SCHLUMBERGER

MICROLOG WITH CALIPER

COUNTY	BANNER
FIELD or LOCATION	VOWERS SEC. 33-17N-54W
WELL	VOWERS UNIT NO.20
COMPANY	PAN AMERICAN PETROLEUM CORP.

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WELL	VOWERS UNIT NO.20
FIELD	VOWERS
LOCATION	15 SEC. 33-17N-54W
COUNTY	BANNER
STATE	NEBRASKA
Other Surveys	IES DR
Location of Well	820' FSL 1980' FEL
Elevation: K.B.	4699.5
D.F.	
or G.L.	4693

Log Depths Measured From K.B. 6.5 Ft. above G.L.

RUN No.	ONE		
Date	1-1-63		
First Reading	5955		
Last Reading	5600		
Feet Measured	355		
Depth Reached	5956		
Bottom Driller	5974		
Mud Nat.	CHEM-OIL-LCM		
Dens. | Visc.	9.9 | 90		
Mud Resist.	4.0 @ 63 °F	@ °F	@ °F
" Res. BHT	1.75 @ 148 °F	@ °F	@ °F
" pH	9.5 @ °F	@ °F	@ °F
" Wtr. Loss	4.4 CC 30 min	CC 30 min	CC 30 min
" Rmf	1.7 @ 148 °F	@ °F	@ °F
" Rmc	1.5 @ 148 °F	@ °F	@ °F
Mud Log: Rm	1.75		
Depth	5680'		
Bit Size	7-7/8"		
Sonde Type	PMS-A		
Pad Type	HYD.		
Opr. Rig Time	1 HOUR		
Truck No.	1564 KIM		
Recorded By	HANSON		
Witness	MR. REPP		

FOLD HERE

REMARKS: MUD SAMPLE FROM FLOW LINE

SPONTANEOUS - POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms — m²/m
Micro ☐ ES ☐ — ☐		Micro Inverse 1" x 1" 0 — 10 — 20
— |↔| +		Micro Normal 2" 0 — 10 — 20
MICROCALIPER Hole Diameter in Inches 6 — 16	L.R. 5600	

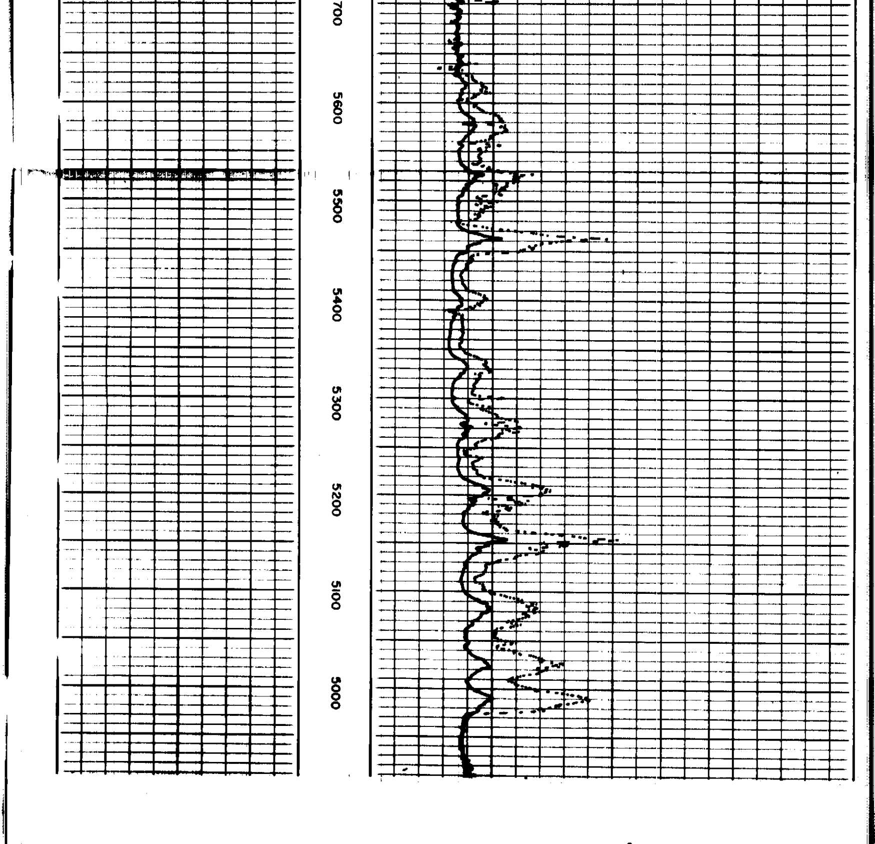
SPONTANEOUS - POTENTIAL millivolts	DEPTHS	RESISTIVITY ohms — m²/m
MICROCALIPER Hole Diameter in Inches 6 — 16		Micro Inverse 1" x 1" 0 — 10 — 20
— |↔| + Micro ☐ ES ☐ — ☐		Micro Normal 2" 0 — 10 — 20

COMPANY PAN AMERICAN PETROLEUM CORPORATION
WELL VOWERS UNIT NO.20
FIELD VOWERS - LOC. 820' FSL, 1980' FEL SEC. 33-17N-54W
COUNTY BANNER STATE NEBRASKA

Rm 4.0 @ 63 °F SWSC FR 5955
Rmf 1.7 @ 148 °F SWSC TD 5956
Rmc 1.5 @ 148 °F DRLR TD 5974
BHT 148 °F Elev: KB 4699.5 DF GL 4693

SURVEY WITH SONDE CLOSED

	DEPTHS	RESISTIVITY ohms — m²/m
Apparent Rm 1.75 Ω m²/m Depth 5680 ft.		0 — 5 — 10



COMPANY: PAN AMERICAN PETROLEUM CORPORATION LOCATION: 820' FSL, 1980' FEL SEC. 33-17N-54W
WELL: VOWERS UNIT NO.20 COUNTY: BANNER STATE: NEBRASKA

First in the Field — *Foremost in Research*