Schlumberger

FOUR – ARM HIGH RESOLUTION CONTINUOUS DIPMETER

COUNT [redacted]
FIELD
LOCATI
WELL BEOWAWE 85-18
COMPANY CHEVRON U.S.A., INC.

COMPANY CHEVRON U.S.A., INC.
WELL BEOWAWE 85-18
FIELD BEOWAWE GEYSERS
COUNTY LANDER STATE NEVADA

LOCATION 2960' SOUTH & 80' WEST FROM THE NORTHEAST 1/4 OF			Other Services: DI-SFL FDC/CNL/GR BHC CBL
API SERIAL NO.	SEC. 18	TWP 31N	RANGE 48E

Permanent Datum: GL ; Elev.: 4920
Log Measured From KB 15 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 4935
D.F. -
G.L. 4920

Date	5-11-80			
Run No.	TWO			
Depth—Driller	4543			
Depth—Logger (Schl.)	4543			
Btm. Log Interval	4318			
Top Log Interval	2937			
Casing—Driller	9 5/8" @ 2937	@	@	@
Casing—Logger	2937			
Bit Size	8 3/4"			
Type Fluid in Hole	GEL			
Dens. | Visc.	8.9 | 43			
pH | Fluid Loss	9.4 | 8 ml	ml	ml	ml
Source of Sample	CIRCULATED			
Rm @ Meas. Temp.	4.5 @ 52 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	4.68 @ 48 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	3.16 @ 58 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | M			
Rm @ BHT	1.07 @ 240F	@ °F	@ °F	@ °F
TIME Circulation Stopped	5-9 1830			
TIME Logger on Bottom	5-11 1300			
Max. Rec. Temp.	240 °F	°F	°F	°F
Equip. | Location	7763 | SAC			
Recorded By	ANDERSEN			
Witnessed By Mr.	IOVENETTI			

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

FOLD HERE

REMARKS: Service Order No. 123994 Magnetic Declination

HYDRALIC COMPENSATOR RUPTURED OPENING SONDE. RAN LOG WITHOUT PAD PRESSURE.

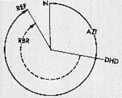
Run No.	1	2	3	4	ROLL NO.	INTERVAL
Tool Type	HDT					
HDP	CSU					
DDR | TTR	– | –					
DPI	– –					
HDM						
HDE						
HDS						
Adapter Head						
UG | CG | SAH						
5" Film | 10" Film | 60" Record	X					
Analog | Digital	X					
TIME Circulation Stopped	5-9 1830					
TIME Schl. on Bottom	5-11 1300					

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

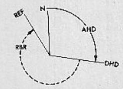
(AZI) AZIMUTH OF REFERENCE ELECTRODE = Clockwise angle from N to REF.
(RBR) RELATIVE BEARING = Clockwise angle from DHD to REF.
(AHD) AZIMUTH OF HOLE DEV. (TOOL AXIS) = Clockwise angle from N to DHD.



LOW ANGLE UNIT ☒

EXAMPLE

HDM - Low Angle Unit (0-36°)
AZI (solid curve) = 330°
RBR (dotted curve) = 230°
AHD = AZI – RBR = 330° – 230° = 100°



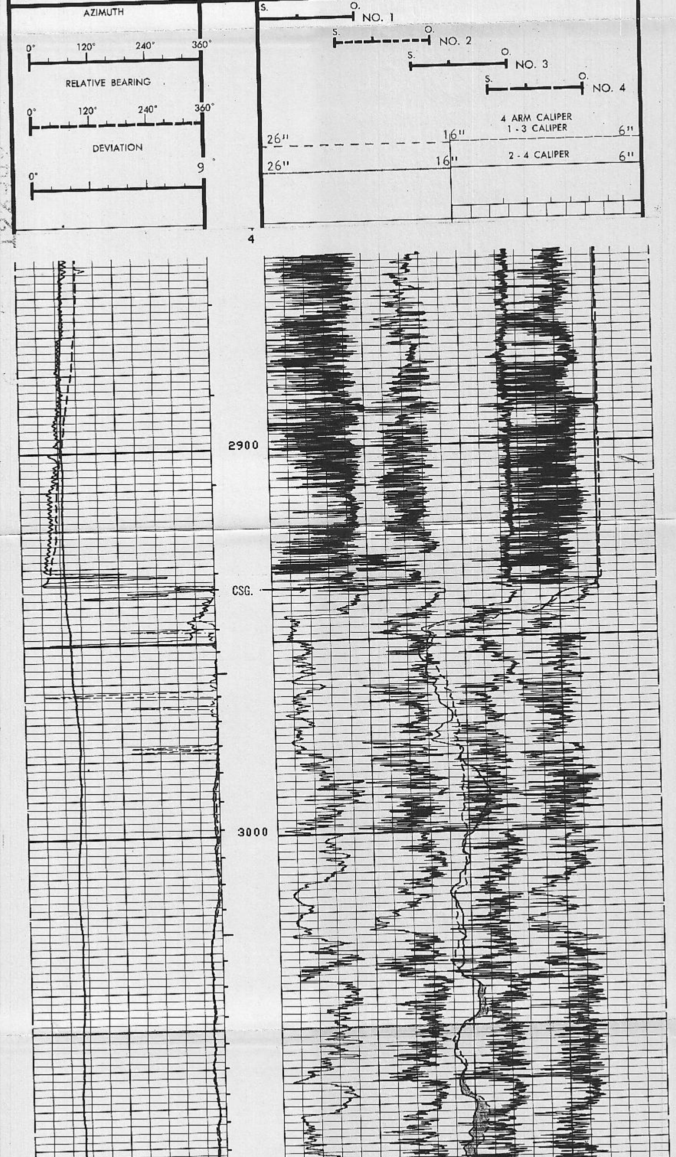
HIGH ANGLE UNIT ☐

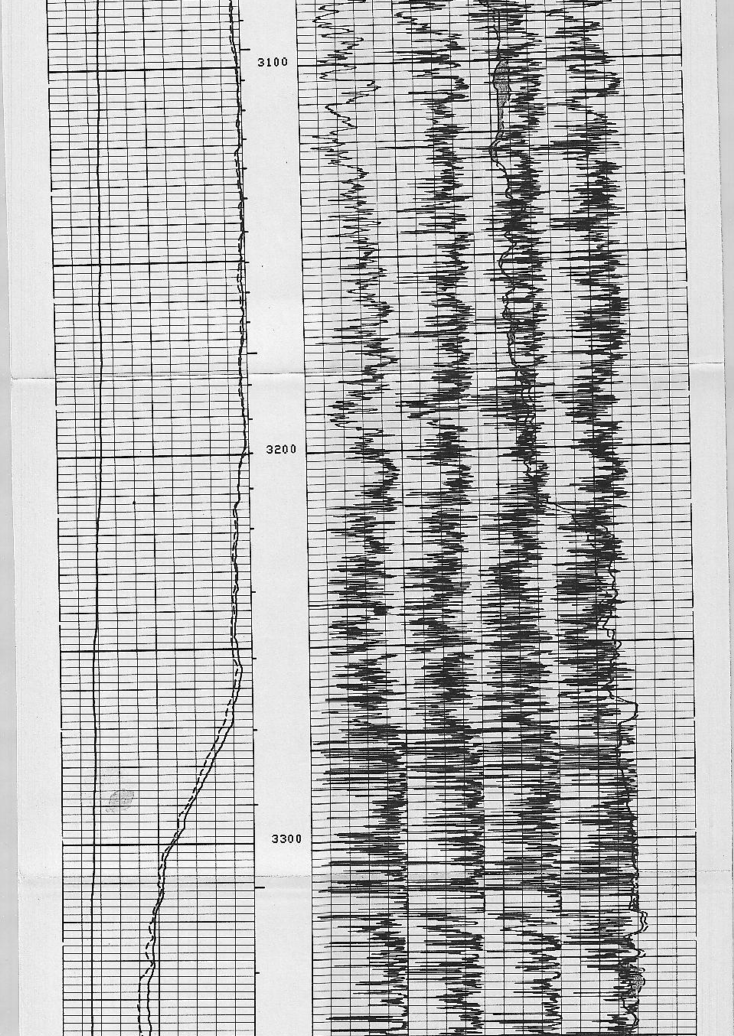
EXAMPLE

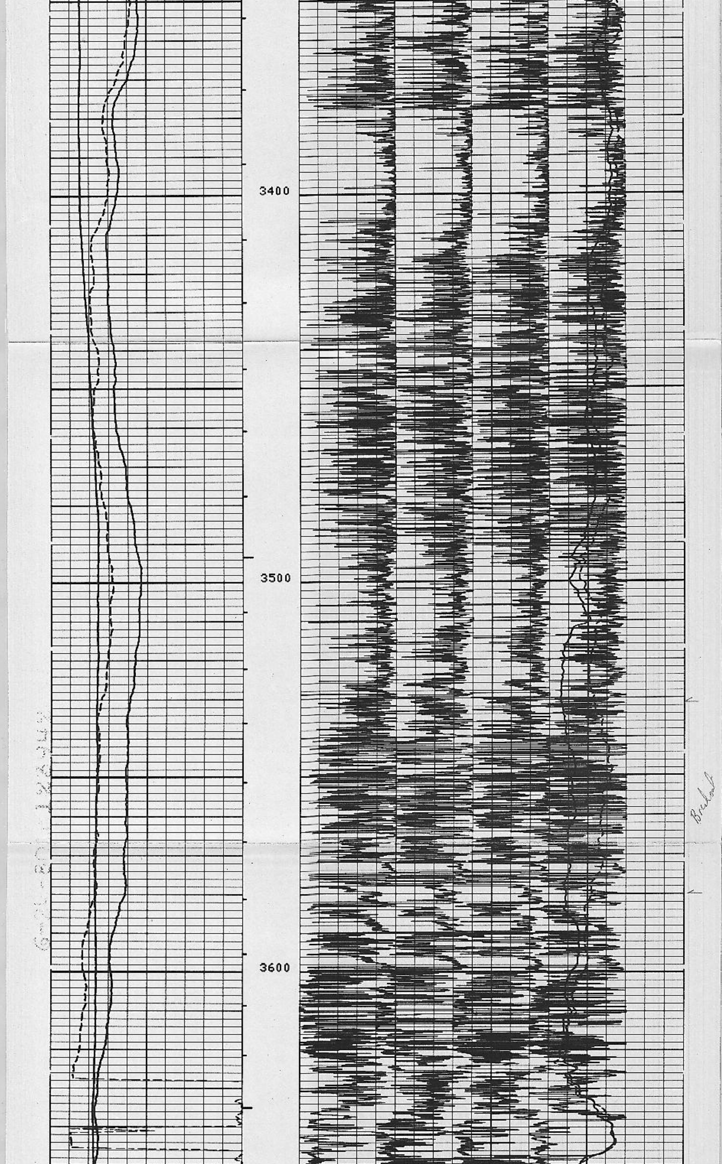
HDM - High Angle Unit (0-72°)
AHD (solid curve) = 100°
RBR (dotted curve) = 230°
AZI = AHD + RBR = 100° + 230° = 330°

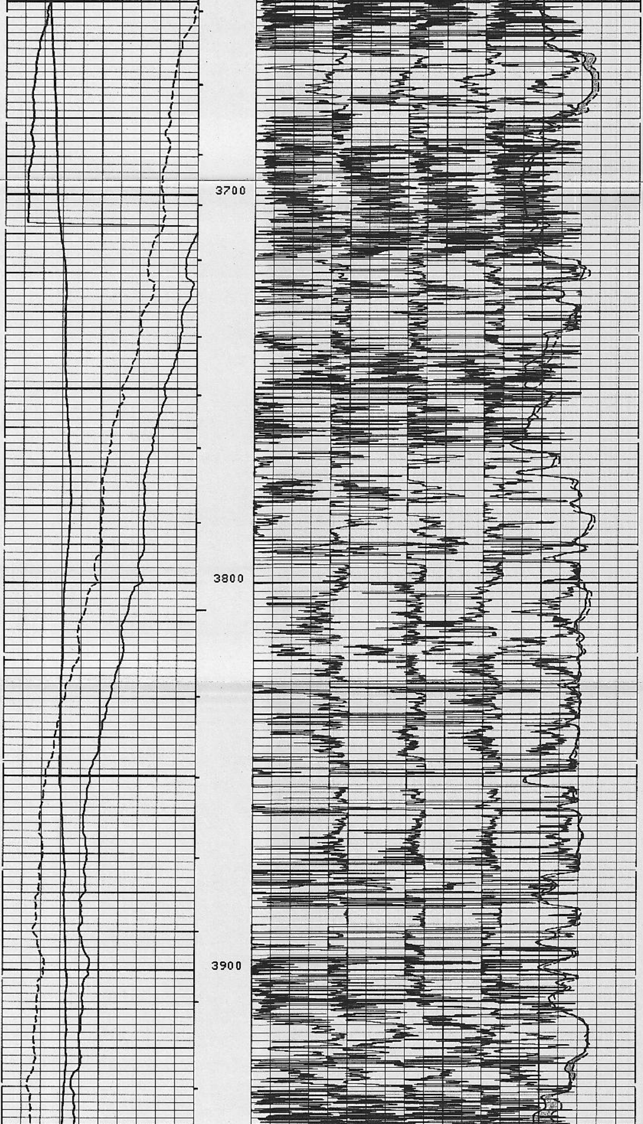
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

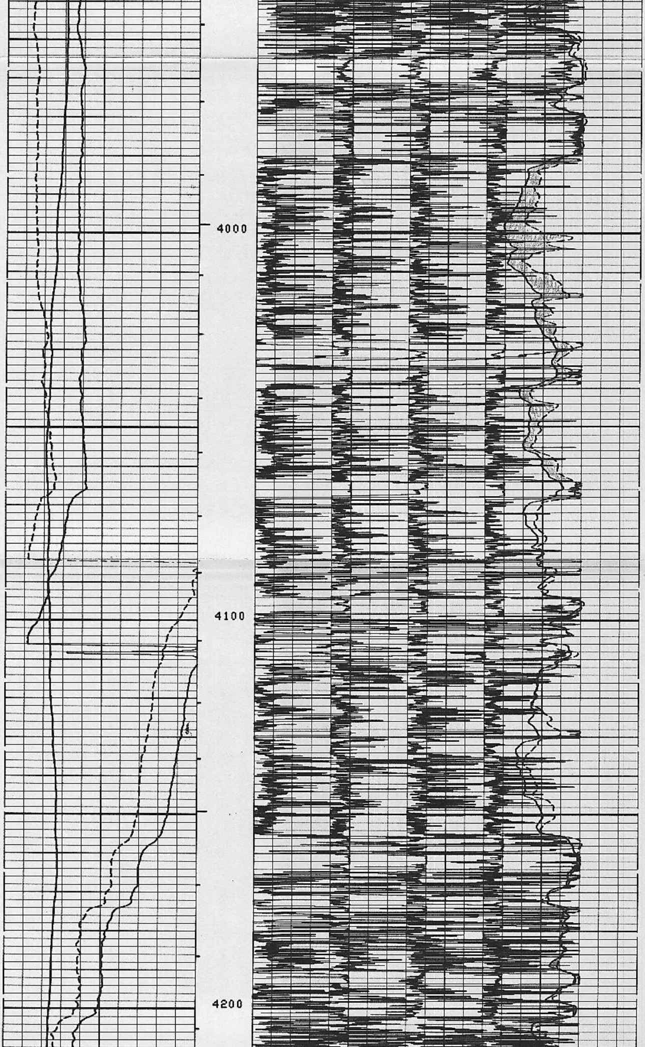
ORIENTATION	DEPTHS	**CORRELATION CURVES** ←CONDUCTIVITY

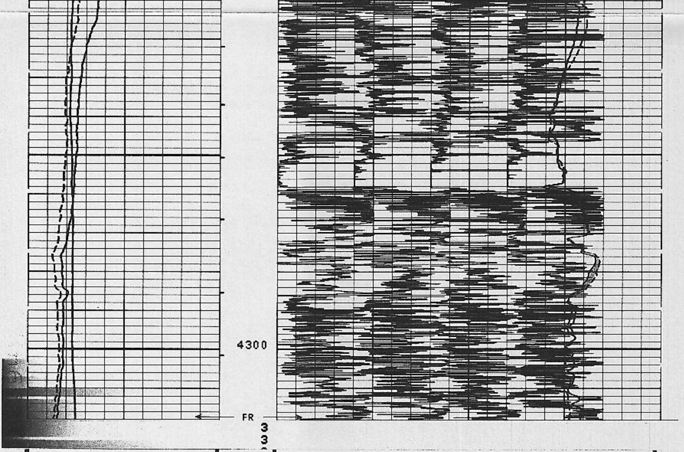




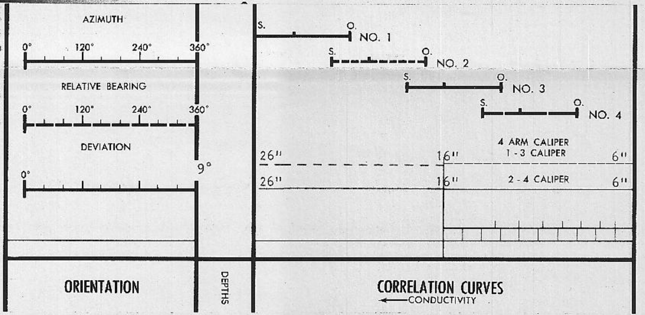




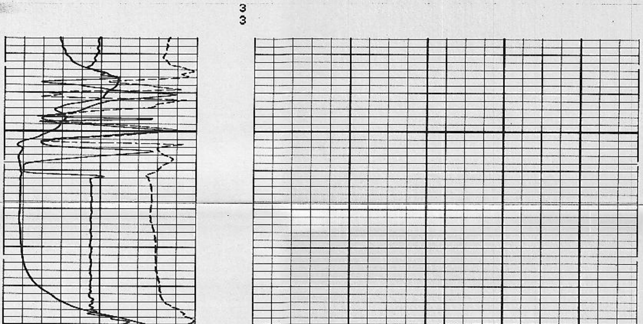


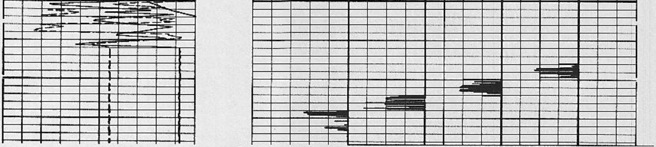


6-26-80



CALIBRATION BEFORE SURVEY





```
3
3
3
3
3
3
```

```
     DEVI(DEG )
-1.000          9.000
     RB  (DEG )
-40.00          360.0
     AZIM(DEG )
-40.00          360.0
```

```
                      C2  (INCH)
26.00                                      6.000
                      C1  (INCH)
26.00                                      6.000
```

```
                          PARAMETERS

NAME  UNIT  VALUE      NAME  UNIT  VALUE      NAME  UNIT  VALUE

DO          0.0        BHS         OPEN       FPHI        PHIX
STYP        STAN       MCT   DEG   36         BS    INCH  8.750
```

```
2
2
2
2
2
2
```

```
           BEFORE SURVEY CALIBRATION SUMMARY

   PERFORMED:     80/05/10
   PROGRAM FILE:  HDT    (VERSION    16.4    00/00/00)

  HDT               CALIPER CALIBRATION SUMMARY

            MEASURED                    CALIBRATED
          SMALL   LARGE               SMALL      LARGE        UNITS
     C1    6.9    13.4                 6.0       12.0          IN
     C2    6.8    13.4                 6.0       12.0          IN
                   2
                   2
```

COMPANY CHEVRON U.S.A., INC.

WELL BEOWAWE 85-18

FIELD BEOWAWE GEYSERS

COUNTY LANDER STATE NEVADA

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