Schlumberger

DUAL INDUCTION-SFL

COUNTY COLUMBIA
FIELD MIST
LOCATION 1823'S & 1214'E
WELL "COMPY" JOHNSTON #22B-19-65
COMPANY NAHAMA & WEAGANT ENERGY CO.

COMPANY	NAHAMA & WEAGANT ENERGY CO.
WELL	"COMPY" JOHNSTON #22B-19-65
FIELD	MIST
COUNTY	COLUMBIA **STATE** OREGON

LOCATION				Other Services:
1823'S & 1214'E FR NW COR				DIL BHC
API SERIAL NO.	SECT.	TWP.	RANGE	
36-009-00306	19	6N	5W	

Permanent Datum	G.L.	Elev.	937.0 F	Elev.: K.B.947.0 F
Log Measured From	KB	10.0 F	above Perm. Datum	D.F.946.0 F
Drilling Measured From	KB			G.L.937.0 F

Date	19-JUL 1993				
Run No.	ONE				
Depth Driller	2940.0 F				
Depth Logger (Schl.)	2940.0 F				
Btm. Log Interval	2934 0 F				
Top Log Interval	606 0 F				
Casing-Driller	8 5/8"	@ 606 0 F	@		@
Casing-Logger	606 0 F				
Bit Size	7 7/8"	@ 2940 0 F	@		@
Type Fluid in Hole	GEL/POLYMER				
Dens. | Visc.	9 40 LB/G	48 0 S			
pH | Fld. Loss	7 0	6.2 C3			
Source of Sample	FLOWLINE				
Rm @ Meas. Temp.	2 340 OHMM	@ 78.0 DEGF	@		
Rmf @ Meas. Temp.	2.760 OHMM	@ 72.0 DEGF	@		
Rmc @ Meas. Temp.	2.140 OHMM	@ 72.0 DEGF	@		
Source: Rmf | Rmc	MEASURED	MEASURED			
Rm @ BHT	2.094 OHMM	@ 88.0 DEGF	@		
TIME Circulation Ended	18:00 19-JUL-93				
TIME Logger on Bottom	22:16 19-JUL-93				
Max. Rec. Temp.	88.0 DEGF				
Equip. | Location	8271	4408			
Recorded By	ROANE THORPE				
Witnessed By	R LUCAS/J VAUGHAN/B PINOTTI				

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

All interpretations are opinions based or 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.

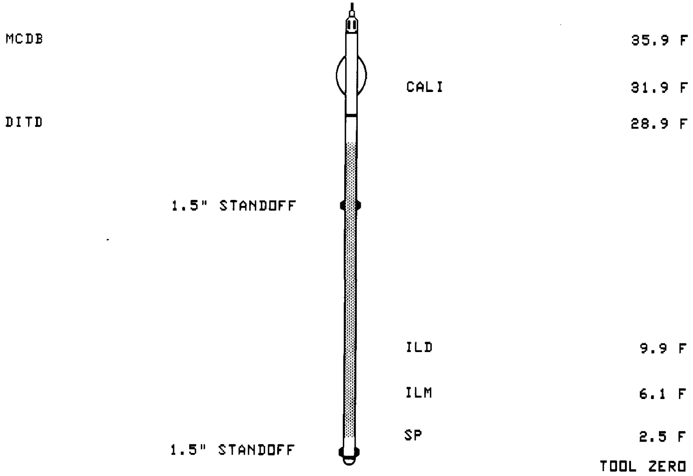
Run No.	ONE			
Service Order No.	624487			
Drilling Fluid Level				
Salinity	800.0 PPM			
Rmf @ BHT	2.287 OHMM	@ 88.0 DEGF		@
Rmc @ BHT	1.780 OHMM	@ 88.0 DEGF		@
Logging Speed	3600.0 F/HR			
EQUIPMENT DATA				
Tool Number 1	DIS-EC 1422			
Tool Number 2	DIC-DA 1149			
Tool Number 3	MCD-DA 668			
Tool Number 4				
Tool Number 5				
Tool Number 6	IEM-BD 685			
Tool Number 7				
Tool Number 8				
Tool Number 9				
Tool Number 10				
Tool Number 11				
Tool Number 12				

REMARKS:

TWO 1.5" STANDOFFS RUN ON INDUCTION TOOL
HOLE KICKED OFF AT 2400 FT.

MAXIMUM DEVIATION 49 deg AT TD.

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 38.7 F.
TOTAL TOOL STRING WEIGHT IS 470. LB IN AIR.

MAIN LOG

ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume: 770.340 F3 FROM 2940.00 F TO 506.000 F
Integrated Cement Volume: 501.513 F3 FROM 2940.00 F TO 506.000 F
(ASSUMING 4.50000 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)
10000. 0.0

ILD(OHMM)
.20000 2000.0

CALI(IN)
6.0000 16.000

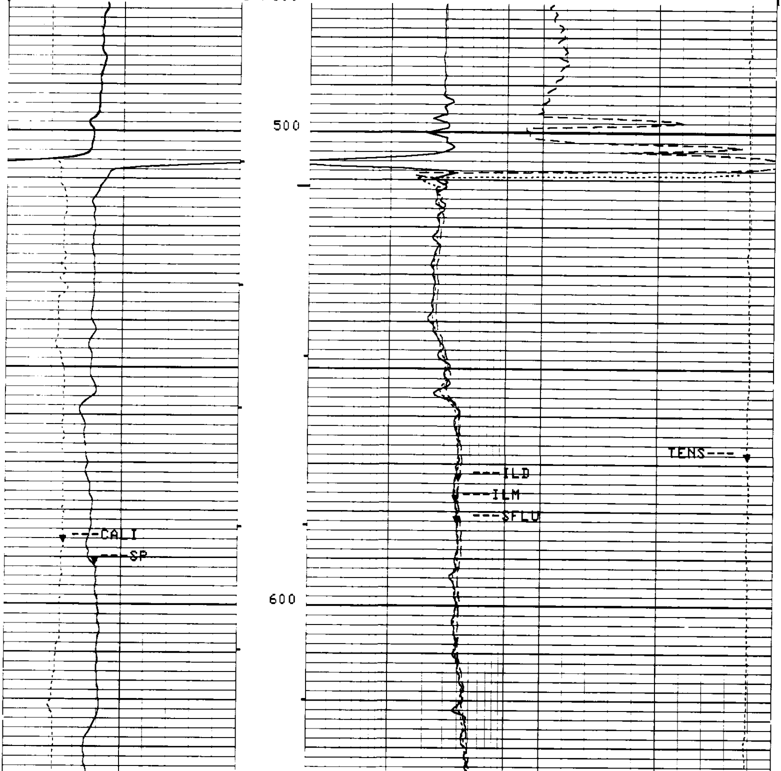
ILM(OHMM)
.20000 2000.0

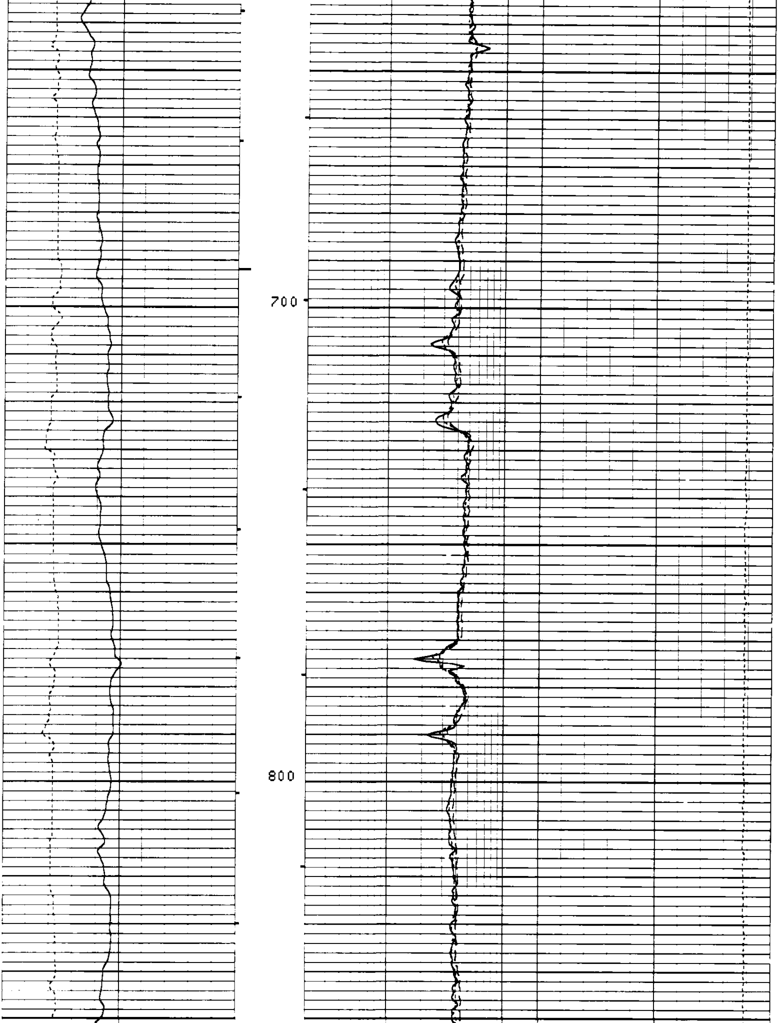
SP(MV)
-100.0 0.0

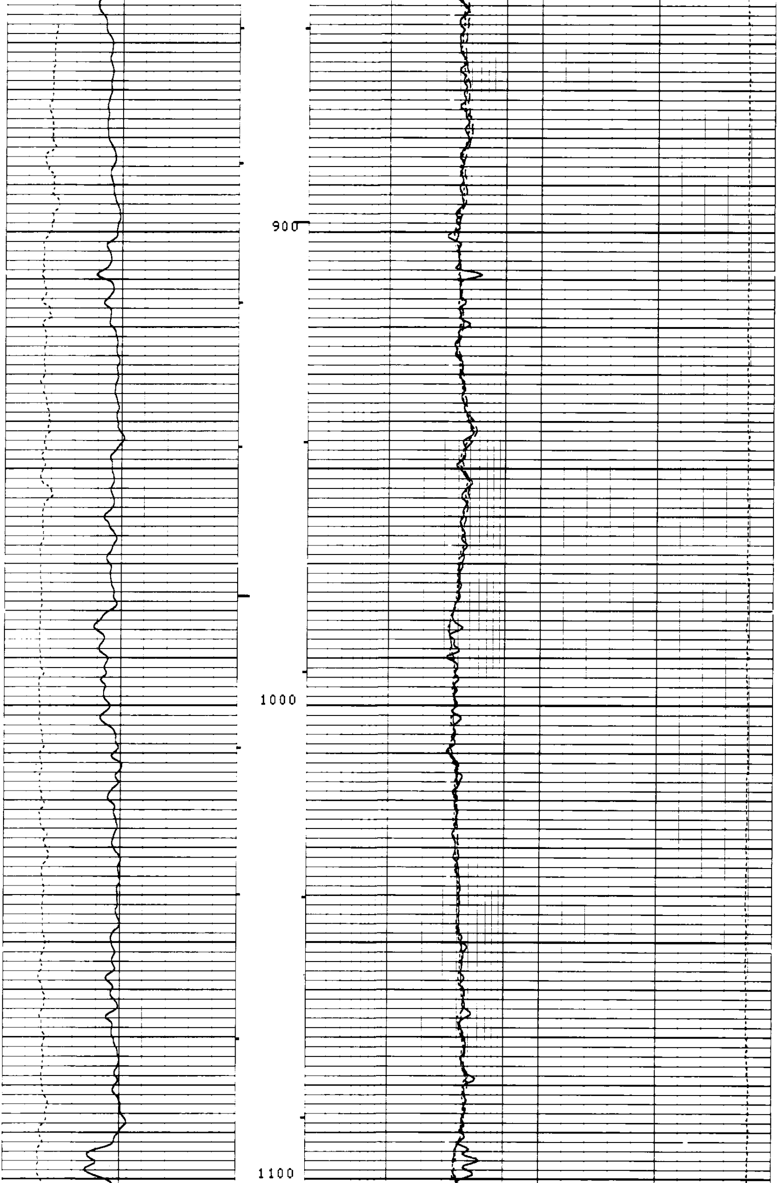
SFLU(OHMM)
.20000 2000.0

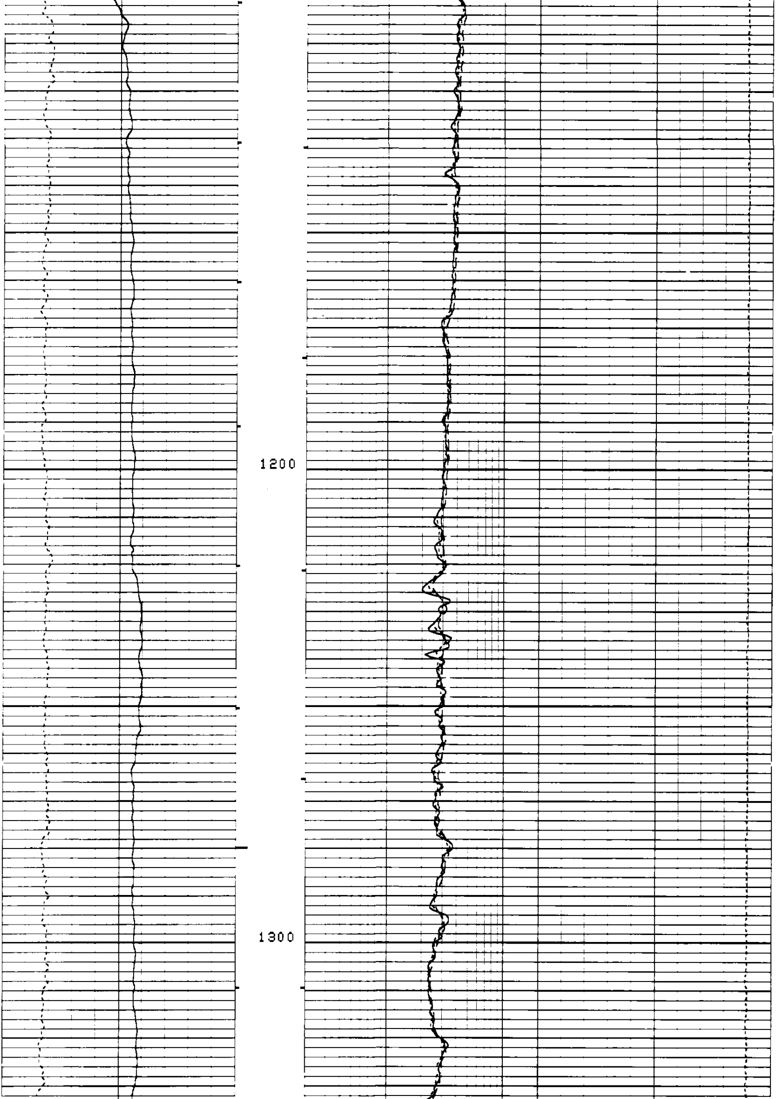
CP 38.2 FILE 7 19-JUL-1993 22:58 (UP)

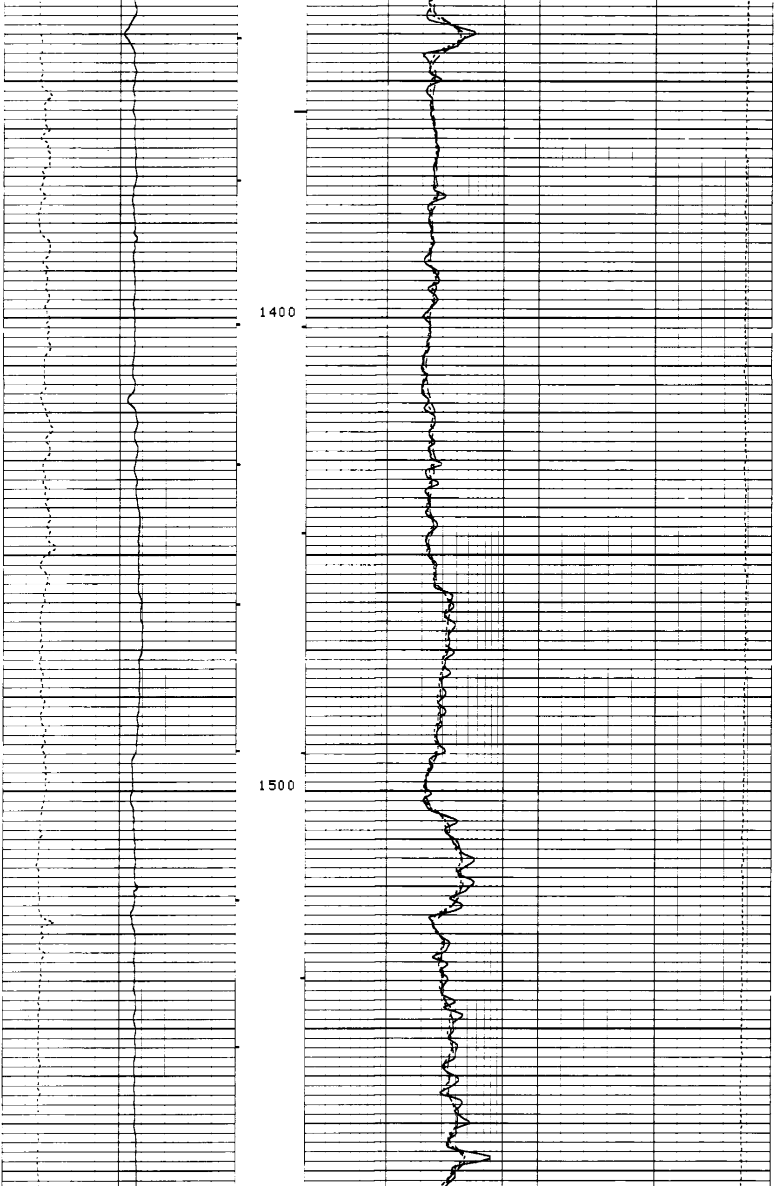
5"/100'

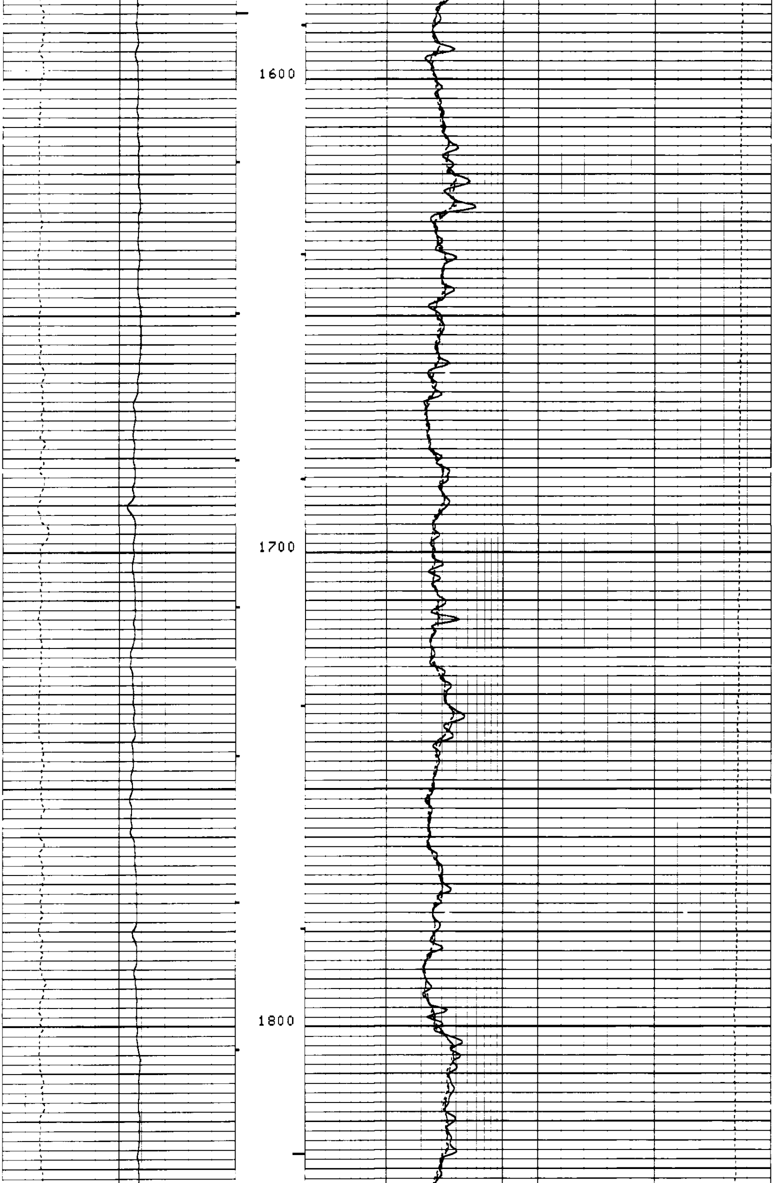


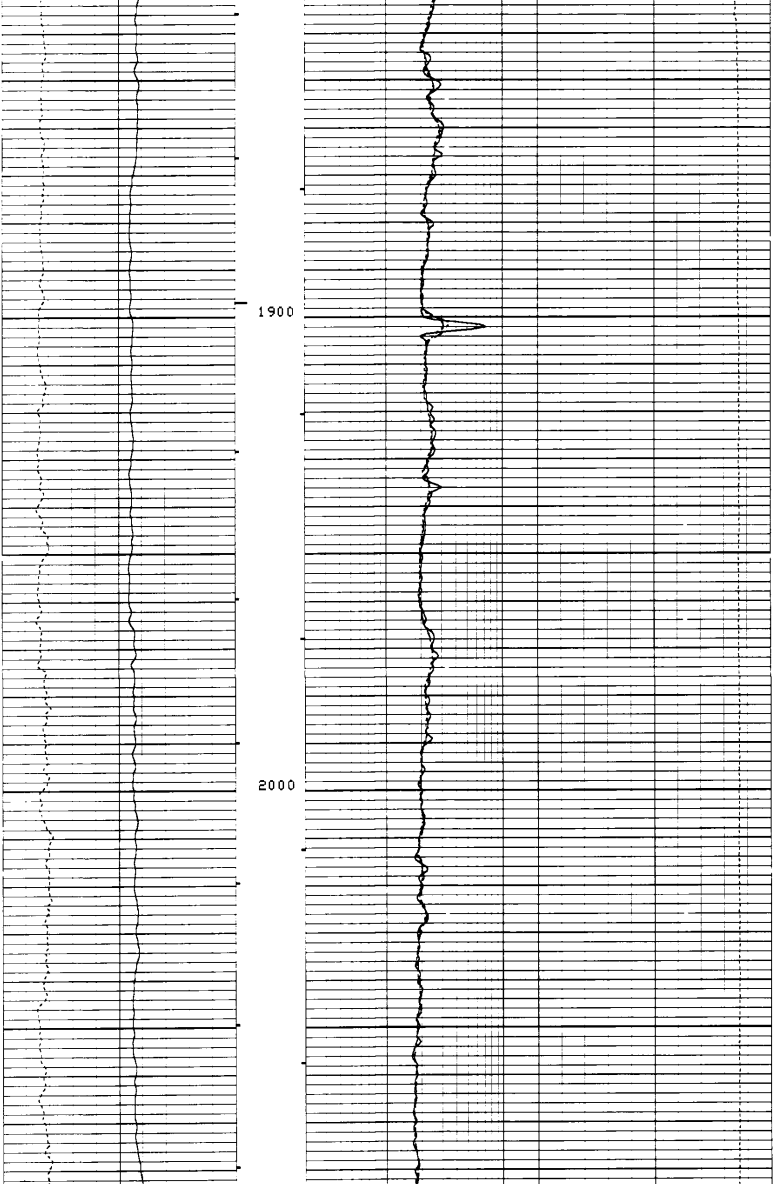


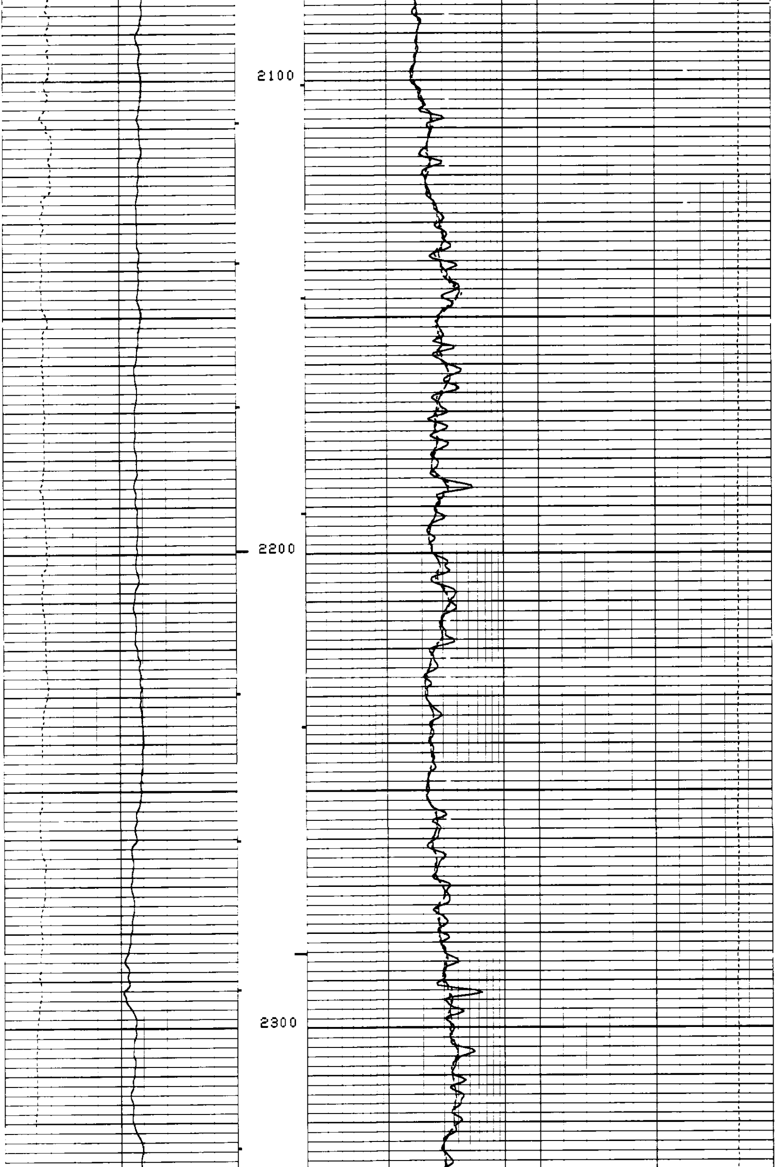


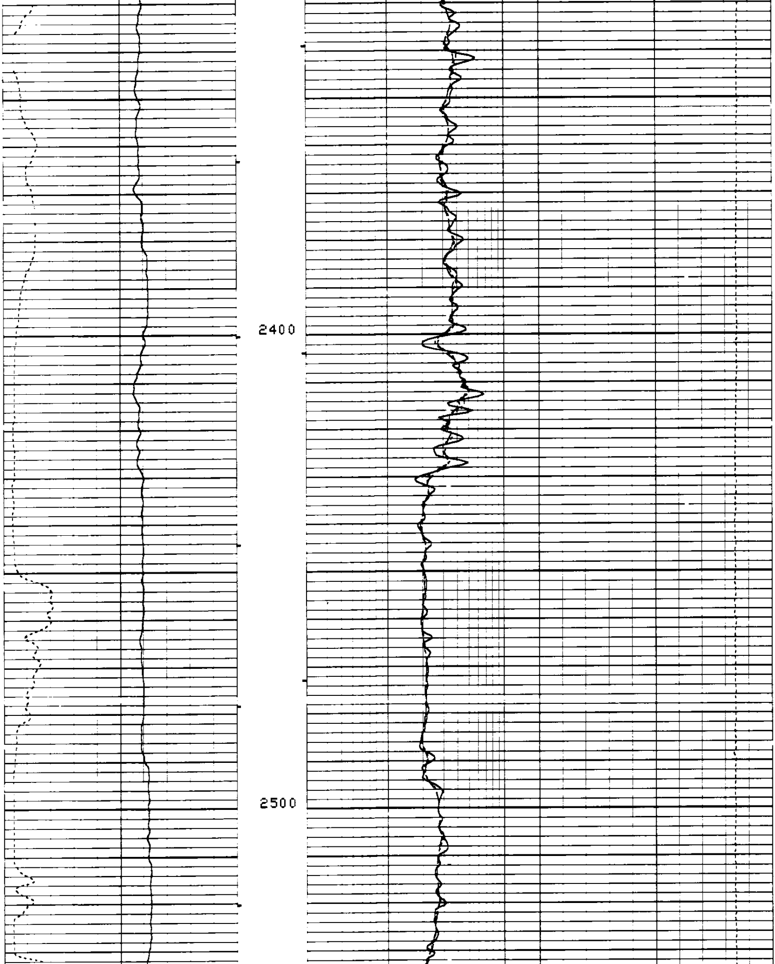


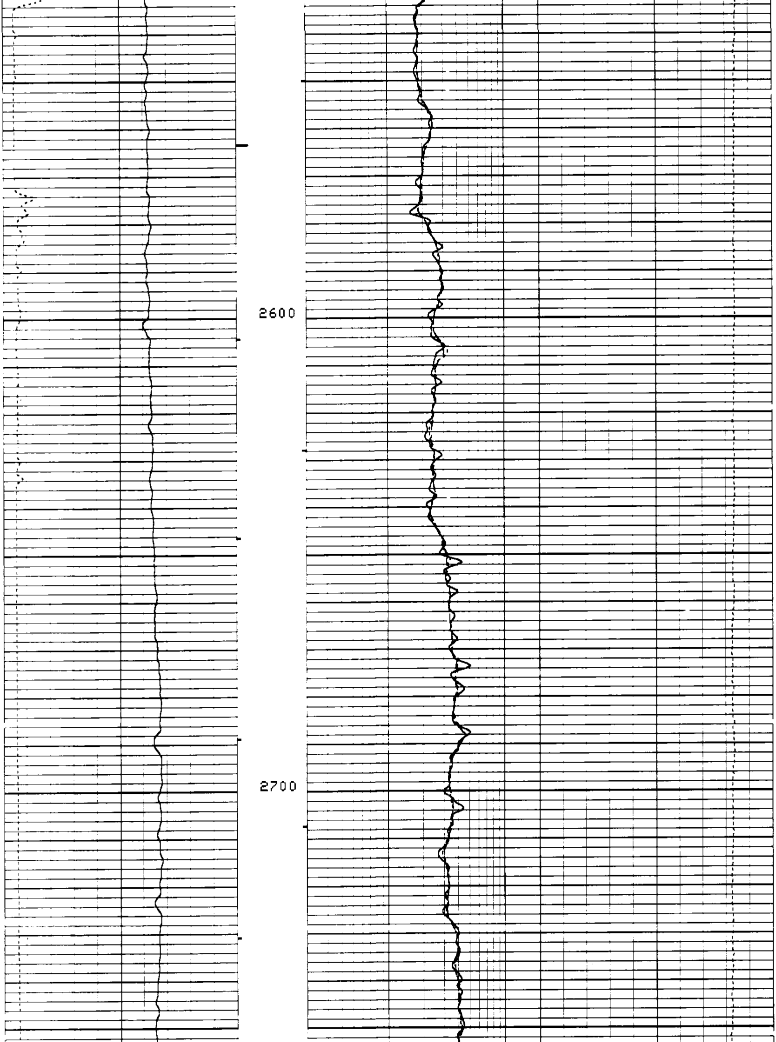


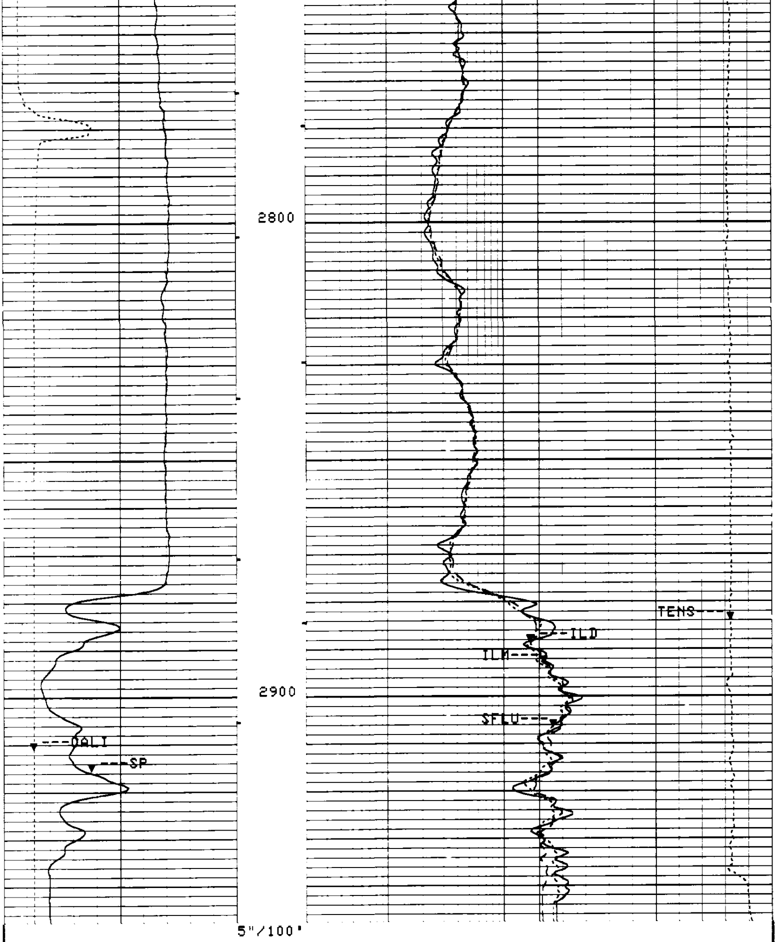












CP 38.2 FILE 7 19-JUL-1993 22:16 (UP)

TENS(LBF)	10000.	0.0
ILD(OHMM)	.20000	2000.0
ILM(OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0
CALI(IN)	6.0000	16.000
SP(MV)	-100.0	0.0

SENSOR MEASURE POINT TO TOOL ZERO

DITD 9.9 FEET
DTT 2.5 FEET
MCDB 31.9 FEET

PARAMETERS

PARAMETER	VALUE	UNIT
MSEC - Medium Sonde Error Correction	7.50000	MM/M
SBR - Shoulder Bed Resistivity	1.00000	OHMM
DSEC - Deep Sonde Error Correction	4.40000	MM/M
FCD - Future Casing Diameter	4.50000	IN
BS - Bit Size	7.87500	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

REPEAT SECTION

ACCUMULATED INTEGRATION VALUES SUMMARY:

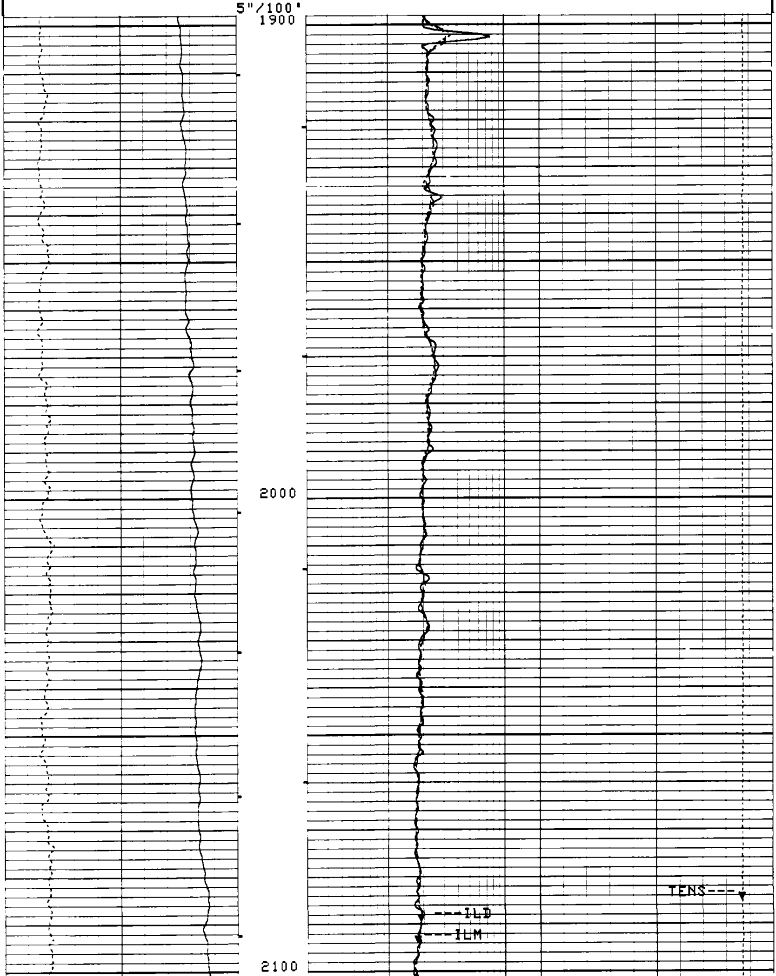
Integrated Hole Volume: 94.1489 F3 FROM 2161.00 F TO 1897.50 F
Integrated Cement Volume: 65.1015 F3 FROM 2161.00 F TO 1897.50 F
(ASSUMING 4.50000 IN O.D. CASING)

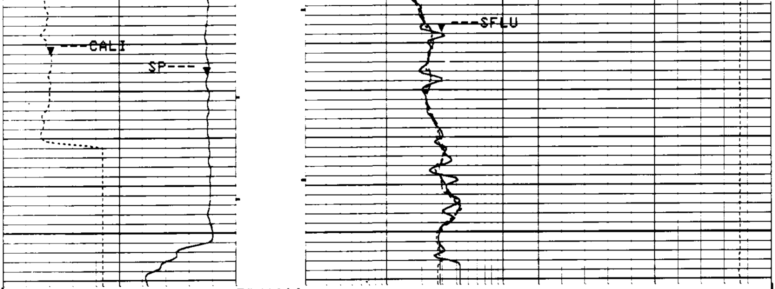
EVENT MARK SUMMARY:

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)	10000.	0.0
ILD(OHMM)	.20000	2000.0
ILM(OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0
CALI(IN)	6.0000	16.000
SP(MV)	-100.0	0.0

CP 38.2 FILE 6 19-JUL-1993 22:07 (UP)





5"/100'

CP 38.2 FILE 6 19-JUL-1993 22:02 (UP)

TENS(LBF)
10000. 0.0

ILD(OHMM)
.20000 2000.0

ILM(OHMM)
.20000 2000.0

SFLU(OHMM)
.20000 2000.0

CALI(IN)
6.0000 16.000

SP(MV)
-100.0 0.0

SENSOR MEASURE POINT TO TOOL ZERO

DITD 9.9 FEET
DTT 2.5 FEET

MCDB 31.9 FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
MSEC	7.50000	MM/M	SBR	1.00000	OHMM
DSEC	4.40000	MM/M	FCD	4.50000	IN
BS	7.87500	IN	BHS	OPEN	

CALIBRATION SUMMARY

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 19-JUL-1993 23:00
PROGRAM FILE: ISN (VERSION 38.2 92/10/12 92/10/12)

DITD TOOL CHECK

	ZERO		PLUS		
	BEFORE	AFTER	BEFORE	AFTER	UNITS
ILD	0.0	-1.1	501.6	498.6	MM/M
ILM	0.0	-1.0	499.0	494.7	MM/M
SFL	0.0	-1.8	500.0	496.8	MM/M

ILD SONDE ERROR CORRECTION : 4.4 MM/M
ILM SONDE ERROR CORRECTION : 7.5 MM/M

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BEFORE SURVEY:               ZERO: 19-JUL-1993 21:48   PLUS: 19-JUL-1993 21:49
AFTER SURVEY CHECK:          ZERO: 19-JUL-1993 22:59   PLUS: 19-JUL-1993 23:00

   CP 38.2            FILE    9      19-JUL-1993 23:00



                BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:     19-JUL-1993 21:50
  PROGRAM FILE: ISN    (VERSION    38.2    92/10/12  92/10/12)


DITD             ELECTRONICS CALIBRATION SUMMARY

             MEASURED                        CALIBRATED
           ZERO    PLUS                  ZERO       PLUS         UNITS
   ILD     1.48    499.9                 0.0        501.6         MM/M
   ILM     1.32    520.4                 0.0        499.0         MM/M
   SFL     2.24    508.7                 0.0        500.0         MM/M

ILD SONDE ERROR CORRECTION :          4.4 MM/M
ILM SONDE ERROR CORRECTION :          7.5 MM/M

ZERO: 19-JUL-1993 21:48  PLUS: 19-JUL-1993 21:49  COMP: 19-JUL-1993 21:49


MCDB             CALIPER CALIBRATION SUMMARY

             MEASURED                        CALIBRATED
           SMALL   LARGE                 SMALL      LARGE        UNITS
  CALI     7.65    12.53                 8.00       12.00         IN

SMALL: 19-JUL-1993 20:44 LARGE: 19-JUL-1993 20:46 COMP: 19-JUL-1993 20:46

   CP 38.2            FILE    4      19-JUL-1993 21:49



                SHOP SUMMARY


  PERFORMED:     14-JUL-1993 14:24
  PROGRAM FILE: SHOP   (VERSION    38.2    92/10/12  92/10/12)


DITD             ELECTRONICS CALIBRATION SUMMARY

               TEST LOOP CALIBRATION            TOOL CHECK
          MEASURED          CALIBRATED          CALIBRATED
         ZERO    PLUS     ZERO      PLUS      ZERO      PLUS    UNITS
   ILD   -2.8    486.9    0.0       500.0     0.0       501.6   MM/M
   ILM   -7.8    503.0    0.0       500.0     0.0       499.0   MM/M
ILD  SONDE ERROR CORRECTION :       4.4 MM/M
ILM  SONDE ERROR CORRECTION :       7.5 MM/M

                   (IS:1422, IC:1149)

   CP 38.2            FILE    8      14-JUL-1993 14:24
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COMPANY	NAHAMA & WEAGANT ENERGY CO.			**SCHL.**	**FR**	2934.0 F
				SCHL.	**TD**	2940.0 F
WELL	"COMPY" JOHNSTON #22B-19-65			**DRLR.**	**TD**	2940.0 F
				Elev:	**KB**	947.0 F
FIELD	MIST				**DF**	946.0 F
COUNTY	COLUMBIA	**STATE**	OREGON		**GL**	937.0 F

DUAL INDUCTION-SFL

Schlumberger