Schlumberger

COMPENSATED FORMATION DENSITY LOG
Gamma Gamma

COUNTY WELD
FIELD or LOCATION SPINDLE
WELL GRANT BROS.NO.2 31-11 (1-68)
COMPANY CHAMPLIN PETRO.CO.

COMPANY CHAMPLIN PETROLEUM COMPANY
PROPERTY OF CENTRAL FILE
WELL GRANT BROTHERS NO. 2 31-11 (1-68)
FIELD SPINDLE
COUNTY WELD STATE COLORADO

Location: NW - NE
Other Services: IES

Sec. 11 Twp. 1N Rge. 68W

Permanent Datum: G.L. ; Elev.: 5018
Log Measured From K.B. , 10 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev.: K.B. 5028
D.F. -
G.L. 5018

Date	6-13-76			
Run No.	ONE			
Depth—Driller	5270			
Depth—Logger	5266			
Btm. Log Interval	5265			
Top Log Interval	4200			
Casing—Driller	8-5/8 @ 617	@	@	@
Casing—Logger	-			
Bit Size	7-7/8			
Type Fluid in Hole	F.G.M.			
Fluid Level	FULL			
Dens. | Visc.	9.3 | 48			
pH | Fluid Los	9.0 | 5.8 ml	ml	ml	ml
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	3.36 @ 64 °F	1.41 @ 152°F	@ °F	@ °F
Rmf @ Meas. Temp.	2.68 @ 64 °F	1.13 @ 152°F	@ °F	@ °F
Rmc @ Meas. Temp.	- @ - °F	- @ - °F	@ °F	@ °F
Source: Rmf | Rmc	PRESS | -			
Rm @ BHT	1.41 @ 152°F	@ °F	@ °F	@ °F
Time Since Circ.	4 HRS.			
Max. Rec. Temp.	159 °F	°F	°F	°F
Equip. | Location	7751 | GROSS			
Recorded By	J.E.GROSS			
Witnessed By	R.GRANT			

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

CHANGES IN MUD TYPE OR ADDITIONAL SAMPLES

Date | Sample No.		
Depth - Driller		
Type Fluid		
Source of Sample		
Rm @ Meas. Temp.	@ °F	@ °F
Rmf @ Meas. Temp.	@ °F	@ °F
Rmc @ Meas. Temp.	@ °F	@ °F
Rm @ BHT	@ °F	@ °F
Dens. | Visc.		
ph | Fluid Loss	ml	ml
% Water by Vol.		
% Oil by Vol.		
% Solids by Vol.		
Solids Av. Sp. Gr.		

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

LOGGING DATA

FDC Selectors					
Liquid Density	Grain Density	Hole Fluid	Porosity Scale	From	To
1.00	2.65	LIQUID	20/TK	ALL DEPTHS	

EQUIPMENT DATA

Run No.	ONE
Panel No.	EC-512
Cart No.	EA-459
Skid No.	D-1193
Sonde No.	E-481
Source	J-5063
Calibrator	489
GR Cart.	JAA-505
TTR	-
Mem Panel	B-400

REMARKS

Service Order No. - 17734

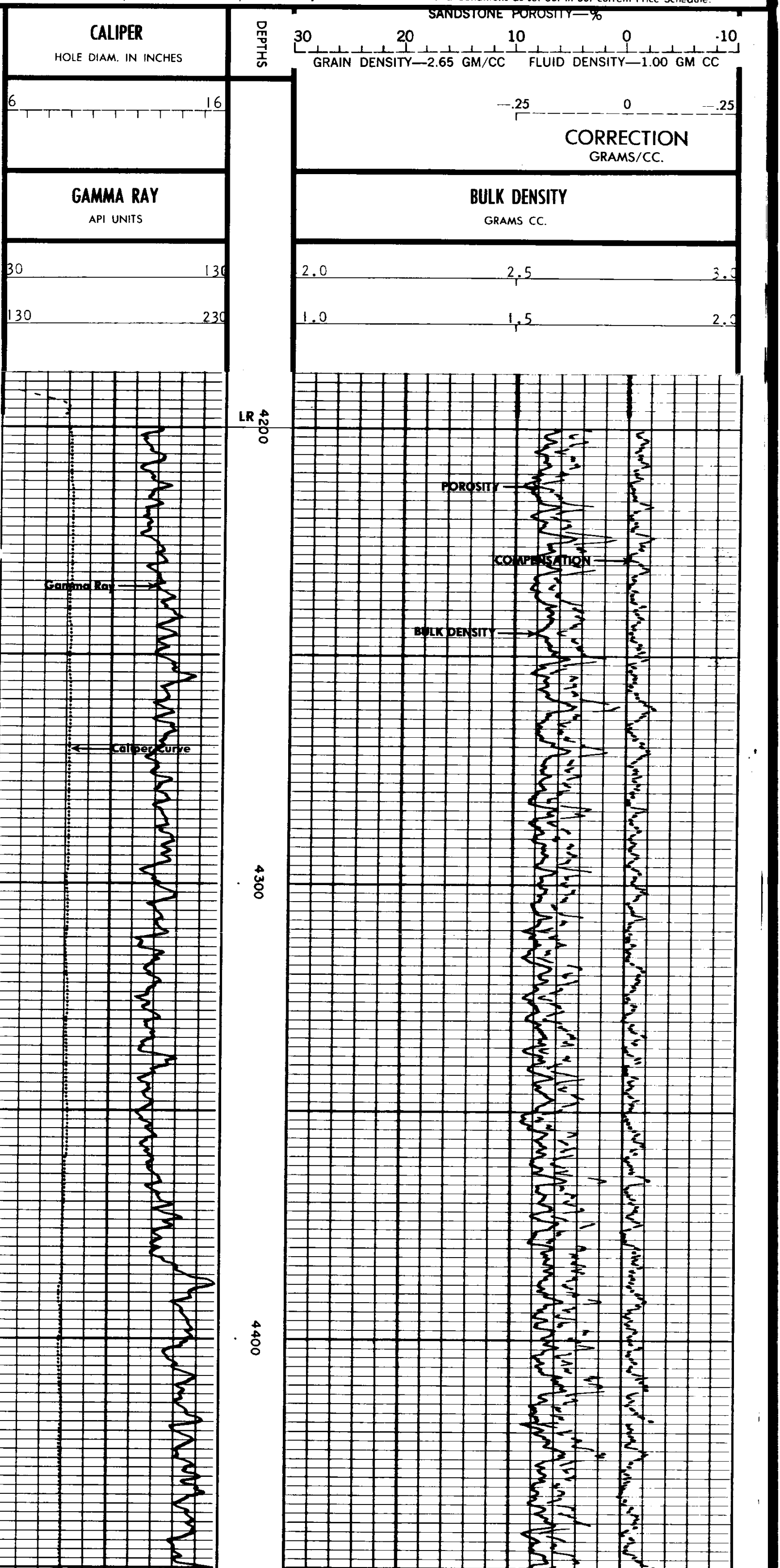
BIT SIZE/CASING DATA

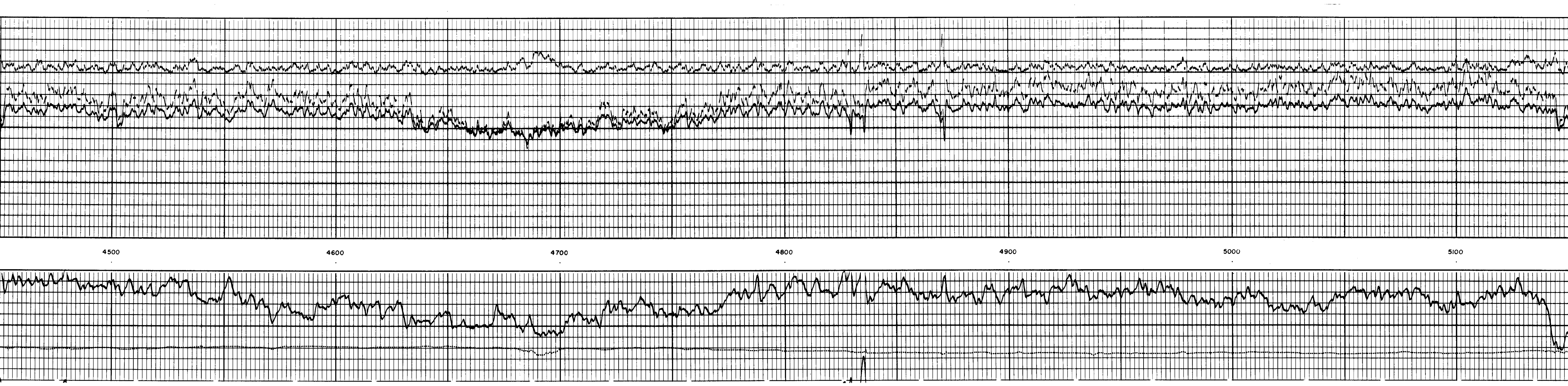
Bit	From	To	Csg. Size	Csg. Wt.	From	To
7-7/8	617	T.D.	8-5/8	24	SURF.	617

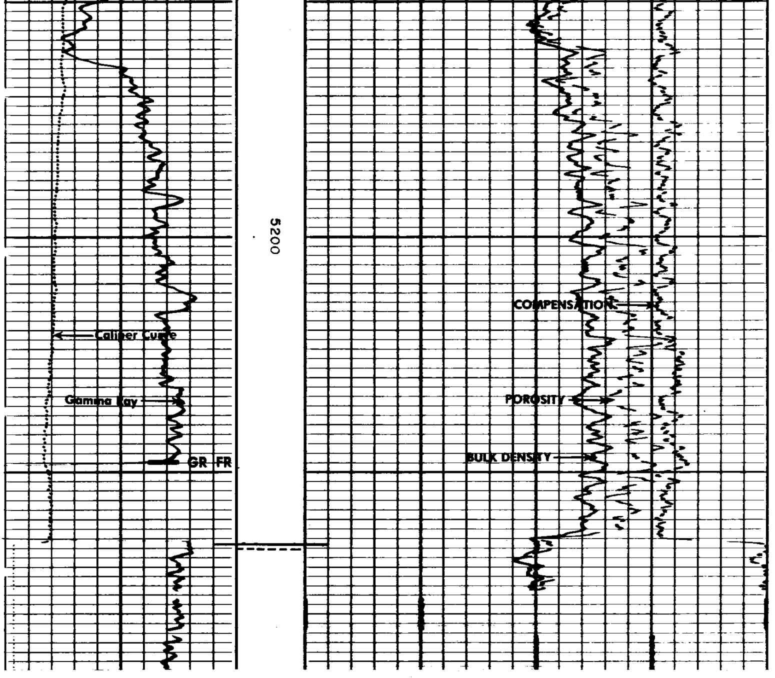
CALIBRATION DATA

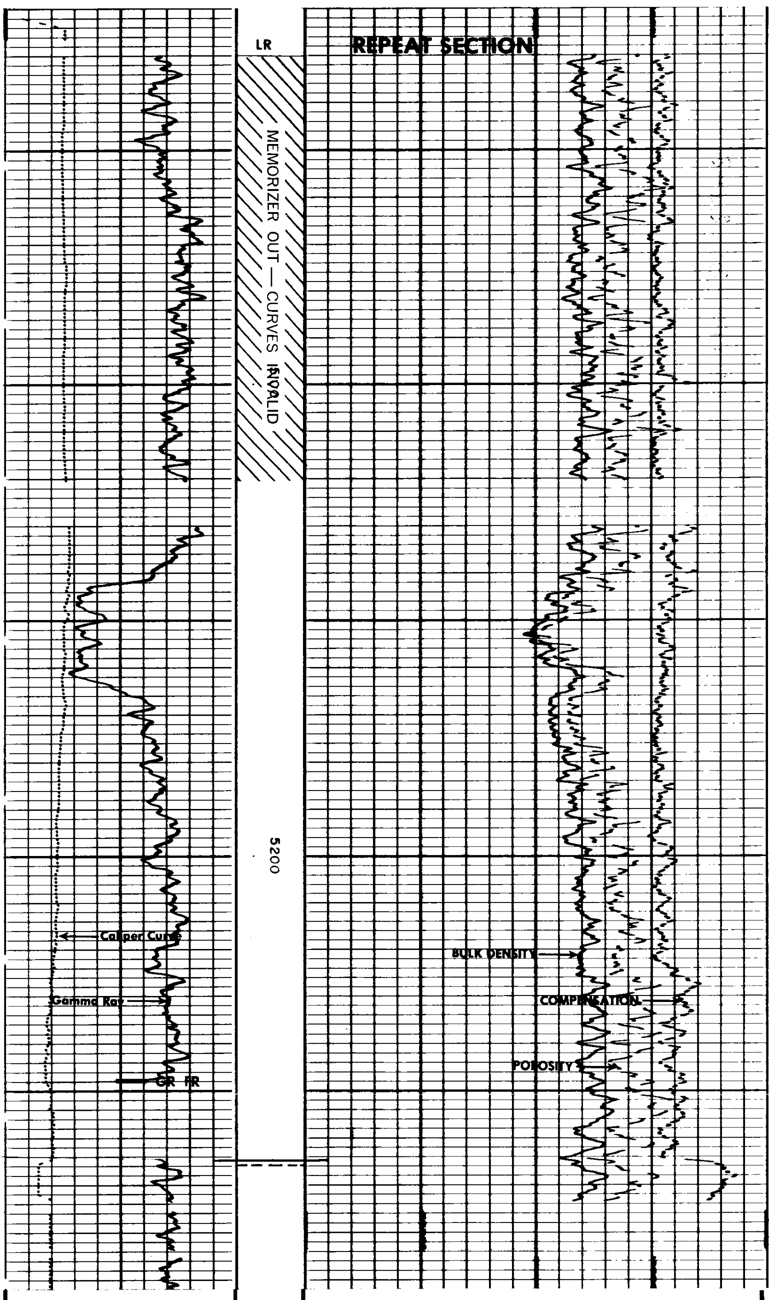
Run No.	Gamma Ray			FDC — Before Log — ACPS		FDC — After Log — ACPS	
	API Scale	Background CPS	Total CPS	P1	P2	P1	P2
1	0-165	130	530	444	722	444	722
2							
3							
4							

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.









30 130
130 230

GAMMA RAY
API UNITS

2.0 2.5 3.0
1.0 1.5 2.0

BULK DENSITY
GRAMS/CC.

6 16

CALIPER
HOLE DIAM. IN INCHES

DEPTHS

−.25 0 +.25

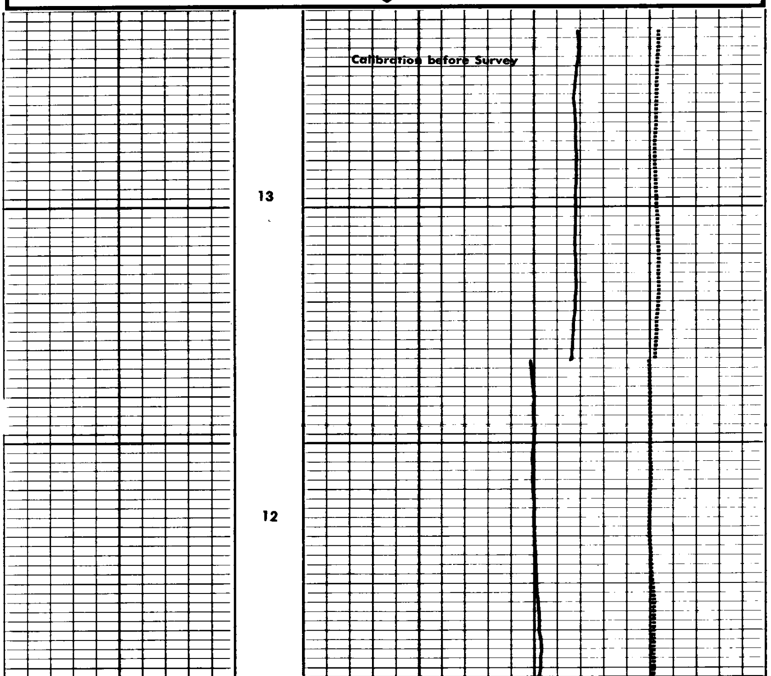
CORRECTION
GRAMS CC.

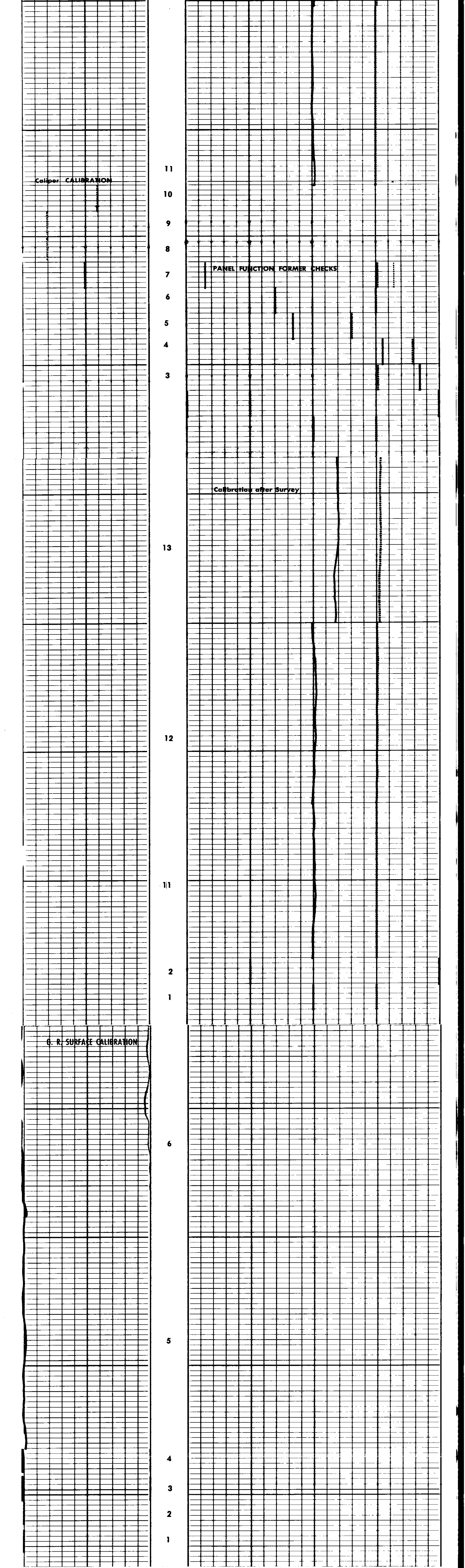
SANDSTONE POROSITY—%
30 20 10 0 -10
GRAIN DENSITY—2.65 GM/CC FLUID DENSITY—1.00 GM CC

COMPANY CHAMPLIN PETROLEUM COMPANY
WELL GRANT BROS. NO. 2 31-11 (1-68)
FIELD SPINDLE
COUNTY WELD STATE COLORADO

SCHL. FR 5265
SCHL. TD 5266
DRLR TD 5270
Elev:
KB 5028
DF -
GL 5018

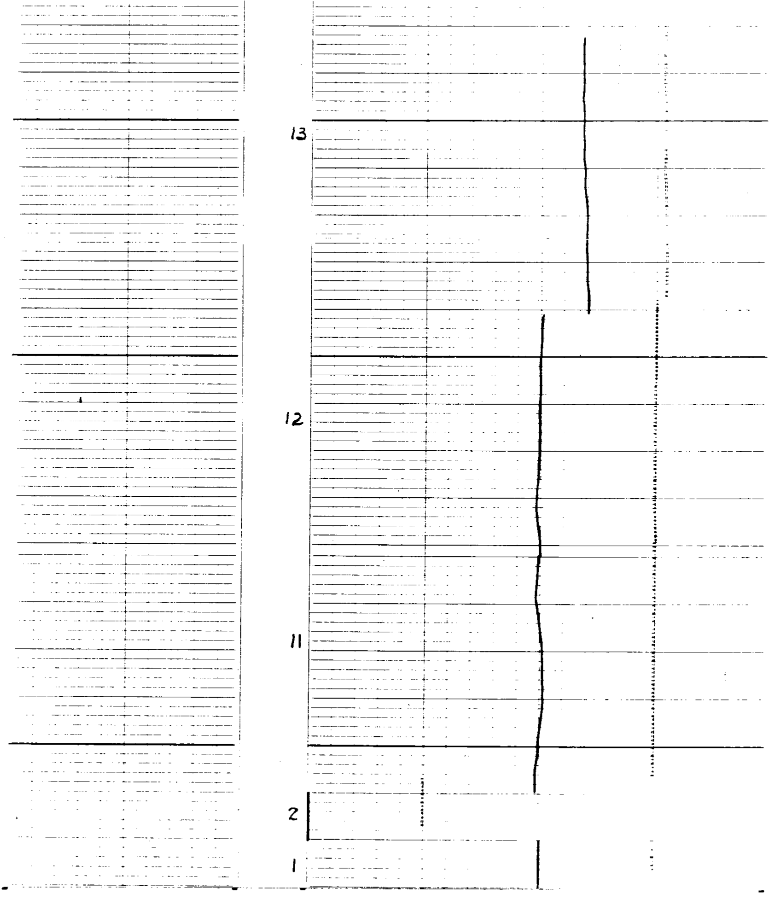
CALIBRATION RECORD





DATE: 5-12-76
GSR-J-5063
PDH-D-1193
SFT 106-489
ρ_1 442
ρ_2 724

7751 DENSITY - E SET



FORMATION DENSITY COMPENSATED CALIBRATION CODING

1. MECHANICAL ZERO
2. RECORDER SENSITIVITY

PANEL TEST

FDC LIQUID

	POS	ρ	$\Delta\rho$
3.	# 1	2.92	.00
4.	# 2	2.78	+.14
5.	# 3	2.42	−.10
6.	# 4	2.35	.00
7.	# 5	2.08	.01

8. MECHANICAL ZERO CALIPER
9. 8" RING
10. 12" RING
11. TOOL CALIBRATE # 1 SET $\rho = 2.50$
12. TOOL CALIBRATE # 2 SET $\Delta\rho = .00$
13. LOG POSITION $\rho = 2.59$, $\Delta\rho = .015$

GAMMA RAY CALIBRATION CODING

1. MECHANICAL ZERO
2. ELECTRICAL ZERO
3. RECORDER SENSITIVITY
4. MEMORIZER ADJUSTMENT
5. BACKGROUND
6. CALIBRATE - SOURCE IN PLACE

CALIBRATION RECORD

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