GL04968-18

Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER

COUNTY CHURCHILL
FIELD DIXIE VALLEY
LOCATION 21-24N-36E
WELL DIXIE FEDERAL 66-21
COMPANY THERMAL POWER CO.

COMPANY THERMAL POWER COMPANY

WELL DIXIE FEDERAL 66-21

FIELD DIXIE VALLEY

COUNTY CHURCHILL STATE NEVADA

LOCATION N/A

Other Services:
FDC/CNL/GR,
DI-SFL
BHC
TES

API SERIAL NO.	SEC.	TWP.	RANGE
	21	24N	36E

Permanent Datum: GL ; Elev.: 3430
Log Measured From KB 23 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 3453
D.F. 3452
G.L. 3430

Date	8-3-79			
Run No.	ONE			
Depth–Driller	4580			
Depth–Logger (Schl.)	4579			
Btm. Log Interval	4579			
Top Log Interval	3000			
Casing–Driller	13⅜"@2152	@	@	@
Casing–Logger	2154			
Bit Size	12¼"			
Type Fluid in Hole	LIGNOSULFONATE			
Dens. | Visc.	10.10 | 50			
pH | Fluid Loss	9.8 | 1.6 ml	ml	ml	ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	1.09 @ 114°F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	1.26 @ 80°F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.18 @ 80°F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	M | M			
R_m @ BHT	0.50 @ 247°F	@ °F	@ °F	@ °F
TIME Circulation Stopped	1930			
TIME Logger on Bottom	0700			
Max. Rec. Temp.	247°F	°F	°F	°F
Equip. | Location	8128 | SAC			
Recorded By	FINNELL			
Witnessed By Mr.	DE LEON			

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

FOLD HERE

Reproduced By
Petroleum Information
CORPORATION
MIDLAND, TEXAS 79701

REFERENCE K 62795

12 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

API NO.

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

IP

GOR GR

TP CP

REMARKS:

REPRODUCTION FOR RESALE PROHIBITED

REMARKS: Service Order No. 82954 Magnetic Declination

Run No.	1	2	3	4	ROLL NO.	INTERVAL
Tool Type	HDT					
HDP	0-970					
DDR / TTR	-- / 1940					
DPI	2733					
HDM	F-1726					
HDE	CB-1879					
HDS	D-1752					
Adapter Head	846x					
UG / CG / SAH	-- / -- / --					
5" Film / 10" Film / 60" Record	X / -- / --					
Analog / Digital	-- / X					
TIME Circulation Stopped	1930					
TIME Schl. on Bottom	0700					

TOOL AZIMUTH. AND HOLE DIRECTION CALCULATION

DEFINITIONS

(DHD) HIGH SIDE OF TOOL = Direction from center of tool to upper side of tool.

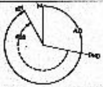
(N) NORTH = Direction from center of tool to Magnetic North.

(REF) REFERENCE ELECTRODE = Direction from center of tool to #1 electrode.

(AZI) AZIMUTH OF REFERENCE ELECTRODE — Clockwise angle from N to REF.

(RBR) RELATIVE BEARING = Clockwise angle from DHD to REF.

(AHD) AZIMUTH OF HOLE DEV. (TOOL AXIS) = Clockwise angle from N to DHD.



LOW ANGLE UNIT ☒

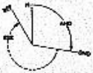
EXAMPLE

HDM - Low Angle Unit (0-36°)

AZI (solid curve) = 330°

RBR (dotted curve) = 230°

AHD = AZI − RBR = 330° − 230° = 100°



HIGH ANGLE UNIT ☐

EXAMPLE

HDM - High Angle Unit (0-72°)

AHD (solid curve) = 100°

RBR (dotted curve) = 230°

AZI = AHD + RBR = 100° + 230° = 330°

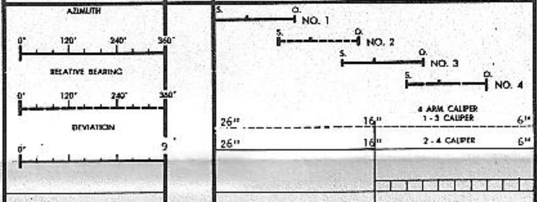
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

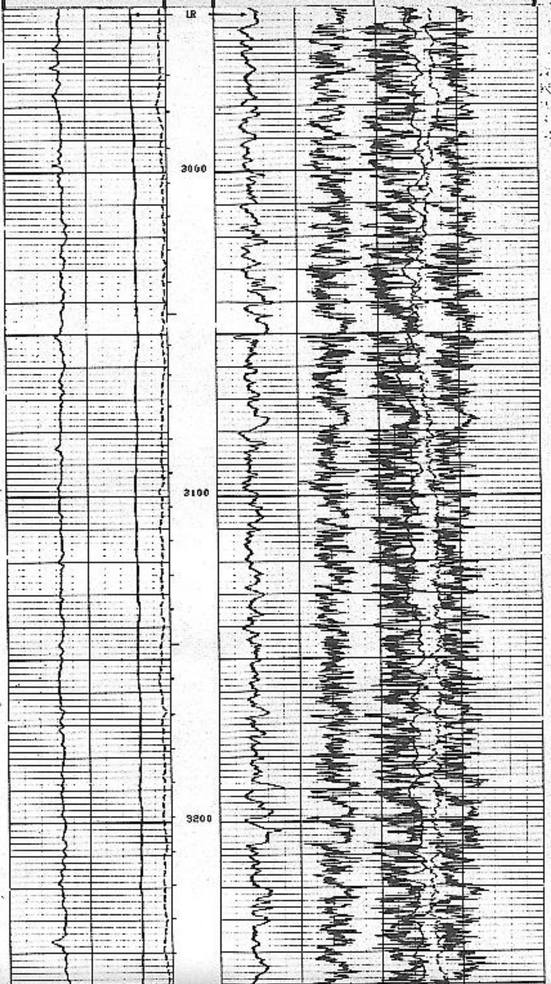
ORIENTATION

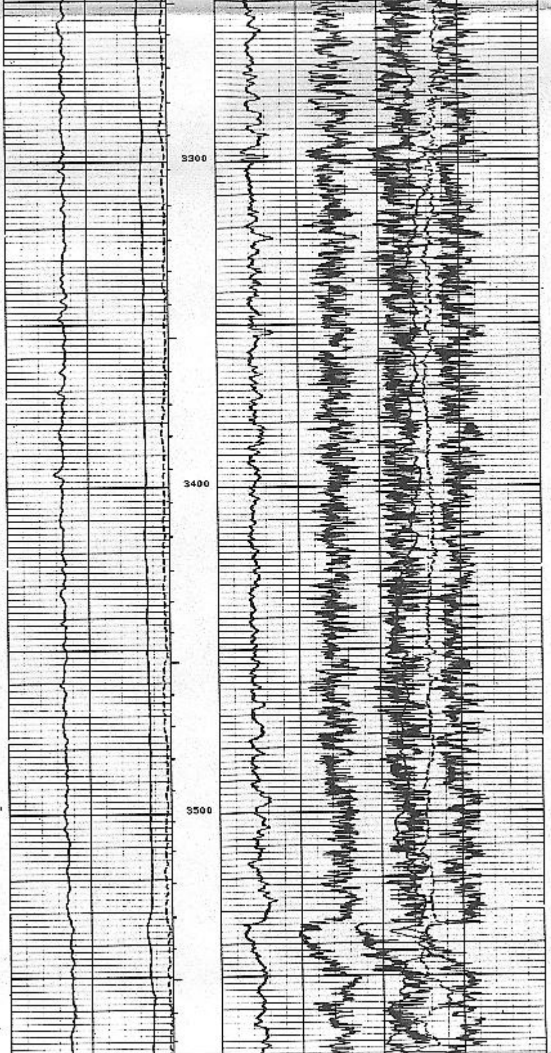
DEPTHS

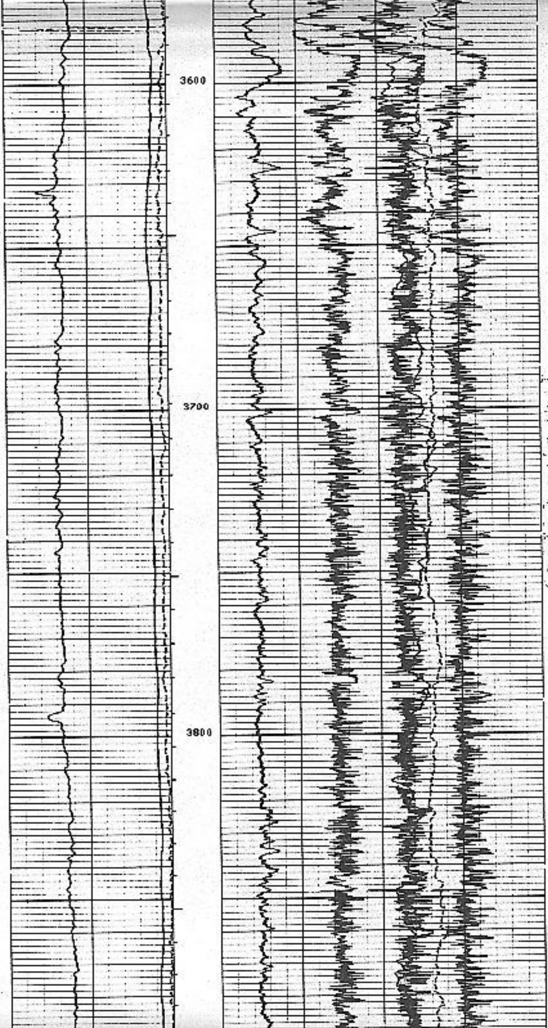
CORRELATION CURVES

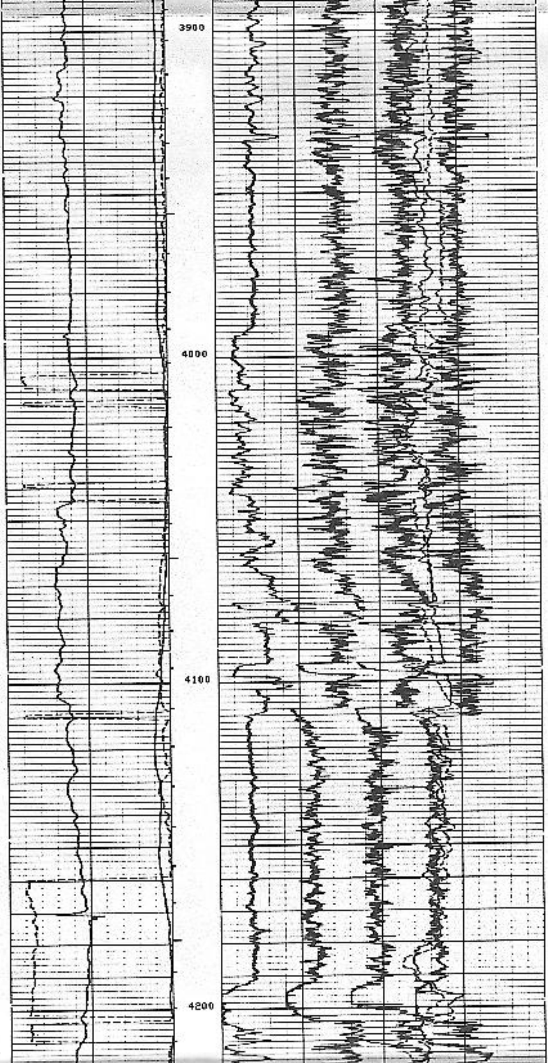
—CONDUCTIVITY

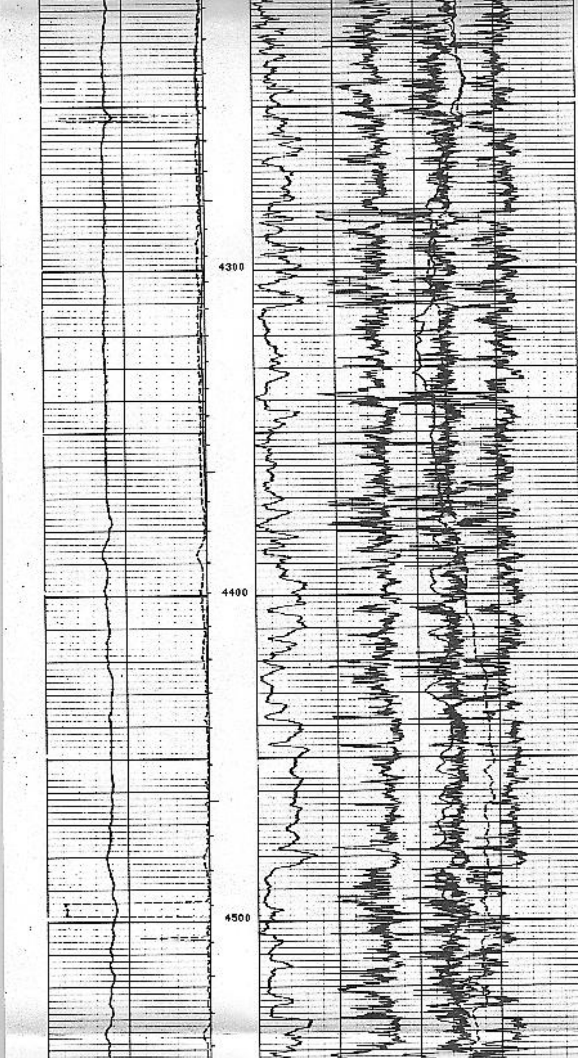


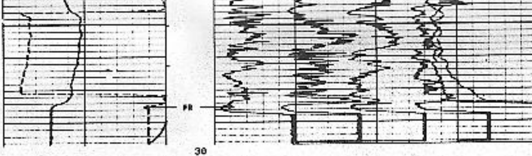


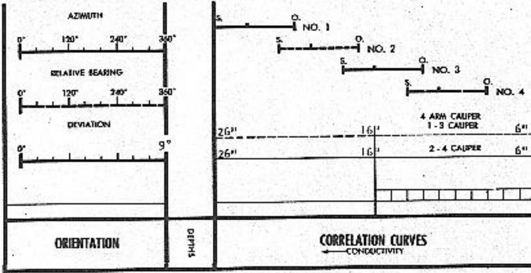




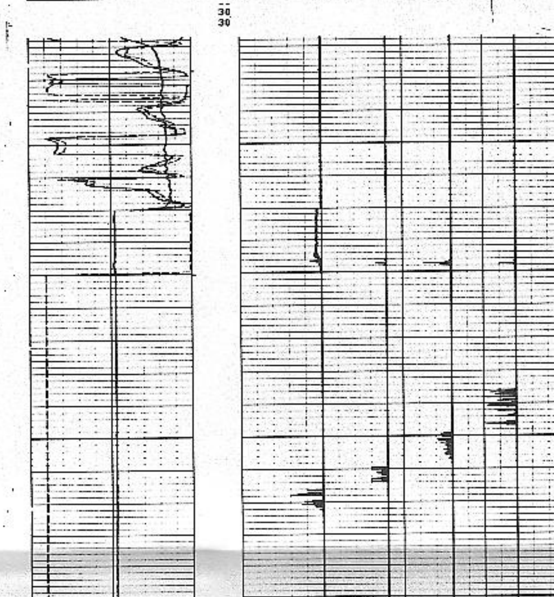








CALIBRATION RECORD



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                    29
                    29
                    28
                    28
                    28


         BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:       79/08/03
   PROGRAM FILE:    HDT     (VERSION     14.4     79/ 6/ 1)


  HDT                CALIPER CALIBRATION SUMMARY

                                             CALIBRATED
               MEASURED                 SMALL       LARGE          UNITS
            SMALL    LARGE               8.0         12.0            IN
      C1     8.9     13.[illegible]      8.0         12.0            IN
      C2     8.8     13.2   28
                            28
                            28
                            28
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HIGH RESOLUTION DIPMETER CALIBRATION CODING

1. MECHANICAL ZERO
2. ELECTRICAL ZERO
3. FULL SCALE ADJUST
4. CALIPER ADJUST AT 6" AND 16" CALIPER 1-3 IS CODED
5. CALIPER ADJUST AT 6" AND 16" CALIPER 2-4 IS SOLID
6. PAD #1 RESPONSE CHECK
7. PAD #2 RESPONSE CHECK
8. PAD #3 RESPONSE CHECK
9. PAD #4 RESPONSE CHECK
10. SONDE HANGING VERTICALLY
11. TOOL AND PAD #1 POINTED NORTH
12. TOOL ROTATING

COMPANY THERAME' POWER COMPANY

WELL DIXIE FEDERAL 66-21

FIELD DIXIE VALLEY

COUNTY CHURCHILL STATE NEVADA

Schlumberger

FOUR — ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER

COUNTY CHURCHILL
FIELD DIXIE VALLEY
LOCATION 21-24N-36E
WELL DIXIE FEDERAL 66-21
COMPANY THERMAL POWER CO.

COMPANY THERMAL POWER COMPANY

K62795

WELL DIXIE FEDERAL 66-21 2nd Run

FIELD DIXIE VALLEY

COUNTY CHURCHILL STATE NEVADA

LOCATION N/A

API SERIAL NO.	SEC.	TWP.	RANGE
	21	24N	36E

Other Services:
FDC/CNL/GR
DI-SFL
BHC
HES

Permanent Datum: GL ; Elev.: 3430
Log Measured From KB 23 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 3453
D.F. 3452
G.L. 3430

Date	9-17-79			
Run No.	ONE			
Depth—Driller	9780			
Depth—Logger (Schl.)	--			
Btm. Log Interval	7000			
Top Log Interval	4580			
Casing—Driller	9⅝" @ 4580	@	@	@
Casing—Logger	4580			
Bit Size	8¾"			
Type Fluid in Hole	GEL/CAUSTIC/BAR			
Dens. | Visc.	10.2 | 46	|	|	|
pH | Fluid Loss	10 | 24 ml	| ml	| ml	| ml
Source of Sample	CIRCULATED			
Rm @ Meas. Temp.	0.94 @ 75 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	0.81 @ 72 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	1.44 @ 73 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | M	|	|	|
Rm @ BHT	0.22 @340 °F	@ °F	@ °F	@ °F
TIME Circulation Stopped	2200 9-16			
TIME Logger on Bottom	1745			
Max. Rec. Temp.	340 °F	°F	°F	°F
Equip. | Location	7763 | 4408	|	|	|
Recorded By	BRASFIELD			
Witnessed By Mr.	MC MURDIE			

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

REMARKS: Service Order No. Magnetic Declination

Run No.	1	2	3	4	ROLL NO.	INTERVAL
Tool Type	HDT-D					
HDP	D-970					
DDR / TTR	-- / 1940					
DPI	2733					
HDM	F-1726					
HDE	CB-1879					
HDS	D-1752					
Adapter Head	846					
UG / CG / SAM	-- / -- / --					
5" Film / 10" Film / 60"Record	X / -- / X					
Analog / Digital	X / X					
TIME Circulation Stopped	2200 9-16					
TIME Schl. on Bottom	1745 9-18					

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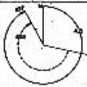

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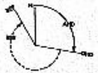

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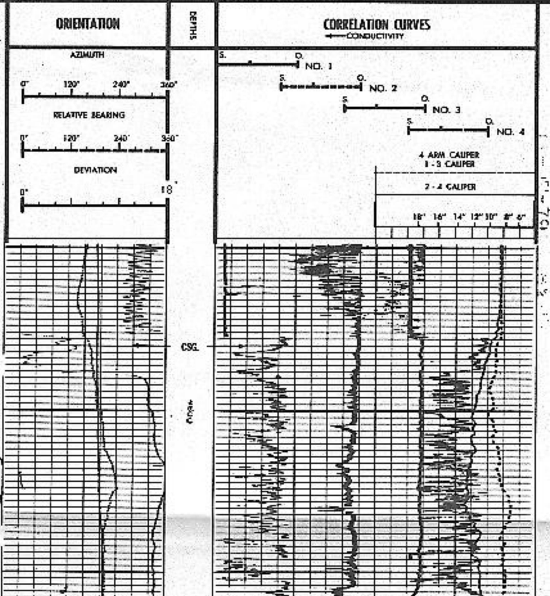

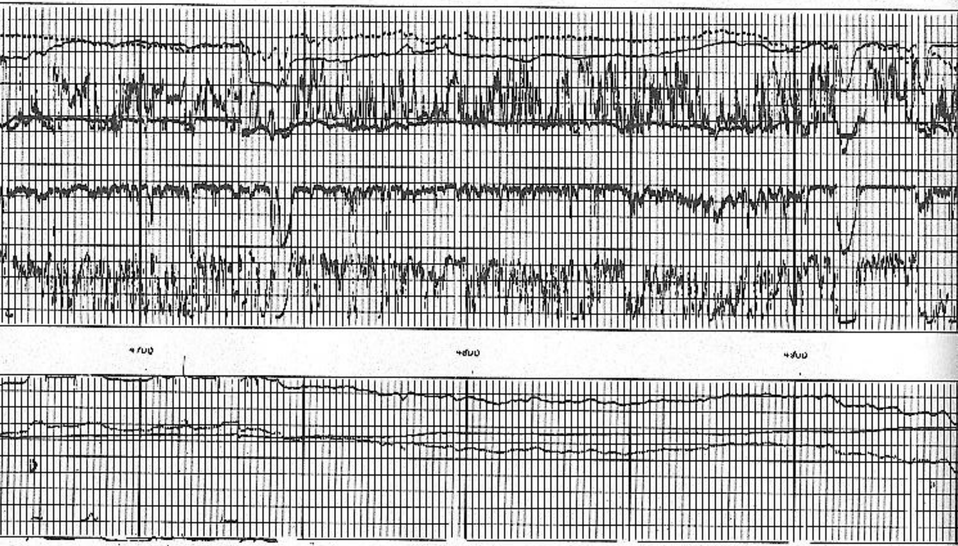

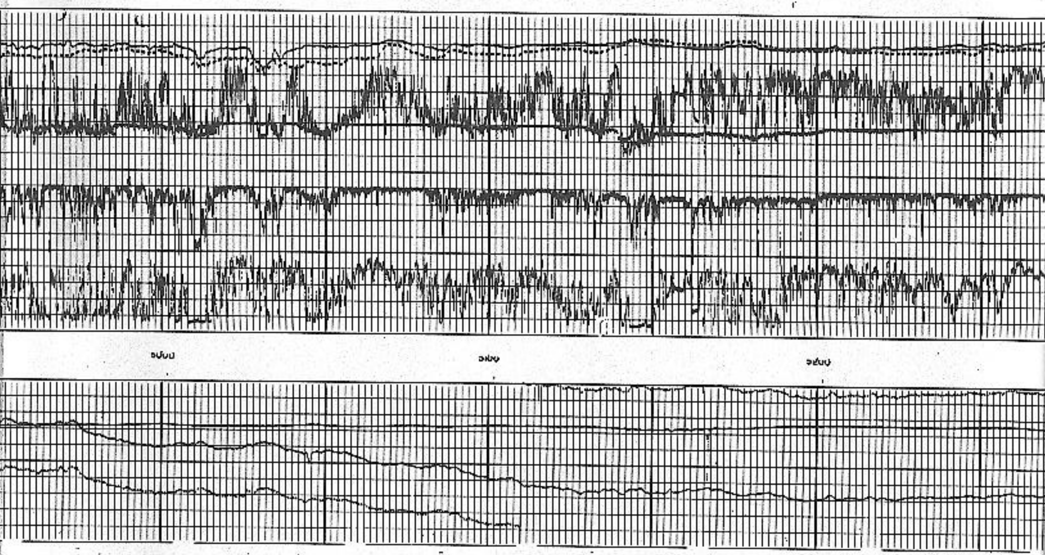

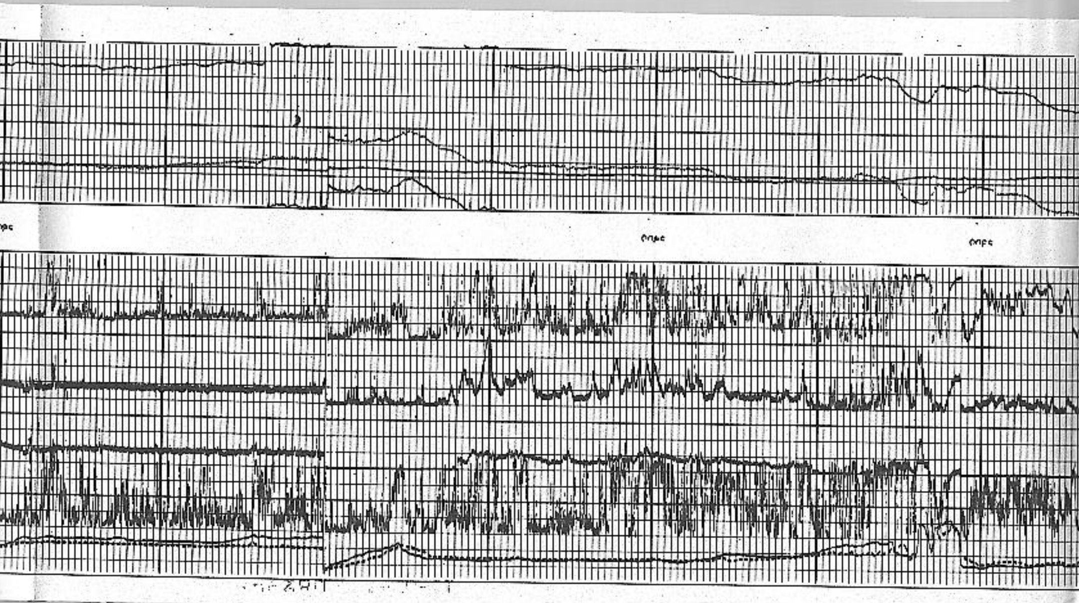

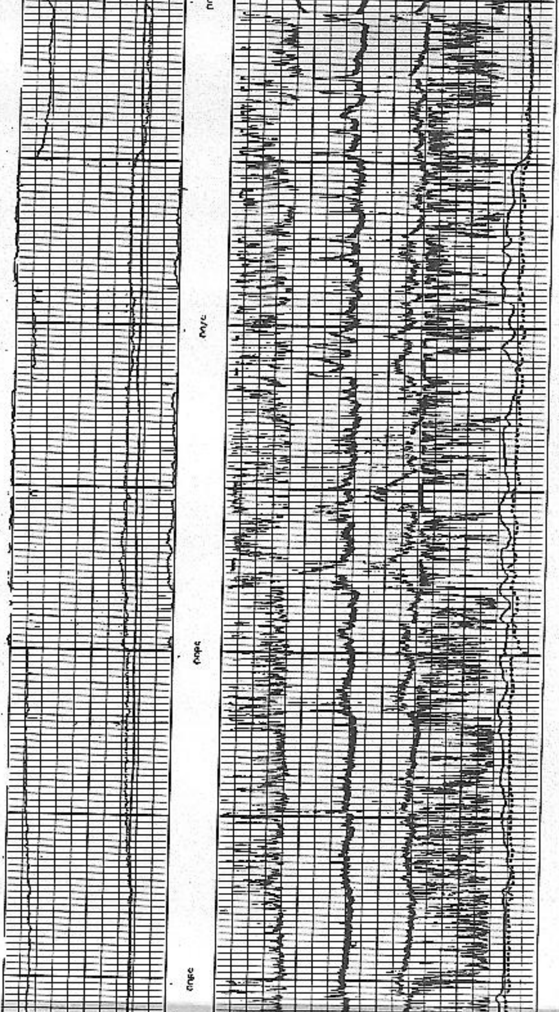

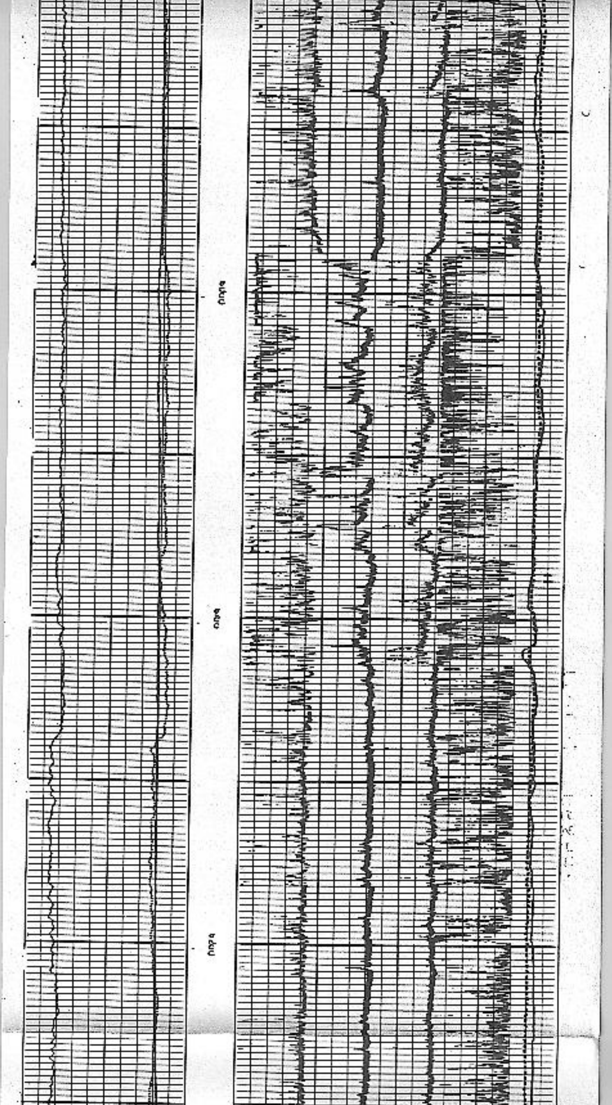

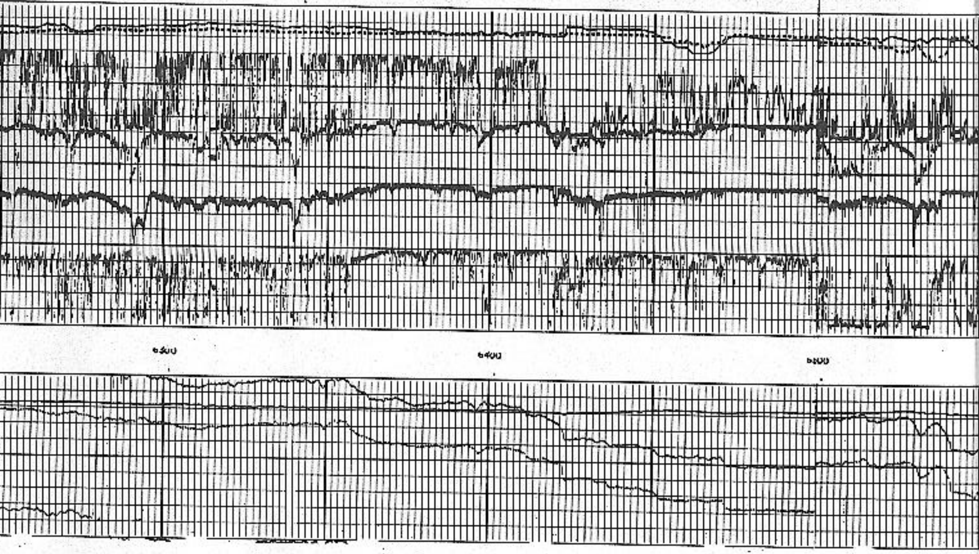

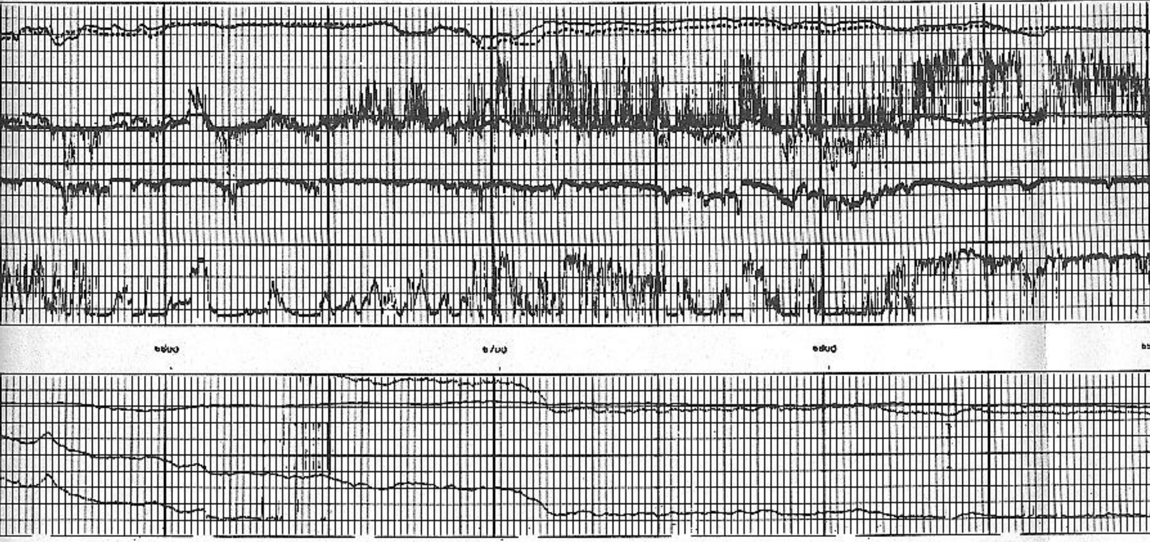

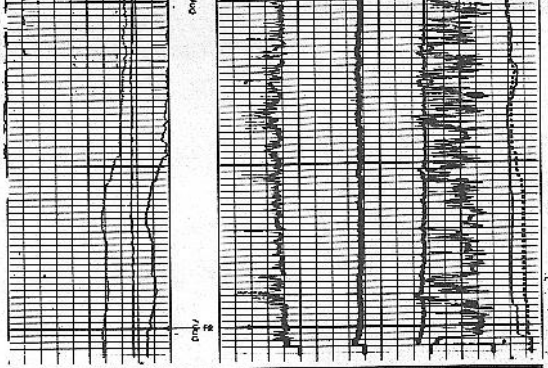

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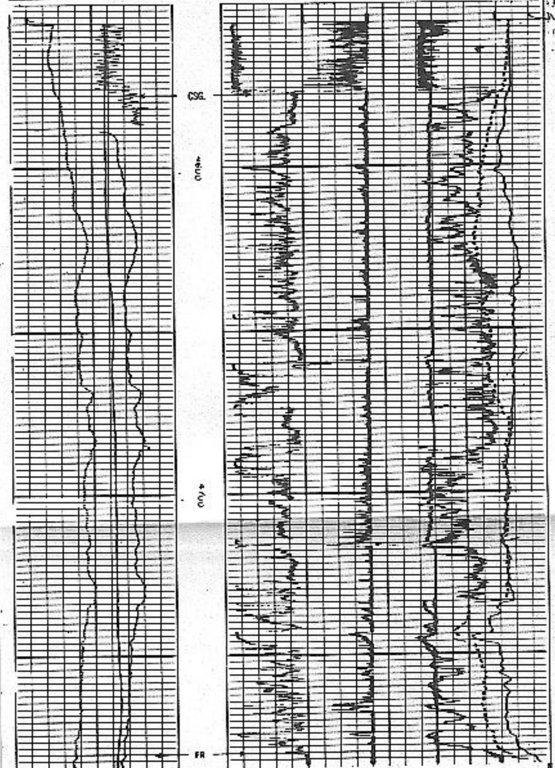
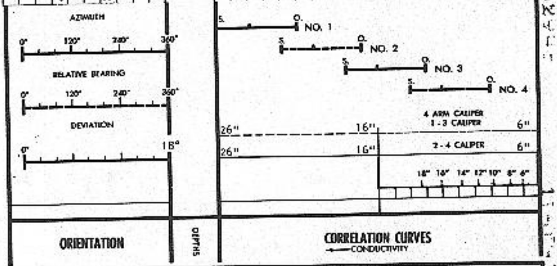
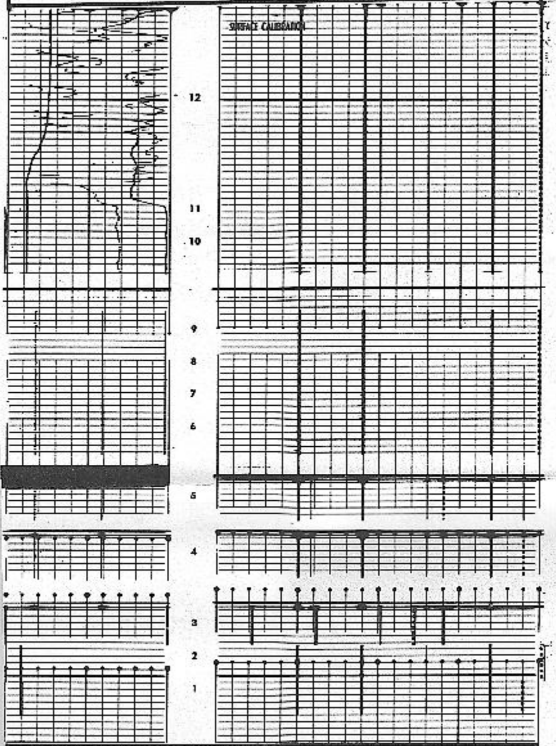




CALIBRATION RECORD



HIGH RESOLUTION DIPMETER CALIBRATION CODING

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11. TOOL AND PAD #1 POINTED NORTH
12. TOOL ROTATING

COMPANY THERMAL POWER COMPANY

WELL DIXIE FEDERAL 66-21

FIELD DIXIE VALLEY

COUNTY CHURCHILL STATE NEVADA