



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

24310

P. O. BOX 793

PHONE 793-7903

GREAT BEND, KANSAS

Formation

Admire

Elevation

Eff. Pay

Ft.

District

Augusta

Date

7/10/76

Customer Order No.

COMPANY NAME

Range Oil Company, Inc.

ADDRESS 240 Page Court, 220 West Douglas Wichita, Ks. 67207

LEASE AND WELL NO. Andes #2

COUNTY Cowley STATE Kansas

Sec. 26 Twp. 33S Rge. 5E

Mail Inv. To Same

Co. Name

Address

No. Copies Requested 1

Mail Charts To Same

Address

No. Copies Requested 5

Formation Test No. 1 O.K. X Misrun — Interval Tested From 525 to 590 Total Depth 590

Size Main Hole 7 7/8 Rat Hole — Conv. — B.T. X Damaged — Yes X No Conv. X B.T. — Damaged — Yes X No

Top Packer Depth 520 Ft. Size 6 3/4 Bottom Packer Depth 525 Ft. Size 6 3/4

Straddle — Conv. — B.T. — Damaged — Yes — No Packer Depth — Ft. Size —

Tool Size 5 1/2" Tool Joint Size 4 1/2" FH Anchor Length 65 Ft. Size 5 1/2" Surface Choke Size 1/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 544 Ft. Clock No. 8476

Depth 547 Ft. Clock No. 4964

Top Make Kuster Cap. 4200 No. 1559

Inside Outside

Bottom Make Kuster Cap. 3200 No. 1561

Inside Outside

Below Straddle: Depth — Rec. No. — Clock No. —

Depth — Ft. Rec. No. — Clock No. —

Time Set Packer 4:28 A M

Tool Open I.F.P. From 4:30 M. to 5:00 M. — Hr. 30 Min. From (B) 41 36 P.S.I. To (C) 41 36 P.S.I.

Tool Closed I.C.I.P. From 5:00 M. to 5:30 M. — Hr. 30 Min. (D) 54 56 P.S.I.

Tool Open F.F.P. From 5:30 M. to 6:00 M. — Hr. 30 Min. From (E) 52 38 P.S.I. To (F) 41 36 P.S.I.

Tool Closed F.C.I.P. From 6:00 M. to 7:00 M. — Hr. 60 Min. (G) 229 217 P.S.I.

Initial Hydrostatic Pressure (A) 236 P.S.I. Final Hydrostatic Pressure (H) 236 P.S.I. Maximum Temp. 95

INFORMATION

BLOW Strong blow throughout test. Gas to surface 5 min. See attached sheet

Did Well Flow — Yes X No Recovery Total Ft. 20' drilling mud

Reversed Out — Yes X No Mud Type Chem Viscosity 35 Weight 9.2 Water Loss — cc. Chlorides —

EXTRA EQUIPMENT: Type Circ. Sub. — Safety Joint — Jars: Size — In. Make — Ser. No. —

Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? NO Where? —

DRILLING CONTRACTOR White & Ellis #4 Length Drill Pipe — ft. I.D. Drill Pipe — In. Tool Joint Size — In.

Length Weight Pipe — ft. I.D. Weight Pipe — In. Tool Joint Size — In. Length Drill Collars 253 ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4 1/2" In. Length D.S.T. Tool 54 ft.

Remarks Gas Gaugeed 9,000 C.F.P.D. Gas AT 5:00
" " " 4,500 C.F.P.D. Gas AT 6:00

INVOICE SECTION

Open Hole Test	\$ 355.00
Straddle Test	\$
Jars	\$
Selective Zone	\$
Safety Joint	\$
Misrun	\$
Evaluation	\$
Packer	\$
Circ. Sub.	\$
Total	\$ 355.00

COMPANY TERMS

Western Testing Co., Inc., shall not be liable for damage 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, or 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 10% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By

Signature of Customer or his
Authorized Representative

Gerald D. Abner

Western Representative

Bill Baker

Operator's Time

Hrs.

WESTERN TESTING CO., INC.

Pressure Data

Date 7-10-76 Test Ticket No. 24310
 Recorder No. 1559 Capacity 4200 Location 5HH
 Clock No. EH76 Elevation — Well Temperature 95
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud 250 P.S.I. Open Tool 4:28 AM
 B First Initial Flow Pressure 36 P.S.I. First Flow Pressure 30 Mins. 30 Min
 C First Final Flow Pressure 36 P.S.I. Initial Closed-in Pressure 30 Mins. 30 Min
 D Initial Closed-in Pressure 55 P.S.I. Second Flow Pressure 30 Mins. 30 Min
 E Second Initial Flow Pressure 38 P.S.I. Final Closed-in Pressure 60 Mins. 60 Min
 F Second Final Flow Pressure 36 P.S.I.
 G Final Closed-in Pressure 217 P.S.I.
 H Final Hydrostatic Mud 246 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: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

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

Final Shut-In
 Breakdown: 20 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>36</u>	0	<u>36</u>	0	<u>38</u>	0	<u>36</u>
P 2 5	<u>38</u>	3	<u>47</u>	5	<u>36</u>	3	<u>94</u>
P 3 10	<u>37</u>	6	<u>50</u>	10		6	<u>136</u>
P 4 15	<u>36</u>	9	<u>52</u>	15		9	<u>157</u>
P 5 20	↓	12	<u>52</u>	20	↓	12	<u>171</u>
P 6 25		15	<u>55</u>	25	✓	15	<u>182</u>
P 7 30	<u>36</u>	18	<u>55</u>	30	<u>36</u>	18	<u>190</u>
P 8 35		21	↓	35		21	<u>194</u>
P 9 40		24	↓	40		24	<u>196</u>
P 10 45		27	↓	45		27	<u>201</u>
P 11 50		30	<u>55</u>	50		30	<u>203</u>
P 12 55		33		55		33	<u>205</u>
P 13 60		36		60		36	<u>207</u>
P 14		39		65		39	<u>209</u>
P 15		42		70		42	<u>210</u>
P 16		45		75		45	<u>211</u>
P 17		48		80		48	<u>213</u>
P 18		51		85		51	<u>214</u>
P 19		54		90		54	<u>215</u>
P 20		57				57	<u>216</u>
		60				60	<u>217</u>



GAS FLOW REPORT

Nº 173

Date 7/10/76 Ticket 24310 Company Range Oil Co.
Well Name and No. Andes #2 Dst No. 2 Interval Tested 525-590
County Cowley State Kansas Sec. 26 Twp. 33s Rg. 5E

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pilot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
Tool Open 4:30 PRE FLOW Gas to surface 5 min.						
4:40	10	1/4" choke		1 PSIG		9,000 C.F.P.D. GAS
45	15	"		" 1		" " " "
50	20	"		" 1		" " " "
55	25	"		" 1		" " " "
5:00	30	"		1		9,000 C.F.P.D. GAS
Tool Shut in from 5:00-5:30 SECOND FLOW For F.C.I.P.						
5:30		1/4" choke		1		9,000 C.F.P.D. GAS
5:35	35	"		1		9,000 C.F.P.D. GAS
40	40	"		" 1		" " " "
45	45	"		" 1		" " " "
50	50	"		.5		4,500 C.F.P.D. GAS
55	55	"		" .5		" " " "
6:00	60	"		.5		4,500 C.F.P.D. GAS
Tool Shut in from 6:00 to 7:00 For F.C.I.P.						

GAS BOTTLE

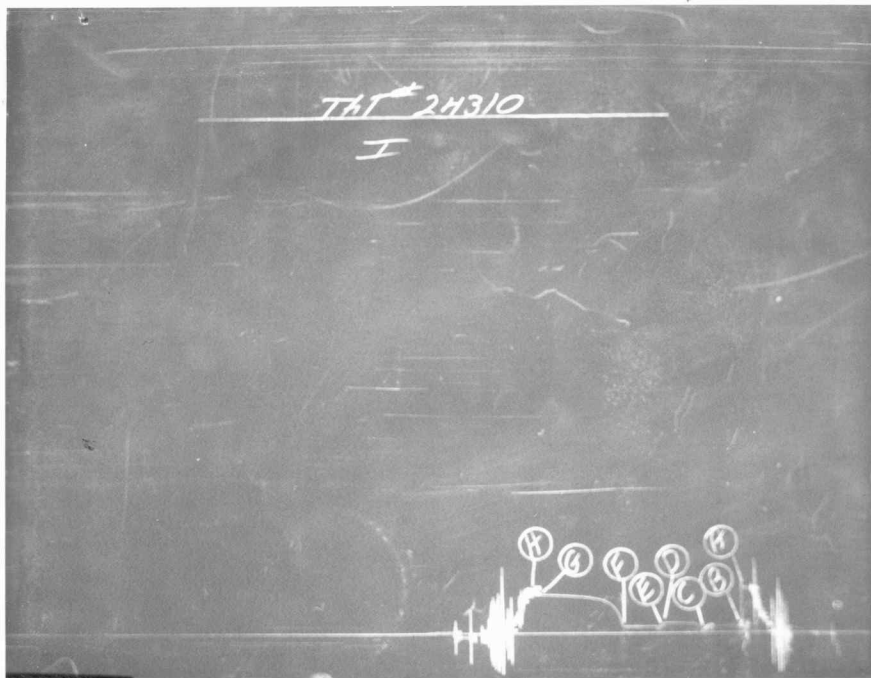
Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

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 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 _____

Authorized by _____





INC.

P. O. Box 1599
Wichita, Kansas 67201

Company Range Oil Company, Inc. Lease & Well No. Andes #2
Elevation - Formation Admire Effective Pay - Ft. Ticket No. 24310
Date 7-10-76 Sec. 26 Twp. 33S Range 5E County Cowley State Kansas
Test Approved by Gerald D. Honas Western Representative Bill Baker
Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 525' to 590' Total Depth 590'
Size Main Hole 77/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Top Packer Depth 520 Ft. Size 6 3/4 Bottom Packer Depth 525 Ft. Size 6 3/4
Straddle ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☒ No Packer Depth - Ft. Size -
Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 65 Ft. Size 5 1/2 OD Surface Choke Size 1/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 544 Ft. Clock No. 8476 Depth 547 Ft. Clock No. 4964
Top Make Kuster Cap. 4200 No. 1559 Inside Outside Bottom Make Kuster Cap. 3200 No. 1561 Inside Outside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside
Time Set Packer 4:28 A M
Tool Open I.F.P. From 4:30 A.M. to 5:00 A.M. - Hr. 30 Min. From (B) 36 P.S.I. To (C) 36 P.S.I.
Tool Closed I.C.I.P. From 5:00 A.M. to 5:30 A.M. - Hr. 30 Min (D) 55 P.S.I.
Tool Open F.F.P. From 5:30 A.M. to 6:00 A.M. - Hr. 30 Min. From (E) 38 P.S.I. To (F) 36 P.S.I.
Tool Closed F.C.I.P. From 6:00 A.M. to 7:00 A.M. 1 Hr. - Min. (G) 217 P.S.I.
Initial Hydrostatic Pressure (A) 250 P.S.I. Final Hydrostatic Pressure (H) 246 P.S.I. Maximum Temp. 95

INFORMATION

BLOW Strong blow throughout test. Gas to Surface in 5 minutes. See attached sheet for gas measurements.
Did Well Flow ☐ Yes ☒ No Recovery Total Ft. 20' drilling mud.

Reversed Out ☐ Yes ☒ No Mud Type chem Viscosity 35 Weight 9.2 Water Loss - cc. Chlorides -
EXTRA EQUIPMENT: Type Circ. Sub. - Safety Joint - Jars: Size - In. Make - Ser. No. -
Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? -
DRILLING CONTRACTOR White & Ellis #4 Length Drill Pipe? - Ft. I.D. Drill Pipe - In. Tool Joint Size - In.
Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 253 Ft. I.D. Drill Collars 2 1/4 In.
Tool Joint Size 4 1/2 In. Length D.S.T. Tool 54 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 7-10-76 Test Ticket No. 24310
 Recorder No. 1559 Capacity 4200 Location 544 Ft.
 Clock No. 8476 Elevation - Well Temperature 95 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	250	P.S.I.	4:28	A M
B First Initial Flow Pressure	36	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	36	P.S.I.	30	Mins. 30 Mins.
D Initial Closed-in Pressure	55	P.S.I.	30	Mins. 30 Mins.
E Second Initial Flow Pressure	38	P.S.I.	60	Mins. 60 Mins.
F Second Final Flow Pressure	36	P.S.I.		
G Final Closed-in Pressure	217	P.S.I.		
H Final Hydrostatic Mud	246	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>6</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>36</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>36</u>
P 2 <u>5</u>	<u>38</u>	<u>3</u>	<u>47</u>	<u>5</u>	<u>36</u>	<u>3</u>	<u>94</u>
P 3 <u>10</u>	<u>37</u>	<u>6</u>	<u>50</u>	<u>10</u>	<u>36</u>	<u>6</u>	<u>136</u>
P 4 <u>15</u>	<u>36</u>	<u>9</u>	<u>52</u>	<u>15</u>	<u>36</u>	<u>9</u>	<u>157</u>
P 5 <u>20</u>	<u>36</u>	<u>12</u>	<u>52</u>	<u>20</u>	<u>36</u>	<u>12</u>	<u>171</u>
P 6 <u>25</u>	<u>36</u>	<u>15</u>	<u>55</u>	<u>25</u>	<u>36</u>	<u>15</u>	<u>182</u>
P 7 <u>30</u>	<u>36</u>	<u>18</u>	<u>55</u>	<u>30</u>	<u>36</u>	<u>18</u>	<u>190</u>
P 8		<u>21</u>	<u>55</u>			<u>21</u>	<u>194</u>
P 9		<u>24</u>	<u>55</u>			<u>24</u>	<u>196</u>
P10		<u>27</u>	<u>55</u>			<u>27</u>	<u>201</u>
P11		<u>30</u>	<u>55</u>			<u>30</u>	<u>203</u>
P12						<u>33</u>	<u>205</u>
P13						<u>36</u>	<u>207</u>
P14						<u>39</u>	<u>209</u>
P15						<u>42</u>	<u>210</u>
P16						<u>45</u>	<u>211</u>
P17						<u>48</u>	<u>213</u>
P18						<u>51</u>	<u>214</u>
P19						<u>54</u>	<u>215</u>
P20						<u>57</u>	<u>216</u>
						<u>60</u>	<u>217</u>



INC.

P. O. Box 1599

Wichita, Kansas 67201

GAS FLOW REPORT

Date 7-10-76 Ticket 24310 Company Range Oil Company, Inc.
Well Name and No. Andes #2 Dst No. 2 Interval Tested 525' - 590'
County Cowley State Kansas Sec. 26 Twp. 33S Rg. 5E

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						
Tool Open 4:30 - Gas to surface in 5 min.						
4:40AM	10 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
4:45AM	15 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
4:50AM	20 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
4:55AM	25 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
5:00AM	30 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.

SECOND FLOW

5:35 AM	35 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
5:40 AM	40 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
5:45 AM	45 min.	1/4" choke		1 P.S.I.G.		9,000 C.F.P.D.
5:50 AM	50 min.	1/4" choke		.5 P.S.I.G.		4,500 C.F.P.D.
5:55 AM	55 min.	1/4" choke		.5 P.S.I.G.		4,500 C.F.P.D.
6:00 AM	60 min.	1/4" choke		.5 P.S.I.G.		4,500 C.F.P.D.
All gas measurements were taken with a 2" merla orifice well tester through a 1/4" choke.						

GAS BOTTLE

Serial No. - Date Bottle Filled 7-10-76 Date to be Invoiced 7 - 10 - 76

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 Range Oil Company, Inc.

Authorized by Gerald D. Honas