

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 1 Date 10-12-91
Company RITCHIE EXPLORATION INC Zone Tested LKC 'H'
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4120-4152 Drill Pipe Size 4.5 XH
Anchor Length 32 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4115 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4120
Total Depth 4152

Mud Wt. 9.0 lb / gal. Viscosity 43 Filtrate 10.4

Tool Open @ 7:30AM Initial Blow GOOD SURFACE BLOW TO BOTTOM IN 6 MINUTES

Final Blow BLOW OFF BOTTOM IN 7 MINUTES

Recovery — Total Feet 1370 Flush Tool? NO

Rec. 150 Feet of MUDDY WATER 80%WATER/20%MUD

Rec. 1220 Feet of SLIGHTLY MUDDY WATER 95%WATER/5%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____
BHT 119 °F Gravity _____ °API @ _____ °F Corrected Gravity 43 °API

RW 0.1 @ 89 °F Chlorides 55000 ppm Recovery Chlorides 3000 ppm System

(A) Initial Hydrostatic Mud 1910.2 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 59.1 PSI @ (depth) 4122 w/Clock No. 27573

(C) First Final Flow Pressure 216.3 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1025.7 PSI @ (depth) 4147 w/Clock No. 8376

(E) Second Initial Flow Pressure 267.9 PSI AK1 Recorder No. _____ Range _____

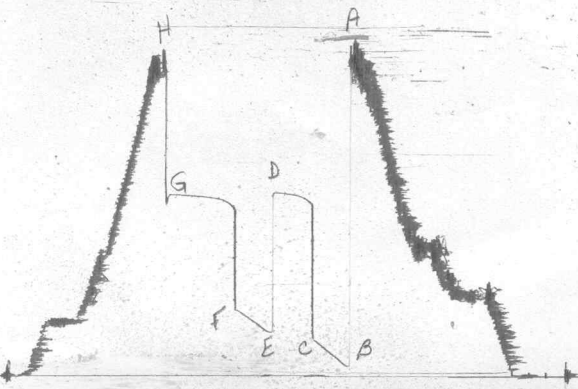
(F) Second Final Flow Pressure 394.5 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 1015.8 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1879.1 PSI Initial Shut-in 30 Final Shut-in 51

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 585

DST f



TRILOBITE TESTING COMPANY

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Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 2 Date 10-12-91
Company RITCHIE EXPLORATION INC Zone Tested LKC 'J'
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4189-4207 Drill Pipe Size 4.5 XH
Anchor Length 18 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4184 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4189
Total Depth 4207

Mud Wt. 9.0 lb / gal. Viscosity 50 Filtrate 9.6

Tool Open @ 10:40 PM Initial Blow WEAK BLOW BUILDING TO 3/4" IN 45 MINUTES

Final Blow NO BLOW FOR 38 MINUTES
WEAK SURFACE BLOW FOR 7 MINUTES

Recovery — Total Feet 15 Flush Tool? NO

Rec. 45 Feet of GAS IN PIPE

Rec. 15 Feet of MUDDY OIL 93%OIL/7%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____
BHT 120 °F Gravity _____ °API @ _____ °F Corrected Gravity 43 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2010.6 PSI Ak1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 26.5 PSI @ (depth) 4194 w/Clock No. 27573

(C) First Final Flow Pressure 26.5 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 980.7 PSI @ (depth) 4202 w/Clock No. 8376

(E) Second Initial Flow Pressure 25.3 PSI AK1 Recorder No. _____ Range _____

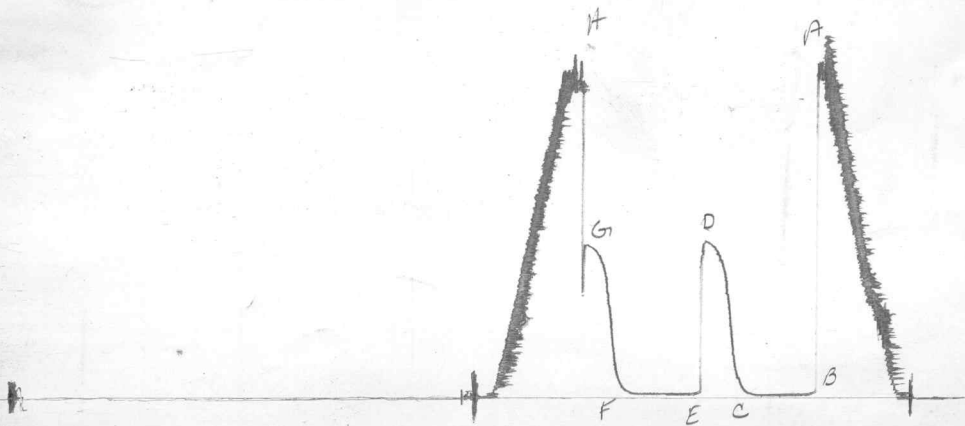
(F) Second Final Flow Pressure 25.3 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 960.4 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 1970.2 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550

DS 7-21



TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 3 Date 10-13-91
Company RITCHIE EXPLORATION INC Zone Tested LKC 'J'
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4215-4235 Drill Pipe Size 4.5 XH
Anchor Length 20 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4210 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4215
Total Depth 4235

Mud Wt. 9.0 lb / gal. Viscosity 49 Filtrate 9.6

Tool Open @ 11:45 AM Initial Blow GOOD SURFACE BLOW BUILDING TO 8 1/2" IN 30 MINUTE

Final Blow SURFACE BLOW TO 8 1/2" IN 30 MINUTES

Recovery — Total Feet 170 Flush Tool? NO

Rec. 70 Feet of GAS IN PIPE

Rec. 5 Feet of OIL 100%

Rec. 45 Feet of SLIGHTLY OILY WATER CUT MUD 1%OIL/20%WATER/79%MUD

Rec. 120 Feet of SLIGHTLY OILY MUDDY WATER 1%OIL/89%WATER/10%MUD

Rec. 120 Feet of _____
BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.18 @ 80 °F Chlorides 30000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2020.3 PSI Ak1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 29.7 PSI @ (depth) 4217 w/Clock No. 27573

(C) First Final Flow Pressure 53.8 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1033.7 PSI @ (depth) 4230 w/Clock No. 8376

(E) Second Initial Flow Pressure 68.2 PSI AK1 Recorder No. _____ Range _____

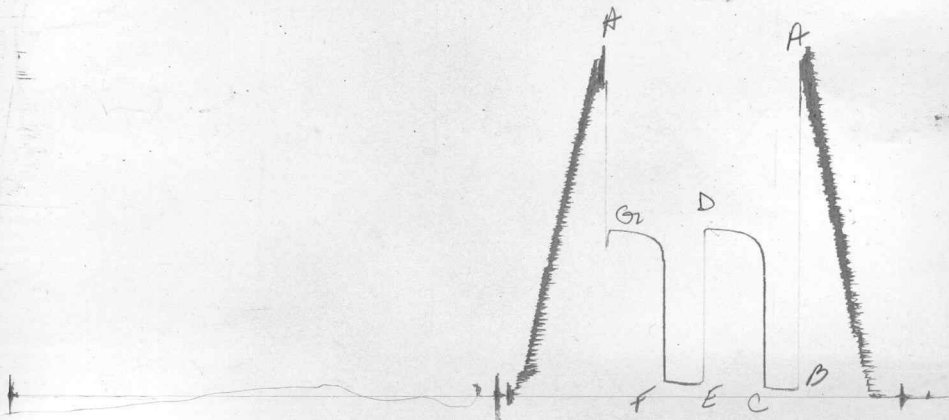
(F) Second Final Flow Pressure 92.1 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 1022.1 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1980.6 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550

D 57-3



TRILOBITE TESTING COMPANY

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Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 4 Date 10-14-91
Company RITCHIE EXPLORATION INC Zone Tested LKC
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4253-4293 Drill Pipe Size 4.5 XH
Anchor Length 40 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4248 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4253
Total Depth 4293

Mud Wt. 9.2 lb / gal. Viscosity 44 Filtrate 9.6

Tool Open @ 3:15 AM Initial Blow WEAK SURRFACE BLOW TO 4" IN 45 MINUTES

Final Blow SURFACE BLOW TO 3 1/2" IN 45 MINUTES

Recovery — Total Feet 75 Flush Tool? NO

Rec. 45 Feet of GAS IN PIPE

Rec. 5 Feet of CLEAN OIL

Rec. 70 Feet of OIL CUT MUDDY WATER 2%OIL/73%WATER/15%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____
BHT 121 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.15 @ 80 °F Chlorides 40000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2070.2 PSI Ak1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 29.7 PSI @ (depth) 4263 w/Clock No. 27573

(C) First Final Flow Pressure 38.5 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1140.1 PSI @ (depth) 4288 w/Clock No. 8376

(E) Second Initial Flow Pressure 41.5 PSI AK1 Recorder No. _____ Range _____

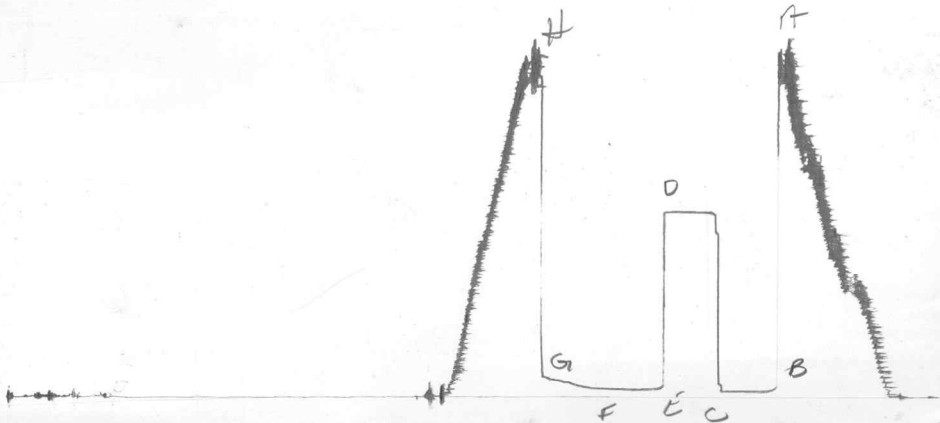
(F) Second Final Flow Pressure 48.5 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 125.3 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 2031.6 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550

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TRILOBITE TESTING COMPANY

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Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 5 Date 10-14-91
Company RITCHIE EXPLORATION INC Zone Tested MARMATON
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4295-4410 Drill Pipe Size 4.5 XH
Anchor Length 115 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4290 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4295
Total Depth 4410

Mud Wt. 9.1 lb / gal. Viscosity 50 Filtrate 9.6

Tool Open @ 10:44 PM Initial Blow WEAK SURRFACE BLOW TO 1.25" IN 45 MINUTES

Final Blow SURFACE BLOW TO 1/2" IN 45 MINUTES

Recovery — Total Feet 20 Flush Tool? NO

Rec. 40 Feet of GAS IN PIPE

Rec. 20 Feet of OIL CUT MUD-7%OIL/93%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____
BHT 122 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 2166.9 PSI Ak1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 20.6 PSI @ (depth) 4301 w/Clock No. 27573

(C) First Final Flow Pressure 20.6 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 145.7 PSI @ (depth) 4311 w/Clock No. 8376

(E) Second Initial Flow Pressure 18.4 PSI AK1 Recorder No. _____ Range _____

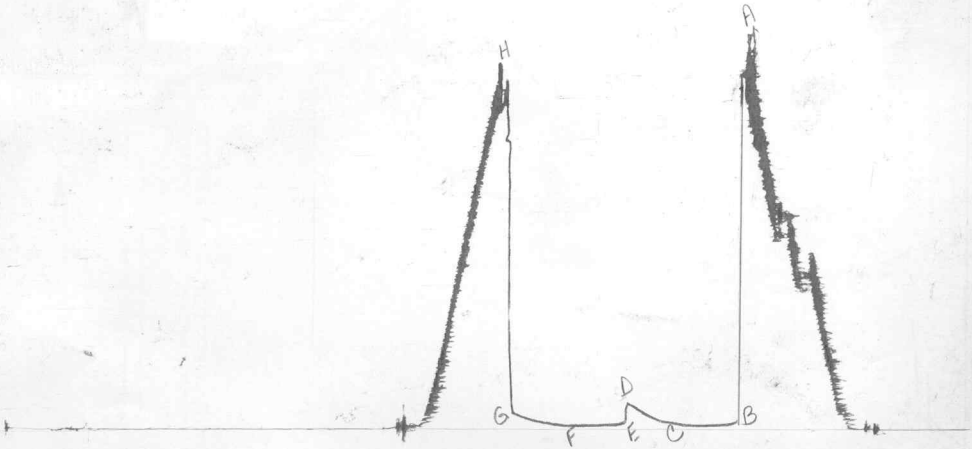
(F) Second Final Flow Pressure 18.4 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 102.3 PSI Initial Opening 45 Final Flow 45

(H) Final Hydrostatic Mud 2104.9 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550

DST 3



POINT This is an actual photograph of recorder chart
PRESSURE

| | FIELD READING | OFFICE READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD | 2159 | 2166.9 |
| (B) FIRST INITIAL FLOW PRESSURE | 11 | 20.6 |
| (C) FIRST FINAL FLOW PRESSURE | 11 | 20.6 |
| (D) INITIAL CLOSED-IN PRESSURE | 141 | 145.7 |
| (E) SECOND INITIAL FLOW PRESSURE | 11 | 18.4 |
| (F) SECOND FINAL FLOW PRESSURE | 11 | 18.4 |
| (G) FINAL CLOSED-IN PRESSURE | 98 | 102.3 |
| (H) FINAL HYDROSTATIC MUD | 2099 | 2104.9 |

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Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 6 Date 10-15-91
Company RITCHIE EXPLORATION INC Zone Tested CONG SAND
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4548-4563 Drill Pipe Size 4.5 XH
Anchor Length 15 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4543 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4548
Total Depth 4563

Mud Wt. 9.1 lb / gal. Viscosity 48 Filtrate 9.6

Tool Open @ ' 11:37 PM Initial Blow NO BLOW

Final Blow WEAK SURFACE BLOW FOR 14 MINUTES-NO BLOW

Recovery — Total Feet 62 Flush Tool? NO

Rec. 2 Feet of OIL

Rec. 60 Feet of SLTLY OILY MUD CUT WTR-85%WTR/15%MUD

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT 123 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.14 @ 81 °F Chlorides 45000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2287.4 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 20.6 PSI @ (depth) 4550 w/Clock No. 27573

(C) First Final Flow Pressure 30.1 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1230.4 PSI @ (depth) 4558 w/Clock No. 8376

(E) Second Initial Flow Pressure 30.1 PSI AK1 Recorder No. _____ Range _____

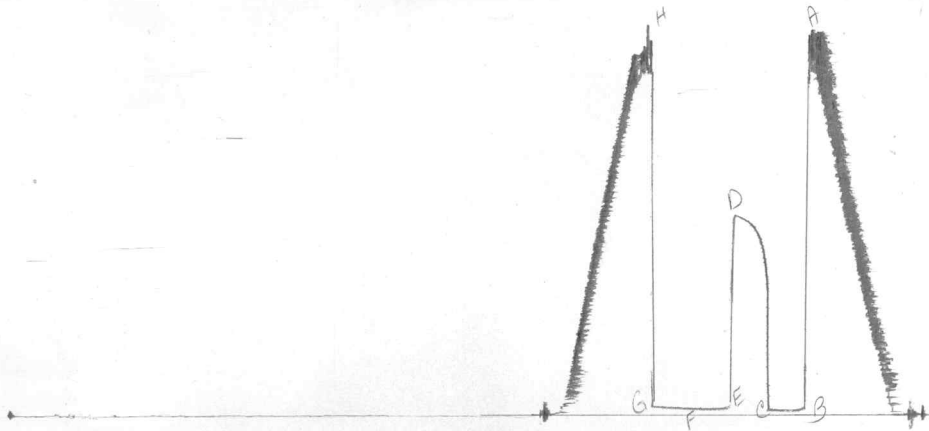
(F) Second Final Flow Pressure 30.1 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 50.2 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2244.7 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 400

DST. 6



TRILOBITE TESTING COMPANY

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Drill-Stem Test Data

Well Name E. SHAPLAND TRUST 'A' 1 Test No. 7 Date 10-16-91
Company RITCHIE EXPLORATION INC Zone Tested MISSISSIPPI
Address 125 N MARKET #500 WICHITA KS 67202 Elevation 2711 KB
Co. Rep./Geo. KEVIN KESSLER Cont. WHITE/ELLIS #9 Est. Ft. of Pay _____
Location: Sec. 35 Twp. 18S Rge. 28W Co. LANE State KS

Interval Tested 4566-4573 Drill Pipe Size 4.5 XH
Anchor Length 7 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4561 Drill Collar — 2.25 Ft. Run _____
Bottom Packer Depth 4566
Total Depth 4573

Mud Wt. 9.3 lb / gal. Viscosity 50 Filtrate 10.5

Tool Open @ 11:47 PM Initial Blow GOOD BLOW - OFF BOTTOM IN 10 MIN 30 SECONDS

Final Blow OFF BOTTOM IN 12 MINUTES 45 SECONDS
1 1/2" BLOW ON SHUT IN

Recovery — Total Feet 597 Flush Tool? NO

Rec. 30 Feet of OIL STAINED MUDDY WTR-55%WTR/45%MUD

Rec. 567 Feet of SLTLY GASSY WTR-1GAS/99%WTR

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____
BHT 123 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 0.09 @ 94 °F Chlorides 60000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2298.7 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 30.1 PSI @ (depth) 4553 w/Clock No. 27573

(C) First Final Flow Pressure 129.8 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1054.7 PSI @ (depth) 4568 w/Clock No. 8376

(E) Second Initial Flow Pressure 170.3 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 241.5 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 880.3 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2189.7 PSI Initial Shut-in 30 Final Shut-in 30

Our Representative MARK HERSKOWITZ TOTAL PRICE \$ 550

