HALLIBURTON LOGGING SERVICES, INC.

FOUR-ARM DIPMETER LOG

COMPANY ______
WELL ______
FIELD ______
COUNTY ______ STATE ______

COMPANY	NAHAMA & WEAGANT ENERGY COMPANY
WELL	FREDDIE COUGAR CREEK #22-31-65
FIELD	MIST
COUNTY	COLUMBIA
STATE	OREGON
API No.	
Location	1162.81' SOUTH & 1305.79' EAST OF THE NORTHWEST CORNER
Other Services	DIL/BCS/GR
Sec.	31
Twp.	6N
Rge.	5W
Permanent Datum	GL
Elev.	561.93'
Log Measured From	KB
Ft. Above Perm. Datum	10'
Drilling Measured From	KB
Elev.: K.B.	571.93'
D.F.	-
G.L.	561.93'

Date	8-31-91			
Run No.	ONE			
Depth—Driller	1991'			
Depth—Logger	1982'			
Btm. Log Inter.	1980'			
Top Log Inter.	1100'			
Casing—Driller	8.63"@ 496'	@	@	@
Casing—Logger	496'			
Bit Size	7.87"			
Type Fluid in Hole	GEL-POLYMER			
Dens. / Visc.	10.6 / 55	/	/	/
pH / Fluid Loss	9.0 / 5.3 ml	/ ml	/ ml	/ ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	2.5 @ 68 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	2.3 @ 62 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.9 @ 62 °F	@ °F	@ °F	@ °F
Source R_{mf} / R_{mc}	MEAS / MEAS	/	/	/
R_m @ BHT	1.8 @ 97 °F	@ °F	@ °F	@ °F
Time Since Circ.	5.75 HOURS			
Time On Bottom	07:14			
Max. Rec. Temp.	97 °F @	°F @	°F @	°F @
Equip. / Location	7674 / BKFD	/	/	/
Recorded By	POZAS			
Witnessed By	VAUGHAN	PINOTTI		

Fold Here

Part Number 26000

Service Ticket No.: L68248 API Serial No.: PGM Version:

Change in Mud Type or Additional Samples		
Date / Sample No.	/	/
Depth—Driller		
Type Fluid in Hole		
Dens. / Visc.	/	/
ph / Fluid Loss	/ ml	/
Source of Sample		
R_m @ Meas. Temp.	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F
Source: R_{mf} / R_{mc}	/	/
R_m @ BHT	@ °F	@ °F
R_{mf} BHT	@ °F	@ °F
R_{mc} BHT	@ °F	@ °F

RESISTIVITY/RWA SCALE CHANGES				COMPUTED FROM	
Type Log	Depth	Scale Up Hole	Scale Down Hole	a	m

RESISTIVITY EQUIPMENT DATA				
Run No.	Tool Type and No.	Pad Type	Tool Position	Other
ONE	FED #G-144		CENTER	

Borehole Corrections: shallow. medium. deep.

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.		Run No.		Run No.		Run No.	
Serial No.		Serial No.		Serial No.		Serial No.	
Model No.		Model No.		Model No.		Model No.	
Diameter		No. of Cent.		Diameter		Diameter	
Detector Model No.		Spacing		Log Type		Log Type	
Type				Source Type		Source Type	
Length		LSA	☐ Yes ☐ No	Serial No.		Serial No.	
Distance to Source		FWDA	☐ Yes ☐ No	Strength		Strength	

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run No.	Depths From	Depths To	Speed Ft./Min.	Scale L	Scale R	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix	Scale L	Scale R	Matrix
ONE			30											

a = m = Δt_{ma} = Δt_{fl} = ρ_{fl} =

REMARKS: TAYLOR DRILLING

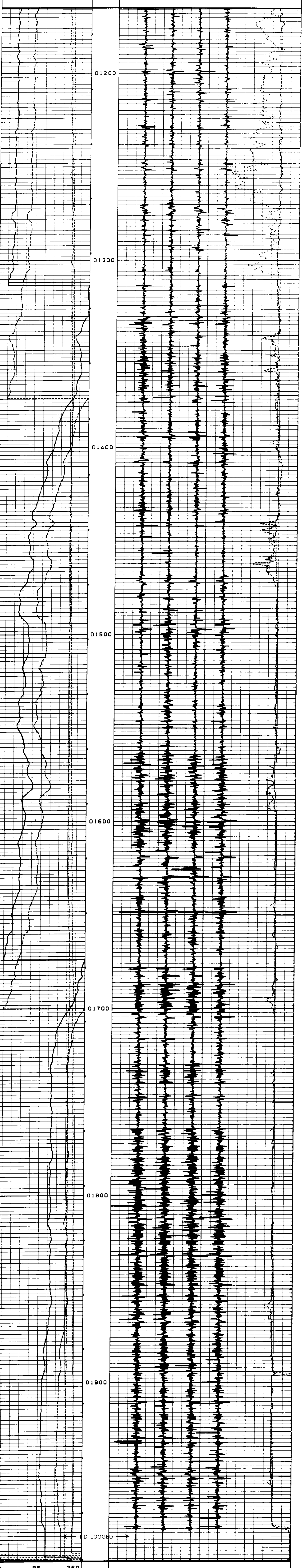
CASED HOLE PARAMETERS	
From:	To:
Bit Size	
Csg. O.D.	
Csg. Wt.	

Halliburton Logging Services, Inc. does not guarantee the accuracy of any interpretation of log data, conversion of log data to physical rock parameters, or recommendations which may be given by Halliburton Logging Services, Inc. personnel or which may appear on the log or in any other form. Any user of such data, interpretations, conversions or recommendations agrees that Halliburton Logging Services, Inc. is not responsible, except where due to gross negligence or willful misconduct, for any loss, damages, or expenses resulting from the use thereof

08-31-91 07:57 1165.4 68248 0017-98 0 7

0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 19

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024



0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 19

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024

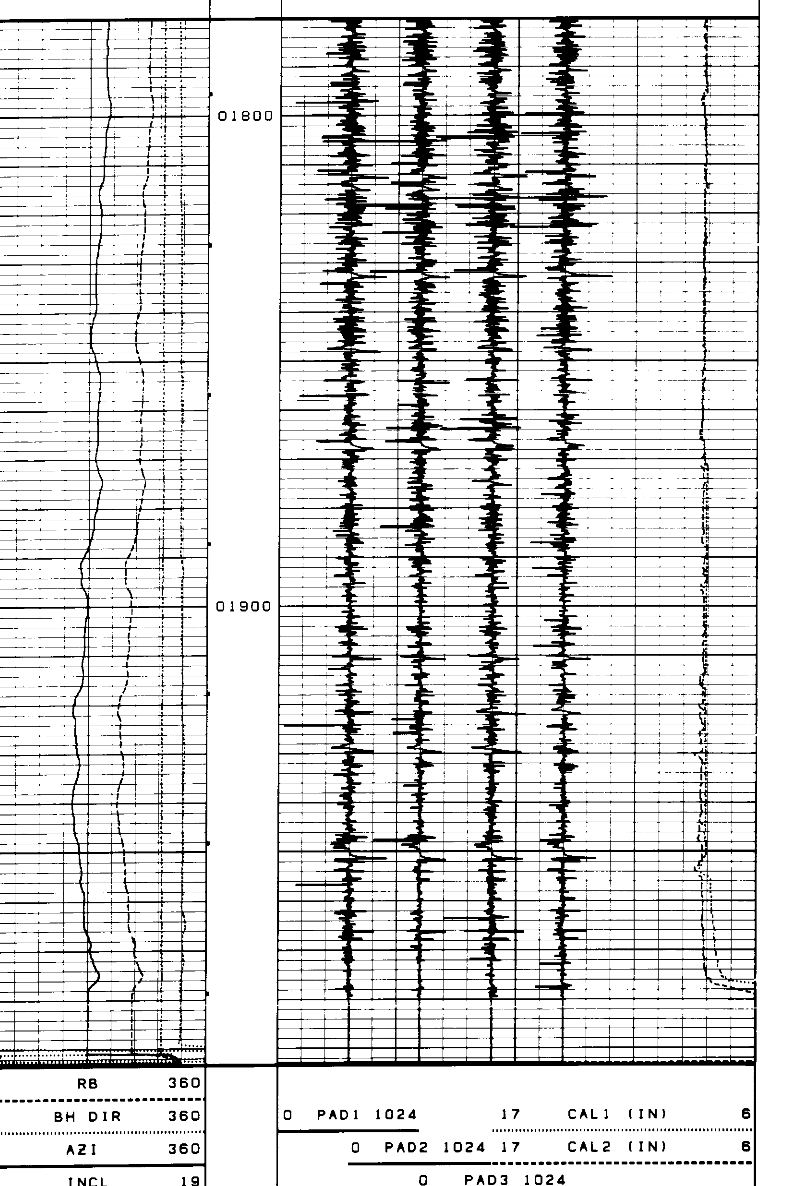
08-31-91 07:29 1995.0 68248 0017-98 0 7

REPEAT SECTION

08-31-91 07:21 1780.5 68248 0017-98 0 6

0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 19

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024



0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 19

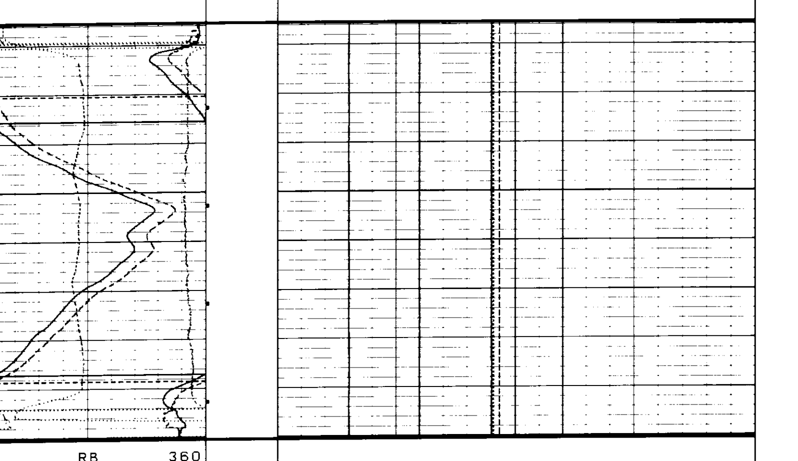
0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024

08-31-91 07:14 1993.0 68248 0017-98 0 6

08-31-91 06:59 0.0 68248 0017-98 0 5

0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 9

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024



0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 9

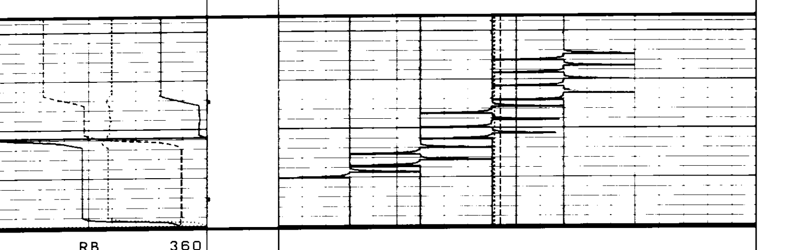
0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024

08-31-91 06:55 0.0 68248 0017-98 0 5

08-31-91 06:46 0.0 68248 0017-98 0 4

0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 9

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024



0 RB 360
0 BH DIR 360
0 AZI 360
-1 INCL 9

0 PAD1 1024 17 CAL1 (IN) 6
0 PAD2 1024 17 CAL2 (IN) 6
0 PAD3 1024
0 PAD4 1024

08-31-91 06:44 0.0 68248 0017-98 0 4

08-31-91 06:36 0.0 68248 0017-98 0 1

CALIPER BEFORE SURVEY CALIBRATION

TOOL TYPE: FED-FB SERIAL NO:00144

	TOOL SIGNAL CAL 1	TOOL SIGNAL CAL 2	CALIBRATED (IN)
SMALL RING	134	108	6.00
LARGE RING	876	905	16.00
BITSIZE	214	184	8.00

4 1/2" TOOL