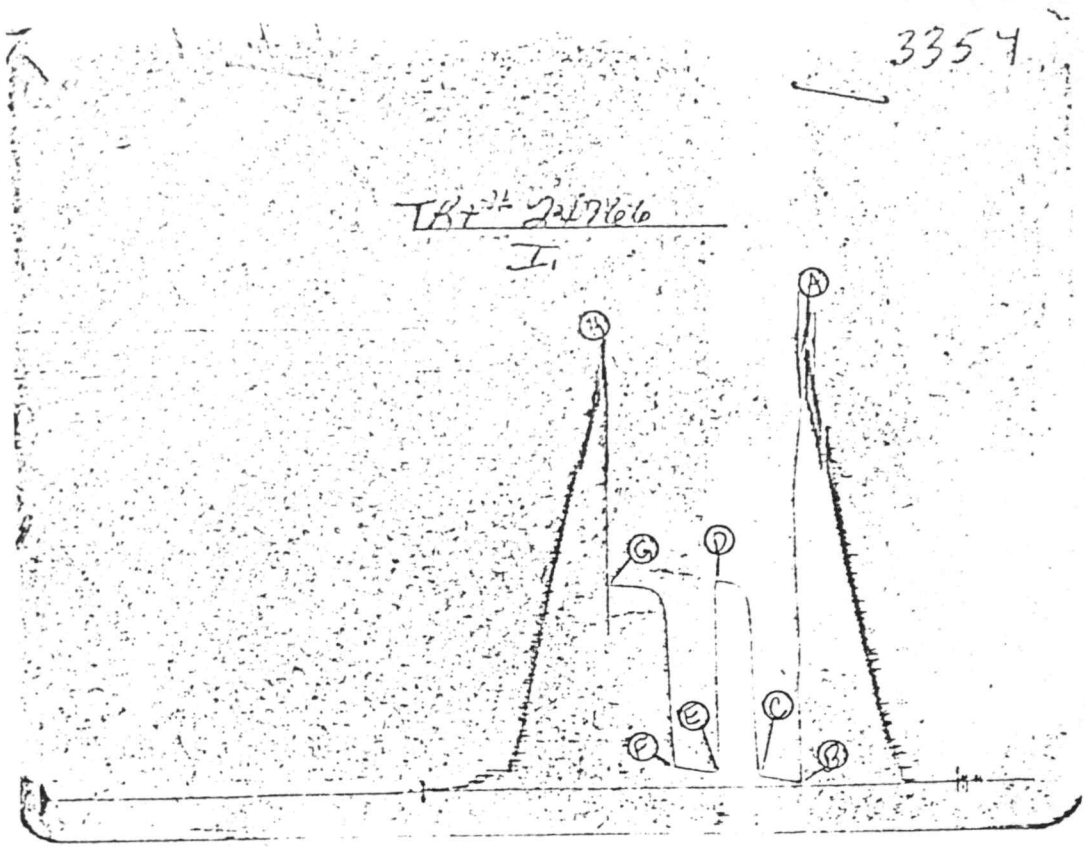


This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2144	2150	PSI
(B)	First Initial Flow Pressure	32	23	PSI
(C)	First Final Flow Pressure	63	60	PSI
(D)	Initial Closed-in Pressure	1118	1118	PSI
(E)	Second Initial Flow Pressure	84	95	PSI
(F)	Second Final Flow Pressure	116	114	PSI
(G)	Final Closed-in Pressure	1108	1102	PSI
(H)	Final Hydrostatic Mud	2123	2148	PSI

COMPANY Patrick Petroleum Corp. & Hinkle Oil Company LEASE AND WELL NO. Beahm #1 SEC. 26 TWP. 16S RGE. 25W TEST NO. 1 DATE 11-27

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

Company Patrick Petroleum Corp. & Hinkle Oil Co. Lease & Well No. Beahm #1

Elevation 2520 Kelly Bush. Formation Ft. Scott Effective Pay - Ft. Ticket No. 24966

Date 11-27-77 Sec. 26 Twp. 16S Range 25W County Ness State Kansas

Test Approved by K. W. Johnson Western Representative Ken Metzler

Formation Test No. 1 O.K. X Misrun - Interval Tested From 4397' to 4420' Total Depth 4420'

Size Main Hole 7-7/8 Rat Hole 12¼ Conv. - B.T. X Damaged - Yes X No Conv. - B.T. - Damaged - Yes - No

Top Packer Depth 4397 Ft. Size 6-3/4 Bottom Packer Depth - Ft. Size -

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

Tool Size 5½OD Tool Joint Size 4½FH Anchor Length 23 Ft. Size 5½OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4412 Ft. Clock No. 6893 Depth 4415 Ft. Clock No. 5665

Top Make Kuster Cap. 4200 No. 3354 Inside Outside Bottom Make Kuster Cap. 4150 No. 2605 Inside Outside

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

Time Set Packer 9:57 P M

Tool Open I.F.P. From 10:00 M. to 10:30 M. - Hr. 30 Min. From (B) 23 P.S.I. To (C) 60 P.S.I.

Tool Closed I.C.I.P. From 10:30 M. to 11:00 M. - Hr. 30 Min (D) 1118 P.S.I.

Tool Open F.F.P. From 11:00 M. to 11:30 M. - Hr. 30 Min. From (E) 95 P.S.I. To (F) 114 P.S.I.

Tool Closed F.C.I.P. From 11:30 M. to 12:15 M. - Hr. 45 Min. (G) 1102 P.S.I.

Initial Hydrostatic Pressure (A) 2150 P.S.I. Final Hydrostatic Pressure (H) 2148 P.S.I. Maximum Temp. 120°

INFORMATION

BLOW Strong blow throughout test

Did Well Flow - Yes X No Recovery Total Ft. 412' Gas in Pipe - 220' Clean Oil (43 Gravity)
63' Slightly Oil Cut Mud - No Water

Reversed Out - Yes X No Mud Type Drispac Viscosity 50 Weight 9.4 Water Loss 19.8 cc. Chlorides 15,000 P.P.M.

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

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

DRILLING CONTRACTOR Slawson #1 Length Drill Pipe? 3700 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½FH In.

Length Weight Pipe 315 Ft. I.D. Weight Pipe 2.76 In. Tool Joint Size 4½FH In. Length Drill Collars 375 Ft. I.D. Drill Collars 2.26 In.

Tool Joint Size 4½XH In. Length D.S.T. Tool 36 Ft.

Remarks:

(Slid 6' to bottom before tool opened)

WESTERN TESTING CO., INC.

Pressure Data

Date 11-27-77 Test Ticket No. 24966

Recorder No. 3354 Capacity 4200 Location 4412 Ft.

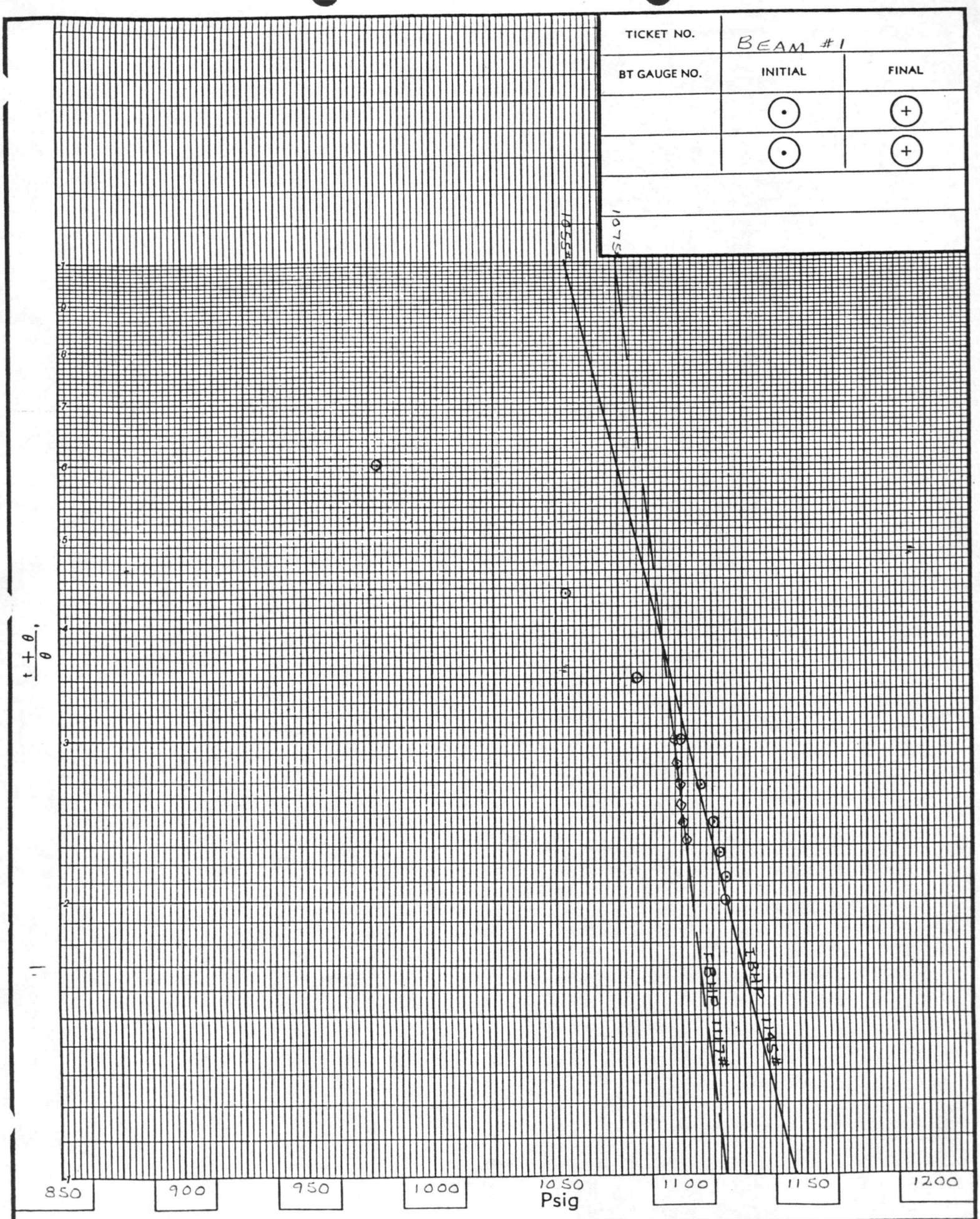
Clock No. 6893 Elevation 2520 Kelly Bushing Well Temperature 120 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2150	P.S.I.	Open Tool	9:57 P M	
B	First Initial Flow Pressure	23	P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	60	P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1118	P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	95	P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	114	P.S.I.			
G	Final Closed-in Pressure	1102	P.S.I.			
H	Final Hydrostatic Mud	2148	P.S.I.			

PRESSURE BREAKDOWN

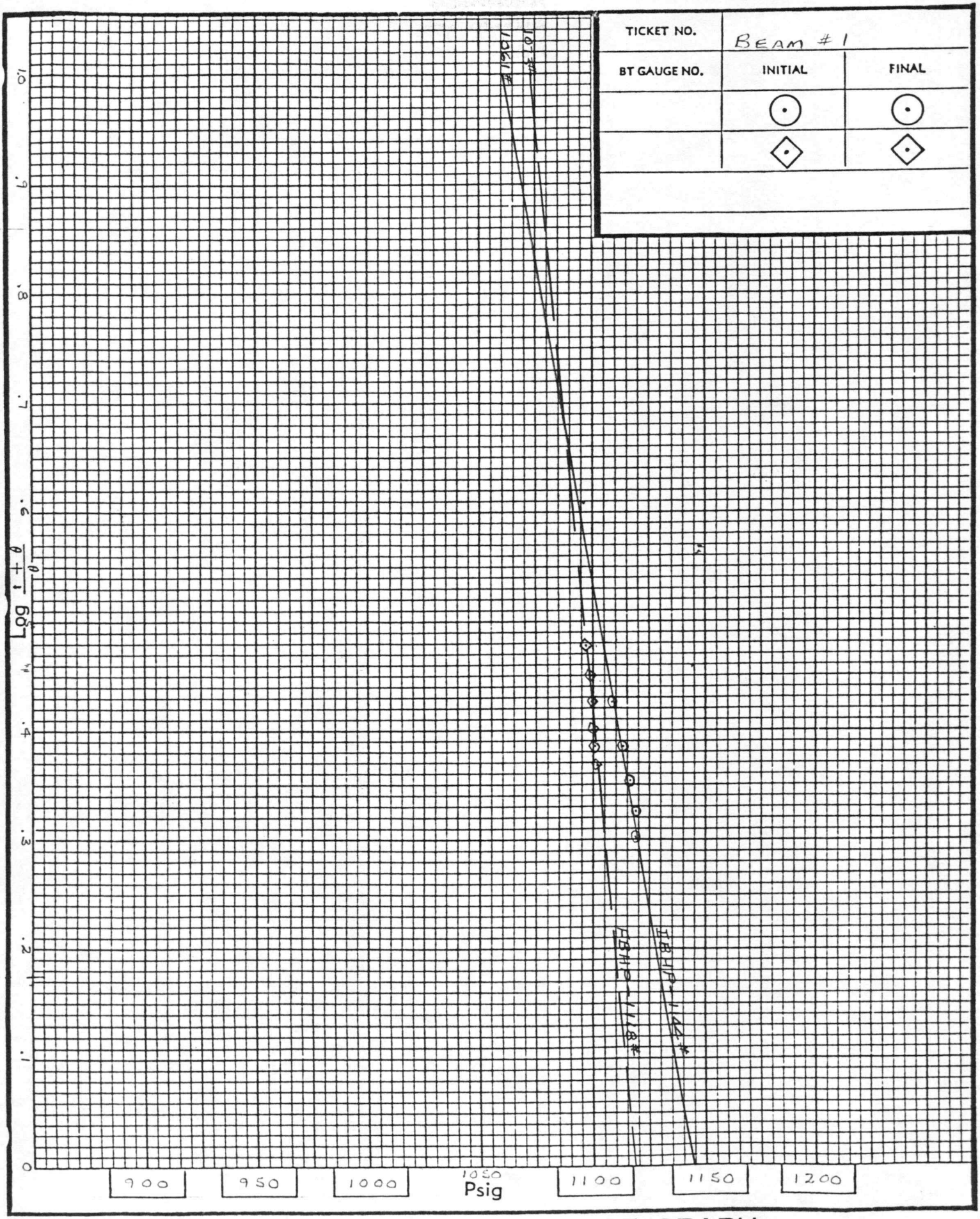
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 10 Inc.		Breakdown: 6 Inc.		Breakdown: 15 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	23	0 —	60 —	0	95	0 —	114 —
P 2 5	28	3 1.041	458 11	5	84	3 1.322	445 21
P 3 10	35	6 .778	977 6	10	89	6 1.041	973 11
P 4 15	42	9 .637	1058 4.33	15	95	9 .885	1036 7.667
P 5 20	49	12 .544	1084 3.50	20	101	12 .778	1063 6
P 6 25	55	15 .477	1099 3	25	108	15 .699	1075 5
P 7 30✓	60	1 18 .426	1108 2.67	30✓	114	18 .637	1083 4.33
P 8		2 21 .385	1113 2.43			21 .585	1089 3.86
P 9		3 24 .352	1116 2.25			24 .544	1092 3.50
P10		4 27 .325	1118 2.11			27 .508	1095 3.22
P11		5 30 .301	1118 2.0			1 30 .477	1097 3.00
P12						2 33 .450	1098 2.82
P13						3 36 .426	1099 2.67
P14						4 39 .405	1100 2.54
P15						5 42 .385	1101 2.43
P16						6 45 .368	1102 2.33
P17							
P18							
P19							
P20							

WTC - 4



EXTRAPOLATED PRESSURE GRAPH

TICKET NO.	BEAM #1	
BT GAUGE NO.	INITIAL	FINAL
	⊙	⊙
	◇	◇



EXTRAPOLATED PRESSURE GRAPH

Liquid Production

B T. Gauge Numbers		3354	Ticket Number		24966
		PRESSURE			
Initial Hydrostatic		2150	Elevation		2520 K.B. ft.
Final Hydrostatic		2148	Indicated Production	1st Flow	.698 bbls. day
	Time			Total Flow	1.392 bbls. day
1st Flow — Initial	— — — —	23			
1st Flow — Final	30	60	Weight Pipe ~~Drill Collar~~ Length		315 ft.
Initial Closed In Pressure	30	1118	Weight Pipe ~~Drill Collar~~ I.D.		2.25 in.
2nd Flow — Initial	— — — —	95	Weight pipe ~~Drill Pipe~~ Factor		.0142 bbls. ft.
2nd Flow — Final	30	114	Hole Size		7.875 in.
Final Closed In Pressure	45	1102	Footage Tested		23 ft.
Extrapolated Static Pressure — Initial		1144–1061	Mud Weight		9.4 lbs. gal.
Extrapolated Static Pressure — Final		1118–1073	Viscosity, Oil or Water		cp
Slope psi/cycle — Initial		82,335	Oil API Gravity		38 ~~43°~~ —
Slope psi/cycle — Final		45,539	Water Specific Gravity		—

Remarks:

SUMMARY

Gauge No.
Depth

Product	Equation	INITIAL	FINAL	Units
Production	$Q = \frac{1440\ R}{t}$	33.547	33.429	bbls., day.
Transmissibility	$\frac{Kh}{\mu} = \frac{162.6\ Q}{m}$	65.720	120.791	md. ft. / cp .
Indicated Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$	32.860	60.395	md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$	2.527	4.645	md.
	$K_1 = \frac{Kh}{h_1}$	2.527	4.645	md.
Damage Ratio	$DR = .183\ \frac{Ps - Pf}{m}$	2.390	4.082	—
Theoretical Potential w/Damage Removed	$Q_1 = Q\ DR$	80.179	136.489	bbls. day
Approx. Radius of Investigation	$b \leftrightarrows \sqrt{Kt}$ or $\sqrt{Kt_0}$	8.708	16.695	ft.
	$b_1 \leftrightarrows \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$	8.708	16.695	ft.
Potentiometric Surface *	$Pot. = El - GD + 2.319\ Ps$			ft.

INTERPRETATIONS AND CALCULATIONS

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

Company Patrick Petroleum Corp. & Hinkle Oil Co. Lease & Well No. Beahm #1

Elevation 2520 Kelly Bush. Formation Mississippi Effective Pay - Ft. Ticket No. 24967

Date 11-28-77 Sec. 26 Twp. 16S Range 25W County Ness State Kansas

Test Approved by K. W. Johnson Western Representative Ken Metzler

Formation Test No. 2 O.K. X Misrun - Interval Tested From 4474' to 4520' Total Depth 4520'

Size Main Hole 7-7/8 Rat Hole 12¼ Conv. - B.T. X Damaged - Yes X No Conv. - B.T. X Damaged - Yes X No

Top Packer Depth 4469 Ft. Size 6-3/4 Bottom Packer Depth 4474 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 4513 Ft. Clock No. 6893 Depth 4516 Ft. Clock No. 5665

Top Make Kuster Cap. 4200 No. 3354 Inside Outside Bottom Make Kuster Cap. 4150 No. 2605 ~~Inside~~ Outside

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

Time Set Packer 10:12P M

Tool Open I.F.P. From 10:15 M. to 11:00 M. - Hr. 45 Min. From (B) 54 P.S.I. To (C) 122 P.S.I.

Tool Closed I.C.I.P. From 11:00 M. to 11:45 M. - Hr. 45 Min (D) 1286 P.S.I.

Tool Open F.F.P. From 11:45 M. to 12:45A M. 1 Hr. - Min. From (E) 135 P.S.I. To (F) 224 P.S.I.

Tool Closed F.C.I.P. From 12:45 M. to 1:45A M. 1 Hr. - Min. (G) 1276 P.S.I.

Initial Hydrostatic Pressure (A) 2180 P.S.I. Final Hydrostatic Pressure (H) 2129 P.S.I. Maximum Temp. 125°

INFORMATION

BLOW Weak Blow Building to Fair Blow

Did Well Flow - Yes X No Recovery Total Ft. 408' Muddy Salt Water with few specks of Heavy Oil at top.

Reversed Out - Yes X No Mud Type Drispac Viscosity 42 Weight 9.5 Water Loss 16.0 cc. Chlorides 15,000 P.P.M.

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

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

DRILLING CONTRACTOR Slawson #1 Length Drill Pipe? 3794 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4½FH In.

Length Weight Pipe 315 Ft. I.D. Weight Pipe 2.76 In. Tool Joint Size 4½FH In. Length Drill Collars 375 Ft. I.D. Drill Collars 2.26 In.

Tool Joint Size 4½XH In. Length D.S.T. Tool 32 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 11-28-77 Test Ticket No. 24967

Recorder No. 3354 Capacity 4200 Location 4513 Ft.

Clock No. 6893 Elevation 2520 Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2180 P.S.I.	Open Tool	10:12 P M	
B First Initial Flow Pressure	54 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C First Final Flow Pressure	122 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1286 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	135 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	224 P.S.I.			
G Final Closed-in Pressure	1276 P.S.I.			
H Final Hydrostatic Mud	2129 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	54
P 2 5	49
P 3 10	56
P 4 15	65
P 5 20	76
P 6 25	87
P 7 30	95
P 8 35	105
P 9 40	116
P10 45	122
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

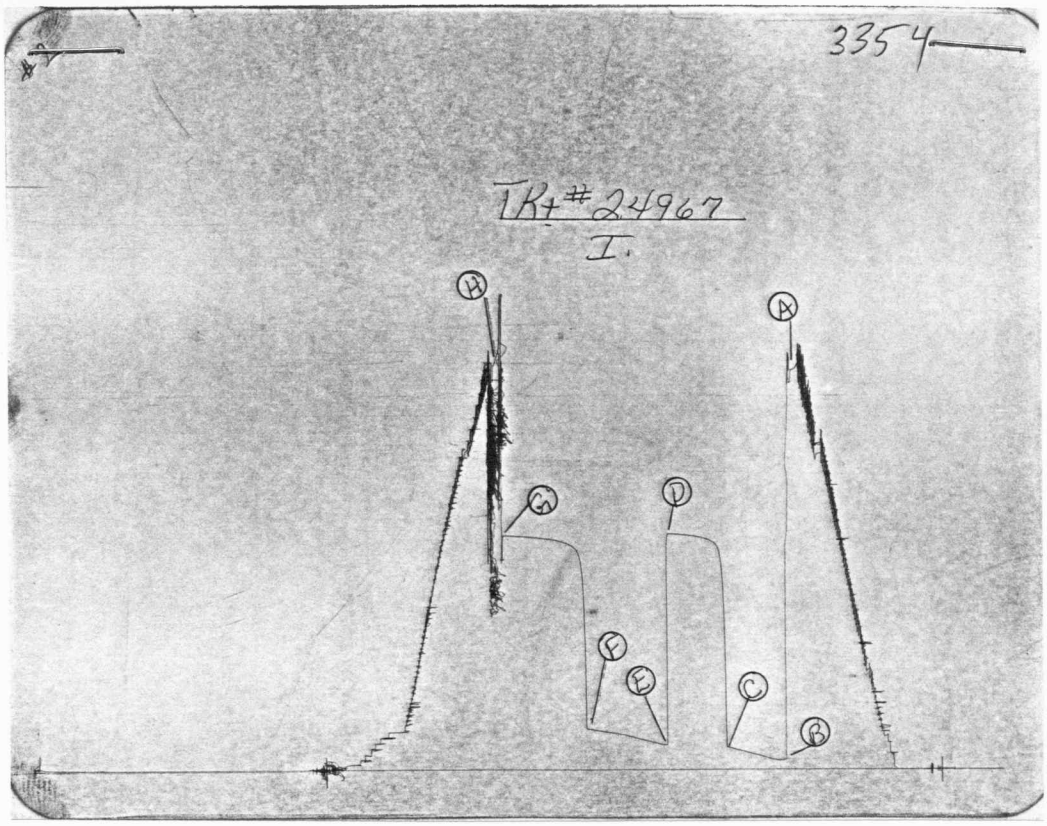
Point Minutes	Press.
0	122
3	1013
6	1190
9	1231
12	1247
15	1256
18	1264
21	1269
24	1273
27	1276
30	1278
33	1281
36	1283
39	1285
42	1286
45	1286

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	135
5	139
10	149
15	158
20	167
25	177
30	188
35	194
40	200
45	207
50	212
55	219
60	224

Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	224
3	1076
6	1186
9	1212
12	1226
15	1237
18	1245
21	1250
24	1254
27	1257
30	1260
33	1264
36	1266
39	1268
42	1270
45	1271
48	1272
51	1274
54	1275
57	1276
60	1276



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2176	2180	PSI
(B)	First Initial Flow Pressure	53	54	PSI
(C)	First Final Flow Pressure	116	122	PSI
(D)	Initial Closed-in Pressure	1287	1286	PSI
(E)	Second Initial Flow Pressure	127	135	PSI
(F)	Second Final Flow Pressure	222	224	PSI
(G)	Final Closed-in Pressure	1276	1276	PSI
(H)	Final Hydrostatic Mud	2155	2129	PSI

COMPANY Patrick Petroleum Corp. & Hinkle Oil Co. LEASE AND WELL NO. Beahm #1 SEC. 26 TWP. 16S RGE. 25W TEST NO. 2 DATE 11-28-77