



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET N° 19778

P. O. BOX 1599
WICHITA, KANSAS 67201

PHONE (316) 262-5861

Elevation 1127 KB Formation Burnee FT Scott Eff. Pay Ft.

District Augusta Date 8-18-93 Customer Order No.

COMPANY NAME Range Oil Co Inc

ADDRESS 125 N Market South 1120 Wichita KS 67202

LEASE AND WELL NO. Mc Tree #2 COUNTY Chautauque STATE KS Sec. 13 Twp 32 Rge. 10E

Mail Invoice To Sam #2 Mc Tree E No. Copies Requested 1

Mail Charts To Sam Address 1669 No. Copies Requested 5

Formation Test No. DST #1 Interval Tested From 1589 ft. to 1696 ft. Total Depth 1669 ft.

Packer Depth 1589 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 1589 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 1680 66 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 1693 63 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Glauco Drill Collar Length 270 I. D. 2.25 in.

Mud Type Chem Viscosity 45 Weight Pipe Length I. D. in.

Weight 9.5 Water Loss 10.8 cc. Drill Pipe Length 1299 I. D. 3.8 in.

Chlorides 800 P.P.M. Test Tool Length 20 ft. Tool Size 5700 in.

Jars: Make Serial Number Anchor Length 80 ft. Size 5700 in.

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

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

Blow: Work to string blow bottom of bucket in Sam on (TFP) Very Weak blow 3 in into bucket on (TFP)

Recovered 290 ft. of gas in pipe

Recovered 70 ft. of drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

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

AUG 23 1993

Time On Location 3730 A.M. Time Pick Up Tool 4:00 A.M. Time Off Location A.M.

Time Set Packer(s) 5:00 A.M. Time Started Off Bottom 8:00 A.M. Maximum Temperature 95° P.M.

Initial Hydrostatic Pressure (A) 855 P.S.I.

Initial Flow Period Minutes 30 (B) 85 P.S.I. to (C) 65 P.S.I.

Initial Closed In Period Minutes 30 (D) 420 P.S.I.

Final Flow Period Minutes 60 (E) 115 P.S.I. to (F) 85 P.S.I.

Final Closed In Period Minutes 60 (G) 490 P.S.I.

Final Hydrostatic Pressure (H) 845 P.S.I. 10979

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]

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 8-18-93

Test Ticket No. 19778

Recorder No. _____ Capacity _____ Location _____ Ft.

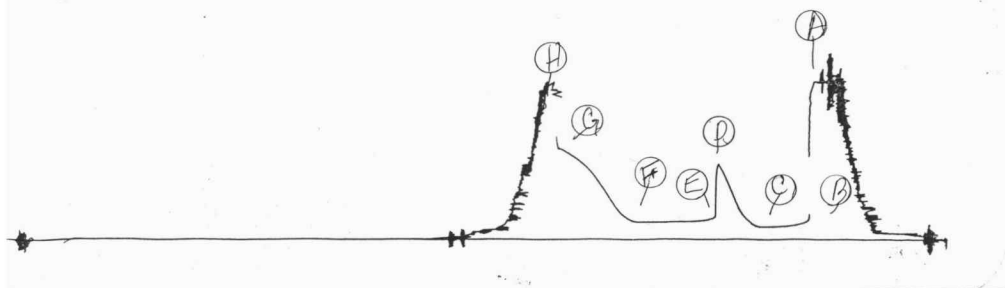
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>855</u>	P.S.I.	<u>5:00</u>	M
B First Initial Flow Pressure	<u>100</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>74</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
D Initial Closed-in Pressure	<u>410</u>	P.S.I.	<u>60</u>	Mins. <u>60</u> Mins.
E Second Initial Flow Pressure	<u>126</u>	P.S.I.	<u>60</u>	Mins. <u>57</u> Mins.
F Second Final Flow Pressure	<u>98</u>	P.S.I.		
G Final Closed-in Pressure	<u>496</u>	P.S.I.		
H Final Hydrostatic Mud	<u>836</u>	P.S.I.		

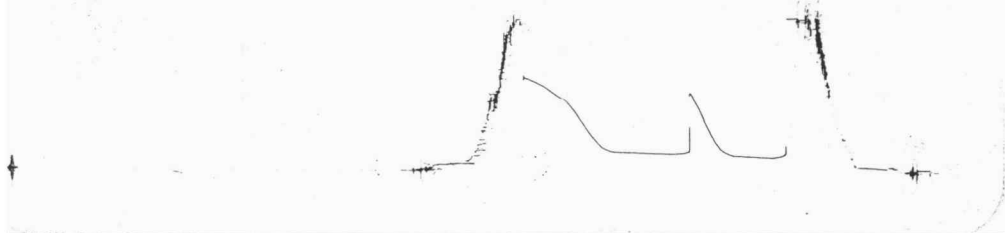
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>100</u>	0	<u>58 74</u>	0	<u>126</u>	0	<u>2058 74</u>
P 2 5	<u>92</u>	3	<u>80</u>	5	<u>109</u>	3	<u>2058 109</u>
P 3 10	<u>82</u>	6	<u>88</u>	10	<u>105</u>	6	<u>2058 119</u>
P 4 15	<u>77</u>	9	<u>107</u>	15	<u>105</u>	9	<u>2058 138</u>
P 5 20	<u>75</u>	12	<u>134</u>	20	<u>104</u>	12	<u>2058 159</u>
P 6 25	<u>75</u>	15	<u>165</u>	25	<u>103 104</u>	15	<u>2058 190</u>
P 7 30	<u>74</u>	18	<u>213</u>	30	<u>103</u>	18	<u>2058 213</u>
P 8 35		21	<u>259</u>	35	<u>103</u>	21	<u>2058 255</u>
P 9 40		24	<u>311</u>	40	<u>102</u>	24	<u>2058 287</u>
P10 45		27	<u>334</u>	45	<u>101</u>	27	<u>2058 318</u>
P11 50		30	<u>410</u>	50	<u>100</u>	30	<u>2058 345</u>
P12 55		33		55	<u>99</u>	33	<u>2058 372</u>
P13 60		36		60	<u>98</u>	36	<u>2058 393</u>
P14 65		39		65		39	<u>2058 416</u>
P15 70		42		70		42	<u>431</u>
P16 75		45		75		45	<u>446</u>
P17 80		48		80		48	<u>460</u>
P18 85		51		85		51	<u>475</u>
P19 90		54		90		54	<u>490</u>
P20 95		57		95		57	<u>496</u>
100		60		100		60	<u>502</u>

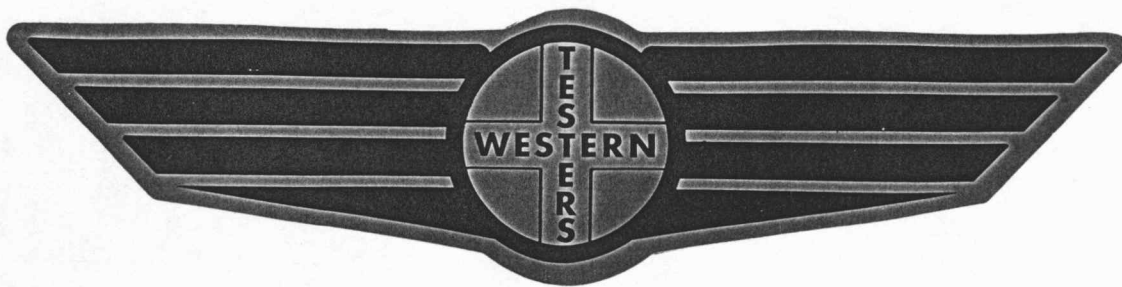
TK-# 19778
I.



TK-# 19778
O.



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800 - 688 - 7021

DST REPORT

GENERAL INFORMATION

DATE	: 8/18/93	TICKET	: 19778
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: MCNEE E
WELL	: #2	TEST:	1
ELEVATION:	1127 KB	GEOLOGIST:	BLAIR
SECTION	: 13	FORMATION:	PAWNEE-FT SCOTT
RANGE	: 10E	TOWNSHIP	: 32S
GAUGE SN#:	10979	STATE	: KS
	COUNTY: CHAUTAUQUA	CLOCK	: 12
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	1589.00 ft	TO:	1669.00 ft	TVD:	1669.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	1666.0 ft		1663.0 ft		
TEMPERATURE:	95.0				
DRILL COLLAR LENGTH:	270.0 ft	I.D.:	2.250 in		
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH :	1299.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :	5.500 in		
ANCHOR LENGTH :	80.0 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 :	4.5FH		
PACKER DEPTH:	1584.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	1589.0 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. :	GLAVES RIG 1	VISCOSITY :	45.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	10.800 cc
WEIGHT :	9.500 ppg		
CHLORIDES :	800 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO STRONG BLOW - BOTTOM
OF BUCKET IN 8 MINUTES. FINAL FLOW PERIOD VERY
WEAK BLOW - 3 INCHES INTO BUCKET.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	290 FT GAS ABOVE FLUID
70.0	0.0	0.0	0.0	100.0	DRILLING MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.3442	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.3442	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 855.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	85.00	65.00
INITIAL SHUT-IN	30.00		420.00
FINAL FLOW	60.00	115.00	85.00
FINAL SHUT-IN	60.00		490.00

FINAL HYDROSTATIC PRESSURE: 845.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 855.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	100.00	74.00
INITIAL SHUT-IN	30.00		410.00
FINAL FLOW	60.00	126.00	98.00
FINAL SHUT-IN	57.00		496.00

FINAL HYDROSTATIC PRESSURE: 836.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/18/93	TICKET : 19778
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : MCNEE E
WELL : #2	GEOLOGIST: BLAIR
ELEVATION: 1127 KB	FORMATION: PAWNEE-FT SCOTT
SECTION : 13	TOWNSHIP : 32S
RANGE : 10E	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: CHAUTAUQUA	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	100.00	100.00
5.00	92.00	-8.00
10.00	82.00	-10.00
15.00	77.00	-5.00
20.00	75.00	-2.00
25.00	75.00	0.00
30.00	74.00	-1.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	80.00	80.00	0.00
6.00	88.00	8.00	0.00
9.00	107.00	19.00	0.00
12.00	134.00	27.00	0.00
15.00	165.00	31.00	0.00
18.00	213.00	48.00	0.00
21.00	259.00	46.00	0.00
24.00	311.00	52.00	0.00
27.00	354.00	43.00	0.00
30.00	410.00	56.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	126.00	126.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	109.00	-17.00
10.00	105.00	-4.00
15.00	105.00	0.00
20.00	104.00	-1.00
25.00	104.00	0.00
30.00	103.00	-1.00
35.00	103.00	0.00
40.00	102.00	-1.00
45.00	101.00	-1.00
50.00	100.00	-1.00
55.00	99.00	-1.00
60.00	98.00	-1.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	109.00	109.00	0.00
6.00	119.00	10.00	0.00
9.00	138.00	19.00	0.00
12.00	159.00	21.00	0.00
15.00	190.00	31.00	0.00
18.00	213.00	23.00	0.00
21.00	255.00	42.00	0.00
24.00	287.00	32.00	0.00
27.00	318.00	31.00	0.00
30.00	345.00	27.00	0.00
33.00	372.00	27.00	0.00
36.00	393.00	21.00	0.00
39.00	416.00	23.00	0.00
42.00	431.00	15.00	0.00
45.00	446.00	15.00	0.00
48.00	460.00	14.00	0.00
51.00	475.00	15.00	0.00
54.00	490.00	15.00	0.00
57.00	496.00	6.00	0.00



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 19779

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

Elevation 1127 KB Formation Miss Eff. Pay Ft.

District Augusta Date 8-18-93 Customer Order No.

COMPANY NAME Range Oil Co Inc

ADDRESS 125 N Market Suite 1120 Wichita KS 67202

LEASE AND WELL NO. Mc Nee 11E13 COUNTY Chautauqua STATE KS Sec. 13 Twp 32 Rge. 10E

Mail Invoice To Same Co. Name Address No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. DST #2 Interval Tested From 1972 ft. to 2000 ft. Total Depth 2000 ft.

Packer Depth 1967 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 1972 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 1993 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 1997 ft. Recorder Number 3354 Cap. 4200

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

Drilling Contractor Slaves Rig 1 Drill Collar Length 330 I. D. 2.25 in.

Mud Type Chem Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 11.2 cc. Drill Pipe Length 1622 I. D. 3.8 in.

Chlorides 1300 P.P.M. Test Tool Length 60 1/2 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 28 ft. Size 5 1/2 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 FH in.

Blow: Weak to Very Strong blow bottom of inches 1 min on (R.P.P) gas to surface in 28 min

Recovered 170 ft. of greasy oil cut mud 50% oil 20% gas 30% mud

Recovered 1820 ft. of gas in pipe

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

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

AUG 23 1993

Time On Location 6:00 A.M. Time Pick Up Tool 7:00 A.M. Time Off Location A.M.

Time Set Packer(s) 8:00 A.M. Time Started Off Bottom 11:00 A.M. Maximum Temperature 102°F

Initial Hydrostatic Pressure (A) 1060 P.S.I.

Initial Flow Period Minutes 30 (B) 50 P.S.I. to (C) 75 P.S.I.

Initial Closed In Period Minutes 30 (D) 635 P.S.I.

Final Flow Period Minutes 60 (E) 85 P.S.I. to (F) 95 P.S.I.

Final Closed In Period Minutes 60 (G) 555 P.S.I.

Final Hydrostatic Pressure (H) 1050 P.S.I.

COMPANY TERMS

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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]

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	\$

WICHITA, KANSAS 67201

Nº 3998

GAS FLOW REPORT

Date 8-18-93 Ticket 19779 Company Kanze Oil Co
Well Name and No. McNee "E" #2 Dst No. DST #2 Interval Tested _____
County Chautauque State KS Sec. _____ Twp. _____ Rg. _____

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

[illegible]

SECOND FLOW

[illegible]

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ 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 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

Date 9-18-93

Test Ticket No. 19779

Recorder No. _____ Capacity _____ Location _____ Ft.

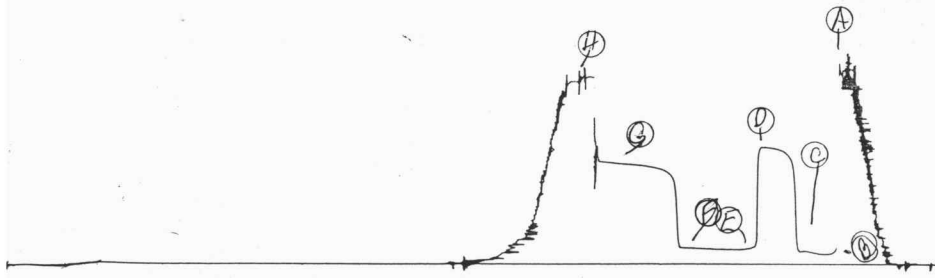
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	1008 1051 P.S.I.		8:00 M	
B First Initial Flow Pressure	69 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	71 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	637 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	96 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	92 P.S.I.			
G Final Closed-in Pressure	552 P.S.I.			
H Final Hydrostatic Mud	1020 P.S.I.			

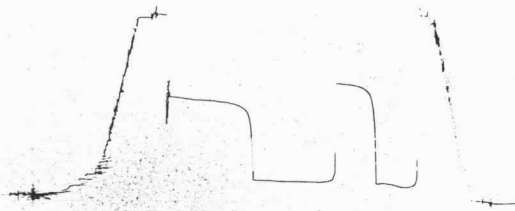
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	69	0	71	0	96	0	92
P 2 5	59	3	232	5	84	3	310
P 3 10	63	6	541	10	84	6	462
P 4 15	65	9	589	15	85	9	488
P 5 20	71	12	606	20	85	12	503
P 6 25	71	15	618	25	86	15	512
P 7 30	71	18	627	30	86	18	521
P 8 35		21	631	35	87	21	527
P 9 40		24	633	40	88	24	531
P 10 45		27	635	45	89	27	535
P 11 50		30	637	50	90	30	539
P 12 55		33		55	91	33	540
P 13 60		36		60	92	36	543
P 14 65		39		65		39	545
P 15 70		42		70		42	546
P 16 75		45		75		45	547
P 17 80		48		80		48	548
P 18 85		51		85		51	549
P 19 90		54		90		54	550
P 20 95		57		95		57	551
100		60		100		60	552

TK-# 19779
I.

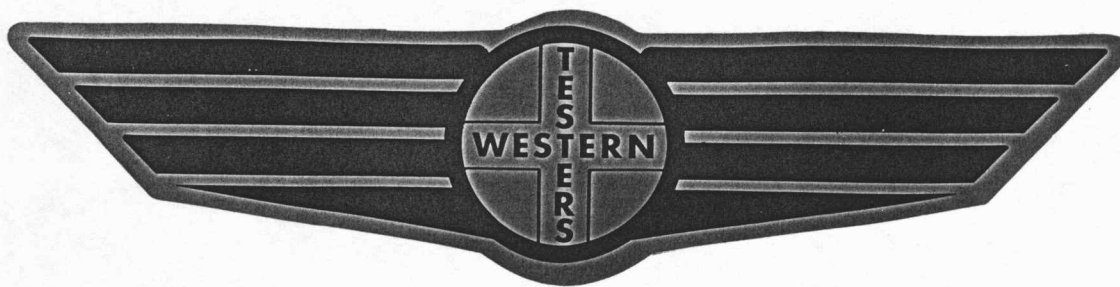


TK-# 19779
O.



3354

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688- 7021**

DST REPORT

GENERAL INFORMATION

DATE	: 8/18/93	TICKET	: 19779
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: MCNEE E
WELL	: #2	TEST:	2
ELEVATION:	1127 KB	GEOLOGIST:	BLAIR
SECTION	: 13	FORMATION:	MISSISSIPPI
RANGE	: 10E	TOWNSHIP	: 32S
GAUGE SN#:	10979	STATE	: KS
		CLOCK	: 12
	COUNTY: CHAUTAUQUA		
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	1972.00 ft	TO:	2000.00 ft	TVD:	2000.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	1993.0 ft		1997.0 ft		
TEMPERATURE:	102.0				
DRILL COLLAR LENGTH:	330.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	1622.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	28.0 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 :		4.5FH	
PACKER DEPTH:	1967.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	1972.0 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. :	GLAVES RIG 1	VISCOSITY :	47.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	11.200 cc
WEIGHT :	9.500 ppg		
CHLORIDES :	1300 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO VERY STRONG BLOW -
BOTTOM OF BUCKET IN 1 MINUTE. GAS TO SURFACE IN
28 MINUTES. SEE GAS SHEET ATTACHED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
170.0	50.0	20.0	0.0	30.0	GASSY OIL CUT MUD
0.0	0.0	0.0	0.0	0.0	1820 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.4180	STB		
GAS VOLUME:	0.9388	SCF		
MUD VOLUME:	0.2508	STB		
WATER VOLUME:	0.0000	STB		
TOTAL FLUID :	0.6688	STB		
			TOTAL FLOW TIME:	90.0000 min.
			AVERAGE OIL RATE:	10.7004 STB/D
			AVERAGE WATER RATE:	0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1060.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	50.00	75.00
INITIAL SHUT-IN	30.00		635.00
FINAL FLOW	60.00	85.00	95.00
FINAL SHUT-IN	60.00		555.00

FINAL HYDROSTATIC PRESSURE: 1050.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1051.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	69.00	71.00
INITIAL SHUT-IN	30.00		637.00
FINAL FLOW	60.00	96.00	92.00
FINAL SHUT-IN	60.00		552.00

FINAL HYDROSTATIC PRESSURE: 1020.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 8/18/93	TICKET : 19779
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : MCNEE E
WELL : #2	GEOLOGIST: BLAIR
ELEVATION: 1127 KB	FORMATION: MISSISSIPPI
SECTION : 13	TOWNSHIP : 32S
RANGE : 10E	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: CHAUTAUQUA	
RANGE : 4100	

PRE FLOW

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

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.500	27 " WATER	32500 SCF/D
20 MIN	MERLA	0.500	28" WATER	33200 SCF/D
30 MIN	MERLA	0.500	26" WATER	31900 SCF/D
40 MIN	MERLA	0.500	23" WATER	30100 SCF/D
50 MIN	MERLA	0.500	19" WATER	27300 SCF/D
60 MIN	MERLA	0.500	17" WATER	25800 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/18/93	TICKET : 19779
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : MCNEE E
WELL : #2 TEST: 2	GEOLOGIST: BLAIR
ELEVATION: 1127 KB	FORMATION: MISSISSIPPI
SECTION : 13	TOWNSHIP : 32S
RANGE : 10E COUNTY: CHAUTAUQUA	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	69.00	69.00
5.00	59.00	-10.00
10.00	63.00	4.00
15.00	65.00	2.00
20.00	71.00	6.00
25.00	71.00	0.00
30.00	71.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	232.00	232.00	0.00
6.00	541.00	309.00	0.00
9.00	589.00	48.00	0.00
12.00	606.00	17.00	0.00
15.00	618.00	12.00	0.00
18.00	627.00	9.00	0.00
21.00	631.00	4.00	0.00
24.00	633.00	2.00	0.00
27.00	635.00	2.00	0.00
30.00	637.00	2.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	96.00	96.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	84.00	-12.00
10.00	84.00	0.00
15.00	85.00	1.00
20.00	85.00	0.00
25.00	86.00	1.00
30.00	86.00	0.00
35.00	87.00	1.00
40.00	88.00	1.00
45.00	89.00	1.00
50.00	90.00	1.00
55.00	91.00	1.00
60.00	92.00	1.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	310.00	310.00	0.00
6.00	462.00	152.00	0.00
9.00	488.00	26.00	0.00
12.00	503.00	15.00	0.00
15.00	512.00	9.00	0.00
18.00	521.00	9.00	0.00
21.00	527.00	6.00	0.00
24.00	531.00	4.00	0.00
27.00	535.00	4.00	0.00
30.00	539.00	4.00	0.00
33.00	540.00	1.00	0.00
36.00	543.00	3.00	0.00
39.00	545.00	2.00	0.00
42.00	546.00	1.00	0.00
45.00	547.00	1.00	0.00
48.00	548.00	1.00	0.00
51.00	549.00	1.00	0.00
54.00	550.00	1.00	0.00
57.00	551.00	1.00	0.00
60.00	552.00	1.00	0.00



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET N° 19780

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation

1127 KB

Formation

Miss

Eff. Pay

Ft.

District

Augusta

Date

8-19-93

Customer Order No.

COMPANY NAME

Range Oil Co. Inc.

ADDRESS 125 N Market Suite 1120 Wichita KS 67202

LEASE AND WELL NO

McNee E #2

COUNTY

Chautauque

STATE

KS

Sec.

13

Twp.

32

Rge.

DE

Mail Invoice To

Same

No. Copies Requested

1

Mail Charts To

Same

Address

No. Copies Requested

5

Formation Test No.

AST#3

Interval Tested From

2002

ft. to

2050

ft. Total

Depth 2050

ft.

Packer Depth

1997

ft.

Size

6 3/8

in.

Packer Depth

-

ft.

Size

-

in.

Packer Depth

2002

ft.

Size

6 3/8

in.

Packer Depth

-

ft.

Size

-

in.

Depth of Selective Zone Set

Top Recorder Depth (Inside)

2044

ft.

Recorder Number

10979

Cap.

4100

Bottom Recorder Depth (Outside)

2047

ft.

Recorder Number

3354

Cap.

4200

Below Straddle Recorder Depth

-

ft.

Recorder Number

-

Cap.

-

Drilling Contractor

Glaves Riser

Drill Collar Length

330

I. D.

2 1/2 in.

Mud Type

Chen

Viscosity

47

Weight Pipe Length

-

I. D.

-

in.

Weight

8.4

Water Loss

10.0

cc.

Drill Pipe Length

1652

I. D.

3.8

in.

Chlorides

1100

P.P.M.

Test Tool Length

20

ft.

Tool Size

5/16 in.

Jars: Make

-

Serial Number

-

Anchor Length

48

ft.

Size

5/16 in.

Did Well Flow?

-

Reversed Out

-

Surface Choke Size

3/4

in.

Bottom Choke Size

3/4 in.

Main Hole Size

7/8

in.

Tool Joint Size

5/16 in.

Blow: No blow thru out test (IFP & PFP)

Recovered 5 ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

AUG 23 1993

Chlorides

P.P.M. Sample Jars used

Remarks:

Time On Location

Start by

A.M.

Time Pick Up Tool

12:00

A.M.

Time Off Location

A.M.

Time Set Packer(s)

1:00

A.M.

Time Started Off Bottom

3:00

A.M.

Maximum Temperature

102°F

Initial Hydrostatic Pressure

(A)

1050

P.S.I.

Initial Flow Period

Minutes

30

(B)

40

P.S.I. to (C)

30

P.S.I.

Initial Closed In Period

Minutes

30

(D)

50

P.S.I.

Final Flow Period

Minutes

30

(E)

30

P.S.I. to (F)

40

P.S.I.

Final Closed In Period

Minutes

30

(G)

50

P.S.I.

Final Hydrostatic Pressure

(H)

1040

P.S.I.

10979

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

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 _____

Test Ticket No. 19780

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1045</u>	P.S.I.	<u>1:00</u> M	
B First Initial Flow Pressure	<u>46</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>36</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>46</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>42</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>44</u>	P.S.I.		
G Final Closed-in Pressure	<u>63</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1027</u>	P.S.I.		

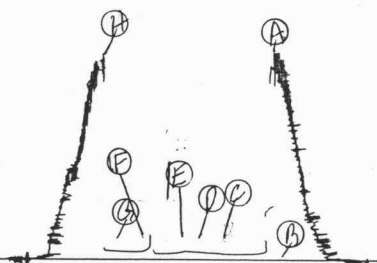
*Flushed Tool
Final Flow Period*

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>46</u>	0	<u>36</u>	0	<u>42</u>	0	<u>44</u>
P 2 5	<u>36</u>	3	<u>39</u>	5	<u>38</u>	3	<u>52</u>
P 3 10	<u>↓</u>	6	<u>38</u>	10	<u>38 39</u>	6	<u>54</u>
P 4 15	<u>↓</u>	9	<u>39</u>	15	<u>36</u>	9	<u>56</u>
P 5 20	<u>↓</u>	12	<u>40</u>	20	<u>36</u>	12	<u>57</u>
P 6 25	<u>↓</u>	15	<u>41</u>	25	<u>36 50</u> FT	15	<u>58</u>
P 7 30	<u>36</u>	18	<u>42</u>	30	<u>30</u>	18	<u>59</u>
P 8 35		21	<u>43</u>	35		21	<u>60</u>
P 9 40		24	<u>44</u>	40		24	<u>61</u>
P10 45		27	<u>45</u>	45		27	<u>62</u>
P11 50		30	<u>46</u>	50		30	<u>63</u>
P12 55		33		55		33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

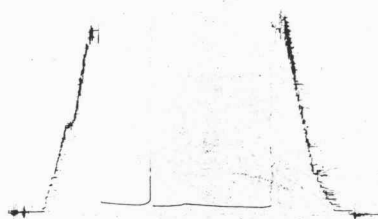
TK# 19280

T.



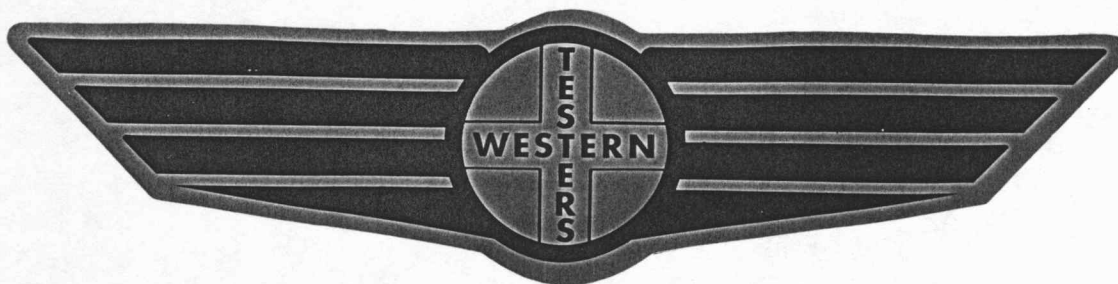
TK# 19780

0.



3354

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #2 MCNEE E SEC. 13 TWP. 32S RGE. 10E TEST NO. 3 DATE 8/19/93

DST REPORT

GENERAL INFORMATION

DATE	: 8/19/93	TICKET	: 19780
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: MCNEE E
WELL	: #2	TEST:	3
ELEVATION:	1127 KB	GEOLOGIST:	BLAIR
SECTION	: 13	FORMATION:	MISSISSIPPI
RANGE	: 10E	TOWNSHIP	: 32S
GAUGE SN#:	10979	STATE	: KS
	COUNTY: CHAUTAUQUA	CLOCK	: 12
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	2002.00 ft	TO:	2050.00 ft	TVD:	2050.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	2044.0 ft		2047.0 ft		
TEMPERATURE:	102.0				
DRILL COLLAR LENGTH:	330.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	1652.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	48.0 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 :		4.5FH	
PACKER DEPTH:	1997.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	2002.0 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. :	GLAVES RIG 1	VISCOSITY :	47.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	10.000 cc
WEIGHT :	9.400 ppg		
CHLORIDES :	1100 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

NO BLOW THROUGHOUT TEST.
FLUSHED TOOL FINAL FLOW PERIOD.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
5.0	0.0	0.0	0.0	100.0	DRILLING MUD - 6 INCHES
0.0	0.0	0.0	0.0	0.0	FREE OIL ON TOP OF TOOL

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0246	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0246	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1050.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	40.00	30.00
INITIAL SHUT-IN	30.00		50.00
FINAL FLOW	30.00	30.00	40.00
FINAL SHUT-IN	30.00		50.00

FINAL HYDROSTATIC PRESSURE: 1040.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1045.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	46.00	36.00
INITIAL SHUT-IN	30.00		46.00
FINAL FLOW	30.00	42.00	44.00
FINAL SHUT-IN	30.00		63.00

FINAL HYDROSTATIC PRESSURE: 1027.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 8/19/93	TICKET : 19780
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : MCNEE E
WELL : #2	GEOLOGIST: BLAIR
ELEVATION: 1127 KB	FORMATION: MISSISSIPPI
SECTION : 13	TOWNSHIP : 32S
RANGE : 10E	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: CHAUTAUQUA	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	46.00	46.00
5.00	36.00	-10.00
10.00	36.00	0.00
15.00	36.00	0.00
20.00	36.00	0.00
25.00	36.00	0.00
30.00	36.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	37.00	37.00	0.00
6.00	38.00	1.00	0.00
9.00	39.00	1.00	0.00
12.00	40.00	1.00	0.00
15.00	41.00	1.00	0.00
18.00	42.00	1.00	0.00
21.00	43.00	1.00	0.00
24.00	44.00	1.00	0.00
27.00	45.00	1.00	0.00
30.00	46.00	1.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	42.00	42.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	38.00	-4.00
10.00	37.00	-1.00
15.00	36.00	-1.00
20.00	36.00	0.00
25.00	36.00	0.00
30.00	44.00	8.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	52.00	52.00	0.00
6.00	54.00	2.00	0.00
9.00	56.00	2.00	0.00
12.00	57.00	1.00	0.00
15.00	58.00	1.00	0.00
18.00	59.00	1.00	0.00
21.00	60.00	1.00	0.00
24.00	61.00	1.00	0.00
27.00	62.00	1.00	0.00
30.00	63.00	1.00	0.00