HALLIBURTON
LOGGING SERVICES, INC.

5" = 100'

DUAL INDUCTION LATEROLOG COMPENSATED SONIC LOG

COMPANY ______
WELL ______
FIELD ______
COUNTY ______ STATE ______

COMPANY NAHAMA & WEAGANT ENERGY COMPANY
WELL BORROW PIT #23-35-75 CC
FIELD MIST
COUNTY COLUMBIA STATE OREGON

API No. 36-0009-002780 6
Location 261.4' NORTH & 2269.67' EAST OF THE WEST 1/4 CORNER OF:
Sec 35 Twp 7N Rge 5W

Other Services

Permanent Datum GL Elev. 1372.49'
Log Measured From KB 10' Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 1382.49'
D.F. -
G.L. 1372.49'

Date	8-10-91			
Run No.	ONE			
Depth—Driller	3374' MD			
Depth—Logger	3368' MD	3241' TVD		
Btm. Log Inter.	3366' MD	3239' TVD		
Top Log Inter.	CASING			
Casing—Driller	9.63" @1010'	MD @	@	@
Casing—Logger	1010' MD	990' TVD		
Bit Size	8.75"			
Type Fluid in Hole	GEL-POLYMER			
Dens. | Visc.	10.0 | 54	|	|	|
pH | Fluid Loss	8.0 | 5.8 ml	| ml	| ml	| ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	3.1 @ 63 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	2.7 @ 64 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.7 @ 66 °F	@ °F	@ °F	@ °F
Source R_{mf} R_{mc}	MEAS | MEAS	|	|	|
R_m @ BHT	2.0 @102 °F	@ °F	@ °F	@ °F
Time Since Circ.	3.25 HOURS			
Time On Bottom	15:12			
Max. Rec. Temp.	102 °F @	°F @	°F @	°F @
Equip. | Location	7674 | BKFD	|	|	|
Recorded By	POZAS			
Witnessed By	VAUHGAN	PINOTTI		

Fold Here

Part Number 26000

Service Ticket No. L-68245 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	DIL #G-5492		FREE	

Borehole Corrections
shallow medium deep

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No	ONE	Run No.	ONE	Run No.		Run No.	
Serial No	G-3051	Serial No.	G-205	Serial No.		Serial No.	
Model No	HA	Model No.	BA	Model No.		Model No	
Diameter	3.38"	No. of Cent.	2	Diameter		Diameter	
Detector Model No	NA	Spacing	TOP	Log Type		Log Type	
Type	SCINT		BOTTOM	Source Type		Source Type	
Length	4.5'	LSA	☐ Yes ☐ No	Serial No.		Serial No.	
Distance to Source	NA	FWDA	☐ Yes ☐ No	Strength		Strength	

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depths		Speed	Scale		Scale			Scale			Scale		
No	From	To	Ft./Min.	L	R	L	R	Matrix	L	R	Matrix	L	R	Matrix
ONE	TD	CSG	45	0	150	175	75	55.6						

a = m = Δt_{sh} = Δt_{fl} = ρ_{fl} =

REMARKS TAYLOR DRILLING

DUE TO TIGHT HOLE CONDITIONS, DID NOT RUN STANDOFFS. DISCUSSED WITH CLIENT. SP SPIKE AT 2720' IS DUE TO TURNING OF POWER TO GR.

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

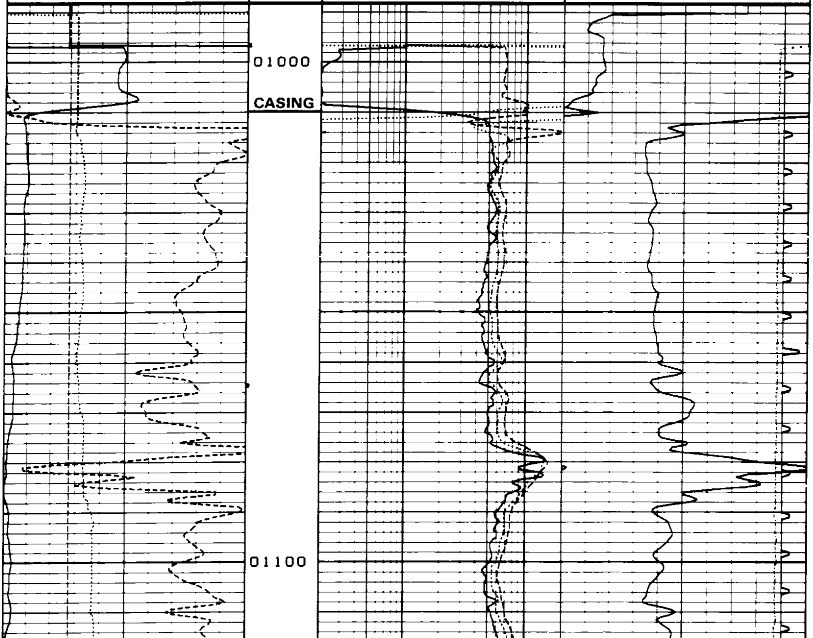
Halliburton Logging Services Inc. does not guarantee the accuracy of any interpretation of log data, conversion of log data to physical rock parameters, or recommendations which may be given by Halliburton Logging Services Inc. personnel or which may appear on the log or in any other form. Any user of 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

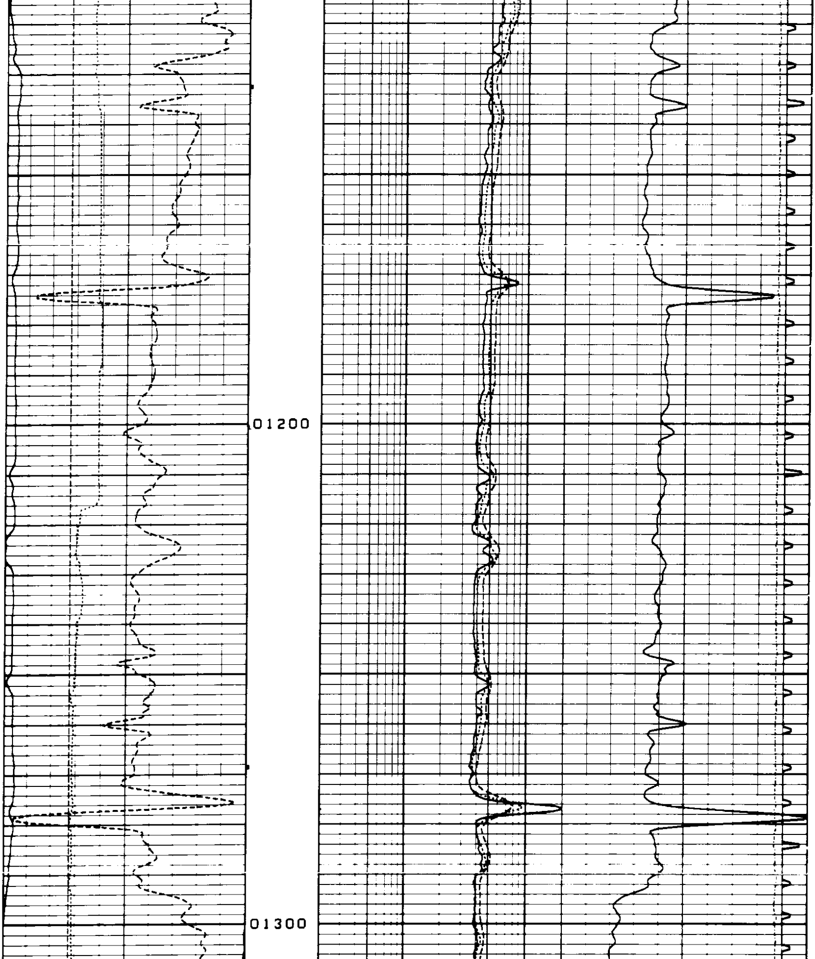
08-10-91 15:49 988.0 68245 0367-96 0 0

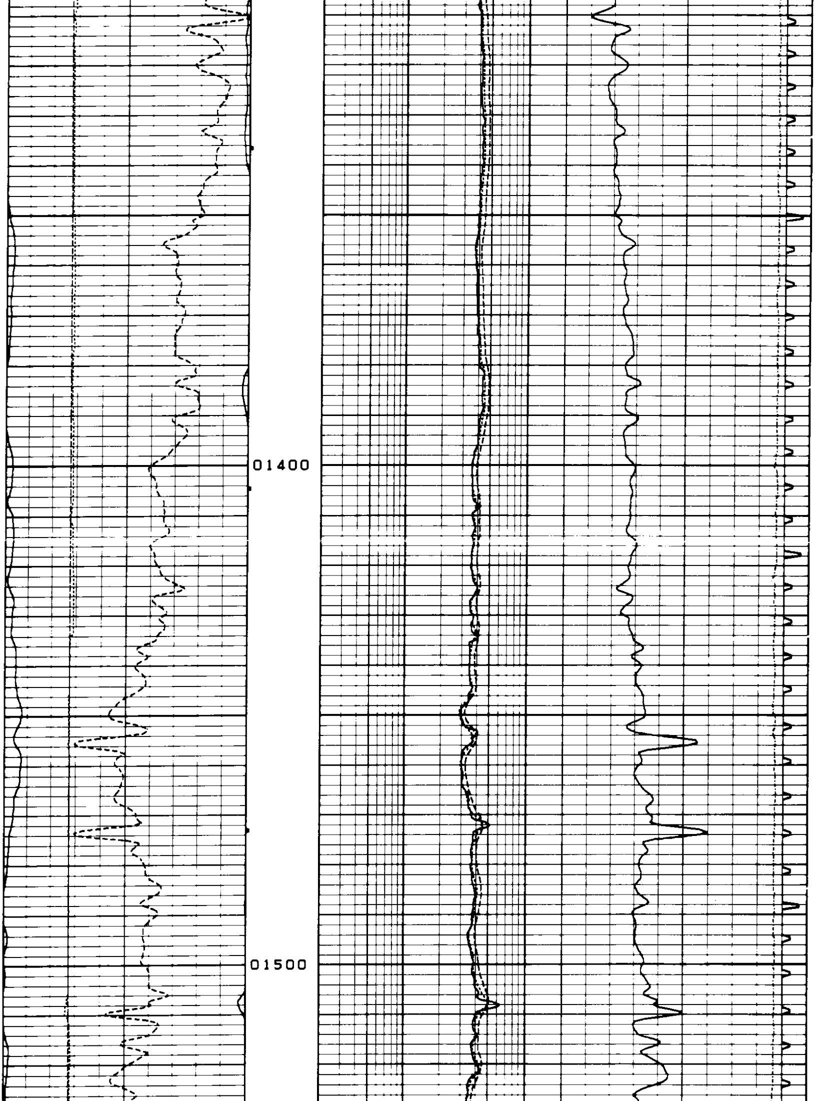
0.0 RWA-Ø BS 3.0
6 BIT (IN) 16
6 CAL-X (IN) 16
-40 SP (MV) 110

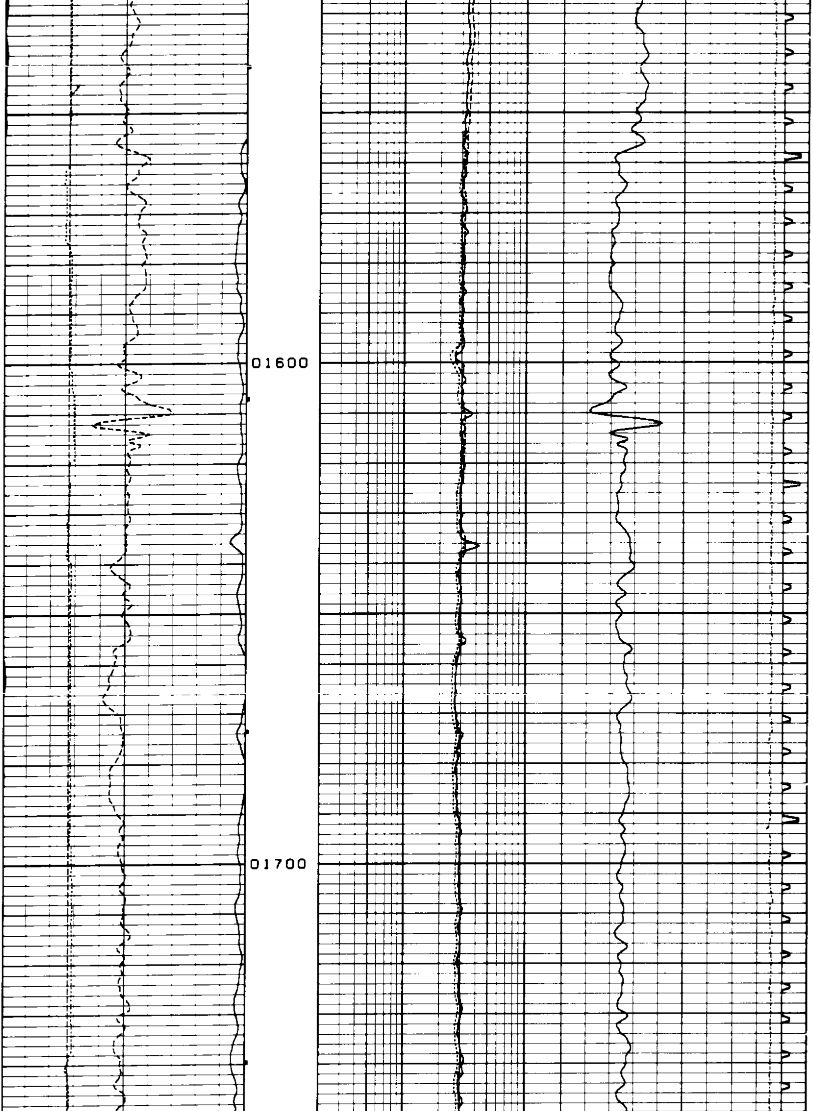
0.2 R-LL (Ω-M) 20
0.2 R-ILM(Ω-M) 20
0.2 R-ILD(Ω-M) 20

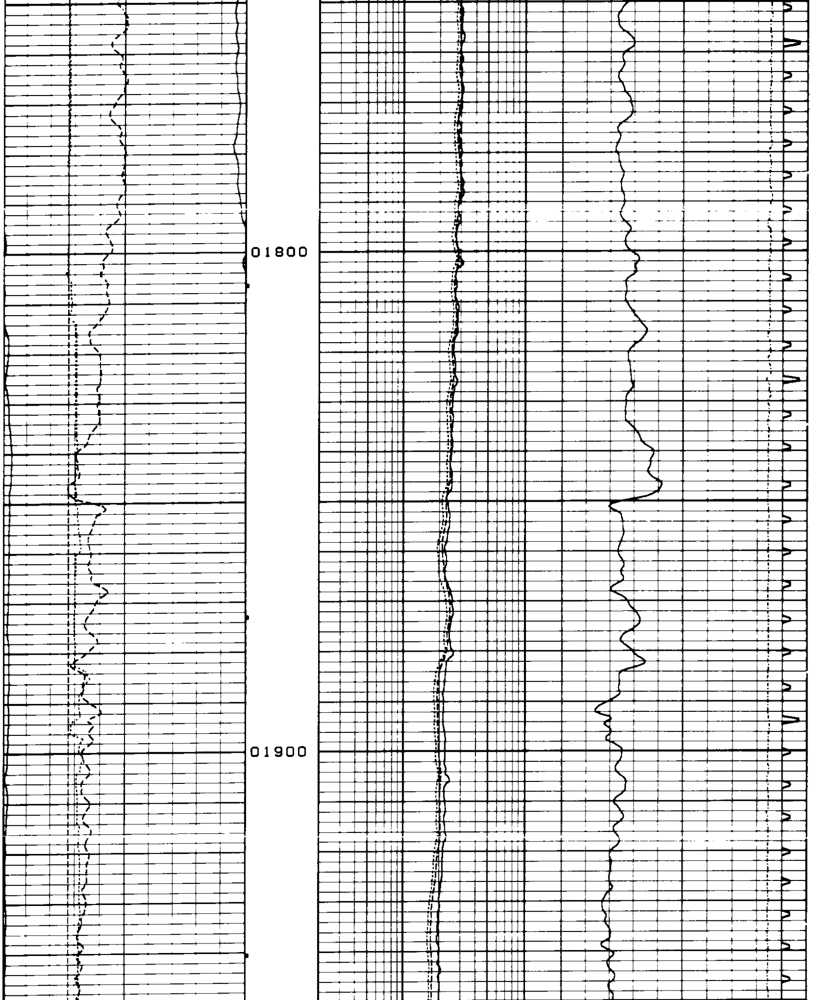
-27 3
175 BCS ΔT 75
10000 TENS(LB) 0

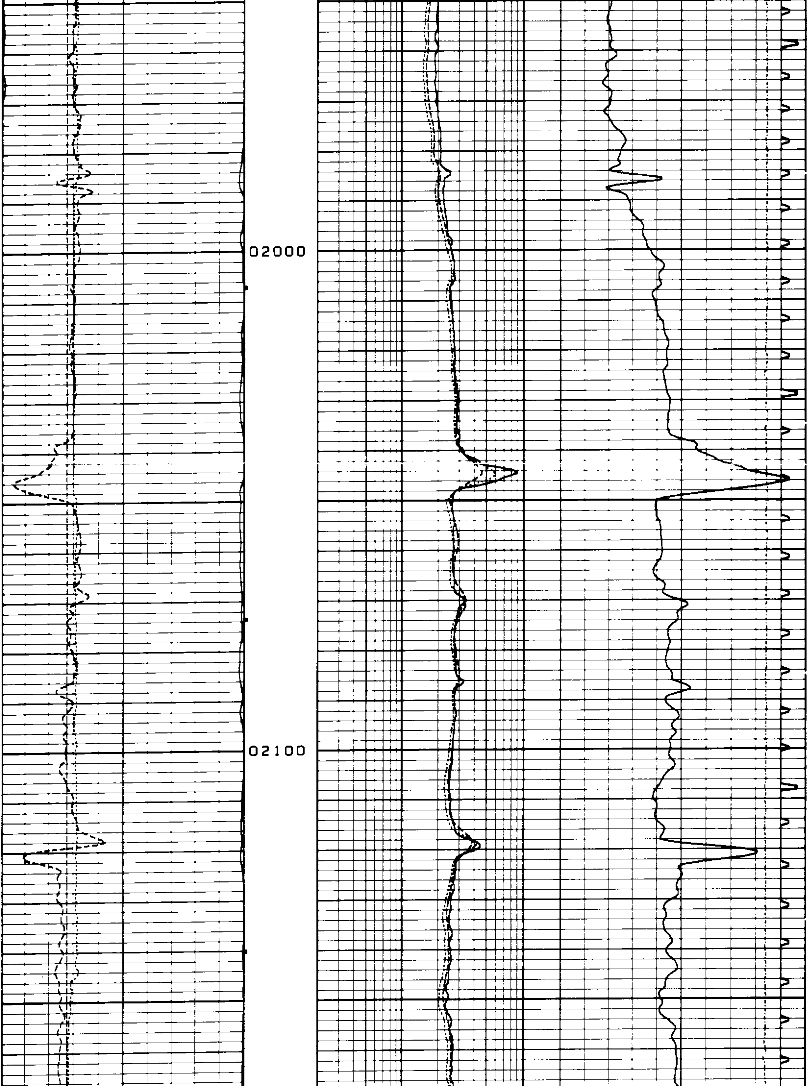


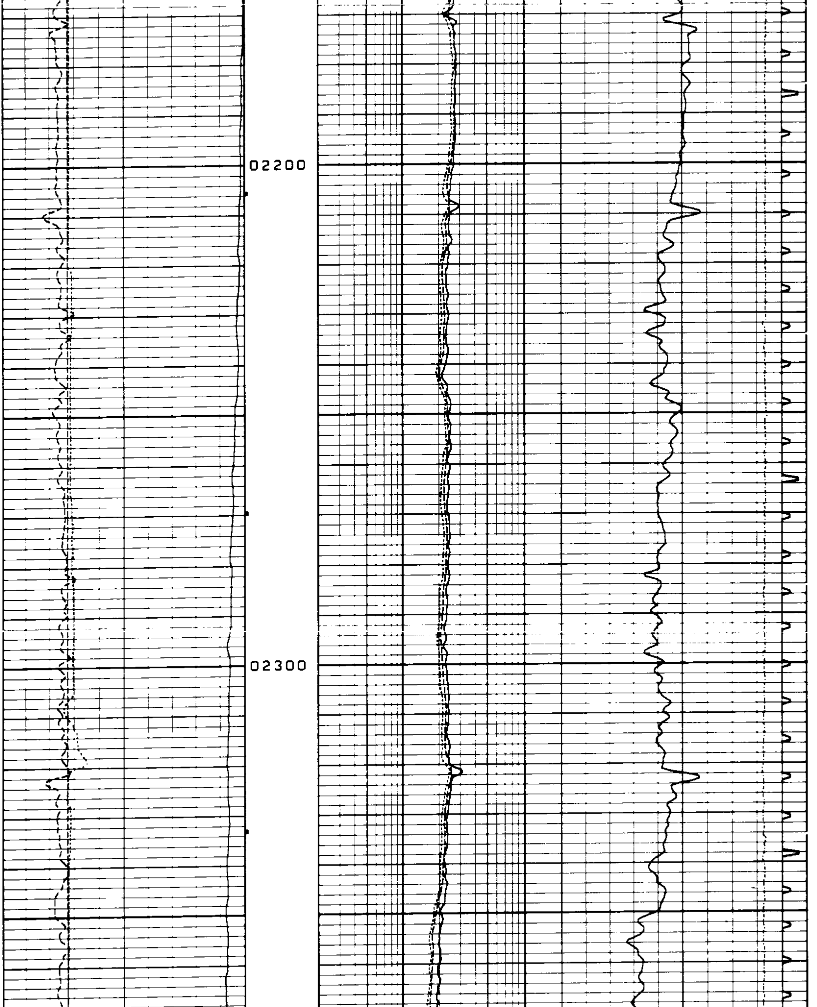


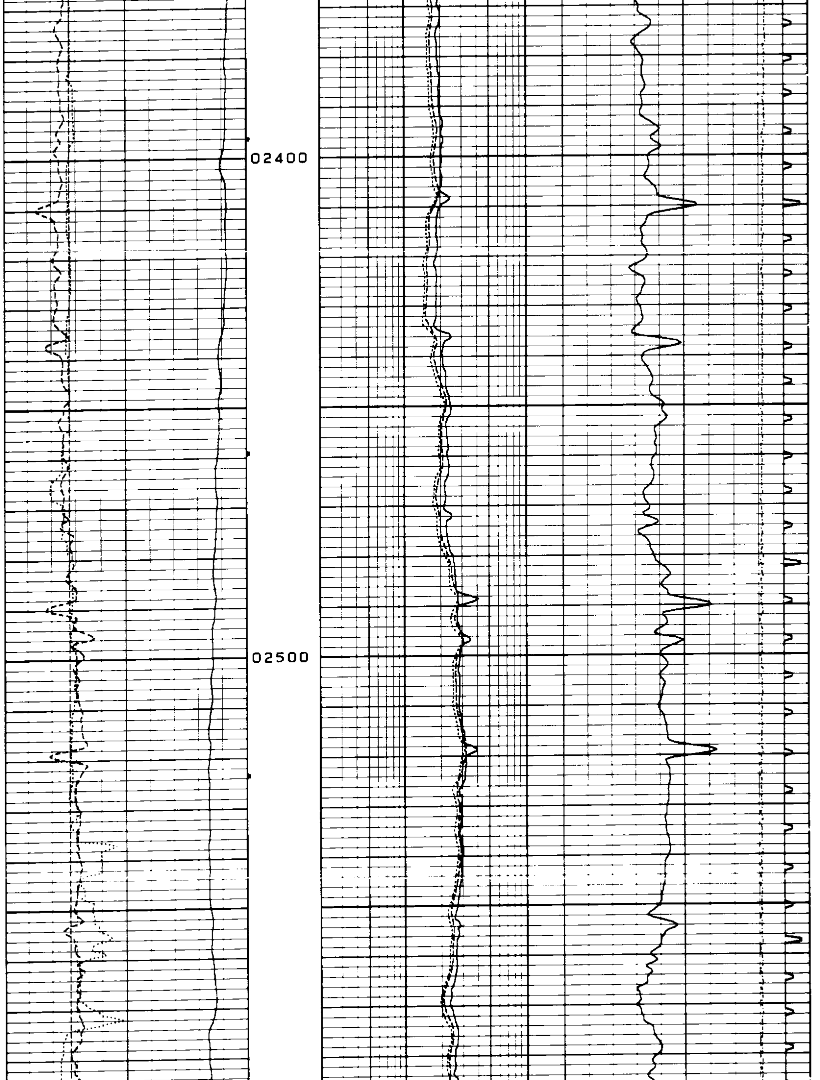


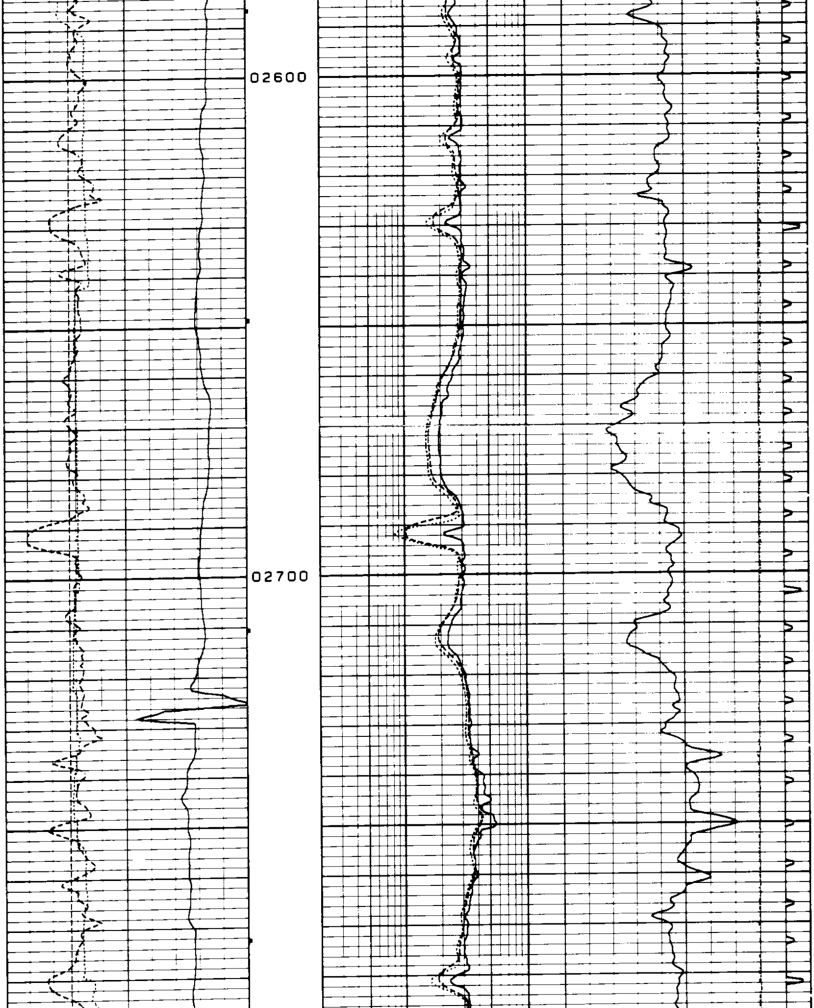


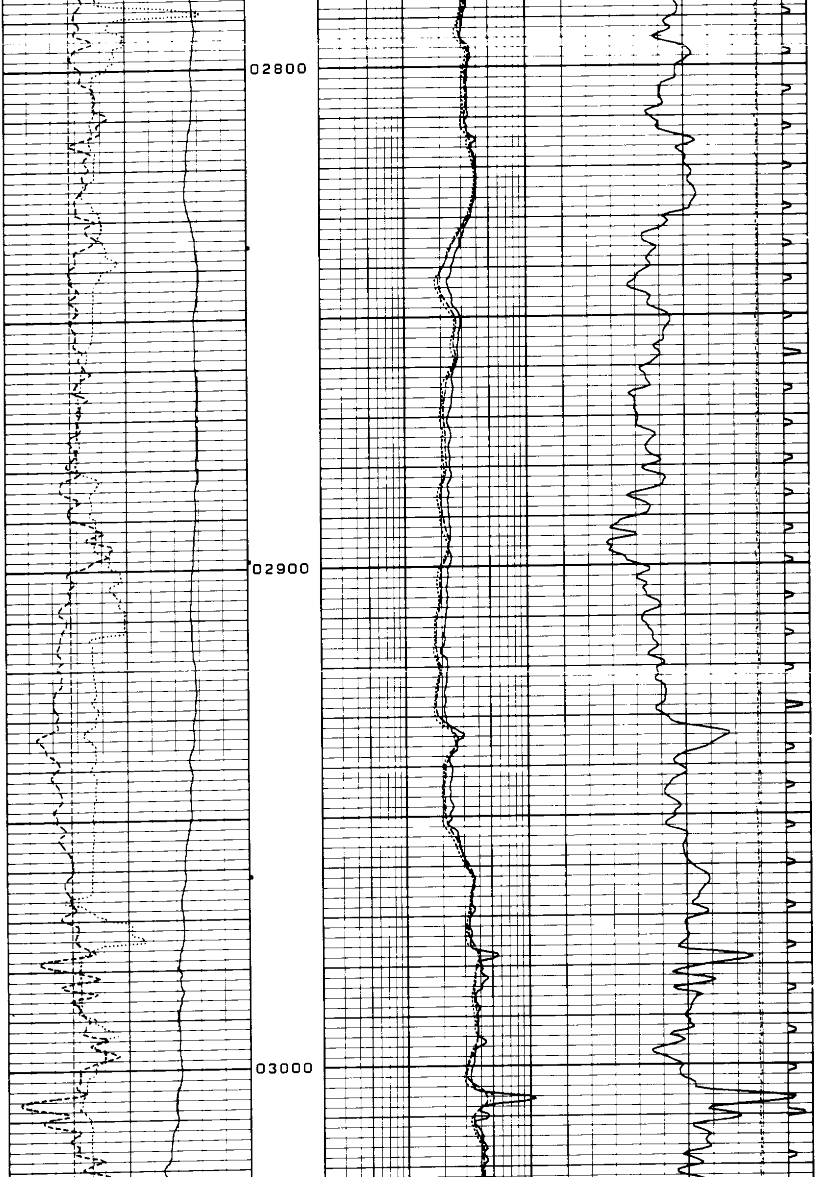


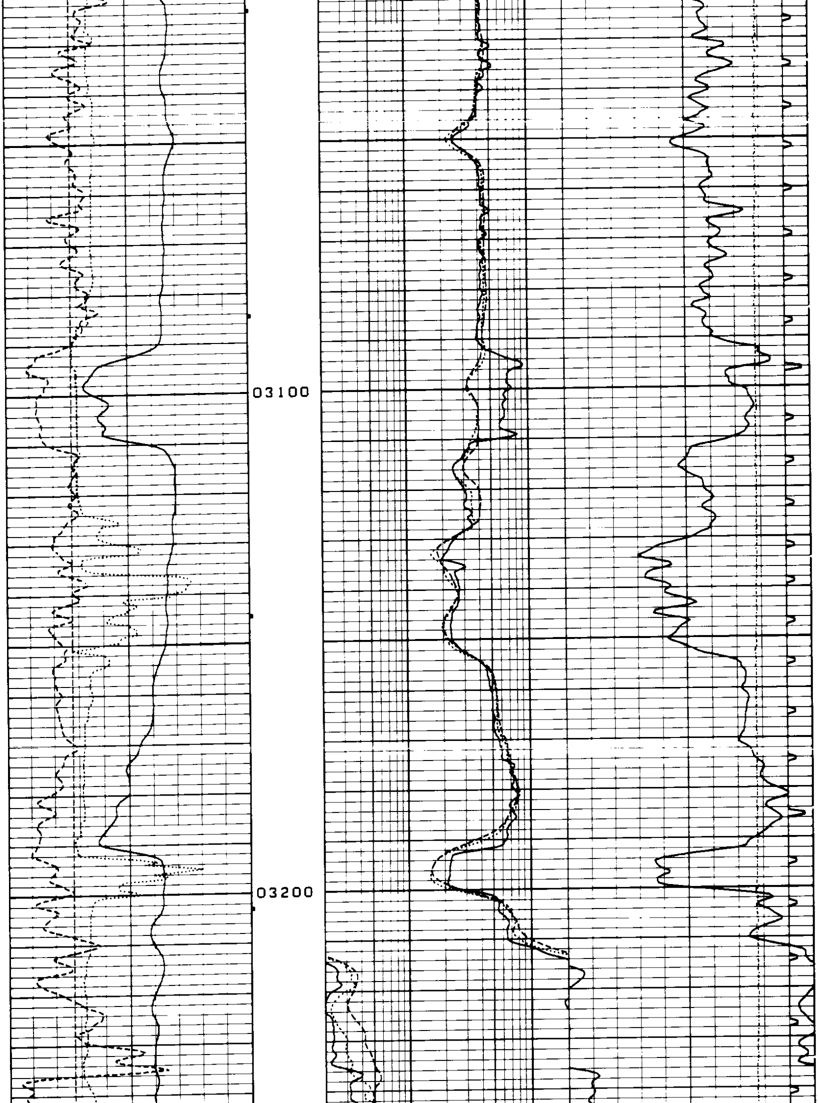


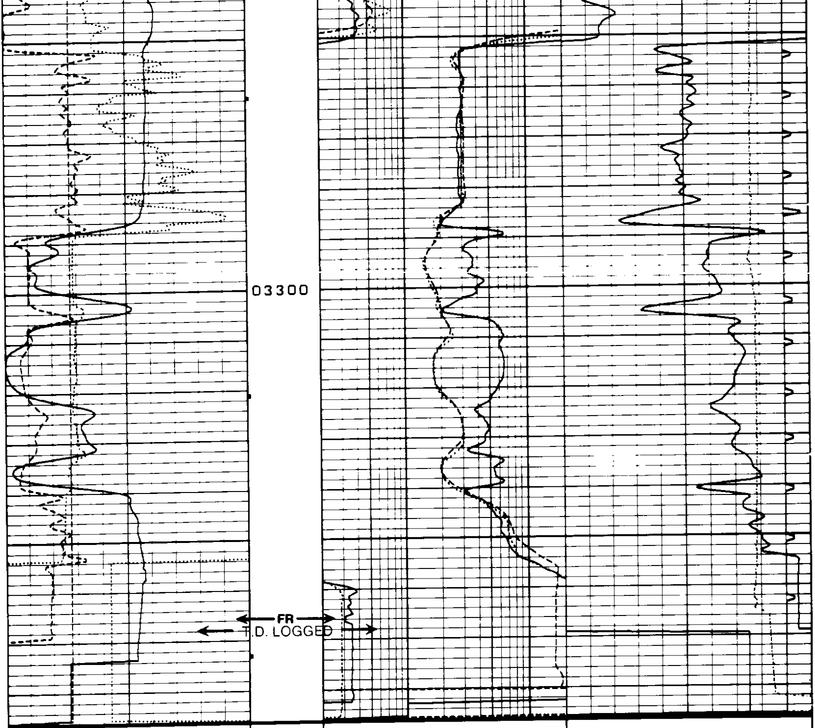












0.0 RWA-Ø BS 3.0
6 BIT (IN) 16
6 CAL-X (IN) 16
-40 SP (MV) 110

0.2 R-LL (Ω-M) 20
0.2 R-ILM(Ω-M) 20
0.2 R-ILD(Ω-M) 20

-27 3
175 BCS ΔT 75
10000 TENS(LB) 0

08-10-91	15:13	3386.0	68245	0308-99	0	0

REPEAT SECTION

08-10-91 15:57 991.5 68245 0367-96 0 0

0.0 RWA-Ø BS 3.0

6 BIT (IN) 16

6 CAL-X (IN) 16

-40 SP (MV) 110

0.2 R-LL (Ω-M) 20

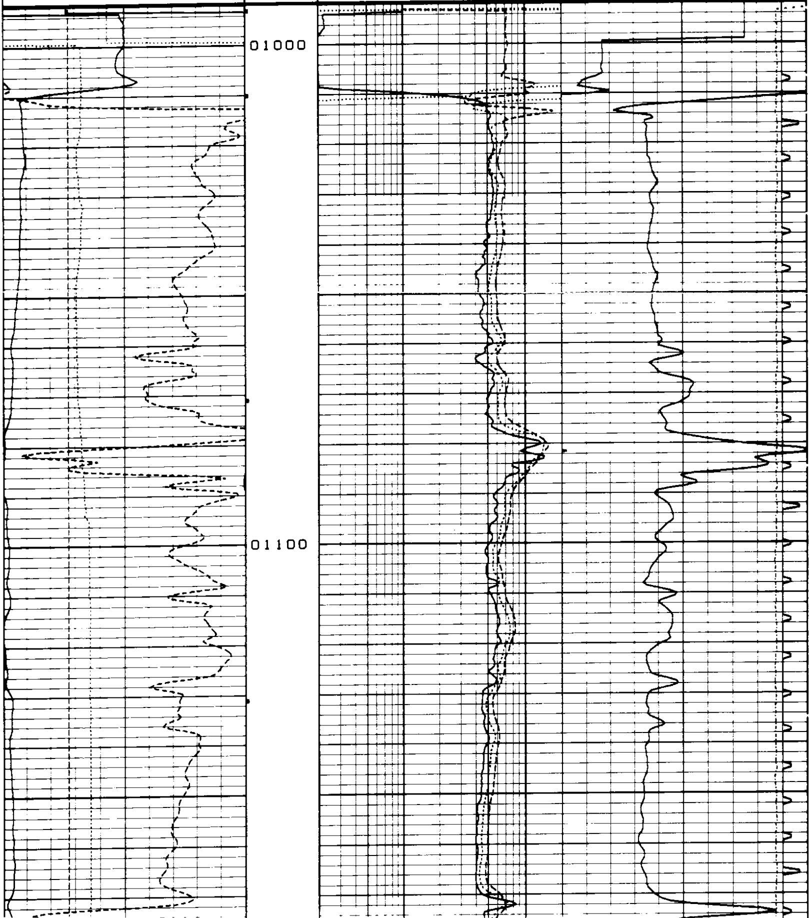
0.2 R-ILM(Ω-M) 20

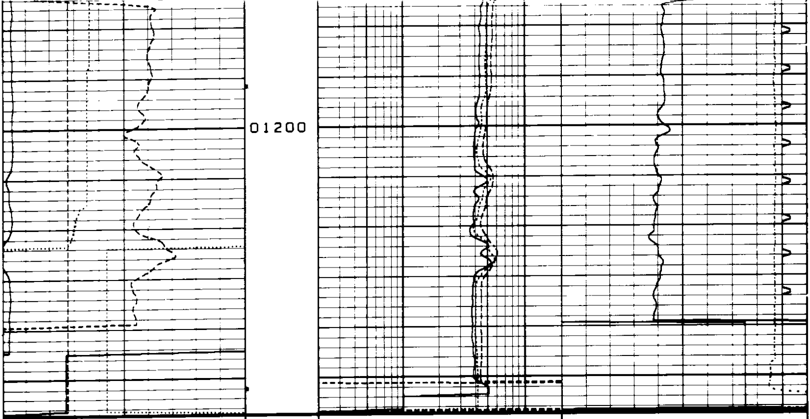
0.2 R-ILD(Ω-M) 20

-27 3

175 BCS ΔT 75

10000 TENS(LB) 0





0.0	RWA-Ø BS	3.0
6	BIT (IN)	16
6	CAL-X (IN)	16
-40	SP (MV)	110

0.2	R-LL (Ω-M)	20
0.2	R-ILM(Ω-M)	20
0.2	R-ILD(Ω-M)	20

-27		3
175	BCS ΔT	75
10000	TENS(LB)	0

08-10-91	15:53	1257.0	68245	0308-99	0	0

08-10-91	15:59	1134.5	68245	0326-01	0	4

DUAL INDUCTION AFTER SURVEY CALIBRATION

TOOL TYPE: DIL-FA SERIAL NO:05492

	LOW		HIGH		
	BEFORE	AFTER	BEFORE	AFTER	UNITS
ILD	0.0	0.0	398.7	398.0	MMHO/M
ILM	0.0	0.0	457.2	456.5	MMHO/M
LL RES	20.0	20.0	1500.0	1500.4	OHM-M
LL COND	0.267	0.266	20.0	20.0	OHM-M

ILD SONDE ERROR CORRECTION: 1.68 MMHO/M
ILM SONDE ERROR CORRECTION: 2.72 MMHO/M

08-10-91	14:58	1152.5	68245	0326-01	0	3

DUAL INDUCTION BEFORE SURVEY CALIBRATION

TOOL TYPE: DIL-FA SERIAL NO:05492

	MEASURED		CALIBRATED		
	LOW	HIGH	LOW	HIGH	UNITS
ILD	0.6	400.0	0.0	398.7	MMHO/M
ILM	-1.0	467.7	0.0	457.2	MMHO/M
LL RES	19.4	1493.8	20.0	1500.0	OHM-M
LL COND	0.265	19.4	0.267	20.0	OHM-M

ILD SONDE ERROR CORRECTION: 1.68 MMHO/M
ILM SONDE ERROR CORRECTION: 2.72 MMHO/M

08-10-91	16:28	1.0	68245	0326-01	0	2

GAMMA RAY BEFORE SURVEY CALIBRATION

TOOL TYPE: UGR-HA SERIAL NO:03051

BACKGROUND	CALIBRATOR	STANDARD	UNITS
170.9	1122.8	218.0	GAPI

DELTA COUNTS PER SEC: 951.9 CPS/API = 4.366

08-10-91	10:06	3.0	68245	0326-01	0	1

CALIPER BEFORE SURVEY CALIBRATION

TOOL TYPE: XCA-CD SERIAL NO:09154

	MEASURED			CALIBRATED		
	SMALL	LARGE	UNITS	SMALL	LARGE	UNITS
CALX	9.62	17.03	IN	7.00	14.00	IN

07-23-91	08:58	0.0	7674	0326-01	0	0

DUAL INDUCTION SHOP CALIBRATION

TOOL TYPE: DIL-FA SERIAL NO:05492

	TEST LOOP CALIBRATION				INTERNAL CALIBRATION				
	MEASURED		REFERENCE		MEASURED		CALIBRATED		
	LOW	HIGH	ZERO	REF	LOW	HIGH	ZERO	CAL	UNITS
ILD	-2.8	398.1	0.0	400.0	-1.1	398.7	0.0	398.7	MMHO/M
ILM	-9.5	466.4	0.0	464.0	-6.7	462.7	0.0	457.2	MMHO/M

ILD SONDE ERROR CORRECTION: 1.68 MMHO/M
ILM SONDE ERROR CORRECTION: 2.72 MMHO/M