**COMPANY: SANTOS / MAGELLAN**

**WELL: WEST MEREENIE # 13**

**FIELD: WEST MEREENIE**

**RIG: EWS W/O COUNTRY: AUSTRALIA**

RIG: EWS W/O
Field: WEST MEREENIE
Location: BLOCK NT OL-4
Well: WEST MEREENIE # 13
Company: SANTOS / MAGELLAN

**Schlumberger**

## PLATFORM EXPRESS (AITH)
## RUN #2, SUITE #2
## SCALE 1:500

LOCATION
BLOCK NT OL-4

Elev.: R.T. 770.5 M
G.L. 764.8 M
D.F. 770.5 M

| | | | |
|---|---|---|---|
| Permanent Datum: | GROUND LEVEL | Elev.: 764.8 M | |
| Log Measured From: | RT | 5.7 M | above Perm. Datum |
| Drilling Measured From: | RT | | |

| STATE: | Max. Well Deviation | Longitude | Latitude |
|---|---|---|---|
| NTH. TERRITOTY | | 131 28' 39.17"E | 23 57' 24.30"S |

| | | | | | | |
|---|---|---|---|---|---|---|
| Logging Date | | 4-DEC-1997 | | | | |
| Run Number | | 2 | | | | |
| Depth Driller | | 1605 M | | | | |
| Schlumberger Depth | | 1603 M | | | | |
| Bottom Log Interval | | 1600.5 M | | | | |
| Top Log Interval | | 1496.7 M | | | | |
| Casing Driller Size @ Depth | | 8.625 IN | @ 1506 M | | @ | |
| Casing Schlumberger | | 1496.7 M | | | | |
| Bit Size | | 7.625 IN | | | | |
| Type Fluid In Hole | | Crude oil | | | | |
| MUD Density | Viscosity | | | | | |
| Fluid Loss | PH | | | | | |
| Source Of Sample | | N/A | | | | |
| RM @ Measured Temperature | | | @ | | @ | |
| RMF @ Measured Temperature | | | @ | | @ | |
| RMC @ Measured Temperature | | | @ | | @ | |
| Source RMF | RMC | N/A | N/A | | | |
| RM @ MRT | RMF @ MRT | @ 62 | @ 62 | @ | @ | |
| Maximum Recorded Temperatures | | 62 DEGC | 62 | | | |
| Circulation Stopped | Time | 4-DEC-1997 | 10:00 | | | |
| Logger On Bottom | Time | 4-DEC-1997 | 14:18 | | | |
| Unit Number | Location | 3140 | QEA | | | |
| Recorded By | | KAMALUDDIN JANSEN | | | | |
| Witnessed By | | I.FENDLEY | | | | |

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

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS. AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

OTHER SERVICES1
OS1: NONE

OTHER SERVICES2
OS1:

OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1

* Log correlated to Platform Express run #1, suite #2 dated 23-Nov-1997
* AITH failed during the above logging suite (23-Nov-97), re-run to acquire AITH
. data only. HGNS and HRMS run with AITH to provide GR and caliper reading. No
. nuclear data presented.
* HGNS run without bowspring. AITH run with 0.5" standoffs as per tool sketch.
* Mud sample not available, no measurement taken
* Well drilled to TD on 16-Oct-1997, and was completed barefoot in the open hole
. section.
*
*
*
*
*

OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 2

RUN 1

SERVICE ORDER #:
PROGRAM VERSION: 8C0-609
FLUID LEVEL:

| LOGGED INTERVAL | START | STOP |
|---|---|---|
| | | |

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

| LOGGED INTERVAL | START | STOP |
|---|---|---|
| | | |

# EQUIPMENT DESCRIPTION

## RUN 1

### SURFACE EQUIPMENT

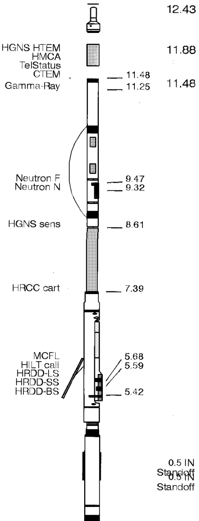
TCM-AB
GSR-U/Y
NCT-B
CNB-AB
NCS-VB

### DOWNHOLE EQUIPMENT

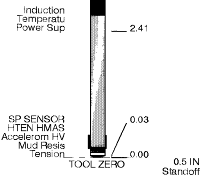
**PEH-A**
PEH-A

**AH-64**
AH-64

**HILTB-CTS**
HGNSC-B
HMCA
TCC-B
HGNS-H 856
NLS-KL
NSR-F
HACCZ
HCNT
HGR
HRCC-B 868
HRMS-B 861
HRGD 788
GLS-VJ 5684
MCFL Device
HILT Nucl. LS
HILT Nucl. SS
HILT Nucl. BS
AIT-H
AHIS-BA 256
BOW-SPR
NPV-N



## RUN 2



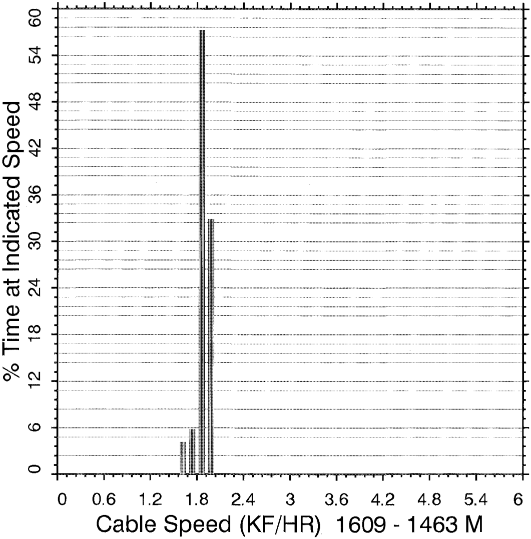
MAXIMUM STRING DIAMETER 4.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Schlumberger

**MAIN LOG**

MAXIS 500 Field Log

Sequence # 045 (Dec 04 14:49:23 1997)



## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .045 | FN:33 | FIELD | 04-Dec-1997 14:32 | 1609.3 M | 1463.1 M |

## Output DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .051 | FN:39 | FIELD | 04-Dec-1997 16:04 | 1609.3 M | 1481.2 M |

## OP System Version: 8C0-609

MCM

HILTB-CTS APCW-97Q2

PIP SUMMARY

▮ Time Mark Every 60 S

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

H. Res. Invaded Zone Resistivity (RXO8)
0.2 (OHMM) 2000

▨ Undergauge From HCAL to BS

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

Caliper (HCAL)
6 (IN) 16

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

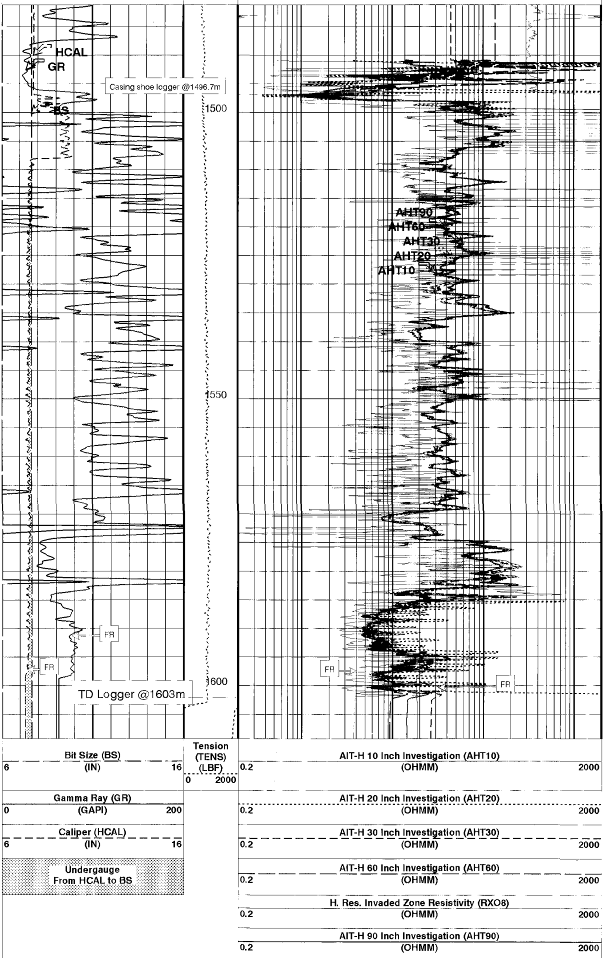
Gamma Ray (GR)
0 (GAPI) 200

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

Bit Size (BS)
6 (IN) 16

Tension (TENS) (LBF)
0 2000

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



PIP SUMMARY

■ Time Mark Every 60 S

AIT-H Answer Product Processing Summary. Data taken with tool # 256 (AHTNO)
...Acquired data from HILT/HAIT

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

Effective Mud Resistivity computed. Borehole diameter taken as input (see GCSE parameter)
Tool is run in ECCENTERED mode with a tool stand-off of 0.50 IN. Bit Size is 7.63 IN.

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

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

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

|  |  |  |  |
|---|---|---|---|
| Surface Hole Temperature (SHT) | 20.000 DEGC | Bottom Temperature (BHT) | 63.000 DEGC |
| Total Depth (TD) | 1605.000 M |  |  |
| Form Factor Exponent (FEXP) | 2.000 | Form Factor Numerator (FNUM) | 1.000 |
| Mud Filtrate Sample Resistivity (RMFS) | -50000.000 OHMM | Mud Filtrate Sample Temperature (MFST) | -50000.000 DEGC |
| Resitivity Connate Water (RW) | 1.000 OHMM |  |  |

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

Playback Mode: OFF

## Parameters

| DLIS Name | Description | Value |  |
|---|---|---|---|
| AHBHM | AIT-H Bhole Correction Mode | 0_ComputeMudResistivity |  |
| AHBLM | AIT-H Basic Logs Mode | 1_Two |  |
| AHCDE | AIT-H Casing Detection Enable | No |  |
| AHCEN | AIT-H Tool Centering Flag (in Borehole) | Eccentered |  |
| AHCSED | AIT-H Casing Shoe Estimated Depth | -50000 | M |
| AHMRF | AIT-H Mud Resistivity Factor | 1 |  |
| AHSTA | AIT-H Tool Standoff | 0.5 | IN |
| BHT | Bottom Hole Temperature (used in calculations) | 63 | DEGC |
| BS | Bit Size | 7.625 | IN |
| DFD | Drilling Fluid Density | -50000.00 | G/C3 |
| DO | Depth Offset | 0.0 | M |
| DORL | Depth Offset Repeat Analysis | 0.0 | M |
| FEXP | Form Factor Exponent | 2 |  |
| FNUM | Form Factor Numerator | 1 |  |
| GCSE | Generalized Caliper Selection | HCAL |  |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.018227 | DC/M |
| GRSE | Generalized Mud Resistivity Selection | AITH_RESIST |  |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE |  |
| HSCM | HILT Speed Correction Mode | TSCD_SPEED_CORRECTION |  |
| HSTI | STI Uses HILT Acceleration | YES |  |
| MPOF | MCFL Processing Operation Mode | ON |  |
| MST | Mud Sample Temperature | -50000.00 | DEGC |
| PP | Playback Processing | OFF |  |
| RIAV | MCFL Resistivity Algorithm Version | 1.07 |  |
| SHT | Surface Hole Temperature | 20 | DEGC |
| TD | Total Depth | 1605 | M |

Format: AITH_500 Vertical Scale: 1:500 Graphics File Created: 04-Dec-1997 16:04

## OP System Version: 8C0-609

MCM

HILTB-CTS APCW-97Q2

## Speed Corrected - Depth Matched LOG

### Input DLIS Files

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .045 | FN:33 | FIELD | 04-Dec-1997 14:32 | 1609.3 M | 1463.1 M |

### Output DLIS Files

|  |  |  |  |  |
|---|---|---|---|---|
| DEFAULT | HILTC .051 | FN:39 | FIELD | 04-Dec-1997 16:04 |

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## REPEAT ANALYSIS

MAXIS 500 Field Log

### Input DLIS Files

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .045 | FN:33 | FIELD | 04-Dec-1997 14:32 | 1609.3 M | 1463.1 M |
| DEFAULT | HILTC .047 | FN:35 | FIELD | 04-Dec-1997 15:09 | 1608.9 M | 1464.9 M |

### Output DLIS Files

|  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .051 | FN:39 | FIELD | 04-Dec-1997 16:04 | 1609.3 M | 1481.2 M |

## OP System Version: 8C0-609

MCM

HILTB-CTS APCW-97Q2

PIP SUMMARY

■ Time Mark Every 60 S

RXO8_REP Curve (RXO8_REP)
0.2 (OHMM) 2000

AHT90_REP Curve (AHT90_REP)
0.2 (OHMM) 2000

AHT60_REP Curve (AHT60_REP)
0.2 (OHMM) 2000

AHT30_REP Curve (AHT30_REP)
0.2 (OHMM) 2000

AHT20_REP Curve (AHT20_REP)
0.2 (OHMM) 2000

AHT10_REP Curve (AHT10_REP)
0.2 (OHMM) 2000

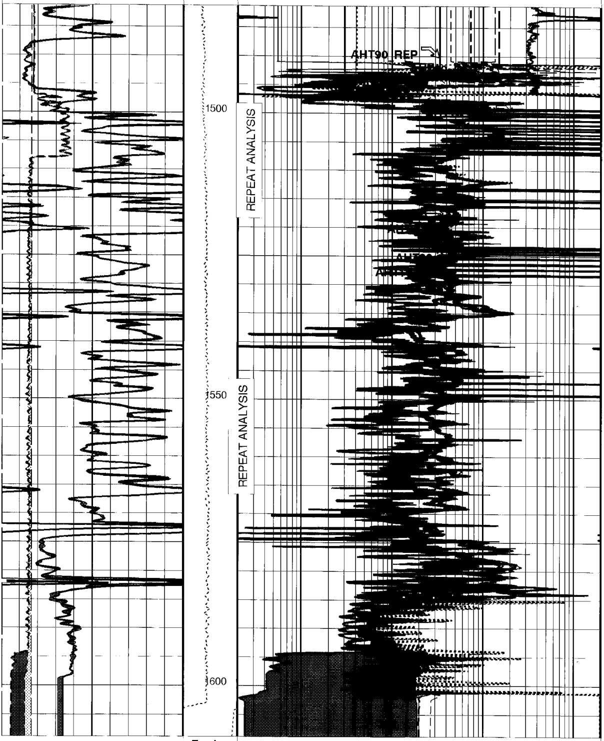
Undergauge
From HCAL to BS

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

GR_REP Curve (GR_REP)
0 (GAPI) 200

Bit Size (BS)
6 (IN) 16

Tension
(TENS)
(LBF)
0 2000



Bit Size (BS)
6 (IN) 16

Tension
(TENS)
(LBF)
0 2000

GR_REP Curve (GR_REP)
0 (GAPI) 200

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

Undergauge
From HCAL to BS

AHT10_REP Curve (AHT10_REP)
0.2 (OHMM) 2000

AHT20_REP Curve (AHT20_REP)
0.2 (OHMM) 2000

AHT30_REP Curve (AHT30_REP)
0.2 (OHMM) 2000

AHT60_REP Curve (AHT60_REP)
0.2 (OHMM) 2000

AHT90_REP Curve (AHT90_REP)
0.2 (OHMM) 2000

RXO8_REP Curve (RXO8_REP)
0.2 (OHMM) 2000

PIP SUMMARY

Time Mark Every 60 S

AIT-H Answer Product Processing Summary. Data taken with tool # 256 (AHTNO)
...Acquired data from HILT/HAIT

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

Effective Mud Resistivity computed. Borehole diameter taken as input (see GCSE parameter)
Tool is run in ECCENTERED mode with a tool stand-off of 0.50 IN. Bit Size is 7.63 IN.

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

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

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

| | | | |
|---|---|---|---|
| Surface Hole Temperature (SHT) | 20.000 DEGC | Bottom Temperature (BHT) | 63.000 DEGC |
| Total Depth (TD) | 1605.000 M | | |
| Form Factor Exponent (FEXP) | 2.000 | Form Factor Numerator (FNUM) | 1.000 |
| Mud Filtrate Sample Resistivity (RMFS) | -50000.000 OHMM | Mud Filtrate Sample Temperature (MFST) | -50000.000 DEGC |
| Resitivity Connate Water (RW) | 1.000 OHMM | | |

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

Playback Mode: OFF

## Parameters

| DLIS Name | Description | Value | |
|---|---|---|---|
| AHBHM | AIT-H Bhole Correction Mode | 0_ComputeMudResistivity | |
| AHBLM | AIT-H Basic Logs Mode | 1_Two | |
| AHCDE | AIT-H Casing Detection Enable | No | |
| AHCEN | AIT-H Tool Centering Flag (in Borehole) | Eccentered | |
| AHCSED | AIT-H Casing Shoe Estimated Depth | -50000 | M |
| AHMRF | AIT-H Mud Resistivity Factor | 1 | |
| AHSTA | AIT-H Tool Standoff | 0.5 | IN |
| BHT | Bottom Hole Temperature (used in calculations) | 63 | DEGC |
| BS | Bit Size | 7.625 | IN |
| DFD | Drilling Fluid Density | -50000.00 | G/C3 |
| DO | Depth Offset | 0.0 | M |
| DORL | Depth Offset Repeat Analysis | 0.0 | M |
| FEXP | Form Factor Exponent | 2 | |
| FNUM | Form Factor Numerator | 1 | |
| GCSE | Generalized Caliper Selection | HCAL | |
| GDEV | Average Angular Deviation of Borehole from Normal | 0 | DEG |
| GGRD | Geothermal Gradient | 0.018227 | DC/M |
| GRSE | Generalized Mud Resistivity Selection | AITH_RESIST | |
| GTSE | Generalized Temperature Selection | LINEAR_ESTIMATE | |
| HSCM | HILT Speed Correction Mode | TSCD_SPEED_CORRECTION | |
| HSTI | STI Uses HILT Acceleration | YES | |
| MPOF | MCFL Processing Operation Mode | ON | |
| MST | Mud Sample Temperature | -50000.00 | DEGC |
| PP | Playback Processing | OFF | |
| RIAV | MCFL Resistivity Algorithm Version | 1.07 | |
| SHT | Surface Hole Temperature | 20 | DEGC |
| TD | Total Depth | 1605 | M |

Format: AITH_rep Vertical Scale: 1:500 Graphics File Created: 04-Dec-1997 16:04

## OP System Version: 8C0-609

MCM

HILTB-CTS APCW-97Q2

## Speed Corrected - Depth Matched LOG

## Input DLIS Files

| | | | | | | |
|---|---|---|---|---|---|---|
| DEFAULT | HILTC .045 | FN:33 | FIELD | 04-Dec-1997 14:32 | 1609.3 M | 1463.1 M |
| DEFAULT | HILTC .047 | FN:35 | FIELD | 04-Dec-1997 15:09 | 1608.9 M | 1464.9 M |

## Output DLIS Files

| | | | | |
|---|---|---|---|---|
| DEFAULT | HILTC .051 | FN:39 | FIELD | 04-Dec-1997 16:04 |

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CALIBRATIONS

MAXIS 500 Field Log

## Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|---|---|---|---|---|---|---|---|
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase | | | | | | | |
| Master: Oct 29 14:35 1997 Before: Dec 03 15:36 1997 | | | | | | | |
| Thru Cal Magnitude - 0 | 0 | 0.6052 | 0.6041 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 1 | 0 | 1.243 | 1.240 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 2 | 0 | 0.6163 | 0.6143 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 3 | 0 | 0.6963 | 0.6948 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 4 | 0 | 1.309 | 1.305 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 5 | 0 | 1.892 | 1.889 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 6 | 0 | 1.888 | 1.885 | N/A | N/A | N/A | V |
| Thru Cal Magnitude - 7 | 0 | 1.352 | 1.357 | N/A | N/A | N/A | V |
| Phase - 0 | 0 | 64.89 | 64.24 | N/A | N/A | N/A | DEG |
| Phase - 1 | 0 | 63.85 | 63.22 | N/A | N/A | N/A | DEG |
| Phase - 2 | 0 | 59.99 | 59.41 | N/A | N/A | N/A | DEG |
| Phase - 3 | 0 | 59.19 | 58.62 | N/A | N/A | N/A | DEG |
| Phase - 4 | 0 | 52.66 | 52.19 | N/A | N/A | N/A | DEG |
| Phase - 5 | 0 | 50.68 | 50.27 | N/A | N/A | N/A | DEG |
| Phase - 6 | 0 | 50.68 | 50.26 | N/A | N/A | N/A | DEG |
| Phase - 7 | 0 | 46.03 | 46.18 | N/A | N/A | N/A | DEG |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Electronics Calibration Check - Auxilliary | | | | | | | |
| Master: Oct 29 14:35 1997 Before: Dec 03 15:36 1997 | | | | | | | |
| AIT-H SPA Plus | 990.5 | 993.0 | 994.2 | N/A | N/A | N/A | MV |
| AIT-H SPA Zero | 0 | 0.04659 | 0.01634 | N/A | N/A | N/A | MV |
| AIT-H Temperature Plus | 0.9150 | 0.9196 | 0.9206 | N/A | N/A | N/A | V |
| AIT-H Temperature Zero | 0 | 0.00006353 | 7.865E-006 | N/A | N/A | N/A | V |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Test Loop Gain Correction | | | | | | | |
| Master: Oct 29 14:50 1997 | | | | | | | |
| Test Loop Gain Magnitude - 0 | 0 | 1.026 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 1 | 0 | 1.020 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 2 | 0 | 1.031 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 3 | 0 | 1.020 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 4 | 0 | 1.004 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 5 | 0 | 1.002 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 6 | 0 | 1.016 | N/A | N/A | N/A | N/A | V |
| Test Loop Gain Magnitude - 7 | 0 | 1.019 | N/A | N/A | N/A | N/A | V |
| Phase - 0 | 0 | 0.4012 | N/A | N/A | N/A | N/A | DEG |
| Phase - 1 | 0 | 0.4930 | N/A | N/A | N/A | N/A | DEG |
| Phase - 2 | 0 | -0.9370 | N/A | N/A | N/A | N/A | DEG |
| Phase - 3 | 0 | 0.4308 | N/A | N/A | N/A | N/A | DEG |
| Phase - 4 | 0 | -0.3170 | N/A | N/A | N/A | N/A | DEG |
| Phase - 5 | 0 | -0.2073 | N/A | N/A | N/A | N/A | DEG |
| Phase - 6 | 0 | 0.2204 | N/A | N/A | N/A | N/A | DEG |
| Phase - 7 | 0 | -0.1622 | N/A | N/A | N/A | N/A | DEG |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Sonde Error Correction | | | | | | | |
| Master: Oct 29 15:06 1997 | | | | | | | |
| R Sonde Error Correction - 0 | 0 | -80.60 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 1 | 0 | 148.7 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 2 | 0 | 113.0 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 3 | 0 | 60.48 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 4 | 0 | 23.82 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 5 | 0 | 13.71 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 6 | 0 | 9.639 | N/A | N/A | N/A | N/A | MM/M |
| R Sonde Error Correction - 7 | 0 | -0.2755 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 0 | 0 | 75.81 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 1 | 0 | -1.747 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 2 | 0 | 50.92 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 3 | 0 | 3.249 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 4 | 0 | 21.76 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 5 | 0 | -3.865 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 6 | 0 | 7.261 | N/A | N/A | N/A | N/A | MM/M |
| X Sonde Error Correction - 7 | 0 | -0.4168 | N/A | N/A | N/A | N/A | MM/M |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Mud Gain Correction | | | | | | | |
| Master: Calibration out of date Jun 23 20:35 1997 | | | | | | | |
| Coarse - Mag, Real, Imag - 0 | 0 | 1.065 | N/A | N/A | N/A | N/A | |
| Coarse - Mag, Real, Imag - 1 | 0 | 1.065 | N/A | N/A | N/A | N/A | |
| Coarse - Mag, Real, Imag - 2 | 0 | 1.065 | N/A | N/A | N/A | N/A | |
| Fine - Mag, Real, Imag - 0 | 0 | 1.061 | N/A | N/A | N/A | N/A | |
| Fine - Mag, Real, Imag - 1 | 0 | 1.061 | N/A | N/A | N/A | N/A | |
| Fine - Mag, Real, Imag - 2 | 0 | 1.061 | N/A | N/A | N/A | N/A | |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Stab Measurement Summary | | | | | | | |
| Before: Dec 03 15:39 1997 | | | | | | | |
| BS Window Ratio | 1.015 | N/A | 1.016 | N/A | N/A | N/A | |
| BS Window Sum | 17600 | N/A | 17600 | N/A | N/A | N/A | CPS |
| SS Window Ratio | 0.4533 | N/A | 0.4548 | N/A | N/A | N/A | |
| SS Window Sum | 10680 | N/A | 10700 | N/A | N/A | N/A | CPS |
| LS Window Ratio | 0.2881 | N/A | 0.2835 | N/A | N/A | N/A | |
| LS Window Sum | 1394 | N/A | 1389 | N/A | N/A | N/A | CPS |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations | | | | | | | |
| Before: Dec 03 15:39 1997 | | | | | | | |
| BS PM High Voltage (Command) | 1748 | N/A | 1745 | N/A | N/A | N/A | V |
| SS PM High Voltage (Command) | 1835 | N/A | 1827 | N/A | N/A | N/A | V |
| LS PM High Voltage (Command) | 1634 | N/A | 1629 | N/A | N/A | N/A | V |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Crystal Quality Resolutions Calibration | | | | | | | |
| Before: Dec 03 15:39 1997 | | | | | | | |
| BS Crystal Resolution | 13.23 | N/A | 13.22 | N/A | N/A | N/A | % |
| SS Crystal Resolution | 9.896 | N/A | 9.965 | N/A | N/A | N/A | % |
| LS Crystal Resolution | 9.123 | N/A | 9.276 | N/A | N/A | N/A | % |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - MCFL Calibration | | | | | | | |
| Before: Dec 03 15:41 1997 | | | | | | | |
| Raw B0 Resistivity | 3875 | N/A | 3863 | N/A | N/A | N/A | OHMM |
| Raw B1 Resistivity | 3830 | N/A | 3804 | N/A | N/A | N/A | OHMM |
| Raw B2 Resistivity | 3830 | N/A | 3826 | N/A | N/A | N/A | OHMM |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - HILT Caliper Calibration | | | | | | | |
| Before: Dec 03 15:44 1997 | | | | | | | |
| HILT Caliper Zero Measurement | 8.000 | N/A | 8.007 | N/A | N/A | N/A | IN |
| HILT Caliper Plus Measurement | 12.00 | N/A | 12.23 | N/A | N/A | N/A | IN |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Detector Calibration | | | | | | | |
| Before: Dec 03 15:38 1997 | | | | | | | |
| Gamma Ray Background | 30.00 | N/A | 50.87 | N/A | N/A | N/A | GAPI |
| Gamma Ray (Jig - Bkg) | 168.7 | N/A | 168.7 | N/A | N/A | 15.33 | GAPI |
| Gamma Ray (Calibrated) | 162.0 | N/A | 162.0 | N/A | N/A | 15.00 | GAPI |
| High resolution Integrated Logging Tool-CTS Wellsite Calibration - Zero Measurement | | | | | | | |
| Master: Nov 20 15:47 1997 Before: Dec 03 15:40 1997 | | | | | | | |
| CNTC Background | 25.72 | 25.72 | 25.20 | N/A | N/A | 3.858 | CPS |
| CFTC Background | 26.65 | 26.65 | 25.99 | N/A | N/A | 3.998 | CPS |

High resolution Integrated Logging Tool-CTS Wellsite Calibration - Accelerometer Calibration
Before: Dec 04 13:45 1997

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Z-Axis Acceleration | 9.810 | N/A | 9.786 | N/A | N/A | N/A | M/S2 |

High resolution Integrated Logging Tool-CTS Master Calibration - Inversion results
Master: Nov 20 14:43 1997

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rho Aluminium | 2.596 | 2.598 | -- | -- | -- | -- | G/C3 |
| Rho Magnesium | 1.686 | 1.687 | -- | -- | -- | -- | G/C3 |
| Pe Aluminium | 2.570 | 2.588 | -- | -- | -- | -- | |
| Pe Magnesium | 2.760 | 2.732 | -- | -- | -- | -- | |

High resolution Integrated Logging Tool-CTS Master Calibration - Deviation Summary
Master: Nov 20 14:43 1997

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BS Average Deviation | 0 | 0.2762 | -- | -- | -- | -- | % |
| BS Max Deviation | 0 | 1.324 | -- | -- | -- | -- | % |
| SS Average Deviation | 0 | 0.5351 | -- | -- | -- | -- | % |
| SS Max Deviation | 0 | 1.138 | -- | -- | -- | -- | % |
| LS Average Deviation | 0 | 0.4596 | -- | -- | -- | -- | % |
| LS Max Deviation | 0 | 1.244 | -- | -- | -- | -- | % |

High resolution Integrated Logging Tool-CTS Master Calibration - Tank Measurement
Master: Nov 20 15:47 1997

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Thermal Near Corr. (Tank) | 6031 | 5645 | -- | -- | -- | -- | CPS |
| Thermal Far Corr. (Tank) | 2793 | 2386 | -- | -- | -- | -- | CPS |
| CNTC/CFTC (Tank) | 2.159 | 2.366 | -- | -- | -- | -- | |

The CNT Master Calibration Was Done With The Following Parameters :

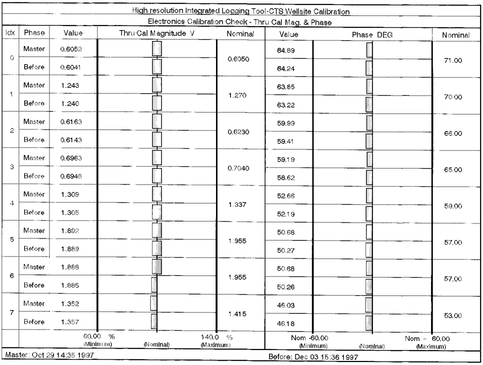
| | | |
|---|---|---|
| NCT-B Water Temperature | 37.0 | DEGC. |
| Thermal Housing Size | 3.375 | IN. |

High resolution Integrated Logging Tool-CTS / Equipment Identification

Primary Equipment:

| | | |
|---|---|---|
| Array Induction Tool - H | AIT - H | |
| Array Induction Sonde | AHIS - BA | 256 |
| HILT high-Resolution Mechanical Sonde | HRMS - B | 861 |
| HILT Rxo Gamma-ray Device | HRGD - | 788 |
| HILT Nuclear Back-Scatter Detector | HILT - | |
| HILT Nuclear Short-Spacing Detector | HILT - | |
| HILT Nuclear Long-Spacing Detector | HILT - | |
| Micro Cylindrically Focused Log Device | MCFL - | |

Auxiliary Equipment:

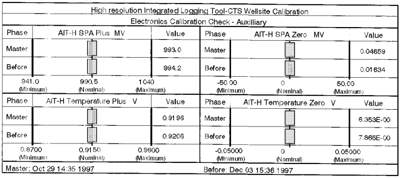


High resolution Integrated Logging Tool-CTS Wellsite Calibration

Electronics Calibration Check - Thru Cal Mag. & Phase

| Idx | Phase | Value | Thru Cal Magnitude V | Nominal | Value | Phase DEG | Nominal |
|---|---|---|---|---|---|---|---|
| 0 | Master | 0.6052 | | 0.6050 | 64.89 | | 71.00 |
| | Before | 0.6041 | | | 64.24 | | |
| 1 | Master | 1.243 | | 1.270 | 63.85 | | 70.00 |
| | Before | 1.240 | | | 63.22 | | |
| 2 | Master | 0.6163 | | 0.6230 | 59.99 | | 66.00 |
| | Before | 0.6143 | | | 59.41 | | |
| 3 | Master | 0.6963 | | 0.7040 | 59.19 | | 65.00 |
| | Before | 0.6948 | | | 58.62 | | |
| 4 | Master | 1.309 | | 1.337 | 52.66 | | 59.00 |
| | Before | 1.305 | | | 52.19 | | |
| 5 | Master | 1.892 | | 1.955 | 50.68 | | 57.00 |
| | Before | 1.889 | | | 50.27 | | |
| 6 | Master | 1.888 | | 1.955 | 50.68 | | 57.00 |
| | Before | 1.885 | | | 50.26 | | |
| 7 | Master | 1.352 | | 1.415 | 46.03 | | 53.00 |
| | Before | 1.357 | | | 46.18 | | |
| | | 60.00 % (Minimum) | (Nominal) | 140.0 % (Maximum) | Nom -60.00 (Minimum) | (Nominal) | Nom - 60.00 (Maximum) |

Master: Oct 29 14:35 1997 Before: Dec 03 15:36 1997



High resolution Integrated Logging Tool-CTS Wellsite Calibration

Electronics Calibration Check - Auxilliary

| Phase | AIT-H SPA Plus MV | Value | Phase | AIT-H SPA Zero MV | Value |
|---|---|---|---|---|---|
| Master | | 993.0 | Master | | 0.04659 |
| Before | | 994.2 | Before | | 0.01634 |
| 941.0 (Minimum) | 990.5 (Nominal) | 1040 (Maximum) | -50.00 (Minimum) | 0 (Nominal) | 50.00 (Maximum) |

| Phase | AIT-H Temperature Plus V | Value | Phase | AIT-H Temperature Zero V | Value |
|---|---|---|---|---|---|
| Master | | 0.9196 | Master | | 6.353E-00 |
| Before | | 0.9206 | Before | | 7.865E-00 |
| 0.8700 (Minimum) | 0.9150 (Nominal) | 0.9600 (Maximum) | -0.05000 (Minimum) | 0 (Nominal) | 0.05000 (Maximum) |

Master: Oct 29 14:35 1997 Before: Dec 03 15:36 1997

## High resolution Integrated Logging Tool-CTS Wellsite Calibration

### Test Loop Gain Correction

| Idx | Value | Test Loop Gain Magnitude V | Value | Phase DEG |
|---|---|---|---|---|
| 0 | 1.026 | | 0.4012 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 1 | 1.020 | | 0.4930 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 2 | 1.031 | | -0.9370 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 3 | 1.020 | | 0.4308 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 4 | 1.004 | | -0.3170 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 5 | 1.002 | | -0.2073 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 6 | 1.016 | | 0.2204 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |
| 7 | 1.019 | | -0.1622 | |
| | | 0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum) | | -3.000 (Minimum) 0 (Nominal) 3.000 (Maximum) |

Master: Oct 29 14:50 1997

## High resolution Integrated Logging Tool-CTS Wellsite Calibration

### Sonde Error Correction

| Idx | Value | R Sonde Error Correction MM/M | Value | X Sonde Error Correction MM/M |
|---|---|---|---|---|
| 0 | -80.60 | | 75.81 | |
| | | -231.0 (Minimum) -56.00 (Nominal) 119.0 (Maximum) | | -2250 (Minimum) 0 (Nominal) 2250 (Maximum) |
| 1 | 148.7 | | -1.747 | |
| | | 114.0 (Minimum) 159.0 (Nominal) 204.0 (Maximum) | | -625.0 (Minimum) 0 (Nominal) 625.0 (Maximum) |
| 2 | 113.0 | | 50.92 | |
| | | 66.00 (Minimum) 111.0 (Nominal) 156.0 (Maximum) | | -350.0 (Minimum) 0 (Nominal) 350.0 (Maximum) |
| 3 | 60.48 | | 3.249 | |
| | | 39.00 (Minimum) 64.00 (Nominal) 89.00 (Maximum) | | -250.0 (Minimum) 0 (Nominal) 250.0 (Maximum) |
| 4 | 23.82 | | 21.76 | |
| | | 15.00 (Minimum) 25.00 (Nominal) 35.00 (Maximum) | | -63.00 (Minimum) 0 (Nominal) 63.00 (Maximum) |
| 5 | 13.71 | | -3.865 | |
| | | 4.000 (Minimum) 14.00 (Nominal) 24.00 (Maximum) | | -50.00 (Minimum) 0 (Nominal) 50.00 (Maximum) |
| 6 | 9.639 | | 7.261 | |
| | | 5.000 (Minimum) 10.00 (Nominal) 15.00 (Maximum) | | -30.00 (Minimum) 0 (Nominal) 30.00 (Maximum) |
| 7 | -0.2755 | | -0.4168 | |
| | | -5.000 (Minimum) 0 (Nominal) 5.000 (Maximum) | | -30.00 (Minimum) 0 (Nominal) 30.00 (Maximum) |

Master: Oct 29 15:06 1997

## High resolution Integrated Logging Tool-CTS Wellsite Calibration

### Mud Gain Correction

| Idx | Value | Coarse - Mag, Real, Imag | Value | Fine - Mag, Real, Imag |
|---|---|---|---|---|
| 0 | 1.065 | | 1.061 | |
| | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) |
| 1 | 1.065 | | 1.061 | |
| | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) |
| 2 | 1.065 | | 1.061 | |
| | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) | | 0.6000 (Minimum) 1.000 (Nominal) 1.400 (Maximum) |

Master: Calibration out of date Jun 23 20:35 1997

## High resolution Integrated Logging Tool-CTS Wellsite Calibration

### Stab Measurement Summary

| Phase | BS Window Ratio | Value | Phase | SS Window Ratio | Value | Phase | LS Window Ratio | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 1.016 | Before | | 0.4548 | Before | | 0.2835 |
| | 0.9643 (Minimum) 1.015 (Nominal) 1.066 (Maximum) | | | 0.4306 (Minimum) 0.4533 (Nominal) 0.4760 (Maximum) | | | 0.2737 (Minimum) 0.2881 (Nominal) 0.3025 (Maximum) | |
| **Phase** | **BS Window Sum CPS** | **Value** | **Phase** | **SS Window Sum CPS** | **Value** | **Phase** | **LS Window Sum CPS** | **Value** |
| Before | | 17600 | Before | | 10700 | Before | | 1389 |
| | 16720 (Minimum) 17600 (Nominal) 18480 (Maximum) | | | 10150 (Minimum) 10680 (Nominal) 11220 (Maximum) | | | 1324 (Minimum) 1394 (Nominal) 1464 (Maximum) | |

Before: Dec 03 15:39 1997

## High resolution Integrated Logging Tool-CTS Wellsite Calibration

### Photo-multiplier High Voltages Calibrations

| Phase | BS PM High Voltage (Command) V | Value | Phase | SS PM High Voltage (Command) V | Value | Phase | LS PM High Voltage (Command) V | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 1745 | Before | | 1827 | Before | | 1629 |
| | 1648 (Minimum) 1748 (Nominal) 1848 (Maximum) | | | 1735 (Minimum) 1835 (Nominal) 1935 (Maximum) | | | 1534 (Minimum) 1634 (Nominal) 1734 (Maximum) | |

Before: Dec 03 15:39 1997

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Crystal Quality Resolutions Calibration

| Phase | BS Crystal Resolution % | Value | Phase | SS Crystal Resolution % | Value | Phase | LS Crystal Resolution % | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 13.22 | Before | | 9.965 | Before | | 9.276 |
| | 12.23 (Minimum)<br>13.23 (Nominal)<br>14.23 (Maximum) | | | 8.896 (Minimum)<br>9.896 (Nominal)<br>10.90 (Maximum) | | | 8.123 (Minimum)<br>9.123 (Nominal)<br>10.12 (Maximum) | |

Before: Dec 03 15:39 1997

High resolution Integrated Logging Tool-CTS Wellsite Calibration

MCFL Calibration

| Phase | Raw B0 Resistivity OHMM | Value | Phase | Raw B1 Resistivity OHMM | Value | Phase | Raw B2 Resistivity OHMM | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 3863 | Before | | 3804 | Before | | 3826 |
| | 3565 (Minimum)<br>3875 (Nominal)<br>4185 (Maximum) | | | 3524 (Minimum)<br>3830 (Nominal)<br>4136 (Maximum) | | | 3524 (Minimum)<br>3830 (Nominal)<br>4136 (Maximum) | |

Before: Dec 03 15:41 1997

High resolution Integrated Logging Tool-CTS Wellsite Calibration

HILT Caliper Calibration

| Phase | HILT Caliper Zero Measurement IN | Value | Phase | HILT Caliper Plus Measurement IN | Value |
|---|---|---|---|---|---|
| Before | | 8.007 | Before | | 12.23 |
| | 6.000 (Minimum)<br>8.000 (Nominal)<br>10.00 (Maximum) | | | 9.000 (Minimum)<br>12.00 (Nominal)<br>15.00 (Maximum) | |

Before: Dec 03 15:44 1997

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Detector Calibration

| Phase | Gamma Ray Background GAPI | Value | Phase | Gamma Ray (Jig - Bkg) GAPI | Value | Phase | Gamma Ray (Calibrated) GAPI | Value |
|---|---|---|---|---|---|---|---|---|
| Before | | 50.87 | Before | | 168.7 | Before | | 162.0 |
| | 0 (Minimum)<br>30.00 (Nominal)<br>120.0 (Maximum) | | | 153.3 (Minimum)<br>168.7 (Nominal)<br>184.0 (Maximum) | | | 147.0 (Minimum)<br>162.0 (Nominal)<br>177.0 (Maximum) | |

Before: Dec 03 15:38 1997

High resolution Integrated Logging Tool-CTS Wellsite Calibration

Zero Measurement

| Phase | CNTC Background CPS | Value | Phase | CFTC Background CPS | Value |
|---|---|---|---|---|---|
| Master | | 25.72 | Master | | 26.65 |
| Before | | 25.20 | Before | | 25.99 |
| | 5.000 (Minimum)<br>25.72 (Nominal)<br>40.00 (Maximum) | | | 5.000 (Minimum)<br>26.65 (Nominal)<br>40.00 (Maximum) | |

Master: Nov 20 15:47 1997 Before: Dec 03 15:40 1997

High resolution Integrated Logging Tool-CTS
Wellsite Calibration

Accelerometer Calibration

| Phase | Z-Axis Acceleration M/S2 | Value |
|---|---|---|
| Before | | 9.786 |
| | 9.610 (Minimum)<br>9.810 (Nominal)<br>10.01 (Maximum) | |

Before: Dec 04 13:45 1997

High resolution Integrated Logging Tool-CTS Master Calibration

Electronics Calibration Check - Thru Cal Mag. & Phase

| Idx | Phase | Value | Thru Cal Magnitude V | Nominal | Value | Phase DEG | Nominal |
|---|---|---|---|---|---|---|---|
| 0 | Master | 0.6052 | | 0.6050 | 64.89 | | 71.00 |
| 1 | Master | 1.243 | | 1.270 | 63.85 | | 70.00 |
| 2 | Master | 0.6163 | | 0.6230 | 59.99 | | 66.00 |
| 3 | Master | 0.6963 | | 0.7040 | 59.19 | | 65.00 |
| 4 | Master | 1.309 | | 1.337 | 52.66 | | 59.00 |
| 5 | Master | 1.892 | | 1.955 | 50.68 | | 57.00 |
| 6 | Master | 1.888 | | 1.955 | 50.68 | | 57.00 |
| 7 | Master | 1.352 | | 1.415 | 46.03 | | 53.00 |
| | | 60.00 % (Minimum) | (Nominal) | 140.0 % (Maximum) | Nom -60.00 (Minimum) | (Nominal) | Nom + 60.00 (Maximum) |

Master: Oct 29 14:35 1997

High resolution Integrated Logging Tool-CTS Master Calibration

Electronics Calibration Check - Auxilliary

| Phase | AIT-H SPA Plus MV | Value | Phase | AIT-H SPA Zero MV | Value |
|---|---|---|---|---|---|
| Master | | 993.0 | Master | | 0.04659 |
| | 941.0 (Minimum)<br>990.5 (Nominal)<br>1040 (Maximum) | | | -50.00 (Minimum)<br>0 (Nominal)<br>50.00 (Maximum) | |
| Phase | AIT-H Temperature Plus V | Value | Phase | AIT-H Temperature Zero V | Value |
| Master | | 0.9196 | Master | | 6.353E-00 |
| | 0.8700 (Minimum)<br>0.9150 (Nominal)<br>0.9600 (Maximum) | | | -0.05000 (Minimum)<br>0 (Nominal)<br>0.05000 (Maximum) | |

Master: Oct 29 14:35 1997

### High resolution Integrated Logging Tool-CTS Master Calibration

Test Loop Gain Correction

| Idx | Value | Test Loop Gain Magnitude V | | | Value | Phase DEG | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 1.026 | | | | 0.4012 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 1 | 1.020 | | | | 0.4930 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 2 | 1.031 | | | | -0.9370 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 3 | 1.020 | | | | 0.4308 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 4 | 1.004 | | | | -0.3170 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 5 | 1.002 | | | | -0.2073 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 6 | 1.016 | | | | 0.2204 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |
| 7 | 1.019 | | | | -0.1622 | | | |
| | | 0.9500<br>(Minimum) | 1.000<br>(Nominal) | 1.050<br>(Maximum) | | -3.000<br>(Minimum) | 0<br>(Nominal) | 3.000<br>(Maximum) |

Master: Oct 29 14:50 1997

### High resolution Integrated Logging Tool-CTS Master Calibration

Sonde Error Correction

| Idx | Value | R Sonde Error Correction MM/M | | | Value | X Sonde Error Correction MM/M | | |
|---|---|---|---|---|---|---|---|---|
| 0 | -80.60 | | | | 75.81 | | | |
| | | -231.0<br>(Minimum) | -56.00<br>(Nominal) | 119.0<br>(Maximum) | | -2250<br>(Minimum) | 0<br>(Nominal) | 2250<br>(Maximum) |
| 1 | 148.7 | | | | -1.747 | | | |
| | | 114.0<br>(Minimum) | 159.0<br>(Nominal) | 204.0<br>(Maximum) | | -625.0<br>(Minimum) | 0<br>(Nominal) | 625.0<br>(Maximum) |
| 2 | 113.0 | | | | 50.92 | | | |
| | | 66.00<br>(Minimum) | 111.0<br>(Nominal) | 156.0<br>(Maximum) | | -350.0<br>(Minimum) | 0<br>(Nominal) | 350.0<br>(Maximum) |
| 3 | 60.46 | | | | 3.249 | | | |
| | | 39.00<br>(Minimum) | 64.00<br>(Nominal) | 89.00<br>(Maximum) | | -250.0<br>(Minimum) | 0<br>(Nominal) | 250.0<br>(Maximum) |
| 4 | 23.82 | | | | 21.76 | | | |
| | | 15.00<br>(Minimum) | 25.00<br>(Nominal) | 35.00<br>(Maximum) | | -63.00<br>(Minimum) | 0<br>(Nominal) | 63.00<br>(Maximum) |
| 5 | 13.71 | | | | -3.865 | | | |
| | | 4.000<br>(Minimum) | 14.00<br>(Nominal) | 24.00<br>(Maximum) | | -50.00<br>(Minimum) | 0<br>(Nominal) | 50.00<br>(Maximum) |
| 6 | 9.639 | | | | 7.261 | | | |
| | | 5.000<br>(Minimum) | 10.00<br>(Nominal) | 15.00<br>(Maximum) | | -30.00<br>(Minimum) | 0<br>(Nominal) | 30.00<br>(Maximum) |
| 7 | -0.2755 | | | | -0.4168 | | | |
| | | -5.000<br>(Minimum) | 0<br>(Nominal) | 5.000<br>(Maximum) | | -30.00<br>(Minimum) | 0<br>(Nominal) | 30.00<br>(Maximum) |

Master: Oct 29 15:06 1997

### High resolution Integrated Logging Tool-CTS Master Calibration

Mud Gain Correction

| Idx | Value | Coarse - Mag, Real, Imag | | | Value | Fine - Mag, Real, Imag | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 1.065 | | | | 1.061 | | | |
| | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) |
| 1 | 1.065 | | | | 1.061 | | | |
| | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) |
| 2 | 1.065 | | | | 1.061 | | | |
| | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) | | 0.6000<br>(Minimum) | 1.000<br>(Nominal) | 1.400<br>(Maximum) |

Master: Calibration out of date Jun 23 20:35 1997

### High resolution Integrated Logging Tool-CTS Master Calibration

Inversion results

| Phase | Rho Aluminium G/C3 | | | Value | Phase | Rho Magnesium G/C3 | | | Value |
|---|---|---|---|---|---|---|---|---|---|
| Master | | | | 2.598 | Master | | | | 1.687 |
| | 2.586<br>(Minimum) | 2.596<br>(Nominal) | 2.606<br>(Maximum) | | | 1.676<br>(Minimum) | 1.686<br>(Nominal) | 1.696<br>(Maximum) | |
| Phase | Pe Aluminium | | | Value | Phase | Pe Magnesium | | | Value |
| Master | | | | 2.588 | Master | | | | 2.732 |
| | 2.470<br>(Minimum) | 2.570<br>(Nominal) | 2.670<br>(Maximum) | | | 2.660<br>(Minimum) | 2.760<br>(Nominal) | 2.860<br>(Maximum) | |

Master: Nov 20 14:43 1997

### High resolution Integrated Logging Tool-CTS Master Calibration

Deviation Summary

| Phase | BS Average Deviation % | | | Value | Phase | SS Average Deviation % | | | Value | Phase | LS Average Deviation % | | | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Master | | | | 0.2762 | Master | | | | 0.5351 | Master | | | | 0.4596 |
| | -0.6000<br>(Minimum) | 0<br>(Nominal) | 0.6000<br>(Maximum) | | | -1.000<br>(Minimum) | 0<br>(Nominal) | 1.000<br>(Maximum) | | | -1.500<br>(Minimum) | 0<br>(Nominal) | 1.500<br>(Maximum) | |
| Phase | BS Max Deviation % | | | Value | Phase | SS Max Deviation % | | | Value | Phase | LS Max Deviation % | | | Value |
| Master | | | | 1.324 | Master | | | | 1.138 | Master | | | | 1.244 |
| | -1.600<br>(Minimum) | 0<br>(Nominal) | 1.600<br>(Maximum) | | | -2.500<br>(Minimum) | 0<br>(Nominal) | 2.500<br>(Maximum) | | | -3.500<br>(Minimum) | 0<br>(Nominal) | 3.500<br>(Maximum) | |

Master: Nov 20 14:43 1997

High resolution Integrated Logging Tool-CTS Master Calibration

Tank Measurement

| Phase | Thermal Near Corr. (Tank) CPS | | | Value | Phase | Thermal Far Corr. (Tank) CPS | | | Value | Phase | CNTC/CFTC (Tank) | | | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Master | | ▨ | | 5645 | Master | ▨ | | | 2386 | Master | | ▨ | | 2.366 |
| | 5000 (Minimum) | 6031 (Nominal) | 7200 (Maximum) | | | 2075 (Minimum) | 2793 (Nominal) | 3125 (Maximum) | | | 2.120 (Minimum) | 2.159 (Nominal) | 2.540 (Maximum) | |

Master: Nov 20 15:47 1997

| | | | |
|---|---|---|---|
| **COMPANY:** | **SANTOS / MAGELLAN** | BOTTOM LOG INTERVAL | 1600.5 M |
| | | SCHLUMBERGER DEPTH | 1603 M |
| **WELL:** | **WEST MEREENIE # 13** | DEPTH DRILLER | 1605 M |
| **FIELD:** | **WEST MEREENIE** | ROTARY TABLE | 770.5 M |
| **RIG:** | **EWS W/O** | DRILL FLOOR | 770.5 M |
| **COUNTRY:** | **AUSTRALIA** | GROUND LEVEL | 764.8 M |

Schlumberger

**PLATFORM EXPRESS (AITH)**
**RUN #2, SUITE #2**
**SCALE 1:500**