WESTERN TESTERS

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

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

Elevation 1928 Kelly Bushings Formation Toronto Lansing Effective Pay Ft. Ticket No. 14861

Date 8-19-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold Schmidt

Formation Test No. 1 O.K. X Misrun Interval Tested From 3085' to 3130' Total Depth 3130'

Size Main Hole 6 3/4" Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No

Top Packer Depth 3080 Ft. Size 5 1/2" Packer Depth 3085 Ft. Size 5 1/2"

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

Packer Depth Ft. Size

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 45 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3124 Ft. Clock No. 6893 Depth 3127 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 3354 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 11:38 A. M

Tool Open I.F.P. From 11:39 M. to 12:09P M. Hr. 30 Min. From (B) 53 P.S.I. To (C) 58 P.S.I.

Tool Closed I.C.I.P. From 12:09 M. to 12:39P M. Hr. 30 Min. (D) 1042 P.S.I.

Tool Open F.F.P. From 12:39 M. to 1:39P. M. Hr. 60 Min. From (E) 69 P.S.I. To (F) 81 P.S.I.

Tool Closed F.C.I.P. From 1:39 M. to 2:09P. M. Hr. 30 Min. (G) 867 P.S.I.

Initial Hydrostatic Pressure (A) 1610 P.S.I. Final Hydrostatic Pressure (H) 1587 P.S.I.

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

BLOW Weak to fair Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 295 feet Gas in pipe

15 feet clean oil

110 feet heavy oil cut mud

Reversed Out Yes X No Mud Type Chem. Viscosity 40 Weight 9.9 Water Loss 10.8 cc. Maximum Temp. 106 °F

Type Circ. Sub. Plug Did Tool Plug? Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint No Did Packer Hold? Yes Where? 3085

Length Drill Pipe 1351 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 65 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 8-19-70 Test Ticket No. 14861

Recorder No. 1051 Capacity 4250 Location 3124 Ft.

Clock No. 6893 Elevation 1928 Kelly Bushings Well Temperature 106 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1610 P.S.I.	Open Tool	11:38 A, M	
B	First Initial Flow Pressure	53 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	58 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1042 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	69 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	81 P.S.I.			
G	Final Closed-in Pressure	867 P.S.I.			
H	Final Hydrostatic Mud	1587 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	53
P 2 5	53
P 3 10	53
P 4 15	54
P 5 20	55
P 6 25	56
P 7 30	58
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.

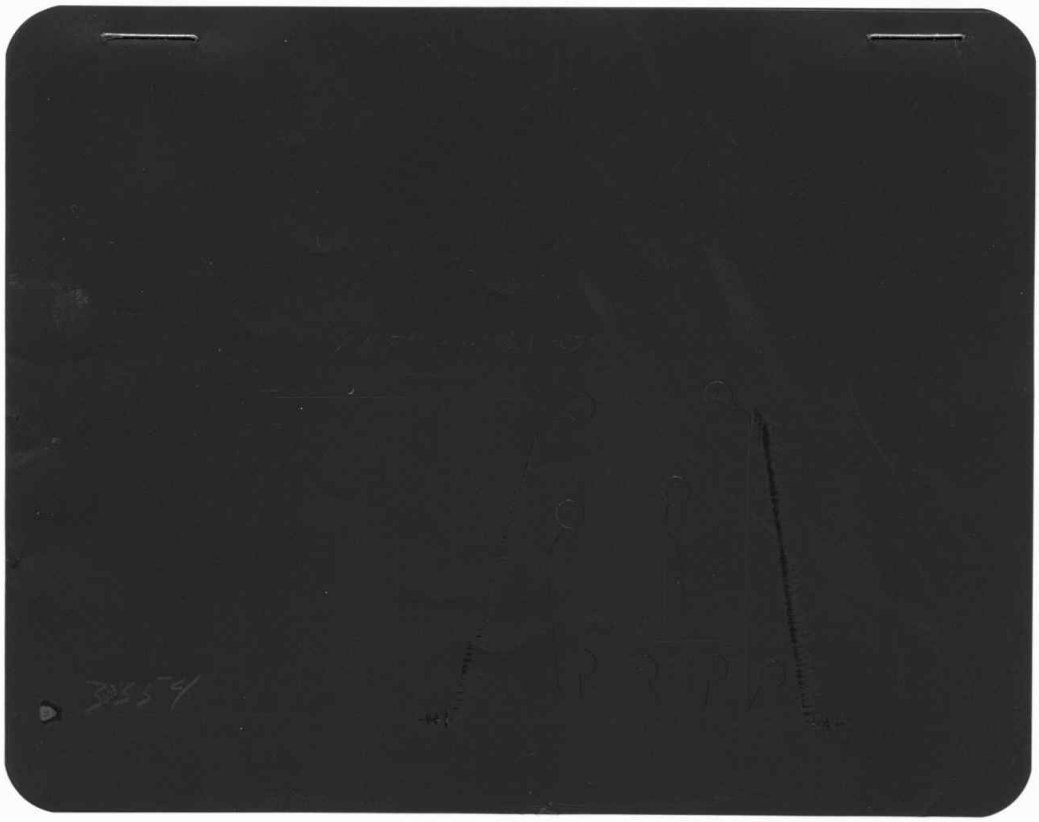
Point Minutes	Press.
0	58
3	64
6	77
9	154
12	387
15	669
18	842
21	923
24	980
27	1020
30	1042

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

Point Minutes	Press.
0	69
5	70
10	71
15	72
20	73
25	74
30	75
35	76
40	77
45	78
50	79
55	80
60	81

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

Point Minutes	Press.
0	81
3	86
6	95
9	103
12	113
15	180
18	342
21	582
24	744
27	833
30	867



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1646	1610	PSI
(B)	First Initial Flow Pressure	52	53	PSI
(C)	First Final Flow Pressure	63	58	PSI
(D)	Initial Closed-in Pressure	1075	1042	PSI
(E)	Second Initial Flow Pressure	73	69	PSI
(F)	Second Final Flow Pressure	94	81	PSI
(G)	Final Closed-in Pressure	886	867	PSI
(H)	Final Hydrostatic Mud	1642	1587	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. McCauley #1 SEC. 16 TWP. 7S RGE. 19W TEST NO. 1 DATE 8-19-70

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

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

Elevation 1928 Kelly Bushings Formation Lansing Effective Pay Ft. Ticket No. 14862

Date 8-20-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold J. Schmidt

Formation Test No. 2 O.K. X Misrun Interval Tested From 3147' to 3203' Total Depth 3203'

Size Main Hole 6 3/4 Rat Hole Conv. B.T. X Damaged Yes No Conv. X B.T. Damaged Yes No

Top Packer Depth 3142 Ft. Size 5 1/2" Packer Depth 3147 Ft. Size 5 1/2"

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

Packer Depth Ft. Size

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 56 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3197 Ft. Clock No. 6893 Depth 3200 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 Inside Outside Bottom Make Kuster Cap. 4200 No. 3354 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 4:34 A. M

Tool Open I.F.P. From 4:35 M. to 4:50A. M. Hr. 15 Min. From (B) 66 P.S.I. To (C) 66 P.S.I.

Tool Closed I.C.I.P. From 4:50 M. to 5:20A. M. Hr. 30 Min. (D) 953 P.S.I.

Tool Open F.F.P. From 5:20 M. to 6:20A. M. Hr. 60 Min. From (E) 75 P.S.I. To (F) 82 P.S.I.

Tool Closed F.C.I.P. From 6:20 M. to 6:50A. M. Hr. 30 Min. (G) 136 P.S.I.

Initial Hydrostatic Pressure (A) 1636 P.S.I. Final Hydrostatic Pressure (H) 1612 P.S.I.

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

BLOW Very weak thru out Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 65 feet watery mud with trace of oil

Good show of oil in tool

Reversed Out Yes X No Mud Type Chem. Viscosity 40 Weight 9.9 Water Loss 10.8 cc. Maximum Temp. 105 °F

Type Circ. Sub. Plug Did Tool Plug? No Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint No Did Packer Hold? Yes Where? 3147

Length Drill Pipe 1413 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 76 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 8-20-70 Test Ticket No. 14862

Recorder No. 1051 Capacity 4200 Location 3197 Ft.

Clock No. 6893 Elevation 1928 Kelly Bushings Well Temperature 105 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1636 P.S.I.	Open Tool	4:34 A/M	
B First Initial Flow Pressure	66 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	66 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	953 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	75 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	82 P.S.I.			
G Final Closed-in Pressure	136 P.S.I.			
H Final Hydrostatic Mud	1612 P.S.I.			

PRESSURE BREAKDOWN

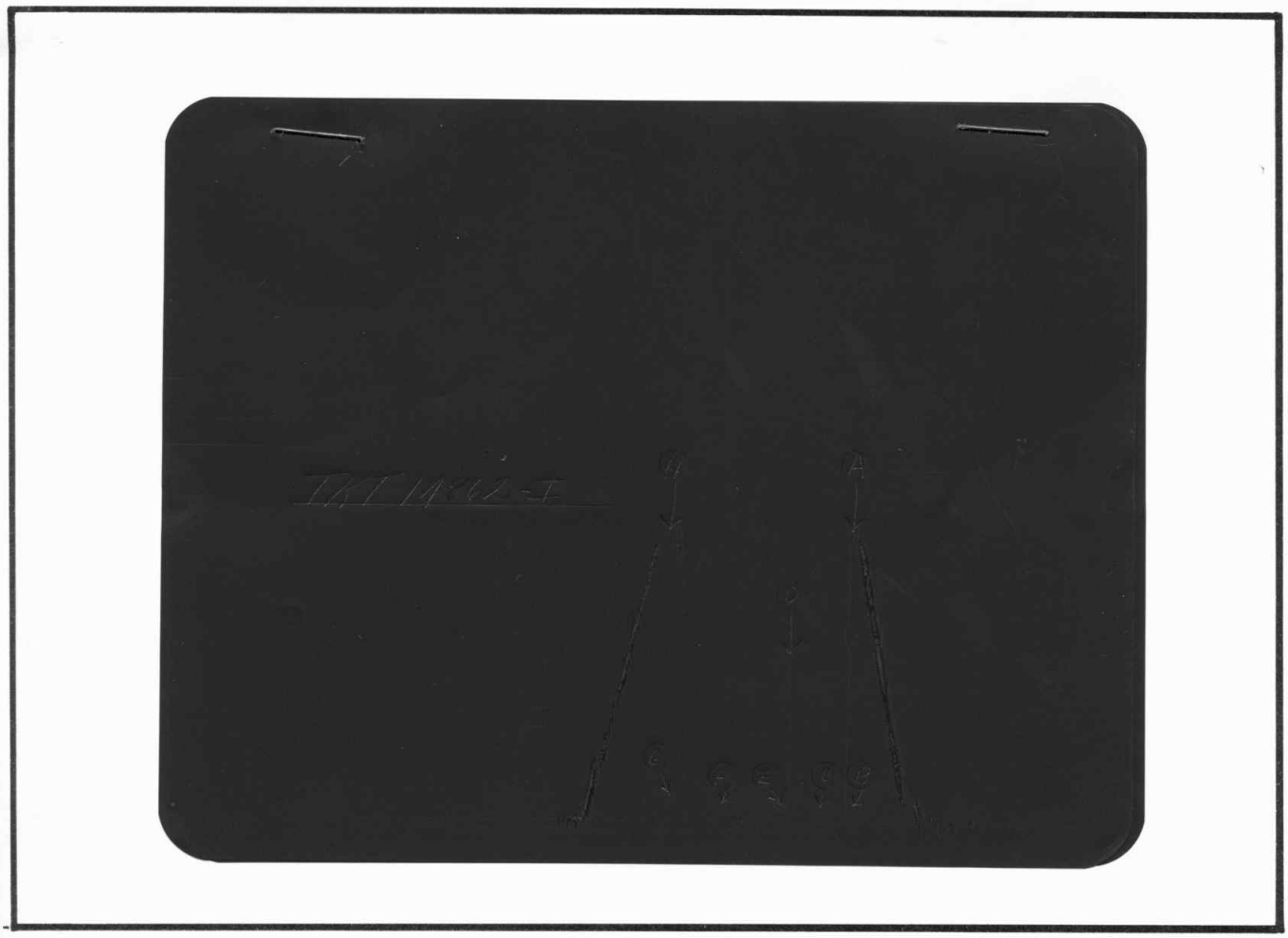
First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of ____ Min.

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

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

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

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	66	0	66	0	75	0	82
P 2 5	66	3	68	5	75	3	83
P 3 10	66	6	70	10	75	6	84
P 4 15	66	9	86	15	73	9	87
P 5		12	124	20	77	12	92
P 6		15	215	25	79	15	97
P 7		18	402	30	77	18	103
P 8		21	644	35	77	21	109
P 9		24	816	40	77	24	113
P10		27	895	45	78	27	124
P11		30	953	50	79	30	136
P12				55	80		
P13				60	82		
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	1667	1636	PSI
(B)	First Initial Flow Pressure	52	66	PSI
(C)	First Final Flow Pressure	61	66	PSI
(D)	Initial Closed-in Pressure	970	953	PSI
(E)	Second Initial Flow Pressure	73	75	PSI
(F)	Second Final Flow Pressure	84	82	PSI
(G)	Final Closed-in Pressure	147	136	PSI
(H)	Final Hydrostatic Mud	1663	1612	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. McCauley #1 SEC. 16 TWP. 7S RGE. 19 TEST NO. 2 DATE 8-20-70

WESTERN TESTERS

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

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

Elevation 1928 Kelly Bushings Formation Lansing Effective Pay _____ Ft. Ticket No. 14863

Date 8-20-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold Schmidt

Formation Test No. 3 O.K. X Misrun _____ Interval Tested From 3261' to 3283' Total Depth 3283'

Size Main Hole 6 3/4" Rat Hole _____ Conv. _____ B.T. X Damaged _____ Yes X No Conv. X B.T. _____ Damaged _____ Yes X No

Top Packer Depth 3256' Ft. Size 5 1/2" Packer Depth 3261 Ft. Size 5 1/2"

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

Packer Depth _____ Ft. Size _____

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 22 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3275 Ft. Clock No. 6893 Depth 3278 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 3354 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 10:14 P. M

Tool Open I.F.P. From 10:15 M. to 10:30P M. Hr. 15 Min. From (B) 21 P.S.I. To (C) 24 P.S.I.

Tool Closed I.C.I.P. From 10:30 M. to 11:00P M. Hr. 30 Min. (D) 183 P.S.I.

Tool Open F.F.P. From 11:00 M. to 11:20P M. Hr. 20 Min. From (E) 31 P.S.I. To (F) 33 P.S.I.

Tool Closed F.C.I.P. From 11:20 M. to 11:50P. M. Hr. 30 Min. (G) 66 P.S.I.

Initial Hydrostatic Pressure (A) 1738 P.S.I. Final Hydrostatic Pressure (H) 1720 P.S.I.

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

BLOW Weak for 10 minutes Bottom Choke Size 3/4 In.

Did Well Flow X Yes No Recovery Total Ft. 5 feet drilling mud

Reversed Out Yes X No Mud Type Chem. Viscosity 35 Weight 9.7 Water Loss 9.8 cc. Maximum Temp. 107 °F

Type Circ. Sub. Plug Did Tool Plug? No Jars: Size _____ Make _____ Ser. No. _____

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint No Did Packer Hold? Yes Where? 3261

Length Drill Pipe 1527 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.

I. D. Drill Collars _____ in. Length D.S.T. Tool 42 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 8-20-70 Test Ticket No. 14863

Recorder No. 3354 Capacity 4200 Location 3278 Ft.

Clock No. 6894 Elevation 1928 Kelly Bushings Well Temperature 107 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1738 P.S.I.	Open Tool	10:14 P. M	
B First Initial Flow Pressure	21 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	24 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	183 P.S.I.	Second Flow Pressure	20 Mins.	20 Mins.
E Second Initial Flow Pressure	31 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	33 P.S.I.			
G Final Closed-in Pressure	66 P.S.I.			
H Final Hydrostatic Mud	1720 P.S.I.			

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	21
P 2 5	22
P 3 10	23
P 4 15	24
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	24
3	24
6	25
9	27
12	29
15	38
18	48
21	63
24	84
27	122
30	183

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

Point Minutes	Press.
0	31
5	31
10	31
15	32
20	33

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

Point Minutes	Press.
0	33
3	34
6	35
9	38
12	42
15	45
18	48
21	52
24	56
27	61
30	66



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1741	1738	PSI
(B)	First Initial Flow Pressure	29	21	PSI
(C)	First Final Flow Pressure	31	24	PSI
(D)	Initial Closed-in Pressure	185	183	PSI
(E)	Second Initial Flow Pressure	31	31	PSI
(F)	Second Final Flow Pressure	33	33	PSI
(G)	Final Closed-in Pressure	67	66	PSI
(H)	Final Hydrostatic Mud	1738	1720	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. McCauley #1 SEC. 16 TWP. 7S RGE. 19W TEST NO. 3 DATE 8-20-70

WESTERN TESTERS

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

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

Elevation 1928 Kelly Bushings Formation Lansing Effective Pay Ft. Ticket No. 14864

Date 8-21-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold Schmidt

Formation Test No. 4 O.K. X Misrun Interval Tested From 3286' to 3305' Total Depth 3305'

Size Main Hole 6 3/4 Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No

Top Packer Depth 3281 Ft. Size 5 1/2" Packer Depth 3286 Ft. Size 5 1/2"

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

Packer Depth Ft. Size

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 19 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3299 Ft. Clock No. 6893 Depth 3302 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 Inside Outside Bottom Make Kuster Cap. 4200 No. 3354 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 8:48 A.M.

Tool Open I.F.P. From 8:49 M. to 9:04A.M. Hr. 15 Min. From (B) 30 P.S.I. To (C) 31 P.S.I.

Tool Closed I.C.I.P. From 9:04 M. to 9:34A.M. Hr. 30 Min. (D) 1054 P.S.I.

Tool Open F.F.P. From 9:34 M. to 10:09A.M. Hr. 35 Min. From (E) 40 P.S.I. To (F) 44 P.S.I.

Tool Closed F.C.I.P. From 10:09 M. to 10:39A.M. Hr. 30 Min. (G) 354 P.S.I.

Initial Hydrostatic Pressure (A) 1760 P.S.I. Final Hydrostatic Pressure (H) 1752 P.S.I.

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

BLOW Weak for 15 minutes Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 10 feet oil cut mud

Good show of oil in tool

Reversed Out Yes X No Mud Type Chem. Viscosity 47 Weight 9.8 Water Loss 8.5 cc. Maximum Temp. 107 °F

Type Circ. Sub. Plug Did Tool Plug? Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint No Did Packer Hold? Yes Where? 3286

Length Drill Pipe 1552 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 39 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 8-21-70 Test Ticket No. 14864

Recorder No. 3354 Capacity 4200 Location 3302 Ft.

Clock No. 6894 Elevation 1928 Kelly Bushings Well Temperature 107 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1760 P.S.I.		Open Tool	8:48 A.M	
B	First Initial Flow Pressure	30 P.S.I.		First Flow Pressure	15 Mins.	15 Mins.
C	First Final Flow Pressure	31 P.S.I.		Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1054 P.S.I.		Second Flow Pressure	35 Mins.	35 Mins.
E	Second Initial Flow Pressure	40 P.S.I.		Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	44 P.S.I.				
G	Final Closed-in Pressure	354 P.S.I.				
H	Final Hydrostatic Mud	1752 P.S.I.				

PRESSURE BREAKDOWN

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

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

Second Flow Pressure
Breakdown: 7 Inc. of 5 mins. and a final inc. of ____ Min.

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

Point	First Flow Pressure Mins.	First Flow Pressure Press.	Initial Shut-In Minutes	Initial Shut-In Press.	Second Flow Pressure Minutes	Second Flow Pressure Press.	Final Shut-In Minutes	Final Shut-In Press.
P 1	0	30	0	31	0	40	0	44
P 2	5	30	3	34	5	40	3	45
P 3	10	30	6	44	10	40	6	46
P 4	15	31	9	69	15	41	9	54
P 5			12	111	20	42	12	65
P 6			15	202	25	43	15	80
P 7			18	434	30	44	18	103
P 8			21	656	35	44	21	132
P 9			24	871			24	194
P10			27	989			27	259
P11			30	1054			30	354
P12								
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. MC Cauley #1 SEC. 16 TWP. 7S RGE. 19W TEST NO. 4 DATE 8-21-70



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1762	1760	PSI
(B)	First Initial Flow Pressure	31	30	PSI
(C)	First Final Flow Pressure	37	31	PSI
(D)	Initial Closed-in Pressure	1054	1054	PSI
(E)	Second Initial Flow Pressure	42	40	PSI
(F)	Second Final Flow Pressure	44	44	PSI
(G)	Final Closed-in Pressure	358	354	PSI
(H)	Final Hydrostatic Mud	1758	1752	PSI

WESTERN TESTERS

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

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

Elevation 1928 Kelly Bushings Formation Lansing Effective Pay Ft. Ticket No. 14865

Date 8-21-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold Schmidt

Formation Test No. 5 O.K. X Misrun Interval Tested From 3302' to 3338' Total Depth 3338'

Size Main Hole 6 3/4 Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No

Top Packer Depth 3297 Ft. Size 5 1/2" Packer Depth 3302 Ft. Size 5 1/2"

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

Packer Depth Ft. Size

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 36 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3330 Ft. Clock No. 6893 Depth 3333 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 3354 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 8:39 P.M.

Tool Open I.F.P. From 8:40 M. to 8:55P.M. Hr. 15 Min. From (B) 38 P.S.I. To (C) 28 P.S.I.

Tool Closed I.C.I.P. From 8:55 M. to 9:25P.M. Hr. 30 Min. (D) 45 P.S.I.

Tool Open F.F.P. From 9:25 M. to 9:45P.M. Hr. 20 Min. From (E) 34 P.S.I. To (F) 34 P.S.I.

Tool Closed F.C.I.P. From 9:45 M. to 10:15PM. Hr. 30 Min. (G) 40 P.S.I.

Initial Hydrostatic Pressure (A) 1721 P.S.I. Final Hydrostatic Pressure (H) 1708 P.S.I.

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

BLOW Weak for 5 minutes Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 5 feet drilling Mud

Reversed Out Yes X No Mud Type Chem. Viscosity 43 Weight 9.9 Water Loss 8.4 cc. Maximum Temp. 107 °F

Type Circ. Sub. Plug Did Tool Plug? No Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint Did Packer Hold? Yes Where? 3302

Length Drill Pipe 1568 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 56 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 821-70 Test Ticket No. 14865

Recorder No. 1051 Capacity 4200 Location 3330 Ft.

Clock No. 6893 Elevation 1928 kelly Bushings Well Temperature 107 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1721	P.S.I.
B	First Initial Flow Pressure	38	P.S.I.
C	First Final Flow Pressure	28	P.S.I.
D	Initial Closed-in Pressure	45	P.S.I.
E	Second Initial Flow Pressure	34	P.S.I.
F	Second Final Flow Pressure	34	P.S.I.
G	Final Closed-in Pressure	40	P.S.I.
H	Final Hydrostatic Mud	1708	P.S.I.

	Time Given	Time Computed
Open Tool	8:39 P.M	
First Flow Pressure	15 Mins.	15 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	20 Mins.	20 Mins.
Final Closed-in Pressure	30 Mins.	30 Mins.

PRESSURE BREAKDOWN

First Flow Pressure

Breakdown: 3 Inc. of 5 mins. and a final inc. of ____ Min.

Point Mins.	Press.
P 1 0	38
P 2 5	30
P 3 10	27
P 4 15	28
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	28
3	29
6	30
9	31
12	32
15	33
18	34
21	36
24	38
27	40
30	45

Second Flow Pressure

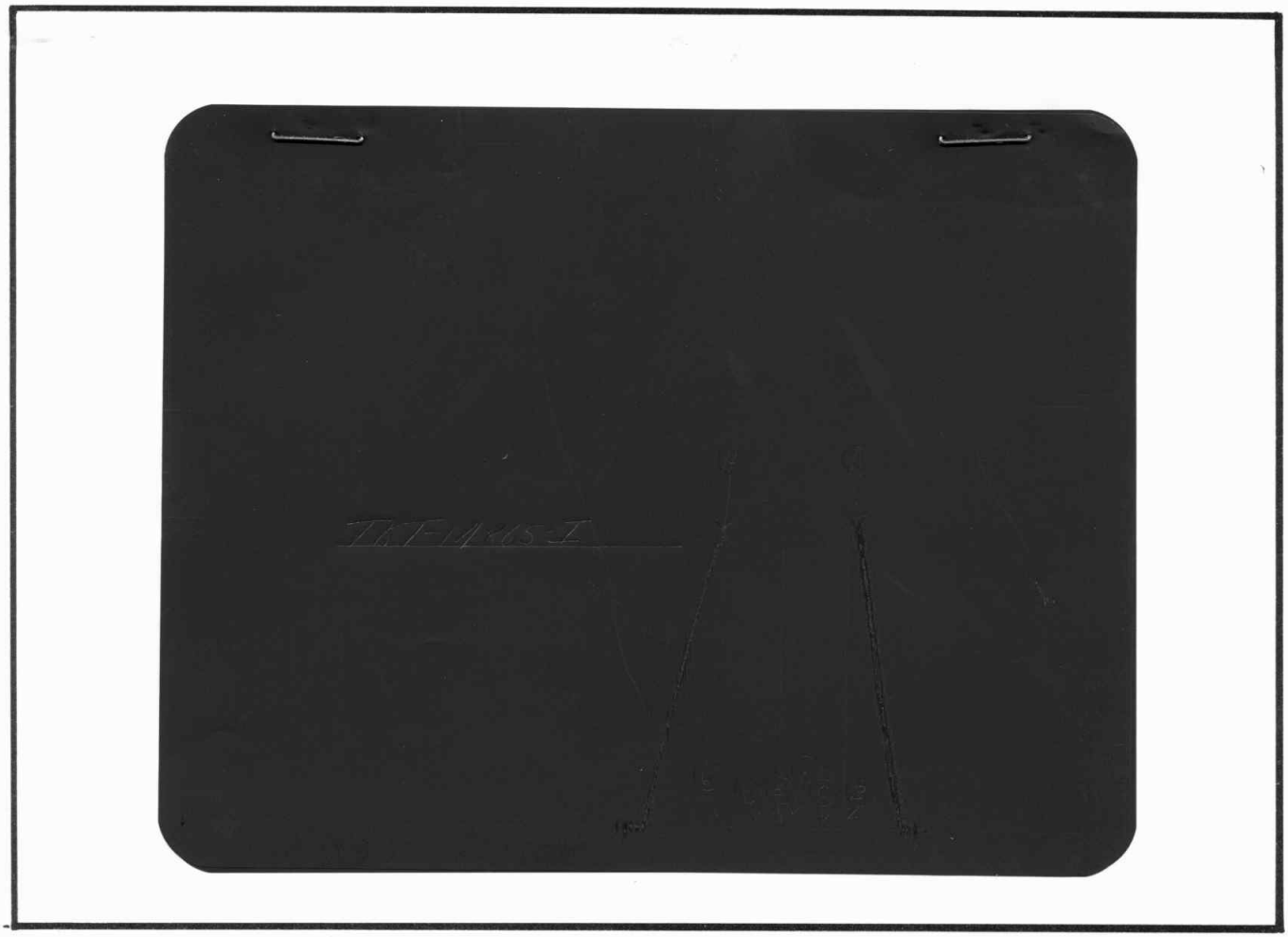
Breakdown: 4 Inc. of 5 mins. and a final inc. of ____ Min.

Point Minutes	Press.
0	34
5	34
10	34
15	34
20	34

Final Shut-In

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

Point Minutes	Press.
0	34
3	34
6	34
9	35
12	36
15	37
18	37
21	38
24	39
27	40
30	40



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1766	1721	PSI
(B)	First Initial Flow Pressure	31	38	PSI
(C)	First Final Flow Pressure	35	28	PSI
(D)	Initial Closed-in Pressure	63	45	PSI
(E)	Second Initial Flow Pressure	40	34	PSI
(F)	Second Final Flow Pressure	42	34	PSI
(G)	Final Closed-in Pressure	52	40	PSI
(H)	Final Hydrostatic Mud	1762	1708	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. McCauley #1 SEC. 16 TWP. 7S RGE. 19W TEST NO. 5 DATE 8-21-70

WESTERN

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

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

Elevation 1928 Kelly Bushings Formation Arbuckle Effective Pay Ft. Ticket No. 14866

Date 8-22-70 Sec. 16 Twp. 7S Range 19W County Rooks State Kansas

Test Approved by Jack K. Wharton Western Representative Harold Schmidt

Formation Test No. 6 O.K. X Misrun Interval Tested From 3328' to 3400' Total Depth 3400'

Size Main Hole 6 3/4" Rat Hole Conv. B.T. X Damaged Yes X No Conv. X B.T. Damaged Yes X No

Top Packer Depth 3323 Ft. Size 5 1/2" Packer Depth 3328 Ft. Size 5 1/2"

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

Packer Depth Ft. Size

Tool Size 4 1/2" O.D. Tool Jt. Size 3 1/2" I.F. Anchor Length 72 Ft. Size 4 1/2" O.D.

RECORDERS Depth 3361 Ft. Clock No. 6893 Depth 3364 Ft. Clock No. 6894

Top Make Kuster Cap. 4200 No. 1051 Inside ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 3354 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 10:04 A.M

Tool Open I.F.P. From 10:05 M. to 10:15A.M. Hr. 10 Min. From (B) 47 P.S.I. To (C) 49 P.S.I.

Tool Closed I.C.I.P. From 10:15 M. to 10:45 M. Hr. 30 Min. (D) 663 P.S.I.

Tool Open F.F.P. From 10:45 M. to 11:10A.M. Hr. 25 Min. From (E) 51 P.S.I. To (F) 55 P.S.I.

Tool Closed F.C.I.P. From 11:10 M. to 11:40 M. Hr. 30 Min. (G) 467 P.S.I.

Initial Hydrostatic Pressure (A) 1796 P.S.I. Final Hydrostatic Pressure (H) 1756 P.S.I.

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

BLOW Weak for 9 minutes Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 10 feet drilling mud with trace of oil

Good show of oil in tool

Reversed Out Yes X No Mud Type Chem. Viscosity 43 Weight 9.9 Water Loss 8.4 cc. Maximum Temp. 108 °F

Type Circ. Sub. Plug Did Tool Plug? No Jars: Size Make Ser. No.

EXTRA EQUIPMENT: Dual Packers Yes Safety Joint Did Packer Hold? Yes Where? 3328

Length Drill Pipe 1594 ft. I.D. Drill Pipe 2.7 in. Length Weight Pipe 1714 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 92 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 8-22-70 Test Ticket No. 14866

Recorder No. 1051 Capacity 4200 Location 3361 Ft.

Clock No. 6893 Elevation 1928 Kelly Bushings Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1796 P.S.I.	Open Tool	10:04 A. M	
B First Initial Flow Pressure	47 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C First Final Flow Pressure	49 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	663 P.S.I.	Second Flow Pressure	25 Mins.	27 Mins.
E Second Initial Flow Pressure	51 P.S.I.	Final Closed-in Pressure	30 Mins.	33 Mins.
F Second Final Flow Pressure	55 P.S.I.			
G Final Closed-in Pressure	467 P.S.I.			
H Final Hydrostatic Mud	1756 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 2 Inc. of 5 mins. and a final inc. of ____ Min.

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

Second Flow Pressure
Breakdown: 5 Inc. of 5 mins. and a final inc. of 2 Min.

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

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	47	0	49	0	51	0	55
P 2 5	47	3	75	5	51	3	64
P 3 10	49	6	126	10	55	6	86
P 4		9	199	15	55	9	111
P 5		12	292	20	55	12	146
P 6		15	379	25	55	15	182
P 7		18	463	27	55	18	230
P 8		21	531			21	279
P 9		24	582			24	333
P10		27	629			27	387
P11		30	663			30	448
P12						33	467
P13							
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	1826	1796	PSI
(B)	First Initial Flow Pressure	50	47	PSI
(C)	First Final Flow Pressure	52	49	PSI
(D)	Initial Closed-in Pressure	660	663	PSI
(E)	Second Initial Flow Pressure	54	51	PSI
(F)	Second Final Flow Pressure	56	55	PSI
(G)	Final Closed-in Pressure	453	467	PSI
(H)	Final Hydrostatic Mud	1822	1756	PSI

COMPANY Abercrombie Drilling Inc. LEASE AND WELL NO. McCauley #1 SEC. 16 TWP. 7S RGE. 19W TEST NO. 6 DATE 8-22-70