Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company A. L. Abercrombie Inc. Lease & Well No. Pike #1

Elevation 1582 Kelly Bushings Formation Elgin Effective Pay Ft. Ticket No. 18174

Date 11-16-73 Sec. 26 Twp. 31S Range 12W County Barber State Kansas

Test Approved by Harold Steincamp Western Representative Lyle Cason Sr.

Formation Test No. 1 O.K. X Misrun Interval Tested From 3400' to 3470' Total Depth 3470'

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

Top Packer Depth 3395 Ft. Size 6 3/4" Bottom Packer Depth 3400 Ft. Size 6 3/4"

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

Tool Size 5½"O.D. Tool Joint Size 4½"F.H. Anchor Length 70 Ft. Size 5½"O.D. &D.P. Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3402 Ft. Clock No. 8476 Depth 3405 Ft. Clock No. 9102

Top Make Kuster Cap. 4150 No. 969 ~~Outside~~ Inside Bottom Make Kuster Cap. 4000 No. 3473 ~~Inside~~ Outside

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

Time Set Packer 3:43 P.M

Tool Open I.F.P. From 3:45 M. to 4:00P.M. Hr. 15 Min. From (B) 108 P.S.I. To (C) 235 P.S.I.

Tool Closed I.C.I.P. From 4:00 M. to 4:45P.M. Hr. 45 Min (D) 856 P.S.I.

Tool Open F.F.P. From 4:45 M. to 5:45P.M. Hr. 60 Min. From (E) 256 P.S.I. To (F) 528 P.S.I.

Tool Closed F.C.I.P. From 5:45 M. to 6:30P.M. Hr. 45 Min. (G) 826 P.S.I.

Initial Hydrostatic Pressure (A) 1828 P.S.I. Final Hydrostatic Pressure (H) 1790 P.S.I. Maximum Temp. 105

INFORMATION

BLOW Fair throughout test

Did Well Flow Yes X No Recovery Total Ft. 1260 feet salt water

Reversed Out X Yes No Mud Type Chem. Viscosity 38 Weight 9.9 Water Loss 11 cc. Chlorides

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

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

DRILLING CONTRACTOR Length Drill Pipe? 2673 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size In.

Length Weight Pipe 390 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size In. Length Drill Collars 300 Ft. I.D. Drill Collars 2.25 In.

Tool Joint Size In. Length D.S.T. Tool 38' Ft. & 2 joints drill pipe

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 11-16-73 Test Ticket No. 18174

Recorder No. 969 Capacity 4150 Location 3402 Ft.

Clock No. 8476 Elevation 1582 Kelly Bushings Well Temperature 105 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1828 P.S.I.	Open Tool	3:45 P. M	
B First Initial Flow Pressure	108 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	235 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	856 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	256 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	528 P.S.I.			
G Final Closed-in Pressure	826 P.S.I.			
H Final Hydrostatic Mud	1790 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	108
P 2 5	139
P 3 10	204
P 4 15	235
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: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	235
3	745
6	778
9	803
12	813
15	825
18	829
21	833
24	833
27	833
30	833
33	833
36	842
39	848
42	852
45	856

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

Point Minutes	Press.
0	256
5	290
10	336
15	379
20	403
25	420
30	438
35	452
40	471
45	487
50	500
55	514
60	528

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

Point Minutes	Press.
0	528
3	751
6	772
9	788
12	799
15	801
18	805
21	809
24	811
27	813
30	815
33	818
36	820
39	822
42	824
45	826

This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1837	1828	PSI
(B)	First Initial Flow Pressure	112	108	PSI
(C)	First Final Flow Pressure	235	235	PSI
(D)	Initial Closed-in Pressure	870	856	PSI
(E)	Second Initial Flow Pressure	266	256	PSI
(F)	Second Final Flow Pressure	542	528	PSI
(G)	Final Closed-in Pressure	827	826	PSI
(H)	Final Hydrostatic Mud	1832	1790	PSI

COMPANY A. L. Abercrombie Inc. LEASE AND WELL NO. Pike #1 SEC. 26 TWP. 31S RGE. 12W TEST NO. 1 DATE 11-16-73

WESTERN TESTERS

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Pike #1

Elevation 1582 Kelly Bushings Formation Mississippian Effective Pay — Ft. Ticket No. 17756

Date 11-21-73 Sec. 26 Twp. 31S Range 12W County Barber State Kansas

Test Approved by Harold Steincamp Western Representative Dean Blagrave

Formation Test No. 2 O.K. X Misrun Interval Tested From 4272' to 4305' Total Depth 4305'

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

Top Packer Depth 4267 Ft. Size 6 3/4" Bottom Packer Depth 4272 Ft. Size 6 3/4"

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

Tool Size 5½"OD Tool Joint Size 4½"FH Anchor Length 33 Ft. Size 5½"OD Surface Choke Size ¼ In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4296 Ft. Clock No. 6897 Depth 4299 Ft. Clock No. 6866

Top Make Kuster Cap. 6600 No. 1564 ~~Outside~~ Inside Bottom Make Kuster Cap. 6200 No. 1563 ~~Inside~~ Outside

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

Time Set Packer 7:29 A. M

Tool Open I.F.P. From 7:31 M. to 7:46 A.M. Hr. 15 Min. From (B) 77 P.S.I. To (C) 77 P.S.I.

Tool Closed I.C.I.P. From 7:46 M. to 8:31 A.M. Hr. 45 Min (D) 450 P.S.I.

Tool Open F.F.P. From 8:31 M. to 9:31 A.M. 1 Hr. 00 Min. From (E) 80 P.S.I. To (F) 80 P.S.I.

Tool Closed F.C.I.P. From 9:31 M. to 10:46 A.M. Hr. 45 Min. (G) 325 P.S.I.

Initial Hydrostatic Pressure (A) 2387 P.S.I. Final Hydrostatic Pressure (H) 2386 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Good immediately after open decreased to weak and intermittent

Did Well Flow Yes X No Recovery Total Ft. 75 feet gassy mud

Reversed Out Yes X No Mud Type Starch Viscosity 44 Weight 10.1 Water Loss 9.6 cc. Chlorides —

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

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

DRILLING CONTRACTOR Length Drill Pipe? 3685 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size XXXX In.

Length Weight Pipe 455 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size — In. Length Drill Collars 140 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size — In. Length D.S.T. Tool 51 Ft.

Remarks:

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date November 21, 1973 Test Ticket No. 17756

Recorder No. 1564 Capacity 6600 Location 4296 Ft.

Clock No. 6897 Elevation 1582 Kelly Bushings Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2387 P.S.I.	Open Tool	7:29 A. M	
B First Initial Flow Pressure	77 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	77 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	450 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	80 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F Second Final Flow Pressure	80 P.S.I.			
G Final Closed-in Pressure	325 P.S.I.			
H Final Hydrostatic Mud	2386 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	77
P 2 5	77
P 3 10	77
P 4 15	77
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: 14 Inc. of 3 mins. and a final inc. of 0 Min.

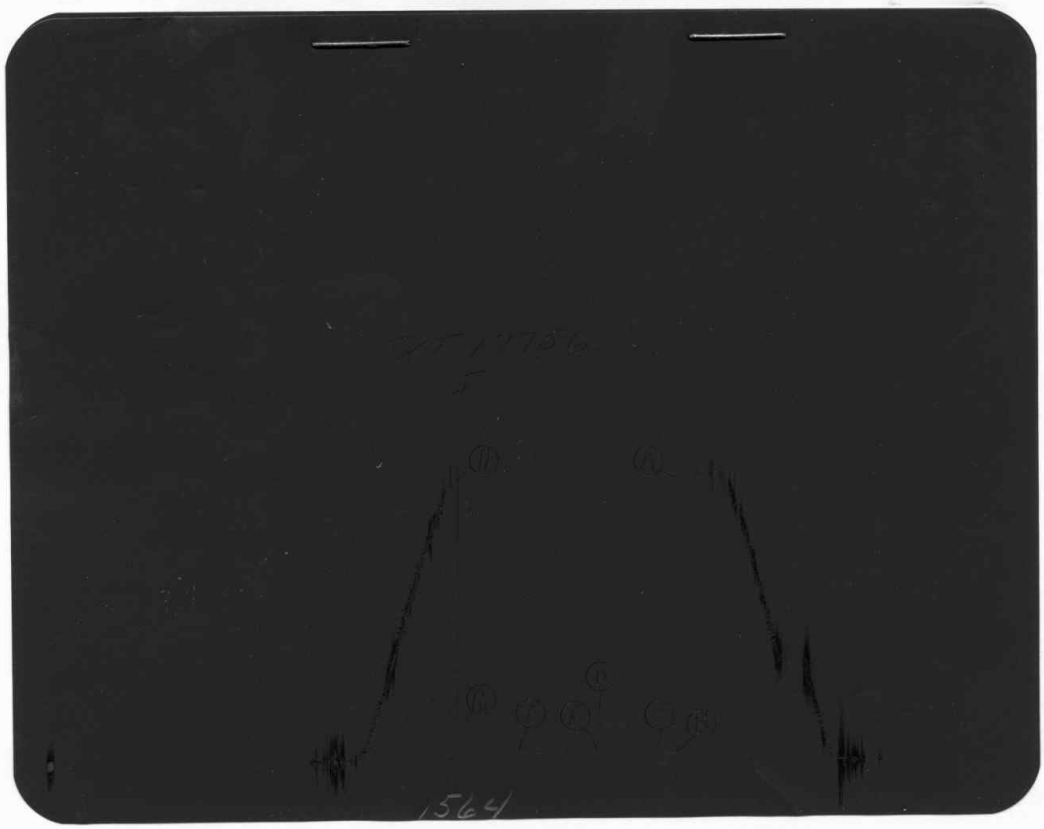
Point Minutes	Press.
0	77
3	96
6	135
9	161
12	190
15	222
18	251
21	280
24	305
27	331
30	360
33	383
36	402
39	428
42	450

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

Point Minutes	Press.
0	80
5	80
10	80
15	80
20	80
25	80
30	80
35	80
40	80
45	80
50	80
55	80
60	80

Final Shut-In
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	80
3	93
6	103
9	115
12	135
15	151
18	167
21	186
24	199
27	218
30	235
33	248
36	264
39	281
42	296
45	312
48	325



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2389	2387	PSI
(B)	First Initial Flow Pressure	80	77	PSI
(C)	First Final Flow Pressure	80	77	PSI
(D)	Initial Closed-in Pressure	450	450	PSI
(E)	Second Initial Flow Pressure	80	80	PSI
(F)	Second Final Flow Pressure	80	80	PSI
(G)	Final Closed-in Pressure	322	325	PSI
(H)	Final Hydrostatic Mud	2389	2386	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Pike #1 SEC. 26 TWP. 31S RGE. 12W TEST NO. 2 DATE 11-21-73

WESTERN TESTERS

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Pike #1

Elevation 1582 Kelly Bushings Formation Mississippian Effective Pay — Ft. Ticket No. 17757

Date 11-21-73 Sec. 26 Twp. 31S Range 12W County Barber State Kansas

Test Approved by Harold Steincamp Western Representative Dean Blagrave

Formation Test No. 3 O.K. X Misrun Interval Tested From 4305' to 4330' Total Depth 4330'

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

Top Packer Depth 4300 Ft. Size 6 3/4" Bottom Packer Depth 4305 Ft. Size 6 3/4"

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

Tool Size 5½"OD Tool Joint Size 4½"FH Anchor Length 25 Ft. Size 5½"OD Surface Choke Size ¼ In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4321 Ft. Clock No. 6897 Depth 4324 Ft. Clock No. 6866

Top Make Kuster Cap. 6600 No. 1564 ~~Inside~~ Outside Bottom Make Kuster Cap. 6200 No. 1563 ~~Inside~~ Outside

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

Time Set Packer 10:05 P. M

Tool Open I.F.P. From 10:08 M. to 10:23 P. M. Hr. 15 Min. From (B) 74 P.S.I. To (C) 74 P.S.I.

Tool Closed I.C.I.P. From 10:23 M. to 10:53 P. M. Hr. 30 Min (D) 86 P.S.I.

Tool Open F.F.P. From 10:53 M. to 11:23 P. M. Hr. 30 Min. From (E) 74 P.S.I. To (F) 74 P.S.I.

Tool Closed F.C.I.P. From 11:23 M. to 11:53 P. M. Hr. 30 Min. (G) 86 P.S.I.

Initial Hydrostatic Pressure (A) 2432 P.S.I. Final Hydrostatic Pressure (H) 2419 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Weak for 3 minutes then died

Did Well Flow Yes X No Recovery Total Ft. 15 feet Mud

Reversed Out Yes X No Mud Type Starch Viscosity 43 Weight 9.5 Water Loss 13.2 cc. Chlorides —

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

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

DRILLING CONTRACTOR Length Drill Pipe? 3685 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size — In.

Length Weight Pipe 455 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size — In. Length Drill Collars 170 Ft. I.D. Drill Collars 2¼ In.

Tool Joint Size — In. Length D.S.T. Tool 43 Ft.

Remarks:

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date November 21, 1973 Test Ticket No. 17757

Recorder No. 1564 Capacity 6600 Location 4321 Ft.

Clock No. 6897 Elevation 1582 Kelly Bushings Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2432 P.S.I.	Open Tool	10:05 P. M	
B First Initial Flow Pressure	74 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	74 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	86 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	74 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	74 P.S.I.			
G Final Closed-in Pressure	86 P.S.I.			
H Final Hydrostatic Mud	2419 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure

Breakdown: 8 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	74
P 2 5	74
P 3 10	74
P 4 15	74
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 0 Min.

Point Minutes	Press.
0	74
3	74
6	75
9	76
12	77
15	78
18	79
21	80
24	82
27	84
30	86

Second Flow Pressure

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

Point Minutes	Press.
0	74
5	74
10	74
15	74
20	74
25	74
30	74

Final Shut-In

Breakdown: 10 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	74
3	74
6	75
9	76
12	77
15	78
18	79
21	80
24	82
27	84
30	86

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Fike #1 SEC. 26 TWP. 31S RGE. 12W TEST NO. 3 DATE 11-21-73

This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2406	2432	PSI
(B)	First Initial Flow Pressure	64	74	PSI
(C)	First Final Flow Pressure	64	74	PSI
(D)	Initial Closed-in Pressure	80	86	PSI
(E)	Second Initial Flow Pressure	64	74	PSI
(F)	Second Final Flow Pressure	74	74	PSI
(G)	Final Closed-in Pressure	80	86	PSI
(H)	Final Hydrostatic Mud	2389	2419	PSI