WESTERN TESTERS

TIGHT HOLE

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

Company Abercrombie Drilling Inc. Lease & Well No. Galen Smith #1

Elevation 2609 Kelly Bushings Formation Kansas City Effective Pay Ft. Ticket No. 14801

Date 11-16-70 Sec. 11 Twp. 3S Range 29W County Decatur State Kansas

Test Approved by Jack Wharton Western Representative Jerry Allen

Formation Test No. 1 O.K. X Misrun Interval Tested From 3579' to 3625' Total Depth 3625'

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

Packer Depth 3574 Ft. Size 5 3/4" Packer Depth 3579 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 46 Ft. Size 4 1/2" O.D. Perf.

RECORDERS Depth 3617 Ft. Clock No. 8476 Depth 3620 Ft. Clock No. 8376

Top Make Kuster Cap. 4150 No. 969 Inside ~~Outside~~ Bottom Make Kuster Cap. 4150 No. 2607 ~~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 1:43 A. M

Tool Open I.F.P. From 1:45 M. to 2:00A. M. Hr. 15 Min. From (B) 51 P.S.I. To (C) 51 P.S.I.

Tool Closed I.C.I.P. From 2:00 M. to 2:30A. M. Hr. 30 Min. (D) 1227 P.S.I.

Tool Open F.F.P. From 2:30 M. to 3:30A. M. Hr. 60 Min. From (E) 59 P.S.I. To (F) 75 P.S.I.

Tool Closed F.C.I.P. From 3:30 M. to 4:00A. M. Hr. 30 Min. (G) 1079 P.S.I.

Initial Hydrostatic Pressure (A) 1876 P.S.I. Final Hydrostatic Pressure (H) 1867 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 dead in 15 min.-Flushed tool back thru flow period Bottom Choke Size 3/4 In.

Did Well Flow Yes X No Recovery Total Ft. 90 feet heavy oil cut mud with spots of free oil

Reversed Out Yes No Mud Type Starch Viscosity 41 Weight 9.9 Water Loss 10.5 cc. Maximum Temp. 123 °F

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

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

Length Drill Pipe 1879 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 1680 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.

I. D. Drill Collars in. Length D.S.T. Tool 66 ft.

Remarks Flushed tool during final flow period (2:35)

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date 11-16-70 Test Ticket No. 14801

Recorder No. 969 Capacity 4150 Location 3617 Ft.

Clock No. 8476 Elevation 2609 Kelly Bushings Well Temperature 123 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1876	P.S.I.
B	First Initial Flow Pressure	51	P.S.I.
C	First Final Flow Pressure	51	P.S.I.
D	Initial Closed-in Pressure	1227	P.S.I.
E	Second Initial Flow Pressure	59	P.S.I.
F	Second Final Flow Pressure	75	P.S.I.
G	Final Closed-in Pressure	1079	P.S.I.
H	Final Hydrostatic Mud	1867	P.S.I.

	Time Given	Time Computed
Open Tool	1:43 A. M	
First Flow Pressure	15 Mins.	15 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	60 Mins.	60 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.

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	51	0	51	0	59	0	75
P 2 5	50	3	61	5	58	3	90
P 3 10	50	6	139	10	63	6	120
P 4 15	51	9	377	15	63	9	174
P 5		12	801	20	64	12	286
P 6		15	967	25	66	15	440
P 7		18	1092	30	67	18	663
P 8		21	1151	35	67	21	887
P 9		24	1184	40	69	24	985
P10		27	1211	45	71	27	1049
P11		30	1227	50	73	30	1079
P12				55	74		
P13				60	75		
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TIGHT HOLE

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

Company Abercrombie Drilling Inc. Lease & Well No. Galen Smith #1

Elevation 2609 Kelly Bushings Formation Kansas City Effective Pay ____ Ft. Ticket No. 14802

Date 11-16-70 Sec. 11 Twp. 3S Range 29W County Decatur State Kansas

Test Approved by Jack K. Wharton Western Representative Jerry Allen

Formation Test No. 2 O.K. X Misrun ____ Interval Tested From 3627' to 3647' Total Depth 3647'

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

Packer Depth 3622 Ft. Size 5 3/4" Packer Depth 3627 Ft. Size 5 3/4"

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 20 Ft. Size 4 1/2" O.D. Perf.

RECORDERS Depth 3637 Ft. Clock No. 8476 Depth 3640 Ft. Clock No. 8376

Top Make Kuster Cap. 4150 No. 969 Inside ~~Outside~~ Bottom Make Kuster Cap. 4150 No. 2607 ~~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 12:48 P. M

Tool Open I.F.P. From 12:50 M. to 1:00P.M. Hr. 10 Min. From (B) 29 P.S.I. To (C) 34 P.S.I.

Tool Closed I.C.I.P. From 1:00 M. to 1:32P.M. Hr. 32 Min. (D) 1186 P.S.I.

Tool Open F.F.P. From 1:32 M. to 2:32P.M. Hr. 60 Min. From (E) 63 P.S.I. To (F) 90 P.S.I.

Tool Closed F.C.I.P. From 2:32 M. to 3:02P.M. Hr. 30 Min. (G) 989 P.S.I.

Initial Hydrostatic Pressure (A) 1896 P.S.I. Final Hydrostatic Pressure (H) 1854 P.S.I.

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

BLOW Weak increasing to good thru flow period Bottom Choke Size 3/4 In.

Did Well Flow ____ Yes X No Recovery Total Ft. 130 feet clean gassy oil - 80 feet mud & gas cut oil (50%)

650 feet gas in pipe

Reversed Out ____ Yes X No Mud Type Chem. Viscosity 41 Weight 9.9 Water Loss 10.2 cc. Maximum Temp. 128 °F

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

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

Length Drill Pipe 1927 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 1680 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 40 ft.

Remarks Gravity 30 (corrected)

WESTERN TESTING CO., INC.
Pressure Data

Date 11-16-70 Test Ticket No. 14802

Recorder No. 2607 Capacity 4150 Location 3640 Ft.

Clock No. 8376 Elevation 2609 Kelly Bushings Well Temperature 128 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1896 P.S.I.	Open Tool	12:48 P.M	
B	First Initial Flow Pressure	29 P.S.I.	First Flow Pressure	10 Mins.	10 Mins.
C	First Final Flow Pressure	34 P.S.I.	Initial Closed-in Pressure	32 Mins.	35 Mins.
D	Initial Closed-in Pressure	1186 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	63 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	90 P.S.I.			
G	Final Closed-in Pressure	989 P.S.I.			
H	Final Hydrostatic Mud	1854 P.S.I.			

PRESSURE BREAKDOWN

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

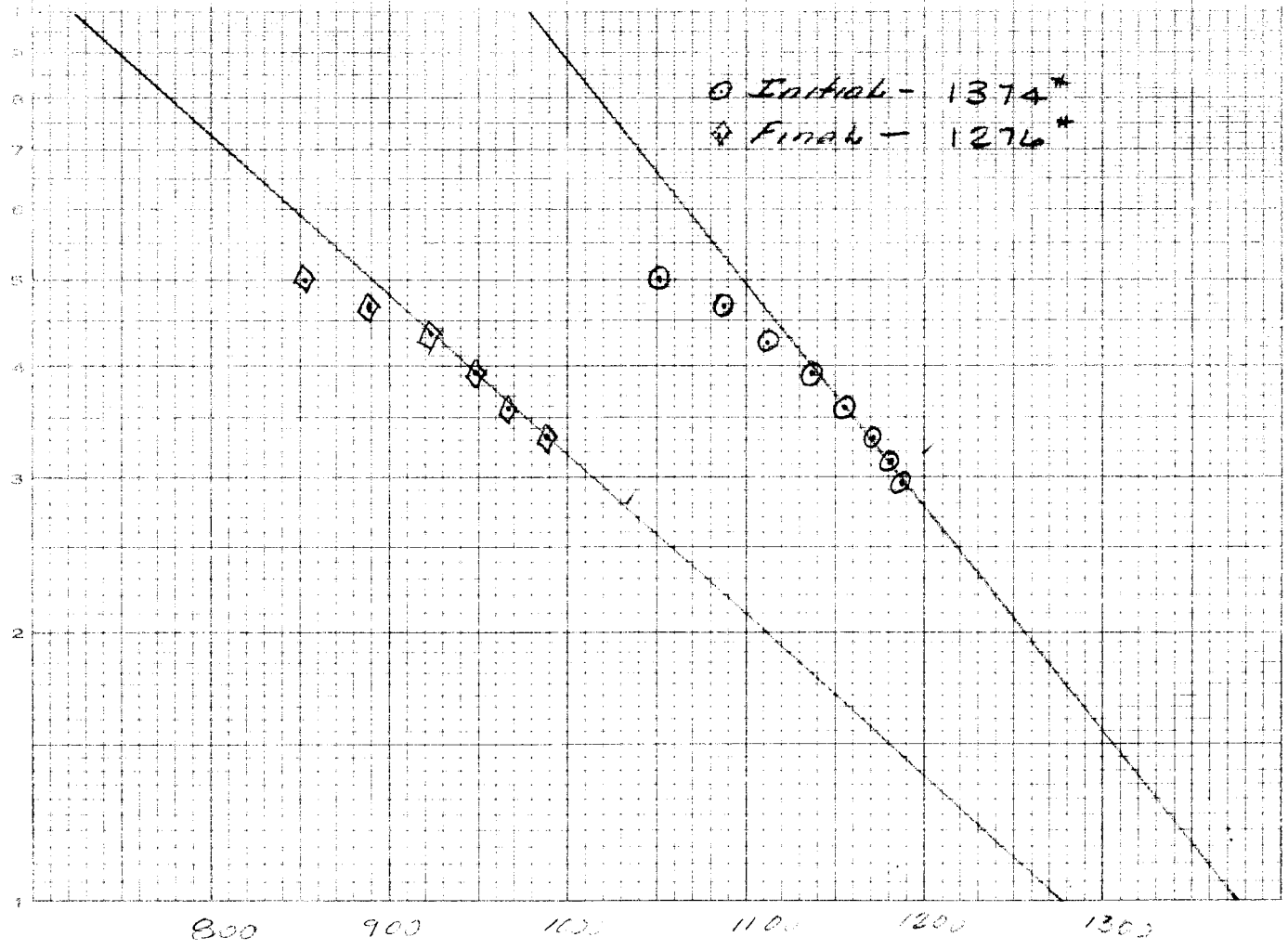
Initial Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 2 Min.

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	29		0	34		0	63		0	90
P 2	5	31		3	175		5	63		3	198
P 3	10	34		6	574		10	64		6	489
P 4				9	893		15	67		9	670
P 5				12	995		20	71		12	793
P 6				15	1052		25	73		15	853
P 7				18	1087		30	77		18	889
P 8				21	1112		35	81		21	924
P 9				24	1137		40	84		24	948
P10				27	1154		45	86		27	968
P11				30	1171		50	88		30	989
P12				33	1181		55	89			
P13				35	1186		60	90			
P14											
P15											
P16											
P17											
P18											
P19											
P20											

Abercrombie Drlg. Inc.
Galen Smith #1 Decatur Co.
DST #2 3627-3647
400.0 psi Slope Cycle
1.0 Damage
1.2 bbls per hour
28.8 " " day
14.0 Average permeability
7.0 Millidarcy ft per 2 ft Effective pay



WESTERN TESTERS

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

Company Abercrombie Drilling Inc. Lease & Well No. Galen Smith #1

Elevation 2609 Kelly Bushings Formation Kansas City Effective Pay ____ Ft. Ticket No. 14803

Date 11-17-70 Sec. 11 Twp. 3S Range 29W County Decatur State Kansas

Test Approved by Jack K. Wharton Western Representative Jerry Allen

Formation Test No. 3 O.K. X Misrun ____ Interval Tested From 3665' to 3735' Total Depth 3735'

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

Packer Depth 3660 Ft. Size 5 3/4" Packer Depth 3665 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 70 Ft. Size 4 1/2" O.D. 30" W.P.

RECORDERS Depth 3727 Ft. Clock No. 8476 Depth 3730 Ft. Clock No. 8376

Top Make Kuster Cap. 4150 No. 969 Inside Outside Bottom Make Kuster Cap. 4150 No. 2607 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 6:58 A.M

Tool Open I.F.P. From 7:00 M. to 7:15A. M. Hr. 15 Min. From (B) 57 P.S.I. To (C) 59 P.S.I.

Tool Closed I.C.I.P. From 7:15 M. to 7:45A. M. Hr. 30 Min. (D) 959 P.S.I.

Tool Open F.F.P. From 7:45 M. to 8:15A. M. Hr. 30 Min. From (E) 61 P.S.I. To (F) 67 P.S.I.

Tool Closed F.C.I.P. From 8:15 M. to 8:45A. M. Hr. 30 Min. (G) 418 P.S.I.

Initial Hydrostatic Pressure (A) 1972 P.S.I. Final Hydrostatic Pressure (H) 1951 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 dead in 15 min. Bottom Choke Size 3/4 In.

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

Reversed Out ____ Yes X No Mud Type Chem. Viscosity 43 Weight 9.9 Water Loss 10.1 cc. Maximum Temp. 128 °F

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

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

Length Drill Pipe 1965 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 1680 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ____ ft.

I. D. Drill Collars ____ in. Length D.S.T. Tool 90 ft.

Remarks Flushed tool during final flow pressure

FORM WTC 3

WESTERN TESTING CO., INC.
Pressure Data

Date 11-17-70 Test Ticket No. 14803

Recorder No. 969 Capacity 4150 Location 3727 Ft.

Clock No. 8476 Elevation 2609 Kelly Bushings Well Temperature 128 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1972 P.S.I.	Open Tool	6:58 A. M	
B	First Initial Flow Pressure	57 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C	First Final Flow Pressure	59 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	959 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E	Second Initial Flow Pressure	61 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	67 P.S.I.			
G	Final Closed-in Pressure	418 P.S.I.			
H	Final Hydrostatic Mud	1951 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: 6 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.	Press.	Initial Shut-In Minutes	Press.	Second Flow Pressure Minutes	Press.	Final Shut-In Minutes	Press.
P 1	0	57	0	59	0	61	0	67
P 2	5	57	3	118	5	61	3	71
P 3	10	58	6	284	10	61	6	81
P 4	15	59	9	471	15	61	9	100
P 5			12	620	20	61	12	128
P 6			15	731	25	67	15	169
P 7			18	807	30	67	18	219
P 8			21	866			21	274
P 9			24	911			24	342
P10			27	936			27	387
P11			30	959			30	418
P12								
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								


TBT-1482-I


9
6
9
11803-I