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

Company Abercrombie Drilling Co. Lease & Well No. Rice #1

Elevation 2210 Derrick Floor Formation Cottonwood Effective Pay Ft. Ticket No. 17819

Date 10-23-73 Sec. 31 Twp. 27S Range 18W County Kiowa State Kansas

Test Approved by Al Stude Western Representative Charles W. Wedgewood

Formation Test No. 1 O.K. X Misrun Interval Tested From 2967' to 3000' Total Depth 3000'

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

Packer Depth 2962 Ft. Size 6 3/4" Packer Depth 2967 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5 1/2" O.D. Tool Jt. Size 4 1/2" F.H. Anchor Length 33 Ft. Size 5 1/2" O.D.

RECORDERS Depth 2991 Ft. Clock No. 8378 Depth 2994 Ft. Clock No. 4964

Top Make Kuster Cap. 6200 No. 1562 Inside ~~Outside~~ Bottom Make Kuster Cap. 6000 No. 1560 ~~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 12:42 A.M.

Tool Open I.F.P. From 12:46 M. to 1:16A M. Hr. 30 Min. From (B) 48 P.S.I. To (C) 60 P.S.I.

Tool Closed I.C.I.P. From 1:16 M. to 1:46A M. Hr. 30 Min. (D) 960 P.S.I.

Tool Open F.F.P. From 1:46 M. to 2:16A. M. Hr. 30 Min. From (E) 81 P.S.I. To (F) 96 P.S.I.

Tool Closed F.C.I.P. From 2:16 M. to 2:45A M. Hr. 30 Min. (G) 894 P.S.I.

Initial Hydrostatic Pressure (A) 1635 P.S.I. Final Hydrostatic Pressure (H) 1600 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	1/4 In.		M.	
			M.	
			M.	

BLOW Weak - increased to fair initial flow period weak final flow period Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 90 feet slightly oil spotted muddy salt water

Reversed Out Yes X No Mud Type Gel Viscosity 43 Weight 9.6 Water Loss cc. Maximum Temp. 96 °F

Type Circ. Sub Pin Safety Joint No Jars: Size 4 3/4" Make WTC Ser. No. 401

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Yes Did Tool Plug? No Where?

Length Drill Pipe 1951 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 547 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 443 ft.

I.D. Drill Collars 2.25 in. Length D.S.T. Tool 59 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date 10-23-73 Test Ticket No. 17819

Recorder No. 1562 Capacity 6200 Location 2991 Ft.

Clock No. 8378 Elevation 2210 Derrick Floor Well Temperature 96 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1635 P.S.I.	Open Tool	12:42 A. M	
B First Initial Flow Pressure	48 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.	33 Mins.
D Initial Closed-in Pressure	960 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	81 P.S.I.	Final Closed-in Pressure	30 Mins.	34 Mins.
F Second Final Flow Pressure	96 P.S.I.			
G Final Closed-in Pressure	894 P.S.I.			
H Final Hydrostatic Mud	1600 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 11 Inc.		Breakdown: 6 Inc.		Breakdown: 11 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 1 Min.	
Point Mins.	**Press.**	**Point Minutes**	**Press.**	**Point Minutes**	**Press.**	**Point Minutes**	**Press.**
P 1 0	48	0	60	0	81	0	96
P 2 5	50	3	400	5	83	3	302
P 3 10	52	6	653	10	85	6	602
P 4 15	54	9	752	15	88	9	689
P 5 20	56	12	812	20	92	12	746
P 6 25	58	15	852	25	94	15	779
P 7 30	60	18	879	30	96	18	812
P 8		21	903			21	833
P 9		24	924			24	849
P10		27	936			27	864
P11		30	948			30	879
P12		33	960			33	888
P13						34	894
P14							
P15							
P16							
P17							
P18							
P19							
P20							

This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1645	1635	PSI
(B)	First Initial Flow Pressure	45	48	PSI
(C)	First Final Flow Pressure	60	60	PSI
(D)	Initial Closed-in Pressure	948	960	PSI
(E)	Second Initial Flow Pressure	90	81	PSI
(F)	Second Final Flow Pressure	105	96	PSI
(G)	Final Closed-in Pressure	888	894	PSI
(H)	Final Hydrostatic Mud	1569	1600	PSI

COMPANY Abercrombie Drilling Co. LEASE AND WELL NO. Rice #1 SEC. 31 TWP. 27S RGE. 18W TEST NO. 1 DATE 10-23-73

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

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

Elevation 2210 Derrick Floor Formation Lansing Effective Pay -- Ft. Ticket No. 14920

Date 10-27-73 Sec. 31 Twp. 27S Range 18W County Kiowa State Kansas

Test Approved by Al Stude Western Representative Guy Max Knipe

Formation Test No. 2 O.K. X Misrun Interval Tested From 4196' to 4210' Total Depth 4210'

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

Packer Depth 4191 Ft. Size 6 3/4" Packer Depth 4196 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5½" O.D. Tool Jt. Size 4½" F.H. Anchor Length 14 Ft. Size 5½" O.D.

RECORDERS Depth 4202 Ft. Clock No. 6895 Depth 4205 Ft. Clock No. 6899

Top Make Kuster Cap. 4000 No. 3659 Inside ~~Outside~~ Bottom Make Kuster Cap. 4000 No. 3660 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 6:41 A. M

Tool Open I.F.P. From 6:45 M. to 7:15 A.M. Hr. 30 Min. From (B) 26 P.S.I. To (C) 26 P.S.I.

Tool Closed I.C.I.P. From 7:15 M. to 7:45 A.M. Hr. 30 Min. (D) 560 P.S.I.

Tool Open F.F.P. From 7:45 M. to 8:45 A.M. 1 Hr. 00 Min. From (E) 26 P.S.I. To (F) 31 P.S.I.

Tool Closed F.C.I.P. From 8:45 M. to 9:15 A.M. Hr. 30 Min. (G) 388 P.S.I.

Initial Hydrostatic Pressure (A) 2186 P.S.I. Final Hydrostatic Pressure (H) 2178 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3 inch Water	¼" choke	15 M.	2,920 C.F.
Spring Gauge	3 inch Water	¼" choke	30 M.	2,920 C.F.
	3 inch Water	¼" choke	45 M.	2,920 C.F.

BLOW Strong through out Flow Period- Gas surface in 10 minutes on 2nd Flow Bottom Choke Size 3/4 In.

Did Well Flow X Yes No Recovery Total Ft. 70 feet Gas Cut Mud

Reversed Out Yes X No Mud Type Starch Viscosity 44 Weight 10.1 Water Loss 14 cc. Maximum Temp. 119 °F

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

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Yes Did Tool Plug? No Where?

Length Drill Pipe 3688 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 517 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

WESTERN TESTING CO., INC.
Pressure Data

Date October 27, 1973 Test Ticket No. 14920

Recorder No. 3659 Capacity 4000 Location 4202 Ft.

Clock No. 6895 Elevation 2210 Derrick Floor Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2186 P.S.I.	Open Tool	6:41 A. M	
B First Initial Flow Pressure	26 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	26 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D Initial Closed-in Pressure	560 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	26 P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F Second Final Flow Pressure	31 P.S.I.			
G Final Closed-in Pressure	388 P.S.I.			
H Final Hydrostatic Mud	2178 P.S.I.			

PRESSURE BREAKDOWN

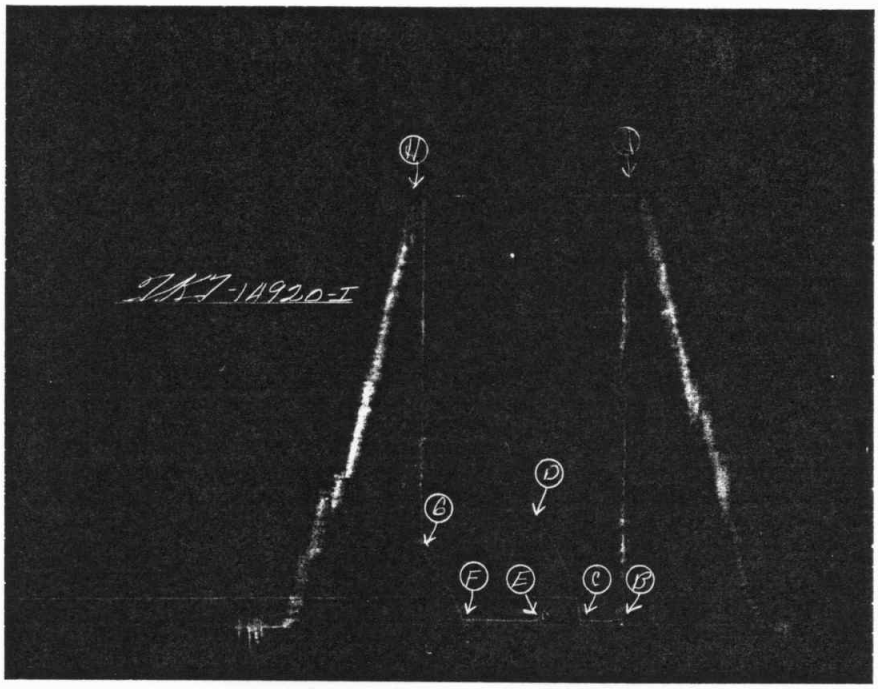
First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

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

Second Flow Pressure
Breakdown: 12 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	26	0	26	0	26	0	31
P 2 5	26	3	124	5	26	3	73
P 3 10	26	6	198	10	26	6	122
P 4 15	26	9	262	15	26	9	162
P 5 20	26	12	312	20	26	12	201
P 6 25	26	15	358	25	26	15	230
P 7 30	26	18	400	30	26	18	266
P 8		21	436	35	27	21	294
P 9		24	472	40	28	24	320
P10		27	502	45	28	27	348
P11		30	532	50	29	30	372
P12		33	560	55	30	33	388
P13				60	31		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2210	2186	PSI
(B)	First Initial Flow Pressure	20	26	PSI
(C)	First Final Flow Pressure	20	26	PSI
(D)	Initial Closed-in Pressure	560	560	PSI
(E)	Second Initial Flow Pressure	26	26	PSI
(F)	Second Final Flow Pressure	30	31	PSI
(G)	Final Closed-in Pressure	380	388	PSI
(H)	Final Hydrostatic Mud	2180	2178	PSI

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

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

Elevation 2210 Derrick Floor Formation Mississippian Effective Pay — Ft. Ticket No. 17822

Date 10-29-73 Sec. 31 Twp. 27S Range 18W County Kiowa State Kansas

Test Approved by Al Stude Western Representative Chuck Wedgewood

Formation Test No. 3 O.K. X Misrun Interval Tested From 4772' to 4785' Total Depth 4785'

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

Packer Depth 4767 Ft. Size 6 3/4" Packer Depth 4772 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5½" O.D. Tool Jt. Size 4½" F.H. Anchor Length 13 Ft. Size 5½" O.D.

RECORDERS Depth 4776 Ft. Clock No. 8378 Depth 4779 Ft. Clock No. 4964

Top Make Kuster Cap. 6200 No. 1562 Inside ~~Outside~~ Bottom Make Kuster Cap. 6000 No. 1560 ~~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 11:11 P. M

Tool Open I.F.P. From 11:15 M. to 11:45 P.M. Hr. 30 Min. From (B) 105 P.S.I. To (C) 99 P.S.I.

Tool Closed I.C.I.P. From 11:45 M. to 12:30 A.M. Hr. 45 Min. (D) 1569 P.S.I.

Tool Open F.F.P. From 12:30 M. to 1:30 A.M. 1 Hr. 00 Min. From (E) 96 P.S.I. To (F) 108 P.S.I.

Tool Closed F.C.I.P. From 1:30 M. to 2:15 A.M. Hr. 45 Min. (G) 1539 P.S.I.

Initial Hydrostatic Pressure (A) 2559 P.S.I. Final Hydrostatic Pressure (H) 2544 P.S.I.

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

BLOW Strong Bottom Choke Size 3/4 In.

Did Well Flow X Yes No Recovery Total Ft. Gas to Surface in 1 minute, 2 feet heavy mud

Reversed Out Yes X No Mud Type Starch Viscosity 47 Weight 9.7 Water Loss 9.6 cc. Maximum Temp. 124 °F

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

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Yes Did Tool Plug? No Where?

Length Drill Pipe 4236 ft. I.D. Drill Pipe 3.80 in. Length Weight Pipe 517 ft. I.D. Weight Pipe 2.70 in. Length Drill Collars — ft.

I.D. Drill Collars — in. Length D.S.T. Tool 32 ft.

Remarks

WESTERN TESTERS

P. O. BOX 793
GREAT BEND, KANSAS

COMPANY Abercrombie Drilling Inc. LEASE & WELL NO. Rice #1

TEST NO. 3 INTERVAL TESTED FROM 4772' TO 4785'

TIME PRE-FLOW	MAX PRESS. P.S.I.	DESCRIPTION OF FLOW
11:15 P.M.	Tool open	
11:16 P.M.	Gas to surface	
11:22 P.M.	1¼" Merla Orifice Gauged	893,000 C.F.P.D.
11:32 P.M.	1¼" " " "	802,000 C.F.P.D.
11:42 P.M.	1¼" " " "	802,000 C.F.P.D.
11:45 P.M.	Tool closed for Initial Shut In Pressure	
SECOND FLOW		
12:30 A.M.	Tool open for Final Flow Pressure	
~~12:31 A.M.~~	~~1¼" Merla Orifice Gauged~~	~~653,000 C.F.P.D.~~
12:35 A.M.	1¼" " " "	802,000 C.F.P.D.
12:45 A.M.	1¼" " " "	937,000 C.F.P.D.
12:55 A.M.	1¼" " " "	937,000 C.F.P.D.
1:05 A.M.	1¼" " " "	937,000 C.F.P.D.
1:15 A.M.	1¼" " " "	937,000 C.F.P.D.
1:25 A.M.	1¼" " " "	937,000 C.F.P.D.
1:30 A.M.	Tool closed for Final Shut In Pressure	

SIZE CHOKE SURFACE 3/4 IN. BOTTOM 3/4 IN.

REMARKS

WESTERN TESTING CO., INC.
Pressure Data

Date October 29, 1973 — Test Ticket No. 17822

Recorder No. 1562 — Capacity 6200 — Location 4776 Ft.

Clock No. 8378 — Elevation 2210 Derrick Floor — Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2559 P.S.I.	Open Tool	11:11 P. M	
B First Initial Flow Pressure	105 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	99 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1569 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	96 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	108 P.S.I.			
G Final Closed-in Pressure	1539 P.S.I.			
H Final Hydrostatic Mud	2544 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	105
P 2 5	104
P 3 10	102
P 4 15	99
P 5 20	99
P 6 25	99
P 7 30	99
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	99
3	695
6	1334
9	1524
12	1540
15	1548
18	1554
21	1557
24	1560
27	1561
30	1563
33	1564
36	1565
39	1566
42	1567
45	1569

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

Point Minutes	Press.
0	96
5	96
10	96
15	96
20	96
25	96
30	96
35	96
40	96
45	96
50	96
55	96
60	108

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

Point Minutes	Press.
0	108
3	1172
6	1463
9	1493
12	1506
15	1515
18	1516
21	1521
24	1527
27	1530
30	1533
33	1534
36	1535
39	1536
42	1538
45	1539

This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2608	2559	PSI
(B)	First Initial Flow Pressure	120	105	PSI
(C)	First Final Flow Pressure	90	99	PSI
(D)	Initial Closed-in Pressure	1569	1569	PSI
(E)	Second Initial Flow Pressure	105	96	PSI
(F)	Second Final Flow Pressure	90	108	PSI
(G)	Final Closed-in Pressure	1539	1539	PSI
(H)	Final Hydrostatic Mud	2578	2544	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Rice #1 SEC. 31 TWP. 27S RGE. 18W TEST NO. 3 DATE 10-29-73

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

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

Elevation 2210 Derrick Floor Formation Mississippian Effective Pay — Ft. Ticket No. 17823

Date 10-30-73 Sec. 31 Twp. 27S Range 18W County Kiowa State Kansas

Test Approved by Al Stude Western Representative Chuck Wedgewood

Formation Test No. 4 O.K. X Misrun Interval Tested From 4787' to 4800' Total Depth 4800'

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

Packer Depth 4782 Ft. Size 6 3/4" Packer Depth 4787 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5½" O.D. Tool Jt. Size 4½" F.H. Anchor Length 13 Ft. Size 5½" O.D.

RECORDERS Depth 4791 Ft. Clock No. 8378 Depth 4794 Ft. Clock No. 4964

Top Make Kuster Cap. 6200 No. 1562 Inside ~~Outside~~ Bottom Make Kuster Cap. 6000 No. 1560 ~~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 7:56 P. M

Tool Open I.F.P. From 8:00 M. to 8:30 P.M. Hr. 30 Min. From (B) 45 P.S.I. To (C) 45 P.S.I.

Tool Closed I.C.I.P. From 8:30 M. to 9:15 P.M. Hr. 45 Min. (D) 1345 P.S.I.

Tool Open F.F.P. From 9:15 M. to 10:15 P.M. 1 Hr. 00 Min. From (E) 40 P.S.I. To (F) 45 P.S.I.

Tool Closed F.C.I.P. From 10:15 M. to 11:00 P.M. Hr. 45 Min. (G) 1239 P.S.I.

Initial Hydrostatic Pressure (A) 2562 P.S.I. Final Hydrostatic Pressure (H) 2542 P.S.I.

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

BLOW Strong Bottom Choke Size 3/4 In.

Did Well Flow X Yes No Recovery Total Ft. 10 feet Mud

Reversed Out Yes X No Mud Type Starch Viscosity 59 Weight 10 Water Loss 7.2 cc. Maximum Temp. 125 °F

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

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

Length Drill Pipe 4251 ft. I.D. Drill Pipe 380 in. Length Weight Pipe 517 ft. I.D. Weight Pipe 2.70 in. Length Drill Collars — ft.

I.D. Drill Collars — in. Length D.S.T. Tool 32 ft.

Remarks

FORM WTC 3

WESTERN TESTERS

P. O. BOX 793
GREAT BEND, KANSAS

COMPANY Abercrombie Drilling Inc. LEASE & WELL NO. Rice #1

TEST NO. 4 INTERVAL TESTED FROM 4787' TO 4800'

TIME PRE-FLOW	MAX PRESS. P.S.I.	DESCRIPTION OF FLOW
8:00 P.M.	Tool Open	
8:26 P.M.	Gas to Surface	
8:28 P.M.	3/4" Merla Orifice Gauged	14,200 C.F.P/D.
8:30 P.M.	Tool closed for Initial Shut In Pressure	
SECOND FLOW		
9:15 P.M.	Tool open for Final Flow Pressure	
9:20 P.M.	1/4" Merla Orifice Gauged	4,450 C.F.P.D.
9:30 P.M.	1/4" " " "	8,220 C.F.P.D.
9:40 P.M.	1/4" " " "	8,220 C.F.P.D.
9:50 P.M.	1/4" " " "	6,550 C.F.P.D.
10:00 P.M.	1/4" " " "	6,100 C.F.P.D.
10:10 P.M.	1/4" " " "	5,860 C.F.P.D.
10:15	Tool closed for Final Shut In Pressure	

SIZE CHOKE SURFACE 3/4 IN. BOTTOM 3/4 IN.

REMARKS

WESTERN TESTING CO., INC.
Pressure Data

Date October 30, 1973 — Test Ticket No. 17823

Recorder No. 1562 — Capacity 6200 — Location 4791 Ft.

Clock No. 8378 — Elevation 2210 Derrick Floor — Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2562 P.S.I.	Open Tool	7:56 P. M	
B First Initial Flow Pressure	45 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	45 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	1345 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	40 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F Second Final Flow Pressure	45 P.S.I.			
G Final Closed-in Pressure	1239 P.S.I.			
H Final Hydrostatic Mud	2541 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: 6 Inc.	Breakdown: 14 Inc.	Breakdown: 12 Inc.	Breakdown: 16 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	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Mins.	Press.	Minutes	Press.	Minutes	Press.	Minutes	Press.
P 1	0	45	0	45	0	40	0	45
P 2	5	45	3	279	5	40	3	207
P 3	10	45	6	493	10	40	6	382
P 4	15	45	9	680	15	40	9	532
P 5	20	45	12	821	20	41	12	659
P 6	25	45	15	933	25	42	15	764
P 7	30	45	18	1033	30	43	18	852
P 8			21	1099	35	43	21	924
P 9			24	1154	40	43	24	984
P10			27	1203	45	43	27	1033
P11			30	1242	50	43	30	1078
P12			33	1275	55	44	33	1115
P13			36	1299	60	45	36	1145
P14			39	1324			39	1172
P15			42	1345			42	1199
P16							45	1221
P17							48	1239
P18								
P19								
P20								

This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2639	2562	PSI
(B)	First Initial Flow Pressure	40	45	PSI
(C)	First Final Flow Pressure	40	45	PSI
(D)	Initial Closed-in Pressure	1342	1345	PSI
(E)	Second Initial Flow Pressure	45	40	PSI
(F)	Second Final Flow Pressure	45	45	PSI
(G)	Final Closed-in Pressure	1236	1239	PSI
(H)	Final Hydrostatic Mud	2562	2542	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Rice #1 SEC. 31 TWP. 27S RGE. 18W TEST NO. 4 DATE 10-30-73

WESTERN TESTERS

Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

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

Elevation 2210 Derrick Floor Formation Kinderhook Effective Pay — Ft. Ticket No 18957

Date 10-31-73 Sec. 31 Twp. 27S Range 18W County Kiowa State Kansas

Test Approved by Al Stude Western Representative Kenneth Cheney

Formation Test No. 5 O.K. X Misrun Interval Tested From 4832' to 4850' Total Depth 4850'

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

Packer Depth 4827 Ft. Size 6 3/4" Packer Depth 4832 Ft. Size 6 3/4"

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

Packer Depth Ft. Size

Tool Size 5½" O.D. Tool Jt. Size 4½" F.H. Anchor Length 18 Ft. Size 5½" O.D.

RECORDERS Depth 4842 Ft. Clock No. 8674 Depth 4844 Ft. Clock No. 10168

Top Make Kuster Cap. 4150 No. 2605 Inside ~~Outside~~ Bottom Make Kuster Cap 4150 No. 3351 ~~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 5:24 P. M

Tool Open I.F.P. From 5:25 M. to 5:55 P.M. Hr. 30 Min. From (B) 40 P.S.I. To (C) 92 P.S.I.

Tool Closed I.C.I.P. From ~~6:40~~ 5:55 M. to ~~7:40~~ 6:40 P. M. Hr. 45 Min. (D) 1393 P.S.I.

Tool Open F.F.P. From 6:40 M. to 7:40 P. M. 1 Hr. 00 Min. From (E) 109 P.S.I. To (F) 194 P.S.I.

Tool Closed F.C.I.P. From 7:40 M. to 8:25 P. M. Hr. 45 Min. (G) 1344 P.S.I.

Initial Hydrostatic Pressure (A) 2571 P.S.I. Final Hydrostatic Pressure (H) 2556 P.S.I.

SURFACE INFORMATION	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
	3/8 In.		M.	
			M.	
			M.	

BLOW Fair throughout test Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 420 feet Salt Water

Reversed Out Yes X No Mud Type Impernex Viscosity 59 Weight 10.0 Water Loss 7.2 cc. Maximum Temp. 128 °F

Type Circ. Sub. Plug Safety Joint No Jars: Size — Make — Ser. No. —

EXTRA EQUIPMENT: Dual Packers Yes Did Packer Hold? Yes Did Tool Plug? No Where?

Length Drill Pipe 4295 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 517 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars — ft.

I.D. Drill Collars — in. Length D.S.T. Tool 38 ft.

Remarks

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date October 31, 1973 — Test Ticket No. 18957

Recorder No. 2605 — Capacity 4150 — Location 4842 Ft.

Clock No. 8674 — Elevation 2210 Derrick Floor — Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2571 P.S.I.	Open Tool	5:24 P. M.	
B First Initial Flow Pressure	40 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	92 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1393 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	109 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	194 P.S.I.			
G Final Closed-in Pressure	1344 P.S.I.			
H Final Hydrostatic Mud	2556 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	40
P 2 5	41
P 3 10	48
P 4 15	59
P 5 20	71
P 6 25	82
P 7 30	92
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.

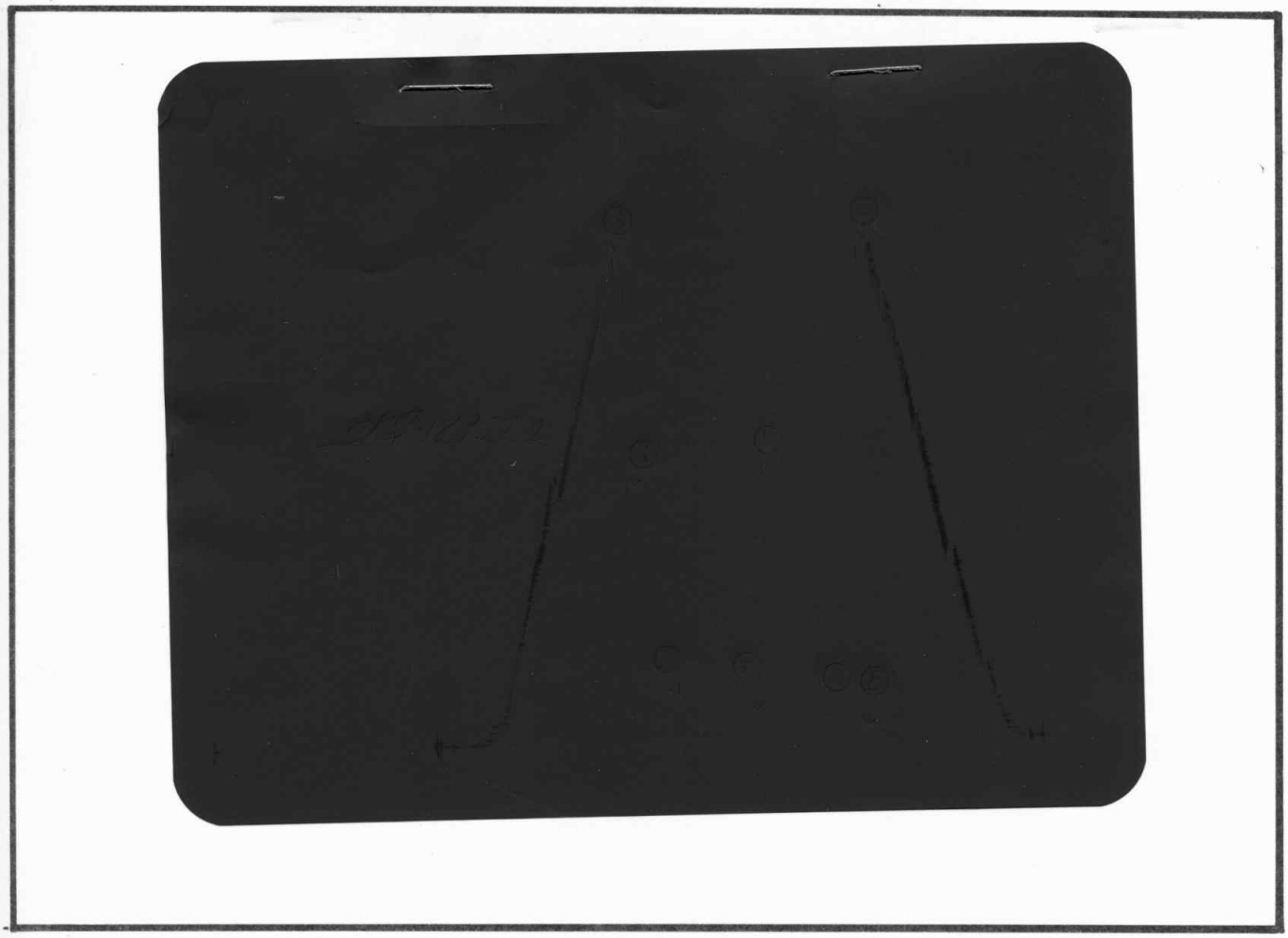
Point Minutes	Press.
0	92
3	684
6	1053
9	1178
12	1233
15	1275
18	1304
21	1323
24	1339
27	1352
30	1362
33	1371
36	1377
39	1383
42	1388
45	1393

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

Point Minutes	Press.
0	109
5	112
10	120
15	131
20	137
25	145
30	156
35	165
40	171
45	172
50	180
55	188
60	194

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

Point Minutes	Press.
0	194
3	717
6	1016
9	1134
12	1186
15	1223
18	1250
21	1269
24	1285
27	1298
30	1308
33	1316
36	1325
39	1331
42	1337
45	1344



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	2438	2571	PSI
(B)	First Initial Flow Pressure	20	40	PSI
(C)	First Final Flow Pressure	70	92	PSI
(D)	Initial Closed-in Pressure	1327	1393	PSI
(E)	Second Initial Flow Pressure	90	109	PSI
(F)	Second Final Flow Pressure	190	194	PSI
(G)	Final Closed-in Pressure	1277	1344	PSI
(H)	Final Hydrostatic Mud	2438	2556	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. Rice #1 SEC. 31 TWP. 27S RGE. 18W TEST NO. 5 DATE 10-31-73