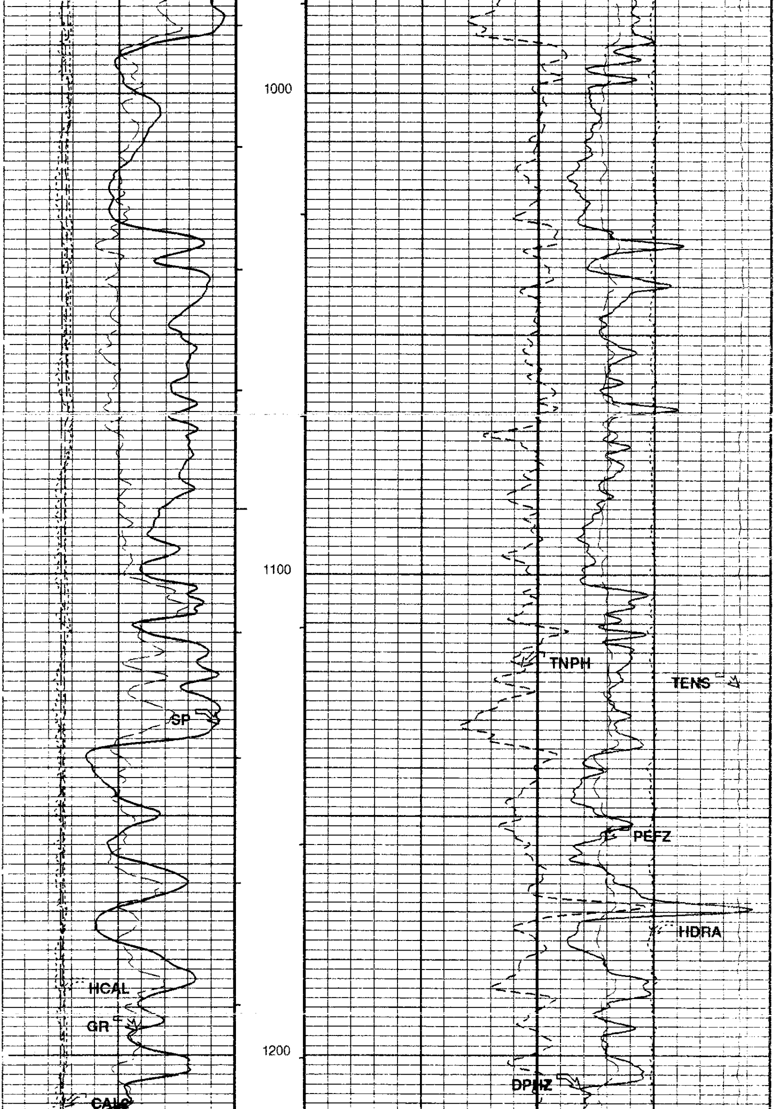
■ Time Mark Every 60 S

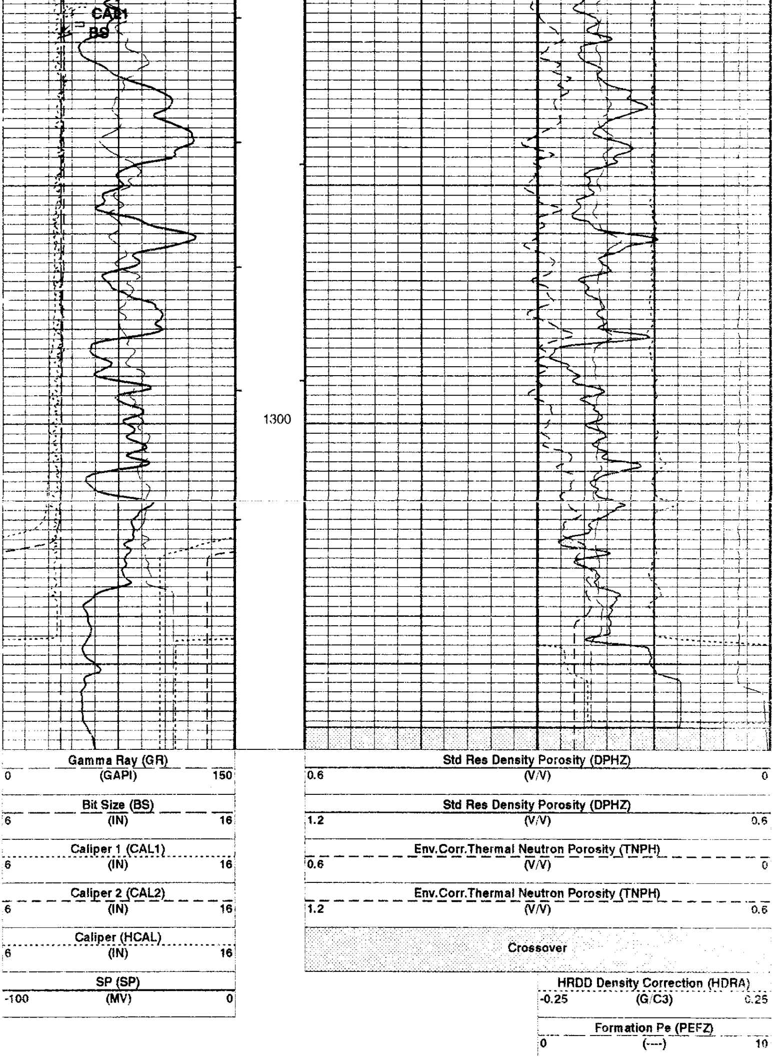
Curve	Left	Unit	Right
Tension (TENS)	10000	(LBF)	0
Formation Pe (PEFZ)	0	(----)	10
SP (SP)	-100	(MV)	0
HRDD Density Correction (HDRA)	-0.25	(G/C3)	0.25
Caliper (HCAL)	6	(IN)	16
Crossover			
Caliper 2 (CAL2)	6	(IN)	16
Env.Corr.Thermal Neutron Porosity (TNPH)	1.2	(V/V)	0.6
Caliper 1 (CAL1)	6	(IN)	16
Env.Corr.Thermal Neutron Porosity (TNPH)	0.6	(V/V)	0
Bit Size (BS)	6	(IN)	16
Std Res Density Porosity (DPHZ)	1.2	(V/V)	0.6
Gamma Ray (GR)	0	(GAPI)	150
Std Res Density Porosity (DPHZ)	0.6	(V/V)	0











Tension (TENS)		
10000	(LBF)	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

AIT-H Answer Product Processing Summary. Data taken with tool # 112 (AHTNO)

...Acquired data from HILT/HAIT

***** Bhole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)

Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.

***** Input Selections to AIT Answer Product processing *****

Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHZ

***** Other parameters used by AIT-H Answer Product processing *****

Surface Hole Temperature (SHT)	68.000 DEGF	Bottom Temperature (BHT)	70.600 DEGF
Total Depth (TD)	1356.000 FT		
Form Factor Exponent (FEXP)	2.000	Form Factor Numerator (FNUM)	1.000
Mud Filtrate Sample Resistivity (RMFS)	2.420 OHMM	Mud Filtrate Sample Temperature (MFST)	71.000 DEGF
Resitivity Connate Water (RW)	1.000 OHMM		

***** AIT-H Answer Product processing control parameters *****

Playback Mode: NORMAL

Parameters

DLIS Name	Description	Value	
BHFL	Borehole Fluid Type	WATER	
BHS	Bore Hole Status	OPEN	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	400.00	PPM
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	9.00	LB/G
DHC	Density Hole Correction	BS	
DO	Depth Offset	0.0	FT
DORL	Depth Offset Repeat Analysis	1.8	FT
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCM	HILT Speed Correction Mode	TSCD_SPEED_CORRECTION	
HSCO	Hole Size Correction Option	YES	
HSTI	STI Uses HILT Acceleration	YES	
MATR	Rock Matrix Type	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.65	G/C3
MST	Mud Sample Temperature	82.00	DEGF
MWCO	Mud Weight Correction Option	NO	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	StdRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PP	Playback Processing	NORMAL	
PTCO	Pressure/Temperature Correction Option	NO	
RMFS	Resistivity of Mud Filtrate Sample	2.4200	OHMM
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
SPNV	SP Next Value	-80	MV
TDL	Total Depth - Logger	1356.00	FT

Format: poro Vertical Scale: 5" per 100' Graphics File Created: 30-Sep-1998 22:36

OP System Version: 8C1-205

MCM

HILTB-DTB	APCW-98Q1	EDAC	8C1-205
TCC-B	APCW-98Q1		

Speed Corrected - Depth Matched LOG

Input DLIS Files

DEFAULT	HILTB .007	FN:4	FIELD	30-Sep-1998 16:27	1368.0 FT	362.0 FT

Output DLIS Files

DEFAULT	HILTB .047	FN:40	FIELD	30-Sep-1998 22:36

Input DLIS Files

DEFAULT	HILTB .007	FN:4	FIELD	30-Sep-1998 16:27	1368.0 FT	362.0 FT
DEFAULT	HILTB .005	FN:3	FIELD	30-Sep-1998 15:24	1344.0 FT	723.6 FT

Output DLIS Files

DEFAULT	HILTB .047	FN:40	FIELD	30-Sep-1998 22:36

OP System Version: 8C1-205

MCM

HILTB-DTB	APCW-98Q1	EDAC	8C1-205
TCC-B	APCW-98Q1		

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

TENS_REP Curve (TENS_REP)
10000 (LBF) 0

PEFZ_REP Curve (PEFZ_REP)
0 (----) 10

HDRA_REP Curve (HDRA_REP)
-0.25 (G/C3) 0.25

RWA_REP Curve (RWA_REP)
0 (OHMM) 3

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

GR_1_REP Curve (GR_REP)
150 (GAPI) 300

GR_REP Curve (GR_REP)
0 (GAPI) 150

CAL2_REP Curve (CAL2_REP)
6 (IN) 16

BS_REP Curve (BS_REP)
6 (IN) 16

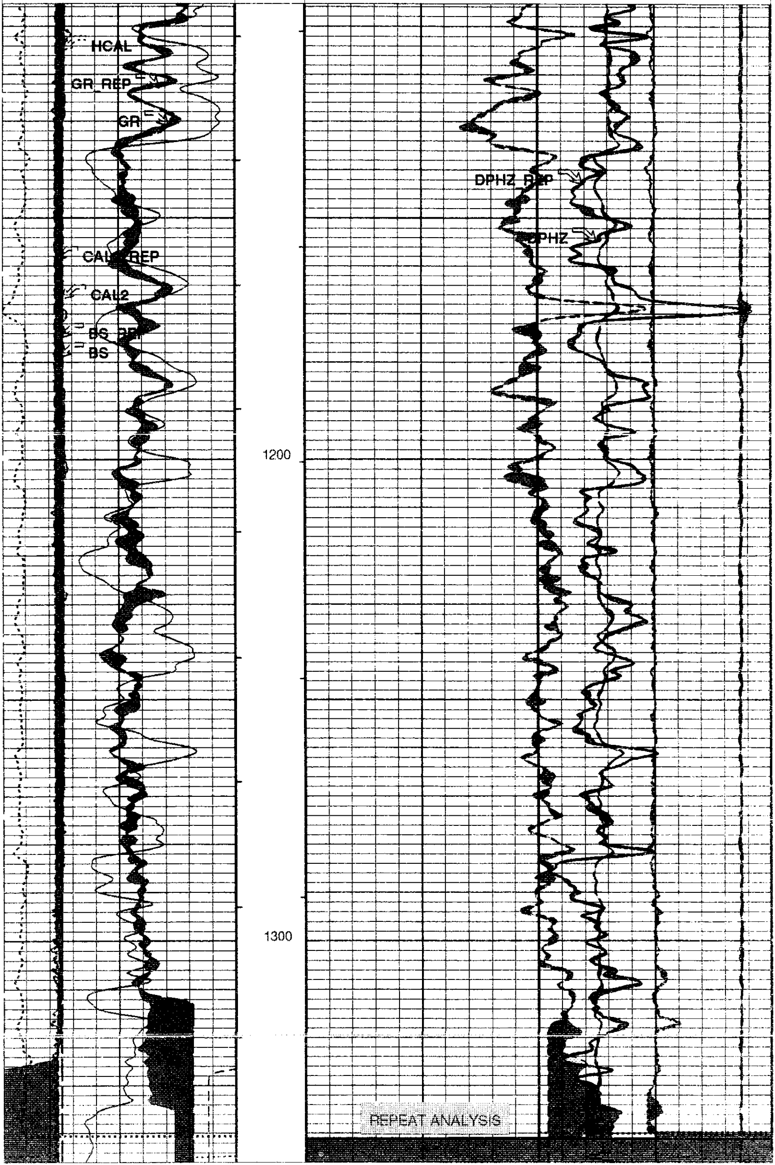
Crossover

TNPH_1_REP Curve (TNPH_REP)
1.2 (V/V) 0.6

TNPH_REP Curve (TNPH_REP)
0.6 (V/V) 0

DPHZ_1_REP Curve (DPHZ_REP)
1.2 (V/V) 0.6

DPHZ_REP Curve (DPHZ_REP)
0.6 (V/V) 0



BS_REP Curve (BS_REP)		
6	(IN)	16
CAL2_REP Curve (CAL2_REP)		
6	(IN)	16
GR_REP Curve (GR_REP)		
0	(GAPI)	150
GR_1_REP Curve (GR_REP)		
150	(GAPI)	300
HCAL_REP Curve (HCAL_REP)		
6	(IN)	16
RWA_REP Curve (RWA_REP)		
0	(OHMM)	3

DPHZ_REP Curve (DPHZ_REP)		
0.6	(V/V)	0
DPHZ_1_REP Curve (DPHZ_REP)		
1.2	(V/V)	0.6
TNPH_REP Curve (TNPH_REP)		
0.6	(V/V)	0
TNPH_1_REP Curve (TNPH_REP)		
1.2	(V/V)	0.6
▨ Crossover		
HDRA_REP Curve (HDRA_REP)		
-0.25	(G/C3)	0.25
PEFZ_REP Curve (PEFZ_REP)		
0	(----)	10
TENS_REP Curve (TENS_REP)		
10000	(LBF)	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

AIT-H Answer Product Processing Summary. Data taken with tool # 112 (AHTNO)

...Acquired data from HILT/HAIT

***** Bhole Correction *****

Effective Tool Standoff computed. Borehole diameter and mud res. taken as input (see GCSE and GRSE parameters)

Tool is run in ECCENTERED mode with a tool stand-off of 1.00 IN. Bit Size is 8.50 IN.

***** Input Selections to AIT Answer Product processing *****

Caliper (GCSE): HCAL Mud Resistivity (GRSE): AHMF Temperature (GTSE): LINEAR_ESTIMATE Porosity (FPHI): DPHZ

***** Other parameters used by AIT-H Answer Product processing *****

Surface Hole Temperature (SHT)	68.000 DEGF	Bottom Temperature (BHT)	70.600 DEGF
Total Depth (TD)	1356.000 FT		
Form Factor Exponent (FEXP)	2.000	Form Factor Numerator (FNUM)	1.000
Mud Filtrate Sample Resistivity (RMFS)	2.420 OHMM	Mud Filtrate Sample Temperature (MFST)	71.000 DEGF
Resitivity Connate Water (RW)	1.000 OHMM		

***** AIT-H Answer Product processing control parameters *****

Playback Mode: NORMAL

Parameters

DLIS Name	Description	Value	
BHFL	Borehole Fluid Type	WATER	
BHS	Bore Hole Status	OPEN	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	400.00	PPM
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	9.00	LB/G
DHC	Density Hole Correction	BS	
DO	Depth Offset	0.0	FT

DORL	**Depth Offset Repeat Analysis**	**1.8**	**FT**
FD	**Fluid Density**	**1**	**G/C3**
FSAL	**Formation Salinity**	**-50000**	**PPM**
FSCO	**Formation Salinity Correction Option**	**NO**	
GCSE	**Generalized Caliper Selection**	**HCAL**	
GDEV	**Average Angular Deviation of Borehole from Normal**	**0**	**DEG**
GGRD	***Geothermal Gradient***	**0.01**	**DF/F**
HSCM	**HILT Speed Correction Mode**	**TSCD_SPEED_CORRECTION**	
HSCO	**Hole Size Correction Option**	**YES**	
HSTI	**STI Uses HILT Acceleration**	**YES**	
MATR	**Rock Matrix Type**	**SANDSTONE**	
MCCO	**Mud Cake Correction Option**	**NO**	
MCOR	**Mud Correction**	**NATU**	
MDEN	**Matrix Density**	**2.65**	**G/C3**
MST	**Mud Sample Temperature**	**82.00**	**DEGF**
MWCO	**Mud Weight Correction Option**	**NO**	
NMT	**HILT Nuclear Mud Type**	**NOBARITE**	
NPRM	**HRDD Processing Mode**	**StdRes**	
NSAR	**HRDD Depth Sampling Rate**	**1**	**IN**
PP	**Playback Processing**	**NORMAL**	
PTCO	**Pressure/Temperature Correction Option**	**NO**	
RMFS	**Resistivity of Mud Filtrate Sample**	**2.4200**	**OHMM**
SDAT	**Standoff Data Source**	**SOCN**	
SHT	**Surface Hole Temperature**	**68**	**DEGF**
SOCN	**Standoff Distance**	**0.125**	**IN**
SOCO	**Standoff Correction Option**	**NO**	
SPNV	**SP Next Value**	**-60**	**MV**
TDL	**Total Depth - Logger**	**1356.00**	**FT**

Format: poro_REP   Vertical Scale: 5" per 100'   Graphics File Created: 30-Sep-1998 22:36

OP System Version: 8C1-205

MCM

HILTB-DTB	**APCW-98Q1**	**EDAC**	**8C1-205**
TCC-B	**APCW-98Q1**		

Speed Corrected - Depth Matched LOG

Input DLIS Files

DEFAULT	**HILTB .007**	**FN:4**	**FIELD**	**30-Sep-1998 16:27**	**1368.0 FT**	**362.0 FT**
DEFAULT	**HILTB .005**	**FN:3**	**FIELD**	**30-Sep-1998 15:24**	**1344.0 FT**	**723.6 FT**

Output DLIS Files

DEFAULT	**HILTB .047**	**FN:40**	**FIELD**	**30-Sep-1998 22:36**

Calibration and Check Summary

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase
Master: Aug 06 11:26 1998   Before: Sep 30 15:14 1998

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Thru Cal Magnitude - 0	0	0.6200	0.6280	N/A	N/A	N/A	V
Thru Cal Magnitude - 1	0	1.271	1.287	N/A	N/A	N/A	V
Thru Cal Magnitude - 2	0	0.6317	0.6397	N/A	N/A	N/A	V
Thru Cal Magnitude - 3	0	0.7134	0.7231	N/A	N/A	N/A	V
Thru Cal Magnitude - 4	0	1.332	1.349	N/A	N/A	N/A	V
Thru Cal Magnitude - 5	0	1.939	1.964	N/A	N/A	N/A	V
Thru Cal Magnitude - 6	0	1.942	1.968	N/A	N/A	N/A	V
Thru Cal Magnitude - 7	0	1.365	1.390	N/A	N/A	N/A	V
Phase - 0	0	64.83	65.59	N/A	N/A	N/A	DEG
Phase - 1	0	63.70	64.48	N/A	N/A	N/A	DEG
Phase - 2	0	59.91	60.73	N/A	N/A	N/A	DEG
Phase - 3	0	59.12	59.95	N/A	N/A	N/A	DEG
Phase - 4	0	52.74	53.65	N/A	N/A	N/A	DEG
Phase - 5	0	50.77	51.73	N/A	N/A	N/A	DEG
Phase - 6	0	50.72	51.68	N/A	N/A	N/A	DEG
Phase - 7	0	46.65	48.08	N/A	N/A	N/A	DEG

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Electronics Calibration Check - Auxiliary
Master: Aug 06 11:26 1998   Before: Sep 30 15:14 1998

AIT-H SPA Plus	990.5	989.1	990.8	N/A	N/A	N/A	MV
AIT-H SPA Zero	0	0.1113	0.1029	N/A	N/A	N/A	MV
AIT-H Temperature Plus	0.9150	0.9163	0.9179	N/A	N/A	N/A	V
AIT-H Temperature Zero	0	0.0001137	0.00009922	N/A	N/A	N/A	V

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Test Loop Gain Correction
Master: Aug 06 11:26 1998

Test Loop Gain Magnitude - 0	0	1.010	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 1	0	1.011	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 2	0	1.013	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 3	0	1.010	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 4	0	0.9918	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 5	0	1.004	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 6	0	1.013	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude - 7	0	1.012	N/A	N/A	N/A	N/A	V
Phase - 0	0	0.4095	N/A	N/A	N/A	N/A	DEG
Phase - 1	0	0.4601	N/A	N/A	N/A	N/A	DEG
Phase - 2	0	-0.2755	N/A	N/A	N/A	N/A	DEG
Phase - 3	0	-0.1217	N/A	N/A	N/A	N/A	DEG
Phase - 4	0	-0.2547	N/A	N/A	N/A	N/A	DEG
Phase - 5	0	-0.5340	N/A	N/A	N/A	N/A	DEG
Phase - 6	0	-0.1695	N/A	N/A	N/A	N/A	DEG
Phase - 7	0	-0.7410	N/A	N/A	N/A	N/A	DEG

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Sonde Error Correction
Master: Aug 06 11:26 1998

R Sonde Error Correction - 0	0	-17.40	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 1	0	152.5	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 2	0	102.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 3	0	61.35	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 4	0	23.67	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 5	0	12.52	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 6	0	8.430	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction - 7	0	-1.807	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 0	0	269.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 1	0	87.25	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 2	0	-50.74	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 3	0	22.51	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 4	0	-22.75	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 5	0	-13.87	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 6	0	4.084	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 7	0	-1.223	N/A	N/A	N/A	N/A	MM/M

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Mud Gain Correction
Master: Aug 06 11:26 1998

Coarse - Mag, Real, Imag - 0	0	0.8499	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 1	0	0.8500	N/A	N/A	N/A	N/A	
Coarse - Mag, Real, Imag - 2	0	0.8500	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 0	0	0.8510	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 1	0	0.8510	N/A	N/A	N/A	N/A	
Fine - Mag, Real, Imag - 2	0	0.8510	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Stab Measurement Summary
Before: Sep 29 12:07 1998

BS Window Ratio	1.031	N/A	1.016	N/A	N/A	N/A	
BS Window Sum	14670	N/A	14760	N/A	N/A	N/A	CPS
SS Window Ratio	0.5027	N/A	0.5073	N/A	N/A	N/A	
SS Window Sum	11910	N/A	11870	N/A	N/A	N/A	CPS
LS Window Ratio	0.2844	N/A	0.2826	N/A	N/A	N/A	
LS Window Sum	1206	N/A	1199	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations
Before: Sep 29 12:07 1998

BS PM High Voltage (Command)	1620	N/A	1625	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1937	N/A	1954	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1985	N/A	1977	N/A	N/A	N/A	V

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Crystal Quality Resolutions Calibration
Before: Sep 29 12:07 1998

BS Crystal Resolution	12.17	N/A	12.36	N/A	N/A	N/A	%
SS Crystal Resolution	11.68	N/A	11.90	N/A	N/A	N/A	%
LS Crystal Resolution	10.73	N/A	10.98	N/A	N/A	N/A	%

High resolution Integrated Logging Tool-CTS Wellsite Calibration - MCFL Calibration
Before: Sep 29 12:08 1998

Raw B0 Resistivity	3875	N/A	3845	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3807	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3818	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool-CTS Wellsite Calibration - HILT Caliper Calibration
Before: Sep 29 12:04 1998

HILT Caliper Zero Measurement	8.000	N/A	7.872	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.12	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Detector Calibration
Before: Sep 29 12:04 1998

Gamma Ray Background	30.00	N/A	31.52	N/A	N/A	N/A	GAPI
Gamma Ray (Jig - Bkg)	154.1	N/A	154.1	N/A	N/A	14.01	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Zero Measurement
Master. Sep 09 22:02 1993 Before. Sep 29 12:05 1998

CNTC Background	26.01	26.01	26.74	N/A	N/A	3.902	CPS
CFTC Background	28.05	28.05	27.12	N/A	N/A	4.207	CPS

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Accelerometer Calibration
Before: Sep 30 15:15 1998

Z-Axis Acceleration	32.19	N/A	32.19	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 :

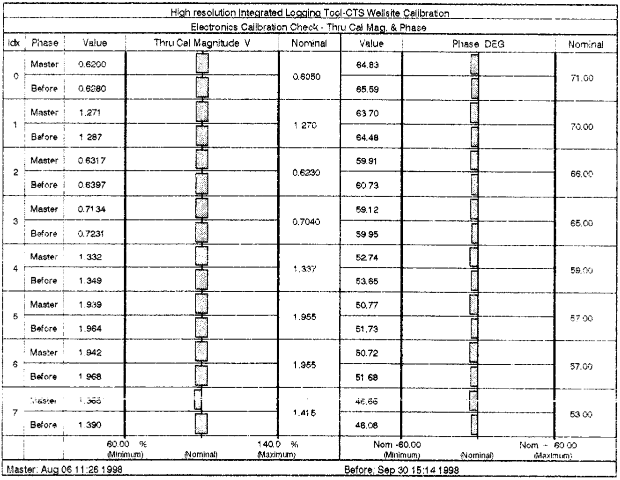
NCT-B Water Temperature	90.0	DEGF.
Thermal Housing Size	3.361	IN.

High resolution Integrated Logging Tool-CTS / Equipment Identification

Primary Equipment:

Array Induction Tool - H	AIT - H	
Array Induction Sonde	AHIS - BA	
HILT high-Resolution Mechanical Sonde	HRMS - B	923
HILT Rxo Gamma-ray Device	HRGD -	723
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-CTS Wellsite Calibration

Electronics Calibration Check - Thru Cal Mag. & Phase

Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6200		0.6050	64.83		71.00
	Before	0.6280			65.59		
1	Master	1.271		1.270	63.70		70.00
	Before	1.287			64.48		
2	Master	0.6317		0.6230	59.91		66.00
	Before	0.6397			60.73		
3	Master	0.7134		0.7040	59.12		65.00
	Before	0.7231			59.95		
4	Master	1.332		1.337	52.74		59.00
	Before	1.349			53.65		
5	Master	1.939		1.955	50.77		57.00
	Before	1.964			51.73		
6	Master	1.942		1.955	50.72		57.00
	Before	1.968			51.68		
7	Master	1.365		1.415	46.66		53.00
	Before	1.390			48.08		

Master: Aug 06 11:26 1998 Before: Sep 30 15:14 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Electronics Calibration Check - Auxiliary

Phase	AIT-H SPA Plus MV	Value	Phase	AIT-H SPA Zero MV	Value
Master		989.1	Master		0.1113
Before		990.8	Before		0.1029
	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		0.9163	Master		0.0001137
Before		0.9179	Before		9.922E-00
	0.8700 (Minimum) 0.9150 (Nominal) 0.9600 (Maximum)			-0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Master: Aug 06 11:26 1998 Before: Sep 30 15:14 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Test Loop Gain Correction

Idx	Value	Test Loop Gain Magnitude V	Value	Phase DEG
0	1.010		0.4095	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
1	1.011		0.4601	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
2	1.013		-0.2755	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
3	1.010		-0.1317	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
4	0.9918		-0.2547	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
5	1.004		-0.5340	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
6	1.013		-0.1695	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
7	1.012		-0.7410	
		0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)

Master: Aug 06 11:26 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Sonde Error Correction

Idx	Value	R Sonde Error Correction MM/M	Value	X Sonde Error Correction MM/M
0	-17.40		269.7	
		-231.0 (Minimum) -56.00 (Nominal) 119.0 (Maximum)		-2250 (Minimum) 0 (Nominal) 2250 (Maximum)
1	152.5		87.25	
		114.0 (Minimum) 159.0 (Nominal) 204.0 (Maximum)		-625.0 (Minimum) 0 (Nominal) 625.0 (Maximum)
2	102.4		-50.74	
		66.00 (Minimum) 111.0 (Nominal) 156.0 (Maximum)		-350.0 (Minimum) 0 (Nominal) 350.0 (Maximum)
3	61.35		22.51	
		39.00 (Minimum) 64.00 (Nominal) 89.00 (Maximum)		-250.0 (Minimum) 0 (Nominal) 250.0 (Maximum)
4	23.67		-22.75	
		15.00 (Minimum) 25.00 (Nominal) 35.00 (Maximum)		-63.00 (Minimum) 0 (Nominal) 63.00 (Maximum)
5	12.52		-13.87	
		4.000 (Minimum) 14.00 (Nominal) 24.00 (Maximum)		-50.00 (Minimum) 0 (Nominal) 50.00 (Maximum)
6	8.430		4.084	
		5.000 (Minimum) 10.00 (Nominal) 15.00 (Maximum)		-30.00 (Minimum) 0 (Nominal) 30.00 (Maximum)
7	-1.607		-1.223	
		-5.000 (Minimum) 0 (Nominal) 5.000 (Maximum)		-30.00 (Minimum) 0 (Nominal) 30.00 (Maximum)

Master: Aug 06 11:26 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Mud Gain Correction

Idx	Value	Coarse - Mag, Real, Imag (Minimum)	Coarse (Nominal)	Coarse (Maximum)	Value	Fine - Mag, Real, Imag (Minimum)	Fine (Nominal)	Fine (Maximum)
0	0.8499	0.6000	1.000	1.400	0.8510	0.6000	1.000	1.400
1	0.8500	0.6000	1.000	1.400	0.8510	0.6000	1.000	1.400
2	0.8500	0.6000	1.000	1.400	0.8510	0.6000	1.000	1.400

Master: Aug 06 11:26 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Stab Measurement Summary

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	BS Window Ratio	0.9798	1.031	1.083	1.016
Before	SS Window Ratio	0.4775	0.5027	0.5278	0.5073
Before	LS Window Ratio	0.2702	0.2844	0.2986	0.2826
Before	BS Window Sum CPS	13940	14670	15410	14760
Before	SS Window Sum CPS	11310	11910	12500	11870
Before	LS Window Sum CPS	1146	1206	1267	1199

Before: Sep 29 12:07 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Photo-multiplier High Voltages Calibrations

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	BS PM High Voltage (Command) V	1520	1620	1720	1625
Before	SS PM High Voltage (Command) V	1837	1937	2037	1954
Before	LS PM High Voltage (Command) V	1885	1965	2095	1977

Before: Sep 29 12:07 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	BS Crystal Resolution %	11.17	12.17	13.17	12.36
Before	SS Crystal Resolution %	10.68	11.68	12.68	11.90
Before	LS Crystal Resolution %	9.729	10.73	11.73	10.98

Before: Sep 29 12:07 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

MCFL Calibration

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	Raw B0 Resistivity OHMM	3565	3875	4185	3845
Before	Raw B1 Resistivity OHMM	3524	3830	4136	3807
Before	Raw B2 Resistivity OHMM	3524	3830	4136	3816

Before: Sep 29 12:08 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

HILT Caliper Calibration

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	HILT Caliper Zero Measurement IN	6.000	8.000	10.00	7.872
Before	HILT Caliper Plus Measurement IN	9.000	12.00	15.00	12.12

Before: Sep 29 12:04 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Detector Calibration

Phase	Measurement	Minimum	Nominal	Maximum	Value
Before	Gamma Ray Background GAPI	0	30.00	120.0	31.52
Before	Gamma Ray (Jig - Bkg) GAPI	140.1	154.1	168.1	154.1
Before	Gamma Ray (Calibrated) GAPI	150.0	165.0	180.0	165.0

Before: Sep 29 12:04 1998

High resolution Integrated Logging Tool-CTS Wellsite Calibration					
Zero Measurement					
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		26.01	Master		28.05
Before		26.74	Before		27.12
	5.000 (Minimum) 26.01 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 28.05 (Nominal) 40.00 (Maximum)	
Master: Sep 09 22:02 1998			Before: Sep 29 12:05 1998		

High resolution Integrated Logging Tool-CTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration F/S2	Value
Before		32.19
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	
Before: Sep 30 15:15 1998		

COMPANY: **SOFREGAZ US INC.**

WELL: **Jefferson Gas LLC "Clayton" well #1**

FIELD: **Wildcat**

COUNTY: **Linn**

STATE: **Oregon**

BOTTOM LOG INTERVAL	1348 F
SCHLUMBERGER DEPTH	1356 F
DEPTH DRILLER	1356 F
KELLY BUSHING	219 F
DRILL FLOOR	
GROUND LEVEL	207 F

Schlumberger

Platform Express
Compensated Neutron
Three Detector Density