CC 13-03-55

HALLIBURTON

EXCELL

SHIVA PROCESSED
SIX ELECTRODE
DIPMETER
5"=100'

COMPANY	**TAYLOR OPERATING COMPANY**
WELL	**CC 13–3–55**
FIELD	**EXPLORATION**
COUNTY	**COLUMBIA**
STATE	**OREGON**

Location: 2101.6' FSL
513.7' FWL

Elevations: K.B.: 1100' R.T.: 1100' G.L.: 1090'

Date Processed	MAY 18, 2004	**Logs Processed**	SED
Job Number	3077615	**Date Logged**	MAY 18, 2004
Interval Processed	1616'–389'	**Type Fluid In Hole**	GEL/CEM
Processed By	G. ROUSSEAU	**Location**	WDLD
Processed At	WELLSITE		

— COMPUTER PROCESSED PRODUCT —

Service Ticket No.: 3077615 **API Serial No.:** 36–009–00359 **PGM Version:** XL v5.0

DIRECTIONAL INFORMATION

Maximum Deviation	NA	**deg. @**	NA	**KOP**	NA

NA

Remarks:

K.B. ELEVATION IS PROVISIONAL.
REPEAT SECTION AS PER CUSTOMER.
MAGNETIC DECLINATION 20 DEGREES.
PROCESSING 4 FEET x 2 feet x 35 degrees.

CREW: M. EMERSON, D. ROSENSTEEL. RIG: TAYLOR DRILLING.

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

HALLIBURTON

HALLIBURTON

Version No: 5.0 | hc:3.0
Data File: 0517_2230_s2360.2.cls
Format File: dip.spc

EXCELL

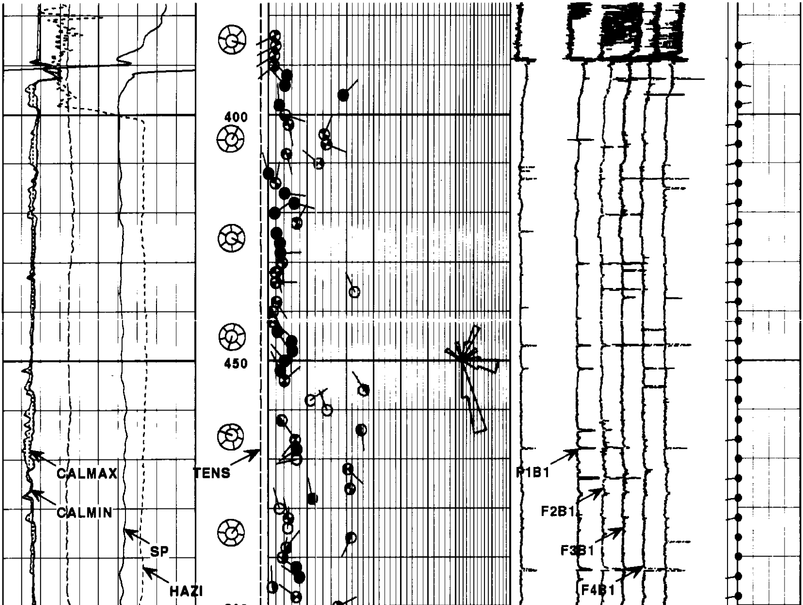
Plot Time: 2004-05-18 01:23:52
Log Time: 2004-05-17 23:32:44

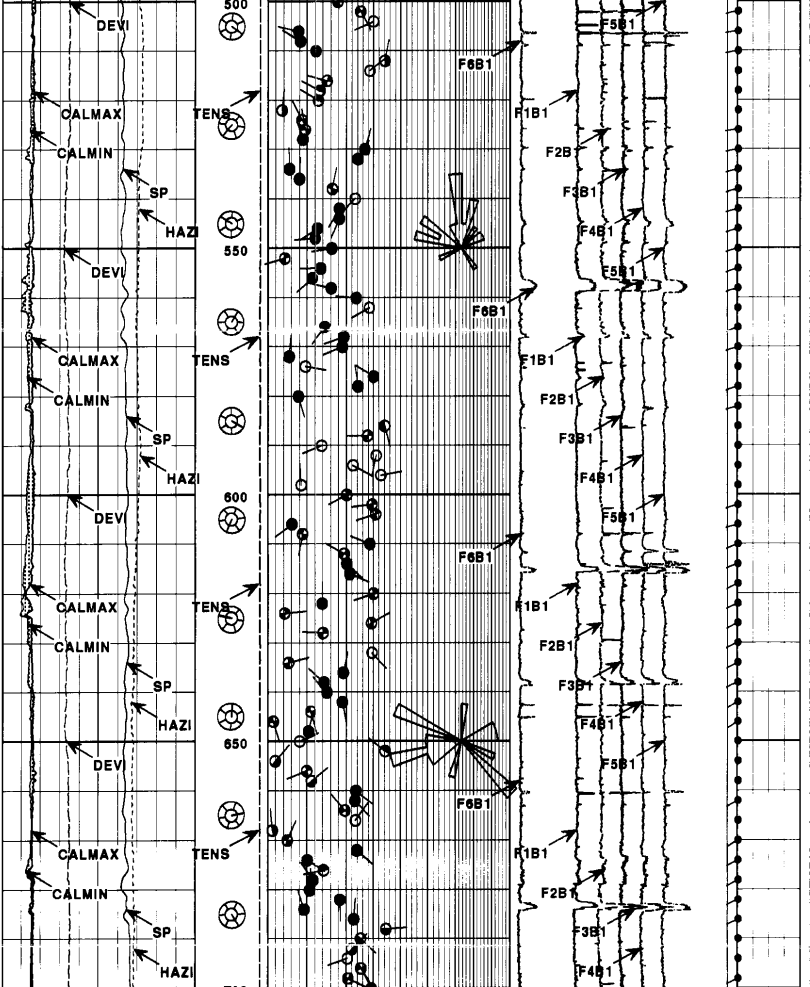
Top Depth: 377.51
Bottom Depth: 1616.75

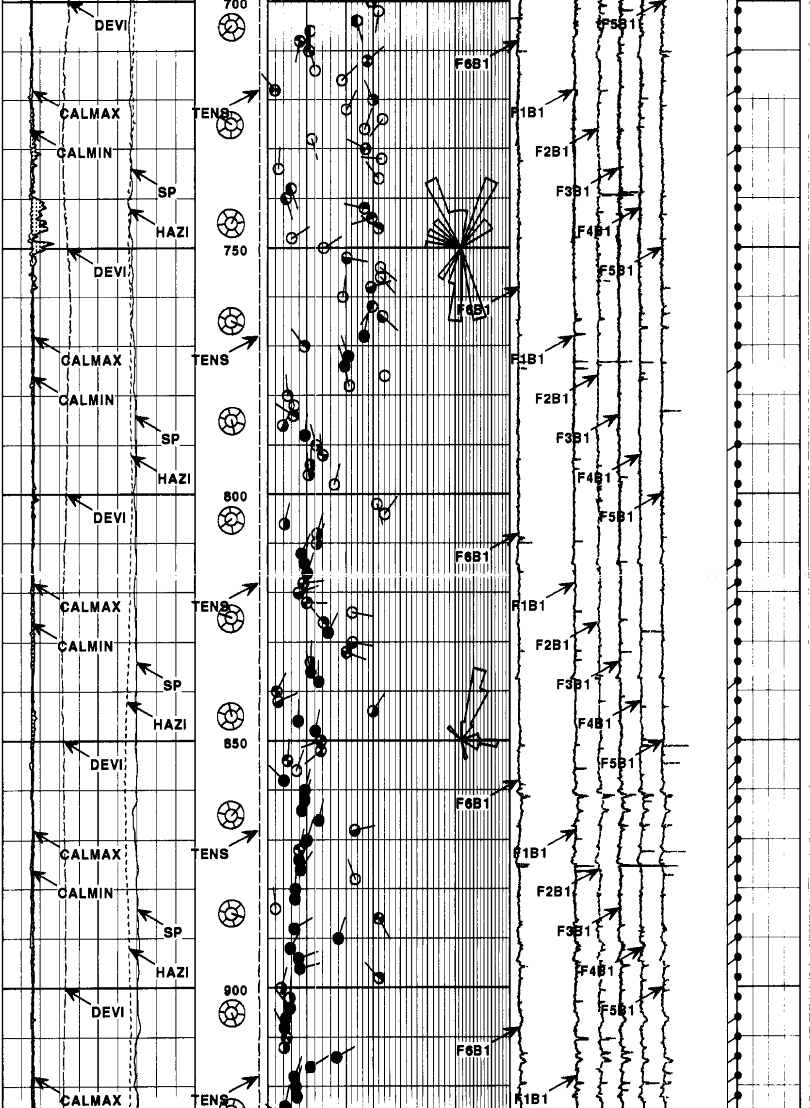
GAMMA RAY CALIPERS	BH X-SECTION	SHIVA DIPS	RAW SP-CORR RES. CURVES	DEVIATION

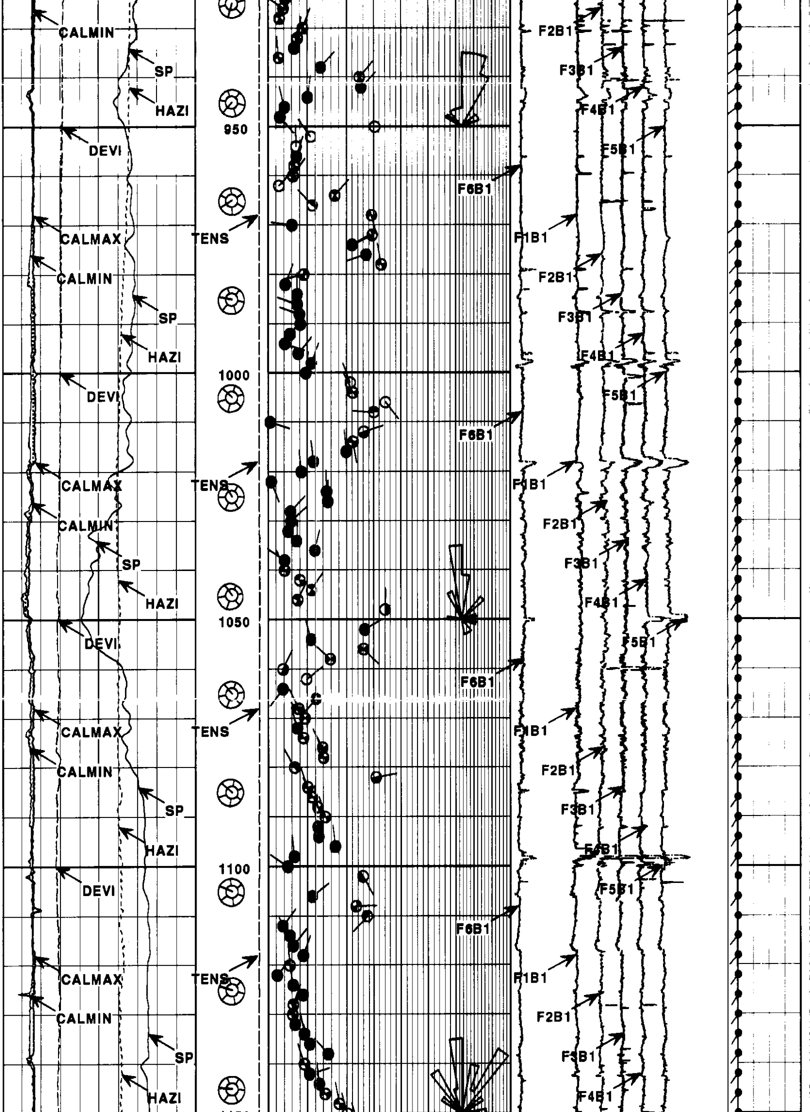
Curve	Left	Unit	Right
CALMAX	7	INCHES	17
CALMIN	7	INCHES	17
SP	40	]10[	140
HAZI	-50	DEGREES	350
DEVI	-2	DEGREES	8
AZI1	0		360
TENS	10000		0
DIP	0	DEG	90
F1B1	1000		-1000
F2B1	1200		-800
F3B1	1400		-600
F4B1	1600		-400
F5B1	1800		-200
F6B1	2500		500
DRIFT	0	DEG	90

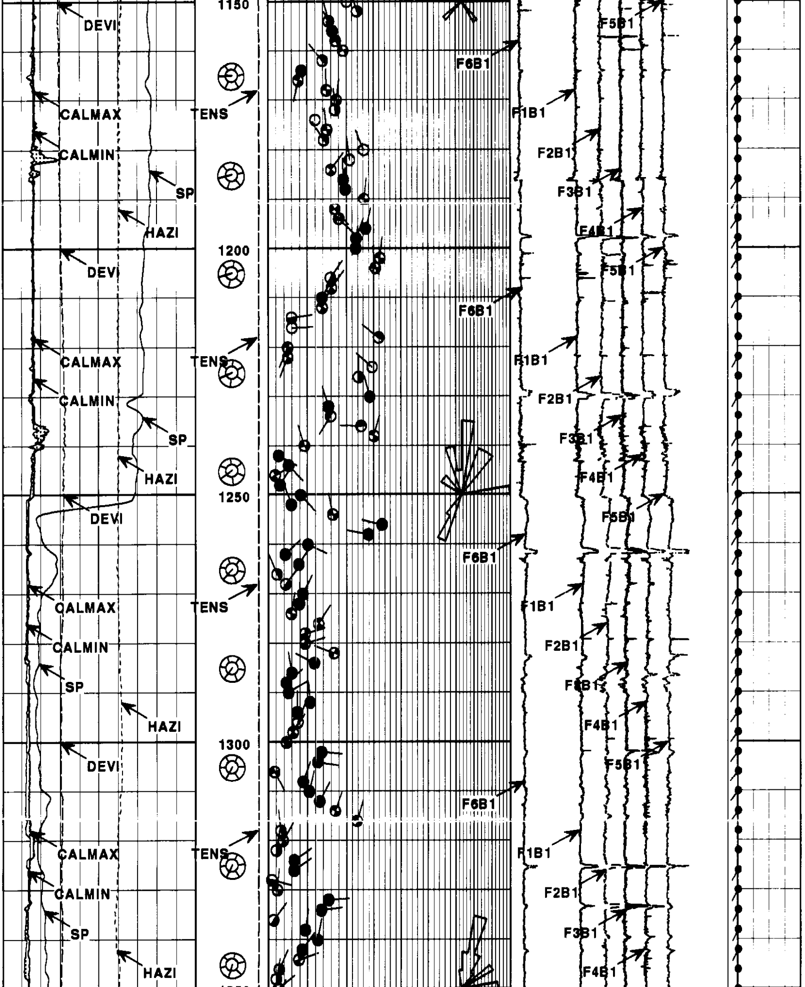
1:240
FT.

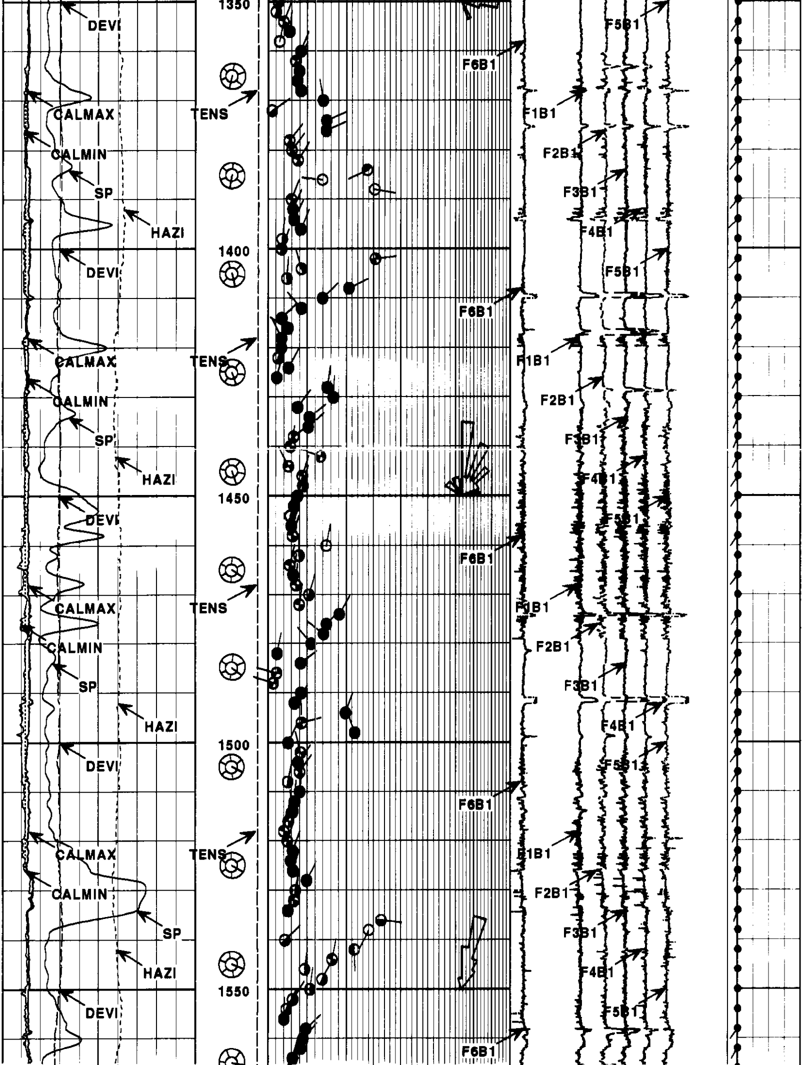


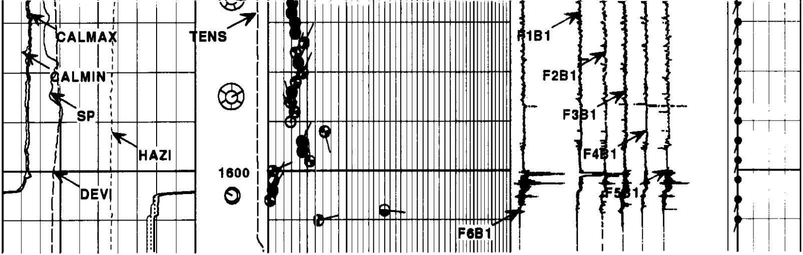












DEVI
-2 DEGREES 8

HAZI
-50 DEGREES 350

SP
40]10[140

CALMIN
7 INCHES 17

CALMAX
7 INCHES 17

1:240
FT.

TENS
10000 0

AZI1
0 360

DIP
0 DEG 90

F6B1
2500 500

F5B1
1800 -200

F4B1
1600 -400

F3B1
1400 -600

F2B1
1200 -800

F1B1
1000 -1000

DRIFT
0 DEG 90

GAMMA RAY CALIPERS	BH X-SECTION	SHIVA DIPS	RAW SP-CORR RES. CURVES	DEVIATIO

HALLIBURTON
EXCELL

Version No: 5.0 \| hc:3.0
Data File: 0517_2230_s2360.2.cls
Format File: dip.spc
Plot Time: 2004-05-18 01:27:07
Log Time: 2004-05-17 23:32:44
Top Depth: 377.51
Bottom Depth: 1616.75

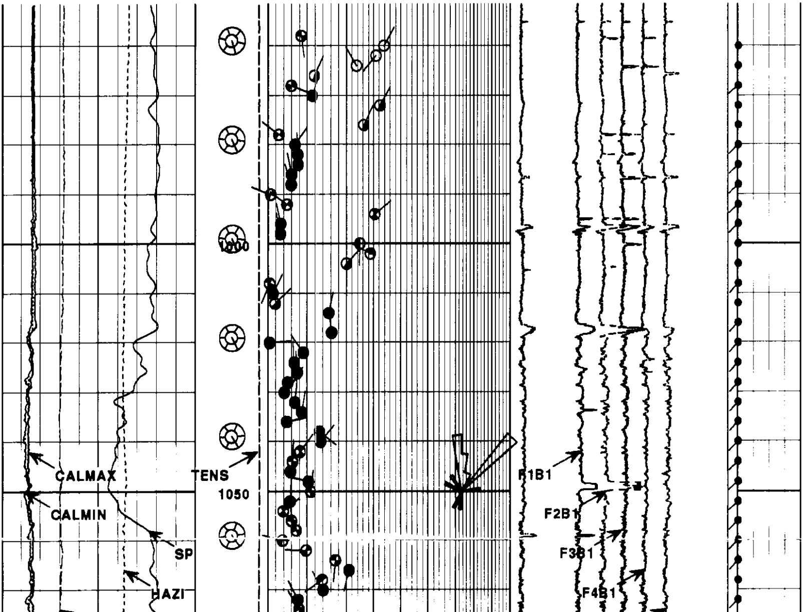
REPEAT SECTION

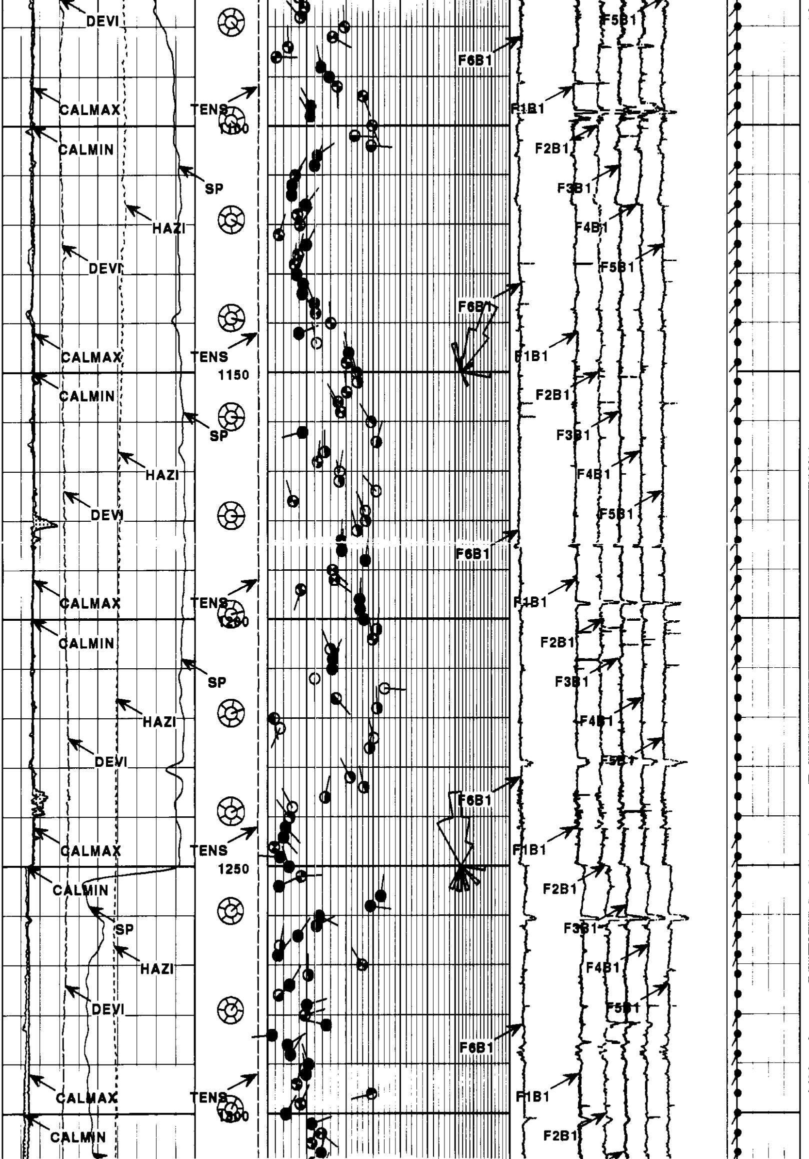
HALLIBURTON
EXCELL

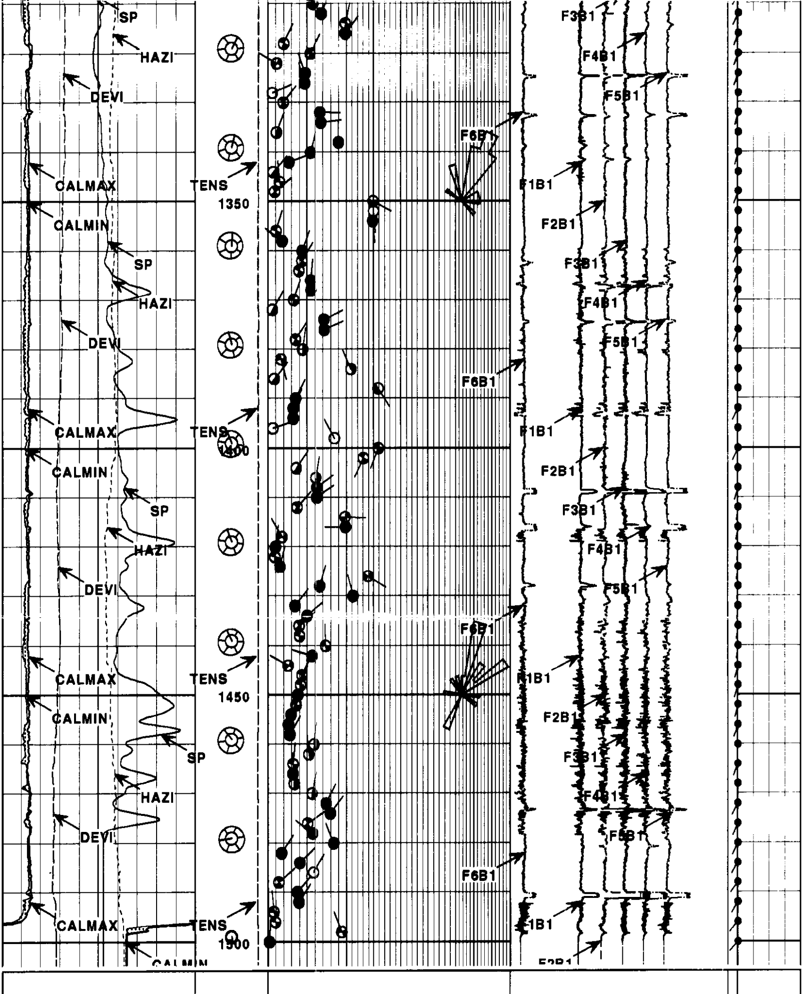
Version No: 5.0 \| hc:3.0
Data File: 0517_2230_s2360.1.cls
Format File: dip.spc
Plot Time: 2004-05-18 01:22:05
Log Time: 2004-05-17 23:06:46
Top Depth: 951.51
Bottom Depth: 1505.25

GAMMA RAY CALIPERS	BH X-SECTION	SHIVA DIPS	RAW SP-CORR RES. CURVES	DEVIATIO

CALMAX 7 INCHES 17	**AZI1** 0 360	**DIP** 0 DEG 90	**F1B1** 1000 -1000	**DRIFT** 0 DEG 90
CALMIN 7 INCHES 17	**TENS** 10000 0		**F2B1** 1200 -800	
SP 40]10[140	1:240 FT.		**F3B1** 1400 -600	
HAZI -50 DEGREES 350			**F4B1** 1600 -400	
DEVI -2 DEGREES 5			**F5B1** 1800 -200	
			F6B1 2500 500	







			F6B1 2500 500	
DEVI -2 DEGREES 8			**F5B1** 1800 -200	
HAZI -50 DEGREES 350			**F4B1** 1600 -400	
SP 40]10[140	1:240 FT.		**F3B1** 1400 -600	
CALMIN 7 INCHES 17	**TENS** 10000 0		**F2B1** 1200 -800	
CALMAX 7 INCHES 17	**AZI1** 0 360	**DIP** 0 DEG 90	**F1B1** 1000 -1000	**DRIFT** 0 DEG 90
GAMMA RAY CALIPERS	BH X-SECTION	SHIVA DIPS	RAW SP-CORR RES. CURVES	DEVIATION

HALLIBURTON
EXCELL

Version No: 5.0 | hc:3.0
Data File: 0517_2230_s2360.1.cls
Format File: dip.spc
Plot Time: 2004-05-18 01:23:31
Log Time: 2004-05-17 23:06:46
Top Depth: 951.51
Bottom Depth: 1505.25

SHIVA COMPUTATION PARAMETERS

COMPANY NAME :
WELL NAME :
FIELD NAME :
COUNTRY :

Horizontal Reference Plane		Tool type	WBM
Shift Search Angle	35.0	Output selected by N Lines then Quality	
Correlation Interval	4.000 f	Number of Maxima	3
Correlation Step	2.000 f	Peak Fraction	.90
Dip Cutoff Angle	35.0	Number of Triangles Searched	20
Closure Cutoff Angle	1.0	Plotted dip quality range	A-E
Planarity Cutoff Angle	3.0	Depth of Investigation	.90
Declination	20.0	Mirror Dip Rejection	No

HALLIBURTON

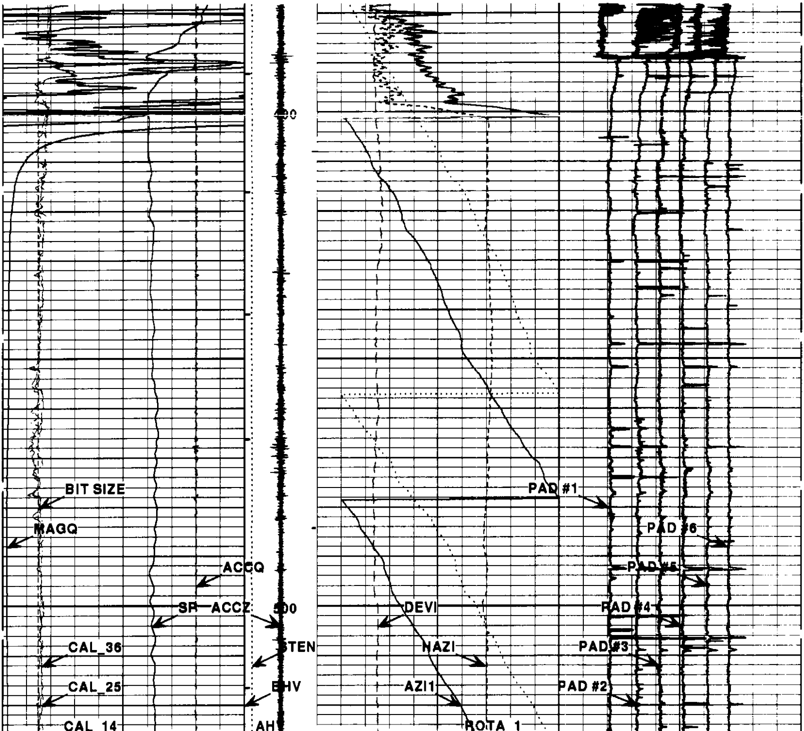
Version No: 5.0 | hc:3.0
Data File: 0517_2230_s2360.2.cls
Format File: plot_01_1.spc

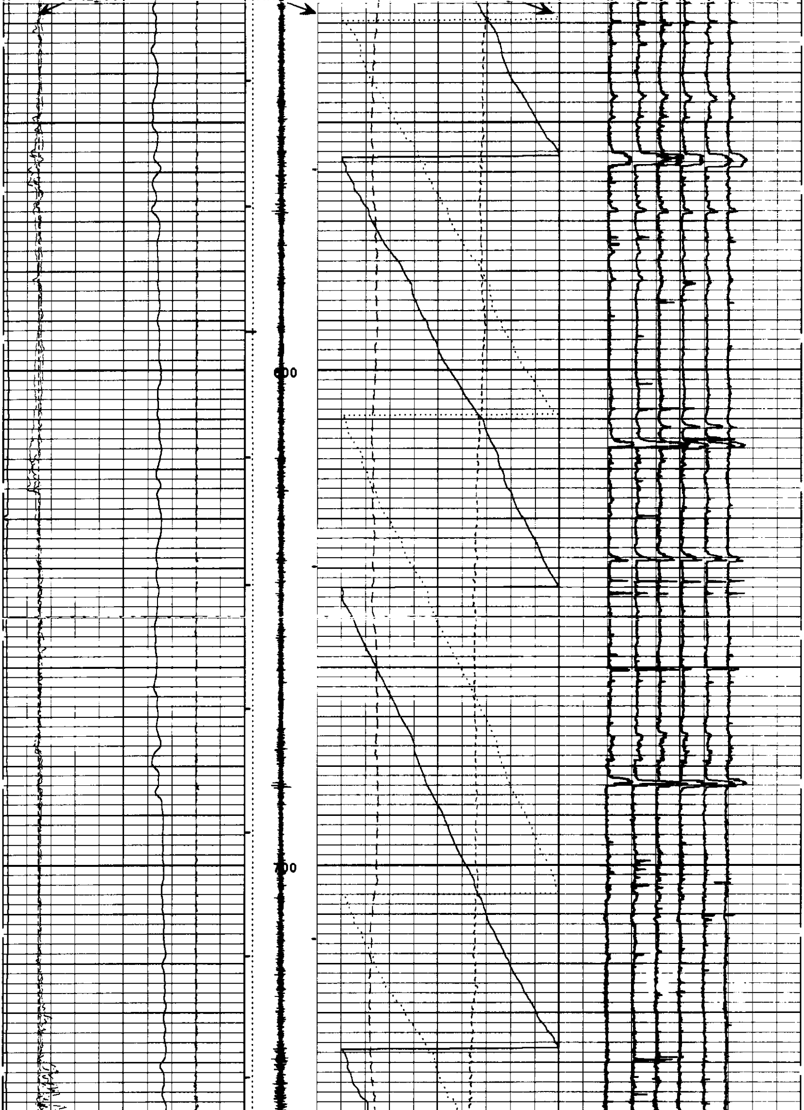
EXCELL

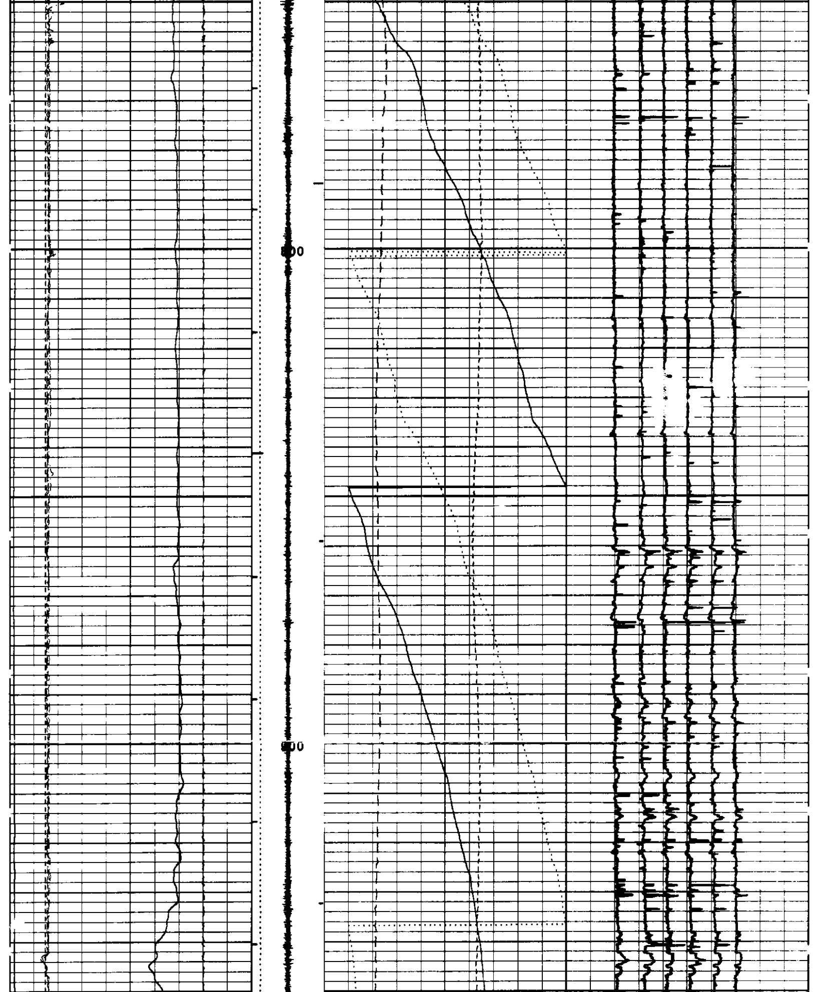
Plot Time: 2004-05-18 00:17:03
Log Time: 2004-05-17 23:32:44

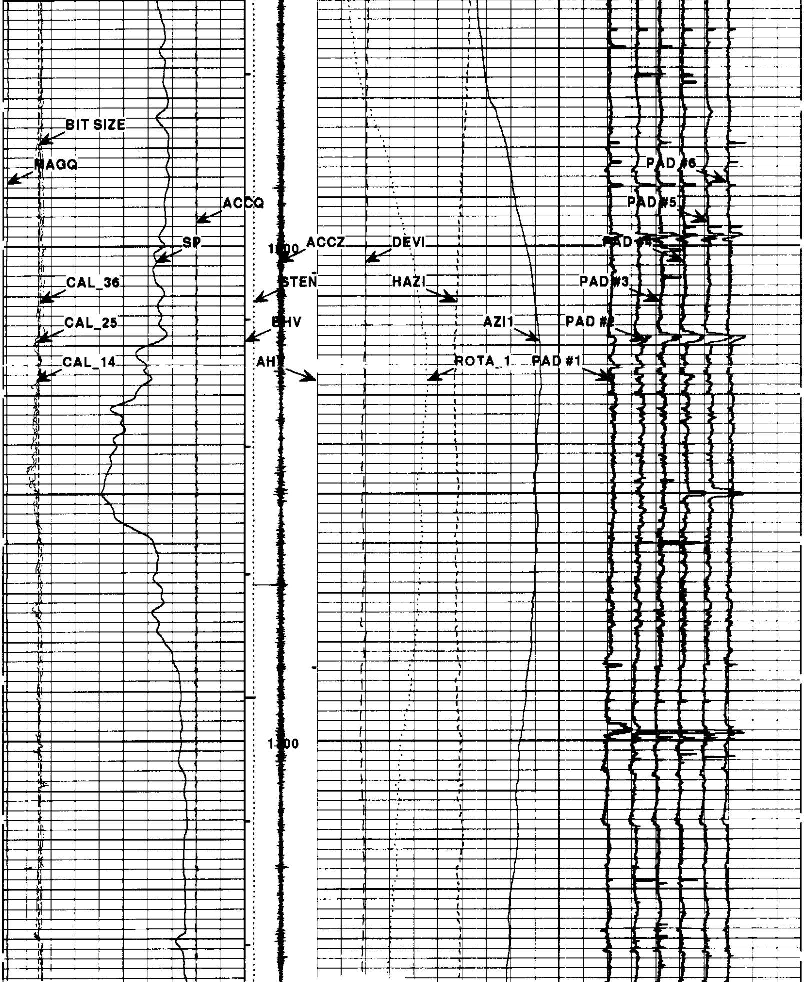
Top Depth: 377.75
Bottom Depth: 1616.75

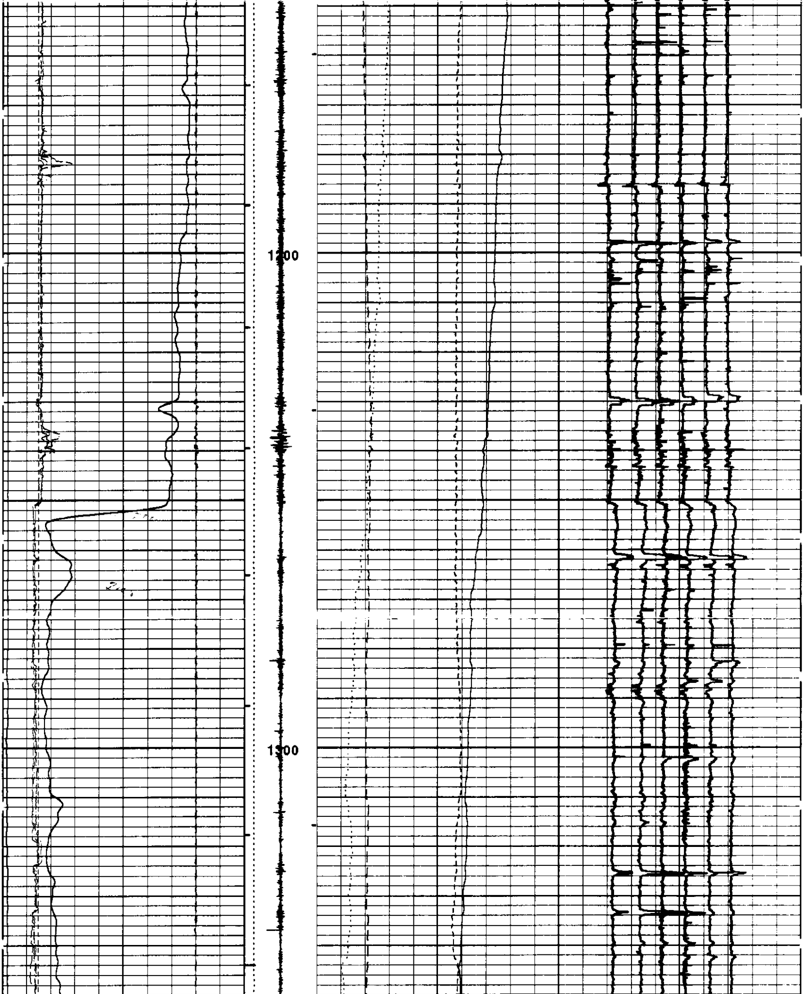
CAL_14 7 INCHES 17	**AHV** FT3	**ROTA_1** -40 DEGREES 360	**PAD #1** 800 -1200
CAL_25 7 INCHES 17	**BHV** FT3	**AZI1** -40 DEGREES 360	**PAD #2** 1000 -1000
CAL_36 7 INCHES 17	**STEN** 0 10000	**HAZI** -40 DEGREES 360	**PAD #3** 1200 -800
SP -]10[+	**ACCZ** .8 1.2	**DEVI** -1 DEGREES 9	**PAD #4** 1400 -600
ACCQ .6 1.1	1:240 FT.		**PAD #5** 1600 -400
MAGQ .6 1.1			**PAD #6** 1800 -200
BIT SIZE 7 INCHES 17			

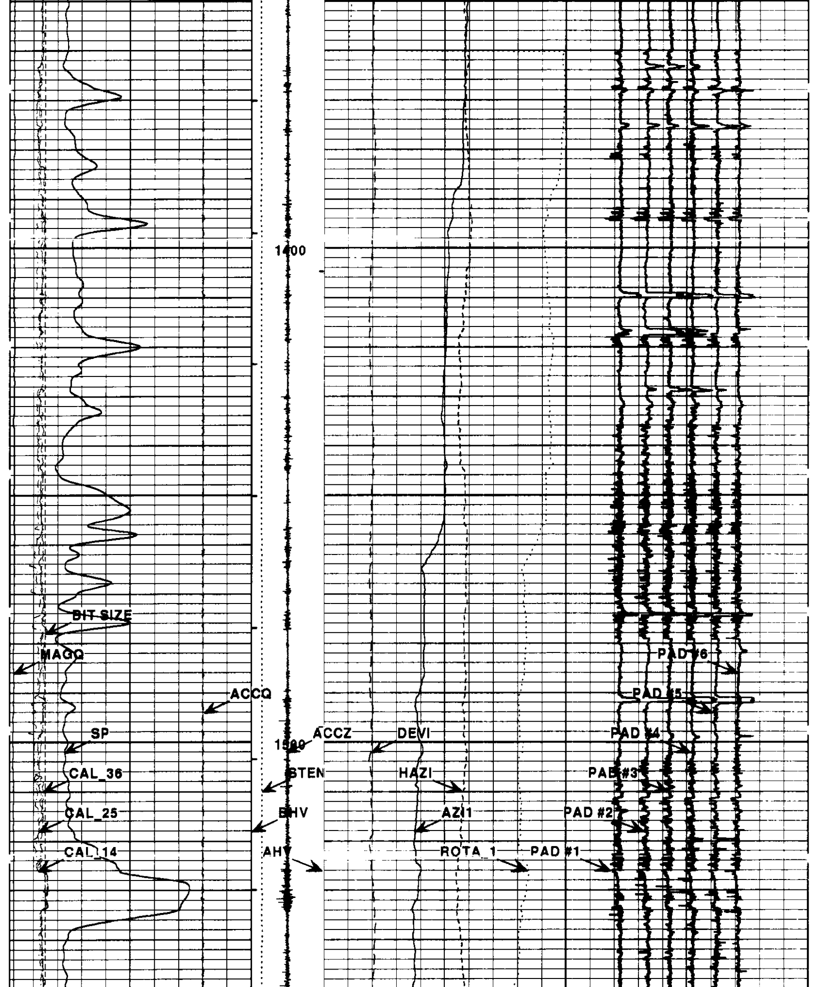


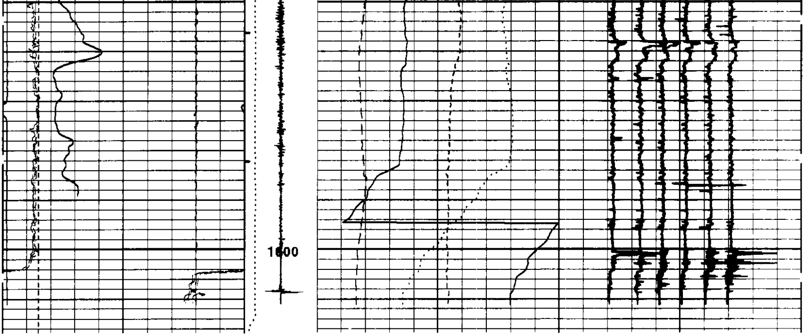












BIT SIZE 7 INCHES 17			
MAGQ .6 1.1			**PAD #6** 1800 -200
ACCQ .6 1.1	1:240 FT		**PAD #5** 1600 -400
SP -]10[+	**ACCZ** .8 1.2	**DEVI** -1 DEGREES 9	**PAD #4** 1400 -600
CAL_36 7 INCHES 17	**STEN** 0 10000	**HAZI** -40 DEGREES 360	**PAD #3** 1200 -800
CAL_25 7 INCHES 17	**BHV** ← FT3	**AZI1** -40 DEGREES 360	**PAD #2** 1000 -1000
CAL_14 7 INCHES 17	**AHV** FT3 →	**ROTA_1** -40 DEGREES 360	**PAD #1** 800 -1200

HALLIBURTON

EXCELL 2000

Version No: 5.0 | hc:3.0
Data File: 0517_2230_s2360.2.cls
Format File: plot_01_1.spc
Plot Time: 2004-05-17 23:32:45
Log Time: 2004-05-17 23:32:44

Top Depth: ------
Bottom Depth: 1616.75

Current EXCELL-2000 Parameter Values
Depth: 307.667
Date: 18-May-2004 00:18
Service Number: 2360
Software Version: 5.0

Mnemonic	Tool	Parameter Description	Value	Units
PERF	DITSHD	PERFORATED INTERVAL	NO	
TD	DITSHD	TOTAL DEPTH	0.	FT
CS_ANT	DITSHD	CASING DEPTH (FOR ANNOTATION)	0.	FT
DIP_OK	SED	DO DIPMETER CALCULATIONS?	YES	
LO_RES	SED	PICK LOWEST SED RESISTIVITY.	0.1	
HI_RES	SED	PICK HIGHEST SED RESISTIVITY.	500.	
CASED	SED	IS THE HOLE CASED?	NO	
CASEOD	SED	CASING DIAMETER (OD)	7.	Inches
BS	SED	BIT SIZE	8.5	Inches
NAV_OK	SEDNAV	DO NAVIGATION CALCULATIONS?	YES	

EXCELL-2000 Calibration Report
Date: 18-May-2004 02:23

SIX ELECTRODE DIPMETER (DITS) SHOP CALIBRATION SUMMARY

```
PERFORMED: 14-May-2004 16:21   LAST SHOP CALIBRATION: 13-Dec-2003 12:31
SERIAL NUMBER: SED14           MODEL: SED-C
TRUCK UNIT NUMBER: 49599       PROGRAM VERSION: 5.0
PERFORMED BY: G
```

```
         *************** WATER-BASED MUD PADS *********************
         ************* CALIPER ARM LENGTH: 12.0 *******************

              CALIPER 1-4            CALIPER 2-5            CALIPER 3-6
         MEASURED CALIBRATED MEASURED CALIBRATED MEASURED CALIBRATED  UNITS
         -------- ---------- -------- ---------- -------- ----------  -----
RING #1:      7.10      7.00     7.01      7.00      7.11      7.00  INCH
RING #2:     15.08     15.00    15.08     15.00     15.10     15.00  INCH
MID POINT:   11.09     11.00    11.04     11.00     11.11     11.00  INCH

          *************** PAD  RESISTIVITIES *********************

         MEASURED CALIBRATED MEASURED CALIBRATED MEASURED CALIBRATED  UNITS
         -------- ---------- -------- ---------- -------- ----------  -----
PADS #1-3:    2.50      2.49     2.44      2.50      2.50      2.50  OHM-M
PADS #4-6:    2.50      2.50     2.49      2.49      2.48      2.48  OHM-M

             PRESSER PAD                         PAD VOLTS
         MEASURED CALIBRATED                MEASURED CALIBRATED
         -------- ----------                -------- ----------
CLOSED:       0.06      0.00   ZERO:            0.00      0.00
OPENED:       1.00      1.00   CALIBRATE:       2.50      2.50
```

SIX ELECTRODE DIPMETER (DITS) BEFORE SURVEY FIELD CHECK SUMMARY

```
PERFORMED: 17-May-2004 22:37   LAST SHOP CALIBRATION: 14-May-2004 16:21
```

```
         *************** WATER-BASED MUD PADS *********************

                          SHOP      BEFORE     UNITS
                        --------   --------    -----
CALIPER #1:               7.000      6.886     INCH
CALIPER #2:               7.000      6.940     INCH
CALIPER #3:               7.000      7.104     INCH
CALIPER #4:               7.000      7.232     INCH
CALIPER #5:               7.000      7.127     INCH
CALIPER #6:               7.000      6.869     INCH
PAD #1:                   2.492      2.484     OHM-M
PAD #2:                   2.498      2.496     OHM-M
PAD #3:                   2.493      2.486     OHM-M
PAD #4:                   2.490      2.482     OHM-M
PAD #5:                   2.485      2.484     OHM-M
PAD #6:                   2.478      2.470     OHM-M
```

SIX ELECTRODE DIPMETER (DITS) AFTER SURVEY FIELD CHECK SUMMARY

```
PERFORMED: 18-May-2004 01:00   LAST SHOP CALIBRATION: 14-May-2004 16:21
```

```
         *************** WATER-BASED MUD PADS *********************

                         BEFORE      AFTER     UNITS
                        --------   --------    -----
```

CALIPER #1:	6.886	6.886	INCH
CALIPER #2:	6.940	6.940	INCH
CALIPER #3:	7.104	7.105	INCH
CALIPER #4:	7.232	7.232	INCH
CALIPER #5:	7.127	7.127	INCH
CALIPER #6:	6.869	6.869	INCH
PAD #1:	2.484	2.484	OHM-M
PAD #2:	2.496	2.495	OHM-M
PAD #3:	2.486	2.485	OHM-M
PAD #4:	2.482	2.481	OHM-M
PAD #5:	2.484	2.484	OHM-M
PAD #6:	2.470	2.471	OHM-M

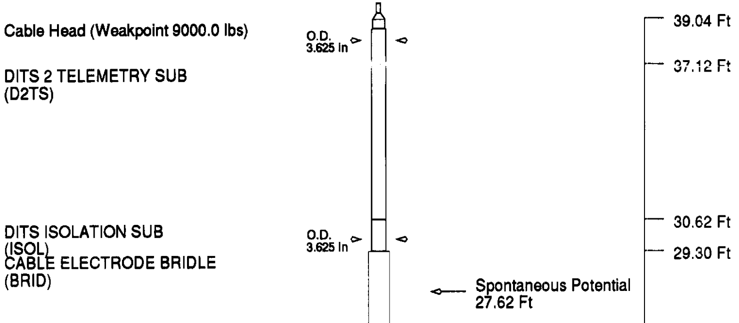
EXCELL-2000 Calibration Summary Table

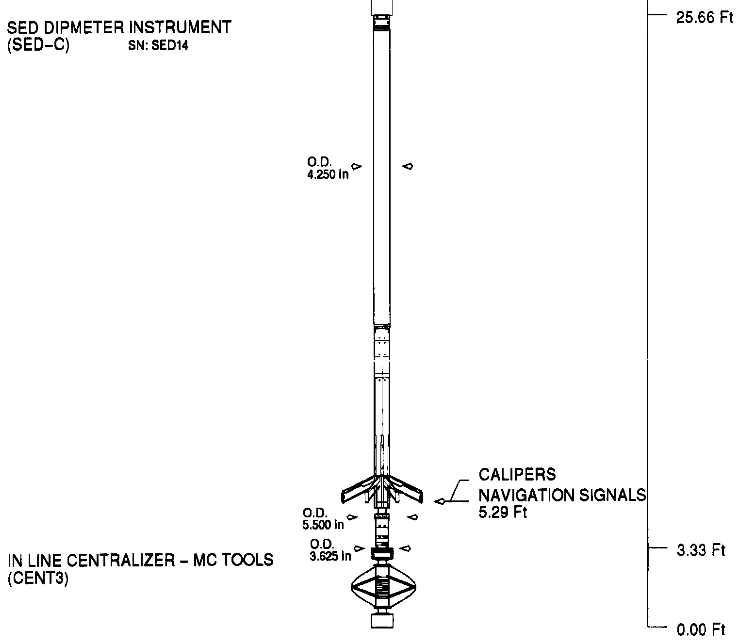
Date: 18-May-2004 02:23

Service or Signal	Shop	Before	After	Change	Tolerance
CALIPER #1:	7.000	6.886	6.886	-0.001	+/-0.25
CALIPER #2:	7.000	6.940	6.940	-0.000	+/-0.25
CALIPER #3:	7.000	7.104	7.105	-0.000	+/-0.25
CALIPER #4:	7.000	7.232	7.232	-0.000	+/-0.25
CALIPER #5:	7.000	7.127	7.127	-0.000	+/-0.25
CALIPER #6:	7.000	6.869	6.869	0.000	+/-0.25
PAD #1:	2.492	2.484	2.484	-0.000	0.10
PAD #2:	2.498	2.496	2.495	0.001	0.10
PAD #3:	2.493	2.486	2.485	0.000	0.10
PAD #4:	2.490	2.482	2.481	0.000	0.10
PAD #5:	2.485	2.484	2.484	-0.001	0.10
PAD #6:	2.478	2.470	2.471	-0.001	0.10

SIX ARM DIPMETER

Excell 2000 Tool String Diagram





Tool Mnemonic	Length (Ft)	Weight In Air (lbs)	Logging Speed (Ft/min)
D2TS	6.50	100.00	N/A
ISOL	1.32	30.00	N/A
BRID	3.64	0.00	N/A
SED-C	22.33	400.00	60.00
CENT3	3.33	35.00	N/A
Tool String	37.12	565.00	60.00

COMPANY	TAYLOR OPERATING COMPANY		
WELL	CC 13-3-55		
FIELD	EXPLORATION		
COUNTY	COLUMBIA	**STATE**	OREGON

HALLIBURTON

EXCELL

SHIVA PROCESSED
SIX ELECTRODE
DIPMETER
5"=100'