

15-171-20586

DIAMOND TESTING

P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21099.D23

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1
Elevation 2916 KB Formation Lansing/Kansas City "C" Effective Pay -- Ft. Ticket No. 1867
Date 5-15-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 1 Interval Tested from 3,963 ft. to 3,987 ft. Total Depth 3,987 ft.
Packer Depth 3,958 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Packer Depth 3,963 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 3,951 ft. Recorder Number Elec. Cap. 5,000 psi
Bottom Recorder Depth (Outside) 3,984 ft. Recorder Number 13387 Cap. 4,000 psi
Below Straddle Recorder Depth -- ft. Recorder Number -- Cap. -- psi

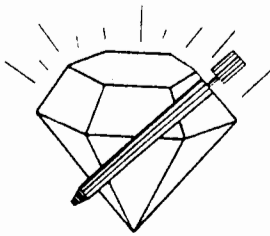
Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.
Mud Type Chemical Viscosity 52 Weight Pipe Length -- ft. I.D. -- in.
Weight 9.2 Water Loss 8.8 cc. Drill Pipe Length 3,938 ft. I.D. 3 1/2 in.
Chlorides 2,000 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.
Jars: Make Bowen Serial Number Not Run Anchor Length 24 ft. Size 4 1/2 - FH in.
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 1/2 in., blow increasing to 6 1/2 ins. No blow back during shut-in.
2nd Open: Weak surface blow increasing to 6 ins. No blow back during shut-in.

Recovered 42 ft. of clean oil = .430920 bbls. (Gravity: 22 @ 60°)
Recovered 84 ft. of slightly oil cut muddy water = .861840 bbls. (Grind out: 2%-gas; 4%-oil; 42%-mud; 52%-water)
Recovered 126 ft. of TOTAL FLUID = 1.292760 bbls.
Recovered -- ft. of --
Recovered -- ft. of --
Remarks Tool Sample Grind Out: 3%-gas; 18%-oil; 25%-mud; 54%-water

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Time Set Packer(s) 7:53:30 P.M. Time Started Off Bottom 10:53:30 P.M. Maximum Temperature 119°
Initial Hydrostatic Pressure (A) 1905 P.S.I.
Initial Flow Period Minutes 30 (B) 10 P.S.I. to (C) 35 P.S.I.
Initial Closed In Period Minutes 45 (D) 918 P.S.I.
Final Flow Period Minutes 45 (E) 37 P.S.I. to (F) 65 P.S.I.
Final Closed In Period Minutes 60 (G) 876 P.S.I.
Final Hydrostatic Pressure (H) 1893 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.  
Lease & Well No. Sharp Seed 14C No. 1  
Date 5-15-04 Sec. 14 Twp. 17 S Range 31 W  
Formation Test No. 1 Interval Tested From 3,963 ft. to 3,987 ft. Total Depth 3,987 ft.  
Formation Lansing/ Kansas City "C"

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |                            |
|------------|----------------|-----------------|----------------------------|
| Viscosity  | <u>52</u> CP   | <u>--</u> CP    |                            |
| Weight     | <u>9.2</u>     | <u>--</u>       |                            |
| Water Loss | <u>8.8</u> CC  | <u>--</u> CC    |                            |
| PH Factor  | <u>9.0</u>     | <u>--</u>       | <u>Water</u><br><u>7.0</u> |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE</u><br><u>CONTENT</u> |
|-------------------------|-----------------------------|-----------------------------------|
| Recovery Water          | <u>.26</u> @ <u>62</u> °F.  | <u>30,000</u> ppm                 |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm                     |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm                     |
| Mud Pit Sample          | <u>2.10</u> @ <u>66</u> °F. | <u>3,100</u> ppm                  |
| Mud Pit Sample Filtrate | <u>2.00</u> @ <u>68</u> °F. | <u>3,200</u> ppm                  |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,000 Ppm.  
Recovery water dish chlorides were 25,500 Ppm.

## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC.  
Contact: ROCKY MILFORD  
Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
Operator: RITCHIE EXPLORATION, INC.  
Location-Downhole: DST #1 LKC 'C' 3,963'-3,987'  
Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

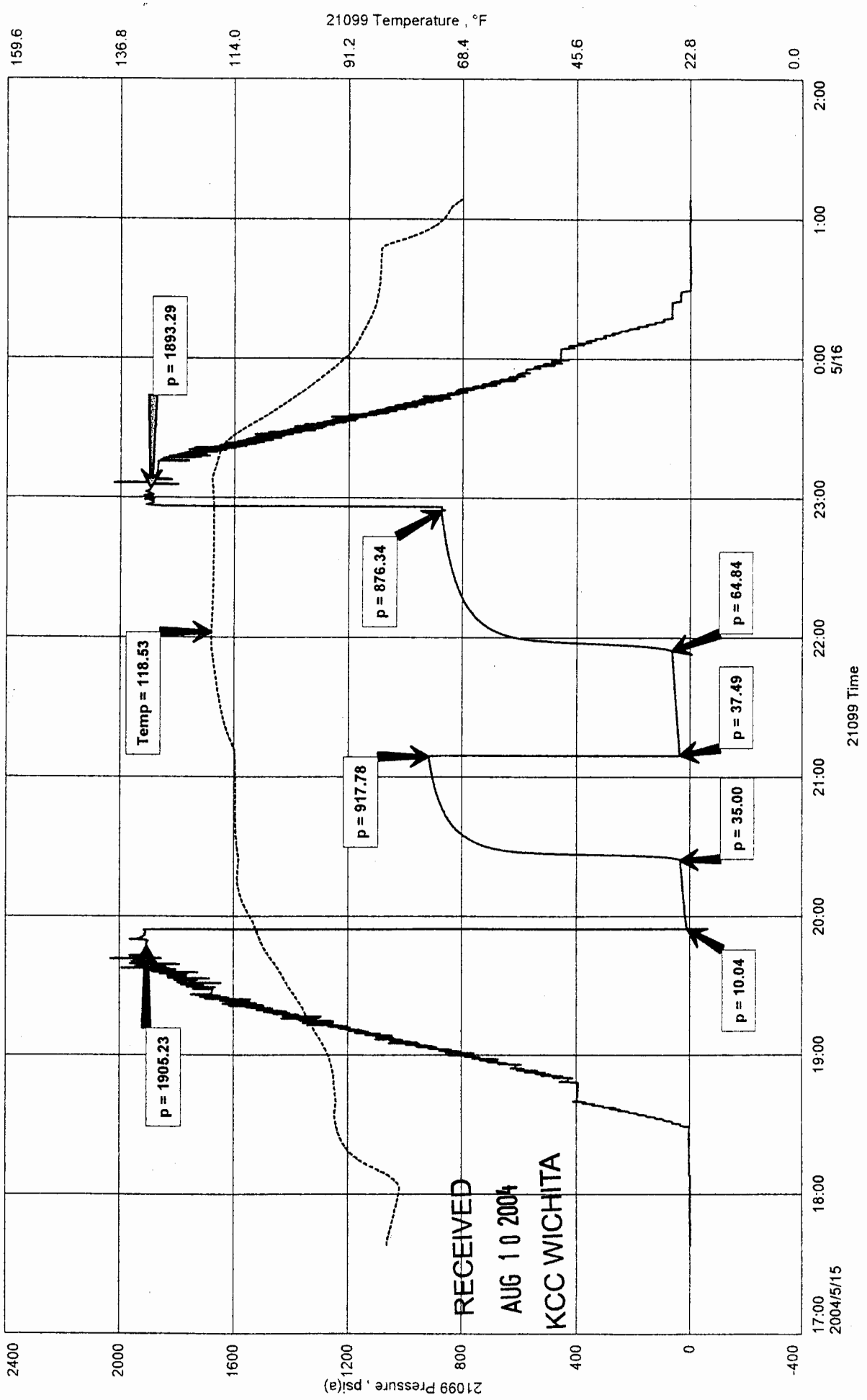
Company: DIAMOND TESTING  
Representative: ROGER D. FRIEDLY  
Supervisor: KIM SHOEMAKER  
Test Type: CONVENTIONAL Job Number:  
Test Unit: NO 1  
Start Date: 2004/05/15 Start Time: 17:37:00  
End Date: 2004/05/16 End Time: 01:07:30  
Report Date: Prepared By:  
Remarks: Qualified By:

RECOVERED 42' CO (22 GRAVITY @ 60 deg), 84' SLT OCMW ( 2% GAS, 4% OIL  
42% MUD, 52% WTR.)  
TOOL SAMPLE 3% GAS, 18% OIL, 25% MUD, 54% WTR.

RITCHIE EXPLORATION, INC.  
 DST #1 LKC 'C' 3,963'-3,987'  
 Start Test Date: 2004/05/15  
 Final Test Date: 2004/05/16

#1 SHARP SEED 14C  
 Formation: DST #1 LKC 'C' 3,963'-3,987'  
 Pool: WILDCAT

# #1 SHARP SEED 14C



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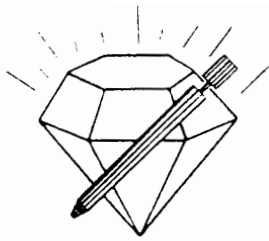
DST # 1 outside 13387  
LKC 'C'

3963-3987  
LCC 3984



This is an actual photograph of recorder chart.

| POINT                            | PRESSURE         |  | Elec.<br>Office<br>Reading | PSI |
|----------------------------------|------------------|--|----------------------------|-----|
|                                  | Field<br>Reading |  |                            |     |
| (A) Initial Hydrostatic Mud      | 1905             |  | 1905                       | PSI |
| (B) First Initial Flow Pressure  | 10               |  | 10                         | PSI |
| (C) First Final Flow Pressure    | 35               |  | 35                         | PSI |
| (D) Initial Closed-in Pressure   | 918              |  | 918                        | PSI |
| (E) Second Initial Flow Pressure | 37               |  | 37                         | PSI |
| (F) Second Final Flow Pressure   | 65               |  | 65                         | PSI |
| (G) Final Closed-in Pressure     | 876              |  | 876                        | PSI |
| (H) Final Hydrostatic Mud        | 1893             |  | 1893                       | PSI |



DIAMOND TESTING

P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21099.D24

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1

Elevation 2916 KB Formation Lansing/Kansas City "E-F" Effective Pay -- Ft. Ticket No. 1868

Date 5-16-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 2 Interval Tested from 4,019 ft. to 4,045 ft. Total Depth 4,045 ft.

Packer Depth 4,014 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,019 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 4,007 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,042 ft. Recorder Number 13387 Cap. 4,000 psi

Below Straddle Recorder Depth -- ft. Recorder Number -- Cap. -- psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 50 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.15 Water Loss 8.8 cc. Drill Pipe Length 3,994 ft. I.D. 3 1/2 in.

Chlorides 1,800 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 26 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 1/8 in., blow increasing to 7 ins. No blow back during shut-in.

2nd Open: Weak surface blow increasing to 10 ins. Weak surface blow back during shut-in.

Recovered 60 ft. of clean oil = .615600 bbls. (Gravity: 36 @ 60 °)

Recovered 84 ft. of slightly gassy & oil cut watery mud = .861840 bbls. (Grind out: 4%-gas; 8%-oil; 34%-water; 54%-mud)

Recovered 144 ft. of TOTAL FLUID = 1.477440 bbls.

Recovered -- ft. of --

Recovered -- ft. of --

Remarks Tool Sample Grind Out: 4%-gas; 18%-oil; 34%-water; 44%-mud

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Time Set Packer(s) 11:35 A.M. Time Started Off Bottom 2:35 P.M. Maximum Temperature 117°

Initial Hydrostatic Pressure (A) 1936 P.S.I.

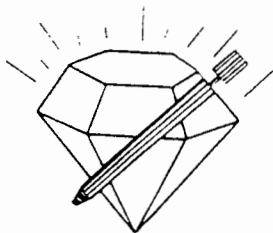
Initial Flow Period Minutes 30 (B) 9 P.S.I. to (C) 38 P.S.I.

Initial Closed In Period Minutes 45 (D) 1024 P.S.I.

Final Flow Period Minutes 45 (E) 39 P.S.I. to (F) 69 P.S.I.

Final Closed In Period Minutes 60 (G) 1014 P.S.I.

Final Hydrostatic Pressure (H) 1924 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.

Lease & Well No. Sharp Seed 14C No. 1

Date 5-16-04 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 2 Interval Tested From 4,019 ft. to 4,045 ft. Total Depth 4,045 ft.

Formation Lansing/Kansas City "E-F"

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |                     |
|------------|----------------|-----------------|---------------------|
| Viscosity  | <u>50</u> CP   | <u>--</u> CP    |                     |
| Weight     | <u>9.15</u>    | <u>--</u>       |                     |
| Water Loss | <u>8.8</u> CC  | <u>--</u> CC    |                     |
| PH Factor  | <u>9.0</u>     | <u>--</u>       | Water<br><u>7.5</u> |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>.42</u> @ <u>80</u> °F.  | <u>14,000</u> ppm       |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Mud Pit Sample          | <u>1.70</u> @ <u>76</u> °F. | <u>3,400</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.80</u> @ <u>79</u> °F. | <u>3,000</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 1,800 Ppm.  
Recovery water dish chlorides were 11,000 Ppm.

## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC.  
Contact: ROCKY MILFORD  
Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
Operator: RITCHIE EXPLORATION, INC.  
Location-Downhole: DST #2 LKC 'E-F' 4,019'-4,045'  
Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

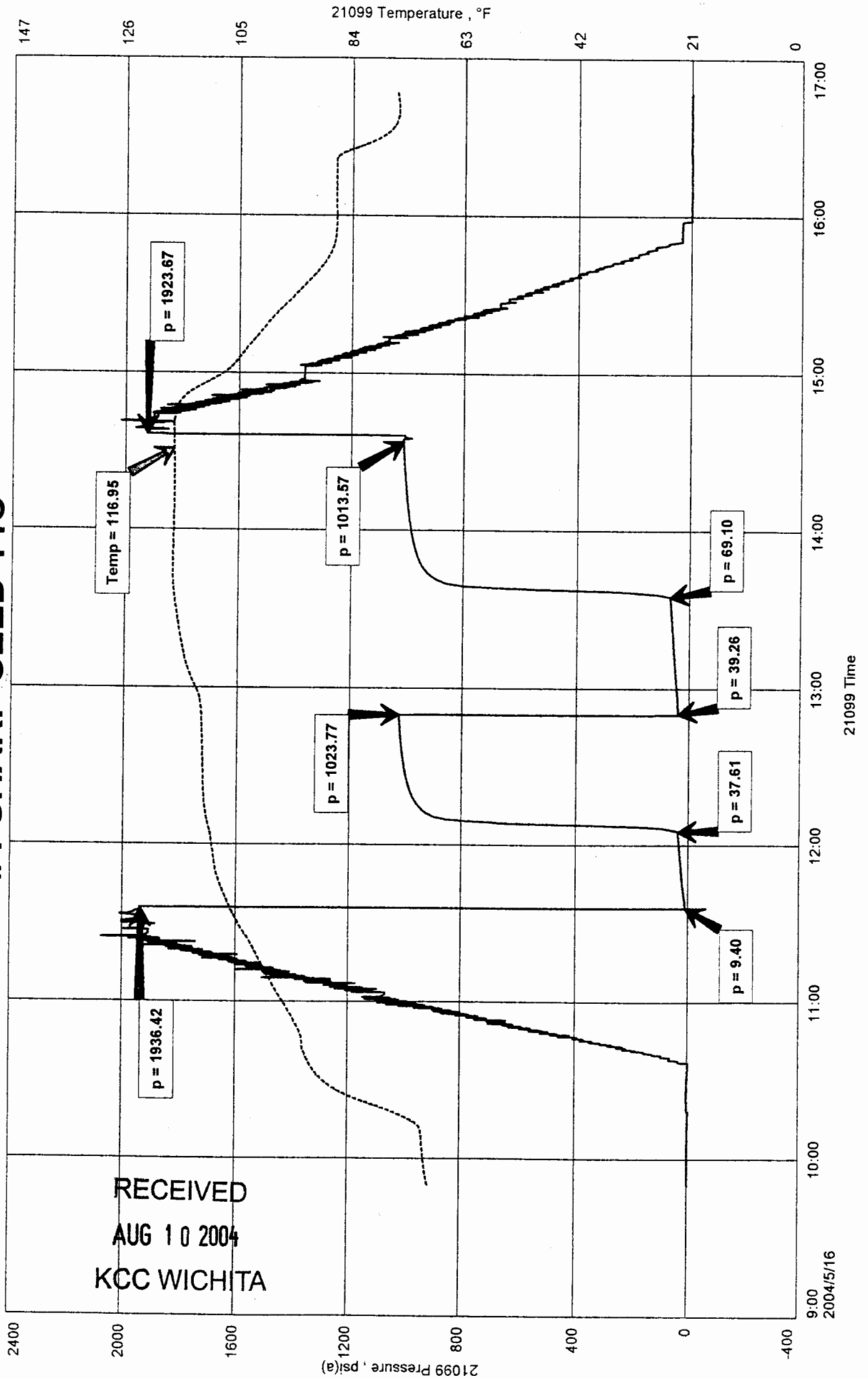
Company: DIAMOND TESTING  
Representative: ROGER D. FRIEDLY  
Supervisor: KIM SHOEMAKER  
Test Type: CONVENTIONAL Job Number:  
Test Unit: NO 1  
Start Date: 2004/05/16 Start Time: 09:49:00  
End Date: 2004/05/16 End Time: 16:45:30  
Report Date: Prepared By:  
Remarks: Qualified By:

RECOVERED: 60' CO 36% GRAVITY @ 60 deg  
84' SLT G&OCWM ( 4% GAS, 8% OIL, 34% WTR, 54% MUD  
TOOL SAMPLE 4% GAS, 18% OIL, 34% WTR, 44% MUD

RITCHIE EXPLORATION, INC.  
DST #2 LKC 'E-F' 4,019'-4,045'  
Start Test Date: 2004/05/16  
Final Test Date: 2004/05/16

#1 SHARP SEED 14C  
Formation: DST #2 LKC 'E-F' 4,019'-4,045'  
Pool: WILDCAT

# #1 SHARP SEED 14C



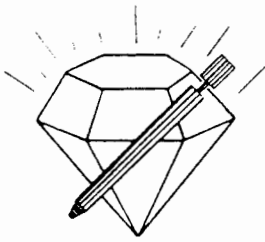
DST # 2 Outside 13387  
LICC E-K

4019-4045  
Loc 4042



This is an actual photograph of recorder chart.

| POINT                                 | PRESSURE         |  | Elec.<br>Office<br>Reading | PSI |
|---------------------------------------|------------------|--|----------------------------|-----|
|                                       | Field<br>Reading |  |                            |     |
| (A) Initial Hydrostatic Mud .....     | 1936             |  | 1936                       | PSI |
| (B) First Initial Flow Pressure.....  | 9                |  | 9                          | PSI |
| (C) First Final Flow Pressure .....   | 38               |  | 38                         | PSI |
| (D) Initial Closed-in Pressure .....  | 1024             |  | 1024                       | PSI |
| (E) Second Initial Flow Pressure..... | 39               |  | 39                         | PSI |
| (F) Second Final Flow Pressure.....   | 69               |  | 69                         | PSI |
| (G) Final Closed-in Pressure.....     | 1014             |  | 1014                       | PSI |
| (H) Final Hydrostatic Mud.....        | 1924             |  | 1924                       | PSI |



# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D25

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1  
Elevation 2916 KB Formation Lansing/Kansas City "H-1" Effective Pay -- Ft. Ticket No. 1869  
Date 5-17-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas  
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 3 Interval Tested from 4,120 ft. to 4,190 ft. Total Depth 4,190 ft.  
Packer Depth 4,115 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Packer Depth 4,120 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Depth of Selective Zone Set          ft.

Top Recorder Depth (Inside) 4,108 ft. Recorder Number Elec. Cap. 5,000 psi  
Bottom Recorder Depth (Outside) 4,187 ft. Recorder Number 13387 Cap. 4,000 psi  
Below Straddle Recorder Depth          ft. Recorder Number          Cap.          psi

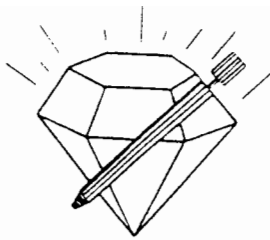
Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.  
Mud Type Chemical Viscosity 44 Weight Pipe Length -- ft. I.D. -- in.  
Weight 9.3 Water Loss 8.0 cc. Drill Pipe Length 4,095 ft. I.D. 3 1/2 in.  
Chlorides 1,500 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.  
Jars: Make Bowen Serial Number Not Run Anchor Length 39' perf. w/31' drill pipe Size 4 1/2 - FH in.  
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.  
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 1/4 in., blow increasing. Off bottom of bucket in 22 mins. No blow back during shut-in.  
2nd Open: Weak surface blow increasing. Off bottom of bucket in 26 mins. No blow back during shut-in.

Recovered 162 ft. of muddy water with a scum of oil = 1.662120 bbls. (Grind out: 40%-mud; 60%-water)  
Recovered 248 ft. of salt water = 2.544480 bbls.  
Recovered 410 ft. of TOTAL FLUID = 4.206600 bbls.  
Recovered          ft. of           
Recovered          ft. of           
Remarks Tool Sample Grind Out: 100%-water (Chlorides: 25,500 Ppm)

**RECEIVED**  
**AUG 10 2004**  
**KCC WICHITA**

Time Set Packer(s) 8:56 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 11:56 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 126°  
Initial Hydrostatic Pressure          (A) 1979 P.S.I.  
Initial Flow Period          Minutes 30 (B) 9 P.S.I. to (C) 90 P.S.I.  
Initial Closed In Period          Minutes 45 (D) 913 P.S.I.  
Final Flow Period          Minutes 45 (E) 92 P.S.I. to (F) 197 P.S.I.  
Final Closed In Period          Minutes 60 (G) 908 P.S.I.  
Final Hydrostatic Pressure          (H) 1963 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.  
Lease & Well No. Sharp Seed 14C No. 1  
Date 5-17-04 Sec. 14 Twp. 17 S Range 31 W  
Formation Test No. 3 Interval Tested From 4,120 ft. to 4,190 ft. Total Depth 4,190 ft.  
Formation Lansing/Kansas City "H - I"

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |                     |
|------------|----------------|-----------------|---------------------|
| Viscosity  | <u>44</u> CP   | <u>36</u> CP    |                     |
| Weight     | <u>9.3</u>     | <u>8.9</u>      |                     |
| Water Loss | <u>8.0</u> CC  | <u>40.0+</u> CC |                     |
| PH Factor  | <u>9.5</u>     | <u>8.0</u>      | Water<br><u>7.5</u> |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>.20</u> @ <u>80</u> °F.  | <u>30,000</u> ppm       |
| Recovery Mud            | <u>.30</u> @ <u>82</u> °F.  | <u>19,000</u> ppm       |
| Recovery Mud Filtrate   | <u>.32</u> @ <u>80</u> °F.  | <u>18,000</u> ppm       |
| Mud Pit Sample          | <u>1.90</u> @ <u>74</u> °F. | <u>3,000</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.80</u> @ <u>78</u> °F. | <u>3,000</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 1,500 Ppm.  
Recovery filtrate triton dish chlorides were 13,000 Ppm.  
Recovery water dish chlorides were 25,500 Ppm.

## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC  
Contact: ROCKY MILFORD  
Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
Operator: RITCHIE EXPLORATION, INC.  
Location-Downhole: DST #3 LKC "H-I" 4, 120'-4, 190'  
Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

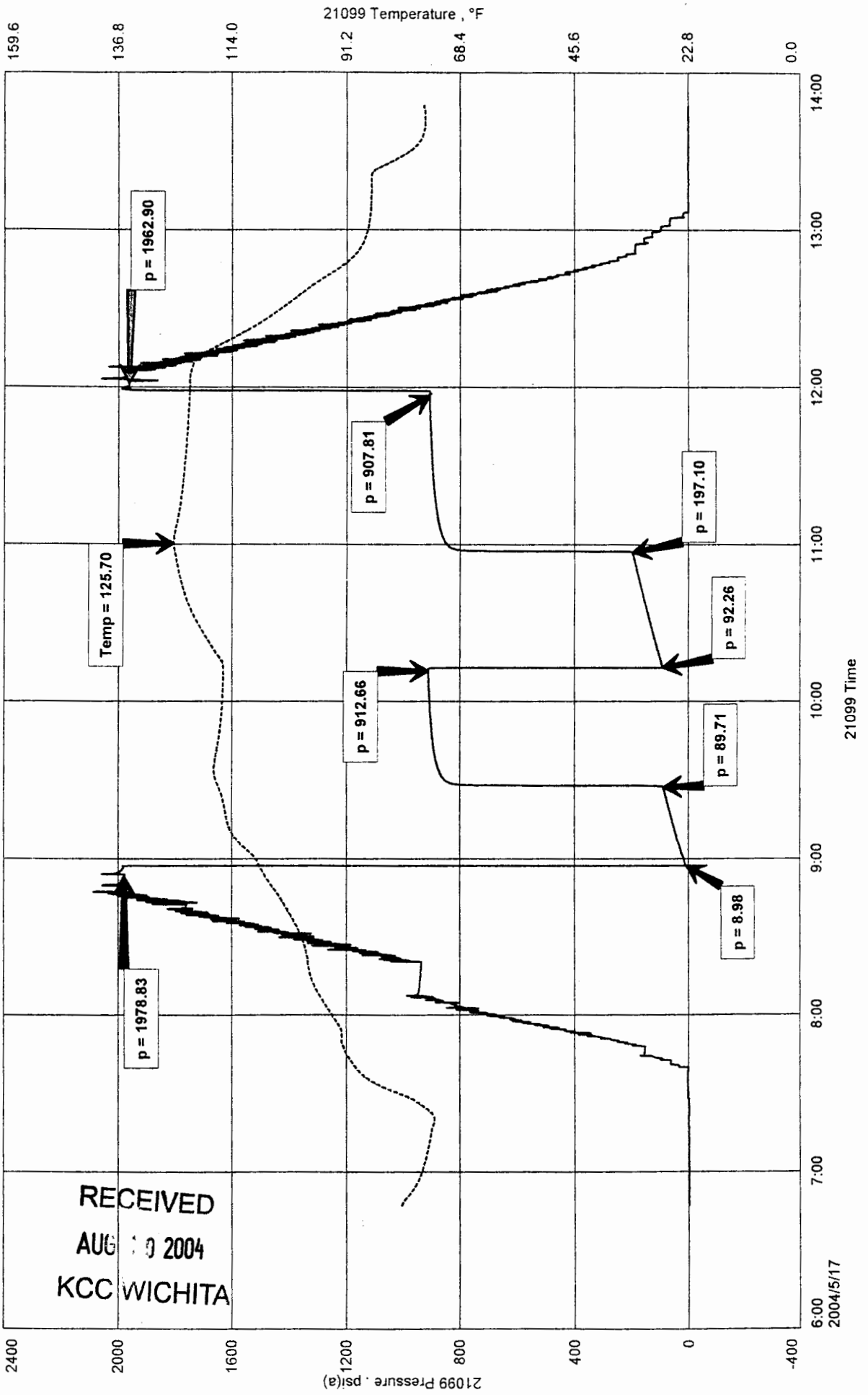
Company: DIAMOND TESTING  
Representative: ROGER D. FRIEDLY  
Supervisor: KIM SHOEMAKER  
Test Type: CONVENTIONAL Job Number:  
Test Unit: NO 1  
Start Date: 2004/05/17 Start Time: 06:46:00  
End Date: 2004/05/17 End Time: 13:46:20  
Report Date: Prepared By:  
Remarks: Qualified By:

RECOVERED: 162' MW ( 40% MUD 60% WTR)  
248' SW  
TOOL SAMPLE 100% WTR 25,500 ppm CHLORIDES

RITCHIE EXPLORATION, INC  
 DST #3 LKC "H-I" 4,120'-4,190'  
 Start Test Date: 2004/05/17  
 Final Test Date: 2004/05/17

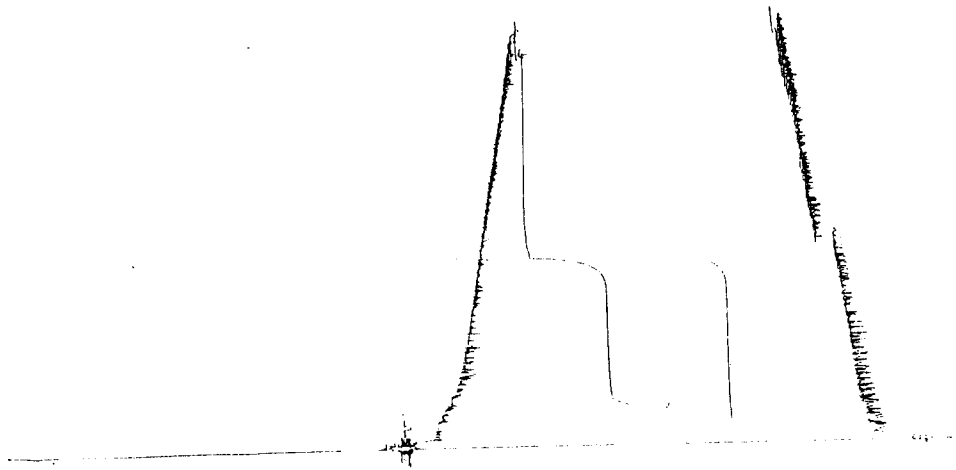
#1 SHARP SEED 14C  
 Formation: DST #3 LKC "H-I" 4,120'-4,190'  
 Pool: WILDCAT

# #1 SHARP SEED 14C



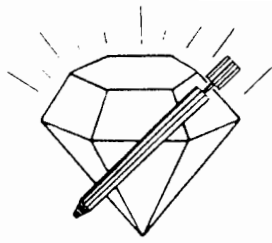
RECEIVED  
 AUG 10 2004  
 KCC WICHITA

DST # 3 Outside 13387 4120/4190-  
 LCC 'H-I' LOC 4187



This is an actual photograph of recorder chart.

| POINT                                  | PRESSURE         |  | Elec.<br>Office<br>Reading | PSI |
|--|------------------|--|----------------------------|-----|
|  | Field<br>Reading |  |                            |     |
| (A) Initial Hydrostatic Mud .....      | 1979             |  | 1979                       | PSI |
| (B) First Initial Flow Pressure.....   | 9                |  | 9                          | PSI |
| (C) First Final Flow Pressure .....    | 90               |  | 90                         | PSI |
| (D) Initial Closed-in Pressure .....   | 913              |  | 913                        | PSI |
| (E) Second Initial Flow Pressure ..... | 92               |  | 92                         | PSI |
| (F) Second Final Flow Pressure.....    | 197              |  | 197                        | PSI |
| (G) Final Closed-in Pressure.....      | 908              |  | 908                        | PSI |
| (H) Final Hydrostatic Mud .....        | 1963             |  | 1963                       | PSI |



# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D26

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1  
Elevation 2916 KB Formation Middle Creek/Lansing/Kansas City "L" Effective Pay -- Ft. Ticket No. 1870  
Date 5-18-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas  
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 4 Interval Tested from 4,250 ft. to 4,284 ft. Total Depth 4,284 ft.  
Packer Depth 4,245 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Packer Depth 4,250 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Depth of Selective Zone Set          ft.

Top Recorder Depth (Inside) 4,238 ft. Recorder Number Elec. Cap. 5,000 psi  
Bottom Recorder Depth (Outside) 4,281 ft. Recorder Number 13387 Cap. 4,000 psi  
Below Straddle Recorder Depth          ft. Recorder Number          Cap.          psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.  
Mud Type Chemical Viscosity 44 Weight Pipe Length -- ft. I.D. -- in.  
Weight 9.25 Water Loss 8.8 cc. Drill Pipe Length 4,225 ft. I.D. 3 1/2 in.  
Chlorides 2,000 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.  
Jars: Make Bowen Serial Number Not Run Anchor Length 34 ft. Size 4 1/2 - FH in.  
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.  
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

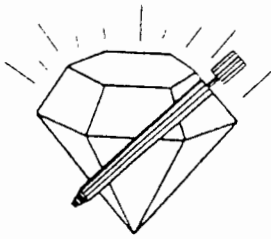
Blow: 1st Open: Weak, 1/2 in., blow increasing to 8 ins. No blow back during shut-in.  
2nd Open: Weak surface blow increasing to 8 ins.

Recovered 20 ft. of muddy water with a trace of oil = .205200 bbls. (Grind out: 30%-mud; 70%-water)  
Recovered 190 ft. of salt water = 1.949400 bbls.  
Recovered 210 ft. of TOTAL FLUID = 2.154600 bbls.

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**KCC WICHITA**

Recovered          ft. of           
Recovered          ft. of           
Remarks Tool Sample Grind Out: 100%-water

Time Set Packer(s) 4:28:30 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 7:28:30 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 129°  
Initial Hydrostatic Pressure          (A) 2035 P.S.I.  
Initial Flow Period          Minutes 30 (B) 9 P.S.I. to (C) 51 P.S.I.  
Initial Closed In Period          Minutes 45 (D) 925 P.S.I.  
Final Flow Period          Minutes 45 (E) 52 P.S.I. to (F) 106 P.S.I.  
Final Closed In Period          Minutes 60 (G) 917 P.S.I.  
Final Hydrostatic Pressure          (H) 2012 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.

Lease & Well No. Sharp Seed 14C No. 1

Date 5-18-04 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 4 Interval Tested From 4,250 ft. to 4,284 ft. Total Depth 4,284 ft.

Formation Middle Creek/Lansing/Kansas City "L"

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |                            |
|------------|----------------|-----------------|----------------------------|
| Viscosity  | <u>44</u> CP   | <u>--</u> CP    |                            |
| Weight     | <u>9.25</u>    | <u>--</u>       |                            |
| Water Loss | <u>8.8</u> CC  | <u>--</u> CC    |                            |
| PH Factor  | <u>9.5</u>     | <u>--</u>       | <u>Water</u><br><u>7.0</u> |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>.20</u> @ <u>82</u> °F.  | <u>29,000</u> ppm       |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Mud Pit Sample          | <u>1.90</u> @ <u>58</u> °F. | <u>3,900</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.80</u> @ <u>60</u> °F. | <u>3,600</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

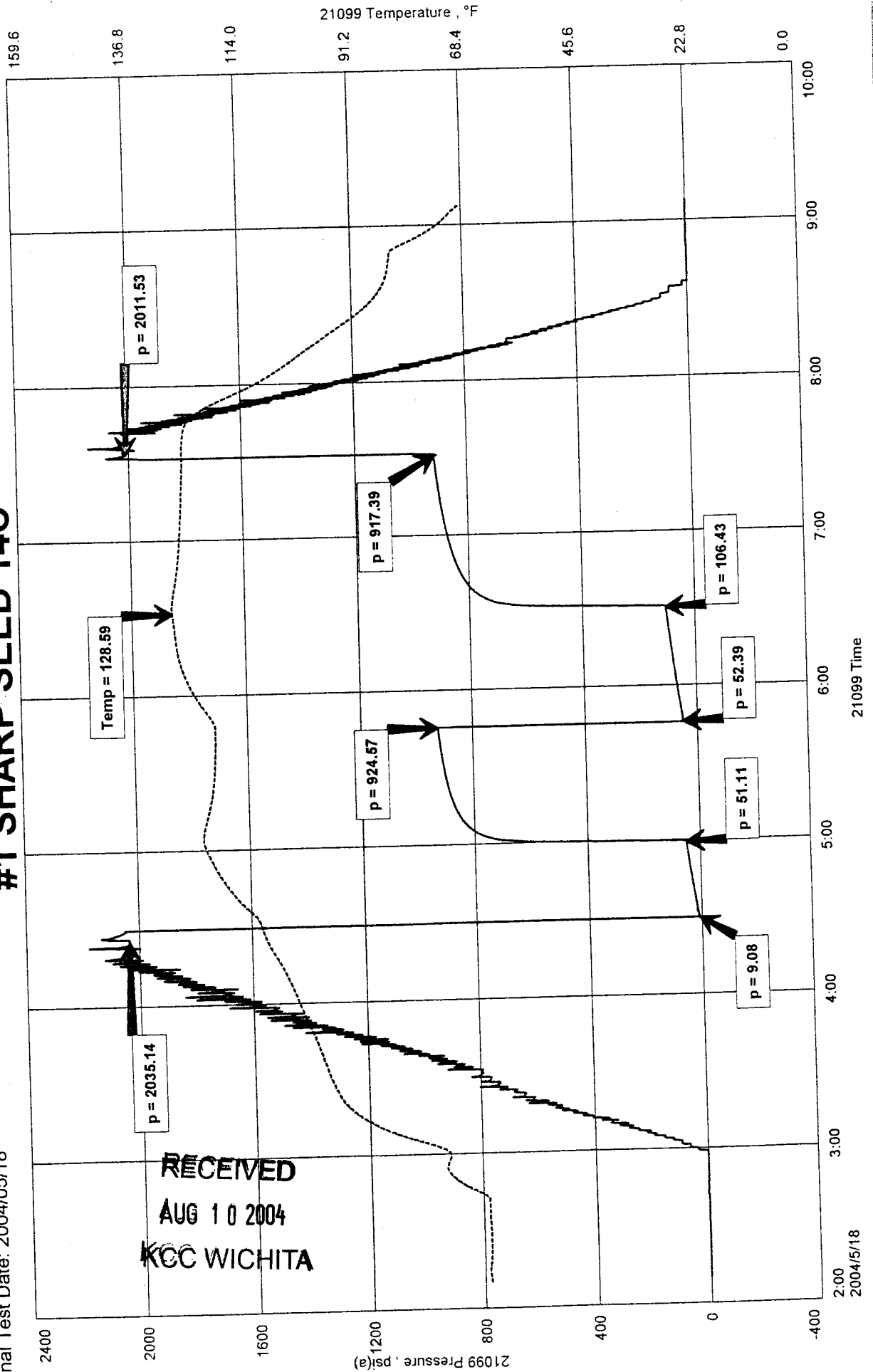
Remarks Pit filtrate triton dish chlorides were 2,000 Ppm.  
Recovery water dish chlorides were 24,000 Ppm.



#1 SHARP SEED 14C  
Formation: DST #4 MID. CRK / LKC 'L' 4,250'-4,284'  
Pool: WILDCAT

RITCHE EXPLORATION, INC.  
DST #4 MID. CRK / LKC 'L' 4,250'-4,284'  
Start Test Date: 2004/05/18  
Final Test Date: 2004/05/18

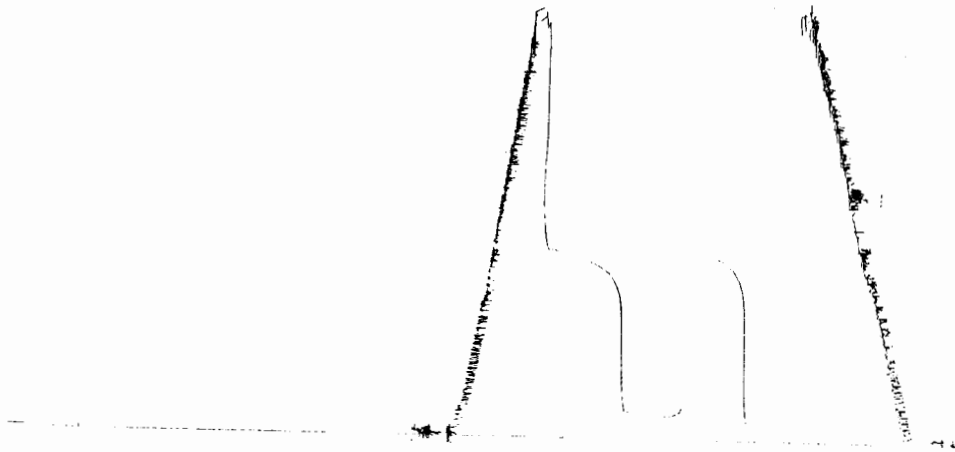
# #1 SHARP SEED 14C



RECEIVED  
AUG 10 2004  
KCC WICHITA

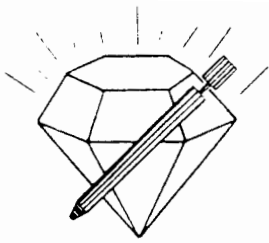
DST # 4 outside 13387  
 mid creek  
 LKc VL'

4250-4284  
 LOC 4281



This is an actual photograph of recorder chart.

| POINT                                 | PRESSURE Elec. |                | PSI |
|---------------------------------------|----------------|----------------|-----|
|                                       | Field Reading  | Office Reading |     |
| (A) Initial Hydrostatic Mud .....     | 2035           | 2035           | PSI |
| (B) First Initial Flow Pressure.....  | 9              | 9              | PSI |
| (C) First Final Flow Pressure .....   | 51             | 51             | PSI |
| (D) Initial Closed-in Pressure .....  | 925            | 925            | PSI |
| (E) Second Initial Flow Pressure..... | 52             | 52             | PSI |
| (F) Second Final Flow Pressure.....   | 106            | 106            | PSI |
| (G) Final Closed-in Pressure.....     | 917            | 917            | PSI |
| (H) Final Hydrostatic Mud.....        | 2012           | 2012           | PSI |



# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D27

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1  
Elevation 2916 KB Formation Pleasanton Effective Pay -- Ft. Ticket No. 1871  
Date 5-18-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas  
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 5 Interval Tested from 4,290 ft. to 4,310 ft. Total Depth 4,310 ft.  
Packer Depth 4,285 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Packer Depth 4,290 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 4,278 ft. Recorder Number Elec. Cap. 5,000 psi  
Bottom Recorder Depth (Outside) 4,307 ft. Recorder Number 13387 Cap. 4,000 psi  
Below Straddle Recorder Depth -- ft. Recorder Number -- Cap. -- psi

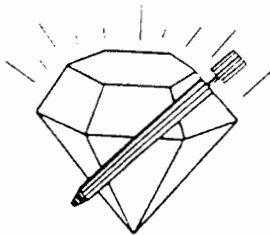
Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.  
Mud Type Chemical Viscosity 47 Weight Pipe Length -- ft. I.D. -- in.  
Weight 9.0 Water Loss 8.8 cc. Drill Pipe Length 4,265 ft. I.D. 3 1/2 in.  
Chlorides 1,800 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.  
Jars: Make Bowen Serial Number Not Run Anchor Length 20 ft. Size 4 1/2 - FH in.  
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.  
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak surface blow increasing to 1/2 in. No blow back during shut-in.  
2nd Open: Weak surface blow throughout. No blow back during shut-in.

Recovered 1 ft. of clean oil = .010260 bbls. (Gravity: 38 @ 60°)  
Recovered 9 ft. of oil cut mud = .092340 bbls. (Grind out: 15%-oil; 85%-mud)  
Recovered 10 ft. of TOTAL FLUID = .102600 bbls.  
Recovered -- ft. of --  
Recovered -- ft. of --  
Remarks Tool Sample Grind Out: 25%-oil; 75%-mud

**RECEIVED**  
**AUG 10 2004**  
**KCC WICHITA**

Time Set Packer(s) 5:05 ~~XXXX~~ P.M. Time Started Off Bottom 7:05 ~~XXV~~ P.M. Maximum Temperature 114°  
Initial Hydrostatic Pressure (A) 2059 P.S.I.  
Initial Flow Period Minutes 30 (B) 7 P.S.I. to (C) 14 P.S.I.  
Initial Closed In Period Minutes 30 (D) 565 P.S.I.  
Final Flow Period Minutes 30 (E) 12 P.S.I. to (F) 14 P.S.I.  
Final Closed In Period Minutes 30 (G) 71 P.S.I.  
Final Hydrostatic Pressure (H) 2054 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.

Lease & Well No. Sharp Seed 14C No. 1

Date 5-18-04 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 5 Interval Tested From 4,290 ft. to 4,310 ft. Total Depth 4,310 ft.

Formation Pleasanton

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |
|------------|----------------|-----------------|
| Viscosity  | <u>47</u> CP   | <u>--</u> CP    |
| Weight     | <u>9.0</u>     | <u>--</u>       |
| Water Loss | <u>8.8</u> CC  | <u>--</u> CC    |
| PH Factor  | <u>10.0</u>    | <u>--</u>       |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Mud Pit Sample          | <u>1.65</u> @ <u>63</u> °F. | <u>4,200</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.70</u> @ <u>64</u> °F. | <u>3,800</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 1,800 Ppm.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC  
Contact: ROCKY MILFORD  
Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14 C  
Operator: RITCHIE EXPLORATION, INC.  
Location-Downhole: DST #5 PLEASONTON 4,290'-4,310'  
Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

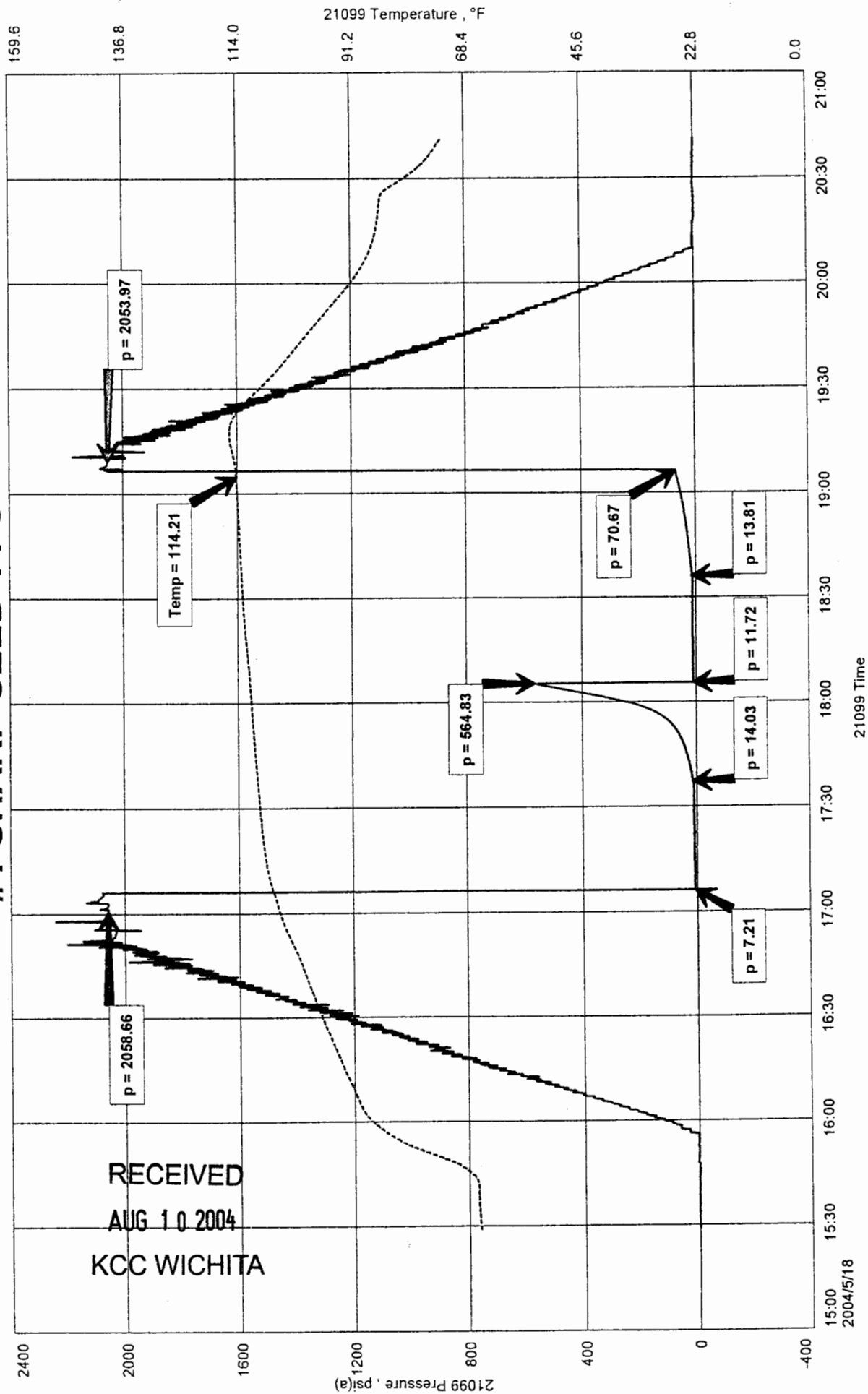
Company: DIAMOND TESTING  
Representative: ROGER D. FRIEDLY  
Supervisor: KIM SHOEMAKER  
Test Type: CONVENTIONAL Job Number:  
Test Unit: NO 1  
Start Date: 2004/05/18 Start Time: 15:28:00  
End Date: 2004/05/18 End Time: 20:39:50  
Report Date: Prepared By:  
Remarks: Qualified By:

RECOVERED: 1' CO 38 GRAVITY @ 60 deg.  
9' OCM ( 15% OIL, 85% MUD  
TOOL SAMPLE 25% OIL 75% MUD.

#1 SHARP SEED 14 C  
 Formation: DST #5 PLEASANTON 4,290'-4,310'  
 Pool: WILDCAT

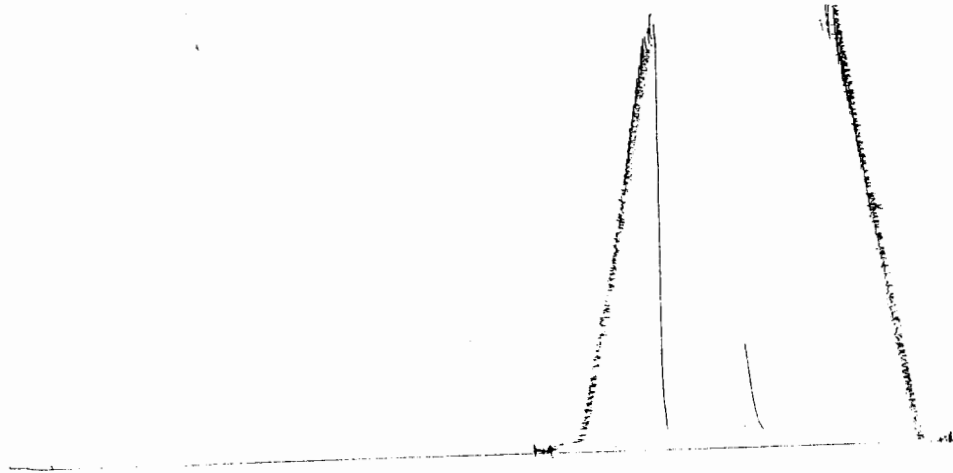
RITCHE EXPLORATION, INC  
 DST #5 PLEASANTON 4,290'-4,310'  
 Start Test Date: 2004/05/18  
 Final Test Date: 2004/05/18

# #1 SHARP SEED 14 C



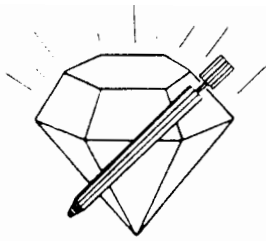
DST #5 13887 outside  
 PLEASANTON

4290 - 4310  
 LOC 4307



This is an actual photograph of recorder chart.

| POINT                                  | PRESSURE      |                      |     |
|--|---------------|----------------------|-----|
|  | Field Reading | Elec. Office Reading |     |
| (A) Initial Hydrostatic Mud .....      | 2059          | 2059                 | PSI |
| (B) First Initial Flow Pressure .....  | 7             | 7                    | PSI |
| (C) First Final Flow Pressure .....    | 14            | 14                   | PSI |
| (D) Initial Closed-in Pressure .....   | 565           | 565                  | PSI |
| (E) Second Initial Flow Pressure ..... | 12            | 12                   | PSI |
| (F) Second Final Flow Pressure .....   | 14            | 14                   | PSI |
| (G) Final Closed-in Pressure .....     | 71            | 71                   | PSI |
| (H) Final Hydrostatic Mud .....        | 2054          | 2054                 | PSI |



# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D28

Page 1 of 16 Pages

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1

Elevation 2916 KB Formation Altamont Effective Pay 3 Ft. Ticket No. 1872

Date 5-19-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 6 Interval Tested from 4,312 ft. to 4,377 ft. Total Depth 4,377 ft.

Packer Depth 4,307 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,312 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set          ft.

Top Recorder Depth (Inside) 4,300 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,374 ft. Recorder Number 13387 Cap. 4,000 psi

Below Straddle Recorder Depth          ft. Recorder Number          Cap.         psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 49 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.3 Water Loss 8.8 cc. Drill Pipe Length 4,287 ft. I.D. 3 1/2 in.

Chlorides 3,600 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.

Jars Make Bowen Serial Number Not Run Anchor Length 34' perf. w/31' drill pipe Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size          in. Bottom Choke Size 5/8 in.

Main Hole Size 7.7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket immediately. Gas to surface in 30 mins. Strong blow back off bottom of bucket during shut-in. (SEE GAS VOLUME REPORT)

2nd Open: Strong blow. Off bottom of bucket in 1 min. Good, 8 in., blow back during shut-in. (SEE GAS VOLUME REPORT)

Recovered 2,929 ft. of clean gassy oil = 30.051540 bbls. (Grind out: 4%-gas; 96%-oil) Gravity: 36 @ 60°

Recovered 62 ft. of heavy gas cut muddy oil = .636120 bbls. (Grind out: 10%-gas; 20%-mud; 70%-oil)

Recovered 62 ft. of heavy gas cut muddy oil = .636120 bbls. (Grind out: 18%-gas; 37%-mud; 45%-oil)

Recovered 3,053 ft. of TOTAL FLUID = 31.323780 bbls.

Recovered          ft. of         

Remarks Tool Sample Grind Out: 2%-gas; 7%-water; 30%-mud; 61%-oil

**RECEIVED**

**AUG 10 2004**

**KCC WICHITA**

Time Set Packer(s) 8:39 ~~XXX~~ A.M. Time Started Off Bottom 11:24 ~~XXX~~ A.M. Maximum Temperature 133°

Initial Hydrostatic Pressure 2094 (A) P.S.I.

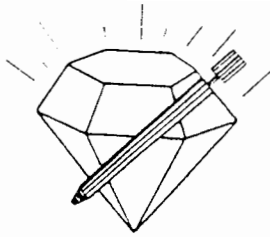
Initial Flow Period 30 Minutes (B) 512 P.S.I. to (C) 1039 P.S.I.

Initial Closed In Period 45 Minutes (D) 1099 P.S.I.

Final Flow Period 30 Minutes (E) 1049 P.S.I. to (F) 1102 P.S.I.

Final Closed In Period 60 Minutes (G) 1109 P.S.I.

Final Hydrostatic Pressure 2056 (H) P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.

Lease & Well No. Sharp Seed 14C No. 1

Date 5-19-04 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 6 Interval Tested From 4,312 ft. to 4,377 ft. Total Depth 4,377 ft.

Formation Altamont

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |
|------------|----------------|-----------------|
| Viscosity  | <u>49</u> CP   | <u>--</u> CP    |
| Weight     | <u>9.3</u>     | <u>--</u>       |
| Water Loss | <u>8.8</u> CC  | <u>--</u> CC    |
| PH Factor  | <u>9.5</u>     | <u>--</u>       |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Mud Pit Sample          | <u>1.10</u> @ <u>77</u> °F. | <u>4,600</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.30</u> @ <u>80</u> °F. | <u>4,000</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

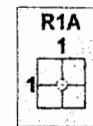
Remarks Pit filtrate triton dish chlorides were 3,600 Ppm.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Oil Well Test - Buildup

## Radial Flow Analysis



Page 4 of 16 Pages

RITCHIE EXPLORATION, INC.

DST #6 ALTAMONT 4,312-4,377

#1 SHARP SEED 14C

### Analysis Results

|                                     |                  |  |        |
|-------------------------------------|------------------|--|--------|
| Total Sandface Rate ( $q_{tBt}$ )   | 256.186 bbl/d    | Apparent Skin ( $s'$ )                     | -6.150 |
| Semilog Slope (m)                   | 8.11             | Skin - Damage                              | -6.150 |
| Gas Permeability ( $k_g$ )          | md               | Skin - Inclination                         | 0.000  |
| Oil Permeability ( $k_o$ )          | 1627.633 md      | Skin - Partial Penetration                 |        |
| Water Permeability ( $k_w$ )        | md               | Pressure Drop Due to Skin ( $\Delta p_s$ ) | psi    |
| Flow Capacity (kh)                  | 4882.899 md.ft   | Damage Ratio (DR)                          | 0.962  |
| Total Mobility ( $k/\mu_t$ )        | 1712.79 md/cp    | Flow Efficiency (FE)                       | 1.039  |
| Total Transmissivity ( $kh/\mu_t$ ) | 5138.38 md.ft/cp |  |        |

### Reservoir Parameters

|                                     |                            |
|-------------------------------------|----------------------------|
| Net Pay (h)                         | 3.000 ft                   |
| Total Porosity ( $\phi_t$ )         | 11.00 %                    |
| Water Saturation ( $S_w$ )          | 20.00 %                    |
| Oil Saturation ( $S_o$ )            | 80.00 %                    |
| Gas Saturation ( $S_g$ )            | 0.00 %                     |
| Wellbore Radius ( $r_w$ )           | 0.30 ft                    |
| Formation Temperature (T)           | 133.0 °F                   |
| Formation Compressibility ( $c_f$ ) | 4.674e-6 psi <sup>-1</sup> |
| Total Compressibility ( $c_t$ )     | 1.558e-5 psi <sup>-1</sup> |

### Pressures

|                                      |             |
|--------------------------------------|-------------|
| Initial Pressure ( $p_i$ )           | 2204.71 psi |
| Extrapolated Pressure ( $p^*$ )      | 1114.67 psi |
| Ave. Reservoir Press                 | 1112.86 psi |
| Final Flowing Pressure ( $p_{wfo}$ ) | 1102.45 psi |

### Production and Times

|                               |               |
|-------------------------------|---------------|
| Corrected Flow Time ( $t_c$ ) | 1.0833 hr     |
| Cumulative Oil Production     | 9.163 bbl     |
| Final Oil Rate                | 203.000 bbl/d |

### Fluid Properties

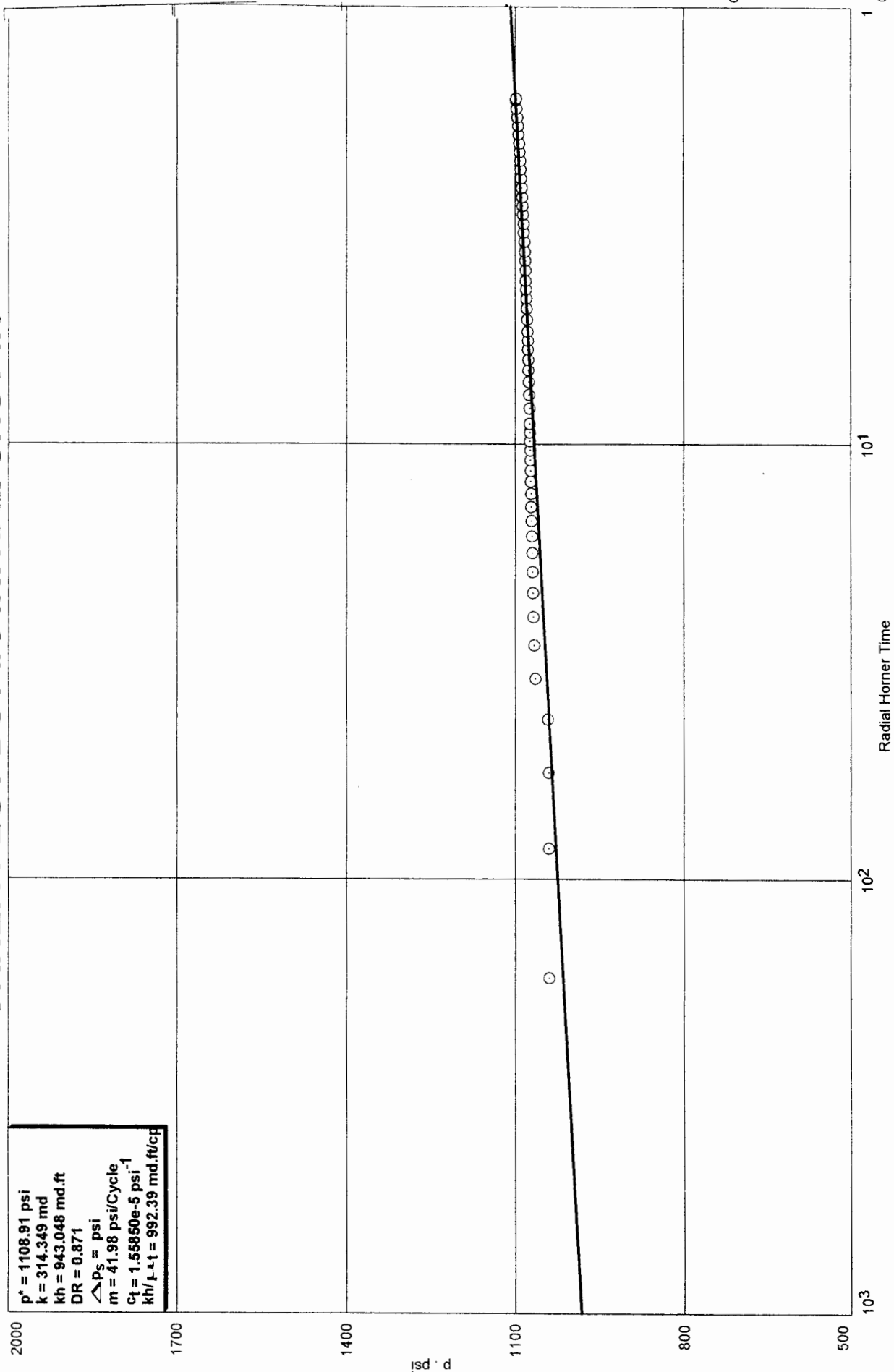
|                                       |                              |
|---------------------------------------|------------------------------|
| Oil Compressibility ( $c_o$ )         | 1.28990e-5 psi <sup>-1</sup> |
| Oil Formation Volume Factor ( $B_o$ ) | 1.262                        |
| Oil Viscosity ( $\mu_o$ )             | 0.950 cp                     |
| Solution Gas Ratio ( $R_s$ )          | 460 scf/bbl                  |
| Oil Gravity ( $\gamma_o$ )            | 36.00 ° API                  |
| Gas Gravity (G)                       | 0.650                        |
| PVT Reference Pressure ( $pp_{VT}$ )  | 2204.71 psi                  |

### Extended Rates Calculations

|  |                  |
|--|------------------|
| Specified Flowing Pressure             | 1102.45 psi      |
| Specified Reservoir Pressure           | 1112.86 psi      |
| Drainage Area                          | 160.0 acres      |
| 3 - Month Constant Rate                | bbl/d            |
| 6 - Month Constant Rate                | bbl/d            |
| Stabilized Rate @ Current Skin         | 134.087 bbl/d    |
| Stabilized Rate @ Skin of 0            | 35.781 bbl/d     |
| Stabilized Rate @ Skin of -4           | bbl/d            |
| PI / II (Total Liquids - Actual)       | 19.504 bbl/d/psi |
| PI / II (Total Liquids - Ideal)        | bbl/d/psi        |
| Stab. PI / II (Total Liquids - Actual) | 12.883 bbl/d/psi |
| Stab. PI / II (Total Liquids - Ideal)  | bbl/d/psi        |

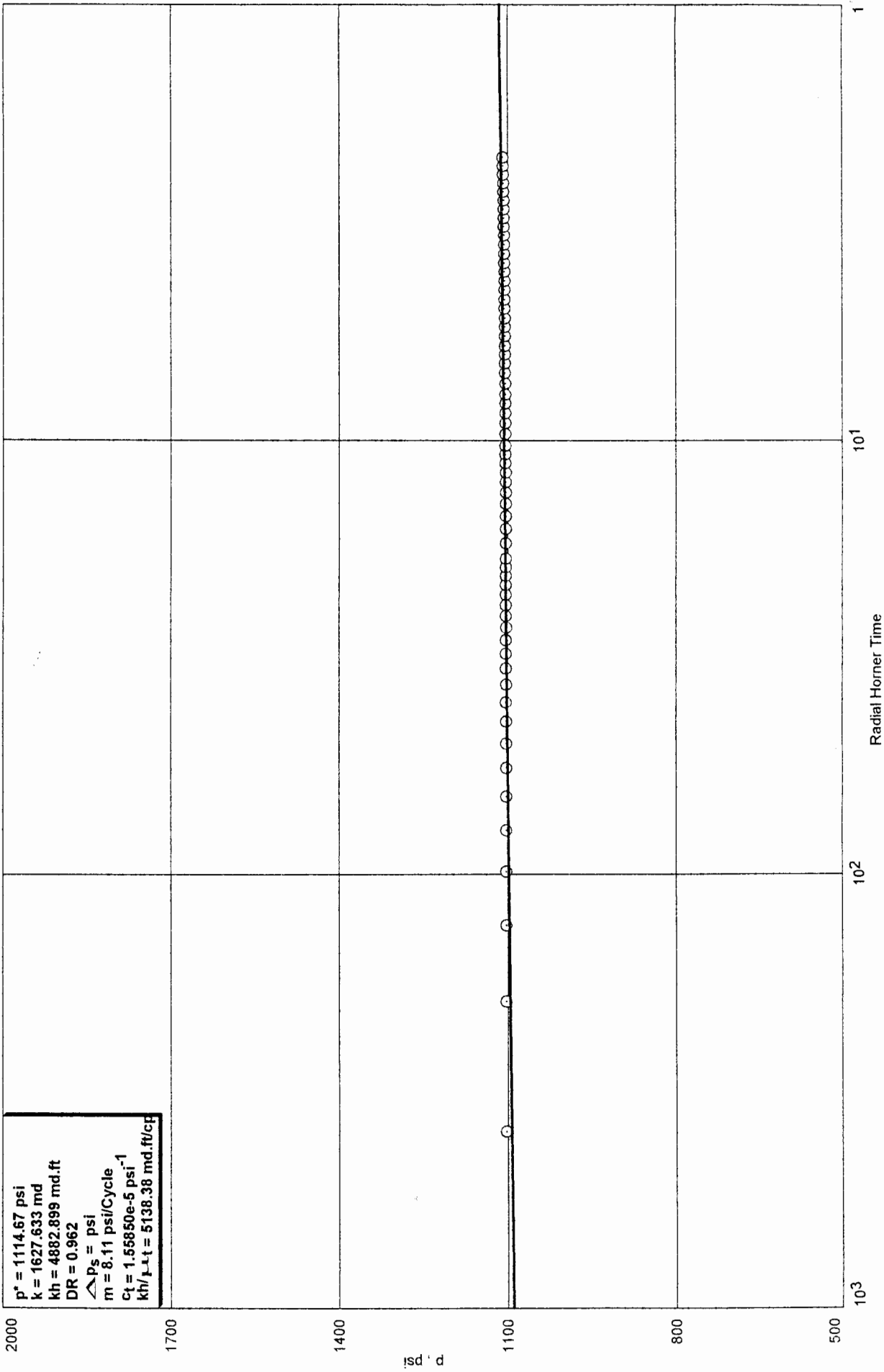
RITCHIE EXPLORATION, INC.  
 #1 SHARP SEED 14C  
 DST #6 ALTAMONT 4,312'-4,377

# HORNER PLOT DST #6 INITIAL SHUT IN



RITCHIE EXPLORATION, INC.  
 #1 SHARP SEED 14C  
 DST #6 ALTAMONT 4,312'-4,377'

# HORNER PLOT DST #6 FINAL SHUT IN



RITCHIE EXPLORATION, INC

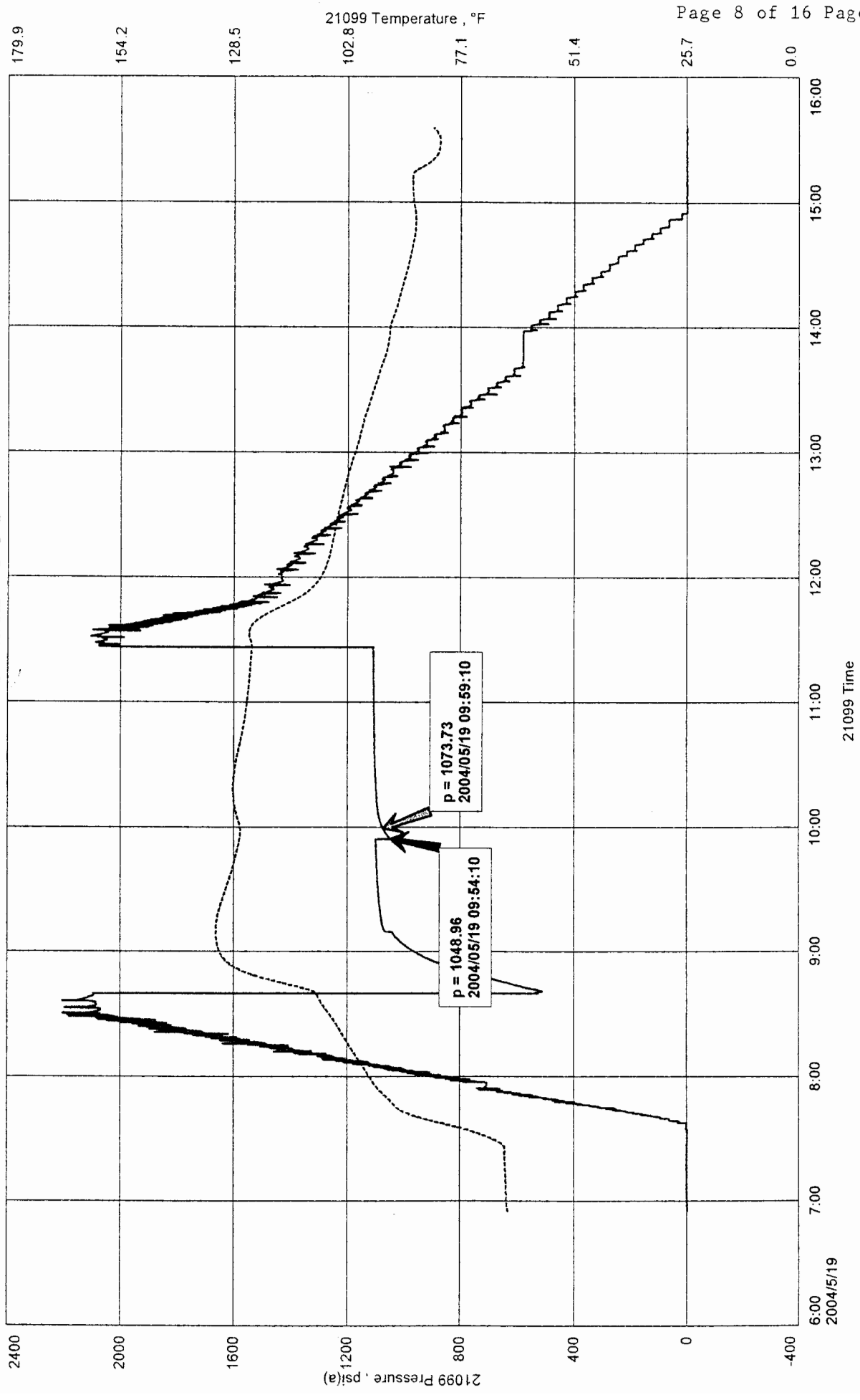
|             |         |         |          |         |          |        |       |       |         |            |
|-------------|---------|---------|----------|---------|----------|--------|-------|-------|---------|------------|
| DESCRIPTION | SECOND  | FIRST   | PRESSURE | PIPE    | FLUID    | TIME   | TOTAL | DAILY | AVERAGE | ESTIMATED  |
| FINAL FLOW  | READING | READING | CHANGE   | SIZE-ID | GRADIENT | CHANGE | TIME  | PROD. | % OIL   | PRODUCTION |
|             | 1,074   | 1,049   | 25       | 0.0103  | 0.3658   | 5      | 1440  | 203   | 1       | 203        |

#1 SHARP SEED 14C DST #6 ALTAMONT 4,312'-4,377'

RITCHIE EXPLORATION, INC.  
DST #6 ALTAMONT 4,312'-4,377'  
Start Test Date: 2004/05/19  
Final Test Date: 2004/05/19

#1 SHARP SEED 14C  
Formation: DST #6 ALTAMONT 4,312'-4,377'  
Pool: WILDCAT

# #1 SHARP SEED 14C



Comments relative to analysis of the drill stem test that was run in the Altamont formation by Diamond Testing.

This analysis is based upon the liquid recovery and equations applicable to liquid recovery tests; radial flow analysis and derivative analysis techniques. It has been assumed for purposes of this analysis, that the tested reservoir system consisted of a single porosity zone 3 feet in thickness with an average porosity of 11 percent. A linear flow regime equivalent to approximately  $\frac{1}{2}$  slope is noted on the diagnostic plots. This type of flow regime is often times associated with the presence of fractures or the presence of a channel reservoir system. A vertical oil-well model with linear flow was used for type-curve matching and non-linear regression analysis.

The semi-log plots indicate a maximum initial reservoir pressure of 1122 psi and a maximum final reservoir pressure of 1126 psi, which is equivalent to a subsurface pressure gradient of 0.261 psi/ft at gauge depth. The subsurface pressure gradient would appear to be somewhat low compared to normal reservoir pressures.

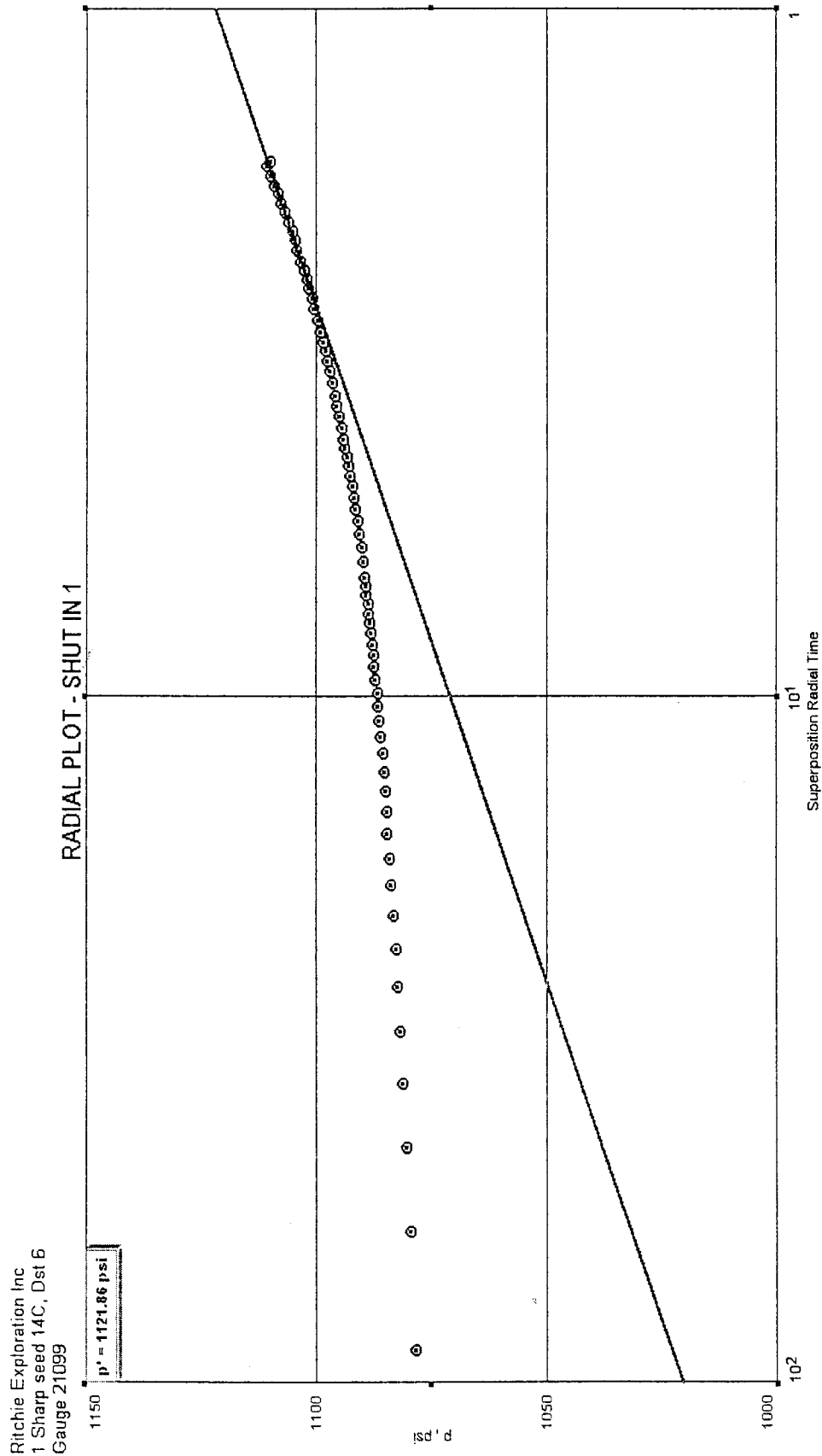
The Average Production Rate which was used in this analysis has been calculated from analysis of the flow pressure curves using a liquid gradient for the recovered oil of 0.366 psi/ft.

The calculated Skin Factors indicate no well-bore damage was present at the time of this formation test. It should be noted that negative skin, representing well-bore stimulation, is often times associated with the presence of fracture porosity.

The evaluation criteria used in the drill stem test analysis system indicate this is a good mechanical test and the results obtained in this analysis should be reliable within reasonable limits relative to the assumptions which have been made.

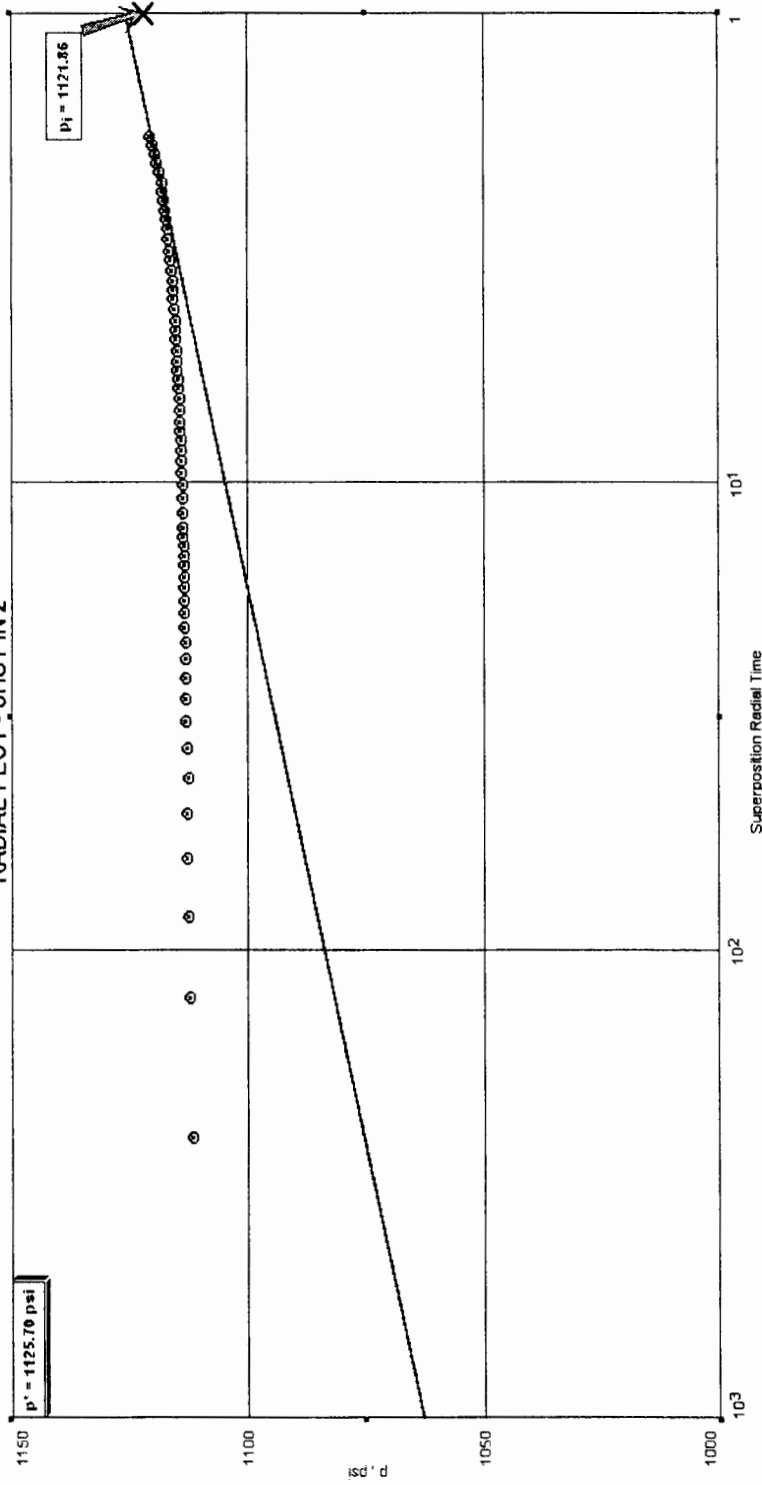
Michael Hudson  
Analyst  
(928) 505-8389





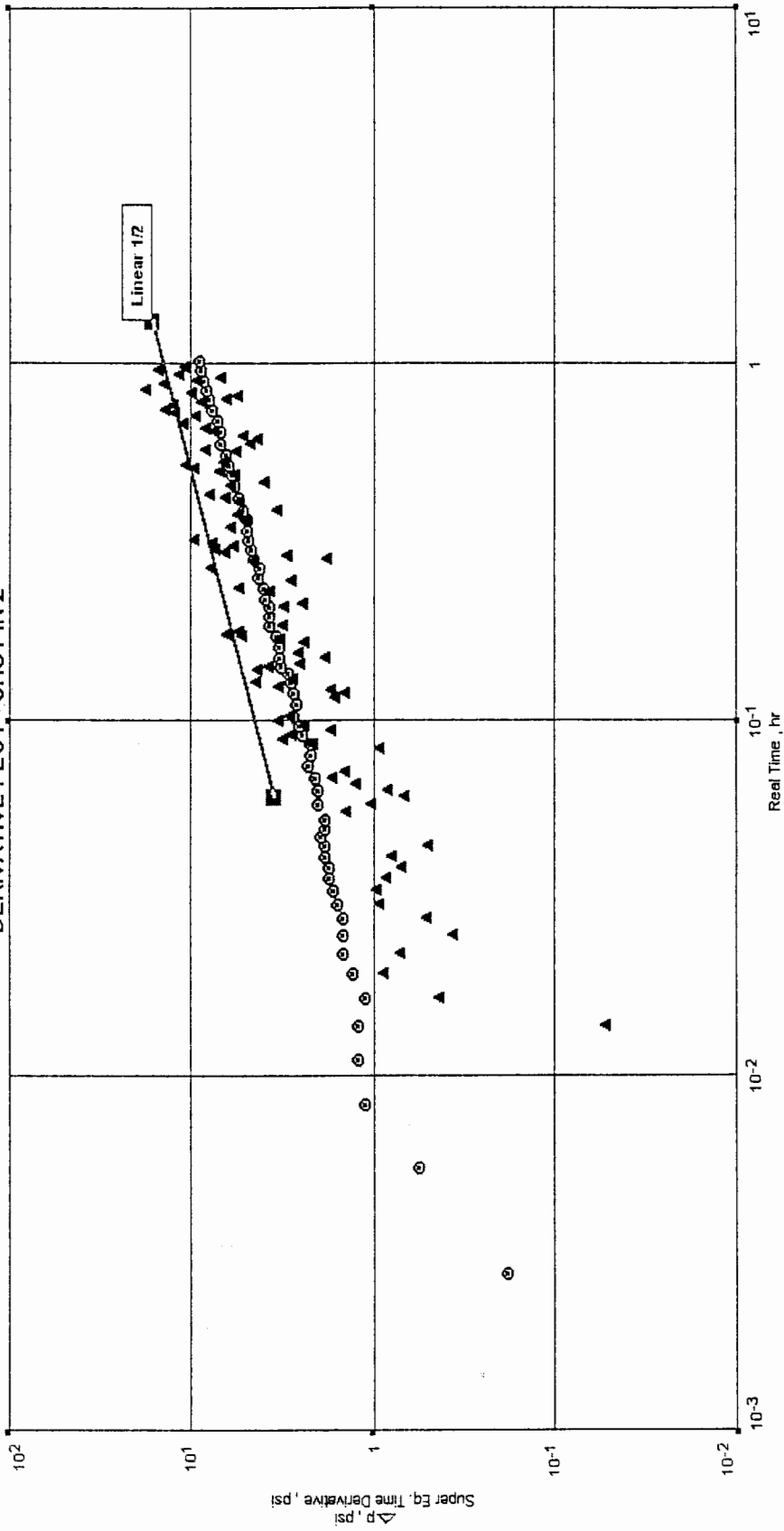
Ritchie Exploration Inc  
1 Sharp seed 14C, Dst 6  
Gauge 21099

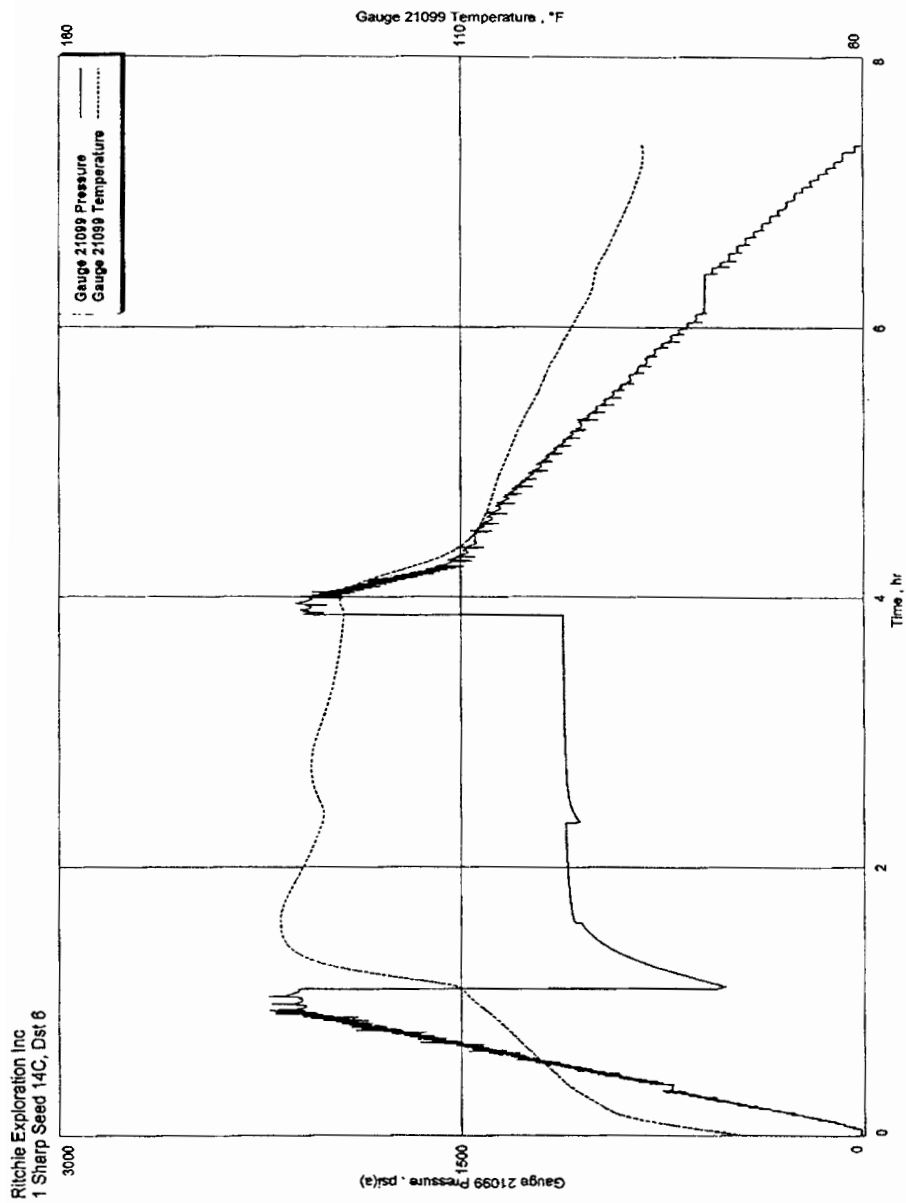
### RADIAL PLOT - SHUT IN 2



Ritchie Exploration Inc  
1 Sharp seed 14C, Dist 6  
Gauge 21099

### DERIVATIVE PLOT - SHUT IN 2





Fos

# Vertical Oil Well Model

Richie Exploration Inc  
1 Sharp seed 14C, Dst 6  
Gauge 21099

## Model Parameters

|                              |                |                                     |                   |
|------------------------------|----------------|-------------------------------------|-------------------|
| Oil Permeability ( $k_o$ )   | 34937.537 md   | Total Transmissivity ( $kh/\mu_t$ ) | 68011.21 md.ft/cp |
| Total Mobility ( $k/\mu_t$ ) | 22670.40 md/cp | Skin (s)                            | -7.000            |

## Formation Parameters

|  |                            |
|--|----------------------------|
| Net Pay (h)                              | 3.000 ft                   |
| Total Porosity ( $\phi_t$ )              | 11.00 %                    |
| Oil Saturation ( $S_o$ )                 | 80.00 %                    |
| Gas Saturation ( $S_g$ )                 | 0.00 %                     |
| Water Saturation ( $S_w$ )               | 20.00 %                    |
| Wellbore Radius ( $r_w$ )                | 0.33 ft                    |
| Formation Temperature (T)                | 132.5 °F                   |
| Formation Compressibility ( $c_f$ )      | 4.674e-6 psi <sup>-1</sup> |
| Total Compressibility ( $c_t$ )          | 1.646e-5 psi <sup>-1</sup> |
| Wellbore Storage Constant Dim. ( $C_D$ ) | 0.01                       |

## Fluid Properties

|   |                              |
|---|------------------------------|
| Oil Compressibility ( $c_o$ )           | 1.39653e-5 psi <sup>-1</sup> |
| Gas Compressibility ( $c_g$ )           | 9.95820e-4 psi <sup>-1</sup> |
| Water Compressibility ( $c_w$ )         | 3.05332e-6 psi <sup>-1</sup> |
| Oil Formation Volume Factor ( $B_o$ )   | 1.142                        |
| Gas Formation Volume Factor ( $B_g$ )   | 0.002316 bbl/scf             |
| Water Formation Volume Factor ( $B_w$ ) | 1.010                        |
| Oil Viscosity ( $\mu_o$ )               | 1.541 cp                     |
| Gas Viscosity ( $\mu_g$ )               | 0.0134 cp                    |
| Water Viscosity ( $\mu_w$ )             | 0.493 cp                     |
| Solution Gas Ratio ( $R_s$ )            | 207 scf/bbl                  |
| Oil Gravity ( $\gamma_o$ )              | 36.00 ° API                  |
| Gas Gravity (G)                         | 0.650                        |
| PVT Reference Pressure ( $p_{pVT}$ )    | 1121.86 psi                  |
| Bubble Point Pressure ( $P_{bp}$ )      | 1121.86 psi                  |

## Production and Pressure

|                                      |                |
|--------------------------------------|----------------|
| $Q_i B_t$                            | 1567.723 bbl/d |
| Final Oil Rate                       | 1372.990 bbl/d |
| Final Flowing Pressure ( $p_{wfo}$ ) | 1111.45 psi    |
| Final Measured Pressure              | 1120.57 psi    |

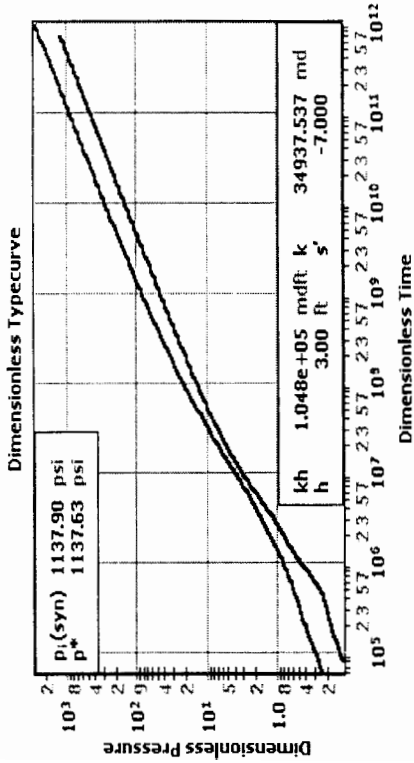
## Synthesis Results

|  |             |
|--|-------------|
| Average Error                              | -0.00 %     |
| Synthetic Initial Pressure ( $p_i$ )       | 1137.90 psi |
| Extrapolated Pressure at Specified Time    | 1137.63 psi |
| Pressure Drop Due To Skin ( $\Delta p_s$ ) | psi         |
| Flow Efficiency (FE)                       | 1.948       |
| Damage Ratio (DR)                          | 0.513       |

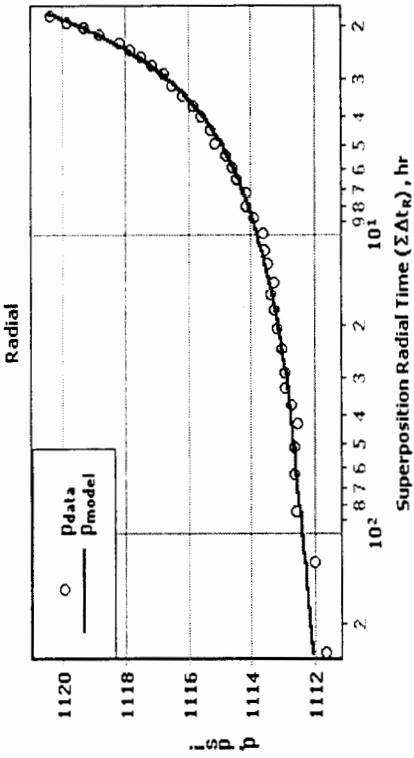
## Forecasts

|   |                 |
|---|-----------------|
| Forecast Flowing Pressure ( $P_{flow}$ )      | 1111.45 psi     |
| 3 - Month Constant Rate Forecast @ Curr. Skin | 15.160 bbl/d    |
| 6 - Month Constant Rate Forecast @ Curr. Skin | 10.682 bbl/d    |
| Forecast Flow Duration ( $t_{flow}$ )         | 12.00 month     |
| Constant Rate Forecast @ Curr. Skin           | 7.542 bbl/d     |
| PI / II (Total Liquids - Actual)              | 0.494 bbl/d/psi |

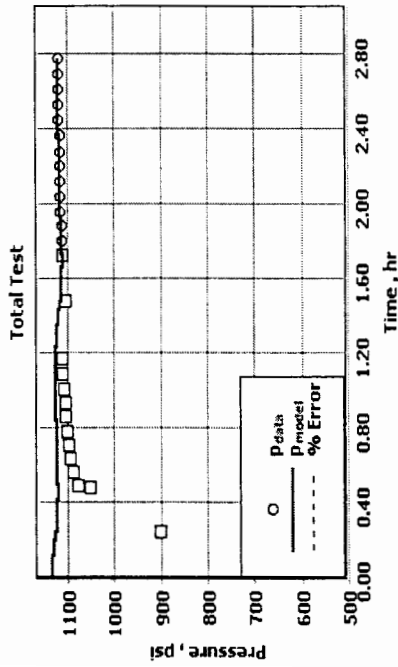
Vertical Oil-Well Model



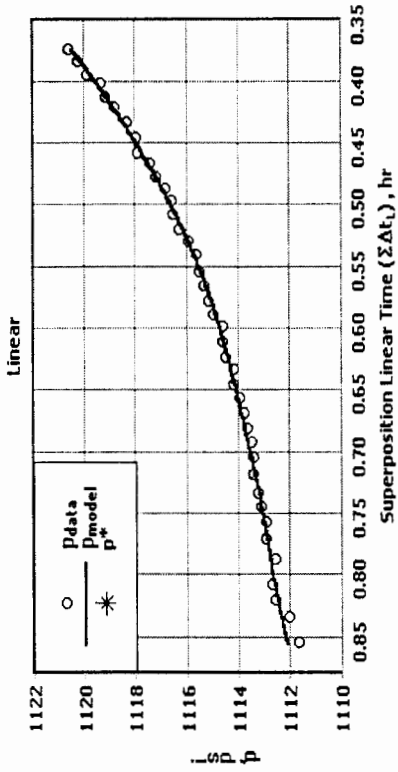
Vertical Oil-Well Model



Vertical Oil-Well Model



Vertical Oil-Well Model



## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC.  
 Contact: ROCKY MILFORD  
 Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
 Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
 Operator: RITCHIE EXPLORATION, INC.  
 Location-Downhole: DST #6 ALTAMONT 4,312'-4,377'  
 Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

|                 |                  |               |          |
|-----------------|------------------|---------------|----------|
| Company:        | DIAMOND TESTING  |               |          |
| Representative: | ROGER D. FRIEDLY |               |          |
| Supervisor:     | KIM SHOEMAKER    |               |          |
| Test Type:      | CONVENTIONAL     | Job Number:   |          |
| Test Unit:      | NO 1             |               |          |
| Start Date:     | 2004/05/19       | Start Time:   | 06:54:00 |
| End Date:       | 2004/05/19       | End Time:     | 15:34:30 |
| Report Date:    |                  | Prepared By:  |          |
|                 |                  | Qualified By: |          |

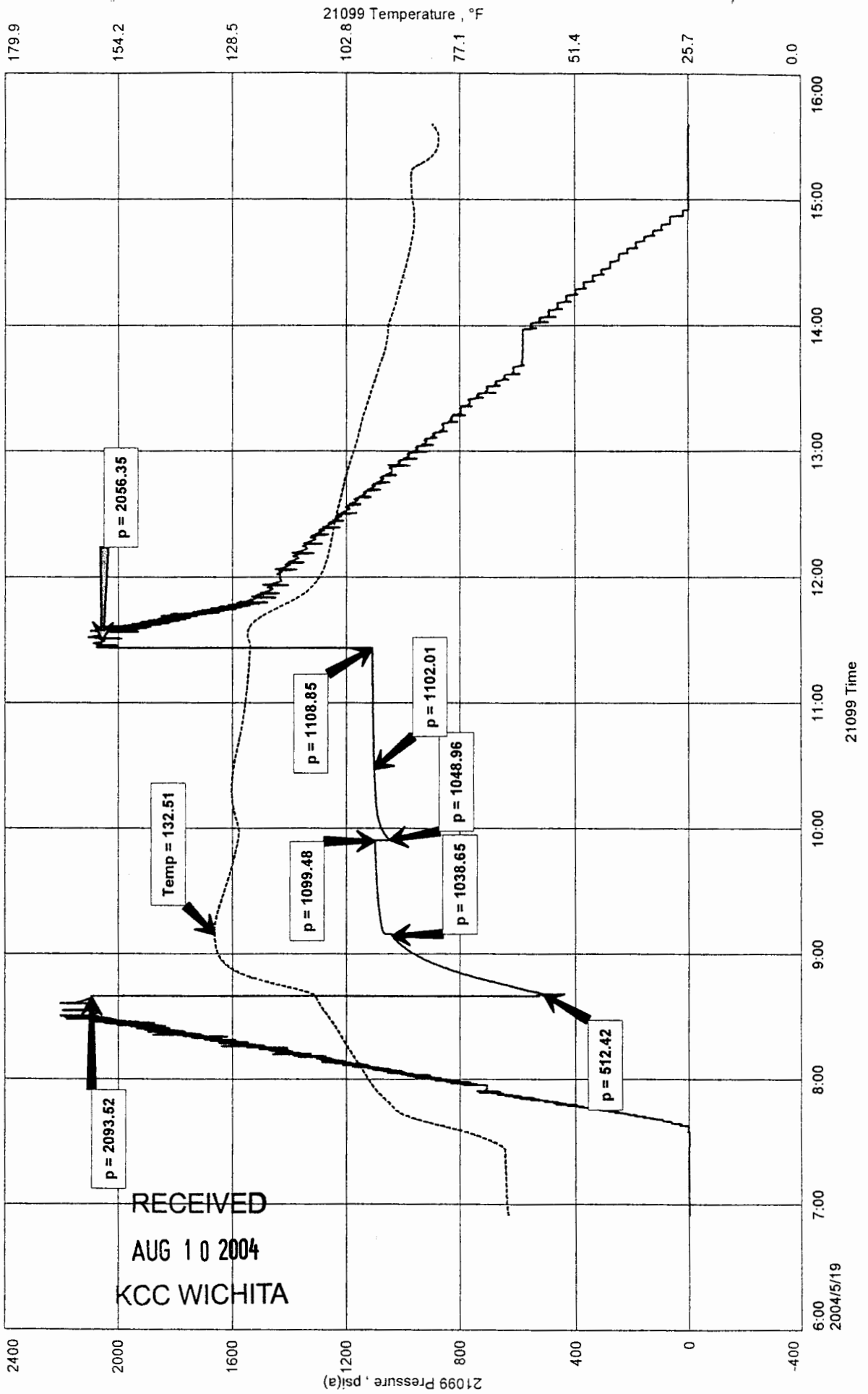
### Remarks:

RECOVERED: 2,929' CLEAN OIL  
                   62' HGCMO ( 10% GAS, 20% MUD, 70% OIL)  
                   62' HGCMO ( 18% GAS, 37% MUD, 45% OIL)  
 TOTAL FLUID 3,053'  
 TOOL SAMPLE 2% GAS, 7% WTR, 30% MUD, 61% OIL

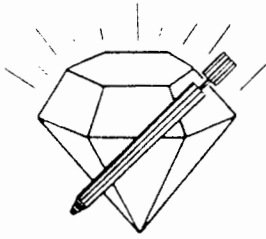
RITCHIE EXPLORATION, INC.  
DST #6 ALTAMONT 4,312'-4,377'  
Start Test Date: 2004/05/19  
Final Test Date: 2004/05/19

#1 SHARP SEED 14C  
Formation: DST #6 ALTAMONT 4,312'-4,377'  
Pool: WILDCAT

# #1 SHARP SEED 14C







# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D29

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1  
Elevation 2916 KB Formation Pawnee/Fort Scott/Cherokee Effective Pay -- Ft. Ticket No. 1873  
Date 5-20-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas  
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 7 Interval Tested from 4,402 ft. to 4,490 ft. Total Depth 4,490 ft.  
Packer Depth 4,397 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Packer Depth 4,402 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Depth of Selective Zone Set          ft.

Top Recorder Depth (Inside) 4,390 ft. Recorder Number Elec. Cap. 5,000 psi  
Bottom Recorder Depth (Outside) 4,487 ft. Recorder Number 13387 Cap. 4,000 psi  
Below Straddle Recorder Depth          ft. Recorder Number          Cap.          psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.  
Mud Type Chemical Viscosity 50 Weight Pipe Length -- ft. I.D. -- in.  
Weight 9.3 Water Loss 7.2 cc. Drill Pipe Length 4,377 ft. I.D. 3 1/2 in.  
Chlorides 1,800 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.  
Jars: Make Bowen Serial Number Not Run Anchor Length 25' perf. w/63' drill pipe Size 4 1/2 - FH in.  
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.  
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 1/2 in., blow decreasing to a weak surface blow. No blow back during shut-in.  
2nd Open: No blow. No blow back during shut-in.

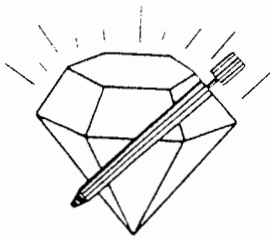
Recovered 5 ft. of drilling mud = .051300 bbls.

Recovered          ft. of           
Recovered          ft. of           
Recovered          ft. of           
Recovered          ft. of         

**RECEIVED**  
**AUG 10 2004**  
**KCC WICHITA**

Remarks Tool Sample Grind Out: 100%-drilling mud

Time Set Packer(s) 6:53 ~~AM.~~ Time Started Off Bottom 8:53 ~~AM.~~ Maximum Temperature 118°  
Initial Hydrostatic Pressure 2102 (A)          P.S.I.  
Initial Flow Period 30 Minutes (B) 6 P.S.I. to (C) 13 P.S.I.  
Initial Closed In Period 30 Minutes (D) 306 P.S.I.  
Final Flow Period 30 Minutes (E) 12 P.S.I. to (F) 14 P.S.I.  
Final Closed In Period 30 Minutes (G) 174 P.S.I.  
Final Hydrostatic Pressure 2074 (H)          P.S.I.



DIAMOND TESTING  
 P. O. Box 157  
 HOISINGTON, KANSAS 67544  
 (800) 542-7313

FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.  
 Lease & Well No. Sharp Seed 14C No. 1  
 Date 5-20-04 Sec. 14 Twp. 17 S Range 31 W  
 Formation Test No. 7 Interval Tested From 4,402 ft. to 4,490 ft. Total Depth 4,490 ft.  
 Formation Pawnee/Fort Scott/ Cherokee

|            | MUD PIT       | RECOVERY      |
|------------|---------------|---------------|
| Viscosity  | <u>50</u> CP  | <u>55</u> CP  |
| Weight     | <u>9.3</u>    | <u>9.2</u>    |
| Water Loss | <u>7.2</u> CC | <u>7.2</u> CC |
| PH Factor  | <u>9.0</u>    | <u>9.0</u>    |

|                         | RESISTIVITY                 | CHLORIDE CONTENT |
|-------------------------|-----------------------------|------------------|
| Recovery Water          | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm    |
| Recovery Mud            | <u>1.80</u> @ <u>68</u> °F. | <u>3,300</u> ppm |
| Recovery Mud Filtrate   | <u>2.00</u> @ <u>69</u> °F. | <u>3,000</u> ppm |
| Mud Pit Sample          | <u>1.90</u> @ <u>66</u> °F. | <u>3,500</u> ppm |
| Mud Pit Sample Filtrate | <u>1.75</u> @ <u>68</u> °F. | <u>3,600</u> ppm |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 1,800 Ppm.  
Recovery filtrate triton dish chlorides were 2,000 Ppm.

## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC.  
Contact: ROCKY MILFORD  
Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOEMAKER  
Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
Operator: RITCHIE EXPLORATION, INC.  
Location-Downhole: DST #7 PAW/FT SCOTT/CHERO. 4,402'-4,490'  
Location-Surface: SEC 14-17S-31W SCOTT COUNTY

### Test Information:

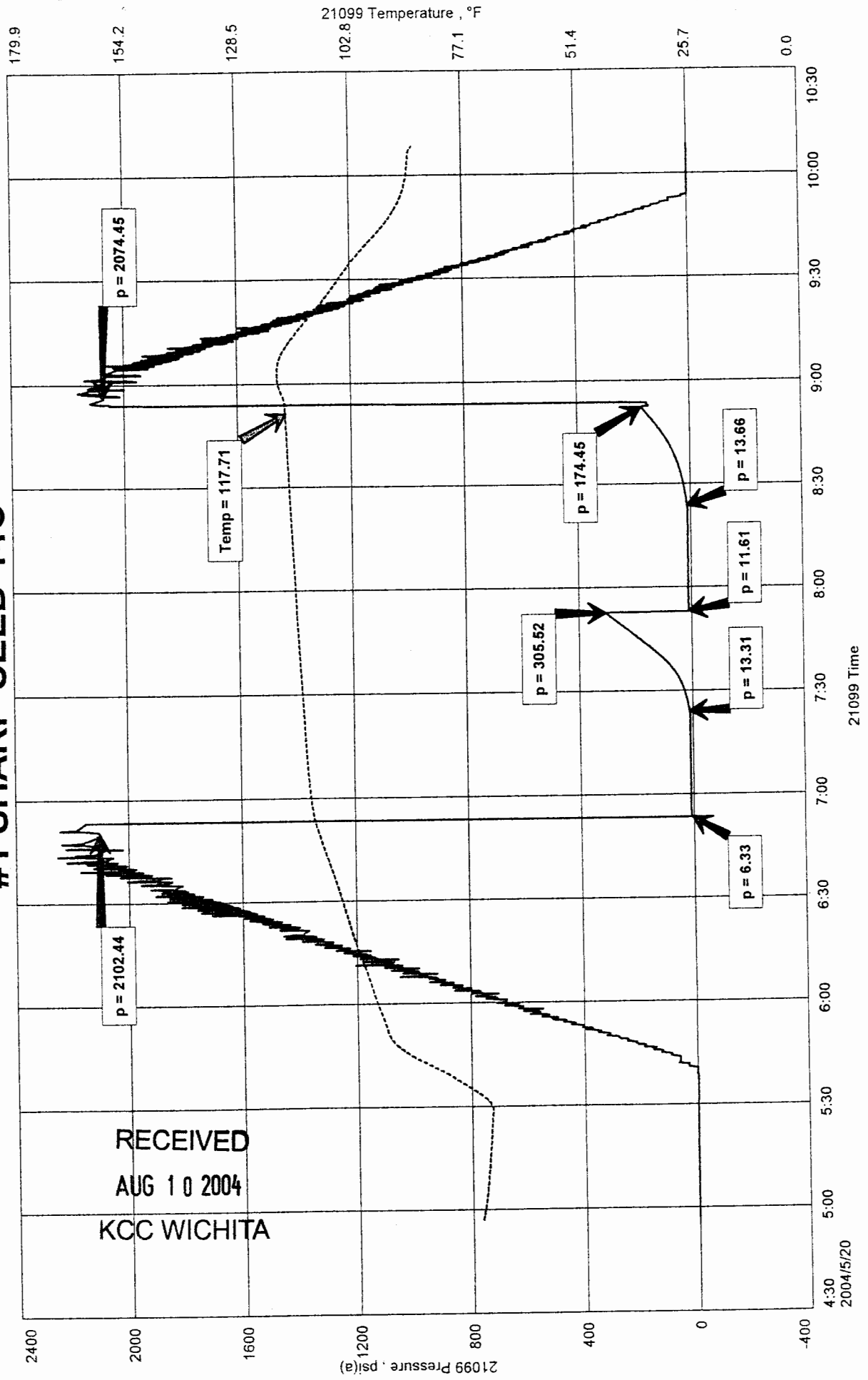
Company: DIAMOND TESTING  
Representative: ROGER D. FRIEDLY  
Supervisor: KIM SHOEMAKER  
Test Type: CONVENTIONAL Job Number:  
Test Unit: NO 1  
Start Date: 2004/05/20 Start Time: 04:56:00  
End Date: 2004/05/20 End Time: 10:07:10  
Report Date: Prepared By:  
Remarks: Qualified By:

RECOVERED: 5' DRILLING MUD  
TOOL SAMPLE 100% DRILLING MUD.

#1 SHARP SEED 14C  
 Formation: DST #7 PAW/FT SCOTT/CHERO. 4,402'-4,490'  
 Pool: WILDCAT

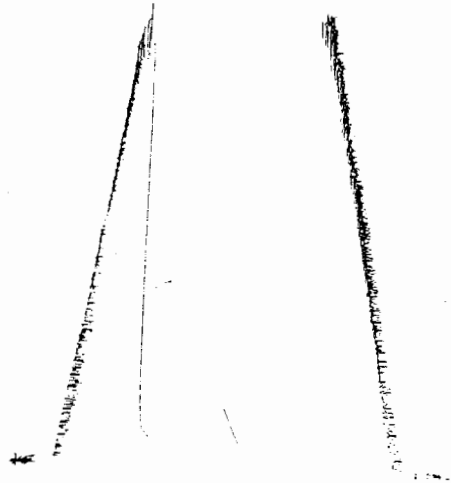
RITCHEE EXPLORATION, INC.  
 DST #7 PAW/FT SCOTT/CHERO. 4,402'-4,490'  
 Start Test Date: 2004/05/20  
 Final Test Date: 2004/05/20

# #1 SHARP SEED 14C



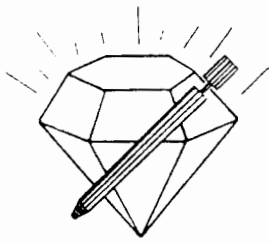
DST #7 outside 13387  
Paw/FS/Chero

4402-4490  
Loc 4487



This is an actual photograph of recorder chart.

| POINT                                  | PRESSURE      |                      |     |
|--|---------------|----------------------|-----|
|  | Field Reading | Elec. Office Reading |     |
| (A) Initial Hydrostatic Mud .....      | 2102          | 2102                 | PSI |
| (B) First Initial Flow Pressure.....   | 6             | 6                    | PSI |
| (C) First Final Flow Pressure .....    | 13            | 13                   | PSI |
| (D) Initial Closed-in Pressure .....   | 306           | 306                  | PSI |
| (E) Second Initial Flow Pressure ..... | 12            | 12                   | PSI |
| (F) Second Final Flow Pressure.....    | 14            | 14                   | PSI |
| (G) Final Closed-in Pressure.....      | 174           | 174                  | PSI |
| (H) Final Hydrostatic Mud .....        | 2074          | 2074                 | PSI |



# DIAMOND TESTING

P.O. Box 157  
HOISINGTON, KANSAS 67544  
(620) 653-7550 • (800) 542-7313  
STC 21099.D30

Company Ritchie Exploration, Inc. Lease & Well No. Sharp Seed 14C No. 1  
Elevation 2916 KB Formation Johnson Effective Pay -- Ft. Ticket No. 1874  
Date 5-20-04 Sec. 14 Twp. 17S Range 31W County Scott State Kansas  
Test Approved By Kim B. Shoemaker Diamond Representative Roger D. Friedly

Formation Test No. 8 Interval Tested from 4,480 ft. to 4,545 ft. Total Depth 4,545 ft.  
Packer Depth 4,475 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Packer Depth 4,480 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.  
Depth of Selective Zone Set          ft.

Top Recorder Depth (Inside) 4,468 ft. Recorder Number Elec. Cap. 5,000 psi  
Bottom Recorder Depth (Outside) 4,542 ft. Recorder Number 13387 Cap. 4,000 psi  
Below Straddle Recorder Depth          ft. Recorder Number          Cap.          psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.  
Mud Type Chemical Viscosity 56 Weight Pipe Length -- ft. I.D. -- in.  
Weight 9.3 Water Loss 8.0 cc. Drill Pipe Length 4,455 ft. I.D. 3 1/2 in.  
Chlorides 2,500 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.  
Jars: Make Bowen Serial Number Not Run Anchor Length 34' perf. w/31' drill pipe Size 4 1/2 - FH in.  
Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.  
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 1/8 in., blow increasing to 10 1/2 ins. No blow back during shut-in.  
2nd Open: Good, 3 in., blow increasing. Off bottom of bucket in 13 mins. Weak, 1/2 in., blow back during shut-in.

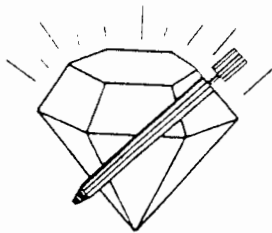
Recovered 350 ft. of gas in pipe  
Recovered 20 ft. of oil cut mud = .205200 bbls. (Grind out: 28%-oil; 72%-mud)  
Recovered 62 ft. of oil cut gassy mud = .636120 bbls. (Grind out: 23%-oil; 28%-gas; 49%-mud)  
Recovered 82 ft. of TOTAL FLUID = .841320 bbls.

Recovered          ft. of           
Remarks Tool Sample Grind Out: 8%-gas; 37%-oil; 55%-mud  
NOTE: Mud system had about 10%-oil.

**RECEIVED**  
**AUG 10 2004**

**KCC WICHITA**

Time Set Packer(s) 8:25 ~~XXX~~ P.M. Time Started Off Bottom 11:25 ~~XXX~~ P.M. Maximum Temperature 122 °  
Initial Hydrostatic Pressure (A) 2146 P.S.I.  
Initial Flow Period Minutes 30 (B) 8 P.S.I. to (C) 24 P.S.I.  
Initial Closed In Period Minutes 45 (D) 1139 P.S.I.  
Final Flow Period Minutes 45 (E) 26 P.S.I. to (F) 47 P.S.I.  
Final Closed In Period Minutes 60 (G) 1139 P.S.I.  
Final Hydrostatic Pressure (H) 2139 P.S.I.



**DIAMOND TESTING**  
P. O. Box 157  
HOISINGTON, KANSAS 67544  
(800) 542-7313

**FLUID SAMPLE DATA**

Company Ritchie Exploration, Inc.

Lease & Well No. Sharp Seed 14C No. 1

Date 5-20-04 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 8 Interval Tested From 4,480 ft. to 4,545 ft. Total Depth 4,545 ft.

Formation Johnson

|            | <u>MUD PIT</u> | <u>RECOVERY</u> |
|------------|----------------|-----------------|
| Viscosity  | <u>56</u> CP   | <u>--</u> CP    |
| Weight     | <u>9.3</u>     | <u>--</u>       |
| Water Loss | <u>8.0</u> CC  | <u>--</u> CC    |
| PH Factor  | <u>9.5</u>     | <u>--</u>       |

|                         | <u>RESISTIVITY</u>          | <u>CHLORIDE CONTENT</u> |
|-------------------------|-----------------------------|-------------------------|
| Recovery Water          | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud            | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Recovery Mud Filtrate   | <u>--</u> @ <u>--</u> °F.   | <u>--</u> ppm           |
| Mud Pit Sample          | <u>1.40</u> @ <u>62</u> °F. | <u>4,600</u> ppm        |
| Mud Pit Sample Filtrate | <u>1.60</u> @ <u>66</u> °F. | <u>4,000</u> ppm        |

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,500 Ppm.

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## GENERAL INFORMATION

### Client Information:

Company: RITCHIE EXPLORATION, INC.  
 Contact: ROCKY MILFORD  
 Phone: Fax: e-mail:

### Site Information:

Contact: KIM SHOMAKER  
 Phone: Fax: e-mail:

### Well Information:

Name: #1 SHARP SEED 14C  
 Operator: RITCHIE EXPLORATION, INC.  
 Location-Downhole: DST #8 JOHNSON 4,480'-4,545'  
 Location-Surface: SEC 15-17S-31W SCOTT COUNTY

### Test Information:

|                 |                  |               |          |
|-----------------|------------------|---------------|----------|
| Company:        | DIAMOND TESTING  |               |          |
| Representative: | ROGER D. FRIEDLY |               |          |
| Supervisor:     | KIM SHOEMAKER    |               |          |
| Test Type:      | CONVENTIONAL     | Job Number:   |          |
| Test Unit:      | NO 1             |               |          |
| Start Date:     | 2004/05/20       | Start Time:   | 18:36:00 |
| End Date:       | 2004/05/21       | End Time:     | 01:33:40 |
| Report Date:    |                  | Prepared By:  |          |
| <u>Remarks:</u> |                  | Qualified By: |          |

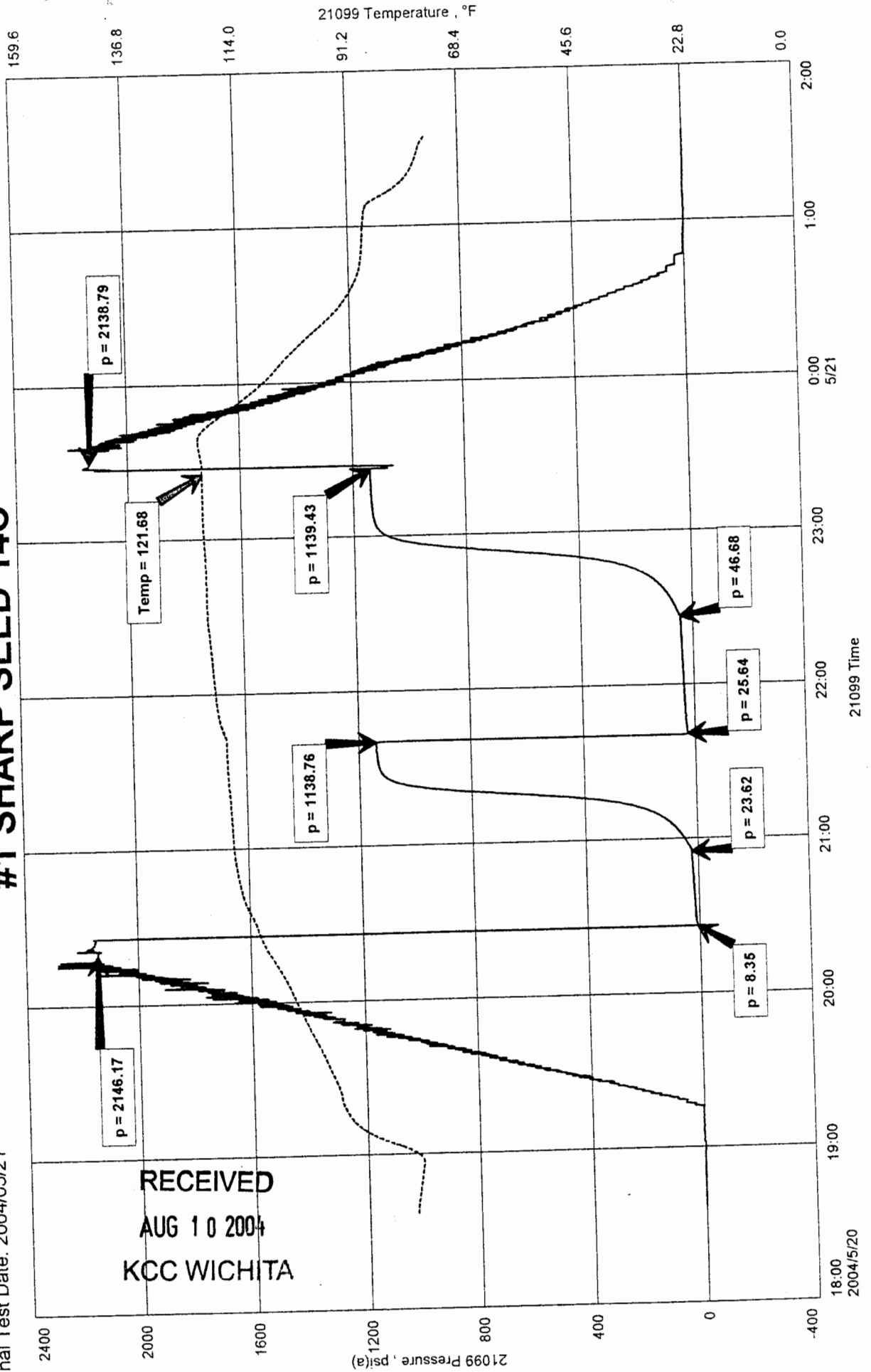
RECOVERED: 20' OCM (28% OIL 72% MUD)  
 62' OCGM ( 23% OIL, 28% GAS 49% MUD)  
 82' TOTAL FLUID  
 350' GAS IN PIPE

NOTE: MUD SYSTEM IS CARRYING ABOUT 10% OIL FROM ALTAMONT DST.

#1 SHARP SEED 14C  
 Formation: DST #8 JOHNSON 4,480'-4,545'  
 Pool: WILDCAT

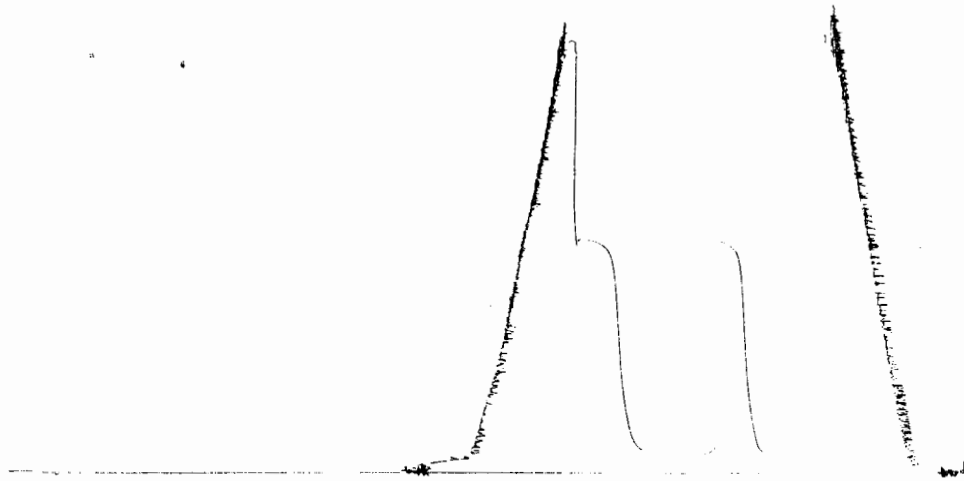
RITCHE EXPLORATION, INC.  
 DST #8 JOHNSON 4,480'-4,545'  
 Start Test Date: 2004/05/20  
 Final Test Date: 2004/05/21

# #1 SHARP SEED 14C



DST # 8 Outside 13387  
 JOHNSON

M 480-4545  
 LOC 4542



This is an actual photograph of recorder chart.

| POINT                                  | PRESSURE Elec. |                |     |
|--|----------------|----------------|-----|
|  | Field Reading  | Office Reading |     |
| (A) Initial Hydrostatic Mud .....      | 2146           | 2146           | PSI |
| (B) First Initial Flow Pressure .....  | 8              | 8              | PSI |
| (C) First Final Flow Pressure .....    | 24             | 24             | PSI |
| (D) Initial Closed-in Pressure .....   | 1139           | 1139           | PSI |
| (E) Second Initial Flow Pressure ..... | 26             | 26             | PSI |
| (F) Second Final Flow Pressure .....   | 47             | 47             | PSI |
| (G) Final Closed-in Pressure .....     | 1139           | 1139           | PSI |
| (H) Final Hydrostatic Mud .....        | 2139           | 2139           | PSI |