COUNTY	COLUMBIA
FIELD	MIST
LOCATION	2367'N AND 1009'W
WELL	"CONDOR" L.F. #43-32-65
COMPANY	NAHAMA & WEAGANT ENERGY CO.

Schlumberger

SIMULTANEOUS
COMPENSATED NEUTRON-LITHO-DENSITY

COMPANY	NAHAMA & WEAGANT ENERGY CO.		
WELL	"CONDOR" L.F. #43-32-65		
FIELD	MIST		
COUNTY	COLUMBIA	**STATE**	OREGON

LOCATION				Other Services:
2367'N AND 1009'W FROM SE CORNER				DIL-GR LDT-CNL-GR FMS-GR
API SERIAL NO. 36-009-00302	SECT. 32	TWP. 6N	RANGE 5W	

Permanent Datum	GL	Elev.	791.0 F	Elev.: K.B. 801.0 F
Log Measured From	KB	10.0 F	above Perm. Datum	D.F.
Drilling Measured From	KB			G.L. 791.0 F

Date		29-AUG-1993			
Run No.		ONE			
Depth Driller		1909.0 F			
Depth Logger (Schl.)		1908.0 F			
Btm. Log Interval		1905.0 F			
Top Log Interval		900.0 F			
Casing-Driller		10 3/4" @ 502.0 F		@	@
Casing-Logger		502.0 F			
Bit Size		9 7/8" @ 1909.0 F		@	@
Type Fluid in Hole		ACRYLAFLOW			
Dens.	Visc.	9.20 LB/G	42.0 S		
pH	Fld. Loss	9.0	6.0 C3		
Source of Sample		FLOWLINE			
Rm @ Meas. Temp.		2.970 OHMM @ 80.0 DEGF		@	
Rmf @ Meas. Temp.		3.890 OHMM @ 68.0 DEGF		@	
Rmc @ Meas. Temp.		2.550 OHMM @ 68.0 DEGF		@	
Source: Rmf	Rmc	MEASURED	MEASURED		
Rm @ BHT		2.839 OHMM @ 84.0 DEGF		@	
TIME	Circulation Ended	12:00 29-AUG-1993			
TIME	Logger on Bottom	17:52 29-AUG-1993			
Max. Rec. Temp.		84.0 DEGF			
Equip.	Location	8504	SACRAMENTO		
Recorded By		SCOTT PILCH			
Witnessed By		JOE NAHAMA / ROB LUCAS			

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

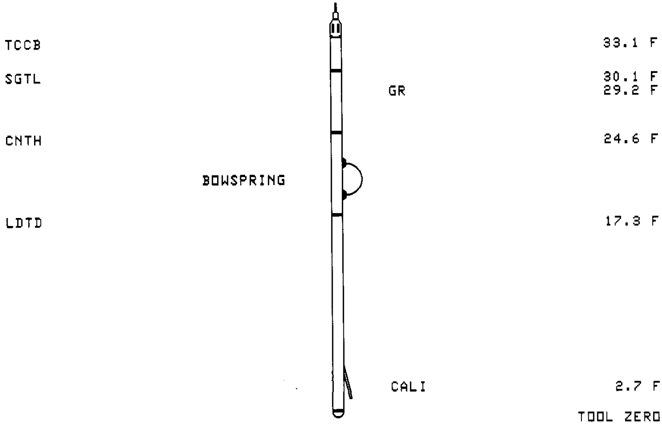
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.	624460	
Drilling Fluid Level	5.0 F	
Salinity	600.0 PPM	
Rmf @ BHT	3.208 OHMM @ 84.0 DEGF	@
Rmo @ BHT	2.102 OHMM @ 84.0 DEGF	@
Logging Speed	3600.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	DRS-B 3959	
Tool Number 2	NSC-D 2941	
Tool Number 3	CNC-HA 1263	
Tool Number 4	SGC-SA 580	
Tool Number 5	TCC-B 1315	
Tool Number 6	TCM-AB 1516	
Tool Number 7		
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

CALIPER CALIBRATED WITH 8 AND 10 INCH RINGS.
NEUTRON AND DENSITY RUN SEPARATELY THEN MERGED.

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 35.6 F.
TOTAL TOOL STRING WEIGHT IS 658. LB IN AIR.

MAIN LOG

ACCUMULATED INTEGRATION VALUES SUMMARY:

```
Integrated Hole Volume:    581.498 F3    FROM 1908.00 F     TO 880.000 F
Integrated Cement Volume:  307.418 F3    FROM 1908.00 F     TO 880.000 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

TENS(LBF)
20000. 0.0
DRHO(G/C3)
-.2500 .25000

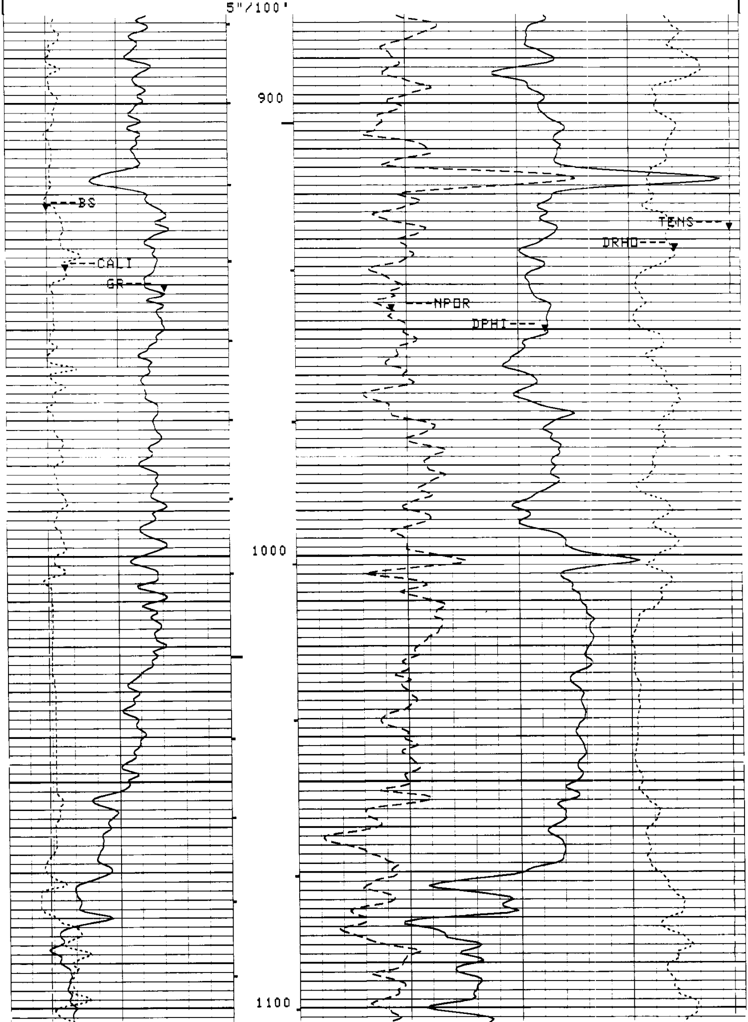
BS(IN)
8.0000 18.000
CALI(IN)
8.0000 18.000
GR(GAPI)
0.0 150.00

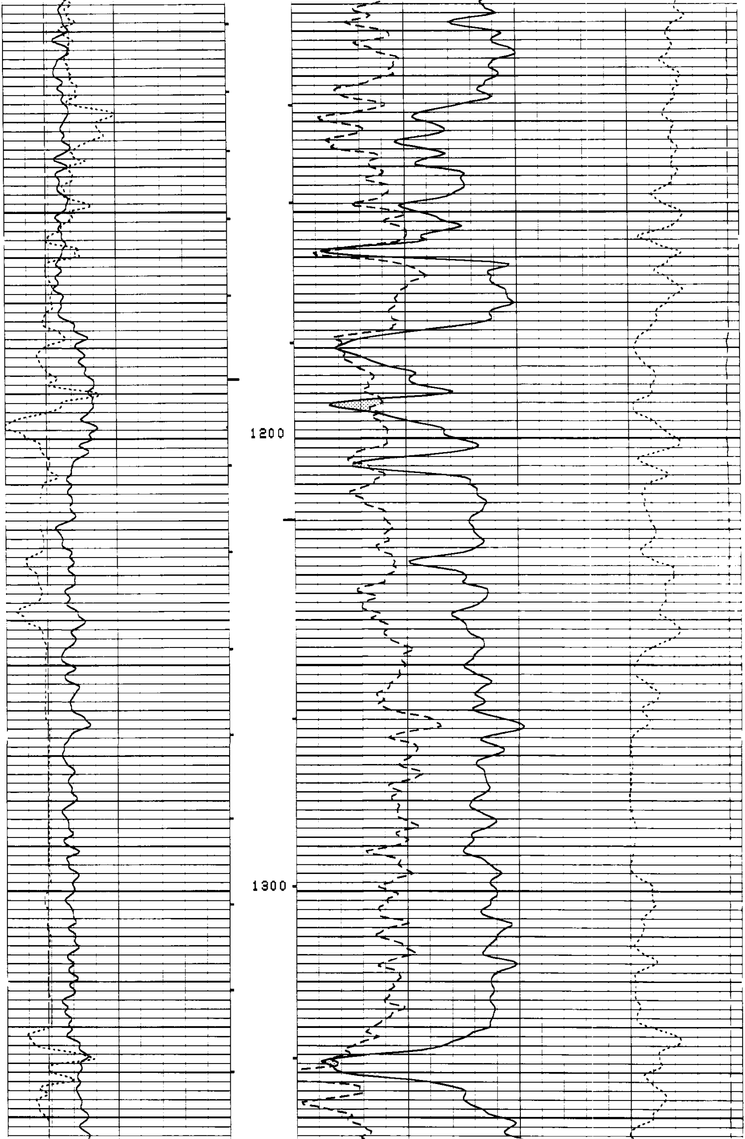
NPOR(V/V)
.60000 0.0
DPHI(V/V)
.60000 0.0

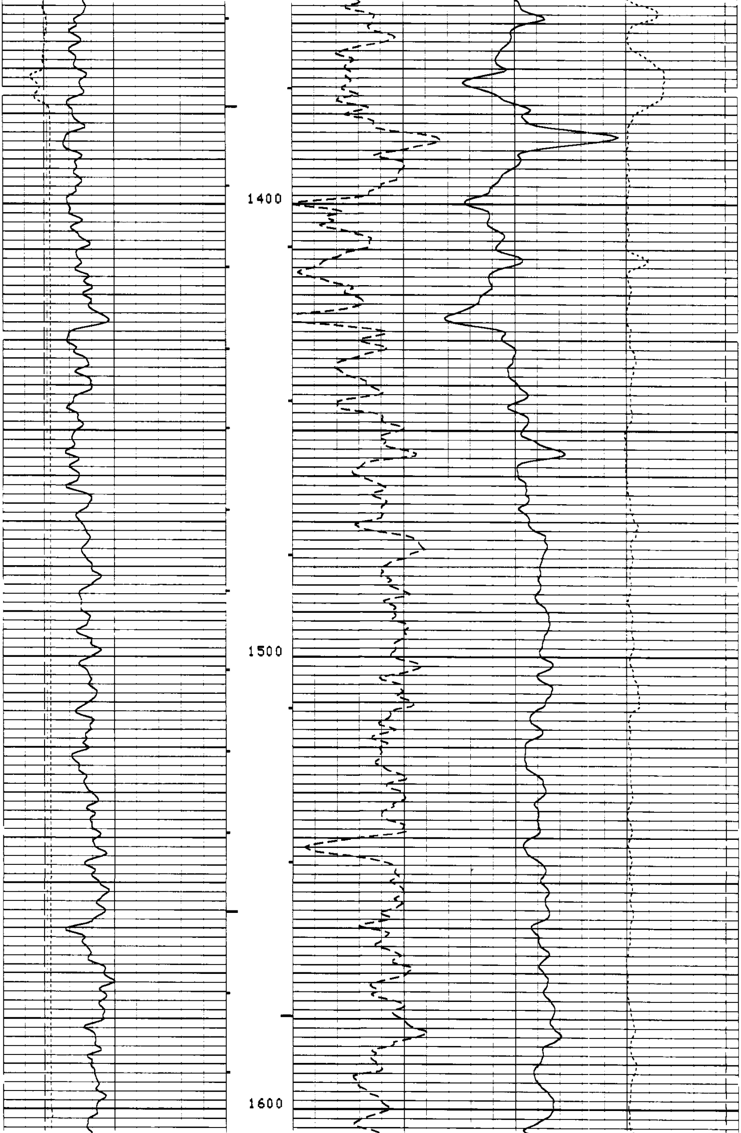
GAS CROSSOVER

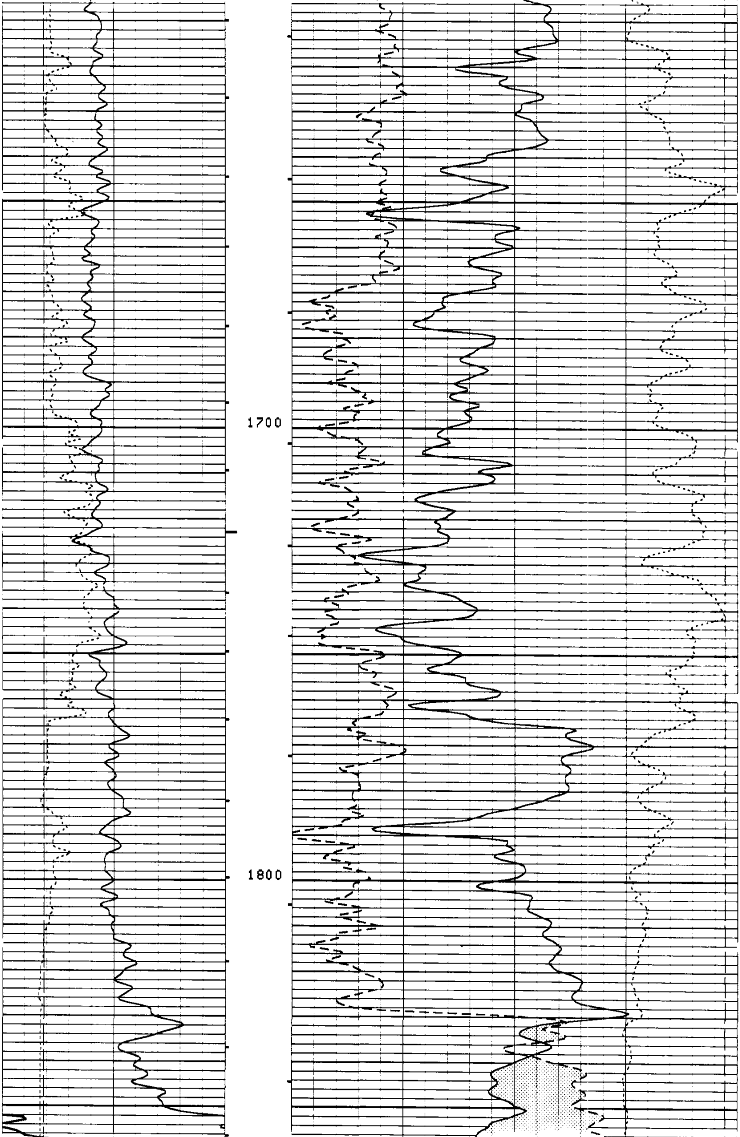
CP 38.2	FILE 34	29-AUG-1993 19:04
	INPUT FILE(S)	CREATION DATE

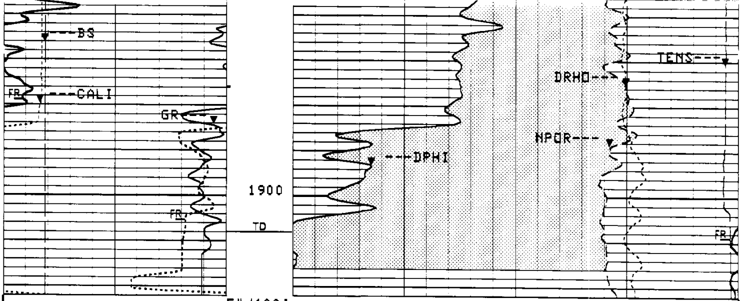
22 29-AUG-1993 17:51
17 29-AUG-1993 16:52







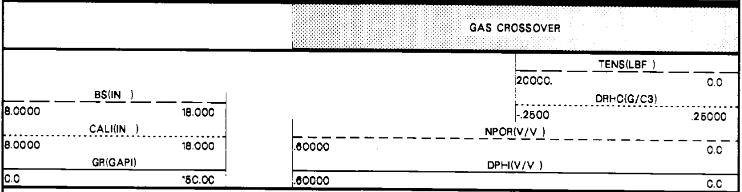




5"/100'

CP 38.2 FILE 34 29-AUG-1993 18:57

INPUT FILE(S)	CREATION DATE
22	29-AUG-1993 17:51
17	29-AUG-1993 16:52



PARAMETERS

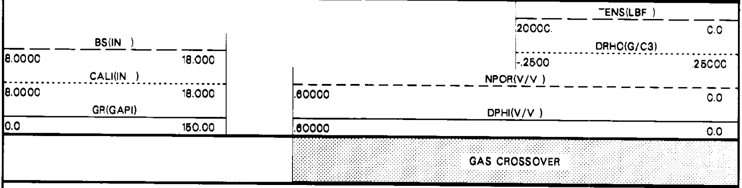
PARAMETER	VALUE	UNIT
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
DO2 - Depth Offset for Logical Unit LI2	0.0	F
WMUD - Weight of Mud	9.20000	LB/G
TD - Total Depth	1908.00	F
FCD - Future Casing Diameter	7.00000	IN
DHC - Density Hole Correction	BS	
BFM - Borehole Fill Medium	LIQU	
MDEN - Matrix Density	2.65000	G/C3
FD - Fluid Density	1.00000	G/C3
DPPM - Density/Porosity Processing Mode	STAN	
MATR - Matrix	SAND	
HC - Hole Correction Origin	CALI	
NPDC - Neutron Alpha Process Depth Constant	0	
HSCO - Hole Size Correction Option	YES	
SOCO - Stand Off Correction Option	NO	
MCCO - Mud Cake Correction Option	NO	
BSCO - Borehole Salinity Correction Option	NO	
FSCO - Formation Salinity Correction Option	NO	
MWCO - Mud Weight Correction Option	NO	

```
PTCO - Pressure Temperature Correction Option     NO
CCCO - Casing & Cement Correction Option for ThickNO
SDAT - Standoff Data Source                        SOCN
MCOR - Mud Correction                              NATU
SOCN - Stand Off for Compensated Neutron           .500000        IN
FSAL - Formation Salinity                          -50000.0       PPM
ANGL - Angle of Well                               0.0            DEG
GGRD - Geothermal Gradient                         .0100000       DF/F
BHFL - BoreHole Fluid Type                         WATE
CDSE - Corrected Density Selector                  RHOB
CNPS - Compensated Neutron Porosity Selector       NPHI
NCJT - NGT Calibration Jig Type                    GSRY
GTSE - Generalized Temperature Selection           TEMP
SHT  - Surface Hole Temperature                    80.0000        DEGF
BHT  - Bottom Hole Temperature                     84.0000        DEGF
TDL  - Total Depth - Logger                        1908.00        F
MRT  - Maximum Recorded Temperature                82.0000        DEGF
BSAL - Borehole Salinity                           600.000        PPM
DFD  - Drilling Fluid Density                      9.20000        LB/G
RMFS - Resistivity of Mud Filtrate Sample          3.89000        OHMM
MFST - Mud Filtrate Sample Temperature             68.0000        DEGF
BS   - Bit Size                                    9.87500        IN
BHS  - BoreHole Status (Open or Cased)             OPEN
```

REPEAT SECTION

```
ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:   94.9721 F3    FROM 1908.00 F    TO 1730.00 F
Integrated Cement Volume: 48.4535 F3    FROM 1908.00 F    TO 1730.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
```

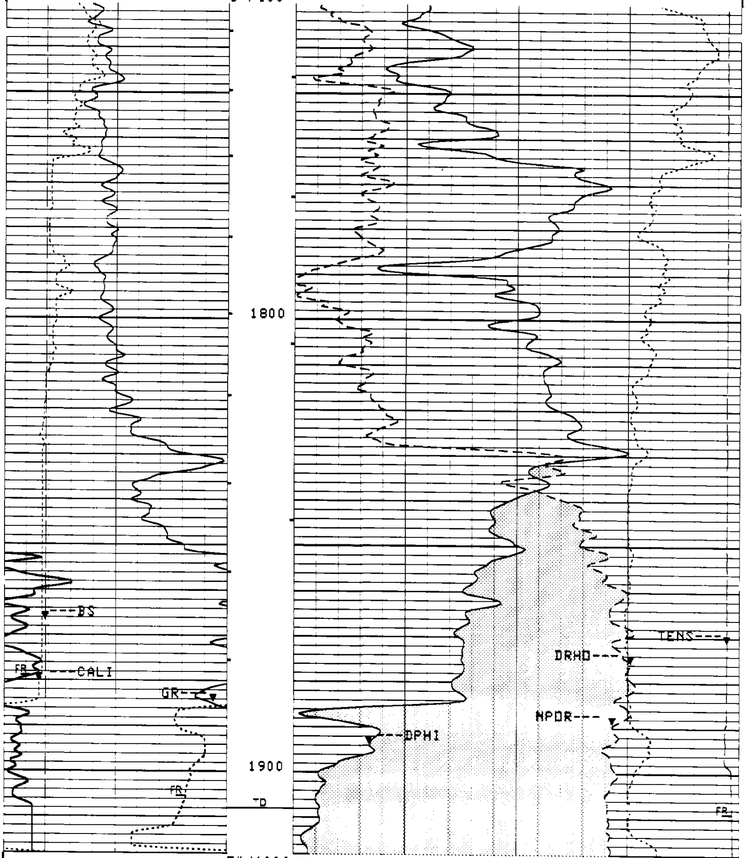
```
EVENT MARK SUMMARY:

OUTPUT                        INTERVAL         DEPTH TRACK
                              BETWEEN PIPS     EDGE

Integrated Hole Volume        10.0000 F3       LEFT EDGE
Integrated Cement Volume      10.0000 F3       RIGHT EDGE
```



CP 38.2 FILE 33 29-AUG-1993 18:56

INPUT FILE(S)	CREATION DATE
21	29-AUG-1993 17:45
16	29-AUG-1993 16:47

5"/100'



5"/100'

CP 38.2 FILE 33 29-AUG-1993 18:54

INPUT FILE(S)	CREATION DATE
21	29-AUG-1993 17:45
16	29-AUG-1993 16:47

GAS CROSSOVER

BS(IN)
8.0000 18.000
CALI(IN)
8.0000 18.000
GR(GAPI)
0.0 150.00

TENS(LBF)
20000. 0.0
DRHO(G/C3)
-.2500 .25000
NPOR(V/V)
.60000 0.0
DPHI(V/V)
.60000 0.0

PARAMETERS

PARAMETER	VALUE	UNIT
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
DO2 - Depth Offset for Logical Unit LI2	0.0	F
WMUD - Weight of Mud	9.20000	LB/G
TD - Total Depth	1908.00	F
FCD - Future Casing Diameter	7.00000	IN
DHC - Density Hole Correction	BS	
BFM - Borehole Fill Medium	LIQU	
MDEN - Matrix Density	2.65000	G/C3
FD - Fluid Density	1.00000	G/C3
DPPM - Density/Porosity Processing Mode	STAN	
MATR - Matrix	SAND	
HC - Hole Correction Origin	CALI	
NPDC - Neutron Alpha Process Depth Constant	0	
HSCO - Hole Size Correction Option	YES	
SOCO - Stand Off Correction Option	NO	
MCCO - Mud Cake Correction Option	NO	
BSCO - Borehole Salinity Correction Option	NO	
FSCO - Formation Salinity Correction Option	NO	
MWCO - Mud Weight Correction Option	NO	
PTCO - Pressure Temperature Correction Option	NO	
CCCO - Casing & Cement Correction Option for Thick	NO	
SDAT - Standoff Data Source	SOCN	
MCOR - Mud Correction	NATU	
SOCN - Stand Off for Compensated Neutron	.500000	IN
FSAL - Formation Salinity	-50000.0	PPM
ANGL - Angle of Well	0.0	DEG
GGRD - Geothermal Gradient	.0100000	DF/F
BHFL - BoreHole Fluid Type	WATE	
CDSE - Corrected Density Selector	RHOB	
CNPS - Compensated Neutron Porosity Selector	NPHI	
NCJT - NGT Calibration Jig Type	GSRY	
GTSE - Generalized Temperature Selection	TEMP	
SHT - Surface Hole Temperature	80.0000	DEGF
BHT - Bottom Hole Temperature	84.0000	DEGF
TDL - Total Depth - Logger	1908.00	F
MRT - Maximum Recorded Temperature	82.0000	DEGF
BSAL - Borehole Salinity	600.000	PPM
DFD - Drilling Fluid Density	9.20000	LB/G
RMFS - Resistivity of Mud Filtrate Sample	3.89000	OHMM
MFST - Mud Filtrate Sample Temperature	68.0000	DEGF
BS - Bit Size	9.87500	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

ACCUMULATED INTEGRATION VALUES SUMMARY:

```
INTEGRATED HOLE VOLUME:    120.370 F3    FROM 1908.00 F    TO 1696.00 F
INTEGRATED CEMENT VOLUME: 64.0393 F3    FROM 1908.00 F    TO 1696.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
```

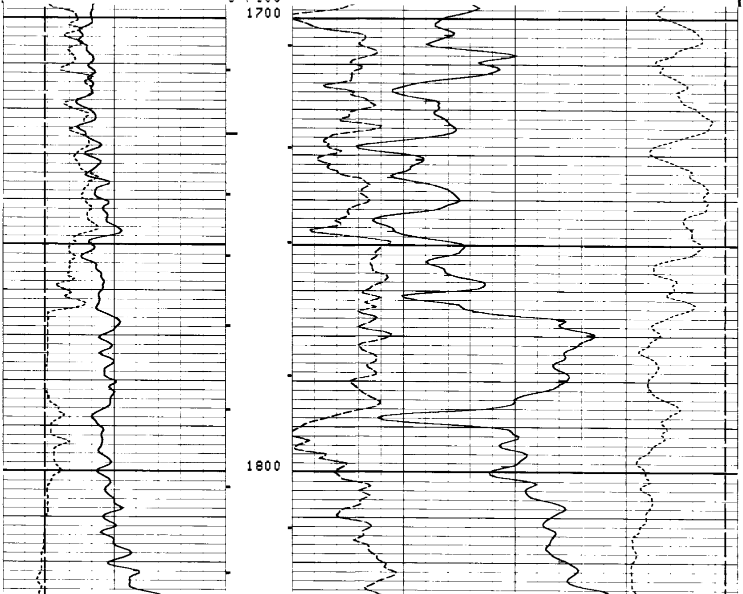
EVENT MARK SUMMARY:

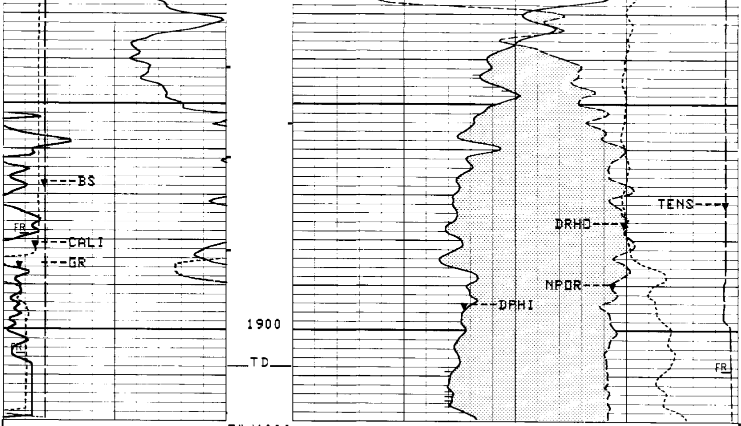
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
INTEGRATED HOLE VOLUME	10.0000 F3	LEFT EDGE
INTEGRATED CEMENT VOLUME	10.0000 F3	RIGHT EDGE

Curve	Left scale	Right scale
TENS(LBF)	20000.	0.0
DRHO(G/C3)	-.2500	.25000
BS (IN)	8.0000	18.000
CALI(IN)	8.0000	18.000
NPOR(V/V)	.60000	0.0
GR (GAPI)	0.0	150.00
DPHI(V/V)	.60000	0.0

```
CP 38.2            FILE    1       29-AUG-1993 19:35

                   INPUT FILE(S)   CREATION DATE
                         20        29-AUG-1993 17:21
                         16        29-AUG-1993 16:47
```

5"/100'





5"/100'

CP 38.2

FILE 1 29-AUG-1993 19:34

INPUT FILE(S) CREATION DATE
20 29-AUG-1993 17:21
16 29-AUG-1993 16:47

TENS(LBF) 20000. 0.0

DRHO(G/C3) -.2500 .25000

BS (IN) 8.0000 18.000

CALI(IN) 8.0000 18.000

NPOR(V/V) .60000 0.0

GR (GAPI) 0.0 150.00

DPHI(V/V) .60000 0.0

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
PP	NORM		DO	0.0	F
DO2	0.0	F	WMUD	9.20000	LB/G
TD	1908.00	F	FCD	7.00000	IN
DHC	BS		BFM	LIQU	
MDEN	2.65000	G/C3	FD	1.00000	G/C3
DPPM	STAN		MATR	SAND	
HC	CALI		NPDC	0	
HSCO	YES		SOCO	NO	
MCCO	NO		BSCO	NO	
FSCO	NO		MWCO	NO	
PTCO	NO		CCCO	NO	
SDAT	SOCN		MCOR	NATU	
SOCN	.500000	IN	FSAL	-50000.0	PPM
ANGL	0.0	DEG	GGRD	.0100000	DF/F
BHFL	WATE		CDSE	RHOB	
CNPS	NPHI		NCJT	GSRY	
GTSE	TEMP		SHT	80.0000	DEGF
BHT	84.0000	DEGF	TDL	1908.00	F
MRT	82.0000	DEGF	BSAL	600.000	PPM
DFD	9.20000	LB/G	RMFS	3.89000	OHMM
MFST	68.0000	DEGF	BS	9.87500	IN
BHS	OPEN				

CALIBRATION SUMMARY

```
               AFTER SURVEY TOOL CHECK SUMMARY

  PERFORMED:    29-AUG-1993 18:52
  PROGRAM FILE: TOH    (VERSION    38.2    92/10/12  92/10/12)

LDTD                      TOOL  CHECK

        DENSITY RESISTIVITY SONDE NUMBER    :    3959
        NUCLEAR SERVICE CARTRIDGE NUMBER    :    2941
        POWERED DETECTOR HOUSING NUMBER     :    3840
        POWERED GAMMA-GAMMA DETECTOR NUMBER :    2868
        LDT LOGGING SOURCE NUMBER           :    1862
        LDT CALIBRATION MODE                :    WATE

             MEASURED BACKGROUND               TOLERANCE ON
             BEFORE        AFTER      UNITS    BEFORE-AFTER
      LL      17.1          16.8       CPS       +/- 1.0
      LU      65.6          65.2       CPS       +/- 1.0
      LS      49.9          49.4       CPS       +/- 1.0
    LITH       4.8           4.8       CPS       +/- 0.3
     SS1      14.1          14.1       CPS       +/- 0.5
     SS2       9.5           9.3       CPS       +/- 0.5

            HV SETTINGS              DETECTOR RESOLUTIONS
          HV LS:  1638.7 V               LS:  8.6 %
          HV SS:  1529.0 V               SS:  8.7 %

BKGD                                 BKGD
  BEFORE SURVEY: 29-AUG-1993 16:21   AFTER SURVEY: 29-AUG-1993 18:33


CNTH                      TOOL  CHECK


          INPUT    BEFORE JIG   AFTER JIG


          CNTC      2923.72     2922.18

          CFTC      1481.82     1471.02


CHANGE IN THERMAL POROSITY AT 20 PU IS    .232  PU


BEFORE SURVEY:            BACK: 29-AUG-1993 16:21   JIG: 29-AUG-1993 16:35
AFTER SURVEY CHECK:       BACK: 29-AUG-1993 18:43   JIG: 29-AUG-1993 18:49

   CP 38.2          FILE   32      29-AUG-1993 18:51


               BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:    29-AUG-1993 16:37
  PROGRAM FILE: TOH    (VERSION    38.2    92/10/12  92/10/12)


SGTL            DETECTOR CALIBRATION SUMMARY

            MEASURED
          BKGD    JIG         CALIBRATED          UNITS
   GR      44     204            165              GAPI

BACK: 29-AUG-1993 16:21   JIG: 29-AUG-1993 16:29  COMP: 29-AUG-1993 16:29


LDTD            DETECTOR CALIBRATION SUMMARY
```

```
        DENSITY RESISTIVITY SONDE NUMBER      :     3959
        NUCLEAR SERVICE CARTRIDGE NUMBER      :     2941
        POWERED DETECTOR HOUSING NUMBER       :     3840
        POWERED GAMMA-GAMMA DETECTOR NUMBER :       2868
        LDT LOGGING SOURCE NUMBER             :     1862
        LDT CALIBRATION MODE                  :     WATE

                 MEASURED       SHOP  VALUES
                   BKGD         AL+FE    AL       UNITS
           LL      17.1          91.7   97.3       CPS
           LU      65.6         134.2  143.3       CPS
           LS      49.9         158.8  168.9       CPS
         LITH       4.8          41.9   62.3       CPS
          SS1      14.1         179.4  192.7       CPS
          SS2       9.5         259.6  276.0       CPS

            HV SETTINGS           DETECTOR RESOLUTIONS
          HV LS:  1657.2 V             LS:  8.7 %
          HV SS:  1519.8 V             SS:  8.8 %

BKGD: 29-AUG-1993 16:21


CNTH              DETECTOR CALIBRATION SUMMARY

      NEUTRON COMPENSATED CARTRIDGE NUMBER: 1263
      NEUTRON SOURCE SERIAL NUMBER        : 1441
      THERMAL HOUSING NUMBER              : 4424
      THERMAL CALIBRATED NEUTRON BOX      : 3080

          INPUT     PLUS        SHOP       SHOP       BEFORE     GAIN
                  REFERENCE     TANK        JIG         JIG
                    COUNTS     COUNTS     COUNTS      COUNTS

          CNTC    6031.00    5811.93    2921.62    2923.72    1.038
          CFTC    2793.00    2602.21    1462.40    1481.82    1.073

          RATIO     2.159      2.233      1.998      1.973

BACK: 29-AUG-1993 16:21   JIG: 29-AUG-1993 16:35  COMP: 29-AUG-1993 16:09


LDTD              CALIPER CALIBRATION SUMMARY

             MEASURED                    CALIBRATED
           SMALL   LARGE               SMALL     LARGE        UNITS
  CALI     8.31   10.55                8.00      10.00          IN

SMALL: 29-AUG-1993 16:15 LARGE: 29-AUG-1993 16:17 COMP: 29-AUG-1993 16:17

   CP 38.2           FILE   13       29-AUG-1993 16:36



                  SHOP SUMMARY


  PERFORMED:     11-AUG-1993 17:13
  PROGRAM FILE: CCSHOP (VERSION    38.2    92/10/12  92/10/12)


CNTH              DETECTOR CALIBRATION SUMMARY

      NEUTRON COMPENSATED CARTRIDGE NUMBER: 1263
      NEUTRON SOURCE SERIAL NUMBER        : 1441
      THERMAL HOUSING NUMBER              : 4424
      THERMAL CALIBRATED NEUTRON BOX      : 3080


          INPUT     PLUS        SHOP       SHOP       GAIN
                  REFERENCE     TANK        JIG
                    COUNTS     COUNTS     COUNTS

          CNTC    6031.00    5811.93    2921.62    1.038
          CFTC    2793.00    2602.21    1462.40    1.073

          RATIO     2.159      2.233      1.998
```

```
              SHOP COUNTS TEMPERATURE AND HOUSING SIZE CORRECTED

   BKGD: 11-AUG-1993 16:56 TANK: 11-AUG-1993 17:02  COMP: 11-AUG-1993 17:02

      CP 38.2            FILE    7       11-AUG-1993 17:13



                       SHOP SUMMARY


     PERFORMED:     11-AUG-1993 16:51
     PROGRAM FILE: CCSHOP (VERSION    38.2    92/10/12  92/10/12)


   LDTD                DETECTOR CALIBRATION SUMMARY

           DENSITY RESISTIVITY SONDE NUMBER     :  3959
           NUCLEAR SERVICE CARTRIDGE NUMBER     :  2941
           POWERED DETECTOR HOUSING NUMBER      :  3840
           POWERED GAMMA-GAMMA DETECTOR NUMBER  :  2868
           LDT LOGGING SOURCE NUMBER            :  1862
           LDT CALIBRATION MODE                 :  WATE

                            MASTER CALIBRATED
                           BKGD    AL+FE      AL   UNITS
                     LL    17.0     91.7     97.3   CPS
                     LU    64.7    134.2    143.3   CPS
                     LS    49.3    158.8    168.9   CPS
                   LITH     4.8     41.9     62.3   CPS
                    SS1    14.0    179.4    192.7   CPS
                    SS2     9.4    259.6    276.0   CPS

             HV SETTINGS           DETECTOR RESOLUTIONS
           HV LS:  1615.7 V              LS:  8.5 %
           HV SS:  1514.9 V              SS:  8.8 %

                         SPECTRUM QUALITY RATIOS
             COMPUTED VALUE          NOMINAL VALUE   TOLERANCE
      QRLS          .679                  0.65        +/- 0.05
      QRSS          .698                  0.72        +/- 0.10
      QRLI          .369                  0.39        +/- 0.06
      QLIR         1.396                  1.39        +/- 0.06
      QR            .991                  1.00        +/- 0.02

   BKGD: 11-AUG-1993 16:15   AL: 11-AUG-1993 16:30  AL+FE: 11-AUG-1993 16:26

      CP 38.2            FILE    6       11-AUG-1993 16:51
```

COMPANY	NAHAMA & WEAGANT ENERGY CO.			SCHL.	FR	1905.0 F
				SCHL.	TD	1908.0 F
WELL	"CONDOR" L.F. #43-32-65			DRLR.	TD	1909.0 F
				Elev:	KB	801.0 F
FIELD	MIST				DF	
COUNTY	COLUMBIA	**STATE**	OREGON		GL	791.0 F

Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON-LITHO-DENSITY