



# INDUCTION - ELECTRICAL LOG

SCHLUMBERGER WELL SURVEYING CORPORATION  
Houston, Texas

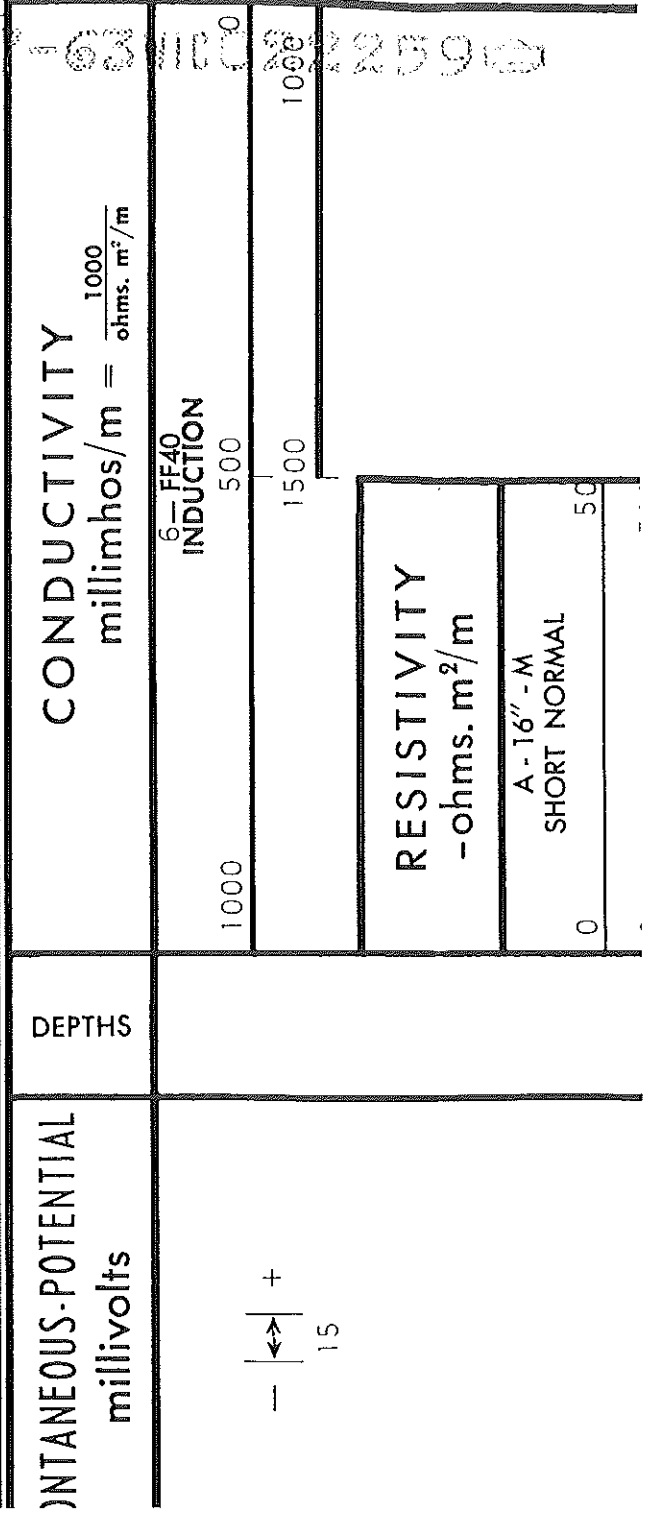
COUNTY <u>BUTLER</u> FIELD or LOCATION <u>SEC 33-25S-5E</u> WELL <u>PIERPOINT NO. 100-W</u>	COMPANY <u>CITIES SERVICE OIL COMPANY</u>	COMPANY <u>CITIES SERVICE OIL COMPANY</u> WELL <u>PIERPOINT NO. 100-W</u> FIELD <u>EL DORADO</u> COUNTY <u>BUTLER</u> STATE <u>KANSAS</u>
LOCATION <u>1310'W &amp; 88' S OF N/4 CORNER</u> Sec. <u>33</u> Twp. <u>25S</u> Rge. <u>5E</u>	Other Services: <u>SL-CAL.</u>	

Permanent Datum: <u>G.L.</u> , Elev. <u>1381.5</u>	Elev.: K.B. <u>1386.5</u>
Log Measured From <u>K.B.</u> , <u>5</u> Ft. Above Perm. Datum	D.F. <u>-----</u>
Drilling Measured From <u>K.B.</u>	G.L. <u>1381.5</u>

Date	<u>11-7-63</u>		
Run No.	<u>ONE</u>		
Depth—Driller	<u>2052</u>		
Depth—Logger	<u>2050</u>		
Btm. Log Interval	<u>2049</u>		
Top Log Interval	<u>659</u>		
Casing—Driller	<u>8 5/8@ 660</u>	<u>@</u>	<u>@</u>
Casing—Logger	<u>659</u>		
Bit Size	<u>7 7/8"</u>		
Type Fluid in Hole	<u>GEL</u>		
Dens.	<u>10</u>	<u>41</u>	
Visc.			
pH	<u>10</u>	<u>9.6 ml</u>	<u>ml</u>
Fluid Loss			
Source of Sample	<u>FLOW LINE</u>		
R <sub>m</sub> @ Meas. Temp.	<u>.728 @ 64 °F</u>	<u>@ °F</u>	<u>@ °F</u>
R <sub>mf</sub> @ Meas. Temp.	<u>.480 @ 62 °F</u>	<u>@ °F</u>	<u>@ °F</u>
R <sub>mc</sub> @ Meas. Temp.	<u>---- @ -- °F</u>	<u>@ °F</u>	<u>@ °F</u>
Source: R <sub>mf</sub> R <sub>mc</sub>	<u>FP</u>	<u>C</u>	
R <sub>m</sub> @ BHT	<u>.55 @ 85 °F</u>	<u>@ °F</u>	<u>@ °F</u>
Time Since Circ.	<u>2 HOURS</u>		
Max. Rec. Temp.	<u>85</u>	<u>°F</u>	<u>°F</u>

Sample No.	Mud Type or Additional Samples	Type Log	Depth	Scale Changes		Equipment Data
				Scale Up Hole	Scale Down Hole	
<u>11-7-ONE</u>						
<u>2052</u>	<u>GEL</u>					
	<u>Visc. 10</u>					
	<u>Fluid Loss 10</u>					
	<u>Flow Line</u>					
	<u>Meas. Temp. .728 @ 64 °F</u>					
	<u>Meas. Temp. .480 @ 62 °F</u>					
	<u>Meas. Temp. ---- @ -- °F</u>					
	<u>R<sub>mf</sub> R<sub>mc</sub> FP C</u>					
	<u>BHT .55 @ 85 °F</u>					
	<u>BHT .36 @ 85 °F</u>					
	<u>BHT --- @ -- °F</u>					

USED S.O.: 1 1/2" SBR-2  
 Used: CART. No.  
 PANEL No.  
 SONDE No.



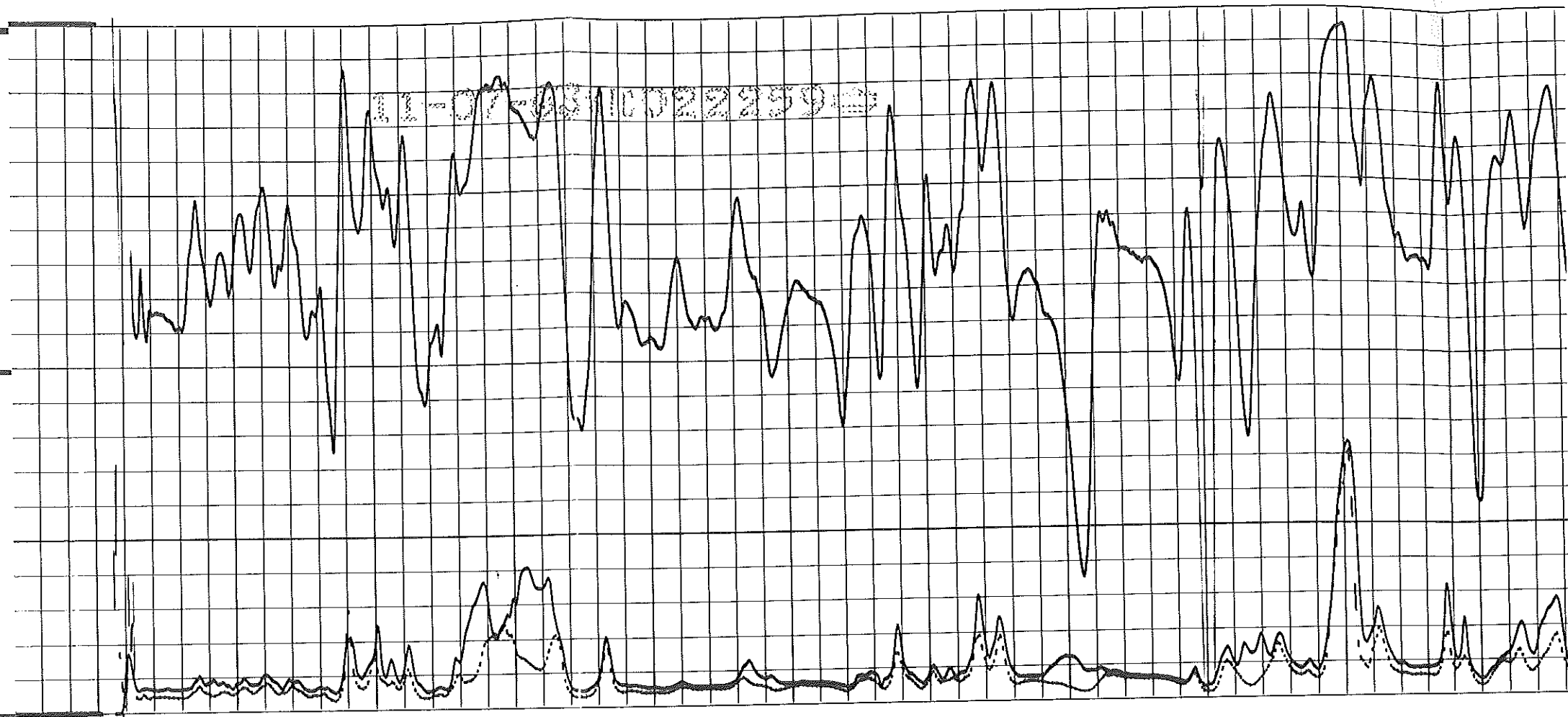
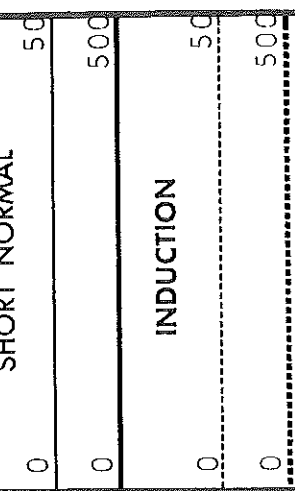
90

11-07-68 1022299

RESISTIVITY  
-ohms. m<sup>2</sup>/m

A-16"-M  
SHORT NORMAL

INDUCTION



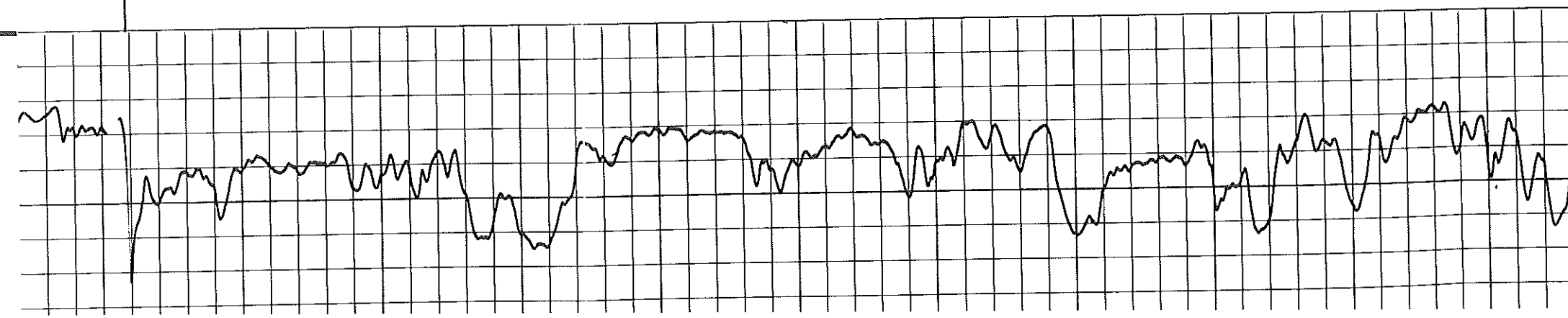
0700

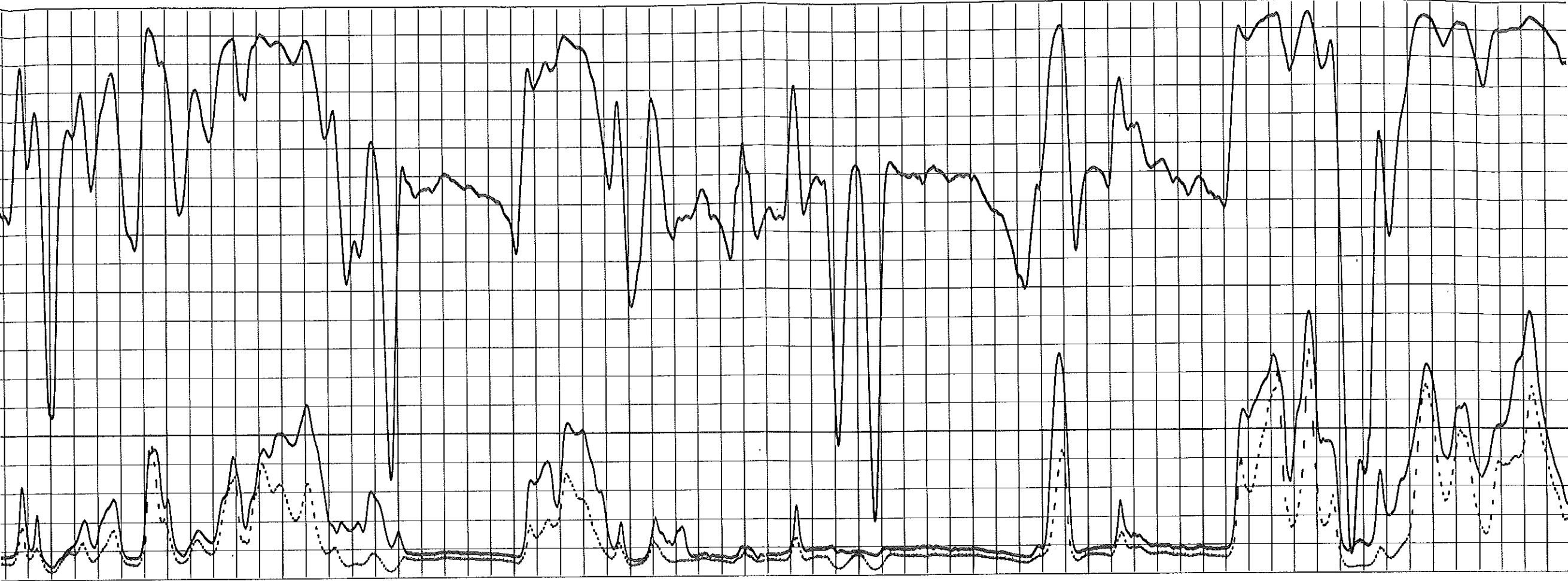
0800

0900

1000

1100





1200

1300

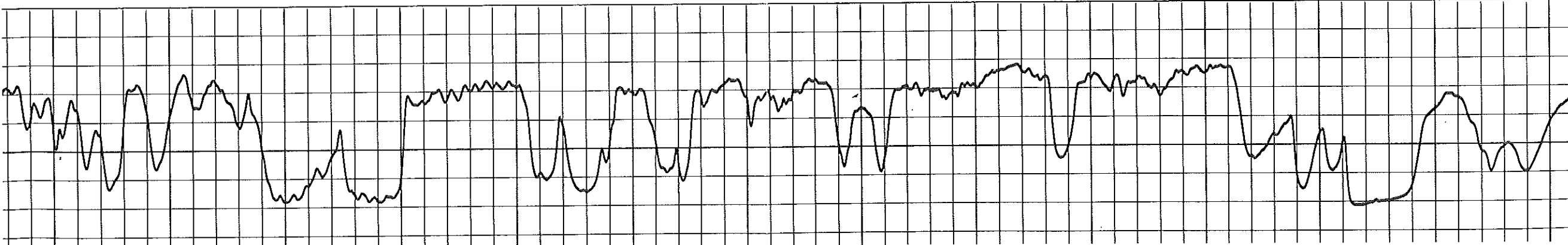
1400

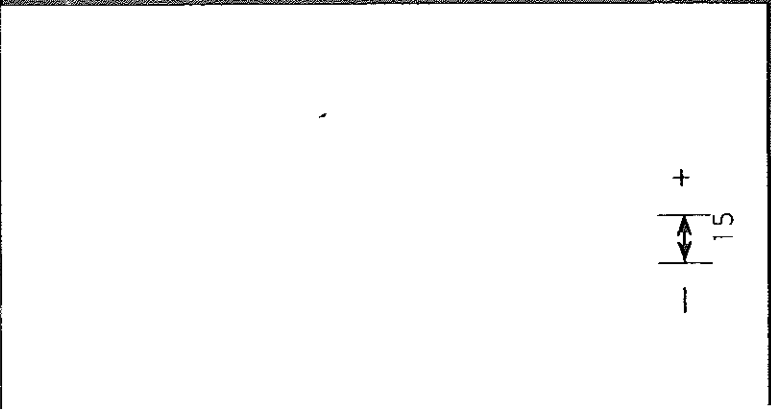
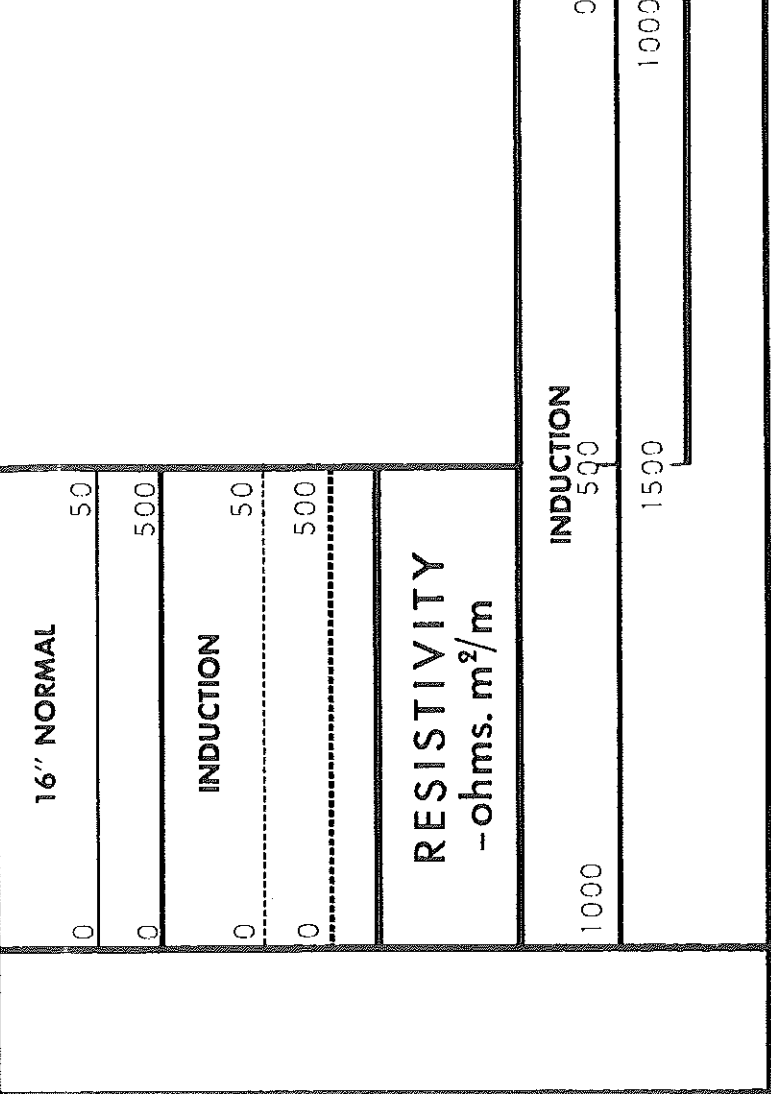
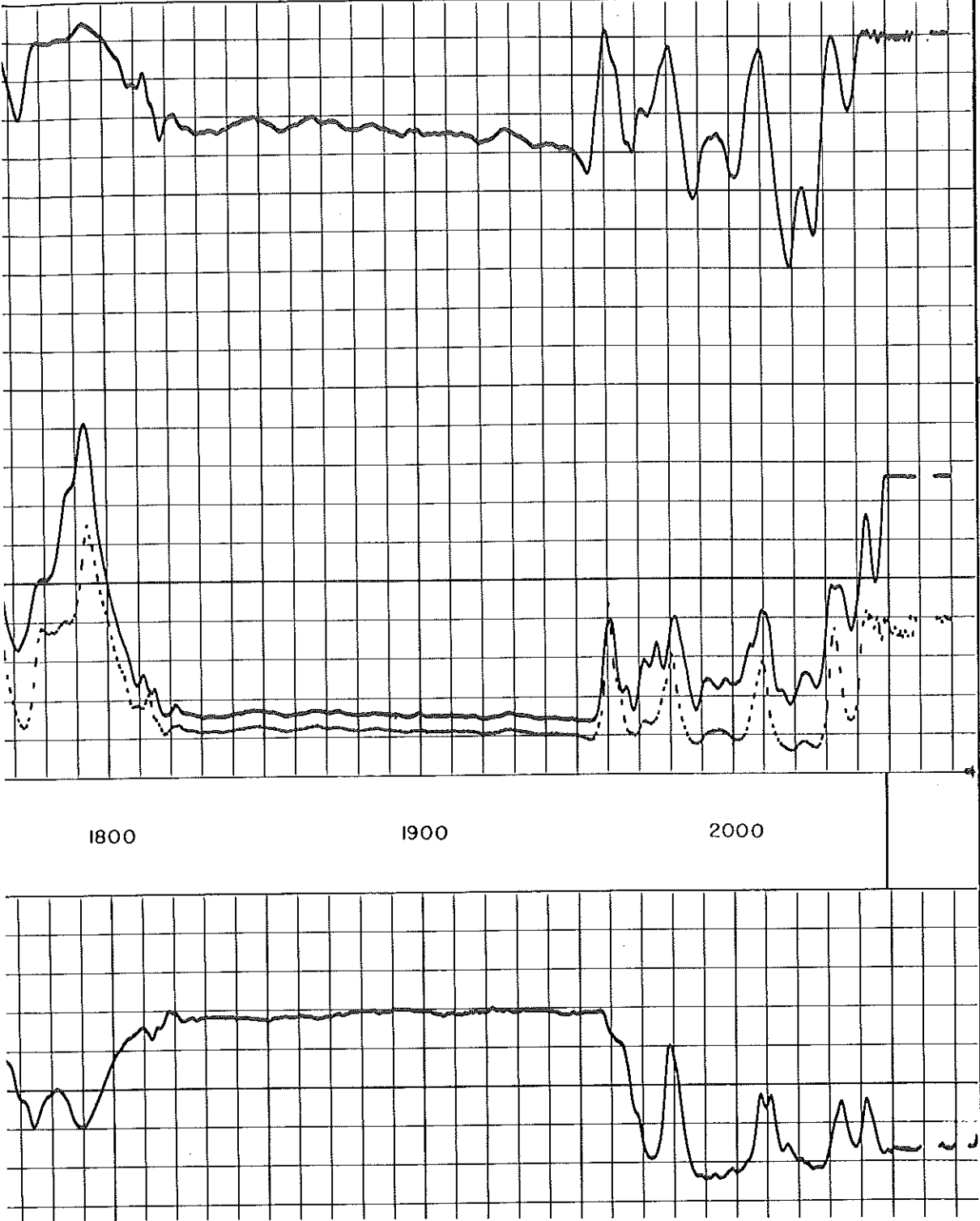
1500

1600

1700

1800





16" NORMAL  
0 50

INDUCTION  
0 500

INDUCTION  
0 50

INDUCTION  
0 500

RESISTIVITY  
-ohms. m<sup>2</sup>/m

INDUCTION  
1000 500 0

INDUCTION  
1500 1000

INSTANTANEOUS-POTENTIAL  
millivolts

DEPTHS

CONDUCTIVITY  
millimhos/m =  $\frac{1000}{\text{ohms. m}^2/\text{m}}$

COMPANY CITIES SERVICE OIL COMPANY  
 WELL PIERPOINT NO. 100-W  
 FIELD EL DORADO  
 COUNTY BUTLER STATE KANSAS  
 SWSC FR 2049  
 SWSC TD 2050  
 DRLR TD 2052  
 Elev: KB 1386.5  
 DF ----  
 GL 1381.5

DETAIL LOG

5" = 100'

INSTANTANEOUS-POTENTIAL  
millivolts

DEPTHS

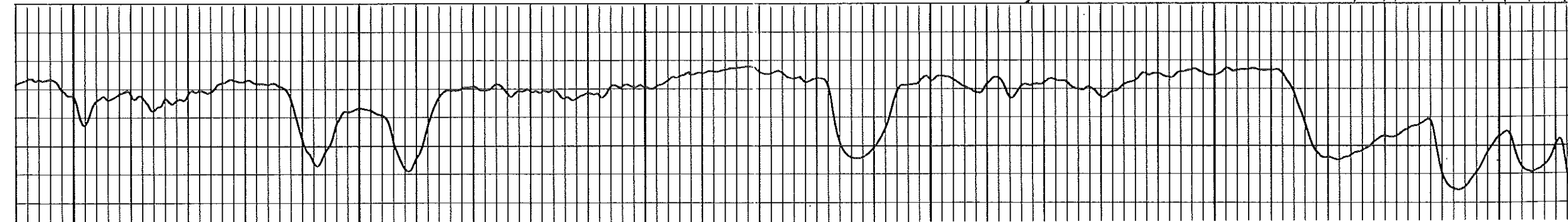
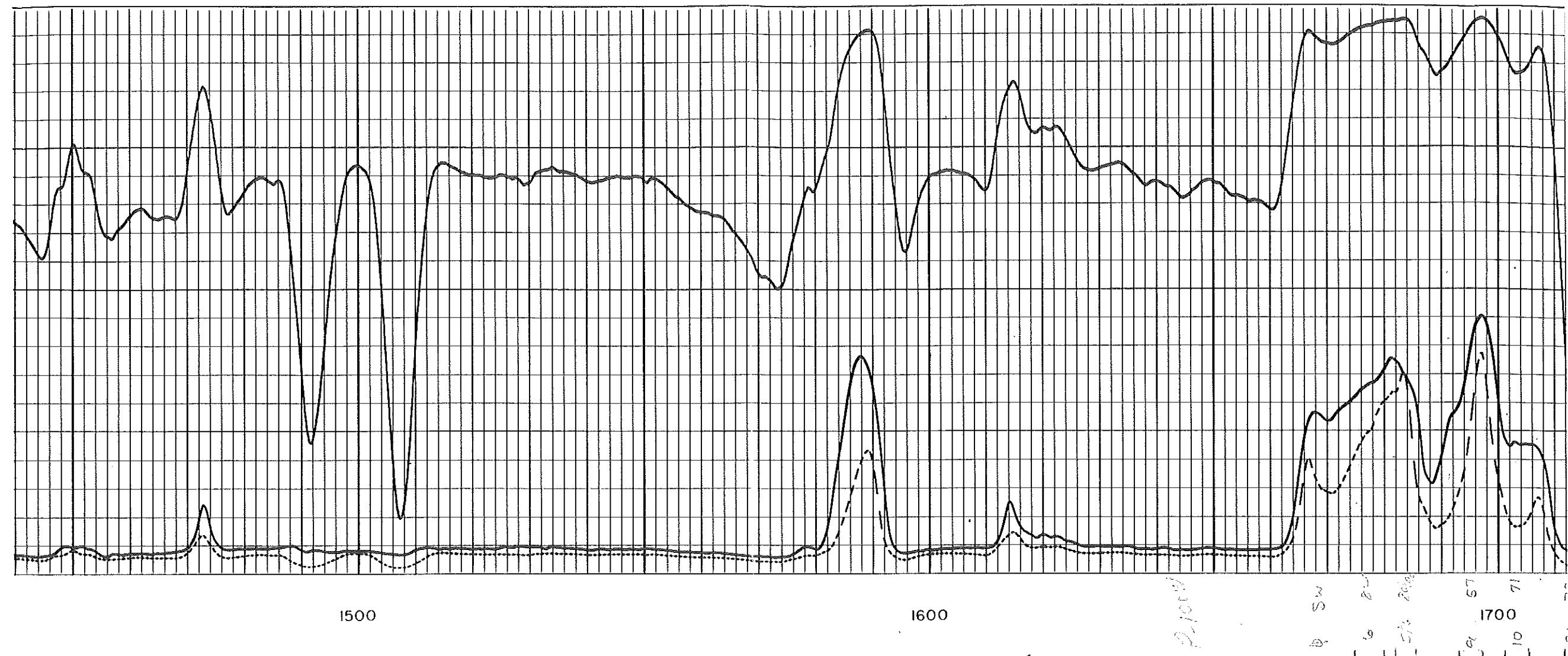
CONDUCTIVITY  
millimhos/m =  $\frac{1000}{\text{ohms. m}^2/\text{m}}$

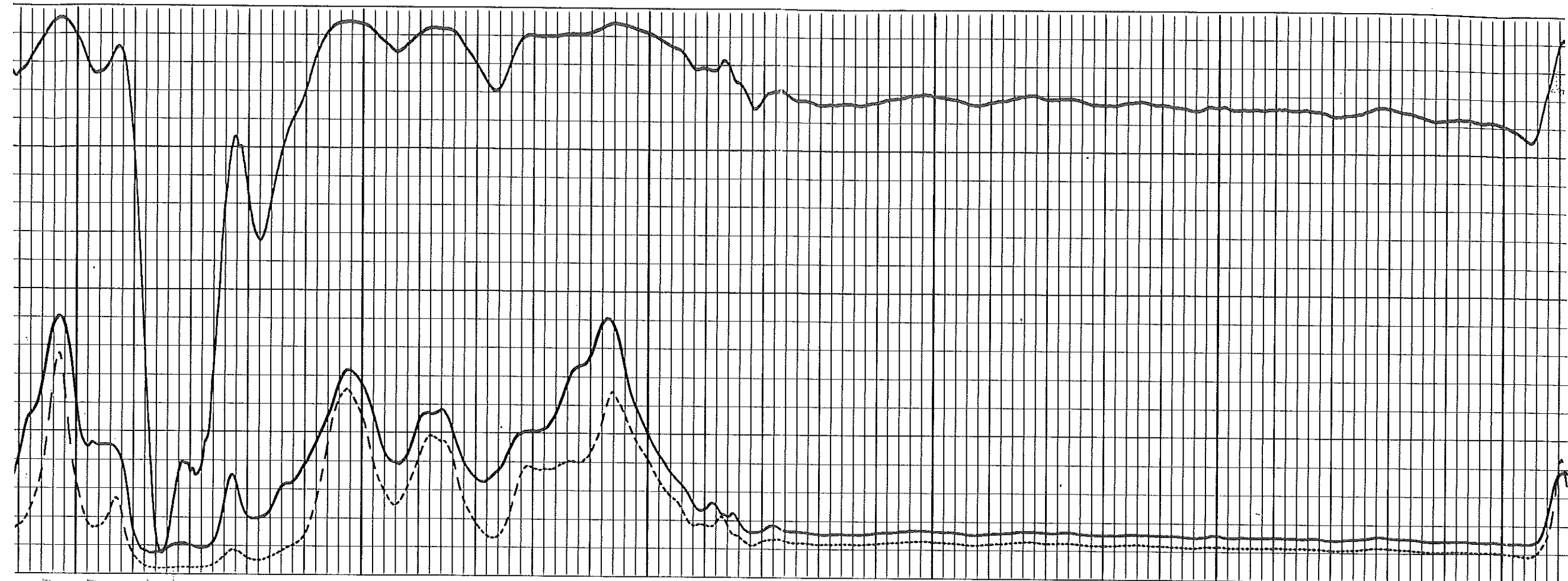
# DETAIL LOG

5" = 100'

<b>TANEOUS-POTENTIAL</b> millivolts	<b>DEPTHS</b>	<b>CONDUCTIVITY</b> millimhos/m = $\frac{1000}{\text{ohms. m}^2/\text{m}}$
+   ↑   ↓   -		INDUCTION 500 1000 1500
		RESISTIVITY -ohms. m <sup>2</sup> /m
		16" NORMAL 50
		INDUCTION 500
		INDUCTION 50
		INDUCTION 500





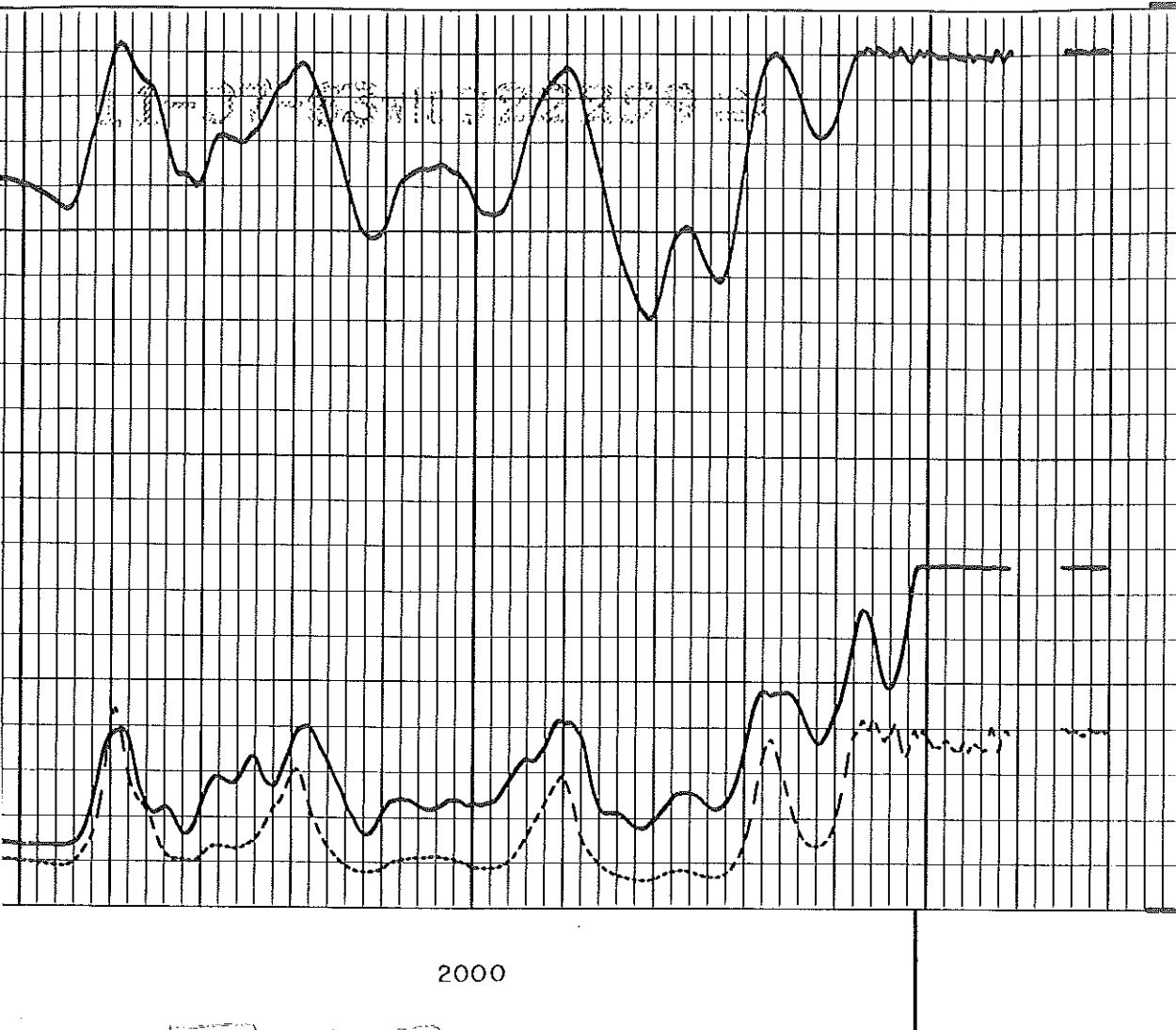
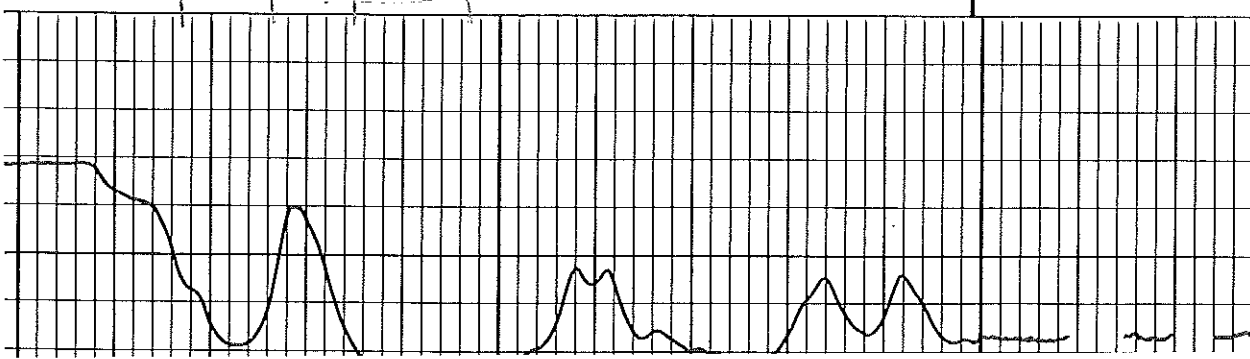


57  
16  
71  
72  
75  
77  
23  
20  
23

1800

1900





2000

— +  
|  
| 15  
|

NEOUS-POTENTIAL  
millivolts

DEPTHS

CONDUCTIVITY  
millimhos/m =  $\frac{1000}{\text{ohms. m}^2/\text{m}}$

1000 INDUCTION 0  
500 1500 1000

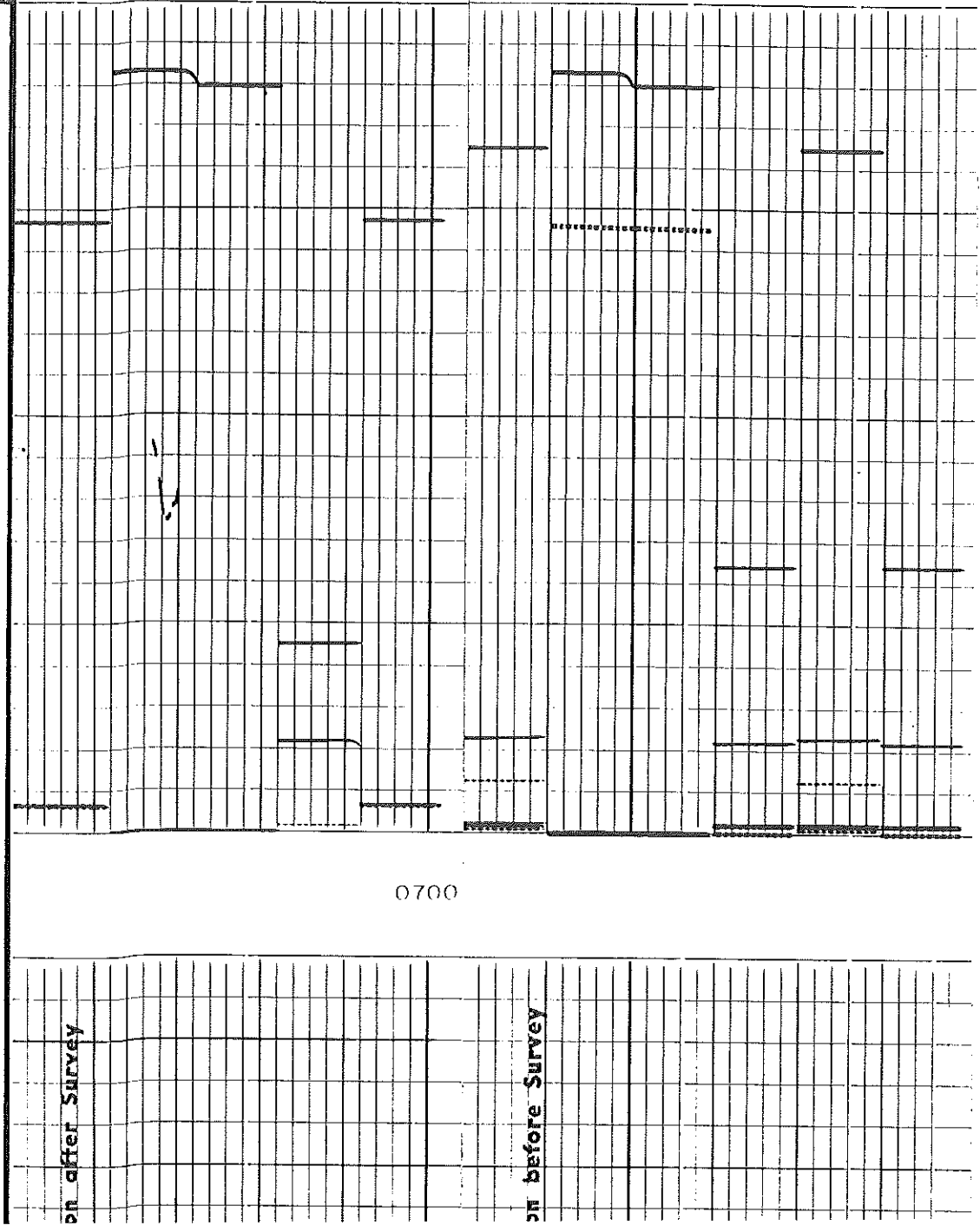
16" NORMAL 50  
0 500  
INDUCTION 50  
0 500  
RESISTIVITY  
-ohms. m<sup>2</sup>/m

NY CITIES SERVICE OIL COMPANY  
PIERPOINT NO. 100-W  
EL DORADO  
Y BUTLER STATE KANSAS

SWSC FR 2049  
SWSC TD 2050  
DRLR TD 2052  
Elev: KB 1386.5  
DF  
GL 1381.5

tion after Survey





# Analysis



DORADO		BUTLER		WELL		
				PIERPOINT NO. 100-W		
				$R_w$	$V_m$ OR $\rho_g$	
				0.044	21,000	
DEPTH	$\Delta T$ OR $\rho_b$	LOG DATA		FORMATION OR RESERVOIR DATA		
		RESISTIVITY ( $R_t$ )	RESISTIVITY ( $R_{xo}$ )	POROSITY ( $\phi$ )	WATER SATURATION ( $S_w$ )	REMARKS
75-1670				6.5	84	
71-1685				5/6	80/90	
93-1697				9	57	
91-1705				10	71	
12-1714				23	72	
14-1717				26	76	
17-1720				23.5	77	
10-1723				22	85	
15-1727				6.5	100	
19-1731				16.5	80	
11-1735				13.5	100	
16-1739				15	65	
18-1970				TIGHT & SHALY		
12-1974				13.5	59	
16-1979				14	48	SHALY
10-1984				7	90	
14-1986				11	82	

	17	40	SMALY
0-1984	7	90	
1-1986	11	82	
3-1989	16.5	62	
0-2000	11/12.5	73/80	
0-2003	11/13	78/88	
3-2008	8.5	85	
1-2012	6	95	
3-2016	12	90	
7-2021	15	85	
4-2028	10.5	100	

11-07-63 WIC022259

tion represents our best judgment. Nevertheless, since all interpretations are opinions based solely on inferences from electrical tests, we cannot and do not guarantee the accuracy or correctness of any interpretation and shall not, except in the case of our part, be liable or responsible for any loss, damages, or expenses that may be incurred or sustained resulting from this or other interpretations.

SCHLUMBERGER LOCATION: WICHITA, KANSAS 3201 ENGINEER: W. E. JACOBS