



WESTERN TESTING CO., INC.
FORMATION TESTING

316-267-3026

TICKET No 18731

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

Elevation 2279 KB Formation Fort Scott Eff. Pay Ft.

District Colby Date 5-11-93 Customer Order No.

COMPANY NAME Ritchie Exploration Inc

ADDRESS 125 N Market Suite 1000 # Wichita ks.

LEASE AND WELL NO #1 McCreight 2C COUNTY Hodgeman STATE KS Sec. 2 Twp. 21 Rge. 24

Mail Invoice To Same Co. Name Address #1 McCreight 2C No. Copies Requested Reg

Mail Charts To Same Address #1 McCreight 2C No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 4286 ft. to 4326 ft. Total Depth 4326 ft.

Packer Depth 4281 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4286 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4289 ft. Recorder Number 6233 Cap. 4000

Bottom Recorder Depth (Outside) 4292 ft. Recorder Number 13400 Cap. 3950

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

Drilling Contractor Dute Rig #4 Drill Collar Length - I. D. - in.

Mud Type Viscosity 46 Weight Pipe Length 193 I. D. 3.2 in.

Weight 9.5 Water Loss 9.6 cc. Drill Pipe Length 4073 I. D. 3.8 in.

Chlorides 1250 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make No Serial Number - Anchor Length 40 ft. Size 5 1/2 OD 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 in.

Blow: IFP - Strong blow - Bottom of bucket in 35 min

FFP - Strong blow - Bottom of bucket in 20 min

Recovered 480 ft. of gas in pipe

Recovered 65 ft. of o.c.m. 5 40 oil 95 40 mud

Recovered 124 ft. of gsy m.c.o. 40 40 oil 30 40 gas 30 40 mud

Recovered ft. of

Recovered ft. of

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

MAY 17 1993

Time On Location 1200 A.M. Time Pick Up Tool 600 P.M. Time Off Location 1000 A.M. P.M.

Time Set Packer(s) 735 A.M. Time Started Off Bottom 1035 A.M. Maximum Temperature 121 P.M.

Initial Hydrostatic Pressure (A) 2167 P.S.I.

Initial Flow Period Minutes 45 (B) 50 P.S.I. to (C) 71 P.S.I.

Initial Closed In Period Minutes 45 (D) 1313 P.S.I.

Final Flow Period Minutes 45 (E) 81 P.S.I. to (F) 101 P.S.I.

Final Closed In Period Minutes 45 (G) 1243 P.S.I.

Final Hydrostatic Pressure (H) 2147 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] Signature of Customer or his authorized representative

Western Representative [Signature] Mite Shulent

Thanks!

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.

Pressure Data

Date 5-11-50 Test Ticket No. 18721
 Recorder No. 6522 Capacity _____ Location _____
 Clock No. _____ Elevation _____ Well Temperature 3

Point	Pressure	P.S.I.	Open Tool	Time Given	Mins.	Time Computed	M
A Initial Hydrostatic Mud	<u>2179</u>			<u>45</u>		<u>45</u>	
B First Initial Flow Pressure	<u>50</u>	P.S.I.	First Flow Pressure	<u>45</u>	Mins.	<u>45</u>	M
C First Final Flow Pressure	<u>78</u>	P.S.I.	Initial Closed-in Pressure	<u>45</u>	Mins.	<u>48</u>	M
D Initial Closed-in Pressure	<u>1321</u>	P.S.I.	Second Flow Pressure	<u>45</u>	Mins.	<u>45</u>	Mi
E Second Initial Flow Pressure	<u>91</u>	P.S.I.	Final Closed-in Pressure	<u>45</u>	Mins.	<u>48</u>	Mi
F Second Final Flow Pressure	<u>105</u>	P.S.I.					
G Final Closed-in Pressure	<u>1259</u>	P.S.I.					
H Final Hydrostatic Mud	<u>2167</u>	P.S.I.					

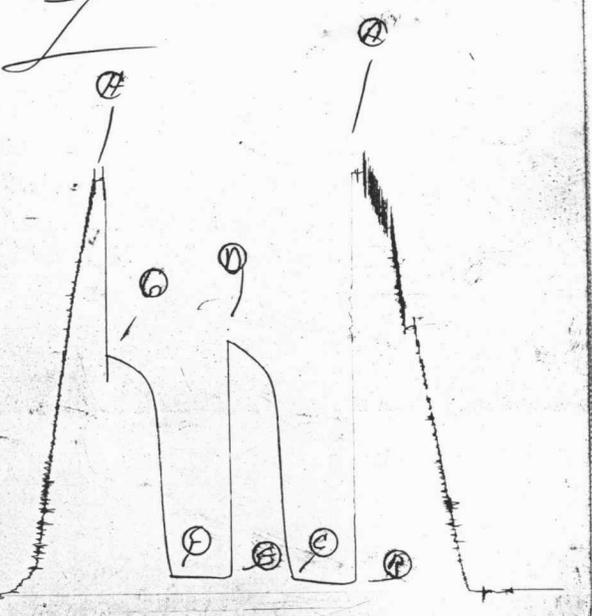
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>50</u>	0	<u>78</u>	0	<u>91</u>	0	<u>105</u>
P 2 5	<u>5</u>	3	<u>142</u>	5	<u>5</u>	3	<u>125</u>
P 3 10	<u>50</u>	6	<u>299</u>	10	<u>91</u>	6	<u>418</u>
P 4 15	<u>52</u>	9	<u>592</u>	15	<u>98</u>	9	<u>822</u>
P 5 20	<u>56</u>	12	<u>892</u>	20	<u>98</u>	12	<u>1000</u>
P 6 25	<u>60</u>	15	<u>1048</u>	25	<u>100</u>	15	<u>1079</u>
P 7 30	<u>64</u>	18	<u>1115</u>	30	<u>102</u>	18	<u>1125</u>
P 8 35	<u>70</u>	21	<u>1160</u>	35	<u>105</u>	21	<u>1150</u>
P 9 40	<u>74</u>	24	<u>1187</u>	40	<u>104</u>	24	<u>1171</u>
P10 45	<u>78</u>	27	<u>1208</u>	45	<u>105</u>	27	<u>1187</u>
P11 50		30	<u>1221</u>	50		30	<u>1204</u>
P12 55		33	<u>1249</u>	55		33	<u>1216</u>
P13 60		36	<u>1268</u>	60		36	<u>1226</u>
P14 65		39	<u>1283</u>	65		39	<u>1237</u>
P15 70		42	<u>1300</u>	70		42	<u>1246</u>
P16 75		45	<u>1312</u>	75		45	<u>1252</u>
P17 80		48	<u>1321</u>	80		48	<u>1259</u>
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

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DKT 18721

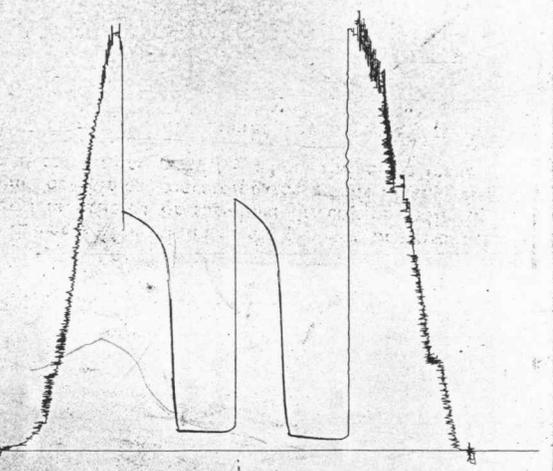
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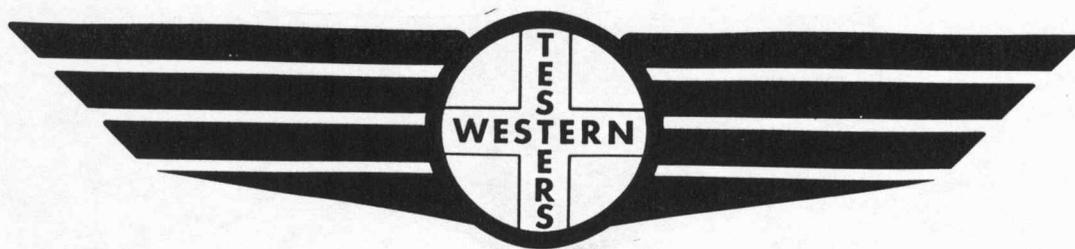
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DKT 18721

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE : 5/11/93
CUSTOMER : RITCHIE EXPLORATION INC.
WELL : #1 TEST: 1
ELEVATION: 2279 KB
SECTION : 2
RANGE : 24W COUNTY: HODGEMAN
GAUGE SN#: 6233 RANGE : 4000
TICKET : 18731
LEASE : MCCREIGHT-2C
GEOLOGIST: NOAH
FORMATION: FT SCOTT
TOWNSHIP : 21S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4286.00 ft TO: 4326.00 ft TVD: 4326.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4289.0 ft 4292.0 ft
TEMPERATURE: 121.0
DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH : 193.0 ft I.D.: 3.200 in
DRILL PIPE LENGTH : 4073.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 40.0 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: 4281.0 ft SIZE: 6.750 in
PACKER DEPTH: 4286.0 ft SIZE: 6.750 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #4
MUD TYPE : CHEMICAL
WEIGHT : 9.500 ppg
CHLORIDES : 1200 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 46.00 cp
WATER LOSS: 9.600 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET
IN 35 MINUTES. FINAL FLOW PERIOD STRONG BLOW -
BOTTOM OF BUCKET IN 20 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
65.0	5.0	0.0	0.0	95.0	OIL CUT MUD
124.0	40.0	30.0	0.0	30.0	GASSY MUD CUT OIL
0.0	0.0	0.0	0.0	0.0	480 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.5257 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	2.0776 SCF	AVERAGE OIL RATE:	24.1585 STB/D
MUD VOLUME:	0.9842 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	1.5099 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2167.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	50.00	71.00
INITIAL SHUT-IN	45.00		1313.00
FINAL FLOW	45.00	81.00	101.00
FINAL SHUT-IN	45.00		1243.00

FINAL HYDROSTATIC PRESSURE: 2147.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2179.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	50.00	78.00
INITIAL SHUT-IN	48.00		1321.00
FINAL FLOW	45.00	91.00	105.00
FINAL SHUT-IN	48.00		1259.00

FINAL HYDROSTATIC PRESSURE: 2167.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 5/11/93	TICKET : 18731
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : MCCREIGHT-2C
WELL : #1 TEST: 1	GEOLOGIST: NOAH
ELEVATION: 2279 KB	FORMATION: FT SCOTT
SECTION : 2	TOWNSHIP : 21S
RANGE : 24W	STATE : KS
GAUGE SN#: 6233	CLOCK : 12
COUNTY: HODGEMAN	
RANGE : 4000	

INITIAL FLOW

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	50.00	50.00
5.00	50.00	0.00
10.00	50.00	0.00
15.00	53.00	3.00
20.00	56.00	3.00
25.00	60.00	4.00
30.00	64.00	4.00
35.00	70.00	6.00
40.00	74.00	4.00
45.00	78.00	4.00

INITIAL SHUT IN

<u>Time</u> <u>(min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	142.00	142.00	6.00
6.00	299.00	157.00	3.50
9.00	592.00	293.00	2.67
12.00	893.00	301.00	2.25
15.00	1048.00	155.00	2.00
18.00	1115.00	67.00	1.83
21.00	1160.00	45.00	1.71
24.00	1187.00	27.00	1.63
27.00	1208.00	21.00	1.56
30.00	1231.00	23.00	1.50
33.00	1249.00	18.00	0.00
36.00	1268.00	19.00	0.00
39.00	1283.00	15.00	0.00
42.00	1300.00	17.00	0.00
45.00	1312.00	12.00	0.00
48.00	1321.00	9.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	91.00	91.00
5.00	91.00	0.00
10.00	91.00	0.00
15.00	96.00	5.00
20.00	98.00	2.00
25.00	100.00	2.00
30.00	102.00	2.00
35.00	103.00	1.00
40.00	104.00	1.00
45.00	105.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	203.00	203.00	39.33
6.00	418.00	215.00	20.17
9.00	822.00	404.00	13.78
12.00	1000.00	178.00	10.58
15.00	1079.00	79.00	8.67
18.00	1125.00	46.00	7.39
21.00	1150.00	25.00	6.48
24.00	1171.00	21.00	5.79
27.00	1187.00	16.00	5.26
30.00	1204.00	17.00	4.83
33.00	1216.00	12.00	4.48
36.00	1226.00	10.00	4.19
39.00	1237.00	11.00	3.95
42.00	1246.00	9.00	3.74
45.00	1253.00	7.00	3.56
48.00	1259.00	6.00	3.40



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18732

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

Elevation 2279 RB Formation Miss Eff. Pay Ft.

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

COMPANY NAME Ritchie Exploration, Inc.
ADDRESS 125 N Market Suite 1000 Wichita KS. 67202
LEASE AND WELL NO. #1 McCreight 2 C COUNTY Hodgeman STATE KS Sec. 2 Twp. 21 Rge. 24
Mail Invoice To Same #1 McCreight - 2C No. Copies Requested Reg
Co. Name Address
Mail Charts To Same No. Copies Requested Reg
Address

Formation Test No. 2 Interval Tested From 4345 ft. to 4418 ft. Total Depth 4418 ft.
Packer Depth 4340 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4345 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4348 ft. Recorder Number 6233 Cap. 4000
Bottom Recorder Depth (Outside) 4351 ft. Recorder Number 13400 Cap. 3950
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Duke Rig #4 Drill Collar Length - I. D. - in.
Mud Type Chemical Viscosity 54 Weight Pipe Length 193 I. D. 3.2 in.
Weight 9.4 Water Loss 10.4 cc. Drill Pipe Length 4182 I. D. 3.8 in.
Chlorides 1700 P.P.M. Test Tool Length 20 ft. Tool Size 5/200 in.
Jars: Make NO Serial Number - Anchor Length 73 ft. Size 5/200 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 4/200 in.

Blow: IFP - Weak blow - increased to 4" in water
FFP - Weak steady blow - 1" in water

Recovered 90 ft. of oil - 39 gravity @ 60°
Recovered 90 ft. of nco 85% oil 15% mud
Recovered ft. of
Recovered ft. of
Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks: MAY 17 1993

Time On Location 2 00 A.M. Time Pick Up Tool 2 45 A.M. Time Off Location 10 00 A.M.
Time Set Packer(s) 4 10 P.M. Time Started Off Bottom 7 10 A.M. Maximum Temperature 124
Initial Hydrostatic Pressure (A) 2167 P.S.I.
Initial Flow Period Minutes 45 (B) 50 P.S.I. to (C) 60 P.S.I.
Initial Closed In Period Minutes 45 (D) 1204 P.S.I.
Final Flow Period Minutes 45 (E) 60 P.S.I. to (F) 71 P.S.I.
Final Closed In Period Minutes 45 (G) 1144 P.S.I.
Final Hydrostatic Pressure (H) 2167 P.S.I.

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature] Signature of Customer or his authorized representative

Western Representative [Signature] Mike Schubert

Thanks!

FIELD INVOICE

Open Hole Test \$
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

WESTERN TESTING CO., INC.

Pressure Data

Date 5-11-53 Test Ticket No. 1872
 Recorder No. 6533 Capacity _____ Location _____
 Clock No. _____ Elevation _____ Well Temperature _____

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2279</u>	P.S.I.	Open Tool	M
B First Initial Flow Pressure	<u>47</u>	P.S.I.	First Flow Pressure	Mins. <u>40</u> Mi
C First Final Flow Pressure	<u>53</u>	P.S.I.	Initial Closed-in Pressure	Mins. <u>45</u> Mi
D Initial Closed-in Pressure	<u>1206</u>	P.S.I.	Second Flow Pressure	Mins. <u>45</u> Mi
E Second Initial Flow Pressure	<u>73</u>	P.S.I.	Final Closed-in Pressure	Mins. <u>45</u> Mi
F Second Final Flow Pressure	<u>77</u>	P.S.I.		
G Final Closed-in Pressure	<u>1151</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2183</u>	P.S.I.		

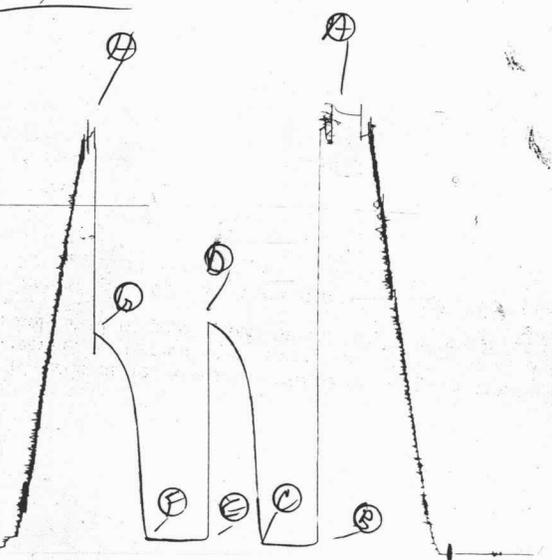
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>47</u>	0	<u>53</u>	0	<u>73</u>	0	<u>77</u>
P 2 5	<u>2</u>	3	<u>184</u>	5	<u>73</u>	3	<u>175</u>
P 3 10	<u>2</u>	6	<u>427</u>	10	<u>73</u>	6	<u>392</u>
P 4 15	<u>47</u>	9	<u>694</u>	15	<u>73</u>	9	<u>588</u>
P 5 20	<u>49</u>	12	<u>827</u>	20	<u>73</u>	12	<u>755</u>
P 6 25	<u>50</u>	15	<u>924</u>	25	<u>73</u>	15	<u>812</u>
P 7 30	<u>51</u>	18	<u>998</u>	30	<u>74</u>	18	<u>922</u>
P 8 35	<u>52</u>	21	<u>1027</u>	35	<u>75</u>	21	<u>972</u>
P 9 40	<u>53</u>	24	<u>1074</u>	40	<u>76</u>	24	<u>1007</u>
P10 45		27	<u>1106</u>	45	<u>77</u>	27	<u>1044</u>
P11 50		30	<u>1134</u>	50		30	<u>1072</u>
P12 55		33	<u>1155</u>	55		33	<u>1091</u>
P13 60		36	<u>1174</u>	60		36	<u>1109</u>
P14 65		39	<u>1186</u>	65		39	<u>1129</u>
P15 70		42	<u>1194</u>	70		42	<u>1142</u>
P16 75		45	<u>1206</u>	75		45	<u>1151</u>
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

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JKT 18755

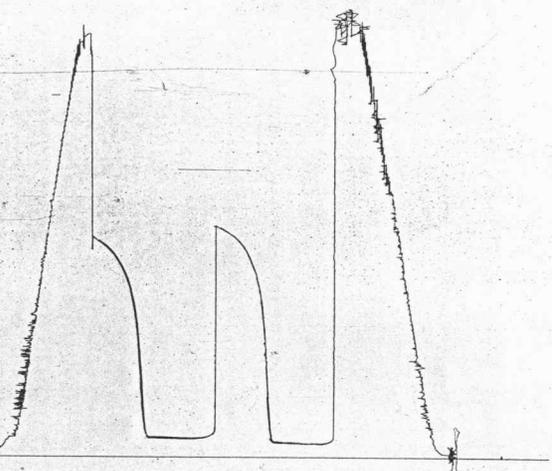
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DST REPORT

GENERAL INFORMATION

DATE : 5/12/93
CUSTOMER : RITCHIE EXPLORATION INC.
WELL : #1 TEST: 2
ELEVATION: 2279 KB
SECTION : 2
RANGE : 24W COUNTY: HODGEMAN
GAUGE SN#: 6233 RANGE : 4000
TICKET : 18732
LEASE : MCCREIGHT-2C
GEOLOGIST: NOAH
FORMATION: MISSISSIPPI
TOWNSHIP : 21S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4345.00 ft TO: 4418.00 ft TVD: 4418.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4348.0 ft 4351.0 ft
TEMPERATURE: 124.0
DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH : 193.0 ft I.D.: 3.200 in
DRILL PIPE LENGTH : 4132.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 73.0 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: 4340.0 ft SIZE: 6.750 in
PACKER DEPTH: 4345.0 ft SIZE: 6.750 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #4
MUD TYPE : CHEMICAL VISCOSITY : 54.00 cp
WEIGHT : 9.400 ppg WATER LOSS: 10.400 cc
CHLORIDES : 1700 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW - INCREASED TO 4
INCH IN WATER. FINAL FLOW PERIOD WEAK STEADY BLOW
1 INCH IN WATER.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
90.0	100.0	0.0	0.0	0.0	OIL-39 GRAVITY @ 60 DEGRE
90.0	85.0	0.0	0.0	15.0	MUD CUT OIL

RATE INFORMATION

OIL VOLUME:	1.6561 STB	TOTAL FLOW TIME:	85.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	30.3315 STB/D
MUD VOLUME:	0.1343 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	1.7904 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2167.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	50.00	60.00
INITIAL SHUT-IN	45.00		1204.00
FINAL FLOW	45.00	60.00	71.00
FINAL SHUT-IN	45.00		1144.00

FINAL HYDROSTATIC PRESSURE: 2167.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2279.00

Description	Duration	p1	p End
INITIAL FLOW	40.00	47.00	53.00
INITIAL SHUT-IN	45.00		1206.00
FINAL FLOW	45.00	73.00	77.00
FINAL SHUT-IN	45.00		1151.00

FINAL HYDROSTATIC PRESSURE: 2183.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 5/12/93	TICKET : 18732
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : MCCREIGHT-2C
WELL : #1 TEST: 2	GEOLOGIST: NOAH
ELEVATION: 2279 KB	FORMATION: MISSISSIPPI
SECTION : 2	TOWNSHIP : 21S
RANGE : 24W	COUNTY: HODGEMAN
GAUGE SN#: 6233	RANGE : 4000
	STATE : KS
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	47.00	47.00
5.00	47.00	0.00
10.00	47.00	0.00
15.00	47.00	0.00
20.00	49.00	2.00
25.00	50.00	1.00
30.00	51.00	1.00
35.00	52.00	1.00
40.00	53.00	1.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	184.00	184.00	6.00
6.00	427.00	243.00	3.50
9.00	694.00	267.00	2.67
12.00	827.00	133.00	2.25
15.00	926.00	99.00	2.00
18.00	998.00	72.00	1.83
21.00	1037.00	39.00	1.71
24.00	1074.00	37.00	1.63
27.00	1106.00	32.00	1.56
30.00	1134.00	28.00	1.50
33.00	1155.00	21.00	0.00
36.00	1174.00	19.00	0.00
39.00	1186.00	12.00	0.00
42.00	1196.00	10.00	0.00
45.00	1206.00	10.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	73.00	73.00
5.00	73.00	0.00
10.00	73.00	0.00
15.00	73.00	0.00
20.00	73.00	0.00
25.00	73.00	0.00
30.00	74.00	1.00
35.00	75.00	1.00
40.00	76.00	1.00
45.00	77.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	175.00	175.00	39.33
6.00	392.00	217.00	20.17
9.00	588.00	196.00	13.78
12.00	755.00	167.00	10.58
15.00	812.00	57.00	8.67
18.00	923.00	111.00	7.39
21.00	972.00	49.00	6.48
24.00	1007.00	35.00	5.79
27.00	1044.00	37.00	5.26
30.00	1073.00	29.00	4.83
33.00	1091.00	18.00	4.48
36.00	1109.00	18.00	4.19
39.00	1129.00	20.00	3.95
42.00	1142.00	13.00	3.74
45.00	1151.00	9.00	3.56



WESTERN TESTING CO., INC.
FORMATION TESTING

No 18733

TICKET

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

Elevation 2279 NB Formation Miss Eff. Pay Ft.

District Colby Date May 12 1993 Customer Order No.
COMPANY NAME Ritchie Exploration Inc
ADDRESS 125 N Market Suite 1000 Wichita KS
LEASE AND WELL NO #1 McCreight 2 C COUNTY Hodgeman STATE KS
Mail Invoice To Same #1 McCreight 2C No. Copies Requested Reg
Mail Charts To Same Address No. Copies Requested Reg

Formation Test No. 3 Interval Tested From 4417 ft. to 4427 ft. Total Depth 4427 ft.
Packer Depth ft. Size in. Packer Depth ft. Size in.
Packer Depth 4417 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set
Top Recorder Depth (Inside) 4420 ft. Recorder Number 6233 Cap. 4000
Bottom Recorder Depth (Outside) 4423 ft. Recorder Number 13400 Cap. 3950
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Drill Collar Length I. D. in.
Mud Type Chemical Viscosity 54 Weight Pipe Length 193 I. D. 3.2 in.
Weight 9.4 Water Loss 104 cc. Drill Pipe Length 4209 I. D. 3.8 in.
Chlorides H2O P.P.M. Test Tool Length 15 ft. Tool Size 5 1/2 OD in.
Jars: Make NO Serial Number Anchor Length 10 ft. Size 5 1/2 OD 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 CH in.

Blow 1FP - Strong blow - bottom of bucket in 9 min
2FP - Strong blow - bottom of bucket in 15 min
Recovered 240 ft. of gas in pipe
Recovered 480 ft. of oil - 39 gravity @ 60°
Recovered 60 ft. of s mcc 95% oil 5% mud
Recovered ft. of
Recovered ft. of
Chlorides P.P.M. Sample Jars used Remarks: MAY 17 1993

Time On Location 1:00 A.M. Time Pick Up Tool 2:00 A.M. Time Off Location 8:30 A.M.
Time Set Packer(s) 3:20 P.M. Time Started Off Bottom 5:20 P.M. Maximum Temperature A
Initial Hydrostatic Pressure (A) 2197 P.S.I.
Initial Flow Period Minutes 30 (B) 71 P.S.I. to (C) 121 P.S.I.
Initial Closed In Period Minutes 30 (D) 1164 P.S.I.
Final Flow Period Minutes 30 (E) 162 P.S.I. to (F) 223 P.S.I.
Final Closed In Period Minutes 30 (G) 1093 P.S.I.
Final Hydrostatic Pressure (H) 2177 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] Signature of Customer or his authorized representative
Western Representative Mike Shulert

It's the shoes! ;)

FIELD INVOICE

Open Hole Test \$
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

WESTERN TESTING CO., INC.

Pressure Data

Date 5-11-90 Test Ticket No. 18725
 Recorder No. 6522 Capacity _____ Location _____
 Clock No. _____ Elevation _____ Well Temperature _____

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2205</u>	P.S.I.	Open Tool	M
B First Initial Flow Pressure	<u>161</u>	P.S.I.	First Flow Pressure	Mins. <u>25</u> Mi
C First Final Flow Pressure	<u>115</u>	P.S.I.	Initial Closed-in Pressure	Mins. <u>30</u> Mi
D Initial Closed-in Pressure	<u>1152</u>	P.S.I.	Second Flow Pressure	Mins. <u>30</u> Mi
E Second Initial Flow Pressure	<u>161</u>	P.S.I.	Final Closed-in Pressure	Mins. <u>30</u> Mi
F Second Final Flow Pressure	<u>210</u>	P.S.I.		
G Final Closed-in Pressure	<u>1092</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2197</u>	P.S.I.		

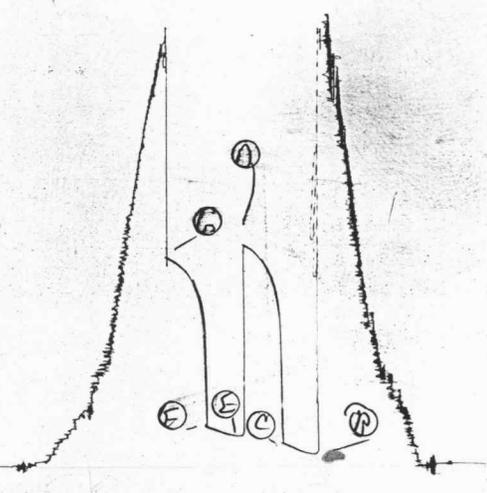
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>161</u>	0	<u>115</u>	0	<u>161</u>	0	<u>210</u>
P 2 5	<u>161</u>	3	<u>689</u>	5	<u>161</u>	3	<u>214</u>
P 3 10	<u>167</u>	6	<u>898</u>	10	<u>168</u>	6	<u>862</u>
P 4 15	<u>81</u>	9	<u>979</u>	15	<u>178</u>	9	<u>919</u>
P 5 20	<u>99</u>	12	<u>1056</u>	20	<u>191</u>	12	<u>964</u>
P 6 25	<u>115</u>	15	<u>1056</u>	25	<u>202</u>	15	<u>998</u>
P 7 30		18	<u>1080</u>	30	<u>210</u>	18	<u>1054</u>
P 8 35		21	<u>1104</u>	35		21	<u>1046</u>
P 9 40		24	<u>1127</u>	40		24	<u>1062</u>
P10 45		27	<u>1141</u>	45		27	<u>1077</u>
P11 50		30	<u>1152</u>	50		30	<u>1092</u>
P12 55		33		55		33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

KT 18752

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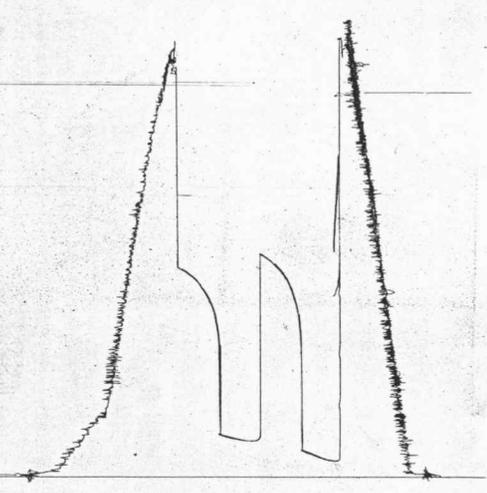
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KT 18752

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE : 5/12/93	TICKET : 18733
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : MCCREIGHT-2C
WELL : #1 TEST: 3	GEOLOGIST: NOAH
ELEVATION: 2279 KB	FORMATION: MISSISSIPPI
SECTION : 2	TOWNSHIP : 21S
RANGE : 24W	COUNTY: HODGEMAN
GAUGE SN#: 6233	STATE : KS
	RANGE : 4000
	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4417.00 ft	TO: 4427.00 ft	TVD: 4427.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4420.0 ft	4423.0 ft	
TEMPERATURE: 0.0		

DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH : 195.0 ft	I.D.:	3.200 in
DRILL PIPE LENGTH : 4209.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 15.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 10.0 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: 4417.0 ft	SIZE:	6.750 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #4	
MUD TYPE : CHEMICAL	VISCOSITY : 54.00 cp
WEIGHT : 9.400 ppg	WATER LOSS: 10.400 cc
CHLORIDES : 1700 ppm	
JARS-MAKE :	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET IN 9 MINUTES. FINAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET IN 15 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
480.0	100.0	0.0	0.0	0.0	OIL-39 GRAVITY @ 60 DEGRE
60.0	95.0	0.0	0.0	5.0	SLIGHTLY MUD CUT OIL
0.0	0.0	0.0	0.0	0.0	240 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	6.7489	STB	TOTAL FLOW TIME:	55.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	177.4785	STB/D
MUD VOLUME:	0.0298	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	6.7787	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2197.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	71.00	121.00
INITIAL SHUT-IN	30.00		1164.00
FINAL FLOW	30.00	162.00	223.00
FINAL SHUT-IN	30.00		1095.00

FINAL HYDROSTATIC PRESSURE: 2177.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2205.00

Description	Duration	p1	p End
INITIAL FLOW	25.00	61.00	115.00
INITIAL SHUT-IN	30.00		1153.00
FINAL FLOW	30.00	161.00	210.00
FINAL SHUT-IN	30.00		1092.00

FINAL HYDROSTATIC PRESSURE: 2197.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 5/12/93	TICKET : 18733
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : MCCREIGHT-2C
WELL : #1 TEST: 3	GEOLOGIST: NOAH
ELEVATION: 2279 KB	FORMATION: MISSISSIPPI
SECTION : 2	TOWNSHIP : 21S
RANGE : 24W	COUNTY: HODGEMAN
GAUGE SN#: 6233	STATE : KS
	RANGE : 4000
	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	61.00	61.00
5.00	61.00	0.00
10.00	67.00	6.00
15.00	81.00	14.00
20.00	99.00	18.00
25.00	115.00	16.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	689.00	689.00	6.00
6.00	898.00	209.00	3.50
9.00	979.00	81.00	2.67
12.00	1026.00	47.00	2.25
15.00	1056.00	30.00	2.00
18.00	1080.00	24.00	1.83
21.00	1106.00	26.00	1.71
24.00	1127.00	21.00	1.63
27.00	1141.00	14.00	1.56
30.00	1153.00	12.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	161.00	161.00
5.00	161.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
10.00	168.00	7.00
15.00	178.00	10.00
20.00	191.00	13.00
25.00	202.00	11.00
30.00	210.00	8.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	714.00	714.00	39.33
6.00	862.00	148.00	20.17
9.00	919.00	57.00	13.78
12.00	966.00	47.00	10.58
15.00	998.00	32.00	8.67
18.00	1026.00	28.00	7.39
21.00	1046.00	20.00	6.48
24.00	1062.00	16.00	5.79
27.00	1077.00	15.00	5.26
30.00	1092.00	15.00	4.83