

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Computer Invented

Drill-Stem Test Data

| | | | | | | | | | |
|-----------------|-------------------------------------|-------------|-----------|-----------------|---------|-----|---------|-------|--------|
| Well Name & No. | ROESNER #16 | Test No. | 1 | Date | 7/12/90 | | | | |
| Company | HALLWOOD PETROLEUM | Zone Tested | TARKIO | | | | | | |
| Address | 4582 S ULSTER PRKWY-DENVER CO 80237 | | Elevation | 1868 KB | | | | | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 0 | | | | |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W | Co. | RUSSELL | State | KANSAS |

| | | | | | | |
|---------------------|---|-----------------------------|------------------------------------|----|----------|-----|
| Interval Tested | 2384-2458 | Drill Pipe Size | 4.5" FH | | | |
| Anchor Length | 74 | Top Choke - 1" | Bottom Choke - 3/4" | | | |
| Top Packer Depth | 2380 | Hole Size - 7 7/8" | Rubber Size - 6 3/4" | | | |
| Bottom Packer Depth | 2384 | Wt. Pipe I.D. - 2.7 Ft. Run | 909 | | | |
| Total Depth | 2458 | Drill Collar - 2.25 Ft. Run | 0 | | | |
| Mud Wt. | 8.9 | lb/gal. | Viscosity | 38 | Filtrate | 9.6 |
| Tool Open @ | 1:43 PM | Initial Blow | SLID TOOL 15' TO BOTTOM -WEAK-DIED | | | |
| | IN 20 MINUTES | | | | | |
| Final Blow | NO BLOW-FLUSHED TOOL-WEAK -DIED IN 10 MINUTES | | | | | |

| | | | | | | | | | |
|----------------------------------|--------|--------------|-----------------------------|-----------|-------------|----------------------|---|------|--|
| Recovery - Total Feet | 65 | Flush Tool? | 2nd OPEN | | | | | | |
| Rec. | 65 | Feet of | MUD WITH OIL SPECKS IN TOOL | | | | | | |
| Rec. | 0 | Feet of | | | | | | | |
| Rec. | 0 | Feet of | | | | | | | |
| Rec. | 0 | Feet of | | | | | | | |
| Rec. | 0 | Feet of | | | | | | | |
| BHT | 0 | %F Gravity | 0 | %API @ | 0 | %F Corrected Gravity | 0 | %API | |
| RW | @ | %F Chlorides | ppm Recovery | Chlorides | 4000 | ppm System | | | |
| (A) Initial Hydrostatic Mud | 1199.3 | PSI | AK1 Recorder No. | 13754 | Range | 4000 | | | |
| (B) First Initial Flow Pressure | 41.2 | PSI | @ (depth) | 2449 | w/Clock No. | 0 | | | |
| (C) First Final Flow Pressure | 41.2 | PSI | AK1 Recorder No. | 13849 | Range | 4375 | | | |
| (D) Initial Shut-In Pressure | 261.2 | PSI | @ (depth) | 2454 | w/Clock No. | 0 | | | |
| (E) Second Initial Flow Pressure | 41.2 | PSI | AK1 Recorder No. | 0 | Range | 0 | | | |
| (F) Second Final Flow Pressure | 41.2 | PSI | @ (depth) | 0 | w/Clock No. | 0 | | | |
| (G) Final Shut-In Pressure | 162.3 | PSI | Initial Opening | 30 | | | | | |
| (H) Final Hydrostatic Mud | 1167.8 | PSI | Initial Shut-In | 45 | | | | | |
| | | | Final Flow | 30 | | | | | |
| | | | Final Shut-In | 45 | | | | | |

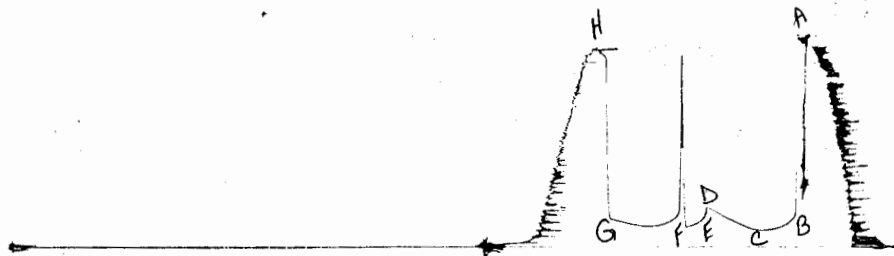
MR DAN BANGLE

450

Our Representative _____

TOTAL PRICE \$ _____

DST# / RECORDER#



This is an actual photograph of recorder chart.

| POINT | PRESSURE | | |
|---------------------------------------|---------------|----------------|-----|
| | Field Reading | Office Reading | |
| (A) Initial Hydrostatic Mud..... | 1196 | 1199.3 | PSI |
| (B) First Initial Flow Pressure..... | 39 | 41.2 | PSI |
| (C) First Final Flow Pressure..... | 39 | 41.2 | PSI |
| (D) Initial Closed-in Pressure..... | 256 | 261.2 | PSI |
| (E) Second Initial Flow Pressure..... | 39 | 41.2 | PSI |
| (F) Second Final Flow Pressure..... | 39 | 41.2 | PSI |
| (G) Final Closed-in Pressure..... | 156 | 162.3 | PSI |
| (H) Final Hydrostatic Mud..... | 1166 | 1167.8 | PSI |

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67801

FLUID SAMPLER DATA

Ticket No. 2971 Date 7/12/90
HALLWOOD PETROLEUM
Company Name ROESNER #16 1
Lease _____ Test No. _____
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML
Oil 0 ML
Mud 4000 ML
Water 0 ML
Other 0 ML
Pressure 10 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 4000 ppm.
Resistivity 0 ohms @ 0 F
Viscosity 38
Mud Weight 8.9
Filtrate 9.6
Other _____

SAMPLER ANALYSIS

Resistivity 1.5 ohms @ 80 F
Chlorides 3700 ppm.
Gravity 0 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.
MIDDLE
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.
BOTTOM
Resistivity 1.5 ohms @ 80 F
Chlorides 3700 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2971

Well Name & No. Roesner #16 Test No. 1 Date 7-12-90
Company Hallwood Petro. Zone Tested Tackio
Address 4582 S. Wister Parkway, Denver, Colo. 80237 Elevation 1868 K.B.
Co. Rep. / Geo. Jim Musgrove Cont. Duke #1 Est. Ft. of Pay _____
Location: Sec. 9 Twp. 15s Rge. 13w Co. Russell State Ks.
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____

Interval Tested 2384-2458 Drill Pipe Size 4.5 F.H.
Anchor Length 74 Top Choke — 1" _____ Bottom Choke — 1/4" _____
Top Packer Depth 2380 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 2384 Wt. Pipe I.D. — 2.7 Ft. Run 909
Total Depth 2458 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 8.9 lb/gal. Viscosity 38 Filtrate 9.6
Tool Open @ 1:43 P.M. Initial Blow Slid tool 15' to bottom - weak - died in 20 min.
Final Blow No blow - Flushed tool - weak - died in 10 min.

Recovery — Total Feet 65 Flush Tool? 2nd open 1
Rec. 65 Feet of mud w/ oil specs in tool
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4000 ppm System
(A) Initial Hydrostatic Mud 1196 PSI Ak1 Recorder No. 13754 Range 4000
(B) First Initial Flow Pressure 39 PSI @ (depth) 2449 w/Clock No. _____
(C) First Final Flow Pressure 39 PSI Ak1 Recorder No. 13849 Range 4375
(D) Initial Shut-In Pressure 256 PSI @ (depth) 2454 w/Clock No. _____
(E) Second Initial Flow Pressure 39 PSI Ak1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 39 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 156 PSI Initial Opening 30 Test 160
(H) Final Hydrostatic Mud 1166 PSI Initial Shut-In 45 Jars
Final Flow 30 Safety Joint
Final Shut-In 45 Straddle _____

Approved By Jim Musgrove
Our Representative Dave Brouse

Circ. Sub
Sampler 100 00
Extra Packer _____
Other _____
TOTAL PRICE \$ 500 00

Discount 10%

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

| | | | | | | | | | |
|-----------------|--|-------------|---------|-----------------|---------|-----|---------|-------|--------|
| Well Name & No. | ROESNER #16 | Test No. | 2 | Date | 7/13/90 | | | | |
| Company | HALLWOOD PETROLEUM INC | Zone Tested | TOPEKA | | | | | | |
| Address | 4582 S ULSTER ST PRKWY DENVER CO 80237 | Elevation | 1868 KB | | | | | | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 0 | | | | |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W | Co. | RUSSELL | State | KANSAS |

| | | | | | | |
|---------------------|-------------|-----------------------------|-------------------------|----|----------|------|
| Interval Tested | 2894 - 2924 | Drill Pipe Size | 4.5" FH | | | |
| Anchor Length | 30 | Top Choke — 1" | Bottom Choke — 3/4" | | | |
| Top Packer Depth | 2889 | Hole Size — 77/8" | Rubber Size — 63/4" | | | |
| Bottom Packer Depth | 2894 | Wt. Pipe I.D. — 2.7 Ft. Run | 909 | | | |
| Total Depth | 2924 | Drill Collar — 2.25 Ft. Run | 0 | | | |
| Mud Wt. | 9.2 | lb/gal. | Viscosity | 45 | Filtrate | 10.8 |
| Tool Open @ | 9:00 PM | Initial Blow | WEAK-DIED IN 20 MINUTES | | | |

Final Blow NO BLOW-FLUSHED TOOL

Recovery — Total Feet 45 Flush Tool? YES

| | | | |
|------|----|---------|-----------------|
| Rec. | 45 | Feet of | OIL SPOTTED MUD |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |

BHT 0 °F Gravity 0 °API @ 0 °F Corrected Gravity 0 °API

RW 0 @ 0 °F Chlorides 6000 ppm Recovery Chlorides 6000 ppm System

| | | | | | | |
|----------------------------------|--------|-----|------------------|-------|-------------|------|
| (A) Initial Hydrostatic Mud | 1499.8 | PSI | AK1 Recorder No. | 13754 | Range | 4000 |
| (B) First Initial Flow Pressure | 11.2 | PSI | @ (depth) | 2899 | w/Clock No. | 0 |
| (C) First Final Flow Pressure | 11.2 | PSI | AK1 Recorder No. | 13849 | Range | 4375 |
| (D) Initial Shut-in Pressure | 572.4 | PSI | @ (depth) | 2924 | w/Clock No. | 0 |
| (E) Second Initial Flow Pressure | 11.2 | PSI | AK1 Recorder No. | 0 | Range | 0 |
| (F) Second Final Flow Pressure | 21.3 | PSI | @ (depth) | 0 | w/Clock No. | 0 |
| (G) Final Shut-in Pressure | 541.6 | PSI | Initial Opening | 30 | | |
| (H) Final Hydrostatic Mud | 1501.1 | PSI | Initial Shut-in | 45 | | |
| | | | Final Flow | 30 | | |
| | | | Final Shut-in | 45 | | |

MR HARRY SCHMIDT

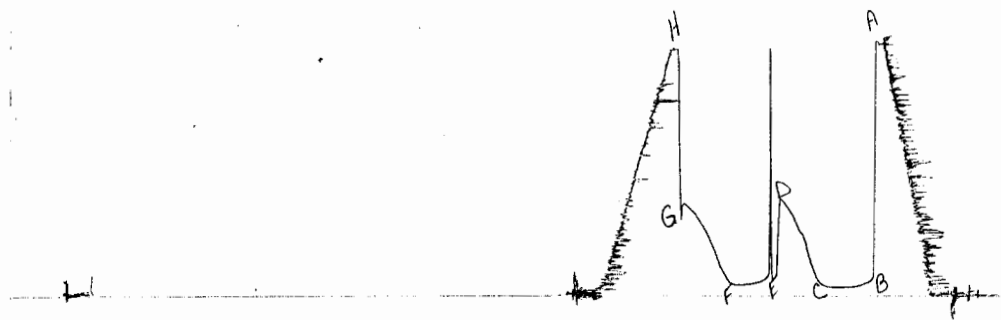
450

Our Representative _____

TOTAL PRICE \$ _____

DST# 2 RECORDER# 13849

#13849 TICKET # 2972



This is an actual photograph of recorder chart.

PRESSURE

| POINT | Field Reading | Office Reading | |
|---------------------------------------|---------------|----------------|-----|
| (A) Initial Hydrostatic Mud..... | 1496 | 1499.8 | PSI |
| (B) First Initial Flow Pressure..... | 10 | 11.2 | PSI |
| (C) First Final Flow Pressure..... | 10 | 11.2 | PSI |
| (D) Initial Closed-in Pressure..... | 571 | 572.4 | PSI |
| (E) Second Initial Flow Pressure..... | 10 | 11.2 | PSI |
| (F) Second Final Flow Pressure..... | 20 | 21.3 | PSI |
| (G) Final Closed-in Pressure..... | 531 | 541.6 | PSI |
| (H) Final Hydrostatic Mud..... | 1496 | 1501.1 | PSI |

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2972 Date 7/13/90
Company Name HALLWOOD PETROLEUM INC
Lease ROESNER #16 Test No. 2
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML
Oil 0 ML
Mud 4000 ML
Water 0 ML
Other 0 ML
Pressure 20 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 6000 ppm.
Resistivity .8 ohms @ 60 F
Viscosity 45
Mud Weight 9.2
Filtrate 10.8
Other _____

SAMPLER ANALYSIS

Resistivity .8 ohms @ 60 F
Chlorides 9000 ppm.
Gravity 0 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity .8 ohms @ 60 F
Chlorides 9000 ppm.

MIDDLE

Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

BOTTOM

Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2972

Well Name & No. ROESNER #16 Test No. TWO Date 7-13-90
Company HALLWOOD PETROLEUM INC. Zone Tested _____
Address 4582 S. VILSTER PARKWAY DENVER COLO. 80237 Elevation 1868 1/2
Co. Rep. / Geo. JIM MUSGROVE Cont. DUISE #1 Est. Ft. of Pay TOPEKA
Location: Sec. 9 Twp. 15 S Rge. 13 W Co. RUSSELL State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____

Interval Tested 2894 to 2924 Drill Pipe Size 4 1/2" F.H.
Anchor Length 30' Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth 2889 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth 2894 Wt. Pipe I.D. — 2.7 Ft. Run 909
Total Depth 2924 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.2 lb / gal. Viscosity 45 Filtrate 10.8
Tool Open @ 9:00 P Initial Blow WEAK DIED IN 20 MIN.
Final Blow NO BLOW FLUSHED TOOL

Recovery — Total Feet 45 Flush Tool? YES
Rec. _____ Feet of _____
Rec. 45 Feet of OIL SPOTTED MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6000 ppm System
(A) Initial Hydrostatic Mud 1496 PSI AK1 Recorder No. 13754 Range 4000
(B) First Initial Flow Pressure 10 PSI @ (depth) 2899 w/Clock No. _____
(C) First Final Flow Pressure 10 PSI AK1 Recorder No. 13849 Range 4375
(D) Initial Shut-In Pressure 571 PSI @ (depth) 2924 w/Clock No. _____
(E) Second Initial Flow Pressure 10 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 20 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 531 PSI Initial Opening 30 Test
(H) Final Hydrostatic Mud 1496 PSI Initial Shut-In 45 Jars
Final Flow 30 Safety Joint
Final Shut-In 45 Straddle _____

Approved By Jim Musgrove Circ. Sub
Our Representative Frank J. Schmitt Sampler 100
Extra Packer _____
Other _____
TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

| | | | | | | |
|-----------------|---|-------------|---------|-----------------|---------|--------|
| Well Name & No. | ROESNER #16 | Test No. | 3 | Date | 7/14/90 | |
| Company | HALLWOOD PETROLEUM INC | Zone Tested | TORONTO | | | |
| Address | 4582 S ULSTER ST PRKWAY DENVER CO 80237 | | | Elevation | 1868 KB | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 0 | |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W | |
| | | | Co. | RUSSELL | State | KANSAS |

| | | | | | | |
|---------------------|-----------|-----------------------------|--------------------------|----|----------|------|
| Interval Tested | 2960-3004 | Drill Pipe Size | 4.5" FH | | | |
| Anchor Length | 44 | Top Choke — 1" | Bottom Choke — 3/4" | | | |
| Top Packer Depth | 2955 | Hole Size — 7 7/8" | Rubber Size — 6 3/4" | | | |
| Bottom Packer Depth | 2960 | Wt. Pipe I.D. — 2.7 Ft. Run | 0 | | | |
| Total Depth | 3004 | Drill Collar — 2.25 Ft. Run | 0 | | | |
| Mud Wt. | 9.5 | lb/gal. | Viscosity | 47 | Filtrate | 15.2 |
| Tool Open @ | 10:30 AM | Initial Blow | VERY WEAK FOR 10 MINUTES | | | |

Final Blow NO BLOW-FLUSHED TOOL RECEIVED SURGE

| | | | |
|-----------------------|---|-------------|-----|
| Recovery — Total Feet | 5 | Flush Tool? | YES |
| Rec. | 5 | Feet of | MUD |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |

| | | | | | | | | | |
|----------------------------------|--------|------------|------------------|--------------|-------------|----------------------|-----------|------|------------|
| BHT | 0 | °F Gravity | | °API @ | 0 | °F Corrected Gravity | 0 | °API | |
| RW | 0.6 | @ | 80 | °F Chlorides | 9000 | ppm Recovery | Chlorides | 6000 | ppm System |
| (A) Initial Hydrostatic Mud | 1567.4 | PSI | Ak1 Recorder No. | 13754 | Range | 4000 | | | |
| (B) First Initial Flow Pressure | 11.2 | PSI | @ (depth) | 2965 | w/Clock No. | 0 | | | |
| (C) First Final Flow Pressure | 11.2 | PSI | Ak1 Recorder No. | 13849 | Range | 4375 | | | |
| (D) Initial Shut-In Pressure | 99.5 | PSI | @ (depth) | 3004 | w/Clock No. | 0 | | | |
| (E) Second Initial Flow Pressure | 11.2 | PSI | Ak1 Recorder No. | 0 | Range | 0 | | | |
| (F) Second Final Flow Pressure | 11.2 | PSI | @ (depth) | 0 | w/Clock No. | 0 | | | |
| (G) Final Shut-In Pressure | 51.2 | PSI | Initial Opening | 30 | | | | | |
| (H) Final Hydrostatic Mud | 561.3 | PSI | Initial Shut-In | 45 | | | | | |
| | | | Final Flow | 30 | | | | | |
| | | | Final Shut-In | 45 | | | | | |

MR HARRY SCHMIDT

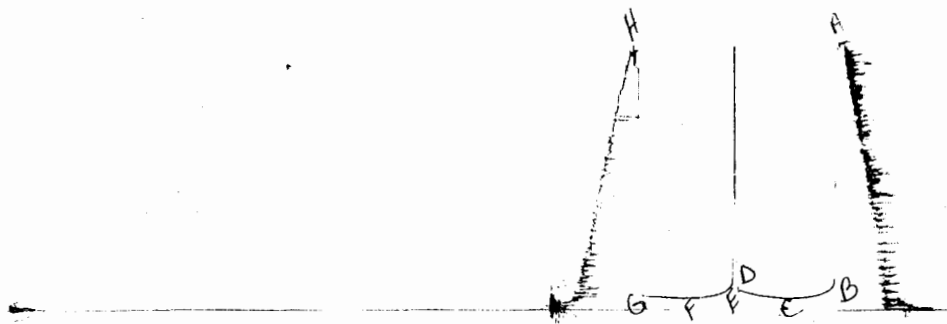
450

Our Representative _____

TOTAL PRICE \$ _____

DST# 3 RECORDER# 13849

13849 TICKET # 2973



This is an actual photograph of recorder chart.

PRESSURE

| POINT | Field Reading | Office Reading | |
|---------------------------------------|---------------|----------------|-----|
| (A) Initial Hydrostatic Mud..... | 1566 | 1567.4 | PSI |
| (B) First Initial Flow Pressure..... | 10 | 11.2 | PSI |
| (C) First Final Flow Pressure..... | 10 | 11.2 | PSI |
| (D) Initial Closed-in Pressure..... | 98 | 99.5 | PSI |
| (E) Second Initial Flow Pressure..... | 10 | 11.2 | PSI |
| (F) Second Final Flow Pressure..... | 10 | 11.2 | PSI |
| (G) Final Closed-in Pressure..... | 59 | 51.2 | PSI |
| (H) Final Hydrostatic Mud..... | 560 | 561.3 | PSI |

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2973 Date 7/14/90
Company Name HALLWOOD PETROLEUM INC
Lease ROESNER #16 Test No. 3
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML
Oil 0 ML
Mud 4000 ML
Water 0 ML
Other 0 ML
Pressure 10 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 6000 ppm.
Resistivity .8 ohms @ 60 F
Viscosity 47
Mud Weight 9.5
Filtrate 15.2
Other _____

SAMPLER ANALYSIS

Resistivity .6 ohms @ 80 F
Chlorides 9000 ppm.
Gravity 0 corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity 6 ohms @ 80 F
Chlorides 9000 ppm.
MIDDLE
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.
BOTTOM
Resistivity 0 ohms @ 0 F
Chlorides 0 ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2973

Well Name & No. ROESNER #16 Test No. THREE Date 7-14-90
Company HALLWOOD PETROLEUM INC. Zone Tested TORONTO
Address 4582 S. VASTAR PARKWAY DENVER CO. 80237 Elevation 1868 KB
Co. Rep./Geo. JIM MUGGROVE Cont. DUKE #1 Est. Ft. of Pay _____
Location: Sec. 9 Twp. 15 S Rge. 13 W Co. RUSSELL State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____

Interval Tested 2960 TO 3004 Drill Pipe Size 4 1/2" 15 ft.
Anchor Length 44' Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 2955' Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 2960 Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth 3004 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.5 lb/gal. Viscosity 45 Filtrate 15.2
Tool Open @ 10:30 A Initial Blow VERY WEAK FOR 10 MIN.

Final Blow NO BLOW FLUSHED TOOL RECEIVED SURGIS

Recovery — Total Feet 5' Flush Tool? YES
Rec. _____ Feet of _____
Rec. 5' Feet of MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.6 @ 80 °F chlorides 9000 ppm Recovery chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 1560 PSI AK1 Recorder No. 13754 Range 4000
(B) First Initial Flow Pressure 10 PSI @ (depth) 2965' w/Clock No. _____
(C) First Final Flow Pressure 10 PSI AK1 Recorder No. 13849 Range 4375
(D) Initial Shut-In Pressure 98 PSI @ (depth) 3004 w/Clock No. _____
(E) Second Initial Flow Pressure 10 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 10 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 49 PSI Initial Opening 30 Test X
(H) Final Hydrostatic Mud 1560 PSI Initial Shut-In 45 Jars X
Final Flow 30 Safety Joint X
Final Shut-In 45 Straddle _____

Approved By [Signature] Circ. Sub X
Our Representative [Signature] Sampler 100
Extra Packer _____
Other _____
TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

| | | | | | |
|-----------------|--|-------------|-----------------|-----------------|---------|
| Well Name & No. | ROESNER #16 | Test No. | 4 | Date | 7/14/90 |
| Company | HALLWOOD PETROLEUM INC | Zone Tested | LANSING-KS CITY | | |
| Address | 4582 S ULSTER ST PRKWY DENVER CO 80237 | Elevation | 1868 KB | | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 5 |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W |
| | | Co. | RUSSELL | State | KANSAS |

| | | | | |
|---------------------|--------------------------|-----------------------------|-----------------------------|---------------|
| Interval Tested | 3052-3066 | Drill Pipe Size | 4.5" FH | |
| Anchor Length | 14 | Top Choke — 1" | Bottom Choke — 3/4" | |
| Top Packer Depth | 3047 | Hole Size — 77/8" | Rubber Size — 63/4" | |
| Bottom Packer Depth | 3052 | Wt. Pipe I.D. — 2.7 Ft. Run | 909 | |
| Total Depth | 3066 | Drill Collar — 2.25 Ft. Run | 0 | |
| Mud Wt. | 9.5 | lb/gal. | Viscosity 47 | Filtrate 15.2 |
| Tool Open @ | 6:55 PM | Initial Blow | WEAK THROUGHOUT FLOW PERIOD | |
| | 1" IN WATER | | | |
| Final Blow | WEAK TO FAIR 2" IN WATER | | | |

| | | | |
|----------------------------------|--------------|---|-----------------------------------|
| Recovery — Total Feet | 360 | Flush Tool? | NO |
| Rec. 180 | Feet of | GAS IN PIPE | |
| Rec. 0 | Feet of | | |
| Rec. 60 | Feet of | CLEAN OIL | |
| Rec. 120 | Feet of | GAS & MUD CUT OIL - 20%OIL / 40%GAS / 30%MUD / 10%WTR | |
| Rec. 0 | Feet of | | |
| BHT 116 °F | Gravity 35 | °API @ 70 | °F Corrected Gravity 34 °API |
| RW @ | °F Chlorides | ppm Recovery | Chlorides 6000 ppm System |
| (A) Initial Hydrostatic Mud | 1545 | PSI | Ak1 Recorder No. 13754 Range 4000 |
| (B) First Initial Flow Pressure | 23.6 | PSI @ (depth) | 3060 w/Clock No. 0 |
| (C) First Final Flow Pressure | 34.4 | PSI | AK1 Recorder No. 13849 Range 4375 |
| (D) Initial Shut-In Pressure | 743 | PSI @ (depth) | 3066 w/Clock No. 0 |
| (E) Second Initial Flow Pressure | 47.2 | PSI | AK1 Recorder No. 0 Range 0 |
| (F) Second Final Flow Pressure | 63.9 | PSI @ (depth) | 0 w/Clock No. 0 |
| (G) Final Shut-In Pressure | 648.2 | PSI | Initial Opening 30 |
| (H) Final Hydrostatic Mud | 1533 | PSI | Initial Shut-In 60 |
| | | | Final Flow 60 |
| | | | Final Shut-In 120 |

MR HARRY SCHMIDT

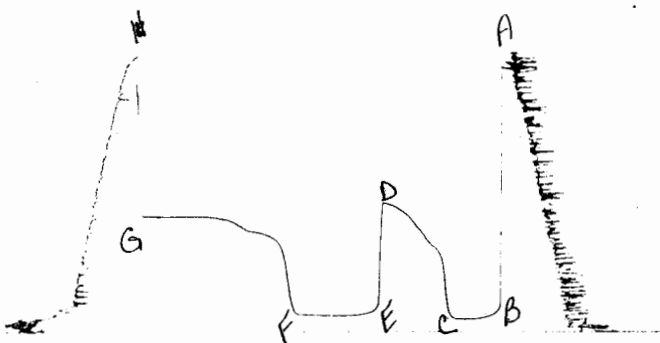
450

Our Representative _____

TOTAL PRICE \$ _____

DST# 4 RECORDER# 13849

13849 TICISIT # 2974



This is an actual photograph of recorder chart.

PRESSURE

| POINT | Field Reading | Office Reading | |
|---------------------------------------|---------------|----------------|-----|
| (A) Initial Hydrostatic Mud..... | 1586 | 1545 | PSI |
| (B) First Initial Flow Pressure..... | 10 | 23.6 | PSI |
| (C) First Final Flow Pressure..... | 30 | 34.4 | PSI |
| (D) Initial Closed-in Pressure..... | 729 | 743 | PSI |
| (E) Second Initial Flow Pressure..... | 40 | 47.2 | PSI |
| (F) Second Final Flow Pressure..... | 59 | 63.9 | PSI |
| (G) Final Closed-in Pressure..... | 640 | 648.2 | PSI |
| (H) Final Hydrostatic Mud..... | 1580 | 1533 | PSI |

COMPUTER EVALUATION BY TRILOBITE TESTING
HALLWOOD PETROLEUM INC
REPORT FOR DST#4 FOR THE ROESNER #16
9-15S-13W RUSSELL KS

TEST PARAMETERS

ELEVATION: 1868 KB EST. PAY: 5 FT
DATUM: -1193 ZONE TESTED: LANSING-KS CITY
TEST INTERVAL: 3052-3066
RECORDED DEPTH: 3060 TIME INTERVALS: 30-60-60-120
BOTTOM HOLE TEMP: 116 VISCOSITY: 6.622526 CP
HOLE SIZE: 7.875 IN

CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 7.023759
TOTAL FEET OF RECOVERY: 360
BARRELS IN WEIGHT PIPE: 2.52
GAS OIL RATIO: 2.787206 CU.FT./BBL
BUBBLE POINT PRESSURE: ; .2755844
TOTAL BARRELS OF RECOVERY: 2.52
API GRAVITY: 34 UNCORR. INIT. PROD.: 40.32 BBL/DAY
CORRECTED PIPE FILLUP: 172.7027 FLUID GRADIENT: .37
CORR. BARRELS OF RECOVERY: 1.2089 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 19.3424 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
7.503841

INITIAL SLOPE 794.27 PSI/CYCLE
INITIAL P* 883 PSI

FINAL SLOPE 187.21 PSI/CYCLE
FINAL P* 694 PSI

TRANSMISSIBILITY 16.79971 (MD.-FT./CP.)
PERMEABILITY 22.25131 (MD.)
INDICATED FLOW CAPACITY 111.2565 (MD.FT)
PRODUCTIVITY INDEX 1.898367E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO .6159302
RADIUS OF INVESTIGATION 44.75062 (FT.)
POTENTIOMETRIC SURFACE 417.386 (FT.)
DRAWDOWN FACTOR 21.4043 (%)

INITIAL FLOW

RECORDER # 13754

DST #4

| DT (MIN) | PRESSURE | <> | PRESSURE |
|----------|----------|----|----------|
| 0 | 23.6 | | 23.6 |
| 3 | 29.5 | | 5.9 |
| 6 | 29.7 | | .2000008 |
| 9 | 29.9 | | .1999989 |
| 12 | 30.5 | | .6000004 |
| 15 | 31.5 | | 1 |
| 18 | 32.4 | | .9000015 |
| 21 | 33.4 | | 1 |
| 24 | 34.4 | | 1 |
| 27 | 34.4 | | 0 |
| 30 | 34.4 | | 0 |
| 33 | 34.4 | | 0 |

FINAL FLOW

RECORDER # 13754

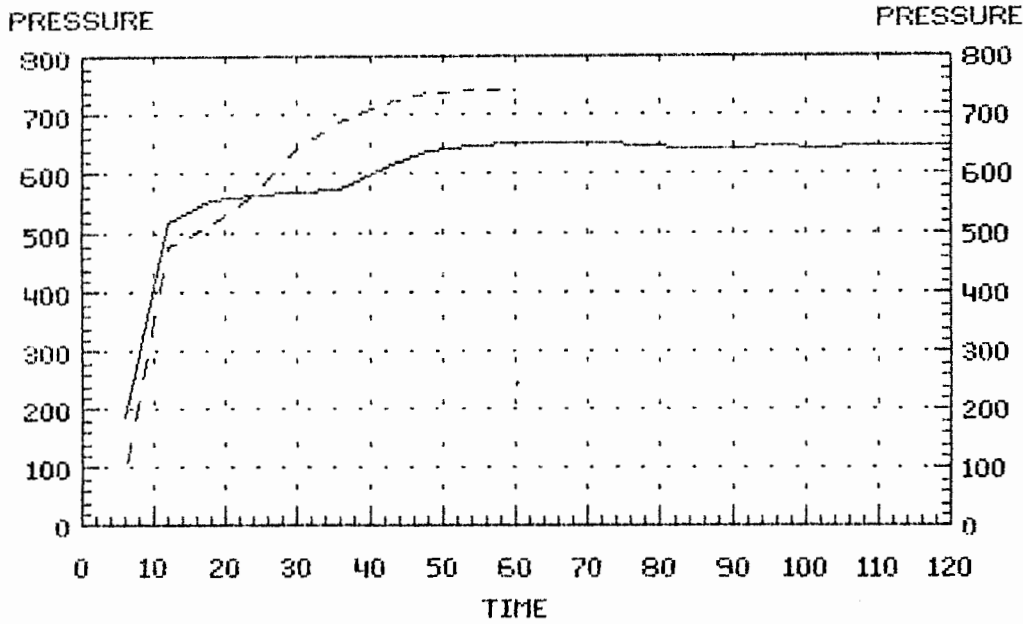
DST #4

| DT (MIN) | PRESSURE | <> | PRESSURE |
|----------|----------|----|----------|
| 0 | 47.2 | | 47.2 |
| 3 | 49.2 | | 2 |
| 6 | 50.2 | | 1 |
| 9 | 50.5 | | .2999992 |
| 12 | 51.1 | | .5999985 |
| 15 | 52.1 | | 1 |
| 18 | 53.1 | | 1 |
| 21 | 54.1 | | 1 |
| 24 | 55.1 | | 1 |
| 27 | 55.1 | | 0 |
| 30 | 56.1 | | 1 |
| 33 | 57 | | .9000015 |
| 36 | 57.9 | | .9000015 |
| 39 | 58.1 | | .199997 |
| 42 | 60 | | 1.900002 |
| 45 | 60 | | 0 |
| 48 | 60 | | 0 |
| 51 | 61 | | 1 |
| 54 | 62 | | 1 |
| 57 | 62.9 | | .9000015 |
| 60 | 63.9 | | 1 |

DELTA T DELTA P

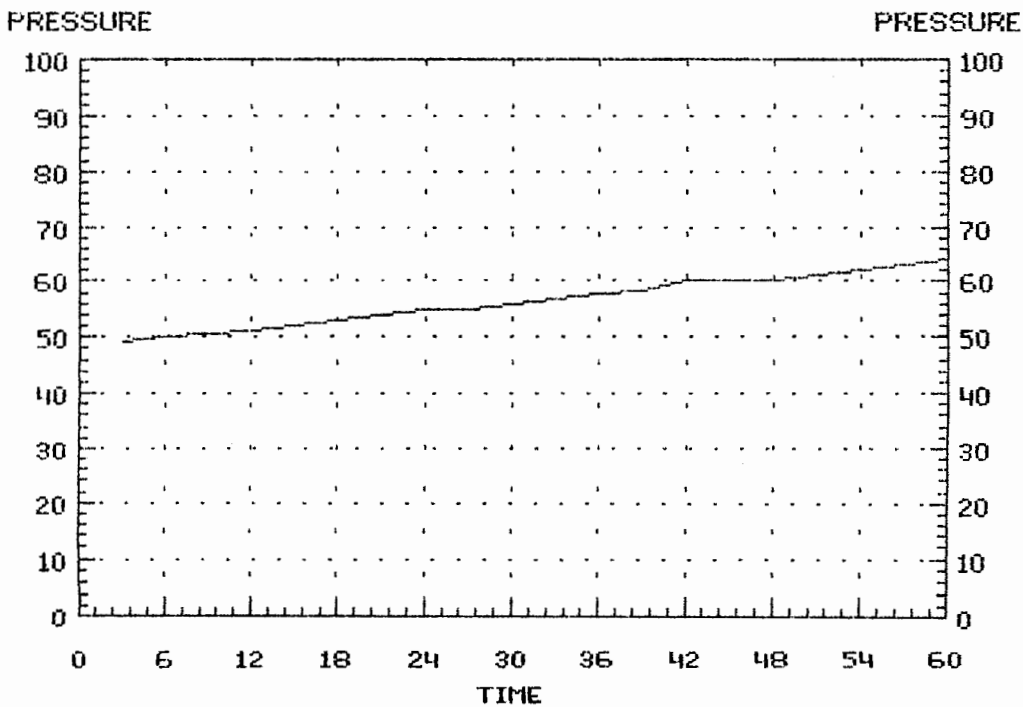
DST #4 INITIAL & FINAL SHUTIN
RECORDER # 13754

FINAL INITIAL



DELTA T DELTA P

DST #4 FINAL FLOW
RECORDER # 13754



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE

7.503841 BBL/DAY

ROESNER #16 DST #4

INITIAL SHUTIN

30 INITIAL FLOW TIME

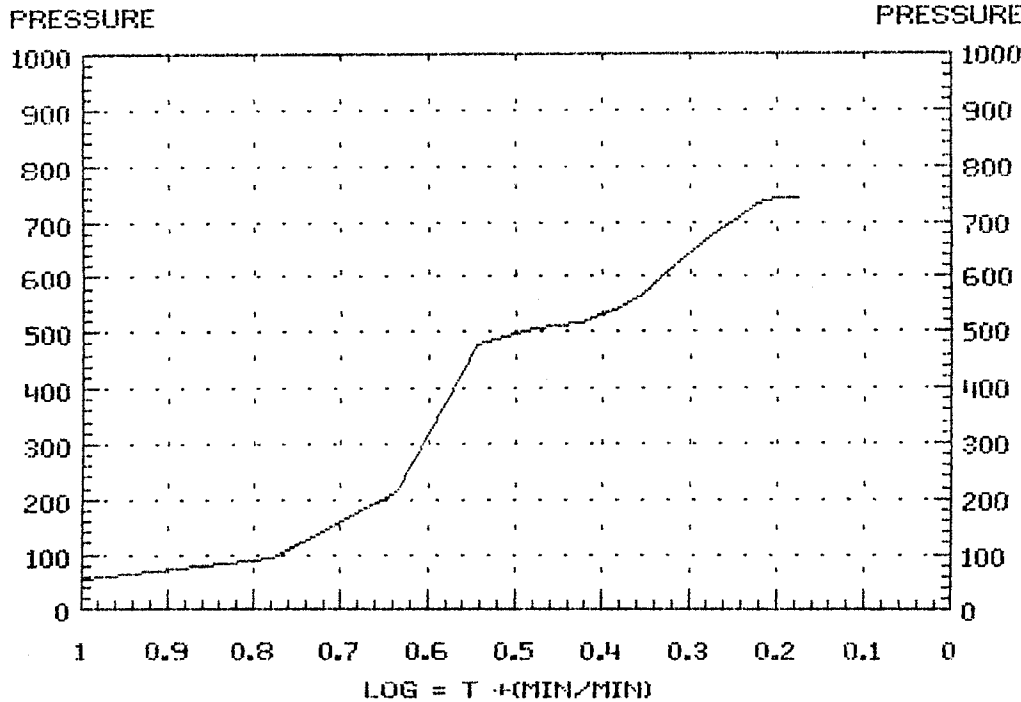
Slope -794.27 psi/cycle

P * 883 psi

| TIME(MIN) | Pws (psi) | Log | | <> PRESSURE |
|-----------|-----------|--------|--------|-------------|
| | | Horn T | Horn T | |
| 3 | 44.2 | 11 | 1.041 | 44.2 |
| 6 | 94.4 | 6 | 0.778 | 50.2 |
| 9 | 211.6 | 4 | 0.637 | 117.2 |
| 12 | 477.3 | 4 | 0.544 | 265.7 |
| 15 | 503.9 | 3 | 0.477 | 26.6 |
| 18 | 515.8 | 3 | 0.426 | 11.9 |
| 21 | 540.5 | 2 | 0.385 | 24.7 |
| 24 | 567.1 | 2 | 0.352 | 26.6 |
| 27 | 609.6 | 2 | 0.325 | 42.5 |
| 30 | 642.2 | 2 | 0.301 | 32.6 |
| 33 | 667.0 | 2 | 0.281 | 24.8 |
| 36 | 689.7 | 2 | 0.263 | 22.7 |
| 39 | 703.5 | 2 | 0.248 | 13.8 |
| 42 | 719.3 | 2 | 0.234 | 15.8 |
| 45 | 731.2 | 2 | 0.222 | 11.9 |
| 48 | 737.1 | 2 | 0.211 | 5.9 |
| 51 | 743.0 | 2 | 0.201 | 5.9 |
| 54 | 743.0 | 2 | 0.192 | 0.0 |
| 57 | 743.0 | 2 | 0.184 | 0.0 |
| 60 | 743.0 | 2 | 0.176 | 0.0 |

HORNER PLOT

DST #4 INITIAL SHUTIN
RECORDER # 13754

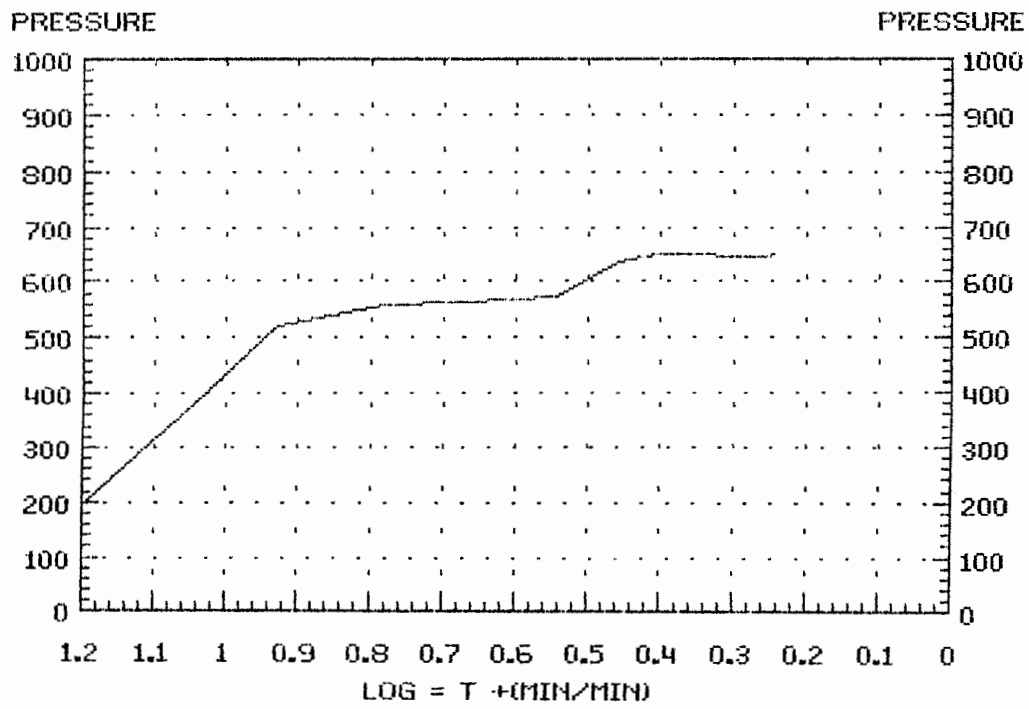


ROESNER #16 DST #4
 FINAL SHUTIN
 90 TOTAL FLOW TIME

 Slope -187.21 psi/cycle
 P * 694 psi

| | TIME(MIN) | Pws (psi) | Horn T | Log Horn T | <> PRESSURE |
|---|-----------|-----------|--------|------------|-------------|
| | 6 | 188.9 | 16 | 1.204 | 188.9 |
| X | 12 | 519.7 | 9 | 0.929 | 330.8 |
| | 18 | 557.3 | 6 | 0.778 | 37.6 |
| | 24 | 565.2 | 5 | 0.677 | 7.9 |
| | 30 | 570.1 | 4 | 0.602 | 4.9 |
| | 36 | 573.1 | 4 | 0.544 | 3.0 |
| | 42 | 608.7 | 3 | 0.497 | 35.6 |
| | 48 | 637.3 | 3 | 0.459 | 28.6 |
| | 54 | 647.2 | 3 | 0.426 | 9.9 |
| | 60 | 650.2 | 3 | 0.398 | 3.0 |
| | 66 | 650.2 | 2 | 0.374 | 0.0 |
| | 72 | 650.2 | 2 | 0.352 | 0.0 |
| | 78 | 648.2 | 2 | 0.333 | -2.0 |
| | 84 | 643.2 | 2 | 0.316 | -5.0 |
| | 90 | 643.2 | 2 | 0.301 | 0.0 |
| | 96 | 647.2 | 2 | 0.287 | 4.0 |
| | 102 | 643.2 | 2 | 0.275 | -4.0 |
| | 108 | 645.2 | 2 | 0.263 | 2.0 |
| | 114 | 647.2 | 2 | 0.253 | 2.0 |
| X | 120 | 648.2 | 2 | 0.243 | 1.0 |

HORNER PLOT
 DST #4 FINAL SHUTIN
 RECORDER # 13754



TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2974 Date 7/14/90
Company Name HALLWOOD PETROLEUM INC
Lease ROESNER #16 Test No. 4
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML
Oil 0 ML
Mud 0 ML
Water 4000 ML
Other 0 ML
Pressure 0 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 6000 ppm.
Resistivity .8 ohms @ 60 F
Viscosity 47
Mud Weight 9.5
Filtrate 15.2
Other _____

SAMPLER ANALYSIS

Resistivity 1.0 ohms @ 72 F
Chlorides 6,000 ppm.
Gravly _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2974

Well Name & No. ROESNER # 16 Test No. FOUR Date 7-14-90
Company HALLWOOD PETROLEUM INC Zone Tested L.H.C. - 2"
Address 4582 S. VESTER PARKWAY DENVER CO. 80237 Elevation 1868 143
Co. Rep. / Geo. JIM MUSGROVE Cont. DUKIE #1 Est. Ft. of Pay _____
Location: Sec. 9 Twp. 13 S Rge. 13 W Co. RUSSELL State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____

Interval Tested 3052 TO 3066 Drill Pipe Size 4 1/2" F.I.T.
Anchor Length 14' Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 3047 Hole Size — 7 1/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 3052 Wt. Pipe I.D. — 2.7 Ft. Run 909
Total Depth 3066 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.5 lb/gal. Viscosity 47 Filtrate 15.2
Tool Open @ 9:55 P Initial Blow WEAR THROUGHOUT F.P. 1" IN WATER.
Final Blow WEAR TO FAIR 2" IN WATER

Recovery — Total Feet 360 Flush Tool? NO
Rec. 180 Feet of G I P
Rec. _____ Feet of _____
Rec. 60 Feet of CLEAN OIL
Rec. _____ Feet of 40% OIL 30%
Rec. 120 Feet of GAS & MUD CUT OIL 20% OIL 10% W.
BHT _____ °F Gravity 35 °API @ 70 °F Corrected Gravity 34 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6000 ppm System
(A) Initial Hydrostatic Mud 1586 PSI AK1 Recorder No. 13754 Range 4000
(B) First Initial Flow Pressure 10 PSI @ (depth) 3060 w/Clock No. _____
(C) First Final Flow Pressure 30 PSI AK1 Recorder No. 13849 Range 4375
(D) Initial Shut-In Pressure 729 PSI @ (depth) 3066 w/Clock No. _____
(E) Second Initial Flow Pressure 40 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 59 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 640 PSI Initial Opening 30 Test
(H) Final Hydrostatic Mud 1580 PSI Initial Shut-In 60 Jars
Final Flow 60 Safety Joint
Final Shut-In 120 Straddle _____

Approved By [Signature]
Our Representative [Signature]

Circ. Sub
Sampler 100
Extra Packer _____
Other _____
TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

| | | | | | | | | | |
|-----------------|--|-------------|----------|-----------------|---------|-----|---------|-------|--------|
| Well Name & No. | ROESNER #16 | Test No. | 5 | Date | 7/16/90 | | | | |
| Company | HALLWOOD PETROLEUM INC | Zone Tested | ARBUCKLE | | | | | | |
| Address | 4582 S ULSTER ST PRKWY DENVER CO 80237 | Elevation | 1868 KB | | | | | | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 0 | | | | |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W | Co. | RUSSELL | State | KANSAS |

| | | | | | | |
|---------------------|-----------------------------|-----------------------------|--|----|----------|------|
| Interval Tested | 3270-3323 | Drill Pipe Size | 4.5" FH | | | |
| Anchor Length | 53 | Top Choke — 1" | Bottom Choke — 3/4" | | | |
| Top Packer Depth | 3265 | Hole Size — 7 7/8" | Rubber Size — 6 3/4" | | | |
| Bottom Packer Depth | 3270 | Wt. Pipe I.D. — 2.7 Ft. Run | 909 | | | |
| Total Depth | 3323 | Drill Collar — 2.25 Ft. Run | 0 | | | |
| Mud Wt. | 9.3 | lb/gal. | Viscosity | 44 | Filtrate | 10.8 |
| Tool Open @ | 9:25 AM | Initial Blow | VERY GOOD - BOTTOM OF BUCKET IN 30 SECONDS | | | |
| Final Blow | GOOD THROUGHOUT FLOW PERIOD | | | | | |

| | | | | | | | | | | | | |
|----------------------------------|-------|-------------------|---|-------|-------------|-------|-------------------|----------|-----------|------|-----|--------|
| Recovery — Total Feet | 2180 | (60' Gas In Pipe) | Flush Tool? | NO | | | | | | | | |
| Rec. | 300 | Feet of | MUDDY FROTHY OIL - 60% OIL / 30% MUD / 10% GAS | | | | | | | | | |
| Rec. | 180 | Feet of | MUDDY GASSY OIL - 50% OIL / 22% MUD / 18% GAS / 10% WTR | | | | | | | | | |
| Rec. | 600 | Feet of | SLIGHTLY MUD CUT GASSY OIL WATER - 30% OIL / 40% GAS / | | | | | | | | | |
| Rec. | 500 | Feet of | OIL CUT WTR - 20% OIL / 76% WTR / 4% GAS | | | | | | | | | |
| Rec. | 600 | Feet of | WATER | | | | | | | | | |
| BHT | 116 | °F | Gravity | 0 | °API @ | °F | Corrected Gravity | 39 | °API | | | |
| RW | 0.25 | @ | 90 | °F | Chlorides | 21000 | ppm | Recovery | Chlorides | 6000 | ppm | System |
| (A) Initial Hydrostatic Mud | 1700 | PSI | AK1 Recorder No. | 13754 | Range | 4000 | | | | | | |
| (B) First Initial Flow Pressure | 159.4 | PSI | @ (depth) | 3275 | w/Clock No. | 0 | | | | | | |
| (C) First Final Flow Pressure | 681.8 | PSI | AK1 Recorder No. | 13849 | Range | 4375 | | | | | | |
| (D) Initial Shut-In Pressure | 923.9 | PSI | @ (depth) | 3323 | w/Clock No. | 0 | | | | | | |
| (E) Second Initial Flow Pressure | 719.3 | PSI | AK1 Recorder No. | 0 | Range | 0 | | | | | | |
| (F) Second Final Flow Pressure | 881.4 | PSI | @ (depth) | 0 | w/Clock No. | 0 | | | | | | |
| (G) Final Shut-In Pressure | 920.9 | PSI | Initial Opening | 30 | | | | | | | | |
| (H) Final Hydrostatic Mud | 1658 | PSI | Initial Shut-In | 45 | | | | | | | | |
| | | | Final Flow | 45 | | | | | | | | |
| | | | Final Shut-In | 45 | | | | | | | | |

MR HARRY SCHMIDT

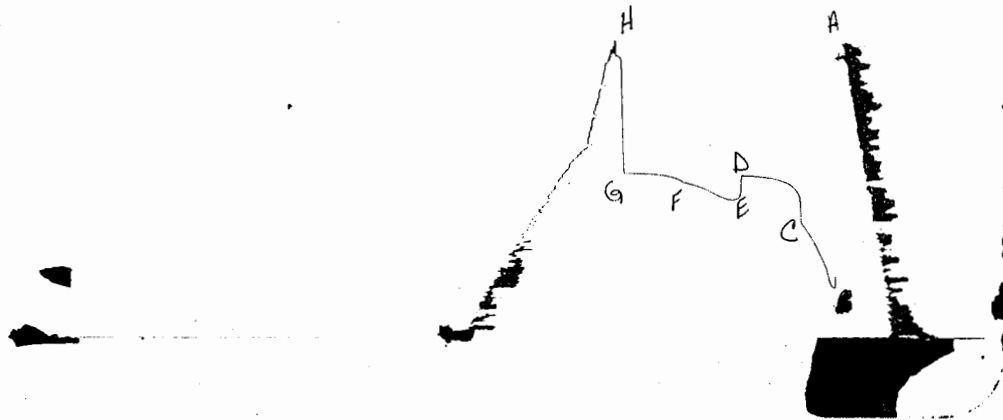
450

Our Representative _____

TOTAL PRICE \$ _____

DST# 5 RECORDER# 13849

13849 TICKET # 2975



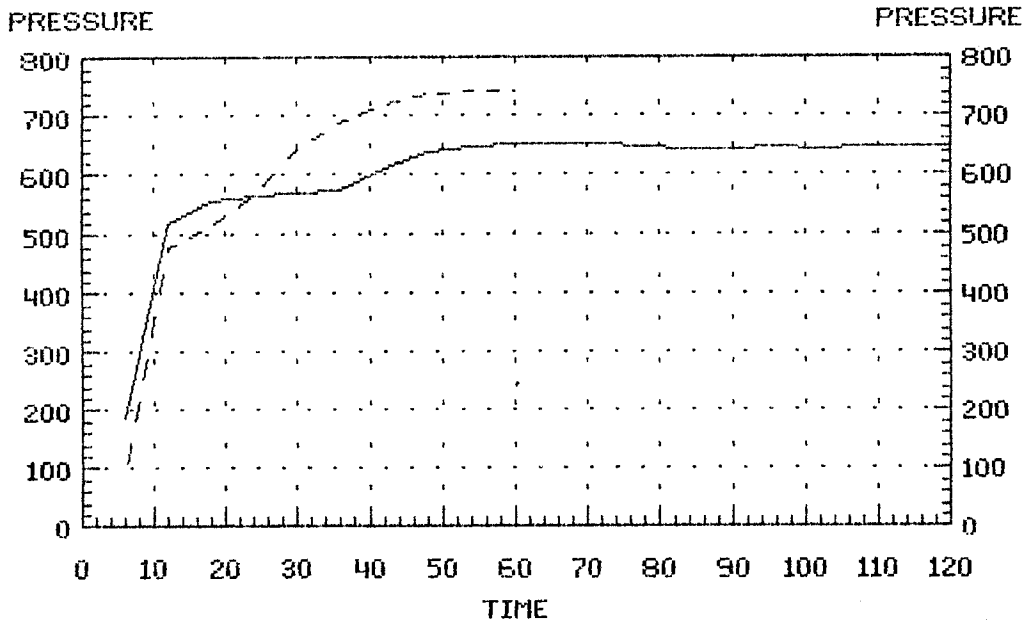
This is an actual photograph of recorder chart.

| POINT | PRESSURE | | |
|---------------------------------------|---------------|----------------|-----|
| | Field Reading | Office Reading | |
| (A) Initial Hydrostatic Mud..... | 1716 | 1700 | PSI |
| (B) First Initial Flow Pressure..... | 147 | 159.4 | PSI |
| (C) First Final Flow Pressure..... | 669 | 681.8 | PSI |
| (D) Initial Closed-in Pressure..... | 907 | 923.9 | PSI |
| (E) Second Initial Flow Pressure..... | 689 | 719.3 | PSI |
| (F) Second Final Flow Pressure..... | 867 | 881.4 | PSI |
| (G) Final Closed-in Pressure..... | 907 | 920.9 | PSI |
| (H) Final Hydrostatic Mud..... | 1716 | 1658 | PSI |

DELTA T DELTA P

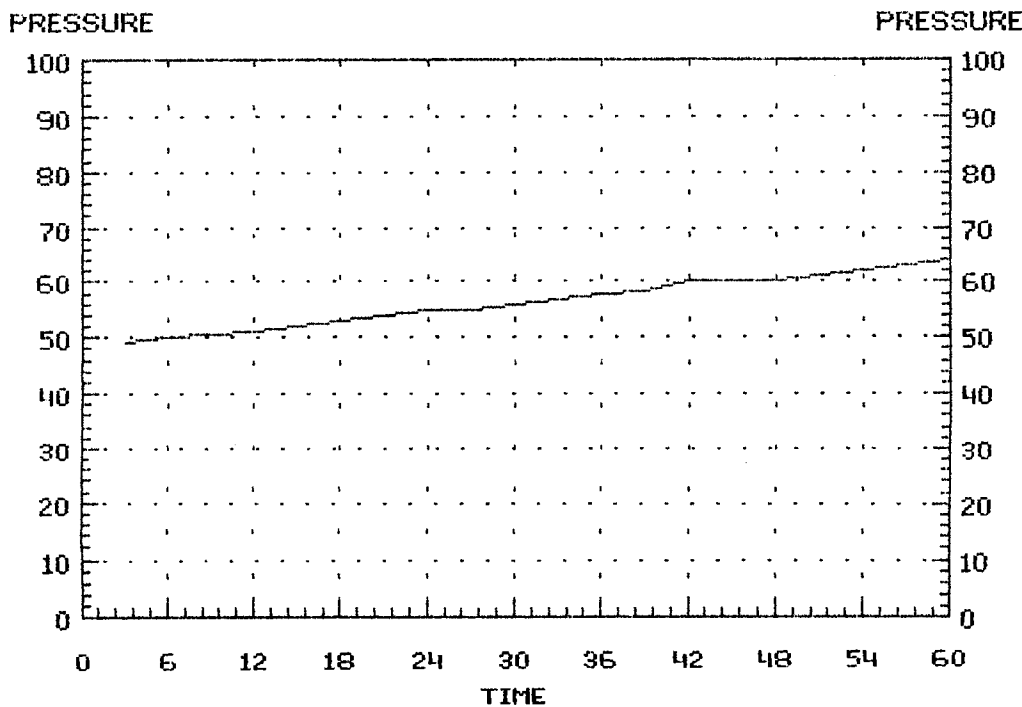
DST #4 INITIAL & FINAL SHUTIN
RECORDER # 13754

FINAL INITIAL



DELTA T DELTA P

DST #4 FINAL FLOW
RECORDER # 13754



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE

7.503841 BBL/DAY

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 2975 Date 7/16/90
Company Name HALLWOOD PETROLEUM INC
Lease ROESNER #16 Test No. 5
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML
Oil 0 ML
Mud 0 ML
Water 4000 ML
Other 0 ML
Pressure 680 PSI
Total 4000 ML

PIT MUD ANALYSIS

Chlorides 6000 ppm.
Resistivity .6 ohms @ 80 F
Viscosity 44
Mud Weight 9.3
Filtrate 10.8
Other _____

SAMPLER ANALYSIS

Resistivity 0.25 ohms @ 90 F
Chlorides 21,000 ppm.
Gravity _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity 0.25 ohms @ 90 F
Chlorides 21,000 ppm.

COMPUTER EVALUATION BY TRILOBITE TESTING
 HALLWOOD PETROLEUM INC
 REPORT FOR DST#5 FOR THE ROESNER #16
 9-15S-13W RUSSELL KANSAS

 TEST PARAMETERS

| | | | |
|-------------------|-----------|-----------------|-------------|
| ELEVATION: | 1968 KB | EST. PAY: | 5 FT |
| DATUM: | -1408 | ZONE TESTED: | ARBUCKLE |
| TEST INTERVAL: | 3270-3323 | | |
| RECORDER DEPTH: | 3275 | TIME INTERVALS: | 30-45-45-45 |
| BOTTOM HOLE TEMP: | 116 | VISCOSITY: | 7.133922 CP |
| | | HOLE SIZE: | 7.875 IN |

 CALCULATIONS

| | | | |
|--|---------------------|----------------------------|------------------|
| CUBIC FEET OF GAS IN PIPE: | 4.790363 | | |
| TOTAL FEET OF RECOVERY: | 2180 | | |
| BARRELS IN DRILL PIPE: | 18.07362 | | |
| BARRELS IN WEIGHT PIPE: | 6.363 | | |
| GAS OIL RATIO: | .1960322 CU.FT./BBL | | |
| BUBBLE POINT PRESSURE: | ; 1.234888E-02 | | |
| TOTAL BARRELS OF RECOVERY: | 24.43662 | UNCORR. INIT. PROD.: | 469.1831 BBL/DAY |
| API GRAVITY: | 39 | FLUID GRADIENT: | .359 |
| CORRECTED PIPE FILLUP: | 2455.153 | CORR. BARRELS OF RECOVERY: | 28.34712 BBL |
| INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: | 544.2647 BBL/DAY | | |
| INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE | 106.3621 | | |

INITIAL SLOPE 57.11 PSI/CYCLE
 INITIAL P* 937 PSI

FINAL SLOPE 15.98 PSI/CYCLE
 FINAL P* 928 PSI

| | |
|-------------------------|----------------------------|
| TRANSMISSIBILITY | 5538.013 (MD.-FT./CP.) |
| PERMEABILITY | 7901.55 (MD.) |
| INDICATED FLOW CAPACITY | 39507.75 (MD.FT) |
| PRODUCTIVITY INDEX | 6.257955 (BARRELS/DAY/PSI) |
| DAMAGE RATIO | .5336543 |
| RADIUS OF INVESTIGATION | 769.8158 (FT.) |
| POTENTIOMETRIC SURFACE | 745.032 (FT.) |
| DRAWDOWN FACTOR | .960511 (%) |

INITIAL FLOW

RECORDER # 13754
DST #5

| DT (MIN) | PRESSURE | <> PRESSURE |
|----------|----------|-------------|
| 0 | 159.4 | 159.4 |
| 3 | 248 | 88.60001 |
| 6 | 362.2 | 114.2 |
| 9 | 447.8 | 85.59998 |
| 12 | 496 | 48.20001 |
| 15 | 578 | 82 |
| 18 | 603.7 | 25.70001 |
| 21 | 634.3 | 30.59998 |
| 24 | 664 | 29.70001 |
| 27 | 681.8 | 17.79999 |

FINAL FLOW

RECORDER # 13754
DST #5

| DT (MIN) | PRESSURE | <> PRESSURE |
|----------|----------|-------------|
| 0 | 719.3 | 719.3 |
| 3 | 726.2 | 6.900025 |
| 6 | 747 | 20.79999 |
| 9 | 766.8 | 19.79999 |
| 12 | 783.6 | 16.79999 |
| 15 | 800.4 | 16.80005 |
| 18 | 814.2 | 13.79999 |
| 21 | 826 | 11.79999 |
| 24 | 837.9 | 11.90003 |
| 27 | 845.8 | 7.899964 |
| 30 | 854.7 | 8.900024 |
| 33 | 859.6 | 4.899964 |
| 36 | 865.6 | 6 |
| 39 | 873.5 | 7.900025 |
| 42 | 878.4 | 4.900025 |
| 45 | 881.4 | 3 |

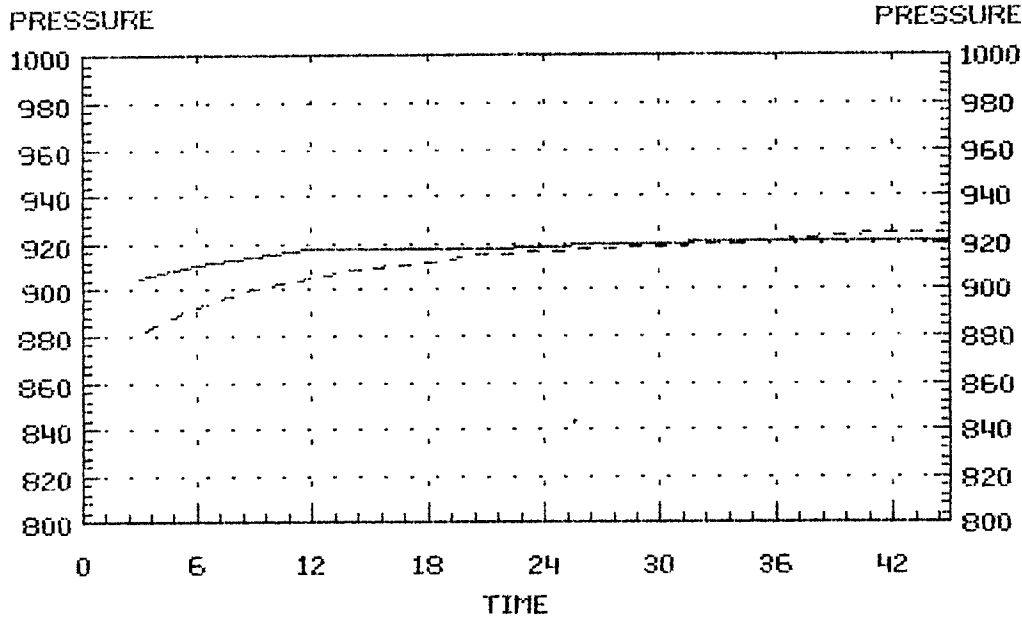
DELTA T DELTA P

DST #5 FINAL SHUTIN

RECORDER # 13754

FINAL

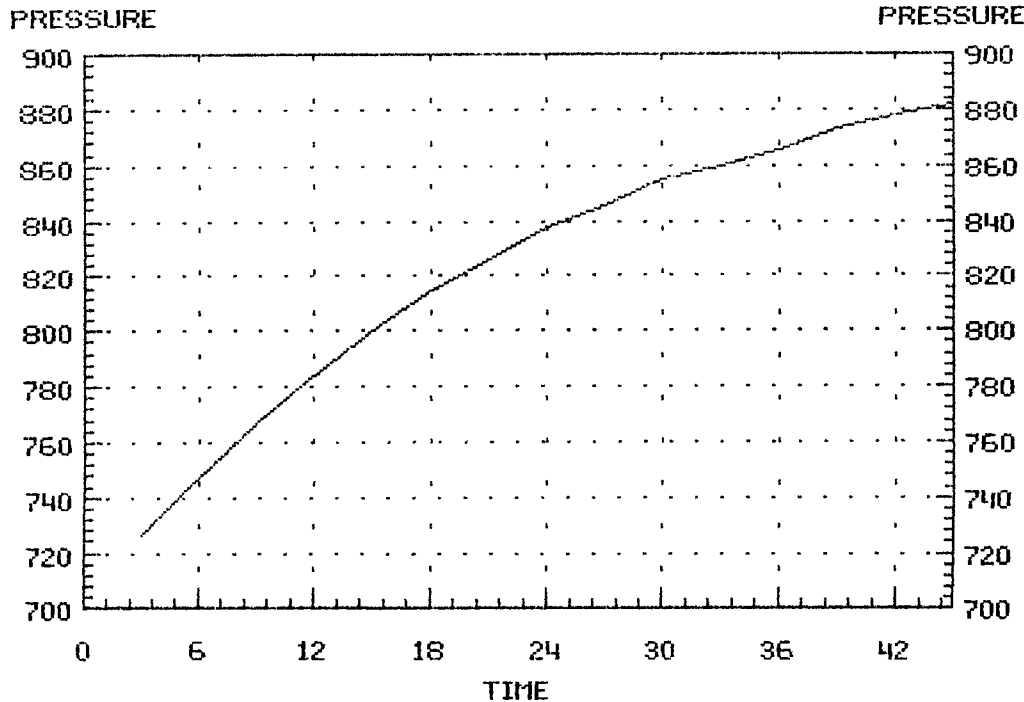
INITIAL



DELTA T DELTA P

DST #5 FINAL FLOW

RECORDER # 13754



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE

106.3621 BBL/DAY

ROESNER #16 DST #5

INITIAL SHUTIN

30 INITIAL FLOW TIME

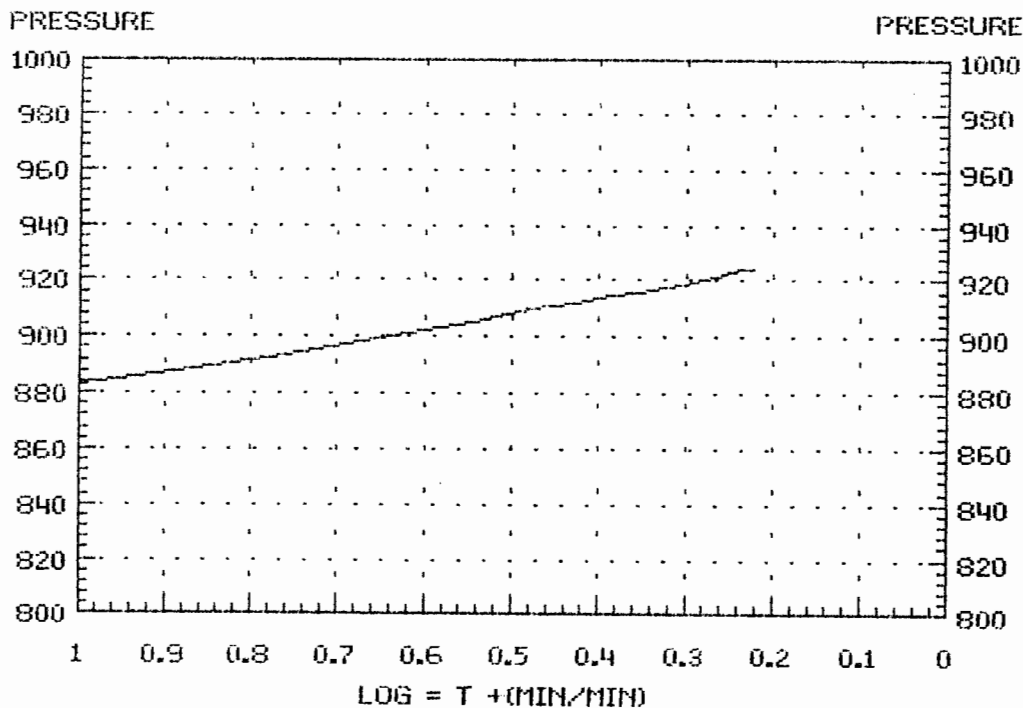
Slope -57.11 psi/cycle

P * 937 psi

| TIME(MIN) | Pws (psi) | Horn T | Log Horn T | <> PRESSURE |
|-----------|-----------|--------|------------|-------------|
| 3 | 881.4 | 11 | 1.041 | 881.4 |
| 6 | 892.2 | 6 | 0.778 | 10.8 |
| 9 | 900.2 | 4 | 0.637 | 8.0 |
| 12 | 905.1 | 4 | 0.544 | 4.9 |
| 15 | 910.0 | 3 | 0.477 | 4.9 |
| 18 | 912.0 | 3 | 0.426 | 2.0 |
| 21 | 915.0 | 2 | 0.385 | 3.0 |
| 24 | 916.0 | 2 | 0.352 | 1.0 |
| 27 | 917.9 | 2 | 0.325 | 1.9 |
| 30 | 918.9 | 2 | 0.301 | 1.0 |
| 33 | 919.9 | 2 | 0.281 | 1.0 |
| 36 | 920.9 | 2 | 0.263 | 1.0 |
| 39 | 922.9 | 2 | 0.248 | 2.0 |
| 42 | 923.9 | 2 | 0.234 | 1.0 |
| 45 | 923.9 | 2 | 0.222 | 0.0 |

HORNER PLOT

DST #5 INITIAL SHUTIN
RECORDER # 13754

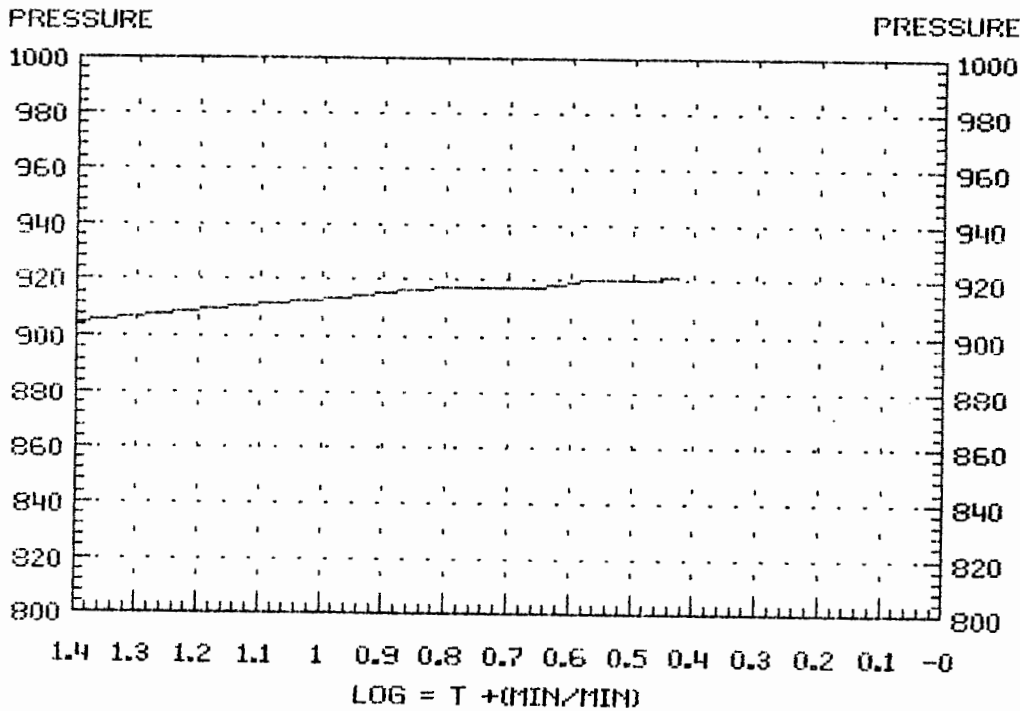


ROESNER #16 DST #5
 FINAL SHUTIN
 75 TOTAL FLOW TIME

Slope -15.98 psi/cycle
 P * 928 psi

| TIME(MIN) | Pws (psi) | Log | | <> PRESSURE |
|-----------|-----------|--------|--------|-------------|
| | | Horn T | Horn T | |
| X 3 | 905.1 | 26 | 1.415 | 905.1 |
| 6 | 911.0 | 14 | 1.130 | 5.9 |
| 9 | 914.0 | 9 | 0.970 | 3.0 |
| 12 | 917.0 | 7 | 0.860 | 3.0 |
| 15 | 917.5 | 6 | 0.778 | 0.5 |
| 18 | 917.9 | 5 | 0.713 | 0.4 |
| 21 | 917.9 | 5 | 0.660 | 0.0 |
| 24 | 918.9 | 4 | 0.615 | 1.0 |
| 27 | 919.9 | 4 | 0.577 | 1.0 |
| 30 | 920.2 | 4 | 0.544 | 0.3 |
| 33 | 920.4 | 3 | 0.515 | 0.2 |
| 36 | 920.6 | 3 | 0.489 | 0.2 |
| 39 | 920.8 | 3 | 0.466 | 0.2 |
| 42 | 920.9 | 3 | 0.445 | 0.1 |
| X 45 | 920.9 | 3 | 0.426 | 0.0 |

HORNER PLOT
 DST #5 FINAL SHUTIN
 RECORDER # 13754



TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No 2975

Well Name & No. ROESNER #16 Test No. FIVE Date 7-16-90
Company HALLWOOD PETROLEUM INC. Zone Tested _____
Address 4422 S. WILSON PARKWAY ANNEA AR. 80232 Elevation 1868 M
Co. Rep. / Geo. JIM MUSGROVE Cont. DUKE #1 Est. Ft. of Pay _____
Location: Sec. 9 Twp. 15 S Rge. 13 W Co. RUSSELL State KS.
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____

Interval Tested 3220 to 3323 Drill Pipe Size 4 1/2" F.14.
Anchor Length 53' Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 3265 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 3220 Wt. Pipe I.D. — 2.7 Ft. Run 909
Total Depth 3323 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.3 lb/gal. Viscosity 44 Filtrate 10.8
Tool Open @ 9:25 Initial Blow VERY GOOD BOT. BUCKET 30 SEC.
Final Blow GOOD THROUGHOUT F.14.

Recovery — Total Feet 2180 Flush Tool? NO

Rec. 60' Feet of gas in pipe
Rec. 300' Feet of muddy frothy oil (60% oil, 30% mud; 10% gas)
Rec. 180' Feet of muddy gassy oil (50% oil, 22% mud; 18% gas, 10% H₂O)
Rec. 600' Feet of slightly mud cut gassy oily water (30% oil, 25% H₂O)
Rec. 500' Feet of oil cut water (20% oil, 76% H₂O) 4% gas
Rec. 600' Feet of 1" water 5% mud 40% gas

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

RW 0.25 @ 90 °F Chlorides 21,000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 1716 1700 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 147 1591 PSI @ (depth) 3275 w/Clock No. _____

(C) First Final Flow Pressure 669 691.8 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 923.9 907 PSI @ (depth) 3323 w/Clock No. _____

(E) Second Initial Flow Pressure 689 719.3 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 867 881.4 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 920.9 907 PSI Initial Opening 30 Test X

(H) Final Hydrostatic Mud 1716 1658.00 PSI Initial Shut-In 45 Jars X

Final Flow 45 Safety Joint X

Final Shut-In 45 Straddle _____

Approved By Jim Musgrove Circ. Sub X

Our Representative _____ Sampler 100

Extra Packer _____

Other _____

TOTAL PRICE \$ _____

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

| | | | | | | | | | |
|-----------------|--|-------------|----------|-----------------|---------|-----|---------|-------|--------|
| Well Name & No. | ROESNER #16 | Test No. | 6 | Date | 7/16/90 | | | | |
| Company | HALLWOOD PETROLEUM INC | Zone Tested | ARBUCKLE | | | | | | |
| Address | 4582 S ULSTER ST PRKWY DENVER CO 80237 | | | Elevation | 1868 KB | | | | |
| Co. Rep./Geo. | MR JIM MUSGROVE | Cont. | DUKE #1 | Est. Ft. of Pay | 0 | | | | |
| Location: Sec. | 9 | Twp. | 15S | Rge. | 13W | Co. | RUSSELL | State | KANSAS |

| | | | | | | |
|---------------------|-------------|-----------------------------|---------------------------|----|----------|------|
| Interval Tested | 3327 - 3339 | Drill Pipe Size | 4.5" FH | | | |
| Anchor Length | 12 | Top Choke — 1" | Bottom Choke — 3/4" | | | |
| Top Packer Depth | 3322 | Hole Size — 7 7/8" | Rubber Size — 6 3/4" | | | |
| Bottom Packer Depth | 3327 | Wt. Pipe I.D. — 2.7 Ft. Run | 909 | | | |
| Total Depth | 3339 | Drill Collar — 2.25 Ft. Run | 0 | | | |
| Mud Wt. | 9.3 | lb/gal. | Viscosity | 44 | Filtrate | 10.8 |
| Tool Open @ | 10:10PM | Initial Blow | WEAK TO FAIR 3" IN BUCKET | | | |

Final Blow VERY WEAK THROUGHOUT FLOW PERIOD -
1/4" IN BUCKET

| | | | |
|-----------------------|-----|-------------|---------------------------------|
| Recovery — Total Feet | 182 | Flush Tool? | NO |
| Rec. | 2 | Feet of | CLEAN OIL |
| Rec. | 180 | Feet of | VERY SLIGHTLY OIL SPECKED WATER |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |
| Rec. | 0 | Feet of | |

| | | | | | | | | | |
|----------------------------------|--------|------------|------------------|--------------|-------------|----------------------|-----------|------|------------|
| BHT | 0 | °F Gravity | 0 | °API @ | 0 | °F Corrected Gravity | 0 | °API | |
| RW | 0.3 | @ | 70 | °F Chlorides | 23000 | ppm Recovery | Chlorides | 6000 | ppm System |
| (A) Initial Hydrostatic Mud | 1695.2 | PSI | AK1 Recorder No. | 13754 | Range | 4000 | | | |
| (B) First Initial Flow Pressure | 11.3 | PSI | @ (depth) | 3334 | w/Clock No. | 0 | | | |
| (C) First Final Flow Pressure | 34.8 | PSI | AK1 Recorder No. | 13849 | Range | 4375 | | | |
| (D) Initial Shut-In Pressure | 449.7 | PSI | @ (depth) | 3339 | w/Clock No. | 0 | | | |
| (E) Second Initial Flow Pressure | 53.2 | PSI | AK1 Recorder No. | 0 | Range | 0 | | | |
| (F) Second Final Flow Pressure | 77.4 | PSI | @ (depth) | 0 | w/Clock No. | 0 | | | |
| (G) Final Shut-In Pressure | 386.9 | PSI | Initial Opening | 30 | | | | | |
| (H) Final Hydrostatic Mud | 1695.5 | PSI | Initial Shut-In | 60 | | | | | |
| | | | Final Flow | 60 | | | | | |
| | | | Final Shut-In | 120 | | | | | |

MR HARRY SCHMIDT

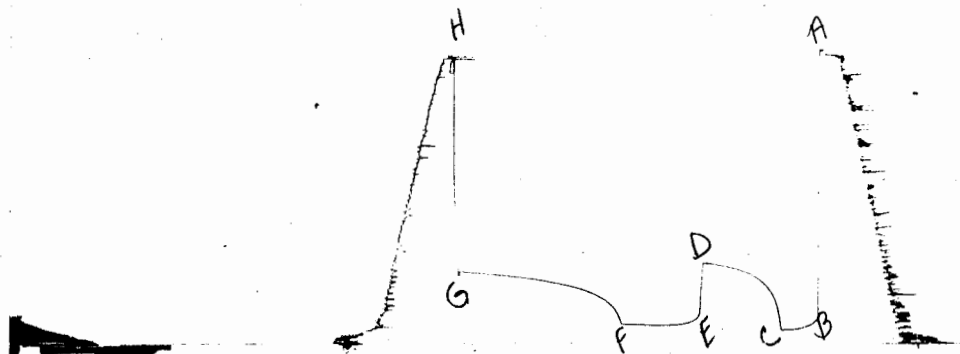
450

Our Representative _____

TOTAL PRICE \$ _____

DST# 6 RECORDER# 13849

#13849 TICKET # 3026



This is an actual photograph of recorder chart.

| POINT | PRESSURE | | |
|---------------------------------------|---------------|----------------|-----|
| | Field Reading | Office Reading | |
| (A) Initial Hydrostatic Mud..... | 1693 | 1695.2 | PSI |
| (B) First Initial Flow Pressure..... | 10 | 11.3 | PSI |
| (C) First Final Flow Pressure..... | 30 | 34.8 | PSI |
| (D) Initial Closed-in Pressure..... | 442 | 449.7 | PSI |
| (E) Second Initial Flow Pressure..... | 50 | 53.2 | PSI |
| (F) Second Final Flow Pressure..... | 70 | 77.4 | PSI |
| (G) Final Closed-in Pressure..... | 383 | 386.9 | PSI |
| (H) Final Hydrostatic Mud..... | 1693 | 1695.5 | PSI |

TRILOBITE TESTING COMPANY

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 3026 Date 7/16/90
Company Name HALLWOOD PETROLEUM INC
Lease ROESNER #16 Test No. 6
County RUSSELL Sec. 9 Twp. 15S Rng. 13W

SAMPLER RECOVERY

Gas 0 ML Chlorides 6000 ppm.
Oil 0 ML Resistivity .8 ohms @ 60 F
Mud 800 ML Viscosity 44
Water 3200 ML Mud Weight 9.3
Other 0 ML Filtrate 10.8
Pressure 100 PSI Other _____
Total 4000 ML _____

PIT MUD ANALYSIS

SAMPLER ANALYSIS

Resistivity 0.3 ohms @ 70 F
Chlorides 23,000 ppm.
Gravty _____ corrected @ 60 F

PIPE RECOVERY

TOP
Resistivity 0.3 ohms @ 70 F
Chlorides 23,000 ppm.
MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

TEST TICKET

No. 3026

| | |
|-----------------|--|
| Well Name & No. | ROSENER # 16 |
| Test No. | SIX |
| Date | 7-16-90 |
| Company | HALLWOOD PETROLEUM INC. |
| Zone Tested | 14RB. |
| Address | 4582 S. WESTERN PARKWAY DENVER CO. 80231 Elevation 1868 1518 |
| CO. Rep./Geo. | TIM MUSGRAVE cont. DUKE #1 |
| Location: Sec. | 9 |
| Twp. | 15 S |
| Rge. | 13 W |
| CO. | 13 USSEAL State 15 S |
| No. of Copies | Distribution Sheet Yes _____ No _____ |

| | |
|---------------------|---------------------------------------|
| Interval Tested | 3327 to 3339 |
| Anchor Length | 12' |
| Top Packer Depth | 3322 |
| Bottom Packer Depth | 3327 |
| Total Depth | 3339 |
| Mud Wt. | 9.3 lb/gal. |
| Initial Blow | 10:10 p |
| Tool Open | WEAK TO FAIR 3 IN. BUCKET |
| Final Blow | VERY WEAK THROUGHOUT 1 1/4" IN BUCKET |

| | |
|-----------------------|-----------------------------------|
| Recovery - Total Feet | 2 |
| Feet of | clean oil |
| Feet of | Very slightly oil speckled water. |
| Recovery | NO |
| Flush Tool | NO |

| | | | |
|----------------------------------|--------|----------------------|----------------|
| BHT | °API @ | °API @ | °API @ |
| Chlorides | 23000 | ppm Recovery | Chlorides 6000 |
| ppm System | | | |
| (A) Initial Hydrostatic Mud | 1693 | PSI AK1 Recorder No. | 13754 |
| Range | | | 4000 |
| (B) First Initial Flow Pressure | 10 | PSI @ (depth) | 3334 |
| W/clock No. | | | |
| (C) First Final Flow Pressure | 30 | PSI AK1 Recorder No. | 13849 |
| Range | | | 4375 |
| (D) Initial Shut-in Pressure | 442 | PSI @ (depth) | 3339 |
| W/clock No. | | | |
| (E) Second Initial Flow Pressure | 50 | PSI AK1 Recorder No. | |
| Range | | | |
| (F) Second Final Flow Pressure | 70 | PSI @ (depth) | |
| W/clock No. | | | |
| (G) Final Shut-in Pressure | 383 | PSI Initial Opening | 30 |
| Test | | | |
| (H) Final Hydrostatic Mud | 1693 | PSI Initial Shut-in | 60 |
| Jars | | | |
| Safety Joint | | | |
| Final Flow | | | |
| Final Shut-in | 120 | | |

| | |
|--------------------------------|--------------------|
| Approved By | <i>[Signature]</i> |
| Our Representative | <i>[Signature]</i> |
| Printcraft Printers - Hays, KS | |
| TOTAL PRICES | |
| Other | |
| Extra Packer | |
| Sampler | 100 cc |
| Circ. sub | X |
| Straddle | |

HALLWOOD PETROLEUM, INC.

ROESNER #16

Sec. 9-T155-R13W
API #167-22,917

Surface 225 sx 60/40, 3% cc 2% gel. Tailed w/100 sx 60/40 poz,
3% cc, no gel.

Production:
200 sx common, 5% EA2, 10% salt, .75% Hallid 322, 5% sk gilsonite
in last 125 sx, 1/4# sk flocele.

RECEIVED
KANSAS CONSERVATION COMMISSION
FEB 14 1992
CONSERVATION DIVISION
MICHITA, KS

9-15-13W
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