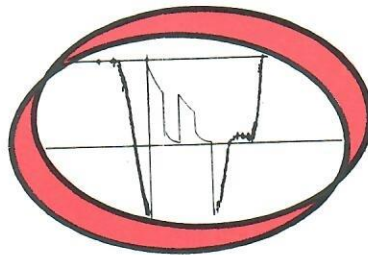


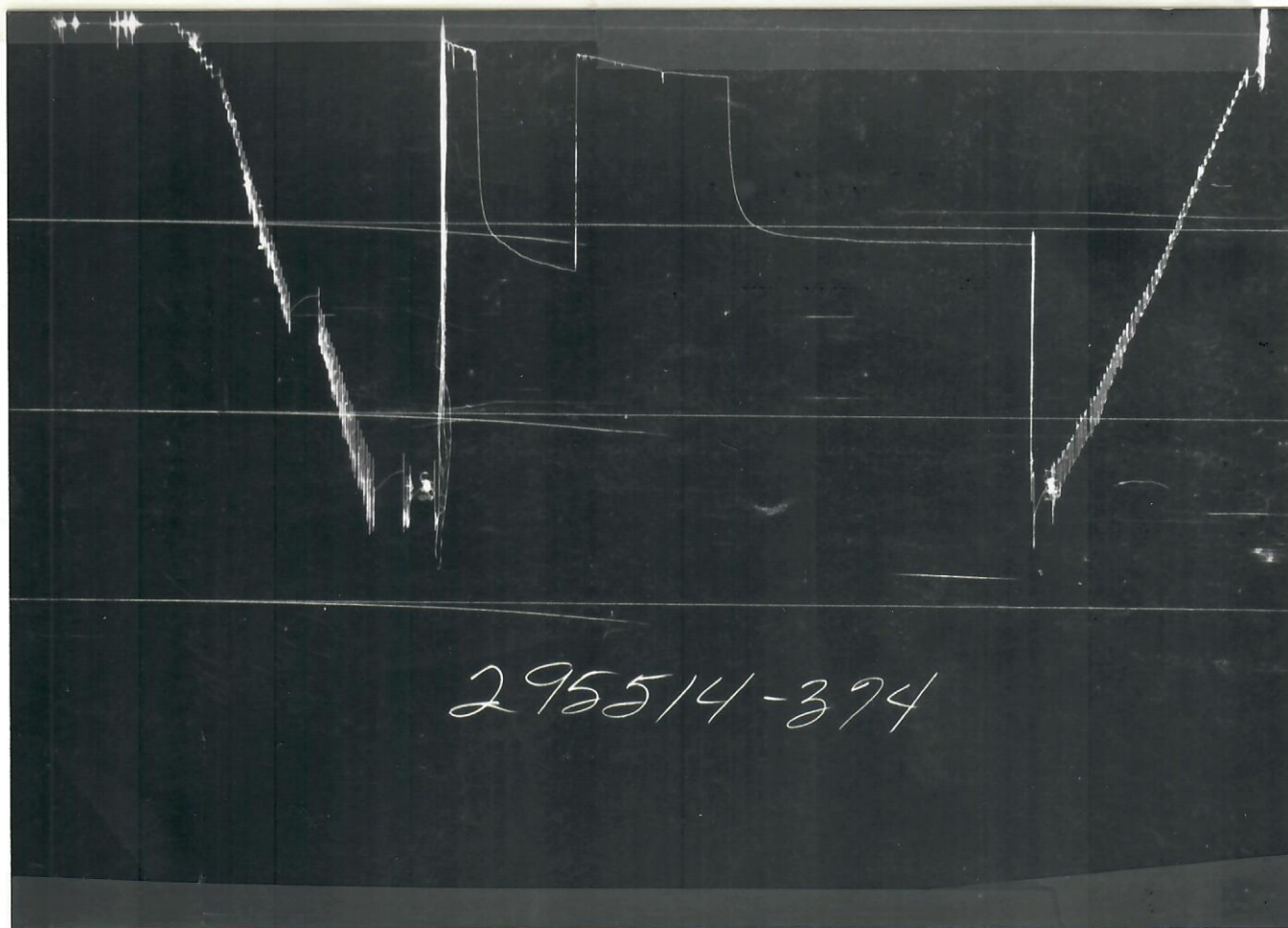
# Formation Testing Service Report



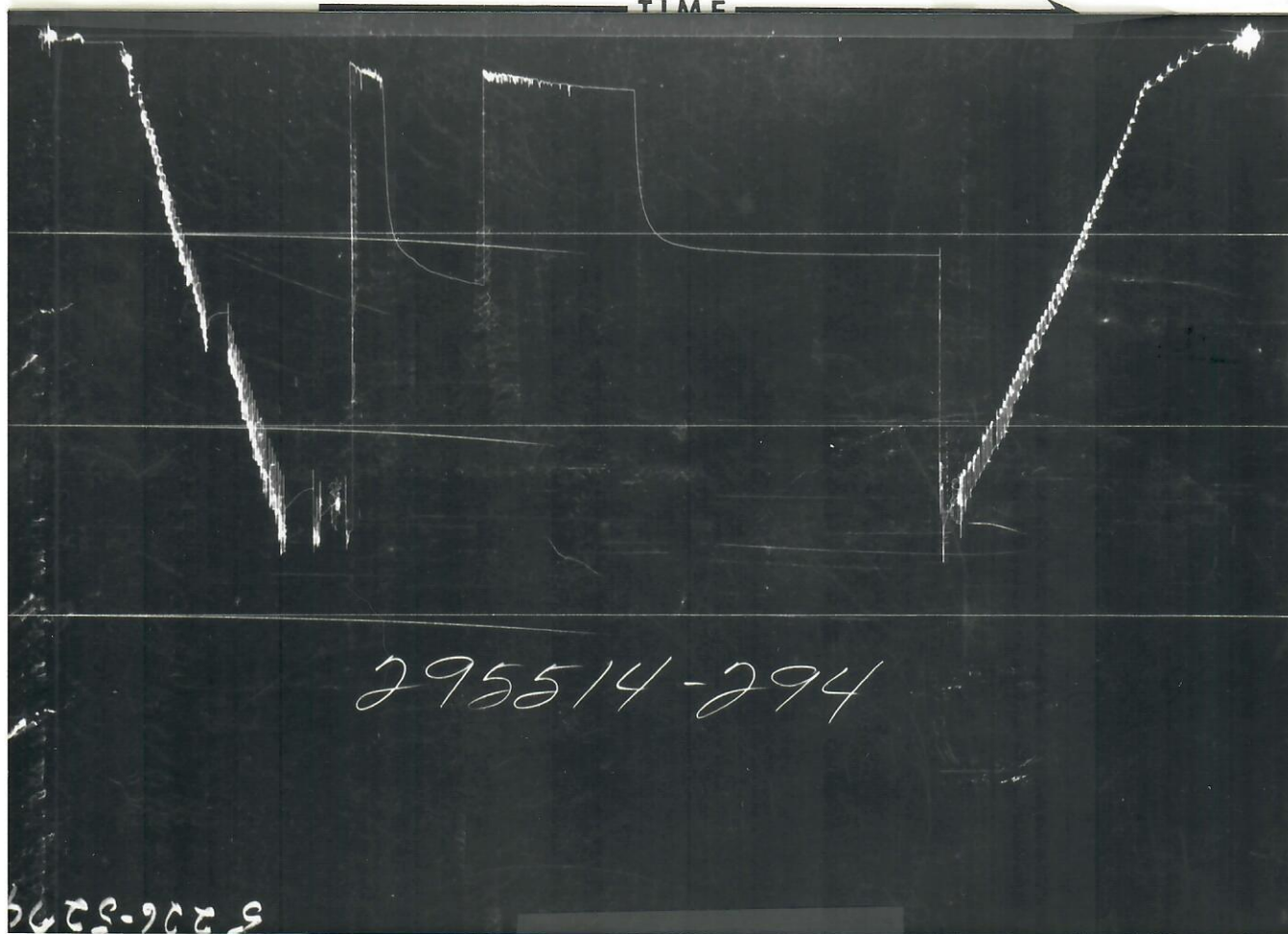
BEST IMAGE  
AVAILABLE

**HALLIBURTON SERVICES**  
DUNCAN, OKLAHOMA

↑ PRESSURE ↓



TIME →



Each Horizontal Line Equal to 1000 p.s.i.

BEST IMAGE  
AVAILABLE



LITTLE'S 102548 5M 9/76



Gauge No. 374			Depth 5215			Clock No. 18765			12 hour		Ticket No. 295514				
First Flow Period			First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	66	.0000		120	.0000	130	.0000		237					
1	.0276*	81	.0267		888	.0997	154	.1063**		986					
2	.0483	89	.0535		1019	.1993	181	.1860		1029					
3	.0689	98	.0802		1065	.2990	201	.2656		1048					
4	.0896	108	.1069		1093	.3986	219	.3453		1056					
5	.1103	114	.1337		1116	.4983	230	.4250		1060					
6	.1310	120	.1604		1142	.5980	237	.5047		1066					
7			.1871		1163			.5844		1070					
8			.2138		1179			.6641		1071					
9			.2406		1190			.7438		1073					
10			.2673		1200			.8235		1073					
11			.2940		1205			.9032		1074					
12			.3208		1216			.9829		1075					
13			.3475		1225			1.0625		1075					
14			.3742		1231			1.1422		1075					
15			.4010		1239			1.2220		1077					

Gauge No. 294			Depth 5270			Clock No. 3247			12 hour	
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.0000	126	.0000		217	.0000	171	.0000		266
1	.0267*	177	.0267		908	.0995	189	.1061**		1014
2	.0468	267	.0535		1043	.1990	212	.1856		1055
3	.0668	177	.0802		1092	.2985	237	.2652		1074
4	.0869	189	.1069		1121	.3980	253	.3448		1082
5	.1069	196	.1337		1146	.4975	259	.4243		1086
6	.1270	217	.1604		1171	.5970	266	.5039		1093
7			.1871		1193			.5834		1096
8			.2138		1207			.6630		1099
9			.2406		1217			.7426		1099
10			.2673		1226			.8221		1100
11			.2940		1232			.9017		1101
12			.3208		1243			.9812		1103
13			.3475		1254			1.0608		1103
14			.3742		1259			1.1404		1104
15			.4010		1268			1.2200		1105

Reading Interval 3 4 15 12

REMARKS: \* - first interval is equal to 4 minutes, \*\* - 16 minutes.

Minutes



BEST IMAGE  
AVAILABLE

Casing perms. \_\_\_\_\_ Bottom choke \_\_\_\_\_ Surf. temp \_\_\_\_\_ °F Ticket No. 295514  
Gas gravity \_\_\_\_\_ Oil gravity \_\_\_\_\_ GOR \_\_\_\_\_  
Spec. gravity \_\_\_\_\_ Chlorides \_\_\_\_\_ ppm Res. \_\_\_\_\_ @ \_\_\_\_\_ °F  
INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE \_\_\_\_\_

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

[illegible]



	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing .....				
Reversing Sub .....	5.75"	2.75"	1'	
Water Cushion Valve .....				
Drill Pipe .....	5"	4.276"	4776'	
Drill Collars .....	6"	2.25"	464'	
Handling Sub & Choke Assembly .....	5.87"	3"	5'	
Dual CIP Valve .....				
Dual CIP Sampler .....	5"	.87"	7'	5209'
Hydro-Spring Tester .....	5"	.75"	5'	5213'
Multiple CIP Sampler .....				
Extension Joint .....				
AP Running Case .....	5"	3.06"	4'	5215'
Hydraulic Jar .....	5.03"	1.75"	5'	
VR Safety Joint .....	5"	1"	3'	
Pressure Equalizing Crossover .....				
Packer Assembly .....	6.75"	1.53"	6'	5226'
Distributor .....				
Packer Assembly .....				
Flush Joint Anchor .....				
Pressure Equalizing Tube .....				
Blanked-Off B.T. Running Case .....				
Drill Collars .....				
Anchor Pipe Safety Joint .....				
Packer Assembly .....				
Distributor .....				
Packer Assembly .....				
Anchor Pipe Safety Joint .....				
Side Wall Anchor .....				
Drill Collars .....				
Flush Joint Anchor .....	5"	3.24"	41'	
Blanked-Off B.T. Running Case .....	5"	2.44"	5'	5270'
Total Depth .....				5274'

# NOMENCLATURE

<b>b</b>	= Approximate Radius of Investigation	Feet
<b>b<sub>1</sub></b>	= Approximate Radius of Investigation (Net Pay Zone h <sub>1</sub> )	Feet
<b>D.R.</b>	= Damage Ratio	—
<b>EI</b>	= Elevation	Feet
<b>GD</b>	= B.T. Gauge Depth (From Surface Reference)	Feet
<b>h</b>	= Interval Tested	Feet
<b>h<sub>1</sub></b>	= Net Pay Thickness	Feet
<b>K</b>	= Permeability	md
<b>K<sub>1</sub></b>	= Permeability (From Net Pay Zone h <sub>1</sub> )	md
<b>m</b>	= Slope Extrapolated Pressure Plot (Psi <sup>2</sup> /cycle Gas)	psi/cycle
<b>OF<sub>1</sub></b>	= Maximum Indicated Flow Rate	MCF/D
<b>OF<sub>2</sub></b>	= Minimum Indicated Flow Rate	MCF/D
<b>OF<sub>3</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
<b>OF<sub>4</sub></b>	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
<b>P<sub>s</sub></b>	= Extrapolated Static Pressure	Psig.
<b>P<sub>f</sub></b>	= Final Flow Pressure	Psig.
<b>P<sub>or</sub></b>	= Potentiometric Surface (Fresh Water *)	Feet
<b>Q</b>	= Average Adjusted Production Rate During Test	bbls/day
<b>Q<sub>1</sub></b>	= Theoretical Production w/Damage Removed	bbls/day
<b>Q<sub>g</sub></b>	= Measured Gas Production Rate	MCF/D
<b>R</b>	= Corrected Recovery	bbls
<b>r<sub>w</sub></b>	= Radius of Well Bore	Feet
<b>t</b>	= Flow Time	Minutes
<b>t<sub>o</sub></b>	= Total Flow Time	Minutes
<b>T</b>	= Temperature Rankine	°R
<b>Z</b>	= Compressibility Factor	—
<b>μ</b>	= Viscosity Gas or Liquid	CP
<b>Log</b>	= Common Log	

\* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,  
Fresh Water Corrected to 100° F.



TEMPERATURE  
RECORDER  
CHART

#295514

140

10° each circle

BEST IMAGE  
AVAILABLE

FORM 1296-R3