

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD 'A' TWIN #1 #3 Test No. 1 Date 4/20/93
Company CHARTER PRODUCTION COMPANY Zone TORONTO
Address 224 EAST DOUGLAS #400 WICHITA KS 67202 Elevation 2737
Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #6 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

| | | | |
|---------------------|------------------|-----------------------------|--------------------|
| Interval Tested | <u>4377-4424</u> | Drill Pipe Size | <u>4.5" XH</u> |
| Anchor Length | <u>47</u> | Wt. Pipe I.D. - 2.7 Ft. Run | _____ |
| Top Packer Depth | <u>4372</u> | Drill Collar - 2.25 Ft. Run | <u>588</u> |
| Bottom Packer Depth | <u>4377</u> | Mud Wt. | <u>8.6</u> lb/Gal. |
| Total Depth | <u>4424</u> | Viscosity | <u>41</u> |
| | | Filtrate | <u>8</u> |

Tool Open @ 12:40 AM ^{Initial} Blow FAIR BLOW - BOTTOM OF BUCKET IN 25 MINUTES
ISI: BLED OFF BLOW - NO BLOW BACK
Final Blow WEAK BLOW - BOTTOM OF BUCKET IN 55 MINUTES
FSI: BLED OFF - NO BLOW BACK

Recovery - Total Feet 680 Flush Tool? NO

| | | |
|-----------------|---------|---------------------------|
| Rec. <u>680</u> | Feet of | <u>GAS CUT SALT WATER</u> |
| Rec. _____ | Feet of | _____ |
| Rec. _____ | Feet of | _____ |
| Rec. _____ | Feet of | _____ |
| Rec. _____ | Feet of | _____ |

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.575 @ 69 °F Chlorides 12000 ppm Recovery Chlorides 4500 ppm System

(A) Initial Hydrostatic Mud 2210.3 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 103.6 PSI @ (depth) 4400 w / Clock No. 15813

(C) First Final Flow Pressure 192.4 PSI AK1 Recorder No. 5495 Range 4200

(D) Initial Shut-in Pressure 1195.6 PSI @ (depth) 4421 w / Clock No. 27594

(E) Second Initial Flow Pressure 216.1 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 354.9 PSI @ (depth) _____ w / Clock No. _____

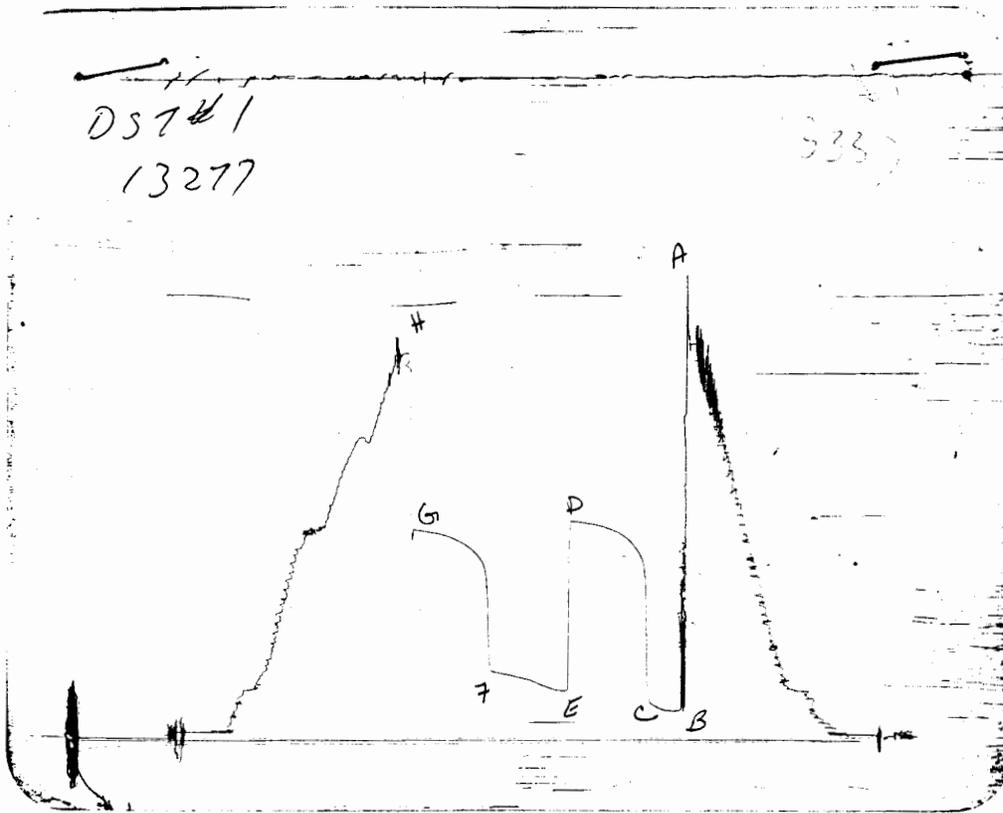
(G) Final Shut-in Pressure 1186.2 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2116.1 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative TOM HORACEK

20-34-31W

CHART PAGE



This is an actual photograph of recorder chart

| | FIELD READING | OFFICE READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD | 2207 | 2210.3 |
| (B) FIRST INITIAL FLOW PRESSURE | 101 | 103.6 |
| (C) FIRST FINAL FLOW PRESSURE | 189 | 192.4 |
| (D) INITIAL CLOSED-IN PRESSURE | 1193 | 1195.6 |
| (E) SECOND INITIAL FLOW PRESSURE | 211 | 216.1 |
| (F) SECOND FINAL FLOW PRESSURE | 353 | 354.9 |
| (G) FINAL CLOSED-IN PRESSURE | 1182 | 1186.2 |
| (H) FINAL HYDROSTATIC MUD | 2112 | 2116.1 |

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 5666

Well Name & No. Good "A" Twin #1 Test No. #1 Date 4-20-93
Company Charter Production Company Zone Tested Toronto
Address 224 E. Douglas Suite 400 Wichita, KS 67202 Elevation 2737' (KB)
Co. Rep./Geo. Chuck Schmalz Cont. Zenith Drg #6 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 34 Rge. 31 W. Co. Seward State Ks
No. of Copies _____ Distribution Sheet _____ Yes No Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4377-4424 Drill Pipe Size 4.5 x-Hole
Anchor Length 47' Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 4372 Hole Size — 77/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 4377 Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth 4424 Drill Collar — 2.25 Ft. Run 588'
Mud Wt. 8.6 lb/gal. Viscosity 41 Filtrate 8.

Tool Open @ 12:40 pm Initial Blow Fair blow - BOB in 25 min.
ISI - Bled off blow - NO blow back
Final Blow Weak blow - BOB in 55 min.
FSI - Bled off blow - NO blow back

Recovery — Total Feet 680' Feet of Gas in Pipe _____ Flush Tool? NO

| Rec. | Feet Of | %gas | %oil | %water | %mud |
|------|-------------|---------------------------|------|--------|------|
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | <u>680'</u> | <u>Gas cut salt water</u> | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud |

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 1.575 @ 69 °F Chlorides 12,000 ppm Recovery Chlorides 4500 ppm System
(A) Initial Hydrostatic Mud 2207 PSI AK1 Recorder No. 13277 Range 4125
(B) First Initial Flow Pressure 101 PSI @ (depth) 4400 w/Clock No. 25813
(C) First Final Flow Pressure 189 PSI AK1 Recorder No. 5495 Range 4200
(D) Initial Shut-In Pressure 1193 PSI @ (depth) 4421 w/Clock No. 27594
(E) Second Initial Flow Pressure 211 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 353 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 1182 PSI Initial Opening 30 Test 600
(H) Final Hydrostatic Mud 2112 PSI Initial Shut-In 60 Jars 300

Final Flow 60 Safety Joint 300
Final Shut-In 60 Straddle _____
Circ. Sub _____
Sampler _____
Extra Packer _____
Other _____
TOTAL PRICE \$ _____

Approved By Chuck Schmalz
Our Representative Tom Horvath

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD 'A' TWIN #1 Test No. 2 Date 4/21/93
Company CHARTER PRODUCTION COMPANY Zone DOUGLAS
Address 224 EAST DOUGLAS #400 WICHITA KS 67202 Elevation 2737
Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #6 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 4463-4479 Drill Pipe Size 4.5" XH
Anchor Length 16 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4458 Drill Collar - 2.25 Ft. Run 617
Bottom Packer Depth 4463 Mud Wt. 8.1 lb/Gal.
Total Depth 4479 Viscosity 47 Filtrate 8.2

Tool Open @ 6:12 PM Initial Blow WEAK BLOW - BUILT TO 7"
ISI: BLED OFF BLOW - NO BLOW BACK
Final Blow WEAK BLOW - BUILT TO 5"
FSI: BLED OFF BLOW - NO BLOW BACK

Recovery - Total Feet 470 Flush Tool? NO

Rec. 470 Feet of GAS CUT SALT WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 117 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.585 @ 72 °F Chlorides 11000 ppm Recovery Chlorides 5700 ppm System

(A) Initial Hydrostatic Mud 2216.3 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 46.8 PSI @ (depth) 4466 w / Clock No. 25813

(C) First Final Flow Pressure 92.3 PSI AK1 Recorder No. 5495 Range 4200

(D) Initial Shut-in Pressure 1316.2 PSI @ (depth) 4476 w / Clock No. 27594

(E) Second Initial Flow Pressure 129.5 PSI AK1 Recorder No. _____ Range _____

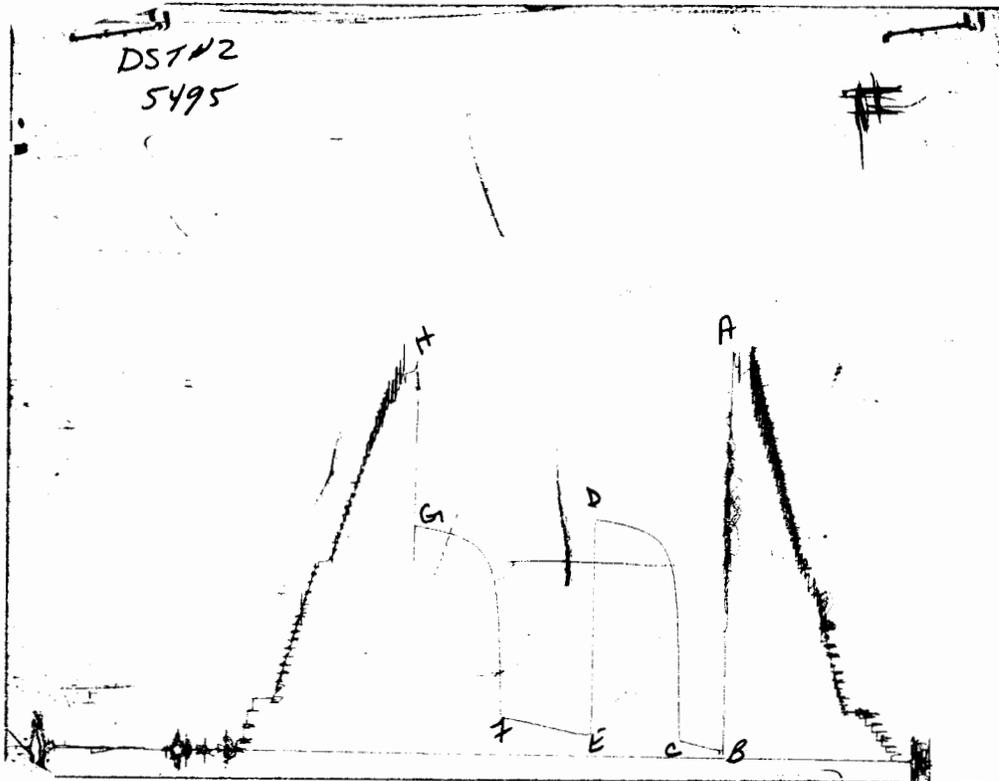
(F) Second Final Flow Pressure 216.7 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1271.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2116.7 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative TOM HORACEK

CHART PAGE



This is an actual photograph of recorder chart

| | FIELD READING | OFFICE READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD | 2207 | 2216.3 |
| (B) FIRST INITIAL FLOW PRESSURE | 45 | 46.8 |
| (C) FIRST FINAL FLOW PRESSURE | 89 | 92.3 |
| (D) INITIAL CLOSED-IN PRESSURE | 1309 | 1316.2 |
| (E) SECOND INITIAL FLOW PRESSURE | 123 | 129.5 |
| (F) SECOND FINAL FLOW PRESSURE | 211 | 216.7 |
| (G) FINAL CLOSED-IN PRESSURE | 1267 | 1271.4 |
| (H) FINAL HYDROSTATIC MUD | 2112 | 2116.7 |

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 5667

Well Name & No. Good "A" Twin #1 Test No. #2 Date 4-21-93
Company Charter Production Company Zone Tested Douglas
Address 224 E. Douglas Suite 400 Wichita ks 67202 Elevation 2737 KB
Co. Rep./Geo. Chuck Schmalte cont. Zenith Drlg #6 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 34 Rge. 31 w Co. Seward State Ks
No. of Copies _____ Distribution Sheet _____ Yes No Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4463-4479 Drill Pipe Size 4.5 x-Hole
Anchor Length 16' Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 4458 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 4463 Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth 4479 Drill Collar — 2.25 Ft. Run 617'
Mud Wt. 8.1 lb/gal. Viscosity 47 Filtrate 8.2

Tool Open @ 6:12 pm Initial Blow weak blow - built to 2 in.
ISI - Bled off blow - NO blow back
Final Blow weak blow - built to 5 in.
FSI - Bled off blow - NO blow back

Recovery — Total Feet 470' Feet of Gas in Pipe _____ Flush Tool? NO

| Rec. | Feet Of | %gas | %oil | %water | %mud | | |
|------|-------------|---------|-------------|--------|------|--------|------|
| Rec. | Feet Of | %gas | %oil | %water | %mud | | |
| Rec. | <u>470'</u> | Feet Of | <u>GCSW</u> | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud | | |
| Rec. | Feet Of | %gas | %oil | %water | %mud | | |

BHT 117 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 1,585 @ 72° °F Chlorides 11,000 ppm Recovery Chlorides 5,700 ppm System

(A) Initial Hydrostatic Mud 2207 PSI Ak1 Recorder No. 13277 Range 4125
(B) First Initial Flow Pressure 45 PSI @ (depth) 4466 w/Clock No. 25813
(C) First Final Flow Pressure 89 PSI AK1 Recorder No. 5495 Range 4200
(D) Initial Shut-In Pressure 1309 PSI @ (depth) 4476 w/Clock No. 27594
(E) Second Initial Flow Pressure 123 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 211 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 1267 PSI Initial Opening 30 Test X 6000
(H) Final Hydrostatic Mud 2112 PSI Initial Shut-In 60 Jars X 200

Final Flow 60 Safety Joint X 500
Final Shut-In 60 Straddle _____
Circ. Sub _____
Sampler _____

Approved By _____
Our Representative Tom Horacek

Extra Packer _____
Other _____

Printcraft Printers - Hays, KS TOTAL PRICE \$ _____

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD 'A' TWIN #1 Test No. 3 Date 4/24/93
Company CHARTER PRODUCTION COMPANY Zone MARMATON
Address 224 EAST DOUGLAS #400 WICHITA KS 67202 Elevation 2737
Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #6 Est. Ft. of Pay 10
Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 5255-5307 Drill Pipe Size 4.5" XH
Anchor Length 52 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5250 Drill Collar - 2.25 Ft. Run 588
Bottom Packer Depth 5255 Mud Wt. 8.9 lb/Gal.
Total Depth 5307 Viscosity 56 Filtrate 7.6

Tool Open @ 11:00 PM Initial Blow STRONG BLOW - BOTTOM OF BUCKET IN 30 SECONDS
GAS TO SURFACE IN 2 MINUTES GAUGED @ 3752 MCF
Final Blow BOTTOM OF BUCKET AS TOOL OPENED
GAUGED @ 3811 MCF

Recovery - Total Feet 176 Flush Tool? NO

Rec. 176 Feet of GASSY OIL CUT WATERY MUD
Rec. _____ Feet of 30%GAS/15%OIL/25%WATER/30%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 126 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 3200 ppm System

(A) Initial Hydrostatic Mud 2530.6 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 677.1 PSI @ (depth) 5287 w / Clock No. 25813

(C) First Final Flow Pressure 688.7 PSI AK1 Recorder No. 5495 Range 4200

(D) Initial Shut-in Pressure 1762.9 PSI @ (depth) 5304 w / Clock No. 27594

(E) Second Initial Flow Pressure 674.9 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 629.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1750.2 PSI Initial Opening 30 Final Flow 35

(H) Final Hydrostatic Mud 2461.3 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative TOM HORACEK



424 Greenwood • Wichita, Kansas 67211 • (316) 289-4200

 EXTENDED NATURAL GAS ANALYSIS

COMPANY NAME: CHARTER PRODUCTION LAB# 9315756
 SAMPLE ID: GOOD A TWIN 1-DST 3
 SETT #: MARMATION FORMATION
 COUNTY: SEWARD LEGAL LOCATION: 20-34-31W
 DATE SAMPLED: N/A 0 SAMPLER: N/A
 SAMPLE PRESSURE: N/A TEMPERATURE (F): N/A
 DATE ANALYZED: MAY 3 1993
 QUALITY CONTROL DATE: MAY 3 1993

*****ANALYSIS*****CALCULATED AT 14.65 PSIA, AT 60 F**NORMALIZED*****

| HYDROCARBONS | MOLAL% | LIQUID VOLUME% | BTU AMOUNT | GPM |
|--------------------|--------------|----------------|------------|------|
| METHANE | 66.85 | 57.97 | 673.07 | 0 |
| ETHANE | 7.28 | 9.96 | 128.42 | 0 |
| PROPANE | 6.59 | 9.29 | 165.29 | 1.8 |
| ISO-BUTANE | .88 | 1.47 | 28.53 | .29 |
| NORMAL-BUTANE | 2.41 | 3.89 | 78.38 | .76 |
| ISO-PENTANE | .81 | 1.52 | 32.31 | .29 |
| NORMAL-PENTANE | .99 | 1.84 | 39.56 | .36 |
| 3-METHYLPENTANE | * | | | |
| 2,3-DIMETHYLBUTANE | * | | | |
| 2-METHYLPENTANE | * | | | |
| CYCLOPENTANE | * | | | |
| NORMAL HEXANE | * | | | |
| HEXANES+ | 3.88 | 8.22 | 195.94 | 1.67 |
| NITROGEN | 9.99 | 5.63 | 0 | 0 |
| OXYGEN | 0 | 0 | 0 | 0 |
| CARBON DIOXIDE | .13 | .11 | 0 | 0 |
| HELIUM | .19 | .1 | 0 | 0 |
| HYDROGEN | TRACE (<.01) | | | |

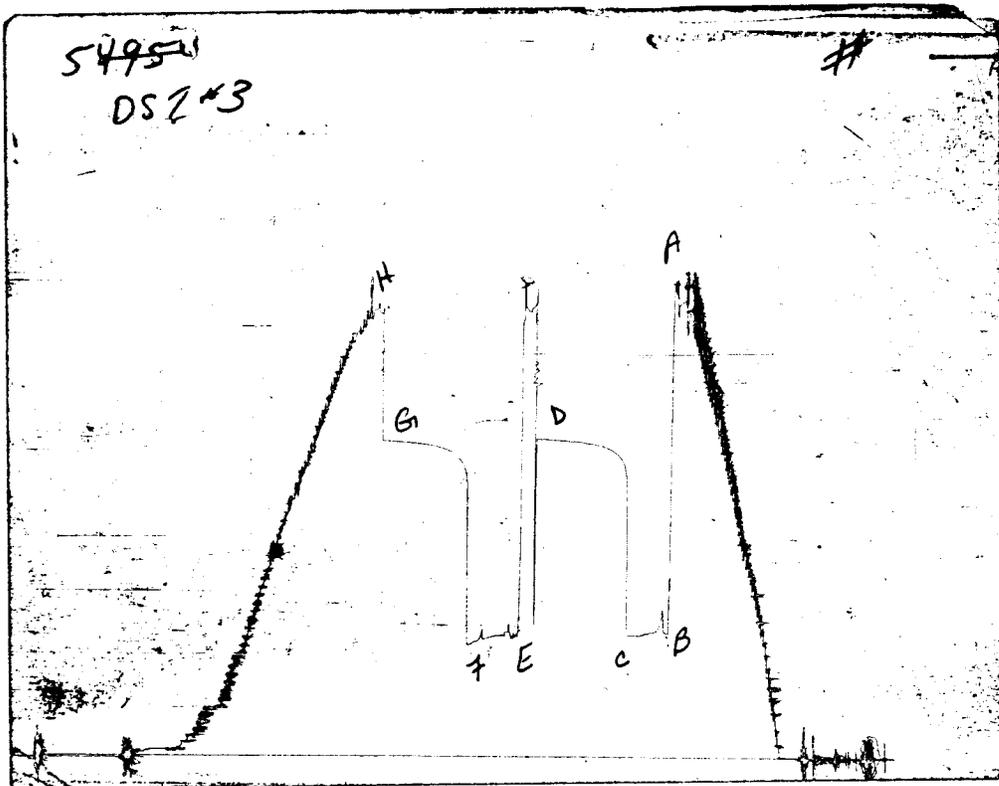
TOTALS***** 100 100 1341.5 5.17

BTU/FT³ DRY (IDEAL GROSS): 1341.5
 BTU/FT³ SATURATED (IDEAL GROSS): 1318.9
 IDEAL SPECIFIC GRAVITY: .8793
 COMPRESSIBILITY: .9954
 GPM: 5.17
 *-COMBINED WITH HEXANES+

RESPECTFULLY SUBMITTED

PRIORITY ANALYTICAL LAB

CHART PAGE



This is an actual photograph of recorder chart

| | FIELD READING | OFFICE READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD | 2521 | 2530.6 |
| (B) FIRST INITIAL FLOW PRESSURE | 685 | 677.1 |
| (C) FIRST FINAL FLOW PRESSURE | 685 | 688.7 |
| (D) INITIAL CLOSED-IN PRESSURE | 1764 | 1762.9 |
| (E) SECOND INITIAL FLOW PRESSURE | 674 | 674.9 |
| (F) SECOND FINAL FLOW PRESSURE | 632 | 629.2 |
| (G) FINAL CLOSED-IN PRESSURE | 1753 | 1750.2 |
| (H) FINAL HYDROSTATIC MUD | 2459 | 2461.3 |

INITIAL FLOW

RECORDER # 5495

DST # 3

TIME(MIN)

<> PRESSURE

| TIME(MIN) | | <> PRESSURE |
|-----------|-------|-------------|
| 3 | 677.1 | 677.1 |
| 6 | 706.8 | 29.7 |
| 9 | 734.8 | 28 |
| 12 | 706.8 | -28 |
| 15 | 704.7 | -2.1 |
| 18 | 698.3 | -6.4 |
| 21 | 696.2 | -2.1 |
| 24 | 686.6 | -9.6 |
| 27 | 688.7 | 2.1 |
| 30 | 688.7 | 0 |
| 33 | 688.7 | 0 |

FINAL FLOW

RECORDER # 5495

DST # 3

TIME(MIN)

<> PRESSURE

| TIME(MIN) | | <> PRESSURE |
|-----------|-------|-------------|
| 3 | 674.9 | 674.9 |
| 6 | 674.9 | 0 |
| 9 | 667.4 | -7.5 |
| 12 | 698.3 | 30.9 |
| 15 | 682.3 | -16 |
| 18 | 682.3 | 0 |
| 21 | 679.1 | -3.2 |
| 24 | 674.9 | -4.2 |
| 27 | 669.6 | -5.3 |
| 30 | 665.3 | -4.3 |
| 33 | 668.5 | 3.2 |
| 36 | 649.4 | -19.1 |
| 39 | 643.1 | -6.3 |
| 42 | 629.2 | -13.9 |

GOOD 'A' TWIN
INITIAL

DST #3
SHUTIN

30 TOTAL FLOW TIME

Slope 79729.40 psi/cycle
P * 1785 psi

| TIME(MIN) | Pws (psi) | Log Horn T | <> PRESSURE | Horn T |
|-----------|-----------|------------|-------------|--------|
| 3 | 1605.4 | 1.041 | 1605.4 | 11 |
| 6 | 1660.4 | 0.778 | 55.0 | 6 |
| 9 | 1687.9 | 0.637 | 27.5 | 4 |
| 12 | 1701.6 | 0.544 | 13.7 | 4 |
| 15 | 1715.4 | 0.477 | 13.8 | 3 |
| 18 | 1723.8 | 0.426 | 8.4 | 3 |
| 21 | 1730.2 | 0.385 | 6.4 | 2 |
| 24 | 1735.5 | 0.352 | 5.3 | 2 |
| 27 | 1739.7 | 0.325 | 4.2 | 2 |
| 30 | 1742.1 | 0.301 | 2.4 | 2 |
| 33 | 1746.1 | 0.281 | 4.0 | 2 |
| 36 | 1749.2 | 0.263 | 3.1 | 2 |
| 39 | 1753.4 | 0.248 | 4.2 | 2 |
| X 42 | 1755.5 | 0.234 | 2.1 | 2 |
| 45 | 1756.6 | 0.222 | 1.1 | 2 |
| 48 | 1757.6 | 0.211 | 1.0 | 2 |
| 51 | 1758.7 | 0.201 | 1.1 | 2 |
| 54 | 1759.8 | 0.192 | 1.1 | 2 |
| 57 | 1760.8 | 0.184 | 1.0 | 2 |
| X 60 | 1762.9 | 0.176 | 2.1 | 2 |

GOOD 'A' TWIN
FINAL

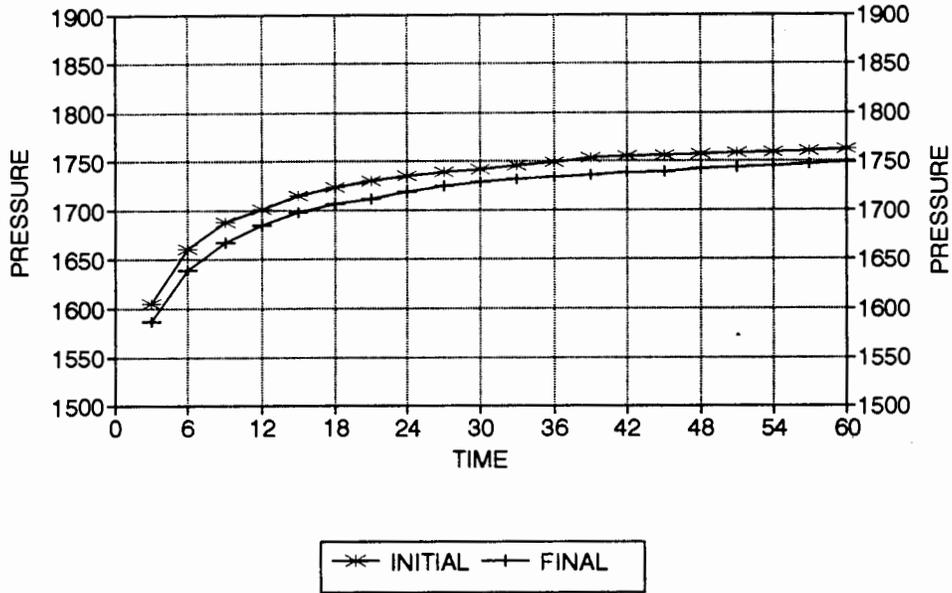
DST #3
SHUTIN

65 TOTAL FLOW TIME

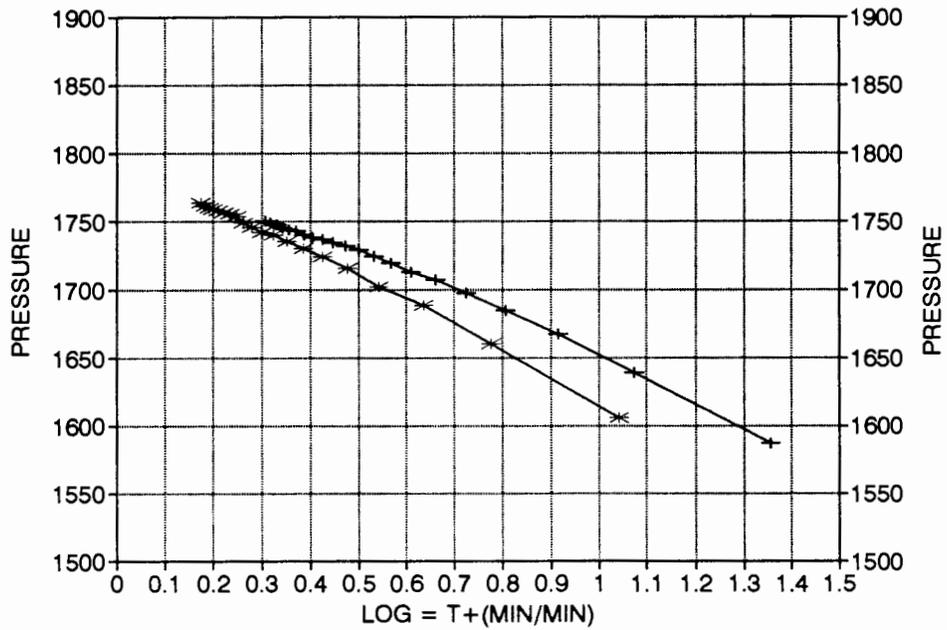
Slope 122697.28 psi/cycle
P * 1785 psi

| Pws (psi) | Log Horn T | <> PRESSURE | Horn T |
|-----------|------------|-------------|--------|
| 3 | 1.355 | 1586.4 | 23 |
| 6 | 1.073 | 52.9 | 12 |
| 9 | 0.915 | 27.5 | 8 |
| 12 | 0.807 | 17.9 | 6 |
| 15 | 0.727 | 12.7 | 5 |
| 18 | 0.664 | 9.5 | 5 |
| 21 | 0.612 | 5.3 | 4 |
| 24 | 0.569 | 7.4 | 4 |
| 27 | 0.532 | 5.3 | 3 |
| 30 | 0.501 | 4.2 | 3 |
| 33 | 0.473 | 3.2 | 3 |
| X 36 | 0.448 | 2.1 | 3 |
| 39 | 0.426 | 2.1 | 3 |
| 42 | 0.406 | 2.1 | 3 |
| 45 | 0.388 | 1.1 | 2 |
| 48 | 0.372 | 3.2 | 2 |
| 51 | 0.357 | 1.0 | 2 |
| 54 | 0.343 | 1.2 | 2 |
| 57 | 0.330 | 2.0 | 2 |
| 60 | 0.319 | 2.1 | 2 |
| X 63 | 0.308 | 1.0 | 2 |

GOOD 'A' TWIN #1 / DST #3 DELTA T DELTA P



HORNER PLOT



GAS VOLUME REPORT

CHARTER PRODUCTION COMPANY

GOOD 'A' TWIN #1

DST # 3

| MIN | INCHES OF WTR | ORIFICE | MCF/D | MIN | PSIG | ORIFICE | MCF/D |
|-----|------------------|---------|-------|-----|------|---------|-------|
| 10 | 41 | 1.5 | 3215 | 10 | 42 | 1.5 | 3274 |
| 20 | 43 | 1.5 | 3334 | 20 | 51 | 1.5 | 3811 |
| 30 | 50 | 1.5 | 3752 | 30 | 48 | 1.5 | 3633 |
| | | | | 35 | 50 | 1.5 | 3811 |

Remarks: GAS TO SURFACE IN 2 MINUTES/GAS WILL BURN

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 5668

| | | |
|--|-----------------------------|---|
| Well Name & No. <u>Good "A" Twin #1</u> | Test No. <u>#3</u> | Date <u>4-24-93</u> |
| Company <u>Charter Production Company</u> | Zone Tested <u>Marmaton</u> | |
| Address <u>224 E. Douglas suite 400 Wichita KS 67202</u> | Elevation <u>2737 (KB)</u> | |
| Co. Rep./Geo. <u>Chuck Schmalte</u> | cont. <u>Zenith Drlg #6</u> | Est. Ft. of Pay <u>10'</u> |
| Location: Sec. <u>20</u> | Twp. <u>34</u> | Rge. <u>31w</u> Co. <u>Seward</u> State <u>Ks.</u> |
| No. of Copies _____ | Distribution Sheet _____ | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Turnkey _____ |
| Yes _____ | No _____ | Evaluation _____ |

| | |
|----------------------------------|---|
| Interval Tested <u>5255-5307</u> | Drill Pipe Size <u>4.5 X-Hole</u> |
| Anchor Length <u>52'</u> | Top Choke — 1" _____ Bottom Choke — 3/4" _____ |
| Top Packer Depth <u>5250</u> | Hole Size — 77/8" _____ Rubber Size — 63/4" _____ |
| Bottom Packer Depth <u>5255</u> | Wt. Pipe I.D. — 2.7 Ft. Run _____ |
| Total Depth <u>5307</u> | Drill Collar — 2.25 Ft. Run <u>588'</u> |
| Mud Wt. <u>8.9</u> lb/gal. | Viscosity <u>56</u> Filtrate <u>7.6</u> |

Tool Open @ 11:00 pm Initial Blow strong blow BOB in 30 sec
GTS in 2 min. Gaged @ 3750 MCF

Final Blow BOB as tool opened.
Gaged @ 3811 MCF

Recovery — Total Feet 176' Feet of Gas In Pipe _____ Flush Tool? NO

| Rec. | Feet Of | %gas | %oil | %water | %mud |
|------------------|------------------------|----------------|----------------|------------------|----------------|
| Rec. _____ | Feet Of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec. <u>176'</u> | Feet Of <u>60 CWIM</u> | <u>30</u> %gas | <u>15</u> %oil | <u>25</u> %water | <u>30</u> %mud |
| Rec. _____ | Feet Of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |
| Rec. _____ | Feet Of _____ | %gas _____ | %oil _____ | %water _____ | %mud _____ |

BHT 126 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 3200 ppm System

| | | | |
|---|-----|-------------------------------|---|
| (A) Initial Hydrostatic Mud <u>2521</u> | PSI | AK1 Recorder No. <u>13277</u> | Range <u>4125</u> |
| (B) First Initial Flow Pressure <u>685</u> | PSI | @ (depth) <u>5287</u> | w/Clock No. <u>25813</u> |
| (C) First Final Flow Pressure <u>685</u> | PSI | AK1 Recorder No. <u>5495</u> | Range <u>4200</u> |
| (D) Initial Shut-In Pressure <u>1764</u> | PSI | @ (depth) <u>5304</u> | w/Clock No. <u>27594</u> |
| (E) Second Initial Flow Pressure <u>674</u> | PSI | AK1 Recorder No. _____ | Range _____ |
| (F) Second Final Flow Pressure <u>632</u> | PSI | @ (depth) _____ | w/Clock No. _____ |
| (G) Final Shut-In Pressure <u>1753</u> | PSI | Initial Opening <u>30</u> | Test <input checked="" type="checkbox"/> <u>700</u> |
| (H) Final Hydrostatic Mud <u>2459</u> | PSI | Initial Shut-in <u>60</u> | Jars <input checked="" type="checkbox"/> <u>100</u> |

| | |
|---------------------------------------|---|
| Final Flow <u>35</u> | Safety Joint <input checked="" type="checkbox"/> <u>100</u> |
| Final Shut-in <u>60</u> | Straddle _____ |
| Approved By <u>Chuck Schmalte</u> | Circ. Sub _____ |
| Our Representative <u>Tom Horvack</u> | Sampler _____ |
| | Extra Packer _____ |
| | Other _____ |

TOTAL PRICE \$ _____

WELL NAME Wood A 16in #1 DST # 3

RECORDER # 5495

INIT. HYD. MUD. 2376

FINAL HYD. MUD 2307

INITIAL FLOW MINUTES 3
INTERVAL 30

INITIAL SHUTIN MINUTES 3
INTERVAL 60

FINAL FLOW MINUTES 3
INTERVAL 35

FINAL SHUTIN MINUTES 3
INTERVAL 60

| INITIAL FLOW MINUTES | INITIAL SHUTIN MINUTES | FINAL FLOW MINUTES | FINAL SHUTIN MINUTES |
|----------------------|------------------------|--------------------|----------------------|
| 622 | 633 | 1 620 | 577 |
| 650 | 1500 | 2 620 | 1482 |
| 676 | 1532 | 3 613 | 1532 |
| 650 | 1578 | 4 642 | 1558 |
| 648 | 1591 | 5 627 | 1575 |
| 642 | 1604 | 6 627 | 1587 |
| 640 | 1612 | 7 624 | 1596 |
| 631 | 1618 | 8 620 | 1601 |
| 633 | 1623 | 9 615 | 1608 |
| 633 | 1627 | 10 611 | 1613 |
| 633 | 1630 | 11 614 | 1617 |
| | 1633 | 12 596 | 1620 |
| | 1636 | 13 590 | 1622 |
| | 1640 | 14 577 | 1624 |
| | 1642 | 15 | 1626 |
| | 1643 | 16 | 1627 |
| | 1644 | 17 | 1630 |
| | 1645 | 18 | 1631 |
| | 1646 | 19 | 1632 |
| | 1647 | 20 | 1634 |
| | 1649 | 21 | 1636 |
| | | 22 | 1637 |
| | | 23 | |
| | | 24 | |
| | | 25 | |
| | | 26 | |
| | | 27 | |

Test Ticket

№ 5668

| | | | | | |
|----------------|--|--------------------|---|---------------|--|
| Well Name & No | Good "A" Twin #1 | Test No | #3 | Date | 4-24-93 |
| Company | Charter Production Company | Zone Tested | Marmaton | | |
| Address | 224 E. Douglas Suite 400 Wichita, KS 67202 | Elevation | 2737 (KB) | | |
| Co Rep / Geo | Chuck Schmalz | cont | Zenith Drly #6 | Est Ft of Pay | 10' |
| Location: Sec | 20 | Twp | 34 | Rge | 31W |
| | | Co | Seward | State | KS |
| No of Copies | | Distribution Sheet | yes <input checked="" type="checkbox"/> | No Turnkey | yes <input type="checkbox"/> No <input type="checkbox"/> |
| | | | | Evaluation | |

| | | | |
|---------------------|-----------|---------------------------|--------------------------------|
| Interval Tested | 5255-5307 | Drill Pipe Size | 4.5 X-Hole |
| Anchor Length | 52' | Top Choke - 1 | Bottom Choke - 1/4" |
| Top Packer Depth | 5250 | Hole Size - 7 7/8" | Rubber Size - 6 3/4" |
| Bottom Packer Depth | 5255 | Wt Pipe I.D. - 27 Ft Run | - |
| Total Depth | 5307 | Drill Collar - 225 Ft Run | 588' |
| Mud Wt. | 8.9 | Viscosity | 56 |
| | lb/gal | Filtrate | 2.6 |
| Tool Open @ | 11:00 pm | Initial Blow | strong blow BOB in 30 sec |
| | | | GTS in 2 min. Gaged @ 3750 MCF |

Final Blow BOB as tool opened
Gauged @ 3811 MCF

| | | | | | |
|-----------------------|--------------|---------------------|------|-------------|------|
| Recovery - Total Feet | 176' | Feet of Gas in Pipe | | Fract Tool? | NO |
| Rec | Feet Of | %gas | %oil | %water | %mud |
| Rec | Feet Of | %gas | %oil | %water | %mud |
| Rec | 176' Feet Of | 30 | 15 | 25 | 30 |
| Rec | Feet Of | %gas | %oil | %water | %mud |
| Rec | Feet Of | %gas | %oil | %water | %mud |

BHT 126 °F Gravity °API @ °F Corrected Gravity °API
 RW @ °F Chlorides ppm Recovery Chlorides 3200 ppm System

| | | | | | | |
|----------------------------------|------|-----|-----------------|-------|------------|-------|
| (A) Initial Hydrostatic Mud | 2521 | PSI | AK1 Recorder No | 13277 | Range | 4125 |
| (B) First Initial Flow Pressure | 685 | PSI | @ (depth) | 5287 | w/Clock No | 25813 |
| (C) First Final Flow Pressure | 685 | PSI | AK1 Recorder No | 5495 | Range | 4200 |
| (D) Initial Shut-in Pressure | 1764 | PSI | @ (depth) | 5304 | w/Clock No | 27594 |
| (E) Second Initial Flow Pressure | 674 | PSI | AK1 Recorder No | | Range | |
| (F) Second Final Flow Pressure | 632 | PSI | @ (depth) | | w/Clock No | |
| (G) Final Shut-in Pressure | 1753 | PSI | Initial Opening | 30 | Test | X 700 |
| (H) Final Hydrostatic Mud | 2459 | PSI | Initial Shut-in | 60 | Jars | X 200 |

Final Flow 35 Safety Joint X 50
 Final Shut-in 60 Straddle
 Circ. Sub
 Sampler
 Extra Packer
 Other seal 5-0
 TOTAL PRICE 1000

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF 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 OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By *Chuck Schmalz*
 Our Representative *Tom Horacek*

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name GOOD 'A' TWIN #1 Test No. 4 Date 4/25/93
Company CHARTER PRODUCTION COMPANY Zone LOW MARMATON
Address 224 EAST DOUGLAS #400 WICHITA KS 67202 Elevation 2737
Co. Rep./Geo. CHUCK SCHMALTZ Cont. ZENITH RIG #6 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 34S Rge. 31W Co. SEWARD State KS

Interval Tested 5308-5318 Drill Pipe Size 4.5" XH
Anchor Length 10 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5303 Drill Collar - 2.25 Ft. Run 617
Bottom Packer Depth 5309 Mud Wt. 8.3 lb/Gal.
Total Depth 5318 Viscosity 60 Filtrate 8.0

Tool Open @ 3:45 AM Initial Blow STRONG BLOW - BOTTOM OF BUCKET IN 30 SECONDS
ISI: BLED OFF BLOW - WEAK BLOW - BUILT TO 3"
Final Blow 3" BLOW - BUILT TO BOTTOM IN 10 MINUTES
FSI: BLED OFF BLOW - WEAK BLOW - BOTTOM OF BUCKET IN 5 MINUTES

Recovery - Total Feet 763 Flush Tool? NO

Rec. 3850 Feet of GAS IN PIPE
Rec. 90 Feet of GASSY OIL CUT MUDDY WATER 40%G/10%O/20%W/30%M
Rec. 673 Feet of SALT WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 126 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.455 @ 72 °F Chlorides 18000 ppm Recovery Chlorides 5400 ppm System

(A) Initial Hydrostatic Mud 2526.9 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 72.8 PSI @ (depth) 5310 w / Clock No. 25813

(C) First Final Flow Pressure 195.3 PSI AK1 Recorder No. 5495 Range 4200

(D) Initial Shut-in Pressure 1779.1 PSI @ (depth) 5315 w / Clock No. 27594

(E) Second Initial Flow Pressure 239.2 PSI AK1 Recorder No. _____ Range _____

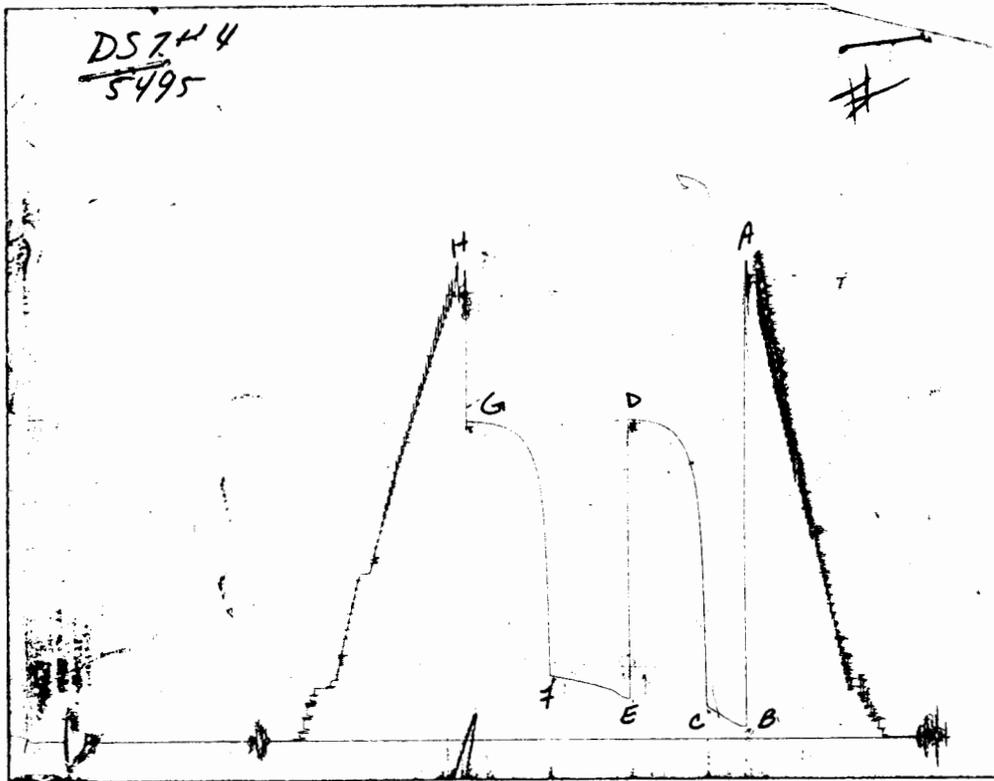
(F) Second Final Flow Pressure 381.5 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1769.3 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2495.4 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative TOM HORACEK

CHART PAGE



This is an actual photograph of recorder chart

| | FIELD READING | OFFICE READING |
|----------------------------------|------------------|-------------------|
| (A) INITIAL HYDROSTATIC MUD | 2521 | 2526.9 |
| (B) FIRST INITIAL FLOW PRESSURE | 67 | 72.8 |
| (C) FIRST FINAL FLOW PRESSURE | 189 | 195.3 |
| (D) INITIAL CLOSED-IN PRESSURE | 1774 | 1779.1 |
| (E) SECOND INITIAL FLOW PRESSURE | 233 | 239.2 |
| (F) SECOND FINAL FLOW PRESSURE | 375 | 381.5 |
| (G) FINAL CLOSED-IN PRESSURE | 1764 | 1769.3 |
| (H) FINAL HYDROSTATIC MUD | 2490 | 2495.4 |

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 5669

| | | | | | | | | | |
|-----------------|---|--------------------|----------------|-----------------|---------|---------|--------|-------|------------|
| Well Name & No. | Good "A" Twin #1 | Test No. | 4 | Date | 4-25-93 | | | | |
| Company | Charter Production Company | Zone Tested | Lower Marmon | | | | | | |
| Address | 224 E. Douglas Suite 400 Wichita Ki 67202 | Elevation | 2737 (KB) | | | | | | |
| Co. Rep./Geo. | Chuck Schmalte | cont. | Zenith Drly #6 | Est. Ft. of Pay | | | | | |
| Location: Sec. | 20 | Twp. | 34 | Rge. | 31 W | CO. | Seward | State | Ks. |
| No. of Copies | | Distribution Sheet | Yes | X | No | Turnkey | Yes | No | Evaluation |

Interval Tested 5308-5318 Drill Pipe Size 4.5 x-Hole
Anchor Length 10' Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth 5303 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth 5308 Wt. Pipe I.D. — 2.7 Ft. Run —
Total Depth 5318 Drill Collar — 2.25 Ft. Run 617'
Mud Wt. 8.3 lb/gal. Viscosity 60 Filtrate 8.0

Tool Open @ 3:45 AM Initial Blow Strong Blow - BOB in 30 sec.

FST - Bled off blow - weak blow - built to 3 in.

Final Blow 3 in. blow - Built to bottom in 10 min.

FST - Bled off blow - weak blow - BOB in 5 min.

Recovery — Total Feet 763' Feet of Gas in Pipe 3850 Flush Tool? NO

| Rec. | Feet Of | %gas | %oil | %water | %mud | |
|------|------------|---------------------------|----------------|----------------|------------------|----------------|
| Rec. | Feet Of | %gas | %oil | %water | %mud | |
| Rec. | <u>90'</u> | Feet Of <u>60CWM</u> | <u>40</u> %gas | <u>10</u> %oil | <u>20</u> %water | <u>30</u> %mud |
| Rec. | <u>673</u> | Feet Of <u>Salt Water</u> | %gas | %oil | %water | %mud |
| Rec. | Feet Of | %gas | %oil | %water | %mud | |

BHT 126 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 1,455 @ 72 °F Chlorides 18,000 ppm Recovery Chlorides 5,400 ppm System

(A) Initial Hydrostatic Mud 2521 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 67 PSI @ (depth) 5310 w/Clock No. 25813

(C) First Final Flow Pressure 189 PSI AK1 Recorder No. 5495 Range 4200

(D) Initial Shut-in Pressure 1774 PSI @ (depth) 5315 w/Clock No. 27594

(E) Second Initial Flow Pressure 233 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 375 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-in Pressure 1764 PSI Initial Opening 30 Test X 700

(H) Final Hydrostatic Mud 2490 PSI Initial Shut-in 60 Jars X 200

Final Flow 60 Safety Joint X 50

Final Shut-in 60 Straddle _____

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Approved By [Signature]

Our Representative Tom Horacek

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ 9500