Company Kennedy - Mitchell, Inc. Lease & Well No. Muller #1

Elevation 1236 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 6747

Date 4/14/81 Sec. 2 Twp. 30S Range 3E County Butler State Kansas

Test Approved by Macklin M. Armstrong Western Representative Kenny Kirkendall

Formation Test No. 1 Interval Tested from 3100 ft. to 3150 ft. Total Depth 3300 ft.

Packer Depth 3100 ft. Size 6 3/4 in. Packer Depth 3150 ft. Size 1 in.

Packer Depth 2955 ft. Size 6 3/4 in. Packer Depth - ft. Size 5 in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3110 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 3115 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Ramco Drilling Rig #2 Drill Collar Length - I. D. - in.

Mud Type chemical Viscosity 40 Weight Pipe Length - I. D. - in.

Weight 9.7 Water Loss 12.2 cc. Drill Pipe Length - I. D. - in.

Chlorides 3,000 P.P.M. Test Tool Length 27 ft. Tool Size 5½ in.

Jars: Make WTC Serial Number 402 Anchor Length 50 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 4½XH in.

Blow:

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of MISRUN PACKER SEAT FAILURE

Recovered ft. of

Remarks:

Time Set Packer(s) A.M. P.M. Time Started Off Bottom A.M. P.M. Maximum Temperature

Initial Hydrostatic Pressure (A) 1579 P.S.I.

Initial Flow Period Minutes (B) - P.S.I. to (C) - P.S.I.

Initial Closed In Period Minutes (D) - P.S.I.

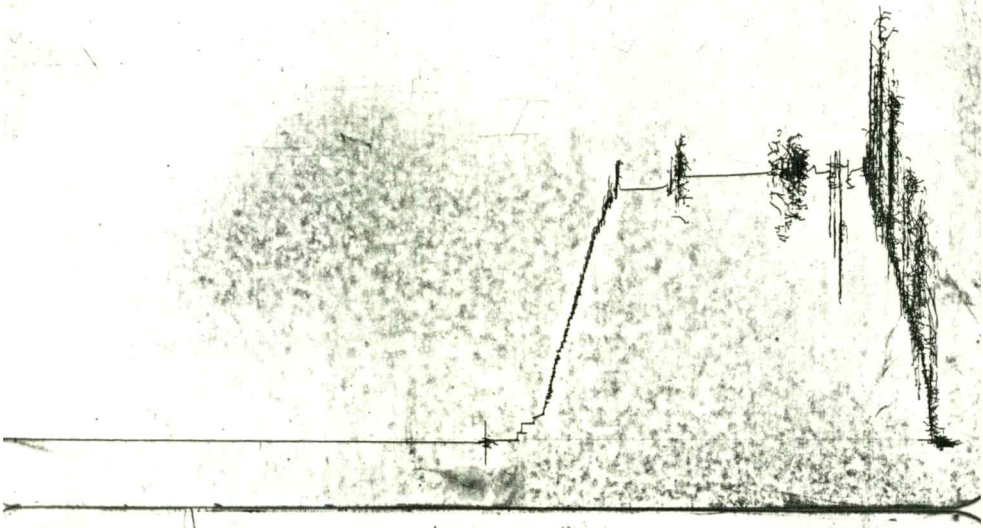
Final Flow Period Minutes (E) - P.S.I. to (F) - P.S.I.

Final Closed In Period Minutes (G) - P.S.I.

Final Hydrostatic Pressure (H) 1546 P.S.I.

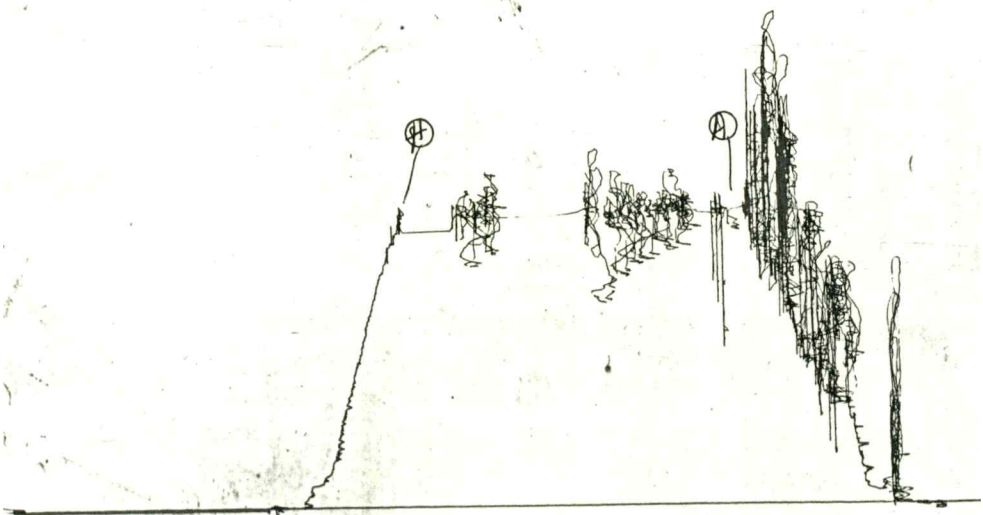
JK # 6747

O



JK # 6747

I



Company Kennedy-Mitchell, Inc. Lease & Well No. Muller #1

Elevation 1236 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 6748

Date 4/15/81 Sec. 2 Twp. 30S Range 3E County Butler State Kansas

Test Approved by Macklin M. Armstrong Western Representative Kenny Kirkendall

Formation Test No. 2 Interval Tested from 3143 ft. to 3200 ft. Total Depth 3300 ft.

Packer Depth 3143 ft. Size 6 3/4 in. Packer Depth 3200 ft. Size 6 3/4 in.

Packer Depth 3127 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3148 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 3153 ft. Recorder Number 1560 Cap. 4500

Below Straddle Recorder Depth 3210 ft. Recorder Number WTC Cap. -

Drilling Contractor Ramco Drilling Rig #2 Drill Collar Length 220 I. D. - in.

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

Weight 9.7 Water Loss 12.2 cc. Drill Pipe Length 2845 I. D. in.

Chlorides 3,000 P.P.M. Test Tool Length 28 ft. Tool Size 4½ in.

Jars: Make WTC Serial Number 402 Anchor Length 57 ft. Size 4½ 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 4½XH in.

Blow: Weak blow throughout initial flow; weak blow throufhout final flow period.

Recovered 270 ft. of drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 5:10 ~~A.M.~~ P.M. Time Started Off Bottom A.M. P.M. Maximum Temperature 108°

Initial Hydrostatic Pressure			(A)	1619	P.S.I.	
Initial Flow Period	Minutes 30	(B)	76	P.S.I. to (C)	76	P.S.I.
Initial Closed In Period	Minutes 60	(D)	1195	P.S.I.		
Final Flow Period	Minutes 45	(E)	144	P.S.I. to (F)	143	P.S.I.
Final Closed In Period	Minutes 87	(G)	1166	P.S.I.		
Final Hydrostatic Pressure		(H)	1619	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 4/15/81 Test Ticket No. 6748

Recorder No. 2605 Capacity 4150 Location 3148 Ft.

Clock No. Elevation 1236 Kelly Bushing Well Temperature 108 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1619 P.S.I.		Open Tool	5:10A M	
B	First Initial Flow Pressure	76 P.S.I.		First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	76 P.S.I.		Initial Closed-in Pressure	60 Mins.	60 Mins.
D	Initial Closed-in Pressure	1195 P.S.I.		Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	144 P.S.I.		Final Closed-in Pressure	90 Mins.	87 Mins.
F	Second Final Flow Pressure	143 P.S.I.				
G	Final Closed-in Pressure	1166 P.S.I.				
H	Final Hydrostatic Mud	1619 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	76
P 2 5	70
P 3 10	65
P 4 15	65
P 5 20	65
P 6 25	72
P 7 30	76
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	76
3	697
6	832
9	913
12	965
15	1004
18	1033
21	1058
24	1081
27	1097
30	1114
33	1128
36	1141
39	1151
42	1157
45	1170
48	1178
51	1184
54	1188
57	1193
60	1195

Second Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	144
5	123
10	116
15	116
20	118
25	121
30	126
35	132
40	137
45	143

Final Shut-In
Breakdown: 29 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	143
3	601
6	757
9	829
12	884
15	923
18	954
21	981
24	1004
27	1025
30	1039
33	1054
36	1066
39	1079
42	1087
45	1101
48	1112
51	1118
54	1122
57	1128
60	1132

continued next

Das

WESTERN TESTING CO., INC.
Pressure Data

Date 4/15/81 Test Ticket No. 6748

Recorder No. 2605 Capacity 4150 Location 3148 Ft.

Clock No. Elevation 1236 Kelly Bushing Well Temperature 108 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1619	P.S.I.	Open Tool	5:10A M	
B	First Initial Flow Pressure	76	P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	76	P.S.I.	Initial Closed-in Pressure	60 Mins.	60 Mins.
D	Initial Closed-in Pressure	1195	P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	144	P.S.I.	Final Closed-in Pressure	90 Mins.	87 Mins.
F	Second Final Flow Pressure	143	P.S.I.			
G	Final Closed-in Pressure	1166	P.S.I.			
H	Final Hydrostatic Mud	1619	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: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 29 Inc.
of 3 mins. and a
final inc. of 0 Min.

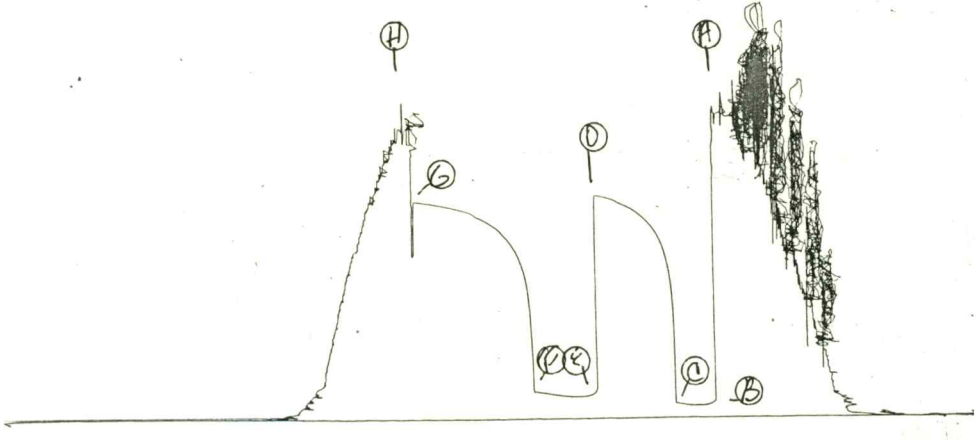
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1						63	1138
P 2						66	1143
P 3						69	1147
P 4						72	1152
P 5						75	1155
P 6						78	1158
P 7						81	1161
P 8						84	1165
P 9						87	1166
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

US ××

2605

JK # 6748

I



Bottom
Chart
DST #2
TK 6748

JK # 6748

Below Straddle

Company Kennedy-Mitchell, Inc. Lease & Well No. Muller #1

Elevation 1236 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 6749

Date 4/15/81 Sec. 2 Twp. 30S Range 3E County Butler State Kansas

Test Approved by Macklin M. Armstrong Western Representative Kenny Kirkendall

Formation Test No. 3 Interval Tested from 3046 ft. to 3144 ft. Total Depth 3300 ft.

Packer Depth 3046 ft. Size 6 3/4 in. Packer Depth 3144 ft. Size 6 3/4 in.

Packer Depth 3041 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3051 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 3140 ft. Recorder Number 1560 Cap. 4500

Below Straddle Recorder Depth 3150 ft. Recorder Number - Cap. -

Drilling Contractor Ramco Drilling Rig #2 Drill Collar Length 210 I. D. - in.

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

Weight 9.7 Water Loss 12.2 cc. Drill Pipe Length 2710 I. D. - in.

Chlorides 3,000 P.P.M. Test Tool Length 28 ft. Tool Size 5½ in.

Jars: Make WTG Serial Number 402 Anchor Length 98 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 4½XH in.

Blow: Weak blow; died in ten minutes, started blowing "weak" twenty minutes into initial flow; weak to very weak final flow period.

Recovered 260 ft. of mud No shows.

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 1:35 ~~A.M.~~ P.M. Time Started Off Bottom 5:20 A.M. P.M. Maximum Temperature 108°

Initial Hydrostatic Pressure			(A)	1566	P.S.I.	
Initial Flow Period	Minutes 30	(B)	95	P.S.I. to (C)	116	P.S.I.
Initial Closed In Period	Minutes 57	(D)	1161	P.S.I.		
Final Flow Period	Minutes 45	(E)	171	P.S.I. to (F)	174	P.S.I.
Final Closed In Period	Minutes 90	(G)	1149	P.S.I.		
Final Hydrostatic Pressure			(H)	1566	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 4/15/81 Test Ticket No. 6749

Recorder No. 2605 Capacity 4150 Location 3051 Ft.

Clock No. - Elevation 1236 Kelly Bushing Well Temperature 108 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1566 P.S.I.	Open Tool		1:35P M	
B	First Initial Flow Pressure	95 P.S.I.	First Flow Pressure		30 Mins.	30 Mins.
C	First Final Flow Pressure	116 P.S.I.	Initial Closed-in Pressure		60 Mins.	57 Mins.
D	Initial Closed-in Pressure	1161 P.S.I.	Second Flow Pressure		45 Mins.	45 Mins.
E	Second Initial Flow Pressure	171 P.S.I.	Final Closed-in Pressure		90 Mins.	90 Mins.
F	Second Final Flow Pressure	174 P.S.I.				
G	Final Closed-in Pressure	1149 P.S.I.				
H	Final Hydrostatic Mud	1566 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	95
P 2 5	84
P 3 10	84
P 4 15	93
P 5 20	99
P 6 25	110
P 7 30	116
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 19 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	116
3	575
6	746
9	840
12	898
15	950
18	988
21	1019
24	1041
27	1064
30	1083
33	1099
36	1116
39	1126
42	1137
45	1144
48	1149
51	1153
54	1157
57	1161

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	171
5	163
10	159
15	165
20	171
25	174
30	174
35	174
40	174
45	174

Final Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	174
3	506
6	674
9	775
12	840
15	886
18	921
21	948
24	973
27	996
30	1012
33	1031
36	1043
39	1054
42	1068
45	1081
48	1089
51	1097
54	1104
57	1110
60	1112

WTC - 4

continued next page

WESTERN TESTING CO., INC.
Pressure Data

Date 4/15/81 Test Ticket No. 6749

Recorder No. 2605 Capacity 4150 Location 3051 Ft.

Clock No. - Elevation 1236 Kelly Bushing Well Temperature 108 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1566 P.S.I.		Open Tool	1:35P M	
B	First Initial Flow Pressure	95 P.S.I.		First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	116 P.S.I.		Initial Closed-in Pressure	60 Mins.	57 Mins.
D	Initial Closed-in Pressure	1161 P.S.I.		Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	171 P.S.I.		Final Closed-in Pressure	90 Mins.	90 Mins.
F	Second Final Flow Pressure	174 P.S.I.				
G	Final Closed-in Pressure	1149 P.S.I.				
H	Final Hydrostatic Mud	1566 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: 19 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 30 Inc.
of 3 mins. and a
final inc. of 0 Min.

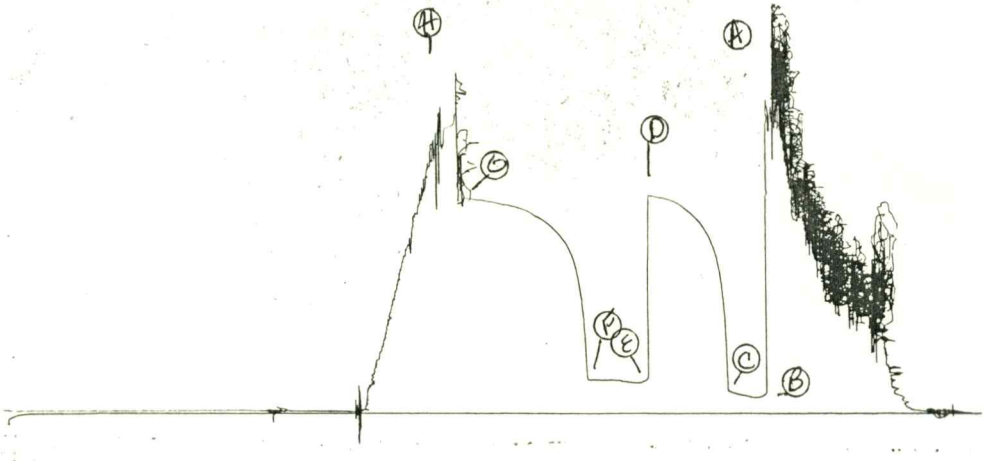
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1						63	1115
P 2						66	1120
P 3						69	1126
P 4						72	1128
P 5						75	1132
P 6						78	1139
P 7						81	1140
P 8						84	1143
P 9						87	1146
P10						90	1149
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

DST #3

2605

Lk #6749

T



JK #6749

Below Straddle

Company Kennedy & Mitchell, Inc. Lease & Well No. Murray #44-660

Elevation 1244 Ground Level Formation Mississippi Effective Pay - Ft. Ticket No. 10069

Date 11/5/81 Sec. 9 Twp. 30S Range 1E County Sumner State Kansas

Test Approved by Stephen J. Miller Western Representative Norman Allen

Formation Test No. 4 Interval Tested from 3361 ft. to 3375 ft. Total Depth 3960 ft.

Packer Depth 3361 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3375 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set 3377

Top Recorder Depth (Inside) 3365 ft. Recorder Number 13240 Cap. 4500

Bottom Recorder Depth (Outside) 3370 ft. Recorder Number 11018 Cap. 4425

Below Straddle Recorder Depth 3380 ft. Recorder Number WTC Cap. -

Drilling Contractor Silver Creek Rig #1 Drill Collar Length 120 I. D. - in.

Mud Type Chemical Viscosity 60 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 15.2 cc. Drill Pipe Length - I. D. - in.

Chlorides 13,000 P.P.M. Test Tool Length - ft. Tool Size - in.

Jars: Make WTC Serial Number 402 Anchor Length 14 ft. Size - in.

Did Well Flow? No Reversed Out No Surface Choke Size - in. Bottom Choke Size - in.

Main Hole Size - in. Tool Joint Size - in.

Blow:

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Tool would not go to bottom - stopped at 1785 ft.

MISRUN - NO PRESSURES AVAILABLE

Time Set Packer(s) - A.M. P.M. Time Started Off Bottom - A.M. P.M. Maximum Temperature -

Initial Hydrostatic Pressure ..... (A) - P.S.I.

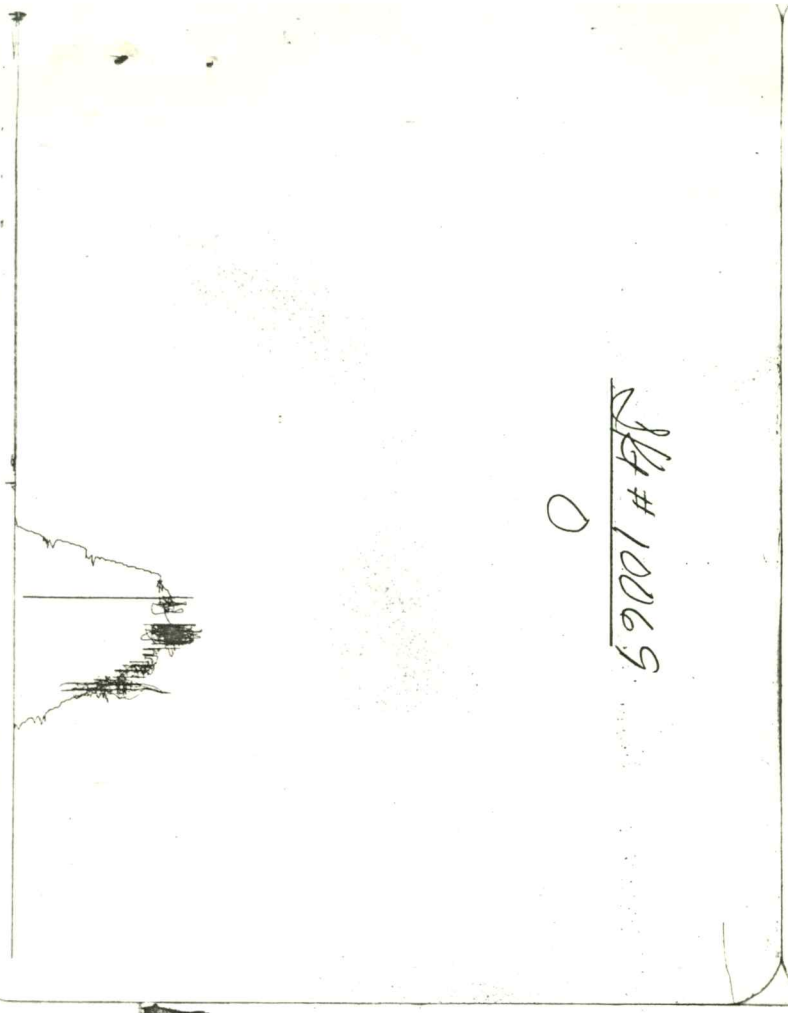
Initial Flow Period ..... Minutes - (B) - P.S.I. to (C) - P.S.I.

Initial Closed In Period ..... Minutes - (D) - P.S.I.

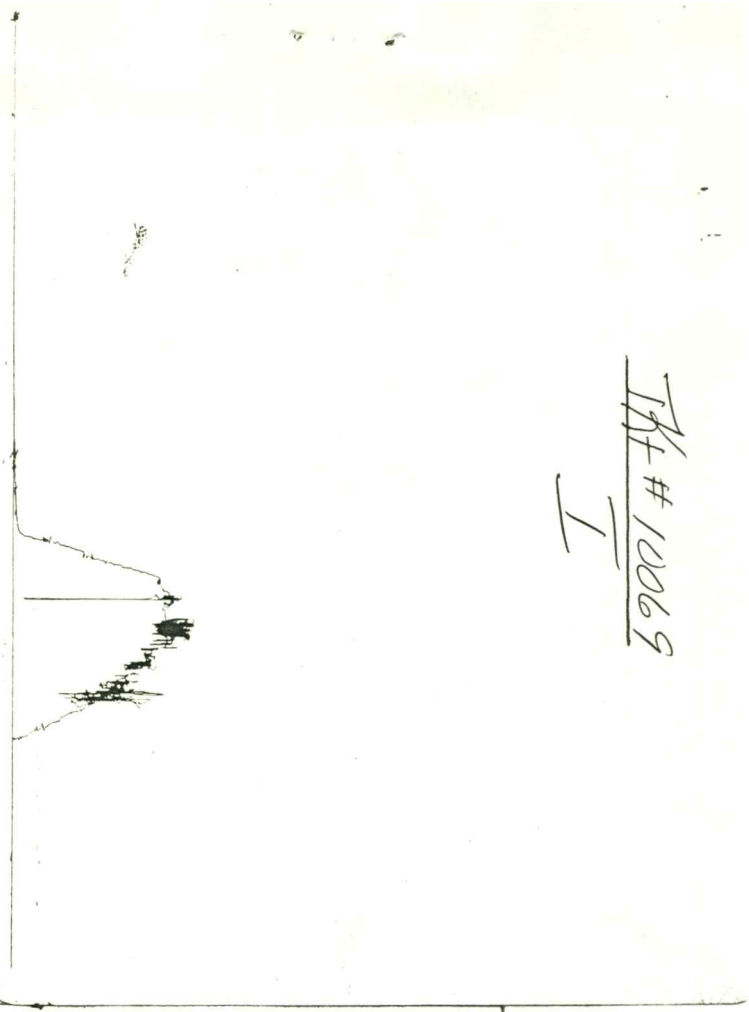
Final Flow Period ..... Minutes - (E) - P.S.I. to (F) - P.S.I.

Final Closed In Period ..... Minutes - (G) - P.S.I.

Final Hydrostatic Pressure ..... (H) - P.S.I.

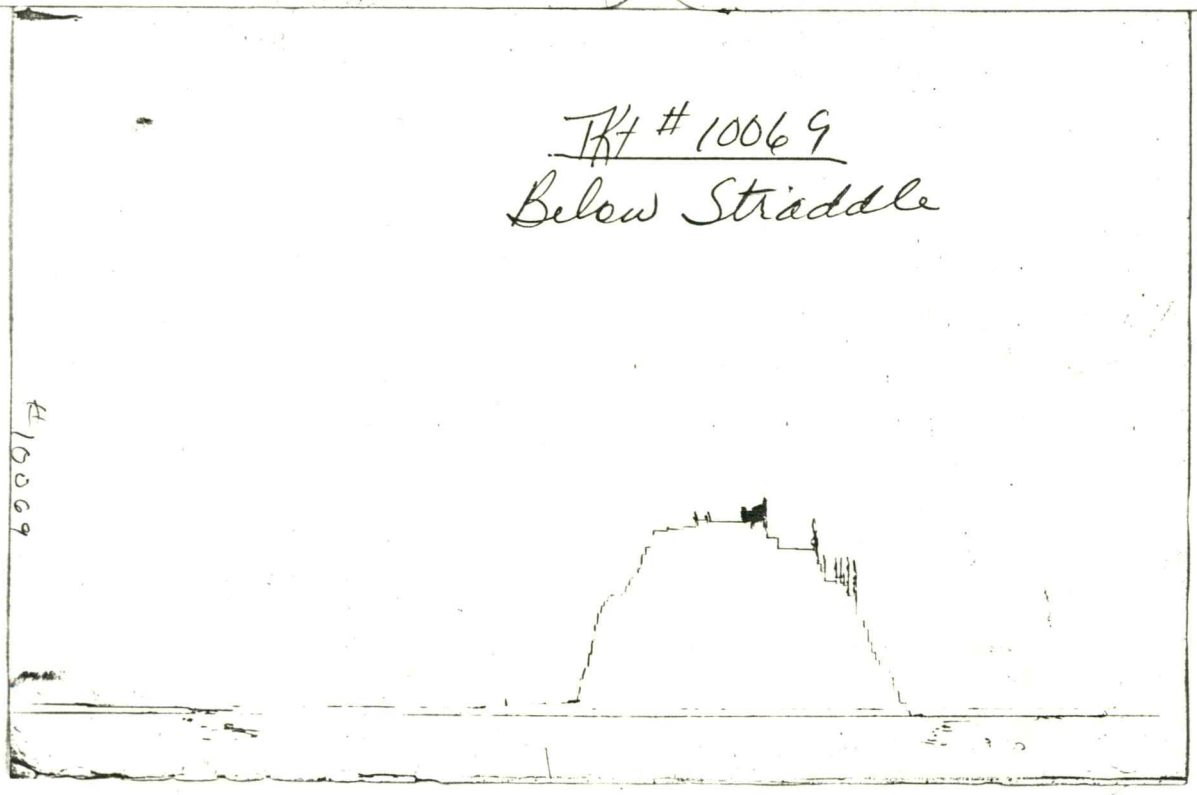


TKT # 10069
O



TKT # 10069
I

TKT # 10069
Below Straddle



TKT 10069

Company Kennedy & Mitchell, Inc. Lease & Well No. Murray #44-660

Elevation 1244 Ground Level Formation Mississippi Effective Pay - Ft. Ticket No. 10070

Date 11/7/81 Sec. 9 Twp. 30S Range 1E County Sumner State Kansas

Test Approved by Stephen J. Miller Western Representative Robert Davis

Formation Test No. 5 Interval Tested from 3361 ft. to 3375 ft. Total Depth 3960 ft.

Packer Depth 3361 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3375 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3365 ft. Recorder Number 13240 Cap. 4500

Bottom Recorder Depth (Outside) 3370 ft. Recorder Number 11018 Cap. 4425

Below Straddle Recorder Depth 3380 ft. Recorder Number WTC Cap. -

Drilling Contractor Silver Creek Rig #1 Drill Collar Length - I. D. - in.

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

Weight 9.7 Water Loss 15.2 cc. Drill Pipe Length - I. D. - in.

Chlorides 13,000 P.P.M. Test Tool Length - ft. Tool Size - in.

Jars: Make WTC Serial Number 402 Anchor Length 14 ft. Size - in.

Did Well Flow? No Reversed Out No Surface Choke Size - in. Bottom Choke Size - in.

Main Hole Size - in. Tool Joint Size - in.

Blow:

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Tool would not go to bottom. - stopped 1785 ft.

MISRUN - NO PRESSURES AVAILABLE

Time Set Packer(s) - A.M. P.M. Time Started Off Bottom - A.M. P.M. Maximum Temperature -

Initial Hydrostatic Pressure ..... (A) - P.S.I.

Initial Flow Period ..... Minutes - (B) - P.S.I. to (C) - P.S.I.

Initial Closed In Period ..... Minutes - (D) - P.S.I.

Final Flow Period ..... Minutes - (E) - P.S.I. to (F) - P.S.I.

Final Closed In Period ..... Minutes - (G) - P.S.I.

Final Hydrostatic Pressure ..... (H) - P.S.I.

TK # 10070
O

#10070

TK # 10070
I

#10070 13240

TK # 10070
Below Straddle

#10070