



CONFIDENTIAL
KCC
DIAMOND TESTING NOV 11 2005
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (620) 653-7550 • (800) 542-7878
 STC 21098.D63

ORIGINAL

Company Ritchie Exploration, Inc. Lease & Well No. Gruver-Cramer No. 1
 Elevation 2909 KB Formation Lansing/Kansas City (35') Effective Pay -- Ft. Ticket No. 1952
 Date 1-23-05 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 3,965 ft. to 3,995 ft. Total Depth 3,995 ft.
 Packer Depth 3,960 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
 Packer Depth 3,965 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.
 Top Recorder Depth (Inside) 3,953 ft. Recorder Number 21098 Cap. 5,000 psi
 Bottom Recorder Depth (Outside) 3,992 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 9.35 Water Loss 8.8 cc. Drill Pipe Length 3,940 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 30 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 10 ins. Weak, 1/2 in., blow back during shut-in.
 2nd Open: Weak surface blow increasing to 7 ins. Weak, 1/2 in., blow back during shut-in.

Recovered 62 ft. of watery mud = .636120 bbls. (Grind out: 4%-water; 96%-mud)
 Recovered 62 ft. of gas cut muddy water = .636120 bbls. (Grind out: 10%-gas; 29%-mud; 61%-water)
 Recovered 62 ft. of gas cut muddy water = .636120 bbls. (Grind out: 10%-gas; 8%-mud; 82%-water) Chlorides: 25,000 Ppm
 Recovered 186 ft. of TOTAL FLUID = 1.908360 bbls.

Recovered ft. of
 Remarks Tool Sample Grind Out: 8%-gas; 8%-oil; 34%-mud; 50%-water

Time Set Packer(s) 11:31 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 2:31 ~~P.M.~~ ^{AM.} Maximum Temperature 114°
 Initial Hydrostatic Pressure (A) 1894 P.S.I.
 Initial Flow Period Minutes 30 (B) 7 P.S.I. to (C) 45 P.S.I.
 Initial Closed In Period Minutes 45 (D) 949 P.S.I.
 Final Flow Period Minutes 45 (E) 45 P.S.I. to (F) 93 P.S.I.
 Final Closed In Period Minutes 60 (G) 903 P.S.I.
 Final Hydrostatic Pressure (H) 1891 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. Gruver-Cramer No. 1

Date 1-23-05 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 1 Interval Tested From 3,965 ft. to 3,995 ft. Total Depth 3,995 ft.

Formation Lansing/Kansas City (35')

	<u>MUD PIT</u>	<u>RECOVERY</u>	
Viscosity	<u>56</u> CP	<u>--</u> CP	
Weight	<u>9.35</u>	<u>--</u>	
Water Loss	<u>8.8</u> CC	<u>--</u> CC	
PH Factor	<u>10.5</u>	<u>--</u>	Water <u>8.5</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>.22</u> @ <u>63 °F.</u>	<u>35,000</u> ppm
Recovery Mud	<u>--</u> @ <u>-- °F.</u>	<u>--</u> ppm
Recovery Mud Filtrate	<u>--</u> @ <u>-- °F.</u>	<u>--</u> ppm
Mud Pit Sample	<u>1.70</u> @ <u>60 °F.</u>	<u>4,200</u> ppm
Mud Pit Sample Filtrate	<u>1.80</u> @ <u>64 °F.</u>	<u>3,600</u> ppm

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

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

GENERAL INFORMATION

Client Information:

Company: RITCHIE EXPLORATION, INC.
Contact: CRAIG CAULK
Phone: Fax: e-mail:

Site Information:

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

Well Information:

Name: GRUVER-CRAMER #1
Operator: RITCHIE EXPLORATION, INC.
Location-Downhole: DST #1 LKC (35') 3,965' - 3995'
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: 2005/01/23 Start Time: 08:41:00
End Date: 2005/01/23 End Time: 16:49:00
Report Date: Prepared By:
Remarks: Qualified By:

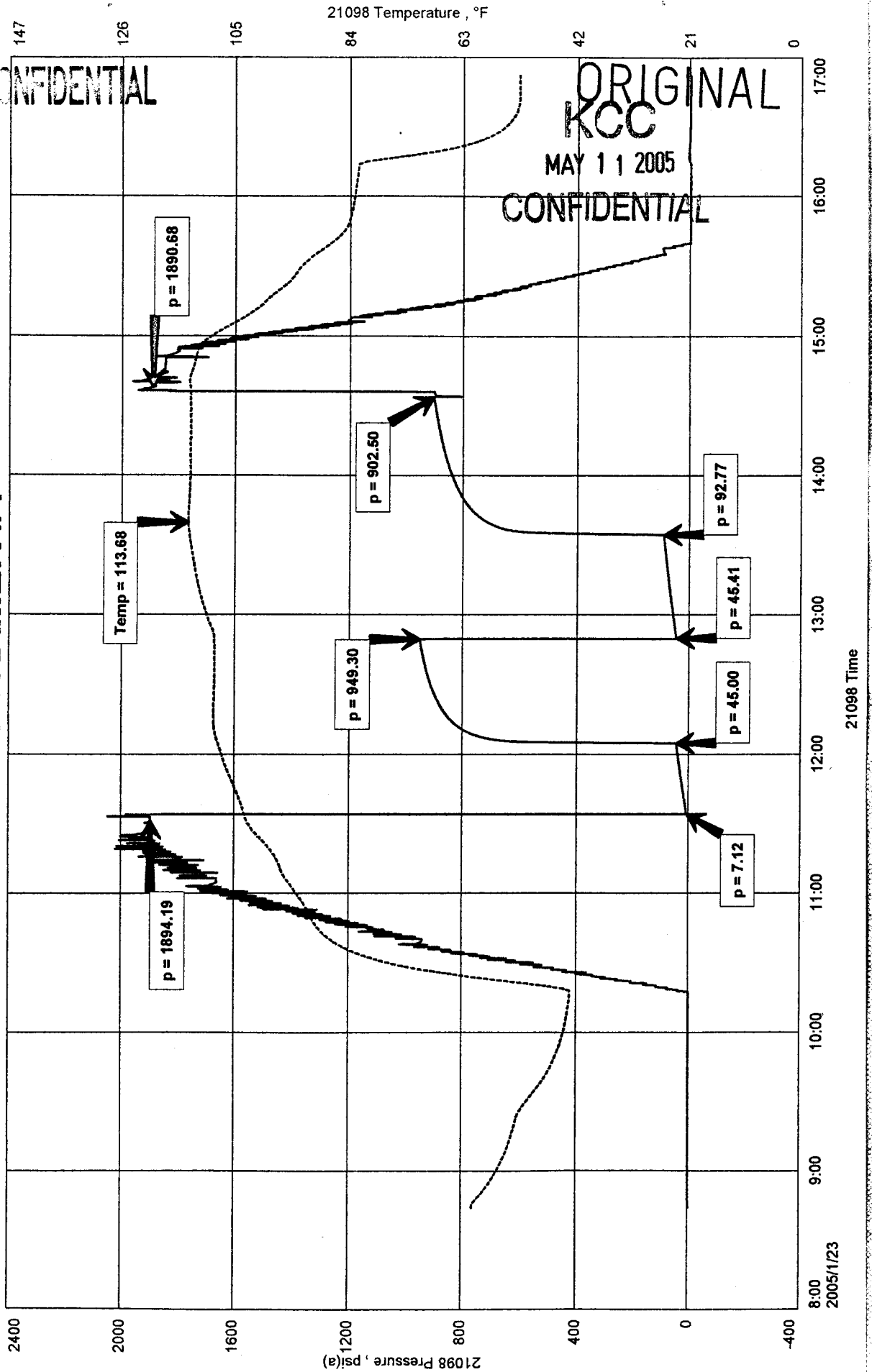
RECOVERED: 62' WM 4% WTR, 96% MUD
62' GCMW 10% GAS, 29% MUD, 61% WTR
62' GCMW 10% GAS, 8% MUD, 82% WTR
186' TOTAL FLUID

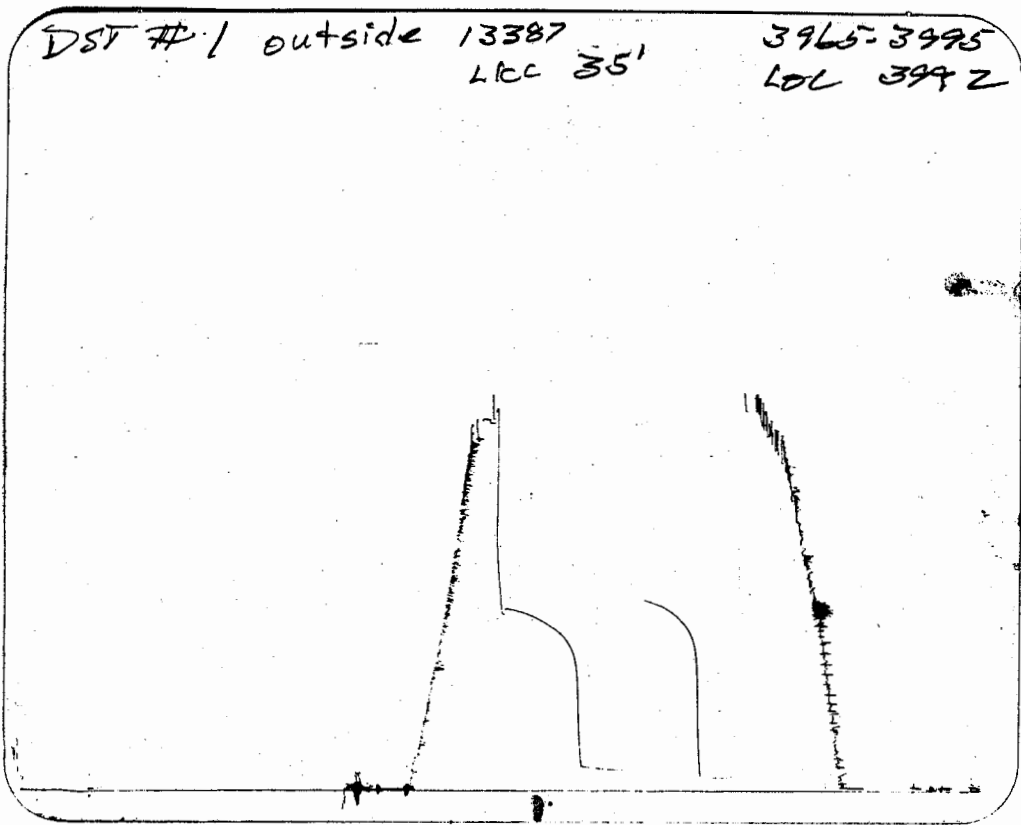
TOOL SAMPLE: 8% GAS, 8% OIL, 34% MUD, 50% WTR.

RITCHIE EXPLORATION, INC.
DST #1 LKC (35') 3,965' - 3995'
Start Test Date: 2005/01/23
Final Test Date: 2005/01/23

GRUVER-CRAMER #1
Formation: DST #1 LKC (35') 3,965' - 3,995'
Pool: WILDCAT

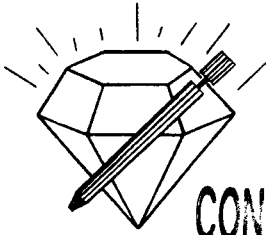
GRUVER-CRAMER #1





This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Elec. Office Reading	
(A) Initial Hydrostatic Mud	1894	1894	PSI
(B) First Initial Flow Pressure.....	7	7	PSI
(C) First Final Flow Pressure	45	45	PSI
(D) Initial Closed-in Pressure	949	949	PSI
(E) Second Initial Flow Pressure.....	45	45	PSI
(F) Second Final Flow Pressure.....	93	93	PSI
(G) Final Closed-in Pressure.....	903	903	PSI
(H) Final Hydrostatic Mud.....	1891	1891	PSI



DIAMOND TESTING

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ORIGINAL

P.O. Box 157

MAY 11 2005

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Page 1 of 3 Pages

STC 21098.D64

Company Ritchie Exploration, Inc. Lease & Well No. Gruver-Cramer No. 1

Elevation 2909 KB Formation Lansing/Kansas City "E" & "F" (70'-90') Effective Pay--Ft. Ticket No. 1953

Date 1-24-05 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 4,027 ft. to 4,057 ft. Total Depth 4,057 ft.

Packer Depth 4,022 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,027 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,015 ft. Recorder Number 21098 Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,054 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 55 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.3 Water Loss 8.4 cc. Drill Pipe Length 4,002 ft. I.D. 3 1/2 in.

Chlorides 3,000 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 30 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 2 1/2 ins. No blow back during shut-in.

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

Recovered 1 ft. of clean oil = .010260 bbls.

Recovered 24 ft. of slightly oil cut watery mud = .246240 bbls. (Grind out: 1%-oil; 15%-water; 84%-mud)

Recovered 25 ft. of TOTAL FLUID = .256500 bbls.

Recovered ft. of

Recovered ft. of

Remarks Tool Sample Grind Out: 15%-oil; 20%-water; 65%-mud

Time Set Packer(s) 3:46 ~~PM~~ A.M. Time Started Off Bottom 6:46 ~~PM~~ A.M. Maximum Temperature 111°

Initial Hydrostatic Pressure (A) 1921 P.S.I.

Initial Flow Period Minutes 30 (B) 1 P.S.I. to (C) 12 P.S.I.

Initial Closed In Period Minutes 45 (D) 985 P.S.I.

Final Flow Period Minutes 45 (E) 11 P.S.I. to (F) 17 P.S.I.

Final Closed In Period Minutes 60 (G) 869 P.S.I.

Final Hydrostatic Pressure (H) 1916 P.S.I.



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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Gruver-Cramer No. 1

Date 1-24-05 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 2 Interval Tested From 4,027 ft. to 4,057 ft. Total Depth 4,057 ft.

Formation Lansing/Kansas City "E" & "F" (70'-90')

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>55</u> CP	<u>33</u> CP
Weight	<u>9.3</u>	<u>8.8</u>
Water Loss	<u>8.4</u> CC	<u>14.0</u> CC
PH Factor	<u>10.5</u>	<u>10.0</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>-- @ -- °F.</u>	<u>-- ppm</u>
Recovery Mud	<u>.85 @ 50 °F.</u>	<u>11,000 ppm</u>
Recovery Mud Filtrate	<u>1.20 @ 54 °F.</u>	<u>7,500 ppm</u>
Mud Pit Sample	<u>1.20 @ 58 °F.</u>	<u>6,100 ppm</u>
Mud Pit Sample Filtrate	<u>1.40 @ 60 °F.</u>	<u>5,000 ppm</u>

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 3,000 Ppm.
Recovery filtrate triton dish chlorides were 5,000 Ppm.

GENERAL INFORMATION

Client Information:

Company: RITCHIE EXPLORATION, INC.
Contact: CRAIG CAULK
Phone: Fax: e-mail:

Site Information:

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

Well Information:

Name: GRUVER-CRAMER #1
Operator: RITCHIE EXPLORATION, INC.
Location-Downhole: DST #2 LKC E/F (70'-90') 4,027' - 4057'
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:	2005/01/24	Start Time:	01:15:00
End Date:	2005/01/24	End Time:	08:57:30
Report Date:		Prepared By:	
<u>Remarks:</u>		Qualified By:	

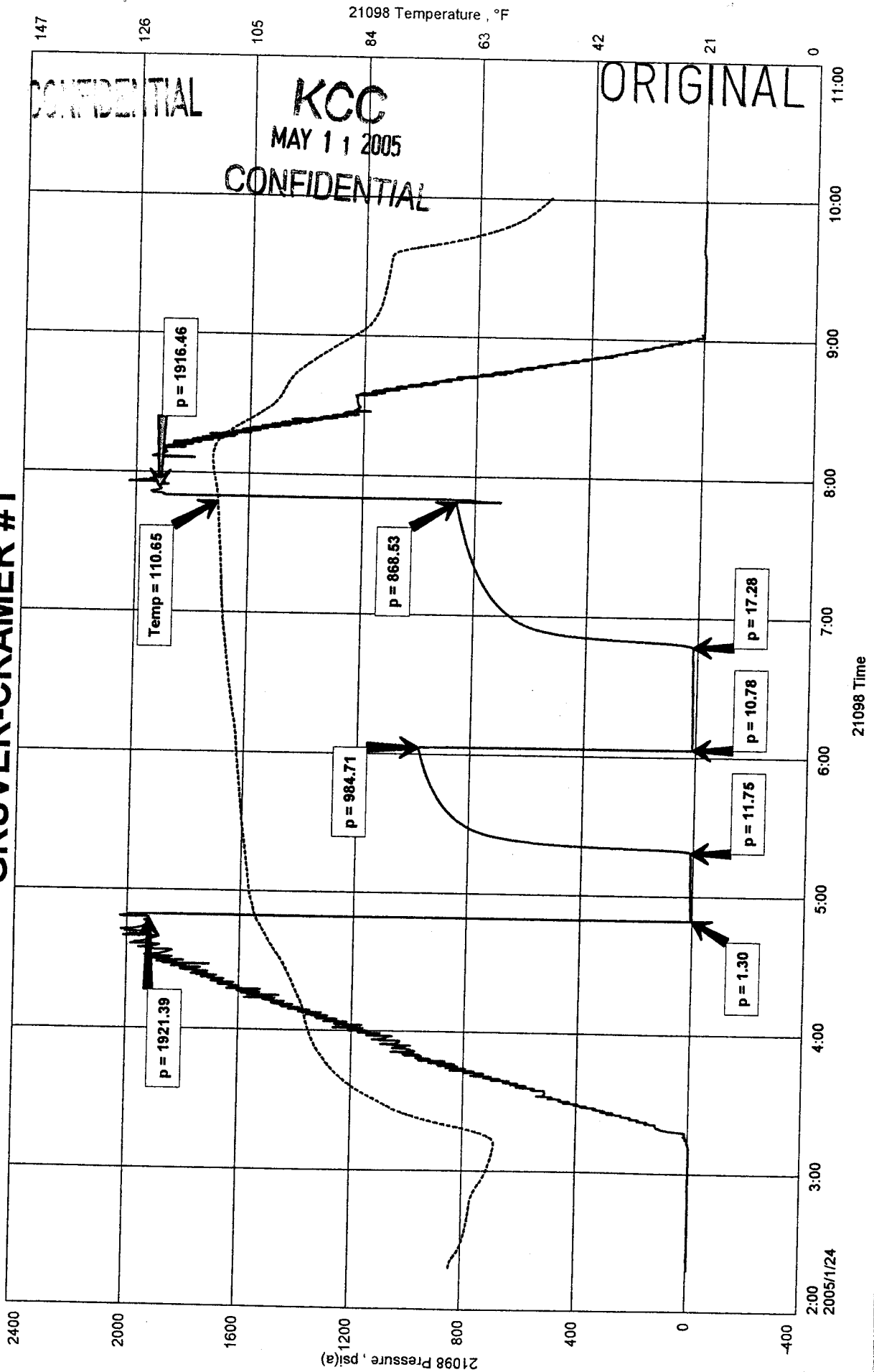
RECOVERED: 1' CLEAN OIL
24' SLTOCWM (1% OIL, 15% WTR, 84% MUD)
25' TOTAL FLUID

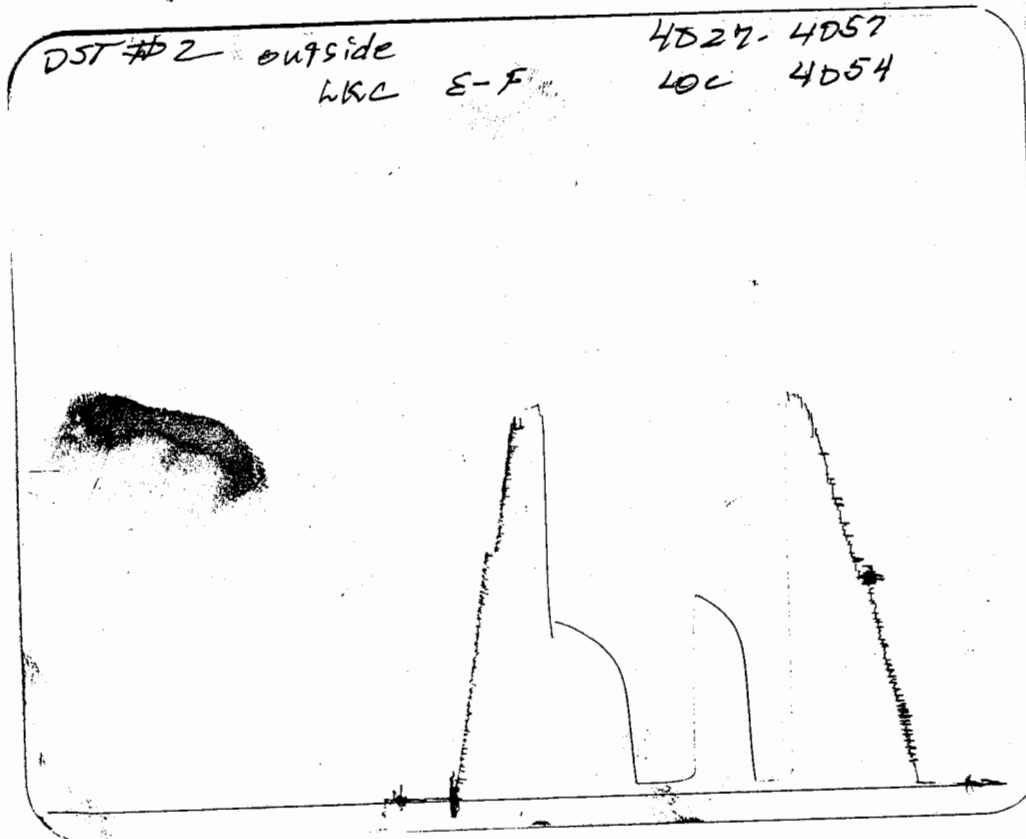
TOOL SAMPLE: 15% OIL, 20% WTR, 65% MUD.

RITCHIE EXPLORATION, INC.
DST #2 LKC E/F (70'-90') 4,027' - 4057'
Start Test Date: 2005/01/24
Final Test Date: 2005/01/24

GRUVER-CRAMER #1
Formation: DST #2 LKC E/F (70'-90') 4,027' - 4,057'
Pool: WILDCAT

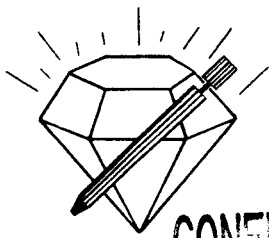
GRUVER-CRAMER #1





This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec. Office Reading	PSI
	Field Reading			
(A) Initial Hydrostatic Mud	1921		1921	PSI
(B) First Initial Flow Pressure.....	1		1	PSI
(C) First Final Flow Pressure	12		12	PSI
(D) Initial Closed-in Pressure	985		985	PSI
(E) Second Initial Flow Pressure	11		11	PSI
(F) Second Final Flow Pressure.....	17		17	PSI
(G) Final Closed-in Pressure.....	869		869	PSI
(H) Final Hydrostatic Mud	1916		1916	PSI



DIAMOND TESTING

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MAY 11 2005

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STC 21098.D65

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Company Ritchie Exploration, Inc. Lease & Well No. Gruver-Cramer No. 1

Elevation 2909 KB Formation Altamont Effective Pay -- Ft. Ticket No. 1954

Date 1-25-05 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 4,323 ft. to 4,385 ft. Total Depth 4,385 ft.

Packer Depth 4,318 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,323 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 4,311 ft. Recorder Number 21098 Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,382 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 58 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.45 Water Loss 8.8 cc. Drill Pipe Length 4,298 ft. I.D. 3 1/2 in.

Chlorides 4,100 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 31' 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, 1/2 in., blow decreasing in 17 mins. to 1/4 in. at end. No blow back during shut-in.

2nd Open: No blow. No blow back during shut-in.

Recovered 5 ft. of slightly oil specked drilling mud with a trace of oil = .051300 bbls. (Grind out: 100%-drilling mud)

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Remarks Tool Sample Grind Out: 100%-drilling mud

Time Set Packer(s) 6:02 P.M. Time Started Off Bottom 8:02 P.M. Maximum Temperature 113°

Initial Hydrostatic Pressure (A) 2130 P.S.I.

Initial Flow Period Minutes 30 (B) 7 P.S.I. to (C) 11 P.S.I.

Initial Closed In Period Minutes 30 (D) 469 P.S.I.

Final Flow Period Minutes 30 (E) 9 P.S.I. to (F) 11 P.S.I.

Final Closed In Period Minutes 30 (G) 364 P.S.I.

Final Hydrostatic Pressure (H) 2125 P.S.I.



DIAMOND TESTING
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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Gruver-Cramer No. 1

Date 1-25-05 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 3 Interval Tested From 4,323 ft. to 4,385 ft. Total Depth 4,385 ft.

Formation Altamont

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>58</u> CP	<u>56</u> CP
Weight	<u>9.45</u>	<u>9.4</u>
Water Loss	<u>8.8</u> CC	<u>8.8</u> CC
PH Factor	<u>10.5</u>	<u>10.0</u>

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	-- @ -- °F.	-- ppm
Recovery Mud	<u>1.15</u> @ <u>60</u> °F.	<u>6,400</u> ppm
Recovery Mud Filtrate	<u>1.20</u> @ <u>61</u> °F.	<u>5,600</u> ppm
Mud Pit Sample	<u>.95</u> @ <u>67</u> °F.	<u>6,800</u> ppm
Mud Pit Sample Filtrate	<u>1.10</u> @ <u>69</u> °F.	<u>5,900</u> ppm

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 4,100 Ppm.
Recovery filtrate triton dish chlorides were 4,200 Ppm.

GENERAL INFORMATION

Client Information:

Company: RITCHIE EXPLORATION, INC.
Contact: CRAIG CAULK
Phone: Fax: e-mail:

Site Information:

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

Well Information:

Name: GRUVER-CRAMER #1
Operator: RITCHIE EXPLORATION
Location-Downhole: DST #3 ALTAMONT 4,323' - 4,385
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: 2005/01/25 Start Time: 16:14:00
End Date: 2005/01/25 End Time: 22:03:00
Report Date: Prepared By:

Remarks:

Qualified By:

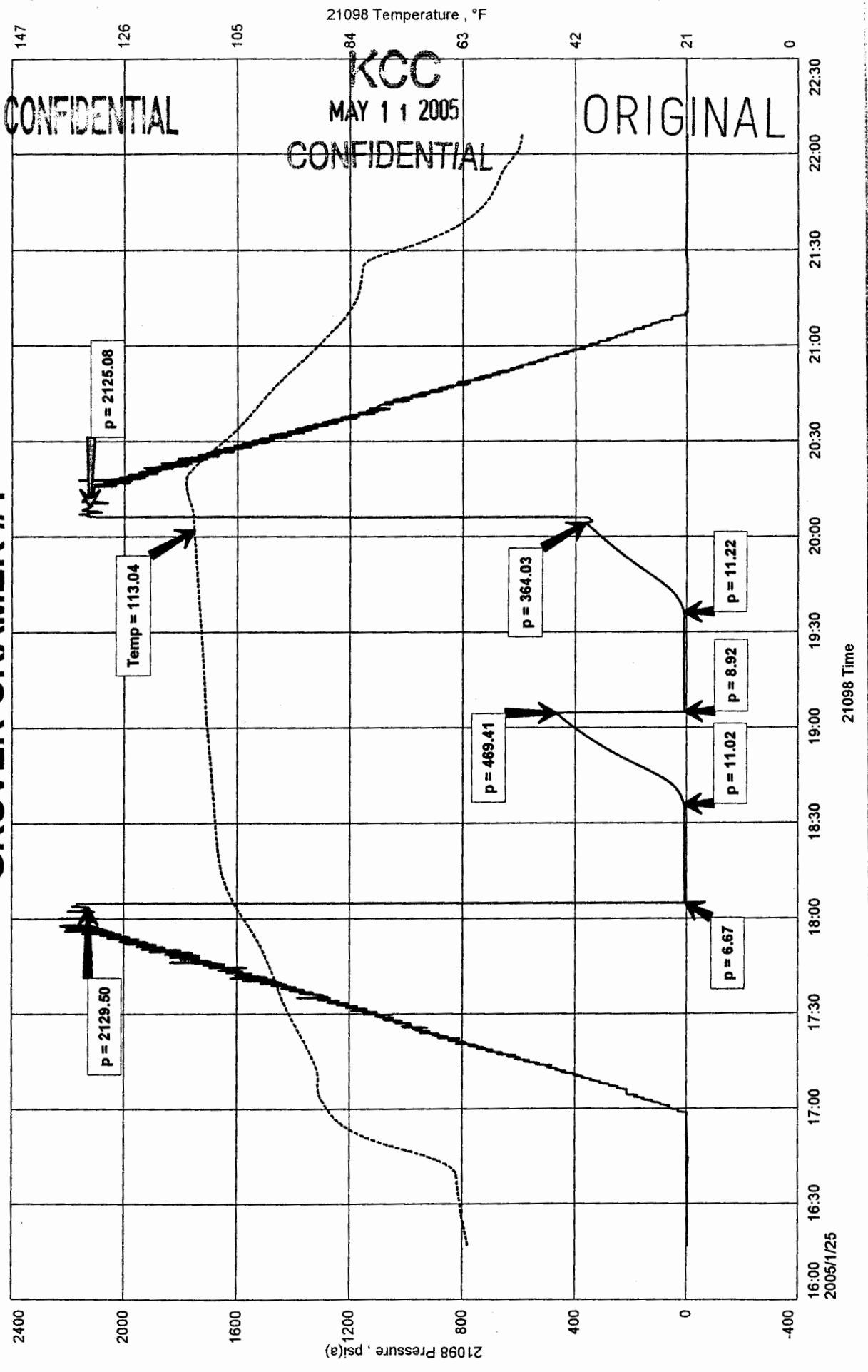
RECOVERED: 5' SLIGHTLY OIL SPECKED DRILLING MUD LESS THAN 1% OIL.

TOOL SAMPLE: 100% DRILLING MUD

GRUVER-CRAMER #1
 Formation: DST #3 ALTAMONT 4,323' - 4,385'
 Pool: WILDCAT

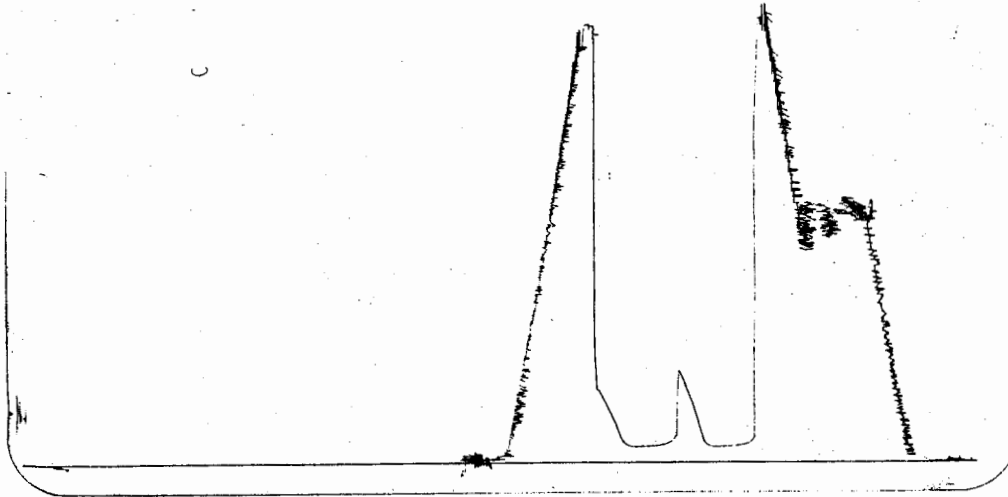
RITCHIE EXPLORATION, INC.
 DST #3 ALTAMONT 4,323' - 4,385'
 Start Test Date: 2005/01/25
 Final Test Date: 2005/01/25

GRUVER-CRAMER #1



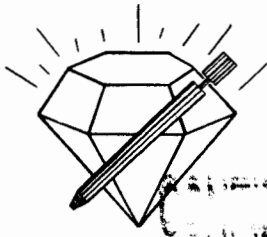
DST #3 outside 13387
Altamont

4323-4385
LOL 43 82



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Elec. Office Reading	
(A) Initial Hydrostatic Mud	2130	2130	PSI
(B) First Initial Flow Pressure.....	7	7	PSI
(C) First Final Flow Pressure	11	11	PSI
(D) Initial Closed-in Pressure	469	469	PSI
(E) Second Initial Flow Pressure	9	9	PSI
(F) Second Final Flow Pressure.....	11	11	PSI
(G) Final Closed-in Pressure.....	364	364	PSI
(H) Final Hydrostatic Mud.....	2125	2125	PSI



KCC
DIAMOND TESTING MAY 11 2005

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STC 21098.D66

CONFIDENTIAL ORIGINAL

Company Ritchie Exploration, Inc. Lease & Well No. Gruver-Cramer No. 1

Elevation 2909 KB Formation Cherokee/Johnson Effective Pay 4 Ft. Ticket No. 1955

Date 1-27-05 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 4,493 ft. to 4,560 ft. Total Depth 4,560 ft.

Packer Depth 4,488 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,493 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,481 ft. Recorder Number 21098 Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,557 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 9.5 Water Loss 8.8 cc. Drill Pipe Length 4,468 ft. I.D. 3 1/4 in.

Chlorides 4,200 P.P.M. Test Tool Length 25 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 36' 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: Good, 3 in., blow increasing. Off bottom of bucket in 3 mins. Strong blow back off bottom of bucket during shut-in.

2nd Open: Good, 3 in., blow increasing. Off bottom of bucket in 3 mins. Strong blow back off bottom of bucket during shut-in.

Recovered 1,316 ft. of gas in pipe

Recovered 668 ft. of clean gassy oil = 6.853680 bbls. (Grind out: 10%-gas; 90%-oil) Gravity: 28 @ 60°

Recovered 341 ft. of gassy & heavy muddy oil = 3.498660 bbls. (Grind out: 17%-gas; 26%-mud; 57%-oil)

Recovered 31 ft. of gas & mud cut oil = .318060 bbls. (Grind out: 30%-gas; 30%-mud; 40%-oil)

Recovered 1,040 ft. of TOTAL FLUID = 10.670400 bbls.

Remarks Tool Sample Grind Out: 5%-mud; 5%-gas; 90%-oil with a trace of water

Time Set Packer(s) 5:49 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 8:49 ~~P.M.~~ ^{A.M.} Maximum Temperature 131°

Initial Hydrostatic Pressure (A) 2234 P.S.I.

Initial Flow Period Minutes 30 (B) 39 P.S.I. to (C) 233 P.S.I.

Initial Closed In Period Minutes 45 (D) 971 P.S.I.

Final Flow Period Minutes 45 (E) 241 P.S.I. to (F) 414 P.S.I.

Final Closed In Period Minutes 60 (G) 865 P.S.I.

Final Hydrostatic Pressure (H) 2221 P.S.I.



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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Gruver-Cramer No. 1

Date 1-27-05 Sec. 14 Twp. 17 S Range 31 W

Formation Test No. 4 Interval Tested From 4,493 ft. to 4,560 ft. Total Depth 4,560 ft.

Formation Cherokee/Johnson

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>50</u> CP	<u>--</u> CP
Weight	<u>9.5</u>	<u>--</u>
Water Loss	<u>8.8</u> CC	<u>--</u> CC
PH Factor	<u>10.5</u>	<u>--</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>-- @ --</u> °F.	<u>--</u> ppm
Recovery Mud	<u>-- @ --</u> °F.	<u>--</u> ppm
Recovery Mud Filtrate	<u>-- @ --</u> °F.	<u>--</u> ppm
Mud Pit Sample	<u>1.00 @ 64</u> °F.	<u>7,000</u> ppm
Mud Pit Sample Filtrate	<u>1.10 @ 66</u> °F.	<u>6,200</u> ppm

Sample Taken By ROGER D. FRIEDLY

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 4,200 Ppm.

GENERAL INFORMATION

Client Information:

Company: RITCHIE EXPLORATION, INC.
Contact: CRAIG CAULK
Phone: Fax: e-mail:

Site Information:

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

Well Information:

Name: GRUVER-CRAMER #1
Operator: RITCHIE EXPLORATION, INC.
Location-Downhole: DST #4 CHERO./JOHNSON 4,493' - 4,560'
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: 2005/01/27 Start Time: 03:24:00
End Date: 2005/01/27 End Time: 13:09:00
Report Date: Prepared By:
Remarks: Qualified By:

RECOVERED: 1,316' GAS IN PIPE
668' CLEAN GASSY OIL 10% GAS 90% OIL 28 GRAVITY @ 60 deg.
341' G&HMO 17% GAS, 57% OIL, 26% MUD
31' G&MCO 30% GAS, 30% MUD, 40% OIL
1,040' TOTAL FLUID

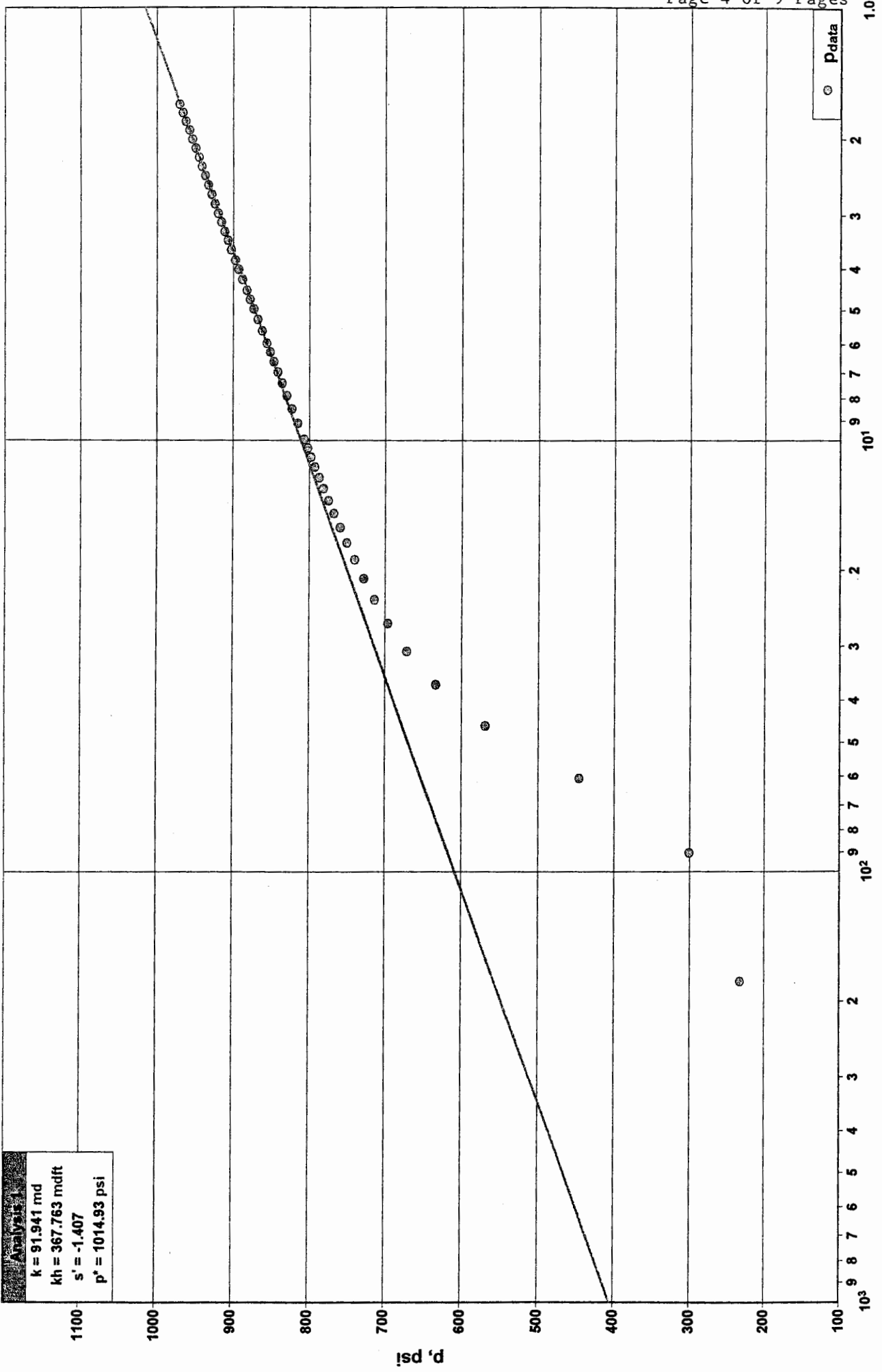
TOOL SAMPLE: 5% MUD, 5% GAS, 90 % OIL WITH A TRACE OF WATER.

Diagnostic Analysis 1

HORNER PLOT DST #4 IN ITIAL SHUT-IN

RITCHIE EXPLORATION, INC
GRUVER-CRAMER #1
DST #4 4,493' - 4,560

Analysis 1
k = 91.941 md
kh = 367.763 mdft
s' = -1.407
p* = 1014.93 psi



Oil Well Test - Buildup Radial Flow Analysis

Page 5 of 9 Pages

RITCHIE EXPLORATION, INC
GRUVER-CRAMER #1

DST #4 4,493' - 4,560

Analysis Results

Total Sandface Rate ($q_t B_t$)	243.671 bbl/d	Apparent Skin (s')	-1.407
Semilog Slope (m)	203.37	Skin - Damage	-1.407
Gas Permeability (k_g)	md	Skin - Inclination	
Oil Permeability (k_o)	91.941 md	Skin - Partial Penetration	
Water Permeability (k_w)	md	Pressure Drop Due to Skin (Δp_s)	-248.66 psi
Flow Capacity (kh)	367.763 md.ft	Damage Ratio (DR)	0.894
Total Mobility (k/μ_t)	48.71 md/cp	Flow Efficiency (FE)	1.118
Total Transmissivity(kh/μ_t)	194.82 md.ft/cp		

Reservoir Parameters

Net Pay (h)	4.000 ft
Total Porosity (ϕ_t)	10.00 %
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)	120.0 °F
Formation Compressibility (c_f)	4.862e-6 psi ⁻¹
Total Compressibility (c_t)	1.343e-5 psi ⁻¹

Pressures

Initial Pressure (p_i)	2336.76 psi
Extrapolated Pressure (p^*)	1014.93 psi
Final Flowing Pressure (p_{wf0})	413.91 psi

Production and Times

Corrected Flow Time (t_c)	0.4972 hr
Cumulative Oil Production	10.562 bbl
Final Oil Rate	201.000 bbl/d

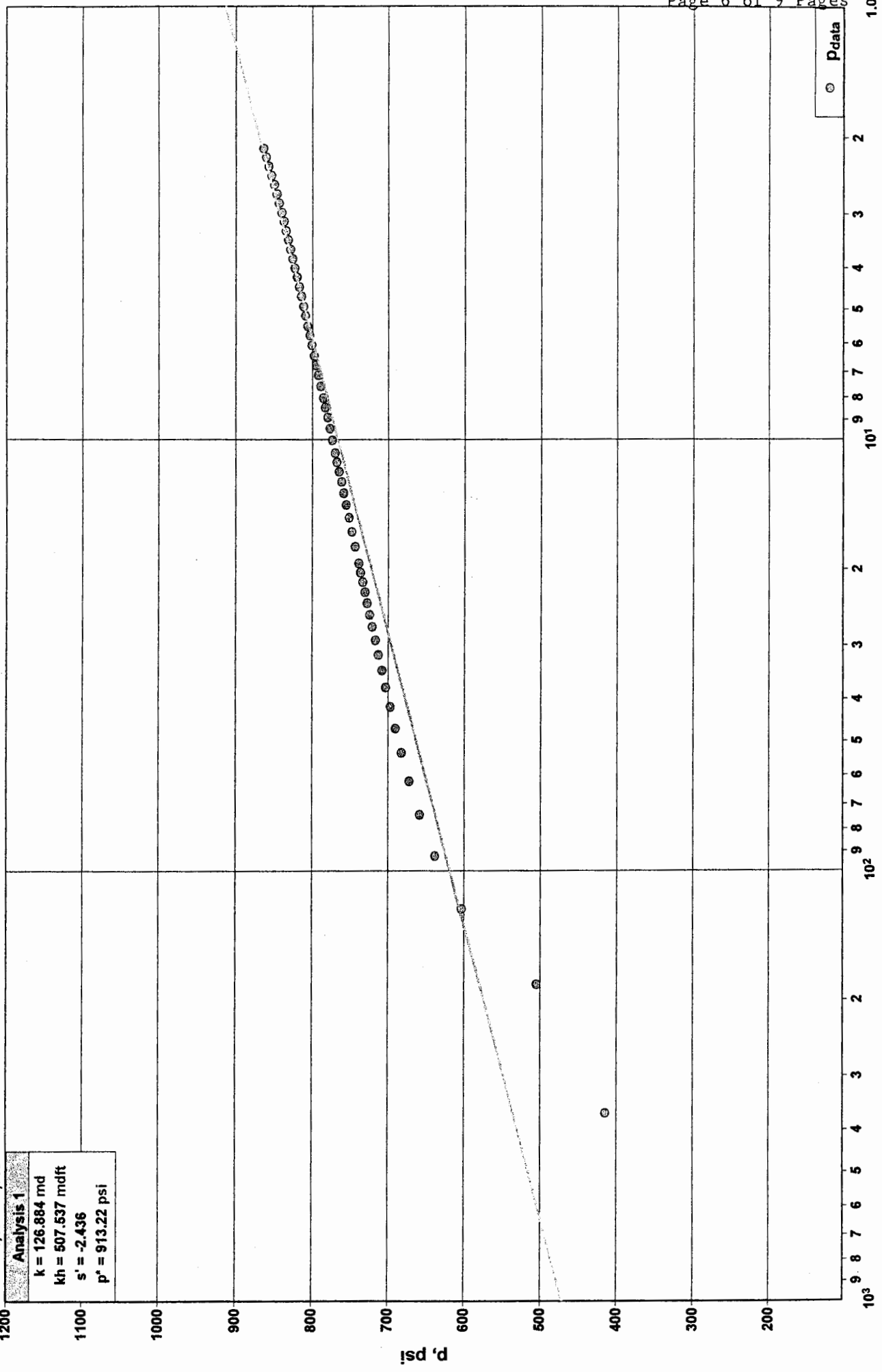
Fluid Properties

Oil Compressibility (c_o)	9.97658e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.212
Oil Viscosity (μ_o)	1.888 cp
Solution Gas Ratio (R_g)	385 scf/bbl
Oil Gravity (γ_o)	28.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (pp_{VT})	2336.76 psi

Diagnostic Analysis 2
HORNER PLOT DST #4 FINAL SHUT IN

RITCHIE EXPLORATION, INC
 GRUVER-CRAMER #1
 DST #4 4,493' - 4,560

Analysis 1
 k = 126.884 md
 kh = 507.537 mdft
 s' = -2.436
 p* = 913.22 psi



Oil Well Test - Buildup Radial Flow Analysis

RITCHIE EXPLORATION, INC
GRUVER-CRAMER #1

DST #4 4,493' - 4,560

Analysis Results

Total Sandface Rate ($q_t B_t$)	243.671 bbl/d	Apparent Skin (s')	-2.436
Semilog Slope (m)	147.36	Skin - Damage	-2.436
Gas Permeability (k_g)	md	Skin - Inclination	
Oil Permeability (k_o)	126.884 md	Skin - Partial Penetration	
Water Permeability (k_w)	md	Pressure Drop Due to Skin (Δp_s)	-311.95 psi
Flow Capacity (kh)	507.537 md.ft	Damage Ratio (DR)	0.860
Total Mobility (k/μ_{LT})	67.22 md/cp	Flow Efficiency (FE)	1.162
Total Transmissivity (kh/μ_{LT})	268.87 md.ft/cp		

Reservoir Parameters

Net Pay (h)	4.000 ft
Total Porosity (ϕ_t)	10.00 %
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)	120.0 °F
Formation Compressibility (c_f)	4.862e-6 psi ⁻¹
Total Compressibility (c_t)	1.343e-5 psi ⁻¹

Pressures

Initial Pressure (p_i)	2336.76 psi
Extrapolated Pressure (p^*)	913.22 psi
Final Flowing Pressure (p_{wfo})	413.91 psi

Production and Times

Corrected Flow Time (t_c)	1.2583 hr
Cumulative Oil Production	10.562 bbl
Final Oil Rate	201.000 bbl/d

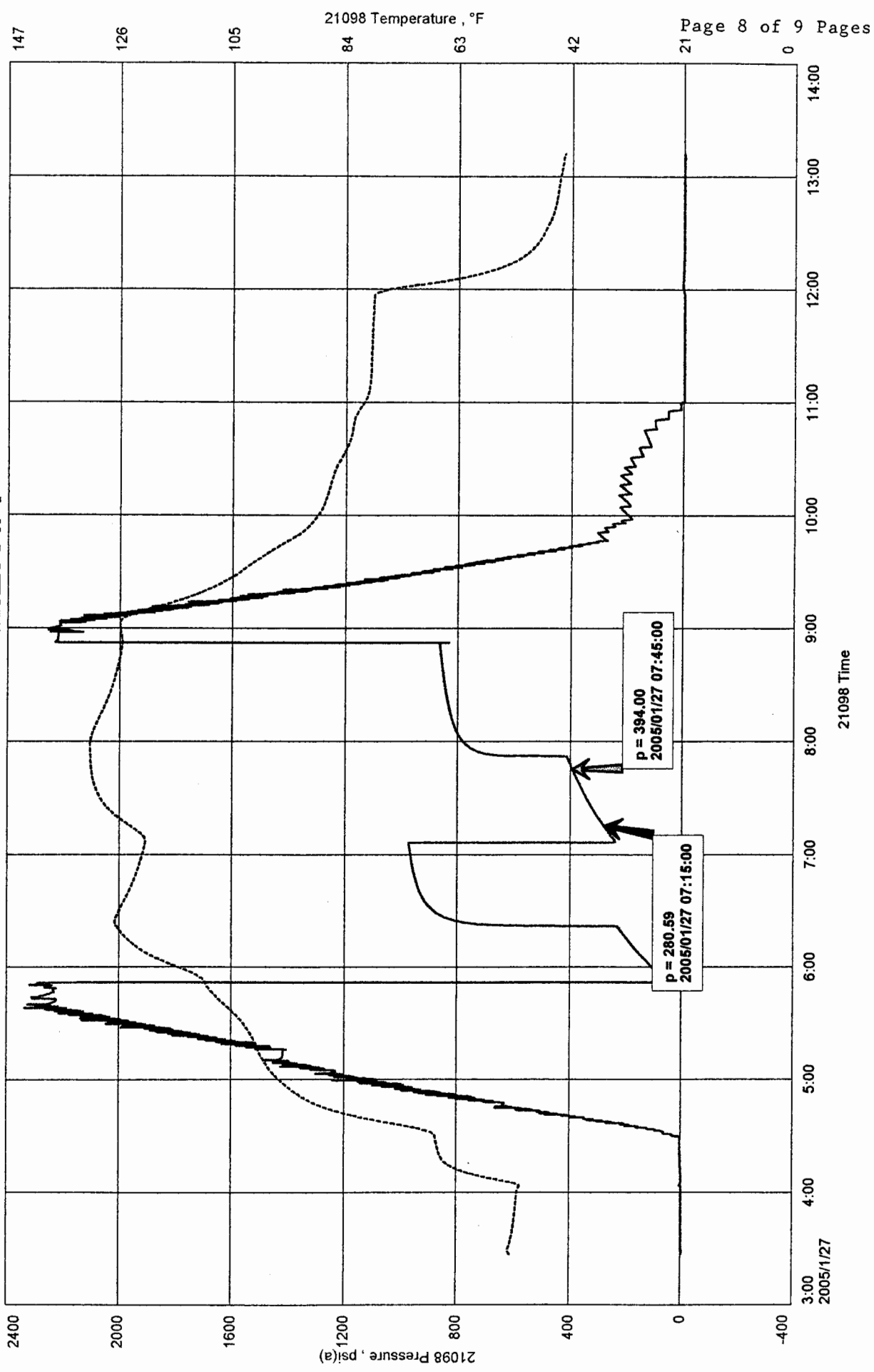
Fluid Properties

Oil Compressibility (c_o)	9.97658e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.212
Oil Viscosity (μ_{LO})	1.888 cp
Solution Gas Ratio (R_g)	385 scf/bbl
Oil Gravity (γ_o)	28.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (pp_{VT})	2336.76 psi

RITCHE EXPLORATION, INC.
 DST #4 CHERO./JOHNSON 4,493' - 4,560'
 Start Test Date: 2005/01/27
 Final Test Date: 2005/01/27

GRUVER-CRAMER #1
 Formation: DST #4 CHERO./JOHNSON 4,493' - 4,560'
 Pool: WILDCAT

GRUVER-CRAMER #1



RITCHIE EXPLORATION, INC

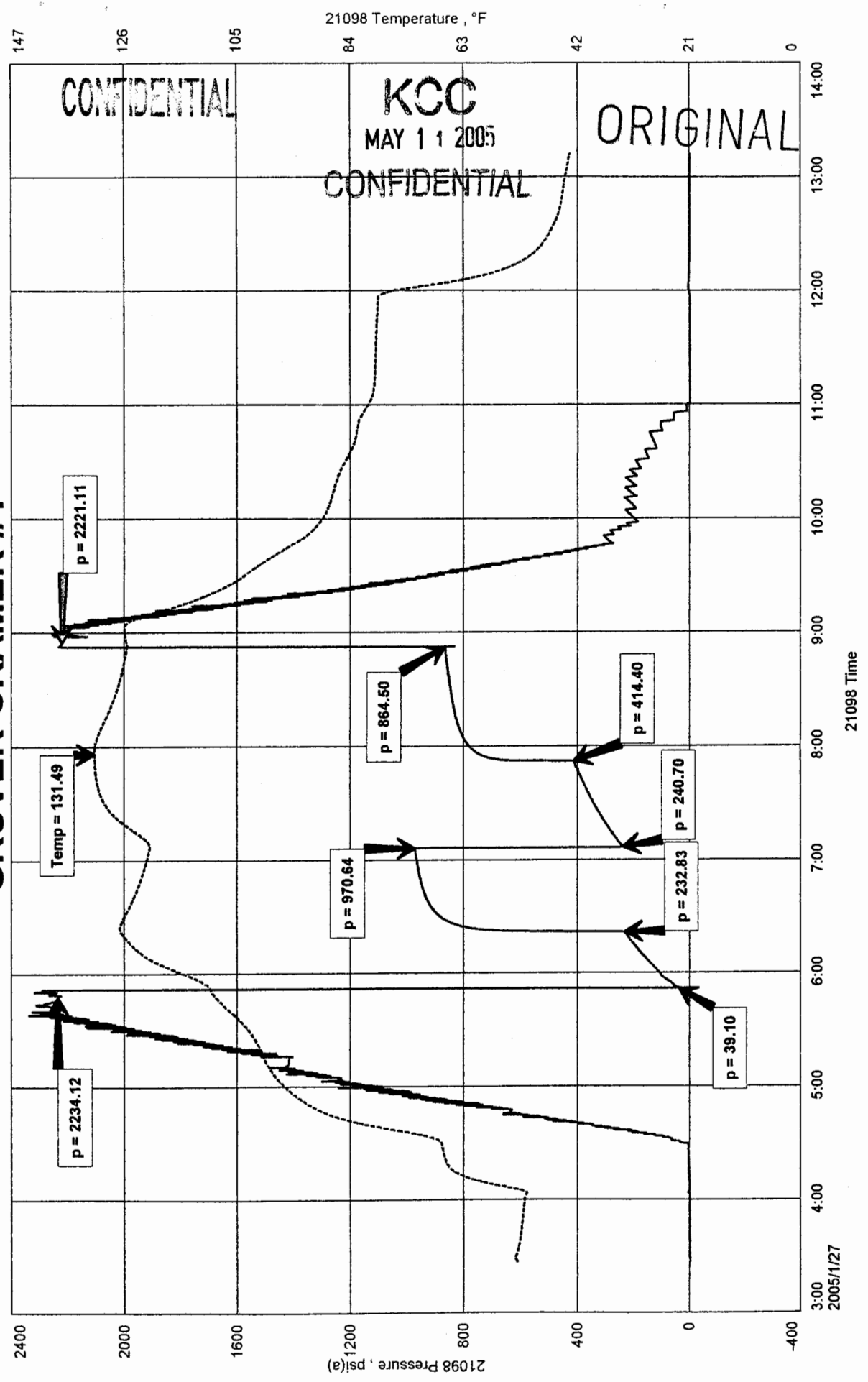
DESCRIPTION	SECOND	FIRST	PRESSURE	PIPE	FLUID	TIME	TOTAL	DAILY	AVERAGE	ESTIMATED
FINAL FLOW	READING	READING	CHANGE	SIZE-ID	GRADIENT	CHANGE	TIME	PROD.	% OIL	PRODUCTION
	394	281	113	0.0142	0.3841	30	1440	201	1	201

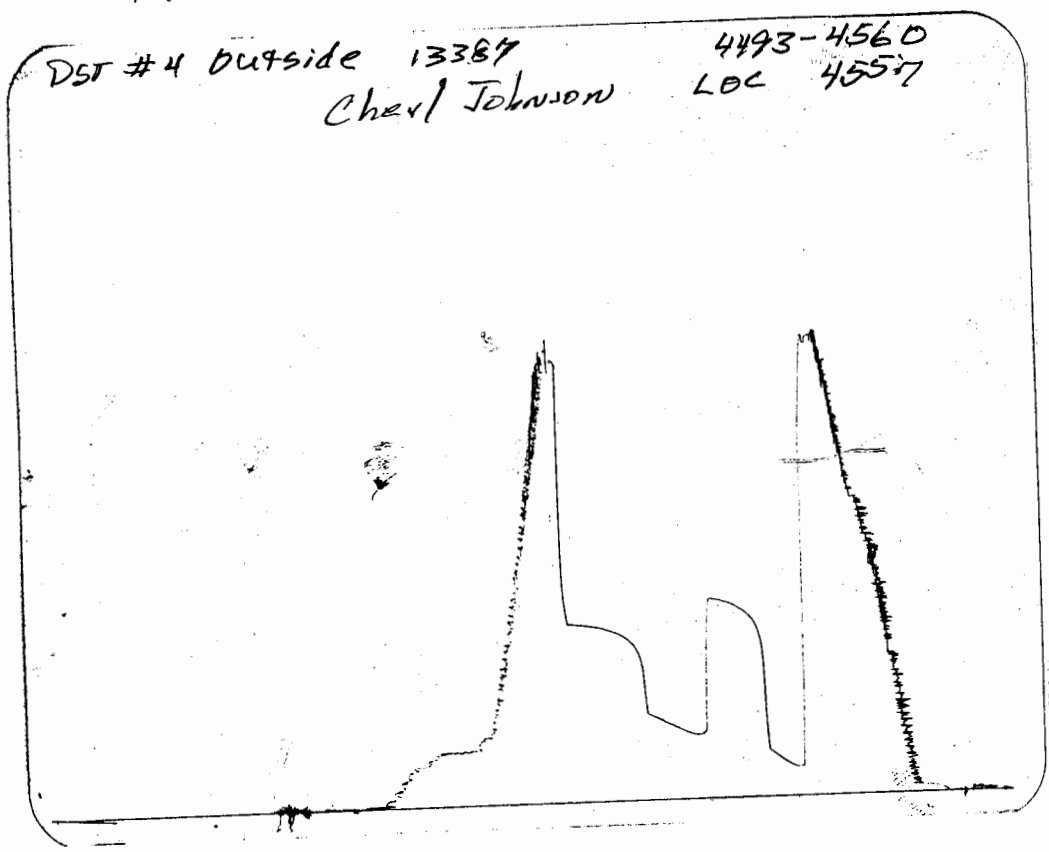
GRUVER-CRAMER #1 DST #4 CHERO./JOHNSON 4,493' - 4,560'

GRUVER-CRAMER #1
 Formation: DST #4 CHERO./JOHNSON 4,493' - 4,560'
 Pool: WILDCAT

RITCHIE EXPLORATION, INC.
 DST #4 CHERO./JOHNSON 4,493' - 4,560'
 Start Test Date: 2005/01/27
 Final Test Date: 2005/01/27

GRUVER-CRAMER #1





This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Elec. Office Reading	
(A) Initial Hydrostatic Mud	2234	2234	PSI
(B) First Initial Flow Pressure.....	39	39	PSI
(C) First Final Flow Pressure	233	233	PSI
(D) Initial Closed-in Pressure	971	971	PSI
(E) Second Initial Flow Pressure.....	241	241	PSI
(F) Second Final Flow Pressure.....	414	414	PSI
(G) Final Closed-in Pressure.....	865	865	PSI
(H) Final Hydrostatic Mud.....	2221	2221	PSI