

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name CARSTEN #1 Test No. 1 Date 11/21/94
Company BLACK DIAMOND OIL Zone LKC F-G
Address P. O. BOX 641, HAYS, KS 67601 Elevation _____
Co. Rep./Geo. KEN VEHIGE Cont. EMPHASIS #8 Est. Ft. of Pay _____
Location: Sec. 32 Twp. 7S Rge. 27W Co. ROOKS State KS

Interval Tested 3168-3234 Drill Pipe Size 4.5" XH
Anchor Length 66 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3163 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3168 Mud Wt. 9.4 lb/Gal.
Total Depth 3234 Viscosity 45 Filtrate 8.8

Tool Open @ 2:22 PM Initial Blow 1" BLOW BUILDING TO BOTTOM OF BUCKET IN 22 MINUTES.

Final Blow SURFACE BLOW BUILDING TO BOTTOM OF BUCKET IN 26 MINUTES.

Recovery - Total Feet 450 Flush Tool? NO

Rec. 130 Feet of WATERY MUD.
Rec. 320 Feet of MUDDY WATER WITH OIL SPOTS.
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 100 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 1567.6 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 75.0 PSI @ (depth) 3200 w / Clock No. 22345

(C) First Final Flow Pressure 112.4 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 992.4 PSI @ (depth) 3229 w / Clock No. 23839

(E) Second Initial Flow Pressure 151.4 PSI AK1 Recorder No. _____ Range _____

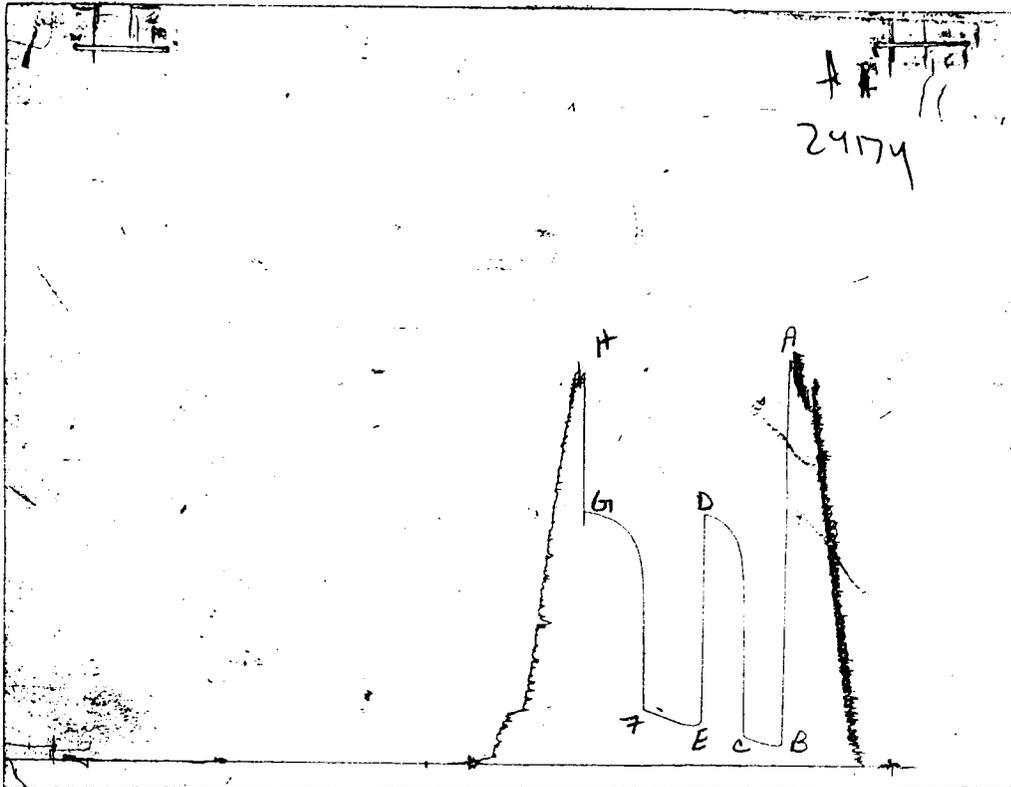
(F) Second Final Flow Pressure 215.6 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1002.2 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 1588.1 PSI Initial Shut-in 30 Final Shut-in 45

Our Representative PAUL SIMPSON

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1590	1567.6
(B) FIRST INITIAL FLOW PRESSURE	67	75.0
(C) FIRST FINAL FLOW PRESSURE	104	112.4
(D) INITIAL CLOSED-IN PRESSURE	986	992.4
(E) SECOND INITIAL FLOW PRESSURE	142	151.4
(F) SECOND FINAL FLOW PRESSURE	217	215.6
(G) FINAL CLOSED-IN PRESSURE	994	1002.2
(H) FINAL HYDROSTATIC MUD	1546	1588.1

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Drill-Stem Test Data

Well Name CARSTEN #1 Test No. 2 Date 11/22/94
Company BLACK DIAMOND OIL Zone ARB
Address P. O. BOX 641, HAYS, KS 67601 Elevation _____
Co. Rep./Geo. KEN VEHIGE Cont. EMPHASIS #8 Est. Ft. of Pay KS
Location: Sec. 32 Twp. 7S Rge. 27W Co. ROOKS State _____

Interval Tested 3372-3403
Anchor Length 32
Top Packer Depth 3367
Bottom Packer Depth 3372
Total Depth 3403

Drill Pipe Size 4.5" XH
Wt. Pipe I.D. - 2.7 Ft. Run _____
Drill Collar - 2.25 Ft. Run 9.5
Mud Wt. _____ 55 8.4 lb/Gal.
Viscosity _____ Filtrate _____

Tool Open @ 2:26 PM Initial Blow WEAK 1/2" BLOW BUILDING TO BOTTOM OF BUCKET IN 34 MINUTES.

Final Blow SURFACE BLOW BOTTOM OF BUCKET IN 37 MINUTES.

Recovery - Total Feet 370 Flush Tool? NO

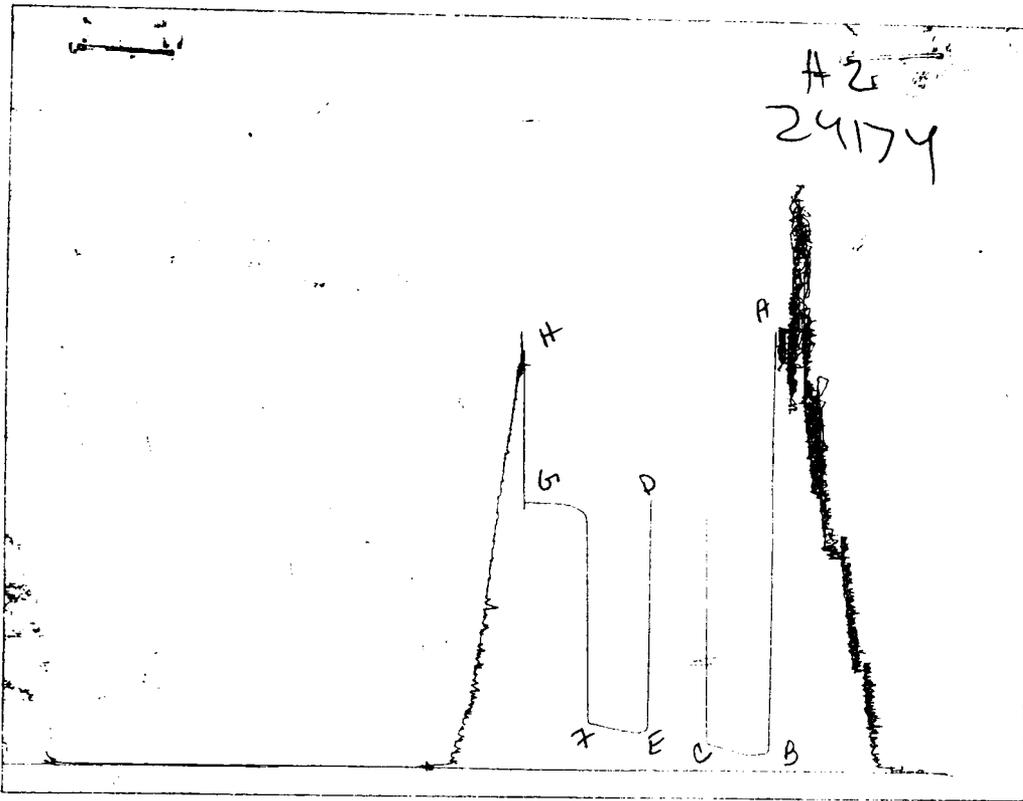
Rec. 190 Feet of WATERY MUD WITH OIL SPOTS.
Rec. 180 Feet of MUDDY WATER. 60% WATER; 40% MUD.
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.2 @ 58 °F Chlorides 42000 ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1682.2 PSI AK1 Recorder No. 22150 Range 3925
(B) First Initial Flow Pressure 66.0 PSI @ (depth) 3375 w / Clock No. 27336
(C) First Final Flow Pressure 103.4 PSI AK1 Recorder No. 24174 Range 3050
(D) Initial Shut-in Pressure 1064.2 PSI @ (depth) 3400 w / Clock No. 22348
(E) Second Initial Flow Pressure 145.4 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 180.1 PSI @ (depth) _____ w / Clock No. _____
(G) Final Shut-in Pressure 1048.4 PSI Initial Opening 45 Final Flow 45
(H) Final Hydrostatic Mud 1623.0 PSI Initial Shut-in 45 Final Shut-in 45

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CHART PAGE



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	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1727	1682.2
(B) FIRST INITIAL FLOW PRESSURE	59	66.0
(C) FIRST FINAL FLOW PRESSURE	96	103.4
(D) INITIAL CLOSED-IN PRESSURE	1062	1064.2
(E) SECOND INITIAL FLOW PRESSURE	134	145.4
(F) SECOND FINAL FLOW PRESSURE	179	180.1
(G) FINAL CLOSED-IN PRESSURE	1047	1048.4
(H) FINAL HYDROSTATIC MUD	1636	1623.0

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Drill-Stem Test Data

Well Name CARSTEN #1 Test No. 3 Date 11/23/94
Company BLACK DIAMOND OIL Zone ARB
Address P. O. BOX 641, HAYS, KS 67601 Elevation _____
Co. Rep./Geo. KEN VEHIGE Cont. EMPHASIS #8 Est. Ft. of Pay KS
Location: Sec. 32 Twp. 7S Rge. 27W Co. ROOKS State _____

Interval Tested 3397-3407 Drill Pipe Size 4.5" XH
Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 3392 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 3397 Mud Wt. _____ lb/Gal.
Total Depth 3407 Viscosity _____ Filtrate _____

Tool Open @ 12:15 AM Initial Blow 1" BLOW BUILDING TO BOTTOM OF BUCKET IN 42 MINUTES.

Final Blow "1/2" BLOW BUILDING TO BOTTOM OF BUCKET IN 43 MINUTES.

Recovery - Total Feet 330 Flush Tool? NO

Rec. 1 Feet of CLEAN OIL
Rec. 329 Feet of OIL STAINED, MUDDY WTR. TR OIL; 70% WATER; 30% MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.22 @ 72 °F Chlorides 30000 ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1725.6 PSI AK1 Recorder No. 24174 Range 3050

(B) First Initial Flow Pressure 59.3 PSI @ (depth) 3400 w / Clock No. 23839

(C) First Final Flow Pressure 60.8 PSI AK1 Recorder No. _____ Range _____

(D) Initial Shut-in Pressure 1049.1 PSI @ (depth) _____ w / Clock No. _____

(E) Second Initial Flow Pressure 122.9 PSI AK1 Recorder No. _____ Range _____

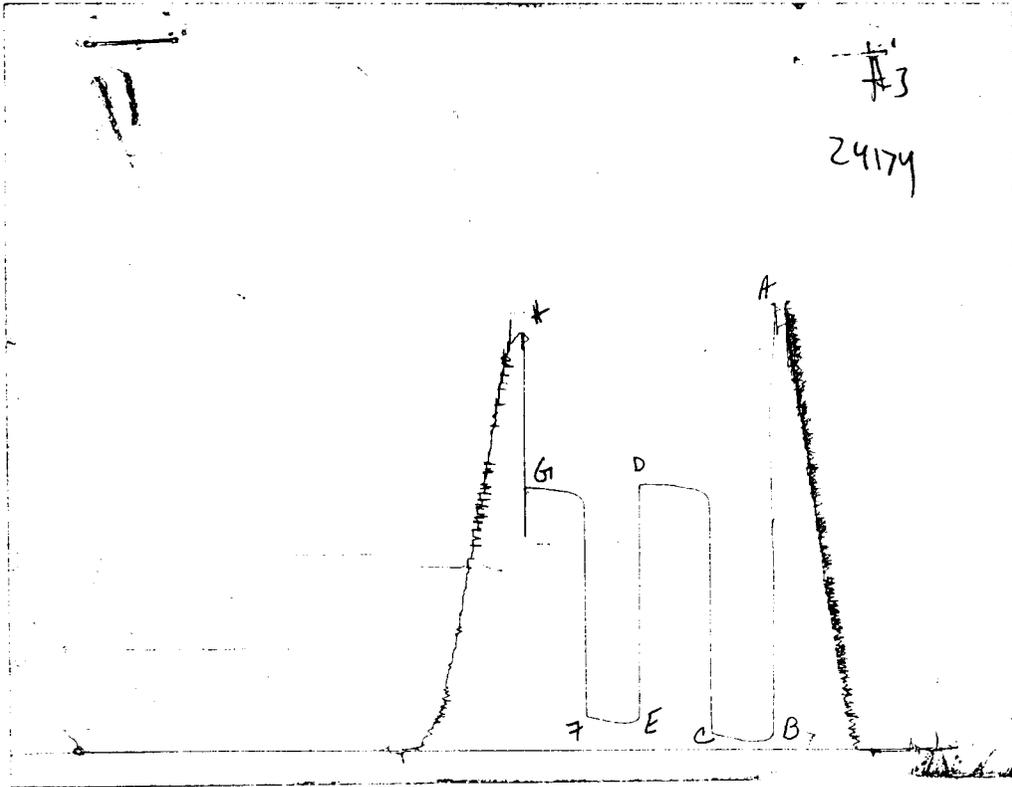
(F) Second Final Flow Pressure 128.9 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1038.5 PSI Initial Opening 45 Final Flow _____

(H) Final Hydrostatic Mud 1610.8 PSI Initial Shut-in 45 Final Shut-in _____

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CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1765	1725.6
(B) FIRST INITIAL FLOW PRESSURE	30	59.3
(C) FIRST FINAL FLOW PRESSURE	52	60.8
(D) INITIAL CLOSED-IN PRESSURE	1039	1049.1
(E) SECOND INITIAL FLOW PRESSURE	89	122.9
(F) SECOND FINAL FLOW PRESSURE	112	128.9
(G) FINAL CLOSED-IN PRESSURE	1024	1038.5
(H) FINAL HYDROSTATIC MUD	1658	1610.8