

Input DLIS Files

DEFAULT MERGE_MERGE_004GUP FN:1 PRODUCER 06-Jan-2005 13:42 1022.5 FT 661.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006PUP FN:4 PRODUCER 06-Jan-2005 14:02 1023.0 FT 783.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 67.19 F3
Cement Volume = 67.19 F3 (assuming 0.00 IN casing O.D.)

Computed from 1018.0 FT to 784.0 FT using data channel(s) HCAL

OP System Version: 12C0-301

MCM

HILTB-CTS 12C0-301

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

MUDCAKE

From DCAL to RHT2

AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000

CROSSOVER From DPHZ to NPHI

Differential Caliper (DCAL) (IN) 20

AIT-H 60 Inch Investigation (AHT60) 0.2 (OHMM) 2000

Washout From LHT3 to DCAL

Computed Micro Normal (HMNO) (OHMM)

AIT-H 30 Inch Investigation (AHT30) 0.2 (OHMM) 2000

Std. Res. Formation Pe (PEF2) (---)

Density Correction (HDRA) (G/C3) 0.2

Computed Micro Inverse (HMIN) (OHMM)

AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000

Neutron Porosity (NPHI) (V/V) 0

Computed Micro Perm From HMIN to HMNO

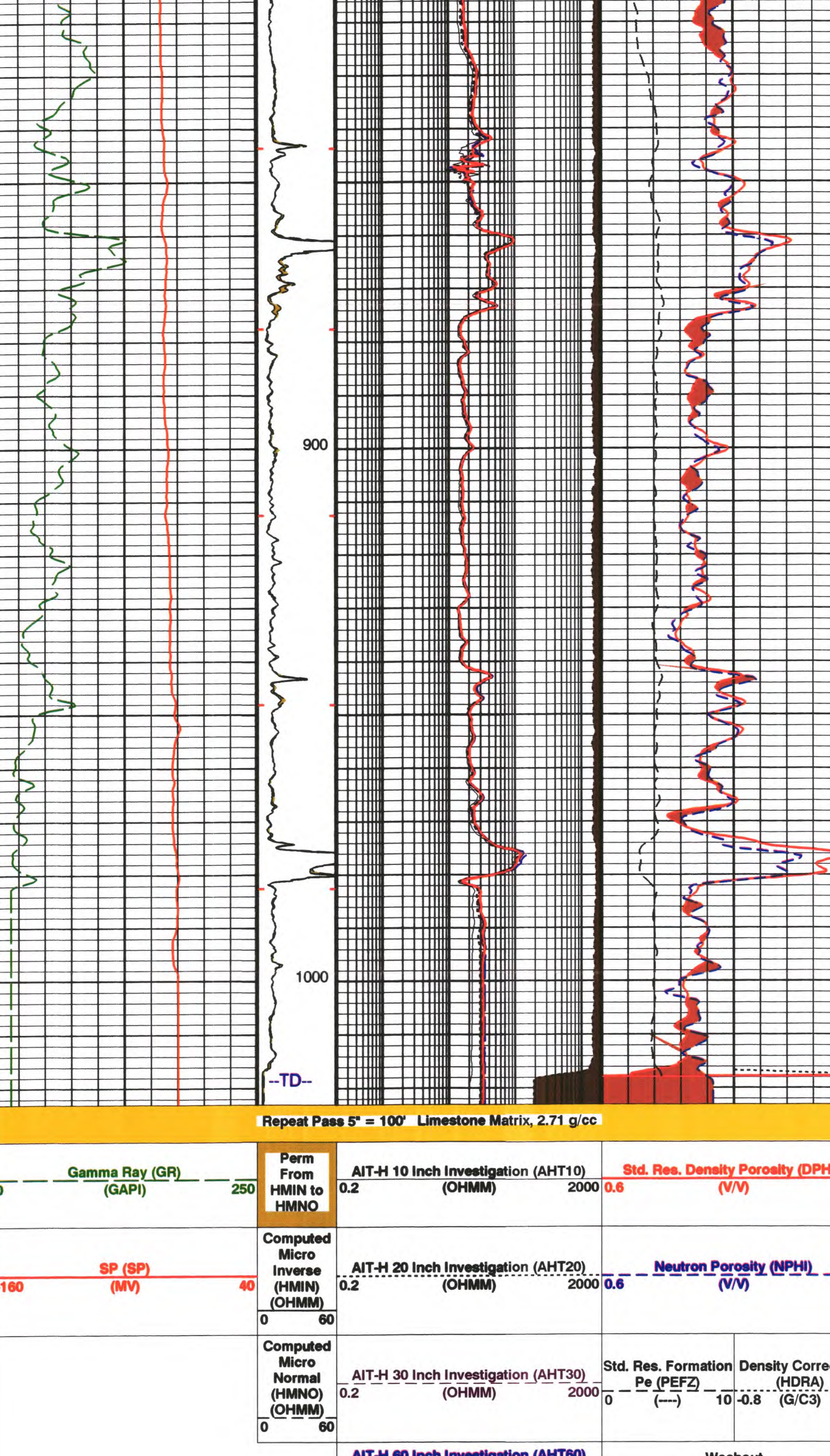
AIT-H 10 Inch Investigation (AHT10) 0.2 (OHMM) 2000

Std. Res. Density Porosity (DPH2) (V/V) 0

SP (SP) (MV) 40

Gamma Ray (GR) (GAPI) 250

Repeat Pass 5" = 100' Limestone Matrix. 2.71 g/cc



Repeat Pass 5" = 100' Limestone Matrix. 2.71 g/cc

Gamma Ray (GR) (GAPI) 250

SP (SP) (MV) 40

Computed Micro Inverse (HMIN) (OHMM)

AIT-H 20 Inch Investigation (AHT20) 0.2 (OHMM) 2000

Neutron Porosity (NPHI) (V/V) 0

Computed Micro Normal (HMNO) (OHMM)

AIT-H 30 Inch Investigation (AHT30) 0.2 (OHMM) 2000

Std. Res. Formation Pe (PEF2) (---)

Density Correction (HDRA) (G/C3) 0.2

AIT-H 60 Inch Investigation (AHT60) 0.2 (OHMM) 2000

Washout From LHT3 to DCAL

Differential Caliper (DCAL) (IN) 20

AIT-H 90 Inch Investigation (AHT90) 0.2 (OHMM) 2000

CROSSOVER From DPHZ to NPHI

MUDCAKE From DCAL to RHT2

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 # 215 (AHTNO)

...Acquired data from HILTB/HAIT

***** Borehole Correction *****

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

Tool is run in ECCENTERED mode with a tool stand-off of 0.13 IN. Bit Size is 7.88 IN.

***** Input Selections to AIT-H Answer Product Processing *****

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

***** Other Parameters used by AIT-H Answer Product Processing *****

Surface Hole Temperature (SHT) 68.000 DEGF Bottom Temperature (BHT) 80.000 DEGF

Total Depth (TD) 1018.000 FT

Form Factor Exponent (FEXP) 2.000 Form Factor Numerator (FNUM) 1.000

Mud Filtrate Sample Resistivity (RMFS) 2.570 OHMM Mud Filtrate Sample Temperature (MFST) 79.000 DEGF

Resistivity Connate Water (RW) 1.000 OHMM

***** AIT-H Answer Product Processing Control Parameters *****

Playback Mode: RECOMPUTE

(AHBEC): Yes (AHEBL): Yes (AHERP): Yes

(AHBMN): 2_ComputeStandoff (AHBLM): 6_One_Two_and_Four (AHRPM): 1_Two

Parameters

DLIS Name	Description	Value
HILTB-CTS: High resolution Integrated Logging Tool-CTS		
AHAPL	Array Induction Answer Product Level/Depth Log/View only	2_ComputeStandoff
AHBHM	Array Induction Borehole Correction Mode	2_BholeCorr_BasicLog
AHBHV	Array Induction Borehole Correction Code Version Number	880
AHBLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
AHBLV	Array Induction Basic Logs Code Version Number	880
AHCDE	Array Induction Enable Borehole Correction	Yes
AHCEN	Array Induction Tool Centering Flag (in Borehole)	Eccentered
AHIDTM	Array Induction Desired Tool Mode	0x00_Log_000
AHICAC	Array Induction Enable Borehole Correction	Yes
AHEBL	Array Induction Enable Basic Logs	Yes
AHERP	Array Induction Enable Radial Processing	Yes
AHERSV	Array Induction Enable Sonde Error Temperature	Yes
AHISV	Array Induction Response Set Version for Four ft Resolution	40.70-24.21
AHISV	Array Induction Select Akima Interpolation Gating	On
AHLNV	Array Induction Log Not Valid Flag Log_Valid-No_Default_Parameters	0.125
AHMRD	Array Induction Mud Resistivity Calibration Depth	1
AHMRP	Array Induction Mud Resistivity Factor	1
AHORSV	Array Induction Response Set Version for One ft Resolution	40.70-24.21
AHRTM	Array Induction Radial Profiling Code Version Number	1
AHRPM	Array Induction Radial Parameterization Code Version Number	223
AHRPV	Array Induction Tool Standoff	0.125
AHSTA	Array Induction Tool Serial Number	215
AHTNO	Array Induction Tool Number	215
AHTRSV	Array Induction Response Set Version for Two ft Resolution	40.70-24.21
AHTSE	Array Induction Temperature Selection (Sonde Error Correction)	Internal
AHTTY	Array Induction Tool Type (of acquired data)	HAIT
AHULV	Array Induction User Level Control	Normal
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	80
BSCCO	Borehole Salinity Correction Option	NO
COCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	HIRS
EXISCCL	External Shale Indicator Clean Value	20
EXSISH	External Shale Indicator Shale Value	150
FD	Fluid Density	1
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1
FPHI	Form Factor Porosity Source	PXND_HILT
FSAL	Formation Salinity	-5000
FSAL	Formation Salinity Correction Option	PPM
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0
GDEV	Generalized Mud Resistivity Selection	0
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HACFP	Accelerometer PROM Presence	PRESENT_FIE
HARTO	Accelerometer Reference Temperature	68
HDCOD	HILT Density Coal detection	2
HDSD	HILT Density Salt detection	2.1
HILT_GAS_DENSITY	HILT Gas Downhole Density	0
HILT_GAS_OPTION	HILT Gas Computation Option	OFF
HNCOD	HILT Neutron Log detection	45
HNSAD	HILT Neutron Self detection	5
HPHICUT	HILT effective Porosity Cutoff	5
HSCO	Hole Size Correction Option	YES
HSIS	HILT Shale Indicator Selection	GR
HSCUT	HILT Water Saturation from AITH cutoff	0
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
MCCO	Mud Cake Correction Option	NO
MCCR	Mud Correction	NATU
MDEN	Matrix Density	2.71
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005
MHC2	MCFL High Contrast Correction Switch	NO
MPOF	MCFL Processing Operation Mode	NO
MWCO	Mud Weight Correction Option	NO
NMT	HRDD AFS Activation Correction	OFF
NPRM	HILT Nuclear Mud Type	NOBARITE
NSAF	HRDD Processing Mode	StdRes
PHIMAX	HRDD Depth Sampling Rate	35
PRVSADP	HILT max porosity	IN
PTAT	Pressure/Temperature Correction Option	NO
RTCO	RTCO - Rt Invasion Correction	YES
STAND	Standoff Data Source	SOCCN
SEXP_HILT	HILT Saturation Exponent	2
SHT	Surface Hole Temperature	68
SOCCN	Standoff Correction Option	0.125
SOCO	Standoff Correction Option	NO
SPNV	SP Next Value	-20
RWA: Apparent Water		
ARTS	AIT Rt Selection (for ALLRES computation)	AITH_TwoResA90
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	80
BSCCO	Borehole Salinity Correction Option	NO
COCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	HIRS
EXISCCL	External Shale Indicator Clean Value	20
EXSISH	External Shale Indicator Shale Value	150
FD	Fluid Density	1
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1
FPHI	Form Factor Porosity Source	PXND_HILT
FSAL	Formation Salinity	-5000
FSAL	Formation Salinity Correction Option	PPM
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0
GDEV	Generalized Mud Resistivity Selection	0
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HACFP	Accelerometer PROM Presence	PRESENT_FIE
HARTO	Accelerometer Reference Temperature	68
HDCOD	HILT Density Coal detection	2
HDSD	HILT Density Salt detection	2.1
HILT_GAS_DENSITY	HILT Gas Downhole Density	0
HILT_GAS_OPTION	HILT Gas Computation Option	OFF
HNCOD	HILT Neutron Log detection	45
HNSAD	HILT Neutron Self detection	5
HPHICUT	HILT effective Porosity Cutoff	5
HSCO	Hole Size Correction Option	YES
HSIS	HILT Shale Indicator Selection	GR
HSCUT	HILT Water Saturation from AITH cutoff	0
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MDEN	Matrix Density	2.71
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MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005
MHC2	MCFL High Contrast Correction Switch	NO
MPOF	MCFL Processing Operation Mode	NO
MWCO	Mud Weight Correction Option	NO
NMT	HRDD AFS Activation Correction	OFF
NPRM	HILT Nuclear Mud Type	NOBARITE
NSAF	HRDD Processing Mode	StdRes
PHIMAX	HRDD Depth Sampling Rate	35
PRVSADP	HILT max porosity	IN
PTAT	Pressure/Temperature Correction Option	NO
RTCO	RTCO - Rt Invasion Correction	YES
STAND	Standoff Data Source	SOCCN
SEXP_HILT	HILT Saturation Exponent	2
SHT	Surface Hole Temperature	68
SOCCN	Standoff Correction Option	0.125
SOCO	Standoff Correction Option	NO
SPNV	SP Next Value	-20
STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	68
STKT	STI Stuck Threshold	2.5
TDD	Total Depth - Driller	1011.00
TDLT	Total Depth - Logger	1018.00
System and Miscellaneous		
ALDTPCHAN	Name of alternate depth channel	SpeedCorrectedDepth
BS	Bit Size	7.875
BSAL	Borehole Salinity	-5000.00
CSIZ	Current Casing Size	8.625
CWEI	Casing Weight	0.00
DO	Drilling Fluid Density	9.10
DO	Depth Offset for Playback	0.0
MST	Mud Sample Temperature	79.00
PRVSADP	Use alternate depth channel for playback	NO
PP	Playback Processing	RECOMPUTE
RMFS	Resistivity of Mud Filtrate Sample	2.570
RW	Resistivity of Connate Water	1.000
TDD	Total Depth	1018.00
TWTS	Temperature of Connate Water Sample	100.00
Formated: Five_Inch_Repeat Vertical Scale: 5" per 100' Graphics File Created: 06-Jan-2005 14:02		

OP System Version: 12C0-301

MCM

HILTB-CTS 12C0-301

Input DLIS Files

DEFAULT MERGE_MERGE_004GUP FN:1 PRODUCER 06-Jan-2005 13:42 1022.5 FT 661.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_006PUP FN:4 PRODUCER 06-Jan-2005 14:02

Calibration and Check Summary

SS Window Sum	10620	N/A	10610	N/A	N/A	N/A	CPS
LS Window Ratio	0.3010	N/A	0.2931	N/A	N/A	N/A	CPS
LS Window Sum	1054	N/A	1057	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool-CTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations							
Before: 3-Jan-2005 15:52							
BS PM High Voltage (Command)	1591	N/A	1633	N/A	N/A	N/A	V
SS PM High Voltage (Command)	2228	N/A	2227	N/A	N/A	N/A	V
LS PM High Voltage (Command)	2015	N/A	2011	N/A	N/A	N/A	V
High resolution Integrated Logging Tool-CTS Wellsite Calibration - Crystal Quality Resolutions Calibration							
Before: 3-Jan-2005 15:52							
BS Crystal Resolution	12.27	N/A	12.51	N/A	N/A	N/A	%
SS Crystal Resolution	11.22	N/A	11.01	N/A	N/A	N/A	%
LS Crystal Resolution	9.995	N/A	10.12	N/A	N/A	N/A	%
High resolution Integrated Logging Tool-CTS Wellsite Calibration - MCFL Calibration							
Before: 3-Jan-2005 15:54							
Raw B0 Resistivity	3875	N/A	3877	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3817	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3823	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool-CTS Wellsite Calibration - HILT Caliper Calibration							
Before: 3-Jan-2005 15:27							
HILT Caliper Zero Measurement	8.000	N/A	9.021	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.000	N/A	13.32	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool-CTS Wellsite Calibration - Detector Calibration							
Before: 3-Jan-2005 15:28							
Gamma Ray Background	30.00	N/A	19.23	N/A	N/A	N/A	GAF
Gamma Ray (Jig - Bkg)	156.2	N/A	156.2	N/A	N/A	14.20	GAF
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAF
High resolution Integrated Logging Tool-CTS Wellsite Calibration - Zero Measurement							
Before: 3-Jan-2005 15:29							
CNTC Background	26.81	N/A	27.33	N/A	N/A	4.022	CPS
CFTC Background	28.22	N/A	26.35	N/A	N/A	4.233	CPS
High resolution Integrated Logging Tool-CTS Wellsite Calibration - Accelerometer Calibration							
Before: 6-Jan-2005 8:15							
Z-Axis Acceleration	32.19	N/A	32.14	N/A	N/A	N/A	F/S
The GLS-VJ source activity is acceptable.							
The HGNS Neutron Master Calibration was done with the following parameters :							
NCT-B Water Temperature 75.0 DEG.F.							
Thermal Housing Size 3.375 IN.							