Schlumberger

DUAL INDUCTION-SFL-SONIC

COUNTY	COLUMBIA
FIELD	MIST
LOCATION	832.6'S AND 1756.2'W
WELL	"SOCKEYE" C.C. #31-15-65 RD. #1
COMPANY	NAHAMA AND WEAGANT ENERGY CO

COMPANY NAHAMA AND WEAGANT ENFRGY CO.

WELL "SOCKFYF" C.C. #31-15-65 RD. #1

FIELD MIST

COUNTY COI UMBIA **STATE** ORFGON

LOCATION 832.6'S AND 1756.2'W
FROM NE CORNIR

Other Services:
DII BHC GR
LDT CNL GR

API SERIAL NO.	SECT.	TWP.	RANGE
36-009-00294	15	6N	5W

Permanent Datum	GL	Elev.	723.2 F	Elev.: K.B. 734.2 F
Log Measured From	KB	11.0 F	above Perm. Datum	D.F.
Drilling Measured From	KB			G.L. 723.2 F

Date	8-NOV-1992			
Run No.	ONE			
Depth Driller	2546.0 F			
Depth Logger (Schl.)	2500.0 F			
Btm. Log Interval	2494.0 F			
Top Log Interval	501.0 F			
Casing-Driller	8 5/8" @ 501.0 F	@		@
Casing-Logger	501.0 F			
Bit Size	7 7/8" @ 2546.0 F	@		@
Type Fluid in Hole	GEL DRISPAC			
Dens. / **Visc.**	9.70 LB/G	50.0 S		
pH / **Fld. Loss**	11.0	6.4 C3		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	3.150 OHMM @ 70.0 DEGF		@	
Rmf @ Meas. Temp.	4.110 OHMM @ 70.0 DEGF		@	
Rmc @ Meas. Temp.	3.920 OHMM @ 70.0 DEGF		@	
Source: Rmf / **Rmc**	MEASURED	MEASURED		
Rm @ BHT	2.401 OHMM @ 94.0 DEGF		@	
TIME **Circulation Ended**	08:00 11-8			
TIME **Logger on Bottom**	12:00 11-3			
Max. Rec. Temp.	94.0 DEGF			
Equip. / **Location**	8504	SACRAMENTO		
Recorded By	SCOTT PILCH			
Witnessed By	ROB LUCAS			

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

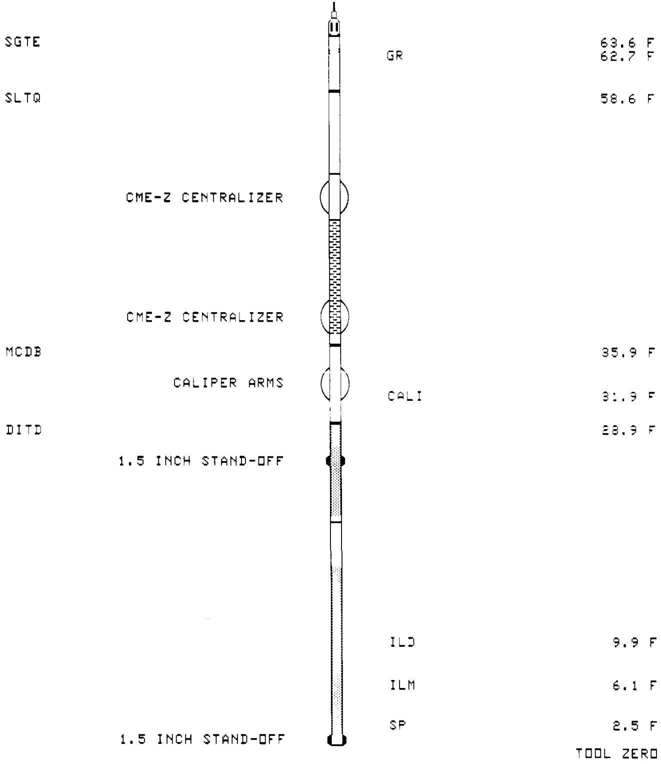
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.	624503	
Drilling Fluid Level	5.0 F	
Salinity	700.0 PPM	
Rmf @ BHT	3.133 OHMM @ 94.0 DEGF	@
Rmo @ BHT	2.989 OHMM @ 94.0 DEGF	@
Logging Speed	3600.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	DIS-EC 298	
Tool Number 2	DIC-DA 1078	
Tool Number 3	MCD-DA 1237	
Tool Number 4	SLS-WA 1464	
Tool Number 5	SLC-MA 95	
Tool Number 6	SGC-JC 4148	
Tool Number 7	IEM-BD 304	
Tool Number 8	SLM-DA 428	
Tool Number 9	NLM-BC 418	
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:
16 DEGREES MAXIMUM DEVIATION.

CALIPER DATA ERRONEOUS IN BOTTOM SECTION OF HOLE DUE TO DEVIATION.
CALIPER DATA NOT PRESENTED FROM TD TO 2180.

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 66.6 F.
TOTAL TOOL STRING WEIGHT IS 957. LB IN AIR.

MAIN LOG

ACCUMULATED INTEGRATION VALUES SUMMARY:

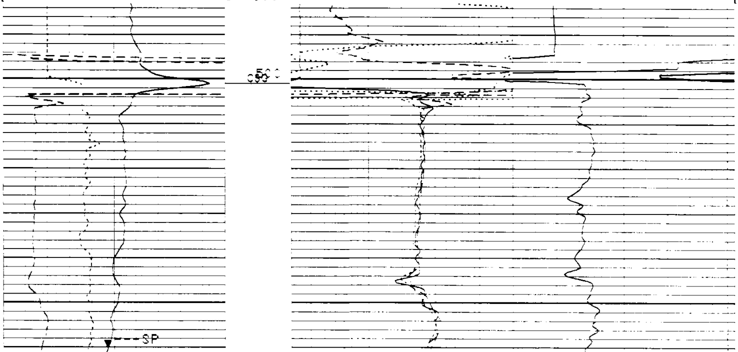
Integrated Transit Time: .261822 S FROM 2500.00 F TO 501.000 F

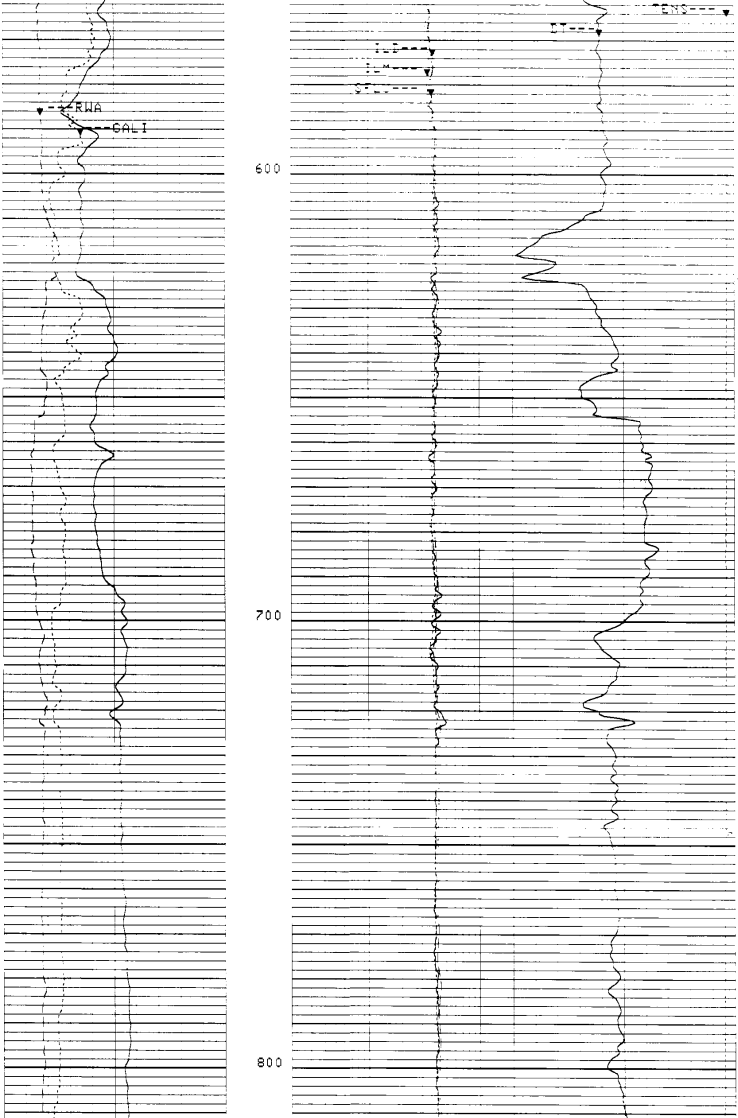
SP(MV)		SFLU(OHMM)		TENS(LBF)	
-100.0	0.0	20.000	2000.0	20500.	500.00
RWA(OHMM)		ILM(OHMM)		DT(US/F)	
0.0	3.0000	20.000	2000.0	175.00	75.000
CALI(IN)		ILD(OHMM)			
6.0000	16.000	20.000	2000.0		
		ILD(OHMM)			
		.20000	20.000		
		ILM(OHMM)			
		.20000	20.000		
		SFLU(OHMM)			
		.20000	20.000		

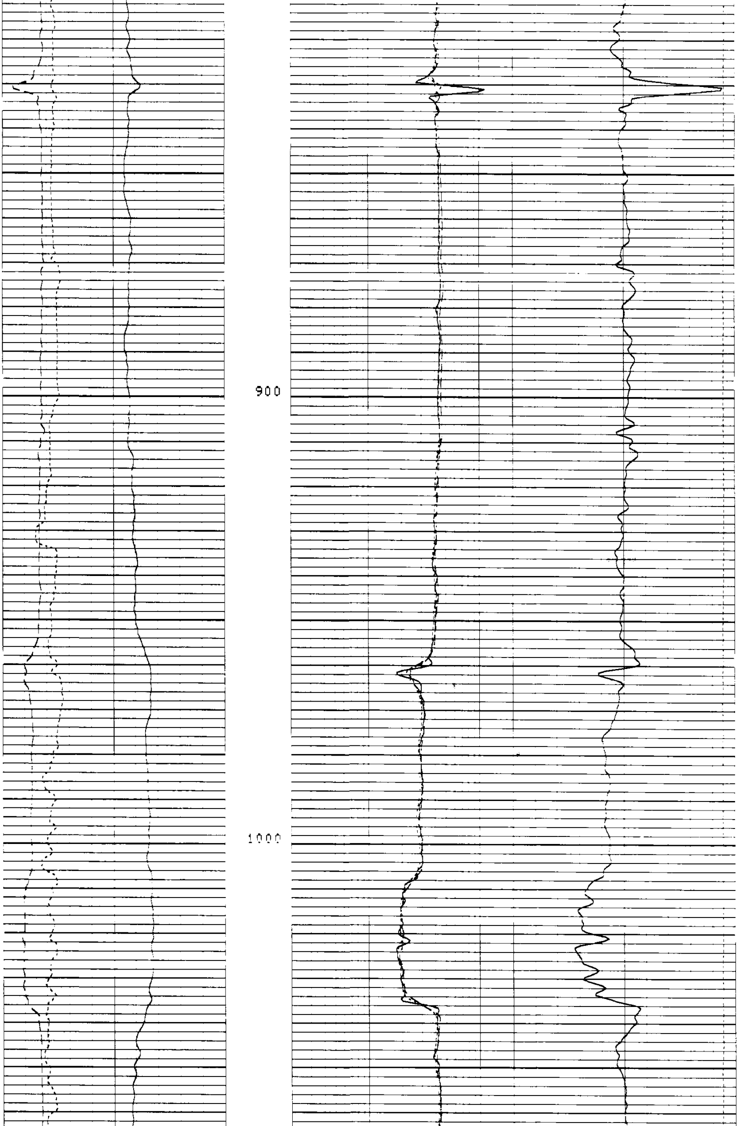
CP 32.6 FILE 2 08-NOV-1992 14:39

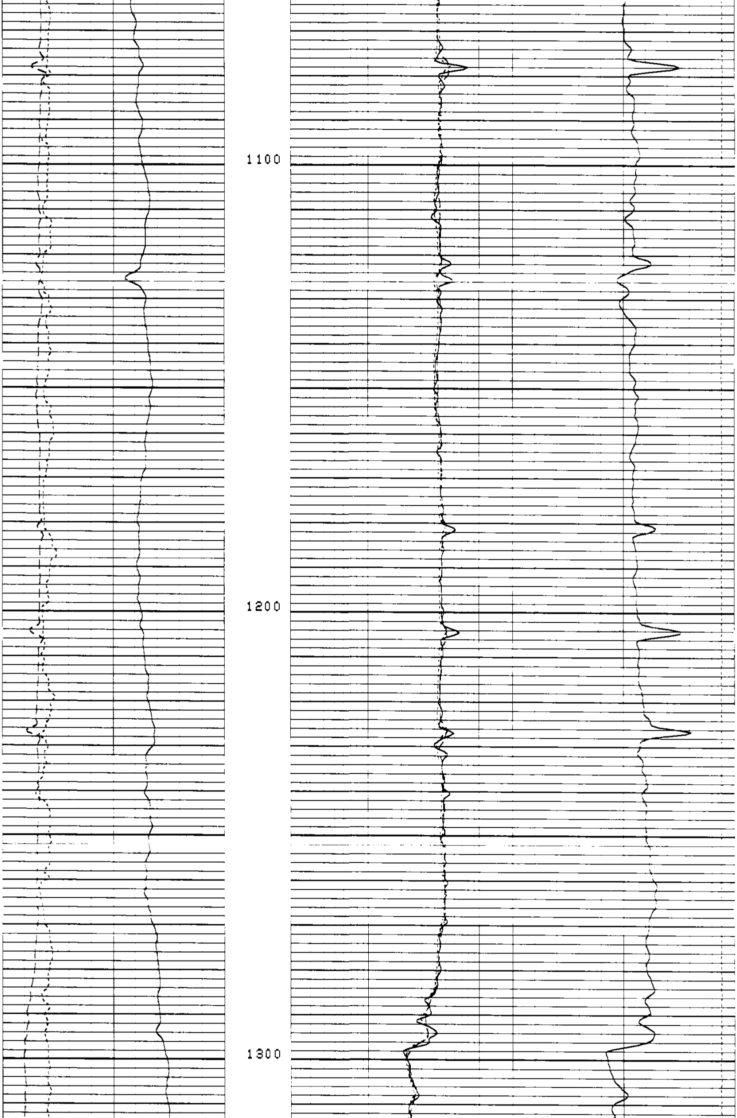
INPUT FILE(S) CREATION DATE
13 08-NOV-1992 11:44

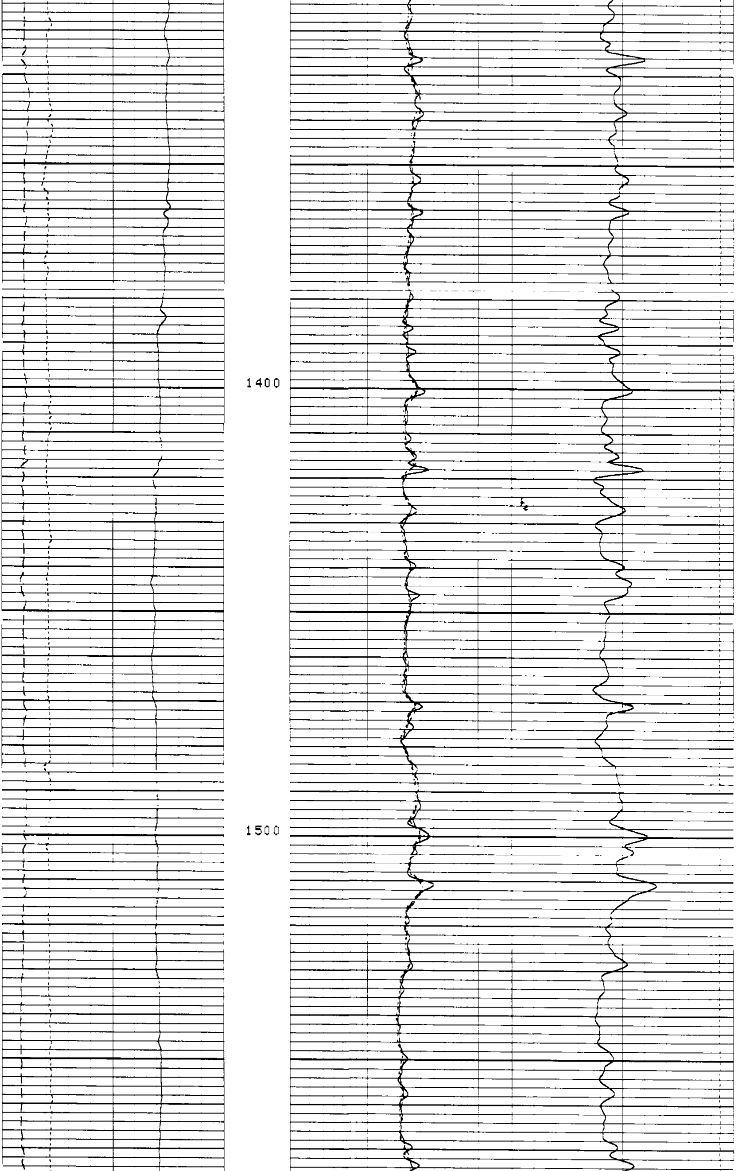
5"/100'

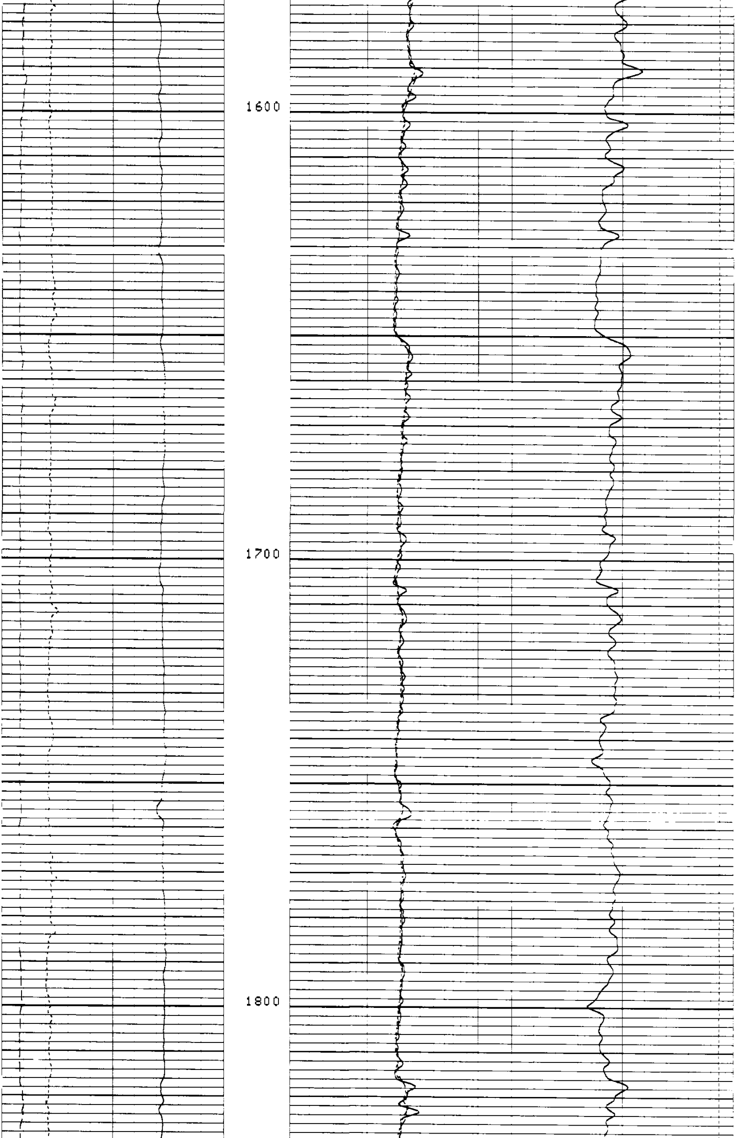


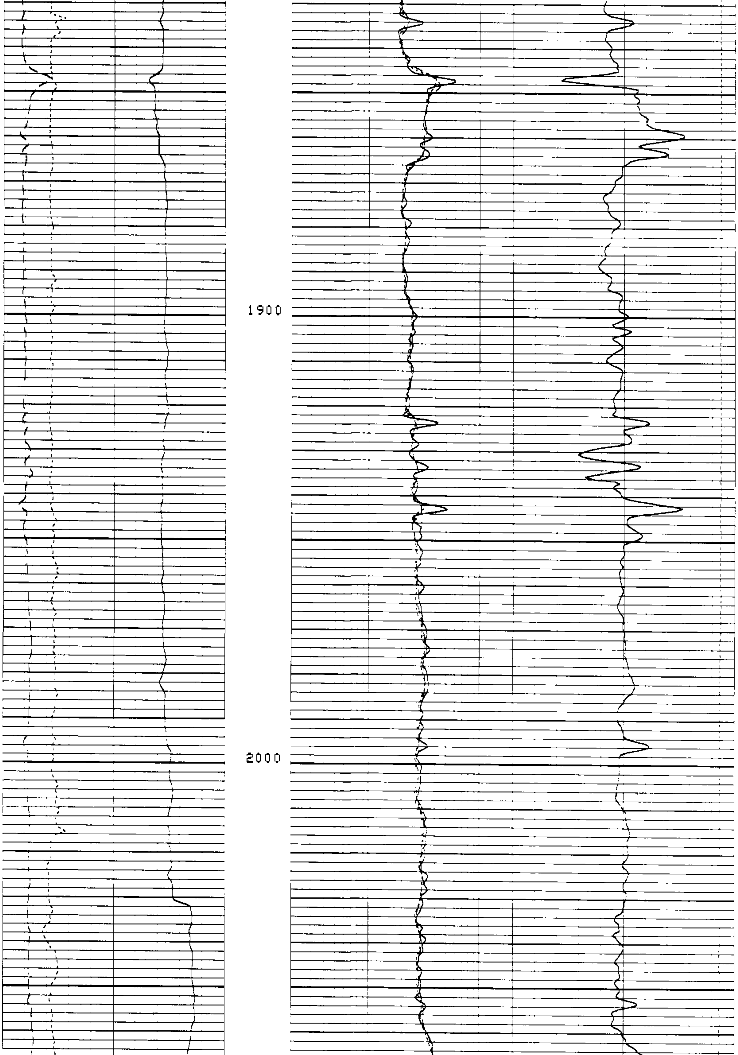


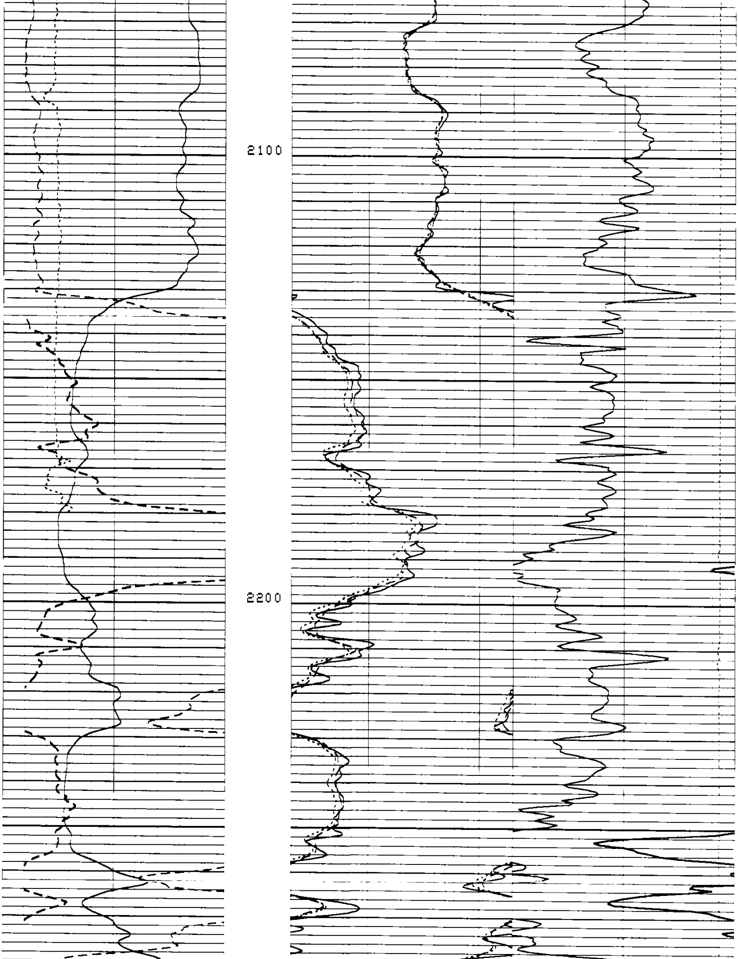


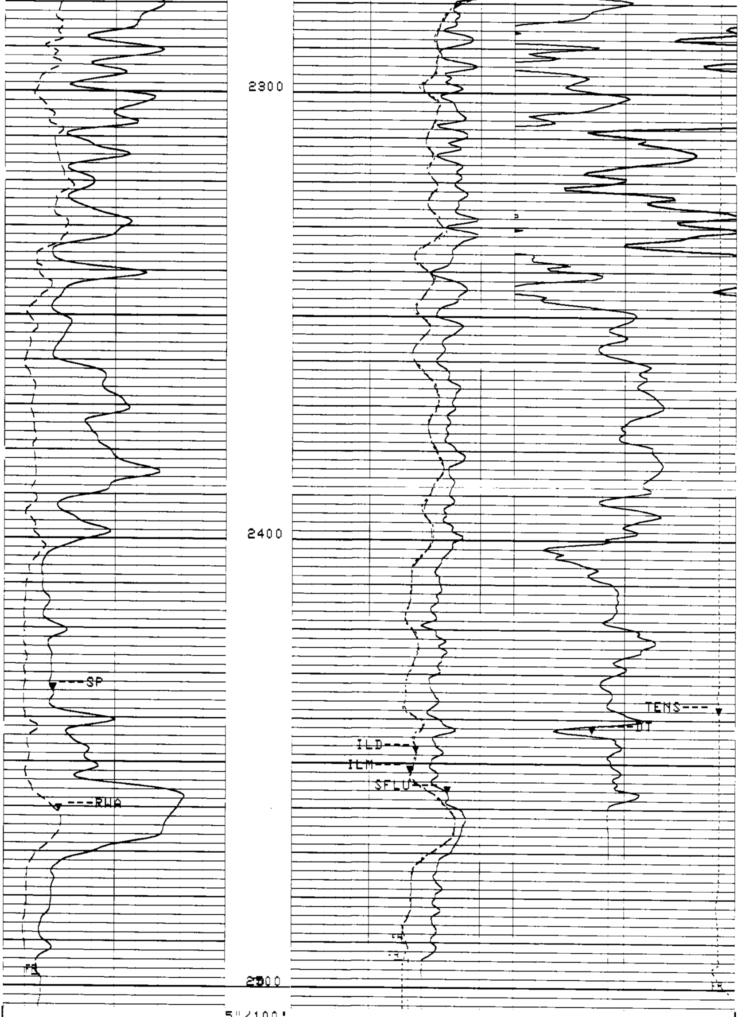












5"/100'

CP 32.6 FILE 2 08-NOV-1992 14:31

INPUT FILE(S) CREATION DATE
13 08-NOV-1992 11:44

SFLU(OHMM)
20.000 2000.0
ILM(OHMM)
20.000 2000.0
ILD(OHMM)
20.000 2000.0
ILD(OHMM)
.20000 20.000

SP(MV)
-100.0 0.0
RWA(OHMM)
0.0 3.0000

ILM(OHMM)
.20000 20.000
SFLU(OHMM)
.20000 20.000

TENS(LBF)
20500. 500.00
DT(US/F)
175.00 75.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.7	FEET	AMPL	44.1	FEET
CBFS	43.1	FEET	CBL	44.1	FEET
TT2	44.1	FEET	TT1	43.1	FEET
TT4	39.3	FEET	TT3	40.3	FEET
TT	44.1	FEET	TO	44.1	FEET
CBSL	44.1	FEET	TTSL	44.1	FEET
CALI	31.9	FEET	GR	62.7	FEET
ILM	6.1	FEET	ILD	9.9	FEET
SP	2.5	FEET	SFL	6.8	FEET
TENS	0.0	FEET	SPAR	2.5	FEET
NOIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
SMB	DISA		TOCA	DISA	
RATE	15	HZ	DG	/5	
DETE	E2		AMPL	2	
CBL	UT		WFM	1	
SS	FAST		TOD	DISA	
DTF	189.000	US/F	DTM	56.0000	US/F
CDTS	100.000		SPFS	R-H	
PP	RECO		DO	0.0	F
WMUD	9.69999	LB/G	MSEC	5.90000	MM/M
SBR	1.00000	OHMM	DSEC	6.60000	MM/M
FCD	4.50000	IN	NCJT	GSRY	
FPHI	SPHI		DWCO	512	
DSIN	5	US	DDEL	200	US
BS	7.87500	IN	BHS	OPEN	

REPEAT SECTION

SFLU(OHMM)
20.000 2000.0
ILM(OHMM)
20.000 2000.0
ILD(OHMM)
20.000 2000.0
ILD(OHMM)
.20000 20.000

SP(MV)
-100.0 0.0
RWA(OHMM)
0.0 3.0000

ILM(OHMM)
.20000 20.000
SFLU(OHMM)
.20000 20.000

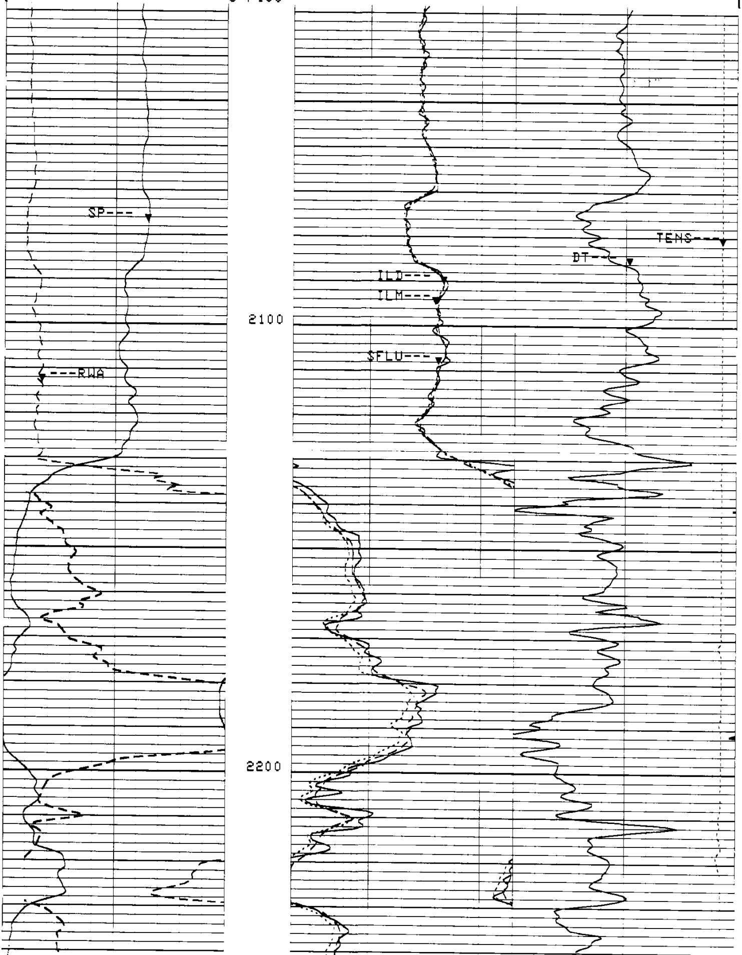
TENS(LBF)
20500. 500.00
DT(US/F)
175.00 75.000

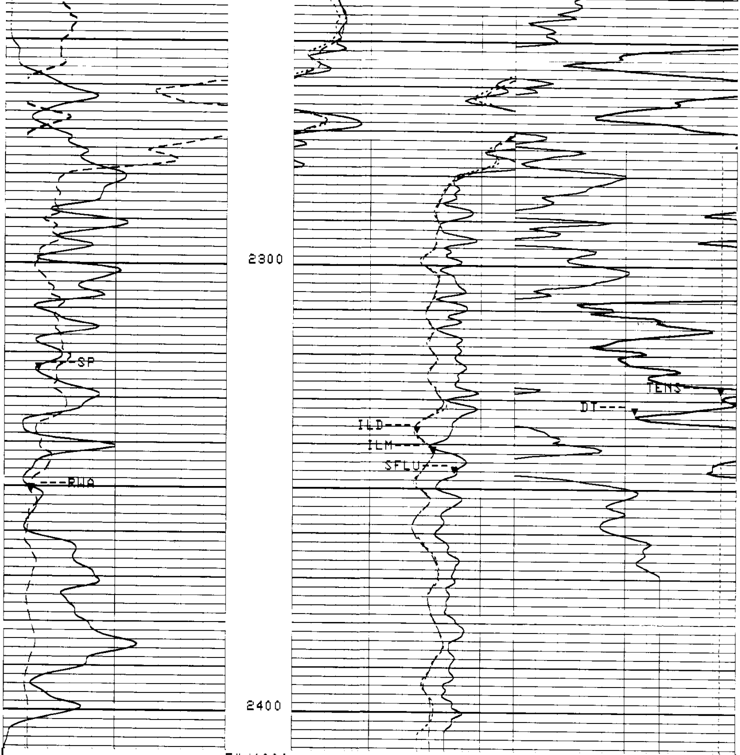
CP 32.6

FILE 17 08-NOV-1992 13:10

INPUT FILE(S) CREATION DATE
12 08-NOV-1992 11:35

5"/100'





5"/100'

CP 32.6

FILE 17 08-NOV-1992 13:09

INPUT FILE(S) CREATION DATE
12 08-NOV-1992 11:35

SFLU(OHMM)
20.000 2000.0
ILM(OHMM)
20.000 2000.0
ILD(OHMM)
20.000 2000.0
ILD(OHMM)
.20000 20.000
ILM(OHMM)
.20000 20.000
SFLU(OHMM)
.20000 20.000

SP(MV)
-100.0 0.0
RWA(OHMM)
0.0 3.0000

TENS(LBF)
20500. 500.00
DT(US/F)
175.00 75.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.7	FEET	AMPL	44.1	FEET
CBFS	43.1	FEET	CBL	44.1	FEET
TT2	44.1	FEET	TT1	43.1	FEET
TT4	39.3	FEET	TT3	40.3	FEET
TT	44.1	FEET	T0	44.1	FEET
CBSL	44.1	FEET	TTSL	44.1	FEET
CALI	31.9	FEET	GR	62.7	FEET
ILM	6.1	FEET	ILD	9.9	FEET
SP	2.5	FEET	SFL	6.8	FEET
TENS	2.5	FEET	SPAR	2.5	FEET
NDIS	2.5	FEET			

PARAMETERS

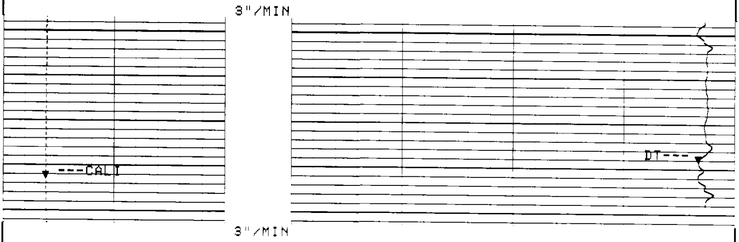
PARAMETER	VALUE	UNIT
SMB - Sonic Memory Board	DISA	
TOCA - T0 Correction Status	DISA	
RATE - Firing Rate	15	HZ
DG - Downhole Gain	/5	
DETE - Detection	E2	
AMPL - Sonic Amplitude	2	
CBL - Cement Bond Log Amplitude	UT	
WFM - Waveform Mode	1	
SS - Sweep Speed	FAST	
TOD - T0 Delay	DISA	
DTF - Delta-T Fluid	189.000	US/F
DTM - Delta-T Matrix	56.0000	US/F
CDTS - Correction for Delta-T Shale, Empirical	100.000	
SPFS - Sonic Porosity Formula Select	R-H	
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
WMUD - Weight of Mud	9.69999	LB/G
MSEC - Medium Sonde Error Correction	5.90000	MM/M
SBR - Shoulder Bed Resistivity	1.00000	OHMM
DSEC - Deep Sonde Error Correction	6.60000	MM/M
FCD - Future Casing Diameter	4.50000	IN
NCJT - NGT Calibration Jig Type	GSRY	
FPHI - Formation Factor Formula Porosity	SPHI	
DWCO - Digitizer Word Count	512	
DSIN - Digitizer Sample Interval	5	US
DDEL - Digitizing Delay	200	US
BS - Bit Size	7.87500	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

SONIC CHECK IN CASING

CALI(IN)
6.0000 16.000

DT(US/F)
150.00 50.000

CP 32.6 FILE 7 08-NOV-1992 11:29 (UP)



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     CP 32.6              FILE     7        08-NOV-1992 11:28     (UP)
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             CALI(IN )                                   DT(US/F)
6.0000                    16.000      150.00                                               50.000
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CALIBRATION SUMMARY

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                 BEFORE SURVEY CALIBRATION SUMMARY


    PERFORMED:    08-NOV-1992 11:33
    PROGRAM FILE: ISN    (VERSION    32.6    92/10/22  91/08/23)


  DITD             ELECTRONICS CALIBRATION SUMMARY

               MEASURED                          CALIBRATED
            ZERO     PLUS                   ZERO        PLUS          UNITS
     ILD     .74    550.1                   0.0         497.0          MM/M
     ILM     .62    533.6                   0.0         503.2          MM/M
     SFL    1.36    536.8                   0.0         500.0          MM/M

  ILD SONDE ERROR CORRECTION :          6.6 MM/M
  ILM SONDE ERROR CORRECTION :          5.9 MM/M

  ZERO: 08-NOV-1992 11:30  PLUS: 08-NOV-1992 11:30  COMP: 08-NOV-1992 11:31

  SGTE             DETECTOR CALIBRATION SUMMARY

               MEASURED
            BKGD     JIG          CALIBRATED          UNITS
     GR      43      189             165              GAPI

  BACK: 08-NOV-1992 10:19   JIG: 08-NOV-1992 10:23  COMP: 08-NOV-1992 10:23

  MCDB             CALIPER CALIBRATION SUMMARY

               MEASURED                          CALIBRATED
            SMALL    LARGE                  SMALL       LARGE         UNITS
    CALI    6.94    10.14                   8.00        12.00          IN

  SMALL: 08-NOV-1992 10:11 LARGE: 08-NOV-1992 10:11 COMP: 08-NOV-1992 10:11

     CP 32.6              FILE     10       08-NOV-1992 11:32



                 AFTER SURVEY TOOL CHECK SUMMARY


    PERFORMED:    08-NOV-1992 12:27
    PROGRAM FILE: ISN    (VERSION    32.6    92/10/22  91/08/23)


  DITD                       TOOL  CHECK

                      ZERO                          PLUS
            BEFORE           AFTER          BEFORE      AFTER      UNITS
     ILD      0.0              .3           497.0       493.9      MM/M
     ILM      0.0              .4           503.2       499.7      MM/M
     SFL      0.0              .8           500.0       497.5      MM/M

  ILD SONDE ERROR CORRECTION :          6.6 MM/M
  ILM SONDE ERROR CORRECTION :          5.9 MM/M

  BEFORE SURVEY:             ZERO: 08-NOV-1992 11:30  PLUS: 08-NOV-1992 11:30
  AFTER SURVEY CHECK:        ZERO: 08-NOV-1992 12:26  PLUS: 08-NOV-1992 12:27
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   CP 32.6             FILE    15       08-NOV-1992 12:27


                 SHOP SUMMARY


   PERFORMED:    09-OCT-1992 10:04
   PROGRAM FILE: SHOP   (VERSION    32.6    91/08/23  91/08/23)


  DITD           ELECTRONICS CALIBRATION SUMMARY

               TEST LOOP CALIBRATION              TOOL CHECK
           MEASURED          CALIBRATED           CALIBRATED
         ZERO     PLUS      ZERO      PLUS      ZERO      PLUS     UNITS
    ILD  -5.8     544.8     0.0       500.0     0.0       497.0    MM/M
    ILM  -4.7     521.9     0.0       500.0     0.0       503.2    MM/M
  ILD  SONDE ERROR CORRECTION :       6.6 MM/M
  ILM  SONDE ERROR CORRECTION :       5.9 MM/M

                    (IS:298 , IC:1078)

    CP 32.6            FILE     1       09-OCT-1992 10:04
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COMPANY	NAHAMA AND WEAGANT ENERGY CO.		
WELL	"SOCKEYE" C.C. #31-15-65 RD. #1		
FIELD	MIST		
COUNTY	COLUMBIA	**STATE**	OREGON

SCHL.	FR	2494.0 F
SCHL.	TD	2500.0 F
DRLR.	TD	2546.0 F
Elev:	KB	734.2 F
	DF	
	GL	723.2 F

Schlumberger

DUAL INDUCTION-SFL-SONIC