

# Schlumberger

**Company: JOGMEC**

**Well: AURORA/JOGMEC/NRCAN MALLIK 2L-38**

**Field: MALLIK**

**Province: NWT**

## CEMENT VOLUME LOG

Province: NWT  
Field: MALLIK  
Location: GRID: 69-30-134-3C  
Well: AURORA/JOGMEC/NRCAN MALLIK 2L-38  
Company: JOGMEC

LOCATION	GRID: 69-30-134-3C		Elev.: K.B. 10.55 m	
	UWID: 302 L38 69-30-134-301		G.L. 1 m	
	Permanent Datum: <u>GROUND LEVEL</u>		Elev.: <u>1 m</u>	
	Log Measured From: <u>KELLY BUSHING</u>		9.6 m above Perm. Datum	
Drilling Measured From: <u>KELLY BUSHING</u>				
API Serial No. 1163				

Logging Date		6-Mar-2007			
Run Number		1P-RUN ONE			
Depth Driller		1310 m			
Schlumberger Depth		1296 m			
Bottom Log Interval		1271 m			
Top Log Interval		680 m			
Casing Driller Size @ Depth		339.700 mm @ 677 m			
Casing Schlumberger		680 m			
Bit Size		361.950 mm			
Type Fluid In Hole		KCL POLYMER			
MUD	Density	Viscosity	1115 kg/m3	58 s	
	Fluid Loss	PH	5 cm3	8.7	
Source Of Sample		FLOWLINE			
RM @ Measured Temperature		0.107 ohm.m @ 20 degC			
RMF @ Measured Temperature		0.120 ohm.m @ 19 degC			
RMC @ Measured Temperature		0.150 ohm.m @ 20 degC			
Source RMF	RMC	PRESS	PRESS		
RM @ MRT	RMF @ MRT	0.146 @ 9	0.160 @ 9	@	@
Maximum Recorded Temperatures		9 degC			
Circulation Stopped	Time	5-Mar-2007 16:00			
Logger On Bottom	Time	6-Mar-2007 11:15			
Unit Number	Location	1803	NISKU, AB		
Recorded By		LANNY LAROCHE			
Witnessed By		TOKUJIRO TAKAYAMA			

	Run 1	Run 2	Run 3
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			
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			

## DEPTH SUMMARY LISTING

Date Created: 6-MAR-2007 13:13:27

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-JA Serial Number: 6423 Calibration Date: 09-JAN-2007 Calibrator Serial Number: 4 Calibration Cable Type: 7-46P-XS Wheel Correction 1: -6 Wheel Correction 2: -7	Type: CMTD-B/A Serial Number: 2565 Calibration Date: 06-FEB-2007 Calibrator Serial Number: 2565 Calibration Gain: 0.84 Calibration Offset: -14.00	Type: 7-46P-XS Serial Number: 0 Length: 6399.89 M Conveyance Method: Wireline Rig Type: LAND

### Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	PLATFORM EXPRESS: COMPENSATED NEUTRON-LITHO DENSITY LOG
Reference Log Run Number:	ONE
Reference Log Date:	03-MAR-2007
Subsequent Trip Down Log Correction:	0.40 M

### Depth Control Remarks

- 1.
2. NO SPEED CORRECTION APPLIED AT WELLSITE
- 3.
- 4.
- 5.
- 6.

#### DISCLAIMER

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OTHER SERVICES1	OTHER SERVICES2
OS1: 2.APS-PEX-CMR-ECS	OS1:
OS2: HNGS	OS2:
OS3: 3.FMI-MSIP-EMS	OS3:
OS4: 4.MRX	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
ZAIT LOGGED WITH 2.5in STANDOFF AND ECCENTERED WITH PPC	
APS HAS LARGE HOLE KIT INSTALLED	
HRLT CENTERED WITH LCME'S	
PPC 1 HAS LARGE HOLE KIT INSTALLED AND SET TO ALL POWERED	
PPC 2 HAS LARGE HOLE KIT INSTALLED AND SET TO ECCENTER	
EMS HAS LARGE HOLE KIT INSTALLED	
BS = 9.875" FROM TD-1296M	

BS = 14.25" FROM 1296-SC

REPEAT PERFORMED OVER 850-1150M  
 SLB ONLY LOGGED DOWN TO 1296M  
 APS MINITRON PRESSURE READING 4PSI ,SO DID NOT POWER UP MINITRON.  
 WILL ADD APS BACKUP TO RUN 2  
 ZAIT ARRAY INDUCTION PLUS VOLT AGE IN HOUSTON MASTERCAL  
 AS WELL AS MALLIK BEFORE CALIBRAION FLAGGED  
 RIG: AKITA 62  
 CREW: JAMES MACDONALD / MARK KIMBALL / MIKE KLOC












RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: 14C0-302 FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

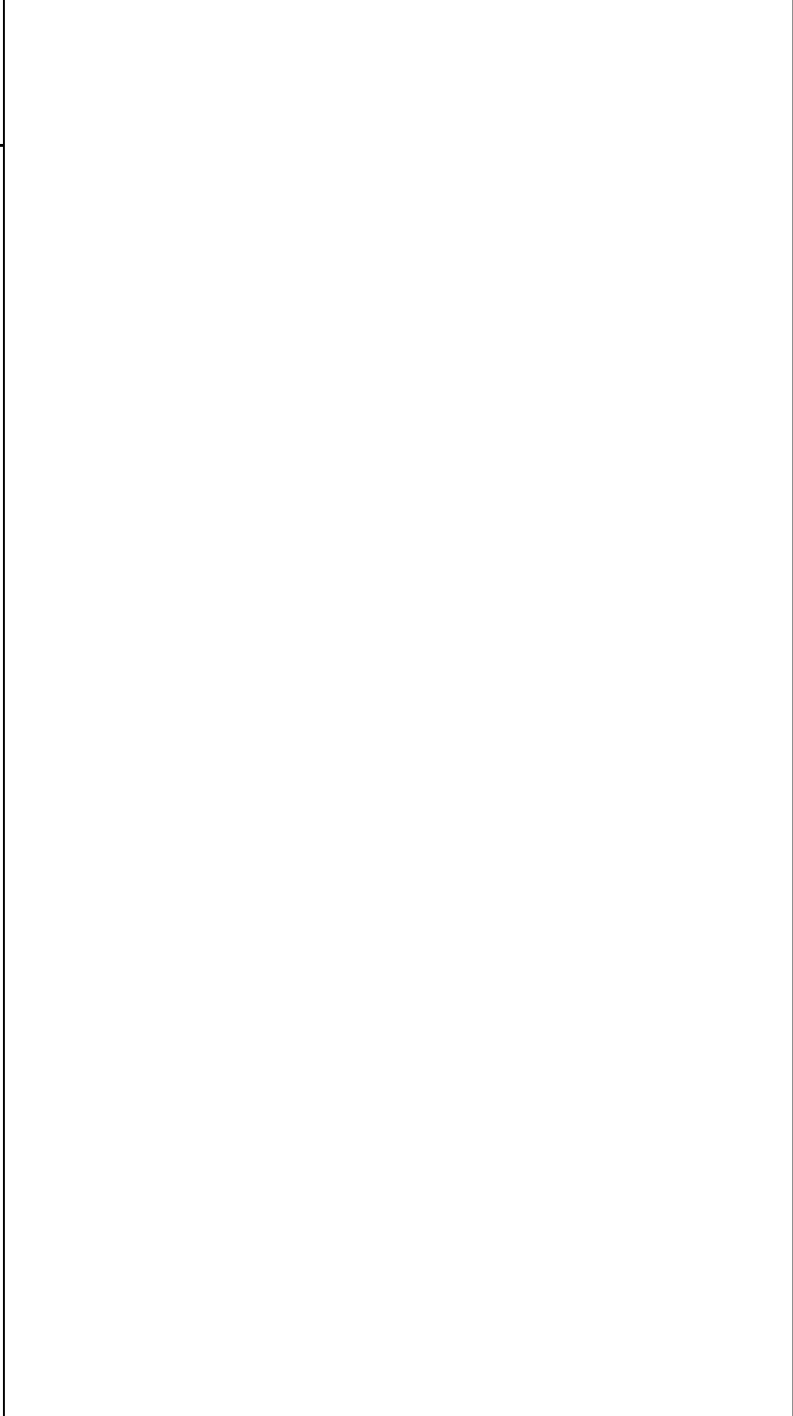
## EQUIPMENT DESCRIPTION

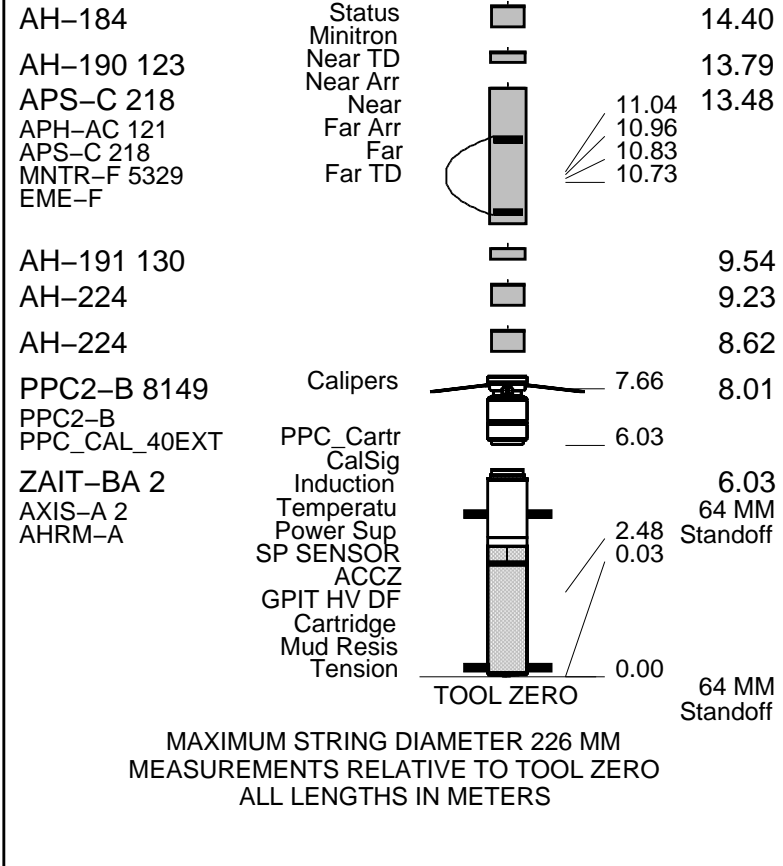
RUN 1 RUN 2

**SURFACE EQUIPMENT**  
 SFT-281 12673  
 SFT-178 53  
 WITM (EDTS)-A

**DOWNHOLE EQUIPMENT**

LEH-QT		37.08
AH-169 2779		36.19
EDTC-B 8265	Mud Tempe	35.79
EDTH-B 8253	CTEM	34.72
EDTC-B	Gamma Ray	34.15
	EDTCB Ele	33.80
PPC1-B 8148	Calipers	33.46
PPC1-B		
PPC_CAL_40EXT	PPC_Cartr	31.82
AH-255(+45D) 8053		31.82
AH-SFT		31.60
AH-SFT		
GPIT-C 1943		30.38
GPIC-C		
AH-SFT		29.16
AH-SFT		
EMS-B 8035	Mud Resis	27.76
EMA-B 8018	Mud Tempe	27.51
RES		
EMC-B 8035		
ECH-KH 8045	Calipers	24.63
EMM-B 8102		
HRLT-B		23.60
HRUH-B 983		
HRUC-B 980		
HRLS-B 973		
HRLH-B 972	High Res.	20.01
HRLC-B 976		
AH-270 1718		
AH-224		16.22
AH-184		15.61
AH-184		15.01





MAXIMUM STRING DIAMETER 226 MM  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN METERS

### Input DLIS Files

DEFAULT	AIT_CAL_APS_HRLA_070PUP	FN:78	PRODUCER	06-Mar-2007 12:43	1295.2 M	557.0 M
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### Output DLIS Files

DEFAULT	AIT_CAL_APS_HRLA_085PUP	FN:98	PRODUCER	06-Mar-2007 14:16	1295.2 M	525.2 M
CLIENT_DATA_NOA	AIT_CAL_APS_HRLA_085PUP	FN:99	PRODUCER	06-Mar-2007 14:16	1295.2 M	525.2 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 73.99 M3  
 Cement Volume = 44.97 M3 (assuming 244.47 MM casing O.D.)  
 Computed from 1295.2 M to 677.1 M using data channel(s) CRD1\_PPC1 CRD2\_PPC1 CRD3\_PPC1 CRD4\_PPC1

### OP System Version: 14C0-302

MCM

ZAIT-BA	SPC-3254-ZAIT-B_t	PPC2-B	SKK-3060-PPCB_b
APS-C	14C0-302	HRLT-B	14C0-302
EMS-B	14C0-302	GPIT-C	14C0-302
PPC1-B	SKK-3060-PPCB_b	EDTC-B	SKK-3248-EDTCB_b

### PIP SUMMARY

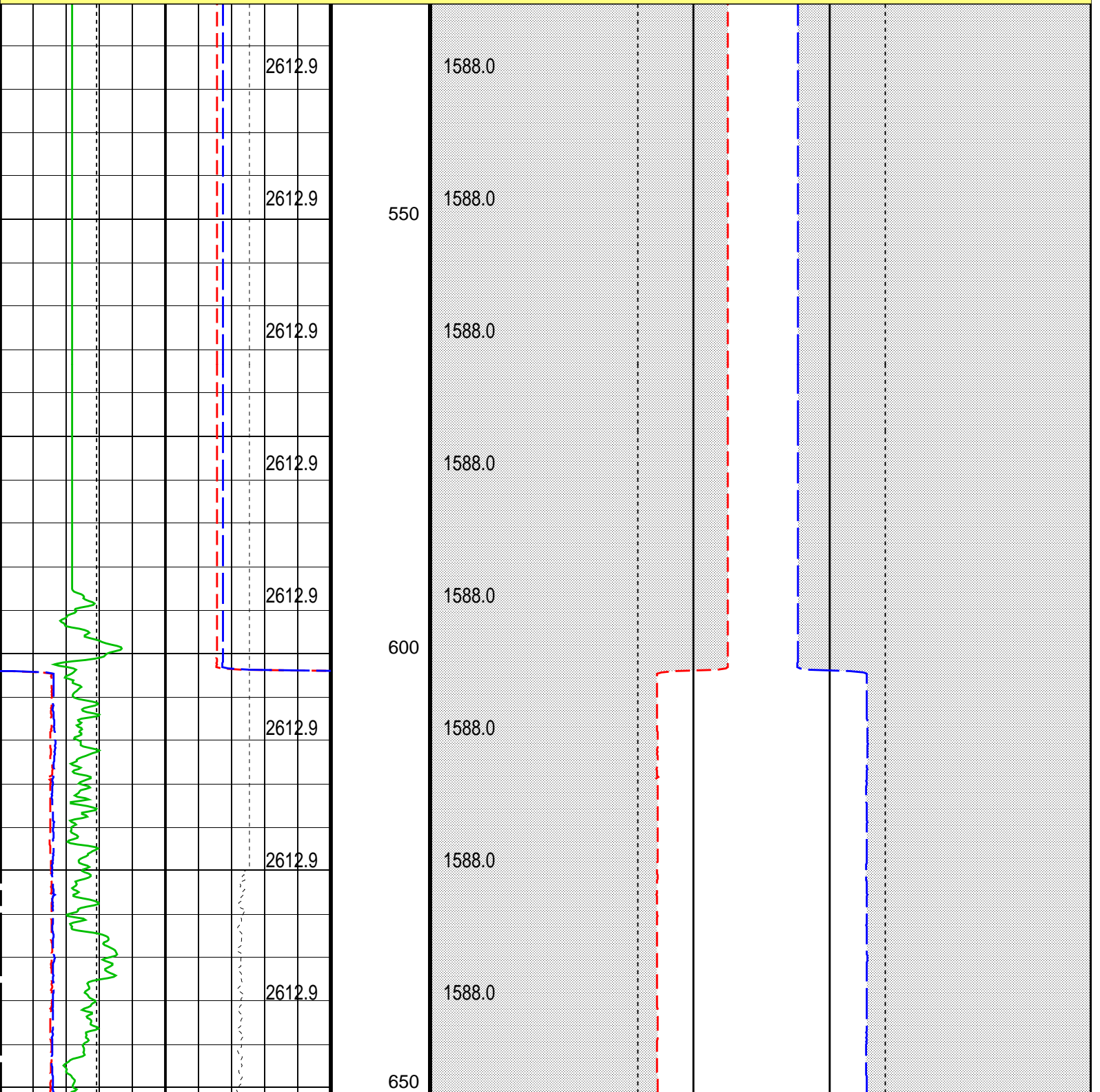
- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
  - └ Integrated Cement Volume Minor Pip Every 0.1 M3
  - └ Integrated Cement Volume Major Pip Every 1 M3

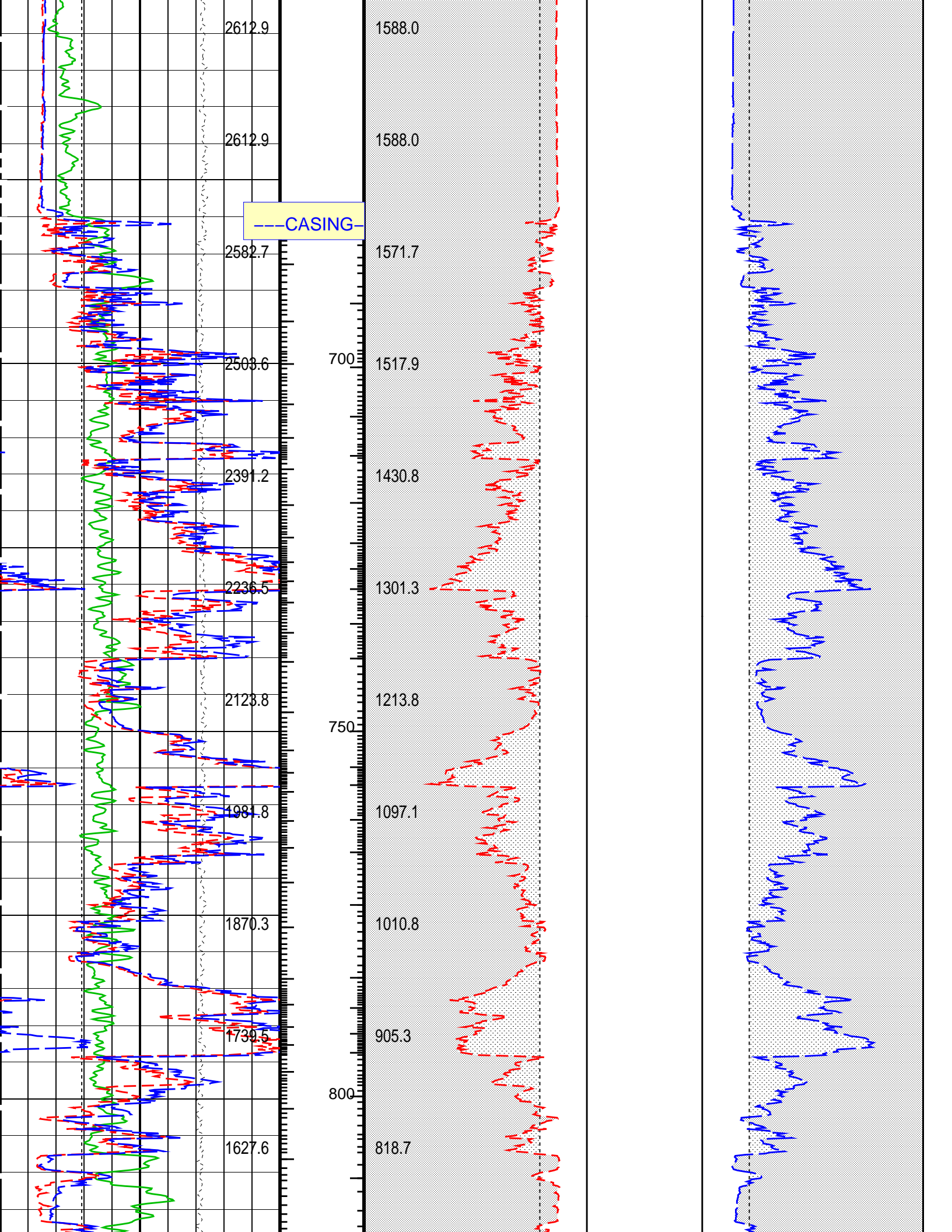
Time Mark Every 60 S

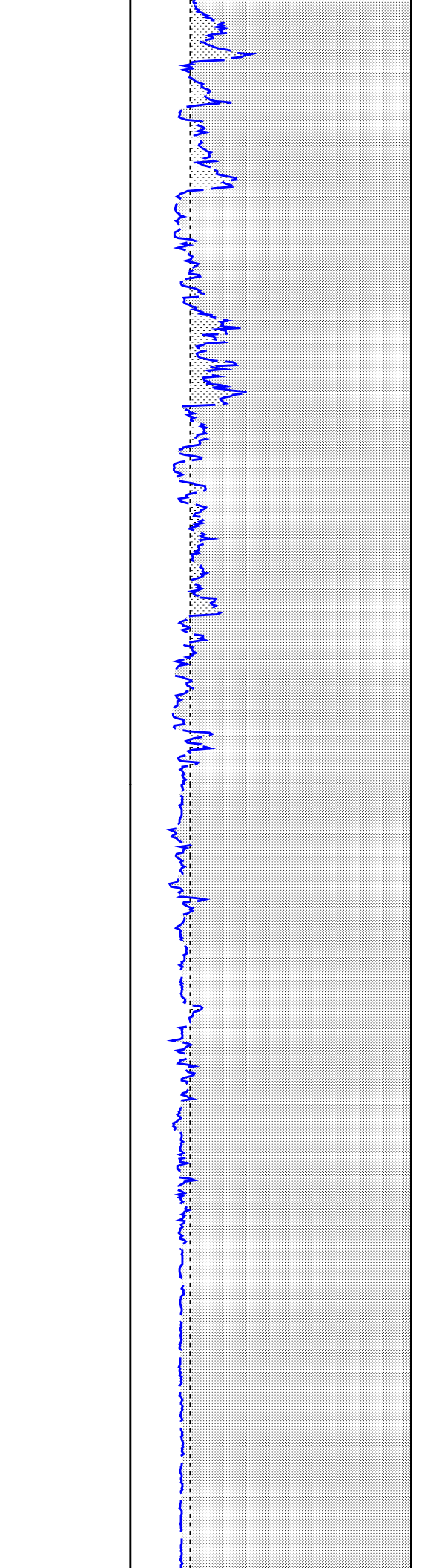
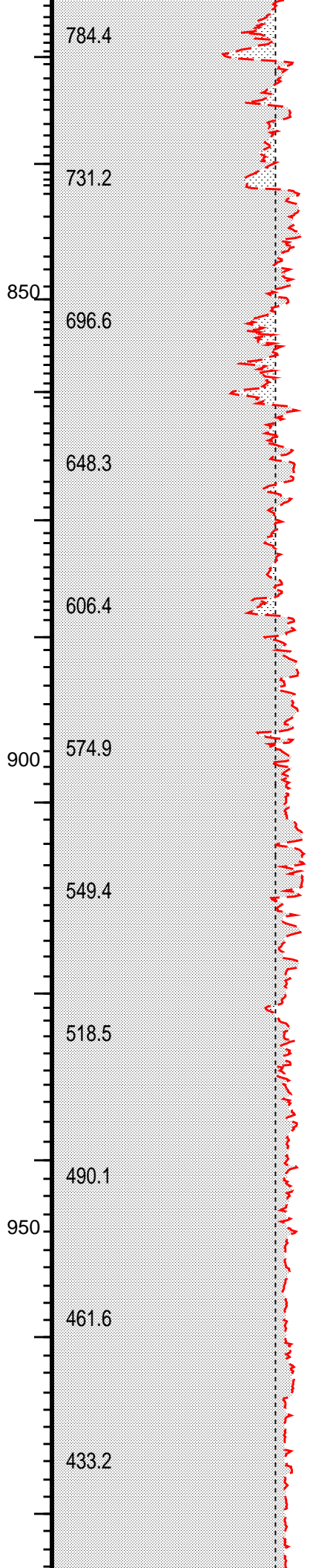
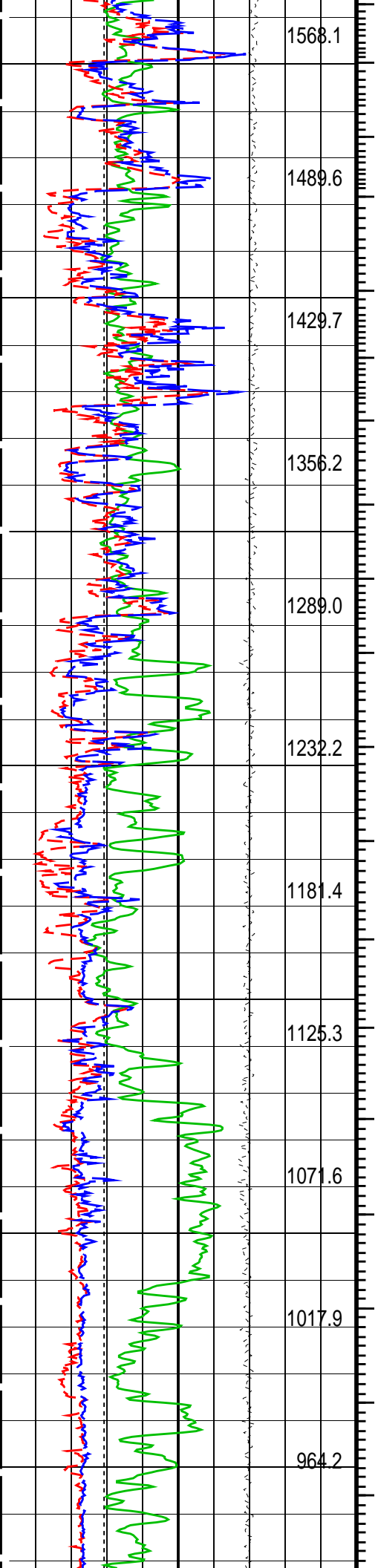
Formation Between LHT2 and HDMI_1	Formation Between HDMX_1 and RHT3
Washout From HDMI_1 to BS2	Washout From BS3 to HDMX_1
Tight Spot From BS2 to HDMI_1	Tight Spot From HDMX_1 to BS3

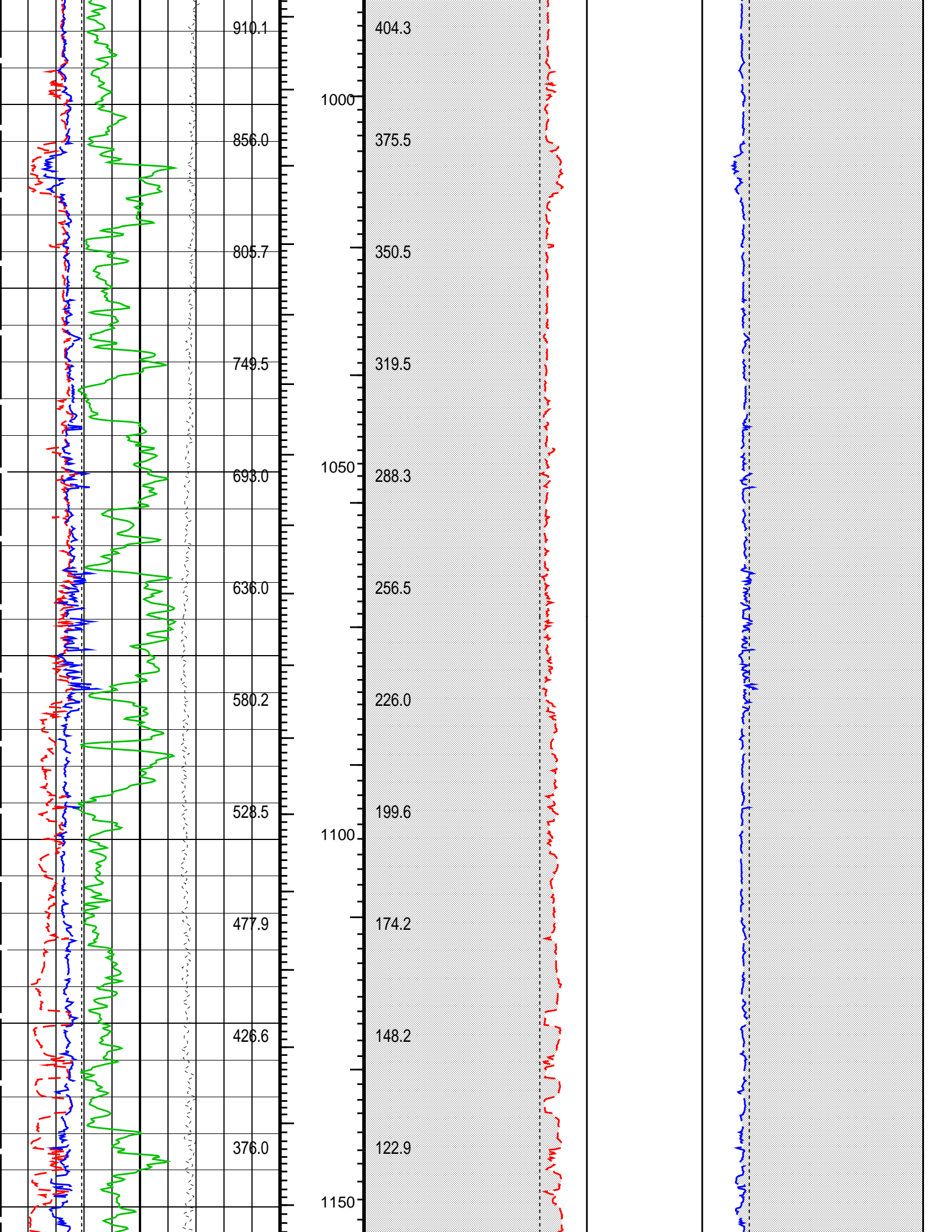
Tension (TENS) 25000 (N) 0		Annulus From BS2 to FCD2		Annulus From FCD3 to BS3	
Hole Diameter Maximum (HDMX) 275 (MM) 575		Future Casing			
Hole Diameter Minimum (HDMI) 275 (MM) 575		Hole Diameter Minimum (HDMI) 800 (MM) 100		Hole Diameter Maximum (HDMX) 100 (MM) 800	
Gamma Ray (GR_EDTC) 0 (GAPI) 150		FCD2 (FCD) 800 (MM) 100		FCD3 (FCD) 100 (MM) 800	
Bit Size (BS) 275 (MM) 575		Bit Size (BS) 800 (MM) 100		Bit Size (BS) 100 (MM) 800	

\*\*\* CEMENT VOLUME LOG \*\*\*

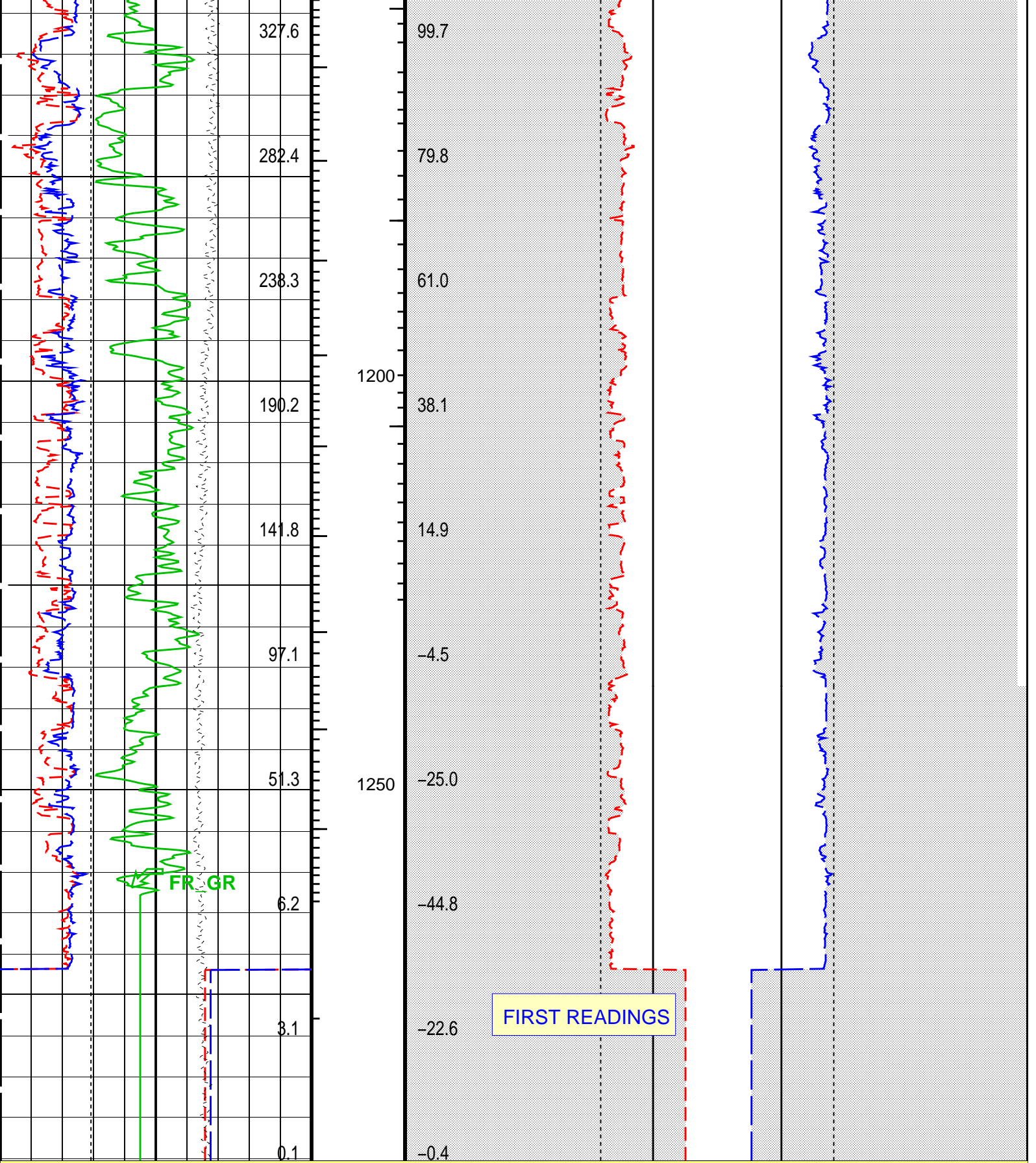












\*\*\* CEMENT VOLUME LOG \*\*\*

Bit Size (BS) (MM)		Bit Size (BS) (MM)		Bit Size (BS) (MM)	
275	575	800	100	100	800
Gamma Ray (GR_EDTC) (GAPI)		FCD2 (FCD) (MM)		FCD3 (FCD) (MM)	
0	150	800	100	100	800
Hole Diameter Minimum (HDMI) (MM)		Hole Diameter Minimum (HDMI) (MM)		Hole Diameter Maximum (HDMX) (MM)	
275	575	800	100	100	800

Hole Diameter Maximum (HDMX) 275 (MM) 575

Tension (TENS) 25000 (N) 0

Future Casing	
Annulus From BS2 to FCD2	Annulus From FCD3 to BS3
Tight Spot From BS2 to HDMI_1	Tight Spot From HDMX_1 to BS3
Washout From HDMI_1 to BS2	Washout From BS3 to HDMX_1
Formation Between LHT2 and HDMI_1	Formation Between HDMX_1 and RHT3

**PIP SUMMARY**

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
  - └ Integrated Cement Volume Minor Pip Every 0.1 M3
  - └ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

**Parameters**

DLIS Name	Description	Value
TRIRT	ZAIT-BA: 3-D Array Induction Tool – ZAIT-3D Rotation Selector	NorTH
EMSB	EMS-B: Environment Measurement Sonde	
ECOF	EMS Caliper Offset	50.8 MM
EFC	EMS Fixed Caliper Operation	OFF
FCD	Future Casing (Outer) Diameter	244.475 MM
HVCS	Integrated Hole Volume Caliper Selection	PPC1_Calipers
HOLEV	Integrated Hole/Cement Volume	
FCD	Future Casing (Outer) Diameter	244.475 MM
HVCS	Integrated Hole Volume Caliper Selection	PPC1_Calipers
STI	Stuck Tool Indicator	
LBFR	Trigger for MAXIS First Reading Label	TDL
TDD	Total Depth – Driller	1310.00 M
TDL	Total Depth – Logger	1296.00 M
	System and Miscellaneous	
BS	Bit Size	361.950 MM
DO	Depth Offset for Playback	0.0 M
DORL	Depth Offset for Repeat Analysis	0.0 M
PP	Playback Processing	RECOMPUTE
TD	Total Depth	4298 FT

Format: CVL Vertical Scale: 1:600

Graphics File Created: 06-Mar-2007 14:16

**OP System Version: 14C0-302**  
MCM

ZAIT-BA	SPC-3254-ZAIT-B_t	PPC2-B	SKK-3060-PPCB_b
APS-C	14C0-302	HRLT-B	14C0-302
EMS-B	14C0-302	GPIT-C	14C0-302
PPC1-B	SKK-3060-PPCB_b	EDTC-B	SKK-3248-EDTCB_b

**Input DLIS Files**

DEFAULT	AIT_CAL_APS_HRLA_070PUP	FN:78	PRODUCER	06-Mar-2007 12:43	1295.2 M	557.0 M
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**Output DLIS Files**

DEFAULT	AIT_CAL_APS_HRLA_085PUP	FN:98	PRODUCER	06-Mar-2007 14:16
CLIENT_DATA_NO	AIT_CAL_APS_HRLA_085PUP	FN:99	PRODUCER	06-Mar-2007 14:16

Calibration and Check Summary

Measurement Nominal Master Before After Change Limit Units

3-D Array Induction Tool – ZAIT–B Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase

Master: 29-Jan-2007 15:32 Before: 6-Mar-2007 10:03

Thru Cal Magnitude – 0	0	1.345	1.345	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 1	0	1.336	1.342	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 2	0	1.387	1.387	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 3	0	3.071	3.081	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 4	0	3.051	3.073	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 5	0	3.167	3.175	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 6	0	2.477	2.486	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 7	0	2.461	2.480	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 8	0	2.559	2.566	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 9	0	1.623	1.648	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 10	0	1.634	1.677	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 11	0	1.796	1.826	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 12	0	3.239	3.240	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 13	0	3.221	3.236	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 14	0	3.346	3.344	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 15	0	2.606	2.648	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 16	0	2.624	2.694	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 17	0	2.884	2.933	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 18	0	0.8449	0.8455	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 19	0	0.8402	0.8443	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 20	0	0.8631	0.8636	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 21	0	3.452	3.512	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 22	0	3.476	3.573	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 23	0	3.821	3.890	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 24	0	1.224	1.228	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 25	0	1.217	1.226	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 26	0	1.250	1.254	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 27	0	3.452	3.512	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 28	0	3.476	3.573	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 29	0	3.821	3.890	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 30	0	1.223	1.227	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 31	0	1.216	1.225	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 32	0	1.250	1.253	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 33	0	0.9808	0.9989	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 34	0	0.9876	1.017	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 35	0	1.071	1.092	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 36	0	1.447	1.453	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 37	0	1.439	1.451	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 38	0	1.474	1.481	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 39	0	1.178	1.200	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 40	0	1.186	1.221	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 41	0	1.286	1.312	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 42	0	2.090	2.099	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 43	0	2.079	2.096	N/A	N/A	N/A	MM/M
Thru Cal Magnitude – 44	0	2.129	2.139	N/A	N/A	N/A	MM/M
Thru Cal Phase – 0	0	-174.6	-170.3	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	-170.2	-165.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	-177.4	-170.7	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	-176.6	-172.6	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	-172.3	-167.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	-179.4	-173.0	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	177.8	-178.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	-177.9	-173.3	N/A	N/A	N/A	DEG
Thru Cal Phase – 8	0	175.0	-178.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 9	0	-72.00	-68.66	N/A	N/A	N/A	DEG
Thru Cal Phase – 10	0	-60.73	-56.78	N/A	N/A	N/A	DEG
Thru Cal Phase – 11	0	-72.15	-66.48	N/A	N/A	N/A	DEG
Thru Cal Phase – 12	0	-174.8	-170.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 13	0	-170.5	-165.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 14	0	-177.6	-171.0	N/A	N/A	N/A	DEG
Thru Cal Phase – 15	0	-72.38	-69.02	N/A	N/A	N/A	DEG
Thru Cal Phase – 16	0	-61.11	-57.16	N/A	N/A	N/A	DEG
Thru Cal Phase – 17	0	-72.56	-66.88	N/A	N/A	N/A	DEG
Thru Cal Phase – 18	0	-174.3	-170.0	N/A	N/A	N/A	DEG
Thru Cal Phase – 19	0	-170.0	-165.3	N/A	N/A	N/A	DEG
Thru Cal Phase – 20	0	-177.4	-170.6	N/A	N/A	N/A	DEG
Thru Cal Phase – 21	0	-72.91	-69.65	N/A	N/A	N/A	DEG
Thru Cal Phase – 22	0	-61.64	-57.79	N/A	N/A	N/A	DEG
Thru Cal Phase – 23	0	-73.08	-67.48	N/A	N/A	N/A	DEG
Thru Cal Phase – 24	0	-177.2	-173.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 25	0	-172.9	-168.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 26	0	179.7	-173.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 27	0	-72.91	-69.64	N/A	N/A	N/A	DEG
Thru Cal Phase – 28	0	-61.64	-57.78	N/A	N/A	N/A	DEG
Thru Cal Phase – 29	0	-73.11	-67.50	N/A	N/A	N/A	DEG
Thru Cal Phase – 30	0	-177.2	-173.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 31	0	-172.9	-168.4	N/A	N/A	N/A	DEG
Thru Cal Phase – 32	0	179.7	-173.8	N/A	N/A	N/A	DEG

Thru Cal Phase – 33	0	-76.79	-73.46	N/A	N/A	N/A	DEG
Thru Cal Phase – 34	0	-65.38	-61.41	N/A	N/A	N/A	DEG
Thru Cal Phase – 35	0	-77.45	-71.74	N/A	N/A	N/A	DEG
Thru Cal Phase – 36	0	176.7	-179.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 37	0	-179.0	-174.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 38	0	173.6	-179.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 39	0	-76.61	-73.28	N/A	N/A	N/A	DEG
Thru Cal Phase – 40	0	-65.22	-61.24	N/A	N/A	N/A	DEG
Thru Cal Phase – 41	0	-77.31	-71.58	N/A	N/A	N/A	DEG
Thru Cal Phase – 42	0	177.4	-178.5	N/A	N/A	N/A	DEG
Thru Cal Phase – 43	0	-178.3	-173.8	N/A	N/A	N/A	DEG
Thru Cal Phase – 44	0	174.2	-179.1	N/A	N/A	N/A	DEG

3-D Array Induction Tool – ZAIT–B Wellsite Calibration – Electronics Calibration Check – Auxilliary  
Master: 29–Jan–2007 15:32 Before: 6–Mar–2007 10:03

Array Induction SPA Plus	0.8360	0.8436	0.8439	N/A	N/A	N/A	V
Array Induction SPA Zero	0	-0.0007702	-0.0008081	N/A	N/A	N/A	V
Array Induction Temperature PI	0.9798	0.9906	0.9913	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.001124	-0.001140	N/A	N/A	N/A	V
Array Induction CalSig Plus	5.000	5.015	5.017	N/A	N/A	N/A	V
Array Induction CalSig Zero	0	-0.01105	-0.01122	N/A	N/A	N/A	V
Array Induction Volt Plus	2.500	5.014	12.04	N/A	N/A	N/A	V
Array Induction Volt Zero	0	-0.01105	-0.02693	N/A	N/A	N/A	V

3-D Array Induction Tool – ZAIT–B Wellsite Calibration – Sonde Error Correction  
Master: 29–Jan–2007 15:32

R Sonde Error Correction – 0	0	20.92	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	754.2	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	-1325	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	33.96	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	154.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	85.67	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	63.31	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	148.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 8	0	90.72	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 9	0	-492.9	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 10	0	18.30	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 11	0	-119.2	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 12	0	-6.887	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 13	0	-394.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 14	0	65.79	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 15	0	52.97	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 16	0	87.06	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 17	0	-85.69	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 18	0	-264.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 19	0	2.997	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 20	0	-67.21	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 21	0	-2.146	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 22	0	-171.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 23	0	2.315	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 24	0	43.68	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 25	0	57.55	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 26	0	-78.64	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 27	0	-324.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 28	0	6.777	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 29	0	-20.82	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 30	0	11.65	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 31	0	-333.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 32	0	48.80	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 33	0	5.421	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 34	0	-1.054	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 35	0	124.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 36	0	-319.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 37	0	6.994	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 38	0	0.5654	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 39	0	1.085	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 40	0	-323.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 41	0	15.87	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 42	0	-0.8276	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 43	0	0.7432	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 44	0	47.85	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 45	0	-15.48	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 46	0	-9.021	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 47	0	-31.66	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 48	0	11.94	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 49	0	-17.19	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 50	0	18.09	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 51	0	5.572	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 52	0	8.875	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 53	0	59.44	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 54	0	-2.308	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 55	0	-1.336	N/A	N/A	N/A	N/A	MM/M

R Sonde Error Correction – 56	0	-1.396	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 57	0	0.9340	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 58	0	1.078	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 59	0	6.561	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 60	0	4.802	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 61	0	5.034	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 62	0	26.23	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 63	0	-2.579	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 64	0	29.50	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 65	0	-15.76	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 66	0	-19.63	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 67	0	-0.2565	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 68	0	3.726	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 69	0	-6.196	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 70	0	-0.5899	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 71	0	22.25	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 72	0	0.3745	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 73	0	1.286	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 74	0	-1.035	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 75	0	-1.570	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 76	0	2.299	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 77	0	1.771	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 78	0	0.7233	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 79	0	0.7604	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 80	0	10.68	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 81	0	-15.45	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 82	0	-8.384	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 83	0	-11.00	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 84	0	13.94	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 85	0	-15.01	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 86	0	4.540	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 87	0	-0.8786	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 88	0	2.126	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 89	0	3.597	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 90	0	-12.18	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 91	0	-2.645	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 92	0	-1.279	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 93	0	2.192	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 94	0	-10.83	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 95	0	1.041	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 96	0	0.9281	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 97	0	0.2935	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 98	0	3.097	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 99	0	-41.39	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 100	0	15.87	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 101	0	-6.421	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 102	0	-11.33	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 103	0	-45.67	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 104	0	-0.1936	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 105	0	1.150	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 106	0	-1.690	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 107	0	-2.731	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 108	0	-40.59	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 109	0	3.576	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 110	0	-0.6722	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 111	0	-3.843	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 112	0	-42.31	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 113	0	-0.1958	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 114	0	1.999	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 115	0	-0.4481	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 116	0	2.266	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	5052	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	8939	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	-103.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	2129	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	830.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	-295.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	700.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	567.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 8	0	-25.51	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 9	0	-220.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 10	0	-581.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 11	0	994.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 12	0	1033	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 13	0	-632.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 14	0	101.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 15	0	-554.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 16	0	-705.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 17	0	221.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 18	0	-380.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 19	0	-278.9	N/A	N/A	N/A	N/A	MM/M

X Sonde Error Correction - 20	0	485.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 21	0	513.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 22	0	-557.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 23	0	48.64	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 24	0	-300.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 25	0	-369.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 26	0	74.67	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 27	0	722.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 28	0	-93.67	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 29	0	251.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 30	0	-837.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 31	0	829.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 32	0	442.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 33	0	-174.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 34	0	-100.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 35	0	-78.95	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 36	0	421.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 37	0	-48.20	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 38	0	122.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 39	0	-417.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 40	0	470.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 41	0	227.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 42	0	-78.56	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 43	0	-45.15	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 44	0	-9.689	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 45	0	2082	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 46	0	368.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 47	0	780.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 48	0	-416.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 49	0	1985	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 50	0	139.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 51	0	784.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 52	0	-98.90	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 53	0	-19.65	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 54	0	1017	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 55	0	188.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 56	0	388.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 57	0	-209.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 58	0	968.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 59	0	72.00	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 60	0	391.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 61	0	-48.64	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 62	0	2.136	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 63	0	635.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 64	0	-951.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 65	0	180.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 66	0	918.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 67	0	611.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 68	0	30.84	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 69	0	286.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 70	0	-46.72	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 71	0	18.34	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 72	0	262.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 73	0	-472.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 74	0	86.88	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 75	0	457.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 76	0	250.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 77	0	17.22	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 78	0	139.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 79	0	-23.30	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 80	0	16.27	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 81	0	315.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 82	0	586.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 83	0	112.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 84	0	-578.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 85	0	295.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 86	0	-83.63	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 87	0	7.633	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 88	0	-185.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 89	0	20.93	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 90	0	84.33	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 91	0	298.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 92	0	55.94	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 93	0	-297.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 94	0	74.61	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 95	0	-40.80	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 96	0	3.809	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 97	0	-91.97	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 98	0	14.05	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 99	0	152.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 100	0	-416.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction - 101	0	-42.07	N/A	N/A	N/A	N/A	MM/M

X Sonde Error Correction – 101	0	-2.07	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 102	0	450.4	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 103	0	156.3	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 104	0	-17.73	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 105	0	-3.397	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 106	0	24.17	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 107	0	55.88	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 108	0	126.8	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 109	0	-220.5	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 110	0	-21.33	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 111	0	234.5	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 112	0	128.4	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 113	0	-4.797	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 114	0	-1.614	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 115	0	14.76	N/A	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 116	0	8.951	N/A	N/A	N/A	N/A	N/A	MM/M

Powered Positioning Device/Caliper 2 Wellsite Calibration – PPC2 Caliper Calibration

Before: 5–Mar–2007 19:34

PPC2 Radius 1 Raw Small Radius	88.90	N/A	139.6	N/A	N/A	12.70	MM
PPC2 Radius 1 Raw Large Radius	203.2	N/A	245.1	N/A	N/A	12.70	MM
PPC2 Radius 2 Raw Small Radius	88.90	N/A	59.05	N/A	N/A	12.70	MM
PPC2 Radius 2 Raw Large Radius	203.2	N/A	169.2	N/A	N/A	12.70	MM
PPC2 Radius 3 Raw Small Radius	88.90	N/A	135.0	N/A	N/A	12.70	MM
PPC2 Radius 3 Raw Large Radius	203.2	N/A	242.2	N/A	N/A	12.70	MM
PPC2 Radius 4 Raw Small Radius	88.90	N/A	75.27	N/A	N/A	12.70	MM
PPC2 Radius 4 Raw Large Radius	203.2	N/A	186.6	N/A	N/A	12.70	MM

Accelerator–Porosity Tool Wellsite Calibration – Detector Background

Master: 12–Jan–2007 23:16 Before: 5–Mar–2007 14:09

Near Det Bkg Cntrate	30.00	26.50	25.71	N/A	N/A	N/A	CPS
Far Det Bkg Cntrate	30.00	25.93	25.16	N/A	N/A	N/A	CPS
Array–1 Det Bkg Cntrate	30.00	26.01	25.06	N/A	N/A	N/A	CPS
Array–2 Det Bkg Cntrate	30.00	26.06	25.75	N/A	N/A	N/A	CPS
Array Therm Det Bkg Cntrate	30.00	25.75	25.43	N/A	N/A	N/A	CPS

Accelerator–Porosity Tool Wellsite Calibration – Calibration Ratios

Master: 12–Jan–2007 23:16

Near/Far Calibration Ratio	0.9250	0.9971	N/A	N/A	N/A	N/A	
Near/Array Calibration Ratio	1.030	1.039	N/A	N/A	N/A	N/A	
Near/Array Cal Ratio Up/Down	1.000	1.011	N/A	N/A	N/A	N/A	

Accelerator–Porosity Tool Wellsite Calibration – Tank Check

Master: 12–Jan–2007 23:16

Array–1 Standoff Porosity	0.1175	0.1109	N/A	N/A	N/A	N/A	V/V
Array–2 Standoff Porosity	0.1175	0.1131	N/A	N/A	N/A	N/A	V/V
Average Slowing Down Time	6.000	5.901	N/A	N/A	N/A	N/A	US
Array–1 SDT Ratio Up/Down	1.000	0.9697	N/A	N/A	N/A	N/A	
Array–2 SDT Ratio Up/Down	1.000	0.9845	N/A	N/A	N/A	N/A	
Sigma Formation	2.750	2.723	N/A	N/A	N/A	N/A	M–1

Accelerator–Porosity Tool Wellsite Calibration – CCR7 signal boxes

Master: 12–Jan–2007 23:16

Near Detector Plateau Setting	1650	1728	N/A	N/A	N/A	N/A	V
Far Detector Plateau Setting	2000	2061	N/A	N/A	N/A	N/A	V
Array Detector Plateau Setting	2000	1968	N/A	N/A	N/A	N/A	V

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01

Before: 6–Mar–2007 11:09

HRLT M0–M1 Voltage Plus – 0	0	N/A	-317.8	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 1	0	N/A	-325.7	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 2	0	N/A	-320.0	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 3	0	N/A	-326.9	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 4	0	N/A	-316.2	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 5	0	N/A	-320.8	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 6	0	N/A	347.6	N/A	N/A	9.681	UV
HRLT M0–M1 Voltage Plus – 7	0	N/A	-322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12

Before: 6–Mar–2007 11:09

HRLT M1–M2 Voltage Plus – 0	0	N/A	1751	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 1	0	N/A	1806	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 2	0	N/A	1766	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 3	0	N/A	1801	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 4	0	N/A	1740	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 5	0	N/A	1765	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 6	0	N/A	-1936	N/A	N/A	53.42	UV
HRLT M1–M2 Voltage Plus – 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23

Before: 6–Mar–2007 11:09

HRLT M2–M3 Voltage Plus – 0	0	N/A	1735	N/A	N/A	53.42	UV
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HRLT M2-M3 Voltage Plus - 1	0	N/A	1799	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1761	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1801	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1734	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1760	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1916	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V34  
Before: 6-Mar-2007 11:09

HRLT A3-A4 Voltage Plus - 0	0	N/A	68490	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	70610	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	69450	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	71320	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	68690	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69780	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-74180	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45  
Before: 6-Mar-2007 11:09

HRLT A4-A5 Voltage Plus - 0	0	N/A	68340	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	71060	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	69750	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	71490	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	68650	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69660	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-74690	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56  
Before: 6-Mar-2007 11:09

HRLT A5-A6 Voltage Plus - 0	0	N/A	68470	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	70830	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	69620	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	71420	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	68720	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69750	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-74430	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP  
Before: 6-Mar-2007 11:09

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68030	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-70740	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-69510	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-71360	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-68680	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69760	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	74270	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD  
Before: 6-Mar-2007 11:09

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68090	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-70940	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-69700	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-71520	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-68780	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69820	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	74500	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO  
Before: 6-Mar-2007 11:09

HRLT Source Current Plus - 0	0	N/A	283.5	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV  
Before: 6-Mar-2007 11:09

HRLT Vertical Voltage PI - 0	0	N/A	-320.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-321.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-314.6	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-319.6	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-306.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.7	N/A	N/A	9.681	UV



HRLT Vertical Voltage PI - 5	0	N/A	-322.7	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	356.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	N/A	N/A	9.681	UV

Environment Measurement Sonde Wellsite Calibration – EMS Caliper Calibration

Before: 5-Mar-2007 14:59

Radius 1 Short Radius	101.6	N/A	99.22	N/A	N/A	5.080	MM
Radius 1 Long Radius	152.4	N/A	159.4	N/A	N/A	5.080	MM
Radius 2 Short Radius	152.4	N/A	165.6	N/A	N/A	5.080	MM
Radius 2 Long Radius	101.6	N/A	104.3	N/A	N/A	5.080	MM
Radius 3 Short Radius	101.6	N/A	94.45	N/A	N/A	5.080	MM
Radius 3 Long Radius	152.4	N/A	156.2	N/A	N/A	5.080	MM
Radius 4 Short Radius	152.4	N/A	161.6	N/A	N/A	5.080	MM
Radius 4 Long Radius	101.6	N/A	101.9	N/A	N/A	5.080	MM
Radius 5 Short Radius	101.6	N/A	95.89	N/A	N/A	5.080	MM
Radius 5 Long Radius	152.4	N/A	154.5	N/A	N/A	5.080	MM
Radius 6 Short Radius	152.4	N/A	156.3	N/A	N/A	5.080	MM
Radius 6 Long Radius	101.6	N/A	95.78	N/A	N/A	5.080	MM

General Purpose Inclinometer Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY

Before: 6-Mar-2007 9:09

TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	6	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	12	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	1071	N/A	N/A	N/A	

General Purpose Inclinometer Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY

Before: 6-Mar-2007 9:09

TEMPERATURE REFERENCE :	N/A	N/A	22	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	6	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	11	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	760	N/A	N/A	N/A	

Powered Positioning Device/Caliper 1 Wellsite Calibration – PPC1 Caliper Calibration

Before: 6-Mar-2007 4:43

PPC1 Radius 1 Raw Small Radius	88.90	N/A	137.5	N/A	N/A	12.70	MM
PPC1 Radius 1 Raw Large Radius	203.2	N/A	244.4	N/A	N/A	12.70	MM
PPC1 Radius 2 Raw Small Radius	88.90	N/A	55.65	N/A	N/A	12.70	MM
PPC1 Radius 2 Raw Large Radius	203.2	N/A	168.8	N/A	N/A	12.70	MM
PPC1 Radius 3 Raw Small Radius	88.90	N/A	136.3	N/A	N/A	12.70	MM
PPC1 Radius 3 Raw Large Radius	203.2	N/A	244.0	N/A	N/A	12.70	MM
PPC1 Radius 4 Raw Small Radius	88.90	N/A	63.71	N/A	N/A	12.70	MM
PPC1 Radius 4 Raw Large Radius	203.2	N/A	178.0	N/A	N/A	12.70	MM

Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 6-Mar-2007 10:05

Gamma Ray (Jig – Bkg)	159.1	N/A	159.1	N/A	N/A	14.47	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 6-Mar-2007 9:11

EDTC Z-Axis Acceleration	9.810	N/A	9.805	N/A	N/A	N/A	M/S2
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Accelerator-Porosity Tool – Detector Plateau Settings :

Near Detector Plateau Setting 1728 V  
 Far Detector Plateau Setting 2061 V  
 Array Detector Plateau Setting 1968 V

3-D Array Induction Tool – ZAIT-B / Equipment Identification

Primary Equipment:

Rm/SP Bottom Nose AHRM – A  
 3-D Array Induction Sonde AXIS – A 2

Auxiliary Equipment:

3-D Array Induction Tool – ZAIT-B Wellsite Calibration

Electronics Calibration Check – Thru Cal Mag. & Phase

Idx	Phase	Value	Thru Cal Magnitude MM/M	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	1.345		1.456	-174.6		0
	Before	1.345			-170.3		

1	Master	1.336			1.456	-170.2		
	Before	1.342				-165.5		0
2	Master	1.387			1.456	-177.4		
	Before	1.387				-170.7		0
3	Master	3.071			3.352	-176.6		
	Before	3.081				-172.6		0
4	Master	3.051			3.352	-172.3		
	Before	3.073				-167.8		0
5	Master	3.167			3.352	-179.4		
	Before	3.175				-173.0		0
6	Master	2.477			2.680	177.8		
	Before	2.486				-178.1		0
7	Master	2.461			2.680	-177.9		
	Before	2.480				-173.3		0
8	Master	2.559			2.680	175.0		
	Before	2.566				-178.4		0
9	Master	1.623			1.956	-72.00		
	Before	1.648				-68.66		0
10	Master	1.634			1.956	-60.73		
	Before	1.677				-56.78		0
11	Master	1.796			1.956	-72.15		
	Before	1.826				-66.48		0
12	Master	3.239			3.537	-174.8		
	Before	3.240				-170.5		0
13	Master	3.221			3.537	-170.5		
	Before	3.236				-165.8		0
14	Master	3.346			3.537	-177.6		
	Before	3.344				-171.0		0
15	Master	2.606			3.100	-72.38		
	Before	2.648				-69.02		0
16	Master	2.624			3.100	-61.11		
	Before	2.694				-57.16		0
17	Master	2.884			3.100	-72.56		
	Before	2.933				-66.88		0
18	Master	0.8449			0.9359	-174.3		
	Before	0.8455				-170.0		0
19	Master	0.8402			0.9359	-170.0		
	Before	0.8443				-165.3		0
20	Master	0.8631			0.9359	-177.4		
	Before	0.8636				-170.6		0
21	Master	3.452			4.081	-72.91		
	Before	3.512				-69.65		0
22	Master	3.476			4.081	-61.64		
	Before	3.573				-57.79		0

23	Master	3.821			4.081	-73.08		
	Before	3.890				-67.48		0
24	Master	1.224			1.362	-177.2		
	Before	1.228				-173.1		0
25	Master	1.217			1.362	-172.9		
	Before	1.226				-168.4		0
26	Master	1.250			1.362	179.7		
	Before	1.254				-173.8		0
27	Master	3.452			4.081	-72.91		
	Before	3.512				-69.64		0
28	Master	3.476			4.081	-61.64		
	Before	3.573				-57.78		0
29	Master	3.821			4.081	-73.11		
	Before	3.890				-67.50		0
30	Master	1.223			1.362	-177.2		
	Before	1.227				-173.1		0
31	Master	1.216			1.362	-172.9		
	Before	1.225				-168.4		0
32	Master	1.250			1.362	179.7		
	Before	1.253				-173.8		0
33	Master	0.9808			1.220	-76.79		
	Before	0.9989				-73.46		0
34	Master	0.9876			1.220	-65.38		
	Before	1.017				-61.41		0
35	Master	1.071			1.220	-77.45		
	Before	1.092				-71.74		0
36	Master	1.447			1.635	176.7		
	Before	1.453				-179.1		0
37	Master	1.439			1.635	-179.0		
	Before	1.451				-174.5		0
38	Master	1.474			1.635	173.6		
	Before	1.481				-179.9		0
39	Master	1.178			1.464	-76.61		
	Before	1.200				-73.28		0
40	Master	1.186			1.464	-65.22		
	Before	1.221				-61.24		0
41	Master	1.286			1.464	-77.31		
	Before	1.312				-71.58		0
42	Master	2.090			2.353	177.4		
	Before	2.099				-178.5		0
43	Master	2.079			2.353	-178.3		
	Before	2.096				-173.8		0
44	Master	2.129			2.353	174.2		
	Before	2.139				-179.1		0
			60.00 %		140.0 %	Nom -180.0		Nom + 180.0

(Minimum)

(Nominal)

(Maximum)

(Minimum)

(Nominal)

(Maximum)

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Before: 6-Mar-2007 10:03

3-D Array Induction Tool – ZAIT-B Wellsite Calibration						
Electronics Calibration Check – Auxilliary						
Phase	Array Induction SPA Plus V	Value	Phase	Array Induction SPA Zero V	Value	
Master		0.8436	Master		-0.0007702	
Before		0.8439	Before		-0.0008081	
	0.7570 (Minimum)	0.8360 (Nominal)	0.9150 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value	
Master		0.9906	Master		-0.001124	
Before		0.9913	Before		-0.001140	
	0.8800 (Minimum)	0.9798 (Nominal)	1.076 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction CalSig Plus V	Value	Phase	Array Induction CalSig Zero V	Value	
Master		5.015	Master		-0.01105	
Before		5.017	Before		-0.01122	
	4.500 (Minimum)	5.000 (Nominal)	5.500 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction Volt Plus V	Value	Phase	Array Induction Volt Zero V	Value	
Master		5.014	Master		-0.01105	
Before		12.04	Before		-0.02693	
	2.250 (Minimum)	2.500 (Nominal)	2.750 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)

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3-D Array Induction Tool – ZAIT-B Wellsite Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	20.92				5052			
		-2105 (Minimum)	351.3 (Nominal)	2808 (Maximum)		-33300 (Minimum)	0 (Nominal)	33300 (Maximum)
1	754.2				8939			
		-5042 (Minimum)	500.9 (Nominal)	6044 (Maximum)		-37570 (Minimum)	0 (Nominal)	37570 (Maximum)
2	-1325				-103.9			
		-2575 (Minimum)	-1399 (Nominal)	-222.3 (Maximum)		-2478 (Minimum)	0 (Nominal)	2478 (Maximum)
3	33.96				2129			
		-2398 (Minimum)	-112.1 (Nominal)	2174 (Maximum)		-7332 (Minimum)	0 (Nominal)	7332 (Maximum)
4	154.4				830.1			
		-1421 (Minimum)	124.3 (Nominal)	1670 (Maximum)		-6457 (Minimum)	0 (Nominal)	6457 (Maximum)
5	85.67				-295.1			
		-563.7 (Minimum)	64.70 (Nominal)	693.1 (Maximum)		-619.1 (Minimum)	0 (Nominal)	619.1 (Maximum)
6	63.31				700.2			
		-2295 (Minimum)	-206.4 (Nominal)	1882 (Maximum)		-5708 (Minimum)	0 (Nominal)	5708 (Maximum)
7	148.3				567.0			
		-1367 (Minimum)	138.2 (Nominal)	1644 (Maximum)		-2991 (Minimum)	0 (Nominal)	2991 (Maximum)
8	90.72				-25.51			
		-811.7 (Minimum)	141.5 (Nominal)	1095 (Maximum)		-372.1 (Minimum)	0 (Nominal)	372.1 (Maximum)
9	-492.9				-220.7			
		-3068 (Minimum)	-97.15 (Nominal)	2874 (Maximum)		-4300 (Minimum)	0 (Nominal)	4300 (Maximum)
10	18.30				-581.3			
		-798.0 (Minimum)	1.896 (Nominal)	801.8 (Maximum)		-12390 (Minimum)	0 (Nominal)	12390 (Maximum)

	-119.2			994.5		
	-770.9 (Minimum)	23.35 (Nominal)	817.6 (Maximum)	-4594 (Minimum)	0 (Nominal)	4594 (Maximum)
12	-6.887			1033		
	-734.3 (Minimum)	14.37 (Nominal)	763.0 (Maximum)	-11510 (Minimum)	0 (Nominal)	11510 (Maximum)
13	-394.3			-632.1		
	-2770 (Minimum)	-241.5 (Nominal)	2287 (Maximum)	-2410 (Minimum)	0 (Nominal)	2410 (Maximum)
14	65.79			101.5		
	-570.4 (Minimum)	31.47 (Nominal)	633.4 (Maximum)	-4653 (Minimum)	0 (Nominal)	4653 (Maximum)
15	52.97			-554.7		
	-2241 (Minimum)	-108.3 (Nominal)	2024 (Maximum)	-5251 (Minimum)	0 (Nominal)	5251 (Maximum)
16	87.06			-705.2		
	-1029 (Minimum)	43.50 (Nominal)	1116 (Maximum)	-6660 (Minimum)	0 (Nominal)	6660 (Maximum)
17	-85.69			221.6		
	-471.1 (Minimum)	-41.64 (Nominal)	387.8 (Maximum)	-287.3 (Minimum)	0 (Nominal)	287.3 (Maximum)
18	-264.4			-380.3		
	-3236 (Minimum)	-34.30 (Nominal)	3167 (Maximum)	-1971 (Minimum)	0 (Nominal)	1971 (Maximum)
19	2.997			-278.9		
	-508.2 (Minimum)	-31.06 (Nominal)	446.1 (Maximum)	-8843 (Minimum)	0 (Nominal)	8843 (Maximum)
20	-67.21			485.0		
	-990.0 (Minimum)	78.40 (Nominal)	1147 (Maximum)	-2886 (Minimum)	0 (Nominal)	2886 (Maximum)
21	-2.146			513.5		
	-332.1 (Minimum)	27.84 (Nominal)	387.8 (Maximum)	-7605 (Minimum)	0 (Nominal)	7605 (Maximum)
22	-171.0			-557.7		
	-1710 (Minimum)	-171.8 (Nominal)	1367 (Maximum)	-1006 (Minimum)	0 (Nominal)	1006 (Maximum)
23	2.315			48.64		
	-700.5 (Minimum)	-7.184 (Nominal)	686.2 (Maximum)	-2778 (Minimum)	0 (Nominal)	2778 (Maximum)
24	43.68			-300.7		
	-2238 (Minimum)	-131.8 (Nominal)	1975 (Maximum)	-4019 (Minimum)	0 (Nominal)	4019 (Maximum)
25	57.55			-369.9		
	-888.1 (Minimum)	60.98 (Nominal)	1010 (Maximum)	-3802 (Minimum)	0 (Nominal)	3802 (Maximum)
26	-78.64			74.67		
	-568.8 (Minimum)	-98.79 (Nominal)	371.2 (Maximum)	-150.9 (Minimum)	0 (Nominal)	150.9 (Maximum)
27	-324.3			722.8		
	-2660 (Minimum)	-247.8 (Nominal)	2164 (Maximum)	-1619 (Minimum)	0 (Nominal)	1619 (Maximum)
28	6.777			-93.67		
	-311.9 (Minimum)	19.89 (Nominal)	351.7 (Maximum)	-4748 (Minimum)	0 (Nominal)	4748 (Maximum)
29	-20.82			251.6		
	-238.9 (Minimum)	-0.7571 (Nominal)	237.4 (Maximum)	-1927 (Minimum)	0 (Nominal)	1927 (Maximum)
30	11.65			-837.1		
	-263.8 (Minimum)	-8.173 (Nominal)	247.5 (Maximum)	-3768 (Minimum)	0 (Nominal)	3768 (Maximum)
31	-333.3			829.5		
	-1851 (Minimum)	-192.8 (Nominal)	1465 (Maximum)	-1400 (Minimum)	0 (Nominal)	1400 (Maximum)
32	48.80			442.1		
	-186.8 (Minimum)	22.62 (Nominal)	232.0 (Maximum)	-1526 (Minimum)	0 (Nominal)	1526 (Maximum)

	5.421			-174.6		
	-1101 (Minimum)	55.12 (Nominal)	1211 (Maximum)	-3024 (Minimum)	0 (Nominal)	3024 (Maximum)
34	-1.054			-100.0		
	-186.5 (Minimum)	-4.793 (Nominal)	176.9 (Maximum)	-2838 (Minimum)	0 (Nominal)	2838 (Maximum)
35	124.1			-78.95		
	-462.5 (Minimum)	63.86 (Nominal)	590.2 (Maximum)	-107.3 (Minimum)	0 (Nominal)	107.3 (Maximum)
36	-319.1			421.2		
	-1876 (Minimum)	-385.5 (Nominal)	1105 (Maximum)	-902.5 (Minimum)	0 (Nominal)	902.5 (Maximum)
37	6.994			-48.20		
	-239.6 (Minimum)	19.09 (Nominal)	277.8 (Maximum)	-4148 (Minimum)	0 (Nominal)	4148 (Maximum)
38	0.5654			122.2		
	-95.40 (Minimum)	8.103 (Nominal)	111.7 (Maximum)	-1441 (Minimum)	0 (Nominal)	1441 (Maximum)
39	1.085			-417.3		
	-232.3 (Minimum)	-11.60 (Nominal)	209.1 (Maximum)	-3221 (Minimum)	0 (Nominal)	3221 (Maximum)
40	-323.3			470.6		
	-840.1 (Minimum)	-332.1 (Nominal)	175.8 (Maximum)	-790.7 (Minimum)	0 (Nominal)	790.7 (Maximum)
41	15.87			227.7		
	-30.50 (Minimum)	11.77 (Nominal)	54.00 (Maximum)	-881.0 (Minimum)	0 (Nominal)	881.0 (Maximum)
42	-0.8276			-78.56		
	-1086 (Minimum)	50.67 (Nominal)	1188 (Maximum)	-1840 (Minimum)	0 (Nominal)	1840 (Maximum)
43	0.7432			-45.15		
	-199.6 (Minimum)	-7.273 (Nominal)	185.1 (Maximum)	-1624 (Minimum)	0 (Nominal)	1624 (Maximum)
44	47.85			-9.689		
	-1.100 (Minimum)	46.99 (Nominal)	95.10 (Maximum)	-91.40 (Minimum)	0 (Nominal)	91.40 (Maximum)
45	-15.48			2082		
	-173.4 (Minimum)	2.034 (Nominal)	177.5 (Maximum)	-2138 (Minimum)	0 (Nominal)	2138 (Maximum)
46	-9.021			368.4		
	-374.2 (Minimum)	-10.87 (Nominal)	352.5 (Maximum)	-2357 (Minimum)	0 (Nominal)	2357 (Maximum)
47	-31.66			780.9		
	-183.8 (Minimum)	-15.64 (Nominal)	152.5 (Maximum)	-986.0 (Minimum)	0 (Nominal)	986.0 (Maximum)
48	11.94			-416.4		
	-261.9 (Minimum)	2.156 (Nominal)	266.2 (Maximum)	-2252 (Minimum)	0 (Nominal)	2252 (Maximum)
49	-17.19			1985		
	-178.2 (Minimum)	-0.6614 (Nominal)	176.9 (Maximum)	-2148 (Minimum)	0 (Nominal)	2148 (Maximum)
50	18.09			139.9		
	-65.70 (Minimum)	8.816 (Nominal)	83.30 (Maximum)	-626.5 (Minimum)	0 (Nominal)	626.5 (Maximum)
51	5.572			784.0		
	-166.5 (Minimum)	2.130 (Nominal)	170.8 (Maximum)	-1981 (Minimum)	0 (Nominal)	1981 (Maximum)
52	8.875			-98.90		
	-52.80 (Minimum)	3.754 (Nominal)	60.30 (Maximum)	-1243 (Minimum)	0 (Nominal)	1243 (Maximum)
53	59.44			-19.65		
	-235.6 (Minimum)	32.53 (Nominal)	300.6 (Maximum)	-41.10 (Minimum)	0 (Nominal)	41.10 (Maximum)
54	-2.308			1017		
	-95.30 (Minimum)	-9.750 (Nominal)	75.80 (Maximum)	-1088 (Minimum)	0 (Nominal)	1088 (Maximum)

	-1.336			188.6		
	-134.6 (Minimum)	-5.565 (Nominal)	123.5 (Maximum)	-1366 (Minimum)	0 (Nominal)	1366 (Maximum)
56	-1.396			388.1		
	-27.40 (Minimum)	-6.454 (Nominal)	14.50 (Maximum)	-540.6 (Minimum)	0 (Nominal)	540.6 (Maximum)
57	0.9340			-209.3		
	-137.9 (Minimum)	-0.5576 (Nominal)	136.8 (Maximum)	-1274 (Minimum)	0 (Nominal)	1274 (Maximum)
58	1.078			968.0		
	-78.10 (Minimum)	-9.827 (Nominal)	58.50 (Maximum)	-1071 (Minimum)	0 (Nominal)	1071 (Maximum)
59	6.561			72.00		
	-18.10 (Minimum)	5.923 (Nominal)	29.90 (Maximum)	-340.7 (Minimum)	0 (Nominal)	340.7 (Maximum)
60	4.802			391.0		
	-65.40 (Minimum)	0.3248 (Nominal)	66.00 (Maximum)	-1250 (Minimum)	0 (Nominal)	1250 (Maximum)
61	5.034			-48.64		
	-32.10 (Minimum)	3.359 (Nominal)	38.80 (Maximum)	-691.8 (Minimum)	0 (Nominal)	691.8 (Maximum)
62	26.23			2.136		
	-9.800 (Minimum)	27.57 (Nominal)	64.90 (Maximum)	-32.90 (Minimum)	0 (Nominal)	32.90 (Maximum)
63	-2.579			635.4		
	-56.30 (Minimum)	0.6343 (Nominal)	57.60 (Maximum)	-770.3 (Minimum)	0 (Nominal)	770.3 (Maximum)
64	29.50			-951.4		
	-86.20 (Minimum)	-0.04571 (Nominal)	86.10 (Maximum)	-1478 (Minimum)	0 (Nominal)	1478 (Maximum)
65	-15.76			180.9		
	-51.90 (Minimum)	-4.624 (Nominal)	42.60 (Maximum)	-621.1 (Minimum)	0 (Nominal)	621.1 (Maximum)
66	-19.63			918.5		
	-171.8 (Minimum)	-2.056 (Nominal)	167.7 (Maximum)	-1581 (Minimum)	0 (Nominal)	1581 (Maximum)
67	-0.2565			611.6		
	-45.00 (Minimum)	0.1900 (Nominal)	45.40 (Maximum)	-751.4 (Minimum)	0 (Nominal)	751.4 (Maximum)
68	3.726			30.84		
	-42.10 (Minimum)	3.956 (Nominal)	50.00 (Maximum)	-476.3 (Minimum)	0 (Nominal)	476.3 (Maximum)
69	-6.196			286.1		
	-27.40 (Minimum)	0.6414 (Nominal)	28.70 (Maximum)	-517.0 (Minimum)	0 (Nominal)	517.0 (Maximum)
70	-0.5899			-46.72		
	-42.00 (Minimum)	3.171 (Nominal)	48.30 (Maximum)	-935.7 (Minimum)	0 (Nominal)	935.7 (Maximum)
71	22.25			18.34		
	-87.80 (Minimum)	11.76 (Nominal)	111.3 (Maximum)	-62.10 (Minimum)	0 (Nominal)	62.10 (Maximum)
72	0.3745			262.4		
	-24.60 (Minimum)	-2.297 (Nominal)	20.00 (Maximum)	-375.5 (Minimum)	0 (Nominal)	375.5 (Maximum)
73	1.286			-472.1		
	-57.60 (Minimum)	2.100 (Nominal)	61.80 (Maximum)	-1185 (Minimum)	0 (Nominal)	1185 (Maximum)
74	-1.035			86.88		
	-12.70 (Minimum)	-1.704 (Nominal)	9.300 (Maximum)	-356.7 (Minimum)	0 (Nominal)	356.7 (Maximum)
75	-1.570			457.0		
	-78.00 (Minimum)	-3.031 (Nominal)	71.90 (Maximum)	-1247 (Minimum)	0 (Nominal)	1247 (Maximum)
76	2.299			250.6		
	-16.10 (Minimum)	-1.311 (Nominal)	13.50 (Maximum)	-374.3 (Minimum)	0 (Nominal)	374.3 (Maximum)

	1.771			17.22		
	-12.80 (Minimum)	2.693 (Nominal)	18.20 (Maximum)	-321.8 (Minimum)	0 (Nominal)	321.8 (Maximum)
78	0.7233			139.4		
	-11.50 (Minimum)	1.215 (Nominal)	13.90 (Maximum)	-333.1 (Minimum)	0 (Nominal)	333.1 (Maximum)
79	0.7604			-23.30		
	-13.40 (Minimum)	3.431 (Nominal)	20.30 (Maximum)	-581.6 (Minimum)	0 (Nominal)	581.6 (Maximum)
80	10.68			16.27		
	-16.30 (Minimum)	11.00 (Nominal)	38.30 (Maximum)	-39.20 (Minimum)	0 (Nominal)	39.20 (Maximum)
81	-15.45			315.8		
	-67.80 (Minimum)	-6.064 (Nominal)	55.70 (Maximum)	-330.3 (Minimum)	0 (Nominal)	330.3 (Maximum)
82	-8.384			586.9		
	-75.70 (Minimum)	0.09571 (Nominal)	75.90 (Maximum)	-805.0 (Minimum)	0 (Nominal)	805.0 (Maximum)
83	-11.00			112.2		
	-42.90 (Minimum)	-3.401 (Nominal)	36.10 (Maximum)	-191.7 (Minimum)	0 (Nominal)	191.7 (Maximum)
84	13.94			-578.9		
	-56.30 (Minimum)	0.3271 (Nominal)	57.00 (Maximum)	-782.3 (Minimum)	0 (Nominal)	782.3 (Maximum)
85	-15.01			295.3		
	-56.50 (Minimum)	-5.537 (Nominal)	45.40 (Maximum)	-319.1 (Minimum)	0 (Nominal)	319.1 (Maximum)
86	4.540			-83.63		
	-16.30 (Minimum)	0.7314 (Nominal)	17.80 (Maximum)	-149.5 (Minimum)	0 (Nominal)	149.5 (Maximum)
87	-0.8786			7.633		
	-7.600 (Minimum)	-0.1829 (Nominal)	7.200 (Maximum)	-242.5 (Minimum)	0 (Nominal)	242.5 (Maximum)
88	2.126			-185.6		
	-10.50 (Minimum)	0.3700 (Nominal)	11.30 (Maximum)	-214.9 (Minimum)	0 (Nominal)	214.9 (Maximum)
89	3.597			20.93		
	-26.20 (Minimum)	2.383 (Nominal)	30.90 (Maximum)	-116.1 (Minimum)	0 (Nominal)	116.1 (Maximum)
90	-12.18			84.33		
	-30.60 (Minimum)	-9.587 (Nominal)	11.50 (Maximum)	-105.7 (Minimum)	0 (Nominal)	105.7 (Maximum)
91	-2.645			298.5		
	-38.50 (Minimum)	-1.329 (Nominal)	35.80 (Maximum)	-471.2 (Minimum)	0 (Nominal)	471.2 (Maximum)
92	-1.279			55.94		
	-17.00 (Minimum)	-2.254 (Nominal)	12.50 (Maximum)	-118.0 (Minimum)	0 (Nominal)	118.0 (Maximum)
93	2.192			-297.9		
	-27.10 (Minimum)	1.459 (Nominal)	30.00 (Maximum)	-441.4 (Minimum)	0 (Nominal)	441.4 (Maximum)
94	-10.83			74.61		
	-28.40 (Minimum)	-9.228 (Nominal)	10.00 (Maximum)	-100.3 (Minimum)	0 (Nominal)	100.3 (Maximum)
95	1.041			-40.80		
	-11.80 (Minimum)	1.184 (Nominal)	14.20 (Maximum)	-100.9 (Minimum)	0 (Nominal)	100.9 (Maximum)
96	0.9281			3.809		
	-4.600 (Minimum)	0.5421 (Nominal)	5.700 (Maximum)	-141.1 (Minimum)	0 (Nominal)	141.1 (Maximum)
97	0.2935			-91.97		
	-6.400 (Minimum)	0.8419 (Nominal)	8.100 (Maximum)	-179.1 (Minimum)	0 (Nominal)	179.1 (Maximum)
98	3.097			14.05		
	-29.10 (Minimum)	3.875 (Nominal)	36.80 (Maximum)	-42.70 (Minimum)	0 (Nominal)	42.70 (Maximum)



		-41.39		152.7			
		-208.6 (Minimum)	-22.42 (Nominal)	163.7 (Maximum)	-228.8 (Minimum)	0 (Nominal)	228.8 (Maximum)
100	15.87				-416.8		
		-110.1 (Minimum)	6.030 (Nominal)	122.1 (Maximum)	-941.8 (Minimum)	0 (Nominal)	941.8 (Maximum)
101	-6.421				-42.07		
		-40.50 (Minimum)	-1.784 (Nominal)	36.90 (Maximum)	-177.8 (Minimum)	0 (Nominal)	177.8 (Maximum)
102	-11.33				450.4		
		-218.8 (Minimum)	-8.666 (Nominal)	201.5 (Maximum)	-932.5 (Minimum)	0 (Nominal)	932.5 (Maximum)
103	-45.67				156.3		
		-201.5 (Minimum)	-21.74 (Nominal)	158.0 (Maximum)	-189.7 (Minimum)	0 (Nominal)	189.7 (Maximum)
104	-0.1936				-17.73		
		-20.20 (Minimum)	0.1186 (Nominal)	20.50 (Maximum)	-173.1 (Minimum)	0 (Nominal)	173.1 (Maximum)
105	1.150				-3.397		
		-13.60 (Minimum)	1.554 (Nominal)	16.70 (Maximum)	-123.5 (Minimum)	0 (Nominal)	123.5 (Maximum)
106	-1.690				24.17		
		-6.300 (Minimum)	0.1929 (Nominal)	6.600 (Maximum)	-93.30 (Minimum)	0 (Nominal)	93.30 (Maximum)
107	-2.731				55.88		
		-19.70 (Minimum)	-1.369 (Nominal)	17.00 (Maximum)	-145.3 (Minimum)	0 (Nominal)	145.3 (Maximum)
108	-40.59				126.8		
		-61.80 (Minimum)	-39.44 (Nominal)	-17.10 (Maximum)	-174.6 (Minimum)	0 (Nominal)	174.6 (Maximum)
109	3.576				-220.5		
		-28.80 (Minimum)	2.697 (Nominal)	34.20 (Maximum)	-490.4 (Minimum)	0 (Nominal)	490.4 (Maximum)
110	-0.6722				-21.33		
		-11.70 (Minimum)	-1.231 (Nominal)	9.200 (Maximum)	-104.4 (Minimum)	0 (Nominal)	104.4 (Maximum)
111	-3.843				234.5		
		-57.50 (Minimum)	-3.492 (Nominal)	50.50 (Maximum)	-491.5 (Minimum)	0 (Nominal)	491.5 (Maximum)
112	-42.31				128.4		
		-67.40 (Minimum)	-39.27 (Nominal)	-11.10 (Maximum)	-150.1 (Minimum)	0 (Nominal)	150.1 (Maximum)
113	-0.1958				-4.797		
		-10.40 (Minimum)	0.8598 (Nominal)	12.10 (Maximum)	-103.3 (Minimum)	0 (Nominal)	103.3 (Maximum)
114	1.999				-1.614		
		-3.100 (Minimum)	2.525 (Nominal)	8.100 (Maximum)	-66.30 (Minimum)	0 (Nominal)	66.30 (Maximum)
115	-0.4481				14.76		
		-3.200 (Minimum)	0.4010 (Nominal)	4.000 (Maximum)	-66.00 (Minimum)	0 (Nominal)	66.00 (Maximum)
116	2.266				8.951		
		-27.70 (Minimum)	1.505 (Nominal)	30.70 (Maximum)	-57.80 (Minimum)	0 (Nominal)	57.80 (Maximum)

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3-D Array Induction Tool – ZAIT-B Master Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude MM/M	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	1.345		1.456	-174.6		0
1	Master	1.336		1.456	-170.2		0
2	Master	1.387		1.456	-177.4		0
3	Master	3.071		3.352	-176.6		0
4	Master	3.051		3.352	-172.3		0

5	Master	3.167		3.352	-179.4		0
6	Master	2.477		2.680	177.8		0
7	Master	2.461		2.680	-177.9		0
8	Master	2.559		2.680	175.0		0
9	Master	1.623		1.956	-72.00		0
10	Master	1.634		1.956	-60.73		0
11	Master	1.796		1.956	-72.15		0
12	Master	3.239		3.537	-174.8		0
13	Master	3.221		3.537	-170.5		0
14	Master	3.346		3.537	-177.6		0
15	Master	2.606		3.100	-72.38		0
16	Master	2.624		3.100	-61.11		0
17	Master	2.884		3.100	-72.56		0
18	Master	0.8449		0.9359	-174.3		0
19	Master	0.8402		0.9359	-170.0		0
20	Master	0.8631		0.9359	-177.4		0
21	Master	3.452		4.081	-72.91		0
22	Master	3.476		4.081	-61.64		0
23	Master	3.821		4.081	-73.08		0
24	Master	1.224		1.362	-177.2		0
25	Master	1.217		1.362	-172.9		0
26	Master	1.250		1.362	179.7		0
27	Master	3.452		4.081	-72.91		0
28	Master	3.476		4.081	-61.64		0
29	Master	3.821		4.081	-73.11		0
30	Master	1.223		1.362	-177.2		0
31	Master	1.216		1.362	-172.9		0
32	Master	1.250		1.362	179.7		0
33	Master	0.9808		1.220	-76.79		0
34	Master	0.9876		1.220	-65.38		0
35	Master	1.071		1.220	-77.45		0
36	Master	1.447		1.635	176.7		0
37	Master	1.439		1.635	-179.0		0
38	Master	1.474		1.635	173.6		0
39	Master	1.178		1.464	-76.61		0
40	Master	1.186		1.464	-65.22		0
41	Master	1.286		1.464	-77.31		0
42	Master	2.090		2.353	177.4		0
43	Master	2.079		2.353	-178.3		0
44	Master	2.129		2.353	174.2		0
		60.00 % (Minimum)	140.0 % (Nominal)	140.0 % (Maximum)	Nom -180.0 (Minimum)	Nom + 180.0 (Nominal)	(Maximum)

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3-D Array Induction Tool - ZAIT-B Master Calibration					
Electronics Calibration Check - Auxillary					
Phase	Amplitude	SRP Phase	Value	Phase	Amplitude

Phase	Array Induction SPA Plus V	Value	Phase	Array Induction SPA Zero V	Value	
Master		0.8436	Master		-0.0007702	
	0.7570 (Minimum)	0.8360 (Nominal)	0.9150 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value	
Master		0.9906	Master		-0.001124	
	0.8800 (Minimum)	0.9798 (Nominal)	1.076 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction CalSig Plus V	Value	Phase	Array Induction CalSig Zero V	Value	
Master		5.015	Master		-0.01105	
	4.500 (Minimum)	5.000 (Nominal)	5.500 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Phase	Array Induction Volt Plus V	Value	Phase	Array Induction Volt Zero V	Value	
Master	EXCEEDS LIMIT	5.014	Master		-0.01105	
	2.250 (Minimum)	2.500 (Nominal)	2.750 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)






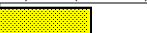






































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3-D Array Induction Tool - ZAIT-B Master Calibration								
Sonde Error Correction								
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	20.92				5052			
		-2105 (Minimum)	351.3 (Nominal)	2808 (Maximum)		-33300 (Minimum)	0 (Nominal)	33300 (Maximum)
1	754.2				8939			
		-5042 (Minimum)	500.9 (Nominal)	6044 (Maximum)		-37570 (Minimum)	0 (Nominal)	37570 (Maximum)
2	-1325				-103.9			
		-2575 (Minimum)	-1399 (Nominal)	-222.3 (Maximum)		-2478 (Minimum)	0 (Nominal)	2478 (Maximum)
3	33.96				2129			
		-2398 (Minimum)	-112.1 (Nominal)	2174 (Maximum)		-7332 (Minimum)	0 (Nominal)	7332 (Maximum)
4	154.4				830.1			
		-1421 (Minimum)	124.3 (Nominal)	1670 (Maximum)		-6457 (Minimum)	0 (Nominal)	6457 (Maximum)
5	85.67				-295.1			
		-563.7 (Minimum)	64.70 (Nominal)	693.1 (Maximum)		-619.1 (Minimum)	0 (Nominal)	619.1 (Maximum)
6	63.31				700.2			
		-2295 (Minimum)	-206.4 (Nominal)	1882 (Maximum)		-5708 (Minimum)	0 (Nominal)	5708 (Maximum)
7	148.3				567.0			
		-1367 (Minimum)	138.2 (Nominal)	1644 (Maximum)		-2991 (Minimum)	0 (Nominal)	2991 (Maximum)
8	90.72				-25.51			
		-811.7 (Minimum)	141.5 (Nominal)	1095 (Maximum)		-372.1 (Minimum)	0 (Nominal)	372.1 (Maximum)
9	-492.9				-220.7			
		-3068 (Minimum)	-97.15 (Nominal)	2874 (Maximum)		-4300 (Minimum)	0 (Nominal)	4300 (Maximum)
10	18.30				-581.3			
		-798.0 (Minimum)	1.896 (Nominal)	801.8 (Maximum)		-12390 (Minimum)	0 (Nominal)	12390 (Maximum)
11	-119.2				994.5			
		-770.9 (Minimum)	23.35 (Nominal)	817.6 (Maximum)		-4594 (Minimum)	0 (Nominal)	4594 (Maximum)
12	-6.887				1033			
		-734.3 (Minimum)	14.37 (Nominal)	763.0 (Maximum)		-11510 (Minimum)	0 (Nominal)	11510 (Maximum)
13	-394.3				-632.1			
		-2770 (Minimum)	-241.5 (Nominal)	2287 (Maximum)		-2410 (Minimum)	0 (Nominal)	2410 (Maximum)
14	65.79				101.5			
		-570.4 (Minimum)	31.47 (Nominal)	633.4 (Maximum)		-4653 (Minimum)	0 (Nominal)	4653 (Maximum)

15	52.97				-554.7			
		-2241 (Minimum)	-108.3 (Nominal)	2024 (Maximum)		-5251 (Minimum)	0 (Nominal)	5251 (Maximum)
16	87.06				-705.2			
		-1029 (Minimum)	43.50 (Nominal)	1116 (Maximum)		-6660 (Minimum)	0 (Nominal)	6660 (Maximum)
17	-85.69				221.6			
		-471.1 (Minimum)	-41.64 (Nominal)	387.8 (Maximum)		-287.3 (Minimum)	0 (Nominal)	287.3 (Maximum)
18	-264.4				-380.3			
		-3236 (Minimum)	-34.30 (Nominal)	3167 (Maximum)		-1971 (Minimum)	0 (Nominal)	1971 (Maximum)
19	2.997				-278.9			
		-508.2 (Minimum)	-31.06 (Nominal)	446.1 (Maximum)		-8843 (Minimum)	0 (Nominal)	8843 (Maximum)
20	-67.21				485.0			
		-990.0 (Minimum)	78.40 (Nominal)	1147 (Maximum)		-2886 (Minimum)	0 (Nominal)	2886 (Maximum)
21	-2.146				513.5			
		-332.1 (Minimum)	27.84 (Nominal)	387.8 (Maximum)		-7605 (Minimum)	0 (Nominal)	7605 (Maximum)
22	-171.0				-557.7			
		-1710 (Minimum)	-171.8 (Nominal)	1367 (Maximum)		-1006 (Minimum)	0 (Nominal)	1006 (Maximum)
23	2.315				48.64			
		-700.5 (Minimum)	-7.184 (Nominal)	686.2 (Maximum)		-2778 (Minimum)	0 (Nominal)	2778 (Maximum)
24	43.68				-300.7			
		-2238 (Minimum)	-131.8 (Nominal)	1975 (Maximum)		-4019 (Minimum)	0 (Nominal)	4019 (Maximum)
25	57.55				-369.9			
		-888.1 (Minimum)	60.98 (Nominal)	1010 (Maximum)		-3802 (Minimum)	0 (Nominal)	3802 (Maximum)
26	-78.64				74.67			
		-568.8 (Minimum)	-98.79 (Nominal)	371.2 (Maximum)		-150.9 (Minimum)	0 (Nominal)	150.9 (Maximum)
27	-324.3				722.8			
		-2660 (Minimum)	-247.8 (Nominal)	2164 (Maximum)		-1619 (Minimum)	0 (Nominal)	1619 (Maximum)
28	6.777				-93.67			
		-311.9 (Minimum)	19.89 (Nominal)	351.7 (Maximum)		-4748 (Minimum)	0 (Nominal)	4748 (Maximum)
29	-20.82				251.6			
		-238.9 (Minimum)	-0.7571 (Nominal)	237.4 (Maximum)		-1927 (Minimum)	0 (Nominal)	1927 (Maximum)
30	11.65				-837.1			
		-263.8 (Minimum)	-8.173 (Nominal)	247.5 (Maximum)		-3768 (Minimum)	0 (Nominal)	3768 (Maximum)
31	-333.3				829.5			
		-1851 (Minimum)	-192.8 (Nominal)	1465 (Maximum)		-1400 (Minimum)	0 (Nominal)	1400 (Maximum)
32	48.80				442.1			
		-186.8 (Minimum)	22.62 (Nominal)	232.0 (Maximum)		-1526 (Minimum)	0 (Nominal)	1526 (Maximum)
33	5.421				-174.6			
		-1101 (Minimum)	55.12 (Nominal)	1211 (Maximum)		-3024 (Minimum)	0 (Nominal)	3024 (Maximum)
34	-1.054				-100.0			
		-186.5 (Minimum)	-4.793 (Nominal)	176.9 (Maximum)		-2838 (Minimum)	0 (Nominal)	2838 (Maximum)
35	124.1				-78.95			
		-462.5 (Minimum)	63.86 (Nominal)	590.2 (Maximum)		-107.3 (Minimum)	0 (Nominal)	107.3 (Maximum)
36	-319.1				421.2			
		-1876 (Minimum)	-385.5 (Nominal)	1105 (Maximum)		-902.5 (Minimum)	0 (Nominal)	902.5 (Maximum)

37	6.994				-48.20			
		-239.6 (Minimum)	19.09 (Nominal)	277.8 (Maximum)		-4148 (Minimum)	0 (Nominal)	4148 (Maximum)
38	0.5654				122.2			
		-95.40 (Minimum)	8.103 (Nominal)	111.7 (Maximum)		-1441 (Minimum)	0 (Nominal)	1441 (Maximum)
39	1.085				-417.3			
		-232.3 (Minimum)	-11.60 (Nominal)	209.1 (Maximum)		-3221 (Minimum)	0 (Nominal)	3221 (Maximum)
40	-323.3				470.6			
		-840.1 (Minimum)	-332.1 (Nominal)	175.8 (Maximum)		-790.7 (Minimum)	0 (Nominal)	790.7 (Maximum)
41	15.87				227.7			
		-30.50 (Minimum)	11.77 (Nominal)	54.00 (Maximum)		-881.0 (Minimum)	0 (Nominal)	881.0 (Maximum)
42	-0.8276				-78.56			
		-1086 (Minimum)	50.67 (Nominal)	1188 (Maximum)		-1840 (Minimum)	0 (Nominal)	1840 (Maximum)
43	0.7432				-45.15			
		-199.6 (Minimum)	-7.273 (Nominal)	185.1 (Maximum)		-1624 (Minimum)	0 (Nominal)	1624 (Maximum)
44	47.85				-9.689			
		-1.100 (Minimum)	46.99 (Nominal)	95.10 (Maximum)		-91.40 (Minimum)	0 (Nominal)	91.40 (Maximum)
45	-15.48				2082			
		-173.4 (Minimum)	2.034 (Nominal)	177.5 (Maximum)		-2138 (Minimum)	0 (Nominal)	2138 (Maximum)
46	-9.021				368.4			
		-374.2 (Minimum)	-10.87 (Nominal)	352.5 (Maximum)		-2357 (Minimum)	0 (Nominal)	2357 (Maximum)
47	-31.66				780.9			
		-183.8 (Minimum)	-15.64 (Nominal)	152.5 (Maximum)		-986.0 (Minimum)	0 (Nominal)	986.0 (Maximum)
48	11.94				-416.4			
		-261.9 (Minimum)	2.156 (Nominal)	266.2 (Maximum)		-2252 (Minimum)	0 (Nominal)	2252 (Maximum)
49	-17.19				1985			
		-178.2 (Minimum)	-0.6614 (Nominal)	176.9 (Maximum)		-2148 (Minimum)	0 (Nominal)	2148 (Maximum)
50	18.09				139.9			
		-65.70 (Minimum)	8.816 (Nominal)	83.30 (Maximum)		-626.5 (Minimum)	0 (Nominal)	626.5 (Maximum)
51	5.572				784.0			
		-166.5 (Minimum)	2.130 (Nominal)	170.8 (Maximum)		-1981 (Minimum)	0 (Nominal)	1981 (Maximum)
52	8.875				-98.90			
		-52.80 (Minimum)	3.754 (Nominal)	60.30 (Maximum)		-1243 (Minimum)	0 (Nominal)	1243 (Maximum)
53	59.44				-19.65			
		-235.6 (Minimum)	32.53 (Nominal)	300.6 (Maximum)		-41.10 (Minimum)	0 (Nominal)	41.10 (Maximum)
54	-2.308				1017			
		-95.30 (Minimum)	-9.750 (Nominal)	75.80 (Maximum)		-1088 (Minimum)	0 (Nominal)	1088 (Maximum)
55	-1.336				188.6			
		-134.6 (Minimum)	-5.565 (Nominal)	123.5 (Maximum)		-1366 (Minimum)	0 (Nominal)	1366 (Maximum)
56	-1.396				388.1			
		-27.40 (Minimum)	-6.454 (Nominal)	14.50 (Maximum)		-540.6 (Minimum)	0 (Nominal)	540.6 (Maximum)
57	0.9340				-209.3			
		-137.9 (Minimum)	-0.5576 (Nominal)	136.8 (Maximum)		-1274 (Minimum)	0 (Nominal)	1274 (Maximum)
58	1.078				968.0			
		-78.10 (Minimum)	-9.827 (Nominal)	58.50 (Maximum)		-1071 (Minimum)	0 (Nominal)	1071 (Maximum)

59	6.561				72.00				
		-18.10 (Minimum)	5.923 (Nominal)	29.90 (Maximum)			-340.7 (Minimum)	0 (Nominal)	340.7 (Maximum)
60	4.802				391.0				
		-65.40 (Minimum)	0.3248 (Nominal)	66.00 (Maximum)			-1250 (Minimum)	0 (Nominal)	1250 (Maximum)
61	5.034				-48.64				
		-32.10 (Minimum)	3.359 (Nominal)	38.80 (Maximum)			-691.8 (Minimum)	0 (Nominal)	691.8 (Maximum)
62	26.23				2.136				
		-9.800 (Minimum)	27.57 (Nominal)	64.90 (Maximum)			-32.90 (Minimum)	0 (Nominal)	32.90 (Maximum)
63	-2.579				635.4				
		-56.30 (Minimum)	0.6343 (Nominal)	57.60 (Maximum)			-770.3 (Minimum)	0 (Nominal)	770.3 (Maximum)
64	29.50				-951.4				
		-86.20 (Minimum)	-0.04571 (Nominal)	86.10 (Maximum)			-1478 (Minimum)	0 (Nominal)	1478 (Maximum)
65	-15.76				180.9				
		-51.90 (Minimum)	-4.624 (Nominal)	42.60 (Maximum)			-621.1 (Minimum)	0 (Nominal)	621.1 (Maximum)
66	-19.63				918.5				
		-171.8 (Minimum)	-2.056 (Nominal)	167.7 (Maximum)			-1581 (Minimum)	0 (Nominal)	1581 (Maximum)
67	-0.2565				611.6				
		-45.00 (Minimum)	0.1900 (Nominal)	45.40 (Maximum)			-751.4 (Minimum)	0 (Nominal)	751.4 (Maximum)
68	3.726				30.84				
		-42.10 (Minimum)	3.956 (Nominal)	50.00 (Maximum)			-476.3 (Minimum)	0 (Nominal)	476.3 (Maximum)
69	-6.196				286.1				
		-27.40 (Minimum)	0.6414 (Nominal)	28.70 (Maximum)			-517.0 (Minimum)	0 (Nominal)	517.0 (Maximum)
70	-0.5899				-46.72				
		-42.00 (Minimum)	3.171 (Nominal)	48.30 (Maximum)			-935.7 (Minimum)	0 (Nominal)	935.7 (Maximum)
71	22.25				18.34				
		-87.80 (Minimum)	11.76 (Nominal)	111.3 (Maximum)			-62.10 (Minimum)	0 (Nominal)	62.10 (Maximum)
72	0.3745				262.4				
		-24.60 (Minimum)	-2.297 (Nominal)	20.00 (Maximum)			-375.5 (Minimum)	0 (Nominal)	375.5 (Maximum)
73	1.286				-472.1				
		-57.60 (Minimum)	2.100 (Nominal)	61.80 (Maximum)			-1185 (Minimum)	0 (Nominal)	1185 (Maximum)
74	-1.035				86.88				
		-12.70 (Minimum)	-1.704 (Nominal)	9.300 (Maximum)			-356.7 (Minimum)	0 (Nominal)	356.7 (Maximum)
75	-1.570				457.0				
		-78.00 (Minimum)	-3.031 (Nominal)	71.90 (Maximum)			-1247 (Minimum)	0 (Nominal)	1247 (Maximum)
76	2.299				250.6				
		-16.10 (Minimum)	-1.311 (Nominal)	13.50 (Maximum)			-374.3 (Minimum)	0 (Nominal)	374.3 (Maximum)
77	1.771				17.22				
		-12.80 (Minimum)	2.693 (Nominal)	18.20 (Maximum)			-321.8 (Minimum)	0 (Nominal)	321.8 (Maximum)
78	0.7233				139.4				
		-11.50 (Minimum)	1.215 (Nominal)	13.90 (Maximum)			-333.1 (Minimum)	0 (Nominal)	333.1 (Maximum)
79	0.7604				-23.30				
		-13.40 (Minimum)	3.431 (Nominal)	20.30 (Maximum)			-581.6 (Minimum)	0 (Nominal)	581.6 (Maximum)
80	10.68				16.27				
		-16.30 (Minimum)	11.00 (Nominal)	38.30 (Maximum)			-39.20 (Minimum)	0 (Nominal)	39.20 (Maximum)

81	-15.45			315.8		
	-67.80 (Minimum)	-6.064 (Nominal)	55.70 (Maximum)	-330.3 (Minimum)	0 (Nominal)	330.3 (Maximum)
82	-8.384			586.9		
	-75.70 (Minimum)	0.09571 (Nominal)	75.90 (Maximum)	-805.0 (Minimum)	0 (Nominal)	805.0 (Maximum)
83	-11.00			112.2		
	-42.90 (Minimum)	-3.401 (Nominal)	36.10 (Maximum)	-191.7 (Minimum)	0 (Nominal)	191.7 (Maximum)
84	13.94			-578.9		
	-56.30 (Minimum)	0.3271 (Nominal)	57.00 (Maximum)	-782.3 (Minimum)	0 (Nominal)	782.3 (Maximum)
85	-15.01			295.3		
	-56.50 (Minimum)	-5.537 (Nominal)	45.40 (Maximum)	-319.1 (Minimum)	0 (Nominal)	319.1 (Maximum)
86	4.540			-83.63		
	-16.30 (Minimum)	0.7314 (Nominal)	17.80 (Maximum)	-149.5 (Minimum)	0 (Nominal)	149.5 (Maximum)
87	-0.8786			7.633		
	-7.600 (Minimum)	-0.1829 (Nominal)	7.200 (Maximum)	-242.5 (Minimum)	0 (Nominal)	242.5 (Maximum)
88	2.126			-185.6		
	-10.50 (Minimum)	0.3700 (Nominal)	11.30 (Maximum)	-214.9 (Minimum)	0 (Nominal)	214.9 (Maximum)
89	3.597			20.93		
	-26.20 (Minimum)	2.383 (Nominal)	30.90 (Maximum)	-116.1 (Minimum)	0 (Nominal)	116.1 (Maximum)
90	-12.18			84.33		
	-30.60 (Minimum)	-9.587 (Nominal)	11.50 (Maximum)	-105.7 (Minimum)	0 (Nominal)	105.7 (Maximum)
91	-2.645			298.5		
	-38.50 (Minimum)	-1.329 (Nominal)	35.80 (Maximum)	-471.2 (Minimum)	0 (Nominal)	471.2 (Maximum)
92	-1.279			55.94		
	-17.00 (Minimum)	-2.254 (Nominal)	12.50 (Maximum)	-118.0 (Minimum)	0 (Nominal)	118.0 (Maximum)
93	2.192			-297.9		
	-27.10 (Minimum)	1.459 (Nominal)	30.00 (Maximum)	-441.4 (Minimum)	0 (Nominal)	441.4 (Maximum)
94	-10.83			74.61		
	-28.40 (Minimum)	-9.228 (Nominal)	10.00 (Maximum)	-100.3 (Minimum)	0 (Nominal)	100.3 (Maximum)
95	1.041			-40.80		
	-11.80 (Minimum)	1.184 (Nominal)	14.20 (Maximum)	-100.9 (Minimum)	0 (Nominal)	100.9 (Maximum)
96	0.9281			3.809		
	-4.600 (Minimum)	0.5421 (Nominal)	5.700 (Maximum)	-141.1 (Minimum)	0 (Nominal)	141.1 (Maximum)
97	0.2935			-91.97		
	-6.400 (Minimum)	0.8419 (Nominal)	8.100 (Maximum)	-179.1 (Minimum)	0 (Nominal)	179.1 (Maximum)
98	3.097			14.05		
	-29.10 (Minimum)	3.875 (Nominal)	36.80 (Maximum)	-42.70 (Minimum)	0 (Nominal)	42.70 (Maximum)
99	-41.39			152.7		
	-208.6 (Minimum)	-22.42 (Nominal)	163.7 (Maximum)	-228.8 (Minimum)	0 (Nominal)	228.8 (Maximum)
100	15.87			-416.8		
	-110.1 (Minimum)	6.030 (Nominal)	122.1 (Maximum)	-941.8 (Minimum)	0 (Nominal)	941.8 (Maximum)
101	-6.421			-42.07		
	-40.50 (Minimum)	-1.784 (Nominal)	36.90 (Maximum)	-177.8 (Minimum)	0 (Nominal)	177.8 (Maximum)
102	-11.33			450.4		
	-218.8 (Minimum)	-8.666 (Nominal)	201.5 (Maximum)	-932.5 (Minimum)	0 (Nominal)	932.5 (Maximum)

103	-45.67			156.3			
	-201.5 (Minimum)	-21.74 (Nominal)	158.0 (Maximum)	-189.7 (Minimum)	0 (Nominal)	189.7 (Maximum)	
104	-0.1936			-17.73			
	-20.20 (Minimum)	0.1186 (Nominal)	20.50 (Maximum)	-173.1 (Minimum)	0 (Nominal)	173.1 (Maximum)	
105	1.150			-3.397			
	-13.60 (Minimum)	1.554 (Nominal)	16.70 (Maximum)	-123.5 (Minimum)	0 (Nominal)	123.5 (Maximum)	
106	-1.690			24.17			
	-6.300 (Minimum)	0.1929 (Nominal)	6.600 (Maximum)	-93.30 (Minimum)	0 (Nominal)	93.30 (Maximum)	
107	-2.731			55.88			
	-19.70 (Minimum)	-1.369 (Nominal)	17.00 (Maximum)	-145.3 (Minimum)	0 (Nominal)	145.3 (Maximum)	
108	-40.59			126.8			
	-61.80 (Minimum)	-39.44 (Nominal)	-17.10 (Maximum)	-174.6 (Minimum)	0 (Nominal)	174.6 (Maximum)	
109	3.576			-220.5			
	-28.80 (Minimum)	2.697 (Nominal)	34.20 (Maximum)	-490.4 (Minimum)	0 (Nominal)	490.4 (Maximum)	
110	-0.6722			-21.33			
	-11.70 (Minimum)	-1.231 (Nominal)	9.200 (Maximum)	-104.4 (Minimum)	0 (Nominal)	104.4 (Maximum)	
111	-3.843			234.5			
	-57.50 (Minimum)	-3.492 (Nominal)	50.50 (Maximum)	-491.5 (Minimum)	0 (Nominal)	491.5 (Maximum)	
112	-42.31			128.4			
	-67.40 (Minimum)	-39.27 (Nominal)	-11.10 (Maximum)	-150.1 (Minimum)	0 (Nominal)	150.1 (Maximum)	
113	-0.1958			-4.797			
	-10.40 (Minimum)	0.8598 (Nominal)	12.10 (Maximum)	-103.3 (Minimum)	0 (Nominal)	103.3 (Maximum)	
114	1.999			-1.614			
	-3.100 (Minimum)	2.525 (Nominal)	8.100 (Maximum)	-66.30 (Minimum)	0 (Nominal)	66.30 (Maximum)	
115	-0.4481			14.76			
	-3.200 (Minimum)	0.4010 (Nominal)	4.000 (Maximum)	-66.00 (Minimum)	0 (Nominal)	66.00 (Maximum)	
116	2.266			8.951			
	-27.70 (Minimum)	1.505 (Nominal)	30.70 (Maximum)	-57.80 (Minimum)	0 (Nominal)	57.80 (Maximum)	

Master: 29-Jan-2007 15:32

### Powered Positioning Device/Caliper 2 / Equipment Identification

**Primary Equipment:**

PPC Powered Positioning Device/Caliper  
PPC2 Caliper 40 Extension

PPC2 - B  
PPC\_ -

**Auxiliary Equipment:**

Powered Positioning Device/Caliper 2 Wellsite Calibration						
PPC2 Caliper Calibration						
Phase	PC2 Radius 1 Raw Small Radius MM	Value	Phase	PC2 Radius 1 Raw Large Radius MM	Value	
Before		139.6	Before		245.1	
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC2 Radius 2 Raw Small Radius MM	Value	Phase	PC2 Radius 2 Raw Large Radius MM	Value	
Before		59.05	Before		169.2	
	30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC2 Radius 3 Raw Small Radius MM	Value	Phase	PC2 Radius 3 Raw Large Radius MM	Value	
Before		135.0	Before		242.2	



30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PC2 Radius 4 Raw Small Radius	MM	Phase	PC2 Radius 4 Raw Large Radius	MM
Before		75.27	Before		186.6
30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)

Before: 5-Mar-2007 19:34

### Accelerator-Porosity Tool / Equipment Identification

#### Primary Equipment:

Accelerator-Porosity Sonde	APS - C	218	218
APS Minitron	MNTR - F	5329	5890

#### Auxiliary Equipment:

Accelerator-Porosity Housing	APH - AC	121	121
APS Calibration Water Tank	SFT - 178	53	53
APS Aluminum Calibrator Sleeve	SFT - 281	12673	12673

### Accelerator-Porosity Tool Wellsite Calibration

#### Detector Background

Phase	Near Det Bkg Cntrate	CPS	Value	Phase	Far Det Bkg Cntrate	CPS	Value	Phase	Array-1 Det Bkg Cntrate	CPS	Value
Master			26.50	Master			25.93	Master			26.01
Before			25.71	Before			25.16	Before			25.06
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)	
Phase	Array-2 Det Bkg Cntrate	CPS	Value	Phase	Array Therm Det Bkg Cntrate	CPS	Value				
Master			26.06	Master			25.75				
Before			25.75	Before			25.43				
1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)		1.000 (Minimum)	30.00 (Nominal)	50.00 (Maximum)					

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Before: 5-Mar-2007 14:09

### Accelerator-Porosity Tool Wellsite Calibration

#### Calibration Ratios

Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.9971	Master		1.039	Master		1.011
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)	0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)	0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

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### Accelerator-Porosity Tool Wellsite Calibration

#### Tank Check

Phase	Array-1 Standoff Porosity	V/V	Value	Phase	Array-2 Standoff Porosity	V/V	Value	Phase	Average Slowing Down Time	US	Value
Master			0.1109	Master			0.1131	Master			5.901
0.09900 (Minimum)	0.1175 (Nominal)	0.1360 (Maximum)		0.09900 (Minimum)	0.1175 (Nominal)	0.1360 (Maximum)		5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)	
Phase	Array-1 SDT Ratio Up/Down	Value	Phase	Array-2 SDT Ratio Up/Down	Value	Phase	Sigma Formation M-1	Value			
Master		0.9697	Master		0.9845	Master		2.723			
0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	2.000 (Minimum)	2.750 (Nominal)	3.500 (Maximum)			

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### Accelerator-Porosity Tool Master Calibration

#### Detector Calibration

Phase	Near/Far Calibration Ratio	Value	Phase	Near/Array Calibration Ratio	Value	Phase	Near/Array Cal Ratio Up/Down	Value
Master		0.9971	Master		1.039	Master		1.011
0.8000 (Minimum)	0.9250 (Nominal)	1.050 (Maximum)	0.9000 (Minimum)	1.030 (Nominal)	1.170 (Maximum)	0.9700 (Minimum)	1.000 (Nominal)	1.030 (Maximum)

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### Accelerator-Porosity Tool Master Calibration

#### Tank Check

Phase	Array-1 Standoff Porosity	V/V	Value	Phase	Array-2 Standoff Porosity	V/V	Value	Phase	Average Slowing Down Time	US	Value
Master			0.1109	Master			0.1131	Master			5.901

Master	0.09900 (Minimum)	0.1175 (Nominal)	0.1360 (Maximum)	0.1109	Master	0.09900 (Minimum)	0.1175 (Nominal)	0.1360 (Maximum)	0.1131	Master	5.500 (Minimum)	6.000 (Nominal)	6.250 (Maximum)	5.901
Phase	Array-1 SDT Ratio Up/Down		Value	Phase	Array-2 SDT Ratio Up/Down		Value	Phase	Sigma Formation M-1		Value			
Master			0.9697	Master			0.9845	Master			2.723			
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		2.000 (Minimum)	2.750 (Nominal)	3.500 (Maximum)			

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### High Resolution Laterolog Array - B / Equipment Identification

Primary Equipment:

HRLT Sonde

HRLS - B

Auxiliary Equipment:

HRLT lower Housing

HRLH - B

HRLT Lower Cartridge

HRLC - B

HRLT upper Housing

HRUH - B

HRLT Upper Cartridge

HRUC - B

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT M01						
Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-317.8	-322.7	-280.7	-379.7
1	Before		-325.7	-322.7	-280.7	-379.7
2	Before		-320.0	-322.7	-280.7	-379.7
3	Before		-326.9	-322.7	-280.7	-379.7
4	Before		-316.2	-322.7	-280.7	-379.7
5	Before		-320.8	-322.7	-280.7	-379.7
6	Before		347.6	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array - B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1751	1781	2095	1549
1	Before		1806	1781	2095	1549
2	Before		1766	1781	2095	1549
3	Before		1801	1781	2095	1549
4	Before		1740	1781	2095	1549
5	Before		1765	1781	2095	1549
6	Before		-1936	-1781	-1549	-2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array - B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1735	1781	2095	1549
1	Before		1799	1781	2095	1549
2	Before		1761	1781	2095	1549
3	Before		1801	1781	2095	1549

4	Before		1734	1781	2095	1549
5	Before		1760	1781	2095	1549
6	Before		-1916	-1781	-1549	-2095
7	Before		1781	1781	2095	1549
(Minimum)                      (Nominal)                      (Maximum)						

Before: 6-Mar-2007 11:09

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68490	70000	82360	60900
1	Before		70610	70000	82360	60900
2	Before		69450	70000	82360	60900
3	Before		71320	70000	82360	60900
4	Before		68690	70000	82360	60900
5	Before		69780	70000	82360	60900
6	Before		-74180	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum)                      (Nominal)                      (Maximum)						

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68340	70000	82360	60900
1	Before		71060	70000	82360	60900
2	Before		69750	70000	82360	60900
3	Before		71490	70000	82360	60900
4	Before		68650	70000	82360	60900
5	Before		69660	70000	82360	60900
6	Before		-74690	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum)                      (Nominal)                      (Maximum)						

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68470	70000	82360	60900
1	Before		70830	70000	82360	60900
2	Before		69620	70000	82360	60900
3	Before		71420	70000	82360	60900
4	Before		68720	70000	82360	60900
5	Before		69750	70000	82360	60900
6	Before		-74430	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum)                      (Nominal)                      (Maximum)						

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High Resolution Laterolog Array – B Wellsite Calibration

HRLT VTP

Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68030	-70000	-60900	-82360
1	Before		-70740	-70000	-60900	-82360
2	Before		-69510	-70000	-60900	-82360
3	Before		-71360	-70000	-60900	-82360
4	Before		-68680	-70000	-60900	-82360
5	Before		-69760	-70000	-60900	-82360
6	Before		74270	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
			(Minimum)	(Nominal)	(Maximum)	

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High Resolution Laterolog Array – B Wellsite Calibration

HRLT VBD

Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68090	-70000	-60900	-82360
1	Before		-70940	-70000	-60900	-82360
2	Before		-69700	-70000	-60900	-82360
3	Before		-71520	-70000	-60900	-82360
4	Before		-68780	-70000	-60900	-82360
5	Before		-69820	-70000	-60900	-82360
6	Before		74500	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
			(Minimum)	(Nominal)	(Maximum)	

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High Resolution Laterolog Array – B Wellsite Calibration

HRLT ISO

Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.5	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
			(Minimum)	(Nominal)	(Maximum)	

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High Resolution Laterolog Array – B Wellsite Calibration

HRLT MV

Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.2	-322.7	-280.7	-379.7
1	Before		-321.5	-322.7	-280.7	-379.7
2	Before		-314.6	-322.7	-280.7	-379.7
3	Before		-319.6	-322.7	-280.7	-379.7
4	Before		-306.4	-322.7	-280.7	-379.7

5	Before		-325.7	-322.7	-280.7	-379.7
6	Before		356.3	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				

Before: 6-Mar-2007 11:09

Environment Measurement Sonde / Equipment Identification			
Primary Equipment:			
EMS Mechanical	EMM - B	8102	8102
EMS Cartridge	EMC - B	8035	8035
EMS Adaptor	EMA - B	8018	8018
Resistivity Meter	RES -		
Auxiliary Equipment:			
Electronics Cartridge Housing	ECH - KH	8045	8045

Environment Measurement Sonde Wellsite Calibration					
EMS Caliper Calibration					
Phase	Radius 1 Short Radius MM	Value	Phase	Radius 1 Long Radius MM	Value
Before		99.22	Before		159.4
	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)			127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)	
Phase	Radius 2 Short Radius MM	Value	Phase	Radius 2 Long Radius MM	Value
Before		165.6	Before		104.3
	127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)			76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	
Phase	Radius 3 Short Radius MM	Value	Phase	Radius 3 Long Radius MM	Value
Before		94.45	Before		156.2
	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)			127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)	
Phase	Radius 4 Short Radius MM	Value	Phase	Radius 4 Long Radius MM	Value
Before		161.6	Before		101.9
	127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)			76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	
Phase	Radius 5 Short Radius MM	Value	Phase	Radius 5 Long Radius MM	Value
Before		95.89	Before		154.5
	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)			127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)	
Phase	Radius 6 Short Radius MM	Value	Phase	Radius 6 Long Radius MM	Value
Before		156.3	Before		95.78
	127.0 (Minimum) 152.4 (Nominal) 177.8 (Maximum)			76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	



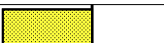





Before: 5-Mar-2007 14:59

General Purpose Inclinometer / Equipment Identification	
Primary Equipment:	
GPIT Cartridge - C	GPIC - C
Auxiliary Equipment:	
GPIT Housing	GPIH - B

Powered Positioning Device/Caliper 1 / Equipment Identification	
Primary Equipment:	
PPC Powered Positioning Device/Caliper	PPC1 - B
PPC1 Caliper 40 Extension	PPC_ -
Auxiliary Equipment:	

Powered Positioning Device/Caliper 1 Wellsite Calibration

PPC1 Caliper Calibration

Phase	PC1 Radius 1 Raw Small Radius MM	Value	Phase	PC1 Radius 1 Raw Large Radius MM	Value
Before		137.5	Before		244.4
	30.48 (Minimum)			154.9 (Minimum)	
	88.90 (Nominal)			203.2 (Nominal)	
	142.2 (Maximum)			246.4 (Maximum)	
Phase	PC1 Radius 2 Raw Small Radius MM	Value	Phase	PC1 Radius 2 Raw Large Radius MM	Value
Before		55.65	Before		168.8
	30.48 (Minimum)			154.9 (Minimum)	
	88.90 (Nominal)			203.2 (Nominal)	
	142.2 (Maximum)			246.4 (Maximum)	
Phase	PC1 Radius 3 Raw Small Radius MM	Value	Phase	PC1 Radius 3 Raw Large Radius MM	Value
Before		136.3	Before		244.0
	30.48 (Minimum)			154.9 (Minimum)	
	88.90 (Nominal)			203.2 (Nominal)	
	142.2 (Maximum)			246.4 (Maximum)	
Phase	PC1 Radius 4 Raw Small Radius MM	Value	Phase	PC1 Radius 4 Raw Large Radius MM	Value
Before		63.71	Before		178.0
	30.48 (Minimum)			154.9 (Minimum)	
	88.90 (Nominal)			203.2 (Nominal)	
	142.2 (Maximum)			246.4 (Maximum)	

Before: 6-Mar-2007 4:43




Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:  
Enhanced DTS Cartridge EDTC - B

Auxiliary Equipment:  
EDTC Housing EDTH - B

Enhanced DTS Cartridge Wellsite Calibration


Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before		5.155	Before		159.1	Before		165.0
	0 (Minimum)			144.7 (Minimum)			150.0 (Minimum)	
	30.00 (Nominal)			159.1 (Nominal)			165.0 (Nominal)	
	120.0 (Maximum)			173.6 (Maximum)			180.0 (Maximum)	

Before: 6-Mar-2007 10:05

Enhanced DTS Cartridge Wellsite Calibration

EDTC Accelerometer Calibration

Phase	EDTC Z-Axis Acceleration M/S2	Value
Before		9.805
	9.610 (Minimum)	
	9.810 (Nominal)	
	10.01 (Maximum)	

Before: 6-Mar-2007 9:11

Company: **JOGMEC**

**Schlumberger**

Well: **AURORA/JOGMEC/NRCAN MALLIK 2L-38**

Field: **MALLIK**

Province: **NWT**

CEMENT VOLUME LOG

