Company Mull Drilling Company, Inc. Lease & Well No. James "E"#1

Elevation 2804 Kelly Bushing Formation Lansing Effective Pay -- Ft. Ticket No. 4639

Date 3/10/80 Sec. 25 Twp. 16S Range 29W County Lane State Kansas

Test Approved by Michael Kidwell Western Representative Randy Lackey

Formation Test No. 1 Interval Tested from 4211 ft. to 4236 ft. Total Depth 4236 ft.

Packer Depth 4206 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4211 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4227 ft. Recorder Number 3085 Cap. 4500 PSI

Bottom Recorder Depth (Outside) 4230 ft. Recorder Number 1564 Cap. 3150 PSI

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

Drilling Contractor Blue Goose Drilling Rig #2 Drill Collar Length 311 I. D. 2.26 in.

Mud Type premix-gel-drispac Viscosity 45 Weight Pipe Length - I. D. - in.

Weight 9.1 Water Loss 9.2 cc. Drill Pipe Length 3894 I. D. 3.8 in.

Chlorides 7,000 P.P.M. Test Tool Length 19 ft. Tool Size 5½ in.

Jars: Make None Serial Number - Anchor Length 25 ft. Size 5½ 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: Very weak;died fifteen minutes into Initial Flow Period. Dead at start of Final Flow Period. Flushed tool twice. Died four minutes each time.

Recovered 10 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 9:45 A.M. P.M. Time Started Off Bottom 11:45 A.M. P.M. Maximum Temperature 122°

Initial Hydrostatic Pressure			(A)	1991	P.S.I.	
Initial Flow Period	Minutes	30	(B)	10	P.S.I. to (C)	14 P.S.I.
Initial Closed In Period	Minutes	27	(D)	1012	P.S.I.	
Final Flow Period	Minutes	30	(E)	62	P.S.I. to (F)	24 P.S.I.
Final Closed In Period	Minutes	30	(G)	1053	P.S.I.	
Final Hydrostatic Pressure			(H)	1984	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 3/10/80 Test Ticket No. 4639

Recorder No. 3085 Capacity 4500 Location 4227 Ft.

Clock No. ----- Elevation 2804 Kelly Bushing Well Temperature 122 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1991 P.S.I.	Open Tool	9:45A M	
B First Initial Flow Pressure	10 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	14 P.S.I.	Initial Closed-in Pressure	30 Mins.	27 Mins.
D Initial Closed-in Pressure	1012 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	62 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	24 P.S.I.			
G Final Closed-in Pressure	1053 P.S.I.			
H Final Hydrostatic Mud	1984 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: 9 Inc. of 3 mins. and a final inc. of 0 Min.

Second Flow Pressure
Breakdown: 7 Inc. of 5 mins. and a final inc. of 0 Min.

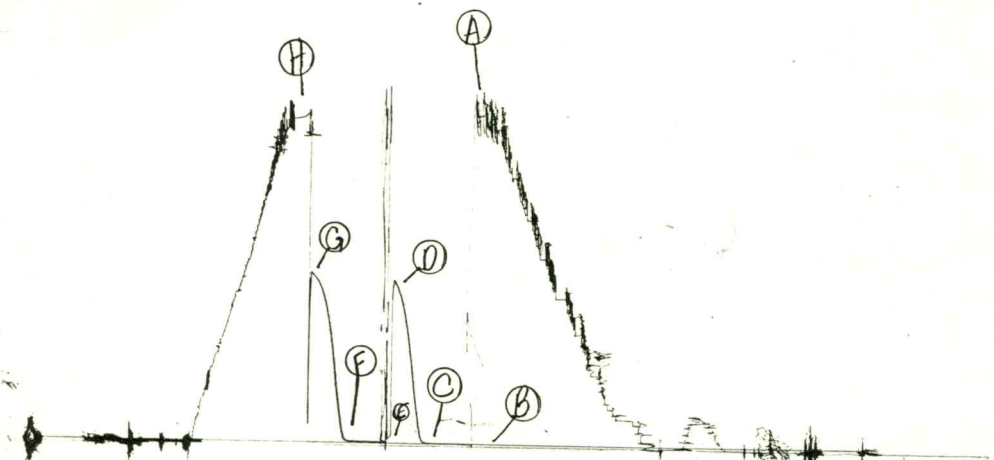
Final Shut-In
Breakdown: 10 Inc. of 3 mins. and a final inc. of 0 Min.

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	10	0	14	0	62	0	24
P 2	5	12	3	24	5	17 flushed tool	3	29
P 3	10	14	6	48	10	24	6	84
P 4	15	14	9	148	15	24	9	275
P 5	20	14	12	428	20	24	12	514
P 6	25	14	15	665	25	24	15	734
P 7	30	14	18	811	30	24	18	856
P 8			21	914			21	946
P 9			24	986			24	991
P10			27	1012			27	1028
P11			30				30	1053
P12								
P13								
P14								
P15								
P16								
P17								
P18								
P19								
P20								

DST #1

B-3085
B-463c

Tk # 4639
I



Company Mull Drilling Company, Inc. Lease & Well No. James "E"#1

Elevation 2804 Kelly Bushing Formation Marmaton Effective Pay -- Ft. Ticket No. 4640

Date 3/11/80 Sec. 25 Twp. 16S Range 29W County Lane State Kansas

Test Approved by Michael R. Kidwell Western Representative Randy Lackey

Formation Test No. 2 Interval Tested from 4308 ft. to 4354 ft. Total Depth 4354 ft.

Packer Depth 4303 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4308 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4345 ft. Recorder Number 1564 Cap. 3150 PSI

Bottom Recorder Depth (Outside) 4348 ft. Recorder Number 3085 Cap. 4500 PSI

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

Drilling Contractor Blue Goose Drilling Rig #2 Drill Collar Length 311 I. D. 2.26 in.

Mud Type premix-gel-drispac Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.1 Water Loss 11.0 cc. Drill Pipe Length 4014 I. D. 3.8 in.

Chlorides 7,000 P.P.M. Test Tool Length 19 ft. Tool Size 5½ in.

Jars: Make None Serial Number - Anchor Length 46 ft. Size 5½ 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 building to strong 25 minutes into Initial Flow Period. Weak building to strong 20 minutes into Final Flow Period.

Recovered 82 ft. of clean oil

Recovered 62 ft. of 53% oil;47% mud muddy oil

Recovered 60 ft. of 53% oil;47% mud muddy oil 41 gravity

Recovered 60 ft. of 60% oil;40% mud muddy oil

Recovered 60 ft. of 56% oil;44% mud muddy oil

Remarks: 60 ft. of 24% oil;76% mud oily mud

384' Total fluid

Time Set Packer(s) 11:00 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 2:15 ~~A.M.~~ ~~P.M.~~ Maximum Temperature 123°

Initial Hydrostatic Pressure			(A) 2058	P.S.I.		
Initial Flow Period	Minutes 30	(B) 60	P.S.I. to	(C) 113	P.S.I.	
Initial Closed In Period	Minutes 45	(D) 925	P.S.I.			
Final Flow Period	Minutes 55	(E) 186	P.S.I. to	(F) 165	P.S.I.	
Final Closed In Period	Minutes 60	(G) 843	P.S.I.			
Final Hydrostatic Pressure			(H) 2032	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 3/11/80 Test Ticket No. 4640

Recorder No. 1564 Capacity 3150 Location 4345 Ft.

Clock No. ------ Elevation 2804 Kelly Bushing Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2058 P.S.I.	Open Tool	11:00A M	
B First Initial Flow Pressure	60 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	113 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	925 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E Second Initial Flow Pressure	186 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	165 P.S.I.			
G Final Closed-in Pressure	843 P.S.I.			
H Final Hydrostatic Mud	2032 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: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Second Flow Pressure
Breakdown: 11 Inc. of 5 mins. and a final inc. of 0 Min.

Final Shut-In
Breakdown: 20 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	60	0	113	0	186	0	165
P 2 5	62	3	147	5	130	3	193
P 3 10	76	6	260	10	133	6	241
P 4 15	90	9	442	15	135	9	350
P 5 20	102	12	583	20	137	12	427
P 6 25	110	15	654	25	140	15	486
P 7 30	113	18	706	30	144	18	536
P 8		21	750	35	149	21	578
P 9		24	785	40	155	24	614
P10		27	817	45	158	27	647
P11		30	840	50	161	30	676
P12		33	862	55	165	33	701
P13		36	882			36	725
P14		39	898			39	742
P15		42	915			42	761
P16		45	925			45	778
P17						48	792
P18						51	807
P19						54	820
P20						57	832
						60	843

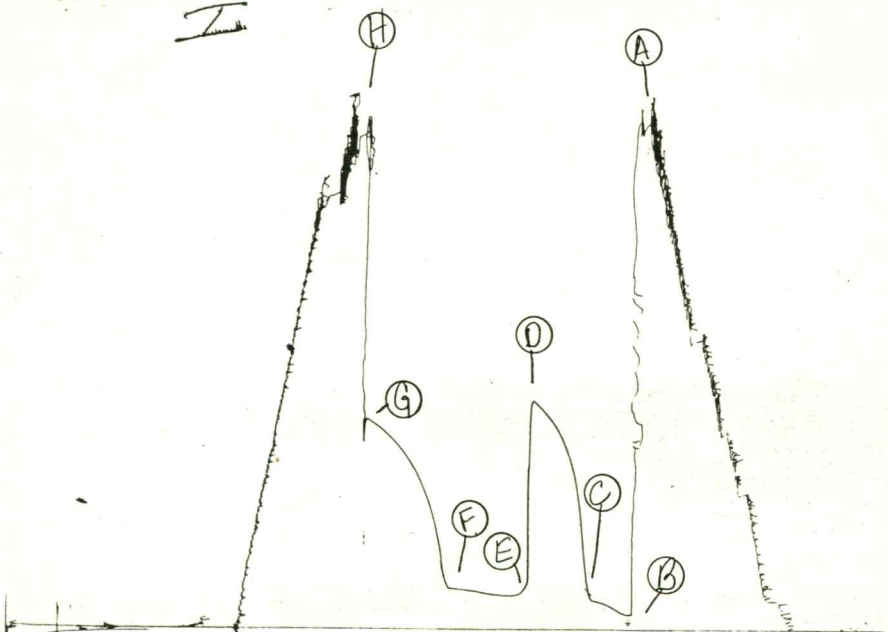
DST #2

Rt #4640

I

T-1564

T-4640



Company: Mull Drilling Company, Inc. | Lease & Well No.: James "E"#1

Elevation: 2804 Kelly Bushing | Formation: Marmaton | Effective Pay: ----- Ft. | Ticket No.: 4641

Date: 3/12/80 | Sec.: 25 | Twp.: 16S | Range: 29W | County: Lane | State: Kansas

Test Approved by: Michael R. Kidwell | Western Representative: Randy Lackey

Formation Test No.: 3 | Interval Tested from: 4385 ft. to: 4432 ft. | Total Depth: 4432 ft.

Packer Depth: 4380 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Packer Depth: 4385 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Depth of Selective Zone Set: -

Top Recorder Depth (Inside): 4395 ft. | Recorder Number: 1564 | Cap.: 3150 PSI

Bottom Recorder Depth (Outside): 4398 ft. | Recorder Number: 3085 | Cap.: 4500 PSI

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

Drilling Contractor: Blue Goose Drilling Rig #2 | Drill Collar Length: 250 | I. D.: 2.26 in.

Mud Type: premix-gel-drispac | Viscosity: 47 | Weight Pipe Length: - | I. D.: - in.

Weight: 9.1 | Water Loss: 11.0 cc. | Drill Pipe Length: 4141 | I. D.: 3.8 in.

Chlorides: 7,000 P.P.M. | Test Tool Length: 19 ft. | Tool Size: 5½ in.

Jars: Make: None | Serial Number: - | Anchor Length: 47 ft. | Size: 5½ 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 building to strong two minutes into Initial Flow Period. Weak building to strong two minutes into Final Flow Period.

Recovered 253 ft. of clean oil

Recovered 62 ft. of muddy oil (55% oil;45% mud)

Recovered 60 ft. of muddy oil (71% oil;29% mud) 41 gravity 76°

Recovered 60 ft. of muddy oil (73% oil;17% mud)

Recovered 60 ft. of muddy oil (72% oil;18% mud)

Remarks: 60 ft. of muddy oil (52% oil;48% mud)

555' Total fluid

Time Set Packer(s): 12:15 ~~A.M.~~ P.M. | Time Started Off Bottom: 3:30 ~~A.M.~~ P.M. | Maximum Temperature: 124°

Initial Hydrostatic Pressure		(A) 2134 P.S.I.		
Initial Flow Period	Minutes 30	(B) 117 P.S.I.	to (C) 177 P.S.I.	
Initial Closed In Period	Minutes 45	(D) 581 P.S.I.		
Final Flow Period	Minutes 55	(E) 232 P.S.I.	to (F) 229 P.S.I.	
Final Closed In Period	Minutes 60	(G) 537 P.S.I.		
Final Hydrostatic Pressure		(H) 2100 P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 3/12/80 Test Ticket No. 4641

Recorder No. 1564 Capacity 3150 Location 4395 Ft.

Clock No. ------ Elevation 2804KellyBushing Well Temperature 124 °F

Point		Pressure	
A	Initial Hydrostatic Mud	2134	P.S.I.
B	First Initial Flow Pressure	117	P.S.I.
C	First Final Flow Pressure	177	P.S.I.
D	Initial Closed-in Pressure	581	P.S.I.
E	Second Initial Flow Pressure	232	P.S.I.
F	Second Final Flow Pressure	229	P.S.I.
G	Final Closed-in Pressure	537	P.S.I.
H	Final Hydrostatic Mud	2100	P.S.I.

	Time Given	Time Computed
Open Tool	12:15P M	
First Flow Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	45 Mins.	45 Mins.
Second Flow Pressure	60 Mins.	55 Mins.
Final Closed-in Pressure	60 Mins.	60 Mins.

PRESSURE BREAKDOWN

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

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

Second Flow Pressure
Breakdown: 11 Inc.
of 5 mins. and a
final inc. of 0 Min.

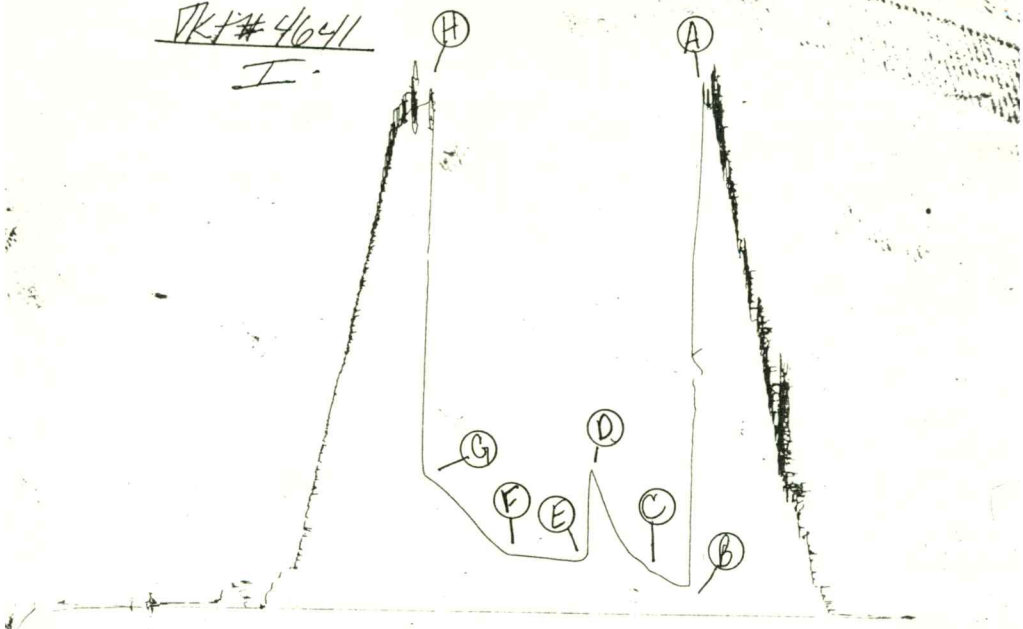
Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.	Point	Minutes	Press.	Point	Minutes	Press.	Point	Minutes	Press.
P 1	0	117		0	177		0	232		0	229
P 2	5	118		3	191		5	210		3	235
P 3	10	124		6	206		10	208		6	246
P 4	15	136		9	217		15	210		9	260
P 5	20	144		12	228		20	213		12	275
P 6	25	169		15	242		25	215		15	289
P 7	30	177		18	262		30	218		18	303
P 8				21	287		35	221		21	324
P 9				24	311		40	222		24	344
P10				27	344		45	225		27	366
P11				30	379		50	227		30	385
P12				33	417		55	229		33	403
P13				36	459					36	420
P14				39	503					39	438
P15				42	545					42	455
P16				45	581					45	470
P17										48	486
P18										51	502
P19										54	516
P20										57	528
										60	537

DST #3

T - 1564
T - 4641

DST #4641
I.



Company: Mull Drilling Company , Inc. | Lease & Well No.: James "E"#1

Elevation: 2804 Kelly Bushing | Formation: Cherokee | Effective Pay: -- Ft. | Ticket No.: 4642

Date: 3/13/80 | Sec.: 25 | Twp.: 16S | Range: 29W | County: Lane | State: Kansas

Test Approved by: Michael R. Kidwell | Western Representative: Randy Lackey

Formation Test No.: 4 | Interval Tested from: 4542 ft. to: 4562 ft. | Total Depth: 4562 ft.

Packer Depth: 4537 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Packer Depth: 4542 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Depth of Selective Zone Set: -

Top Recorder Depth (Inside): 4544 ft. | Recorder Number: 1564 | Cap.: 3150 PSI

Bottom Recorder Depth (Outside): 4547 ft. | Recorder Number: 3085 | Cap.: 4500 PSI

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

Drilling Contractor: Blue Goose Drilling Rig #2 | Drill Collar Length: 250 | I. D.: 2.26 in.

Mud Type: premix-gel-drispac | Viscosity: 45 | Weight Pipe Length: - | I. D.: - in.

Weight: 9.1 | Water Loss: 11.4 cc. | Drill Pipe Length: 4298 | I. D.: 3.8 in.

Chlorides: 7,000 P.P.M. | Test Tool Length: 4298 ft. | Tool Size: 5½ in.

Jars: Make: None | Serial Number: - | Anchor Length: 19 ft. | Size: 5½ 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: Very weak building to good by end of Initial Flow Period. Very weak building to strong forty-five minutes into Final Flow Period.

Recovered 254 ft. of clean oil

Recovered 60 ft. of oily mud (33% oil;67% mud)

Recovered 60 ft. of oily mud (35% oil;65% mud) 34 gravity 72°

Recovered ft. of

Recovered 374 ft. of Total Fluid

Remarks:

Time Set Packer(s): 5:15 ~~A.M.~~ P.M. | Time Started Off Bottom: 8:30 ~~A.M.~~ P.M. | Maximum Temperature: 126°

Initial Hydrostatic Pressure			(A)	2230	P.S.I.	
Initial Flow Period	Minutes 30		(B)	62 P.S.I.	to (C)	101 P.S.I.
Initial Closed In Period	Minutes 42		(D)	1077	P.S.I.	
Final Flow Period	Minutes 60		(E)	163 P.S.I.	to (F)	163 P.S.I.
Final Closed In Period	Minutes 60		(G)	1062	P.S.I.	
Final Hydrostatic Pressure			(H)	2216	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 3/13/80 Test Ticket No. 4642

Recorder No. 1564 Capacity 3150 Location 4544 Ft.

Clock No. ----- Elevation 2804 Kelly Bushing Well Temperature 126 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2230 P.S.I.	Open Tool	5:15P M	
B First Initial Flow Pressure	62 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	101 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	1077 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	163 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	163 P.S.I.			
G Final Closed-in Pressure	1062 P.S.I.			
H Final Hydrostatic Mud	2216 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	62
P 2 5	54
P 3 10	56
P 4 15	65
P 5 20	76
P 6 25	90
P 7 30	101
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	101
3	219
6	553
9	1006
12	1032
15	1044
18	1054
21	1058
24	1063
27	1066
30	1068
33	1071
36	1073
39	1076
42	1077

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

Point Minutes	Press.
0	163
5	137
10	132
15	130
20	133
25	134
30	138
35	141
40	146
45	151
50	155
55	160
60	163

Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	163
3	230
6	573
9	991
12	1009
15	1021
18	1030
21	1036
24	1041
27	1044
30	1047
33	1049
36	1052
39	1054
42	1055
45	1057
48	1058
51	1059
54	1060
57	1061
60	1062

DST#4

I - 4564
T - 4642

IK1# 4642
I

