COMPANY: Enerfin Resources Northwest

WELL: CC 41-06-65 (Fishwhack) RD #1

FIELD: Mist

COUNTY: Columbia **STATE:** Oregon

COUNTY: Columbia
Field: Mist
Location: 501.46' S 47 deg 3 min 9 sec E
Well: CC 41-06-65 (Fishwhack) RD #
Company: Enerfin Resources Northwest

2" = 100'
Schlumberger

PLATFORM EXPRESS
Array Induction/Sonic
Neutron/Density/SP

LOCATION

501.46' S 47 deg 3 min 9 sec E
from the SW corner of Section 32 T7N R5W

Elev.:	K.B.	919 F
	G.L.	909 F
	D.F.	

Permanent Datum:	Ground Level	Elev.:	909 F
Log Measured From:	Kelly Bushing	10.0 F	above Perm. Datum
Drilling Measured From:	Kelly Bushing		

API Serial No.	SECTION	TOWNSHIP	RANGE
36-009-00340	6	6N	5W

Logging Date		24 ~~17~~-DEC-1998				
Run Number		1				
Depth Driller		2970 F				
Schlumberger Depth		2950 F				
Bottom Log Interval		2953 F				
Top Log Interval		531 F				
Casing Driller Size @ Depth		7.000 IN	@ 531 F		@	
Casing Schlumberger		530.5 F				
Bit Size		6.750 IN				
Type Fluid In Hole		Cypan				
MUD Density	Viscosity	9.3 LB/G	38 S			
MUD Fluid Loss	PH	4.9 C3	9			
MUD Source Of Sample		Flowline				
RM @ Measured Temperature		3.620 OHMM	@ 45 DEGF		@	
RMF @ Measured Temperature		3.810 OHMM	@ 39 DEGF		@	
RMC @ Measured Temperature		3.510 OHMM	@ 39 DEGF		@	
Source RMF	RMC	Press	Press			
RM @ MRT	RMF @ MRT	2.264 @ 76	2.107 @ 76	@		@
Maximum Recorded Temperatures		76 DEGF				
Circulation Stopped	Time	24-DEC-1998	11:00			
Logger On Bottom	Time	17-DEC-1998				
Unit Number	Location	3152	Sacramento			
Recorded By		Clayton Campbell				
Witnessed By		Rob Lucas				

Run 1

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	
MUD Fluid Loss	PH	
MUD 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		

@	@	@	@	@		Run 2
@						
@						Run 3
@	@	@	@	@		
@						Run 4

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: InterACT	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

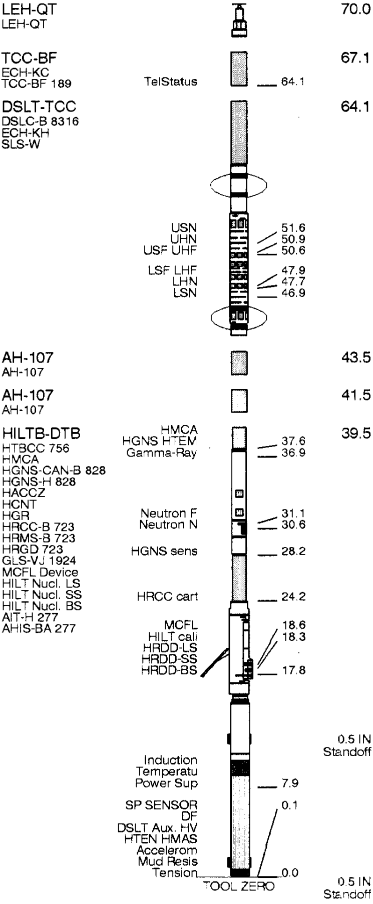
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Rig: Taylor 7	
0.5 inch standoffs used on Array Induction	
2 centralizers used on sonic	

RUN 1		RUN 2	
SERVICE ORDER #:	6004669	SERVICE ORDER #:	
PROGRAM VERSION:	8C1-205	PROGRAM VERSION:	
FLUID LEVEL:		FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1	RUN 2
SURFACE EQUIPMENT GSR-U/Y CNB-AB WITM (CTS)-A	
DOWNHOLE EQUIPMENT	



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

Input DLIS Files

DEFAULT	HILTB .031	FN:1	FIELD	24-Dec-1998 17:45	2952.0 FT	332.0 FT

Output DLIS Files

DEFAULT	HILTB .033	FN:25	FIELD	24-Dec-1998 18:04	2952.0 FT	500.0 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 611.67 F3

Cement Volume = 502.51 F3 (assuming 2.88 IN casing O.D.)

Computed from 2952.0 FT to 531.0 FT using data channel(s) HCAL

OP System Version: 8C1-205

MCM

HILTB-DTB	APCW-98Q2	DSLT-TCC	APCW-98Q2
TCC-BF	APCW-98Q2		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
SPNV	-20 MV	-70 MV	2739.0 18:07:41
	-15 MV	-20 MV	2543.0 18:08:11
	-10 MV	-15 MV	2021.0 18:09:03
	-15 MV	-10 MV	1915.0 18:09:28
	-15 MV	-15 MV	601.0 18:11:42

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

Env.Corr.Thermal Neutron Porosity (TNPH)
1.2 (V/V) 0.6

Env.Corr.Thermal Neutron Porosity (TNPH)
0.6 (V/V) 0

Crossover

Micro Normal Resistivity (HMNO) (OHMM)
0 30

Tension (TENS)
10000 (LBF) 0

RWA (RWA)
0 (OHMM) 3

Micro Inverse Resistivity (HMIN) (OHMM)
0 30

Sonic Porosity (SPHI)
0.6 (V/V) 0

Caliper (HCAL)
4 (IN) 14

Resistivity standoff (RSOZ)
2 (IN) 0

AIT-H 90 Inch Investigation (AHT90)
0 (OHMM) 20

Formation Pe (PEFZ)
-1 (----) 9

Bit Size (BS)
4 (IN) 14

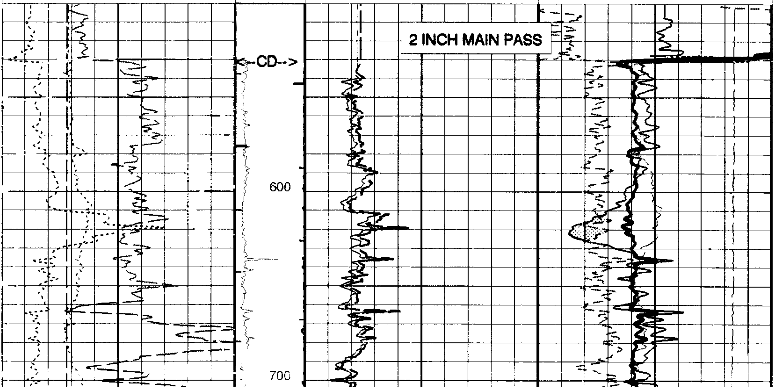
Std Res Density Porosity (DPHZ)
1.2 (V/V) 0.6

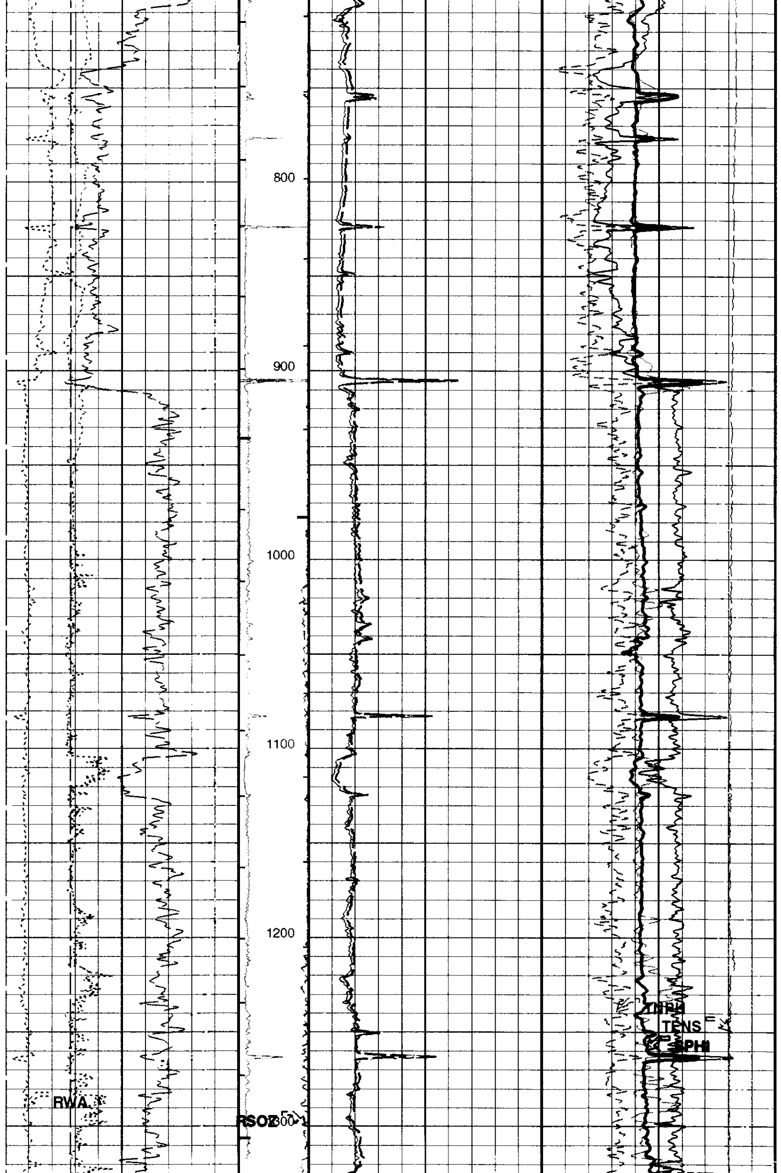
Gamma Ray (GR)
0 (GAPI) 150

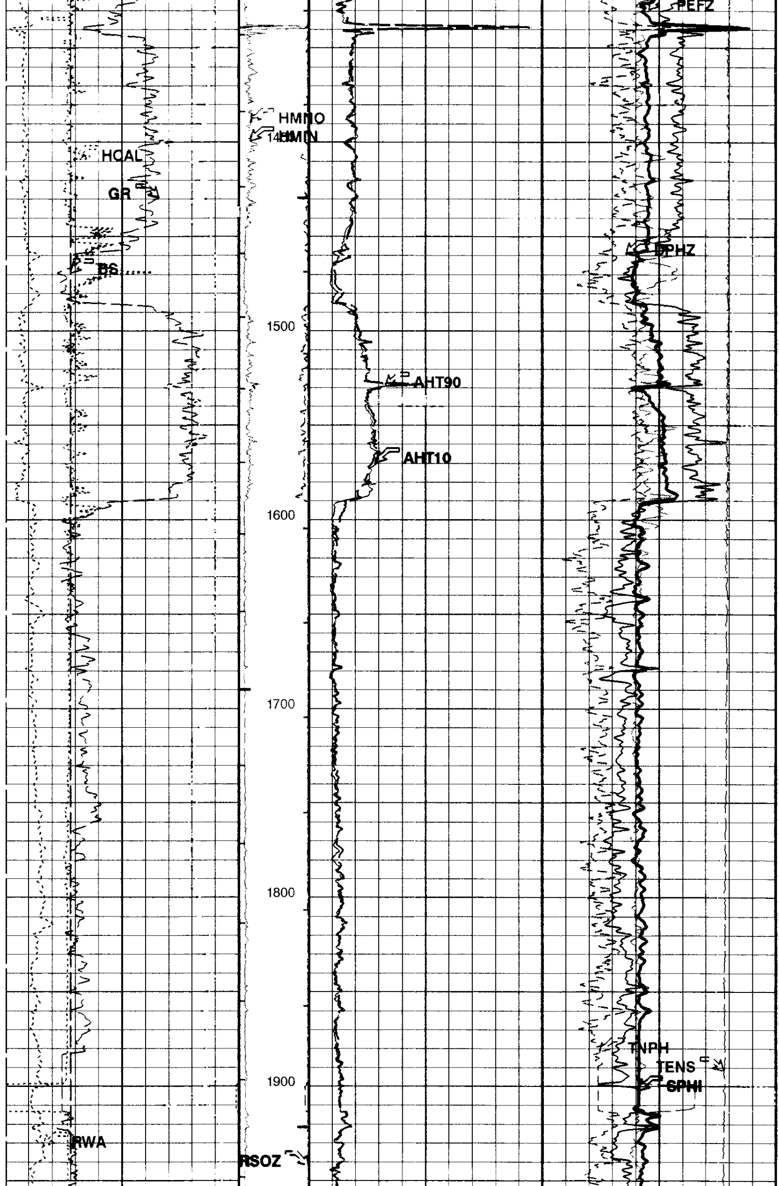
Perm Indicator

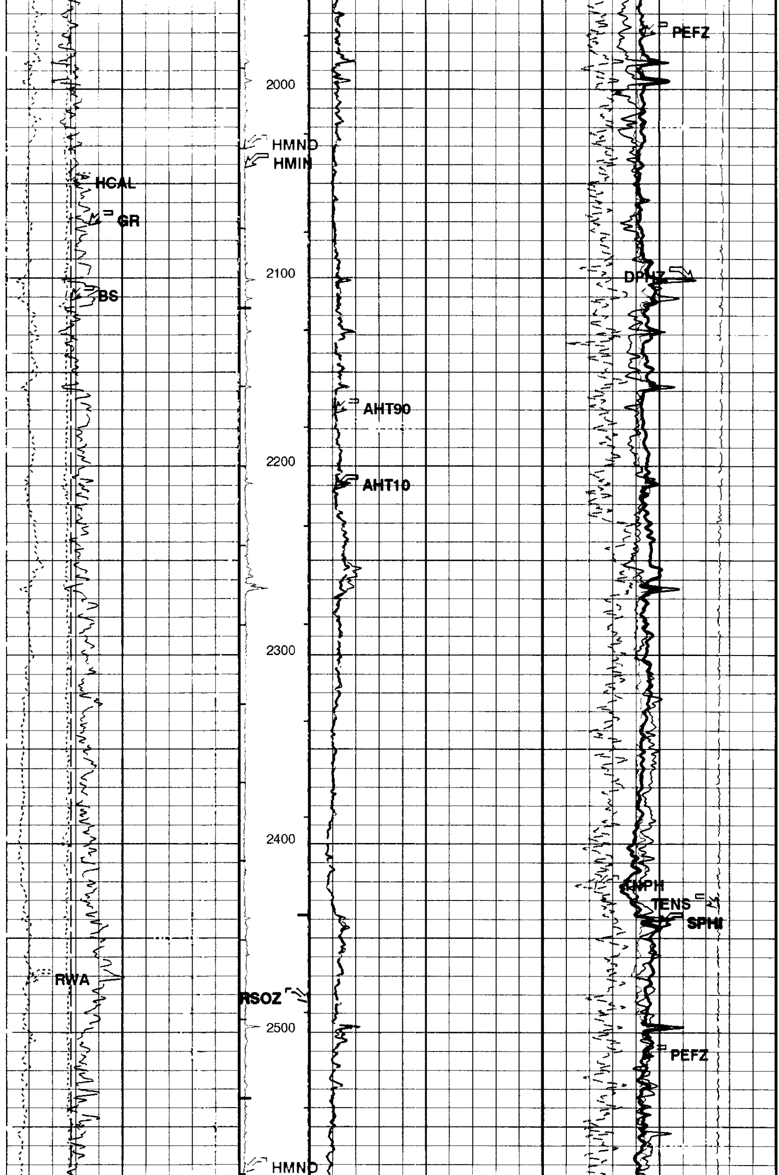
AIT-H 10 Inch Investigation (AHT10)
0 (OHMM) 20

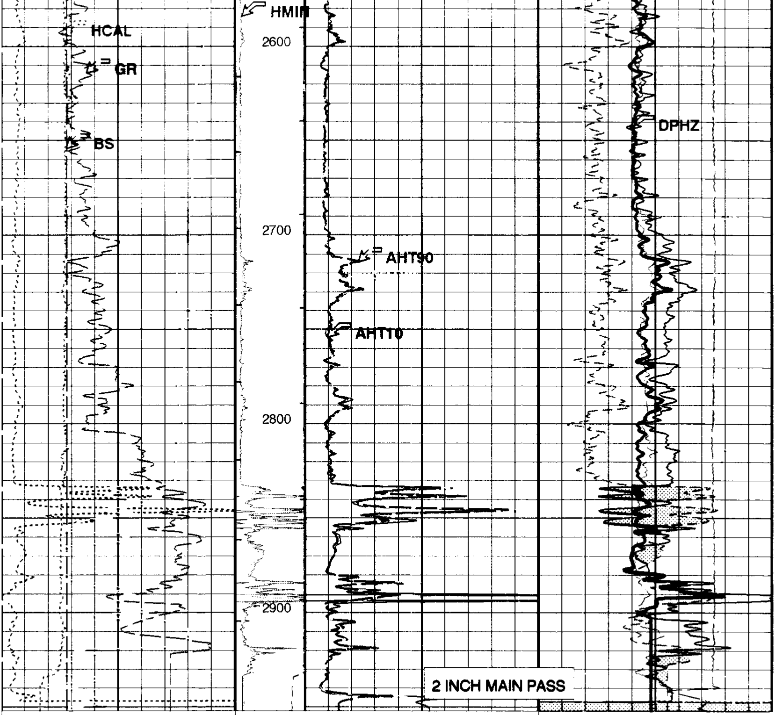
Std Res Density Porosity (DPHZ)
0.6 (V/V) 0











Gamma Ray (GR)
0 (GAPI) 150

Bit Size (BS)
4 (IN) 14

Caliper (HCAL)
4 (IN) 14

RWA (RWA)
0 (OHMM) 3

Perm Indicator

Resistivity standoff (RSOZ)
2 (IN) 0

Micro Inverse Resistivity (HMIN) (OHMM)
0 30

Micro Normal Resistivity (HMNO) (OHMM)
0 30

AIT-H 10 Inch Investigation (AHT10)
0 (OHMM) 20

AIT-H 90 Inch Investigation (AHT90)
0 (OHMM) 20

Std Res Density Porosity (DPHZ)
0.6 (V/V) 0

Std Res Density Porosity (DPHZ)
1.2 (V/V) 0.6

Formation Pe (PEFZ)
-1 (----) 9

Sonic Porosity (SPHI)
0.6 (V/V) 0

Tension (TENS)
10000 (LBF) 0

Crossover

Env.Corr.Thermal Neutron Porosity (TNPH)
0.6 (V/V) 0

Env.Corr.Thermal Neutron Porosity
(TNPH)
1.2 (V/V) 0.6

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 # 277 (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 0.50 IN. Bit Size is 6.75 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/SAIT Answer Product processing *****

Surface Hole Temperature (SHT)	48.000 DEGF	Bottom Temperature (BHT)	78.000 DEGF
Total Depth (TD)	2970.000 FT		
Form Factor Exponent (FEXP)	2.000	Form Factor Numerator (FNUM)	1.000
Mud Filtrate Sample Resistivity (RMFS)	3.810 OHMM	Mud Filtrate Sample Temperature (MFST)	39.000 DEGF
Resitivity Connate Water (RW)	1.000 OHMM		

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

Playback Mode: NORMAL

Parameters

DLIS Name	Description	Value	
AHBHM	AIT-H Bhole Correction Mode	2_ComputeStandoff	
AHBLM	AIT-H Basic Logs Mode	6_One_Two_and_Four	
AHCDE	AIT-H Casing Detection Enable	Yes	
AHCEN	AIT-H Tool Centering Flag (in Borehole)	Eccentered	
AHCSED	AIT-H Casing Shoe Estimated Depth	-50000	FT
AHMRF	AIT-H Mud Resistivity Factor	1	
AHSTA	AIT-H Tool Standoff	0.5	IN
ARTS	AIT Rt Selection (for ALLRES computation)	13_AHT90	
BHFL	Borehole Fluid Type	WATER	
BHS	Bore Hole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	78	DEGF
BS	Bit Size	6.750	IN
BSAL	Borehole Salinity	600.00	PPM
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
CDTS	C-Delta-T Shale	100	US/F
CWEI	Casing Weight	0.00	LB/F
DFD	Drilling Fluid Density	9.30	LB/G
DHC	Density Hole Correction	BS	
DO	Depth Offset	0.0	FT
DTF	Delta-T Fluid	189	US/F
DTM	Delta-T Matrix	56	US/F
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
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
GRSE	Generalized Mud Resistivity Selection	AITH_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
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
MPOF	MCFL Processing Operation Mode	ON	

MST	Mud Sample Temperature	45.00	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	3.8100	OHMM
RTCO	RTCO - Rt Invasion Correction	YES	
RW	Resistivity of Connate Water	1.0000	OHMM
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	48	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPNV	SP Next Value	-70	MV
SPSO	Sonic Porosity Source	DT	
TD	Total Depth	2970	FT
TDL	Total Depth - Logger	2950.00	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: S2 Vertical Scale: 2" per 100' Graphics File Created: 24-Dec-1998 18:04

OP System Version: 8C1-205

MCM

HILTB-DTB	APCW-98Q2	DSLT-TCC	APCW-98Q2
TCC-BF	APCW-98Q2		

Speed Corrected - Depth Matched LOG

Input DLIS Files

DEFAULT	HILTB .031	FN:1	FIELD	24-Dec-1998 17:45	2952.0 FT	332.0 FT

Output DLIS Files

DEFAULT	HILTB .033	FN:25	FIELD	24-Dec-1998 18:04

COMPANY:	**Enerfin Resources Northwest**
WELL:	**CC 41-06-65 (Fishwhack) RD #1**
FIELD:	**Mist**
COUNTY:	**Columbia**
STATE:	**Oregon**

BOTTOM LOG INTERVAL	2953 F
SCHLUMBERGER DEPTH	2950 F
DEPTH DRILLER	2970 F
KELLY BUSHING	919 F
DRILL FLOOR	
GROUND LEVEL	909 F

2" = 100'

Schlumberger

PLATFORM EXPRESS
Array Induction/Sonic
Neutron/Density/SP