

ORIGINAL

API#15-097-21359

Drill Stem Test #1

4823-4848

Gas to surface in 8 min. of IFP

Gauge:	10 min.	68.8 MCFPD
	15 min.	78.1 MCFPD
Gauge:	10 min.	108.0 MCFPD
	20 min.	94.5 MCFPD
	30 min.	94.5 MCFPD
	40 min.	94.5 MCFPD
	50 min.	86.3 MCFPD
	60 min.	86.3 MCFPD

Recovered:

Initial Flow Pressures:

Initial Shut-In Pressure:

Final Flow Pressures:

Final Shut-In Pressure:

Initial Hydrostatic Pressure:

Final Hydrostatic Pressure:

Bottomhole Temperature:

80' GCM (90%M, 10%G)
96# to 86# / 15 min.
1175# / 60 min.
75# to 53# / 60 min.
1175# / 120 min.
2475#
2401#
122 degrees

RECEIVED
KANSAS CORPORATION COMMISSION

MAR 14 1994

COMMISSION DIVISION



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o 20044

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

Elevation 2233 LB Formation Miss Eff. Pay Ft.

District Pratt Date 12-5-93 Customer Order No.

COMPANY NAME Advantage Resources Inc.

ADDRESS 1775 Sheeman St - Suite 1375 Denver, Colorado 80203-4316

LEASE AND WELL NO. Byrd Hardy #C-1 COUNTY Kiowa STATE KANSAS Sec. 24 Twp 28S Rge 18W

Mail Invoice To Same No. Copies Requested Reg

Co. Name Same Address No. Copies Requested Reg

Mail Charts To Same Address No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 4823 ft. to 4848 ft. Total Depth 4848 ft.

Packer Depth 4818 ft. Size 6 5/8 in. Packer Depth 2 ft. Size 2 in.

Packer Depth 4823 ft. Size 6 5/8 in. Packer Depth 2 ft. Size 2 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4830 ft. Recorder Number 1057 Cap 4250

Bottom Recorder Depth (Outside) 4833 ft. Recorder Number 4332 Cap 4200

Below Straddle Recorder Depth ft. Recorder Number Cap

Drilling Contractor Duke Drilling Rig #5 Drill Collar Length 0 I. D. in.

Mud Type Chem Viscosity 48 Weight Pipe Length 0 I. D. in.

Weight 9.1 Water Loss 2.6 cc. Drill Pipe Length 480.3 I. D. 3.8 in.

Chlorides 2.000 P.P.M. Test Tool Length 2.0 ft. Tool Size 5/8 in.

Jars: Make NO Serial Number Anchor Length 2.5 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 in.

Blow: Strong blow on initial flow - gas to surface 8 minutes
See flow chart

Recovered 80 ft. of gas cut mud 10% gas 90% mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

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

Time On Location 9:00 A.M. Time Pick Up Tool 11:00 A.M. Time Off Location A.M. P.M.

Time Set Packer(s) 12:55 A.M. P.M. Time Started Off Bottom 5:10 A.M. P.M. Maximum Temperature 122 °F

Initial Hydrostatic Pressure (A) 2455 P.S.I.

Initial Flow Period Minutes 15 (B) 96 P.S.I. to (C) 86 P.S.I.

Initial Closed In Period Minutes 60 (D) 1175 P.S.I.

Final Flow Period Minutes 60 (E) 75 P.S.I. to (F) 53 P.S.I.

Final Closed In Period Minutes 120 (G) 1175 P.S.I.

Final Hydrostatic Pressure (H) 2401 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 Ted Pitt - 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 \$



GAS FLOW REPORT

No 5731

Date 12-5-93 Ticket 20044 Company Advantage Resources
 Well Name and No. Byed Nardy #C1 Dst No. 1 Interval Tested 4823-4848
 County KIOWA State KANSAS Sec. 24 Twp. 28S Rg. 18W

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
PRE FLOW					
08	—	1/2			Gas To surface C.F.D.
10	4 psi	1/2			
15	5 psi	1/2			

SECOND FLOW					
10	9 psi	1/2			108,000 94,500 94,500 94,500 86,300 86,300 C.F.D.
20	7 psi	1/2			
30	7 psi	1/2			
40	7 psi	1/2			
50	6 1/2	1/2			
60	6 1/2	1/2			

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 _____

WESTERN TESTING CO., INC.

Pressure Data

DATE 12-5-93

Test Ticket No. 20044

Recorder No. 1051 Capacity _____ Location _____ P.C. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud <u>2417</u>	P.S.I.		M
B First Initial Flow Pressure <u>97</u>	P.S.I.	<u>15</u> Mins	<u>15</u> Mins
C First Final Flow Pressure <u>69</u>	P.S.I.	<u>60</u> Mins	<u>63</u> Mins
D Initial Closed-in Pressure <u>1168</u>	P.S.I.	<u>60</u> Mins	<u>55</u> Mins
E Second Initial Flow Pressure <u>85</u>	P.S.I.	<u>120</u> Mins	<u>120</u> Mins
F Second Final Flow Pressure <u>60</u>	P.S.I.		
G Final Closed-in Pressure <u>1163</u>	P.S.I.		
H Final Hydrostatic Mud <u>2384</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 _____ 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.
B P 1 0	<u>97</u>	C 0	<u>69</u>	E 0	<u>85</u>	F 0	<u>60</u>
P 2 5	<u>90</u>	3	<u>583</u>	5	<u>74</u>	3	<u>528</u>
P 3 10	<u>75</u>	6	<u>766</u>	10	<u>69</u>	6	<u>683</u>
C P 4 15	<u>69</u>	9	<u>866</u>	15	<u>65</u>	9	<u>771</u>
P 5 20		12	<u>919</u>	20	<u>63</u>	12	<u>838</u>
P 6 25		15	<u>961</u>	25	<u>62</u>	15	<u>883</u>
P 7 30		18	<u>996</u>	30	<u>61</u>	18	<u>925</u>
P 8 35		21	<u>1023</u>	35	<u>61</u>	21	<u>960</u>
P 9 40		24	<u>1055</u>	40	<u>61</u>	24	<u>992</u>
P10 45		27	<u>1078</u>	45	<u>61</u>	27	<u>1017</u>
P11 50		30	<u>1095</u>	50	<u>60</u>	30	<u>1036</u>
P12 55		33	<u>1109</u>	F 55	<u>60</u>	33	<u>1053</u>
P13 60		36	<u>1120</u>	60		36	<u>1065</u>
P14 65		39	<u>1130</u>	65		39	<u>1077</u>
P15 70		42	<u>1140</u>	70		42	<u>1089</u>
P16 75		45	<u>1146</u>	75		45	<u>1099</u>
P17 80		48	<u>1152</u>	80		48	<u>1106</u>
P18 85		51	<u>1158</u>	85		51	<u>1112</u>
P19 90		54	<u>1161</u>	90		54	<u>1119</u>
P20 95		57	<u>1164</u>	95		57	<u>1125</u>
WTC 100		D 60	<u>1166</u>	100		60	<u>1130</u>

Continued

WESTERN TESTING CO., INC.

Pressure Data

Date 12-5-93

Test Ticket No. 20044

Recorder No. 1051 Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	P.S.I.		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

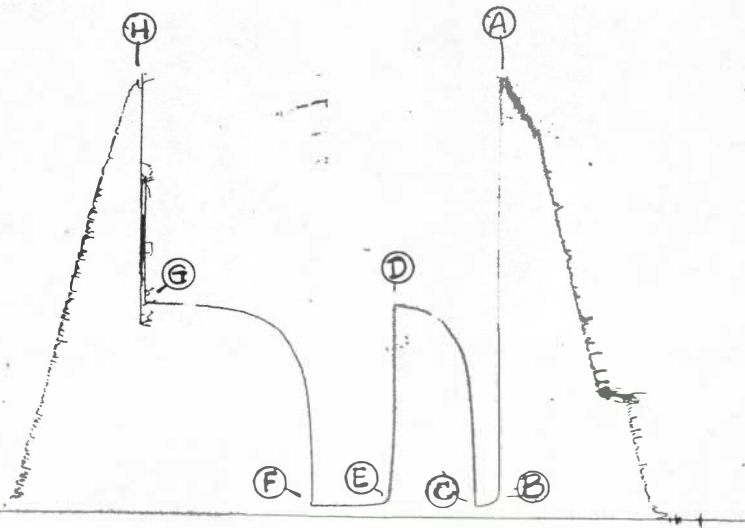
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of <u>3</u> mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>105</u>		<u>63</u>		<u>105</u>		<u>63</u>	<u>1136</u>
P 2 <u>110</u>		<u>66</u>		<u>110</u>		<u>66</u>	<u>1140</u>
P 3 <u>115</u>		<u>69</u>		<u>115</u>		<u>69</u>	<u>1144</u>
P 4 <u>120</u>		<u>72</u>		<u>120</u>		<u>72</u>	<u>1147</u>
P 5 <u>125</u>		<u>75</u>		<u>125</u>		<u>75</u>	<u>1149</u>
P 6 <u>130</u>		<u>78</u>		<u>130</u>		<u>78</u>	<u>1150</u>
P 7 <u>135</u>		<u>81</u>		<u>135</u>		<u>81</u>	<u>1151</u>
P 8 <u>140</u>		<u>84</u>		<u>140</u>		<u>84</u>	<u>1152</u>
P 9 <u>145</u>		<u>87</u>		<u>145</u>		<u>87</u>	<u>1153</u>
P10 <u>150</u>		<u>90</u>		<u>150</u>		<u>90</u>	<u>1154</u>
P11 <u>155</u>		<u>93</u>		<u>155</u>		<u>93</u>	<u>1155</u>
P12 <u>160</u>		<u>96</u>		<u>160</u>		<u>96</u>	<u>1157</u>
P13 <u>165</u>		<u>99</u>		<u>165</u>		<u>99</u>	<u>1158</u>
P14 <u>170</u>		<u>102</u>		<u>170</u>		<u>102</u>	<u>1159</u>
P15 <u>175</u>		<u>105</u>		<u>175</u>		<u>105</u>	<u>1160</u>
P16 <u>180</u>		<u>108</u>		<u>180</u>		<u>108</u>	<u>1161</u>
P17 <u>185</u>		<u>111</u>		<u>185</u>		<u>111</u>	<u>1162</u>
P18 <u>190</u>		<u>114</u>		<u>190</u>		<u>114</u>	<u>1163</u>
P19 <u>195</u>		<u>117</u>		<u>195</u>		<u>117</u>	<u>1163</u>
P20 <u>200</u>		<u>120</u>		<u>200</u>		<u>120</u>	<u>1163</u>

1051 DST #1



TK# 20044

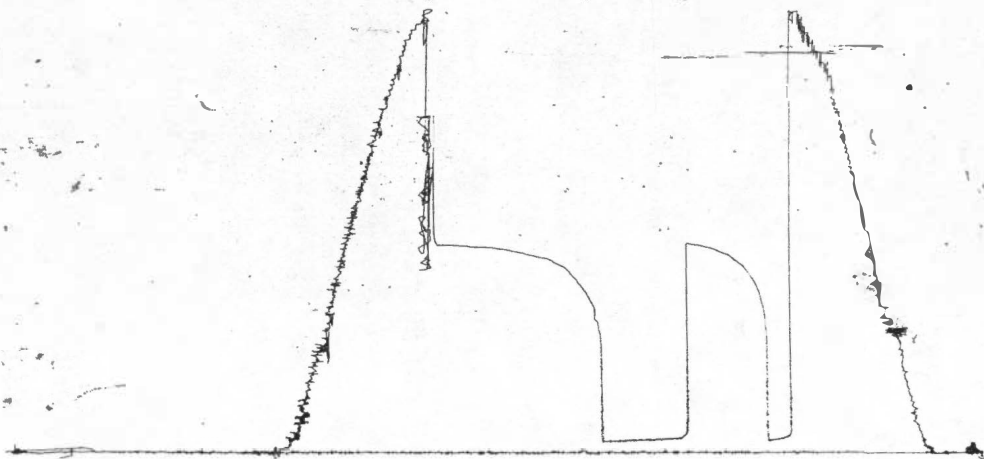
I.



4332 DST #1

TK# 20044

O.



DST REPORT

GENERAL INFORMATION

DATE	: 12/5/93	TICKET	: 20044
CUSTOMER	: ADVANTAGE RESOURCES, INC.	LEASE	: BYRD HARDY C
WELL	: #1	TEST:	1
ELEVATION	: 2233 KB	GEOLOGIST	: JESPERSON?
SECTION	: 24	FORMATION	: MISSISSIPPI
RANGE	: 18W	TOWNSHIP	: 28S
GAUGE SN#	: 1051	STATE	: KS
	COUNTY: KIOWA	CLOCK	: 12
	RANGE : 4250		

WELL INFORMATION

PERFORATION INTERVAL FROM:	4823.00 ft	TO:	4848.00 ft	TVD:	4848.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	4830.0 ft		4835.0 ft		
TEMPERATURE:	122.0				
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 :	4803.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	25.0 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:	4818.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4823.0 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. :	DUKE DRLG RIG 5	VISCOSITY :	48.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.600 cc
WEIGHT :	9.100 ppg	SERIAL NUMBER:	
CHLORIDES :	7000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - GAS TO SURFACE
IN 8 MINUTES. SEE GAS SHEET ATTACHED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
80.0	0.0	10.0	0.0	90.0	GAS CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	70.0000	min.
GAS VOLUME:	0.6301	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	1.0099	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	1.0099	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2455.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	96.00	86.00
INITIAL SHUT-IN	60.00		1175.00
FINAL FLOW	60.00	75.00	53.00
FINAL SHUT-IN	120.00		1175.00

FINAL HYDROSTATIC PRESSURE: 2401.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2417.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	97.00	69.00
INITIAL SHUT-IN	63.00		1168.00
FINAL FLOW	55.00	85.00	60.00
FINAL SHUT-IN	120.00		1163.00

FINAL HYDROSTATIC PRESSURE: 2384.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 12/5/93	TICKET : 20044
CUSTOMER : ADVANTAGE RESOURCES, INC.	LEASE : BYRD HARDY C
WELL : #1	GEOLOGIST: JESPERSON?
ELEVATION: 2233 KB	FORMATION: MISSISSIPPI
SECTION : 24	TOWNSHIP : 28S
RANGE : 18W	STATE : KS
GAUGE SN#: 1051	CLOCK : 12
COUNTY: KIOWA	
RANGE : 4250	

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.500	4 PSIG	68800 SCF/D
15 MIN	MERLA	0.500	5 PSIG	78100 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.500	9 PSIG	10800 SCF/D
20 MIN	MERLA	0.500	7 PSIG	94500 SCF/D
30 MIN	MERLA	0.500	7 PSIG	94500 SCF/D
40 MIN	MERLA	0.500	7 PSIG	94500 SCF/D
50 MIN	MERLA	0.500	6 PSIG	86300 SCF/D
60 MIN	MERLA	0.500	6 PSIG	86300 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 12/5/93	TICKET	: 20044
CUSTOMER	: ADVANTAGE RESOURCES, INC.	LEASE	: BYRD HARDY C
WELL	: #1	GEOLOGIST	: JESPERSON?
ELEVATION	: 2233 KB	FORMATION	: MISSISSIPPI
SECTION	: 24	TOWNSHIP	: 28S
RANGE	: 18W	STATE	: KS
GAUGE SN#	: 1051	CLOCK	: 12
	COUNTY: KIOWA		
	RANGE : 4250		

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	97.00	97.00
5.00	90.00	-7.00
10.00	75.00	-15.00
15.00	69.00	-6.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	583.00	583.00	6.00
6.00	766.00	183.00	3.50
9.00	866.00	100.00	2.67
12.00	919.00	53.00	2.25
15.00	961.00	42.00	2.00
18.00	996.00	35.00	1.83
21.00	1023.00	27.00	1.71
24.00	1055.00	32.00	1.63
27.00	1078.00	23.00	1.56
30.00	1095.00	17.00	1.50
33.00	1109.00	14.00	1.45
36.00	1120.00	11.00	1.42
39.00	1130.00	10.00	1.38
42.00	1140.00	10.00	1.36
45.00	1146.00	6.00	1.33
48.00	1152.00	6.00	1.31
51.00	1158.00	6.00	1.29
54.00	1161.00	3.00	1.28
57.00	1164.00	3.00	1.26
60.00	1166.00	2.00	1.25
63.00	1168.00	2.00	1.24

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	85.00	85.00
5.00	74.00	-11.00
10.00	69.00	-5.00
15.00	65.00	-4.00
20.00	63.00	-2.00
25.00	62.00	-1.00
30.00	61.00	-1.00
35.00	61.00	0.00
40.00	61.00	0.00
45.00	61.00	0.00
50.00	60.00	-1.00
55.00	60.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	528.00	528.00	19.33
6.00	683.00	155.00	10.17
9.00	771.00	88.00	7.11
12.00	838.00	67.00	5.58
15.00	883.00	45.00	4.67
18.00	925.00	42.00	4.06
21.00	960.00	35.00	3.62
24.00	992.00	32.00	3.29
27.00	1017.00	25.00	3.04
30.00	1036.00	19.00	2.83
33.00	1053.00	17.00	2.67
36.00	1065.00	12.00	2.53
39.00	1077.00	12.00	2.41
42.00	1089.00	12.00	2.31
45.00	1099.00	10.00	2.22
48.00	1106.00	7.00	2.15
51.00	1112.00	6.00	2.08
54.00	1119.00	7.00	2.02
57.00	1125.00	6.00	1.96
60.00	1130.00	5.00	1.92
63.00	1136.00	6.00	1.87
66.00	1140.00	4.00	1.83
69.00	1144.00	4.00	1.80
72.00	1147.00	3.00	1.76
75.00	1149.00	2.00	1.73
78.00	1150.00	1.00	1.71

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
81.00	1151.00	1.00	1.68
84.00	1152.00	1.00	1.65
87.00	1153.00	1.00	1.63
90.00	1154.00	1.00	1.61
93.00	1155.00	1.00	1.59
96.00	1157.00	2.00	1.57
99.00	1158.00	1.00	1.56
102.00	1159.00	1.00	1.54
105.00	1160.00	1.00	1.52
108.00	1161.00	1.00	1.51
111.00	1162.00	1.00	1.50
114.00	1163.00	1.00	1.48
117.00	1163.00	0.00	1.47
120.00	1163.00	0.00	1.46