

Company Petro-Dynamics Corporation Lease & Well No. #1 Zimmerman
 Elevation 1285 Kelly Bushing Mississippi Formation Effective Pay -- Ft. Ticket No. 13939
 Date 11/2/82 Sec. 34 Twp. 31S Range 1E County Sumner State Kansas
 Test Approved by M. M. Armstrong Western Representative Allen Edgington

Formation Test No. 1 Interval Tested from 3575 ft. to 3590 ft. Total Depth 3590 ft.

Packer Depth 3570 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3575 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3578 ft. Recorder Number 5666 Cap. 3950

Bottom Recorder Depth (Outside) 3582 ft. Recorder Number 3354 Cap. 4200

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

Drilling Contractor Kandrilco Ltd. Rig #2 Drill Collar Length 248 I. D. 2 1/4 in.

Mud Type chemical Viscosity 41 Weight Pipe Length - I. D. - in.

Weight 9.6 Water Loss 38.8 cc. Drill Pipe Length 3312 I. D. 3.8 in.

Chlorides 3,200 P.P.M. Test Tool Length 30 ft. Tool Size 5 in.

Jars: Make WTC Serial Number 407 Anchor Length 15 ft. Size 5 in.

Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Very weak for twenty-one minutes.

Recovered 125 ft. of drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Slid tool five feet to bottom. Flushed tool on second flow.

Time Set Packer(s) 10:30 A.M. Time Started Off Bottom 2:15 P.M. Maximum Temperature 113°

Initial Hydrostatic Pressure (A) 1761 P.S.I.

Initial Flow Period Minutes 30 (B) 89 P.S.I. to (C) 89 P.S.I.

Initial Closed In Period Minutes 60 (D) 1376 P.S.I.

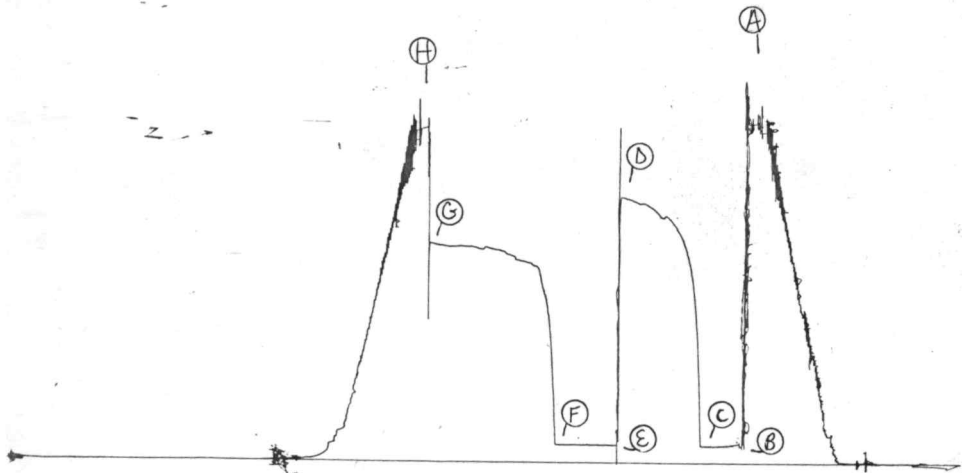
Final Flow Period Minutes 45 (E) 97 P.S.I. to (F) 97 P.S.I.

Final Closed In Period Minutes 93 (G) 1136 P.S.I.

Final Hydrostatic Pressure (H) 1726 P.S.I.

TKT # 13939

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WESTERN TESTING CO., INC.

Pressure Data

Date 11/2/82 Test Ticket No. 13939
 Recorder No. 5666 Capacity 3950 Location 3578 Ft.
 Clock No. -- Elevation 1285 Kelly Bushing Well Temperature 113 °F

Point	Pressure			Time Given		Time Computed	
A Initial Hydrostatic Mud	1761	P.S.I.	Open Tool	10:30P	M		
B First Initial Flow Pressure	89	P.S.I.	First Flow Pressure	30	Mins.	30	Mins.
C First Final Flow Pressure	89	P.S.I.	Initial Closed-in Pressure	60	Mins.	60	Mins.
D Initial Closed-in Pressure	1376	P.S.I.	Second Flow Pressure	45	Mins.	45	Mins.
E Second Initial Flow Pressure	97	P.S.I.	Final Closed-in Pressure	90	Mins.	93	Mins.
F Second Final Flow Pressure	97	P.S.I.					
G Final Closed-in Pressure	1136	P.S.I.					
H Final Hydrostatic Mud	1726	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: 31 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	89	0	89	0	97	0	97
P 2	5	89	3	683	5	97	3	526
P 3	10	89	6	914	10	97	6	769
P 4	15	89	9	1036	15	97	9	878
P 5	20	89	12	1116	20	97	12	970
P 6	25	89	15	1171	25	97	15	1015
P 7	30	89	18	1207	30	97	18	1028
P 8			21	1241	35	97	21	1034
P 9			24	1266	40	97	24	1041
P10			27	1279	45	97	27	1046
P11			30	1275			30	1050
P12			33	1299			33	1071
P13			36	1317			36	1077
P14			39	1331			39	1093
P15			42	1343			42	1100
P16			45	1343			45	1103
P17			48	1352			48	1108
P18			51	1361			51	1113
P19			54	1367			54	1104
P20			57	1374			57	1106
			60	1376			60	1114

WESTERN TESTING CO., INC.
Pressure Data

Date 11/2/82

Test Ticket No. 13939

Recorder No. 5666

Capacity 3950

Location 3578 Ft

Clock No. -- Elevation 1285 Kelly Bushing

Well Temperature 113 °F

Point	Pressure			Time	
				Given	Computed
A. Initial Hydrostatic Mud	<u>1761</u>	P.S.I.	Open Tool	<u>10:30P</u>	M
B. First Initial Flow Pressure	<u>89</u>	P.S.I.	First Flow Pressure	<u>30</u>	Mins. <u>30</u> Mins.
C. First Final Flow Pressure	<u>89</u>	P.S.I.	Initial Closed-in Pressure	<u>60</u>	Mins. <u>60</u> Mins.
D. Initial Closed-in Pressure	<u>1376</u>	P.S.I.	Second Flow Pressure	<u>45</u>	Mins. <u>45</u> Mins.
E. Second Initial Flow Pressure	<u>97</u>	P.S.I.	Final Closed-in Pressure	<u>90</u>	Mins. <u>93</u> Mins.
F. Second Final Flow Pressure	<u>97</u>	P.S.I.			
G. Final Closed-in Pressure	<u>1136</u>	P.S.I.			
H. Final Hydrostatic Mud	<u>1726</u>	P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Point Minutes	Initial Shut-In	Point Minutes	Second Flow Pressure	Point Minutes	Final Shut-In
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>31</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
	Press.		Press.		Press.		Press.
P 1						63	1118
P 2						66	1117
P 3						69	1119
P 4						72	1119
P 5						75	1117
P 6						78	1117
P 7						81	1120
P 8						84	1123
P 9						87	1126
P10						90	1130
P11						93	1136
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 13942

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 1285 KB Formation MISS Eff. Pay Ft.

District AUGUSTA Date 11-6-82 Customer Order No.

COMPANY NAME PETRO-DYNAMICS CORP

ADDRESS 555 N. WOODLAWN Bldg, Suite 207 WICHITA, KS 67208

LEASE AND WELL NO. ZIMMERMAN #1 COUNTY SUMNER, STATE KS Sec. 34 Twp 31S Rge 1E

Mail Invoice To SAME #1 ZIMMERMAN No. Copies Requested 1

Co. Name Address No. Copies Requested 5

Mail Charts To SAME Address No. Copies Requested 5

Formation Test No. 2 Interval Tested from 3574 ft. to 3637 ft. Total Depth 4060 ft.

Packer Depth 3574 ft. Size 6 3/4 in. Packer Depth 3637 ft. Size 6 3/4 in.

Depth of Selective Zone Set 3765

Top Recorder Depth (Inside) 3591 ft. Recorder Number 5666 Cap. 3950

Bottom Recorder Depth (Outside) 3595 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth 3773 ft. Recorder Number 1049 Cap. 4250

Drilling Contractor KANDRILCO #2 Drill Collar Length 186 I. D. 2 1/4 in.

Mud Type CHEM Viscosity 39 Weight Pipe Length I. D. in.

Weight 8.9 Water Loss 12.4 cc. Drill Pipe Length 3378 I. D. 3.8 in.

Chlorides 3,000 P.P.M. Test Tool Length 25 ft. Tool Size 5 in.

Jars: Make WTC Serial Number 407 Anchor Length 63 ft. Size 5 in.

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

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 1 1/4 in.

Blow: STRONG TO WEAK THEN OUT

Recovered 3260 ft. of MUDDY WATER 6,000 ppm (MID-SAMP)

Recovered ft. of 18,000 ppm (BOTTOM SAMPLE)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: BOTTOM PACKER FAILURE

440 ft above where packers were suppose to be

Time On Location 11:00 P.M. Time Pick Up Tool 12:30 A.M. Time Off Location A.M.

Time Set Packer(s) 4:45 A.M. Time Started Off Bottom 8:15 P.M. Maximum Temperature

Initial Hydrostatic Pressure (A) X1485 PSI.

Initial Flow Period Minutes 150 (B) 680 P.S.I. to (C) 1335 P.S.I.

Initial Closed In Period Minutes 60 (D) 1345 P.S.I.

Final Flow Period Minutes NONE TAKEN P.S.I. to (F) P.S.I.

Final Closed In Period Minutes NONE (G) TAKEN P.S.I.

Final Hydrostatic Pressure (H) X1495 PSI. #5666

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature] Signature of Customer or his authorized representative

Western Representative Allen Edgington

FIELD INVOICE

Table with 2 columns: Item and Amount. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, and TOTAL.

Company Petro-Dynamics Corporation Lease & Well No. #1 Zimmerman
 Elevation 1285 Kelly Bushing Mississippi Formation Effective Pay --- Ft. Ticket No. 13942
 Date 11/6 /82 Sec. 34 Twp. 31S Range 1E County Sumner State Kansas
 Test Approved by R. J. Flaker Western Representative Allen Edgington

Formation Test No. 2 Interval Tested from 3574 ft. to 3637 ft. Total Depth 4060 ft.
 Packer Depth 3574 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3637 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set 3765

Top Recorder Depth (Inside) 3591 ft. Recorder Number 5666 Cap. 3950
 Bottom Recorder Depth (Outside) 3595 ft. Recorder Number 3354 Cap. 4200
 Below Straddle Recorder Depth 3773 ft. Recorder Number 1049 Cap. 4250

Drilling Contractor KandrilCo Drlg. #2 Drill Collar Length 186 I. D. 2 1/2 in.
 Mud Type chemical Viscosity 39 Weight Pipe Length - I. D. - in.
 Weight 8.9 Water Loss 12.4 cc. Drill Pipe Length 3378 I. D. 3.8 in.
 Chlorides 3,000 P.P.M. Test Tool Length 25 ft. Tool Size 5 in.
 Jars: Make WTC Serial Number 407 Anchor Length 63 ft. Size 5 in.
 Did Well Flow? No Reversed Out Yes Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Strong to weak blow throughout test.

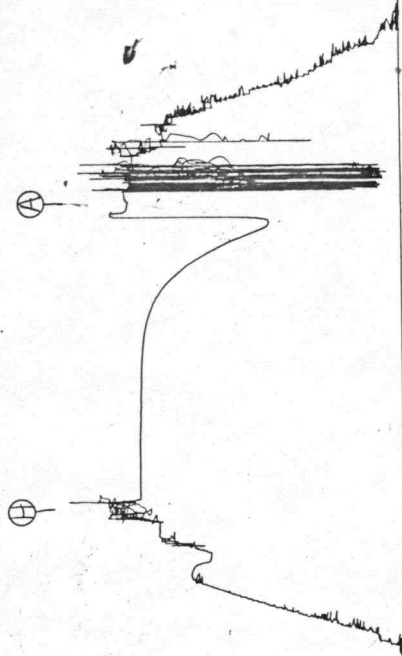
MISRUN

Recovered 3260 ft. of muddy water Chlorides 6,000 ppm (middle sample)
18,000 ppm (bottom sample)
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: BOTTOM PACKER FAILURE
440 feet above where packers were supposed to be.

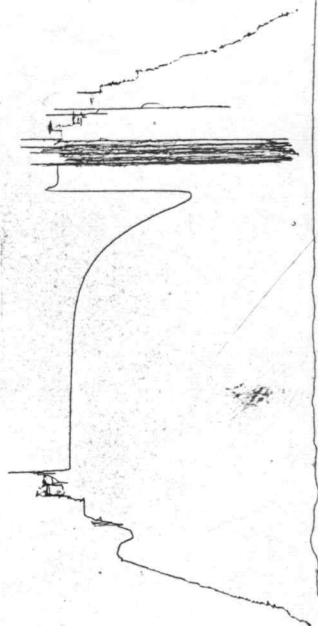
Time Set Packer(s) 4:45 A.M. Time Started Off Bottom 8:15 A.M. Maximum Temperature ---
P.M.
 Initial Hydrostatic Pressure (A) 1418 P.S.I.
 Initial Flow Period Minutes (B) - P.S.I. to (C) - P.S.I.
 Initial Closed In Period Minutes (D) - P.S.I.
 Final Flow Period Minutes (E) - P.S.I. to (F) - P.S.I.
 Final Closed In Period Minutes (G) - P.S.I.
 Final Hydrostatic Pressure (H) 1418 P.S.I.

TKT # 13942
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5660

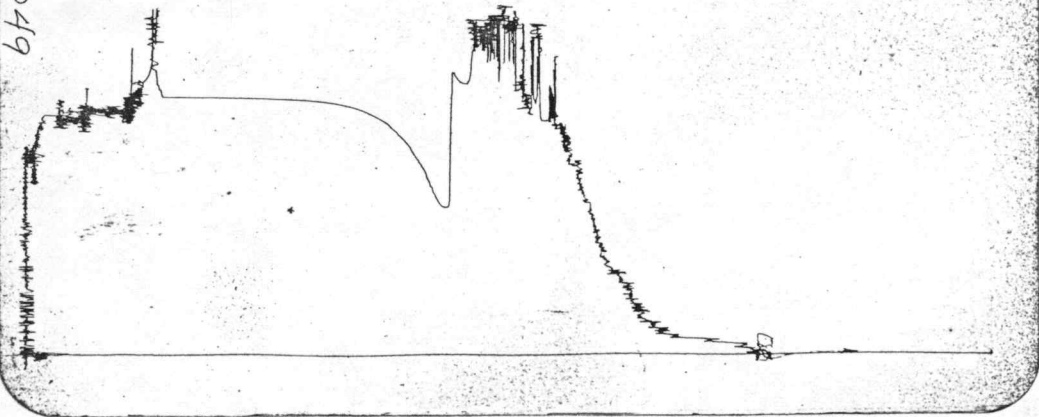
TKT # 13942
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3354

TKT # 13942
Below Straddle

1049
6401



Company Petro-Dynamics Corporation Lease & Well No. #1 Zimmerman
 Elevation 1285 Kelly Bushing Mississippi Formation Effective Pay --- Ft. Ticket No. 13943
 Date 11/6/82 Sec. 34 Twp. 31S Range 1E County Sumner State Kansas
 Test Approved by R. J. Flaker Western Representative Allen Edgington

Formation Test No. 3 Interval Tested from 3574 ft. to 3637 ft. Total Depth 4060 ft.
 Packer Depth 3574 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3637 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 3591 ft. Recorder Number 5666 Cap. 3950
 Bottom Recorder Depth (Outside) 3595 ft. Recorder Number 3354 Cap. 4200
 Below Straddle Recorder Depth 3651 ft. Recorder Number 1049 Cap. 4250

Drilling Contractor KandrilCo Drlg. #2 Drill Collar Length 186 I. D. 2 1/4 in.
 Mud Type chemical Viscosity - Weight Pipe Length - I. D. - in.
 Weight - Water Loss - cc. Drill Pipe Length 3371 I. D. 3.8 in.
 Chlorides --- P.P.M. Test Tool Length 25 ft. Tool Size 5 in.
 Jars: Make WTC Serial Number 407 Anchor Length 63 ft. Size 5 in.
 Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: MISRUN

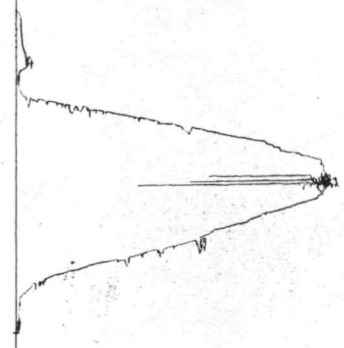
Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -

PACKER SEAT FAILURE

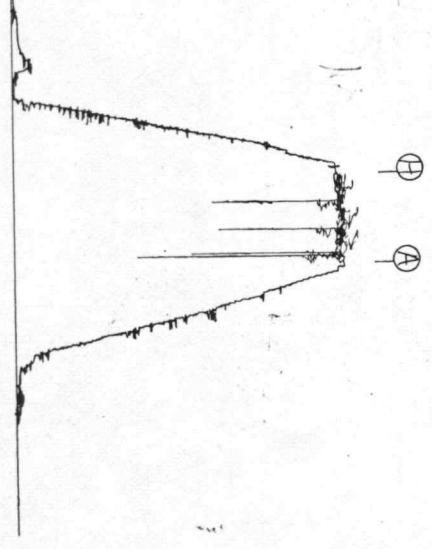
Remarks: -

Time Set Packer(s) --- A.M. Time Started Off Bottom --- A.M. Maximum Temperature ----- P.M.
 Initial Hydrostatic Pressure (A) 1691 P.S.I.
 Initial Flow Period (B) - Minutes P.S.I. to (C) - P.S.I.
 Initial Closed In Period (D) - Minutes P.S.I.
 Final Flow Period (E) - Minutes P.S.I. to (F) - P.S.I.
 Final Closed In Period (G) - Minutes P.S.I.
 Final Hydrostatic Pressure (H) 1653 P.S.I.

TKT # 13943
0

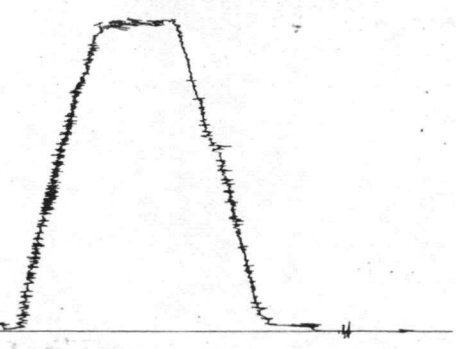


TKT # 13943
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TKT # 13943
Below straddle

1049



Company Petro-Dynamics Corporation Lease & Well No. #1 Zimmerman
 Elevation 1285 Kelly Bushing Formation Mississippi Effective Pay --- Ft. Ticket No. 13944
 Date 11/7/82 Sec. 34 Twp. 31S Range 1E County Sumner State Kansas
 Test Approved by R. J. Flaker Western Representative Allen Edgington

Formation Test No. 4 Interval Tested from 3581 ft. to 3636 ft. Total Depth 4060 ft.
 Packer Depth 3581 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3636 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3599 ft. Recorder Number 5666 Cap. 3950
 Bottom Recorder Depth (Outside) 3603 ft. Recorder Number 3354 Cap. 4200
 Below Straddle Recorder Depth 3774 ft. Recorder Number 1049 Cap. 4250
 Drilling Contractor KandrilCo Drlg. #2 Drill Collar Length 186 I. D. 2 1/4 in.
 Mud Type chemical Viscosity 40 Weight Pipe Length - I. D. - in.
 Weight 9.0 Water Loss 15.2 cc. Drill Pipe Length 3371 I. D. 3.8 in.
 Chlorides 11,000 P.P.M. Test Tool Length 30 ft. Tool Size 5 in.
 Jars: Make WTC Serial Number 407 Anchor Length 55 ft. Size 5 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 4 1/2 XH in.

Blow: Strong throughout test.
MISRUN

Recovered 790 ft. of mud Chlorides 18,000 ppm
 Recovered 430 ft. of watery mud Chlorides 28,000 ppm
 Recovered 850 ft. of muddy water Chlorides 32,000 ppm
 Recovered 940 ft. of salt water Chlorides 52,000 ppm
 Recovered - ft. of - Chlorides - ppm

Remarks: PACKER SEAT FAILURE MISRUN

Time Set Packer(s) 4:15 A.M. Time Started Off Bottom 8:45 A.M. Maximum Temperature ----
-P.M. P.M.
 Initial Hydrostatic Pressure (A) 1705 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) 1705 P.S.I.

TKT # 13944
I

TKT # 13944
O

3354

TKT # 13944
Below straddle

1049
670

