

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

RELEASED CONFIDENTIAL

Well Name KRUG #31-43 Test No. 1 Date 12/18/91
Company PIONEER OIL & GAS Zone Tested FROM CONFIDENTIAL
Address 6925 UNION PARK CNTR #145 MIDVALE VT. 84 Elevation 1798 G.L.
Co. Rep./Geo. ROGER HAAG Cont. DUKE #1 Est. Ft. of Pay _____
Location: Sec. 31 Twp. 12S Rge. 14W Co. RUSSELL State KS

Interval Tested 2798-2860 Drill Pipe Size 4.5 FH
Anchor Length 62 Wt. Pipe I.D. - 2.7 Ft. Run 630
Top Packer Depth 2793 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 2798
Total Depth 2860

Mud Wt. 9.8 lb / gal. Viscosity 39 Filtrate 15.4

Well Open @ 9:15 AM Initial Blow VERY WEAK FOR 15 MINUTES

Final Blow NO BLOW-TOOL SLID 8 ft. TO BOTTOM

Recovery - Total Feet 65 Flush Tool? NO

Rec. 65 Feet of MUD RECEIVED KANSAS CORPORATION COMMISSION

Rec. _____ Feet of _____ JAN 16 1992

Rec. _____ Feet of _____ CONSERVATION DIVISION

Rec. _____ Feet of _____ WICHITA, KS

Rec. 86 Feet of _____
°F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 64000 ppm System

(A) Initial Hydrostatic Mud 1590.3 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 61.2 PSI @ (depth) 2830 w/Clock No. 25814

(C) First Final Flow Pressure 61.2 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure 752.1 PSI @ (depth) 2860 w/Clock No. 27585

(E) Second Initial Flow Pressure 61.2 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 61.2 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 665.2 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1581.2 PSI Initial Shut-In 30 Final Shut-In 30

Our Representative HARRY SCHMIDT TOTAL PRICE \$ 550

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

RELEASED

2 2 1993 CONFIDENTIAL

Drill-Stem Test Data

Well Name KRUG #31-43 Test No. FROM CONFIDENTIAL Date 12/19/91
Company PIONEER OIL & GAS Zone Tested LKC-"B"
Address 6925 UNION PARK CNTR. #145 MIDVALE VT. Elevation 1798 G.L.
Co. Rep./Geo. ROGER HAAG Cont. DUKE #1 Est. Ft. of Pay _____
Location: Sec. 31 Twp. 12S Rge. 14W Co. RUSSELL State KS

Interval Tested 3007-3040
Anchor Length 33
Packer Depth 3002
Bottom Packer Depth 3007
Total Depth 3040

Drill Pipe Size 4.5 PH
Wt. Pipe I.D. - 2.7 Ft. Run 630
Drill Collar - 2.25 Ft. Run _____

Mud Wt. 9.9 lb / gal. Viscosity 47 Filtrate 14

Tool Open @ 11:00 AM Initial Blow PAIR THROUGHOUT-ROTATING HEAD WAS LEAKING

Final Blow SAME AS INITIAL

Recovery - Total Feet 5 Flush Tool? NO

Rec. 5 Feet of OIL SPOTTED MUD

RECEIVED

KANSAS CORPORATION COMMISSION

Rec. _____ Feet of _____

JAN 16 1992

Rec. _____ Feet of _____

CONSERVATION DIVISION
WICHITA, KS

Rec. _____ Feet of _____

P _____ Feet of _____

B _____ 86 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 64000 ppm System

(A) Initial Hydrostatic Mud 1711.2 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 22.1 PSI @ (depth) 3013 w/Clock No. 25814

(C) First Final Flow Pressure 22.1 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure 125.1 PSI @ (depth) 3040 w/Clock No. 27813

(E) Second Initial Flow Pressure 33.2 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 33.2 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 104.1 PSI Initial Opening 60 Final Flow 60

(H) Final Hydrostatic Mud 1711.2 PSI Initial Shut-In 60 Final Shut-In 60

Our Representative HARRY SCHMIDT

TOTAL PRICE \$ 550

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

COPY

Drill-Stem Test Data

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CONFIDENTIAL

Well Name KRUG #31-43 Test No. 5 Date 12/20/91
 Company PIONEER OIL & GAS Zone Tested LKC-"J"
 Address 6925 UNION PARK CNTR #145 MIDVALE VT. 84047 Elevation 1798 G.L.
 Co. Rep./Geo. ROGER HAAG Cont. DUKE #1 Est. Ft. of Pay _____
 Location: Sec. 31 Twp. 12S Rge. 14W Co. RUSSELL State KS

Interval Tested 3170-3205
 Anchor Length 35
 Top Packer Depth 3165
 Bottom Packer Depth 3170
 Total Depth 3205

Drill Pipe Size 4.5 FH
 Wt. Pipe I.D. - 2.7 Ft. Run 630
 Drill Collar - 2.25 Ft. Run _____

Mud Wt. 10.1 lb / gal. Viscosity 49 Filtrate 13.2

Initial Blow 1:30 PM VERY WEAK FOR 10 MINUTES
BRIDGE 105' OFF BOTTOM - OPENED TOOL TO GET THROUGH
 Final Blow NO BLOW

Recovery — Total Feet 120 Flush Tool? YES

Rec. 120 Feet of MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. 88 Feet of _____

T _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1802.3 PSI Ak1 Recorder No. 13851 Range 4425

First Initial Flow Pressure 81.2 PSI @ (depth) 3175 w/Clock No. 25814

(C) First Final Flow Pressure 90.1 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-in Pressure 535.1 PSI @ (depth) 3205 w/Clock No. 27813

(E) Second Initial Flow Pressure 90.1 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 90.1 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 535.1 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1799.1 PSI Initial Shut-In 30 Final Shut-In 30

Our Representative HARRY SCHMIDT TOTAL PRICE \$ 550

RECEIVED

KANSAS CORPORATION COMMISSION

JAN 16 1992

CONSERVATION DIVISION
WICHITA, KS