Schlumberger

COMPENSATED NEUTRON LITHO DENSITY HIGH RESOLUTION LOG

COUNTY	COOS
FIELD	WILD CAT
LOCATION	511.9'N & 2151.7W
WELL	'COOS COUNTY FOREST' #7-1
COMPANY	CARBON ENERGY INT.

COMPANY CARBON ENERGY INT.

WELL "COOS COUNTY FOREST" #7-1

FIELD WILD CAT

COUNTY COOS **STATE** OREGON

LOCATION 511.9'N & 2151.7W
FROM SE CORNER OF:

Other Services:
DITD/GR
LDT/CNL/GR
FMS
MSCT

API SERIAL NO.	SECT.	TWP.	RANGE
36-011-00027	7	27S	13W

Permanent Datum GL Elev. 530.0 F
Log Measured From KB 18.0 F above Perm. Datum
Drilling Measured From KB

Elev.: K.B.548.0 F
D.F.547.0 F
G.L.530.0 F

Date	15-OCT-1993			
Run No.	ONE			
Depth Driller	3804.0 F			
Depth Logger (Schl.)	3779.0 F			
Btm. Log Interval	3776.0 F			
Top Log Interval	380.0 F			
Casing-Driller	9 5/8 @ 380.0 F	@	@	
Casing-Logger	380.0 F			
Bit Size	8 3/4 @ 3804.0 F	@	@	
Type Fluid in Hole	FRESH			
Dens. | Visc.	9.10 LB/G	46.0 S		
pH | Fld. Loss		6.8 C3		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	6.300 OHMM @ 62.0 DEGF		@	
Rmf @ Meas. Temp.	7.250 OHMM @ 60.0 DEGF		@	
Rmc @ Meas. Temp.	3.780 OHMM @ 60.0 DEGF		@	
Source: Rmf | Rmc	MEASURED	MEASURED		
Rm @ BHT	4.025 OHMM @ 101. DEGF		@	
TIME Circulation Ended	06:30 15-OCT-93			
TIME Logger on Bottom	16:30 15-OCT-93			
Max. Rec. Temp.	101. 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.

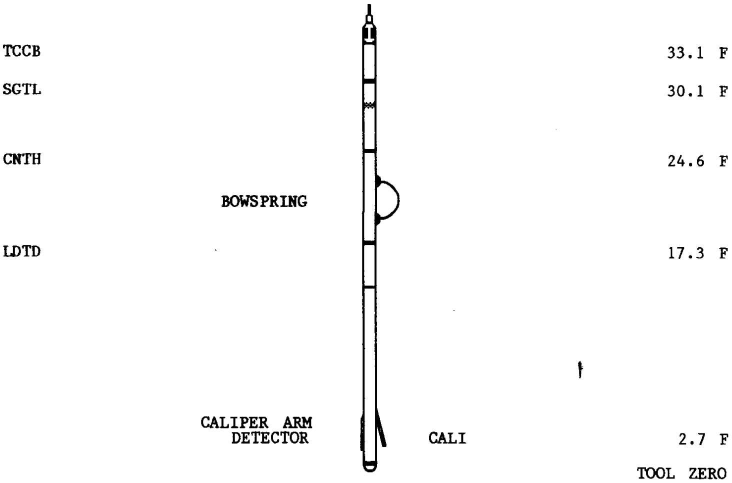
Run No.	ONE	
Service Order No.	624380	
Drilling Fluid Level	100.0 F	
Salinity		
Rmf @ BHT	4.498 OHMM @ 101. DEGF	@
Rmc @ BHT	2.345 OHMM @ 101. DEGF	@
Logging Speed	1800.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	DRS-C 3959	
Tool Number 2	NSC-E 2941	
Tool Number 3	CNC-HA 2524	
Tool Number 4	SGC-SA 544	
Tool Number 5	TCM-AB 1516	
Tool Number 6		
Tool Number 7		
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

HIGH RESOLUTION DATA TAKEN FROM 3779'-3480', AND 3000'-2900'

THANK YOU FOR CHOOSING SCHLUMBERGER
SOME WELLSITE INFORMATION NOT AVAILABLE AT WELL

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 36.6 F.
TOTAL TOOL STRING WEIGHT IS 658. LB IN AIR.

MAIN LOG INTERVAL - 3000TO 2900

ACCUMULATED INTEGRATION VALUES SUMMARY:

```
Integrated Hole Volume:   58.2702 F3    FROM 3010.00 F    TO 2890.00 F
Integrated Cement Volume: 26.1998 F3    FROM 3010.00 F    TO 2890.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
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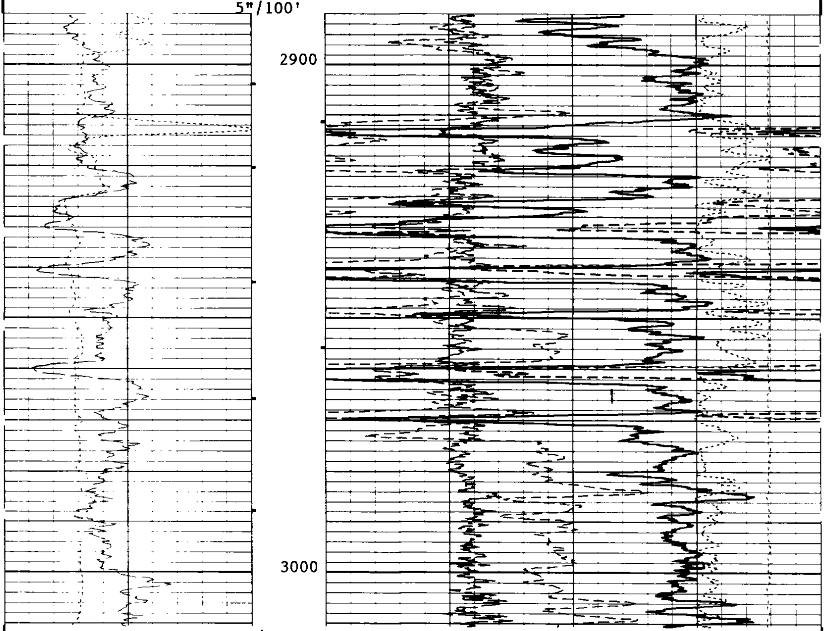
EVENT MARK SUMMARY:

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)
10000. 0.0
HDRH(G/C3)
-.2500 .25000
HRHO(G/C3)
.65000 1.6500
HPEF
0.0 10.000
CALI(IN)
6.0000 16.000
HDPH(V/V)
.60000 0.0
HGR(GAPI)
0.0 150.00
HNPO(V/V)
.60000 0.0

CP 38.2 FILE 3 15-OCT-1993 18:16

INPUT FILE(S) CREATION DATE
4 15-OCT-1993 18:16



CP 38.2 FILE 3 15-OCT-1993 18:16

INPUT FILE(S) CREATION DATE
4 15-OCT-1993 18:16

CALI(IN)	6.0000	16.000
HGR(GAPI)	0.0	150.00

TENS(LBF)	10000.	0.0
HDRH(G/C3)	-.2500	.25000
HRHO(G/C3)	.65000	1.6500
HPEF	0.0	10.000
HDPH(V/V)	.60000	0.0
HNPO(V/V)	.60000	0.0

SENSOR MEASURE POINT TO TOOL ZERO

CFTC	20.2	FEET	GR	29.2	FEET
LITH	2.6	FEET	CNTC	19.7	FEET
LS	2.6	FEET	LL	2.6	FEET
PARI	2.1	FEET	LU	2.6	FEET
SS2	2.1	FEET	SS1	2.1	FEET
TENS	-.9	FEET	CALI	2.7	FEET
TNRA	20.7	FEET	HGR	29.2	FEET
HCFT	20.2	FEET	HCNT	19.7	FEET
HSS1	2.1	FEET	HSS2	2.1	FEET
HLS	2.6	FEET	HLIT	2.6	FEET
HLL	2.6	FEET	HLU	2.6	FEET

PARAMETERS

PARAMETER	VALUE	UNIT
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
WMUD - Weight of Mud	9.10000	LB/G
TD - Total Depth	3779.00	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	HIRS	
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                  100.000       DEGF
TDL  - Total Depth - Logger                     3779.00       F
MRT  - Maximum Recorded Temperature             98.0000       DEGF
DFD  - Drilling Fluid Density                   9.10000       LB/G
RMFS - Resistivity of Mud Filtrate Sample       7.25000       OHMM
RMS  - Resistivity of Mud Sample                6.30000       OHMM
MST  - Mud Sample Temperature                   62.0000       DEGF
MFST - Mud Filtrate Sample Temperature          60.0000       DEGF
BS   - Bit Size                                 8.75000       IN
BHS  - BoreHole Status (Open or Cased)          OPEN
```

MAIN LOG INTERVAL - 3779TO 3480

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ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:   322.291 F3    FROM 3779.00 F    TO 2990.00 F
Integrated Cement Volume: 112.289 F3    FROM 3779.00 F    TO 2990.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
```
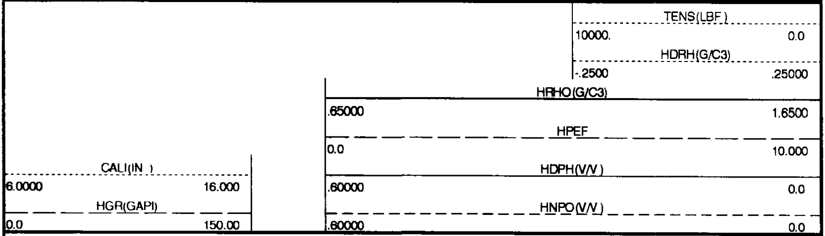

```
EVENT MARK SUMMARY:

OUTPUT                        INTERVAL         DEPTH TRACK
                              BETWEEN PIPS     EDGE

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



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CP 38.2          FILE     2        15-OCT-1993 18:14

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                      4          15-OCT-1993 18:12
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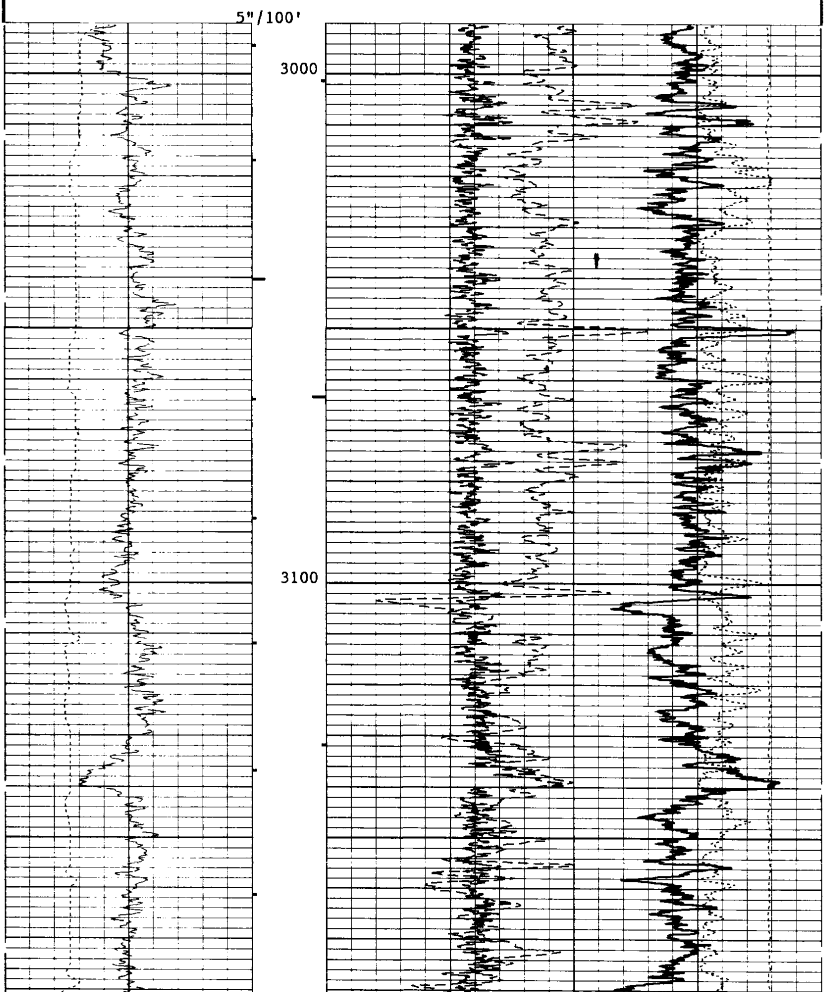

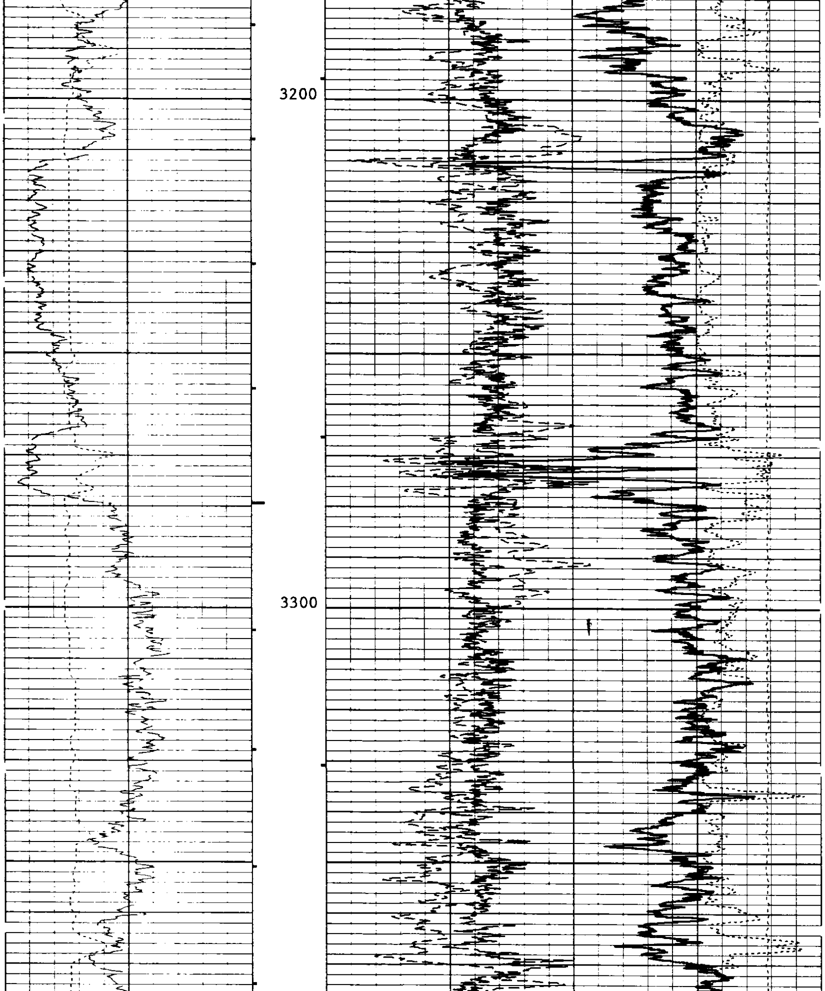

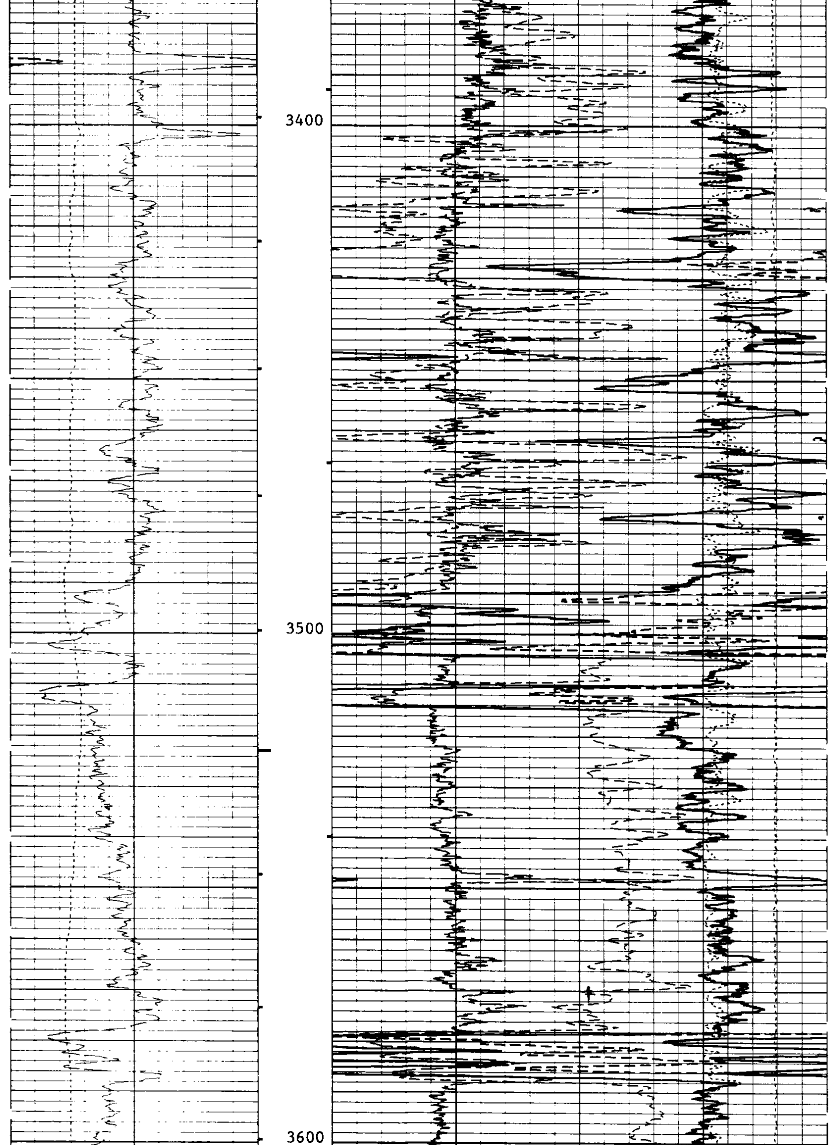

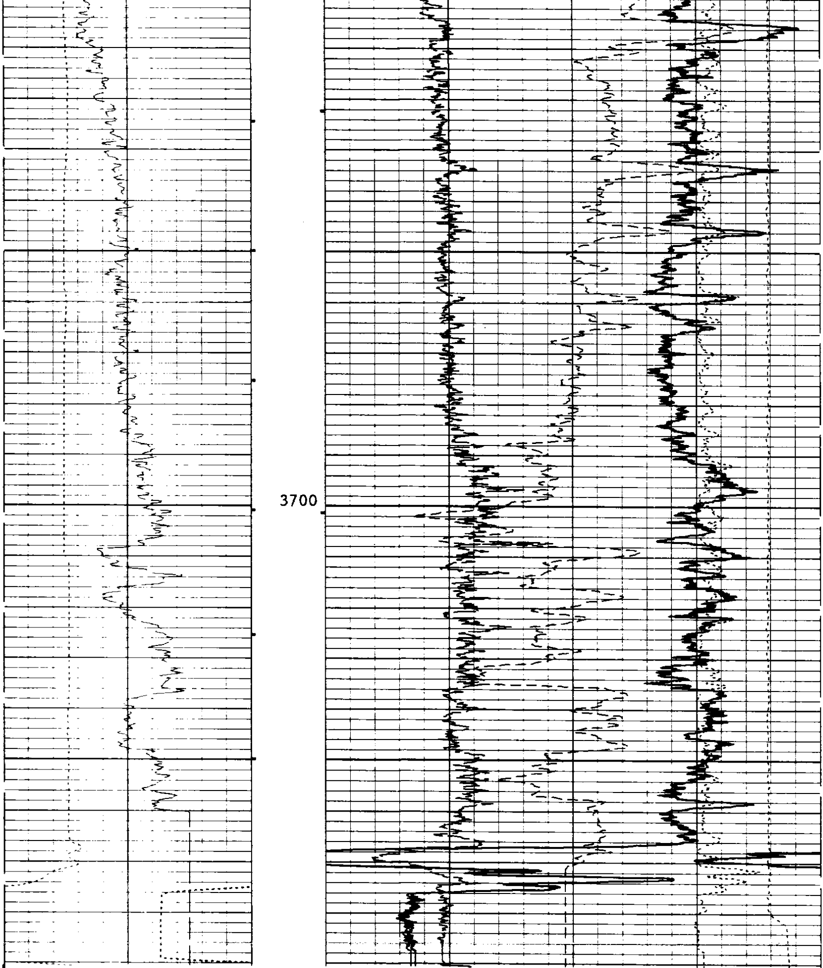

5"/100'

CP 38.2

FILE 2

15-OCT-1993 18:10

INPUT FILE(S)
4

CREATION DATE
15-OCT-1993 18:12

TENS(LBF)	10000.	0.0
HDRH(G/C3)	-.2500	.25000
HRHO(G/C3)	.65000	1.6500
HPEF	0.0	10.000
CALI(IN)	6.0000	16.000
HDPH(V/V)	.60000	0.0
HGR(GAPI)	0.0	150.00
HNPO(V/V)	.60000	0.0

SENSOR MEASURE POINT TO TOOL ZERO

CFTC	20.2	FEET	GR	29.2	FEET
LITH	2.6	FEET	CNTC	19.7	FEET
LS	2.6	FEET	LL	2.6	FEET
PARI	2.1	FEET	LU	2.6	FEET
SS2	2.1	FEET	SS1	2.1	FEET
TENS	-.9	FEET	CALI	2.7	FEET
TNRA	20.7	FEET	HGR	29.2	FEET
HCFT	20.2	FEET	HCNT	19.7	FEET
HSS1	2.1	FEET	HSS2	2.1	FEET
HLS	2.6	FEET	HLIT	2.6	FEET
HLL	2.6	FEET	HLU	2.6	FEET

PARAMETERS

PARAMETER	VALUE	UNIT
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
WMUD - Weight of Mud	9.10000	LB/G
TD - Total Depth	3779.00	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	HIRS	
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	100.000	DEGF
TDL	- Total Depth - Logger	3779.00	F
MRT	- Maximum Recorded Temperature	98.0000	DEGF
DFD	- Drilling Fluid Density	9.10000	LB/G
RMFS	- Resistivity of Mud Filtrate Sample	7.25000	OHMM
RMS	- Resistivity of Mud Sample	6.30000	OHMM
MST	- Mud Sample Temperature	62.0000	DEGF
MFST	- Mud Filtrate Sample Temperature	60.0000	DEGF
BS	- Bit Size	8.75000	IN
BHS	- BoreHole Status (Open or Cased)	OPEN	

COMPANY	CARBON ENERGY INT.			SCHL.	FR	3776.0 F
				SCHL.	TD	3779.0 F
WELL	"COOS COUNTY FOREST" #7-1			DRLR.	TD	3804.0 F
FIELD	WILD CAT			Elev:	KB	548.0 F
					DF	547.0 F
COUNTY	COOS	**STATE**	OREGON		GL	530.0 F

Schlumberger

COMPENSATED NEUTRON
LITHO DENSITY
HIGH RESOLUTION LOG