

Casing perms. _____ Bottom choke 3/4" Surf. temp 20 °F Ticket No. 327549
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
 INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED MERLA WELL TESTER

Date Time	a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
2-19-78						
1330						Called out.
1600						On location. Coming out of hole.
1645						Picked up tool.
1725						Tool made up and in rotary table.
1932						On bottom.
1935						Opened tool with a strong blow.
1942		1 1/2"				Opened 2" line.
1947						Gas to surface in 12 minutes.
1949		1/4"				Changed chokes.
1955		1/4"	1.5	11.02		
2005		1/4"	2	12.7		Closed tool.
2035						Reopened tool to 2" line-1/4" choke
2045		1/4"	2	12.7		
2055		1/4"	1.5	11.02		
2105		1/4"	1	8.95		
2125		1/4"	1	8.95		
2135		1/4"	1	8.95		Closed tool.
2208						Off bottom.
0030						Tool in rotary table.

Gauge No. 698				Depth 5059'				Clock No. 14285				12 hour		Ticket No. 327549					
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.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.			
0 .0000	44	.0000	.0000	106	.0000	.0000	.0000	.0000	112	.0000	.0000	.0000	.0000	180					
1 .0260	60	.0141*	.0141*	207	.0615**	.0615**	.0143*	.0143*	128	.0615**	.0143*	.0143*	.0143*	335					
2 (.0510	75)C	.0352	.0352	350	.1298	.1298	.0356	.0356	141	.1298	.0356	.0356	.0356	591					
3 .0520	75	.0563	.0563	498	.1981	.1981	.0570	.0570	150	.1981	.0570	.0570	.0570	855					
4 .0780	73	.0774	.0774	631	.2664	.2664	.0784	.0784	159	.2664	.0784	.0784	.0784	1000					
5 (.0840	73)C	.0985	.0985	790	.3347	.3347	.0997	.0997	167	.3347	.0997	.0997	.0997	1081					
6 .1040	85	.1196	.1196	960	.4030	.4030	.1211	.1211	180	.4030	.1211	.1211	.1211	1140					
7 .1300	93	.1407	.1407	1114			.1425	.1425			.1425	.1425	.1425	1185					
8 .1560	98	.1618	.1618	1241			.1638	.1638			.1638	.1638	.1638	1219					
9 .1820	103	.1829	.1829	1324			.1852	.1852			.1852	.1852	.1852	1247					
10 .2080	106	.2040	.2040	1380			.2066	.2066			.2066	.2066	.2066	1273					
11							.2280	.2280			.2280	.2280	.2280	1294					
12																			
13																			
14																			
15																			

Gauge No. 697				Depth 5112'				Clock No. 3228X				12 hour			
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	
0 .0000	70	.0000	.0000	119	.0000	.0000	.0000	.0000	123	.0000	.0000	.0000	.0000	196	
1 .0270	76	.0132*	.0132*	210	.0607**	.0607**	.0136*	.0136*	138	.0607**	.0136*	.0136*	.0136*	352	
2 (.0530	90)C	.0331	.0331	367	.1282	.1282	.0339	.0339	152	.1282	.0339	.0339	.0339	579	
3 .0540	91	.0530	.0530	511	.1956	.1956	.0542	.0542	163	.1956	.0542	.0542	.0542	843	
4 .0810	89	.0728	.0728	654	.2631	.2631	.0746	.0746	173	.2631	.0746	.0746	.0746	1002	
5 (.0900	89)C	.0927	.0927	818	.3305	.3305	.0949	.0949	184	.3305	.0949	.0949	.0949	1091	
6 .1080	100	.1125	.1125	997	.3980	.3980	.1153	.1153	196	.3980	.1153	.1153	.1153	1151	
7 .1350	107	.1324	.1324	1148			.1356	.1356			.1356	.1356	.1356	1200	
8 .1620	111	.1523	.1523	1266			.1559	.1559			.1559	.1559	.1559	1236	
9 .1890	115	.1721	.1721	1344			.1763	.1763			.1763	.1763	.1763	1264	
10 .2160	119	.1920	.1920	1395			.1966	.1966			.1966	.1966	.1966	1292	
11							.2170	.2170			.2170	.2170	.2170	1311	
12															
13															
14															
15															

Gauge No. 697				Depth 5112'				Clock No. 3228X				12 hour			
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	
0 .0000	70	.0000	.0000	119	.0000	.0000	.0000	.0000	123	.0000	.0000	.0000	.0000	196	
1 .0270	76	.0132*	.0132*	210	.0607**	.0607**	.0136*	.0136*	138	.0607**	.0136*	.0136*	.0136*	352	
2 (.0530	90)C	.0331	.0331	367	.1282	.1282	.0339	.0339	152	.1282	.0339	.0339	.0339	579	
3 .0540	91	.0530	.0530	511	.1956	.1956	.0542	.0542	163	.1956	.0542	.0542	.0542	843	
4 .0810	89	.0728	.0728	654	.2631	.2631	.0746	.0746	173	.2631	.0746	.0746	.0746	1002	
5 (.0900	89)C	.0927	.0927	818	.3305	.3305	.0949	.0949	184	.3305	.0949	.0949	.0949	1091	
6 .1080	100	.1125	.1125	997	.3980	.3980	.1153	.1153	196	.3980	.1153	.1153	.1153	1151	
7 .1350	107	.1324	.1324	1148			.1356	.1356			.1356	.1356	.1356	1200	
8 .1620	111	.1523	.1523	1266			.1559	.1559			.1559	.1559	.1559	1236	
9 .1890	115	.1721	.1721	1344			.1763	.1763			.1763	.1763	.1763	1264	
10 .2160	119	.1920	.1920	1395			.1966	.1966			.1966	.1966	.1966	1292	
11							.2170	.2170			.2170	.2170	.2170	1311	
12															
13															
14															
15															

Gauge No. 697				Depth 5112'				Clock No. 3228X				12 hour			
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	
0 .0000	70	.0000	.0000	119	.0000	.0000	.0000	.0000	123	.0000	.0000	.0000	.0000	196	
1 .0270	76	.0132*	.0132*	210	.0607**	.0607**	.0136*	.0136*	138	.0607**	.0136*	.0136*	.0136*	352	
2 (.0530	90)C	.0331	.0331	367	.1282	.1282	.0339	.0339	152	.1282	.0339	.0339	.0339	579	
3 .0540	91	.0530	.0530	511	.1956	.1956	.0542	.0542	163	.1956	.0542	.0542	.0542	843	
4 .0810	89	.0728	.0728	654	.2631	.2631	.0746	.0746	173	.2631	.0746	.0746	.0746	1002	
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7 .1350	107	.1324	.1324	1148			.1356	.1356			.1356	.1356	.1356	1200	
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9 .1890	115	.1721	.1721	1344			.1763	.1763			.1763	.1763	.1763	1264	
10 .2160	119	.1920	.1920	1395			.1966	.1966			.1966	.1966	.1966	1292	
11							.2170	.2170			.2170	.2170	.2170	1311	
12															
13															
14															
15															

Gauge No. 697				Depth 5112'				Clock No. 3228X				12 hour			
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	
0 .0000	70	.0000	.0000	119	.0000	.0000	.0000	.0000	123	.0000	.0000	.0000	.0000	196	
1 .0270	76	.0132*	.0132*	210	.0607**	.0607**	.0136*	.0136*	138	.0607**	.0136*	.0136*	.0136*	352	
2 (.0530	90)C	.0331	.0331	367	.1282	.1282	.0339	.0339	152	.1282	.0339	.0339	.0339	579	
3 .0540	91	.0530	.0530	511	.1956	.1956	.0542	.0542	163	.1956	.0542	.0542	.0542	843	
4 .0810	89	.0728	.0728	654	.2631	.2631	.0746	.0746	173	.2631	.0746	.0746	.0746	1002	
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6 .1080	100	.1125	.1125	997	.3980	.3980	.1153	.1153	196	.3980	.1153	.1153	.1153	1151	
7 .1350	107	.1324	.1324	1148			.1356	.1356			.1356	.1356	.1356	1200	
8 .1620	111	.1523	.1523	1266			.1559	.1559			.1559	.1559	.1559	1236	
9 .1890	115	.1721	.1721	1344			.1763	.1763			.1763	.1763	.1763	1264	
10 .2160	119	.1920	.1920	1395			.1966	.1966			.1966	.1966	.1966	1292	
11							.2170	.2170			.2170	.2170	.2170	1311	
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Gauge No. 697				Depth 5112'				Clock No. 3228X				12 hour			
First Flow Period				First Closed In Pressure				Second Flow Period				Second Closed In Pressure			
Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Log $\frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	
0 .0000	70	.0000	.0000	119	.0000	.0000	.0000	.0000	123	.0000	.0000	.0000	.0000	196	
1 .0270	76	.0132*	.0132*	210	.0607**	.0607**	.0136*	.0136*	138	.0607**	.0136*	.0136*	.0136*	352	
2 (.0530	90)C	.0331	.0331	367	.1282	.1282	.0339	.0339	152	.1282	.0339	.0339	.0339	579	
3 .0540	91	.0530	.0530	511	.1956	.1956	.0542	.0542	163	.1956	.0542	.0542	.0542	843	
4 .0810	89	.0728	.0728	654	.2631	.2631	.0746	.0746	173	.2631	.0746	.0746	.0746	1002	
5 (.0900	89)C	.0927	.0927	818	.3305	.3305	.0949	.0949	184	.3305	.0949	.0949	.0		

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6.00"	2.75"	1.00'	
Water Cushion Valve				
Drill Pipe	4.50"	3.826"	4794'	
Drill Collars	6.00"	2.25"	247'	
Handling Sub & Choke Assembly	5.75"	3.75"	5.00'	
Dual CIP Valve	5.00"	.87"	5.00'	5052'
Dual CIP Sampler DOUBLE PIN SUB.	6.00"	2.25"	1.00'	
Hydro-Spring Tester	5.00"	.75"	5.00'	5057'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5.00"	3.06"	4.00'	5059'
Hydraulic Jar	5.00"	1.75"	5.00'	
VR Safety Joint	5.00"	1.00"	3.00'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	6.00'	5074'
Distributor				
Packer Assembly	6.75"	1.53"	6.00'	5080'
Flush Joint Anchor	5.00"	2.37"	29'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5.00"	2.44"	4.00'	5112'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				
Total Depth				5115'

This interpretation represents our best judgement. However, because all log analysis is based on best assumptions and empirical relationships, we cannot guarantee the accuracy of these figures. For this reason, we must disclaim any responsibility for any loss or expense which results from the use of this interpretation.

[illegible]

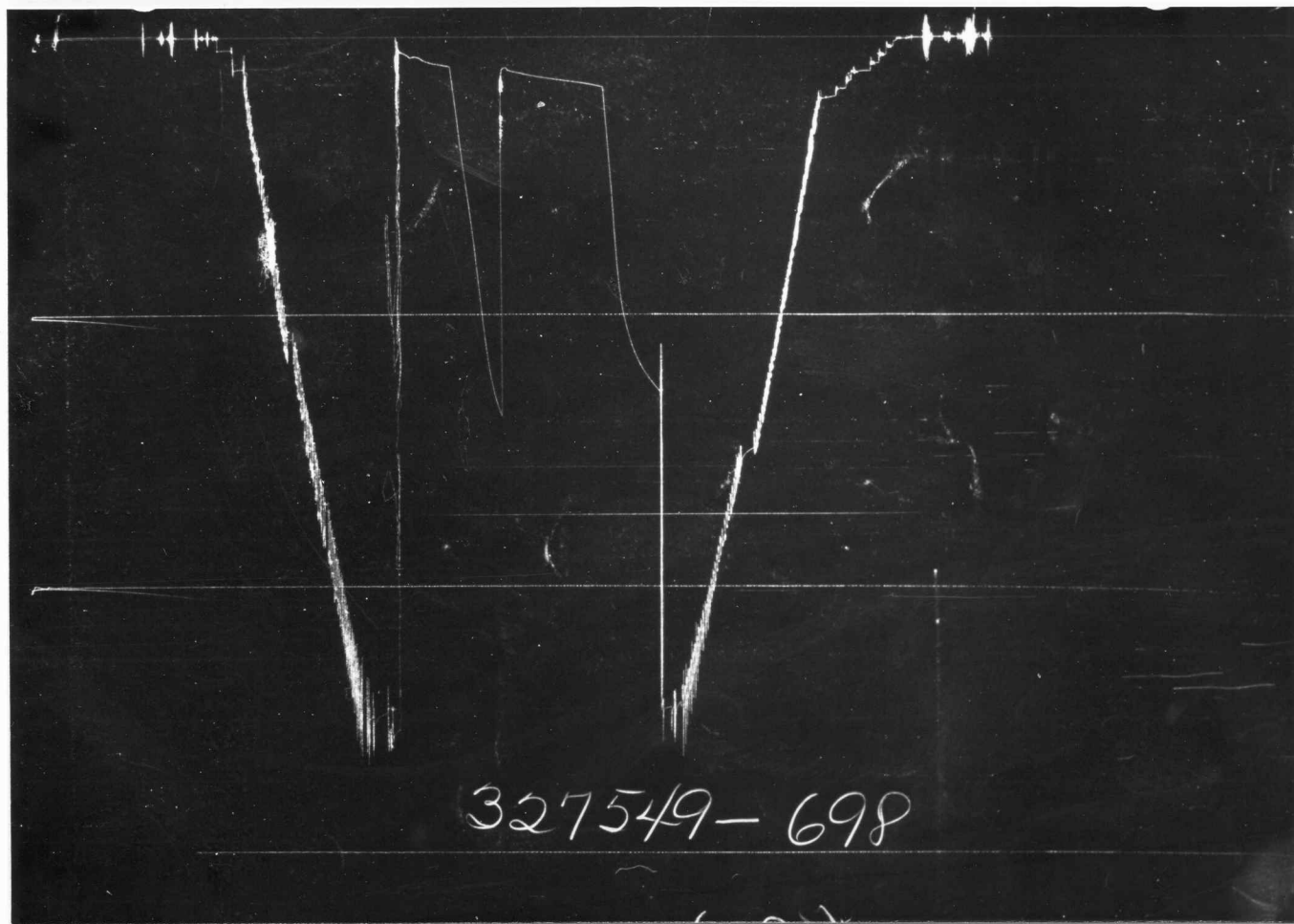
M. Komar

DRESSER ATLAS ENGINEER

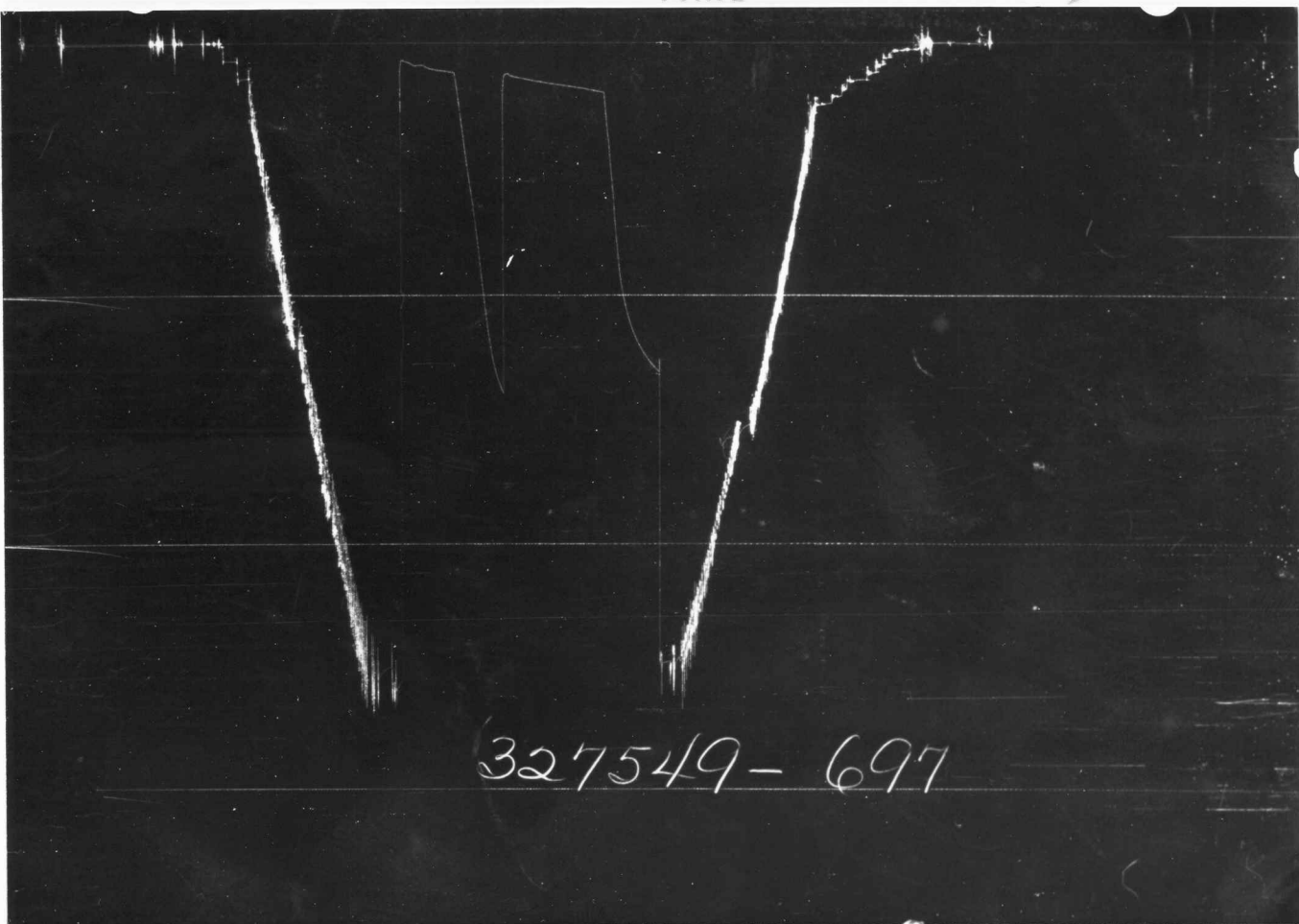
2-21-78

DATE _____

PRESSURE
↓



TIME →



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