2-

GL04462_5

Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER

COUNTY
FIELD or LOCATION
WELL
COMPANY

COMPANY CHEVRON OIL COMPANY
CHEVRON MINERALS STAFF
WELL ROSSI 21-19
FIELD BEOWAWE
COUNTY LANDERS STATE NEVADA

LOCATION: 375'S & 825'E of NW Corner
API Serial No.
Sec. 19 Twp. 31N Rge. 48E

Other Services:

Permanent Datum: GL, Elev.:
Log Measured From KB, Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B.
D.F.
G.L.

Date	11-28-76			
Run No.	1			
Depth – Driller	4377			
Depth – Logger	4376			
Btm. Log Interval	4376			
Top Log Interval	2000			
Casing – Driller	13 3/8 @ 2000	@	@	@
Casing – Logger	2000			
Bit Size	12 1/4			
Type Fluid in Hole	GEL-WATER			
Fluid Level	FULL			
Dens. Visc.	69 60			
pH Fluid Loss	9 8.8 ml	ml	ml	ml
Source of Sample	CIRC			
R_m @ Meas. Temp.	2.41 @ 94 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	3.77 @ 55 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	4.5 @ 55 °F	@ °F	@ °F	@ °F
Source: R_{mf} R_{mc}	M C			
R_m @ BHT	1.03 @ 216 °F	@ °F	@ °F	@ °F
Time Since Circ.	16			
Max. Rec. Temp.	27[illegible] °F	°F	°F	°F
Equip. Location	7763 SAC			
Recorded By	ANDERSON			
Witnessed By	Ms E. POTNAM			

Reproduced By
Electrical Log Services
Midland, Texas 79701

REFERENCE K 26398

15 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

API NO.

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

I P

GOR GR

T P C P

REMARKS:

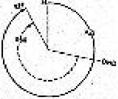
REPRODUCTION FOR RESALE PROHIBITED

REMARKS: Service Order No Magnetic Declination

Run No.	1 1	2	3	4	ROLL NO.	INTERVAL
Tool Type	HDT				1	2000 - 4370
HDP	C 739					
DDR / STR	C746 / —					
DPI	F 14					
HDM	E					
HDE	C5					
HDS	D					
Adapter Head						
UG / CG / SAH	✓					
5" Film / 10" Film / 60" Record	✓ / / ✓					
Analog / Digital	/ ✓					
TIME Circulation Stopped	0700					
TIME Schl. on Bottom	2310					

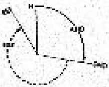
TOOL AZIMUTH AND HOLE DIRECTION CALCULATION DEFINITIONS

(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.
(AZ) AZIMUTH OF REFERENCE ELECTRODE — Clockwise angle from N to REF.
(RB) 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 interpretations, 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 7 of our General Terms and Conditions as set out in our current Price Schedule.

ORIENTATION

DEPTHS

CORRELATION CURVES

←CONDUCTIVITY

AZIMUTH

0° 120° 240° 360°

RELATIVE BEARING

0° 120° 240° 360°

DEVIATION

9

0°

S. O. NO. 1

S. O. NO. 2

S. O. NO. 3

S. O. NO. 4

NOTE:

DIGITAL DIPMETERS

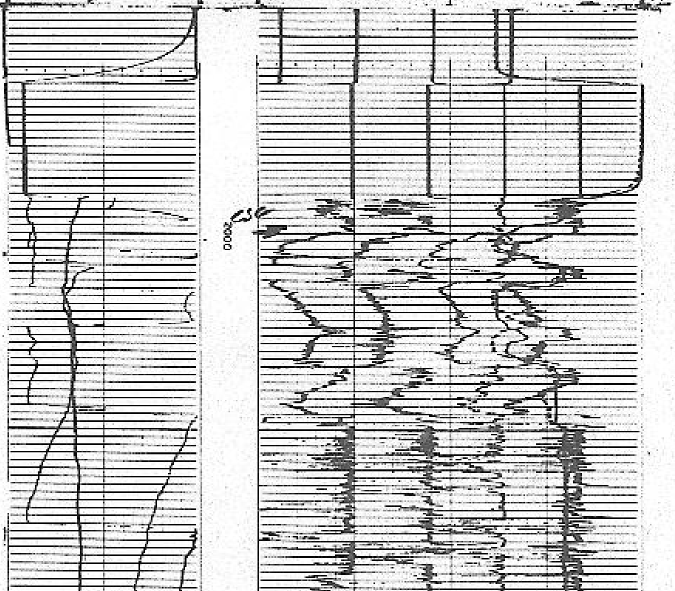
END OF RECORD GAP IS ON DEVIATION CURVE

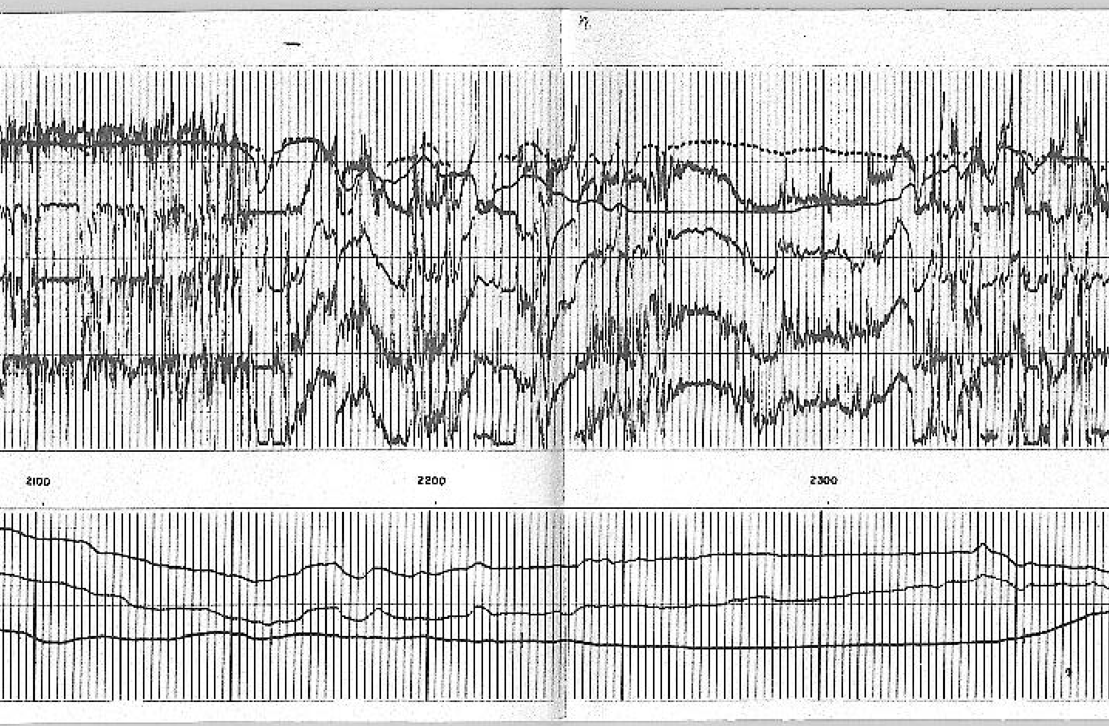
LONG SPACING MARK IS ON CALIPER 2 - 4.

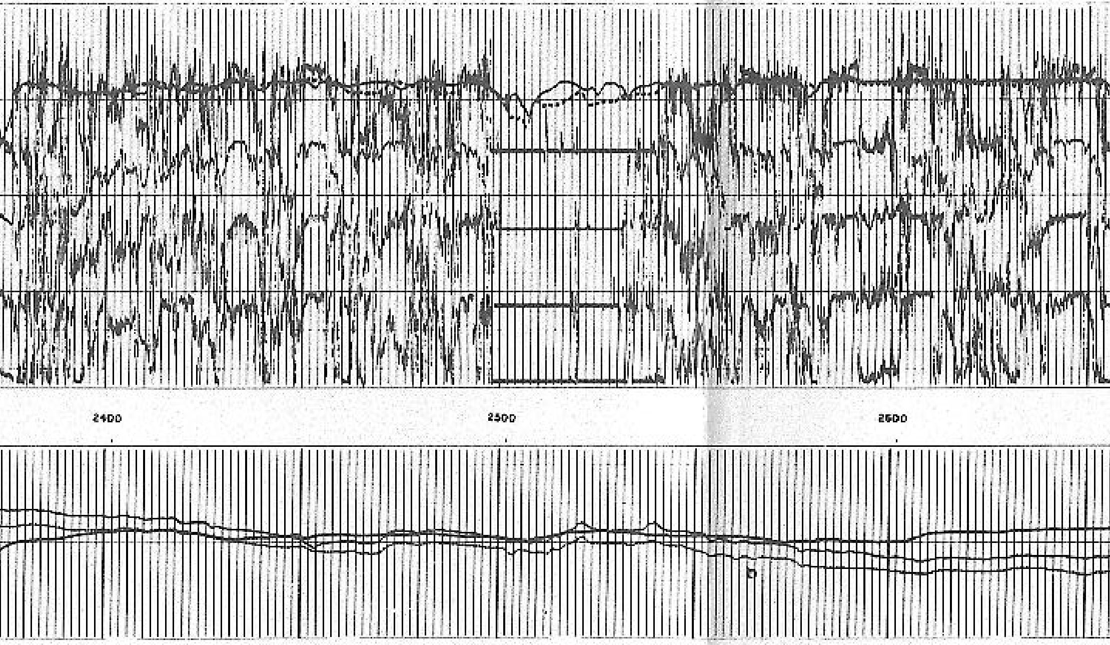
4 ARM CALIPER
1 - 3 CALIPER

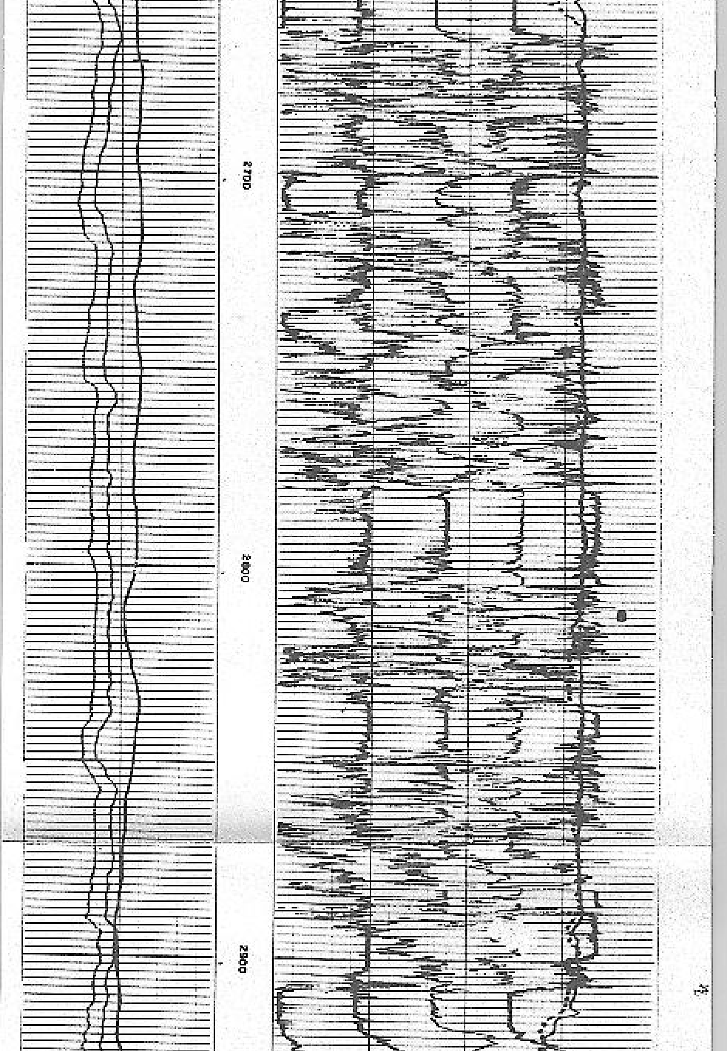
2 - 4 CALIPER

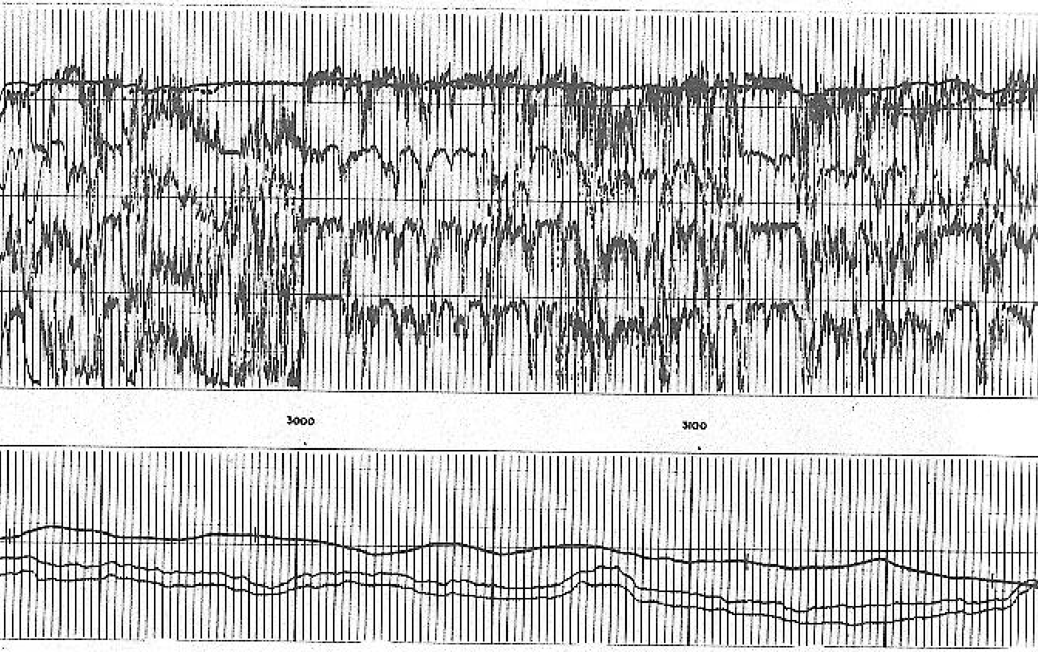
18" 16" 14" 12" 10" 8" 6"

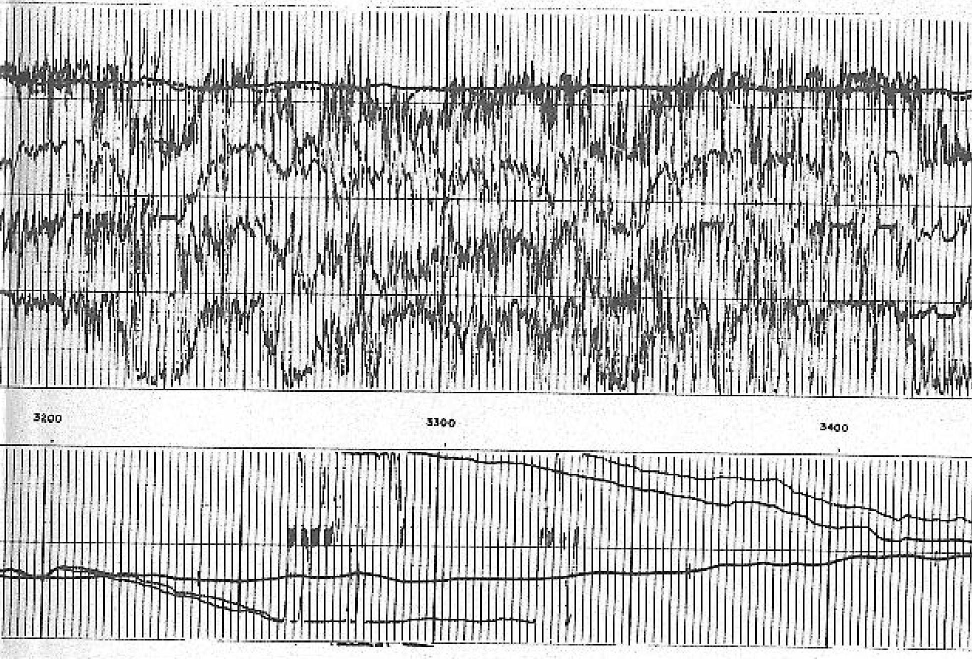


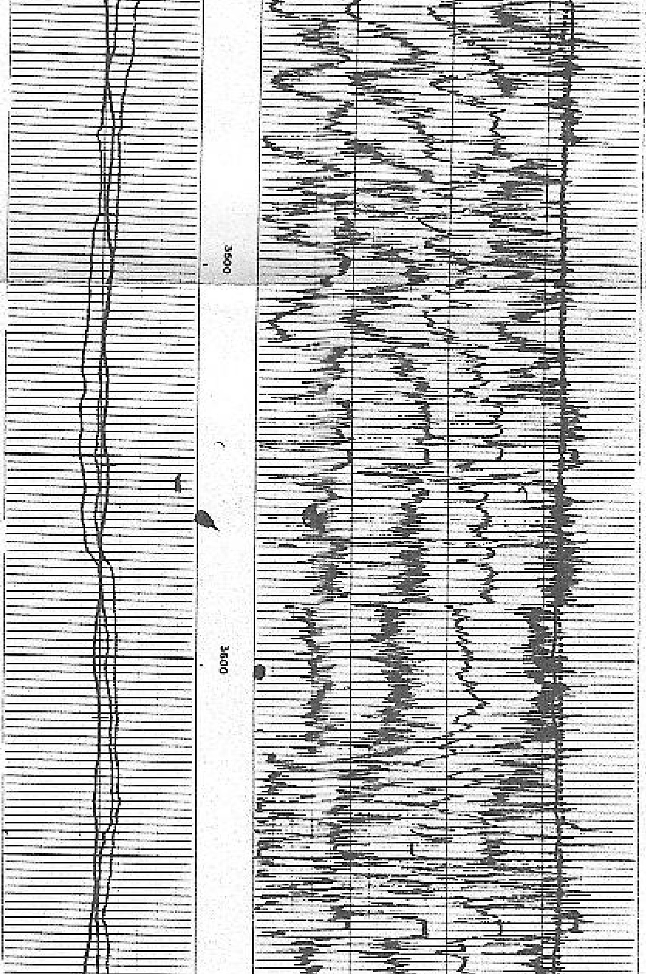


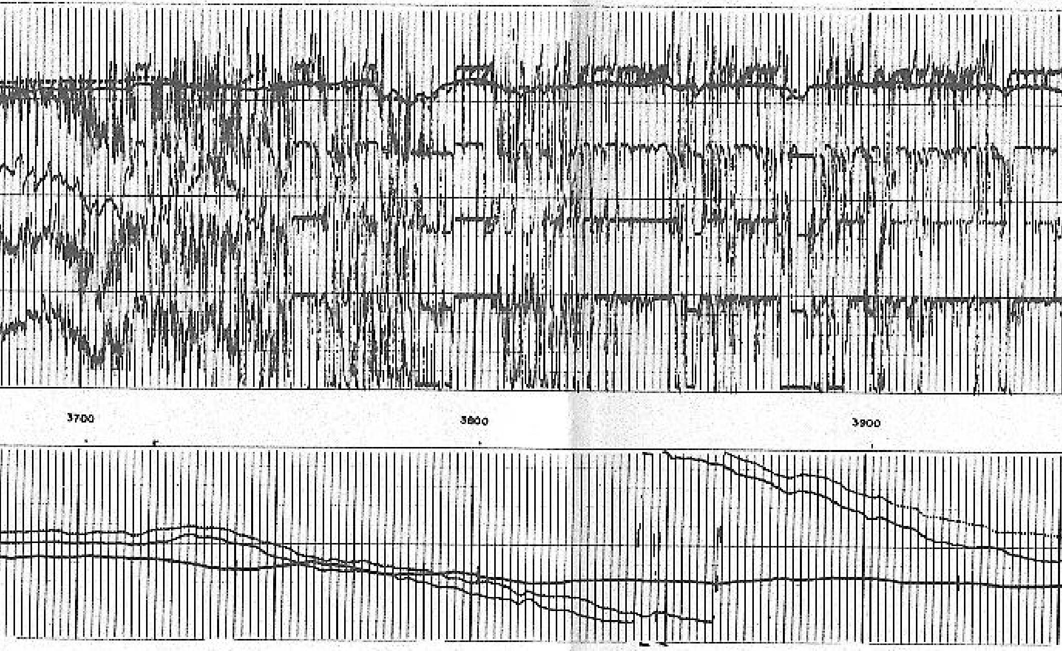


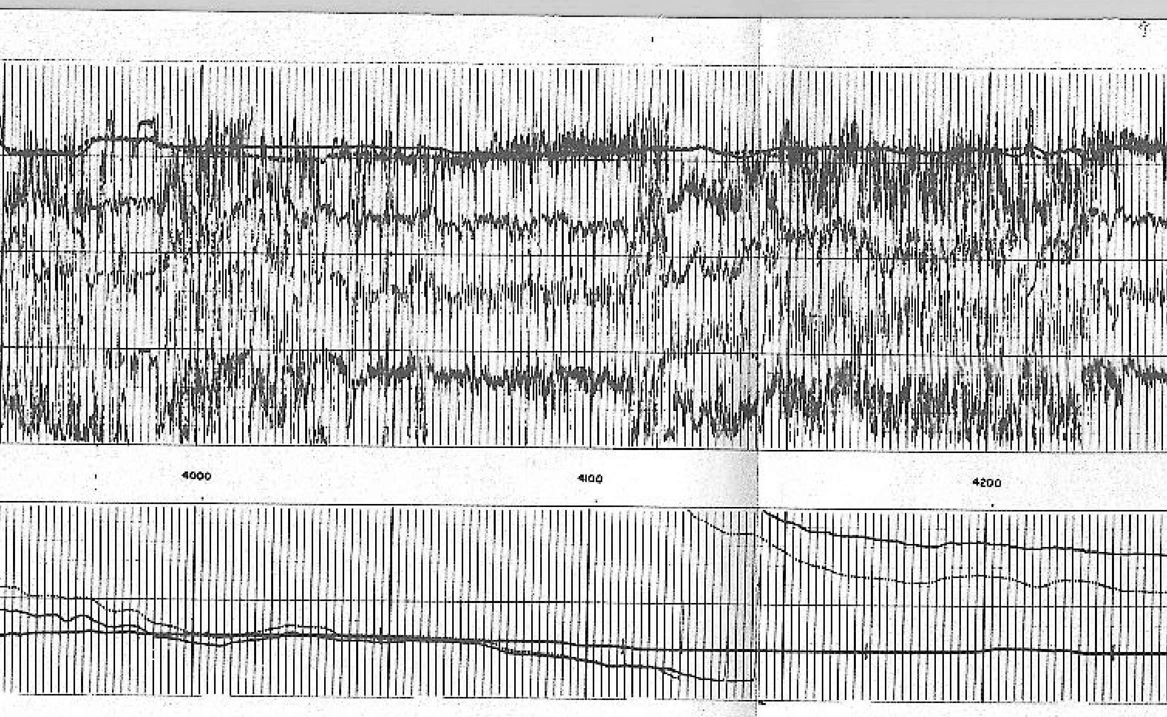


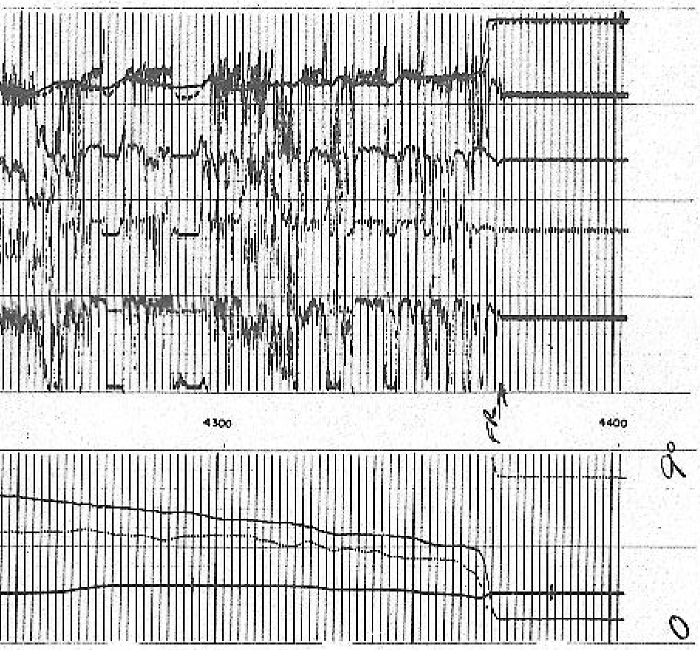


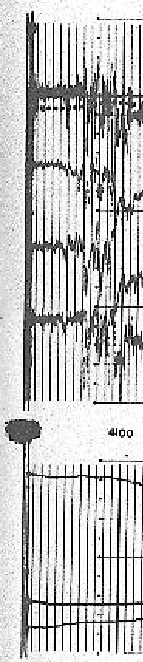


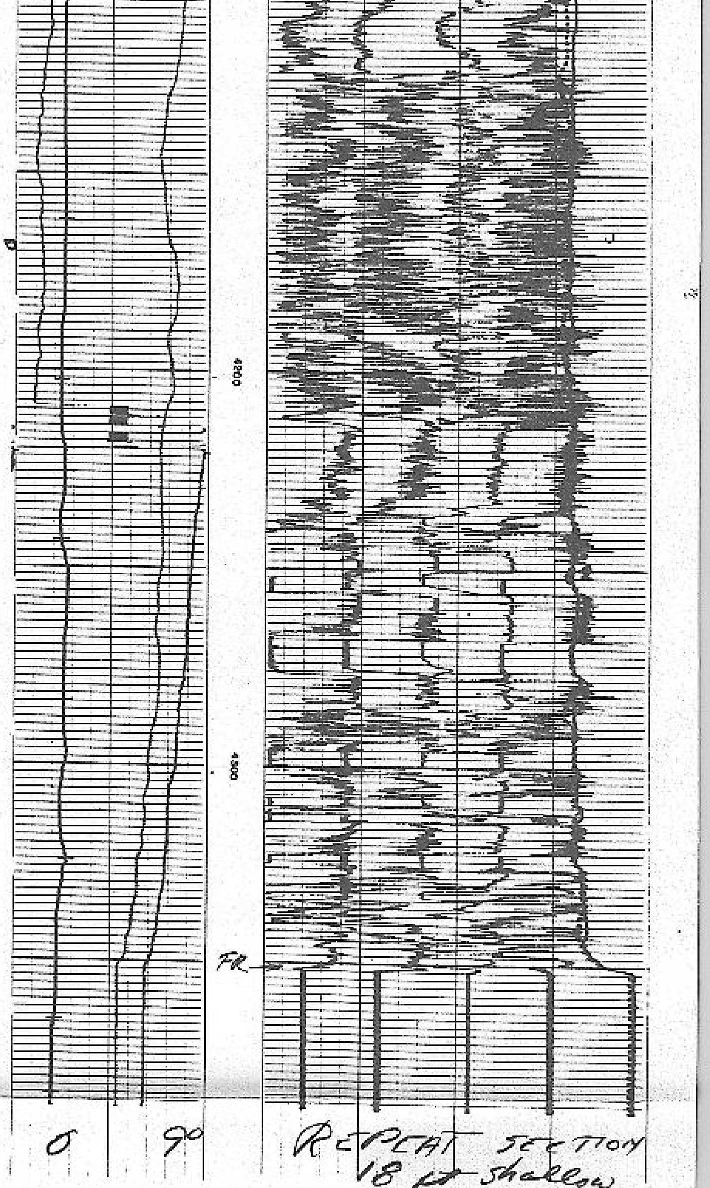




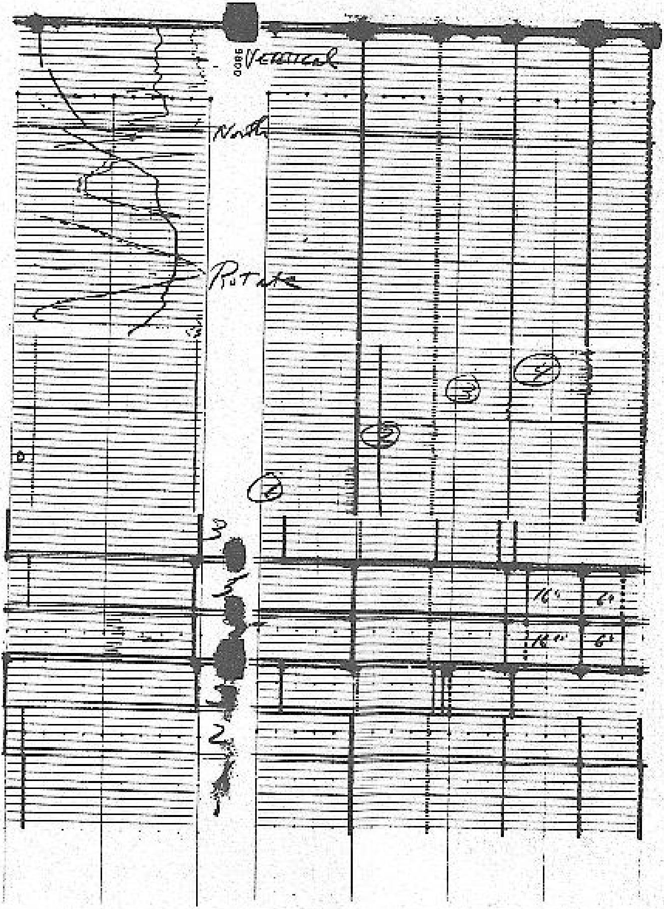








REPEAT SECTION
18 ft shallow



Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER

COUNTY
FIELD or LOCATION
WELL
COMPANY

COMPANY CHEVRON Oil Company
CHEVRON Minerals State
WELL Rossi 21-19
FIELD BEOWAWE
COUNTY LANDERS STATE NEVADA

LOCATION: 825'S, 825'E fr NW cor API Serial No.
Sec. 19 Twp. 31N Rge. 48E

Other Services:
DIL
FDC/CNL/GR
SHG/VDL

Permanent Datum: G.L. ; Elev.
Log Measured From KB Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B.
D.F.
G.L.

Date	3 DEC 76			
Run No.	TWO			
Depth – Driller	5386			
Depth – Logger	5680			
Btm. Log Interval	5680			
Top Log Interval	4375			
Casing – Driller	9 5/8 @ 4369	@	@	@
Casing – Logger	4375			
Bit Size	8 3/4			
Type Fluid in Hole	HYDROPURE			
Fluid Level	FULL			
Dens. | Visc.	— | —	|	|	|
pH | Fluid Loss	— | — ml	ml	ml	ml
Source of Sample	—			
R_m @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	— @ — °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	— | —	|	|	|
R_m @ BHT	— @ — °F	@ °F	@ °F	@ °F
Time Since Circ.	0			
Max. Rec. Temp.	379 °F	°F	°F	°F
Equip. | Location	7763 | SACTO	|	|	|
Recorded By	ANDERSON			

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

REMARKS: Service Order No. 04371 Magnetic Declination

600 BBLS water pumped in before logging

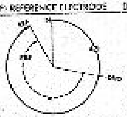
Run No.	1	2	3	4	ROLL NO.	INTERVAL
Tool Type		HDT			1	4375-5680
HDF		C 739				
DDR | TTR		C746 | —				
DPI		F14				
HDM		E172 L				
HDF		CB 7879				
HDS		D 1752				
Adapter Head						
UG | CO | SAH		1 | 1				
5" Film | 10" Film | 60' Record		1 | 1				
Analog | Digital						
TIME: Circulation Stopped		0800				
TIME: Schl. on Bottom						

TOOL AZIMUTH AND HOLE DIRECTION CALCULATION

(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

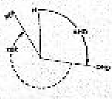
DEFINITIONS

(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°

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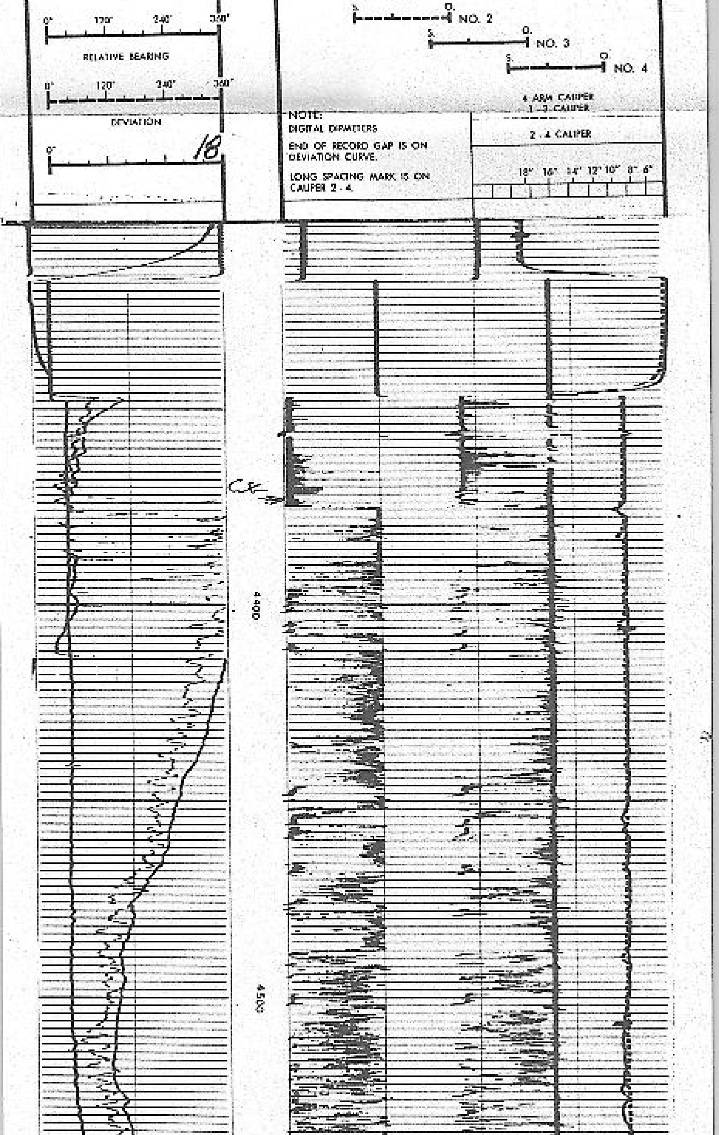
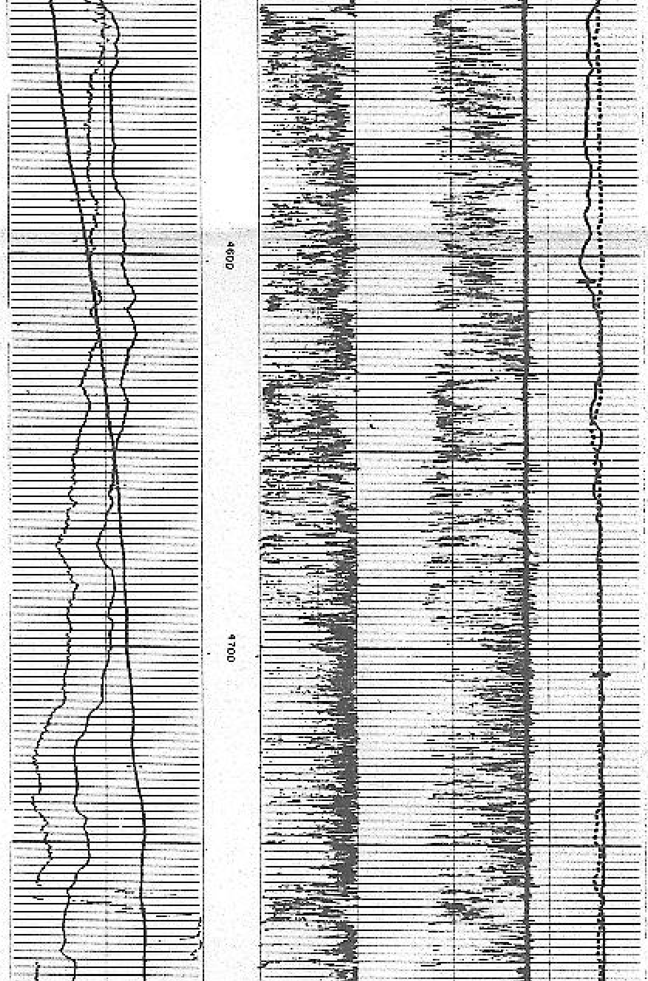
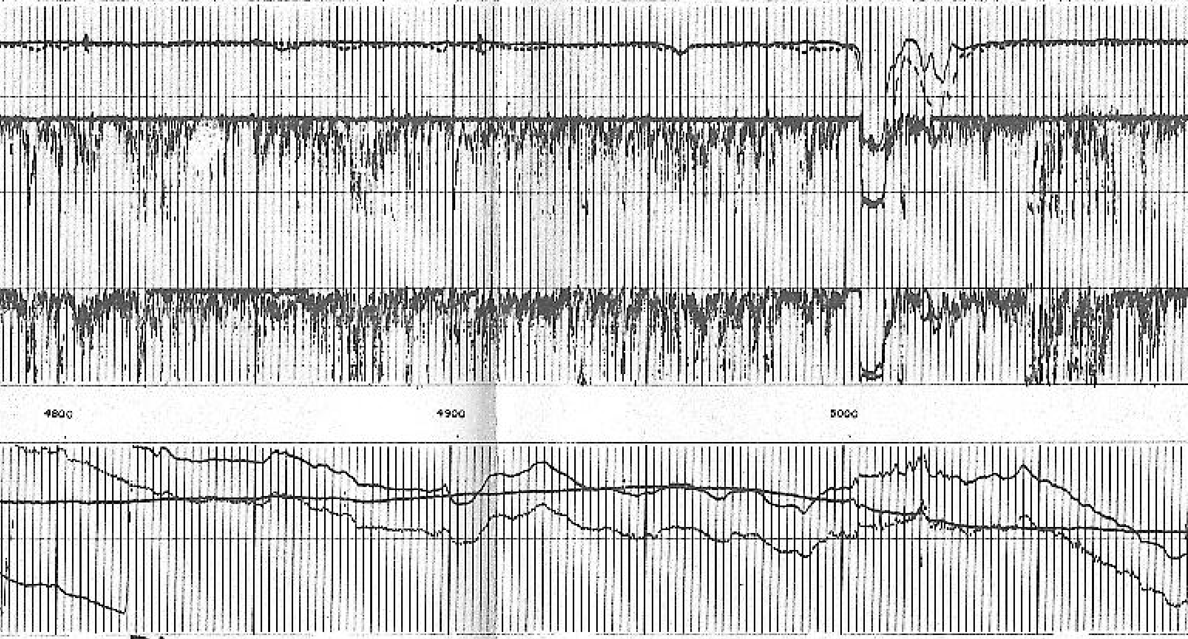
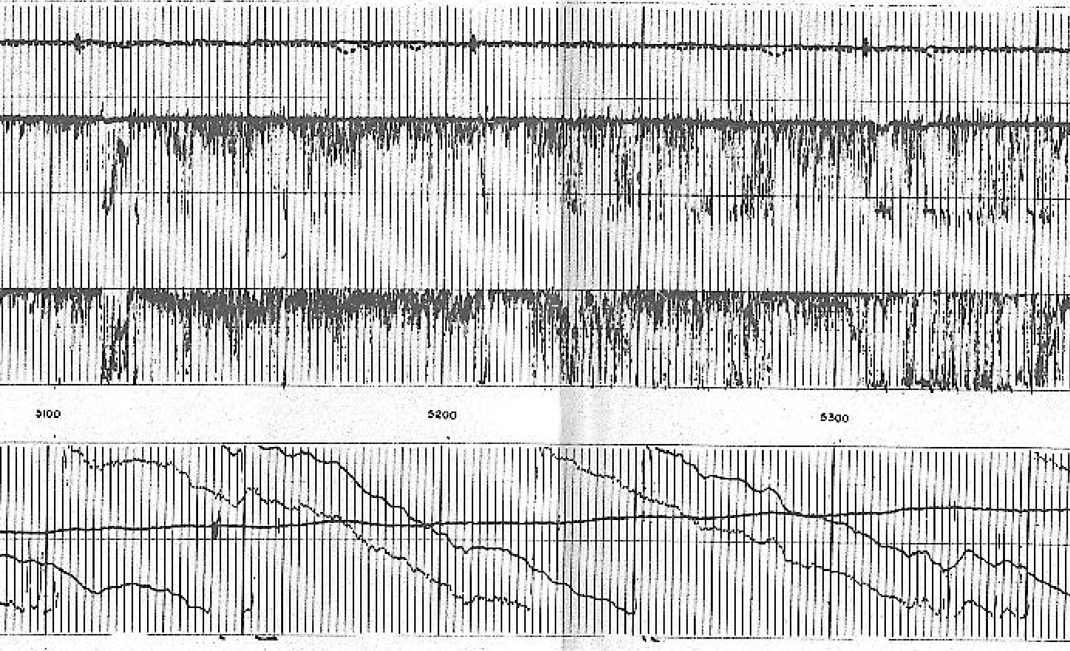
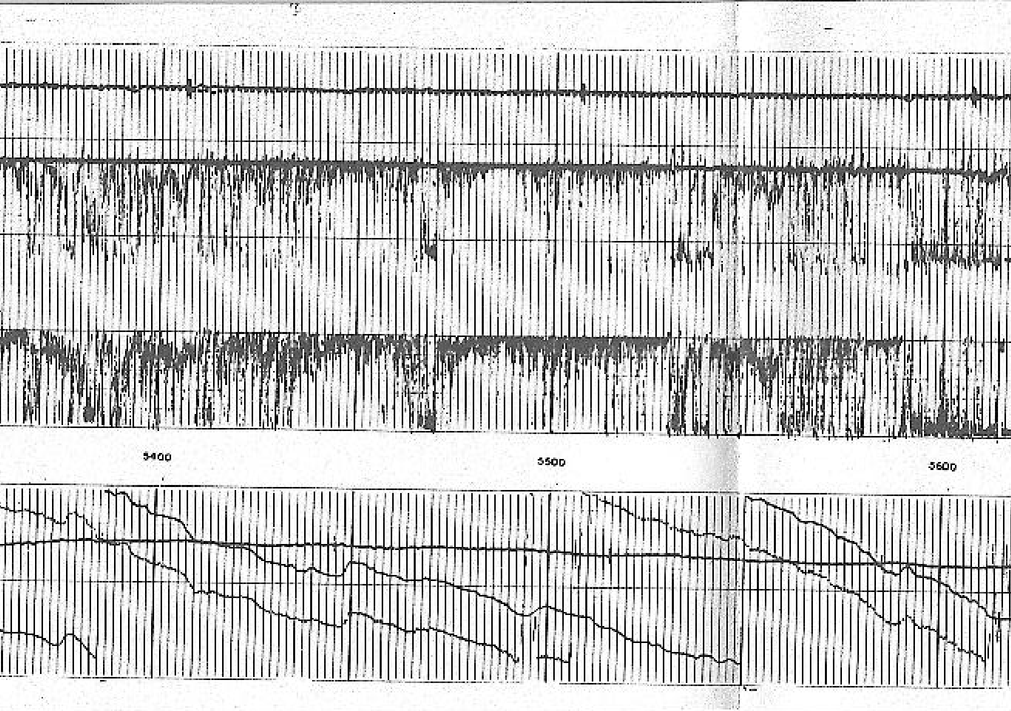
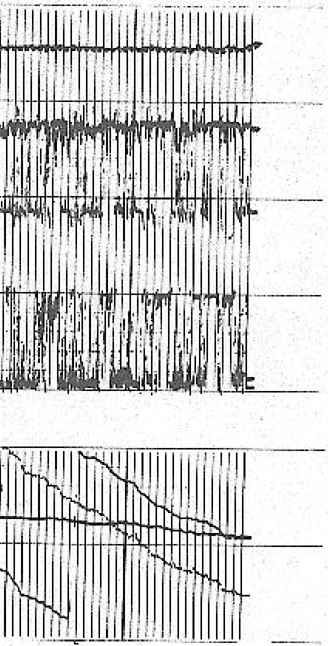
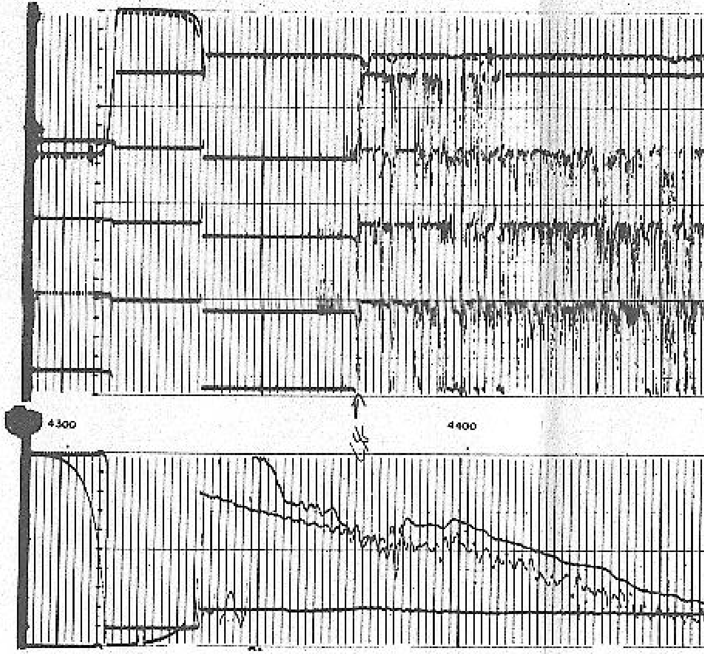
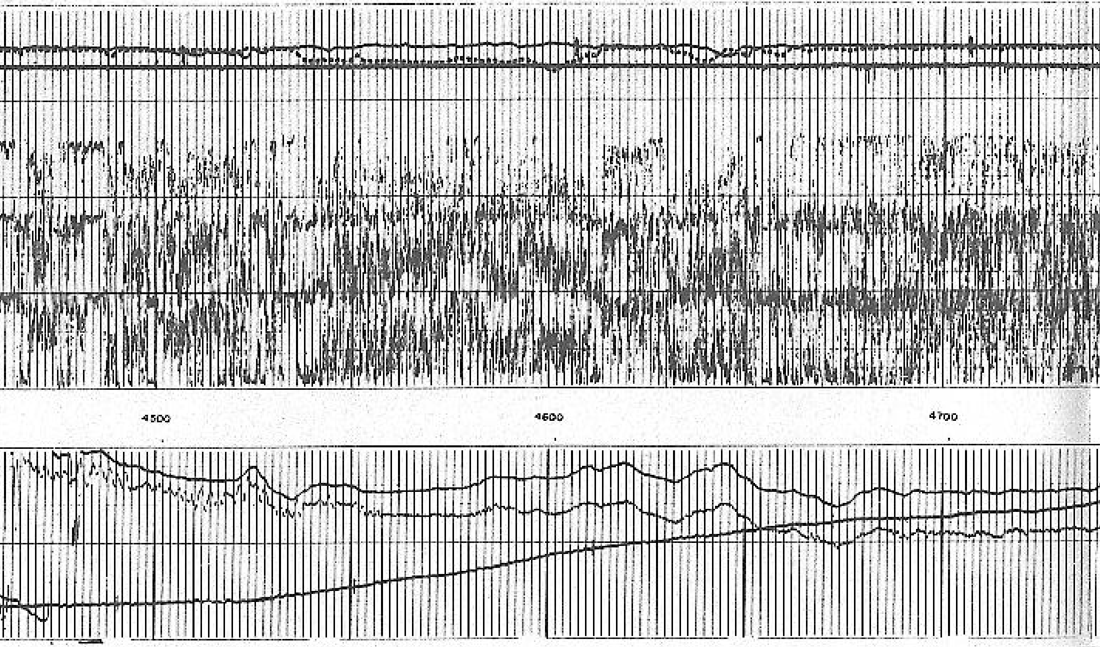
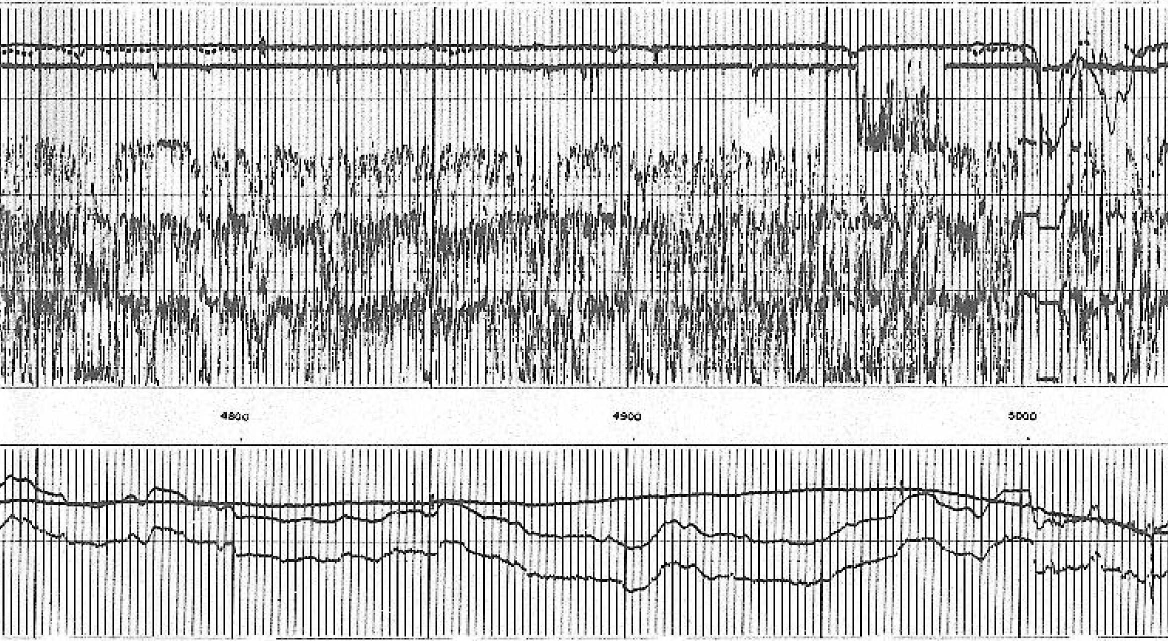
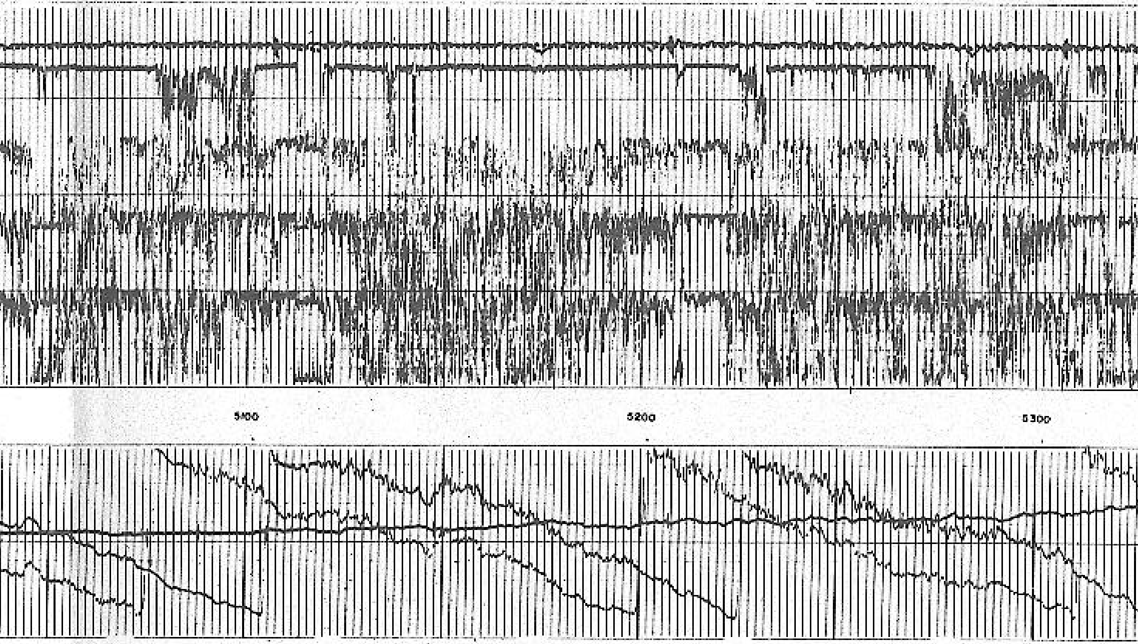
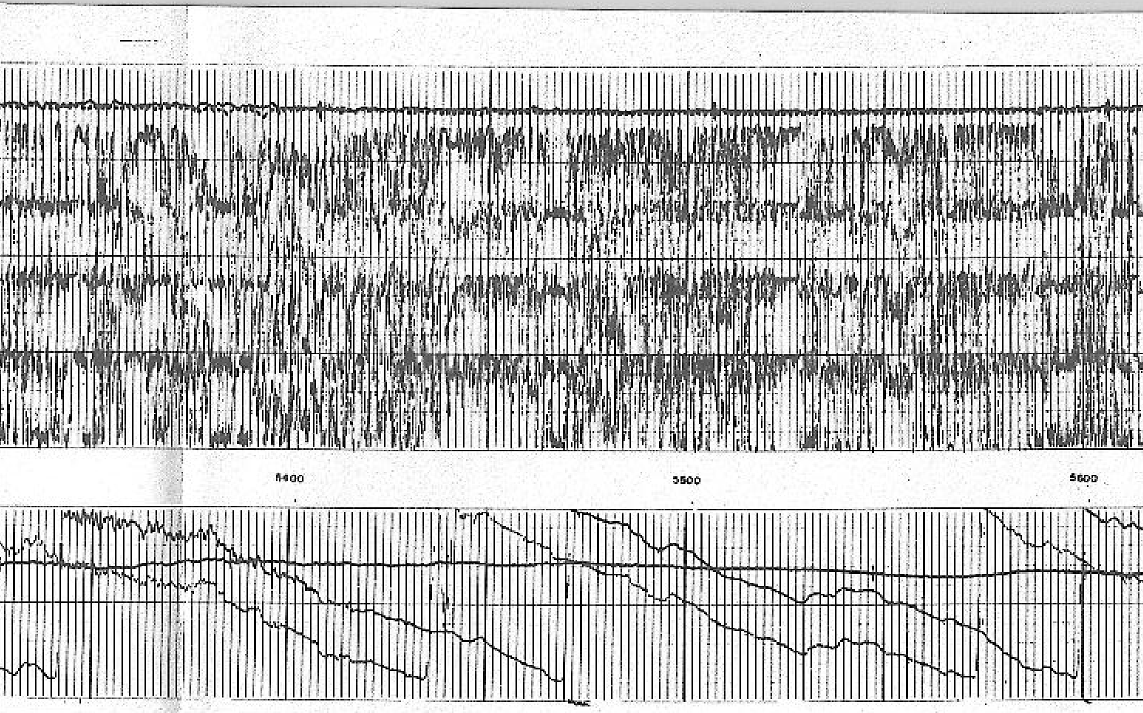
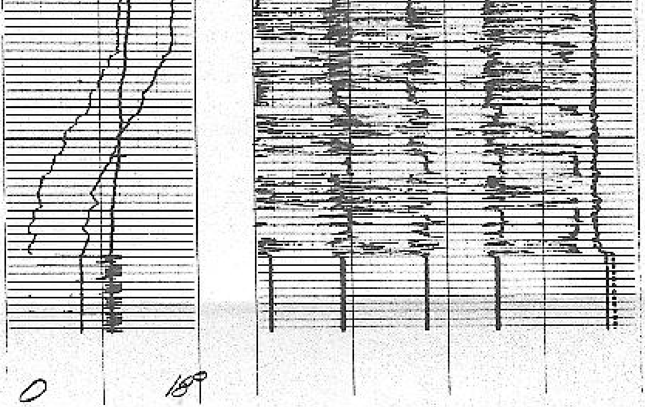
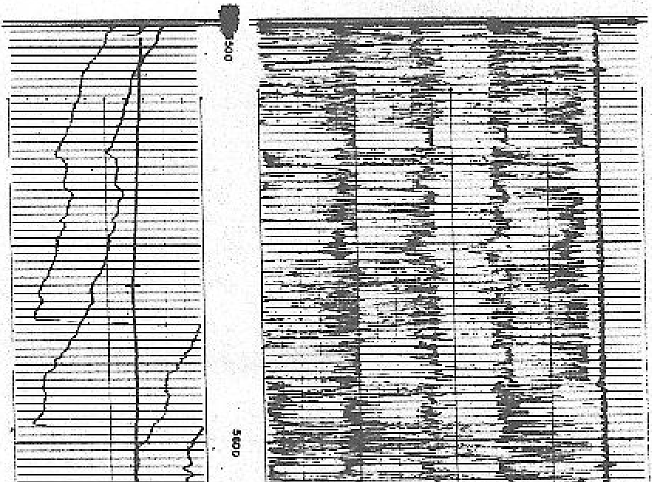
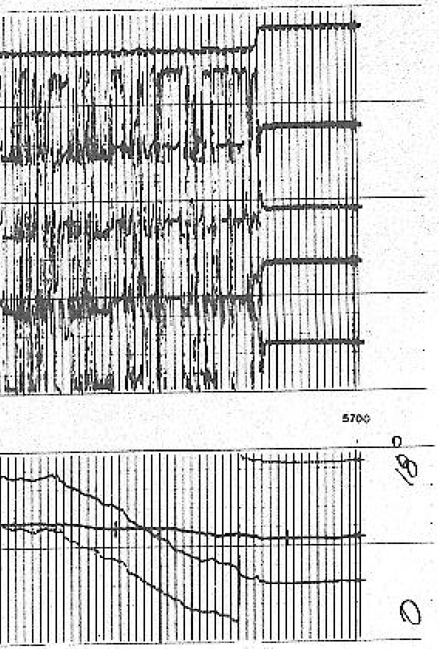
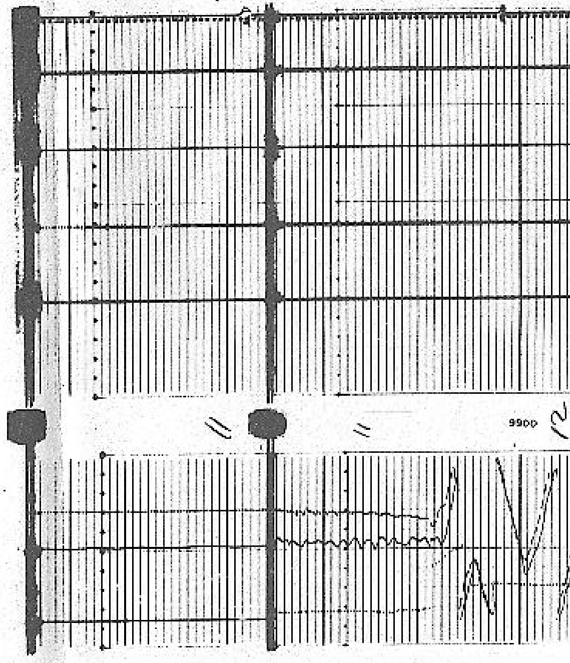
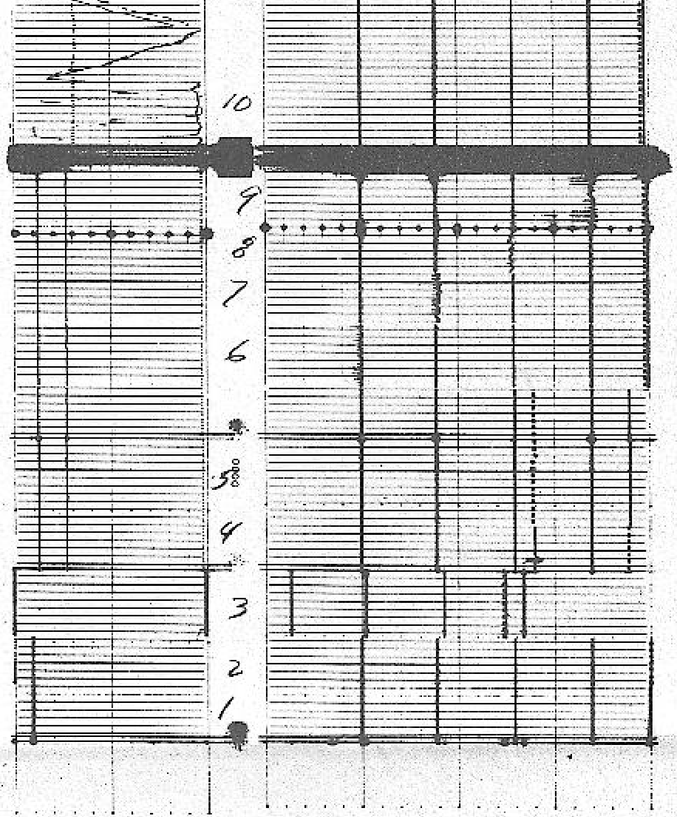
ORIENTATION	DEPTHS	CORRELATION CURVES ←CONDUCTIVITY
AZIMUTH		5. 0. NO. 1



NOTE:
DIGITAL DIPMETERS

END OF RECORD GAP IS ON DEVIATION CURVE.

LONG SPACING MARK IS ON CALIPER 2 - 4.