IKT # 15258

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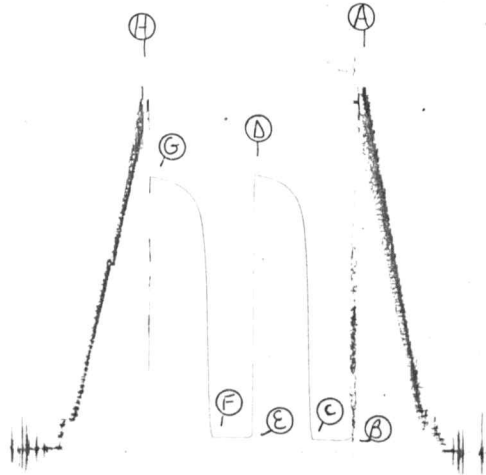

Company Abercrombie Drilling , Inc. Lease & Well No. #1 Downing

Elevation 1325 Kelly Bushing Formation Kansas City Effective Pay -- Ft. Ticket No. 15258

Date 10/9/82 Sec. 2 Twp. 33S Range 6W County Harper State Kansas

Test Approved by James E. Gribi Western Representative Jim Wondra

Formation Test No. 1 Interval Tested from 3733 ft. to 3750 ft. Total Depth 3750 ft.

Packer Depth 3728 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3733 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3739 ft. Recorder Number 13547 Cap. 4225

Bottom Recorder Depth (Outside) 3742 ft. Recorder Number 13552 Cap. 4050

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Union Drlg. Rig #1 Drill Collar Length 365 I. D. 2¼ in.

Mud Type premix-drispac Viscosity 52 Weight Pipe Length - I. D. - in.

Weight 9.4 Water Loss 15.2 cc. Drill Pipe Length 3347 I. D. 3.8 in.

Chlorides 24,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 17 ft. Size 5½OD

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Weak blow throughout initial flow period. Weak blow and died in five minutes on final flow period.

Recovered 90 ft. of drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 11:30 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 2:00 ~~A.M.~~ ~~P.M.~~ Maximum Temperature 115°

Initial Hydrostatic Pressure			(A) 1866	P.S.I.		
Initial Flow Period	Minutes 30	(B) 65	P.S.I. to	(C) 69	P.S.I.	
Initial Closed In Period	Minutes 45	(D) 1528	P.S.I.			
Final Flow Period	Minutes 30	(E) 81	P.S.I. to	(F) 83	P.S.I.	
Final Closed In Period	Minutes 45	(G) 1518	P.S.I.			
Final Hydrostatic Pressure			(H) 1861	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 10/9/82 Test Ticket No. 15258

Recorder No. 13547 Capacity 4225 Location 3739 Ft.

Clock No. --- Elevation 1325 Kelly Bushing Well Temperature 115 °F

Point	Pressure	
A Initial Hydrostatic Mud	1866	P.S.I.
B First Initial Flow Pressure	65	P.S.I.
C First Final Flow Pressure	69	P.S.I.
D Initial Closed-in Pressure	1528	P.S.I.
E Second Initial Flow Pressure	81	P.S.I.
F Second Final Flow Pressure	83	P.S.I.
G Final Closed-in Pressure	1518	P.S.I.
H Final Hydrostatic Mud	1861	P.S.I.

	Time Given	Time Computed
Open Tool	11:30A	M
First Flow Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	45 Mins.	45 Mins.
Second Flow Pressure	30 Mins.	30 Mins.
Final Closed-in Pressure	45 Mins.	45 Mins.

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	65
P 2 5	65
P 3 10	65
P 4 15	65
P 5 20	66
P 6 25	67
P 7 30	69
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	69
3	669
6	1229
9	1347
12	1405
15	1437
18	1461
21	1478
24	1491
27	1500
30	1507
33	1511
36	1515
39	1519
42	1524
45	1528

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

Point Minutes	Press.
0	81
5	81
10	81
15	81
20	81
25	82
30	83

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

Point Minutes	Press.
0	83
3	703
6	1231
9	1336
12	1386
15	1420
18	1443
21	1461
24	1475
27	1485
30	1494
33	1499
36	1504
39	1509
42	1514
45	1518

IKT # 15259

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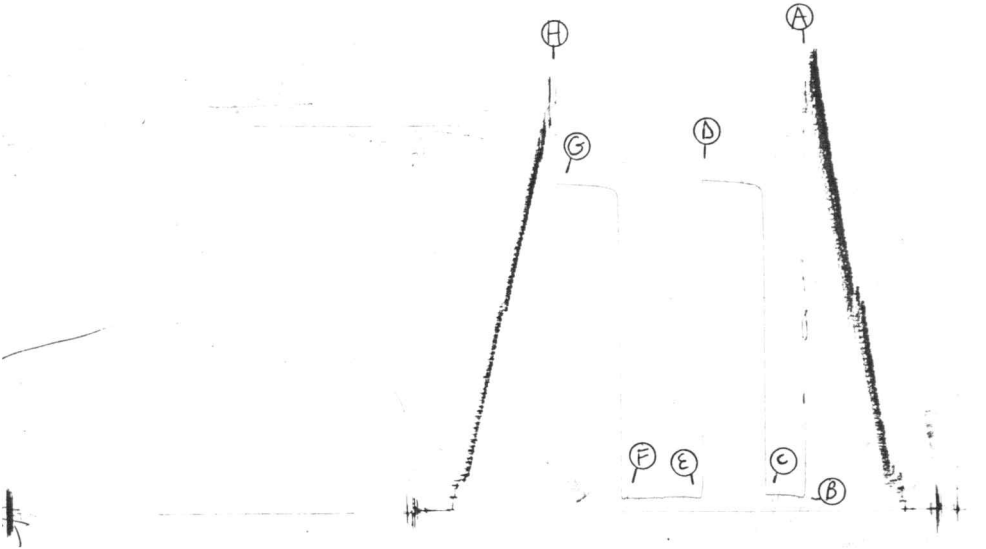

Company Abercrombie Drilling, Inc. Lease & Well No. #1 Downing

Elevation 1325 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 15259

Date 10/11/82 Sec. 2 Twp. 33S Range 6W County Harper State Kansas

Test Approved by James E. Gribi Western Representative Jim Wondra

Formation Test No. 2 Interval Tested from 4347 ft. to 4365 ft. Total Depth 4365 ft.

Packer Depth 4342 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4347 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4354 ft. Recorder Number 13547 Cap. 4225

Bottom Recorder Depth (Outside) 4357 ft. Recorder Number 13552 Cap. 4050

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Union Drilling Rig #1 Drill Collar Length 365 I. D. 2¼ in.

Mud Type premix-drispac Viscosity 51 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 12.0 cc. Drill Pipe Length 3961 I. D. 3.8 in.

Chlorides 21,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 18 ft. Size 5½OD in.

Did Well Flow? Yes Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Strong blow throughout flow periods. Gas to surface in three minutes on pre-flow.
See attached sheet for gas measurements.

Recovered 90 ft. of very slightly oil cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 5:25 ~~A.M.~~ P.M. Time Started Off Bottom 8:25 ~~A.M.~~ P.M. Maximum Temperature 121°

Initial Hydrostatic Pressure			(A)	2224	P.S.I.	
Initial Flow Period	Minutes 30	(B)	82	P.S.I. to (C)	95	P.S.I.
Initial Closed In Period	Minutes 45	(D)	1807	P.S.I.		
Final Flow Period	Minutes 60	(E)	80	P.S.I. to (F)	77	P.S.I.
Final Closed In Period	Minutes 45	(G)	1791	P.S.I.		
Final Hydrostatic Pressure		(H)	2195	P.S.I.		

GAS FLOW REPORT

Date 10/11/82 Ticket 15259 Company Abercrombie Drilling, Inc.

Well Name and No. Downing #1 Dst No. 2 Interval Tested 4347'-4365'

County Harper State Kansas Sec. 2 Twp. 33S Rg. 6W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester		Description of Flow
Gas to surface in three minutes.			**PRE FLOW**			
5 min.	48" of water		1½" orifice			482,000 CFPD
10 min.	66" of water		1½" orifice			565,000 CFPD
20 min.	2.5 PSIG		1½" orifice			595,000 CFPD
30 min.	2.5 PSIG		1½" orifice			595,000 CFPD
			SECOND FLOW			
5 min.	1.5 PSIG		1½" orifice			456,000 CFPD
10 min.	2.0 PSIG		1½" orifice			527,000 CFPD
20 min.	2.5 PSIG		1½" orifice			595,000 CFPD
30 min.	2.5 PSIG		1½" orifice			595,000 CFPD
40 min.	2.0 PSIG		1½" orifice			527,000 CFPD
50 min.	2.0 PSIG		1½" orifice			527,000 CFPD
60 min.	1.5 PSIG		1½" orifice			456,000 CFPD

GAS BOTTLE

Serial No. ----- Date Bottle Filled ------ Date to be Invoiced 10/11/82

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of $75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Abercrombie Drilling, Inc.

Authorized by James E. Gribi

FORM WTC 6

WESTERN TESTING CO., INC.
Pressure Data

Date 10/11/82 Test Ticket No. 15259

Recorder No. 13547 Capacity 4225 Location 4354 Ft.

Clock No. -- Elevation 1325 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2224 P.S.I.	Open Tool	5:25P M	
B First Initial Flow Pressure	82 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	95 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1807 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.	45 Mins.
F Second Final Flow Pressure	77 P.S.I.			
G Final Closed-in Pressure	1791 P.S.I.			
H Final Hydrostatic Mud	2195 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	82
P 2 5	85
P 3 10	92
P 4 15	93
P 5 20	94
P 6 25	95
P 7 30	95
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	95
3	1769
6	1781
9	1785
12	1788
15	1791
18	1793
21	1795
24	1797
27	1799
30	1801
33	1803
36	1804
39	1805
42	1806
45	1807

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

Point Minutes	Press.
0	80
5	82
10	85
15	85
20	85
25	83
30	81
35	81
40	81
45	81
50	81
55	79
60	77

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

Point Minutes	Press.
0	77
3	1750
6	1765
9	1771
12	1775
15	1777
18	1779
21	1781
24	1783
27	1785
30	1786
33	1787
36	1788
39	1789
42	1790
45	1791

Gas Production

B.T. Gauge Numbers			Ticket Number		15259
		Pressure			
Initial Hydrostatic		2224	Elevation		1325 K.B. . ft.
Final Hydrostatic		2195	Production Rate	Intial	595 M cu. ft.
	Time			Final	456 M cu. ft.
1st Flow Initial	— — — —	82			
1st Flow Final	30	95	Hole Size		7.875 in.
Initial Closed In Pressure	45	1807	Footage Tested		18 ft.
2nd Flow Initial	— — — —	80	Mud Weight		9.5 lbs. gal.
2nd Flow Final	60	77	Gas Viscosity		.018 cp
Final Closed In Pressure	45	1791	Gas Gravity		—
Extrapolated Static Pressure Initial		1821-1753	Gas Compressibility		.82 —
Extrapolated Static Pressure Final		1808-1759			
Slope Psi^2/cycle Initial		67,816			
Slope Psi^2/cycle Final		48,826			

Remarks:

SUMMARY

BT Gauge Number Depth

Product	Equation	Initial	Final	Units
Transmissability	$\frac{Kh}{\mu} = \frac{1637\ Q_g\ ZT}{m}$	1909.379	2034.718	$\frac{md.\ ft.}{cp}$
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$	34.368	36.624	md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$	3.818	4.069	md.
	$K_1 = \frac{Kh}{h_1}$	-	-	md.
Indicated Flow Capacity	$(Kh)_2 = \frac{3200\ Q_g\ \mu\ ZT\ Log(0.472\ b/r_w)}{P_s^2 - P_F^2}$	5.985	5.292	md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_2}$	5.742	6.920	—
Indicated Flow Rate	$OF_1 = \frac{Q_g\ P_s^2}{P_s^2 - P_F^2}$	596.623	456.828	MCFD
		596.811	456.414	MCFD
Theoretical Potential Rate	$OF_3 = OF_1\ DR$ Max.	3425.839	3,161.310	MCFD
	$OF_4 = OF_2\ DR$ Min.	3421.174	3,158,442	MCFD
Approx. Radius of Investigation	$b \leftrightarrows \sqrt{Kt}$ or $\sqrt{Kt_0}$	10.70	15.62	ft.
	$b_1 \leftrightarrows \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$	-	-	ft.
Potentiometric Surface *	$Pot. = (EI - GD) + (2.319\ Ps)$	1202.89	1163.75	ft.

INTERPRETATIONS AND CALCULATIONS

Gas Production

B.T. Gauge Numbers			Ticket Number		15259
		Pressure			
Initial Hydrostatic		2224	Elevation		1325 K.B. ft.
Final Hydrostatic		2195	Production Rate	Intial	595 ~~m~~ cu. ft.
	Time			Final	456 ~~m~~ cu. ft.
1st Flow Initial	----	82			
1st Flow Final	30	95	Hole Size		7.875 in.
Initial Closed In Pressure	45	1807	Footage Tested		18 ft.
2nd Flow Initial	----	80	Mud Weight		9.5 lbs. gal.
2nd Flow Final	60	77	Gas Viscosity		.018 cp
Final Closed In Pressure	45	1791	Gas Gravity		—
Extrapolated Static Pressure Initial		1821 - 1753	Gas Compressibility		.82 —
Extrapolated Static Pressure Final		1808 - 1759			
Slope Psi²/cycle Initial		67,816			
Slope Psi²/cycle Final		48,826			

Remarks:

SUMMARY

BT Gauge Number Depth

Product	Equation	Initial	Final	Units
Transmissability	$\frac{Kh}{\mu} = \frac{1637\ Q_g\ ZT}{m}$	1909.379	~~1909.~~ 2034.718	md. ft. / cp
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$	34.368	36.624	md. ft.
Average Effective	$K = \frac{Kh}{h}$	3.818	4.069	md.
Permeability	$K_1 = \frac{Kh}{h_1}$	—	—	md.
Indicated Flow Capacity	$(Kh)_2 = \frac{3200\ Q_g\ \mu\ ZT\ \text{Log}(0.472\ b/r_w)}{P_s^2 - P_F^2}$	5.985	5.292	md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_2}$	5.742	6.920	—
Indicated	$OF_1 = \frac{Q_g \quad P_s^2}{P_s^2 - P_F^2}$	596.623	456.828	MCFD
Flow Rate		596.811	456.414	MCFD
Theoretical	$OF_3 = OF_1\ DR$ Max.	3425.839	3,161.310	MCFD
Potential Rate	$OF_4 = OF_2\ DR$ Min.	3421.174	3,158,442	MCFD
Approx. Radius of Investigation	$b \cong \sqrt{Kt}$ or $\sqrt{Kt_0}$	10.70	15.62	ft.
	$b_1 \cong \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$	—	—	ft.
Potentiometric Surface *	$Pot. = (El - GD) + (2.319\ Ps)$	1202.89	1163.75	ft.

INTERPRETATIONS AND CALCULATIONS

IKT 15260

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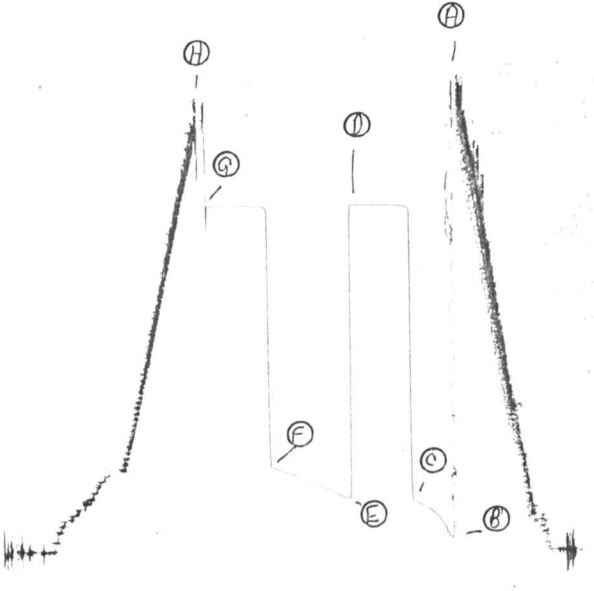

Company Abercrombie Drilling, Inc. Lease & Well No. Downing #1

Elevation 1325 Kelly Bushing Formation Simpson Effective Pay --- Ft. Ticket No. 15260

Date 10/13/82 Sec. 2 Twp. 33S Range 6W County Harper State Kansas

Test Approved by James E. Gribi Western Representative Jim Wondra

Formation Test No. 3 Interval Tested from 4733 ft. to 4761 ft. Total Depth 4761 ft.

Packer Depth 4728 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4733 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4750 ft. Recorder Number 13547 Cap. 4225

Bottom Recorder Depth (Outside) 4753 ft. Recorder Number 13552 Cap. 4050

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Union Drilling Rig #1 Drill Collar Length 365 I. D. 2¼ in.

Mud Type premix-drispac Viscosity 50 Weight Pipe Length - I. D. - in.

Weight 9.1 Water Loss 10.4 cc. Drill Pipe Length - I. D. 3.8 in.

Chlorides 14,000 P.P.M. Test Tool Length 29 ft. Tool Size 5½OD in.

Jars: Make WTC Serial Number 410 Anchor Length 28 ft. Size 5½OD in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4½FH in.

Blow: Weak increased to strong blow on initial flow and final flow periods.

Recovered 90 ft. of watery mud

Recovered 780 ft. of salt water (Chlorides 86,000 ppm)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 4:40 ~~A.M.~~ P.M. Time Started Off Bottom 7:40 ~~A.M.~~ P.M. Maximum Temperature 126°

Initial Hydrostatic Pressure			(A) 2328 P.S.I.			
Initial Flow Period	Minutes 30	(B) 78 P.S.I.	to	(C) 284 P.S.I.		
Initial Closed In Period	Minutes 45	(D) 1879 P.S.I.				
Final Flow Period	Minutes 60	(E) 294 P.S.I.	to	(F) 464 P.S.I.		
Final Closed In Period	Minutes 45	(G) 1879 P.S.I.				
Final Hydrostatic Pressure			(H) 2305 P.S.I.			

WESTERN TESTING CO., INC.
Pressure Data

Date 10/13/82 Test Ticket No. 15260

Recorder No. 13547 Capacity 4225 Location 4750 Ft.

Clock No. --- Elevation 1325 Kelly Bushing Well Temperature 126 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2328 P.S.I.		Open Tool	4:40P M	
B	First Initial Flow Pressure	78 P.S.I.		First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	284 P.S.I.		Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	1879 P.S.I.		Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	294 P.S.I.		Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	464 P.S.I.				
G	Final Closed-in Pressure	1879 P.S.I.				
H	Final Hydrostatic Mud	2305 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	78
P 2	5	112
P 3	10	182
P 4	15	220
P 5	20	246
P 6	25	267
P 7	30	284
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	284
	3	1630
	6	1872
	9	1873
	12	1874
	15	1875
	18	1876
	21	1877
	24	1878
	27	1879
	30	1879
	33	1879
	36	1879
	39	1879
	42	1879
	45	1879

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

Point	Minutes	Press.
	0	294
	5	303
	10	318
	15	337
	20	356
	25	373
	30	390
	35	407
	40	419
	45	432
	50	443
	55	456
	60	464

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

Point	Minutes	Press.
	0	464
	3	1748
	6	1872
	9	1873
	12	1874
	15	1875
	18	1876
	21	1877
	24	1878
	27	1879
	30	1879
	33	1879
	36	1879
	39	1879
	42	1879
	45	1879