

FLUID SAMPLE DATA				Date 6-12-81		Ticket Number 098573	
Sampler Pressure _____ P.S.I.G. at Surface Recovery: Cu. Ft. Gas _____ cc. Oil _____ cc. Water _____ cc. Mud _____ Tot. Liquid cc. _____ Gravity _____ ° API @ _____ °F. Gas/Oil Ratio _____ cu. ft./bbl.				Kind of D.S.T. OPEN HOLE		Halliburton Location PRATT	
				Tester MR. AREND		Witness MR. GARDNER	
				Drilling Contractor EAGLE EXPLORATION		IC	
EQUIPMENT & HOLE DATA							
				Formation Tested Kansas City			
				Elevation _____ Ft.			
				Net Productive Interval _____ Ft.			
				All Depths Measured From Kelly Bushing			
				Total Depth 4200' _____ Ft.			
				Main Hole/Casing Size 7 7/8"			
				Drill Collar Length 525'		I.D. 2.25"	
				Drill Pipe Length 3574'		I.D. 3.826"	
				Packer Depth(s) 4129'-4135' _____ Ft.			
				Depth Tester Valve 4113' _____ Ft.			
TYPE		AMOUNT		Depth Back Pres. Valve		Surface Choke	
Cushion						Bottom Choke .75"	
Recovered	180	Feet of	Water cut mud				
Recovered	560	Feet of	Saltwater				
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks SEE PRODUCTION TEST DATA SHEET.							
TEMPERATURE		Gauge No. 7501 Depth: 4114' _____ Ft.		Gauge No. 7500 Depth: 4197' _____ Ft.		Gauge No. _____ Depth: _____ Ft.	
		12 Hour Clock		12 Hour Clock		Hour Clock	
Est. 4195' @ _____ °F.		Blanked Off NO		Blanked Off YES		Blanked Off	
Actual 117 °F.		Pressures		Pressures		Pressures	
	Field	Office	Field	Office	Field	Office	
Initial Hydrostatic	-	1993.5	2007	2019.6			
First Period Flow	Initial	-	27.5	39	52.5		
	Final	-	257.9	313	301.4		
	Closed in	-	1635.6	1666	1669.2		
Second Period Flow	Initial	-	280.1	323	317.0		
	Final	-	377.2	401	421.0		
	Closed in	-	1626.1	1666	1661.4		
Third Period Flow	Initial						
	Final	*See attached incremental reading sheets.					
Closed in							
Final Hydrostatic	-	1962.5	2017	1997.0			

FORM 181-R2 - PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

EKHARDT

Well No. 1

Test No. 1

4135' - 4200'

County BARBER

KAN-EX INCORPORATED

Lease Owner/Company Name

Legal Location Sec. - Twp. - Rng. 8 - 32 - 10W

Field Area Mea. From Tester Valve ---

County BARBER

State KANSAS

6

Casing perms. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 098573
Gas gravity _____ Oil gravity _____ GOR _____
Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

[illegible]

KAN-EX INCORPORATED
Lease Owner/Company Name

098573
Ticket Number Page #1

B.T. 7501

B.T. 7500

B.T. _____

Depth 4114'-12 Hr.

Depth 4197'-12 Hr.

Depth _____

[illegible]

Remarks: _____

Lease Owner/Company Name

Ticket Number Page #2

B.T. 7501

B.T. 7500

B.T. _____

Depth 4114'-12 Hr.

Depth 4197'-12 Hr.

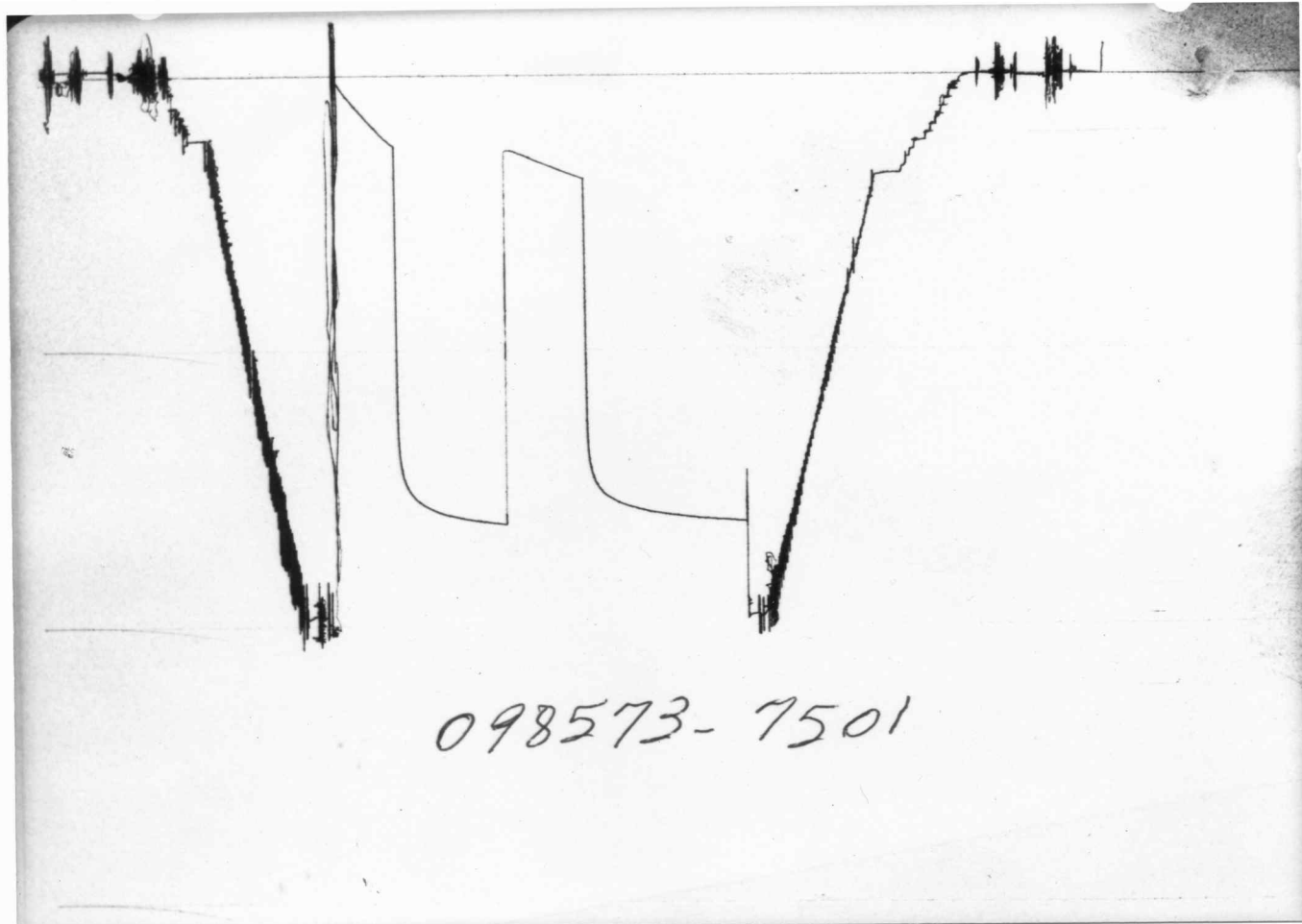
Depth _____

[illegible]

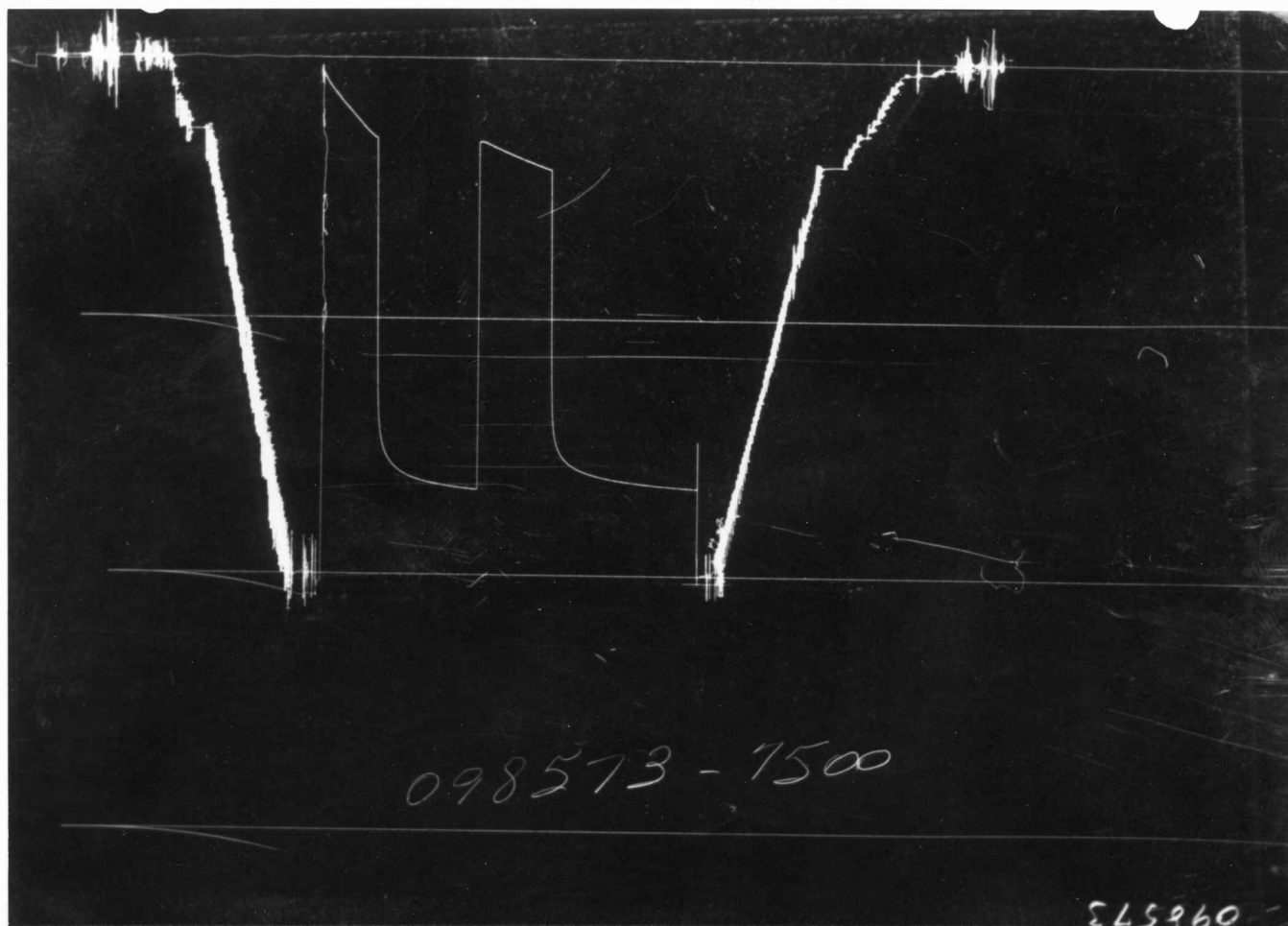
Remarks: _____

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4.5"	3.826"	3574'	
Drill Collars	6"	2.25"	405'	
Reversing Sub	6"	2"	1'	3976'
Water Cushion Valve				
Drill Pipe				
Drill Collars	6"	2.25"	120'	
Handling Sub & Choke Assembly	5 3/4"	2.25"	6'	
Dual CIP Valve	5 3/4"	.87"	6'	4108'
Dual CIP Sampler				
Hydro-Spring Tester	5 3/4"	.75"	5'	4113'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4114'
Hydraulic Jar	5"	1.5"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	6'	4129'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4135'
Flush Joint Anchor	5"	2.36"	4'	
Pressure Equalizing Tube	6"	2"	1'	CHANGE OVER
Blanked-Off B.T. Running Case				
Drill Collars	6"	2.25"	30'	
Anchor Pipe Safety Joint				
Packer Assembly	6"	2"	2'	CHANGE OVERS
Distributor	5"	2.36"	19'	FLUSH JOINT ANCHOR
Packer Assembly	5"	2.25"	2'	4194' TEMP.
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case	5"	2.44"	4'	4197'
Total Depth				4200'

PRESSURE
↓

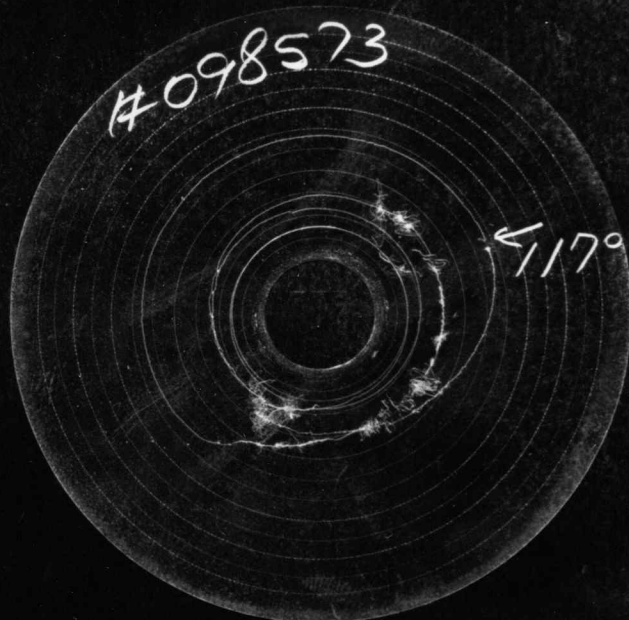


TIME →



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

TEMPERATURE RECORDER CHART



10° each circle

OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

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

FLUID SAMPLE DATA				Date 6-13-81		Ticket Number 098574	
Sampler Pressure _____ P.S.I.G. at Surface				Kind of D.S.T. OPEN HOLE		Halliburton Location PRATT	
Recovery: Cu. Ft. Gas _____				Tester J. AREND		Witness G. GARDNER	
cc. Oil _____				Drilling Contractor EAGLE DRILLING COMPANY # 1 DR			
cc. Water _____				EQUIPMENT & HOLE DATA			
cc. Mud _____				Formation Tested Cherokee Sand			
Tot. Liquid cc. _____				Elevation _____ Ft.			
Gravity _____ ° API @ _____ °F.				Net Productive Interval _____ Ft.			
Gas/Oil Ratio _____ cu. ft./bbl.				All Depths Measured From Ground Level			
RESISTIVITY _____ CHLORIDE CONTENT _____				Total Depth 4396' Ft.			
Recovery Water _____ @ _____ °F. _____ ppm				Main Hole/Casing Size 7 7/8"			
Recovery Mud _____ @ _____ °F. _____ ppm				Drill Collar Length 555' I.D. 2.25"			
Recovery Mud Filtrate _____ @ _____ °F. _____ ppm				Drill Pipe Length 3786' I.D. 3.826"			
Mud Pit Sample _____ @ _____ °F. _____ ppm				Packer Depth(s) 4361- 4367' Ft.			
Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm				Depth Tester Valve 4345' Ft.			
Mud Weight _____ vis _____ sec.							
TYPE		AMOUNT		Depth Back Pres. Valve		Surface Choke	
Cushion				Ft.		Bottom Choke .75"	
Recovered	6	Feet of	mud				
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks See production test data sheet							
TEMPERATURE		Gauge No. 7501		Gauge No. 7500		Gauge No.	
Depth: 4346 Ft.		Depth: 4393 Ft.		Depth: _____ Ft.		TIME (00:00-24:00 hrs.)	
Est. _____ °F.		Blanked Off No		Blanked Off Yes		Blanked Off	
4391'		Pressures		Pressures		Pressures	
Actual 115 °F.		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic			2092.9	2133	2119.6		
First Period	Flow		4.9	39	37.1		
	Final		4.9	39	37.1		
	Closed in		9.9	49	39.1		
Second Period	Flow		9.9	39	39.1		
	Final		6.9	39	35.2		
	Closed in		7.9	39	35.2		
Third Period	Flow						
	Final						
	Closed in						
Final Hydrostatic			2083.4	2114	2104.0		

Legal Location Sec. - Twp. - Rng. 8-32S-10W

Lease Name ECKHARDT

Well No. 1

Test No. 2

4367-4396'

Tested Interval

KAN-EX INCORPORATED

Lease Owner/Company Name

BARBER

State KANSAS

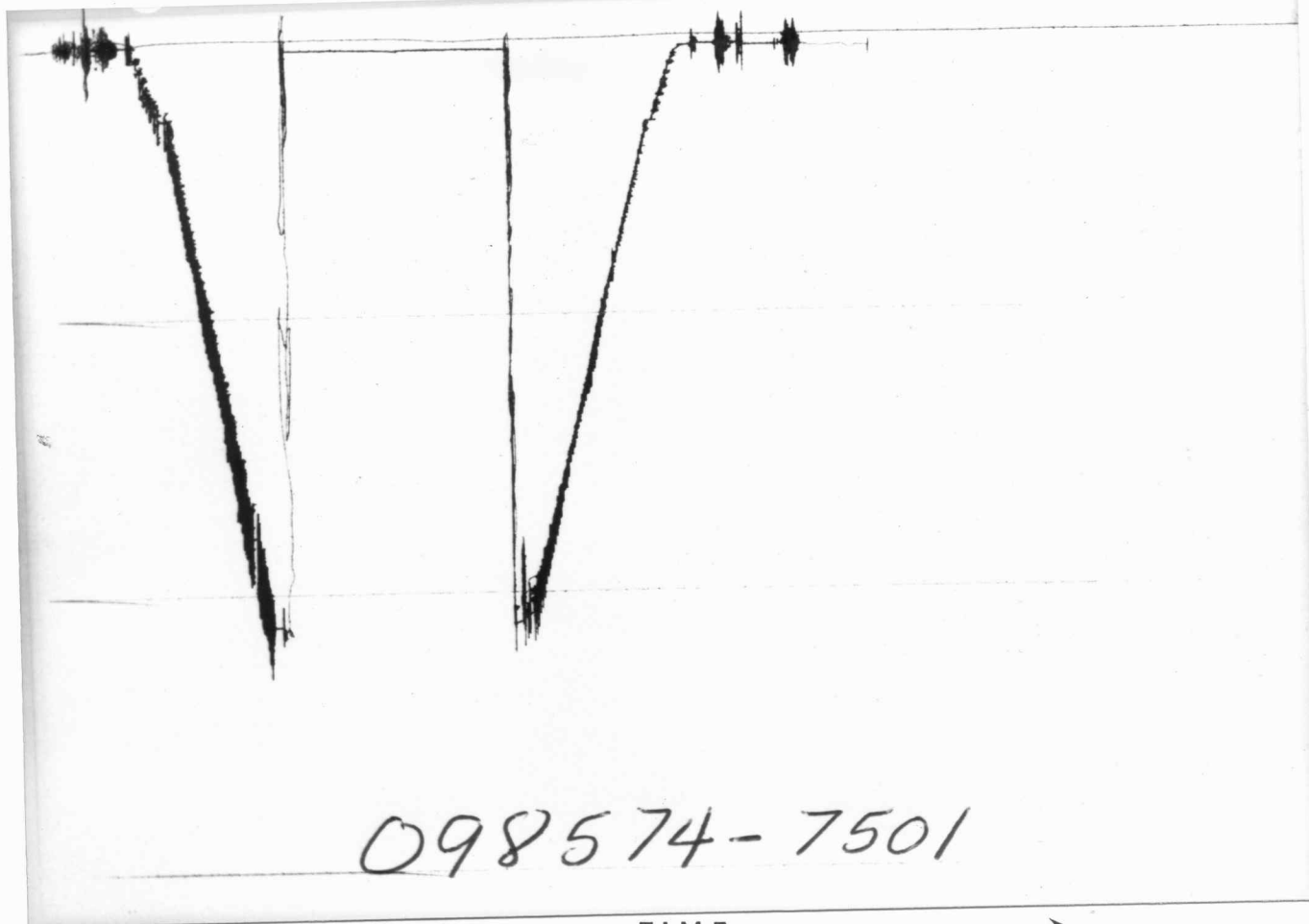
Casing perms. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. _____ 098574
Gas gravity _____ Oil gravity _____ GOR _____
Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

[illegible]

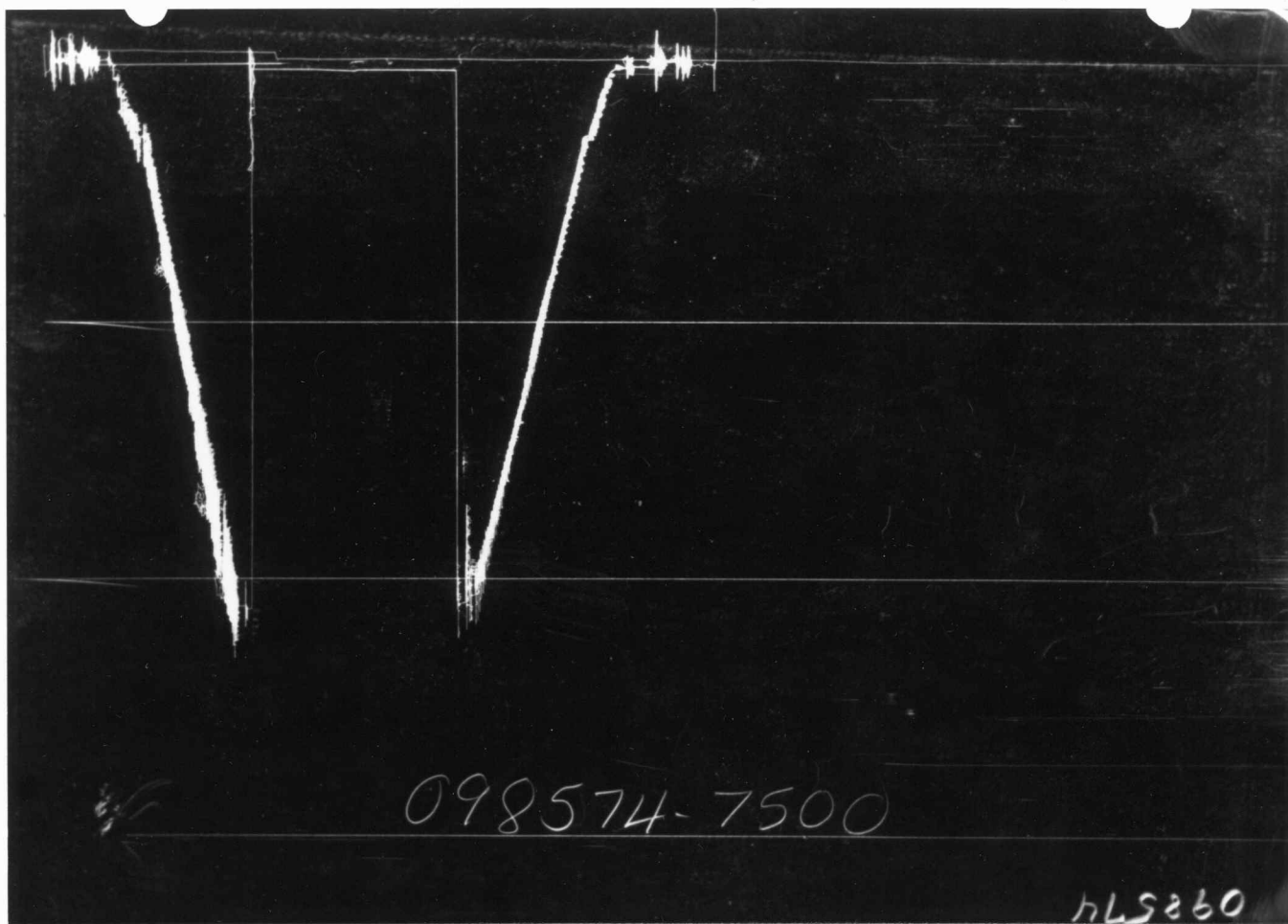
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4 1/2"	3.826 "	3786'	
Drill Collars	6"	2.25"	435'	
Reversing Sub	6"	2.25"	1'	4207'
Water Cushion Valve				
Drill Pipe	6"	2.25"	120'	
Drill Collars	5 3/4"	2"	6'	
Handling Sub & Choke Assembly	5 3/4"	.87"	6'	4340'
Dual CIP Valve				
Dual CIP Sampler	5 3/4"	.75"	5'	4345'
Hydro-Spring Tester				
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4346'
Hydraulic Jar	5"	1.53"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53 "	6'	4361'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4367'
Flush Joint Anchor		2.36"	21'	
Pressure Equalizing Tube				
	5"	2.25"	2'	4390' HT-500
Blanked-Off B.T. Running Case	5"	2.44"	4'	4393'
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				4396'

↓ PRESSURE



098574-7501

TIME

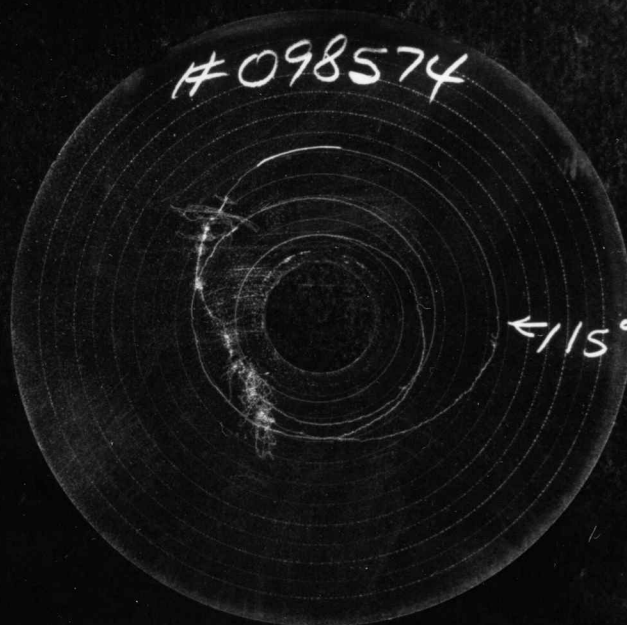


098574-7500

098574

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

TEMPERATURE RECORDER CHART



10° each circle

OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{or}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

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

FLUID SAMPLE DATA				Date 6-14-81		Ticket Number 098575	
Sampler Pressure _____ P.S.I.G. at Surface				Kind of D.S.T. OPEN HOLE		Halliburton Location PRATT	
Recovery: Cu. Ft. Gas _____				Tester MR. AREND		Witness MR. GARDNER	
cc. Oil _____				Drilling Contractor EAGLE DRILLING COMPANY #1 SM			
cc. Water _____				EQUIPMENT & HOLE DATA			
cc. Mud _____				Formation Tested Mississippi			
Tot. Liquid cc. _____				Elevation _____ Ft.			
Gravity _____ ° API @ _____ ° F.				Net Productive Interval _____ Ft.			
Gas/Oil Ratio _____ cu. ft./bbl.				All Depths Measured From Ground Level			
RESISTIVITY				Total Depth 4432' Ft.			
CHLORIDE CONTENT				Main Hole/Casing Size 7 7/8"			
Recovery Water _____ @ _____ ° F. _____ ppm				Drill Collar Length 555' I.D. 2.25"			
Recovery Mud _____ @ _____ ° F. _____ ppm				Drill Pipe Length 3815.5' I.D. 3.826"			
Recovery Mud Filtrate _____ @ _____ ° F. _____ ppm				Packer Depth(s) 4379'-4385' Ft.			
Mud Pit Sample _____ @ _____ ° F. 8000 ppm				Depth Tester Valve 4363' Ft.			
Mud Pit Sample Filtrate _____ @ _____ ° F. _____ ppm							
Mud Weight 9.2 vis 44 sec.							
TYPE		AMOUNT		Depth Back Pres. Valve		Surface Choke	
Cushion				Ft.		Bottom Choke .75"	
Recovered	20	Feet of	Mud				
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks SEE PRODUCTION TEST DATA SHEET.							
TEMPERATURE		Gauge No. 7501		Gauge No. 7500		Gauge No. _____	
		Depth: 4364' Ft.		Depth: 4428' Ft.		Depth: _____ Ft.	
		12 Hour Clock		12 Hour Clock		Hour Clock	
Est. _____ ° F.		Blanked Off NO		Blanked Off YES		Blanked Off _____	
4427'@						Tool	
Actual 116°F.						Opened 17:35	
						Opened _____	
						Bypass 19:50	
						Reported _____	
						Computed _____	
						Minutes _____	
						Minutes _____	
Initial Hydrostatic		-		2079.5		2114	
						2108.0	
Flow Initial		-		70.2		69	
Flow Final		-		21.9		49	
Closed in		-		64.0		98	
						100.1	
Flow Initial		-		39.5		49	
Flow Final		-		23.3		49	
Closed in		-		55.0		90	
						88.1	
Flow Initial							
Flow Final							
Closed in							
Final Hydrostatic		-		1954.9		2124	
						2078.3	

Casing perfs. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 098575
Gas gravity _____ Oil gravity _____ GOR _____
Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

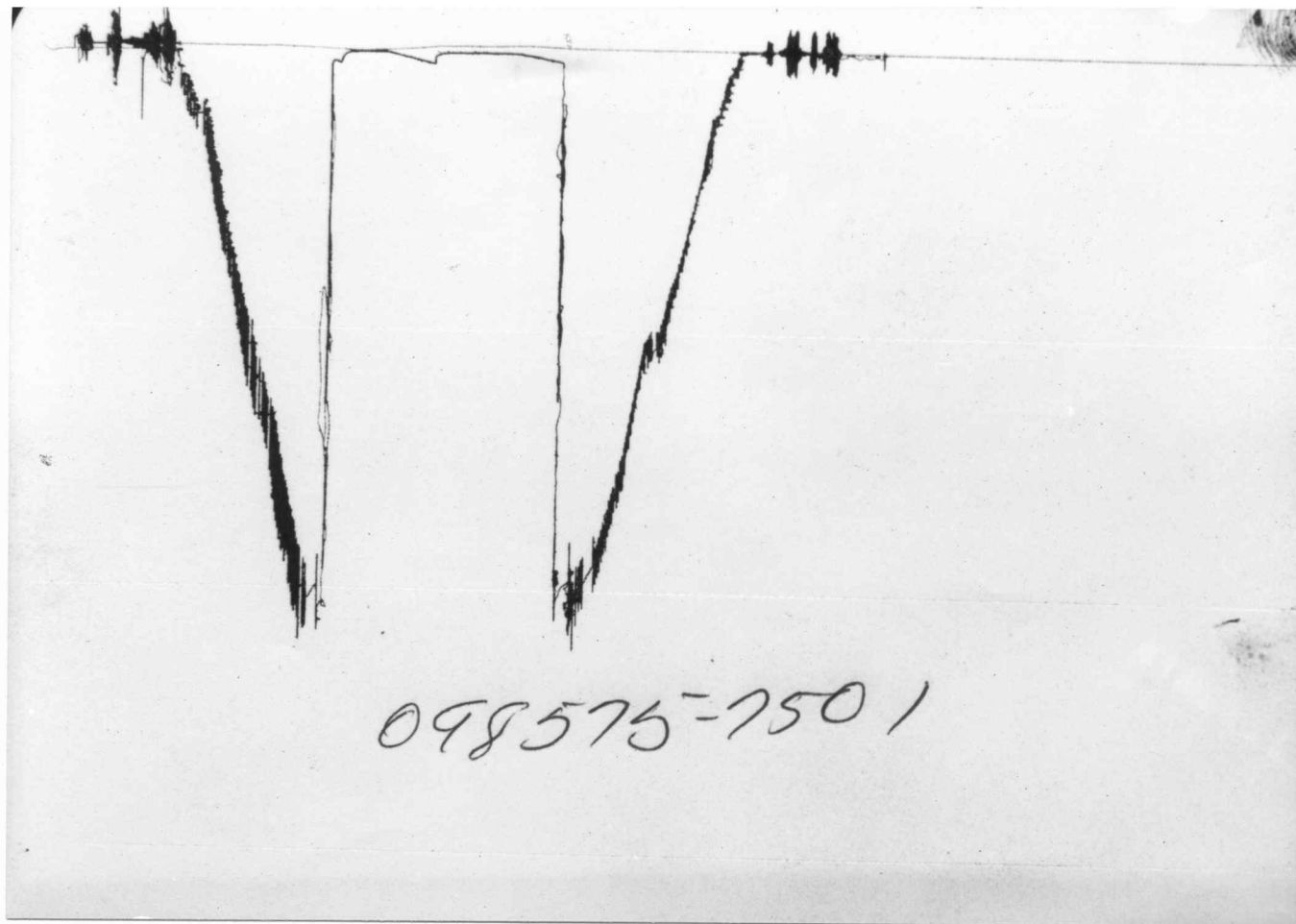
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	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4 1/2"	3.826"	3815.5'	
Drill Collars	?	2.25"	435'	
Reversing Sub	5"	?	1'	4225'
Water Cushion Valve				
Drill Pipe				
Drill Collars	5"	2.25"	120'	
Handling Sub & Choke Assembly	5 3/4"	2.25"	6'	
Dual CIP Valve	5 3/4"	.87"	6'	4358'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4363'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4364'
Hydraulic Jar	5"	1.5"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	6'	4379'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4385'
Flush Joint Anchor	5"	2.36"	39'	
Pressure Equalizing Tube - HT. 500	5"	2.25"	2'	4427'
Blanked-Off B.T. Running Case	5"	2.44"	4'	4428'
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				4432'

PRESSURE

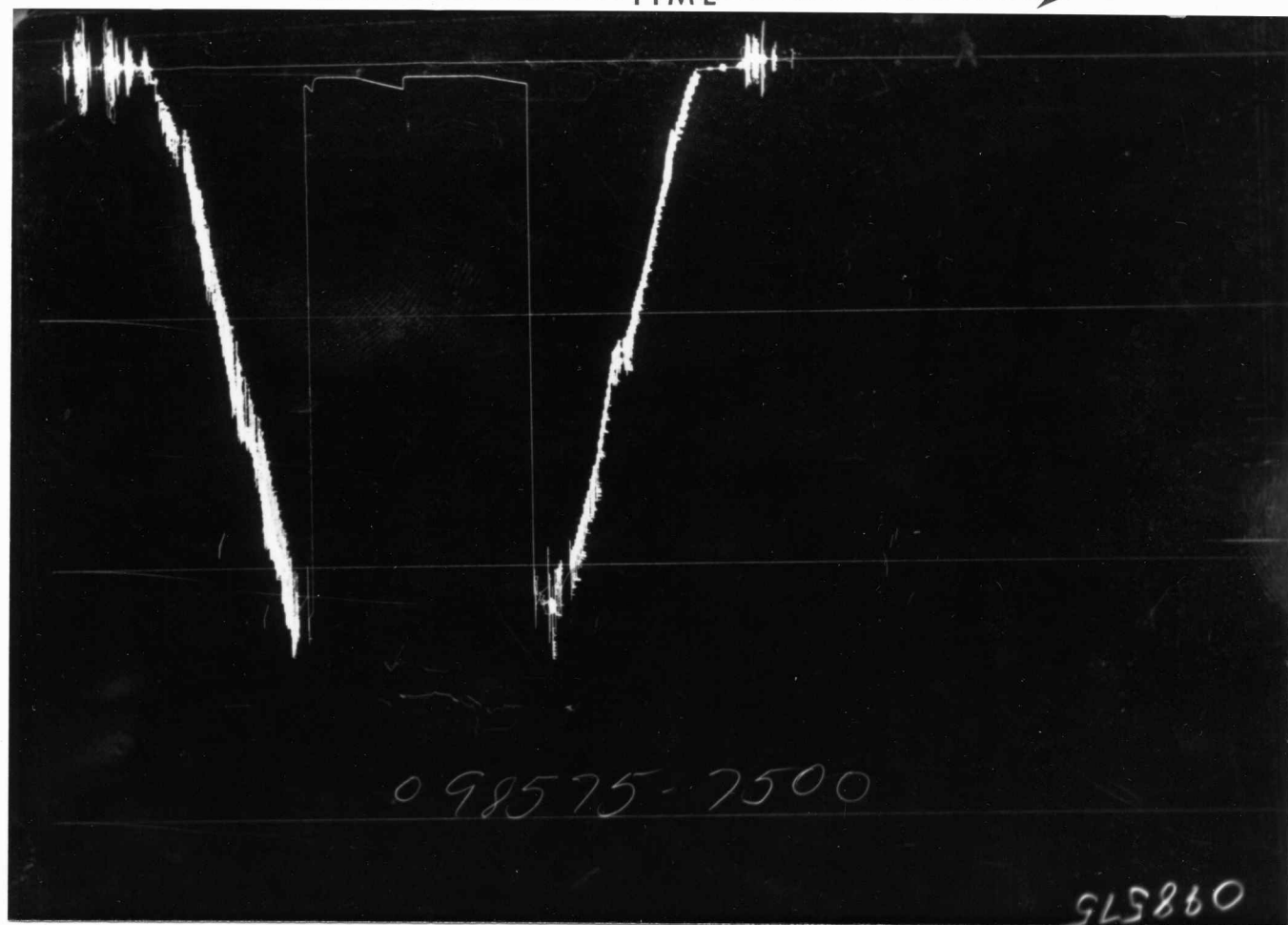
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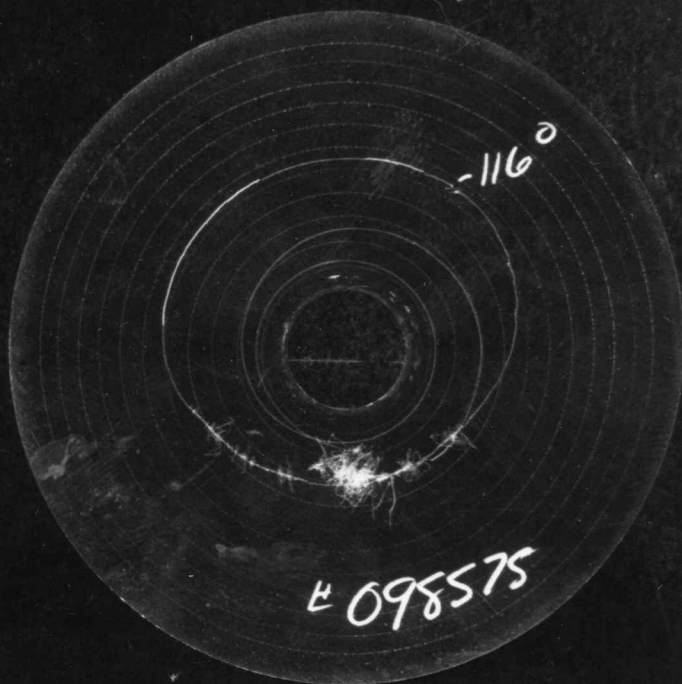
TIME

→



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

TEMPERATURE RECORDER CHART



10° each circle

- OF_4 = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
- P_s = Extrapolated Static Pressure Psig.
- P_F = Final Flow Pressure Psig.
- P_{ot} = Potentiometric Surface (Fresh Water *) Feet
- Q = Average Adjusted Production Rate During Test bbls/day
- Q_1 = Theoretical Production w/Damage Removed bbls/day
- Q_g = Measured Gas Production Rate MCF/D
- R = Corrected Recovery bbls
- r_w = Radius of Well Bore Feet
- t = Flow Time Minutes
- t_o = Total Flow Time Minutes
- T = Temperature Rankine °R
- Z = Compressibility Factor
- μ = Viscosity Gas or Liquid CP
- Log = Common Log

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

FLUID SAMPLE DATA				Date 6-15-81		Ticket Number 099126	
Sampler Pressure _____ P.S.I.G. at Surface Recovery: Cu. Ft. Gas _____ cc. Oil _____ cc. Water _____ cc. Mud _____ Tot. Liquid cc. _____ Gravity _____ ° API @ _____ ° F. Gas/Oil Ratio _____ cu. ft./bbl.				Kind of D.S.T. OPEN HOLE		Halliburton Location PRATT	
				Tester AREND		Witness GARDNER	
				Drilling Contractor EAGLE DRILLING COMPANY RIG # 1		NM	
EQUIPMENT & HOLE DATA							
				Formation Tested MISSISSIPPI			
				Elevation _____ Ft.			
				Net Productive Interval _____ Ft.			
				All Depths Measured From Ground Level			
				Total Depth 4447' Ft.			
				Main Hole/Casing Size 7 7/8"			
				Drill Collar Length 555'		I.D. 2.25"	
				Drill Pipe Length 3845'		I.D. 3.826"	
				Packer Depth(s) 4424' - 4430' Ft.			
				Depth Tester Valve 4408' Ft.			
TYPE		AMOUNT		Depth Back		Surface	
Cushion		NONE		Ft. Pres. Valve		NONE	
						Bottom Choke .75"	
Recovered 60' Feet of mud - trace oil							
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Remarks CHARTS INDICATE PARTIAL PLUGGING OF TOOLS THROUGHOUT THE							
FIRST FLOW PERIOD.							
SEE PRODUCTION TEST DATA SHEET..							
Q = QUESTIONABLE.							
TEMPERATURE		Gauge No. 7501		Gauge No. 7500		Gauge No.	
		Depth: 4409' Ft.		Depth: 4443' Ft.		Depth: _____ Ft.	
		12 Hour Clock		12 Hour Clock		Hour Clock	
Est. _____ ° F.		Blanked Off NO		Blanked Off YES		Blanked Off	
4442' @						Tool Opened 0800	
Actual 116 ° F.						Opened Bypass 1115	
		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic		-	2066.5	2182	2079.9		
First Period	Flow Initial	-	496.0-Q	PLUGG-	456.9-Q		
	Flow Final	-	213.7	ING...	116.4		
	Closed in	-	1353.2	1385	1371.8		
Second Period	Flow Initial	-	47.7	49	49.9		
	Flow Final	-	31.8	69	48.9		
	Closed in	-	1042.0	1064	1062.1		
Third Period	Flow Initial						
	Flow Final						
Final Hydrostatic		-	2026.4	2124	2028.2		

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

[illegible]

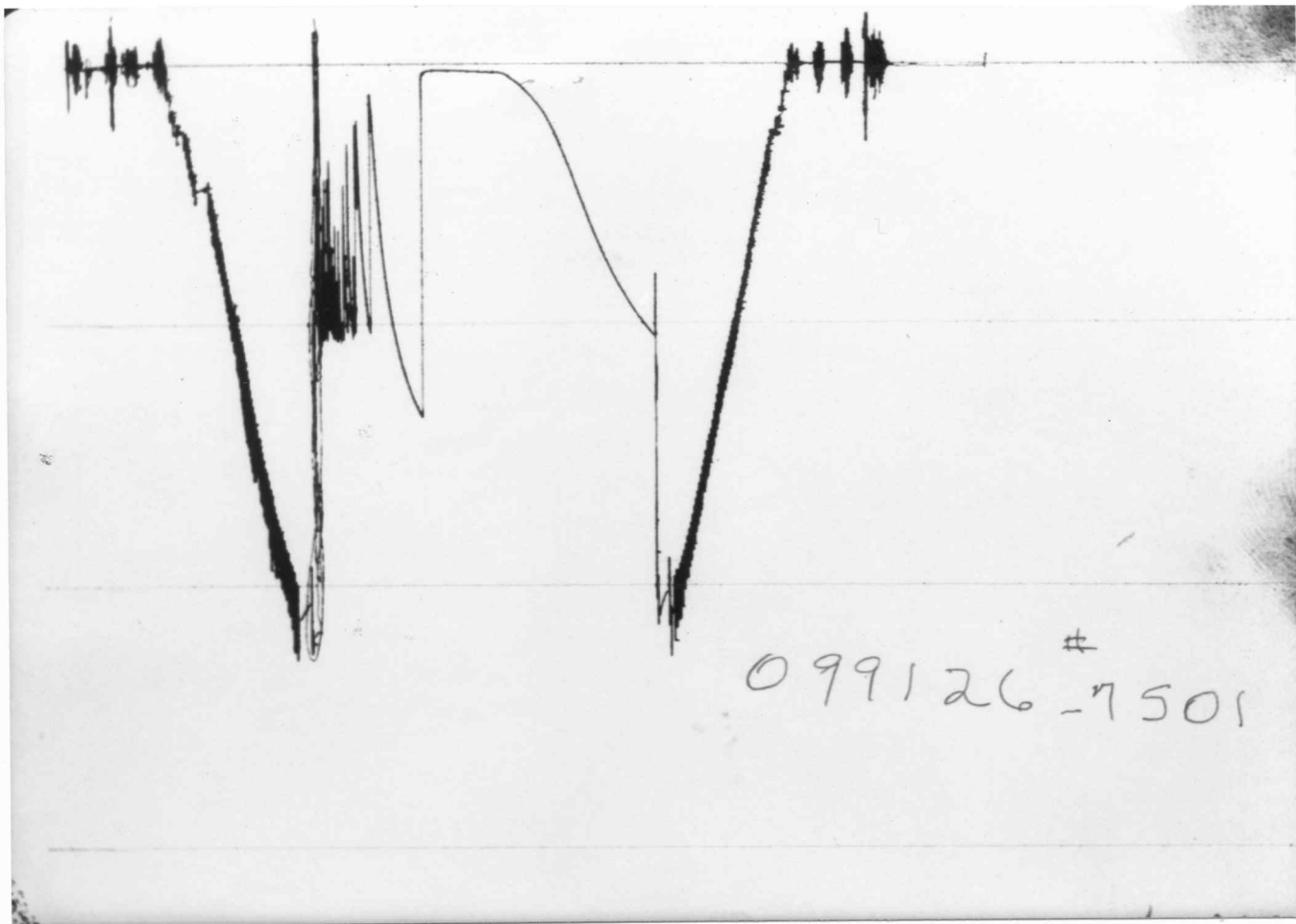
Gauge No. 7501				Depth 4409'				Clock No. 14285				12 hour		Ticket No. 099126	
First Flow Period				Second Flow Period				Second Closed In Pressure				Third Flow Period		Third Closed In Pressure	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0 .000	496.0-0	.000	213.7	.000	47.7	.000	31.8	.000	31.8	.000	31.8				
1 .218	213.7	.0195	457.2	.0549	22.8*	.0601	63.6	.1202	117.2	.1803	201.7				
2		.0390	686.6	.1167	23.8	.1202	117.2	.1803	201.7	.2404	329.0				
3		.0585	849.6	.1785	24.8	.2404	329.0	.3005	484.0	.3606	641.4				
4		.0780	979.3	.2402	29.8	.3005	484.0	.3606	641.4	.4207	772.0				
5		.0975	1076.3	.3020	31.8	.4207	772.0	.4808	883.0	.5409	974.4				
6		.1170	1156.5			.5409	974.4	.6010	1042.0						
7		.1365	1227.9												
8		.1560	1270.0												
9		.1755	1318.0												
10		.1950	1353.2												
11															
12															
13															
14															
15															

Gauge No. 7500				Depth 4443'				Clock No. 14118				hour 12	
First Flow Period				Second Flow Period				Second Closed In Pressure				Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0 .000	456.9-0	.000	116.4	.000	49.9	.000	48.9	.0605	87.0	.1210	144.8		
1 .211	116.4	.0202	465.7	.0536	39.1*	.1210	144.8	.1815	230.9	.2420	359.1		
2		.0404	699.8	.1140	42.0	.1815	230.9	.2420	359.1	.3025	528.2		
3		.0606	862.5	.1743	45.0	.3025	528.2	.3630	674.4	.4235	804.1		
4		.0808	997.0	.2347	66.5	.4235	804.1	.4840	911.3	.5445	998.0		
5		.1010	1097.0	.2950	48.9	.5445	998.0	.6050	1062.1				
6		.1212	1176.7										
7		.1414	1243.6										
8		.1616	1296.1										
9		.1818	1342.7										
10		.2020	1371.8										
11													
12													
13													
14													
15													

Reading Interval	3	9	Minutes
REMARKS: * INTERVAL = 8 MINUTES.			

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4 1/2"	3.826"	3845'	
Drill Collars	6"	2.25"	435'	
Reversing Sub	6"	2.25"	1'	4270'
Water Cushion Valve				
Drill Pipe	6"	2.25"	120'	
Drill Collars	5 3/4"	2"	6'	
Handling Sub & Choke Assembly	5 3/4"	.87"	6'	4403'
Dual CIP Valve				
Dual CIP Sampler	5 3/4"	.75"	5'	4408'
Hydro-Spring Tester				
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4409'
Hydraulic Jar	5"	1.5"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	6'	4424'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4430'
Flush Joint Anchor	5"	2.36"	9'	
Pressure Equalizing Tube HT-500	5"	2.25"	2'	4442'
Blanked-Off B.T. Running Case	5"	2.44"	4'	4443'
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				4447'

↓ PRESSURE



TIME →



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

TEMPERATURE RECORDER CHART



10° each circle

- OF_3 = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
 OF_4 = Theoretical Open Flow Potential with/Damage Removed Min. MCF/D
 P_s = Extrapolated Static Pressure Psig.
 P_F = Final Flow Pressure Psig.
 P_{ot} = Potentiometric Surface (Fresh Water *) Feet
 Q = Average Adjusted Production Rate During Test bbls/day
 Q_1 = Theoretical Production w/Damage Removed bbls/day
 Q_g = Measured Gas Production Rate MCF/D
 R = Corrected Recovery bbls
 r_w = Radius of Well Bore Feet
 t = Flow Time Minutes
 t_o = Total Flow Time Minutes
 T = Temperature Rankine °R
 Z = Compressibility Factor —
 μ = Viscosity Gas or Liquid CP
Log = Common Log

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

FLUID SAMPLE DATA				Date 6-17-81		Ticket Number 099127	
Sampler Pressure _____ P.S.I.G. at Surface Recovery: Cu. Ft. Gas _____ cc. Oil _____ cc. Water _____ cc. Mud _____ Tot. Liquid cc. _____ Gravity _____ ° API @ _____ ° F. Gas/Oil Ratio _____ cu. ft./bbl. RESISTIVITY CHLORIDE CONTENT Recovery Water _____ @ _____ ° F. _____ ppm Recovery Mud _____ @ _____ ° F. _____ ppm Recovery Mud Filtrate _____ @ _____ ° F. _____ ppm Mud Pit Sample _____ @ _____ ° F. 6,000 ppm Mud Pit Sample Filtrate _____ @ _____ ° F. _____ ppm Mud Weight 9.2 vis 44 sec.				Kind of D.S.T. OPEN HOLE Tester MR. AREND Drilling Contractor EAGLE DRILLING COMPANY bi		Halliburton Location PRATT Witness MR. GARDNER	
EQUIPMENT & HOLE DATA							
Formation Tested Simpson				Elevation _____ Ft.			
Net Productive Interval _____				Ft.			
All Depths Measured From Ground Level				Total Depth 4781' Ft.			
Main Hole/Casing Size 7 7/8"				Drill Collar Length 555' I.D. 2.25"			
Drill Pipe Length 4180'				I.D. 3.826"			
Packer Depth(s) 4746'				4752' Ft.			
Depth Tester Valve 4730'				Ft.			
TYPE		AMOUNT		Depth Back Pres. Valve		Surface Choke	
Cushion				Ft.		Bottom Choke	
Recovered		3" Feet of mud					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks SEE PRODUCTION TEST DATA SHEET....							
TEMPERATURE		Gauge No. 7501 Depth: 4731' Ft.		Gauge No. 7500 Depth: 4778' Ft.		Gauge No. _____ Depth: _____ Ft.	
		12 Hour Clock		12 Hour Clock		Hour Clock	
Est. _____ ° F.		Blanked Off NO		Blanked Off YES		Blanked Off _____	
Actual 4776'						Tool Opened 1420	
Actual 118 ° F.		Pressures		Pressures		Pressures	
		Field Office		Field Office		Field Office	
Initial Hydrostatic		2217.2 2318		2238.3			
First Period	Flow Initial	9.9 49		48.9			
	Flow Final	9.9 49		48.9			
	Closed in	11.9 49		50.8			
Second Period	Flow Initial	9.9 49		50.8			
	Flow Final	9.9 49		47.9			
	Closed in	9.9 49		47.9			
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic		2217.2 2260		2238.3			

Legal Location Sec. - Twp. - Rng. 8 32S 10W
 Lease Name
 Well No. 1
 Test No. 5
 Tested Interval 4752' to 4781'
 County BARBER
 State KANSAS

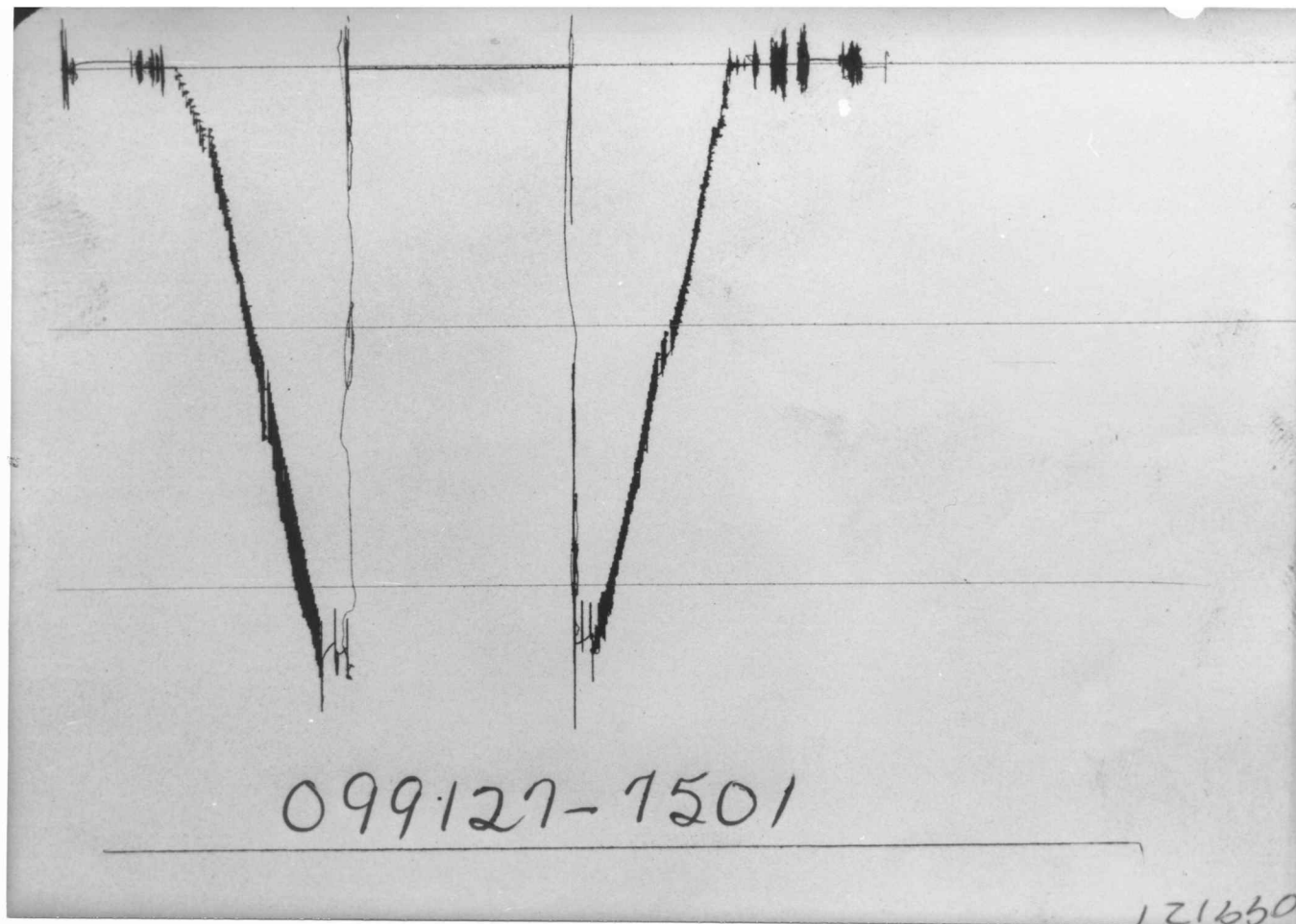
099127

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED.

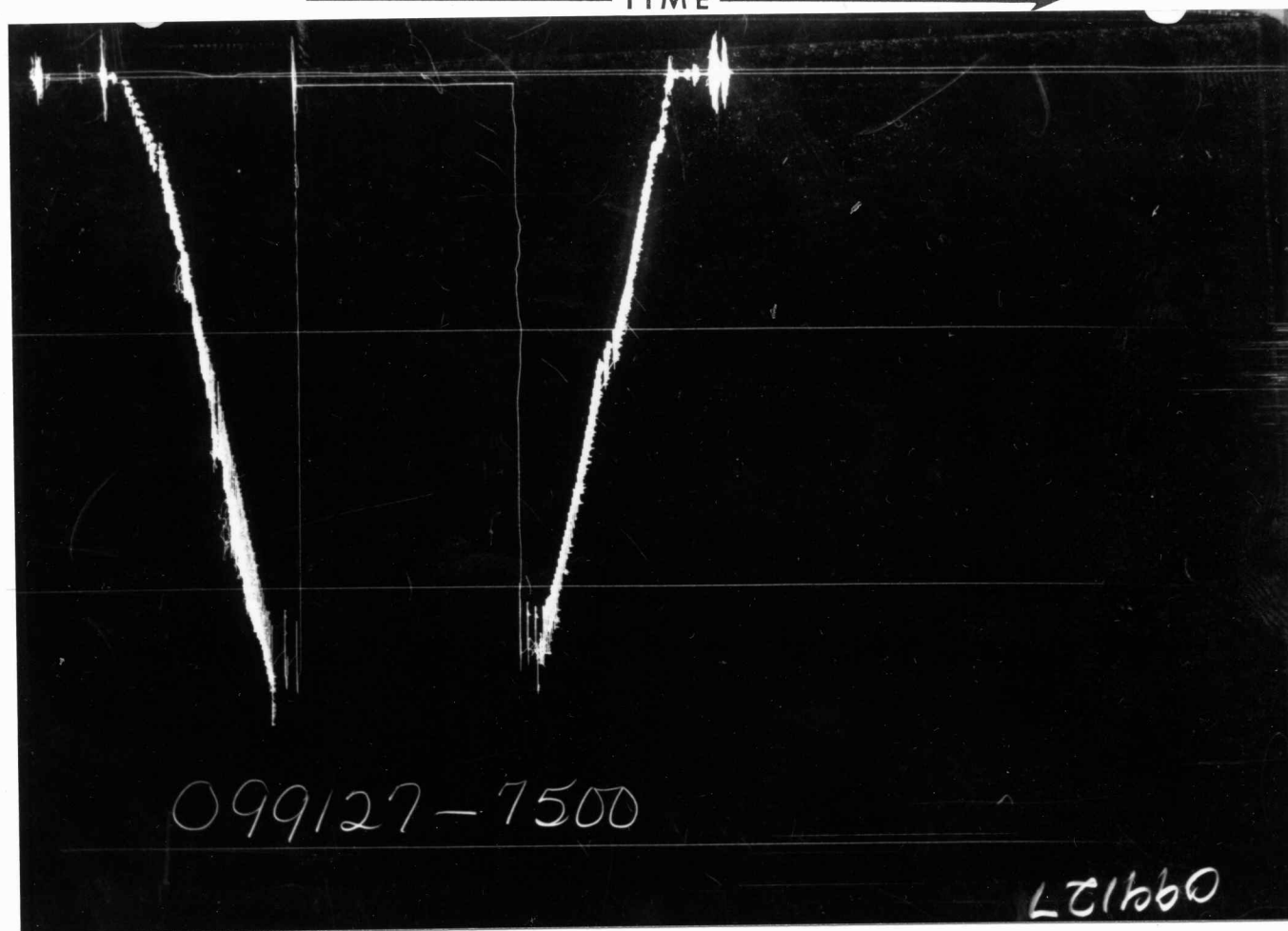
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	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4.50"	3.826"	4180'	
Drill Collars	6.00"	2.25"	435'	
Reversing Sub	6.00"	2.00"	1.00'	4593'
Water Cushion Valve				
Drill Pipe	6.00"	2.25"	120'	
Drill Collars	5.75"	2.25"	6.00'	
Handling Sub & Choke Assembly	5.75"	.87"	6.00'	4725'
Dual CIP Valve				
Dual CIP Sampler	5.75"	.75"	5.00'	4730'
Hydro-Spring Tester				
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5.00"	3.06"	4.00'	4731'
Hydraulic Jar	5.00"	1.50"	5.00'	
VR Safety Joint	5.00"	1.00"	3.00'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	6.00'	4746'
Distributor				
Packer Assembly	6.75"	1.53"	6.00'	4752'
Flush Joint Anchor		2.36"	21'	
Pressure Equalizing Tube		2.25"	2.00'	4776'
Blanked-Off B.T. Running Case		2.44"	4.00'	4778'
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				4781'

↑ PRESSURE ↓

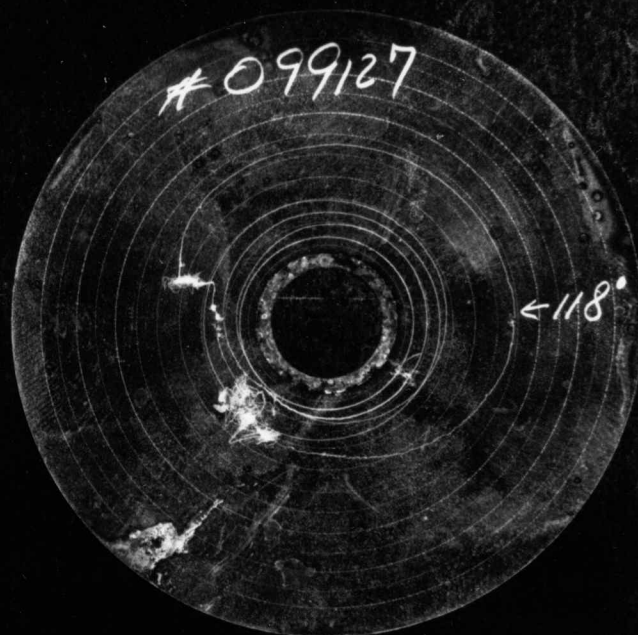


TIME →



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

TEMPERATURE RECORDER CHART



10° each circle

OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
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Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

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