



Operator Name Murfin Drilling Co., Inc. Lease Name Howell Well # 1-32  
 Sec. 32 Twp. 29 Rge. 15W  East  West  
 County Pratt

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests given interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No Formation (Top), Depth and Datum:  Sample  
 (Attach Additional Sheets.)  
 Samples Sent to Geological Survey  Yes  No Name Top Datum  
 Cores Taken  Yes  No  
 Electric Log Run  Yes  No  
 (Submit Copy.)  
 List All E.Logs Run:  
 See attached. See attached.

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
surface	12 1/2	8 5/8	24	422	60-40 Poz	275	2%Gel 3%CC
Production	7 7/8	4 1/2	10.5	4994	Class A	200	10% salt, 3/4% Halad 322

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives	
<input type="checkbox"/> Perforate					
<input type="checkbox"/> Protect Casing					
<input type="checkbox"/> Plug Back TD					
<input type="checkbox"/> Plug Off Zone					

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated		Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)		Depth
	4	4746-50		1000 gal. 28% NE	
4	4756-66		1500 gal. MOD		
2	4792-4808		2000 gal. MOD		4746-66 4792-4808

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No

Date of First, Resumed Production, SWD or Inj.                      Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)                     

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas:  Vented  Sold  Used on Lease (If vented, submit ACO-18.) METHOD OF COMPLETION:  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify)                      Production Interval as above

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# FORMATION

# TEST

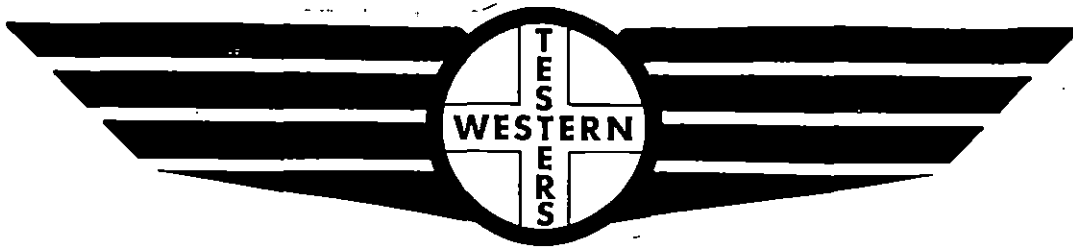
# REPORT

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SEP 6 1994

FROM CONFIDENTIAL

COMPANY MURFIN DRILLING COMPANY LEASE & WELL NO. #1-32 HOWELL SEC. 32 TWP. 29S RGE. 15W TEST NO. 1 DATE 5/21/93



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7000

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STATE CORPORATION COMMISSION

AUG 26 1993

CONSERVATION DIVISION  
Wichita, Kansas

ORIGINAL

007

DST REPORT

GENERAL INFORMATION

DATE : 5-21-93	TICKET : 18694
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : 1-32 TEST: 1	GEOLOGIST: BEN LANDES
ELEVATION: 2032 K.B.	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12 HR

WELL INFORMATION

PERFORATION INTERVAL FROM: 4704.00 ft	TO: 4760.00 ft	TVD: 4760.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4753.0 ft	4757.0 ft	
TEMPERATURE: 130.0		
DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4684.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 56.0 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: 4699.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4704.0 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. : VAL DRILLING	VISCOSITY : 47.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 10.400 cc
WEIGHT : 9.300 ppg	SERIAL NUMBER:
CHLORIDES : 6500 ppm	REVERSED OUT?: NO
JARS-MAKE : NONE	
DID WELL FLOW?: NO	

COMMENTS

Comment

WEAK TO VERY STRONG BLOW - 4 MINUTES TO BOTTOM ON BOTH FLOW PERIODS.

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DST REPORT (CONTINUED)

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**FLUID RECOVERY**

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments	FROM CONFIDENTIAL
90.0	100.0	0.0	0.0	0.0	FREE OIL	
0.0	0.0	0.0	0.0	0.0	GRAVITY 37 @ 60 DEGREES F	
320.0	35.0	40.0	0.0	25.0	GASSY OIL CUT MUD	
0.0	0.0	0.0	0.0	0.0	3370 FT GAS ABOVE FLUID	

**RATE INFORMATION**

OIL VOLUME: 2.8333 STB	TOTAL FLOW TIME: 75.0000 min.
GAS VOLUME: 10.0810 SCF	AVERAGE OIL RATE: 75.9443 STB/D
MUD VOLUME: 1.1221 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 3.9554 STB	

**FIELD TIME & PRESSURE INFORMATION**

INITIAL HYDROSTATIC PRESSURE: 2315.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	95.00
INITIAL SHUT-IN	60.00		1480.00
FINAL FLOW	45.00	125.00	145.00
FINAL SHUT-IN	90.00		1420.00

FINAL HYDROSTATIC PRESSURE: 2305.00

**OFFICE TIME & PRESSURE INFORMATION**

INITIAL HYDROSTATIC PRESSURE: 2300.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	73.00	96.00
INITIAL SHUT-IN	60.00		1470.00
FINAL FLOW	45.00	139.00	160.00
FINAL SHUT-IN	90.00		1395.00

FINAL HYDROSTATIC PRESSURE: 2228.00

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3000 PRESSURE TRANSIENT REPORT

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GENERAL INFORMATION

DATE : 5-21-93	TICKET : 18694
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : 1-32 TEST: 1	GEOLOGIST: BEN LANDES
ELEVATION: 2032 K.B.	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12 HR

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	73.00	73.00
5.00	67.00	-6.00
10.00	71.00	4.00
15.00	80.00	9.00
20.00	85.00	5.00
25.00	92.00	7.00
30.00	96.00	4.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	141.00	141.00	16.00
6.00	234.00	93.00	8.50
9.00	637.00	403.00	6.00
12.00	1122.00	485.00	4.75
15.00	1256.00	134.00	4.00
18.00	1296.00	40.00	3.50
21.00	1326.00	30.00	3.14
24.00	1350.00	24.00	2.88
27.00	1369.00	19.00	2.67
30.00	1388.00	19.00	2.50
33.00	1403.00	15.00	2.36
36.00	1414.00	11.00	2.25
39.00	1423.00	9.00	2.15
42.00	1434.00	11.00	2.07
45.00	1442.00	8.00	2.00
48.00	1448.00	6.00	1.94
51.00	1455.00	7.00	1.88
54.00	1460.00	5.00	1.83
57.00	1464.00	4.00	1.79

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PRESSURE TRANSIENT REPORT (CONTINUED)

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INITIAL SHUT IN (CONTINUED)

SEP 6 1994

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1470.00	6.00	1.75

FROM CONFIDENTIAL

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	139.00	139.00
5.00	126.00	-13.00
10.00	127.00	1.00
15.00	133.00	6.00
20.00	137.00	4.00
25.00	143.00	6.00
30.00	148.00	5.00
35.00	150.00	2.00
40.00	155.00	5.00
45.00	160.00	5.00

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FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	237.00	237.00	31.00
6.00	554.00	317.00	16.00
9.00	1003.00	449.00	11.00
12.00	1128.00	125.00	8.50
15.00	1175.00	47.00	7.00
18.00	1212.00	37.00	6.00
21.00	1232.00	20.00	5.29
24.00	1252.00	20.00	4.75
27.00	1267.00	15.00	4.33
30.00	1278.00	11.00	4.00
33.00	1290.00	12.00	3.73
36.00	1301.00	11.00	3.50
39.00	1307.00	6.00	3.31
42.00	1317.00	10.00	3.14
45.00	1325.00	8.00	3.00
48.00	1331.00	6.00	2.88
51.00	1337.00	6.00	2.76
54.00	1341.00	4.00	2.67
57.00	1348.00	7.00	2.58

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PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1354.00	6.00	2.50
63.00	1360.00	6.00	2.43
66.00	1364.00	4.00	2.36
69.00	1368.00	4.00	2.30
72.00	1373.00	5.00	2.25
75.00	1380.00	7.00	2.20
78.00	1385.00	5.00	2.15
81.00	1387.00	2.00	2.11
84.00	1390.00	3.00	2.07
87.00	1393.00	3.00	2.03
90.00	1395.00	2.00	2.00

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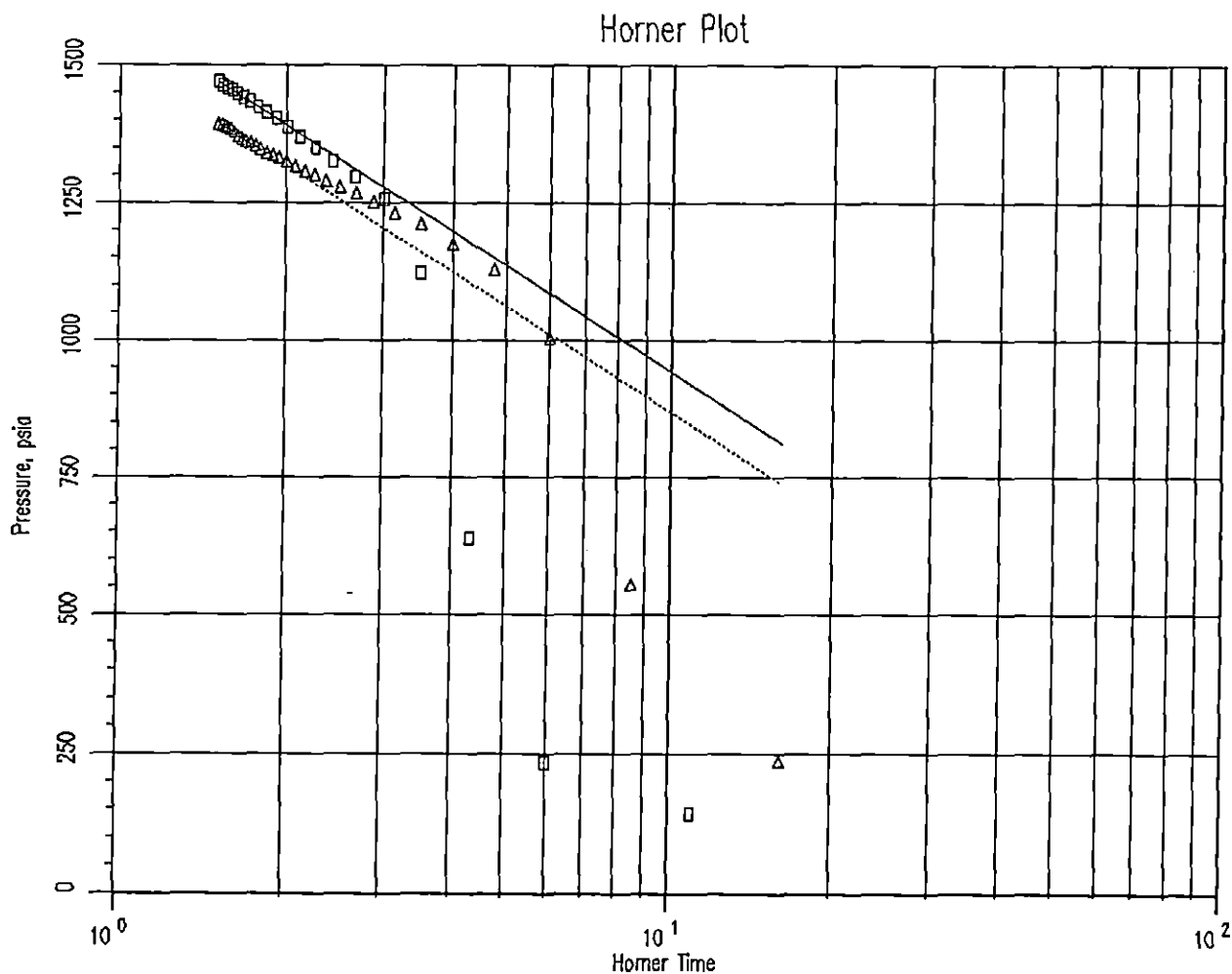
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DATE 5-21-93  
 CUSTOMER MURFIN DRILLING COMPANY  
 WELL 1-32  
 ELEVATION 2032 K.B.  
 SECTION 32  
 RANGE 15W  
 GAUGE SN# 10979

TEST 1  
 COUNTY PRATT  
 RANGE 4100

TICKET 18694  
 LEASE HOWELL  
 GEOLOGIST BEN LANDES  
 FORMATION VIOLA  
 TOWNSHIP 29S  
 STATE KS  
 CLOCK 12 HR



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Result

	#1	#2
tp, hrs	0.50	0.75
Slope	-640.17	-640.69
Pstar, psig	1582.85	1509.31
P1hr, psig	1470.12	1353.59
Skin	0.23	-0.22
k, md	1.65	1.65
kh/u, md-ft/cp	22.46	22.44
ri, ft	5.04	6.17
DR, %	0.89	0.77
Drawdown Factor, %		5.102
Drawdown P*, %		4.647

— BUILD 1  
 ..... BUILD 2

FROM CONFIDENTIAL

SEP 6 1994

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HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 5-21-93	TICKET : 18694
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : 1-32 TEST: 1	GEOLOGIST: BEN LANDES
ELEVATION: 2032 K.B.	FORMATION: VIOLA
SECTION : 32	TOWNSHIP: 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12 HR

Input Data

Porosity 0.180 Rw: 0.328 ft h: 12.000 ft

qo 75.9 STB GOR 338.4 SCF/STB

Pvt Data

Evaluation Pressure : 1470.0  
Evaluation Temperature: 130.0

Oil Grav 37.00 API	Gas Grav 0.65 API	Pb 1470.00 PSIA
Bo 1.164 RBL/STB	Vis 1.000 cp	Ct 2.1617E-004 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
--	-----------------	---------------

pseudo pressure time	0.50 hrs	0.75 hrs
slope	-640.17	-640.69
pstar	1582.85 psig	1509.31 psig
plhr	1470.12 psig	1353.59 psig
skin	0.23	-0.22
permeability	1.65 md	1.65 md
transmissability	22.46 md-ft/cp	22.44 md-ft/cp
radius of investigation	5.04 ft	6.17 ft
Damage-Ratio	0.89 percent	0.77 percent
Drawdown Factor		5.102 percent
Drawdown P*		4.647 percent

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FORMATION

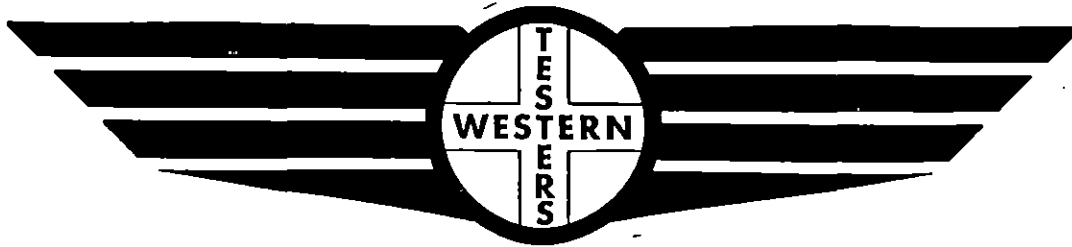
TEST

REPORT

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FROM CONFIDENTIAL



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

COMPANY MURFIN DRILLING COMPANY LEASE & WELL NO. #1-32 HOWELL SEC. 32 TWP. 29S RGE. 15W TEST NO. 2 DATE 5/23/93

AM10130

0.07  
2.80

DST REPORT

GENERAL INFORMATION

DATE : 5/23/93	TICKET : 18695
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : #1-32 TEST: 2	GEOLOGIST: LANDES
ELEVATION: 2032 KB	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4794.00 ft	TO: 4818.00 ft	TVD: 4980.0 ft
DEPTH OF SELECTIVE ZONE:	TEST TYPE: OIL	
DEPTH OF RECORDERS: 4812.0 ft	4815.0 ft	
TEMPERATURE: 127.0		
DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4774.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 186.0 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: 4789.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4794.0 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. : VAL ENERGY RIG 1	VISCOSITY : 49.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 8.800 cc
WEIGHT : 9.200 ppg	SERIAL NUMBER:
CHLORIDES : 5000 ppm	REVERSED OUT?: NO
JARS-MAKE :	
DID WELL FLOW?: NO	

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW - 1 1/2 INCHES INTO BUCKET. FINAL FLOW PERIOD VERY WEAK TO STRONG BLOW - 8 INCHES INTO BUCKET.

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DST REPORT (CONTINUED)

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FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
45.0	15.0	0.0	0.0	85.0	OIL CUT MUD
0.0	0.0	0.0	0.0	0.0	165 FT GAS ABOVE FLUID

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RATE INFORMATION

OIL VOLUME: 0.0947 STB  
 GAS VOLUME: 0.0000 SCF  
 MUD VOLUME: 0.5365 STB  
 WATER VOLUME: 0.0000 STB  
 TOTAL FLUID : 0.6312 STB

TOTAL FLOW TIME: 120.0000 min.  
 AVERAGE OIL RATE: 7.5742 STB/D  
 AVERAGE WATER RATE: 0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2305.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	40.00	30.00
INITIAL SHUT-IN	60.00		1520.00
FINAL FLOW	90.00	30.00	30.00
FINAL SHUT-IN	120.00		1460.00

FINAL HYDROSTATIC PRESSURE: 2295.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2325.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	56.00	36.00
INITIAL SHUT-IN	60.00		1547.00
FINAL FLOW	90.00	62.00	47.00
FINAL SHUT-IN	120.00		1469.00

FINAL HYDROSTATIC PRESSURE: 2315.00

BOX

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 5/23/93	TICKET	: 18695
CUSTOMER	: MURFIN DRILLING COMPANY	LEASE	: HOWELL
WELL	: #1-32	TEST:	: 2
ELEVATION:	2032 KB	GEOLOGIST:	LANDES
SECTION	: 32	FORMATION:	VIOLA
RANGE	: 15W	TOWNSHIP	: 29S
GAUGE SN#:	10979	STATE	: KS
		CLOCK	: 12
		COUNTY:	PRATT
		RANGE	: 4100

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	56.00	56.00
5.00	47.00	-9.00
10.00	45.00	-2.00
15.00	42.00	-3.00
20.00	40.00	-2.00
25.00	38.00	-2.00
30.00	36.00	-2.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	48.00	48.00	11.00
6.00	61.00	13.00	6.00
9.00	84.00	23.00	4.33
12.00	132.00	48.00	3.50
15.00	201.00	69.00	3.00
18.00	337.00	136.00	2.67
21.00	523.00	186.00	2.43
24.00	831.00	308.00	2.25
27.00	1079.00	248.00	2.11
30.00	1391.00	312.00	2.00
33.00	1494.00	103.00	1.91
36.00	1477.00	-17.00	1.83
39.00	1477.00	0.00	1.77
42.00	1483.00	6.00	1.71
45.00	1494.00	11.00	1.67
48.00	1503.00	9.00	1.63
51.00	1512.00	9.00	1.59
54.00	1527.00	15.00	1.56
57.00	1537.00	10.00	1.53

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PRESSURE TRANSIENT REPORT (CONTINUED)

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INITIAL SHUT IN (CONTINUED)

SEP 6 1994

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1547.00	10.00	1.50

FROM CONFIDENTIAL

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	62.00	62.00
5.00	46.00	-16.00
10.00	46.00	0.00
15.00	46.00	0.00
20.00	46.00	0.00
25.00	46.00	0.00
30.00	46.00	0.00
35.00	46.00	0.00
40.00	46.00	0.00
45.00	46.00	0.00
50.00	47.00	1.00
55.00	47.00	0.00
60.00	47.00	0.00
65.00	47.00	0.00
70.00	47.00	0.00
75.00	47.00	0.00
80.00	47.00	0.00
85.00	47.00	0.00
90.00	47.00	0.00

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FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	59.00	59.00	31.00
6.00	71.00	12.00	16.00
9.00	94.00	23.00	11.00
12.00	113.00	19.00	8.50
15.00	136.00	23.00	7.00
18.00	165.00	29.00	6.00
21.00	217.00	52.00	5.29
24.00	285.00	68.00	4.75
27.00	389.00	104.00	4.33
30.00	509.00	120.00	4.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

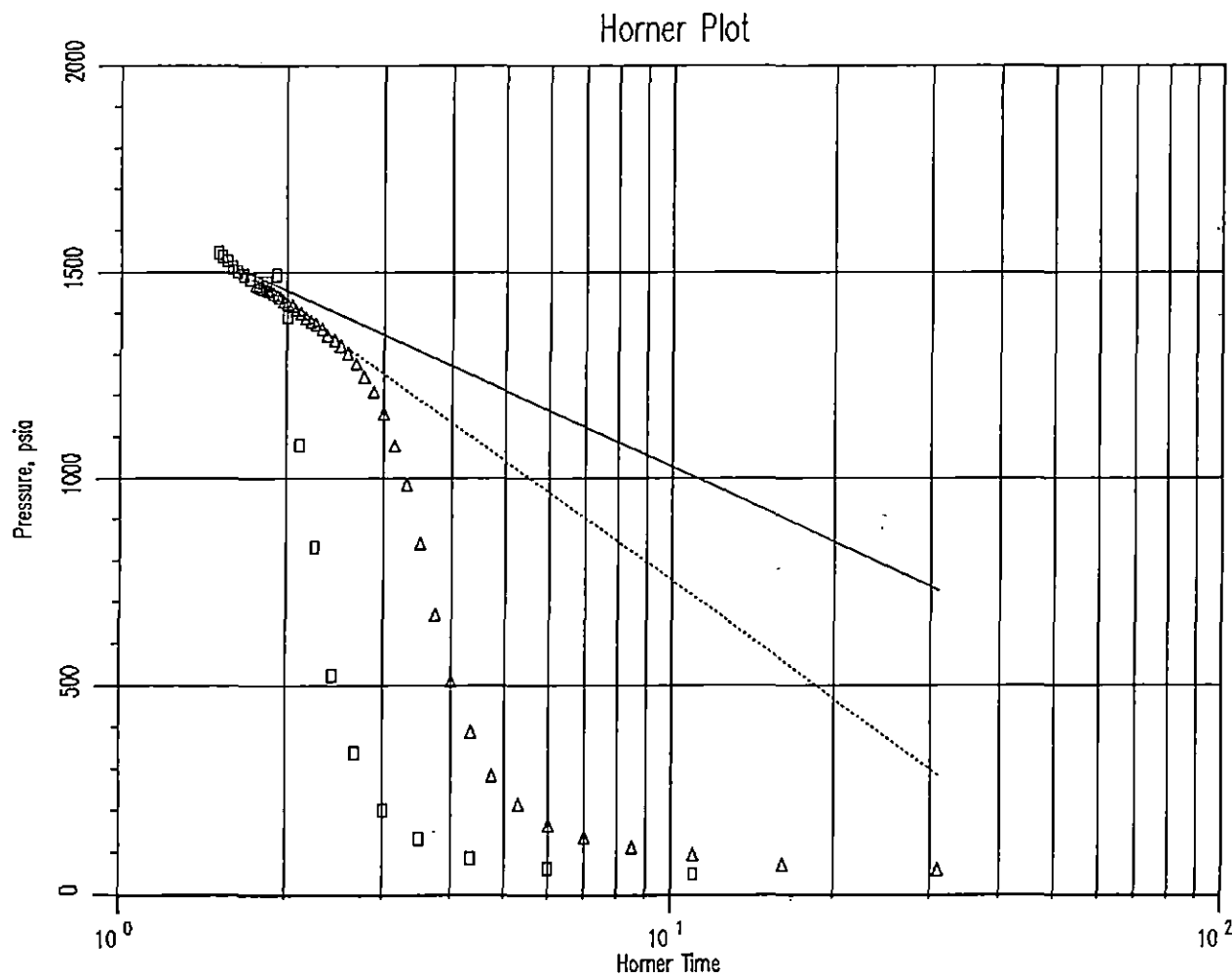
Time (min)	Pressure	Delta P	Horner T
33.00	668.00	159.00	3.73
36.00	840.00	172.00	3.50
39.00	985.00	145.00	3.31
42.00	1078.00	93.00	3.14
45.00	1156.00	78.00	3.00
48.00	1209.00	53.00	2.88
51.00	1246.00	37.00	2.76
54.00	1277.00	31.00	2.67
57.00	1303.00	26.00	2.58
60.00	1320.00	17.00	2.50
63.00	1336.00	16.00	2.43
66.00	1348.00	12.00	2.36
69.00	1361.00	13.00	2.30
72.00	1373.00	12.00	2.25
75.00	1381.00	8.00	2.20
78.00	1389.00	8.00	2.15
81.00	1400.00	11.00	2.11
84.00	1408.00	8.00	2.07
87.00	1418.00	10.00	2.03
90.00	1424.00	6.00	2.00
93.00	1430.00	6.00	1.97
96.00	1439.00	9.00	1.94
99.00	1444.00	5.00	1.91
102.00	1449.00	5.00	1.88
105.00	1453.00	4.00	1.86
108.00	1457.00	4.00	1.83
111.00	1461.00	4.00	1.81
114.00	1464.00	3.00	1.79
117.00	1467.00	3.00	1.77
120.00	1469.00	2.00	1.75



DATE 5/23/93  
 CUSTOMER MURFIN DRILLING COMPANY  
 WELL #1-32  
 ELEVATION 2032 KB  
 SECTION 32  
 RANGE 15W  
 GAUGE SN# 10979

TEST 2  
 COUNTY PRATT  
 RANGE 4100

TICKET 18695  
 LEASE HOWELL  
 GEOLOGIST LANDES  
 FORMATION VIOLA  
 TOWNSHIP 29S  
 STATE KS  
 CLOCK 12



CONFIDENTIAL

AUG 25

KCC

Result

	#1	#2
tp, hrs	0.50	1.50
Slope	-610.81	-955.76
Pstar, psig	1640.16	1708.61
P1hr, psig	1532.60	1328.28
Skin	-0.87	-2.22
k, md	0.27	0.17
kh/u, md-ft/cp	0.27	0.17
ri, ft	21.63	29.95
DR, %	0.66	0.38
Drawdown Factor,	FROM CONFIDENTIAL	5.042
Drawdown P*, %	SEP 6 1994	-4.174

— BUILD 1  
 ..... BUILD 2

FROM CONFIDENTIAL

SEP 6 1994

RELEASED

ORIGINAL

AM10110

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 5/23/93	TICKET : 18695
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : #1-32 TEST: 2	GEOLOGIST: LANDES
ELEVATION: 2032 KB	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

Input Data

Porosity 0.300 Rw: 0.328 ft h: 1.000 ft  
 go 1.0 STB GOR 1.0 SCF/STB

Pvt Data  
 Evaluation Pressure : 1000.0  
 Evaluation Temperature: 127.0

Oil Grav 30.00 API	Gas Grav 0.65 API	Pb 1000.00 PSIA
Bo 1.000 RBL/STB	Vis 1.000 cp	Ct 1.0000E-006 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
pseudo pressure time	0.50 hrs	1.50 hrs
slope	-610.81	-955.76
pstar	1640.16 psig	1708.61 psig
plhr	1532.60 psig	1328.28 psig
skin	-0.87	-2.22
permeability	0.27 md	0.17 md
transmissability	0.27 md-ft/cp	0.17 md-ft/cp
radius of investigation	21.63 ft	29.95 ft
Damage-Ratio	0.66 percent	0.38 percent
Drawdown Factor		5.042 percent
Drawdown P*		-4.174 percent

ORIGINAL  
KCC

AUG 25

CONFIDENTIAL

FORMATION

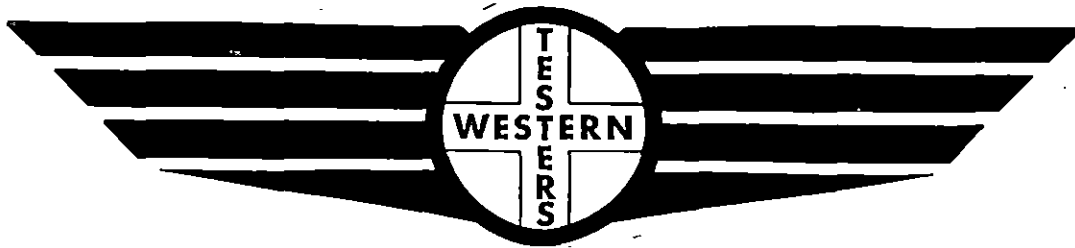
TEST

REPORT

RELEASED

SEP 6 1994

FROM CONFIDENTIAL



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800 - 688 - 7021

COMPANY MURFIN DRILLING COMPANY LEASE & WELL NO. #1-32 HOWELL SEC. 32 TWP. 29S RGE. 25W TEST NO. 3 DATE 5/24/93

DST REPORT

GENERAL INFORMATION

DATE : 5/24/93	TICKET : 18696
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : #1-32 TEST: 3	GEOLOGIST: LANDES
ELEVATION: 2032 KB	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4736.00 ft	TO: 4800.00 ft	TVD: 4980.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4787.0 ft	4790.0 ft	
TEMPERATURE: 129.0		
DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH: 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH: 4716.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH: 20.0 ft	TOOL SIZE:	5.500 in
ANCHOR LENGTH: 244.0 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: 4731.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4736.0 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. : VAL ENERGY RIG 1	
MUD TYPE : CHEMICAL	VISCOSITY : 49.00 cp
WEIGHT : 9.200 ppg	WATER LOSS: 8.800 cc
CHLORIDES : 5000 ppm	
JARS-MAKE :	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO A VERY STRONG BLOW -  
 BOTTOM OF BUCKET IN 15 MINUTES. FINAL FLOW PERIOD  
 VERY STRONG BLOW - BOTTOM OF BUCKET IN 1 MINUTE.

DST REPORT (CONTINUED) AUG 25

CONFIDENTIAL

RELEASED

FLUID RECOVERY

SEP 6 1994

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
230.0	100.0	0.0	0.0	0.0	FREE OIL
180.0	25.0	40.0	0.0	35.0	GASSY OIL CUT MUD
0.0	0.0	0.0	0.0	0.0	3560 FT GAS ABOVE FLUID

FROM CONFIDENTIAL

RATE INFORMATION

OIL VOLUME: 3.8572 STB	TOTAL FLOW TIME: 135.0000 min.
GAS VOLUME: 5.6706 SCF	AVERAGE OIL RATE: 50.5697 STB/D
MUD VOLUME: 0.8837 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 4.7409 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2305.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	95.00
INITIAL SHUT-IN	60.00		1480.00
FINAL FLOW	90.00	125.00	190.00
FINAL SHUT-IN	120.00		1430.00

FINAL HYDROSTATIC PRESSURE: 2295.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2296.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	77.00	100.00
INITIAL SHUT-IN	60.00		1473.00
FINAL FLOW	90.00	157.00	193.00
FINAL SHUT-IN	120.00		1442.00

FINAL HYDROSTATIC PRESSURE: 2248.00

AM10190

29 PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 5/24/93	TICKET : 18696
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : #1-32 TEST: 3	GEOLOGIST: LANDES
ELEVATION: 2032 KB	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	77.00	77.00
5.00	80.00	3.00
10.00	82.00	2.00
15.00	86.00	4.00
20.00	88.00	2.00
25.00	91.00	3.00
30.00	92.00	1.00
35.00	94.00	2.00
40.00	96.00	2.00
45.00	100.00	4.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	140.00	140.00	16.00
6.00	203.00	63.00	8.50
9.00	289.00	86.00	6.00
12.00	435.00	146.00	4.75
15.00	608.00	173.00	4.00
18.00	892.00	284.00	3.50
21.00	1127.00	235.00	3.14
24.00	1277.00	150.00	2.88
27.00	1336.00	59.00	2.67
30.00	1367.00	31.00	2.50
33.00	1385.00	18.00	2.36
36.00	1399.00	14.00	2.25
39.00	1412.00	13.00	2.15
42.00	1423.00	11.00	2.07
45.00	1432.00	9.00	2.00
48.00	1443.00	11.00	1.94

ORIGINAL

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>	RELEASED SEP 6 1994
51.00	1451.00	8.00	1.88	FROM CONFIDENTIAL
54.00	1455.00	4.00	1.83	
57.00	1461.00	6.00	1.79	
60.00	1473.00	12.00	1.75	

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	KCC AUG 25 CONFIDENTIAL
0.00	157.00	157.00	
5.00	140.00	-17.00	
10.00	140.00	0.00	
15.00	140.00	0.00	
20.00	142.00	2.00	
25.00	146.00	4.00	
30.00	151.00	5.00	
35.00	153.00	2.00	
40.00	155.00	2.00	
45.00	161.00	6.00	
50.00	167.00	6.00	
55.00	172.00	5.00	
60.00	174.00	2.00	
65.00	178.00	4.00	
70.00	182.00	4.00	
75.00	185.00	3.00	
80.00	188.00	3.00	
85.00	191.00	3.00	
90.00	193.00	2.00	

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	324.00	324.00	31.00
6.00	739.00	415.00	16.00
9.00	1078.00	339.00	11.00
12.00	1182.00	104.00	8.50
15.00	1230.00	48.00	7.00
18.00	1252.00	22.00	6.00
21.00	1268.00	16.00	5.29

AM10120

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

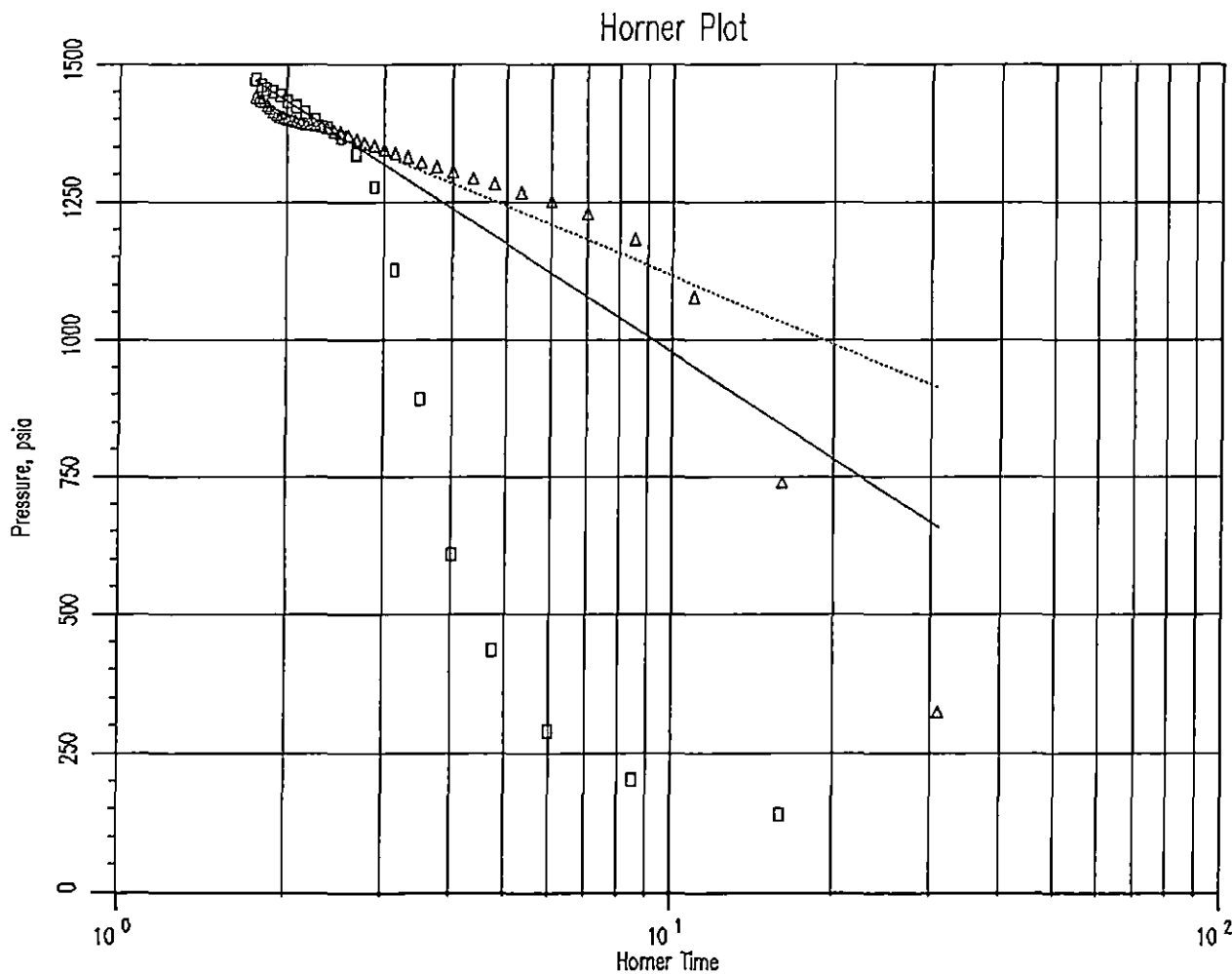
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
24.00	1283.00	15.00	4.75
27.00	1293.00	10.00	4.33
30.00	1305.00	12.00	4.00
33.00	1314.00	9.00	3.73
36.00	1322.00	8.00	3.50
39.00	1332.00	10.00	3.31
42.00	1338.00	6.00	3.14
45.00	1346.00	8.00	3.00
48.00	1352.00	6.00	2.88
51.00	1356.00	4.00	2.76
54.00	1363.00	7.00	2.67
57.00	1371.00	8.00	2.58
60.00	1377.00	6.00	2.50
63.00	1379.00	2.00	2.43
66.00	1385.00	6.00	2.36
69.00	1387.00	2.00	2.30
72.00	1389.00	2.00	2.25
75.00	1391.00	2.00	2.20
78.00	1393.00	2.00	2.15
81.00	1395.00	2.00	2.11
84.00	1397.00	2.00	2.07
87.00	1399.00	2.00	2.03
90.00	1402.00	3.00	2.00
93.00	1404.00	2.00	1.97
96.00	1406.00	2.00	1.94
99.00	1409.00	3.00	1.91
102.00	1415.00	6.00	1.88
105.00	1421.00	6.00	1.86
108.00	1426.00	5.00	1.83
111.00	1431.00	5.00	1.81
114.00	1435.00	4.00	1.79
117.00	1438.00	3.00	1.77
120.00	1442.00	4.00	1.75



DATE 5/24/93  
 CUSTOMER MURFIN DRILLING COMPANY  
 WELL #1-32  
 ELEVATION 2032 KB  
 SECTION 32  
 RANGE 15W  
 GAUGE SN# 10979

TEST 3  
 COUNTY PRATT  
 RANGE 4100

TICKET 18696  
 LEASE HOWELL  
 GEOLOGIST LANDES  
 FORMATION VIOLA  
 TOWNSHIP 29S  
 STATE KS  
 CLOCK 12



CONFIDENTIAL

AUG 2 5

KCC

Result

	#1	#2
tp, hrs	0.75	1.50
Slope	-651.15	-416.50
Pstar, psig	1628.56	1533.61
P1hr, psig	1470.31	1367.86
Skin	0.44	0.87
k, md	0.65	1.02
kh/u, md-ft/cp	14.70	22.98
ri, ft	4.23	7.48
DR, %	1.01	1.23
Drawdown Factor, %	2.105	5.831
Drawdown P*, %		

FROM CONFIDENTIAL

SEP 6 1994

RELEASED

ORIGINAL

— BUILD 1

..... BUILD 2

AM10120

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 5/24/93	TICKET : 18696
CUSTOMER : MURFIN DRILLING COMPANY	LEASE : HOWELL
WELL : #1-32 TEST: 3	GEOLOGIST: LANDES
ELEVATION: 2032 KB	FORMATION: VIOLA
SECTION : 32	TOWNSHIP : 29S
RANGE : 15W COUNTY: PRATT	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

Input Data

Porosity 0.150 Rw: 0.328 ft h: 20.000 ft

qo 50.6 STB GOR 340.1 SCF/STB

Pvt Data  
 Evaluation Pressure : 1473.0  
 Evaluation Temperature: 129.0

Oil Grav 37.00 API	Gas Grav 0.65 API	Pb 1473.00 PSIA
Bo 1.164 RBL/STB	Vis 1.000 cp	Ct 2.1642E-004 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
--	-----------------	---------------

pseudo pressure time	0.75 hrs	1.50 hrs
slope	-651.15	-416.50
pstar	1628.56 psig	1533.61 psig
plhr	1470.31 psig	1367.86 psig
skin	0.44	0.87
permeability	0.65 md	1.02 md
transmissability	14.70 md-ft/cp	22.98 md-ft/cp
radius of investigation	4.23 ft	7.48 ft
Damage-Ratio	1 percent	1.2 percent
Drawdown Factor		2.105 percent
Drawdown P*		5.831 percent

KCC

AUG 25

ORIGINAL

Phone Plainville 913-434-2812

Phone Ness City 913-798-3843

CONFIDENTIAL

# ALLIED CEMENTING CO., INC.

5767

Home Office P. O. Box 31

Russell, Kansas 67665

New

Date	5/16/93	Sec.	32	Twp.	29	Range	15	Called Out	12:30	On Location	2:00	Job Start	6:00	Finish	6:45
Lease	Howell	Well No.	1-32	Location	Coatsks 1 1/2 S 1/4 E S1/2			Pratt	County	Pratt	State	Ks			

Contractor	Val Ebergy
Type Job	8 3/4 Surface
Hole Size	12 1/4
Csg.	8 3/8 24 #
Tbg. Size	
Drill Pipe	
Tool	
Cement Left in Csg.	35
Press Max.	200
Meas Line	
Perf.	

Owner	Same
To Allied Cementing Co., Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Charge To	MARFIN Drilling Co.
Street	250 N. Water South 300
City	Wichita
State	Ks
	67202
The above was done to satisfaction and supervision of owner agent or contractor.	

RELEASED FROM CONFIDENTIAL

Purchase Order No.	6199
X	Paul Smith

### EQUIPMENT

Pumptrk	No.	209	Cementer	Max Ball
			Helper	Justin Hart
Pumptrk	No.	242	Cementer	
			Helper	
Bulktrk			Driver	John Kelley
Bulktrk			Driver	

CEMENT			
Amount Ordered	275 sks	60/40	29.0 gal 39% cacl <sup>2</sup>
Consisting of	Common	165	5.75
	Poz. Mix	110	3.00
	Gel.	6	7.00
	Chloride	8	25.00
	Quickset		200.00

DEPTH of Job	425'	
Reference:		
	Pump Charge	4.30.00
	20 Mileage	45.00
	8 3/4 Top Wood Plug	42.00
	125' at .39	48.75
	<b>Total</b>	<b>565.75</b>

Handling	275	1.00	275.00
Mileage	20		220.00
Total		2927.50	
Disc		585.50	
Total		2342.00	2015.75

Remarks: Cmt 8 3/4 Surface csg with 275 sk  
60; 40; 29.0 gal 39% cacl<sup>2</sup> Drop Plug  
Displace with 24.8 BBL Land Plug  
Close in Head Cmt did circulate

Floating Equipment

1-8 3/4 Threaded **RECEIVED** 105.00  
1-8 3/4 Cement **STATE COMMISSION** 180.00  
1-8 3/4 Centralizer **AUG 26 1993** 61.00  
**CONSERVATION DIVISION** 46.00  
Wichita, Kansas

ORIGINAL

INVOICE



KCC

HEMIT TO:  
P.O. BOX 951046  
DALLAS, TX 75395-1046

HALLIBURTON SERVICES

AUG 25

ORIGINAL

Halliburton Company

CONFIDENTIAL

INVOICE NO.	DATE
364443	05/25/1993

WELL/LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER
HOWELL 1-32		PRATT		KS	SAME
SERVICE LOCATION		CONTRACTOR	JOB PURPOSE		TICKET DATE
PRATT		VAL DRILLING CO	CEMENT PRODUCTION CASING		05/25/1993
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
14500	PETE KUNEYL			COMPANY TRUCK	51260

MURFIN DRLG CO  
BOX 288  
RUSSELL, KS 67665

USED FOR *Comp M*  
APPROVED *At*

DIRECT CORRESPONDENCE TO:  
FIRST OKLAHOMA TOWER  
210 WEST PARK AVENUE  
SUITE 2050  
OKLAHOMA CITY, OK 73102-5601

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
000-117	DRILLING AREA - EASTERN AREA1 MILEAGE	1	MI	2.75	79.75
001-016	CEMENTING CASING	4979	FT	1,480.00	1,480.00
030-016	CEMENTING PLUG SW ALUM TOP	4 1/2	IN	45.00	45.00
018-317	SUPER FLUSH	1	EA		
019-241	CASING SWIVEL W/O WALL CLEANER	12	SK	100.00	1,200.00
12A	GUIDE SHOE - 4 1/2" 8RD THD.	1	JOB	155.00	155.00
825.201		1	EA	95.00	95.00
24A	INSERT FLOAT VALVE - 4 1/2" 8RD	1	EA	73.00	73.00
815.19101		1	EA	45.00	45.00
27	FILL-UP UNIT 4 1/2"-5"	1	EA	45.00	45.00
815.19113		1	EA	45.00	45.00
40	CENTRALIZER 4-1/2 X 7 7/8 8.44	6	EA	43.00	258.00
807.93004		6	EA	43.00	258.00
60	ROTO WALL CLEANER 2 1/8" SPIKE	20	EA	22.00	440.00
807.0007		20	EA	22.00	440.00
504-308	CEMENT - STANDARD	200	SK	6.76	1,352.00
509-968	SALT	850	LB	.13	110.50
507-775	HALAD-322	141	LB	6.90	972.90
509-968	SALT	200	LB	.13	26.00
500-207	BULK SERVICE CHARGE	216	CFT	1.25	270.00
500-306	MILEAGE CMTG MAT DEL OR RETURN	286.9695	TMI	.85	243.92
INVOICE SUBTOTAL					6,846.07
DISCOUNT - (BID)					26.89
INVOICE BID AMOUNT					5,819.18
*-KANSAS STATE SALES TAX					158.06
***** CONTINUED ON NEXT PAGE *****					

RELEASED  
SEP 6 1993  
FROM CONFIDENTIAL

RECEIVED  
STATE CORPORATION COMMISSION  
AUG 26 1993  
CONSERVATION DIVISION  
Wichita, Kansas

TERMS INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE. UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED, CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE COLLECTION OF SAID ACCOUNT, CUSTOMER AGREES TO PAY ALL COLLECTION COSTS AND ATTORNEY FEES IN THE AMOUNT OF...