5 inch

Schlumberger

FORMATION MICROSCANNER

COUNTY	COOS
FIELD	WILDCAT
LOCATION	2130' FSL & 2399' FWL OF:
WELL	"WNS MENASHA" #32-1
COMPANY	CARBON ENERGY INT.

COMPANY CARBON ENERGY INT.

WELL "WNS MENASHA" #32-1

FIELD WILDCAT

COUNTY COOS **STATE** OREGON

LOCATION	2130' FSL & 2399' FWL OF:			**Other Services:** DIL/GR LDT/CNL/GR SHDT
API SERIAL NO. 36-011-00026	**SECT.** 32	**TWP.** 26S	**RANGE** 13W	

Permanent Datum	GL	**Elev.**	165.0 F	**Elev.: K.B.183.0 F**
Log Measured From	KB	18.0 F	**above Perm. Datum**	**D.F.182.0 F**
Drilling Measured From	KB			**G.L.165.0 F**

Date	10-NOV-1993					
Run No.	ONE					
Depth Driller	1158.0 F					
Depth Logger (Schl.)	1157.0 F					
Btm. Log Interval	1155.0 F					
Top Log Interval	154.0 F					
Casing-Driller	9 5/8	@ 154.0 F		@		@
Casing-Logger	154.0 F					
Bit Size	8 3/4	@ 1158.0 F		@		@
Type Fluid in Hole	FRESH					
Dens. / Visc.	8.90 LB/G	33.0 S				
pH / Fld. Loss		10.4 C3				
Source of Sample	FLOWLINE					
Rm @ Meas. Temp.	5.510 OHMM	@ 55.0 DEGF		@		
Rmf @ Meas. Temp.	6.850 OHMM	@ 53.0 DEGF		@		
Rmc @ Meas. Temp.	4.470 OHMM	@ 53.0 DEGF		@		
Source: Rmf / Rmc	MEASURED	MEASURED				
Rm @ BHT	3.559 OHMM	@ 89.0 DEGF		@		
TIME Circulation Ended	17:00 9-NOV-93					
TIME Logger on Bottom	02:00 10-NOV-93					
Max. Rec. Temp.	89.0 DEGF					
Equip. / Location	8504	SACRAMENTO				
Recorded By	M.DEMSKIE					
Witnessed By	S.PAPPAJOHN					

The well name, location and borehole reference data were furnished by the customer.

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 interpretations 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.

Run No.	ONE		
Service Order No.	624386		
Drilling Fluid Level	5.0 F		
Salinity			
Rmf @ BHT	4.281 OHMM @	89.0 DEGF	@
Rmc @ BHT	2.794 OHMM @	89.0 DEGF	@
Logging Speed	2000.0 F/HR		
EQUIPMENT DATA			
Tool Number 1	MEAC-A		
Tool Number 2	MEDS-C		
Tool Number 3	SGC-SA		
Tool Number 4	TCM-AB 1516		
Tool Number 5			
Tool Number 6			
Tool Number 7			
Tool Number 8			
Tool Number 9			
Tool Number 10			
Tool Number 11			
Tool Number 12			

REMARKS:

CORRELATED TO SWS INDUCTION LOG

SOME HEADER INFORMATION NOT AVAILABLE AT WELLSITE

Main Log - 5"/100'

AZIM PRESENTATION DISALLOWED WHEN DEVI IS LESS THAN .500000 DEG

SPEED CORRECTION NOT APPLIED

ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:	529.621 F3	FROM 1157.00 F	TO 154.000 F
Integrated Cement Volume:	262.363 F3	FROM 1157.00 F	TO 154.000 F

(ASSUMING 7.00000 IN O.D. CASING)

EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
Integrated Hole Volume	10.0000 F3	LEFT EDGE
Integrated Cement Volume	10.0000 F3	RIGHT EDGE

FNOR(OER)
.20000 .70000
ANOR(M/S2)
9.0000 11.000

EV(V) | TENS(LBF)
0.0 5.0000 | 5000.0 0.0
MRB8
-1000. 19000.
MRB7
-3000. 17000.
MRB6
-5000. 15000.
MRB5
-7000. 13000.
MRB4
-9000. 11000.
MRB3
-11000 9000.0
MRB2
-13000 7000.0
MRB1
-15000 5000.0

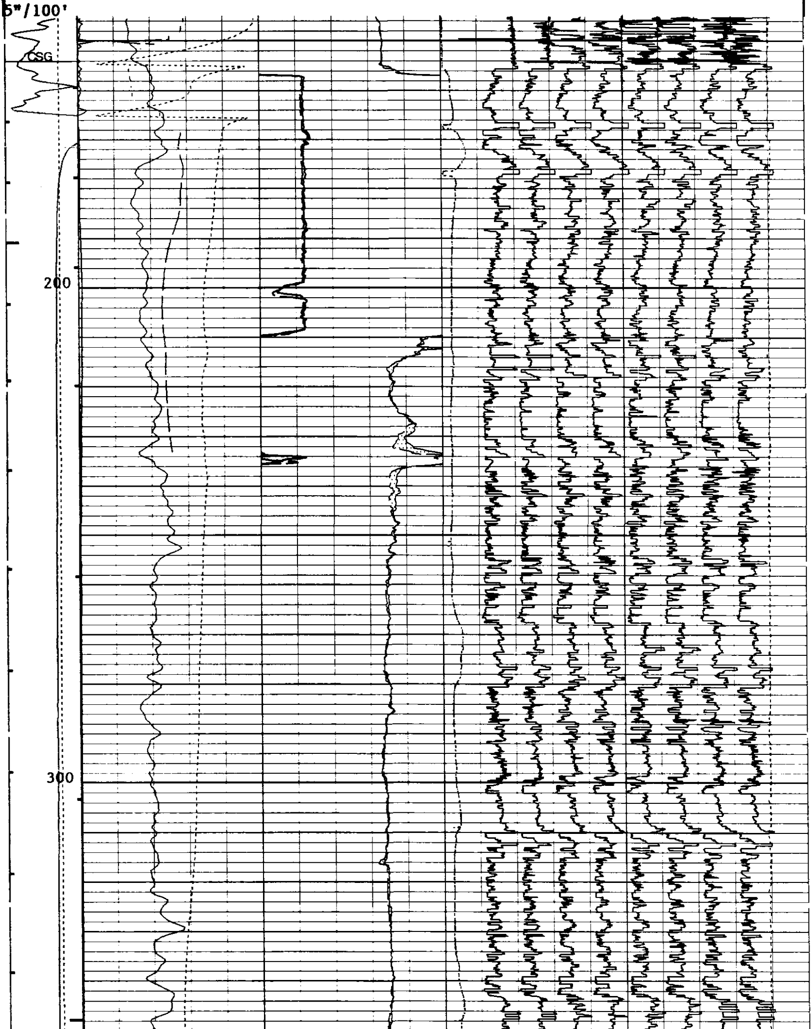
DEVI(DEG)
0.0 50.000
GR(GAPI)
0.0 150.00
P1AZ(DEG)
-40.00 360.00
AZIM(DEG)
-40.00 360.00

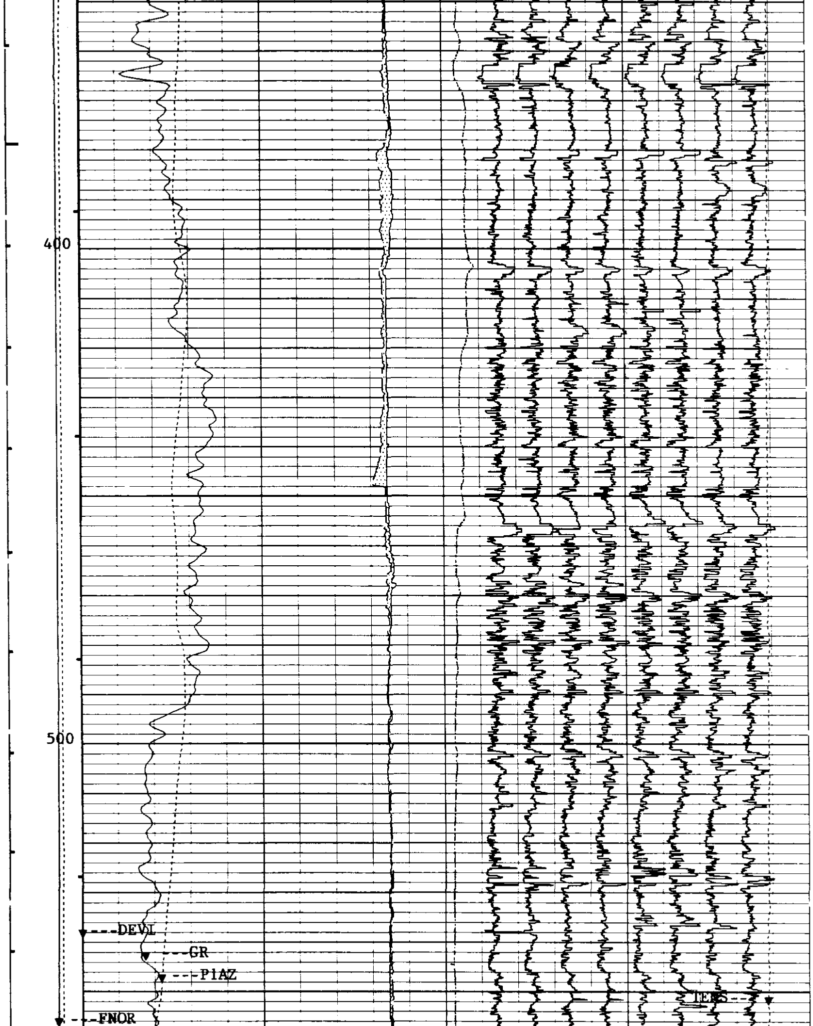
AZ(M/S2)
0.0 10.000
C2(IN)
6.0000 11.000
C1(IN)
6.0000 11.000

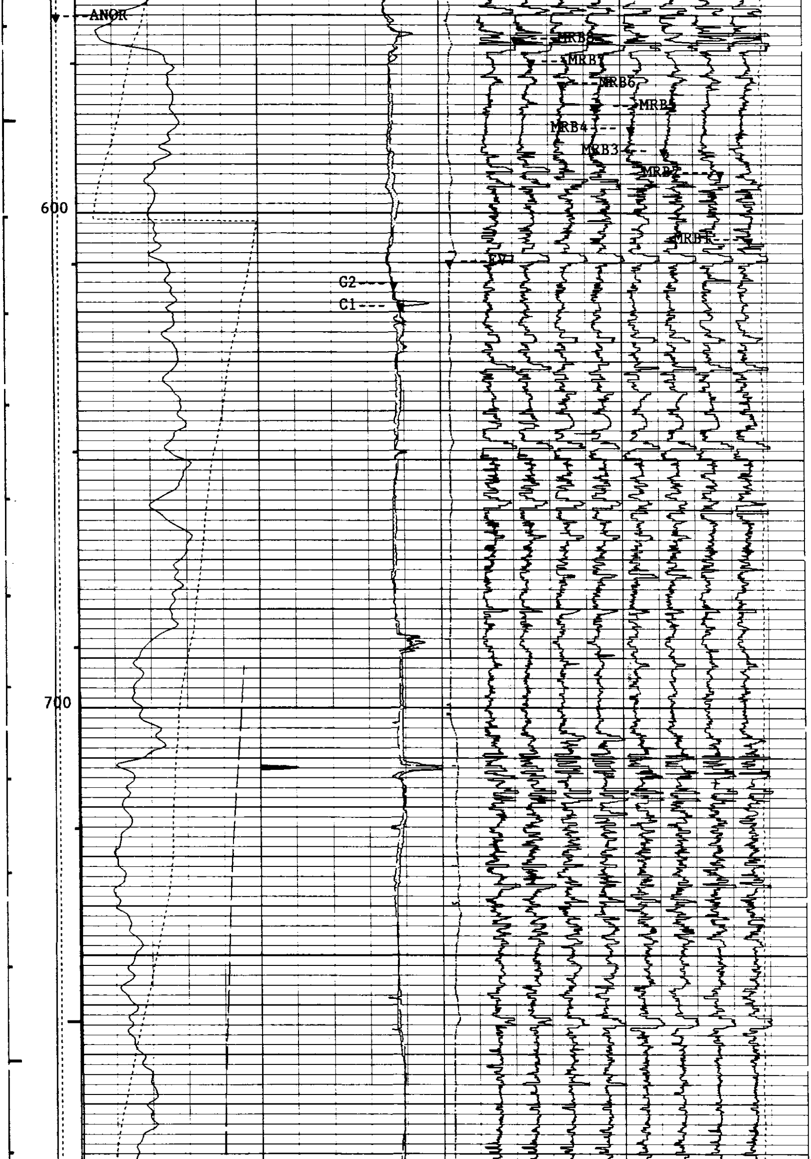
C2A - C1A

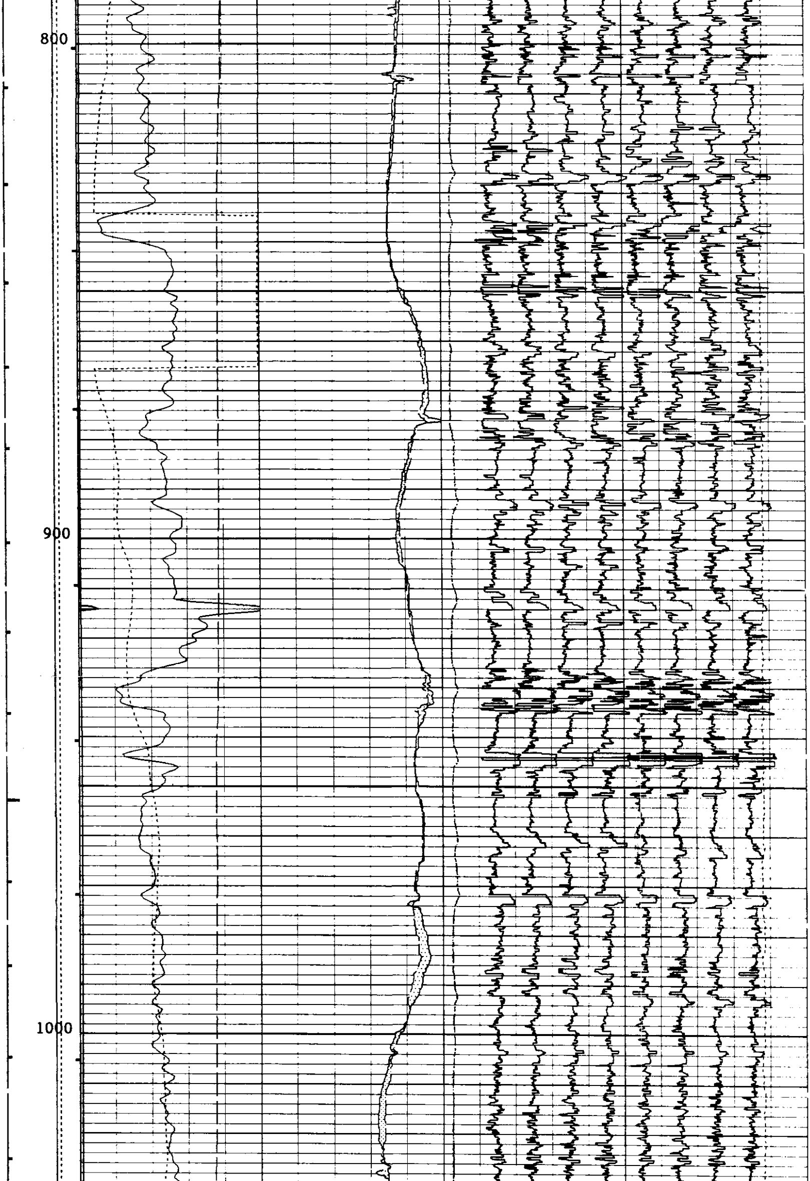
C1A - C2A

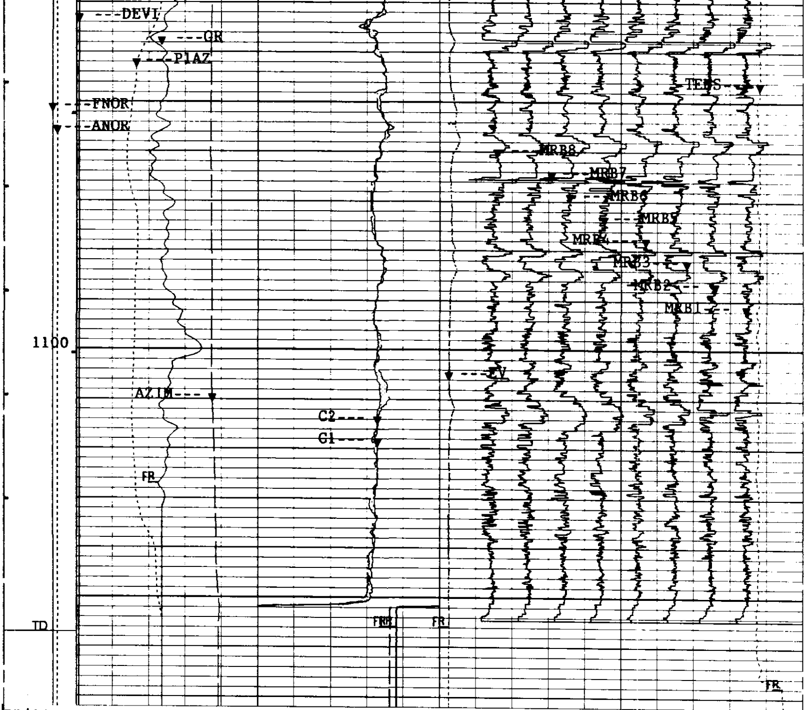
CP 38.2 FILE 5 10-NOV-1993 03:10 (UP)











5"/100'

CP 38.2 FILE 5 10-NOV-1993 02:39 (UP)

C2A - C1A

C1A - C2A

FNOR(OER)
.20000 .70000
ANOR(M/S2)
9.0000 11.000

Curve	Left	Right
DEVI(DEG)	0.0	50.000
GR(GAPI)	0.0	150.00
P1AZ(DEG)	-40.00	360.00
AZIM(DEG)	-40.00	360.00
AZ(M/S2)	0.0	10.000
C2(IN)	6.0000	11.000
C1(IN)	6.0000	11.000
EV(V)	0.0	5.0000
TENS(LBF)	5000.0	0.0
MRB8	-1000.	19000.
MRB7	-3000.	17000.
MRB6	-5000.	15000.
MRB5	-7000.	13000.
MRB4	-9000.	11000.
MRB3	-11000	9000.0
MRB2	-13000	7000.0
MRB1	-15000	5000.0

SENSOR MEASURE POINT TO TOOL ZERO

TENS	-10.9	FEET	GR	30.0	FEET
C2	1.1	FEET	C1	1.1	FEET
MRPD	1.1	FEET	MDRB	1.1	FEET
MRPB	1.1	FEET	MRPC	1.1	FEET
AX	1.1	FEET	MRPA	1.1	FEET
AZ	1.1	FEET	AY	1.1	FEET
FY	1.1	FEET	FX	1.1	FEET
FCAX	1.1	FEET	FZ	1.1	FEET
FCAZ	1.1	FEET	FCAY	1.1	FEET
FTIM	1.1	FEET			

PARAMETERS

PARAMETER	VALUE	UNIT
PADT - Presentation Allow Disallow Threshold	.500000	DEG
NCJT - NGT Calibration Jig Type	GSRY	
FCSR - Fast Channel Sample Rate	0.1"	
AFMO - Accelerometer Filtering Mode	HAMM	
ICMO - Inclinometry Computation Mode	AUTO	
MDEC - Magnetic Field Declination	19.0000	DEG
GLM - GPIT Logging Mode	DIPM	
ICSD - Inclinometry Computation Stop Depth	154.000	F
RBS - Resistivity Button Selection	AUTO	
PTYP - Platform Type	MEC	
MLM - MEST Logging Mode	DIPM	
SOFF - Stand Off	-1.00000	IN
CSR - Curves Sampling Rate	.6"	
ODFO - Output Data Format	RAW	
XMOD - EMEX Voltage Regulation Mode	AUTO	
XGAI - Gain Setting	2	
XOFF - Offset Setting	0	
FCD - Future Casing Diameter	7.00000	IN
SPCR - Speed Correction Constant	DISA	
DSCA - Deviation Scale	20	DEG
SBUT - Set of Buttons Selected	ALL	
INT - Correlation Interval Length	4.00000	F
STEP - Step Length between Correlations	2.00000	F
SPAN - Span of Correlation Sample	4	
SANG - S Wave Arrival Angle	60.0000	
DPAD - Disallowed Pad	AUTO	
DMAX - Maximum Dip Plotted	90	DEG
ELRA - Electrical Radius	.500000	IN
SDFA - Side-By-Side Distance Factor	.900000	
HQUA - High Quality Dip	14	
LQUA - Low Quality Dip	6	

STDI	- Structural Dip	0.0	DEG
STDA	- Structural Azimuth Value	0.0	DEG
CSBL	- CSB Number of Levels	2	
BS	- Bit Size	8.75000	IN
BHS	- BoreHole Status (Open or Cased)	OPEN	

Repeat Section - 5"/100'

SPEED CORRECTION NOT APPLIED

ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:	139.904 F3	FROM 1157.00 F	TO 885.500 F
Integrated Cement Volume:	67.9185 F3	FROM 1157.00 F	TO 885.500 F

(ASSUMING 7.00000 IN O.D. CASING)

EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
Integrated Hole Volume	10.0000 F3	LEFT EDGE
Integrated Cement Volume	10.0000 F3	RIGHT EDGE

Curve	Left	Right
FNOR(OER)	.20000	.70000
ANOR(M/S2)	9.0000	11.000

Curve	Left	Right
DEVI(DEG)	0.0	50.000
GR(GAPI)	0.0	150.00
P1AZ(DEG)	-40.00	360.00
AZIM(DEG)	-40.00	360.00

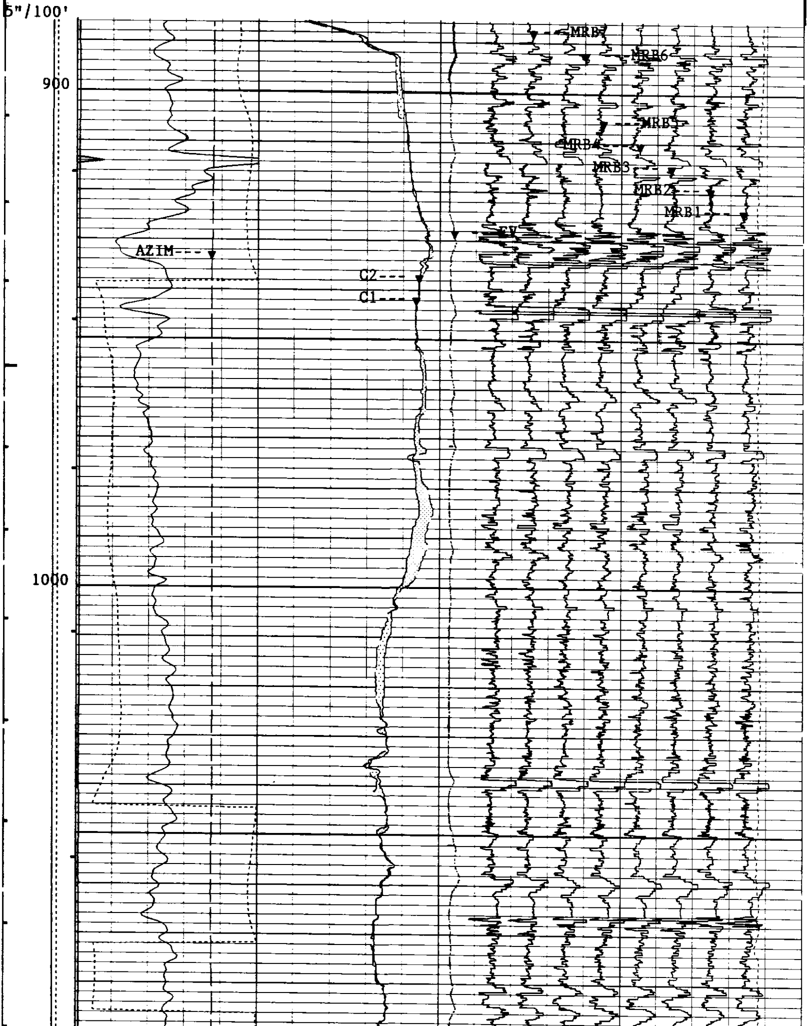
Curve	Left	Right
AZ(M/S2)	0.0	10.000
C2(IN)	6.0000	11.000
C1(IN)	6.0000	11.000

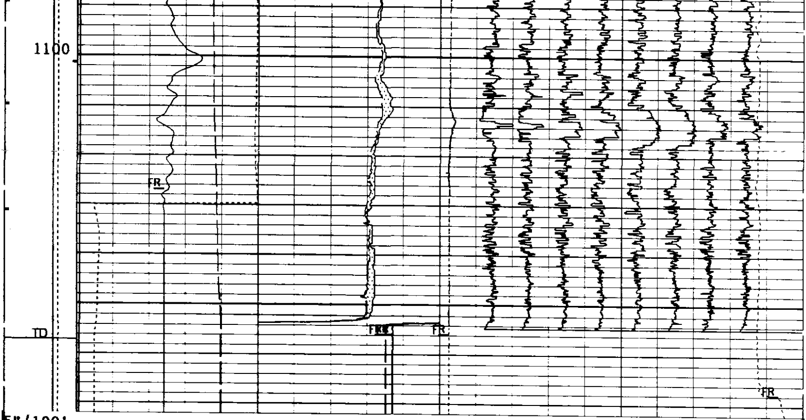
Curve	Left	Right
EV(V)	0.0	5.0000
TENS(LBF)	5000.0	0.0
MRB8	-1000.	19000.
MRB7	-3000.	17000.
MRB6	-5000.	15000.
MRB5	-7000.	13000.
MRB4	-9000.	11000.
MRB3	-11000	9000.0
MRB2	-13000	7000.0
MRB1	-15000	5000.0

C2A – C1A

C1A – C2A

CP 38.2 FILE 4 10-NOV-1993 02:36 (UP)





5"/100'

CP 38.2 FILE 4 10-NOV-1993 02:25 (UP)

C2A - C1A

C1A - C2A

Curve	Left	Right
FNOR(OER)	.20000	.70000
ANOR(M/S2)	9.0000	11.000
DEVI(DEG)	0.0	50.000
GR(GAPI)	0.0	150.00
P1AZ(DEG)	-40.00	360.00
AZIM(DEG)	-40.00	360.00
AZ(M/S2)	0.0	10.000
C2(IN)	6.0000	11.000
C1(IN)	6.0000	11.000
EV(V)	0.0	5.0000
TENS(LBF)	5000.0	0.0
MRB8	-1000.	19000.
MRB7	-3000.	17000.
MRB6	-5000.	15000.
MRB5	-7000.	13000.
MRB4	-9000.	11000.
MRB3	-11000	9000.0
MRB2	-13000	7000.0
MRB1	-15000	5000.0

SENSOR MEASURE POINT TO TOOL ZERO

```
TENS -10.9 FEET                        GR    30.0  FEET
C2     1.1 FEET                        C1     1.1  FEET
MRPD   1.1 FEET                        MDRB   1.1  FEET
MRPB   1.1 FEET                        MRPC   1.1  FEET
AX     1.1 FEET                        MRPA   1.1  FEET
AZ     1.1 FEET                        AY     1.1  FEET
FY     1.1 FEET                        FX     1.1  FEET
FCAX   1.1 FEET                        FZ     1.1  FEET
FCAZ   1.1 FEET                        FCAY   1.1  FEET
FTIM   1.1 FEET
```

PARAMETERS

```
NAME  VALUE        UNIT               NAME  VALUE          UNIT

PADT .500000       DEG                NCJT GSRY
FCSR 0.1"                             AFMO HAMM
ICMO AUTO                             MDEC 19.0000         DEG
GLM  DIPM                             ICSD 154.000         F
RBS  AUTO                             PTYP MEC
MLM  DIPM                             SOFF -1.00000        IN
CSR  .6"                              ODFO RAW
XMOD AUTO                             XGAI 2
XOFF 0                                FCD  7.00000         IN
SPCR DISA                             DSCA 20              DEG
SBUT ALL                              INT  4.00000         F
STEP 2.00000       F                  SPAN 4
SANG 60.0000                          DPAD AUTO
DMAX 90            DEG                ELRA .500000         IN
SDFA .900000                          HQUA 14
LQUA 6                                STDI 0.0             DEG
STDA 0.0           DEG                CSBL 2
BS   8.75000       IN                 BHS  OPEN
```

Calibration Summary

```
              BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:      10-NOV-1993 01:59
  PROGRAM FILE: TDIP    (VERSION     38.2     92/10/12  92/10/12)


SGTL             DETECTOR CALIBRATION SUMMARY

           MEASURED
         BKGD      JIG          CALIBRATED          UNITS
   GR     33       184             165              GAPI

BACK: 10-NOV-1993 01:54   JIG: 10-NOV-1993 01:58   COMP: 10-NOV-1993 01:59


MEST             CALIPER CALIBRATION SUMMARY

           MEASURED                        CALIBRATED
         SMALL    LARGE                  SMALL     LARGE         UNITS
   C1    8.67     12.46                  8.00      12.00          IN
   C2    8.68     12.40                  8.00      12.00          IN

SMALL: 10-NOV-1993 01:51 LARGE: 10-NOV-1993 01:52 COMP: 10-NOV-1993 01:52


GPIC             CALIBRATION SUMMARY
```

```
  MAGNETOMETER MANUFACTURER CODE:                 3
  MAGNETOMETER SERIAL NUMBER:                    87
  MAGNETOMETER REFERENCE TEMPERATURE :           20.0  DEGC


 GPIC            CALIBRATION SUMMARY

  ACCELEROMETER MANUFACTURER CODE:                3
  ACCELEROMETER SERIAL NUMBER:                  336
  ACCELEROMETER REFERENCE TEMPERATURE :          20.0  DEGC

    CP 38.2            FILE    8       10-NOV-1993 01:59
```

COMPANY CARBON ENERGY INT.

WELL "WNS MENASHA" #32-1

FIELD WILDCAT

COUNTY COOS **STATE** OREGON

SCHL.	**FR**	**1155.0 F**
SCHL.	**TD**	**1157.0 F**
DRLR.	**TD**	**1158.0 F**
Elev:	**KB**	**183.0 F**
	DF	**182.0 F**
	GL	**165.0 F**

Schlumberger

FORMATION MICROSCANNER