15-097-20784 24-27s-16w

FLUID SAMPLE DATA

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.	____ ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 9.3 vis 42 sec.

Date 7-12-81 Ticket Number 182447
Kind of D.S.T. OPEN HOLE Halliburton Location GREAT BEND
Tester GAUNT Witness PETE STUBBS
Drilling Contractor RED TIGER DRILLING COMPANY # 6 sm

EQUIPMENT & HOLE DATA

Formation Tested Marmaton
Elevation 2083' Kelly bushing Ft.
Net Productive Interval 4455-4460' Ft.
All Depths Measured From Kelly bushing
Total Depth 4470 Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 988.64' I.D. 2.764" WP
Drill Pipe Length 3433' I.D. 3.826"
Packer Depth(s) 4442-4448' Ft.
Depth Tester Valve 4421' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke Bottom Choke

Recovered 125 Feet of clean gassy oil
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Mea. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET

*See attached incremental pressure sheet

TEMPERATURE	Gauge No. 310 Depth: 4427 Ft.	Gauge No. 1375 Depth: 4467 Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened 1350
Est. °F.	Blanked Off no	Blanked Off yes	Blanked Off	Opened Bypass 1755
Actual 4465 108 °F.	Pressures	Pressures	Pressures	

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			2162.7	2194	2188.3				
First Period	Flow Initial		30.0	31	35.4			———	———
	Flow Final		33.1	41	47.8			61	*
	Closed in		1102.2	1107	1117.5			64	*
Second Period	Flow Initial		40.1	41	48.7			———	———
	Flow Final		43.4	54	59.3			60	*
	Closed in		1028.4	1025	1046.1			60	*
Third Period	Flow Initial							———	———
	Flow Final								
	Closed in								
Final Hydrostatic			2159.1	2148	2181.8			———	———

Legal Location Sec. - Twp. - Rng. C NW NE 24 27S 16W
Lease Name BUTLER THOMPSON
Well No. 3-24
Test No. 1
Tested Interval 4448 - 4470'
Field Area
County KIOWA
State KANSAS
Lease Owner/Company Name IMPERIAL OIL COMPANY

FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

5

Casing perfs. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 182447

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0830					Called out, job ready now
1100					On location, ready now
1130					Started mkaing up tools
1200					Tools started in hole
1350					Opened tool-blow off bottom of
					bucket in 1 minute
1451					Closed tool-gas to surface
1555	2" merla tester				Opened tool using 1/8" choke and
					inches of water gauge
1605					3" of water
1615					35" of water
1623					Changed to 1/4" choke
1625					24" of water
1635					15" of water 6.5 MCF/day
1640					15" of water 6.5 MCF/day
1650					15" of water 6.5 MCF/day
1655					Closed tool
1755					Off bottom
1930					Tools at table
2030					Tools loaded out
2130					Off location

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S

5

IMPERIAL OIL COMPANY
Lease Owner/Company Name

182447
Ticket Number

B.T. 310 B.T. 1375 B.T.

Depth 4427' - 12 Hr. Depth 4467 - 12 Hr. Depth

Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
FIRST FLOW PERIOD			FIRST FLOW PERIOD					
0		30.0	0		35.4			
5		19.7	5		35.1			
10		19.9	10		35.8			
15		27.0	15		41.0			
20		27.9	20		42.5			
25		28.4	25		43.0			
30		28.6	30		43.5			
35		29.4	35		43.7			
40		29.9	40		44.9			
45		31.6	45		46.6			
50		33.2	50		47.4			
55		33.7	55		47.8			
61.5		33.1	61.0		47.8			
FIRST CIP			FIRST CIP					
0		33.1	0		47.8			
4		345.3	4		385.5			
8		579.2	8		606.9			
12		751.8	12		779.2			
16		878.8	16		899.1			
20		956.7	20		976.0			
24		1007.2	24		1024.8			
28		1034.7	28		1051.3			
32		1049.2	32		1065.5			
36		1060.3	36		1076.3			
40		1068.9	40		1085.2			
44		1076.1	44		1092.0			
58		1082.9	48		1099.1			
52		1089.0	52		1104.6			
56		1093.9	56		1109.7			
60		1098.9	60		1115.0			
63.8		1102.2	63.5		1117.5			
SECOND FLOW			SECOND FLOW					
0		40.1	0		48.7			
5		34.2	5		45.6			
10		31.4	10		42.7			
15		31.4	15		43.1			
20		31.4	20		43.9			
25		31.4	25		47.6			
30		33.0	30		49.5			
35		34.2	35		51.8			
40		36.2	40		53.5			

Remarks:

80-2860

5

IMPERIAL OIL COMPANY
Lease Owner/Company Name

182447 Page 2
Ticket Number

B.T. 310 Depth 4427 - 12 Hr.

B.T. 1375 Depth 4467 - 12 Hr.

B.T. _____ Depth _____

Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
SECOND	FLOW CONT.		SECOND	FLOW CONT.				
45		38.3	45		54.4			
50		40.4	50		55.8			
55		41.3	55		57.1			
60.3		43.4	60.0		59.3			
SECOND	CIP		SECOND	CIP				
0		43.4	0		59.3			
4		273.1	4		302.4			
8		467.2	8		502.0			
12		623.3	12		653.0			
16		745.7	16		776.0			
20		832.6	20		861.1			
24		894.7	24		924.5			
28		933.8	28		959.1			
32		957.0	32		980.0			
36		973.8	36		994.7			
40		985.9	40		1006.1			
44		996.4	44		1016.2			
58		1005.4	48		1024.7			
52		1014.1	52		1033.3			
56		1021.8	56		1040.2			
60.0		1028.4	59.6		1046.1			

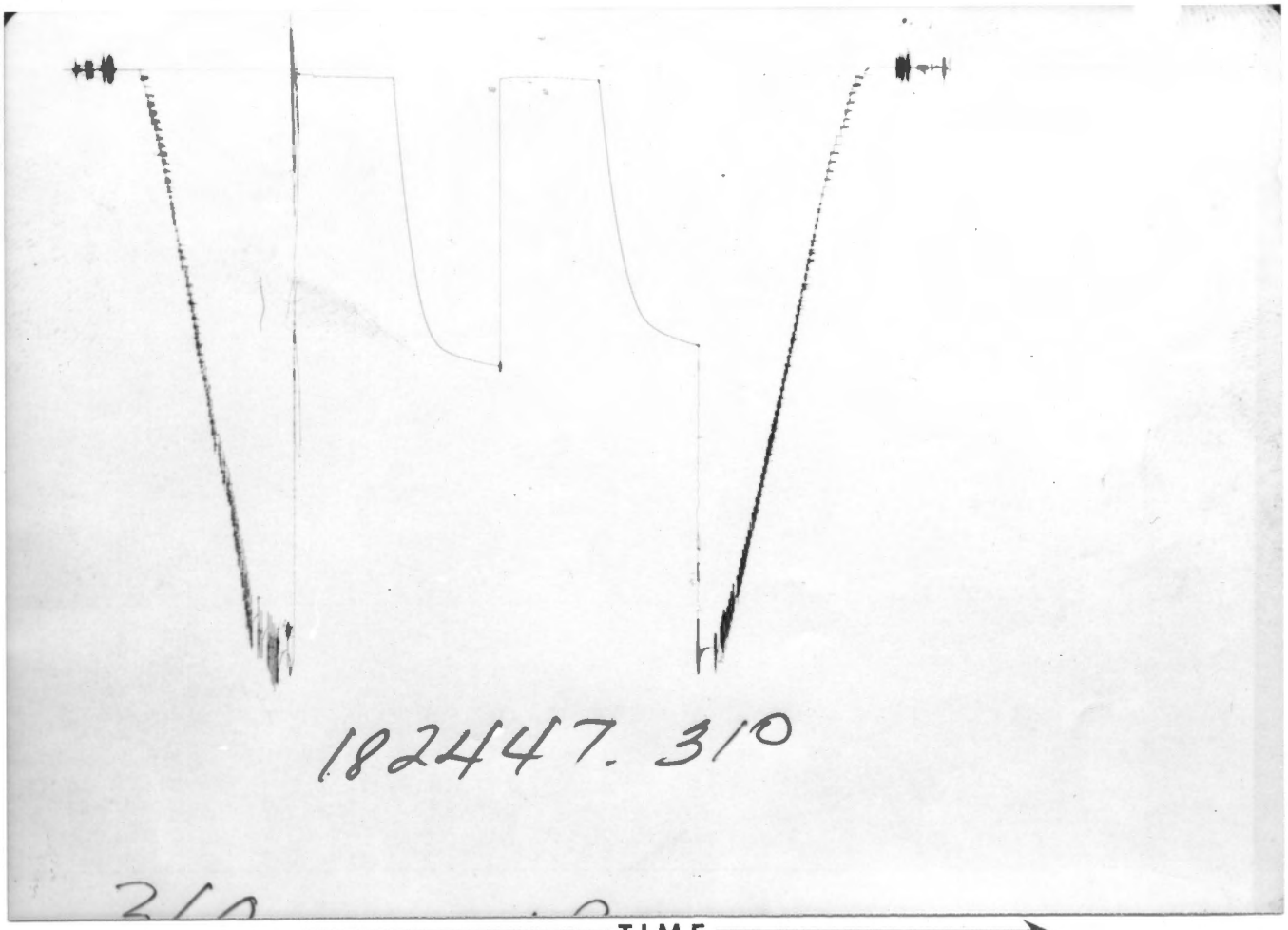
Remarks: _____

80-2860

5

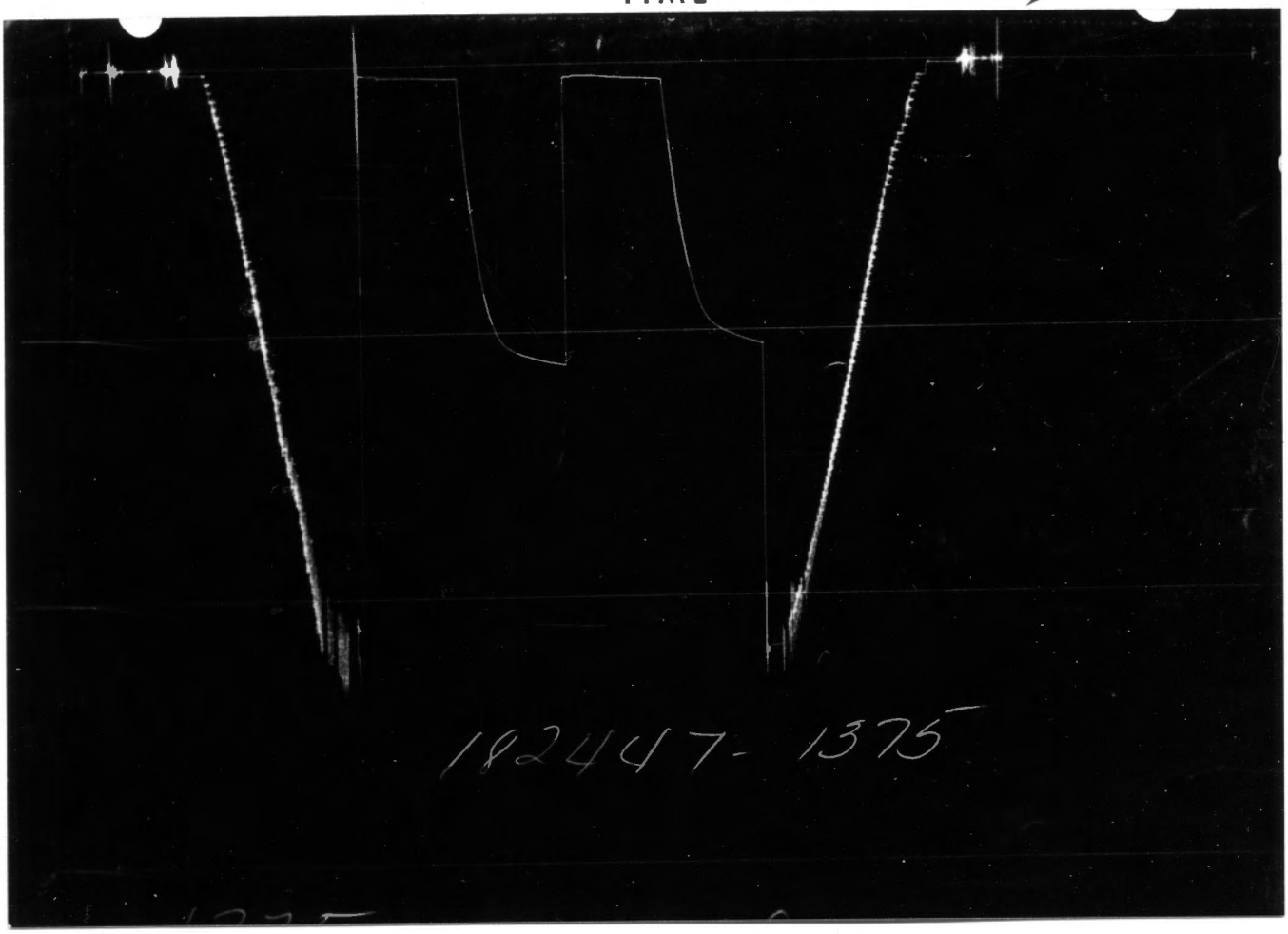
TICKET NO. 182447

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	5.75"	2.75"	1'	4288.91'
Woter Cushion Valve				
Drill Pipe	4.5"	3.826"	3433'	
~~Drill Collars~~ weight pipe	4.5"	2.764"	988.64'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5.75"	.87"	5.98'	4414.91'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5.02	4421'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	2.25	4.12'	4427
Hydraulic Jar	5.03"	1.75"	5'	
VR Safety Joint	5"	1"	2.78'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5.81'	4442'
Distributor				
Packer Assembly	6.75"	1.53"	5.81'	4448'
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 & temp	5"	2.37"	16.51'	
Blanked-Off B.T. Running Case	5"	2.44"	4.06'	4467'
Total Depth				4470'

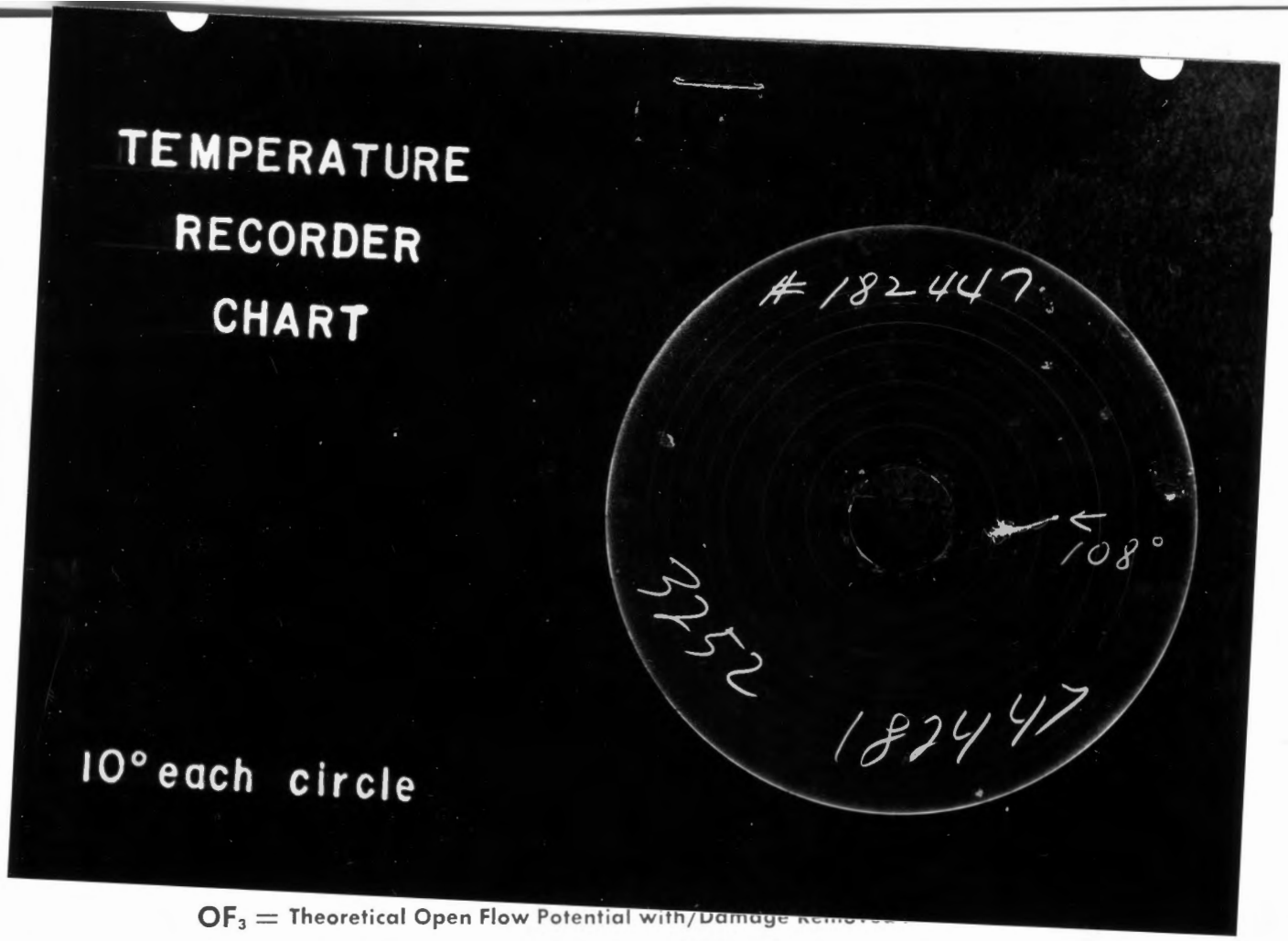


PRESSURE

TIME



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



OF_3 = Theoretical Open Flow Potential with/Damage Removed

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

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	.21 @	75	°F.	17000 ppm
Mud Pit Sample Filtrate	____ @	____	°F.	____ ppm

Mud Weight 9.4 vis 44 sec.

Date 7-13-81 Ticket Number 098824
Kind of D.S.T. OPEN HOLE Halliburton Location PRATT
Tester MR. JOHNSON Witness MR. STUBBS
Drilling Contractor RED TIGER DRILLING COMPANY #6 bj

EQUIPMENT & HOLE DATA

Formation Tested Mississippi
Elevation 2083' KB Ft.
Net Productive Interval 25' Ft.
All Depths Measured From Kelly Bushing
Total Depth 4586' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 1008' WP I.D. 2.764"
Drill Pipe Length 3444' I.D. 3.826"
Packer Depth(s) 4490' 4496' Ft.
Depth Tester Valve 4463' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1/4" Bottom Choke 3/4"

Recovered 450 Feet of gas cut mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET....GAS TO SURFACE IN 68 MINUTES....

TEMPERATURE	Gauge No. 7348 Depth: 4465' Ft.	Gauge No. 7347 Depth: 4583' Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 1817
Est. °F.	Blanked Off NO	Blanked Off YES	Blanked Off	
Actual 4581' 123 °F.	Pressures	Pressures	Pressures	Opened Bypass 2247

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			2182.4	2254	2226.3				
First Period Flow	Initial		67.7	116	122.0			———	———
	Final		165.3	213	215.1			60	
	Closed in		528.5	581	580.6			60	
Second Period Flow	Initial		175.2	213	186.0			———	———
	Final		196.2	231	229.6			60	
	Closed in		841.2	878	881.0			90	
Third Period Flow	Initial							———	———
	Final								
	Closed in								
Final Hydrostatic			2169.6	2206	2213.8			———	———

Legal Location Sec. - Twp. - Rng.
Lease Name: BUTLER-THOMPSON
Well No.: 3-24
Test No.: 2
Field Area: WEST OF WELLSFORD, KS.
Tested Interval: 4496' to 4586'
County: KIOWA
State: KANSAS
Lease Owner/Company Name: IMPERIAL OIL COMPANY

FORM 181-82 – PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

5

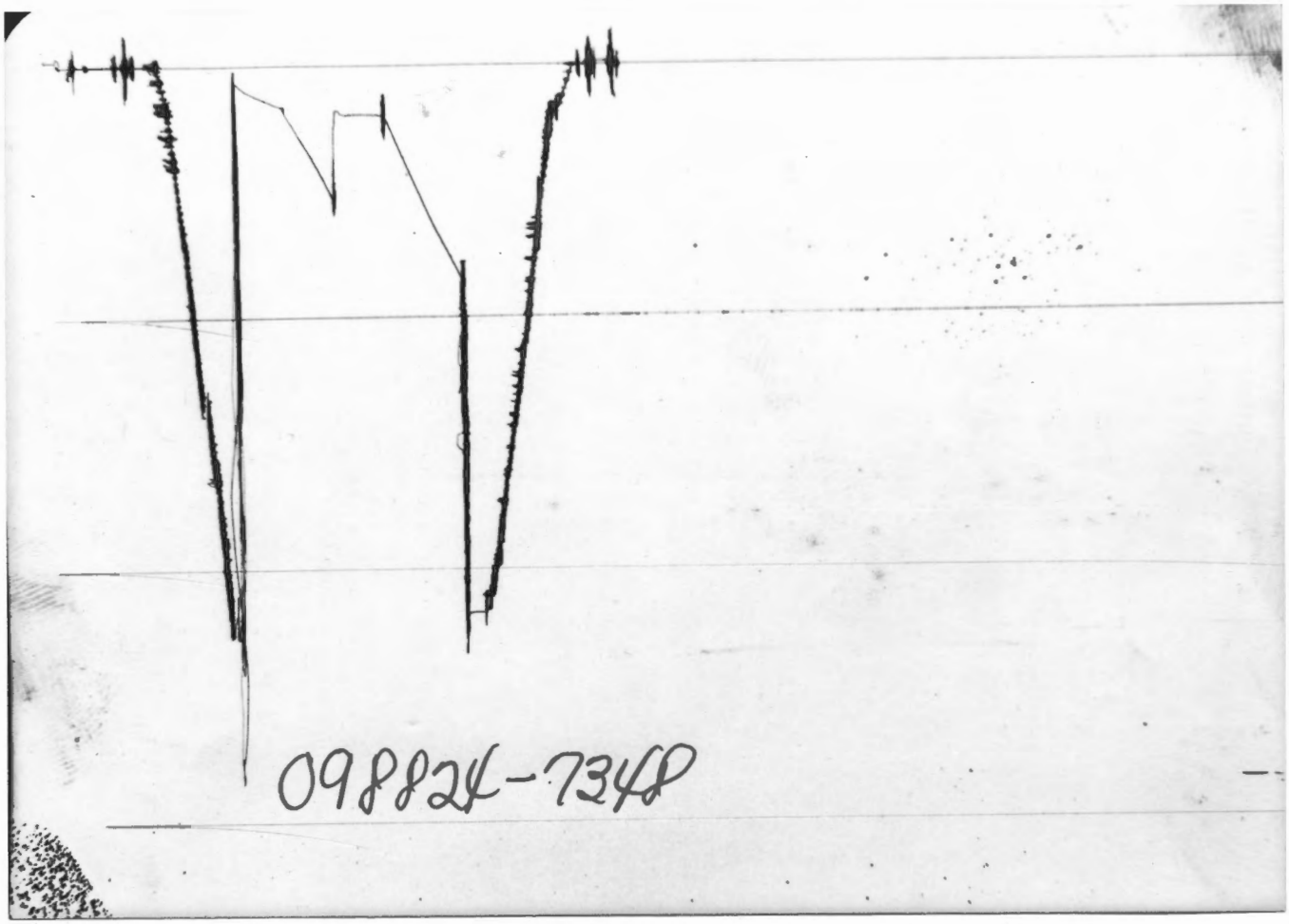
Casing perfs._____ Bottom choke_____ Surf. temp._____ °F Ticket No. 098824
Gas gravity_____ Oil gravity_____ GOR_____
Spec. gravity_____ Chlorides_____ ppm Res._____ @_____ °F
INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED_____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1330					Called out, ready at 1500.
1445					On location, rig tripping out.
1545					Made up tools.
1617					Tool in table.
1647					Tool through table.
1814					Tool on bottom.
1817					Opened tool with a fair blow, building
1822					1' in pail.
1827					Bottom of pail.
1840					Opened 2" line.
1843					Blow died.
1917					Closed tool. No gas to surface.
2017					Opened tool with a strong blow.
2020					Opened 2" flow line.
2025					Gas to surface, not measurable.
2117					Closed tool.
2247					Opened bypass.
2310					Started out with DST #2.
0100					Tool at surface.
0200					Job completed.

PRODUCTION TEST DATA

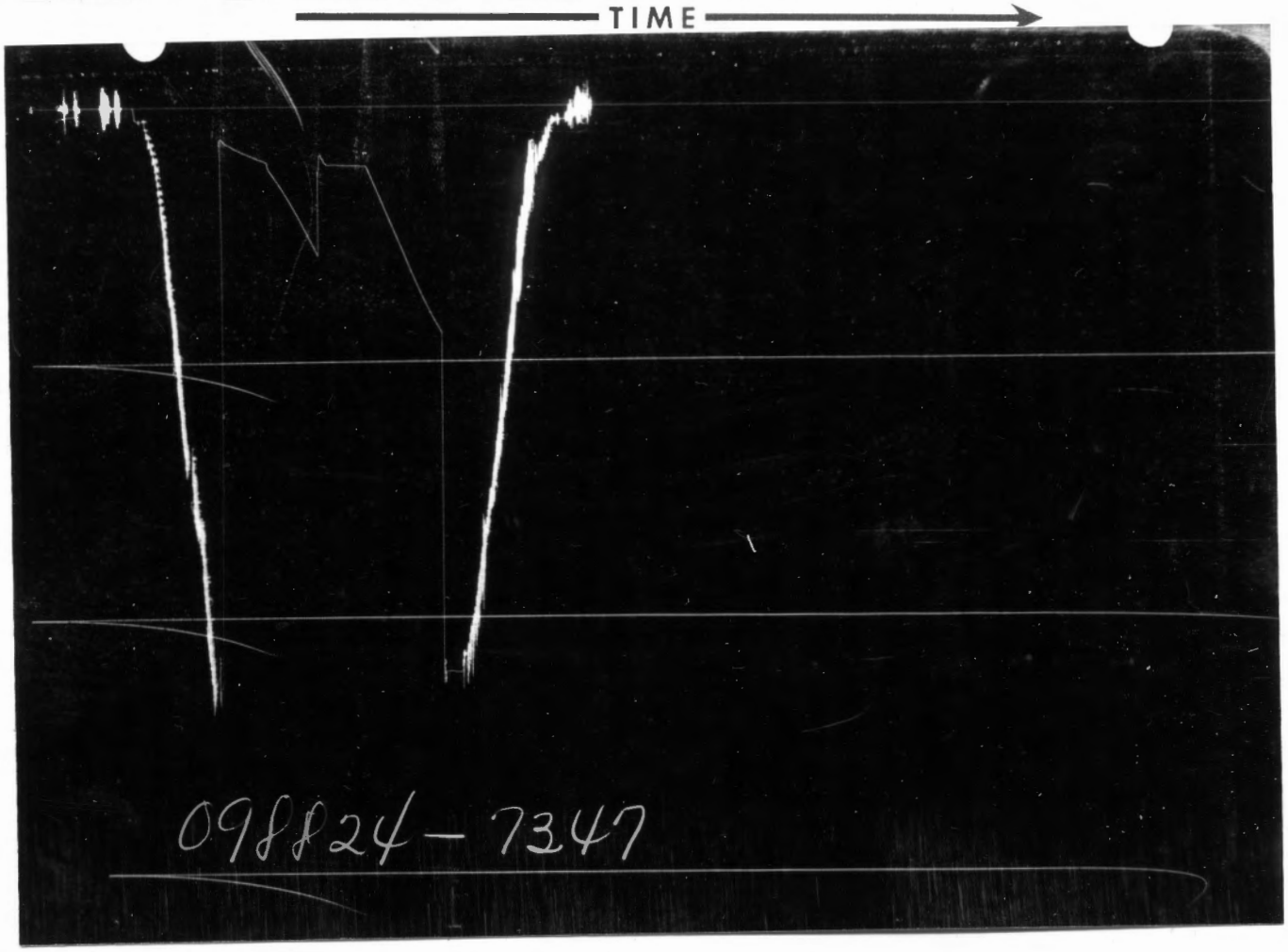
TICKET NO. 098824

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4.50"	3.826"	3444'	
~~Drill Collars~~ Weight Pipe	4.50"	2.764"	882'	
Reversing Sub	6.00"	2.00"	1.00'	4327'
Water Cushion Valve				
Drill Pipe				
~~Drill Collars~~ Weight Pipe	4.50"	2.764"	126'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5.00"	.87"	6.00'	4458'
Dual CIP Sampler				
Hydro-Spring Tester	5.00"	.75"	5.00'	4463'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5.00"	3.06"	4.00'	4465'
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'	4490'
Distributor				
Packer Assembly	6.75"	1.53"	6.00'	4496'
Flush Joint Anchor	5.00"	2.37"	18'	
~~Pressure Equalizing Tube~~ Subs (2)	6.00"	2.00"	2.00'	
Blanked-Off B.T. Running Case				
~~Drill Collars~~ Weight Pipe	4.50"	2.764"	63'	
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor	5.00"	3.44"	1.00'	4581'
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case	5.00"	2.44"	4.00'	4583'
Total Depth				4586'

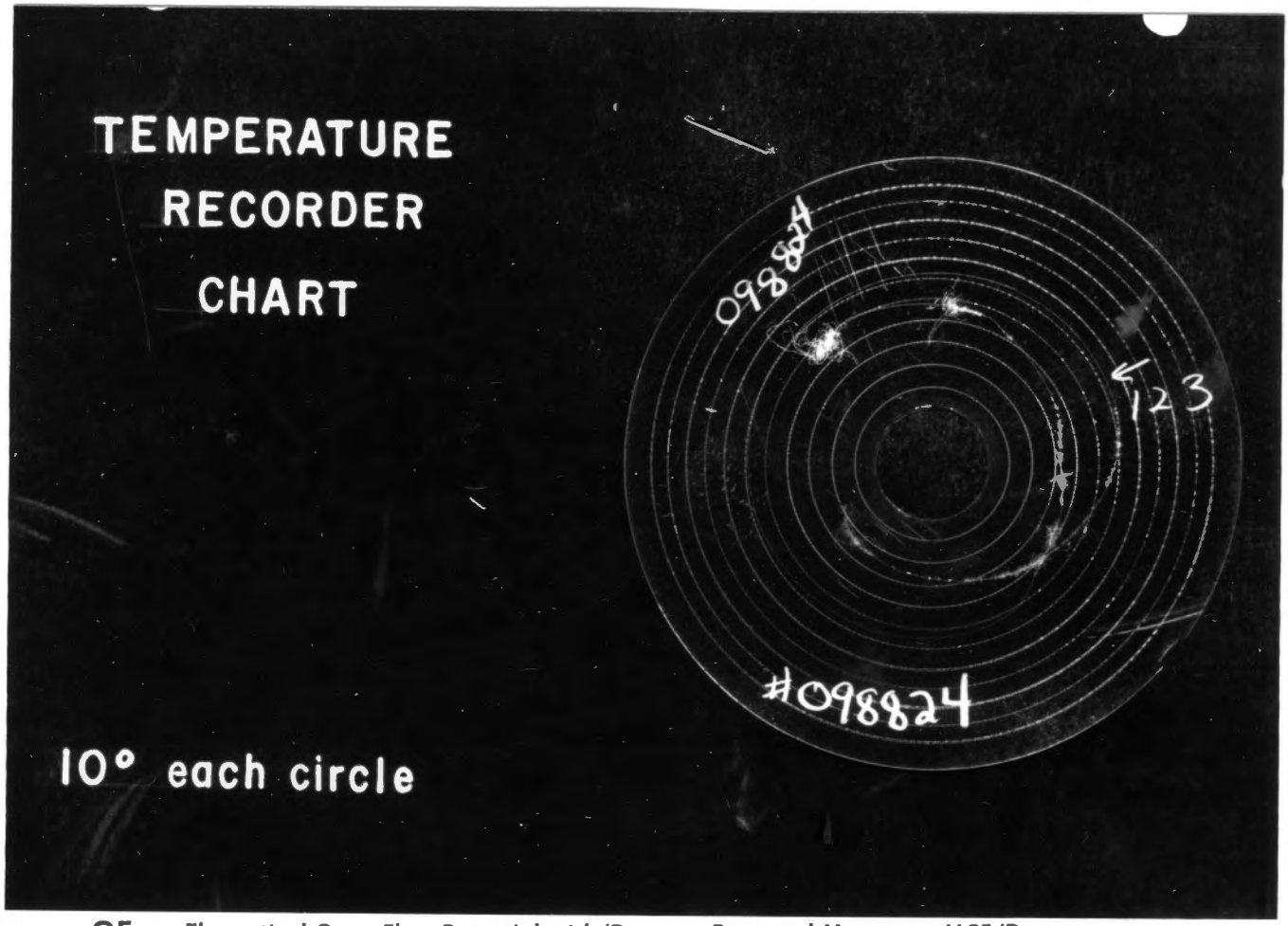


PRESSURE

TIME



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



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

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

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	.21	@ 75	°F.	17000 ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 9.4 vis 44 sec.

Date 7-14-81 Ticket Number 098825
Kind of D.S.T. OPEN HOLE Halliburton Location PRATT
Tester M. R. JOHNSON Witness P. STUBBS
Drilling Contractor RED TIGER #6 BJ-VT

EQUIPMENT & HOLE DATA

Formation Tested Kinderhook
Elevation 2083' Kelly Bushing Ft.
Net Productive Interval 6' Ft.
All Depths Measured From Kelly Bushing
Total Depth 4610' Ft.
Main Hole/Casing Size 7 7/8"
~~Drill Collar~~ Length WP 1008' I.D. 2.764"
Drill Pipe Length 3546' I.D. 3.826"
Packer Depth(s) 4582'-4588' Ft.
Depth Tester Valve 4565' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1/4" Bottom Choke 3/4"

Recovered 180 Feet of Heavy oil and gas cut mud
Recovered 30 Feet of Free gassy oil
Recovered 4000 Feet of Gas in drill pipe
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks -SEE PRODUCTION TEST DATA SHEET-

*-See attached incremental pressure sheet

TEMPERATURE	Gauge No. 7348 Depth: 4567' Ft.	Gauge No. 7347 Depth: 4607' Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened 1333
Est. 4605 °F.	Blanked Off YES	Blanked Off NO	Blanked Off	
Actual 124 @ °F.	Pressures	Pressures	Pressures	Opened Bypass 1703

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			2214.3	2264	2235.5				
First Period	Flow Initial		19.5	39	45.9			___	___
	Flow Final		60.3	78	80.5			45	*
	Closed in		1364.5	1378	1387.1			60	*
Second Period	Flow Initial		72.0	87	86.5			___	___
	Flow Final		95.7	116	114.2			45	*
	Closed in		1282.2	1291	1305.1			60	*
Third Period	Flow Initial							___	___
	Flow Final								
	Closed in								
Final Hydrostatic			2216.4	2197	2236.2			___	___

FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

Legal Location Sec. - Twp. - Rng. 24-27S-16W
Lease Name BUTLER-THOMPSON
Well No. 3-24
Test No. 3
Tested Interval 4588'-4610'
Lease Owner/Company Name IMPERIAL OIL COMPANY
Field Area W. WELLSFORD
County KIOWA
State KANSAS

Casing perfs. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 098825

Gas gravity _____ Oil gravity _____ GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0915					Called out.
1040					On location-rig tripping out.
1105					Picked up tool.
1122					Tool in table.
1205					Tool through table.
1330					Tool on bottom.
1333					Tool opened with fair building to
1339					strong blow.
1418					Tool closed-no gas to surface.
1518					Tool opened with strong blow.
1530					Opened 2" flow line.
1540					Slight blow-closed 2" line.
1603					Tool closed.
1703					Opened by-pass.
1710					Started out with drill stem test #3.
1910					Tool at surface.
2000					Job completed.

IMPERIAL OIL COMPANY
Lease Owner/Company Name

098825
Ticket Number

B.T. 7348 B.T. _____ B.T. 7347

Depth 4567' Depth _____ Depth 4607'

24 HOUR 24 HOUR

Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time (minutes)	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
FIRST FLOW PERIOD						FIRST FLOW PERIOD		
0		19.5				0		45.9
9		28.5				9		51.6
18		37.9				18		59.7
27		45.8				27		66.5
36		52.5				36		73.2
46.1		60.3				45.5		80.5
FIRST CIP						FIRST CIP		
0		60.3				0		80.5
6		277.3				6		331.5
12		572.8				12		653.7
18		882.7				18		960.6
24		1082.7				24		1141.9
30		1189.9				30		1237.2
36		1256.4				36		1291.5
42		1300.5				42		1326.9
48		1327.4				48		1353.0
54		1350.5				54		1373.8
58.7		1364.5				58.9		1387.1
SECOND FLOW PERIOD						SECOND FLOW PERIOD		
0		72.0				0		86.5
9		72.9				9		89.3
18		79.0				18		97.6
27		84.6				27		103.3
36		89.8				36		109.2
45		95.7				44.5		114.2
SECOND CIP						SECOND CIP		
0		95.7				0		114.2
6		249.6				6		287.7
12		464.5				12		511.3
18		708.4				18		769.6
24		923.4				24		982.1
30		1067.2				30		1106.6
36		1148.2				36		1179.5
42		1198.7				42		1225.3
48		1234.8				48		1257.2
54		1260.0				54		1281.9
60.6		1282.2				61.1		1305.1

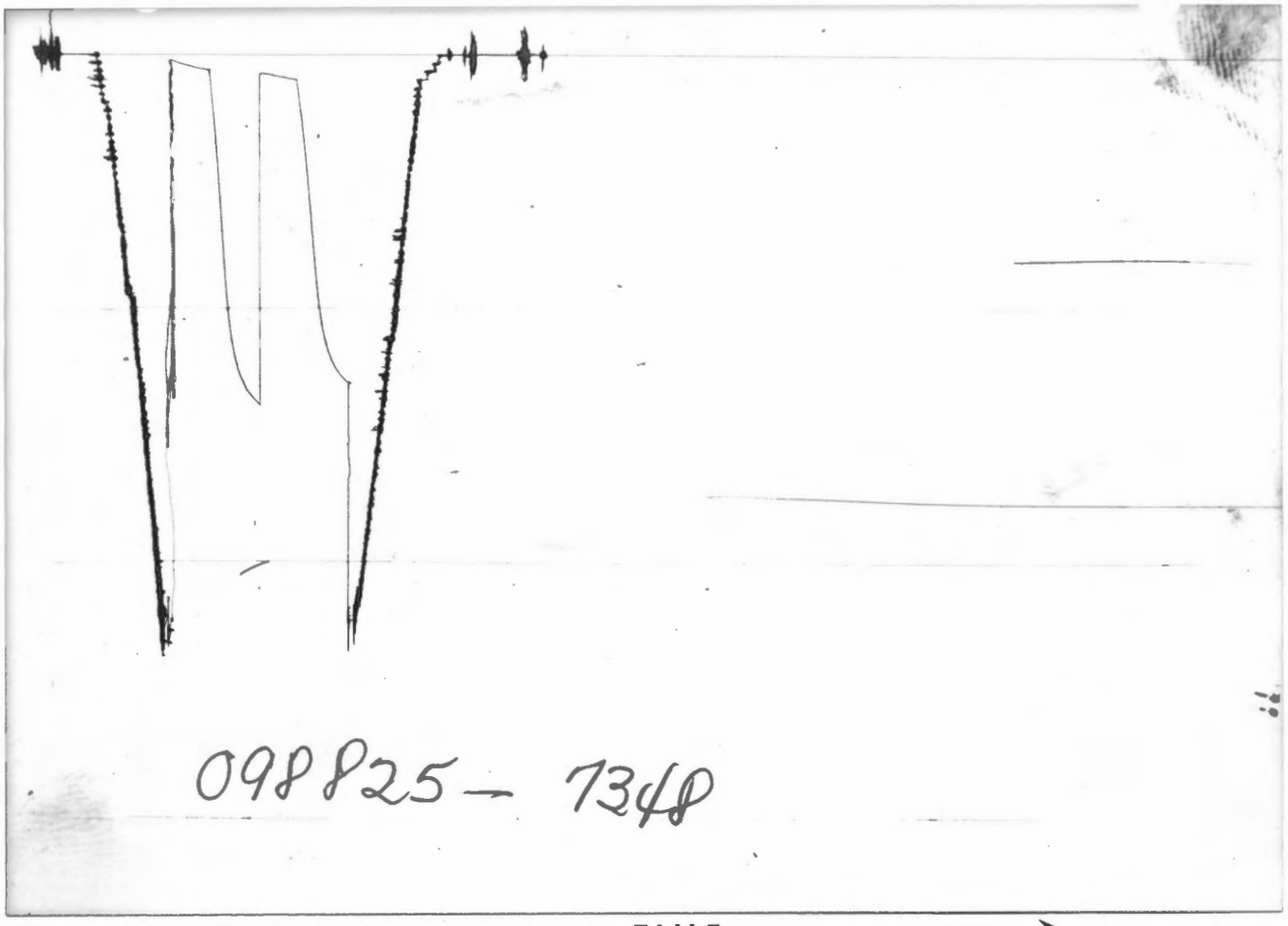
TICKET NO. 098825

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4 1/2"	3.826"	3546'	
~~Drill Collars~~ Weight Pipe	4 1/2"	2.764"	882'	
Reversing Sub	6"	2"	1'	4429'
Water Cushion Valve				
Drill Pipe				
~~Drill Collars~~ WP	4 1/2"	2.764"	126'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	6'	4560'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4565'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4567'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	6'	4582'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4588'
Flush Joint Anchor	5"	2.37"	15'	
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				
HT-500 Drill Collars	5"	3.44"	1'	4605'
Flush Joint Anchor				
Blanked-Off B.T. Running Case	5"	2.44"	4'	4607'
Total Depth				4610'

FORM 187—R2 — PRINTED IN U.S.A.

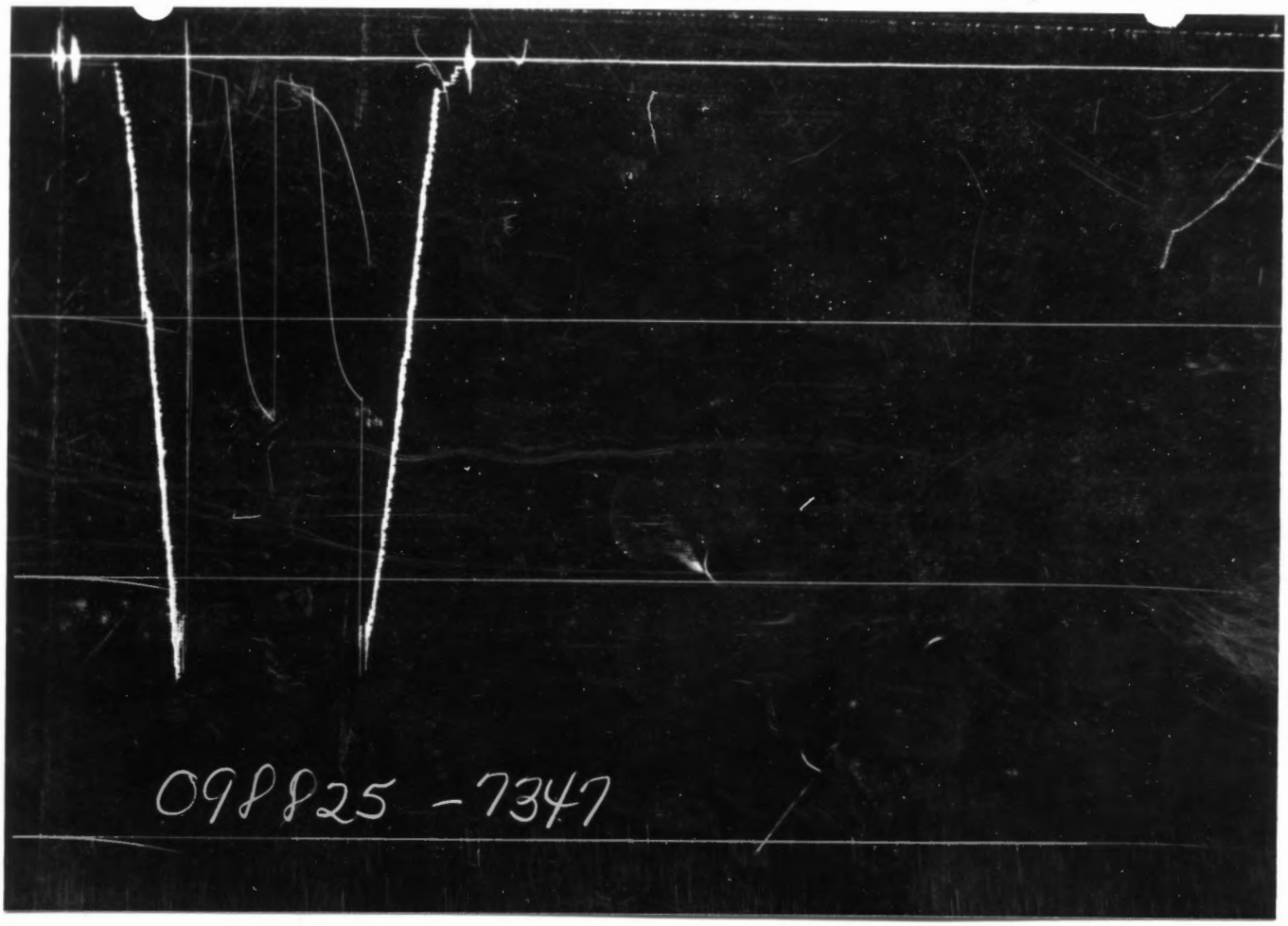
EQUIPMENT DATA

LITTLE'S

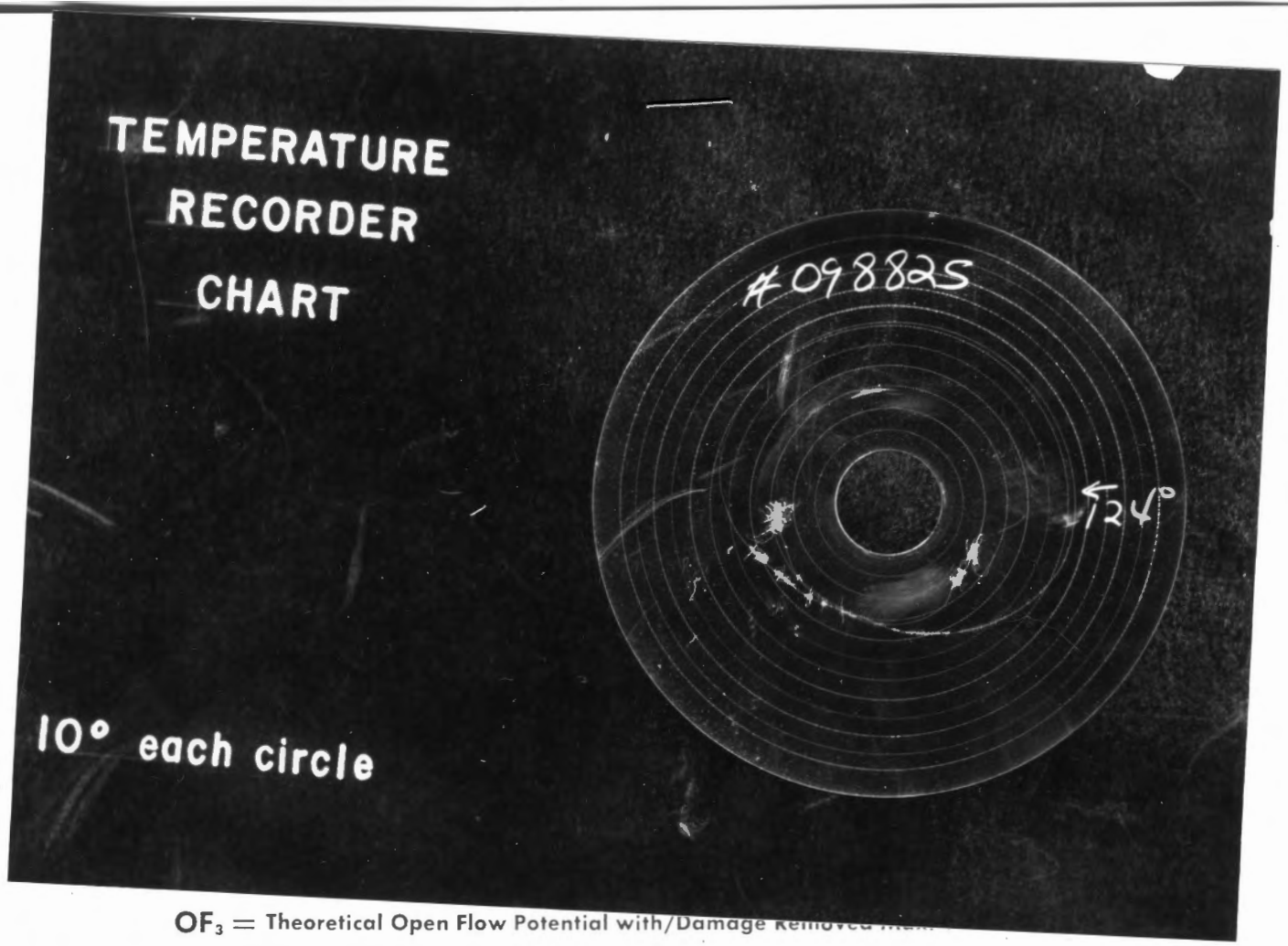


PRESSURE

TIME



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



OF_3 = Theoretical Open Flow Potential with/Damage Removed Max.

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.