Schlumberger

BOREHOLE COMPENSATED SONIC LOG

COUNTY LA SALLE
FIELD PIEDRA CREEK
LOCATION
WELL NUECES MINERALS #1
COMPANY SHELL WESTERN E&P INC.

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WELL NUECES MINERALS #1
FIELD PIEDRA CREEK
COUNTY LASALLE STATE TEXAS

LOCATION 200' FNL & 2465' FEL OF G. B. & CNG RR SURVEY #653, A-726

API SERIAL NO.	SEC.	TWP	RANGE

Other Services:
DIL/LDT/CNL
DIGITAL SONIC
RFT
CST

Permanent Datum: GROUND LEVEL ; Elev.: 344.6
Log Measured From KB 16.5 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 361.1
D.F. 360.1
G.L. 344.6

Date	3-3-85			
Run No.	TWO			
Depth—Driller	10000			
Depth—Logger (Schl.)	9891			
Btm. Log Interval	9852			
Top Log Interval	8700			
Casing—Driller	7-7/8@ 8700	@	@	@
Casing—Logger	8700			
Bit Size	6-3/4			
Type Fluid in Hole	LIGNOSULFONATE			
Dens. | Visc.	13.2 | 44			
pH | Fluid Loss	11 | 5.0 ml	ml	ml	ml
Source of Sample	CIRC. TANK			
Rm @ Meas. Temp.	1.43 @ 77 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	1.14 @ 75 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	2.19 @ 75 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | C			
Rm @ BHT	0.50 @ 232°F	@ °F	@ °F	@ °F
TIME Circulation Stopped	2300, 3-2			
TIME Logger on Bottom	0500, 3-3			
Max. Rec. Temp.	232 °F	°F	°F	°F
Equip. | Location	8300 | LAREDO			
Recorded By	JAY KING			
Witnessed By Mr.	L. VIDAL			

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

Run No.	TWO			
Service Order No.	424398			
Fluid Level	FULL			

EQUIPMENT DATA

Sonic Panel No.	534			
Sonic Cart No.	1446			
Sonic Sonde No.	1022			
Mem. Panel No.	2120			
G.R. Cart. No.	3349			
G.R. Panel No.	96			
Caliper No.	1427			
TTR No.	4995			
Centralizers: No.	1			
Type	CMEZ			
Standoffs: No.	—			
Type	—			
Time Const.-Sec.	—			
Speed - F.P.M.	—			

CALIBRATION DATA

GR	BKG. CPS	—			
	Source CPS	—			
	Tc Sec	—			

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

LOGGING DATA

Porosity Selectors				Depth	
Δt_m	Δt_f	Cp	Ø Scale	From	To
56	89	100		9891	8300

REMARKS

TD NOT REACHED. LOGGED FROM 9891.
$F = 1/\phi_S^{1.9}$

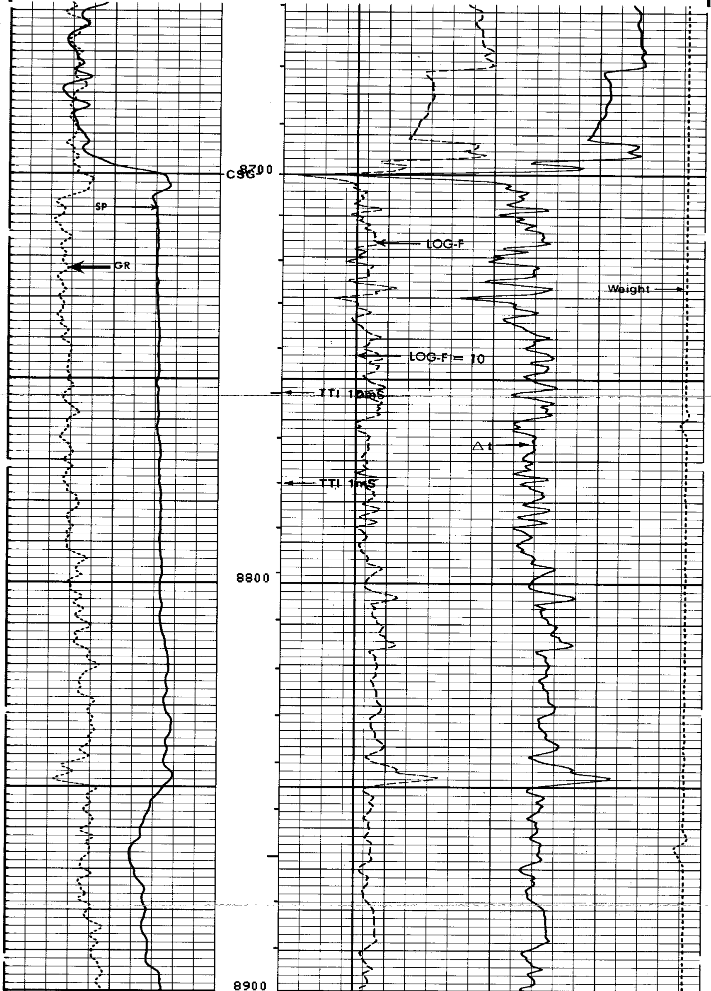
Velocity (ft/sec) = 1,000,000 / Interval Transit Time (microseconds per foot)

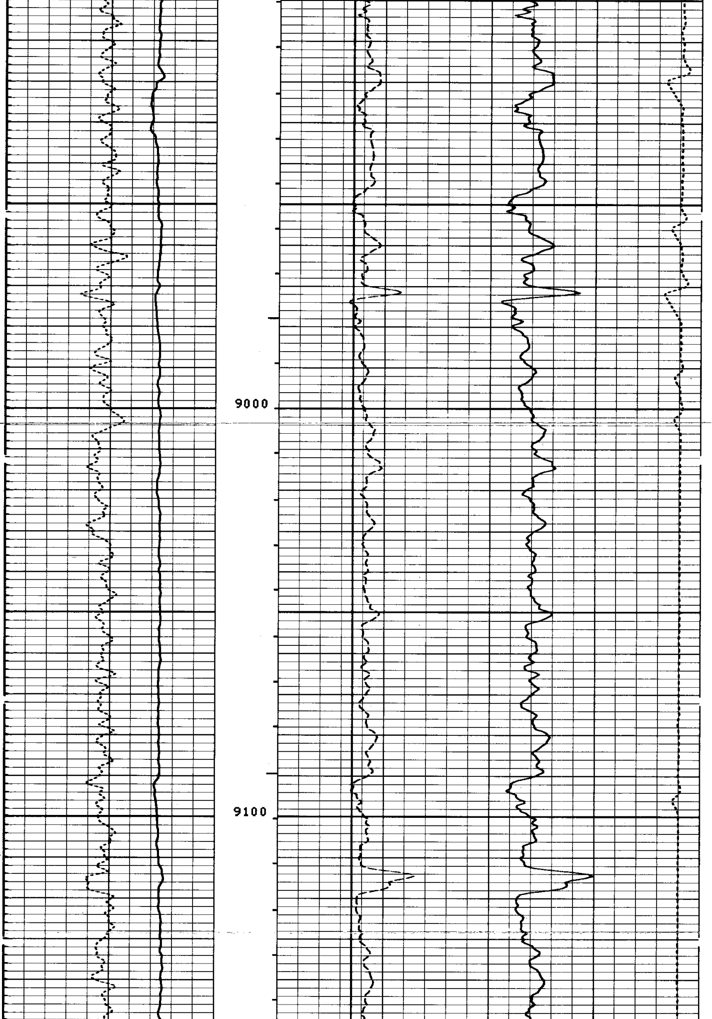
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation 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.

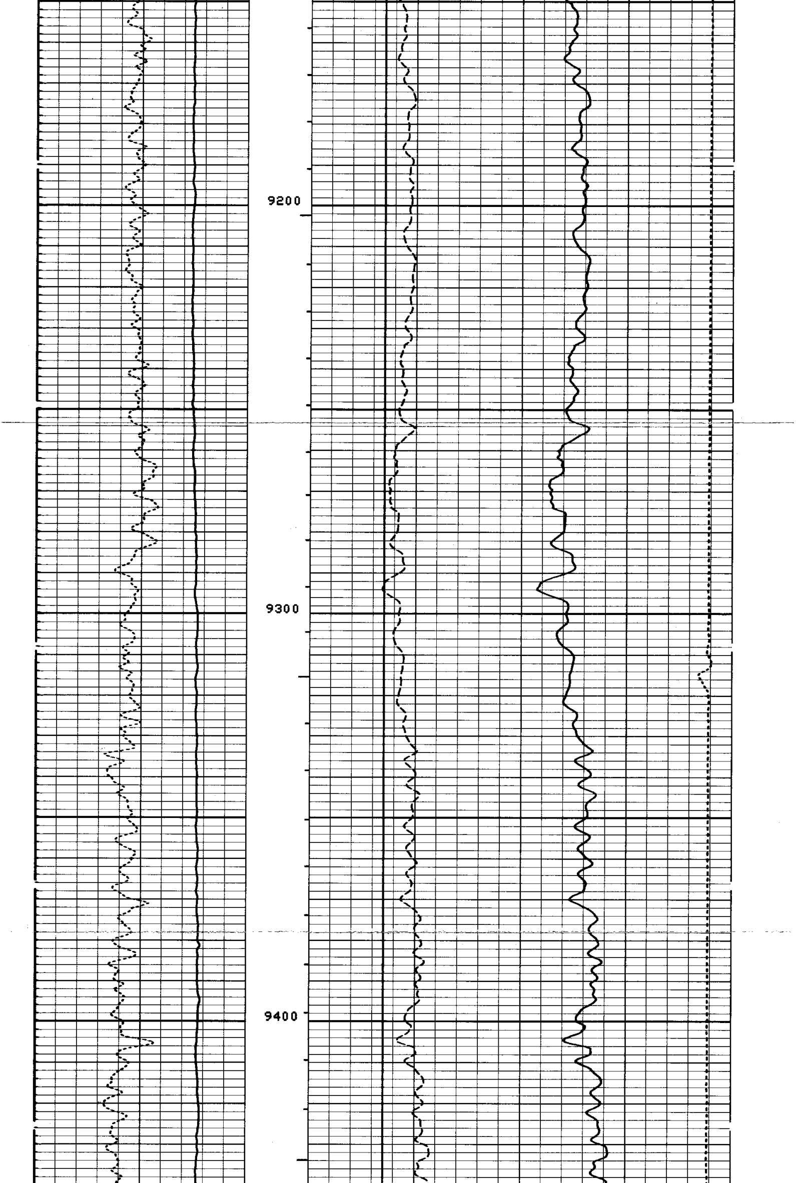
GR (GAPI)
0.0 150.00
SP (MV)
-80.00 20.000

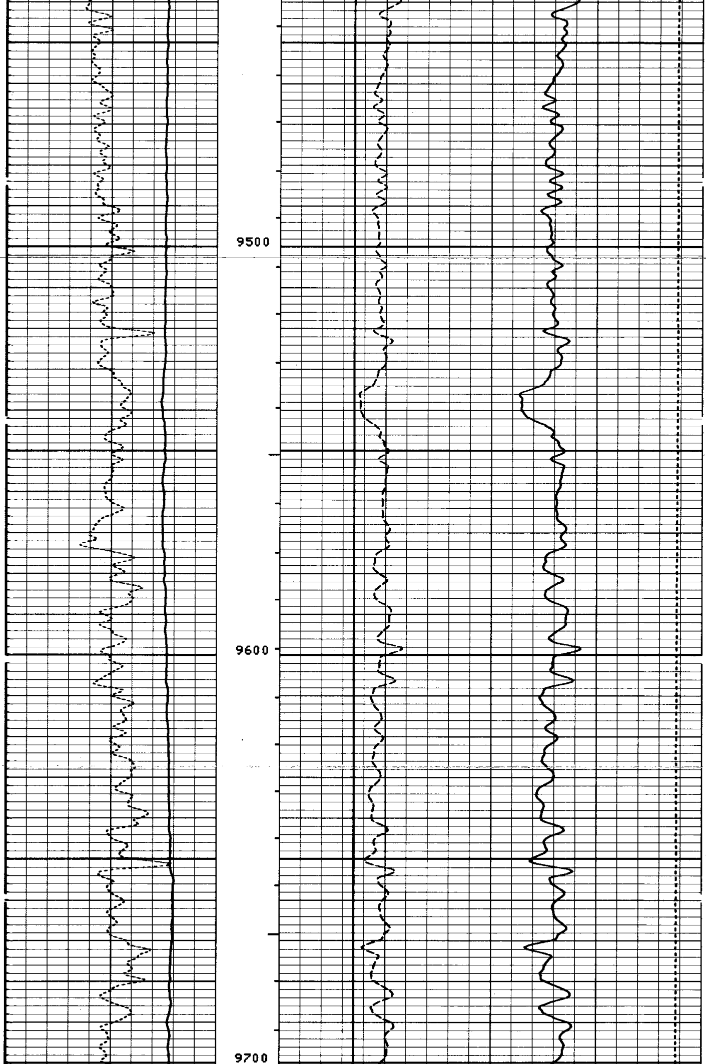
ZERO
-3.500 6.5000
TENS(LB)
12000. 2000.0
RO (OHMM)
2.0000 20000.
DT (US/F)
150.00 50.000

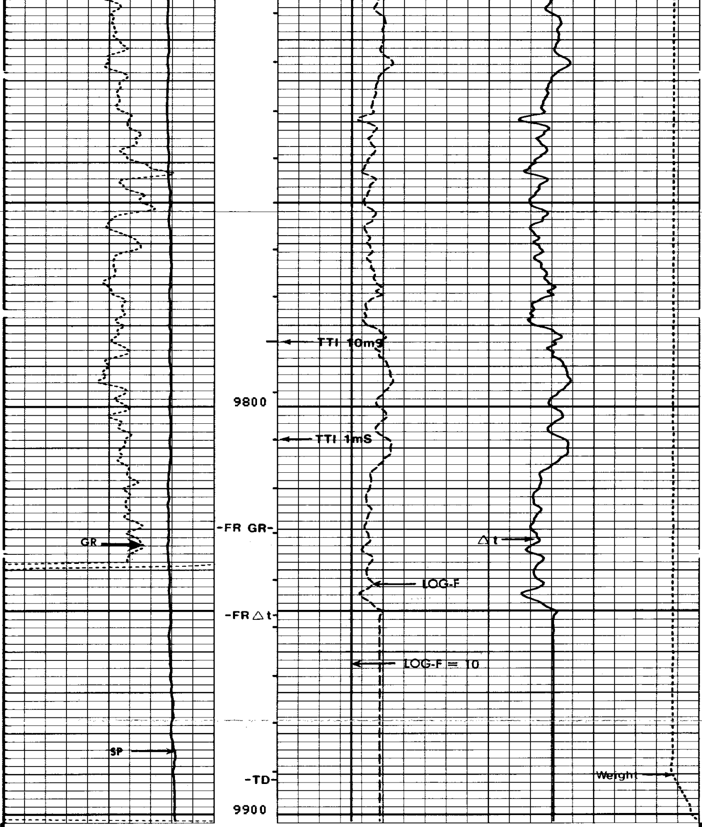
FILE 104 03-MAR-85 07:04
DATA ACQUIRED 03-MAR-85 06:16











FILE 104 03-MAR-85 07:02
DATA ACQUIRED 03-MAR-85 05:55

		ZERO		TENS(LB)
		-3.500 6.5000		12000. 2000.0
GR (GAPI)		RO (OHMM)		
0.0 150.00		2.0000		20000.
SP (MV)		DT (US/F)		
-80.00 20.000		150.00		50.000

SENSOR MEASURE POINT TO TOOL ZERO

CBL	43.9	FEET	AMPL	43.9	FEET
TT3	40.1	FEET	TT4	39.1	FEET
TT1	42.9	FEET	TT2	43.9	FEET
GR	64.0	FEET	SRAT	41.4	FEET
ILD	9.4	FEET	CALI	31.8	FEET
ILM	5.7	FEET	SFL	6.4	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	35.6	FEET	TENS	2.5	FEET

PARAMETERS

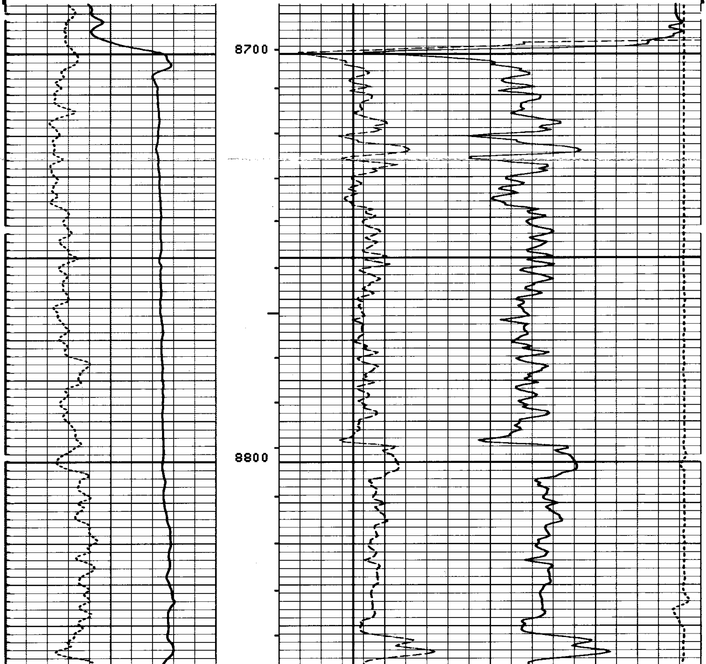
NAME	VALUE	UNIT	NAME	VALUE	UNIT
WSV1	WF1		DWS	16	
DSIN	5	US	DDEL	200	US
CDTS	100.000		DWCO	512	
DTF	189.000	US/F	DTM	56.0000	US/F
SBR	1.00000	OHMM	DSEC	2.70000	MMHO
FPHI	SPHI		MSEC	.200000	MMHO
FNUM	1.00000		FEXP	1.90000	
BS	6.75000	IN	BHS	OPEN	
PP	NORM		DO	0.0	F

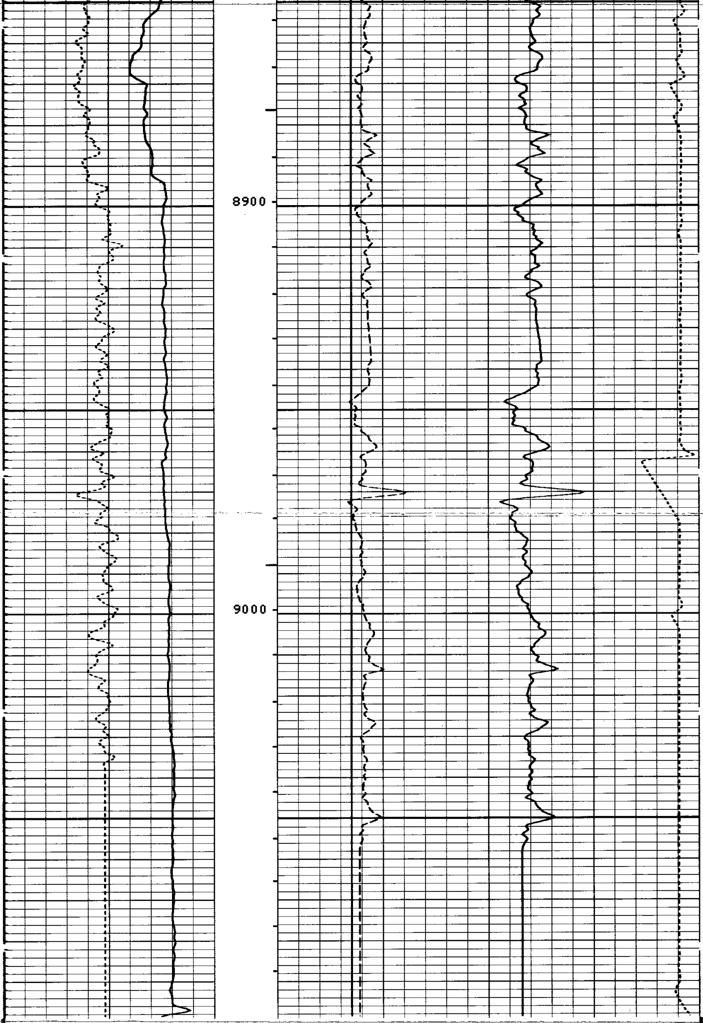
TAPE NOT MADE

ZERO
-3.500 6.5000
TENS(LB)
12000. 2000.0
GR (GAPI)
0.0 150.00
RO (OHMM)
2.0000 20000.
SP (MV)
-80.00 20.000
DT (US/F)
150.00 50.000

REPEAT SECTION

FILE 105 03-MAR-85 06:59
DATA ACQUIRED 03-MAR-85 06:26





FILE 105 03-MAR-85 06:58
DATA ACQUIRED 03-MAR-85 06:18

REPEAT SECTION

GR (GAPI)	0.0	150.00
SP (MV)	-80.00	20.000
ZERO	-3.500	6.5000
TENS(LB)	12000.	2000.0
RO (OHMM)	2.0000	20000.
DT (US/F)	150.00	50.000

SENSOR MEASURE POINT TO TOOL ZERO

CBL	43.9	FEET	AMPL	43.9	FEET
TT3	40.1	FEET	TT4	39.1	FEET
TT1	42.9	FEET	TT2	43.9	FEET
GR	64.0	FEET	SRAT	41.4	FEET
ILD	9.4	FEET	CALI	31.8	FEET
ILM	5.7	FEET	SFL	6.4	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	35.6	FEET	TENS	2.5	FEET

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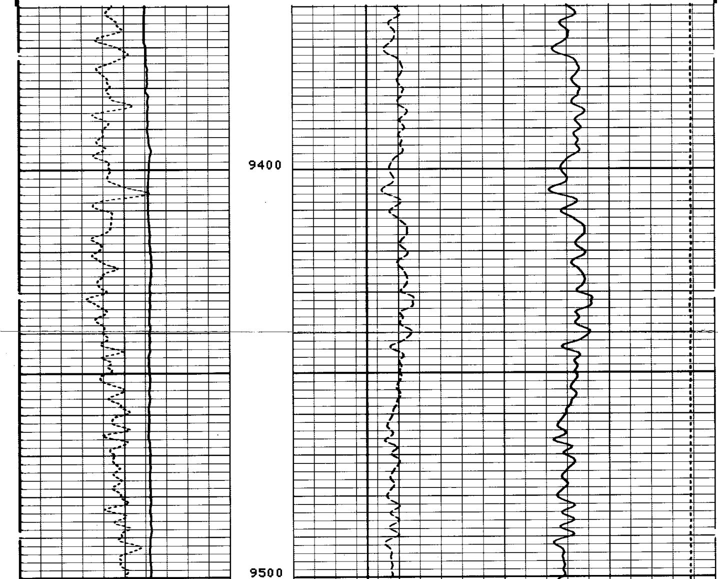
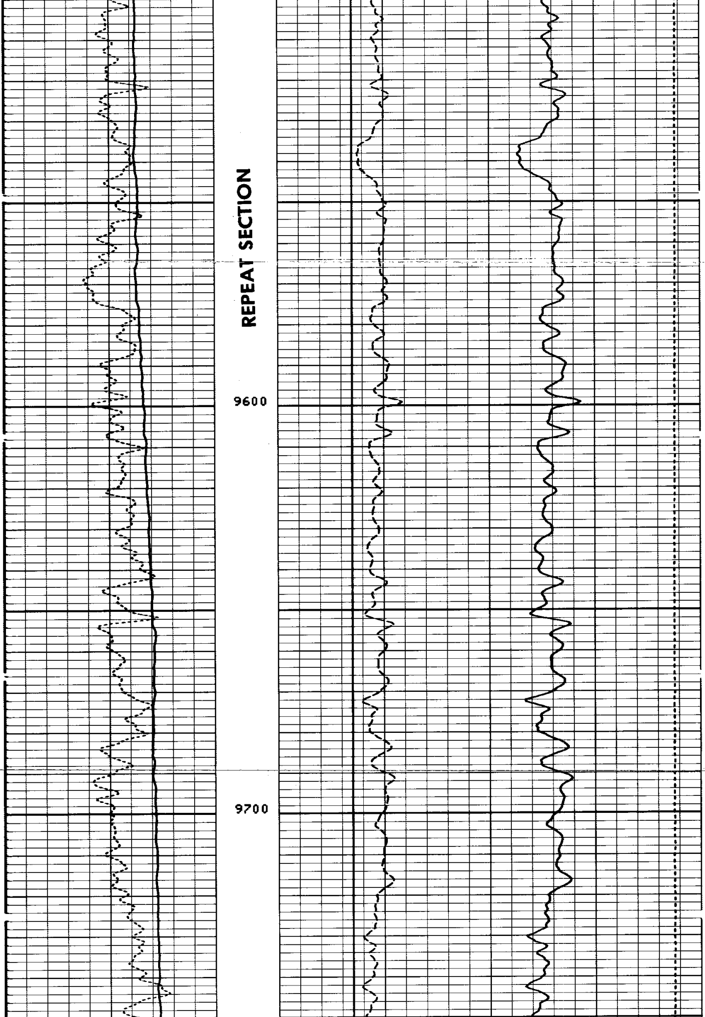
SBR	1.00000	OHMM	DSEC	2.70000	MMHO
FPHI	SPHI		MSEC	.200000	MMHO
FNUM	1.00000		FEXP	1.90000	
BS	6.75000	IN	BHS	OPEN	
PP	NORM		DO	0.0	F

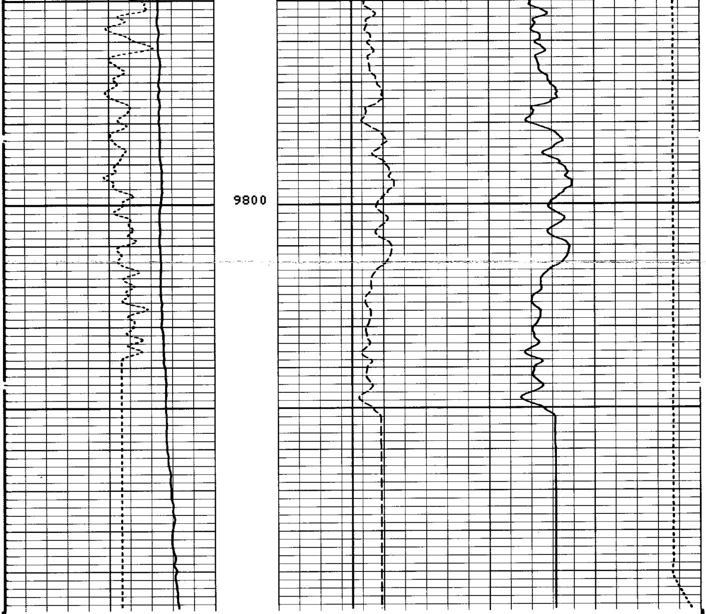
GR (GAPI)	0.0	150.00
SP (MV)	-80.00	20.000
ZERO	-3.500	6.5000
TENS(LB)	12000.	2000.0
RO (OHMM)	2.0000	20000.
DT (US/F)	150.00	50.000

REPEAT SECTION

FILE 103 03-MAR-85 06:53
DATA ACQUIRED 03-MAR-85 05:53







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FILE   103          03-MAR-85 06:52
DATA ACQUIRED       03-MAR-85 05:44
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REPEAT SECTION

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                                         ZERO                TENS(LB  )
                                -3.500          6.5000 |12000.          2000.0
          GR   (GAPI)                            RO   (OHMM)
0.0                  150.00     2.0000                                  20000.
          SP   (MV   )                           DT   (US/F)
-80.00               20.000     150.00                                  50.000
```

SENSOR MEASURE POINT TO TOOL ZERO

CBL	43.9	FEET	AMPL	43.9	FEET
TT3	40.1	FEET	TT4	39.1	FEET
TT1	42.9	FEET	TT2	43.9	FEET
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FNUM	1.00000		FEXP	1.90000	
BS	6.75000	IN	BHS	OPEN	
PP	NORM		DO	0.0	F

COMPANY SHELL WESTERN E&P INC.

WELL NUECES MINERALS #1

FIELD PIEDRA CREEK

COUNTY LA SALLE STATE TEXAS

SCHL. FR 9852

SCHL. TD 9891

DRLR. TD 10000

Elev: KB 361.1

DF 360.1

GL 344.6

SWS—2872