



WESTERN TESTING CO., INC. FORMATION TESTING

TICKET NO. Listed 8115

P. O. BOX 1599 WICHITA, KANSAS 67201 PHONE (316) 268-6861 Elevation ? Formation K.C. Eff. Pay \_\_\_\_\_ Ft.

District Augusta Date 5-10-81 Customer Order No. \_\_\_\_\_  
COMPANY NAME Black Watch Oil & Minerals Corp  
ADDRESS 15024 Castle Wichita Ks 67203 Suite 409 Wheat Ridge Co. 80033  
LEASE AND WELL NO. Cowan #1 COUNTY Sedg STATE Ka Sec. 20 Twp 28S Rge 2E  
Mail Invoice To Same No. Copies Requested 1  
Mail Charts To Same Co. Name Black Watch Address Wheat Ridge Co. 80033 No. Copies Requested 5

Formation Test No. 1 Interval Tested from 2720 ft. to 2750 ft. Total Depth 2750 ft.  
Packer Depth 2720 ft. Size 7 7/8 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
Packer Depth 2715 ft. Size 7 7/8 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 2725 ft. Recorder Number 2605 Cap. 4150  
Bottom Recorder Depth (Outside) 2730 ft. Recorder Number 10266 Cap. 4650  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_  
Drilling Contractor DLM #1 Drill Collar Length 150 I. D. \_\_\_\_\_ in.  
Mud Type Chem Viscosity 44 Weight Pipe Length \_\_\_\_\_ I. D. \_\_\_\_\_ in.  
Weight 9.6 Water Loss 12.3 cc. Drill Pipe Length 2543 I. D. \_\_\_\_\_ in.  
Chlorides 2000 P.P.M. Test Tool Length 27 ft. Tool Size 5 1/2 in.  
Jars: Make WTC Serial Number \_\_\_\_\_ Anchor Length 30 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 3 1/2 I.F. in.

Blow: Weak blow throughout test

Recovered 90 ft. of salt water  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Remarks: \_\_\_\_\_

Time On Location \_\_\_\_\_ A.M. Time Pick Up Tool \_\_\_\_\_ A.M. Time Off Location 1040 A.M.  
Time Set Packer(s) 9 7:40 A.M. Time Started Off Bottom 9:40 A.M. Maximum Temperature \_\_\_\_\_  
Initial Hydrostatic Pressure (A) 1379 P.S.I.  
Initial Flow Period (B) 30 Minutes (C) 31 P.S.I. to (C) 31 P.S.I.  
Initial Closed In Period (D) 30 Minutes (E) 951 P.S.I.  
Final Flow Period (F) 30 Minutes (G) 52 P.S.I. to (F) 52 P.S.I.  
Final Closed In Period (H) 30 Minutes (H) 912 P.S.I.  
Final Hydrostatic Pressure (H) 1379 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 Kenny Kirkendall

FIELD INVOICE table with items: Open Hole Test (\$625.00), Misrun (\$), Straddle Test (\$), Jars (\$300.00), Selective Zone (\$), Safety Joint (\$65.00), Standby (\$), Evaluation (\$), Extra Packer (\$), Circ. Sub. (\$), Mileage (\$17.25), Fluid Sampler (\$), Extra Charts (\$), Insurance (\$), TOTAL (\$1007.25)

WESTERN TESTING CO., INC.

Pressure Data

Date 5-10 Test Ticket No. 8115  
 Recorder No. 2605 Capacity 4150 Location 2725 Ft.  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature 104 °F

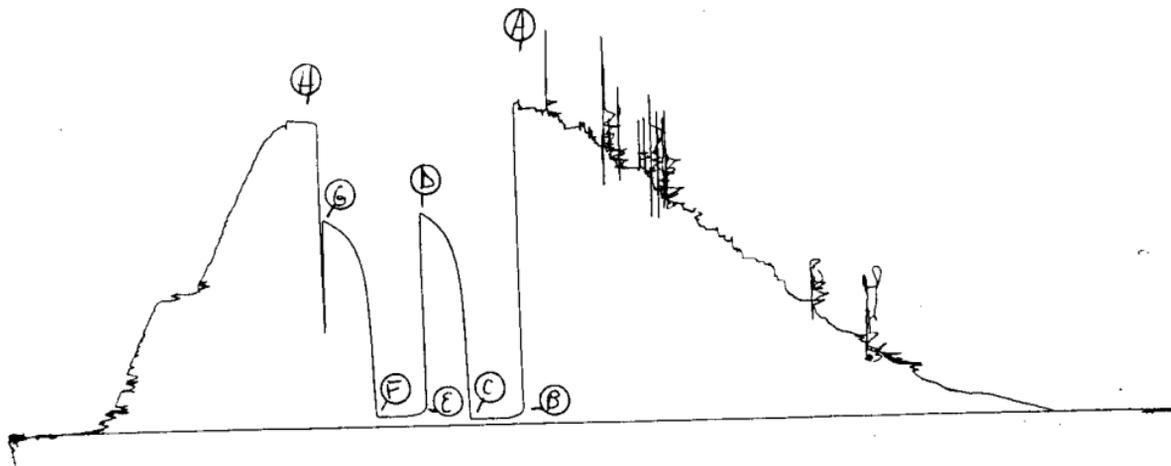
Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1379</u> P.S.I.	<u>7:40 A.M.</u>	
B First Initial Flow Pressure	<u>51</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>29</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>936</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>74</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>45</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
G Final Closed-in Pressure	<u>911</u> P.S.I.		
H Final Hydrostatic Mud	<u>1344</u> P.S.I.		

PRESSURE BREAKDOWN

Point Mins.	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>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	0	<u>51</u>	0	<u>29</u>	0	<u>74</u>	0	<u>45</u>
P 2	5	<u>36</u>	3	<u>424</u>	5	<u>53</u>	3	<u>360</u>
P 3	10	<u>30</u>	6	<u>666</u>	10	<u>49</u>	6	<u>624</u>
P 4	15	<u>29</u>	9	<u>755</u>	15	<u>45</u>	9	<u>719</u>
P 5	20	<u>  </u>	12	<u>807</u>	20	<u>  </u>	12	<u>775</u>
P 6	25	<u>  </u>	15	<u>846</u>	25	<u>  </u>	15	<u>815</u>
P 7	30	<u>29</u>	18	<u>875</u>	30	<u>45</u>	18	<u>842</u>
P 8	35	<u>  </u>	21	<u>896</u>	35	<u>  </u>	21	<u>863</u>
P 9	40	<u>  </u>	24	<u>913</u>	40	<u>  </u>	24	<u>879</u>
P10	45	<u>  </u>	27	<u>927</u>	45	<u>  </u>	27	<u>894</u>
P11	50	<u>  </u>	30	<u>936</u>	50	<u>  </u>	30	<u>911</u>
P12	55	<u>  </u>	33	<u>  </u>	55	<u>  </u>	33	<u>  </u>
P13	60	<u>  </u>	36	<u>  </u>	60	<u>  </u>	36	<u>  </u>
P14		<u>  </u>	39	<u>  </u>	65	<u>  </u>	39	<u>  </u>
P15		<u>  </u>	42	<u>  </u>	70	<u>  </u>	42	<u>  </u>
P16		<u>  </u>	45	<u>  </u>	75	<u>  </u>	45	<u>  </u>
P17		<u>  </u>	48	<u>  </u>	80	<u>  </u>	48	<u>  </u>
P18		<u>  </u>	51	<u>  </u>	85	<u>  </u>	51	<u>  </u>
P19		<u>  </u>	54	<u>  </u>	90	<u>  </u>	54	<u>  </u>
P20		<u>  </u>	57	<u>  </u>		<u>  </u>	57	<u>  </u>
		<u>  </u>	60	<u>  </u>		<u>  </u>	60	<u>  </u>

TKT # 8115  
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2405  
8115



Company Black Watch Oil & Minerals Corporation Lease & Well No. Cowan #1

Elevation -- Formation Kansas City Effective Pay - Ft. Ticket No. 8115

Date 5/10/81 Sec. 20 Twp. 28S Range 2E County Sedgwick State Kansas

Test Approved by Gary Hendrich Western Representative Kenny Kirkendall

Formation Test No. 1 Interval Tested from 2720 ft. to 2750 ft. Total Depth 2750 ft.

Packer Depth 2720 ft. Size 7 7/8 in. Packer Depth - ft. Size - in.

Packer Depth 2715 ft. Size 7 7/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2725 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2730 ft. Recorder Number 10266 Cap. 4650

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

Drilling Contractor D.L.M. Drlg. Rig #1 Drill Collar Length 150 I. D. - in.

Mud Type chemical Viscosity 44 Weight Pipe Length -- I. D. - in.

Weight 9.6 Water Loss 12.3 cc. Drill Pipe Length 2543 I. D. - in.

Chlorides 2,000 P.P.M. Test Tool Length 27 ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 402 Anchor Length 30 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 3 1/2 TF in.

Blow: Weak blow throughout test.

Recovered 90 ft. of salt water

Recovered      ft. of     

Recovered      ft. of     

Recovered      ft. of     

Recovered      ft. of     

Remarks:     

Time Set Packer(s) 7:40 ~~P.M.~~ A.M. Time Started Off Bottom 9:40 A.M. Maximum Temperature ? P.M.

Initial Hydrostatic Pressure (A) 1379 P.S.I.

Initial Flow Period Minutes 30 (B) 51 P.S.I. to (C) 29 P.S.I.

Initial Closed In Period Minutes 30 (D) 936 P.S.I.

Final Flow Period Minutes 30 (E) 74 P.S.I. to (F) 45 P.S.I.

Final Closed In Period Minutes 30 (G) 911 P.S.I.

Final Hydrostatic Pressure (H) 1344 P.S.I.

**WESTERN TESTING CO., INC.**

**Pressure Data**

8115

Date 5/10/81

Test Ticket No. \_\_\_\_\_

Recorder No. 2605

Capacity 4150

Location 2725 Ft.

Clock No. - Elevation ----

Well Temperature 104 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1379 P.S.I.	Open Tool	7:40A	M
B First Initial Flow Pressure	51 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	29 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	936 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	74 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	45 P.S.I.			
G Final Closed-in Pressure	911 P.S.I.			
H Final Hydrostatic Mud	1344 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>10</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>51</u>	<u>0</u>	<u>29</u>	<u>0</u>	<u>74</u>	<u>0</u>	<u>45</u>
P 2 <u>5</u>	<u>36</u>	<u>3</u>	<u>424</u>	<u>5</u>	<u>53</u>	<u>3</u>	<u>360</u>
P 3 <u>10</u>	<u>30</u>	<u>6</u>	<u>666</u>	<u>10</u>	<u>49</u>	<u>6</u>	<u>624</u>
P 4 <u>15</u>	<u>29</u>	<u>9</u>	<u>755</u>	<u>15</u>	<u>45</u>	<u>9</u>	<u>719</u>
P 5 <u>20</u>	<u>29</u>	<u>12</u>	<u>807</u>	<u>20</u>	<u>45</u>	<u>12</u>	<u>775</u>
P 6 <u>25</u>	<u>29</u>	<u>15</u>	<u>846</u>	<u>25</u>	<u>45</u>	<u>15</u>	<u>815</u>
P 7 <u>30</u>	<u>29</u>	<u>18</u>	<u>875</u>	<u>30</u>	<u>45</u>	<u>18</u>	<u>842</u>
P 8 _____	_____	<u>21</u>	<u>896</u>	_____	_____	<u>21</u>	<u>863</u>
P 9 _____	_____	<u>24</u>	<u>913</u>	_____	_____	<u>24</u>	<u>879</u>
P10 _____	_____	<u>27</u>	<u>927</u>	_____	_____	<u>27</u>	<u>894</u>
P11 _____	_____	<u>30</u>	<u>936</u>	_____	_____	<u>30</u>	<u>911</u>
P12 _____	_____	_____	_____	_____	_____	_____	_____
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____