



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET 22111

P. O. BOX 793 PHONE 793-7903
GREAT BEND, KANSAS

Formation Viola Elevation 1784 KIB Pay Ft.

District Great Bend Date 2-18-76 Customer Order No.

COMPANY NAME National Oil Company
ADDRESS 550 - 200 W. Douglas Wichita Kansas 67202

LEASE AND WELL NO. #1 - shaft COUNTY Barber STATE Kansas Sec. 19 Twp. 37S Rge. 14W

Mail Inv. To Same Co. Name AS Address Above No. Copies Requested Req

Mail Charts To Co. Name Address No. Copies Requested Req

Formation Test No. O.K. Misrun Interval Tested From 4538' to 4545' Total Depth 4545'
Size Main Hole 7 7/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
Top Packer Depth 4533 Ft. Size 6 3/4 Bottom Packer Depth 4538 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 7 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4528 Ft. P.S.I. Clock No. 8425 Depth 4542 Ft. Clock No. 6799
Top Make Kuster Cap. 150 No. 206 Inside Bottom Make Kuster Cap. 400 No. 3351 Outside
Below Straddle: Depth Rec. No. Clock No. Outside Depth Ft. Rec. No. Clock No. Outside

Time Set Packer 1:26 P.M.
Tool Open I.F.P. From 1:30 P.M. to 2:00 P.M. Hr. 30 Min. From (B) 62 94 P.S.I. To (C) 52 50 P.S.I.
Tool Closed I.C.I.P. From 2:00 P.M. to 2:45 P.M. Hr. 45 Min. (D) 603 P.S.I. 600 P.S.I.
Tool Open F.F.P. From 2:45 P.M. to 3:30 P.M. Hr. 45 Min. From (E) 62 50 P.S.I. To (F) 72 72 P.S.I.
Tool Closed F.C.I.P. From 3:30 P.M. to 4:30 P.M. Hr. Min. (G) 426 P.S.I. 425 P.S.I.
Initial Hydrostatic Pressure (A) 2407 P.S.I. Final Hydrostatic Pressure (H) 2386 P.S.I. Maximum Temp. 120°

INFORMATION

BLOW Strong Gas surf in 5 min (see Att. sheet)
strong blow throughout test
Did Well Flow Yes No Recovery Total Ft. 10 5/8 Mdy Gsy Oil - (124' Mdy Gsy Oil -
6" Water 20" Mud) (62' Avg Mud Cut Gsy Oil 8" Water 35" Mud)

Reversed Out Yes No Mud Type starch Viscosity 43 Weight 9.8 Water Loss 15.6 cc. Chlorides 63,000 ppm

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

Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? Where?

DRILLING CONTRACTOR H-30 #3100 G.C. Length Drill Pipe 3627 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 x 4 In.
Length Weight Pipe 885 ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 x 4 In. Length Drill Collars ft. I.D. Drill Collars In.
Tool Joint Size In. Length D.S.T. Tool 33 ft.

Remarks Clock stopped on Rec # 3351
see attached sheet for gas
measurements

INVOICE SECTION

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

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 Jay L. Dick Western Representative
Signature of Customer or his Authorized Representative Operator's Time Hrs.

WESTERN TESTING CO., INC.
Pressure Data

Date 2-18-76 Test Ticket No. 22111
 Recorder No. 2606 Capacity 4150 Location 4528 AP Ft.
 Clock No. 8475 Elevation 1784 KB Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2408</u>	P.S.I.	<u>1:26 P</u>	M
B First Initial Flow Pressure	<u>94</u>	P.S.I.	<u>30</u>	Mins. <u>27</u> Mins.
C First Final Flow Pressure	<u>50</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins.
D Initial Closed-in Pressure	<u>604</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins.
E Second Initial Flow Pressure	<u>56</u>	P.S.I.	<u>60</u>	Mins. <u>54</u> Mins.
F Second Final Flow Pressure	<u>72</u>	P.S.I.		
G Final Closed-in Pressure	<u>425</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2393</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>5</u> Inc. of <u>5</u> mins. and a final inc. of <u>02</u> Min.	Initial Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>18</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>94</u>	0	<u>50</u>	0	<u>56</u>	0	<u>72</u>
P 2 5	<u>64</u>	3	<u>214</u>	5	<u>51</u>	3	<u>133</u>
P 3 10	<u>51</u>	6	<u>289</u>	10	<u>51</u>	6	<u>170</u>
P 4 15	<u>50</u>	9	<u>343</u>	15	<u>52</u>	9	<u>198</u>
P 5 20	<u>50</u>	12	<u>380</u>	20	<u>56</u>	12	<u>220</u>
P 6 25	<u>50</u>	15	<u>414</u>	25	<u>59</u>	15	<u>241</u>
P 7 <u>3027</u>	<u>50</u>	18	<u>446</u>	30	<u>62</u>	18	<u>260</u>
P 8 35		21	<u>470</u>	35	<u>67</u>	21	<u>279</u>
P 9 40		24	<u>494</u>	40	<u>70</u>	24	<u>295</u>
P10 45		27	<u>513</u>	45	<u>72</u>	27	<u>310</u>
P11 50		30	<u>533</u>	50		30	<u>325</u>
P12 55		33	<u>551</u>	55		33	<u>339</u>
P13 60		36	<u>568</u>	60		36	<u>355</u>
P14		39	<u>585</u>	65		39	<u>366</u>
P15		42	<u>597</u>	70		42	<u>380</u>
P16		45	<u>604</u>	75		45	<u>394</u>
P17		48		80		48	<u>406</u>
P18		51		85		51	<u>417</u>
P19		54		90		54	<u>425</u>
P20		57				57	
		60				60	

Phone 316 262-5861
316 838-0601



P. O. Box 1599
WICHITA, KANSAS 67201

GAS FLOW REPORT

Nº 336

Date 2-18-76 Ticket 22111 Company National Oil
Well Name and No. #1-Sheft Dst No. 1 Interval Tested 4538-4545
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						
Tool Open 1:30 Merla Orifice						
Gas Surf	1:35			2" open		
1:45pm	10	9" of water		1 1/2" choke		416,000 CFPD
1:55pm	20	2" of water		1 1/2" choke		98,000 "
Tool open at 1:30 pm. Goto surface at 1:35 pm.						

SECOND FLOW						
Tool Open 2:45						
2:50pm	5	10" of water		1/2" choke		220,000 CFPD
3:00pm	15	4" "	3/4			28,300 "
3:10pm	25	3, 4" "	3/4			26,100 " "
3:20pm	35	3" "	3/4			34,500 " "
3:30pm	45	2" "	3/4	choke		20,000 " "
All measurements were taken with a 2" merla orifice well tester.						

GAS BOTTLE

Serial No. 617 Date Bottle Filled 2-18-76 Date to be Invoiced 3-18-76

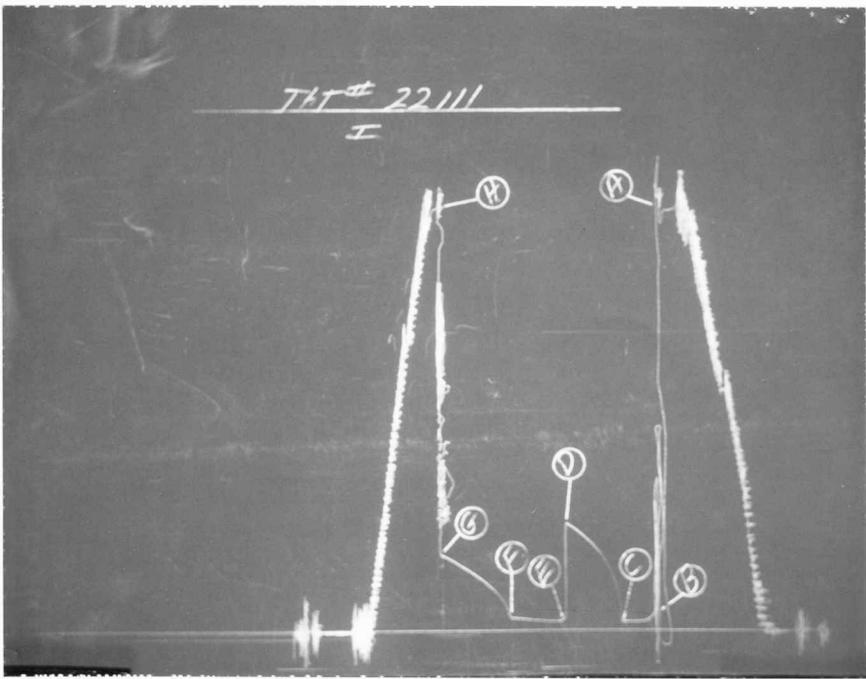
Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By 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 National Oil

Authorized by Jay R. Wicks

THT # 22111
I





Home Office: Wichita, Kansas 67201
 P. O. Box 1599 (316) 838-0601

Company National Oil Company Lease & Well No. Shaft #1
 Elevation 1784 Kelly Bushing Formation Viola Effective Pay - Ft. Ticket No. 22111
 Date 2-18-76 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
 Test Approved by Jay R. Dirks Western Representative Max Knipe

Formation Test No. 1 O.K. Misrun Interval Tested From 4538' to 4545' Total Depth 4545'
 Size Main Hole 77/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
 Top Packer Depth 4533 Ft. Size 6 3/4 Bottom Packer Depth 4538 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 7 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4528 A.P. Ft. Clock No. 8475 Depth 4542 Ft. Clock No. 6799
 Top Make Kuster Cap. 4150 No. 2606 Inside Outside Bottom Make Kuster Cap. 4000 No. 3351 Inside Outside
 Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 1:26 P. M
 Tool Open I.F.P. From 1:30 P. M. to 2:00 P. M. - Hr. 30 Min. From (B) 94 P.S.I. To (C) 50 P.S.I.
 Tool Closed I.C.I.P. From 2:00 P. M. to 2:45 P. M. - Hr. 45 Min (D) 604 P.S.I.
 Tool Open F.F.P. From 2:45 P. M. to 3:30 P. M. - Hr. 45 Min. From (E) 56 P.S.I. To (F) 72 P.S.I.
 Tool Closed F.C.I.P. From 3:30 P. M. to 4:30 P. M. 1 Hr. - Min. (G) 425 P.S.I.
 Initial Hydrostatic Pressure (A) 2408 P.S.I. Final Hydrostatic Pressure (H) 2393 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Strong blow throughout test.

Did Well Flow Yes No Recovery Total Ft. 10' slightly muddy gassy oil 124' muddy gassy oil (6% water 20% mud). 62' heavy mud cut gassy oil (8% water 35% mud).

Reversed Out Yes No Mud Type starch Viscosity 43 Weight 9.8 Water Loss 15.6 cc. Chlorides 63,000 PPM

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

Dual Packer yes Did Packers Hold? yes Did Tool Plug? no Where? -

DRILLING CONTRACTOR H-30 Drlg. Co. Length Drill Pipe? 3627 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.
 Length Weight Pipe 885 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars - Ft. I.D. Drill Collars - In.
 Tool Joint Size - In. Length D.S.T. Tool 33 Ft.

Remarks: See attached sheet for gas measurements.

Phone 316 262-5861
316 838-0601



P. O. Box 1599
WICHITA, KANSAS 67201

GAS FLOW REPORT

Date 2-18-76 Ticket 22111 Company National Oil Company
Well Name and No. Shaft #1 Dst No. 1 Interval Tested 4538' to 4545'
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						
1:45 PM	10 min.	9" of water	1/2" choke			416,000 C.F.P.D.
1:55 PM	20 min.	2" of water	1 1/2" choke			98,000 C.F.P.D.
Tool opened at 1:30 P.M. Gas to surface at 1:35 P.M.						

SECOND FLOW						
2:50 PM	5 min.	10" of water	1/2" choke			220,000 C.F.P.D.
3:00 PM	15 min.	4" of water	3/4" choke			28,300 C.F.P.D.
3:10 PM	25 min.	3.4" of water	3/4" choke			26,100 C.F.P.D.
3:20 PM	35 min.	3" of water	3/4" choke			24,500 C.F.P.D.
3:30 PM	45 min.	2" of water	3/4" choke			20,000 C.F.P.D.
All measurements were taken with a 2" merla orifice well tester.						

GAS BOTTLE

Serial No. 617 Date Bottle Filled 2-18-76 Date to be Invoiced 2-18-76

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 National Oil Company
Authorized by Jay R. Dirks

WESTERN TESTING CO., INC.
Pressure Data

Date 2-18-76

Test Ticket No. 22111

Recorder No. 2606

Capacity 4150

Location 4528 A.P. Ft.

Clock No. 8475

Elevation 1784 Kelly Bushing

Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2408	P.S.I.	1:26 P.	M
B First Initial Flow Pressure	94	P.S.I.	30 Mins.	27 Mins.
C First Final Flow Pressure	50	P.S.I.	45 Mins.	45 Mins.
D Initial Closed-in Pressure	604	P.S.I.	45 Mins.	45 Mins.
E Second Initial Flow Pressure	56	P.S.I.	60 Mins.	54 Mins.
F Second Final Flow Pressure	72	P.S.I.		
G Final Closed-in Pressure	425	P.S.I.		
H Final Hydrostatic Mud	2393	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>5</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>9</u> Inc.		Breakdown: <u>18</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	0	50	0	56	0	72
P 2	5	3	214	5	51	3	133
P 3	10	6	289	10	51	6	170
P 4	15	9	343	15	52	9	198
P 5	20	12	380	20	56	12	220
P 6	25	15	414	25	59	15	241
P 7	27	18	446	30	62	18	260
P 8		21	470	35	67	21	279
P 9		24	494	40	70	24	295
P10		27	513	45	72	27	310
P11		30	533			30	325
P12		33	551			33	339
P13		36	568			36	355
P14		39	585			39	366
P15		42	597			42	380
P16		45	604			45	394
P17						48	406
P18						51	417
P19						54	425
P20							



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET 22112

P. O. BOX 793 PHONE 793-7903
GREAT BEND, KANSAS

Formation Viola Elevation 1784 K.B Eff. Pay Ft.

District Great Bend Date 2-19-76 Customer Order No.

COMPANY NAME National Oil Company
ADDRESS Suite 550-200 W. Douglas Wichita Ks 67202
LEASE AND WELL NO. #1-shaft COUNTY Barber STATE Kansas Sec. 19 Twp. 31 S Rge. 14 W
Mail Inv. To Same As Above No. Copies Requested Reg
Mail Charts To Co. Name Address No. Copies Requested Reg

Formation Test No. 2 O.K. X Misrun Interval Tested From 4596 to 4615 Total Depth 4615
Size Main Hole 7 7/8 Rat Hole Conv. B.T. X Damaged Yes X No Conv. B.T. X Damaged Yes X No
Top Packer Depth 4591 Ft. Size 6 3/4 Bottom Packer Depth 4596 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 F# Anchor Length 19 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4607 Ft. Clock No. 8475 Depth 4610 Ft. Clock No. 6799
Top Make Kuster Cap. 4150 No. 2606 Bottom Make Kuster Cap. 4000 No. 3351
Below Straddle: Depth Rec. No. Clock No. Depth Ft. Rec. No. Clock No.

Time Set Packer 9:46 Ft M
Tool Open I.F.P. From 9:50 A.M. to 10:20 A.M. Hr. 30 Min. From (B) 20 30 P.S.I. To (C) 20 28 P.S.I.
Tool Closed I.C.I.P. From 10:20 A.M. to 10:50 A.M. Hr. 30 Min. (D) 41 44 P.S.I.
Tool Open F.F.P. From 10:50 A.M. to 11:20 A.M. Hr. 30 Min. From (E) 24 33 P.S.I. To (F) 24 29 P.S.I.
Tool Closed F.C.I.P. From 11:20 A.M. to 11:50 A.M. Hr. 30 Min. (G) 31 45 P.S.I.
Initial Hydrostatic Pressure (A) 2422 P.S.I. Final Hydrostatic Pressure (H) 2386 P.S.I. Maximum Temp. 121

INFORMATION

BLOW Weak blow For 20 minutes then
Did Well Flow Yes No Recovery Total Ft. 20' Mud

Reversed Out Yes No Mud Type Starch Viscosity 48 Weight 9.7 Water Loss 6 cc. Chlorides 62,000 ppm
EXTRA EQUIPMENT: Type Circ. Sub. P.N. Safety Joint Jars: Size In. Make Ser. No.
Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? NO Where?
DRILLING CONTRACTOR H-30 #3 Weld Co. Length Drill Pipe 3686 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 In.
Length Weight Pipe 885 ft. I.D. Weight Pipe 2.7 lb. Tool Joint Size 4 1/2 In. Length Drill Collars ft. I.D. Drill Collars In.
Tool Joint Size In. Length D.S.T. Tool 44 ft.

Remarks
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.

Table with 2 columns: Test Name, Amount. Includes Open Hole Test (\$355.00), Straddle Test, Jars, Selective Zone, Safety Joint, Misrun, Evaluation, Packer, Circ. Sub., Total (\$355.00).

Test Approved By [Signature] Western Representative [Signature]
Signature of Customer or his Authorized Representative Operator's Time Thank You Hrs.

WESTERN TESTING CO., INC.

Pressure Data

Date 2-19-76 Test Ticket No. 22112
 Recorder No. 2606 Capacity 4150 Location 4607 Ft.
 Clock No. 0425 Elevation 1784 KB Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2422</u>	P.S.I.	<u>9:46</u> AM	
B First Initial Flow Pressure	<u>30</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>28</u>	P.S.I.	<u>30</u> Mins.	<u>24</u> Mins.
D Initial Closed-in Pressure	<u>44</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>33</u>	P.S.I.	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>29</u>	P.S.I.		
G Final Closed-in Pressure	<u>45</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2403</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: 0 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

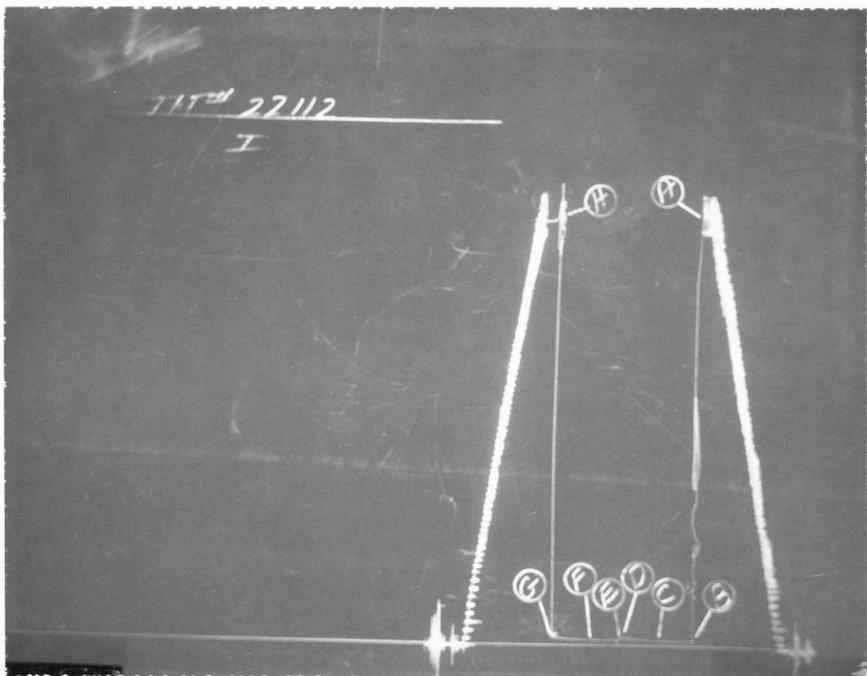
Second Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 9 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>30</u>	0	<u>28</u>	0	<u>33</u>	0	<u>29</u>
P 2 5	<u>26</u>	3	<u>30</u>	5	<u>31</u>	3	<u>31</u>
P 3 10	<u>26</u>	6	<u>32</u>	10	<u>29</u>	6	<u>32</u>
P 4 15	<u>27</u>	9	<u>33</u>	15	<u>29</u>	9	<u>33</u>
P 5 20	<u>28</u>	12	<u>34</u>	20	<u>29</u>	12	<u>34</u>
P 6 25	<u>28</u>	15	<u>36</u>	25	<u>29</u>	15	<u>35</u>
P 7 30	<u>28</u>	18	<u>39</u>	30	<u>29</u>	18	<u>39</u>
P 8 35		21	<u>41</u>	35		21	<u>42</u>
P 9 40		24	<u>44</u>	40		24	<u>44</u>
P10 45		27		45		27	<u>45</u>
P11 50		30		50		30	
P12 55		33		55		33	
P13 60		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

117th 22112

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Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company National Oil Company Lease & Well No. #1 Shaft
Elevation 1784 Kelly Bushing Formation Viola Effective Pay _____ Ft. Ticket No. 22112
Date 2-19-76 Sec. 19 Twp. 31S Range 14W County Barber State KS
Test Approved by Jay R. Dirks Western Representative Max Knipe

Formation Test No. #2 O.K. Misrun Interval Tested From 4596' to 4615' Total Depth 4615'
Size Main Hole 7 7/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
Top Packer Depth 4591 Ft. Size 6 3/4 Bottom Packer Depth 4596 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 19 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4607 Ft. Clock No. 8475 Depth 4610 Ft. Clock No. 6799
Top Make Kuster Cap. 4150 No. 2606 Inside Outside Bottom Make Kuster Cap. 4000 No. 3351 Inside Outside
Below Straddle: Depth _____ Rec. No. _____ Clock No. _____ Inside Outside Depth _____ Ft. Rec. No. _____ Clock No. _____ Inside Outside

Time Set Packer 9:46A. M
Tool Open I.F.P. From 9:50A M. to 10:20A M. - Hr. 30 Min. From (B) 30 P.S.I. To (C) 28 P.S.I.
Tool Closed I.C.I.P. From 10:20A M. to 10:50A M. - Hr. 30 Min (D) 44 P.S.I.
Tool Open F.F.P. From 10:50A M. to 11:20A M. - Hr. 30 Min. From (E) 33 P.S.I. To (F) 29 P.S.I.
Tool Closed F.C.I.P. From 11:20A M. to 11:50A M. - Hr. 30 Min. (G) 45 P.S.I.
Initial Hydrostatic Pressure (A) 2422 P.S.I. Final Hydrostatic Pressure (H) 2403 P.S.I. Maximum Temp. 121

INFORMATION

BLOW Weak blow for 20 minutes then died

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

Reversed Out Yes No Mud Type Starch Viscosity 48 Weight 9.7 Water Loss 6. cc. Chlorides 62,000 PPM

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

Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where?

DRILLING CONTRACTOR H-30 Drilling Co. Length Drill Pipe? 3686 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.

Length Weight Pipe 885 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars Ft. I.D. Drill Collars In.

Tool Joint Size In. Length D.S.T. Tool 44 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 2-19-76 Test Ticket No. 22112
 Recorder No. 2606 Capacity 4150 Location 4607 Ft.
 Clock No. 8475 Elevation 1784 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A. Initial Hydrostatic Mud	<u>2422</u> P.S.I.	Open Tool	<u>9:46A</u> M	
B. First Initial Flow Pressure	<u>30</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C. First Final Flow Pressure	<u>28</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>24</u> Mins.
D. Initial Closed-in Pressure	<u>44</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E. Second Initial Flow Pressure	<u>33</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F. Second Final Flow Pressure	<u>29</u> P.S.I.			
G. Final Closed-in Pressure	<u>45</u> P.S.I.			
H. Final Hydrostatic Mud	<u>2403</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>8</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>9</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>30</u>	<u>0</u>	<u>28</u>	<u>0</u>	<u>33</u>	<u>0</u>	<u>29</u>
P 2 <u>5</u>	<u>26</u>	<u>3</u>	<u>30</u>	<u>5</u>	<u>31</u>	<u>3</u>	<u>31</u>
P 3 <u>10</u>	<u>26</u>	<u>6</u>	<u>32</u>	<u>10</u>	<u>29</u>	<u>6</u>	<u>32</u>
P 4 <u>15</u>	<u>27</u>	<u>9</u>	<u>33</u>	<u>15</u>	<u>29</u>	<u>9</u>	<u>33</u>
P 5 <u>20</u>	<u>28</u>	<u>12</u>	<u>34</u>	<u>20</u>	<u>29</u>	<u>12</u>	<u>34</u>
P 6 <u>25</u>	<u>28</u>	<u>15</u>	<u>36</u>	<u>25</u>	<u>29</u>	<u>15</u>	<u>35</u>
P 7 <u>30</u>	<u>28</u>	<u>18</u>	<u>39</u>	<u>30</u>	<u>29</u>	<u>18</u>	<u>39</u>
P 8		<u>21</u>	<u>41</u>			<u>21</u>	<u>42</u>
P 9		<u>24</u>	<u>44</u>			<u>24</u>	<u>44</u>
P10						<u>27</u>	<u>45</u>
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET 22113

P. O. BOX 793 PHONE 793-7903
GREAT BEND, KANSAS

Formation Simp Elevation 1784 K.B. Eff. Pay Ft.

District Great Bend Date 2-20-76 Customer Order No.

COMPANY NAME National Oil Company

ADDRESS Suite 550-200 W. Douglas Wichita Ks 67202

LEASE AND WELL NO. Shaft #1 COUNTY Barber STATE Kansas Sec. 19 Twp. 31 S Rge. 14 W

Mail Inv. To Same AS Above No. Copies Requested

Mail Charts To Co. Name, Address No. Copies Requested

Formation Test No. 3 O.K. Misrun Interval Tested From 4634' to 4670' Total Depth 4670'

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

Top Packer Depth 4629 Ft. Size 6 3/4 Bottom Packer Depth 4634 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 36' Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4662 Ft. Clock No. 8475 Depth 4665 Ft. Clock No. 6799

Top Make Kuster Cap 4150 No. 2606 Bottom Make Kuster Cap 4000 No. 3351

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

Time Set Packer 2:56 AM

Tool Open I.F.P. From 3:00 A.M. to 3:30 A.M. Hr. 30 Min. From (B) 31 30 P.S.I. To (C) 35 35 P.S.I.

Tool Closed I.C.I.P. From 3:30 A.M. to 4:15 A.M. Hr. 45 Min. (D) 925 921 P.S.I.

Tool Open F.F.P. From 4:15 A.M. to 5:00 A.M. Hr. 45 Min. From (E) 625 66 58 P.S.I.

Tool Closed F.C.I.P. From 5:00 A.M. to 6:00 A.M. Hr. Min. (G) 945 939 P.S.I.

Initial Hydrostatic Pressure (A) 2455 P.S.I. Final Hydrostatic Pressure (H) 2439 2442 P.S.I. Maximum Temp. 124

INFORMATION

BLOW Fair 6" Blow throughout test

Did Well Flow Yes No Recovery Total Ft. 558' Gas IN Pipe 70' Str. Oil & Gas Cut Mud slightly

Reversed Out Yes No Mud Type starch Viscosity 48 Weight 9.7 Water Loss 6. cc. Chlorides 62,000 ppm

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

Dual Packers Yes Did Packers Hold? Yes Did Tool Plug? No Where?

DRILLING CONTRACTOR H-30 - Rig # 312 W. Co. Length Drill Pipe 3723 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 x 1 1/4 In.

Length Weight Pipe 885 ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 x 1 1/4 In. Length Drill Collars ft. I.D. Drill Collars In. Tool Joint Size In. Length D.S.T. Tool 62 ft.

Remarks

INVOICE SECTION

Table with 2 columns: Test Name, Amount. Includes 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] Western Representative [Signature] Operator's Time [Signature] Hrs.

WESTERN TESTING CO., INC.
Pressure Data

Date 2-20-76 Test Ticket No. 22113
 Recorder No. 2606 Capacity 4156 Location 4662 Ft.
 Clock No. 8475 Elevation 1784 HB Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2448</u>	P.S.I.	<u>21.56</u>	M
B First Initial Flow Pressure	<u>30</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>35</u>	P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>921</u>	P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
E Second Initial Flow Pressure	<u>58</u>	P.S.I.	<u>60</u> Mins.	<u>57</u> Mins.
F Second Final Flow Pressure	<u>58</u>	P.S.I.		
G Final Closed-in Pressure	<u>939</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2442</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: 15 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

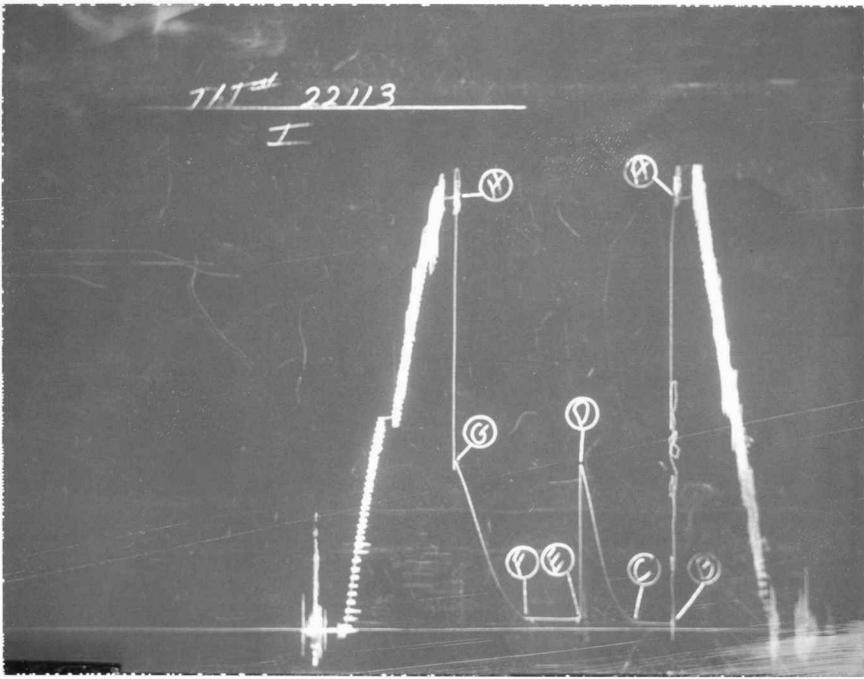
Second Flow Pressure
 Breakdown: 9 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 19 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>30</u>	<u>0</u>	<u>35</u>	<u>0</u>	<u>58</u>	<u>0</u>	<u>58</u>
P 2 <u>5</u>	<u>30</u>	<u>3</u>	<u>49</u>	<u>5</u>	<u>55</u>	<u>3</u>	<u>70</u>
P 3 <u>10</u>	<u>31</u>	<u>6</u>	<u>70</u>	<u>10</u>	<u>54</u>	<u>6</u>	<u>88</u>
P 4 <u>15</u>	<u>32</u>	<u>9</u>	<u>94</u>	<u>15</u>	<u>55</u>	<u>9</u>	<u>111</u>
P 5 <u>20</u>	<u>33</u>	<u>12</u>	<u>123</u>	<u>20</u>	<u>55</u>	<u>12</u>	<u>137</u>
P 6 <u>25</u>	<u>34</u>	<u>15</u>	<u>158</u>	<u>25</u>	<u>56</u>	<u>15</u>	<u>166</u>
P 7 <u>30</u>	<u>35</u>	<u>18</u>	<u>202</u>	<u>30</u>	<u>57</u>	<u>18</u>	<u>200</u>
P 8 <u>35</u>		<u>21</u>	<u>264</u>	<u>35</u>	<u>58</u>	<u>21</u>	<u>240</u>
P 9 <u>40</u>		<u>24</u>	<u>333</u>	<u>40</u>	<u>58</u>	<u>24</u>	<u>289</u>
P10 <u>45</u>		<u>27</u>	<u>427</u>	<u>45</u>	<u>58</u>	<u>27</u>	<u>343</u>
P11 <u>50</u>		<u>30</u>	<u>524</u>	<u>50</u>		<u>30</u>	<u>406</u>
P12 <u>55</u>		<u>33</u>	<u>632</u>	<u>55</u>		<u>33</u>	<u>471</u>
P13 <u>60</u>		<u>36</u>	<u>730</u>	<u>60</u>		<u>36</u>	<u>541</u>
P14		<u>39</u>	<u>819</u>	<u>65</u>		<u>39</u>	<u>611</u>
P15		<u>42</u>	<u>910</u>	<u>70</u>		<u>42</u>	<u>676</u>
P16		<u>45</u>	<u>921</u>	<u>75</u>		<u>45</u>	<u>743</u>
P17		<u>48</u>		<u>80</u>		<u>48</u>	<u>809</u>
P18		<u>51</u>		<u>85</u>		<u>51</u>	<u>867</u>
P19		<u>54</u>		<u>90</u>		<u>54</u>	<u>920</u>
P20		<u>57</u>				<u>57</u>	<u>939</u>
		<u>60</u>				<u>60</u>	

717th 22113

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Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company National Oil Company Lease & Well No. Shaft #1
Elevation 1784 Kelly Bushing Formation Simpson Effective Pay - Ft. Ticket No. 22113
Date 2-20-76 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
Test Approved by Jay R. Dirks Western Representative Max Knipe

Formation Test No. 3 O.K. Misrun Interval Tested From 4634' to 4670' Total Depth 4670'
Size Main Hole 77/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
Top Packer Depth 4629 Ft. Size 6 3/4 Bottom Packer Depth 4634 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 36 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4662 Ft. Clock No. 8475 Depth 4665 Ft. Clock No. 6799
Top Make Kuster Cap. 4150 No. 2606 ~~Inside~~ Outside Bottom Make Kuster Cap. 4000 No. 3351 ~~Inside~~ Outside
Below Straddle: Depth - Rec. No. - Clock No. - ~~Inside~~ Outside Depth - Ft. Rec. No. - Clock No. - ~~Inside~~ Outside

Time Set Packer 2:56 A. M
Tool Open I.F.P. From 3:00A M. to 3:30A M. - Hr. 30 Min. From (B) 30 P.S.I. To (C) 35 P.S.I.
Tool Closed I.C.I.P. From 3:30A M. to 4:15A M. - Hr. 45 Min (D) 921 P.S.I.
Tool Open F.F.P. From 4:15A M. to 5:00A M. - Hr. 45 Min. From (E) 58 P.S.I. To (F) 58 P.S.I.
Tool Closed F.C.I.P. From 5:00A M. to 6:00A M. 1 Hr. - Min. (G) 939 P.S.I.
Initial Hydrostatic Pressure (A) 2448 P.S.I. Final Hydrostatic Pressure (H) 2442 P.S.I. Maximum Temp. 124

INFORMATION

BLOW Fair 6" blow throughout test.

Did Well Flow Yes No Recovery Total Ft. 558' gas in pipe 70' slightly oil and gas cut mud.

Reversed Out Yes No Mud Type starch Viscosity 48 Weight 9.7 Water Loss 6. cc. Chlorides 62,000 P.P.M.

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

Dual Packer Did Packers Hold? Did Tool Plug? no Where? - - -

DRILLING CONTRACTOR H-30 Drlg. Co. Length Drill Pipe? 3723 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.

Length Weight Pipe 885 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars - Ft. I.D. Drill Collars - In.

Tool Joint Size - In. Length D.S.T. Tool 62 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 2-20-76 Test Ticket No. 22113
 Recorder No. 2606 Capacity 4150 Location 4662 Ft.
 Clock No. 8475 Elevation 1784 Kelly Bushing Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2448 P.S.I.	Open Tool	2:56 AM	
B First Initial Flow Pressure	30 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	35 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	921 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E Second Initial Flow Pressure	58 P.S.I.	Final Closed-in Pressure	60 Mins.	57 Mins.
F Second Final Flow Pressure	58 P.S.I.			
G Final Closed-in Pressure	939 P.S.I.			
H Final Hydrostatic Mud	2442 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: 15 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: 19 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	30	0	35	0	58	0	58
P 2 5	30	3	49	5	55	3	70
P 3 10	31	6	70	10	54	6	88
P 4 15	32	9	94	15	55	9	111
P 5 20	33	12	123	20	55	12	137
P 6 25	34	15	158	25	56	15	166
P 7 30	35	18	202	30	57	18	200
P 8		21	264	35	58	21	240
P 9 <u>15</u>		24	333	40	58	24	289
P10 <u>20</u>		27	427	45	58	27	343
P11 <u>25</u>		30	524			30	406
P12 <u>30</u>		33	632			33	471
P13		36	730			36	541
P14		39	819			39	611
P15		42	910			42	676
P16		45	921			45	743
P17						48	809
P18						51	867
P19						54	920
P20						57	939



P. O. BOX 793 PHONE 793-7903
GREAT BEND, KANSAS

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET 22114

Formation Arbuckle Elevation 1784KB Eff. Pay _____ Ft.

District Great Bend Date 2-20-76 Customer Order No. _____

COMPANY NAME National Oil Company

ADDRESS Suite 550 - 200 W. Douglas Wichita - Kansas -

WELL NO. Shaft #1 COUNTY Barber STATE Kans. Sec. 19 Twp. 31S Rge. 14W

Oil Inv. To Same as Above. No. Copies Requested _____

Oil Charts To _____ Address _____ No. Copies Requested _____

Formation Test No. 4 O.K. Misrun Interval Tested From 4670' to 4704' Total Depth 4704'

Main Hole 1 1/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No

Packer Depth 4665 Ft. Size 2 3/4 Bottom Packer Depth 4670 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 34 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

CORDERS Depth 4695 Ft. Clock No. 8475 Depth 4698 Ft. Clock No. 6799

Top Make Kuster Cap. 4150 No. 2606 Inside Bottom Make Kuster Cap. 4000 No. 3351 Inside

Low Straddle: Depth Rec. No. Clock No. Inside Depth Ft. Rec. No. Clock No. Outside

Time Set Packer 8:01 PM

Time of Open I.F.P. From 8:05 PM to 8:35 PM - Hr. 30 Min. From (B) 67 P.S.I. To (C) 291 P.S.I.

Time of Closed I.C.I.P. From 8:35 PM to 9:05 PM - Hr. 30 Min. (D) 1201 1623 P.S.I.

Time of Open F.F.P. From 9:05 PM to 9:50 PM - Hr. 45 Min. From (E) 322 P.S.I. To (F) 520 510 P.S.I.

Time of Closed F.C.I.P. From 9:50 PM to 10:50 PM - Hr. 60 Min. (G) 1200 1630 P.S.I.

Initial Hydrostatic Pressure (A) 2660 P.S.I. Final Hydrostatic Pressure (H) 2452 P.S.I. Maximum Temp. 134

INFORMATION

Flow Strong down throughout Test

Estimated Well Flow Yes No Recovery Total Ft. 160' gas in pipe 1110' Salt water

Reversed Out Yes No Mud Type Strach Viscosity 48 Weight 9.7 Water Loss 6.0 cc. Chlorides _____

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

Special Packers yes Did Packers Hold? yes Did Tool Plug? no Where? _____

DRILLING CONTRACTOR H-30 Rig #3 Length Drill Pipe 3757 ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/4 In.

Length Weight Pipe 885 ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/4 In. Length Drill Collars _____ ft. I.D. Drill Collars _____ In.

Tool Joint Size _____ In. Length D.S.T. Tool 60 ft.

Remarks _____

INVOICE SECTION

Open Hole Test	\$ <u>355.00</u>
Straddle Test	\$ _____
Jars	\$ _____
Selective Zone	\$ _____
Safety Joint	\$ _____
Misrun	\$ _____
Evaluation	\$ _____
Packer	\$ _____
Circ. Sub.	\$ <u>20.00</u>
Total	\$ <u>375.00</u>

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 Jay R. White Western Representative G. F. Bishop
Signature of Customer or his Authorized Representative Operator's Time _____ Hrs.

WESTERN TESTING CO., INC.

Pressure Data

Date 2-20-70 Test Ticket No. 22114
 Recorder No. 2606 Capacity 4150 Location 4695 Ft.
 Clock No. 8475 Elevation 1784 AB Well Temperature 134 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2544</u> P.S.I.	Open Tool	<u>8:01</u> P M	
B First Initial Flow Pressure	<u>92</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>278</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1623</u> P.S.I.	Second Flow Pressure	<u>45</u> Mins.	<u>40</u> Mins.
E Second Initial Flow Pressure	<u>331</u> P.S.I.	Final Closed-in Pressure	<u>40</u> Mins.	<u>57</u> Mins.
F Second Final Flow Pressure	<u>510</u> P.S.I.			
G Final Closed-in Pressure	<u>1630</u> P.S.I.			
H Final Hydrostatic Mud	<u>2481</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: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

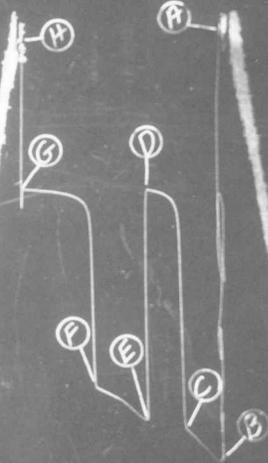
Second Flow Pressure
 Breakdown: 8 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 19 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>92</u>	<u>0</u>	<u>278</u>	<u>0</u>	<u>331</u>	<u>0</u>	<u>510</u>
P 2 <u>5</u>	<u>98</u>	<u>3</u>	<u>827</u>	<u>5</u>	<u>338</u>	<u>3</u>	<u>1369</u>
P 3 <u>10</u>	<u>137</u>	<u>6</u>	<u>1498</u>	<u>10</u>	<u>369</u>	<u>6</u>	<u>1517</u>
P 4 <u>15</u>	<u>177</u>	<u>9</u>	<u>1557</u>	<u>15</u>	<u>403</u>	<u>9</u>	<u>1553</u>
P 5 <u>20</u>	<u>214</u>	<u>12</u>	<u>1579</u>	<u>20</u>	<u>432</u>	<u>12</u>	<u>1571</u>
P 6 <u>25</u>	<u>252</u>	<u>15</u>	<u>1595</u>	<u>25</u>	<u>455</u>	<u>15</u>	<u>1583</u>
P 7 <u>30</u>	<u>278</u>	<u>18</u>	<u>1605</u>	<u>30</u>	<u>471</u>	<u>18</u>	<u>1592</u>
P 8 <u>35</u>		<u>21</u>	<u>1611</u>	<u>35</u>	<u>491</u>	<u>21</u>	<u>1599</u>
P 9 <u>40</u>		<u>24</u>	<u>1618</u>	<u>40</u>	<u>510</u>	<u>24</u>	<u>1604</u>
P10 <u>45</u>		<u>27</u>	<u>1620</u>	<u>45</u>		<u>27</u>	<u>1609</u>
P11 <u>50</u>		<u>30</u>	<u>1623</u>	<u>50</u>		<u>30</u>	<u>1612</u>
P12 <u>55</u>		<u>33</u>		<u>55</u>		<u>33</u>	<u>1617</u>
P13 <u>60</u>		<u>36</u>		<u>60</u>		<u>36</u>	<u>1620</u>
P14		<u>39</u>		<u>65</u>		<u>39</u>	<u>1622</u>
P15		<u>42</u>		<u>70</u>		<u>42</u>	<u>1624</u>
P16		<u>45</u>		<u>75</u>		<u>45</u>	<u>1626</u>
P17		<u>48</u>		<u>80</u>		<u>48</u>	<u>1627</u>
P18		<u>51</u>		<u>85</u>		<u>51</u>	<u>1628</u>
P19		<u>54</u>		<u>90</u>		<u>54</u>	<u>1629</u>
P20		<u>57</u>				<u>57</u>	<u>1630</u>
		<u>60</u>				<u>60</u>	

717th 22114

J





Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company National Oil Company Lease & Well No. _____ Shaft #1 _____
Elevation 1784 Kelly Bushing Formation Arbuckle Effective Pay _____ Ft. Ticket No. 22114
Date 2-20-76 Sec. 19 Twp. 31S Range 14W County Barber State Kansas
Test Approved by Jay R. Dirks Western Representative C.F. Bigheart

Formation Test No. 4 O.K. Misrun Interval Tested From 4670' to 4704' Total Depth 4704'
Size Main Hole 77/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
Top Packer Depth 4665 Ft. Size 6 3/4 Bottom Packer Depth 4670 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 34 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 4695 Ft. Clock No. 8475 Depth 4698 Ft. Clock No. 6799
Top Make Kuster Cap. 4150 No. 2606 ~~Outside~~ Inside Bottom Make Kuster Cap. 4000 No. 3351 Inside ~~Outside~~
Below Straddle: Depth _____ Rec. No. _____ Clock No. _____ Inside Depth _____ Ft. Rec. No. _____ Clock No. _____ Outside

Time Set Packer 8:01 P.M.
Tool Open I.F.P. From 8:05P M. to 8:35P M. - Hr. 30 Min. From (B) 92 P.S.I. To (C) 278 P.S.I.
Tool Closed I.C.I.P. From 8:35P M. to 9:05P M. - Hr. 30 Min (D) 1623 P.S.I.
Tool Open F.F.P. From 9:05P M. to 9:50P M. - Hr. 45 Min. From (E) 331 P.S.I. To (F) 510 P.S.I.
Tool Closed F.C.I.P. From 9:50P M. to 10:50P M. - Hr. 60 Min. (G) 1630 P.S.I.
Initial Hydrostatic Pressure (A) 2544 P.S.I. Final Hydrostatic Pressure (H) 2481 P.S.I. Maximum Temp. 134

INFORMATION

BLOW Strong blow throughout test.
Did Well Flow Yes No Recovery Total Ft. 160' gas in pipe 1110' salt water

Reversed Out Yes No Mud Type starch Viscosity 48 Weight 9.7 Water Loss 6.0 cc. Chlorides _____

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

Dual Packer yes Did Packers Hold? yes Did Tool Plug? no Where? _____

DRILLING CONTRACTOR H-30 Drlg. Co. Length Drill Pipe? 3757 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.

Length Weight Pipe 885 Ft. I.D. Weight Pipe 2.7 In. Tool Joint Size 4 1/2 XH In. Length Drill Collars _____ Ft. I.D. Drill Collars _____ In.

Tool Joint Size _____ In. Length D.S.T. Tool 60 Ft.

Remarks:

WESTERN TESTING CO., INC.
Pressure Data

Date 2-20-76 Test Ticket No. 22114
 Recorder No. 2606 Capacity 4150 Location 4695 Ft.
 Clock No. 8475 Elevation 1784 Kelly Bushing Well Temperature 134 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2544	P.S.I.	8:01 P.	M
B First Initial Flow Pressure	92	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	278	P.S.I.	30	Mins. 30 Mins.
D Initial Closed-in Pressure	1623	P.S.I.	45	Mins. 40 Mins.
E Second Initial Flow Pressure	331	P.S.I.	60	Mins. 57 Mins.
F Second Final Flow Pressure	510	P.S.I.		
G Final Closed-in Pressure	1630	P.S.I.		
H Final Hydrostatic Mud	2481	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>8</u> Inc.		Breakdown: <u>19</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>92</u>	<u>0</u>	<u>278</u>	<u>0</u>	<u>331</u>	<u>0</u>	<u>510</u>
P 2 <u>5</u>	<u>98</u>	<u>3</u>	<u>827</u>	<u>5</u>	<u>338</u>	<u>3</u>	<u>1369</u>
P 3 <u>10</u>	<u>137</u>	<u>6</u>	<u>1498</u>	<u>10</u>	<u>369</u>	<u>6</u>	<u>1517</u>
P 4 <u>15</u>	<u>177</u>	<u>9</u>	<u>1557</u>	<u>15</u>	<u>403</u>	<u>9</u>	<u>1553</u>
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P 6 <u>25</u>	<u>252</u>	<u>15</u>	<u>1595</u>	<u>25</u>	<u>455</u>	<u>15</u>	<u>1583</u>
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P 9 <u>40</u>		<u>24</u>	<u>1618</u>	<u>40</u>	<u>510</u>	<u>24</u>	<u>1604</u>
P10 <u>45</u>		<u>27</u>	<u>1620</u>			<u>27</u>	<u>1609</u>
P11 <u>50</u>		<u>30</u>	<u>1623</u>			<u>30</u>	<u>1612</u>
P12 <u>55</u>						<u>33</u>	<u>1617</u>
P13 <u>60</u>						<u>36</u>	<u>1620</u>
P14 <u>65</u>						<u>39</u>	<u>1622</u>
P15 <u>70</u>						<u>42</u>	<u>1624</u>
P16 <u>75</u>						<u>45</u>	<u>1626</u>
P17 <u>80</u>						<u>48</u>	<u>1627</u>
P18 <u>85</u>						<u>51</u>	<u>1628</u>
P19 <u>90</u>						<u>54</u>	<u>1629</u>
P20 <u>95</u>						<u>57</u>	<u>1630</u>