

ORIGINAL

CONFIDENTIAL

DRILL STEM TEST INFORMATION

SCHAFFER NO. 1

API #15-083-21396-0000

KCC

DEC 17

CONFIDENTIAL

- DST #1 (failed)
- DST #2 4691-4727', 30-45-60-90, GTS 40" (2.9 MCF), 1014' oil, 120' G&OCM, FP 160/299, SIP 1389/1403 BHT 126°
- DST #3 4729-4738', 30-45-120-90, 120' GIP, 10' G&OCM, FP 85/53, SIP 53/53 BHT 126°
- DST #4 4732-4740', 80-45-60-90, GTS 45" (TSTM), 60' G&MCO, 180' oil, FP 74/128, SIP 1276/1297 BHT 128°

RELEASED

FEB 14 1995

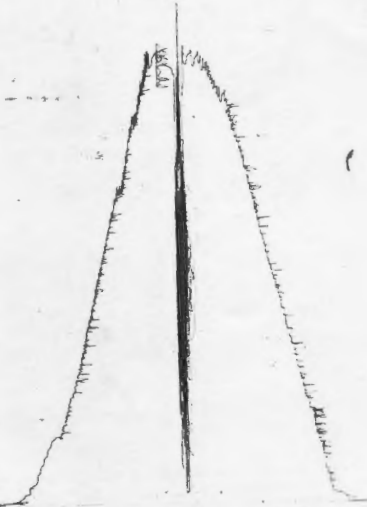
FROM CONFIDENTIAL

RECEIVED
KANSAS CORPORATION COMMISSION
DEC 20 1993
CONSERVATION DIVISION
WICHITA, KS

13265 DST#1

KF 18903

0



13268 DST#1

KF 18903

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY JACK BOWLES LEASE & WELL NO. #1 SCHAFFER SEC. 30 TWP. 24S RGE. 22W TEST NO. 1 DATE 8/2/93

DST REPORT

GENERAL INFORMATION

DATE : 8/2/93
CUSTOMER : JACK BOWLES
WELL : #1 TEST: 1
ELEVATION: 2382 GL
SECTION : 30
RANGE : 22W COUNTY: HODGEMAN
GAUGE SN#: 13268 RANGE : 4225
TICKET : 18903
LEASE : SCHAFFER
GEOLOGIST: LEWELLYN
FORMATION: MISSISSIPPI
TOWNSHIP : 24S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4714.00 ft TO: 4727.00 ft TVD: 4727.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4717.0 ft 4720.0 ft
TEMPERATURE: 0.0
DRILL COLLAR LENGTH: 118.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4576.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 13.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4709.0 ft SIZE: 6.630 in
PACKER DEPTH: 4714.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 20
MUD TYPE : CHEMICAL VISCOSITY : 42.00 cp
WEIGHT : 9.400 ppg WATER LOSS: 12.400 cc
CHLORIDES : 4500 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

MISRUN - PACKER SEAT FAILURE.
TIGHT HOLE

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	%	%	%	%	Comments
Oil	Gas	Water	Mud		
No Data Entered					

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	5.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0000	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0000	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE:	0.00		
Description	Duration	p1	p End
INITIAL FLOW	0.00	0.00	0.00
INITIAL SHUT-IN	0.00		0.00
FINAL FLOW	0.00	0.00	0.00
FINAL SHUT-IN	0.00		0.00
FINAL HYDROSTATIC PRESSURE:	0.00		

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE:	0.00		
Description	Duration	p1	p End
INITIAL FLOW	5.00	145.00	127.00
INITIAL SHUT-IN	0.00		0.00
FINAL HYDROSTATIC PRESSURE:	0.00		

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/2/93	TICKET : 18903
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W	STATE : KS
GAUGE SN#: 13268	CLOCK : 12
TEST: 1	
COUNTY: HODGEMAN	
RANGE : 4225	

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	145.00	145.00
5.00	127.00	-18.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
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FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	0.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
			No Data Entered



WESTERN TESTING CO., INC.
FORMATION TESTING

No 18903

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

Elevation GL 2382 Formation MISS Eff. Pay _____ Ft.

District PRATT Date 8-2-93 Customer Order No. _____

COMPANY NAME Jack Bowles
ADDRESS P.O. Box 3285 Edmond, OK 75089-3285

LEASE AND WELL NO. Schaffer #1 COUNTY Hodgman STATE Kans Sec. 30 Twp 24S Rge 22W

Mail Invoice To Same No. Copies Requested leg

Co. Name same #1 Address Schaffer No. Copies Requested leg

Mail Charts To _____ Address _____ No. Copies Requested _____

Formation Test No. 1 Interval Tested From 4714 ft. to 4727 ft. Total Depth 4727 ft.

Packer Depth 4709 ft. Size 6 7/8 in. Packer Depth 2 ft. Size 2 in.

Packer Depth 4714 ft. Size 6 5/8 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4717 ft. Recorder Number 13268 Cap. 422.5

Bottom Recorder Depth (Outside) 4720 ft. Recorder Number 13265 Cap. 397.5

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

Drilling Contractor Marlin Drilling Rig 20 Drill Collar Length 118 I. D. 2 1/4 in.

Mud Type Chem Viscosity 42 Weight Pipe Length 0 I. D. _____ in.

Weight 9.4 Water Loss 12.4 cc. Drill Pipe Length 4576 I. D. 3.8 in.

Chlorides 4200 P.P.M. Test Tool Length 20 ft. Tool Size 5 3/4 OD in.

Jars: Make NO Serial Number _____ Anchor Length 13 ft. Size 5 3/4 OD in.

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

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

Blow: _____

Recovered _____ ft. of _____

Recovered _____ ft. of packer seat failure

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: Tight hole

Time On Location 11:15 A.M. Time Pick Up Tool 12:45 P.M. Time Off Location _____ A.M.

Time Set Packer (s) 2:50 A.M. Time Started Off Bottom 3:00 P.M. Maximum Temperature 98

Initial Hydrostatic Pressure _____ (A) 2228 P.S.I.

Initial Flow Period _____ Minutes 10 (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) 2215 P.S.I.

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 Loe Britt - Thank you

FIELD INVOICE

Open Hole Test	\$ _____
Misrun	\$ _____
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ _____
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage	\$ _____
Fluid Sampler	\$ _____
Extra Charts	\$ _____
Insurance	\$ _____
Telecopier	\$ _____
TOTAL	\$ _____

WESTERN TESTING CO., INC.
Pressure Data

Date 8-2-52 Test Ticket No. 18905
 Recorder No. 15268 Capacity _____ Location _____ Ft. _____
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	_____ P.S.I.	Open Tool	_____ M	_____
B First Initial Flow Pressure	<u>145</u> P.S.I.	First Flow Pressure	_____ Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>127</u> P.S.I.	Initial Closed-in Pressure	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	_____ P.S.I.	Second Flow Pressure	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	_____ P.S.I.	Final Closed-in Pressure	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	_____ P.S.I.			
G Final Closed-in Pressure	_____ P.S.I.			
H Final Hydrostatic Mud	_____ P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In			
	Breakdown: _____ Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.			
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>145</u>	0		0		0	
P 2	<u>127</u>	3		5		3	
P 3		6		10		6	
P 4		9		15		9	
P 5		12		20		12	
P 6		15		25		15	
P 7		18		30		18	
P 8		21		35		21	
P 9		24		40		24	
P10		27		45		27	
P11		30		50		30	
P12		33		55		33	
P13		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57		95		57	
		60		100		60	

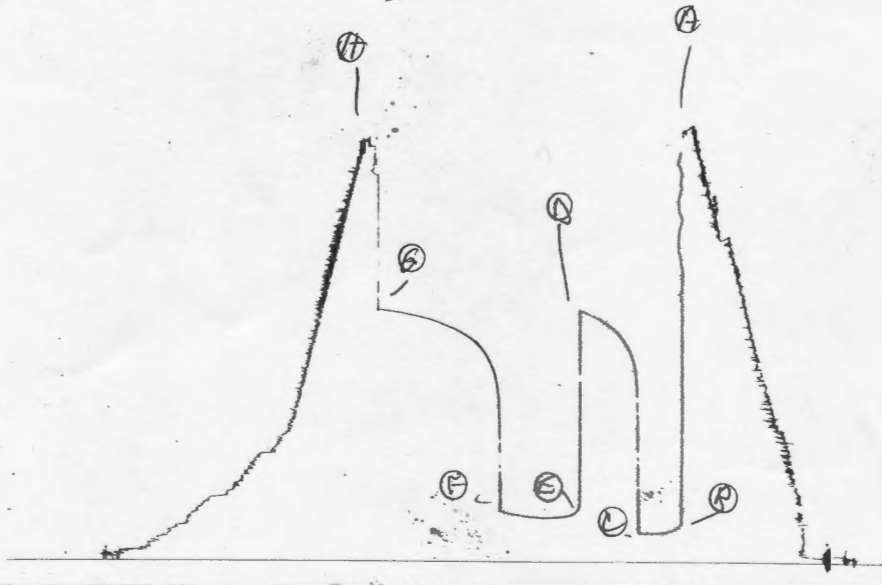
13262 DST#2



KT 18904

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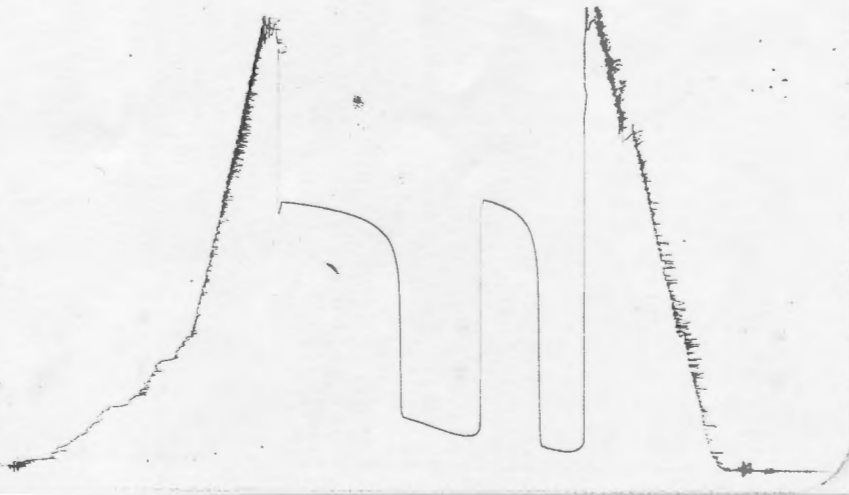


13265 DST#2

KT 18904

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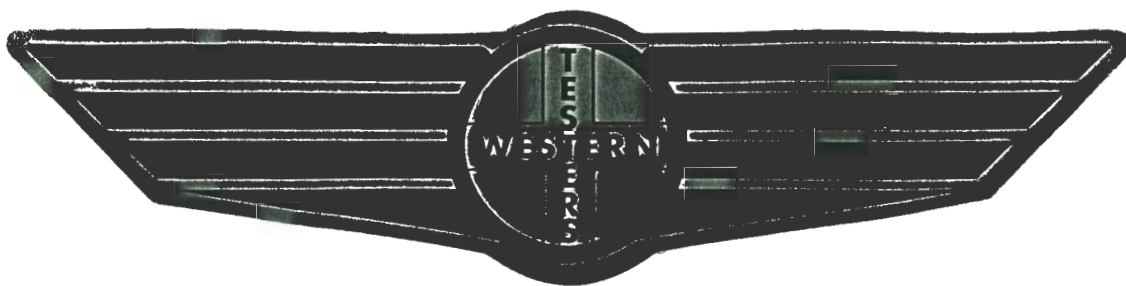
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FORMATION TEST REPORT

COMPANY JACK BOWLES
LEASER & WELL NO. #1 SCHÄFFER

SIC .30 TWIP 24 S RCF 22 W THSTP NO. 2
DATE 8-3-93



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 8/3/93
CUSTOMER : JACK BOWLES
WELL : #1 TEST: 2
ELEVATION: 2382 GL
SECTION : 30
RANGE : 22W COUNTY: HODGEMAN
GAUGE SN#: 13268 RANGE : 4225
TICKET : 18904
LEASE : SCHAFFER
GEOLOGIST: LEWELLYN
FORMATION: MISSISSIPPI
TOWNSHIP : 24S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4691.00 ft TO: 4727.00 ft TVD: 4727.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4718.0 ft 4721.0 ft
TEMPERATURE: 126.0
DRILL COLLAR LENGTH: 118.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4653.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 36.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 20
MUD TYPE : CHEMICAL
WEIGHT : 9.200 ppg
CHLORIDES : 4200 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 42.00 cp
WATER LOSS: 10.000 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

STRONG BLOW IN 2 MINUTES ON INITIAL FLOW PERIOD.
GAS TO SURFACE IN 10 MINUTES INTO FINAL FLOW
PERIOD. SEE ATTACHED SHEET FOR GAS MEASUREMENTS.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment _____

FLUID RECOVERY

Feet of Fluid	%	%	%	%	Comments
	Oil	Gas	Water	Mud	
1014.0	60.0	40.0	0.0	0.0	FREE GASSY OIL
0.0	0.0	0.0	0.0	0.0	37 GRAVITY
120.0	20.0	30.0	0.0	50.0	GAS & OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	8.6553	STB		
GAS VOLUME:	32.9689	SCF	TOTAL FLOW TIME:	90.0000 min.
MUD VOLUME:	0.3042	STB	AVERAGE OIL RATE:	143.3513 STB/D
WATER VOLUME:	0.0000	STB	AVERAGE WATER RATE:	0.0000 STB/D
TOTAL FLUID :	8.9595	STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2385.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	160.00	160.00
INITIAL SHUT-IN	45.00		1389.00
FINAL FLOW	60.00	267.00	299.00
FINAL SHUT-IN	90.00		1403.00

FINAL HYDROSTATIC PRESSURE: 2332.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2385.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	189.00	161.00
INITIAL SHUT-IN	51.00		1382.00
FINAL FLOW	60.00	266.00	274.00
FINAL SHUT-IN	93.00		1386.00

FINAL HYDROSTATIC PRESSURE: 2313.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 8/3/93	TICKET : 18904
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W	STATE : KS
GAUGE SN#: 13268	CLOCK : 12
TEST: 2	
COUNTY: HODGEMAN	
RANGE : 4225	

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
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SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN.	MERLA	0.500	20" OF WATER	28000 SCF/D
20 MIN.	MERLA	0.500	5.5" OF WTR	3950 SCF/D
30 MIN.	MERLA	0.250	5.5" OF WTR	3950 SCF/D
40 MIN.	MERLA	0.250	4" OF WATER	3370 SCF/D
50 MIN.	MERLA	0.250	3" OF WATER	2920 SCF/D
60 MIN.	MERLA	0.250	3" OF WATER	2920 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/3/93	TICKET : 18904
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W	STATE : KS
GAUGE SN#: 13268	CLOCK : 12
TEST: 2	
COUNTY: HODGEMAN	
RANGE : 4225	

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	189.00	189.00
5.00	189.00	0.00
10.00	174.00	-15.00
15.00	166.00	-8.00
20.00	162.00	-4.00
25.00	161.00	-1.00
30.00	161.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	468.00	468.00	0.00
6.00	1002.00	534.00	0.00
9.00	1118.00	116.00	0.00
12.00	1166.00	48.00	0.00
15.00	1206.00	40.00	0.00
18.00	1236.00	30.00	0.00
21.00	1259.00	23.00	0.00
24.00	1278.00	19.00	0.00
27.00	1296.00	18.00	0.00
30.00	1313.00	17.00	0.00
33.00	1325.00	12.00	0.00
36.00	1338.00	13.00	0.00
39.00	1349.00	11.00	0.00
42.00	1359.00	10.00	0.00
45.00	1369.00	10.00	0.00
48.00	1377.00	8.00	0.00
51.00	1382.00	5.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	266.00	266.00
5.00	266.00	0.00
10.00	254.00	-12.00
15.00	249.00	-5.00
20.00	248.00	-1.00
25.00	248.00	0.00
30.00	249.00	1.00
35.00	251.00	2.00
40.00	253.00	2.00
45.00	256.00	3.00
50.00	263.00	7.00
55.00	271.00	8.00
60.00	274.00	3.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	828.00	828.00	0.00
6.00	1014.00	186.00	0.00
9.00	1071.00	57.00	0.00
12.00	1123.00	52.00	0.00
15.00	1156.00	33.00	0.00
18.00	1184.00	28.00	0.00
21.00	1206.00	22.00	0.00
24.00	1222.00	16.00	0.00
27.00	1237.00	15.00	0.00
30.00	1252.00	15.00	0.00
33.00	1264.00	12.00	0.00
36.00	1275.00	11.00	0.00
39.00	1286.00	11.00	0.00
42.00	1295.00	9.00	0.00
45.00	1305.00	10.00	0.00
48.00	1312.00	7.00	0.00
51.00	1320.00	8.00	0.00
54.00	1328.00	8.00	0.00
57.00	1335.00	7.00	0.00
60.00	1342.00	7.00	0.00
63.00	1347.00	5.00	0.00
66.00	1352.00	5.00	0.00
69.00	1357.00	5.00	0.00
72.00	1361.00	4.00	0.00
75.00	1364.00	3.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
78.00	1367.00	3.00	0.00
81.00	1371.00	4.00	0.00
84.00	1374.00	3.00	0.00
87.00	1377.00	3.00	0.00
90.00	1381.00	4.00	0.00
93.00	1386.00	5.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18904

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

Elevation 2382 GL Formation Miss Eff. Pay Ft.

District Pratt Date 8-3-93 Customer Order No.

COMPANY NAME JACK Bowles Bowles
ADDRESS P.O. Box 3285 Edmond, OK 73083-3285

LEASE AND WELL NO Schaffer #1 COUNTY Adger STATE KANSAS Sec. 30 Twp 24 Rge 22

Mail Invoice To Co. Name Same Address No. Copies Requested 1290

Mail Charts To Co. Name Same Address No. Copies Requested 1290

Formation Test No. 2 Interval Tested From 4691 ft. to 4727 ft. Total Depth 4727 ft.

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

Packer Depth 4691 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4718 ft. Recorder Number 13268 Cap. 4225

Bottom Recorder Depth (Outside) 4721 ft. Recorder Number 13265 Cap. 3975

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Murfin Rig #20 Drill Collar Length 118 I. D. 2 1/4 in.

Mud Type Chem Viscosity 42 Weight Pipe Length -0- I. D. in.

Weight 9.2 Water Loss 10.0 cc. Drill Pipe Length 4653 I. D. 3.8 in.

Chlorides 4200 P.P.M. Test Tool Length 20 ft. Tool Size 5/1600 in.

Jars: Make NO Serial Number - Anchor Length 36 ft. Size 5/1600 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 X 11 in.

Blow: Strong blow in 2 min on initial flow

Gas to surface 10 min into final flow - See flow chart

Recovered ft. of

Recovered 1014 ft. of free gassy oil 40% gas - 60% oil (37 gravity)

Recovered ft. of

Recovered 120 ft. of Bastail curb mud 30% gas - 20% oil 50% mud

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

Time On Location 5:30 A.M. Time Pick Up Tool 6:00 A.M. Time Off Location 4:00 P.M.

Time Set Packer(s) 7:55 A.M. Time Started Off Bottom 11:40 A.M. Maximum Temperature 126 F

Initial Hydrostatic Pressure (A) 2385 P.S.I.

Initial Flow Period (B) 30 Minutes 160 P.S.I. to (C) 160 P.S.I.

Initial Closed In Period (D) 45 Minutes 1389 P.S.I.

Final Flow Period (E) 60 Minutes 267 P.S.I. to (F) 299 P.S.I.

Final Closed In Period (G) 90 Minutes 1403 P.S.I.

Final Hydrostatic Pressure (H) 2332 P.S.I.

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 Rod Irwin Thank you

FIELD INVOICE

Table with 2 columns: Item Name 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, Telecopier, and TOTAL.



No 3921

GAS FLOW REPORT

Date 8-3-93 Ticket 1890# Company JACK BOWLS
 Well Name and No. Schaffer #1 Dst No. 2 Interval Tested 4691-4727
 County Hodgeman State Kansas Sec. 30 Twp. 24s Rg. 22w

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
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PRE FLOW

X					

SECOND FLOW

Time	Inches of water	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
10		1/2			GAS to surface
15	20	1/2			28,000 CFH
20	51	1/4			3,950
30	5	1/4			3,950
40	4	1/4			3,370
50	3	1/4			2,920
60	3	1/4			2,920

GAS BOTTLE

Serial No. _____ Date Bottle Filled No Date to be Invoiced _____

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 1 1/2% 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 _____

Authorized by RICZ

WESTERN TESTING CO., INC.

Pressure Data

DATE 8-3-92

Test Ticket No. 18904

Recorder No. 13268 Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud <u>2385</u>	P.S.I.		M
B First Initial Flow Pressure	P.S.I.	_____ Mins.	_____ Mins.
C First Final Flow Pressure	P.S.I.	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	P.S.I.	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	P.S.I.	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	P.S.I.		
G Final Closed-in Pressure	P.S.I.		
H Final Hydrostatic Mud <u>2312</u>	P.S.I.		

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.
	Point Minutes	Point Minutes	Point Minutes	Point Minutes
P 1 0	189	0	246	274
P 2 5	189	3	246	288
P 3 10	174	6	254	1014
P 4 15	166	9	249	1071
P 5 20	162	12	248	1128
P 6 25	161	15	248	1156
P 7 30	161	18	249	1184
P 8 35		21	251	1206
P 9 40		24	253	1222
P10 45		27	256	1227
P11 50		30	263	1252
P12 55		33	271	1264
P13 60		36	274	1275
P14 65		39		1286
P15 70		42		1295
P16 75		45		1308
P17 80		48		1314
P18 85		51		1320
P19 90		54		1328
P20 95		57		1335
WTC 100		60		1341

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. 18904

Recorder No. _____ Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool	_____	M _____
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure	_____	Mins. _____ Mins. _____
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure	_____	Mins. _____ Mins. _____
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure	_____	Mins. _____ Mins. _____
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure	_____	Mins. _____ Mins. _____
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In	
	Breakdown: _____ Inc.	Breakdown: _____ Inc.	Breakdown: _____ Inc.	Breakdown: _____ Inc.	
	of _____ mins. and a final inc. of _____ Min.	of _____ mins. and a final inc. of _____ Min.	of _____ mins. and a final inc. of _____ Min.	of _____ mins. and a final inc. of _____ Min.	
	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	105	63	105	63	1347
P 2	110	66	110	66	1352
P 3	115	69	115	69	1357
P 4	120	72	120	72	1362
P 5	125	75	125	75	1367
P 6	130	78	130	78	1367
P 7	135	81	135	81	1371
P 8	140	84	140	84	1374
P 9	145	87	145	87	1377
P10	150	90	150	90	1381
P11	155	93	155	93	1386
P12	160	96	160	96	
P13	165	99	165	99	
P14	170	102	170	102	
P15	175	105	175	105	
P16	180	108	180	108	
P17	185	111	185	111	
P18	190	114	190	114	
P19	195	117	195	117	
P20	200	120	200	120	

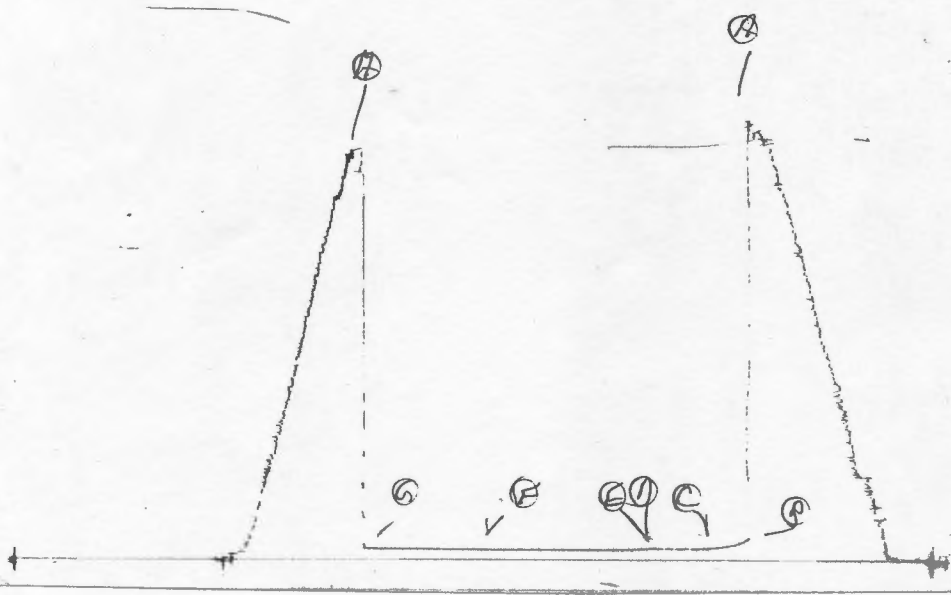
13268 DST#3

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KT 18905

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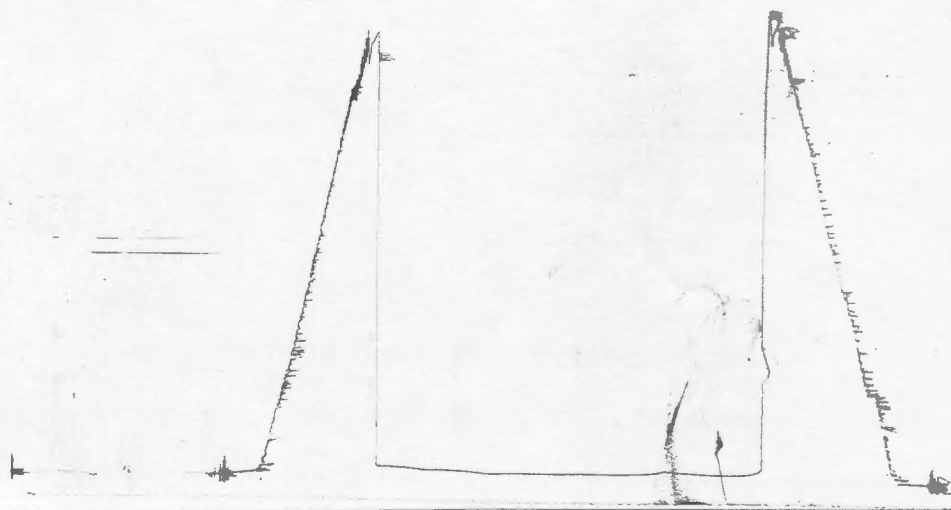


13265 DST#3

KT 18905

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone ~~314~~800-688-7021

COMPANY JACK BOWLES
LEASE & WELL NO. #1 SCHAFFER
SEC. 30 TWP. 24S RGE. 22W
TEST NO. 3 DATE 8/3/93

DST REPORT

GENERAL INFORMATION

DATE : 8-03-93	TICKET : 18905
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1 TEST: 3	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W COUNTY: HODGEMAN	STATE : KS
GAUGE SN#: 13268 RANGE : 4225	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4727.00 ft	TO: 4735.00 ft	TVD: 4735.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: GAS
DEPTH OF RECORDERS: 4722.0 ft	4727.0 ft	
TEMPERATURE: 126.0		

DRILL COLLAR LENGTH: 118.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4589.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 8.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH: 4722.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4727.0 ft	SIZE:	6.630 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 20	VISCOSITY : 42.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 10.000 cc
WEIGHT : 9.400 ppg	
CHLORIDES : 4200 ppm	SERIAL NUMBER:
JARS-MAKE :	REVERSED OUT?: NO
DID WELL FLOW?: NO	

COMMENTS

Comment

WEAK 1" TO 2" STEADY BLOW THROUGHOUT TEST.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
10.0	20.0	10.0	10.0	60.0	GAS & OIL CUT MUD 120 FT. GAS ABOVE FLUID
0.0	0.0	0.0	0.0	0.0	

RATE INFORMATION

OIL VOLUME:	0.0098 STB	TOTAL FLOW TIME:	150.0000 min.
GAS VOLUME:	0.0276 SCF	AVERAGE OIL RATE:	0.2832 STB/D
MUD VOLUME:	0.0295 STB	AVERAGE WATER RATE:	0.1416 STB/D
WATER VOLUME:	0.0049 STB		
TOTAL FLUID :	0.0443 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2385.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	85.00	53.00
INITIAL SHUT-IN	45.00		53.00
FINAL FLOW	120.00	53.00	53.00
FINAL SHUT-IN	90.00		53.00

FINAL HYDROSTATIC PRESSURE: 2150.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2366.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	102.00	70.00
INITIAL SHUT-IN	45.00		66.00
FINAL FLOW	120.00	60.00	60.00
FINAL SHUT-IN	93.00		64.00

FINAL HYDROSTATIC PRESSURE: 2257.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8-03-93	TICKET : 18905
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W	COUNTY: HODGEMAN
GAUGE SN#: 13268	RANGE : 4225
	STATE : KS
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	102.00	102.00
5.00	102.00	0.00
10.00	91.00	-11.00
15.00	82.00	-9.00
20.00	75.00	-7.00
25.00	71.00	-4.00
30.00	70.00	-1.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	69.00	69.00	0.00
6.00	68.00	-1.00	0.00
9.00	67.00	-1.00	0.00
12.00	66.00	-1.00	0.00
15.00	66.00	0.00	0.00
18.00	66.00	0.00	0.00
21.00	66.00	0.00	0.00
24.00	66.00	0.00	0.00
27.00	66.00	0.00	0.00
30.00	66.00	0.00	0.00
33.00	66.00	0.00	0.00
36.00	66.00	0.00	0.00
39.00	66.00	0.00	0.00
42.00	66.00	0.00	0.00
45.00	66.00	0.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	60.00	60.00
5.00	60.00	0.00
10.00	60.00	0.00
15.00	60.00	0.00
20.00	60.00	0.00
25.00	60.00	0.00
30.00	60.00	0.00
35.00	60.00	0.00
40.00	60.00	0.00
45.00	60.00	0.00
50.00	60.00	0.00
55.00	60.00	0.00
60.00	60.00	0.00
65.00	60.00	0.00
70.00	60.00	0.00
75.00	60.00	0.00
80.00	60.00	0.00
85.00	60.00	0.00
90.00	60.00	0.00
95.00	60.00	0.00
100.00	60.00	0.00
105.00	60.00	0.00
110.00	60.00	0.00
115.00	60.00	0.00
120.00	60.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	60.00	60.00	0.00
6.00	60.00	0.00	0.00
9.00	60.00	0.00	0.00
12.00	60.00	0.00	0.00
15.00	60.00	0.00	0.00
18.00	60.00	0.00	0.00
21.00	60.00	0.00	0.00
24.00	60.00	0.00	0.00
27.00	60.00	0.00	0.00
30.00	60.00	0.00	0.00
33.00	60.00	0.00	0.00
36.00	60.00	0.00	0.00
39.00	61.00	1.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
42.00	61.00	0.00	0.00
45.00	61.00	0.00	0.00
48.00	61.00	0.00	0.00
51.00	61.00	0.00	0.00
54.00	61.00	0.00	0.00
57.00	61.00	0.00	0.00
60.00	62.00	1.00	0.00
63.00	62.00	0.00	0.00
66.00	62.00	0.00	0.00
69.00	62.00	0.00	0.00
72.00	62.00	0.00	0.00
75.00	62.00	0.00	0.00
78.00	63.00	1.00	0.00
81.00	63.00	0.00	0.00
84.00	63.00	0.00	0.00
87.00	64.00	1.00	0.00
90.00	64.00	0.00	0.00
93.00	64.00	0.00	0.00



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 18905

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

Elevation 2388 ft. Formation Miss Eff. Pay Ft.

District Pratt Date 8-3-93 Customer Order No.

COMPANY NAME Jack-Bowls Drilling

ADDRESS P.O. Box 3285 Edmond, OK 73083-3285

LEASE AND WELL NO. Schaffer #1 COUNTY AdgerMAN STATE Kans Sec. Twp. Rge. 6

Mail Invoice To Same Co. Name Address No. Copies Requested 6

Mail Charts To SAME Address No. Copies Requested 6

Formation Test No. 3 Interval Tested From 4727 ft. to 4735 ft. Total Depth 4735 ft.

Packer Depth 4722 ft. Size 6 7/8 in. Packer Depth 2 ft. Size 2 in.

Packer Depth 4727 ft. Size 6 7/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4728 ft. Recorder Number 13268 Cap. 4225

Bottom Recorder Depth (Outside) 4740 ft. Recorder Number 13265 Cap. 3975

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Murgen Drilling Log 20 Drill Collar Length 118 I. D. 2 1/4 in.

Mud Type Chem Viscosity 42 Weight Pipe Length 0 I. D. in.

Weight 9.4 Water Loss 10.0 cc. Drill Pipe Length 4589 I. D. 3.8 in.

Chlorides 4200 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make NO Serial Number Anchor Length 8 ft. Size 5 3/4 OD in.

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

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

Blow: Weak 1 to 2 inch steady blow on both the initial & final flows

Recovered 120 ft. of gas in pipe

Recovered ft. of

Recovered 10 ft. of Gas & oil cut mud 10% gas - 20% oil 10% water 60% mud

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

Time On Location 4:00 AM Time Pick Up Tool 10:00 AM Time Off Location AM

Time Set Packer(s) 12:00 AM Time Started Off Bottom 4:45 AM Maximum Temperature 126 of

Initial Hydrostatic Pressure (A) 2385 P.S.I.

Initial Flow Period Minutes 30 (B) 85 P.S.I. to (C) 53 P.S.I.

Initial Closed In Period Minutes 45 (D) 53 P.S.I.

Final Flow Period Minutes 120 (E) 53 P.S.I. to (F) 53 P.S.I.

Final Closed In Period Minutes 90 (G) 53 P.S.I.

Final Hydrostatic Pressure (H) 2150 P.S.I.

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 [Signature] Thank you

FIELD INVOICE

Table with 2 columns: Item Name 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, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.

Pressure Data

DATE 8 2 82

Test Ticket No. 18905

Recorder No. 13268 Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2564</u> P.S.I.		<u>M</u>
B First Initial Flow Pressure	_____ P.S.I.	_____ Mins.	_____ Mins.
C First Final Flow Pressure	_____ P.S.I.	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	_____ P.S.I.	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	_____ P.S.I.	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	_____ P.S.I.		
G Final Closed-in Pressure	_____ P.S.I.		
H Final Hydrostatic Mud	<u>2157</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Initial Shut-In Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Second Flow Pressure Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Final Shut-In Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.
---	---	--	---

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>102</u>	0	<u>70</u>	0	<u>60</u>	0	<u>60</u>
P 2 5	<u>102</u>	3	<u>69</u>	5		3	
P 3 10	<u>91</u>	6	<u>68</u>	10		6	
P 4 15	<u>82</u>	9	<u>67</u>	15		9	
P 5 20	<u>75</u>	12	<u>66</u>	20		12	
P 6 25	<u>71</u>	15	<u>66</u>	25		15	<u>60</u>
P 7 30	<u>70</u>	18		30		18	
P 8 35		21		35		21	
P 9 40		24		40		24	
P 10 45		27		45	<u>60</u>	27	
P 11 50		30	<u>60</u>	50		30	<u>60</u>
P 12 55		33		55		33	<u>60</u>
P 13 60		36		60	<u>60</u>	36	<u>60</u>
P 14 65		39		65		39	<u>5</u>
P 15 70		42		70		42	
P 16 75		45	<u>60</u>	75	<u>60</u>	45	<u>60</u>
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90	<u>60</u>	54	
P 20 95		57		95	<u>60</u>	57	
100		60		100	<u>60</u>	60	<u>60</u>

WESTERN TESTING CO., INC.
Pressure Data

Date _____

Test Ticket No. 18905

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool	_____ M	_____
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure	_____ Mins.	_____ Mins.
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure	_____ Mins.	_____ Mins.
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	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: _____ Inc. of _____ mins. and a final inc. of _____ Min.		Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.		Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.		Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.
	Press.		Press.		Press.		Press.
P 1 105		63		105	<i>62</i>	63	<i>62</i>
P 2 110		66		110	<i>62</i>	66	<i>62</i>
P 3 115		69		115	<i>62</i>	69	<i>62</i>
P 4 120		72		120	<i>60</i>	72	<i>62</i>
P 5 125		75		125		75	<i>62</i>
P 6 130		78		130		78	<i>62</i>
P 7 135		81		135		81	<i>62</i>
P 8 140		84		140		84	<i>62</i>
P 9 145		87		145		87	<i>64</i>
P10 150		90		150		90	<i>64</i>
P11 155		93		155		93	<i>64</i>
P12 160		96		160		96	
P13 165		99		165		99	
P14 170		102		170		102	
P15 175		105		175		105	
P16 180		108		180		108	
P17 185		111		185		111	
P18 190		114		190		114	
P19 195		117		195		117	
P20 200		120		200		120	

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

COMPANY JACK BOWLES
LEASE & WELL NO. #1 SCHAEFFER
SEC. 30 TWP. 24S RGE. 22W
TEST NO. 4 DATE 8/4/93

DST REPORT

GENERAL INFORMATION

DATE : 8/4/93
CUSTOMER : JACK BOWLES
WELL : #1 TEST: 4
ELEVATION: 2382 GL
SECTION : 30
RANGE : 22W COUNTY: HODGEMAN
GAUGE SN#: 13268 RANGE : 4225
TICKET : 18906
LEASE : SCHAFFER
GEOLOGIST: LEWELLYN
FORMATION: MISSISSIPPI
TOWNSHIP : 24S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4732.00 ft TO: 4740.00 ft TVD: 4740.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 4734.0 ft 4737.0 ft
TEMPERATURE: 128.0
DRILL COLLAR LENGTH: 118.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4594.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 8.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4727.0 ft SIZE: 6.630 in
PACKER DEPTH: 4732.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 20
MUD TYPE : CHEMICAL
WEIGHT : 9.300 ppg
CHLORIDES : 6800 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 66.00 cp
WATER LOSS: 11.200 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW IN 6 MINUTES.
FINAL FLOW PERIOD STRONG BLOW - GAS TO SURFACE IN
5 MINUTES. SEE GAS SHEET ATTACHED.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

TIGHT HOLE.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
60.0	60.0	20.0	0.0	20.0	HEAVY GAS & MUD CUT OIL
180.0	100.0	0.0	0.0	0.0	FREE OIL

RATE INFORMATION

OIL VOLUME:	1.9548 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	0.9451 SCF	AVERAGE OIL RATE:	33.9706 STB/D
MUD VOLUME:	0.1683 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	2.1232 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2335.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	74.00	74.00
INITIAL SHUT-IN	45.00		1276.00
FINAL FLOW	60.00	128.00	128.00
FINAL SHUT-IN	90.00		1297.00

FINAL HYDROSTATIC PRESSURE: 2332.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2349.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	30.00	74.00	74.00
INITIAL SHUT-IN	48.00		1264.00
FINAL FLOW	60.00	163.00	128.00
FINAL SHUT-IN	99.00		1285.00

FINAL HYDROSTATIC PRESSURE: 2300.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 8/4/93 CUSTOMER : JACK BOWLES WELL : #1 ELEVATION: 2382 GL SECTION : 30 RANGE : 22W GAUGE SN#: 13268	TEST: 4	TICKET : 18906 LEASE : SCHAFFER GEOLOGIST: LEWELLYN FORMATION: MISSISSIPPI TOWNSHIP : 24S STATE : KS CLOCK : 12
COUNTY: HODGEMAN RANGE : 4225		

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
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SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN.	MERLA	0.250	7" OF WATER	4450 SCF/D
20 MIN.	MERLA	0.250	5" OF WATER	3710 SCF/D
30 MIN.	MERLA	0.250	2" OF WATER	2370 SCF/D
40 MIN.	MERLA	0.250	1" OF WATER	1680 SCF/D
50 MIN.	MERLA	0.250	NO READING	0 SCF/D
60 MIN.	MERLA	0.250	NO READING	0 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/4/93	TICKET : 18906
CUSTOMER : JACK BOWLES	LEASE : SCHAFFER
WELL : #1	GEOLOGIST: LEWELLYN
ELEVATION: 2382 GL	FORMATION: MISSISSIPPI
SECTION : 30	TOWNSHIP : 24S
RANGE : 22W	STATE : KS
GAUGE SN#: 13268	CLOCK : 12
TEST: 4	
COUNTY: HODGEMAN	
RANGE : 4225	

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	74.00	74.00
5.00	74.00	0.00
10.00	74.00	0.00
15.00	74.00	0.00
20.00	74.00	0.00
25.00	74.00	0.00
30.00	74.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	159.00	159.00	11.00
6.00	388.00	229.00	6.00
9.00	542.00	154.00	4.33
12.00	664.00	122.00	3.50
15.00	797.00	133.00	3.00
18.00	913.00	116.00	2.67
21.00	1020.00	107.00	2.43
24.00	1083.00	63.00	2.25
27.00	1117.00	34.00	2.11
30.00	1147.00	30.00	2.00
33.00	1179.00	32.00	1.91
36.00	1202.00	23.00	1.83
39.00	1222.00	20.00	1.77
42.00	1241.00	19.00	1.71
45.00	1251.00	10.00	1.67
48.00	1264.00	13.00	1.63

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	163.00	163.00
5.00	163.00	0.00
10.00	145.00	-18.00
15.00	136.00	-9.00
20.00	131.00	-5.00
25.00	129.00	-2.00
30.00	128.00	-1.00
35.00	128.00	0.00
40.00	128.00	0.00
45.00	128.00	0.00
50.00	128.00	0.00
55.00	128.00	0.00
60.00	128.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	254.00	254.00	21.00
6.00	397.00	143.00	11.00
9.00	522.00	125.00	7.67
12.00	611.00	89.00	6.00
15.00	702.00	91.00	5.00
18.00	799.00	97.00	4.33
21.00	884.00	85.00	3.86
24.00	947.00	63.00	3.50
27.00	998.00	51.00	3.22
30.00	1031.00	33.00	3.00
33.00	1057.00	26.00	2.82
36.00	1080.00	23.00	2.67
39.00	1103.00	23.00	2.54
42.00	1118.00	15.00	2.43
45.00	1133.00	15.00	2.33
48.00	1150.00	17.00	2.25
51.00	1162.00	12.00	2.18
54.00	1176.00	14.00	2.11
57.00	1190.00	14.00	2.05
60.00	1198.00	8.00	2.00
63.00	1207.00	9.00	1.95
66.00	1217.00	10.00	1.91
69.00	1226.00	9.00	1.87
72.00	1232.00	6.00	1.83
75.00	1238.00	6.00	1.80

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
78.00	1246.00	8.00	1.77
81.00	1253.00	7.00	1.74
84.00	1259.00	6.00	1.71
87.00	1265.00	6.00	1.69
90.00	1271.00	6.00	1.67
93.00	1275.00	4.00	1.65
96.00	1280.00	5.00	1.63
99.00	1285.00	5.00	1.61



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18906

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

Elevation 2388 Bl Formation Miss Eff. Pay Ft.

District Platt Date 8-4-93 Customer Order No.

COMPANY NAME Jack Boots Bowles

ADDRESS P.O. Box 3285

LEASE AND WELL NO. Schaffer #1 COUNTY Noddyman STATE Kansas Sec. 30 Twp. 24S Rge. 22W

Mail Invoice To Co. Name SAME Address No. Copies Requested Reg 6

Mail Charts To Co. Name SAME Address No. Copies Requested Reg 6

Formation Test No. 4 Interval Tested From 4732 ft. to 4740 ft. Total Depth 4740 ft.

Packer Depth 4727 ft. Size 6 5/8 in. Packer Depth 2 ft. Size 2 in.

Packer Depth 4732 ft. Size 6 5/8 in. Packer Depth 2 ft. Size 2 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4734 ft. Recorder Number 13268 Cap. 4225

Bottom Recorder Depth (Outside) 4737 ft. Recorder Number 13265 Cap. 3975

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Murfin Reg 20 Drill Collar Length 118 I. D. 2 1/4 in.

Mud Type Chem Viscosity 66 Weight Pipe Length -0- I. D. in.

Weight 9.3 Water Loss 11.2 cc. Drill Pipe Length 4594 I. D. 3.8 in.

Chlorides 6800 P.P.M. Test Tool Length 20 ft. Tool Size 5/8 in.

Jars: Make NO Serial Number Anchor Length 8 ft. Size 5/8 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 blow in 6 minutes on initial flow

Strong blow - gas to surface 45 minutes on final flow - see flow chart

Recovered ft. of Heavy gas & mud cut oil 20% gas - 20% mud 60% oil

Recovered 180 ft. of Free oil

Recovered ft. of Chlorides P.P.M. Sample Jars used Remarks:

Time On Location 12:15 P.M. A.M. Time Pick Up Tool 2:00 P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 3:40 A.M. P.M. Time Started Off Bottom 7:25 A.M. P.M. Maximum Temperature 128 of

Initial Hydrostatic Pressure (A) 2325 P.S.I.

Initial Flow Period Minutes 30 (B) 74 P.S.I. to (C) 74 P.S.I.

Initial Closed In Period Minutes 45 (D) 1276 P.S.I.

Final Flow Period Minutes 60 (E) 128 P.S.I. to (F) 128 P.S.I.

Final Closed In Period Minutes 90 (G) 1297 P.S.I.

Final Hydrostatic Pressure (H) 2332 P.S.I.

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 of Customer or his authorized representative

Western Representative Red Witt Thank you

FIELD INVOICE

Open Hole Test \$
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

WESTERN TESTING CO., INC.

Pressure Data

DATE

8-4-92
B268

Test Ticket No.

18906

Recorder No.

Capacity

Location

Ft.

Clock No.

Elevation

Well Temperature

°F

Point

Pressure

Time Given

Time Computed

A	Initial Hydrostatic Mud	2549	P.S.I.	Open Tool	M
B	First Initial Flow Pressure		P.S.I.	First Flow Pressure	_____ Mins. _____ Mins.
C	First Final Flow Pressure		P.S.I.	Initial Closed-in Pressure	_____ Mins. _____ Mins.
D	Initial Closed-in Pressure		P.S.I.	Second Flow Pressure	_____ Mins. _____ Mins.
E	Second Initial Flow Pressure		P.S.I.	Final Closed-in Pressure	_____ Mins. _____ Mins.
F	Second Final Flow Pressure		P.S.I.		
G	Final Closed-in Pressure		P.S.I.		
H	Final Hydrostatic Mud	2500	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure

Initial Shut-In

Second Flow Pressure

Final Shut-In

Breakdown: _____ Inc.

Breakdown: _____ Inc.

Breakdown: _____ Inc.

Breakdown: _____ Inc.

of _____ mins. and a

of _____ mins. and a

of _____ mins. and a

of _____ mins. and a

final inc. of _____ Min.

final inc. of _____ Min.

final inc. of _____ Min.

final inc. of _____ Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	74	0	74	0	143 OK	0	128
P 2 5		3	159	5	162	3	254
P 3 10		6	388	10	145	6	397
P 4 15		9	542	15	146	9	522
P 5 20		12	604	20	151	12	641
P 6 25		15	797	25	149	15	702
P 7 30	74	18	913	30	148	18	799
P 8 35		21	1020	35	2	21	884
P 9 40		24	1083	40	2	24	947
P10 45		27	1117	45	18	27	978
P11 50		30	1147	50	2	30	1021
P12 55		33	1179	55	2	33	1057
P13 60		36	1205	60	18	36	1080
P14 65		39	1222	65		39	1103
P15 70		42	1241	70		42	1118
P16 75		45	1251	75		45	1132
P17 80		48	1264	80		48	1150
P18 85		51		85		51	1162
P19 90		54		90		54	1176
P20 95		57		95		57	1190
100		60		100		60	1200

WESTERN TESTING CO., INC.
Pressure Data

Date _____

Test Ticket No. 18904

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool _____	M _____	
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure _____	Mins. _____	Mins. _____
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure _____	Mins. _____	Mins. _____
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure _____	Mins. _____	Mins. _____
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure _____	Mins. _____	Mins. _____
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In		Second Flow Pressure		Final Shut-In		
	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	105		63		105		63	1207
P 2	110		66		110		66	1217
P 3	115		69		115		69	1226
P 4	120		72		120		72	1232
P 5	125		75		125		75	1238
P 6	130		78		130		78	1246
P 7	135		81		135		81	1253
P 8	140		84		140		84	1259
P 9	145		87		145		87	1265
P10	150		90		150		90	1271
P11	155		93		155		93	1275
P12	160		96		160		96	1280
P13	165		99		165		99	1285
P14	170		102		170		102	
P15	175		105		175		105	
P16	180		108		180		108	
P17	185		111		185		111	
P18	190		114		190		114	
P19	195		117		195		117	
P20	200		120		200		120	

