

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY A. Scott Ritchie LEASE AND WELL NO. Hacker #1 "A" SEC. 10 TWP. 12S RGE. 22W TEST NO. 1 DATE 10-27-80

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b¹	= Approximate Radius of Investigation (Net Pay Zone h¹)	Feet
D.R.	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h¹	= Net Pay Thickness	Feet
K	= Permeability	md
K¹	= Permeability (From Net Pay Zone h¹)	md
m	= Slope Extrapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
OF¹	= Maximum Indicated Flow Rate	MCF/D
OF²	= Minimum Indicated Flow Rate	MCF/D
OF³	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF⁴	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	= Extrapolated Static Pressure	Psig.
P^F	= Final Flow Pressure	Psig.
P^{OT}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q¹	= Theoretical Production w/Damage Removed	bbls/day
Q^g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r^w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t^o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
u	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.



Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company A. Scott Ritchie Lease & Well No. Hacker #1 "A"
Elevation 2344 Kelly Bushing Formation Kansas City Effective Pay - Ft. Ticket No. 7185
Date 10-27-80 Sec. 10 Twp. 12S Range 22W County Trego State Kansas
Test Approved by Jeff Christian Western Representative Steve Michellich
Formation Test No. 1 Interval Tested from 3601 ft. to 3660 ft. Total Depth 3660 ft.
Packer Depth 3601 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3653 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 3656 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Murfin Rig #15 Drill Collar Length 186 I. D. 2.25 in.
Mud Type Starch Viscosity 43 Weight Pipe Length 900 I. D. 2.76 in.
Weight 9.9 Water Loss 15.2 cc. Drill Pipe Length 2483 I. D. 3.8 in.
Chlorides 40,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 408 Anchor Length 59 ft. Size 5 1/2 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: Initial flow period weak blow throughout. Final flow period no blow.

Recovered 65 ft. of Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 7:40 ~~A.M.~~ P.M. Time Started Off Bottom 10:25 ~~A.M.~~ P.M. Maximum Temperature 105
Initial Hydrostatic Pressure (A) 2040 P.S.I.
Initial Flow Period Minutes 30 (B) 84 P.S.I. to (C) 79 P.S.I.
Initial Closed In Period Minutes 51 (D) 866 P.S.I.
Final Flow Period Minutes 30 (E) 103 P.S.I. to (F) 96 P.S.I.
Final Closed In Period Minutes 69 (G) 848 P.S.I.
Final Hydrostatic Pressure (H) 2009 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 10-27-80 Test Ticket No. 7185

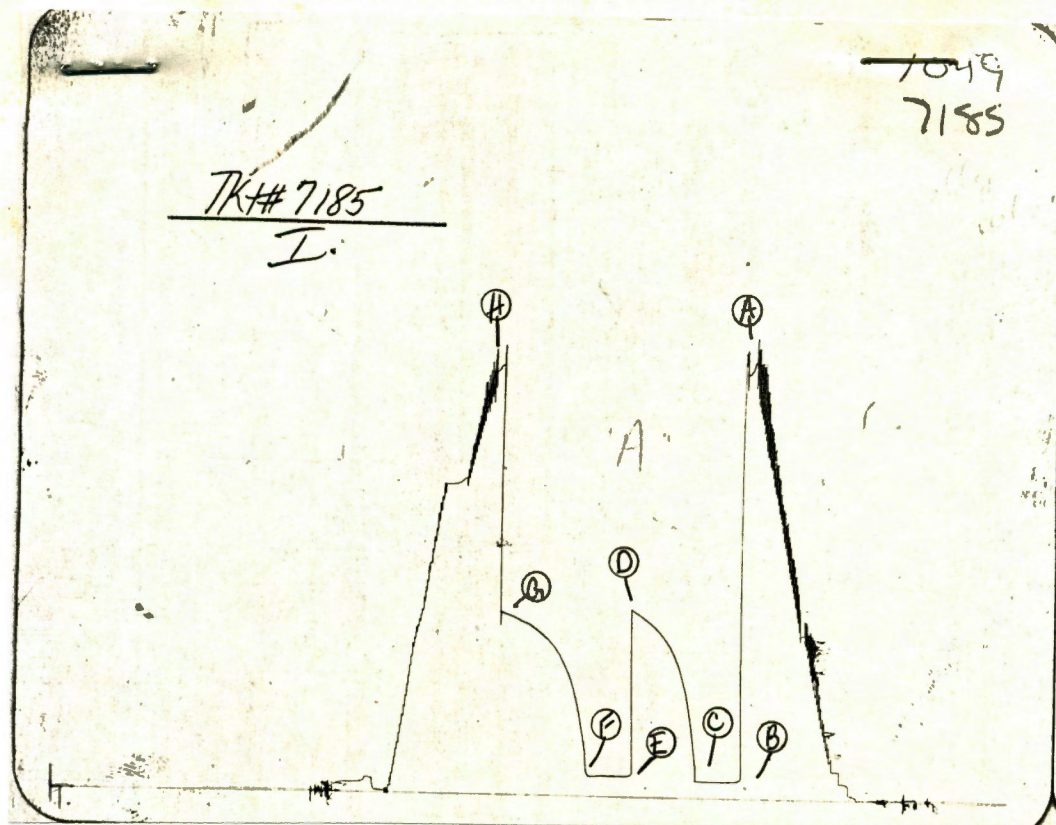
Recorder No. 1049 Capacity 3500 Location 3653 Ft.

Clock No. _____ Elevation 2344 Kelly Bushing Well Temperature 105 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2040	P.S.I.	7:40 P	M
B First Initial Flow Pressure	84	P.S.I.	30	30
C First Final Flow Pressure	79	P.S.I.	45	51
D Initial Closed-in Pressure	866	P.S.I.	30	30
E Second Initial Flow Pressure	103	P.S.I.	60	69
F Second Final Flow Pressure	96	P.S.I.		
G Final Closed-in Pressure	848	P.S.I.		
H Final Hydrostatic Mud	2009	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>17</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>23</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 0	84	0	79	0	103	0	96
P 2 5	81	3	253	5	97	3	125
P 3 10	79	6	379	10	97	6	273
P 4 15	79	9	473	15	97	9	372
P 5 20	79	12	542	20	97	12	451
P 6 25	79	15	606	25	97	15	516
P 7 30	79	18	648	30	96	18	570
P 8		21	685			21	606
P 9		24	716			24	645
P 10		27	744			27	676
P 11		30	766			30	701
P 12		33	786			33	720
P 13		36	802			36	740
P 14		39	817			39	755
P 15		42	830			42	771
P 16		45	843			45	782
P 17		48	857			48	795
P 18		51	866			51	802
P 19						54	811
P 20						57	821
						60	830
						63	837
						66	842
						69	848



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2049	2040 PSI
(B) First Initial Flow Pressure	73	84 PSI
(C) First Final Flow Pressure	73	79 PSI
(D) Initial Closed-in Pressure	870	866 PSI
(E) Second Initial Flow Pressure	92	103 PSI
(F) Second Final Flow Pressure	92	96 PSI
(G) Final Closed-in Pressure	852	848 PSI
(H) Final Hydrostatic Mud	2013	2009 PSI



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 7185

O. BOX 1599 PHONE (316) 838-0601

WICHITA, KANSAS 67201

Elevation

Formation

Eff. Pay ☒ Ft.

COMPANY NAME

ADDRESS 125 N Market Suite 950 Wichita, KS 67202

LEASE AND WELL NO. Hacker #1 'A' COUNTY Trego STATE KS Sec. 10 Twp 12S Rge 22W

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

Mail Charts To Address No. Copies Requested 5

Formation Test No. 1 Interval Tested from 3601 ft. to 3660 ft. Total Depth 3660 ft.

Packer Depth 3601 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth ft. Size in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3653 ft. Recorder Number 1049 Cap. 3500

Bottom Recorder Depth (Outside) 3656 ft. Recorder Number 1134 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Murfin Rig 15 Drill Collar Length 186' I. D. 2.25 in.

Mud Type Starch Viscosity 43 Weight Pipe Length 900' I. D. 2.76 in.

Weight 9.9 Water Loss 13.2 cc. Drill Pipe Length 2483' I. D. 3.8 in.

Chlorides 40,000 P.P.M. Test Tool Length 22' ft. Tool Size 5 1/2 in.

Jars: Make Western WTS Serial Number 4408 Anchor Length 59' ft. Size 5 1/2 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.

Initial Flow Period

Blow: 1st Opening - Weak Blow Throughout

2nd Opening - No Blow

3rd Opening - No Blow

Recovered 25 ft. of Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Arr 5:00 5:30

Time Set Packer(s) 7:40 A.M. P.M. Time Started Off Bottom 10:25 A.M. P.M. Maximum Temperature 105°

Initial Hydrostatic Pressure (A) 2049 P.S.I.

Initial Flow Period Minutes 30 (B) 73 P.S.I. to (C) 73 P.S.I.

Initial Closed In Period Minutes 45 (D) 870 P.S.I.

Final Flow Period Minutes 30 (E) 92 P.S.I. to (F) 92 P.S.I.

Final Closed In Period Minutes 60 (G) 852 P.S.I.

Final Hydrostatic Pressure (H) 2013 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 Jeff Christain

Signature of Customer or his authorized representative

Western Representative

Steve Mitchell

FIELD INVOICE

Open Hole Test \$ 550.00

Misrun \$

Straddle Test \$

Jars \$ 300.00

Selective Zone \$

Safety Joint \$ 50.00

Standby \$

Evaluation \$

Extra Packer \$

Circ. Sub. \$

Mileage \$ NC

Fluid Sampler \$

Extra Charts \$

TOTAL \$ 900.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-27-80 Test Ticket No. 7185
 Recorder No. 1049 Capacity 3500 Location 3653 Ft.
 Clock No. — Elevation 2344 KB Well Temperature 105 °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2040 P.S.I. Open Tool 7:40 P
 B First Initial Flow Pressure 84 P.S.I. First Flow Pressure 30 Mins. 30 Mins.
 C First Final Flow Pressure 79 P.S.I. Initial Closed-in Pressure 45 Mins. 51 Mins.
 D Initial Closed-in Pressure 866 P.S.I. Second Flow Pressure 30 Mins. 30 Mins.
 E Second Initial Flow Pressure 103 P.S.I. Final Closed-in Pressure 60 Mins. 69 Mins.
 F Second Final Flow Pressure 986 P.S.I.
 G Final Closed-in Pressure 848 P.S.I.
 H Final Hydrostatic Mud 2009 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>17</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>23</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 0	84	0	79	0	103	0	986
P 2 5	81	3	253	5	97	3	125
P 3 10	79	6	379	10		6	273
P 4 15		9	473	15		9	372
P 5 20		12	542	20	97	12	451
P 6 25		15	606	25	97	15	516
P 7 30	79	18	648	30	986	18	570
P 8 35		21	685	35		21	606
P 9 40		24	716	40		24	645
P 10 45		27	744	45		27	676
P 11 50		30	766	50		30	701
P 12 55		33	786	55		33	720
P 13 60		36	802	60		36	740
P 14		39	817	65		39	755
P 15		42	830	70		42	771
P 16		45	843	75		45	782
P 17		48	857	80		48	795
P 18		51	866	85		51	802
P 19		54		90		54	811
P 20		57				57	821
		60				60	830
						63	837
						66	842
						69	848



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company A. Scott Ritchie Lease & Well No. Hacker #1 "A"
Elevation 2344 Kelly Bushing Formation Kansas City Effective Pay - Ft. Ticket No. 7186
Date 10-28-80 Sec. 10 Twp. 12S Range 22W County Trego State Kansas
Test Approved by Jeff Christian Western Representative Steve Michellich
Formation Test No. 2 Interval Tested from 3666 ft. to 3694 ft. Total Depth 3694 ft.
Packer Depth 3666 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3687 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 3690 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Murfin Rig #15 Drill Collar Length 186 I. D. 2.25 in.
Mud Type Starch Viscosity 45 Weight Pipe Length 900 I. D. 2.76 in.
Weight 10.1 Water Loss 22.0 cc. Drill Pipe Length 2493 I. D. 3.8 in.
Chlorides 40,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 408 Anchor Length 28 ft. Size 5 1/2 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: Strong blow throughout initial flow period. Fair blow throughout final flow period.

Recovered 400 ft. of water cut mud
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks:

Time Set Packer(s) 11:30 ~~P.M.~~ A.M. Time Started Off Bottom 2:00 ~~P.M.~~ A.M. Maximum Temperature 107
Initial Hydrostatic Pressure (A) 2053 P.S.I.
Initial Flow Period Minutes (B) 81 P.S.I. to (C) 150 P.S.I.
Initial Closed In Period Minutes (D) 804 P.S.I.
Final Flow Period Minutes (E) 183 P.S.I. to (F) 223 P.S.I.
Final Closed In Period Minutes (G) 844 P.S.I.
Final Hydrostatic Pressure (H) 2018 P.S.I.

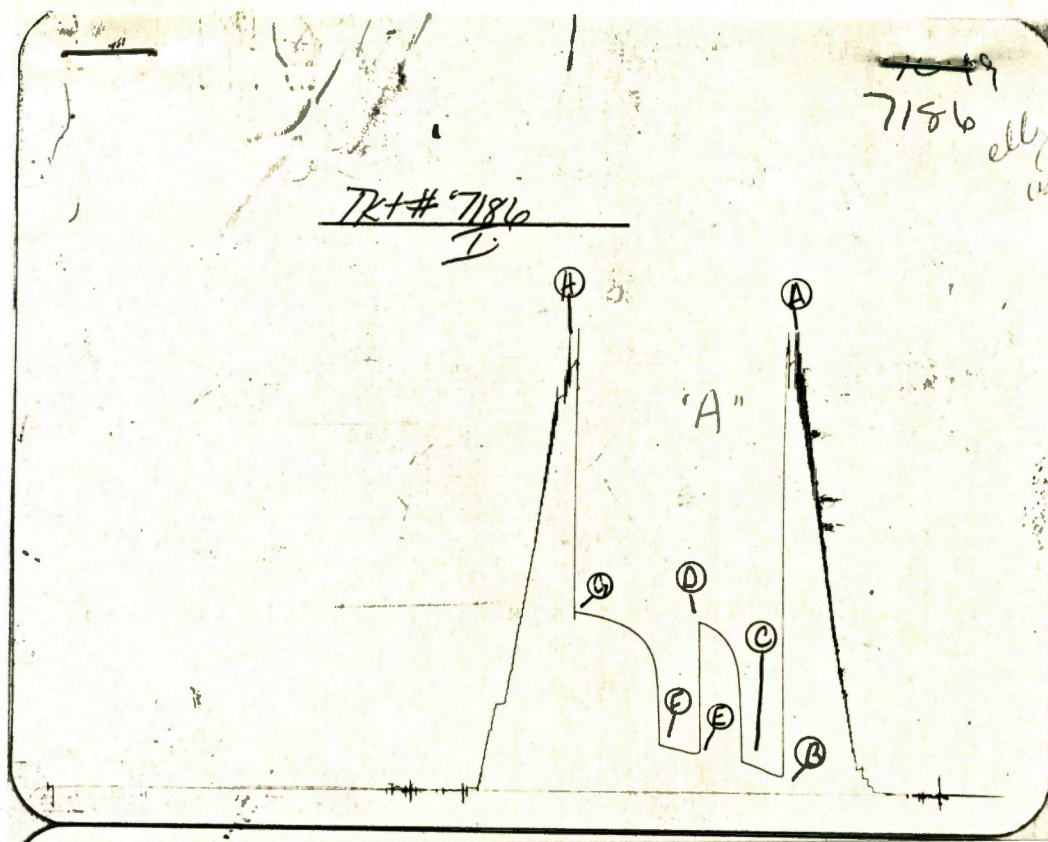
WESTERN TESTING CO., INC.

Pressure Data

Date 10-28-80 Test Ticket No. 7186
 Recorder No. 1049 Capacity 3500 Location 3678 Ft.
 Clock No. _____ Elevation 2344 Kelly Bushing Well Temperature 107 °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2053 P.S.I. Open Tool 11:30 A M
 B First Initial Flow Pressure 81 P.S.I. First Flow Pressure 30 Mins. 30 Mins.
 C First Final Flow Pressure 150 P.S.I. Initial Closed-in Pressure 30 Mins. 33 Mins.
 D Initial Closed-in Pressure 804 P.S.I. Second Flow Pressure 30 Mins. 30 Mins.
 E Second Initial Flow Pressure 183 P.S.I. Final Closed-in Pressure 60 Mins. 63 Mins.
 F Second Final Flow Pressure 223 P.S.I.
 G Final Closed-in Pressure 844 P.S.I.
 H Final Hydrostatic Mud 2018 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>11</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>21</u> Inc. of <u>3</u> mins. and a 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>81</u>	<u>0</u>	<u>150</u>	<u>0</u>	<u>183</u>	<u>0</u>	<u>223</u>
P 2 <u>5</u>	<u>88</u>	<u>3</u>	<u>456</u>	<u>5</u>	<u>187</u>	<u>3</u>	<u>548</u>
P 3 <u>10</u>	<u>99</u>	<u>6</u>	<u>595</u>	<u>10</u>	<u>192</u>	<u>6</u>	<u>628</u>
P 4 <u>15</u>	<u>114</u>	<u>9</u>	<u>656</u>	<u>15</u>	<u>201</u>	<u>9</u>	<u>670</u>
P 5 <u>20</u>	<u>125</u>	<u>12</u>	<u>694</u>	<u>20</u>	<u>209</u>	<u>12</u>	<u>703</u>
P 6 <u>25</u>	<u>137</u>	<u>15</u>	<u>722</u>	<u>25</u>	<u>216</u>	<u>15</u>	<u>725</u>
P 7 <u>30</u>	<u>150</u>	<u>18</u>	<u>740</u>	<u>30</u>	<u>223</u>	<u>18</u>	<u>740</u>
P 8 _____	_____	<u>21</u>	<u>760</u>	_____	_____	<u>21</u>	<u>756</u>
P 9 _____	_____	<u>24</u>	<u>771</u>	_____	_____	<u>24</u>	<u>767</u>
P10 _____	_____	<u>27</u>	<u>782</u>	_____	_____	<u>27</u>	<u>778</u>
P11 _____	_____	<u>30</u>	<u>793</u>	_____	_____	<u>30</u>	<u>789</u>
P12 _____	_____	<u>33</u>	<u>804</u>	_____	_____	<u>33</u>	<u>797</u>
P13 _____	_____	_____	_____	_____	_____	<u>36</u>	<u>802</u>
P14 _____	_____	_____	_____	_____	_____	<u>39</u>	<u>810</u>
P15 _____	_____	_____	_____	_____	_____	<u>42</u>	<u>815</u>
P16 _____	_____	_____	_____	_____	_____	<u>45</u>	<u>821</u>
P17 _____	_____	_____	_____	_____	_____	<u>48</u>	<u>826</u>
P18 _____	_____	_____	_____	_____	_____	<u>51</u>	<u>830</u>
P19 _____	_____	_____	_____	_____	_____	<u>54</u>	<u>833</u>
P20 _____	_____	_____	_____	_____	_____	<u>57</u>	<u>838</u>
						<u>60</u>	<u>841</u>
						<u>63</u>	<u>844</u>



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2031	2053 PSI
(B) First Initial Flow Pressure	82	81 PSI
(C) First Final Flow Pressure	156	150 PSI
(D) Initial Closed-in Pressure	806	804 PSI
(E) Second Initial Flow Pressure	183	183 PSI
(F) Second Final Flow Pressure	229	223 PSI
(G) Final Closed-in Pressure	842	844 PSI
(H) Final Hydrostatic Mud	2013	2018 PSI



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

WESTERN TESTING CO., INC. FORMATION TESTING

TICKET No. 7186

Elevation 2344 ^{KD} _{ushing} Formation K City Eff. Pay Ft.

District Wakeney Date 10-28-80 Customer Order No.

COMPANY NAME A Scott Ritchie
ADDRESS 125 N. Market, Suite 950, Wichita, KS 67202
LEASE AND WELL NO. Hacker #1 'A' COUNTY Trego STATE Ks Sec. 12 Twp 12S Rge 22W
Mail Invoice To Same No. Copies Requested 5
Co. Name 11 Address
Mail Charts To No. Copies Requested 5

Formation Test No. 2 Interval Tested from 3666 ft. to 3694 ft. Total Depth 3694 ft.
Packer Depth 3666 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Packer Depth ft. Size in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 3687 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 3690 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Martin Rig 15 Drill Collar Length 186' I. D. 2.25 in.
Mud Type SAGIN Viscosity 45 Weight Pipe Length 900' I. D. 2.76 in.
Weight 10.1 Water Loss 22 cc. Drill Pipe Length 2493' I. D. 3.8 in.
Chlorides 40,000 P.P.M. Test Tool Length 22' ft. Tool Size 5 1/2 in.
Jars: Make Western Serial Number 408 Anchor Length 28' ft. Size 5 1/2 in.
Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 1 1/2 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Strong Blow thru/out 1st opening Initial flow period
Fair Blow thru/out 2nd opening Final flow period

Recovered 400 ft. of Water cut Mud
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks:

Time Set Packer(s) 9:30 10:00 11:30 AM Time Started Off Bottom 2:00 AM Maximum Temperature 107°
Initial Hydrostatic Pressure 2031 P.S.I. (A)
Initial Flow Period 30 Minutes (B) 82 P.S.I. to (C) 156 P.S.I.
Initial Closed In Period 30 Minutes (D) 806 P.S.I.
Final Flow Period 30 Minutes (E) 183 P.S.I. to (F) 229 P.S.I.
Final Closed In Period 60 Minutes (G) 842 P.S.I.
Final Hydrostatic Pressure 2013 P.S.I. (H)

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 Jeff Christen
Signature of Customer or his authorized representative

Western Representative Steve Mitchell

FIELD INVOICE

Open Hole Test \$ 550.00
Misrun \$
Straddle Test \$
Jars \$ 300.00
Selective Zone \$
Safety Joint \$ 50.00
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$ NC
Fluid Sampler \$
Extra Charts \$
TOTAL \$ 900.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-28 Test Ticket No. 7186
 Recorder No. 1049 Capacity 3500 Location 3687 Ft.
 Clock No. _____ Elevation 2344 KB Well Temperature 107 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2053</u> P.S.I.	<u>11:30</u> A _M	
B First Initial Flow Pressure	<u>81</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>150</u> P.S.I.	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>804</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>183</u> P.S.I.	<u>60</u> Mins.	<u>63</u> Mins.
F Second Final Flow Pressure	<u>223</u> P.S.I.		
G Final Closed-in Pressure	<u>844</u> P.S.I.		
H Final Hydrostatic Mud	<u>2018</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>11</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>21</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>81</u>	<u>0</u>	<u>150</u>	<u>0</u>	<u>183</u>	<u>0</u>	<u>223</u>
P 2 <u>5</u>	<u>88</u>	<u>3</u>	<u>456</u>	<u>5</u>	<u>187</u>	<u>3</u>	<u>548</u>
P 3 <u>10</u>	<u>99</u>	<u>6</u>	<u>595</u>	<u>10</u>	<u>192</u>	<u>6</u>	<u>628</u>
P 4 <u>15</u>	<u>114</u>	<u>9</u>	<u>656</u>	<u>15</u>	<u>201</u>	<u>9</u>	<u>670</u>
P 5 <u>20</u>	<u>125</u>	<u>12</u>	<u>694</u>	<u>20</u>	<u>209</u>	<u>12</u>	<u>703</u>
P 6 <u>25</u>	<u>137</u>	<u>15</u>	<u>722</u>	<u>25</u>	<u>216</u>	<u>15</u>	<u>725</u>
P 7 <u>30</u>	<u>150</u>	<u>18</u>	<u>740</u>	<u>30</u>	<u>223</u>	<u>18</u>	<u>740</u>
P 8 <u>35</u>		<u>21</u>	<u>760</u>	<u>35</u>		<u>21</u>	<u>756</u>
P 9 <u>40</u>		<u>24</u>	<u>771</u>	<u>40</u>		<u>24</u>	<u>767</u>
P 10 <u>45</u>		<u>27</u>	<u>782</u>	<u>45</u>		<u>27</u>	<u>778</u>
P 11 <u>50</u>		<u>30</u>	<u>793</u>	<u>50</u>		<u>30</u>	<u>789</u>
P 12 <u>55</u>		<u>33</u>	<u>804</u>	<u>55</u>		<u>33</u>	<u>797</u>
P 13 <u>60</u>		<u>36</u>		<u>60</u>		<u>36</u>	<u>802</u>
P 14		<u>39</u>		<u>65</u>		<u>39</u>	<u>810</u>
P 15		<u>42</u>		<u>70</u>		<u>42</u>	<u>815</u>
P 16		<u>45</u>		<u>75</u>		<u>45</u>	<u>821</u>
P 17		<u>48</u>		<u>80</u>		<u>48</u>	<u>826</u>
P 18		<u>51</u>		<u>85</u>		<u>51</u>	<u>830</u>
P 19		<u>54</u>		<u>90</u>		<u>54</u>	<u>833</u>
P 20		<u>57</u>				<u>57</u>	<u>838</u>
		<u>60</u>				<u>60</u>	<u>841</u>
						<u>63</u>	<u>844</u>



Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company A. Scott Ritchie Lease & Well No. Hacker #1 "A"
Elevation 2344 Kelly Bushing Formation Kansas City Effective Pay - Ft. Ticket No. 7187
Date 10-29-80 Sec 10 Twp 12S Range 22W County Trego State Kansas
Test Approved by Jeff Christian Western Representative Steve Michellich
Formation Test No. 3 Interval Tested from 3691 ft. to 3727 ft. Total Depth 3727 ft.
Packer Depth 3691 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3720 ft. Recorder Number 1049 Cap 3500
Bottom Recorder Depth (Outside) 3723 ft. Recorder Number 1134 Cap 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap -
Drilling Contractor Murfin Rig #15 Drill Collar Length 186 I. D. 2.25 in.
Mud Type Starch Viscosity 45 Weight Pipe Length 900 I. D. 2.76 in.
Weight 10.1 Water Loss 22.0 cc. Drill Pipe Length 2583 I. D. 3.8 in.
Chlorides 40,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 408 Anchor Length 36 ft. Size 5 1/2 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: Strong blow throughout test.

Recovered 630 ft. of mud cut water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 3:10 A.M. Time Started Off Bottom 5:40 A.M. Maximum Temperature 107
Initial Hydrostatic Pressure 2049 P.S.I. (A)
Initial Flow Period 35 Minutes (B) 86 P.S.I. to (C) 207 P.S.I.
Initial Closed In Period 36 Minutes (D) 923 P.S.I.
Final Flow Period 30 Minutes (E) 247 P.S.I. to (F) 313 P.S.I.
Final Closed In Period 63 Minutes (G) 934 P.S.I.
Final Hydrostatic Pressure 2038 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 10-29-80 Test Ticket No. 7187

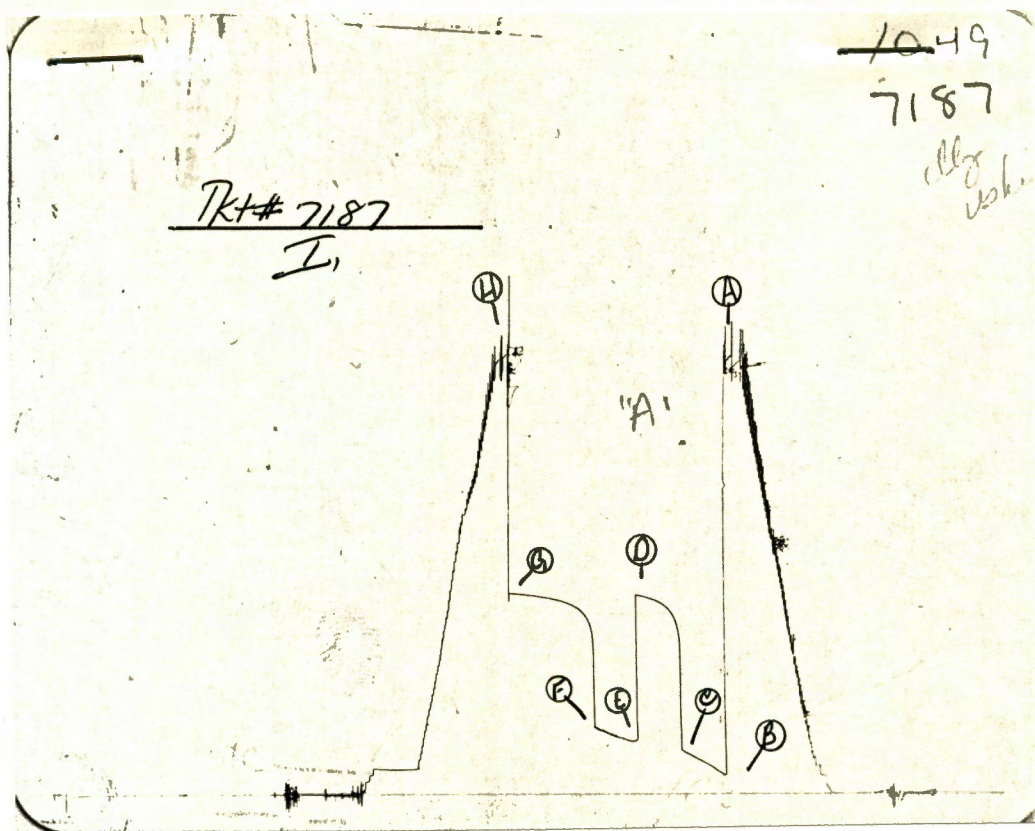
Recorder No. 1049 Capacity 3500 Location 3720 Ft.

Clock No. 2344 Kelly Bushing Elevation 107 Well Temperature 107 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2049	P.S.I.	3:10 A	M
B First Initial Flow Pressure	86	P.S.I.	30 Mins.	35 Mins.
C First Final Flow Pressure	207	P.S.I.	30 Mins.	36 Mins.
D Initial Closed-in Pressure	923	P.S.I.	30 Mins.	30 Mins.
E Second Initial Flow Pressure	247	P.S.I.	60 Mins.	63 Mins.
F Second Final Flow Pressure	313	P.S.I.		
G Final Closed-in Pressure	934	P.S.I.		
H Final Hydrostatic Mud	2038	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>7</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>21</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 0	86	0	207	0	247	0	313
P 2 5	104	3	665	5	247	3	716
P 3 10	126	6	788	10	260	6	791
P 4 15	145	9	830	15	269	9	828
P 5 20	161	12	857	20	280	12	852
P 6 25	181	15	874	25	297	15	864
P 7 30	196	18	888	30	313	18	875
P 8 35	207	21	896			21	885
P 9		24	905			24	892
P10		27	912			27	897
P11		30	916			30	903
P12		33	921			33	908
P13		36	923			36	912
P14						39	916
P15						42	918
P16						45	921
P17						48	924
P18						51	927
P19						54	929
P20						57	931
						60	932
						63	934



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2049	2049 PSI
(B) First Initial Flow Pressure	82	86 PSI
(C) First Final Flow Pressure	211	207 PSI
(D) Initial Closed-in Pressure	934	923 PSI
(E) Second Initial Flow Pressure	247	247 PSI
(F) Second Final Flow Pressure	311	313 PSI
(G) Final Closed-in Pressure	934	934 PSI
(H) Final Hydrostatic Mud	2040	2038 PSI



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

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 7187

Elevation 2344 Kelly Formation K. B. Bushin Eff. Pay K. B. Bushin Ft.

District W. Keeney Date 10-29-80 Customer Order No.

COMPANY NAME A Scott Ritchie

ADDRESS 125 N Market, Suite 950, Wichita, Ks. 67202

LEASE AND WELL NO. Hacker #11A COUNTY Trego STATE Ks Sec. 10 Twp 12S Rge 22W

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

Mail Charts To Address No. Copies Requested 5

Formation Test No. 3 Interval Tested from 3691 ft. to 3727 ft. Total Depth 3727 ft.

Packer Depth 3691 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth ft. Size in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3720 ft. Recorder Number 1049 Cap. 3500

Bottom Recorder Depth (Outside) 3723 ft. Recorder Number 1134 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Murfin Rig 15 Drill Collar Length 186 I. D. 2.25 in.

Mud Type Starch Viscosity 45 Weight Pipe Length 900 I. D. 2.176 in.

Weight 10.1 Water Loss 22 cc. Drill Pipe Length 2583 I. D. 3.18 in.

Chlorides 40,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.

Jars: Make Western Serial Number 808 Anchor Length 36 ft. Size 5 1/2 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: Strong Blow Throughout Both Openings Test

Recovered 630 ft. of Mud cut water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Arr 12:30 1:30 5:00

Time Set Packer(s) 3:10 AM Time Started Off Bottom 5:40 AM Maximum Temperature 107°

Initial Hydrostatic Pressure 2049 P.S.I.

Initial Flow Period 30 Minutes (B) 82 P.S.I. to (C) 211 P.S.I.

Initial Closed In Period 30 Minutes (D) 934 P.S.I.

Final Flow Period 30 Minutes (E) 247 P.S.I. to (F) 311 P.S.I.

Final Closed In Period 60 Minutes (G) 934 P.S.I.

Final Hydrostatic Pressure 2040 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 Jeff Christian
Signature of Customer or his authorized representative

Western Representative Steve Michelsch

FIELD INVOICE

Open Hole Test	\$ <u>550.00</u>
Misrun	\$ <u> </u>
Straddle Test	\$ <u> </u>
Jars	\$ <u>300.00</u>
Selective Zone	\$ <u> </u>
Safety Joint	\$ <u>50.00</u>
Standby	\$ <u> </u>
Evaluation	\$ <u> </u>
Extra Packer	\$ <u> </u>
Circ. Sub.	\$ <u> </u>
Mileage	\$ <u>NC</u>
Fluid Sampler	\$ <u> </u>
Extra Charts	\$ <u> </u>
TOTAL	\$ <u>900.00</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 10-29 Test Ticket No. 7187
 Recorder No. 1049 Capacity 3500 Location 3720 Ft.
 Clock No. _____ Elevation 2344 KB Well Temperature 107 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2049</u> P.S.I.	<u>3:10</u> A	
B First Initial Flow Pressure	<u>86</u> P.S.I.	<u>30</u> Mins.	<u>35</u> Mins.
C First Final Flow Pressure	<u>207</u> P.S.I.	<u>30</u> Mins.	<u>36</u> Mins.
D Initial Closed-in Pressure	<u>923</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>247</u> P.S.I.	<u>60</u> Mins.	<u>63</u> Mins.
F Second Final Flow Pressure	<u>313</u> P.S.I.		
G Final Closed-in Pressure	<u>934</u> P.S.I.		
H Final Hydrostatic Mud	<u>2038</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>7</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>12</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>21</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>86</u>	0	<u>207</u>	0	<u>247</u>	0	<u>313</u>
P 2	<u>104</u>	3	<u>665</u>	5	<u>247</u>	3	<u>716</u>
P 3	<u>126</u>	6	<u>788</u>	10	<u>260</u>	6	<u>791</u>
P 4	<u>145</u>	9	<u>830</u>	15	<u>269</u>	9	<u>828</u>
P 5	<u>161</u>	12	<u>857</u>	20	<u>280</u>	12	<u>852</u>
P 6	<u>181</u>	15	<u>874</u>	25	<u>297</u>	15	<u>864</u>
P 7	<u>196</u>	18	<u>888</u>	30	<u>313</u>	18	<u>875</u>
P 8	<u>207</u>	21	<u>896</u>	35		21	<u>885</u>
P 9		24	<u>905</u>	40		24	<u>892</u>
P 10		27	<u>912</u>	45		27	<u>897</u>
P 11		30	<u>916</u>	50		30	<u>903</u>
P 12		33	<u>921</u>	55		33	<u>908</u>
P 13		36	<u>923</u>	60		36	<u>912</u>
P 14		39		65		39	<u>916</u>
P 15		42		70		42	<u>918</u>
P 16		45		75		45	<u>921</u>
P 17		48		80		48	<u>924</u>
P 18		51		85		51	<u>927</u>
P 19		54		90		54	<u>929</u>
P 20		57				57	<u>931</u>
		60				60	<u>932</u>
						63	<u>934</u>



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company A. Scott Ritchie

Lease & Well No. Hacker #1 "A"

Elevation 2344 Kelly Bushing Kansas City Formation Kansas City Effective Pay - Ft. Ticket No. 7188

Date 10-30-80 Sec 10 Twp 12S Range 22W County Trego State Kansas

Test Approved by Jeff Christian Western Representative Steve Michellich

Formation Test No. 4 Interval Tested from 3766 ft. to 3900 ft. Total Depth 3900 ft.

Packer Depth 3766 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3893 ft. Recorder Number 1049 Cap. 3500

Bottom Recorder Depth (Outside) 3896 ft. Recorder Number 1134 Cap. 4500

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

Drilling Contractor Murfin Rig #15 Drill Collar Length 186 I. D. 2.25 in.

Mud Type Starch Viscosity 40 Weight Pipe Length 900 I. D. 2.76 in.

Weight 10.2 Water Loss 18.0 cc. Drill Pipe Length 2658 I. D. 3.8 in.

Chlorides 34,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.

Jars: Make WIC Serial Number 408 Anchor Length 134 ft. Size 5 1/2 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: Strong blow throughout initial flow period. Fair decreasing blow in final flow period.

Recovered 240 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 6:15 A.M. Time Started Off Bottom 9:00 A.M. Maximum Temperature 107

Initial Hydrostatic Pressure (A) 2196 P.S.I.

Initial Flow Period Minutes (B) 103 P.S.I. to (C) 187 P.S.I.

Initial Closed In Period Minutes (D) 1215 P.S.I.

Final Flow Period Minutes (E) 201 P.S.I. to (F) 218 P.S.I.

Final Closed In Period Minutes (G) 1252 P.S.I.

Final Hydrostatic Pressure (H) 2159 P.S.I.

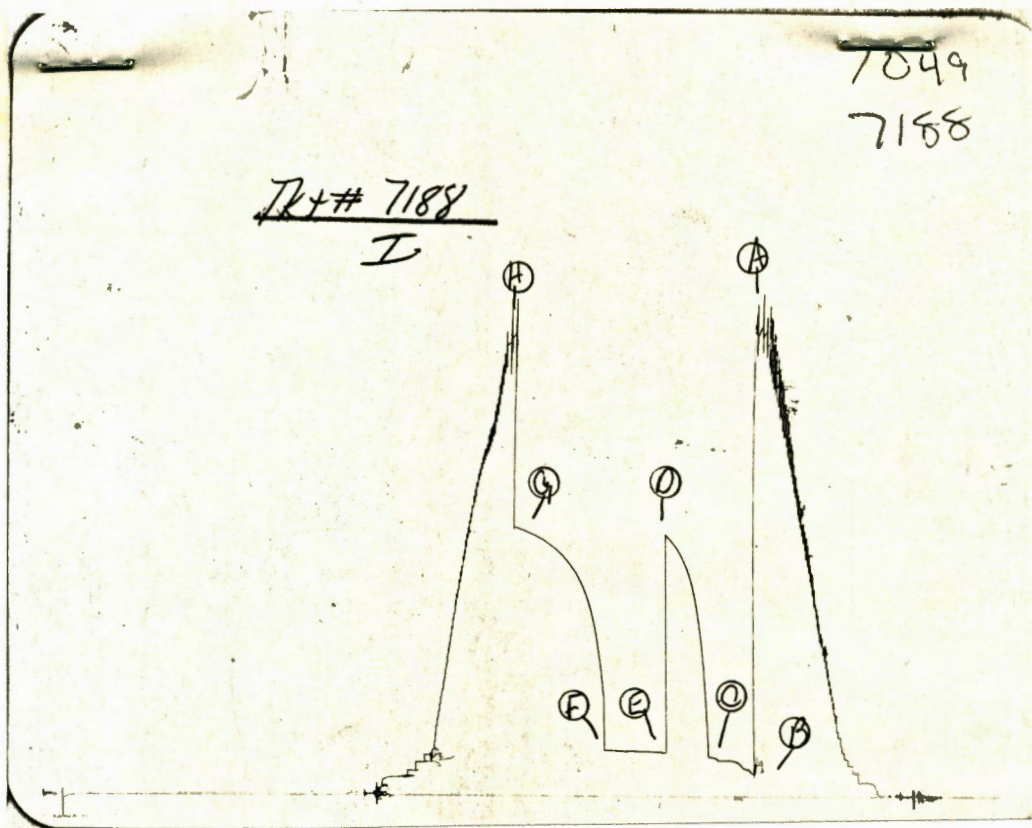
WESTERN TESTING CO., INC.

Pressure Data

Date 10-30-80 Test Ticket No. 7188
 Recorder No. 1049 Capacity 2344 Kelly Bushing Location 3893 Ft.
 Clock No. _____ Elevation 2344 Kelly Bushing Well Temperature 107 °F
 Point _____ Pressure _____
 A Initial Hydrostatic Mud 2196 P.S.I. Open Tool _____
 B First Initial Flow Pressure 103 P.S.I. First Flow Pressure 30 Mins. 30 Mins.
 C First Final Flow Pressure 187 P.S.I. Initial Closed-in Pressure 30 Mins. 36 Mins.
 D Initial Closed-in Pressure 1215 P.S.I. Second Flow Pressure 45 Mins. 45 Mins.
 E Second Initial Flow Pressure 201 P.S.I. Final Closed-in Pressure 60 Mins. 69 Mins.
 F Second Final Flow Pressure 218 P.S.I.
 G Final Closed-in Pressure 1252 P.S.I.
 H Final Hydrostatic Mud 2159 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>9</u> Inc.		Breakdown: <u>23</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>187</u>	<u>0</u>	<u>201</u>	<u>0</u>	<u>218</u>
P 2 <u>5</u>	<u>130</u>	<u>3</u>	<u>432</u>	<u>5</u>	<u>209</u>	<u>3</u>	<u>516</u>
P 3 <u>10</u>	<u>154</u>	<u>6</u>	<u>615</u>	<u>10</u>	<u>211</u>	<u>6</u>	<u>650</u>
P 4 <u>15</u>	<u>169</u>	<u>9</u>	<u>762</u>	<u>15</u>	<u>212</u>	<u>9</u>	<u>756</u>
P 5 <u>20</u>	<u>170</u>	<u>12</u>	<u>879</u>	<u>20</u>	<u>213</u>	<u>12</u>	<u>846</u>
P 6 <u>25</u>	<u>170</u>	<u>15</u>	<u>962</u>	<u>25</u>	<u>213</u>	<u>15</u>	<u>908</u>
P 7 <u>30</u>	<u>187</u>	<u>18</u>	<u>1026</u>	<u>30</u>	<u>213</u>	<u>18</u>	<u>960</u>
P 8 _____		<u>21</u>	<u>1075</u>	<u>35</u>	<u>215</u>	<u>21</u>	<u>998</u>
P 9 _____		<u>24</u>	<u>1117</u>	<u>40</u>	<u>217</u>	<u>24</u>	<u>1035</u>
P10 _____		<u>27</u>	<u>1148</u>	<u>45</u>	<u>218</u>	<u>27</u>	<u>1062</u>
P11 _____		<u>30</u>	<u>1177</u>			<u>30</u>	<u>1091</u>
P12 _____		<u>33</u>	<u>1201</u>			<u>33</u>	<u>1113</u>
P13 _____		<u>36</u>	<u>1215</u>			<u>36</u>	<u>1128</u>
P14 _____						<u>39</u>	<u>1150</u>
P15 _____						<u>42</u>	<u>1164</u>
P16 _____						<u>45</u>	<u>1177</u>
P17 _____						<u>48</u>	<u>1190</u>
P18 _____						<u>51</u>	<u>1203</u>
P19 _____						<u>54</u>	<u>1212</u>
P20 _____						<u>57</u>	<u>1221</u>
						<u>60</u>	<u>1228</u>
						<u>63</u>	<u>1237</u>
						<u>66</u>	<u>1246</u>
						<u>69</u>	<u>1252</u>



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2196	2196	PSI
(B) First Initial Flow Pressure	110	103	PSI
(C) First Final Flow Pressure	192	187	PSI
(D) Initial Closed-in Pressure	1217	1215	PSI
(E) Second Initial Flow Pressure	211	201	PSI
(F) Second Final Flow Pressure	220	218	PSI
(G) Final Closed-in Pressure	1254	1252	PSI
(H) Final Hydrostatic Mud	2169	2159	PSI



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No. 7188

P. O. BOX 1599 PHONE (316) 838-0601

WICHITA, KANSAS 67201

Elevation

2344

Formation

KB

KC City

Eff. Pay Ft.

District Wakeeney

Date 10-30-80

Customer Order No.

COMPANY NAME

A Scott Ritchie

ADDRESS

125 N Market, Suite 950, Wichita, Ks. 67202

LEASE AND WELL NO.

Hacker #1A

COUNTY

Trego

STATE

Ks

Sec.

10

Twp.

12S

Rge.

22W

Mail Invoice To

Same

Co. Name

Address

No. Copies Requested

5

Mail Charts To

Address

No. Copies Requested

5

Formation Test No.

4

Interval Tested from

3766

ft. to

3900

ft.

Total Depth

3900

ft.

Packer Depth

3766

ft.

Size

6 3/4

in.

Packer Depth

ft.

Size

in.

Packer Depth

ft.

Size

in.

Packer Depth

ft.

Size

in.

Depth of Selective Zone Set

Top Recorder Depth (Inside)

3893

ft.

Recorder Number

1049

Cap.

3500

Bottom Recorder Depth (Outside)

3896

ft.

Recorder Number

1134

Cap.

4500

Below Straddle Recorder Depth

ft.

Recorder Number

ft.

Cap.

ft.

Drilling Contractor

Murphy Rig 15

Mud Type

Starch

Viscosity

40

Weight

10.2

Water Loss

18.0

cc.

Chlorides

18.0

P.P.M.

34000

Jars: Make

Western

Serial Number

34000

Did Well Flow?

No

Reversed Out

No

Drill Collar Length

186

I. D.

2.25

in.

Weight Pipe Length

900

I. D.

2.76

in.

Drill Pipe Length

2658

I. D.

3.8

in.

Test Tool Length

221

ft.

Tool Size

5 1/2

in.

Anchor Length

134

ft.

Size

5 1/2

in.

Surface Choke Size

3/4

in.

Bottom Choke Size

3/4

in.

Main Hole Size

7 7/8

in.

Tool Joint Size

7 7/8

in.

Blow:

Strong Blow Throughout 1st Opening. Initial flow period

2nd Opening - Fair Decreasing Blow Final flow period

Recovered

240 ft. of

Mud

Recovered

ft. of

Recovered

ft. of

Recovered

ft. of

Recovered

ft. of

Remarks:

RECEIVED
NOV 3 - 1980

Arr. 4:00

4:30

12:00

Time Set Packer(s)

6:15

A.M.

Time Started Off Bottom

9:00

A.M.

Maximum Temperature

107°

Initial Hydrostatic Pressure

(A)

2196

P.S.I.

Initial Flow Period

Minutes

30

(B)

110

P.S.I. to (C)

192

P.S.I.

Initial Closed In Period

Minutes

30

(D)

1217

P.S.I.

Final Flow Period

Minutes

45

(E)

211

P.S.I. to (F)

220

P.S.I.

Final Closed In Period

Minutes

60

(G)

1254

P.S.I.

Final Hydrostatic Pressure

(H)

2169

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

Jeff Christian

Signature of Customer or his authorized representative

Western Representative

Steve Mitchell

FIELD INVOICE

Open Hole Test

\$ 550.00

Misrun

\$

Straddle Test

\$

Jars

\$ 300.00

Selective Zone

\$

Safety Joint

\$ 50.00

Standby

\$

Evaluation

\$

Extra Packer

\$

Circ. Sub.

\$

Mileage

\$ NC

Fluid Sampler

\$

Extra Charts

\$

TOTAL

\$ 900.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-30

Test Ticket No. 7188

Recorder No. 1049

Capacity 3500

Location 3893 Ft.

Clock No.

Elevation 2344 KB

Well Temperature 107 °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>2196</u>	P.S.I.
B First Initial Flow Pressure	<u>103</u>	P.S.I.
C First Final Flow Pressure	<u>187</u>	P.S.I.
D Initial Closed-in Pressure	<u>1215</u>	P.S.I.
E Second Initial Flow Pressure	<u>201</u>	P.S.I.
F Second Final Flow Pressure	<u>218</u>	P.S.I.
G Final Closed-in Pressure	<u>1252</u>	P.S.I.
H Final Hydrostatic Mud	<u>2159</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>6:15</u>	<u>AM</u>
First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>36</u> Mins.
Second Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
Final Closed-in Pressure	<u>60</u> Mins.	<u>69</u> Mins.

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: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 23 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>187</u>	0	<u>201</u>	0	<u>218</u>
P 2 5	<u>130</u>	3	<u>432</u>	5	<u>209</u>	3	<u>516</u>
P 3 10	<u>154</u>	6	<u>615</u>	10	<u>211</u>	6	<u>650</u>
P 4 15	<u>169</u>	9	<u>762</u>	15	<u>212</u>	9	<u>756</u>
P 5 20	<u>170</u>	12	<u>879</u>	20	<u>213</u>	12	<u>846</u>
P 6 25	<u>170</u>	15	<u>962</u>	25	<u>213</u>	15	<u>908</u>
P 7 30	<u>187</u>	18	<u>1026</u>	30	<u>213</u>	18	<u>960</u>
P 8 35		21	<u>1075</u>	35	<u>215</u>	21	<u>998</u>
P 9 40		24	<u>1117</u>	40	<u>217</u>	24	<u>1035</u>
P10 45		27	<u>1148</u>	45	<u>218</u>	27	<u>1062</u>
P11 50		30	<u>1177</u>	50		30	<u>1091</u>
P12 55		33	<u>1201</u>	55		33	<u>1113</u>
P13 60		36	<u>1215</u>	60		36	<u>1128</u>
P14		39		65		39	<u>1150</u>
P15		42		70		42	<u>1164</u>
P16		45		75		45	<u>1177</u>
P17		48		80		48	<u>1190</u>
P18		51		85		51	<u>1203</u>
P19		54		90		54	<u>1212</u>
P20		57				57	<u>1221</u>
		60				60	<u>1228</u>
						63	<u>1237</u>
						66	<u>1246</u>
						69	<u>1255</u>



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company A. Scott Ritchie Lease & Well No. Hacker #1 "A"
Elevation 2344 Kelly Bushing Formation Marmaton Effective Pay - Ft. Ticket No. 7189
Date 10-31-80 Sec. 10 Twp. 12S Range 22W County Trego State Kansas
Test Approved by Jeff Christian Western Representative Steve Michellich
Formation Test No. 5 Interval Tested from 3965 ft. to 4000 ft. Total Depth 4000 ft.
Packer Depth 3965 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3993 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 3996 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Murfin Rig #15 Drill Collar Length 186 I. D. 2.25 in.
Mud Type Starch Viscosity 40.0 Weight Pipe Length 900 I. D. 2.76 in.
Weight 10.2 Water Loss 18.0 cc. Drill Pipe Length 2857 I. D. 3.8 in.
Chlorides 34,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 408 Anchor Length 35 ft. Size 5 1/2 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: Initial flow period weak blow died in 26 minutes. Final flow period no blow.

Recovered 75 ft. of oil cut mud - 15% oil, 85% mud
Recovered - ft. of -
Recovered - ft. of -
Recovered - ft. of -
Recovered - ft. of -

Remarks: -

Time Set Packer(s) 1:35 A.M. Time Started Off Bottom 4:05 P.M. Maximum Temperature 109
Initial Hydrostatic Pressure (A) 2271 P.S.I.
Initial Flow Period Minutes 35 (B) 84 P.S.I. to (C) 92 P.S.I.
Initial Closed In Period Minutes 30 (D) 740 P.S.I.
Final Flow Period Minutes 35 (E) 101 P.S.I. to (F) 92 P.S.I.
Final Closed In Period Minutes 63 (G) 610 P.S.I.
Final Hydrostatic Pressure (H) 2262 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

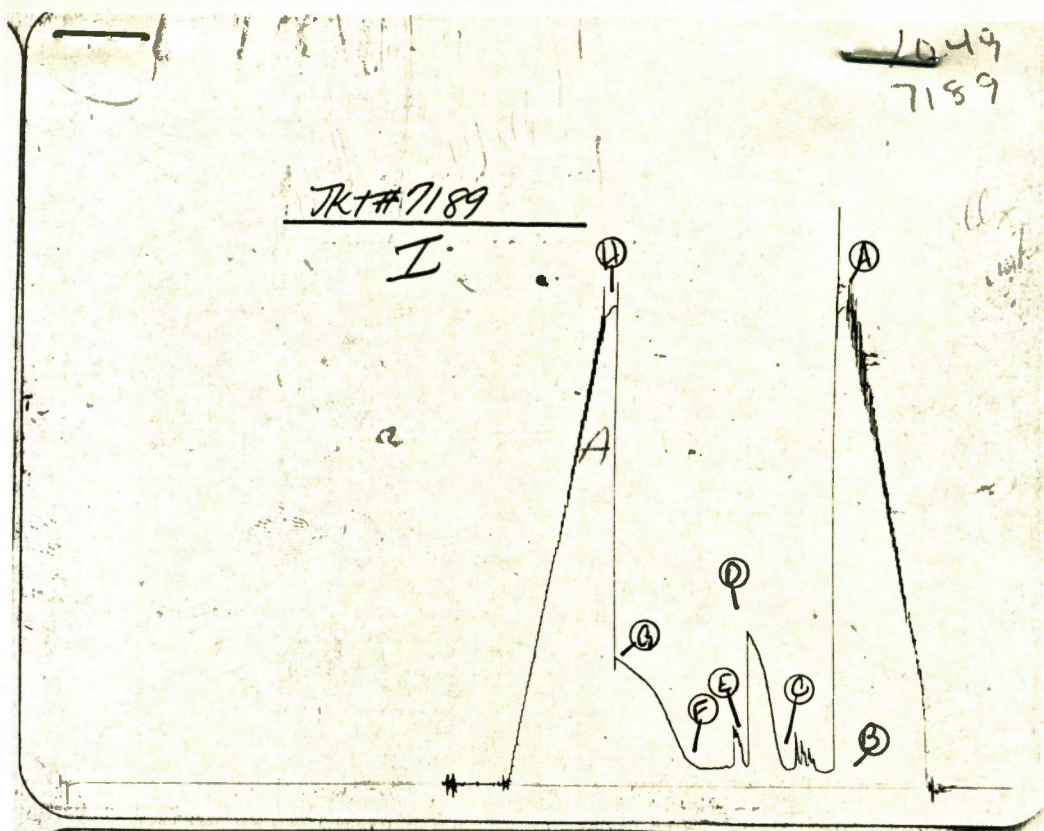
Date 10-31-80 Recorder No. 1049 Capacity 3500 Location 3993 Ft.
 Clock No. Elevation 2344 Kelly Bushing Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2271 P.S.I.	Open Tool	1:35 A M	
B First Initial Flow Pressure	84 P.S.I.	First Flow Pressure	30 Mins	35 Mins.
C First Final Flow Pressure	92 P.S.I.	Initial Closed-in Pressure	30 Mins	30 Mins.
D Initial Closed-in Pressure	740 P.S.I.	Second Flow Pressure	30 Mins	35 Mins.
E Second Initial Flow Pressure	101 P.S.I.	Final Closed-in Pressure	60 Mins	63 Mins.
F Second Final Flow Pressure	92 P.S.I.			
G Final Closed-in Pressure	610 P.S.I.			
H Final Hydrostatic Mud	2262 P.S.I.			

*Pressures questionable due to plugging action

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>7</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>7</u> Inc.		Breakdown: <u>21</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>	84	0	92	0	101	0	92
P 2 <u>5</u>	79	3	119	5	174*	3	104
P 3 <u>10</u>	79	6	181	10	106*	6	117
P 4 <u>15</u>	119*	9	286	15	99 *	9	134
P 5 <u>20</u>	112*	12	399	20	93 *	12	170
P 6 <u>25</u>	112*	15	485	25	92	15	211
P 7 <u>30</u>	94	18	562	30	92	18	253
P 8 <u>35</u>	92	21	615	35	92	21	297
P 9		24	665			24	341
P10		27	711			27	381
P11		30	740			30	416
P12						33	451
P13						36	474
P14						39	493
P15						42	513
P16						45	529
P17						48	544
P18						51	559
P19						54	575
P20						57	590
						60	601
						63	610



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2269	2271	PSI
(B) First Initial Flow Pressure	73	84	PSI
(C) First Final Flow Pressure	82	92	PSI
(D) Initial Closed-in Pressure	733	740	PSI
(E) Second Initial Flow Pressure	92	101	PSI
(F) Second Final Flow Pressure	92	92	PSI
(G) Final Closed-in Pressure	614	610	PSI
(H) Final Hydrostatic Mud	2260	2262	PSI



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 7189

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

Elevation 2344 ^{ally} KBushing Formation Marmaton Eff. Pay ☒ Ft.

District Wakeley Date 10-31-80 Customer Order No. ☒

COMPANY NAME A Scott Ritchie
ADDRESS 125 N. Market, Suite 950, Wichita, Ks. 67202
LEASE AND WELL NO. Hacker #1 A COUNTY Trego STATE Ks. Sec. 10 Twp. 12S Rge. 22W
Mail Invoice To Same No. Copies Requested 5
Co. Name 11 Address _____
Mail Charts To _____ No. Copies Requested 5

Formation Test No. 5 Interval Tested from 3965 ft. to 4000 ft. Total Depth 4000 ft.
Packer Depth 3965 ft. Size 6 3/4 in. Packer Depth _____ ft. Size ✓ in.
Packer Depth ✓ ft. Size ✓ in. Packer Depth _____ ft. Size ✓ in.
Depth of Selective Zone Set ✓

Top Recorder Depth (Inside) 3993 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 3996 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth ✓ ft. Recorder Number ✓ Cap. ✓

Drilling Contractor Murfin Rig 15 Drill Collar Length 186 I. D. 2 1/2 in.
Mud Type Starch Viscosity 10.240 Weight Pipe Length 900 I. D. 2 1/8 in.
Weight 40.02 Water Loss 18.0 cc. Drill Pipe Length 2857 I. D. 3 1/8 in.
Chlorides 34,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make Western WTC Serial Number 408 Anchor Length 35 ft. Size 5 1/2 in.
Did Well Flow? No Reversed Out No Surface Choke Size 3 1/4 in. Bottom Choke Size 3 1/4 in.
Initial Flow Period Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: 1st Opening - weak Blow Died in 26 min

2nd Opening - No Blow

Recovered 75 ft. of Oil cut Mud 15% Oil 85% Mud

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s) 1:35 ^{A.M.} P.M. Time Started Off Bottom 4:05 ^{A.M.} P.M. Maximum Temperature 109°

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Initial Hydrostatic Pressure	<u>2269</u>							
Initial Flow Period	<u>30</u>	<u>73</u>	<u>82</u>					
Initial Closed In Period	<u>30</u>	<u>733</u>						
Final Flow Period	<u>30</u>	<u>92</u>	<u>92</u>					
Final Closed In Period	<u>60</u>	<u>614</u>						
Final Hydrostatic Pressure	<u>2260</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 Jeff Christian
Signature of Customer or his authorized representative

Western Representative Steve Michellish

FIELD INVOICE

Open Hole Test	\$ <u>550.00</u>
Misrun	\$ _____
Straddle Test	\$ _____
Jars	\$ <u>300.00</u>
Selective Zone	\$ _____
Safety Joint	\$ <u>50.00</u>
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage	\$ <u>NC</u>
Fluid Sampler	\$ _____
Extra Charts	\$ _____
TOTAL	\$ <u>900.00</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 10-31

Test Ticket No. 7189

Recorder No. 1049

Capacity 3500

Location 3993 Ft.

Clock No.

Elevation 2344 KB

Well Temperature 109 °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>2271</u>	P.S.I.
B First Initial Flow Pressure	<u>84</u>	P.S.I.
C First Final Flow Pressure	<u>92</u>	P.S.I.
D Initial Closed-in Pressure	<u>740</u>	P.S.I.
E Second Initial Flow Pressure	<u>101</u>	P.S.I.
F Second Final Flow Pressure	<u>92</u>	P.S.I.
G Final Closed-in Pressure	<u>610</u>	P.S.I.
H Final Hydrostatic Mud	<u>2262</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>1:35 A</u>	M
First Flow Pressure	<u>30</u> Mins.	<u>35</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Second Flow Pressure	<u>30</u> Mins.	<u>35</u> Mins.
Final Closed-in Pressure	<u>60</u> Mins.	<u>63</u> Mins.

* Pressures questionable due to plugging action.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 21 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>84</u>	0	<u>92</u>	0	<u>101</u>	0	<u>92</u>
P 2 5	<u>79</u>	3	<u>119</u>	5	<u>174*</u>	3	<u>104</u>
P 3 10	<u>79</u>	6	<u>181</u>	10	<u>106*</u>	6	<u>117</u>
P 4 15	<u>119*</u>	9	<u>286</u>	15	<u>99*</u>	9	<u>134</u>
P 5 20	<u>112*</u>	12	<u>399</u>	20	<u>93*</u>	12	<u>170</u>
P 6 25	<u>112*</u>	15	<u>485</u>	25	<u>92</u>	15	<u>211</u>
P 7 30	<u>94</u>	18	<u>562</u>	30	<u>92</u>	18	<u>253</u>
P 8 35	<u>92</u>	21	<u>615</u>	35	<u>92</u>	21	<u>297</u>
P 9 40		24	<u>665</u>	40		24	<u>341</u>
P10 45		27	<u>711</u>	45		27	<u>381</u>
P11 50		30	<u>740</u>	50		30	<u>416</u>
P12 55		33		55		33	<u>451</u>
P13 60		36		60		36	<u>474</u>
P14		39		65		39	<u>493</u>
P15		42		70		42	<u>513</u>
P16		45		75		45	<u>529</u>
P17		48		80		48	<u>544</u>
P18		51		85		51	<u>559</u>
P19		54		90		54	<u>575</u>
P20		57				57	<u>590</u>
		60				60	<u>601</u>
						63	<u>610</u>



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company A. Scott Ritchie Lease & Well No. Hacker "A" #1
Elevation 2344 Kelly Bushing Arbuckle Formation Effective Pay - Ft. Ticket No. 7190
Date 10/31/80 Sec. 10 Twp. 12S Range 22W County Trego State Kansas
Test Approved by Jeff Christian Western Representative Steve Michellich

Formation Test No. 6 Interval Tested from 3994 ft. to 4036 ft. Total Depth 4036 ft.

Packer Depth 3994 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4029 ft. Recorder Number 1049 Cap. 3500

Bottom Recorder Depth (Outside) 4032 ft. Recorder Number 1134 Cap. 4500

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

Drilling Contractor Murfin Drilling Rig #15 Drill Collar Length 186 I. D. 2.25 in.

Mud Type starch Viscosity 47 Weight Pipe Length 900 I. D. 2.76 in.

Weight 10.2 Water Loss 8.8 cc. Drill Pipe Length 2886 I. D. 3.8 in.

Chlorides 56,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 420 Anchor Length 42 ft. Size 5 1/2 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 blow; died in twenty one minutes of initial flow period. No blow final flow period.

Recovered 40 ft. of oil specked mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: -

Time Set Packer(s) 11:50 -A.M. P.M. Time Started Off Bottom 1:50 A.M. P.M. Maximum Temperature 110°

Initial Hydrostatic Pressure 2267 (A) P.S.I.

Initial Flow Period 30 Minutes (B) 86 P.S.I. to (C) 78 P.S.I.

Initial Closed In Period 33 Minutes (D) 531 P.S.I.

Final Flow Period 35 Minutes (E) 91 P.S.I. to (F) 88 P.S.I.

Final Closed In Period 30 Minutes (G) 124 P.S.I.

Final Hydrostatic Pressure 2256 (H) P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 10-31-80Test Ticket No. 7190Recorder No. 1049Capacity 3000Location 4029 Ft.Clock No. - Elevation 2344 Kelly BushingWell Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2267</u>	P.S.I.	<u>11:50P</u> M	
B First Initial Flow Pressure	<u>86</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>78</u>	P.S.I.	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>531</u>	P.S.I.	<u>30</u> Mins.	<u>35</u> Mins.
E Second Initial Flow Pressure	<u>91</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>88</u>	P.S.I.		
G Final Closed-in Pressure	<u>124</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2256</u>	P.S.I.		

PRESSURE BREAKDOWN

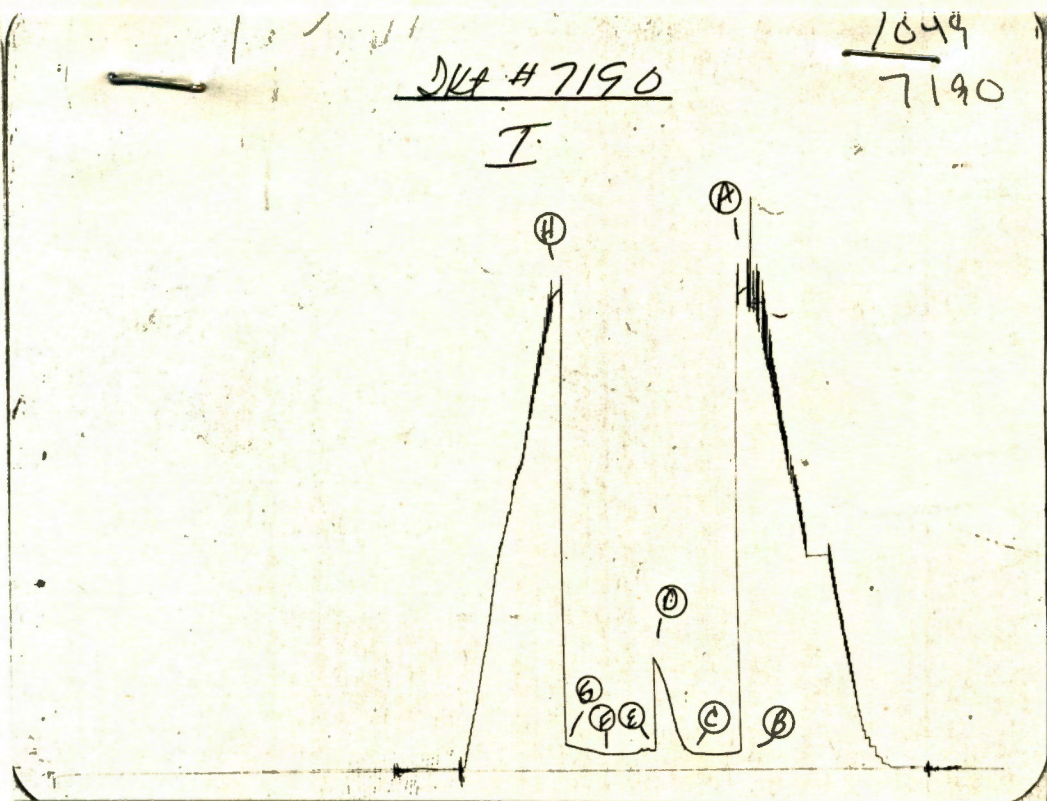
First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 10 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>0</u>	<u>86</u>	<u>0</u>	<u>78</u>	<u>0</u>	<u>91</u>	<u>0</u>	<u>88</u>
P 2 <u>5</u>	<u>80</u>	<u>3</u>	<u>78</u>	<u>5</u>	<u>91</u>	<u>3</u>	<u>82</u>
P 3 <u>10</u>	<u>77</u>	<u>6</u>	<u>86</u>	<u>10</u>	<u>91</u>	<u>6</u>	<u>87</u>
P 4 <u>15</u>	<u>75</u>	<u>9</u>	<u>97</u>	<u>15</u>	<u>82</u>	<u>9</u>	<u>93</u>
P 5 <u>20</u>	<u>75</u>	<u>12</u>	<u>122</u>	<u>20</u>	<u>80</u>	<u>12</u>	<u>97</u>
P 6 <u>25</u>	<u>76</u>	<u>15</u>	<u>161</u>	<u>25</u>	<u>80</u>	<u>15</u>	<u>100</u>
P 7 <u>30</u>	<u>78</u>	<u>18</u>	<u>225</u>	<u>30</u>	<u>88</u>	<u>18</u>	<u>103</u>
P 8		<u>21</u>	<u>309</u>	<u>35</u>	<u>88</u>	<u>21</u>	<u>108</u>
P 9		<u>24</u>	<u>379</u>			<u>24</u>	<u>113</u>
P10		<u>27</u>	<u>434</u>			<u>27</u>	<u>119</u>
P11		<u>30</u>	<u>481</u>			<u>30</u>	<u>124</u>
P12		<u>33</u>	<u>531</u>				
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2269	2267	PSI
(B) First Initial Flow Pressure	73	86	PSI
(C) First Final Flow Pressure	73	78	PSI
(D) Initial Closed-in Pressure	540	531	PSI
(E) Second Initial Flow Pressure	82	91	PSI
(F) Second Final Flow Pressure	82	88	PSI
(G) Final Closed-in Pressure	119	124	PSI
(H) Final Hydrostatic Mud	2260	2256	PSI



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

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 7190

Elevation 2344 RB Formation Arbuckle Eff. Pay Ft.

District Waverly Date 10-31-80 Customer Order No.

COMPANY NAME A Scott Ritchie
ADDRESS 125 N Market, Suite 950, Wichita, Ks. 67202
LEASE AND WELL NO. Hacker #1-A COUNTY Trego STATE Ks Sec 10 Twp 12S Rge 22W
Mail Invoice To Same No. Copies Requested 5
Co., Name Address
Mail Charts To No. Copies Requested 5
Address

Formation Test No. 6 Interval Tested from 3994 ft. to 4036 ft. Total Depth 4036 ft.
Packer Depth 3994 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Packer Depth ft. Size in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4029 ft. Recorder Number 1049 Cap. 3500
Bottom Recorder Depth (Outside) 4032 ft. Recorder Number 1134 Cap. 4500
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Martin Risks Drill Collar Length 186 I. D. 2.25 in.
Mud Type Starch Viscosity 47 Weight Pipe Length 900 I. D. 2.76 in.
Weight 10.2 Water Loss 8.8 cc. Drill Pipe Length 2886 I. D. 3.8 in.
Chlorides 56,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
Jars: Make Western Serial Number 420 Anchor Length 42 ft. Size 5 1/2 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: 1st Opening - Weak Blow Died in 21 min 05 Initial Flow Period
2nd Opening - No Blow Final Flow Period

Recovered 40 ft. of Oil Specked Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

RECEIVED
NOV 4 - 1980
RECEIVED

Time Set Packer(s) 11:50 A.M. Time Started Off Bottom 1:50 A.M. Maximum Temperature 110°
Initial Hydrostatic Pressure 2269 P.S.I. (A)
Initial Flow Period 30 Minutes (B) 73 P.S.I. to (C) 73 P.S.I.
Initial Closed In Period 30 Minutes (D) 540 P.S.I.
Final Flow Period 30 Minutes (E) 82 P.S.I. to (F) 82 P.S.I.
Final Closed In Period 30 Minutes (G) 119 P.S.I.
Final Hydrostatic Pressure 2260 P.S.I. (H)

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 Jeff Christian
Signature of Customer or his authorized representative

Western Representative Steve Mitchell

FIELD INVOICE

Open Hole Test \$ 600.00
Misrun \$
Straddle Test \$
Jars \$ 300.00
Selective Zone \$
Safety Joint \$ 50.00
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$ NC
Fluid Sampler \$
Extra Charts \$
TOTAL \$ 950.00

WESTERN TESTING CO., INC.

Pressure Data

Date 10-31-80 Test Ticket No. 7190
 Recorder No. 1049 Capacity 3000 Location 4029 Ft.
 Clock No. _____ Elevation 2344 Kelly Bushing Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2267</u>	P.S.I.	<u>11:50</u> P	M
B First Initial Flow Pressure	<u>86</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>78</u>	P.S.I.	<u>30</u>	Mins. <u>33</u> Mins.
D Initial Closed-in Pressure	<u>531</u>	P.S.I.	<u>30</u>	Mins. <u>35</u> Mins.
E Second Initial Flow Pressure	<u>91</u>	P.S.I.	<u>30</u>	Mins. <u>30</u> Mins.
F Second Final Flow Pressure	<u>88</u>	P.S.I.		
G Final Closed-in Pressure	<u>124</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2256</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>11</u> Inc.		Breakdown: <u>7</u> Inc.		Breakdown: <u>10</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>86</u>	<u>0</u>	<u>78</u>	<u>0</u>	<u>91</u>	<u>0</u>	<u>88</u>
P 2 <u>5</u>	<u>80</u>	<u>3</u>	<u>78</u>	<u>5</u>	<u>91</u>	<u>3</u>	<u>82</u>
P 3 <u>10</u>	<u>77</u>	<u>6</u>	<u>86</u>	<u>10</u>	<u>91</u>	<u>6</u>	<u>87</u>
P 4 <u>15</u>	<u>75</u>	<u>9</u>	<u>91</u>	<u>15</u>	<u>82</u>	<u>9</u>	<u>93</u>
P 5 <u>20</u>	<u>75</u>	<u>12</u>	<u>122</u>	<u>20</u>	<u>80</u>	<u>12</u>	<u>97</u>
P 6 <u>25</u>	<u>76</u>	<u>15</u>	<u>161</u>	<u>25</u>	<u>80</u>	<u>15</u>	<u>100</u>
P 7 <u>30</u>	<u>78</u>	<u>18</u>	<u>225</u>	<u>30</u>	<u>88</u>	<u>18</u>	<u>103</u>
P 8 <u>35</u>		<u>21</u>	<u>309</u>	<u>35</u>	<u>88</u>	<u>21</u>	<u>108</u>
P 9 <u>40</u>		<u>24</u>	<u>379</u>	<u>40</u>		<u>24</u>	<u>113</u>
P10 <u>45</u>		<u>27</u>	<u>434</u>	<u>45</u>		<u>27</u>	<u>119</u>
P11 <u>50</u>		<u>30</u>	<u>481</u>	<u>50</u>		<u>30</u>	<u>124</u>
P12 <u>55</u>		<u>33</u>	<u>531</u>	<u>55</u>		<u>33</u>	
P13 <u>60</u>		<u>36</u>		<u>60</u>		<u>36</u>	
P14		<u>39</u>		<u>65</u>		<u>39</u>	
P15		<u>42</u>		<u>70</u>		<u>42</u>	
P16		<u>45</u>		<u>75</u>		<u>45</u>	
P17		<u>48</u>		<u>80</u>		<u>48</u>	
P18		<u>51</u>		<u>85</u>		<u>51</u>	
P19		<u>54</u>		<u>90</u>		<u>54</u>	
P20		<u>57</u>				<u>57</u>	
		<u>60</u>				<u>60</u>	