



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 11915

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

Elevation 1746 KB Formation Viola Eff. Pay Ft.

District Great Date 10-31-81 Customer Order No.

COMPANY NAME Double Oil, Inc / Logo, Inc
ADDRESS P.O. Box 8640 Wichita, Ks. 67201

LEASE AND WELL NO. 7 COUNTY Barber STATE Ks. Sec. 19 Twp 31 Rge 14

Mail Invoice To Thunderbird #2 Co. Name Address No. Copies Requested

Mail Charts To Address No. Copies Requested

Formation Test No. 1 Interval Tested from 4506 ft. to 4521 ft. Total Depth 4521 ft.

Packer Depth 4501 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 4506 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4510 Recorder Number 1566 Cap. 4300

Bottom Recorder Depth (Outside) 4513 ft. Recorder Number 3086 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Transpac Drill Collar Length 469' I. D. 2.2 in.

Mud Type chemical Viscosity 54 Weight Pipe Length I. D. in.

Weight 9.3 Water Loss 9.6 cc. Drill Pipe Length 4014' I. D. 3.8 in.

Chlorides 14,000 P.P.M. Test Tool Length 53 ft. Tool Size 5 1/2 in.

Jars: Make Serial Number Anchor Length 15 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: STRONG Throughout! gas-to-surface during I.S.T.P.
See flow chart attached sheet for gas measurements

Recovered 60 ft. of slightly gas cut oil mud

Recovered 30 ft. of slightly gas & oil cut oil mud

Recovered ft. of 7% oil 83% mud 10% water

Recovered ft. of w/ 22,000 chlorides

Recovered ft. of

Remarks:

Time On Location 8:00 AM Time Pick Up Tool 11:30 AM Time Off Location 9:30 PM

Time Set Packer(s) 1:45 PM Time Started Off Bottom 5:15 PM Maximum Temperature Booke!

Initial Hydrostatic Pressure (A) 2210 P.S.I.

Flow Period Minutes 30 (B) 54 P.S.I. to (C) 54 P.S.I.

Closed In Period Minutes 60 (D) 615 P.S.I.

Flow Period Minutes 60 (E) 75 P.S.I. to (F) 64 P.S.I.

Final Closed In Period Minutes 60 (G) 615 P.S.I.

Final Hydrostatic Pressure (H) 2188 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 Rogers Thank You!

FIELD INVOICE

Open Hole Test \$ 700.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$ 65.00
Standby 15% \$ NC
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage 55 \$ 41.25
Fluid Sampler \$
Extra Charts \$
Insurance \$ 50.00
TOTAL \$ 856.25

WICHITA, KANSAS 67201

Nº 2789

GAS FLOW REPORT

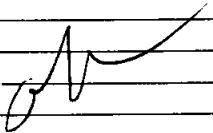
Date 10-30-81 Ticket 11915 Company Should Oil
Well Name and No. 2 Thunderbird Dst No. _____ Interval Tested 4506-4521
County Barber State Ks. Sec. 19 Twp. 31 Rg. 14

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

[illegible]

SECOND FLOW

PSI			SECOND FLOOR	
05	2	1/2		47,700 CPO
10	2	1/4		12,700 CPO
20	5	1/4		20,700 CPO
30	10	1/4		30,800 CPO
40	12	1/4		34,000 CPO
50	13	1/4		35,900 CPO
60	13	1/4		35,900 CPO
				

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME _____

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

Date 10-31-81 Test Ticket No. 11915
 Recorder No. 1566 Capacity 4300 Location 4510 Ft.
 Clock No. --- Elevation 1746 KB Well Temperature --- °F

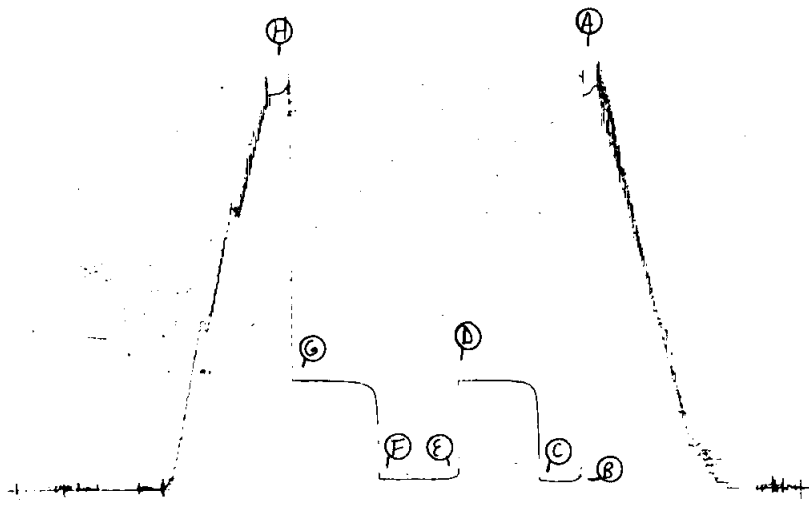
Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2186</u> P.S.I.	<u>1145 A</u>	
B First Initial Flow Pressure	<u>45</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>51</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>612</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>62</u> P.S.I.	<u>60</u> Mins.	<u>63</u> Mins.
F Second Final Flow Pressure	<u>62</u> P.S.I.		
G Final Closed-in Pressure	<u>612</u> P.S.I.		
H Final Hydrostatic Mud	<u>2186</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>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</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>45</u>	<u>0</u>	<u>51</u>	<u>0</u>	<u>62</u>	<u>0</u>	<u>62</u>
P 2 <u>5</u>	<u>1</u>	<u>3</u>	<u>556</u>	<u>5</u>		<u>3</u>	<u>541</u>
P 3 <u>10</u>		<u>6</u>	<u>586</u>	<u>10</u>		<u>6</u>	<u>572</u>
P 4 <u>15</u>	<u>45</u>	<u>9</u>	<u>595</u>	<u>15</u>		<u>9</u>	<u>587</u>
P 5 <u>20</u>	<u>46</u>	<u>12</u>	<u>602</u>	<u>20</u>		<u>12</u>	<u>594</u>
P 6 <u>25</u>	<u>50</u>	<u>15</u>	<u>605</u>	<u>25</u>		<u>15</u>	<u>600</u>
P 7 <u>30</u>	<u>51</u>	<u>18</u>	<u>607</u>	<u>30</u>		<u>18</u>	<u>602</u>
P 8 <u>33</u>		<u>21</u>	<u>609</u>	<u>35</u>		<u>21</u>	<u>604</u>
P 9 <u>40</u>		<u>24</u>	<u>610</u>	<u>40</u>		<u>24</u>	<u>606</u>
P10 <u>45</u>		<u>27</u>	<u>611</u>	<u>45</u>		<u>27</u>	<u>608</u>
P11 <u>50</u>		<u>30</u>	<u>612</u>	<u>50</u>		<u>30</u>	<u>609</u>
P12 <u>55</u>		<u>33</u>		<u>55</u>		<u>33</u>	<u>610</u>
P13 <u>60</u>		<u>36</u>		<u>60</u>	<u>62</u>	<u>36</u>	<u>611</u>
P14		<u>39</u>		<u>65</u>		<u>39</u>	<u>612</u>
P15		<u>42</u>		<u>70</u>		<u>42</u>	<u>613</u>
P16		<u>45</u>	<u>612</u>	<u>75</u>		<u>45</u>	<u>613</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>	
WTC - 4		<u>60</u>	<u>612</u>			<u>60</u>	<u>613</u>
						<u>63</u>	<u>612</u>

TKT # 11915
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1566:



Company Gould Oil, Inc./ Logo, Inc. Lease & Well No. Thunderbird Ranch #2
Elevation 1746 Kelly Bushing Formation Viola Effective Pay - Ft. Ticket No. 11915
Date 10/31/81 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
Test Approved by Philip J Paschay Western Representative Mike Rogers
Formation Test No. 1 Interval Tested from 4506 ft. to 4521 ft. Total Depth 4521 ft.
Packer Depth 4501 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 4506 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4510 ft. Recorder Number 1566 Cap. 4300
Bottom Recorder Depth (Outside) 4513 ft. Recorder Number 3086 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Transpac Drill Collar Length 469 I. D. 2.2 in.
Mud Type Chemical Viscosity 54 Weight Pipe Length - I. D. - in.
Weight 9.3 Water Loss 9.6 cc. Drill Pipe Length 4014 I. D. 3.8 in.
Chlorides 14,000 P.P.M. Test Tool Length 23 ft. Tool Size 5 1/2 in.
Jars: Make - Serial Number - Anchor Length 15 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: Strong throughout test. Gas to surface during initial shut-in period. See attached sheet for gas measurements.

Recovered 60 ft. of slightly gas cut drilling mud
Recovered 30 ft. of slightly gas & oil cut drilling mud - 7% oil; 83% mud; 10% water
Recovered - ft. of Chlorides 22,000 PPM
Recovered - ft. of -
Recovered - ft. of -
Recovered - ft. of -

Remarks: -

Time Set Packer(s) 1:45 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 5:15 ~~P.M.~~ ^{A.M.} Maximum Temperature -
Initial Hydrostatic Pressure (A) 2186 P.S.I.
Initial Flow Period Minutes 30 (B) 45 P.S.I. to (C) 51 P.S.I.
Initial Closed In Period Minutes 60 (D) 612 P.S.I.
Final Flow Period Minutes 60 (E) 62 P.S.I. to (F) 62 P.S.I.
Final Closed In Period Minutes 63 (G) 613 P.S.I.
Final Hydrostatic Pressure (H) 2186 P.S.I.

GAS FLOW REPORT

Date 10/30/81 Ticket 11915 Company Gould Oil, Inc./ Logo, Inc.
 Well Name and No. Thunderbird Ranch #2 Dst No. 1 Interval Tested 4506-4521
 County Barber State Kansas Sec. 19 Twp. 31S Rg. 14W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
PRE FLOW						
						Gas to surface during initial shut-in.

SECOND FLOW

	5 Min	2 PSIG	½" Orifice			47,700 C.F.P.D.
	10 Min	2 PSIG	¾" Orifice			12,700 C.F.P.D.
	20 Min	5 PSIG	¾" Orifice			20,700 C.F.P.D.
	30 Min	10 PSIG	¾" Orifice			30,800 C.F.P.D.
	40 Min	12 PSIG	¾" Orifice			34,000 C.F.P.D.
	50 Min	13 PSIG	¾" Orifice			35,900 C.F.P.D.
	60 Min	13 PSIG	¾" Orifice			35,900 C.F.P.D.

GAS BOTTLE

Serial No. - Date Bottle Filled - Date to be Invoiced 10/31/81

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1% per month, equal to 12% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Gould Oil, Inc./ Logo, Inc.

Authorized by Philip J Paschay

WESTERN TESTING CO., INC.

Pressure Data

Date 10/31/81 Test Ticket No. 11915
 Recorder No. 1566 Capacity 4300 Location 4510 Ft.
 Clock No. - Elevation 1746 Kelly Bushing Well Temperature - °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2186	P.S.I.	1:45A	M
B First Initial Flow Pressure	45	P.S.I.	30	Mins.
C First Final Flow Pressure	51	P.S.I.	60	Mins.
D Initial Closed-in Pressure	612	P.S.I.	60	Mins.
E Second Initial Flow Pressure	62	P.S.I.	60	Mins.
F Second Final Flow Pressure	62	P.S.I.	60	Mins.
G Final Closed-in Pressure	613	P.S.I.		
H Final Hydrostatic Mud	2186	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>12</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>45</u>	<u>0</u>	<u>51</u>	<u>0</u>	<u>62</u>	<u>0</u>	<u>62</u>
P 2 <u>5</u>	<u>45</u>	<u>3</u>	<u>556</u>	<u>5</u>	<u>62</u>	<u>3</u>	<u>541</u>
P 3 <u>10</u>	<u>45</u>	<u>6</u>	<u>586</u>	<u>10</u>	<u>62</u>	<u>6</u>	<u>572</u>
P 4 <u>15</u>	<u>45</u>	<u>9</u>	<u>595</u>	<u>15</u>	<u>62</u>	<u>9</u>	<u>587</u>
P 5 <u>20</u>	<u>46</u>	<u>12</u>	<u>602</u>	<u>20</u>	<u>62</u>	<u>12</u>	<u>594</u>
P 6 <u>25</u>	<u>50</u>	<u>15</u>	<u>605</u>	<u>25</u>	<u>62</u>	<u>15</u>	<u>600</u>
P 7 <u>30</u>	<u>51</u>	<u>18</u>	<u>607</u>	<u>30</u>	<u>62</u>	<u>18</u>	<u>602</u>
P 8		<u>21</u>	<u>609</u>	<u>35</u>	<u>62</u>	<u>21</u>	<u>604</u>
P 9		<u>24</u>	<u>610</u>	<u>40</u>	<u>62</u>	<u>24</u>	<u>606</u>
P10		<u>27</u>	<u>611</u>	<u>45</u>	<u>62</u>	<u>27</u>	<u>608</u>
P11		<u>30</u>	<u>612</u>	<u>50</u>	<u>62</u>	<u>30</u>	<u>609</u>
P12		<u>33</u>	<u>612</u>	<u>55</u>	<u>62</u>	<u>33</u>	<u>610</u>
P13		<u>36</u>	<u>612</u>	<u>60</u>	<u>62</u>	<u>36</u>	<u>611</u>
P14		<u>39</u>	<u>612</u>			<u>39</u>	<u>612</u>
P15		<u>42</u>	<u>612</u>			<u>42</u>	<u>613</u>
P16		<u>45</u>	<u>612</u>			<u>45</u>	<u>613</u>
P17		<u>48</u>	<u>612</u>			<u>48</u>	<u>613</u>
P18		<u>51</u>	<u>612</u>			<u>51</u>	<u>613</u>
P19		<u>54</u>	<u>612</u>			<u>54</u>	<u>613</u>
P20		<u>57</u>	<u>612</u>			<u>57</u>	<u>613</u>
WTC - 4		<u>60</u>	<u>612</u>			<u>60</u>	<u>613</u>
						<u>63</u>	<u>613</u>



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 11917

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation 1746 KB Formation anubale Eff. Pay Ft.

COMPANY NAME South Oil Inc. District Pratt Date 11-2-81 Customer Order No. Rockhamphs Bldg.
ADDRESS 260 N. Rock Road Suite 210 Wichita, Ks. 67206
LEASE AND WELL NO. T-bird #2 COUNTY Barber STATE Ks. Sec. 19 Twp 3P Rge 14W
Mail Invoice To Thunderbird Ranch #2 No. Copies Requested
Co. Name Address
Mail Charts To Address No. Copies Requested

Formation Test No. 3 Interval Tested from 4768 ft. to 4778 ft. Total Depth 4778 ft.
Packer Depth 4763 ft. Size 6 5/8 in. Packer Depth ft. Size in.
Packer Depth 4768 ft. Size 6 5/8 in. Packer Depth ft. Size in.
Depth of Selective Zone Set
Top Recorder Depth (Inside) 4770 ft. Recorder Number 1566 Cap. 4300
Bottom Recorder Depth (Outside) 4774 ft. Recorder Number 3086 Cap. 4500
Below Straddle Recorder Depth ft. Recorder Number Cap.
Drilling Contractor Trans-Pak Drill Collar Length 469' I. D. 2.2 in.
Mud Type Chemical Viscosity 40 Weight Pipe Length I. D. in.
Weight 9.24 Water Loss 13.4 cc. Drill Pipe Length 4276' I. D. 3.8 in.
Chlorides 15,000 P.P.M. Test Tool Length 23' Tool Size 5 1/2 in.
Jars: Make Serial Number Anchor Length 10' ft. Size 5 1/4 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: Very WK Building to 1/2 inch Then displacing lead in 25 min - Flushed (OK) I.F.P.
F.F.P. - Dend Flushed 1/2 inch - remaining remainder of test!

Recovered 30' ft. of Oil Spotted + Slightly gassy watery Dry mud -
Recovered 240' ft. of gassy Oil spotted maddy Salt water.
Recovered ft. of w/ 2% oil 45% mud 53% water
Recovered ft. of w/ 30,000 chloride -
Recovered ft. of

Remarks: Tight spot approx. 80' off Bottom!

Time On Location 9:30 A.M. Time Pick Up Tool 10:45 A.M. Time Off Location P.M.
Time Set Packer(s) 1:00 A.M. Time Started Off Bottom 3:30 P.M. Maximum Temperature BROKE!
Initial Hydrostatic Pressure (A) 2308 P.S.I.
Initial Flow Period 30 Minutes (B) 43 P.S.I. to (C) 75 P.S.I.
Initial Closed In Period 45 Minutes (D) 1646 P.S.I.
Final Flow Period 30 Minutes (E) 108 P.S.I. to (F) 118 P.S.I.
Final Closed In Period 45 Minutes (G) 1603 P.S.I.
Final Hydrostatic Pressure (H) 2373 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 Mike Rogers
Signature of Customer or his authorized representative

Western Representative Mike Rogers Thank You!

FIELD INVOICE

Open Hole Test \$ 700.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$ 65.00
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$ 55.41.25
Fluid Sampler \$
Extra Charts \$
TOTAL \$ 806.25

WESTERN TESTING CO., INC.

Pressure Data

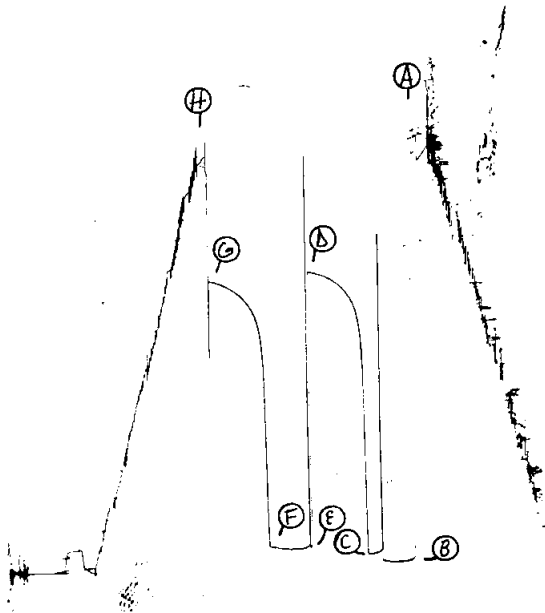
Date 11-2-81 Test Ticket No. 11917
 Recorder No. 1566 Capacity 4300 Location 4770 Ft.
 Clock No. --- Elevation 1746 K.B. Well Temperature --- °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 2273 P.S.I. Open Tool 1:00 P M
 B First Initial Flow Pressure 42 P.S.I. First Flow Pressure 30 Mins. 35 Mins.
 C First Final Flow Pressure 85 P.S.I. Initial Closed-in Pressure 45 Mins. 42 Mins.
 D Initial Closed-in Pressure 1665 P.S.I. Second Flow Pressure 30 Mins. 30 Mins.
 E Second Initial Flow Pressure 131 P.S.I. Final Closed-in Pressure 45 Mins. 42 Mins.
 F Second Final Flow Pressure 132 P.S.I.
 G Final Closed-in Pressure 1618 P.S.I.
 H Final Hydrostatic Mud 2258 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>7</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>14</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>42</u>	<u>0</u>	<u>85</u>	<u>0</u>	<u>131</u>	<u>0</u>	<u>132</u>
P 2 <u>5</u>	<u>42</u>	<u>3</u>	<u>1201</u>	<u>5</u>	<u>125</u>	<u>3</u>	<u>1173</u>
P 3 <u>10</u>	<u>42</u>	<u>6</u>	<u>1401</u>	<u>10</u>	<u>119</u>	<u>6</u>	<u>1349</u>
P 4 <u>15</u>	<u>42</u>	<u>9</u>	<u>1481</u>	<u>15</u>	<u>117</u>	<u>9</u>	<u>1420</u>
P 5 <u>20</u>	<u>45</u>	<u>12</u>	<u>1522</u>	<u>20</u>	<u>121</u>	<u>12</u>	<u>1462</u>
P 6 <u>25</u>	<u>106</u>	<u>15</u>	<u>1556</u>	<u>25</u>	<u>126</u>	<u>15</u>	<u>1500</u>
P 7 <u>30</u>	<u>87</u>	<u>18</u>	<u>1580</u>	<u>30</u>	<u>132</u>	<u>18</u>	<u>1526</u>
P 8 <u>35</u>	<u>85</u>	<u>21</u>	<u>1598</u>	<u>35</u>		<u>21</u>	<u>1547</u>
P 9 <u>40</u>		<u>24</u>	<u>1617</u>	<u>40</u>		<u>24</u>	<u>1561</u>
P10 <u>45</u>		<u>27</u>	<u>1630</u>	<u>45</u>		<u>27</u>	<u>1576</u>
P11 <u>50</u>		<u>30</u>	<u>1640</u>	<u>50</u>		<u>30</u>	<u>1588</u>
P12 <u>55</u>		<u>33</u>	<u>1648</u>	<u>55</u>		<u>33</u>	<u>1599</u>
P13 <u>60</u>		<u>36</u>	<u>1655</u>	<u>60</u>		<u>36</u>	<u>1608</u>
P14		<u>39</u>	<u>1660</u>	<u>65</u>		<u>39</u>	<u>1614</u>
P15		<u>42</u>	<u>1665</u>	<u>70</u>		<u>42</u>	<u>1618</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>	

TKT # 11917

I



Company Gould Oil, Inc./Logo, Inc. Lease & Well No. Thunderbird Ranch #2
 Elevation 1746 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 11917
 Date 11/ 2 /81 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
 Test Approved by Philip J. Paschay Western Representative Mike Rogers
 Formation Test No. 3 Interval Tested from 4768 ft. to 4778 ft. Total Depth 4778 ft.
 Packer Depth 4763 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 4768 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4770 ft. Recorder Number 1566 Cap 4300
 Bottom Recorder Depth (Outside) 4774 ft. Recorder Number 3086 Cap 4500
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -
 Drilling Contractor Trans-Pak Drlg. Drill Collar Length 469 I. D. 2.2 in.
 Mud Type chemical Viscosity 40 Weight Pipe Length - I. D. - in.
 Weight 9.2+ Water Loss 13.4 cc. Drill Pipe Length 4276 I. D. 3.8 in.
 Chlorides 15,000 P.P.M. Test Tool Length 23 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 10 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: Very weak building to one half inch then depleting and dead in twenty-five minutes; Flush
okay) on initial flow period. Final flow period dead; flushed one fourth inch remainder of test.

Recovered 30 ft. of oil spotted and slightly gas cut watery drilling mud
 Recovered 240 ft. of gassy oil spotted muddy salt water with 2% oil; 45% mud; 53% water with
 Recovered - ft. of 30,000 ppm chlorides
 Recovered - ft. of -
 Recovered - ft. of -

Remarks: Tight spot approximately eighty feet off bottom.

Time Set Packer(s)	<u>1:00</u>	<u>AM</u> <u>PM</u>	Time Started Off Bottom	<u>3:30</u>	<u>AM</u> <u>PM</u>	Maximum Temperature	<u>Broken</u>
Initial Hydrostatic Pressure	(A)	<u>2273</u>	P.S.I.				
Initial Flow Period	Minutes	<u>35</u>	(B)	<u>42</u>	P.S.I. to (C)	<u>85</u>	P.S.I.
Initial Closed In Period	Minutes	<u>42</u>	(D)	<u>1665</u>	P.S.I.		
Final Flow Period	Minutes	<u>30</u>	(E)	<u>131</u>	P.S.I. to (F)	<u>132</u>	P.S.I.
Final Closed In Period	Minutes	<u>42</u>	(G)	<u>1618</u>	P.S.I.		
Final Hydrostatic Pressure	(H)	<u>2258</u>	P.S.I.				

WESTERN TESTING CO., INC.

Pressure Data

Date 11/2/81 Test Ticket No. 11917
 Recorder No. 1566 Capacity 4300 Location 4770 Ft.
 Clock No. - Elevation 1746 Kelly Bushing Well Temperature - °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	2273 P.S.I.	1:00P	M
B First Initial Flow Pressure	42 P.S.I.	30	35 Mins.
C First Final Flow Pressure	85 P.S.I.	45	42 Mins.
D Initial Closed-in Pressure	1665 P.S.I.	30	30 Mins.
E Second Initial Flow Pressure	131 P.S.I.	45	42 Mins.
F Second Final Flow Pressure	132 P.S.I.		
G Final Closed-in Pressure	1618 P.S.I.		
H Final Hydrostatic Mud	2258 P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>7</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>14</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	42	0	85	0	131	0	132
P 2 5	42	3	1201	5	125	3	1173
P 3 10	42	6	1401	10	119	6	1349
P 4 15	42	9	1481	15	117	9	1420
P 5 20	45	12	1522	20	121	12	1462
P 6 25	106	15	1556	25	126	15	1500
P 7 30	87	18	1580	30	132	18	1526
P 8 35	85	21	1598			21	1547
P 9		24	1617			24	1561
P10		27	1630			27	1576
P11		30	1640			30	1588
P12		33	1648			33	1599
P13		36	1655			36	1608
P14		39	1660			39	1614
P15		42	1665			42	1618
P16							
P17							
P18							
P19							
P20							



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

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No. 11916 *OK*

Elevation 1746 KB Formation Simpson Sand Eff. Pay Ft.

District Pratt Date 11-1-81 Customer Order No.

COMPANY NAME Should Oil Company Rockingham Bldg.

ADDRESS 260 N. Rock Road Suite 210 Wichita, Ks. 67206

LEASE AND WELL NO. #2 T-bird COUNTY Barber STATE Ks. Sec. 19 Twp. 31S Rge. 14W

Mail Invoice To Thunderbird Ranch #2 No. Copies Requested
Co. Name Address

Mail Charts To No. Copies Requested
Address

Formation Test No. 2 Interval Tested from 4653 ft. to 4662 ft. Total Depth 4662 ft.

Packer Depth 4648 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 4653 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4655 ft. Recorder Number 1566 Cap. 4300

Bottom Recorder Depth (Outside) 4658 ft. Recorder Number 3086 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Trans-Pak Drill Collar Length 469' I. D. 2.2 in.

Mud Type Chemical Viscosity 50 Weight Pipe Length I. D. in.

Weight 9 Water Loss 12.2 cc. Drill Pipe Length 416 1/4' I. D. 3.8 in.

Chlorides 20,000 P.P.M. Test Tool Length 23' Tool Size 5 1/2 in.

Jars: Make Serial Number Anchor Length 9' 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 1/8 in. Tool Joint Size 4 1/2 in.

Blow: 3 inch Building to String in 10 min. I.F.P. STRONG F.F.P.

Nogast to Surface

Recovered 1320 ft. of gas in pipe

Recovered 90 ft. of gas oil cut dr. liquid w/ 22% oil 63% mud 15% water

Recovered 60 ft. of " " " w/ 8% oil 62% mud 30% water

Recovered 720 ft. of gassy Salt water w/ Very Slight Oil stain w/ 54,000 clods.

Recovered ft. of

Remarks:

Time On Location 4:00 AM Time Pick Up Tool 5:30 AM Time Off Location 4:30 AM

Time Set Packer(s) 8:30 PM Time Started Off Bottom 12:00 AM Maximum Temperature 130°

Initial Hydrostatic Pressure (A) 2319 P.S.I.

Initial Flow Period 30 Minutes (B) 151 P.S.I. to (C) 248 P.S.I.

Initial Closed In Period 60 Minutes (D) 1668 P.S.I.

Final Flow Period 60 Minutes (E) 324 P.S.I. to (F) 432 P.S.I.

Final Closed In Period 60 Minutes (G) 1668 P.S.I.

Final Hydrostatic Pressure (H) 2286 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 Philip J. Pash 1980
Signature of Customer or his authorized representative

Western Representative Mike Rogers Thank You!

FIELD INVOICE

Open Hole Test \$ 720.00
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$ 65.00
Standby \$
Evaluation \$
Extra Packer \$
Arc. Sub. \$
Mileage \$ 55 1/2
Fluid Sampler \$
Extra Charts \$
Insurance \$
TOTAL \$ 806.25

WESTERN TESTING CO., INC.

Pressure Data

Date 11-1-81 Test Ticket No. 11916
 Recorder No. 1566 Capacity 4300 Location 4655 Ft.
 Clock No. --- Elevation 1746 R.B. Well Temperature 130 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2288</u> P.S.I.	Open Tool	<u>8:30</u> A.M.	
B First Initial Flow Pressure	<u>115</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>230</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>1652</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>300</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>413</u> P.S.I.			
G Final Closed-in Pressure	<u>1644</u> P.S.I.			
H Final Hydrostatic Mud	<u>2254</u> P.S.I.			

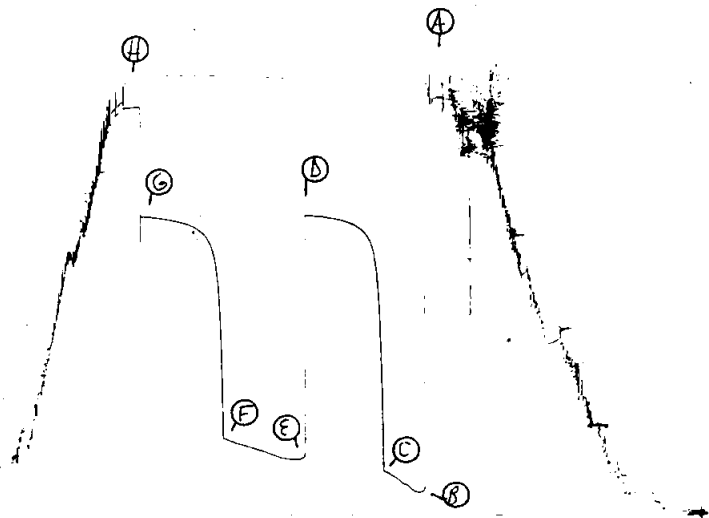
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>30</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>20</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>115</u>	<u>0</u>	<u>230</u>	<u>0</u>	<u>300</u>	<u>0</u>	<u>413</u>
P 2 <u>5</u>	<u>116</u>	<u>3</u>	<u>1049</u>	<u>5</u>	<u>300</u>	<u>3</u>	<u>1178</u>
P 3 <u>10</u>	<u>136</u>	<u>6</u>	<u>1375</u>	<u>10</u>	<u>300</u>	<u>6</u>	<u>1384</u>
P 4 <u>15</u>	<u>164</u>	<u>9</u>	<u>1472</u>	<u>15</u>	<u>305</u>	<u>9</u>	<u>1469</u>
P 5 <u>20</u>	<u>192</u>	<u>12</u>	<u>1526</u>	<u>20</u>	<u>314</u>	<u>12</u>	<u>1515</u>
P 6 <u>25</u>	<u>215</u>	<u>15</u>	<u>1558</u>	<u>25</u>	<u>329</u>	<u>15</u>	<u>1545</u>
P 7 <u>30</u>	<u>230</u>	<u>18</u>	<u>1579</u>	<u>30</u>	<u>343</u>	<u>18</u>	<u>1564</u>
P 8 <u>35</u>		<u>21</u>	<u>1594</u>	<u>35</u>	<u>354</u>	<u>21</u>	<u>1581</u>
P 9 <u>40</u>		<u>24</u>	<u>1604</u>	<u>40</u>	<u>367</u>	<u>24</u>	<u>1593</u>
P10 <u>45</u>		<u>27</u>	<u>1614</u>	<u>45</u>	<u>376</u>	<u>27</u>	<u>1603</u>
P11 <u>50</u>		<u>30</u>	<u>1621</u>	<u>50</u>	<u>387</u>	<u>30</u>	<u>1610</u>
P12 <u>55</u>		<u>33</u>	<u>1627</u>	<u>55</u>	<u>400</u>	<u>33</u>	<u>1616</u>
P13 <u>60</u>		<u>36</u>	<u>1632</u>	<u>60</u>	<u>413</u>	<u>36</u>	<u>1622</u>
P14		<u>39</u>	<u>1636</u>	<u>65</u>		<u>39</u>	<u>1626</u>
P15		<u>42</u>	<u>1640</u>	<u>70</u>		<u>42</u>	<u>1630</u>
P16		<u>45</u>	<u>1645</u>	<u>75</u>		<u>45</u>	<u>1634</u>
P17		<u>48</u>	<u>1647</u>	<u>80</u>		<u>48</u>	<u>1636</u>
P18		<u>51</u>	<u>1649</u>	<u>85</u>		<u>51</u>	<u>1638</u>
P19		<u>54</u>	<u>1650</u>	<u>90</u>		<u>54</u>	<u>1640</u>
P20		<u>57</u>	<u>1651</u>			<u>57</u>	<u>1642</u>
		<u>60</u>	<u>1652</u>			<u>60</u>	<u>1644</u>

1562

TKT # 11916

I.



Company Gould Oil, Inc./Logo, Inc. Lease & Well No. Thunderbird Ranch #2
Elevation 1746 Kelly Bushing Formation Simpson Sand Effective Pay - Ft. Ticket No. 11916
Date 11/ 1 /81 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
Test Approved by Philip J. Paschay Western Representative Mike Rogers
Formation Test No. 2 Interval Tested from 4653 ft. to 4662 ft. Total Depth 4662 ft.
Packer Depth 4648 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 4653 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4655 ft. Recorder Number 1566 Cap. 4300
Bottom Recorder Depth (Outside) 4658 ft. Recorder Number 3086 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Trans-Pak Drlg. Drill Collar Length 469 I. D. 2.2 in.
Mud Type chemical Viscosity 50 Weight Pipe Length - I. D. - in.
Weight 9 Water Loss 12.2 cc. Drill Pipe Length 4161 I. D. 3.8 in.
Chlorides 20,000 P.P.M. Test Tool Length 23 ft. Tool Size 5 1/2 in.
Jars: Make - Serial Number - Anchor Length 9 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: Three inch building to strong in ten minutes on initial flow period. Strong on final flow period. No gas to surface.

Recovered 1320 ft. of gas in pipe
Recovered 90 ft. of gas and oil cut drilling mud with 22% oil;63% mud;15% water
Recovered 60 ft. of gas and oil cut drilling mud with 8% oil;62% mud;30% water
Recovered 720 ft. of gassy salt water with very slight oil stain with Chlorides 54,000 ppm
Recovered ft. of

Remarks:

Time Set Packer(s) 8:30 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 12:00 ~~P.M.~~ ^{A.M.} Maximum Temperature 130°
Initial Hydrostatic Pressure (A) 2288 P.S.I.
Initial Flow Period Minutes 30 (B) 115 P.S.I. to (C) 230 P.S.I.
Initial Closed In Period Minutes 60 (D) 1652 P.S.I.
Final Flow Period Minutes 60 (E) 300 P.S.I. to (F) 413 P.S.I.
Final Closed In Period Minutes 60 (G) 1644 P.S.I.
Final Hydrostatic Pressure (H) 2254 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/1/81 Recorder No. 1566 Capacity 4300 Test Ticket No. 11916
 Clock No. - Elevation 1746 Kelly Bushing Location 4655 Ft. -
 Well Temperature 130 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	2288 P.S.I.	8:30A	M
B First Initial Flow Pressure	115 P.S.I.	30 Mins	30 Mins
C First Final Flow Pressure	230 P.S.I.	60 Mins	60 Mins
D Initial Closed-in Pressure	1652 P.S.I.	60 Mins	60 Mins
E Second Initial Flow Pressure	300 P.S.I.	60 Mins	60 Mins
F Second Final Flow Pressure	413 P.S.I.		
G Final Closed-in Pressure	1644 P.S.I.		
H Final Hydrostatic Mud	2254 P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>20</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>115</u>	<u>0</u>	<u>230</u>	<u>0</u>	<u>300</u>	<u>0</u>	<u>413</u>
P 2 <u>5</u>	<u>116</u>	<u>3</u>	<u>1049</u>	<u>5</u>	<u>300</u>	<u>3</u>	<u>1178</u>
P 3 <u>10</u>	<u>136</u>	<u>6</u>	<u>1375</u>	<u>10</u>	<u>300</u>	<u>6</u>	<u>1384</u>
P 4 <u>15</u>	<u>164</u>	<u>9</u>	<u>1472</u>	<u>15</u>	<u>305</u>	<u>9</u>	<u>1469</u>
P 5 <u>20</u>	<u>192</u>	<u>12</u>	<u>1526</u>	<u>20</u>	<u>314</u>	<u>12</u>	<u>1515</u>
P 6 <u>25</u>	<u>215</u>	<u>15</u>	<u>1558</u>	<u>25</u>	<u>329</u>	<u>15</u>	<u>1545</u>
P 7 <u>30</u>	<u>230</u>	<u>18</u>	<u>1579</u>	<u>30</u>	<u>343</u>	<u>18</u>	<u>1564</u>
P 8		<u>21</u>	<u>1594</u>	<u>35</u>	<u>354</u>	<u>21</u>	<u>1581</u>
P 9		<u>24</u>	<u>1604</u>	<u>40</u>	<u>367</u>	<u>24</u>	<u>1593</u>
P10		<u>27</u>	<u>1614</u>	<u>45</u>	<u>376</u>	<u>27</u>	<u>1603</u>
P11		<u>30</u>	<u>1621</u>	<u>50</u>	<u>387</u>	<u>30</u>	<u>1610</u>
P12		<u>33</u>	<u>1627</u>	<u>55</u>	<u>400</u>	<u>33</u>	<u>1616</u>
P13		<u>36</u>	<u>1632</u>	<u>60</u>	<u>413</u>	<u>36</u>	<u>1626</u>
P14		<u>39</u>	<u>1636</u>			<u>39</u>	<u>1626</u>
P15		<u>42</u>	<u>1640</u>			<u>42</u>	<u>1630</u>
P16		<u>45</u>	<u>1645</u>			<u>45</u>	<u>1634</u>
P17		<u>48</u>	<u>1647</u>			<u>48</u>	<u>1636</u>
P18		<u>51</u>	<u>1649</u>			<u>51</u>	<u>1638</u>
P19		<u>54</u>	<u>1650</u>			<u>54</u>	<u>1640</u>
P20		<u>57</u>	<u>1651</u>			<u>57</u>	<u>1642</u>
		<u>60</u>	<u>1652</u>			<u>60</u>	<u>1644</u>