



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 5407

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

Elevation _____ Formation Arbuckle Eff. Pay _____ Ft.

District Pratt Date 8/18/80 Customer Order No. _____

COMPANY NAME Production Inc

ADDRESS Box 459 Great Bend

LEASE AND WELL NO. Callaway #1 COUNTY Barton STATE Ks Sec. 19 Twp. 16 Rge. 13W

Mail Invoice To Same Co. Name _____ Address _____ No. Copies Requested 5

Mail Charts To Same Co. Name _____ Address _____ No. Copies Requested 5

Formation Test No. 1 Interval Tested from 3340 ft. to 3369 ft. Total Depth 3369 ft.
Packer Depth 3335 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Packer Depth 3340 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3359 ft. Recorder Number 2607 Cap. 4150
Bottom Recorder Depth (Outside) 3362 ft. Recorder Number 3351 Cap. 4000
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Mustang Drilg Rig #1 Drill Collar Length 150 I. D. 2 1/2 in.
Mud Type Premix-Starch Viscosity 46 Weight Pipe Length _____ I. D. _____ in.
Weight 9.8 Water Loss 11.4 cc. Drill Pipe Length 3169 I. D. 3.8 in.
Chlorides 42,000 P.P.M. Test Tool Length 21 ft. Tool Size 5500 in.
Jars: Make _____ Serial Number _____ Anchor Length 29 ft. Size 5500 in.
Did Well Flow? No Reversed Out No Surface Choke Size 3 1/4 in. Bottom Choke Size 3 1/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very Weak blow throughout flow periods

Recovered 75 ft. of Drilg Mud (Specks of oil on top of tool)
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____

Remarks: Arrived 7:00 AM
Pick up Tool 8:30 AM
Left: stayed on location
Slid tool 3' to bottom

Time Set	Packer(s)	A.M.	P.M.	Time Started Off Bottom	A.M.	P.M.	Maximum Temperature
Initial Hydrostatic Pressure	<u>9:50</u>			<u>12:20</u>			<u>113^o</u>
Initial Flow Period					<u>18 57</u>		
Initial Closed In Period					<u>84</u>		<u>84</u>
Final Flow Period					<u>338</u>		
Final Closed In Period					<u>105</u>		<u>105</u>
Final Hydrostatic Pressure					<u>747</u>		
					<u>1836</u>		

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 Daniel P. Williams David P Williams
Signature of Customer or his authorized representative

Western Representative Jim Woods Thank You

FIELD INVOICE

Open Hole Test	\$ <u>550⁰⁰</u>
Misrun	\$ _____
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ _____
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage <u>22m</u>	\$ <u>146⁵⁰</u>
Fluid Sampler	\$ _____
Extra Charts	\$ _____
INSURANCE	\$ <u>4000⁰⁰</u>
TOTAL	\$ <u>606⁵⁰</u>

WESTERN TESTING CO., INC.
Pressure Data

Date 8-18 Test Ticket No. 5407
 Recorder No. 2607 Capacity 4150 Location 3359 Ft.
 Clock No. Elevation Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1875</u>	P.S.I.	<u>9:50 A.M.</u>	
B First Initial Flow Pressure	<u>103</u>	P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>95</u>	P.S.I.	<u>45</u> Mins.	<u>54</u> Mins.
D Initial Closed-in Pressure	<u>351</u>	P.S.I.	<u>15</u> Mins.	<u>15</u> Mins.
E Second Initial Flow Pressure	<u>125</u>	P.S.I.	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>114</u>	P.S.I.		
G Final Closed-in Pressure	<u>743</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1838</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 9 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

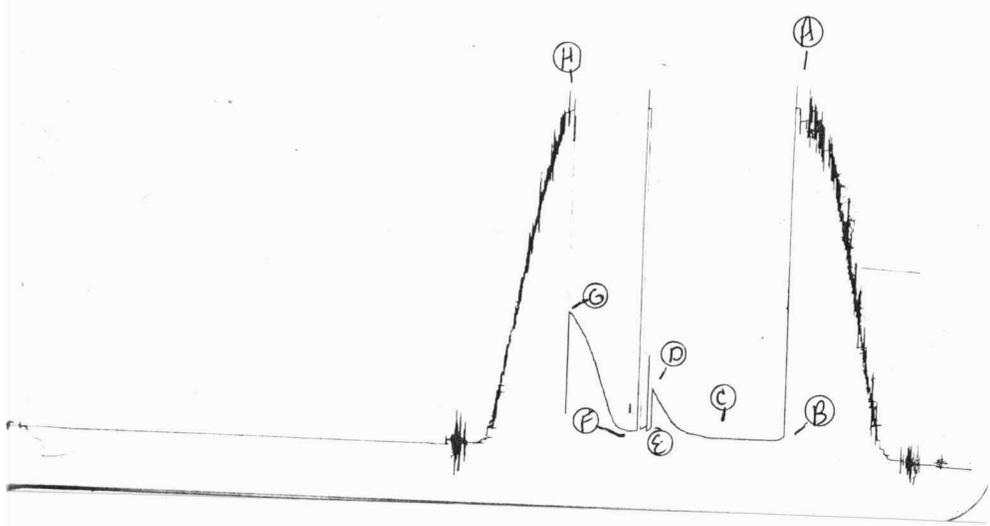
Initial Shut-In
 Breakdown: 18 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 3 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 16 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>103</u>	0	<u>95</u>	0	<u>125</u>	0	<u>114</u>
P 2 5	<u>97</u>	3	<u>95</u>	5	<u>125</u> <i>Flushed tool</i>	3	<u>120</u>
P 3 10	<u>95</u>	6	<u>96</u>	10	<u>114</u> <i>Flushed tool</i>	6	<u>127</u>
P 4 15	<u>↑</u>	9	<u>97</u>	15	<u>114</u>	9	<u>135</u>
P 5 20	<u>↑</u>	12	<u>98</u>	20		12	<u>166</u>
P 6 25	<u>↑</u>	15	<u>103</u>	25		15	<u>220</u>
P 7 30	<u>↑</u>	18	<u>108</u>	30		18	<u>284</u>
P 8 35	<u>↑</u>	21	<u>112</u>	35		21	<u>354</u>
P 9 40	<u>↓</u>	24	<u>113</u>	40		24	<u>402</u>
P10 45	<u>95</u>	27	<u>122</u>	45		27	<u>477</u>
P11 50		30	<u>131</u>	50		30	<u>527</u>
P12 55		33	<u>148</u>	55		33	<u>581</u>
P13 60		36	<u>167</u>	60		36	<u>622</u>
P14		39	<u>195</u>	65		39	<u>656</u>
P15		42	<u>226</u>	70		42	<u>689</u>
P16		45	<u>256</u>	75		45	<u>718</u>
P17		48	<u>288</u>	80		48	<u>743</u>
P18		51	<u>328</u>	85		51	
P19		54	<u>351</u>	90		54	
P20		57				57	
		60				60	

SKA # 5407
I



Company Production, Inc. Lease & Well No. Callaway #1
 Elevation ----- Formation Arbuckle Effective Pay ----- Ft. Ticket No. 5407
 Date 8/18/80 Sec. 19 Twp. 16S Range 13W County Barton State Kansas
 Test Approved by David P. Williams Western Representative Jim Wondra

Formation Test No. 1 Interval Tested from 3340 ft. to 3369 ft. Total Depth 3369 ft.
 Packer Depth 3335 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3340 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3359 ft. Recorder Number 2607 Cap. 4150
 Bottom Recorder Depth (Outside) 3362 ft. Recorder Number 3351 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Mustang Drlg. Rig #1 Drill Collar Length 150 I. D. 2 1/4 in.
 Mud Type premix-starch Viscosity 46 Weight Pipe Length - I. D. - in.
 Weight 9.8 Water Loss 11.4 cc. Drill Pipe Length 3169 I. D. 3.8 in.
 Chlorides 42,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
 Jars: Make -- Serial Number - Anchor Length 29 ft. Size 5 1/2 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 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very weak blow throughout flow periods.

Recovered 75 ft. of drilling mud (specks of oil on top of tool)
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Remarks: Slid tool three feet to bottom.

Time Set Packer(s) 9:50 ~~P.M.~~ A.M. Time Started Off Bottom 12:20 ~~A.M.~~ P.M. Maximum Temperature 113°
 Initial Hydrostatic Pressure (A) 1875 P.S.I.
 Initial Flow Period Minutes 45 (B) 103 P.S.I. to (C) 95 P.S.I.
 Initial Closed In Period Minutes 54 (D) 351 P.S.I.
 Final Flow Period Minutes 15 (E) 125 P.S.I. to (F) 116 P.S.I.
 Final Closed In Period Minutes 48 (G) 743 P.S.I.
 Final Hydrostatic Pressure (H) 1838 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8/18/80 Test Ticket No. 5407
 Recorder No. 2607 Capacity 4150 Location 3359 Ft.
 Clock No. --- Elevation -- Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1875</u> P.S.I.	Open Tool	<u>9:50A</u> M	
B First Initial Flow Pressure	<u>103</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>95</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>54</u> Mins.
D Initial Closed-in Pressure	<u>351</u> P.S.I.	Second Flow Pressure	<u>15</u> Mins.	<u>15</u> Mins.
E Second Initial Flow Pressure	<u>125</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>116</u> P.S.I.			
G Final Closed-in Pressure	<u>743</u> P.S.I.			
H Final Hydrostatic Mud	<u>1838</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>9</u> Inc.		Breakdown: <u>18</u> Inc.		Breakdown: <u>3</u> Inc.		Breakdown: <u>16</u> 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 <u>0</u>	<u>103</u>	<u>0</u>	<u>95</u>	<u>0</u>	<u>125</u>	<u>0</u>	<u>116</u>
P 2 <u>5</u>	<u>97</u>	<u>3</u>	<u>95</u>	<u>5</u>	<u>125</u> Flushed tool	<u>3</u>	<u>120</u>
P 3 <u>10</u>	<u>95</u>	<u>6</u>	<u>96</u>	<u>10</u>	<u>114</u> Flushed tool	<u>6</u>	<u>127</u>
P 4 <u>15</u>	<u>95</u>	<u>9</u>	<u>97</u>	<u>15</u>	<u>116</u>	<u>9</u>	<u>135</u>
P 5 <u>20</u>	<u>95</u>	<u>12</u>	<u>98</u>			<u>12</u>	<u>166</u>
P 6 <u>25</u>	<u>95</u>	<u>15</u>	<u>103</u>			<u>15</u>	<u>220</u>
P 7 <u>30</u>	<u>95</u>	<u>18</u>	<u>108</u>			<u>18</u>	<u>284</u>
P 8 <u>35</u>	<u>95</u>	<u>21</u>	<u>112</u>			<u>21</u>	<u>354</u>
P 9 <u>40</u>	<u>95</u>	<u>24</u>	<u>113</u>			<u>24</u>	<u>402</u>
P10 <u>45</u>	<u>95</u>	<u>27</u>	<u>122</u>			<u>27</u>	<u>477</u>
P11		<u>30</u>	<u>131</u>			<u>30</u>	<u>527</u>
P12		<u>33</u>	<u>148</u>			<u>33</u>	<u>581</u>
P13		<u>36</u>	<u>167</u>			<u>36</u>	<u>622</u>
P14		<u>39</u>	<u>195</u>			<u>39</u>	<u>656</u>
P15		<u>42</u>	<u>226</u>			<u>42</u>	<u>689</u>
P16		<u>45</u>	<u>256</u>			<u>45</u>	<u>718</u>
P17		<u>48</u>	<u>288</u>			<u>48</u>	<u>743</u>
P18		<u>51</u>	<u>328</u>				
P19		<u>54</u>	<u>351</u>				
P20							



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 5408

P. O. BOX 1599 PHONE (316) 838-0601 WICHITA, KANSAS 67201

Elevation Formation Arbuckle Eff. Pay Ft.

District Pratt Date 8/18/80 Customer Order No.

COMPANY NAME Production Inc ADDRESS Box 459 Great Bend LEASE AND WELL NO Callaway #1 COUNTY Barber STATE Ks Sec. 19 Twp 16 Rge 13 Mail Invoice To Same Co. Name Same Address Copy to David Williams No. Copies Requested 5

Formation Test No. 2 Interval Tested from 3338 ft. to 3372 ft. Total Depth 3372 ft. Packer Depth 3333 ft. Size 6 3/4 in. Packer Depth 3338 ft. Size 6 3/4 in.

Top Recorder Depth (Inside) 3362 ft. Recorder Number 2607 Cap. 4150 Bottom Recorder Depth (Outside) 3365 ft. Recorder Number 3351 Cap. 4000 Below Straddle Recorder Depth - ft. Recorder Number - Cap. - Drilling Contractor Mustang Drlys Rig #1 Mud Type Premix Starch Viscosity 46 Weight 9.8 Water Loss 11.4 cc. Chlorides 42,000 P.P.M. Test Tool Length 21 ft. Tool Size 5200 in. Jars: Make No Serial Number No Anchor Length 34 ft. Size 5200 in. Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in. Main Hole Size 7/8 in. Tool Joint Size 45 FH in.

Blow: Very Weak blow throughout first flow period No blow on second flow period Blow died in 5 min after flushing tool

Recovered 60 ft. of Drlys Mud (Specks of oil on top of tool) Recovered ft. of Recovered ft. of Recovered ft. of Recovered ft. of Slid tool 5' to bottom

Remarks: Arrived on Location Pickup Tool 7:30 P.M. Left: Stayed on Location

Table with 4 columns: Time Set Packer (s), Time Started Off Bottom, Maximum Temperature, and P.S.I. values for various tests (A-H).

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 David P. Williams Signature of Customer or his authorized representative

Western Representative Jim Wonda Thank You

FIELD INVOICE

Table listing items for field invoice: Open Hole Test \$550.00, Misrun \$, Straddle Test \$, Jars \$, Selective Zone \$, Safety Joint \$, Standby \$, Evaluation \$, Extra Packer \$, Circ. Sub. \$, Mileage \$, Fluid Sampler \$, Extra Charts \$.

TOTAL

WESTERN TESTING CO., INC.
Pressure Data

Date 8-18 Test Ticket No. 5408
 Recorder No. 2607 Capacity 4150 Location 3362 Ft.
 Clock No. — Elevation — Well Temperature 113 °F

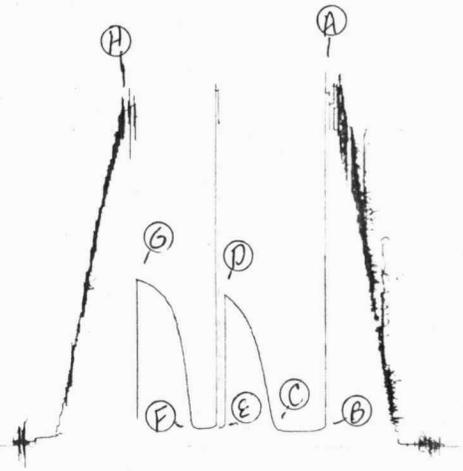
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1903</u>	P.S.I.	<u>9:10 P</u>	M
B First Initial Flow Pressure	<u>105</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>89</u>	P.S.I.	<u>45</u>	Mins. <u>48</u> Mins.
D Initial Closed-in Pressure	<u>814</u>	P.S.I.	<u>50</u>	Mins. <u>50</u> Mins.
E Second Initial Flow Pressure	<u>108</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins.
F Second Final Flow Pressure	<u>100</u>	P.S.I.		
G Final Closed-in Pressure	<u>896</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1863</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>14</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>4</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>105</u>	0	<u>89</u>	0	<u>108</u>	0	<u>100</u>
P 2 5	<u>95</u>	3	<u>89</u>	5	<u>Flushed tool</u>	3	<u>154</u>
P 3 10	<u>89</u>	6	<u>101</u>	10	<u>105</u>	6	<u>320</u>
P 4 15	<u>89</u>	9	<u>141</u>	15	<u>101</u>	9	<u>460</u>
P 5 20	<u>1</u>	12	<u>250</u>	20	<u>100</u>	12	<u>566</u>
P 6 25	<u>1</u>	15	<u>354</u>	25		15	<u>646</u>
P 7 30	<u>89</u>	18	<u>443</u>	30		18	<u>710</u>
P 8 35		21	<u>521</u>	35		21	<u>760</u>
P 9 40		24	<u>581</u>	40		24	<u>793</u>
P 10 45		27	<u>637</u>	45		27	<u>814</u>
P 11 50		30	<u>680</u>	50		30	<u>837</u>
P 12 55		33	<u>716</u>	55		33	<u>858</u>
P 13 60		36	<u>745</u>	60		36	<u>870</u>
P 14		39	<u>766</u>	65		39	<u>881</u>
P 15		42	<u>789</u>	70		42	<u>889</u>
P 16		45	<u>803</u>	75		45	<u>896</u>
P 17		48	<u>814</u>	80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	

Net # 5408
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Company Production, Inc. Lease & Well No. Callaway #1

Elevation ----- Formation Arbuckle Effective Pay ----- Ft. Ticket No. 5408

Date 8/18/80 Sec. 19 Twp. 16S Range 13W County Barton State Kansas

Test Approved by David P. Williams Western Representative Jim Wondra

Formation Test No. 2 Interval Tested from 3338 ft. to 3372 ft. Total Depth 3372 ft.

Packer Depth 3333 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3338 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3362 ft. Recorder Number 2607 Cap. 4150

Bottom Recorder Depth (Outside) 3365 ft. Recorder Number 3351 Cap. 4000

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

Drilling Contractor Mustang Drlg. Rig #1 Drill Collar Length 150 I. D. 2 1/4 in.

Mud Type premix-starch Viscosity 46 Weight Pipe Length - I. D. - in.

Weight 9.8 Water Loss 11.4 cc. Drill Pipe Length 3167 I. D. 3.8 in.

Chlorides 42,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make -- Serial Number - Anchor Length 34 ft. Size 5 1/2 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 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very weak blow throughout first flow period. No blow on second flow period. Blow died in five minutes after flushing tool.

Recovered 60 ft. of drilling mud (specks of oil on top of tool)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Slid tool five feet to bottom.

Time Set Packer(s) 9;10 A.M. P.M. Time Started Off Bottom 11:40 A.M. P.M. Maximum Temperature 113°

Initial Hydrostatic Pressure 1903 (A) P.S.I.

Initial Flow Period 30 Minutes (B) 105 P.S.I. to (C) 89 P.S.I.

Initial Closed In Period 48 Minutes (D) 814 P.S.I.

Final Flow Period 20 Minutes (E) 108 P.S.I. to (F) 100 P.S.I.

Final Closed In Period 45 Minutes (G) 896 P.S.I.

Final Hydrostatic Pressure 1863 (H) P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 8/18/80 Test Ticket No. 5408
 Recorder No. 2607 Capacity 4150 Location 3362 Ft.
 Clock No. - Elevation - Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1903</u> P.S.I.	Open Tool	<u>9:10P</u> M	
B First Initial Flow Pressure	<u>105</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>89</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
D Initial Closed-in Pressure	<u>814</u> P.S.I.	Second Flow Pressure	<u>20</u> Mins.	<u>20</u> Mins.
E Second Initial Flow Pressure	<u>108</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>100</u> P.S.I.			
G Final Closed-in Pressure	<u>896</u> P.S.I.			
H Final Hydrostatic Mud	<u>1863</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>16</u> Inc.		Breakdown: <u>4</u> Inc.		Breakdown: <u>15</u> 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 <u>0</u>	<u>105</u>	<u>0</u>	<u>89</u>	<u>0</u>	<u>108</u>	<u>0</u>	<u>100</u>
P 2 <u>5</u>	<u>95</u>	<u>3</u>	<u>89</u>	<u>5</u>	<u>FLUSHED TOOL</u>	<u>3</u>	<u>154</u>
P 3 <u>10</u>	<u>89</u>	<u>6</u>	<u>101</u>	<u>10</u>	<u>105</u>	<u>6</u>	<u>320</u>
P 4 <u>15</u>	<u>89</u>	<u>9</u>	<u>161</u>	<u>15</u>	<u>101</u>	<u>9</u>	<u>460</u>
P 5 <u>20</u>	<u>89</u>	<u>12</u>	<u>250</u>	<u>20</u>	<u>100</u>	<u>12</u>	<u>566</u>
P 6 <u>25</u>	<u>89</u>	<u>15</u>	<u>354</u>			<u>15</u>	<u>646</u>
P 7 <u>30</u>	<u>89</u>	<u>18</u>	<u>443</u>			<u>18</u>	<u>710</u>
P 8		<u>21</u>	<u>521</u>			<u>21</u>	<u>760</u>
P 9		<u>24</u>	<u>581</u>			<u>24</u>	<u>793</u>
P10		<u>27</u>	<u>637</u>			<u>27</u>	<u>816</u>
P11		<u>30</u>	<u>680</u>			<u>30</u>	<u>837</u>
P12		<u>33</u>	<u>716</u>			<u>33</u>	<u>858</u>
P13		<u>36</u>	<u>745</u>			<u>36</u>	<u>870</u>
P14		<u>39</u>	<u>766</u>			<u>39</u>	<u>881</u>
P15		<u>42</u>	<u>789</u>			<u>42</u>	<u>889</u>
P16		<u>45</u>	<u>803</u>			<u>45</u>	<u>896</u>
P17		<u>48</u>	<u>814</u>				
P18							
P19							
P20							



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 5409

P. O. BOX 1599 WICHITA, KANSAS 67201 PHONE (316) 838-0601

Elevation _____ Formation Arbuckle Eff. Pay _____ Ft.

District Pratt Date 8/19/80 Customer Order No. _____

COMPANY NAME Production Inc

ADDRESS Box 459 Great Bend

LEASE AND WELL NO. Callaway #1 COUNTY Barton STATE Ks Sec. 19 Twp 16 Rge 13

Mail Invoice To Same Co. Name _____ Address _____ No. Copies Requested 5

Mail Charts To Same Co. Name _____ Address _____ No. Copies Requested 5

Formation Test No. 3 Interval Tested from 3366 ft. to 3377 ft. Total Depth 3377 ft.

Packer Depth 3361 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 3366 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3369 ft. Recorder Number 2607 Cap. 4/50

Bottom Recorder Depth (Outside) 3372 ft. Recorder Number 3351 Cap. 4000

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

Drilling Contractor Mustang Drlg Rig #1 Drill Collar Length 150 I. D. 2 1/2 in.

Mud Type Premix-Starch Viscosity 47 Weight Pipe Length _____ I. D. _____ in.

Weight 9.9 Water Loss 9.2 cc. Drill Pipe Length 3195 I. D. 3.8 in.

Chlorides 48,000 P.P.M. Test Tool Length 21 ft. Tool Size 5200 in.

Jars: Make _____ Serial Number _____ Anchor Length _____ ft. Size 5200 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 FH in.

Blow: Weak increased to strong blow on first flow period

Strong blow throughout second flow period

Recovered 5 ft. of 5 1/2 Oil Cut Mud

Recovered 540 ft. of Gassy Water

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: Arrived: On Location

Pick Up Tool: 9:30 AM

Left: 2:30 PM

Time Set Packer(s) 10:30 A.M. P.M. Time Started Off Bottom 12:35 A.M. P.M. Maximum Temperature 114°

Initial Hydrostatic Pressure _____ (A) 1909 P.S.I.

Initial Flow Period _____ Minutes 30 (B) 63 P.S.I. to (C) 148 P.S.I.

Initial Closed In Period _____ Minutes 30 (D) 924 P.S.I.

Final Flow Period _____ Minutes 30 (E) 211 P.S.I. to (F) 243 P.S.I.

Final Closed In Period _____ Minutes 30 (G) 924 P.S.I.

Final Hydrostatic Pressure _____ (H) 1870 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.

David T. Williams

Test Approved By David P. Williams Signature of Customer or his authorized representative

Western Representative Jim Wondke Thank You

FIELD INVOICE

Open Hole Test	\$ <u>550.00</u>
Misrun	\$ _____
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ _____
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage	\$ _____
Fluid Sampler	\$ _____
Extra Charts	\$ _____
TOTAL	\$ <u>550.00</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 8-19 Recorder No. 2607 Capacity 4150 Test Ticket No. 5409
 Location 3369 Ft. Elevation _____ Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1873</u>	P.S.I.	<u>10:30 A</u>	<u>M</u>
B First Initial Flow Pressure	<u>88</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>144</u>	P.S.I.	<u>30</u>	Mins. <u>36</u> Mins.
D Initial Closed-in Pressure	<u>929</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
E Second Initial Flow Pressure	<u>230</u>	P.S.I.	<u>30</u>	Mins. <u>36</u> Mins.
F Second Final Flow Pressure	<u>256</u>	P.S.I.		
G Final Closed-in Pressure	<u>925</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1834</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 4 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 12 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

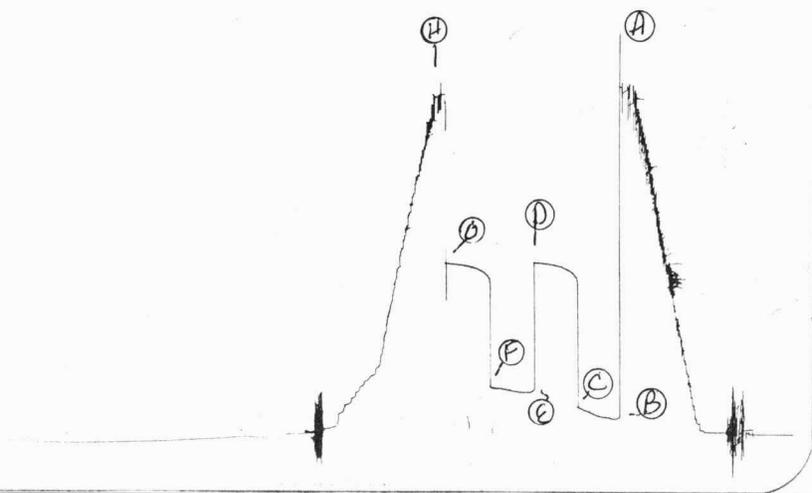
Final Shut-In
 Breakdown: 12 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	0	144	0	230	0	256
P 2	5	3	843	5	226	3	850
P 3	10	6	872	10	229	6	975
P 4	15	9	887	15	235	9	885
P 5	20	12	897	20	243	12	897
P 6	25	15	907	25	250	15	904
P 7	30	18	915	30	256	18	909
P 8	35	21	916	35		21	914
P 9	40	24	921	40		24	917
P10	45	27	924	45		27	919
P11	50	30	927	50		30	921
P12	55	33	928	55		33	923
P13	60	36	929	60		36	925
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				57	
		60				60	

SKT #5409

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Company Production, Inc. Lease & Well No. Callaway #1
 Elevation -- Formation Arbuckle Effective Pay ---- Ft. Ticket No. 5409
 Date 8/19/80 Sec. 19 Twp. 16S Range 13W County Barton State Kansas
 Test Approved by David P. Williams Western Representative Jim Wondra

Formation Test No. 3 Interval Tested from 3366 ft. to 3377 ft. Total Depth 3377 ft.
 Packer Depth 3361 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 3366 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3369 ft. Recorder Number 2607 Cap. 4150
 Bottom Recorder Depth (Outside) 3372 ft. Recorder Number 3351 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Mustang Drlg. Rig #1 Drill Collar Length 150 I. D. 2 1/4 in.
 Mud Type premix-starch Viscosity 47 Weight Pipe Length - I. D. - in.
 Weight 9.9 Water Loss 9.2 cc. Drill Pipe Length 3195 I. D. 3.8 in.
 Chlorides 48,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
 Jars: Make - Serial Number - Anchor Length 11 ft. Size 5 1/2 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 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Weak, increased to strong blow on first flow period. Strong blow throughout second flow period.

Recovered 5 ft. of slightly oil cut mud
 Recovered 540 ft. of gassy water
 Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -

Remarks: -

Time Set Packer(s) 10:30 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 12:35 ~~P.M.~~ ^{A.M.} Maximum Temperature 114°
 Initial Hydrostatic Pressure (A) 1873 P.S.I.
 Initial Flow Period Minutes 30 (B) 88 P.S.I. to (C) 144 P.S.I.
 Initial Closed In Period Minutes 36 (D) 929 P.S.I.
 Final Flow Period Minutes 30 (E) 230 P.S.I. to (F) 256 P.S.I.
 Final Closed In Period Minutes 36 (G) 925 P.S.I.
 Final Hydrostatic Pressure (H) 1836 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8/19/80 Test Ticket No. 5409
 Recorder No. 2607 Capacity 4150 Location 3369 Ft.
 Clock No. --- Elevation - Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1873</u> P.S.I.	Open Tool	<u>10:30A</u> M	
B First Initial Flow Pressure	<u>88</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>144</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>36</u> Mins.
D Initial Closed-in Pressure	<u>929</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>230</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>36</u> Mins.
F Second Final Flow Pressure	<u>256</u> P.S.I.			
G Final Closed-in Pressure	<u>925</u> P.S.I.			
H Final Hydrostatic Mud	<u>1836</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 12 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 12 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>88</u>	<u>0</u>	<u>144</u>	<u>0</u>	<u>230</u>	<u>0</u>	<u>256</u>
P 2	<u>84</u>	<u>3</u>	<u>843</u>	<u>5</u>	<u>226</u>	<u>3</u>	<u>850</u>
P 3	<u>93</u>	<u>6</u>	<u>872</u>	<u>10</u>	<u>229</u>	<u>6</u>	<u>975</u>
P 4	<u>99</u>	<u>9</u>	<u>887</u>	<u>15</u>	<u>235</u>	<u>9</u>	<u>885</u>
P 5	<u>112</u>	<u>12</u>	<u>897</u>	<u>20</u>	<u>243</u>	<u>12</u>	<u>897</u>
P 6	<u>130</u>	<u>15</u>	<u>907</u>	<u>25</u>	<u>250</u>	<u>15</u>	<u>904</u>
P 7	<u>144</u>	<u>18</u>	<u>912</u>	<u>30</u>	<u>256</u>	<u>18</u>	<u>914</u>
P 8		<u>21</u>	<u>916</u>			<u>21</u>	<u>917</u>
P 9		<u>24</u>	<u>921</u>			<u>24</u>	<u>919</u>
P10		<u>27</u>	<u>924</u>			<u>27</u>	<u>921</u>
P11		<u>30</u>	<u>927</u>			<u>30</u>	<u>923</u>
P12		<u>33</u>	<u>928</u>			<u>33</u>	<u>925</u>
P13		<u>36</u>	<u>929</u>			<u>36</u>	
P14							
P15							
P16							
P17							
P18							
P19							
P20							