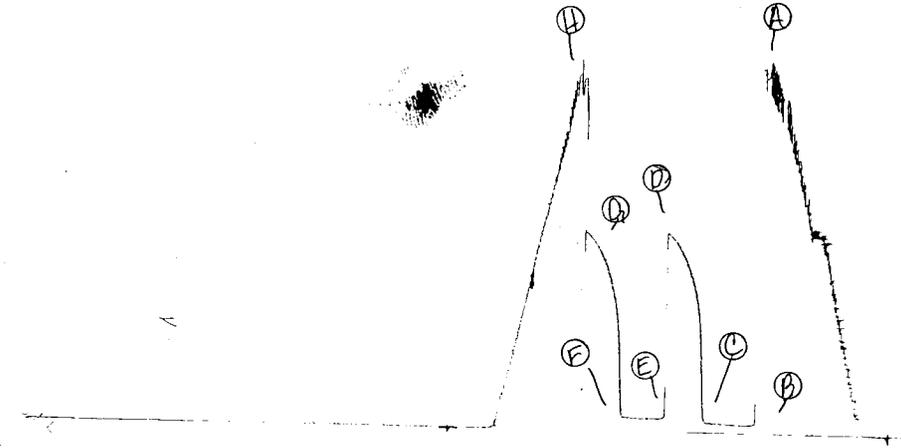


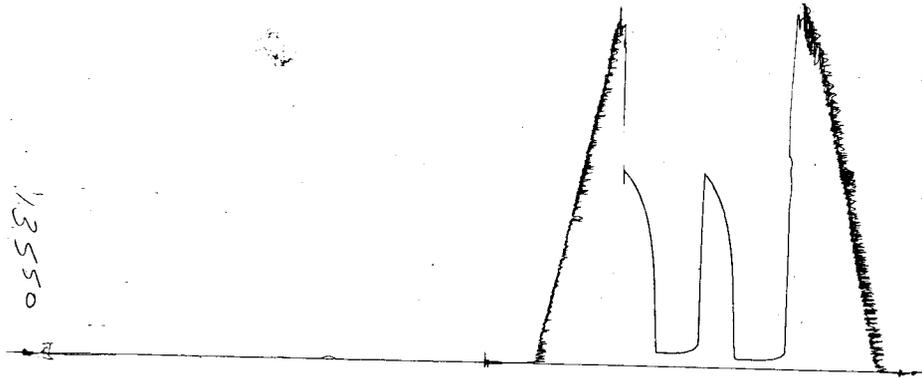
TK# 20080  
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10270

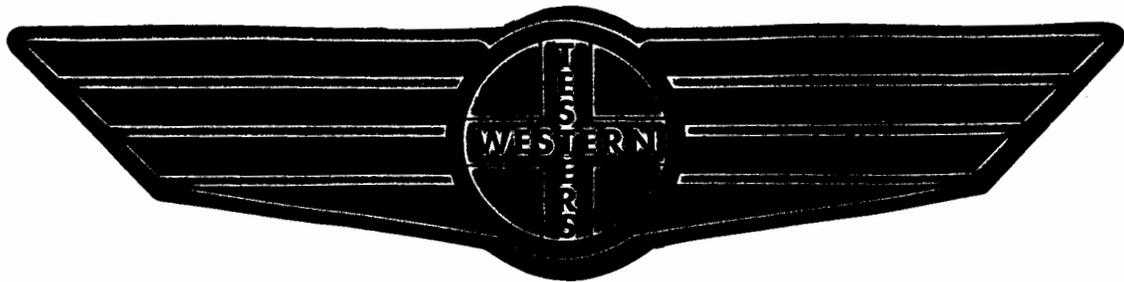


TK# 20080  
D.

13550



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHALLENGER EXPLORATION LEASE & WELL NO. #6 KRAUS SEC. 21 TWP. 14S RGE. 19W TEST NO. 1 DATE 10/15/93

DST REPORT

GENERAL INFORMATION

DATE	: 10/15/93	TICKET	: 20080
CUSTOMER	: CHALLENGER EXPLORATION	LEASE	: KRAUS
WELL	: #6	TEST: 1	GEOLOGIST: NELSON
ELEVATION	: N/A	FORMATION	: CONGLOMERATE & ARBUC
SECTION	: 21	TOWNSHIP	: 14S
RANGE	: 19W	COUNTY: ELLIS	STATE : KS
GAUGE SN#	: 10270	RANGE : 4150	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3741.00 ft	TO:	3765.00 ft	TVD:	3765.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3755.0 ft		3758.0 ft		
TEMPERATURE:	116.0				
DRILL COLLAR LENGTH:	0.0 ft	I.D.:		0.000 in	
WEIGHT PIPE LENGTH :	180.0 ft	I.D.:		2.700 in	
DRILL PIPE LENGTH :	3541.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	24.0 ft	ANCHOR SIZE:		5.500 in	
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:		0.750 in	
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :		4.5XH	
PACKER DEPTH:	3736.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3741.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	EMPHASIS DRLG RIG 5	VISCOSITY :	48.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.800 cc
WEIGHT :	9.200 ppg	SERIAL NUMBER:	
CHLORIDES :	6000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW THROUGHOUT - 1/2 TO 2 1/2 INCH BLOW. FINAL FLOW PERIOD WEAK BLOW BUILDING TO A FAIR BLOW - 2 TO 4 1/2 INCHES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	60 GAS ABOVE FLUID
65.0	100.0	0.0	0.0	0.0	CLEAN OIL GRAVITY 35
60.0	45.0	5.0	0.0	50.0	VERY HEAVY OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.6515	STB	TOTAL FLOW TIME:	65.0000	min.
GAS VOLUME:	0.1193	SCF	AVERAGE OIL RATE:	19.1388	STB/D
MUD VOLUME:	0.2124	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.8639	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1900.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	31.00	41.00
INITIAL SHUT-IN	30.00		1060.00
FINAL FLOW	30.00	62.00	62.00
FINAL SHUT-IN	30.00		1060.00

FINAL HYDROSTATIC PRESSURE: 1869.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1913.00

Description	Duration	p1	p End
INITIAL FLOW	35.00	50.00	48.00
INITIAL SHUT-IN	33.00		1071.00
FINAL FLOW	30.00	75.00	72.00
FINAL SHUT-IN	30.00		1071.00

FINAL HYDROSTATIC PRESSURE: 1869.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 10/15/93	TICKET	: 20080
CUSTOMER	: CHALLENGER EXPLORATION	LEASE	: KRAUS
WELL	: #6	TEST:	1
ELEVATION:	N/A	GEOLOGIST:	NELSON
SECTION	: 21	FORMATION:	CONGLOMERATE & ARBUC
RANGE	: 19W	TOWNSHIP	: 14S
GAUGE SN#:	10270	STATE	: KS
		CLOCK	: 12
		COUNTY:	ELLIS
		RANGE	: 4150

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	50.00	50.00
5.00	38.00	-12.00
10.00	38.00	0.00
15.00	40.00	2.00
20.00	42.00	2.00
25.00	44.00	2.00
30.00	46.00	2.00
35.00	48.00	2.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	110.00	110.00	0.00
6.00	541.00	431.00	0.00
9.00	703.00	162.00	0.00
12.00	803.00	100.00	0.00
15.00	863.00	60.00	0.00
18.00	925.00	62.00	0.00
21.00	967.00	42.00	0.00
24.00	1000.00	33.00	0.00
27.00	1029.00	29.00	0.00
30.00	1059.00	30.00	0.00
33.00	1071.00	12.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	75.00	75.00
5.00	67.00	-8.00
10.00	68.00	1.00
15.00	69.00	1.00
20.00	70.00	1.00
25.00	71.00	1.00
30.00	72.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	406.00	406.00	0.00
6.00	658.00	252.00	0.00
9.00	763.00	105.00	0.00
12.00	844.00	81.00	0.00
15.00	907.00	63.00	0.00
18.00	952.00	45.00	0.00
21.00	994.00	42.00	0.00
24.00	1023.00	29.00	0.00
27.00	1046.00	23.00	0.00
30.00	1071.00	25.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 20080

last

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

Elevation N/A Formation Congl. + Arb. Eff. Pay Ft.

District GREAT Bend Date 10-15-93 Customer Order No.

COMPANY NAME Challenger Exploration

ADDRESS P.O. Box 1112 Hays, Ks 67601

LEASE AND WELL NO. KRAUS #6 COUNTY Ellis STATE Ks Sec. 21 Twp. 14 Rge. 19

Mail Invoice To Emphasis P.O. Box 306 Russell, Ks 67665-0506 No. Copies Requested 109

Mail Charts To Challenger Kraus #6 Co. Name Address 08/9 No. Copies Requested 109

Formation Test No. 1 Interval Tested From 3741 ft. to 3765 ft. Total Depth 3765 ft.

Packer Depth 3736 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 3741 ft. Size 6 7/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3755 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3758 ft. Recorder Number 13550 Cap. 4175

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Emphasis drlg rigs Drill Collar Length I. D. in.

Mud Type Chemical Viscosity 48 Weight Pipe Length 180 I. D. 2.7 in.

Weight 9.2 Water Loss 8.8 cc. Drill Pipe Length 3541 I. D. 3.8 in.

Chlorides 16000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make Serial Number Anchor Length 24 ft. Size 5 1/2 in.

Did Well Flow? Reversed Out Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: IF - WEAK Blow throughout 1/2" to 2 1/2" Blow

FF - WEAK building to a fair blow 2" to 4 1/2" Blow

Recovered 60 ft. of GAS IN PIPE

Recovered 65 ft. of CLEAN OIL GRAVITY 35

Recovered 60 ft. of VERY Heavy oil cut mud

Recovered ft. of 5% GAS 45% OIL 50% mud

Recovered ft. of Chlorides P.P.M. Sample Jars used 4 Remarks:

Time On Location 1:30 A.M. P.M. Time Pick Up Tool 4:50 A.M. P.M. Time Off Location 11:00 A.M. P.M.

Time Set Packer(s) 6:20 A.M. P.M. Time Started Off Bottom 8:20 A.M. P.M. Maximum Temperature 116°

Initial Hydrostatic Pressure (A) 1900 P.S.I.

Initial Flow Period Minutes 30 (B) 31 P.S.I. to (C) 41 P.S.I.

Initial Closed In Period Minutes 30 (D) 1060 P.S.I.

Final Flow Period Minutes 30 (E) 62 P.S.I. to (F) 62 P.S.I.

Final Closed In Period Minutes 30 (G) 1060 P.S.I.

Final Hydrostatic Pressure (H) 1869 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 Ray Schwager THANK YOU

FIELD INVOICE

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

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date \_\_\_\_\_

Test Ticket No. 20080

Recorder No. \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_ Ft. \_\_\_\_\_

Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature \_\_\_\_\_ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1913</u>	P.S.I.	<u>30</u> M	
B First Initial Flow Pressure	<u>50</u>	P.S.I.	<u>30</u> Mins.	<u>35</u> Mins.
C First Final Flow Pressure	<u>48</u>	P.S.I.	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>1071</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>75</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>72</u>	P.S.I.		
G Final Closed-in Pressure	<u>1071</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1869</u>	P.S.I.		

**PRESSURE BREAKDOWN**

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>50</u>	0	<u>48</u>	0	<u>75</u>	0	<u>72</u>
P 2 5	<u>38</u>	3	<u>110</u>	5	<u>67</u>	3	<u>406</u>
P 3 10	<u>38</u>	6	<u>541</u>	10	<u>68</u>	6	<u>658</u>
P 4 15	<u>40</u>	9	<u>703</u>	15	<u>69</u>	9	<u>763</u>
P 5 20	<u>42</u>	12	<u>803</u>	20	<u>70</u>	12	<u>844</u>
P 6 25	<u>44</u>	15	<u>813 863</u>	25	<u>71</u>	15	<u>901</u>
P 7 30	<u>46</u>	18	<u>925</u>	30	<u>72</u>	18	<u>952</u>
P 8 35	<u>48</u>	21	<u>967</u>	35		21	<u>994</u>
P 9 40		24	<u>1000</u>	40		24	<u>1023</u>
P10 45		27	<u>1029</u>	45		27	<u>1046</u>
P11 50		30	<u>1056</u>	50		30	<u>1071</u>
P12 55		33	<u>1071</u>	55		33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	