Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company American Petroleum Co., Inc. Lease & Well No. Ash #1-A

Elevation 1516 Kelly Bush. Formation Snyderville Sand Effective Pay - Ft. Ticket No. 21942

Date 8-23-77 Sec. 27 Twp. 32S Range 12W County Barber State Kansas

Test Approved by Donald J. Malone Western Representative Norman Allen

Formation Test No. 1 O.K. X Misrun - Interval Tested From 3624' to 3670' Total Depth 3670'

Size Main Hole 7 7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No

Top Packer Depth 3619 Ft. Size 6 3/4 Bottom Packer Depth 3624 Ft. Size 6 3/4

Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 46 Ft. Size 5½OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3630 Ft. Clock No. 8474 Depth 3633 Ft. Clock No. 9727

Top Make Kuster Cap. 3150 No. 1562 Inside ~~Outside~~ Bottom Make Kuster Cap. 3200 No. 1561 ~~Inside~~ Outside

Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 8:28P. M

Tool Open I.F.P. From 8:30P M. to 9:00P M. - Hr. 30 Min. From (B) 36 P.S.I. To (C) 187 P.S.I.

Tool Closed I.C.I.P. From 9:00P M. to 9:30P M. - Hr. 30 Min (D) 1301 P.S.I.

Tool Open F.F.P. From 9:30P M. to 10:00P M. - Hr. 30 Min. From (E) 242 P.S.I. To (F) 293 P.S.I.

Tool Closed F.C.I.P. From 10:00 M. to 10:30P M. - Hr. 30 Min. (G) 1276 P.S.I.

Initial Hydrostatic Pressure (A) 1807 P.S.I. Final Hydrostatic Pressure (H) 1788 P.S.I. Maximum Temp. 125

INFORMATION

BLOW Fair blow throughout test.

Did Well Flow - Yes X No Recovery Total Ft. 660' of slightly muddy salt water.

Reversed Out - Yes X No Mud Type Chem Viscosity 35 Weight 9.8 Water Loss 54.8 cc. Chlorides 24,500 PPM

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint - Jars: Size 4½OD In. Make WTC Ser. No. 406

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -

DRILLING CONTRACTOR DNB Drlg. (#4) Length Drill Pipe? 3148 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½XH In.

Length Weight Pipe 450 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4½XH In. Length Drill Collars - Ft. I.D. Drill Collars - In.

Tool Joint Size - In. Length D.S.T. Tool 72 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 8-23-77 Test Ticket No. 21942

Recorder No. 1562 Capacity 3150 Location 3630 Ft.

Clock No. 8474 Elevation 1516 Kelly Bushing Well Temperature 125 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1807	P.S.I.	Open Tool	8:28P M	
B	First Initial Flow Pressure	36	P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	187	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1301	P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	242	P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F	Second Final Flow Pressure	293	P.S.I.			
G	Final Closed-in Pressure	1276	P.S.I.			
H	Final Hydrostatic Mud	1788	P.S.I.			

PRESSURE BREAKDOWN

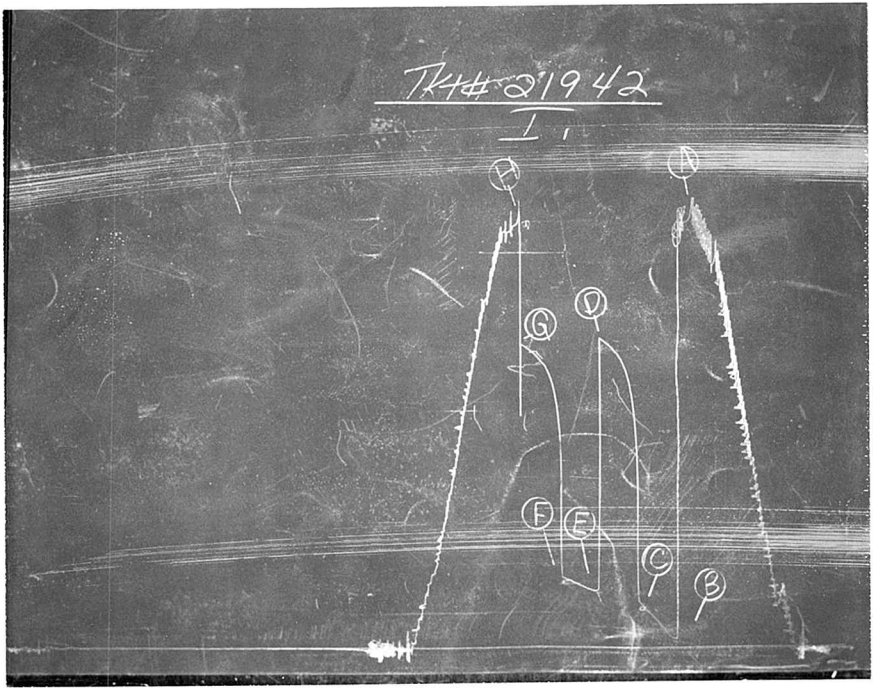
First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.	Point	Minutes	Press.	Point	Minutes	Press.	Point	Minutes	Press.
P 1	0	36		0	187		0	242		0	293
P 2	5	42		3	688		5	239		3	842
P 3	10	71		6	945		10	249		6	1038
P 4	15	102		9	1075		15	263		9	1110
P 5	20	129		12	1151		20	274		12	1159
P 6	25	154		15	1195		25	287		15	1187
P 7	30	187		18	1227		30	293		18	1206
P 8				21	1249					21	1225
P 9				24	1266					24	1241
P10				27	1282					27	1255
P11				30	1301					30	1266
P12										33	1276
P13											
P14											
P15											
P16											
P17											
P18											
P19											
P20											


TK44 21942
I
A
A
G
D
F
E
C
B

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 9.1 vis 41 sec

Date 8-28-77 Ticket Number 207355
Kind of Job OPEN HOLE Halliburton District PRATT
Tester T. MOFF Witness D. MALONE
Drilling Contractor DN & B DRILLING COMPANY DR

EQUIPMENT & HOLE DATA

Formation Tested Simpson
Elevation 1516' KB Ft.
Net Productive Interval 25' Ft.
All Depths Measured From Kelly Bushing
Total Depth 4775' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 478' WP I.D. 2.764"
Drill Pipe Length 4237' I.D. 3.826"
Packer Depth(s) 4738-4748' Ft.
Depth Tester Valve 4726' Ft.

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

Recovered 10 Feet of mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET

TEMPERATURE	Gauge No. 6144 Depth: 4731 Ft.	Gauge No. 6143 Depth: 4771 Ft.	Gauge No. Depth: Ft.	TIME
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened A.M. 07:55 P.M.
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off	Opened A.M.
4770' Actual 127 °F.	Pressures	Pressures	Pressures	Bypass 09:55 P.M.

	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			2329	2329				
First Period Flow Initial			0	32			———	———
First Period Flow Final	STYLUS NOT ENGAGED		0	32				
First Period Closed in			20	49				
Second Period Flow Initial			0	39			———	———
Second Period Flow Final			0	35				
Second Period Closed in			41	77				
Third Period Flow Initial							———	———
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic			2329	2319			———	———

Legal Location Sec. - Twp. - Rng. 27-32-12W
Lease Name ASH
Well No. A-1
Test No. 4
Tested Interval 4748-4775'
Field Area
County BARBER
State KANSAS
Lease Owner/Company Name AMERICAN PETROLEUM COMPANY, INCORPORATED

FORM 181-R2—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 102548 5M 9/76

Casing perfs._____ Bottom choke 3/4" Surf. temp 65 °F Ticket No. 207355

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
0100					Called out
0230					On location, came out of hole.
0540					Made up tool
0610					Tool through table
0753					Tool on bottom wt/59 m
0755					Opened tool with no blow
0825					Closed tool
0855					Opened tool with no blow
0905					Flushed tool
0910					Closed tool
0925					Came off bottom

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 96672 5M 8/74

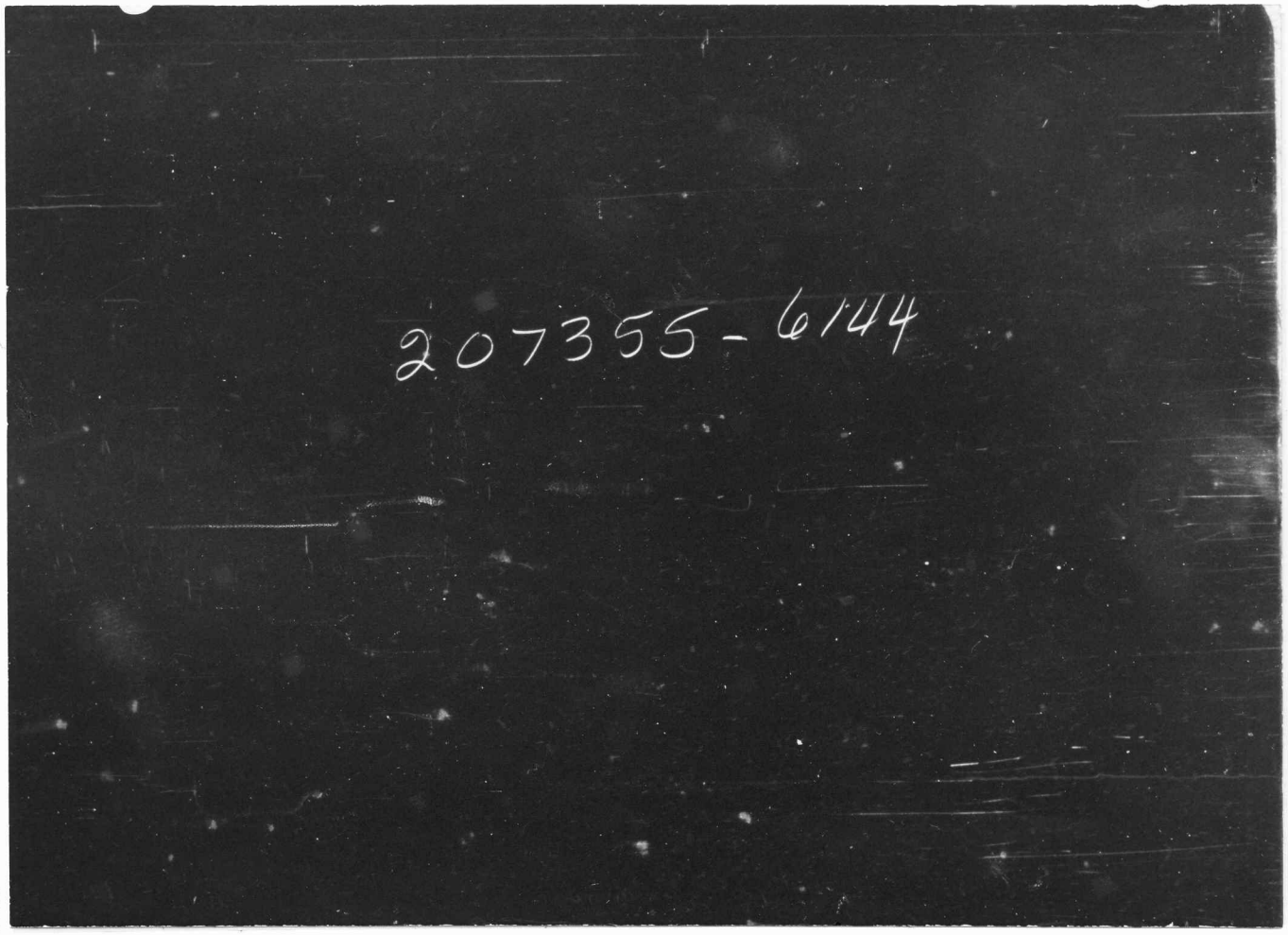
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TICKET NO. 207355



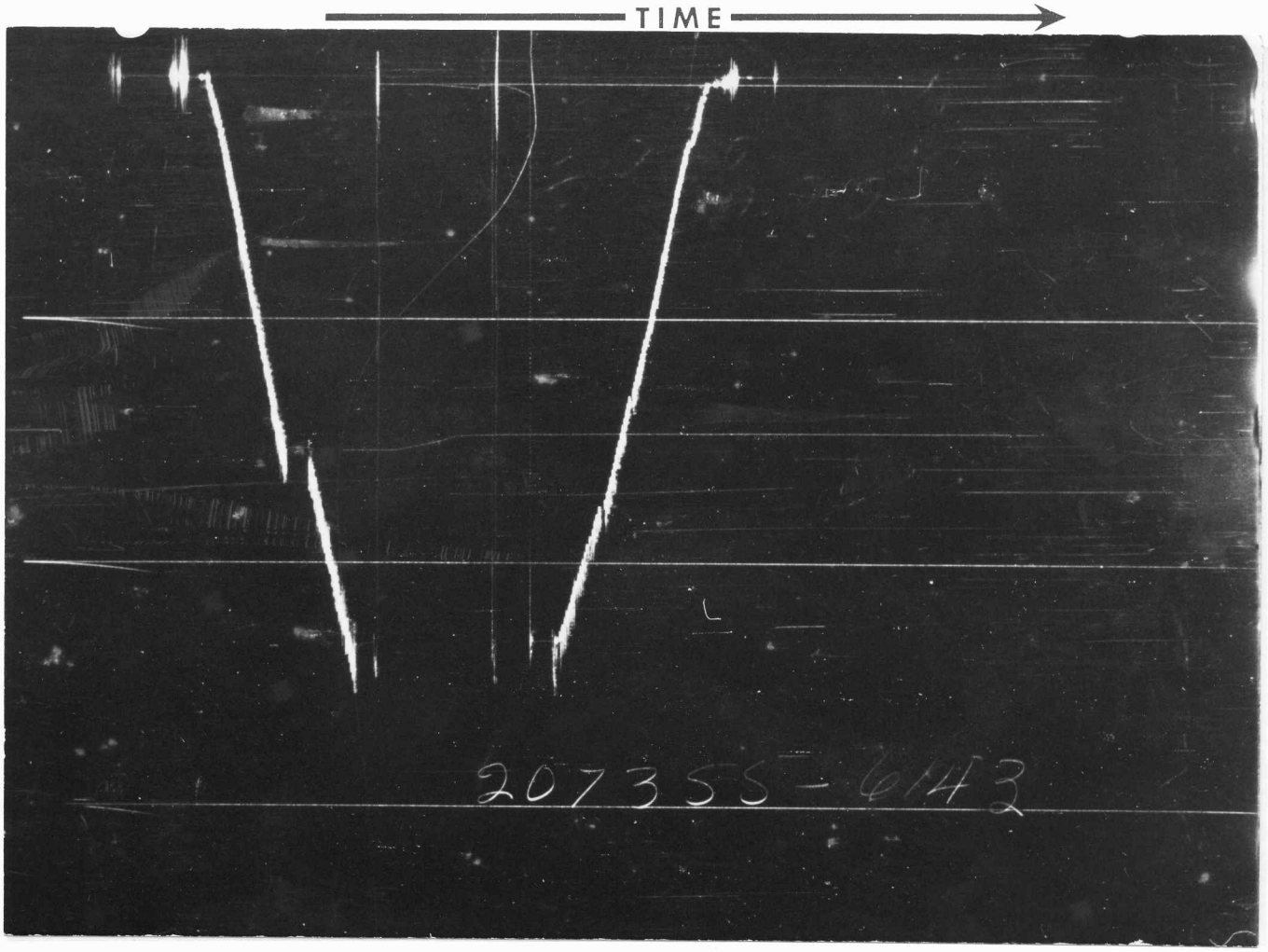
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	5 5/8"	2"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4237'	
Drill Collars	4½"	2.764"	478' WP	
Handling Sub & Choke Assembly	5 3/4"	2 1/4"	5'	
Dual CIP Valve	5"	.87"	5'	4721'
Dual CIP Sampler				
Hydro-Spring Tester	5"	3/4"	5'	4726'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4731'
Hydraulic Jar				
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	6'	4738'
Distributor				
Packer Assembly	6 3/4"	1.53"	6'	4748'
Flush Joint Anchor	5"	2.37"	20'	
Pressure Equalizing Tube				
	5"	2"	1' HT-500	
Blanked-Off B.T. Running Case	5"	2.44"	4'	4771'
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				4775'

EQUIPMENT DATA

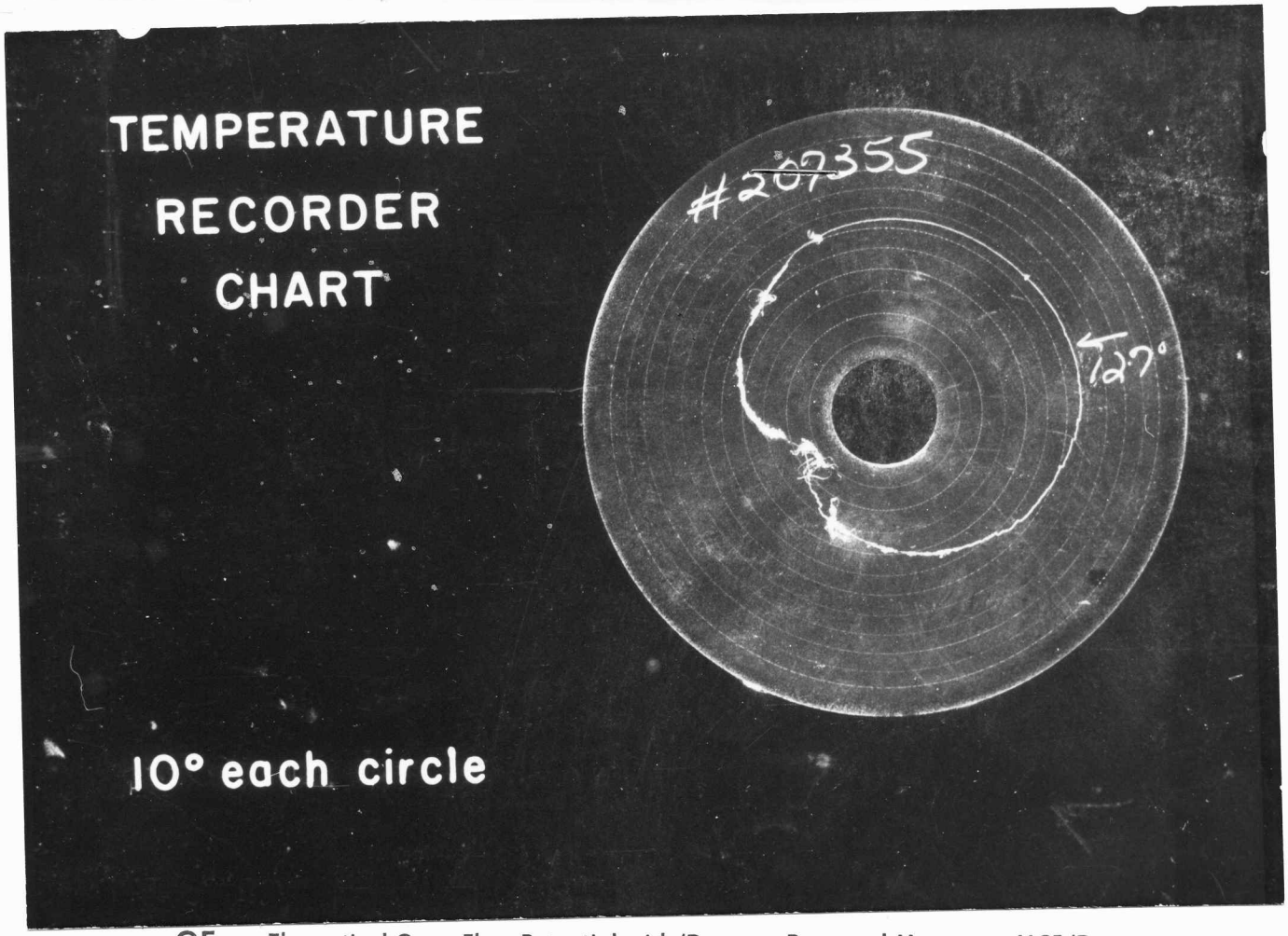


PRESSURE

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.