WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Pickrell Drilling Company Lease & Well No. Bane #1

Elevation 1607 Kelly Bushings Formation Mississippi Ticket Number 8943

Date Jan.15,1967 Sec. 22 Twp. 29s Range 8w County Kingman State Kansas

Test Approved by Dan Bowles Western Representative Norman Allen

---

Formation Test No. 1 O.K. x Misrun ____ Interval Tested From 4167' to 4182' Total Depth 4188'

Size Main Hole 7 7/8 Rat Hole ____ Conv. x B.T. ____ Damaged ____ Yes no No Conv. x B.T. ____ Damaged ____ Yes no No

Packer Depth 4162 Ft. Size 6 3/4 Packer Depth 4167 Ft. Size 6 3/4

Straddle ____ Yes ____ No no Conv. ____ B.T. ____ Damaged ____ Yes ____ No

Packer Depth ____ Ft. Size ____

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 15 Ft. Size 5½ OD

RECORDERS Depth 4175 Ft. Clock No. 6861 Depth 4178 Ft. Clock No. 6893

Top Make Kuster Cap. 3150 No. 1560 Inside Outside Bottom Make Kuster Cap. 3200 No. 1561 Inside Outside

Below Straddle: Depth ____ Clock No. ____ Inside Outside Depth ____ Ft. Clock No. ____ Inside Outside

Top Make ____ Cap. ____ No. ____ Inside Outside Bottom Make ____ Cap. ____ No. ____ Inside Outside

---

Time Set Packer 12:53 A M

Tool Open I.F.P. From 12:55 M to 1:00 M Hr. 5 Min. From (B) 90 P.S.I. To (C) 90 P.S.I.

Tool Closed I.C.I.P. From 1:00 M. to 1:30 M. Hr. 30 Min. (D) 1594 P.S.I.

Tool Open F.F.P. From 1:30 M. to 2:30 M. 1 Hr. Min. From (E) 72 P.S.I. To (F) 81 P.S.I.

Tool Closed F.C.I.P. From 2:30 M. to 3:00 M. Hr. 30 Min. (G) 1540 P.S.I.

Initial Hydrostatic Pressure (A) 2327 P.S.I. Final Hydrostatic Pressure (H) 2290 P.S.I.

SURFACE INFORMATION

Size Choke 3/4 In. Max. Press. P.S.I. Time Description of Flow

Spring gauge 7 inches water -2inch line 1:40A M. 370,000 C.F.P.D.Gas

Spring gauge 7inches water -2 inch line 1:50A 370,000C.F.P.D. Gas

Springgauge 6inches water -2inch line2:00 to2:30AM.340,000 C.F.P.D.Gas stablized

M.

BLOW Strong throughout test.Gas to surface 4 minutes. Bottom Choke Size 3/4 In.

Did Well Flow GAs Yes yes No Recovery Total Ft. Fluid Rec:115' gas cut mud

Mud

Reversed Out ____ Yes no No Mud Type starch Viscosity 41 Weight 10.3 Maximum Temp. 113 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size no Make ____ Ser. No. ____

Type Circ. Sub. pin Did Tool Plug? no Where? ____ Did Packer Hold? yes

Length Drill Pipe 3247 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 900 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 35 ft.

Remarks Gas measured 370,000 C.F.P/D.after tool was open 15 minutes.
Gas measured 340,000 C.F.P.D.after tool was open 35 To end of test.(Stablized)

WESTERN TESTING CO., INC.
Pressure Data

Date: January 15,1967

Test Ticket No.: 8943

Recorder No.: 1560 Capacity: 3150 Location: 4175 Ft.

Clock No.: 6861 Elevation: 1607 Kelly Bushings Well Temperature: 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2327 P.S.I.	Opened Tool	12:53 A M	
B First Initial Flow Pressure	90 P.S.I.	First Flow Pressure	5 Mins.	5 Mins.
C First Final Flow Pressure	90 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1694 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	72 P.S.I.	Final Closed-in Pressure	30 Mins.	29 Mins.
F Second Final Flow Pressure	81 P.S.I.			
G Final Closed-in Pressure	1540 P.S.I.			
H Final Hydrostatic Mud	2290 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.

Breakdown: 1 Inc.

of 5 mins. and a

final inc. of = Min.

Point Mins.	Press.
P 1 0	90
P 2 5	90
P 3	
P 4	
P 5	
P 6	
P 7.	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In

Breakdown: 10 Inc.

of 3 mins. and a

final inc. of = Min.

Point Minutes	Press.
0	90
3	1442
6	1516
9	1549
12	1567
15	1578
18	1584
21	1589
24	1591
27	1592
30	1594

Second Flow Pressure

Breakdown: 12 Inc.

of 5 mins. and a

final inc. of = Min.

Point Minutes	Press.
0	72
5	72
10	72
15	72
20	72
25	73
30	73
35	75
40	76
45	78
50	78
55	79
60	81

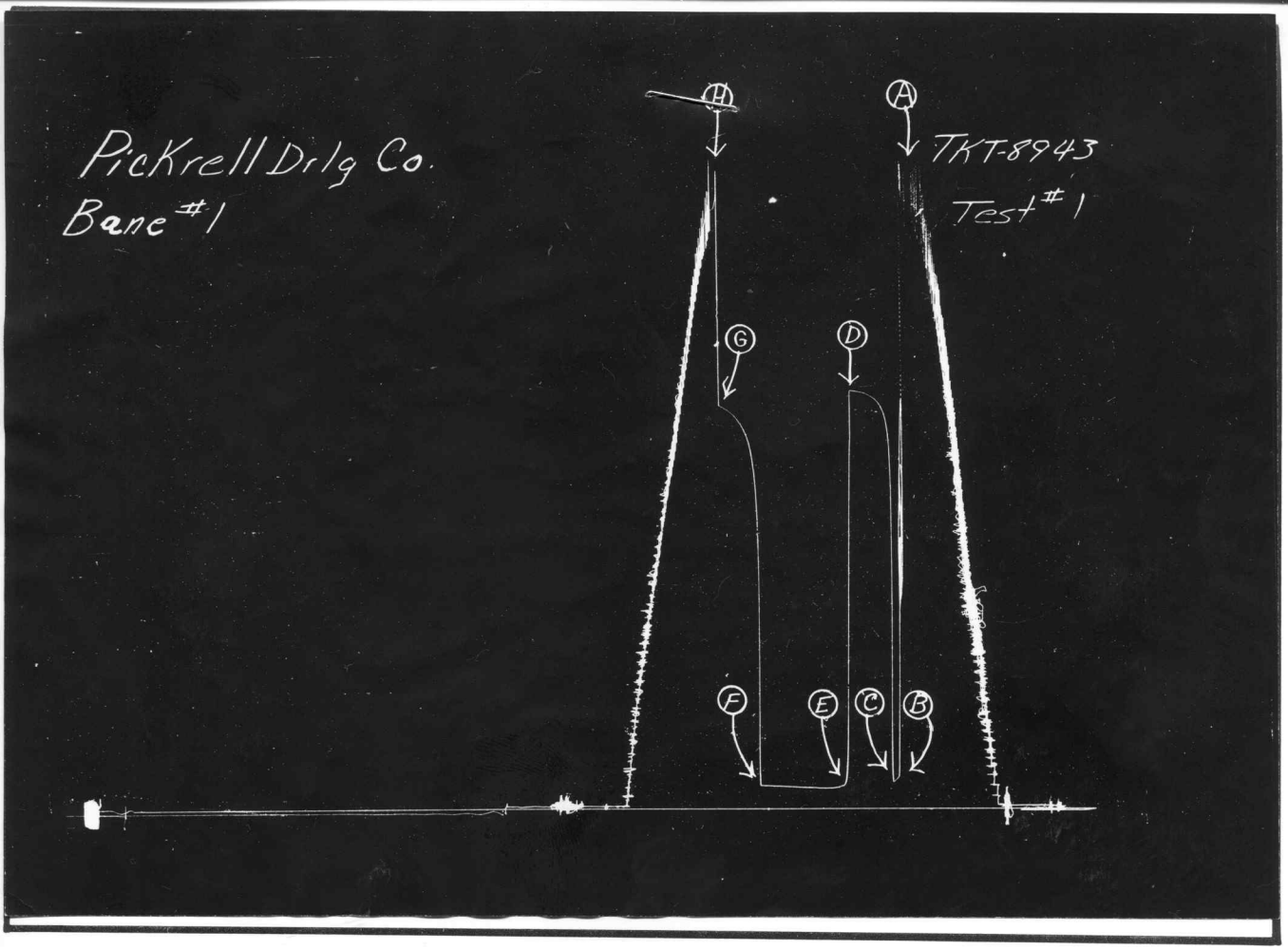
Final Shut-In

Breakdown: 9 Inc.

of 3 mins. and a

final inc. of 2 Min.

Point Minutes	Press.
0	81
3	1286
6	1375
9	1436
12	1469
15	1495
18	1512
21	1525
24	1532
27	1537
29	1540



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	2327 PSI
(B)	First Initial Flow Pressure	90 PSI
(C)	First Final Flow Pressure	90 PSI
(D)	Initial Closed-in Pressure	1594 PSI
(E)	Second Initial Flow Pressure	72 PSI
(F)	Second Final Flow Pressure	81 PSI
(G)	Final Closed-in Pressure	1540 PSI
(H)	Final Hydrostatic Mud	2290 PSI

COMPANY PICKRELL DRILLING COMPANY LEASE AND WELL NO. BANE #1 SEC. 22 TWP. 29S RGE. 8W TEST NO. 1 DATE 1-15-67

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Pickrell Drilling Company Lease & Well No. Bane #1

Elevation 1607 Kelly Bushings Formation Mississippi Ticket Number 8944

Date Jan.15,1967 Sec. 22 Twp. 29s Range 8w County Kingman State Kansas

Test Approved by Dan Bowles Western Representative Norman Allen

---

Formation Test No. 2 O.K. x Misrun Interval Tested From 4182' to 4206' Total Depth 4206'

Size Main Hole 7 7/8 Rat Hole Conv. x B.T. Damaged Yes no No Conv. x B.T. Damaged Yes no No

Packer Depth 4177 Ft. Size 6 3/4 Packer Depth 4182 Ft. Size 6 3/4

Straddle Yes No no Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 24 Ft. Size 5½ OD

RECORDERS Depth 4198 Ft. Clock No. 6861 Depth 4201 Ft. Clock No. 6893

Top Make Kuster Cap. 3150 No. 1560 Inside Outside Bottom Make Kuster Cap. 3200 No. 1568 Inside Outside

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

Top Make 1:53P Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer M

Tool Open I.F.P. From 1:55 M to 2:00 M Hr. 5 Min. From (B) 36 P.S.I. To (C) 36 P.S.I.

Tool Closed I.C.I.P. From 2:00 M. to 2:30 M. Hr. 30 Min. (D) 1589 P.S.I.

Tool Open F.F.P. From 2:30 M. to 4:30 M. 2 Hr. Min. From (E) 36 P.S.I. To (F) 91 P.S.I.

Tool Closed F.C.I.P. From 4:30 M. to 5:30 M. 1 Hr. Min. (G) 1599 P.S.I.

Initial Hydrostatic Pressure (A) 2297 P.S.I. Final Hydrostatic Pressure (H) 2278 P.S.I.

SURFACE INFORMATION — Size Choke 3/4 In. | Max. Press. P.S.I. | Time | Description of Flow

Spring gauge 24 inches water 1inch line 2:35P M. 171,000 Gas C.F.P.D.

Spring gauge 32 inches water 1 inch line 2:45P M. 198,000 Gas C.F.P.D.

Spring gauge 32 inches water 1 inch line 4:30 M. 198,000 Stablized

BLOW Strong throughout test. Gas to surface 5 minutes. Bottom Choke Size 3/4 In.

Did Well Flow Gas Yes yes No Recovery Total Ft. Fluid Rec;120' gas cut mud;60' oil gas cut mud

Mud

Reversed Out no Yes No Mud Type starch Viscosity 46 Weight 10.3 Maximum Temp. 120 °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size no Make Ser. No.

Type Circ. Sub. pin Did Tool Plug? Where? Did Packer Hold?

Length Drill Pipe 3262 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 900 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 44 ft.

Remarks Gas measured 171,000 C.F.P.D. after tool was open 10 minutes.

Gas measured 198,000 C.F.P.D. after tool was open 20 minutes to end of test.(Stablized)

WESTERN TESTING CO., INC.
Pressure Data

Date January 15,1967 Test Ticket No. 8944

Recorder No. 1560 Capacity 3150 Location 4198 Ft.

Clock No. 6861 Elevation 1607 Kelly Bushings Well Temperature 120 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	2297 P.S.I.	Opened Tool	1:53 P M	
B	First Initial Flow Pressure	36 P.S.I.	First Flow Pressure	5 Mins.	5 Mins.
C	First Final Flow Pressure	36 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1589 P.S.I.	Second Flow Pressure	120 Mins.	120 Mins.
E	Second Initial Flow Pressure	36 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F	Second Final Flow Pressure	91 P.S.I.			
G	Final Closed-in Pressure	1599 P.S.I.			
H	Final Hydrostatic Mud	2278 P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of = Min.

Point Mins.	Press.
P 1 0	36
P 2 5	36
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

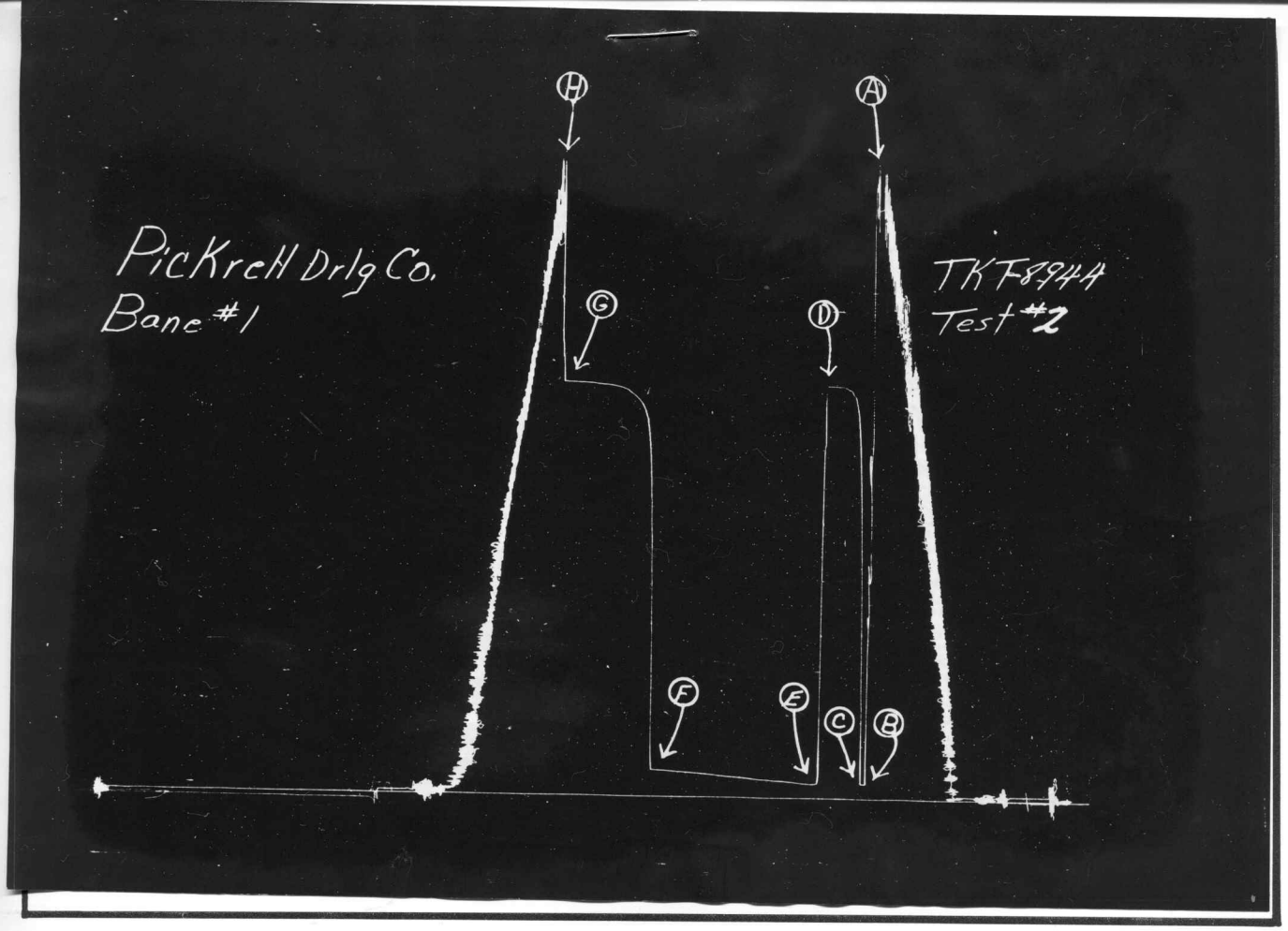
Point Minutes	Press.
0	36
3	1348
6	1514
9	1562
12	1576
15	1583
18	1586
21	1588
24	1588
~~27~~	~~1589~~
30	1589

Second Flow Pressure
Breakdown: 24 Inc.
of 5 mins. and a
final inc. of = Min.

Point Minutes	Press.
0	36
5	38
10	40
15	43
20	45
25	48
30	51
35	53
40	56
~~45~~	~~59~~
50	62
55	65
~~60~~	~~67~~
65	70
70	73
~~75~~	~~75~~
80	78
85	80
~~90~~	~~83~~
95	85
100	87
~~105~~	~~88~~
110	89
115	90
~~120~~	~~91~~

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

Point Minutes	Press.
0	91
3	1447
6	1504
9	1532
12	1549
15	1560
18	1568
21	1576
24	1580
~~27~~	~~1583~~
30	1586
33	1589
~~36~~	~~1591~~
39	1593
42	1594
~~45~~	~~1594~~
48	1595
51	1596
~~54~~	~~1597~~
57	1598
60	1599



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	2297 PSI
(B)	First Initial Flow Pressure	36 PSI
(C)	First Final Flow Pressure	36 PSI
(D)	Initial Closed-in Pressure	1589 PSI
(E)	Second Initial Flow Pressure	36 PSI
(F)	Second Final Flow Pressure	91 PSI
(G)	Final Closed-in Pressure	1599 PSI
(H)	Final Hydrostatic Mud	2278 PSI

COMPANY PICKRELL DRILLING CO. LEASE AND WELL NO. BANE #1 SEC. 22 TWP. 29S RGE. 8W TEST NO. 2 DATE 1-15-67

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 SWift 3-7903

Company Pickrell Drilling Company Lease & Well No. Bane #1

Elevation 1607 Kelly Bushings Formation Mississippi Ticket Number 8945

Date Jan.16,1967 Sec. 22 Twp. 29s Range 8w County Kingman State Kansas

Test Approved by Dah Bowles Western Representative Norman Allen

Formation Test No. 3 O.K. x Misrun Interval Tested From 4205' to 4215' Total Depth 4215'

Size Main Hole 7 7/8 Rat Hole Conv. x B.T. Damaged Yes no No Conv. x B.T. Damaged Yes no No

Packer Depth 4200 Ft. Size 6 3/4 Packer Depth 4205 Ft. Size 6 3/4

Straddle Yes No no Conv. B.T. Damaged Yes No

Packer Depth Ft. Size

Tool Size 5½ OD Tool Jt. Size 4½ FH Anchor Length 10 Ft. Size 5½ OD

RECORDERS Depth 4208 Ft. Clock No. 6861 Depth 4211 Ft. Clock No. 6893

Top Make Kuster Cap. 3150 No. 1560 Inside Outside Bottom Make Kuster Cap. 3200 No. 1561 Inside Outside

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

Top Make Cap. No. Inside Outside Bottom Make Cap. No. Inside Outside

Time Set Packer 3:23 A M

Tool Open I.F.P. From 3:25 M to 3:30 M Hr. 5 Min. From (B) 18 P.S.I. To (C) 21 P.S.I.

Tool Closed I.C.I.P. From 3:30 M. to 4:00 M. Hr. 30 Min. (D) 1535 P.S.I.

Tool Open F.F.P. From 4:00 M. to 6:00 M. 2 Hr. Min. From (E) 37 P.S.I. To (F) 138 P.S.I.

Tool Closed F.C.I.P. From 6:00 M. to 7:00 M. 1 Hr. Min. (G) 1423 P.S.I.

Initial Hydrostatic Pressure (A) 2279 P.S.I. Final Hydrostatic Pressure (H) 2268 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/4 In.		M.	
			M.	
			M.	

BLOW Weak to very weak throughout test. Bottom Choke Size 3/4 In.

Did Well Flow Yes no No Recovery Total Ft. 15' slightly muddy oil;45' slightly oil and muddy salt water; 240' salt water.

Reversed Out Yes no No Mud Type starch Viscosity 46 Weight 10.3 Maximum Temp. 124 °F

EXTRA EQUIPMENT: Dual Packers no Safety Joint no Jars: Size no Make Ser. No.

Type Circ. Sub. pin Did Tool Plug? no Where? Did Packer Hold? yes

Length Drill Pipe 3285 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 900 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 30 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date: January 16,1967 | Test Ticket No. 8945

Recorder No. 1560 | Capacity 3150 | Location 4208 Ft.

Clock No. 6861 | Elevation 1607 Kelly Bushings | Well Temperature 124 °F

Point		Pressure	
A	Initial Hydrostatic Mud	2279	P.S.I.
B	First Initial Flow Pressure	18	P.S.I.
C	First Final Flow Pressure	21	P.S.I.
D	Initial Closed-in Pressure	1535	P.S.I.
E	Second Initial Flow Pressure	37	P.S.I.
F	Second Final Flow Pressure	138	P.S.I.
G	Final Closed-in Pressure	1423	P.S.I.
H	Final Hydrostatic Mud	2268	P.S.I.

	Time Given	Time Computed
Opened Tool	3:23 A M	
First Flow Pressure	5 Mins.	5 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	120 Mins.	119 Mins.
Final Closed-in Pressure	60 Mins.	59 Mins.

PRESSURE BREAKDOWN

First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of = Min.

Point Mins.	Press.
P 1 0	18
P 2 5	21
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

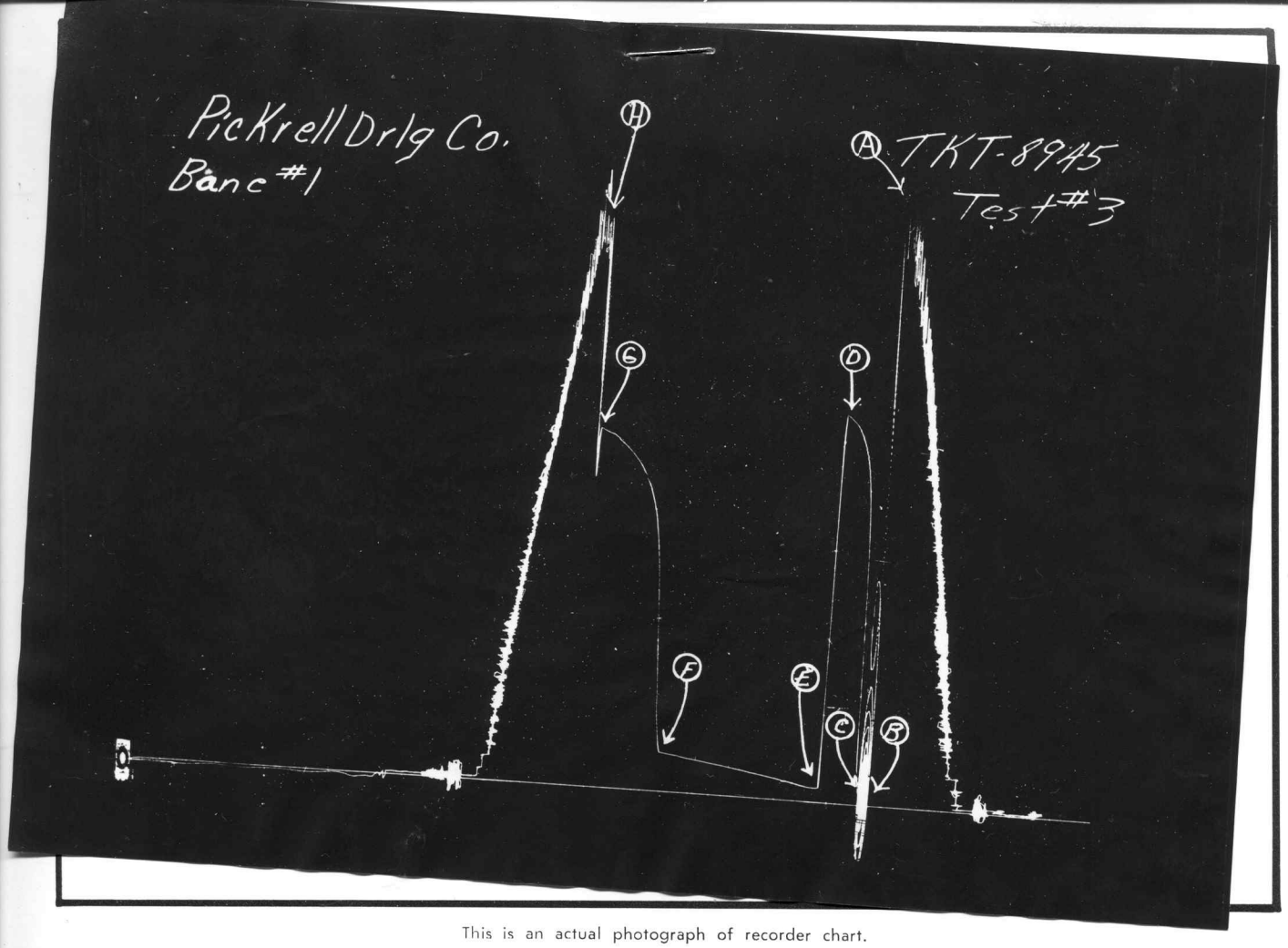
Point Minutes	Press.
0	21
3	283
6	1058
9	1282
12	1377
15	1439
18	1474
21	1500
24	1517
27	1528
30	1535

Second Flow Pressure
Breakdown: 23 Inc.
of 5 mins. and a
final inc. of 4 Min.

Point Minutes	Press.
0	37
5	39
10	43
15	47
20	53
25	58
30	62
35	69
40	73
45	76
50	81
55	86
60	91
65	96
70	100
75	105
80	108
85	113
90	117
95	120
100	124
105	128
110	131
115	136
119	138

Final Shut-In
Breakdown: 19 Inc.
of 3 mins. and a
final inc. of 2 Min.

Point Minutes	Press.
0	138
3	251
6	539
9	857
12	1007
15	1115
18	1183
21	1229
24	1263
27	1291
30	1313
33	1331
36	1348
39	1363
42	1375
45	1387
48	1398
51	1407
54	1414
57	1420
59	1423



This is an actual photograph of recorder chart.

POINT		PRESSURE
(A)	Initial Hydrostatic Mud	2279 PSI
(B)	First Initial Flow Pressure	18 PSI
(C)	First Final Flow Pressure	21 PSI
(D)	Initial Closed-in Pressure	1535 PSI
(E)	Second Initial Flow Pressure	37 PSI
(F)	Second Final Flow Pressure	138 PSI
(G)	Final Closed-in Pressure	1423 PSI
(H)	Final Hydrostatic Mud	2268 PSI

COMPANY PICKRELL DRILLING CO. LEASE AND WELL NO. BANE #1 SEC. 22 TWP. 29S RGE. 8W TEST NO. 3 DATE 1-16-67