

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD  
 Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or  
Recompletion Date Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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COMPANY Fitchie Exploration  
WELL #1 Schroeder 22C  
FIELD Wildcat  
LOCATION 16601 FSL 1375 FWM  
SEC 22 T15S R36W  
COUNTY Logan STATE KS  
CONTRACT # 110  
SPS 5-10-17 OMP 5-25-17  
RFD 4973-9  
MUD UP 3443' TYPE MUD Chem  
FORMATION TOPS AND STRUCTURAL POSITIONS

FORMATION	SHAPE	ELECTRIC LOG TOP	SURFACE	STRUCTURAL POSITION
Basal Anhydrite	2610	2608	688	A
Stotler	3663	3663	398	B
Hessner	4026	4024	-78	C
Muncie	4243	4244	-940	D
BKC	4417	4428	-940	E
Marmaton	4413	4427	-1187	F
Albion	4474	4480	-1254	G
El Scott	4626	4624	-1320	H
Cherokee	4654	4652	-1348	I
Johnson	4787	4787	-1428	J
Mission	4830	4830	-1592	K
Missouri	4830	4830	-1603	L
Massena	4830	4830	-1603	M

REFERENCE WELLS FOR STRATIGRAPHY:  
A F.M. #1 Blair, A.C. SE. NW. 21-15-38W.  
B Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
C Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
D Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
E Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
F Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
G Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
H Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
I Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
J Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
K Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
L Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.  
M Fitchie #1 Blair, T6C. E. S. NW. 21-15-38W.

REMARKS

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# RITCHIE

EXPLORATION, INC.  
Wichita, Kansas

## #1 Schroeder 22C

1660' FSL & 1375' FWL

10' N & 55' E of S/2 N/2 SW Section 22-15S-36W

Logan County, Kansas

API# 15-109-21502-0000

Elevation: GL: 3299', KB: 3304'

Sample Tops			Ref. Well
Anhydrite	2591'	+713	-15
B/Anhydrite	2610'	+694	-15
Stotler	3663'	-359	-13
Heebner	4025'	-721	-15
Toronto	4045'	-741	-17
Lansing	4069'	-765	-7
Muncie	4243'	-939	+1
Stark	4331'	-1027	+3
Hush	4375'	-1071	Flat
BKC	4426'	-1122	-10
Marmaton	4473'	-1169	-15
Altamont	4491'	-1187	-17
Pawnee	4573'	-1269	-15
Myrick	4613'	-1309	-14
Fort Scott	4626'	-1322	-11
Cherokee	4654'	-1350	-9
Johnson	4737'	-1433	-7
Morrow	4786'	-1482	-3
Mississippian	4895'	-1591	-11
RTD	4974'	-1670	



0101  
8030

TICKET NUMBER 51813  
 LOCATION Oakley, KS  
 FOREMAN Miles Shaw

PO Box 884, Chanute, KS 66720  
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT  
 CEMENT

INVOICE # 810297 *KS*

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-10-17	7173	Schroder 22C	22	153	36W	Logan
CUSTOMER <u>Bitchie Exploration</u>		Russell Springs Route to Oakley, KS St. E. Ink				
MAILING ADDRESS		TRUCK #	DRIVER	TRUCK #	DRIVER	
<u>PO. Box 783188</u>		<u>753</u>	<u>Trauw</u>			
CITY <u>Wichita</u>		<u>546</u>	<u>Stam D</u>			
STATE <u>KS</u>	ZIP CODE <u>67278-3188</u>					

JOB TYPE Surface HOLE SIZE 12 1/4" HOLE DEPTH 237' CASING SIZE & WEIGHT 8 5/8" 24#  
 CASING DEPTH 237 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.8 SLURRY VOL 1.36 WATER gal/sk \_\_\_\_\_ CEMENT LEFT In CASING 20'  
 DISPLACEMENT 13.5 bbls DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety Meeting and resurvey. Well drilling rig #10 Circulate casing  
mix 1705x Surface blend II Class A cement with 32 gallon 20 gal diaplane 13.5 bbls  
Water shut in Cement did Circulate Celler only

Thanks Miles & Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1150. <sup>00</sup>	1150. <sup>00</sup>
CE0002	3.5	MILEAGE	7.15	250.25
CE0711	8 hours	Ton mile asse delivery	660. <sup>00</sup>	660. <sup>00</sup>
CE5871	170 5x	Surface Blend II	23. <sup>00</sup>	3900. <sup>00</sup>
			Subtotal	5970.25
		less 30% discount		1791.07
			Subtotal	4179.18
			SALES TAX	218.99
			ESTIMATED TOTAL	4398.15

AVIN 3737  
 AUTHORIZATION Rich Wilson TITLE Toolpusher DATE 5-10-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



8211  
8112

TICKET NUMBER 51788  
LOCATION Oakley KS  
FOREMAN Jerry Y  
Walt Dinkel

FIELD TICKET & TREATMENT REPORT  
CEMENT

Invoice # 81029 KS

F. BOX 004, Chanute, KS 66720  
620-431-9210 or 800-467-8676

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
5-25-17	7173	Schroder 22C	22	15S	36W	Logan	
CUSTOMER		MATERIALS		TRUCK #		DRIVER	
Ritchie Exp		Russell Sops 5 to 200 lbs Bimix S+E into		731		Cory D	
MAILING ADDRESS		CITY		STATE		ZIP CODE	
P.O. Box 783188		Wichita		KS		67278-3188	
TRUCK #		DRIVER		TRUCK #		DRIVER	
460		Walt D		639		Seth O	

JOB TYPE Plug HOLE SIZE 7 7/8 HOLE DEPTH \_\_\_\_\_ CASING SIZE & WEIGHT \_\_\_\_\_  
 CASING DEPTH 0 DRILL PIPE 4 1/2 TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 15.8 SLURRY VOL. 1.42 WATER gal/sk \_\_\_\_\_ CEMENT LEFT In CASING \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_ DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting on rig up on WLU10 plug as ordered with 240 sks  
60/40 4 1/2 gal 14 # 06 seal  
50 sks @ 2600'  
100 sks @ 1350'  
50 sks @ 290'  
10 sks @ 40' with 8 7/8 wooden plug  
30 sks Rot 66

Thank you  
Jerry & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0451	1	PUMP CHARGE	1900.00	1900.00
CE0002	35	MILEAGE	7.15	250.25
CE0711	10.32	don mileage delivery	660.00	660.00
CC 5829	240 sks	life blood V	16.00	3840.00
CC 6075	60 #	fl 3 gal	3.00	180.00
CP 8228	1	8 7/8 wooden plug	165.00	165.00
			Subtotal	6995.25
			- 30%	2098.58
			Subtotal	4896.68
			SALES TAX	234.36
			ESTIMATED TOTAL	5131.04

RAVIN 3737  
 AUTHORIZATION Ritchie TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXLORATION, INC.	Job Number	T609
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #1, OREAD, 3997-4020	Report Date	2017/05/18
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	CONVENTIONAL
Formation	DST #1, OREAD, 3997-4020
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/18	Start Test Time	00:55:00
Final Test Date	2017/05/18	Final Test Time	08:42:00

Gauge Name	5504
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## Test Results

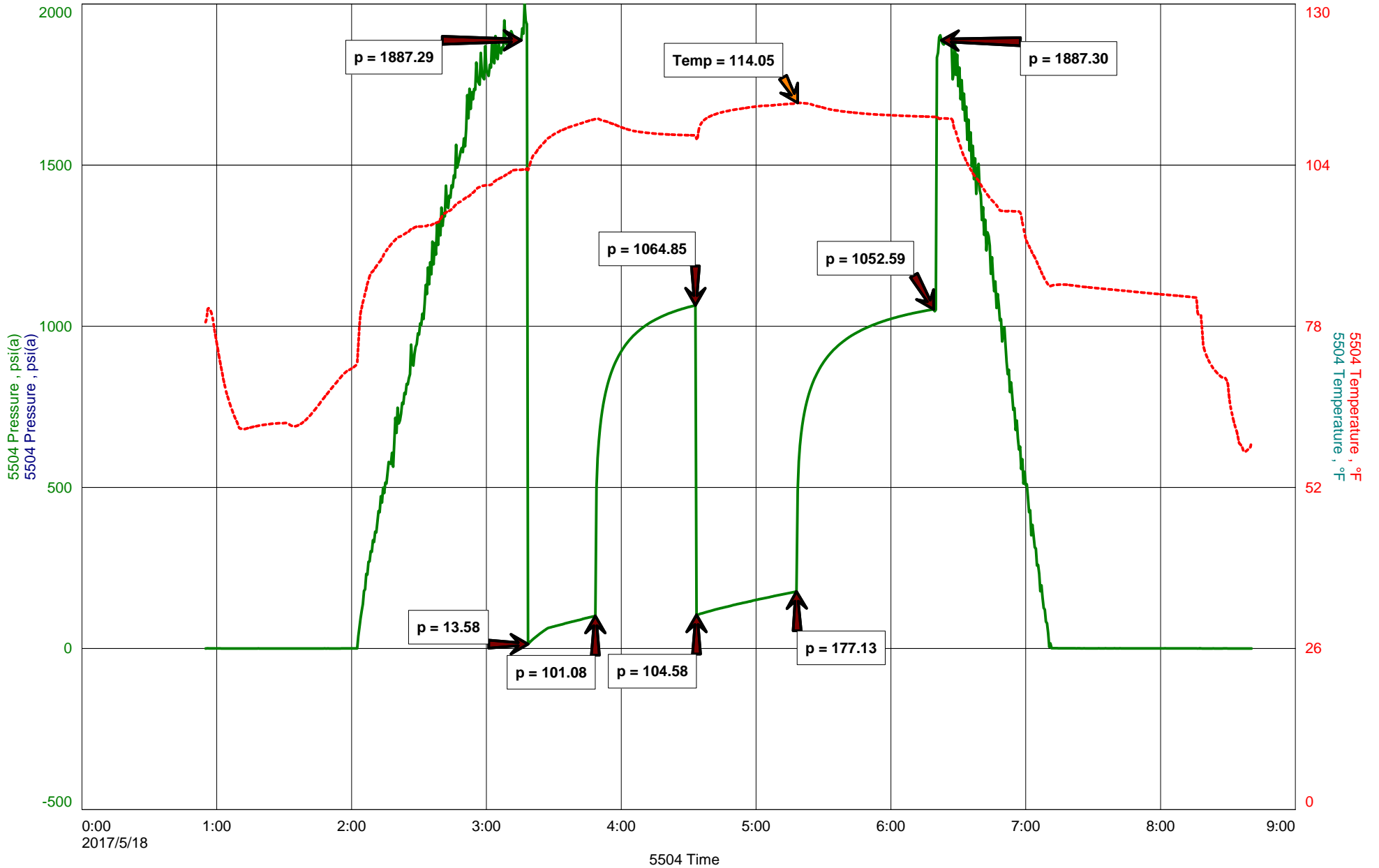
RECOVERED: 65' SMCW W/TR. O, TRACE OIL < 1%, 84% WATER, 16% MUD  
305' SMCW, 97% WATER, 3% MUD  
370' TOTAL FLUID

TOOL SAMPLE: TRACE OIL < 1%, 88% WATER, 12% MUD

CHLORIDES: 42,000 ppm  
PH: 6.0  
RW: .21 @ 68 deg



# SCHROEDER 22C #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST1

TIME ON: 00:55  
TIME OFF: 08:42

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation OREAD Effective Pay \_\_\_\_\_ Ft. Ticket No. T609  
Date 5-18-17 Sec. 22 Twp. \_\_\_\_\_ 15 S Range \_\_\_\_\_ 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 1 Interval Tested from 3997 ft. to 4020 ft. Total Depth 4020 ft.  
Packer Depth 3992 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 3997 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 3978 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4017 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 58 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 8.7 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,000 P.P.M. Drill Pipe Length 3846 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 23 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 28 MIN. (NO BB)  
2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 36 MIN. (NO BB)

Recovered 65 ft. of SMCW W/TR. O, TRACE OIL < 1%, 84% WATER, 16% MUD  
Recovered 305 ft. of SMCW, 97% WATER, 3% MUD  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered _____ ft. of _____	CHLORIDES: 42,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 6.0	Other Charges
Remarks: _____	RW: .21 @ 68 deg.	Insurance
TOOL SAMPLE: TRACE OIL <1%, 88% WATER, 12% MUD		Total

Time Set Packer(s) 3:19 AM A.M. P.M. Time Started Off Bottom 6:19 AM A.M. P.M. Maximum Temperature 114 deg.  
Initial Hydrostatic Pressure..... (A) 1887 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 14 P.S.I. to (C) 101 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1065 P.S.I.  
Final Flow Period..... Minutes 45 (E) 105 P.S.I. to (F) 177 P.S.I.  
Final Closed In Period..... Minutes 60 (G) 1053 P.S.I.  
Final Hydrostatic Pressure..... (H) 1887 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXPLORATION, INC.	Job Number	T610
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #2, LANSING "A", 4064-4087	Report Date	2017/05/19
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	CONVENTIONAL
Formation	DST #2, LANSING "A", 4064-4087
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/18	Start Test Time	17:37:00
Final Test Date	2017/05/19	Final Test Time	00:44:00

Gauge Name	5504
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## Test Results

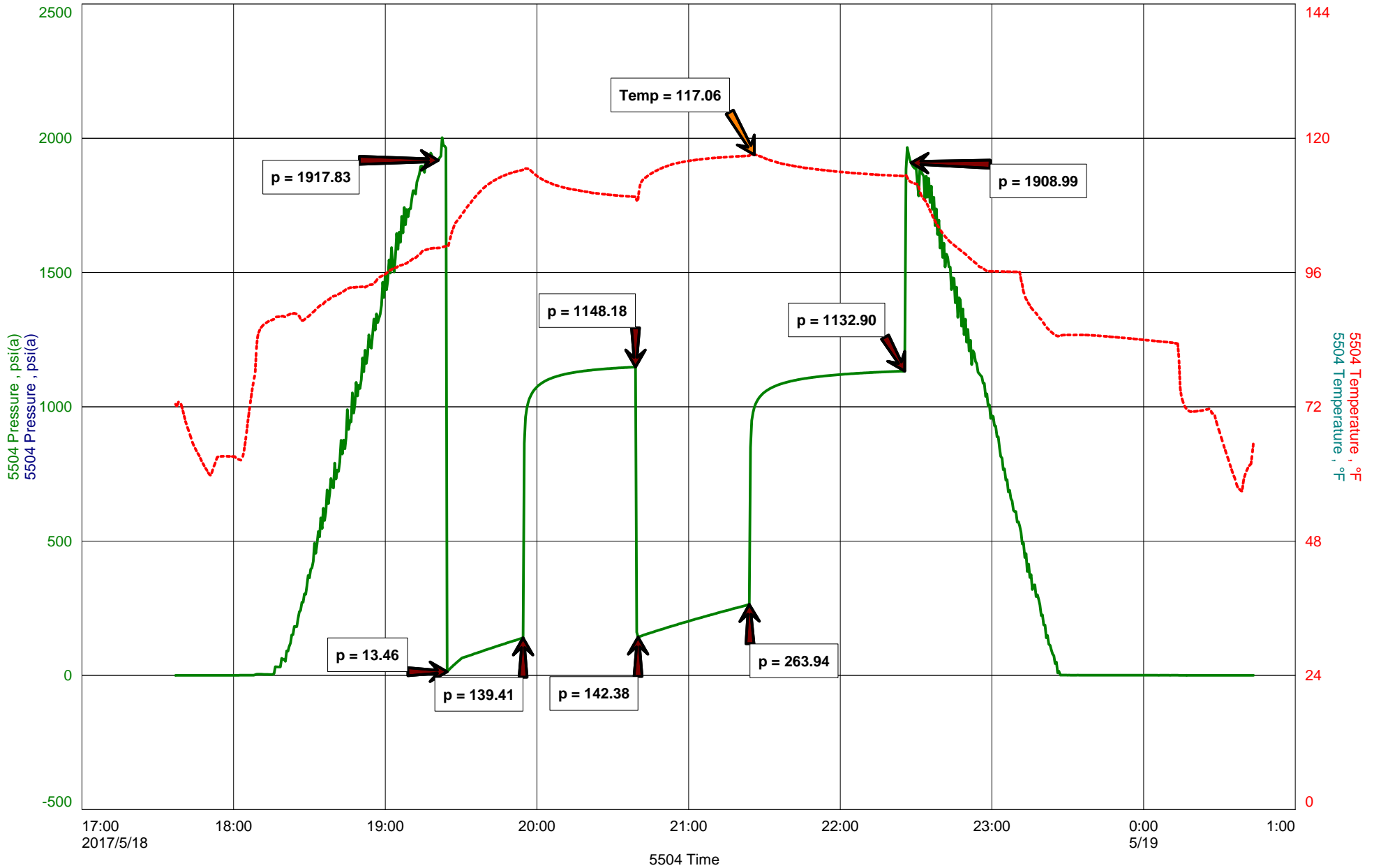
RECOVERED: 5' MCW W/O SPKS, OIL SPECKS, 74% WATER, 26% MUD  
185' MCW, 72% WATER, 28% MUD  
190' SMCW, 97% WATER, 3% MUD  
185' WATER, 100% WATER  
565' TOTAL FLUID

TOOL SAMPLE: TRACE OIL < 1%, 84% WATER, 16% MUD

CHLORIDES: 30,000 ppm  
PH: 7.5  
RW: .28 @ 62 deg.



# SCHROEDER 22C #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST2

TIME ON: 17:37 5-18-17  
TIME OFF: 00:44 5-19-17

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation LANSING "A" Effective Pay \_\_\_\_\_ Ft. Ticket No. T610  
Date 5-18-17 Sec. 22 Twp. \_\_\_\_\_ 15 S Range \_\_\_\_\_ 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 2 Interval Tested from 4064 ft. to 4087 ft. Total Depth 4087 ft.  
Packer Depth 4059 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4064 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4045 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4084 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 62 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 8.9 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 4,400 P.P.M. Drill Pipe Length 3913 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 23 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 16 1/2 MIN. (VWS BB)  
2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 19 MIN. (NO BB)

Recovered 5 ft. of MCW W/O SPKS, OIL SPECKS, 74% WATER, 26% MUD  
Recovered 185 ft. of MCW, 72% WATER, 28% MUD  
Recovered 190 ft. of SMCW, 97% WATER, 3% MUD  
Recovered 185 ft. of WATER, 100% WATER

Recovered <u>565</u> ft. of <u>TOTAL FLUID</u>	<u>CHLORIDES: 30,000 ppm</u>	Price Job
Recovered _____ ft. of _____	<u>PH: 7.5</u>	Other Charges
Remarks: _____	<u>RW: .28 @ 62 deg.</u>	Insurance
<u>TOOL SAMPLE: TRACE OIL &lt;1%, 84% WATER, 16% MUD</u>		Total

Time Set Packer(s) 7:24 PM <sup>A.M.</sup>/<sub>P.M.</sub> Time Started Off Bottom 10:24 PM <sup>A.M.</sup>/<sub>P.M.</sub> Maximum Temperature 117 deg.

Initial Hydrostatic Pressure..... (A) 1918 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 13 P.S.I. to (C) 139 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1148 P.S.I.  
Final Flow Period..... Minutes 45 (E) 142 P.S.I. to (F) 264 P.S.I.  
Final Closed In Period..... Minutes 60 (G) 1133 P.S.I.  
Final Hydrostatic Pressure..... (H) 1909 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITHCIE EXPLORATION, INC.	Job Number	T611
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #3, LANSING "E", 4156-4179	Report Date	2017/05/19
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	CONVENTIONAL
Formation	DST #3, LANSING "E", 4156-4179
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/19	Start Test Time	12:45:00
Final Test Date	2017/05/19	Final Test Time	18:17:00

Gauge Name	5504
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## Test Results

RECOVERED: 2' MUD

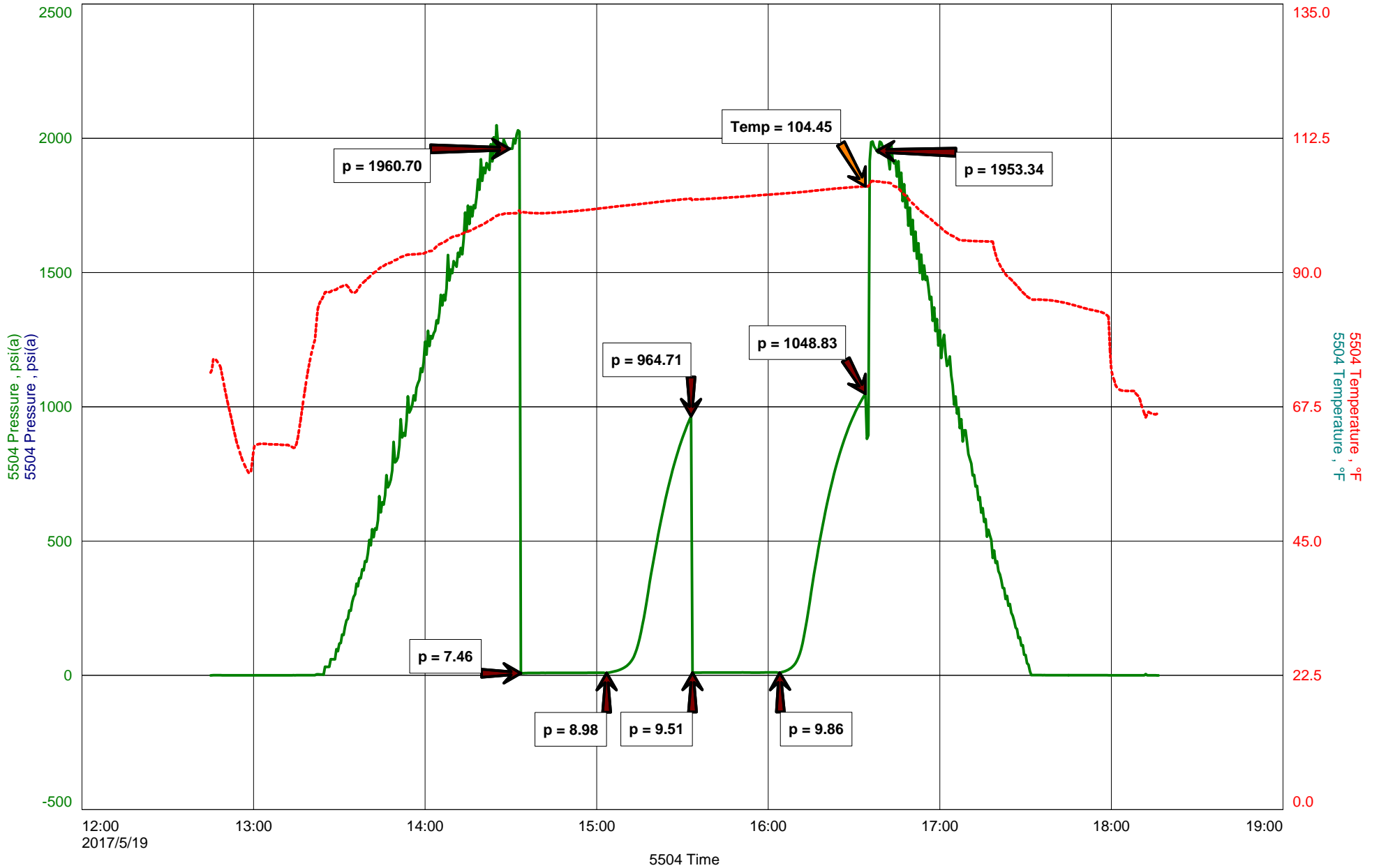
TOOL SAMPLE: OIL SPECKS, 100% MUD



RITHCIE EXPLORATION, INC.  
DST #3, LANSING "E", 4156-4179  
Start Test Date: 2017/05/19  
Final Test Date: 2017/05/19

SCHROEDER 22C #1  
Formation: DST #3, LANSING "E", 4156-4179  
Pool: WILDCAT  
Job Number: T611

# SCHROEDER 22C #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST3

TIME ON: 12:45  
TIME OFF: 18:17

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation LANSING "E" Effective Pay \_\_\_\_\_ Ft. Ticket No. T611  
Date 5-19-17 Sec. 22 Twp. \_\_\_\_\_ 15 S Range \_\_\_\_\_ 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 3 Interval Tested from 4156 ft. to 4179 ft. Total Depth 4179 ft.  
Packer Depth 4151 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4156 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4137 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4176 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 52 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 9.1 Water Loss 8,4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,500 P.P.M. Drill Pipe Length 4005 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 23 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW THROUGHOUT PERIOD. (NO BB)  
2nd Open: VERY WEAK SURFACE BLOW, LASTING 2 MIN. (NO BB)

Recovered 2 ft. of MUD  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: OIL SPECKS, 100% MUD	Total

Time Set Packer(s) 2:33 PM A.M. P.M. Time Started Off Bottom 4:33 PM A.M. P.M. Maximum Temperature 104 deg.

Initial Hydrostatic Pressure..... (A) 1961 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 7 P.S.I. to (C) 9 P.S.I.  
Initial Closed In Period..... Minutes 30 (D) 965 P.S.I.  
Final Flow Period..... Minutes 30 (E) 10 P.S.I. to (F) 10 P.S.I.  
Final Closed In Period..... Minutes 30 (G) 1049 P.S.I.  
Final Hydrostatic Pressure..... (H) 1953 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXPLORATION, INC.	Job Number	T612
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #4, LANSING "H&I", 4236-4315	Report Date	2017/05/20
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	CONVENTIONAL
Formation	DST #4, LANSING "H&I", 4236-4315
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/20	Start Test Time	08:49:00
Final Test Date	2017/05/20	Final Test Time	16:07:00

Gauge Name	5504
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## Test Results

RECOVERED: 420' MCW, 63% WATER, 37% MUD  
2070' SMCW, 99% WATER, 1% MUD  
2490' TOTAL FLUID

TOOL SAMPLE: 100% WATER

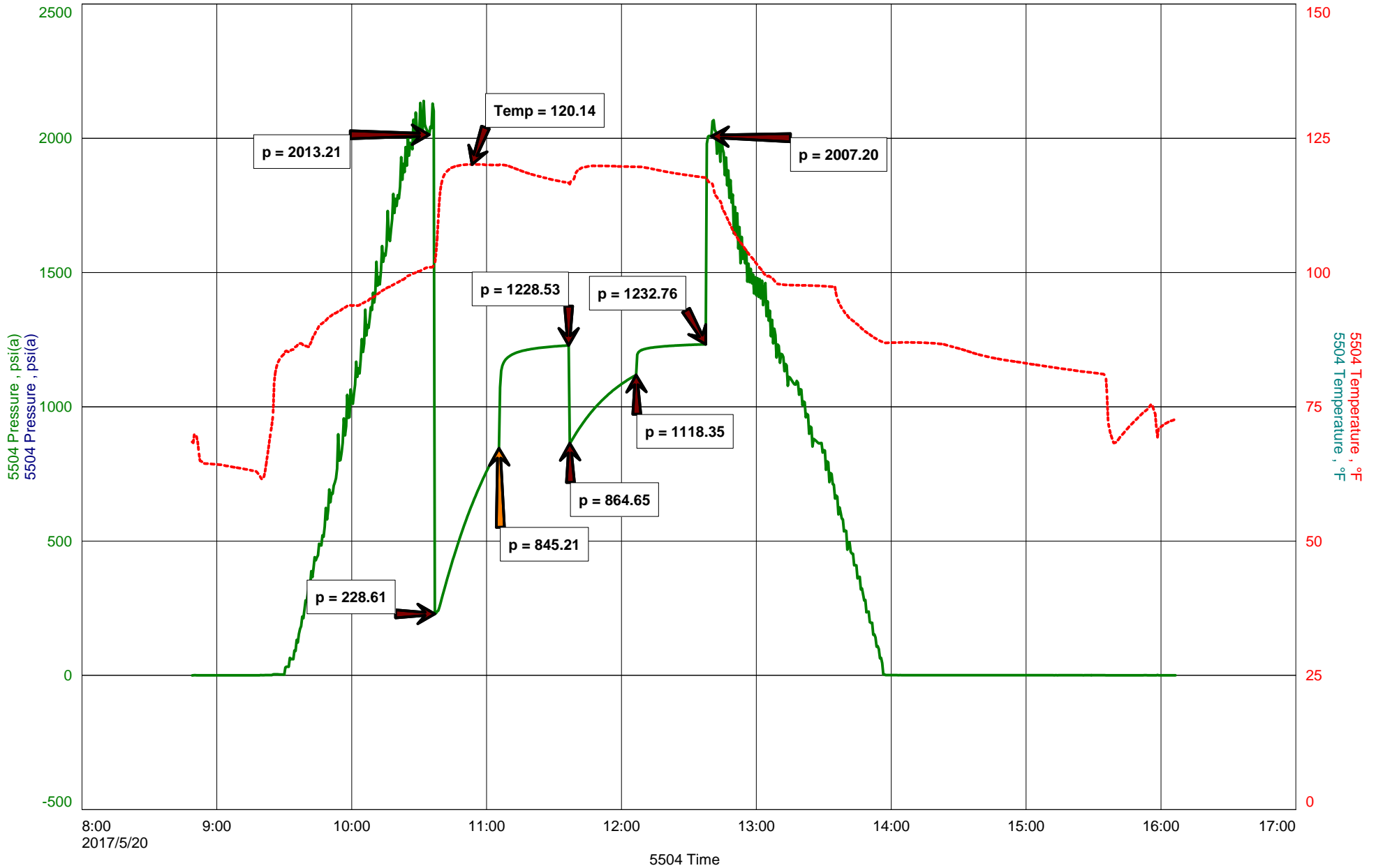
CHLORIDES: 21,000 ppm  
PH: 6.0  
RW: .33 @ 65 deg.



RITCHIE EXPLORATION, INC.  
DST #4, LANSING "H&I", 4236-4315  
Start Test Date: 2017/05/20  
Final Test Date: 2017/05/20

SCHROEDER 22C #1  
Formation: DST #4, LANSING "H&I", 4236-4315  
Pool: WILDCAT  
Job Number: T612

# SCHROEDER 22C #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST4

TIME ON: 08:49  
TIME OFF: 16:07

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation LANSING "H&I" Effective Pay \_\_\_\_\_ Ft. Ticket No. T612  
Date 5-20-17 Sec. 22 Twp. \_\_\_\_\_ 15 S Range \_\_\_\_\_ 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 4 Interval Tested from 4236 ft. to 4315 ft. Total Depth 4315 ft.  
Packer Depth 4231 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4236 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4217 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4312 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 54 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 5,200 P.P.M. Drill Pipe Length 4085 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 17 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. <sup>62' DP IN ANCHOR</sup> Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: GOOD 1 1/2 INCH BLOW, BUILDING, REACHING BOB 1 1/2 MIN. (NO BB)  
2nd Open: GOOD 2 INCH BLOW, BUILDING, REACHING BOB 2 MIN. (NO BB)

Recovered 420 ft. of MCW, 63% WATER, 37% MUD  
Recovered 2070 ft. of SMCW, 99% WATER, 1% MUD  
Recovered 2490 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 21,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 6.0	Other Charges
Remarks: _____	RW: .33 @ 65 deg.	Insurance
TOOL SAMPLE: 100% WATER		Total

Time Set Packer(s) 10:36 AM <sup>A.M.</sup> P.M. Time Started Off Bottom 12:36 PM <sup>A.M.</sup> P.M. Maximum Temperature 120 deg.

Initial Hydrostatic Pressure..... (A) 2013 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 229 P.S.I. to (C) 845 P.S.I.  
Initial Closed In Period..... Minutes 30 (D) 1229 P.S.I.  
Final Flow Period..... Minutes 30 (E) 865 P.S.I. to (F) 1118 P.S.I.  
Final Closed In Period..... Minutes 30 (G) 1233 P.S.I.  
Final Hydrostatic Pressure..... (H) 2007 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXPLORATION, INC.	Job Number	T613
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #5, LANSING "J", 4314-4335	Report Date	2017/05/21
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	CONVENTIONAL
Formation	DST #5, LANSING "J", 4314-4335
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/20	Start Test Time	22:03:00
Final Test Date	2017/05/21	Final Test Time	05:10:00

Gauge Name	5504
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## Test Results

RECOVERED: 40' HO&MCW, 35% OIL, 42% WATER, 23% MUD  
245' SO&MCW, 3% OIL, 86% WATER, 11% MUD  
285' TOTAL FLUID

TOOL SAMPLE: 4% OIL, 84% WATER, 12% MUD

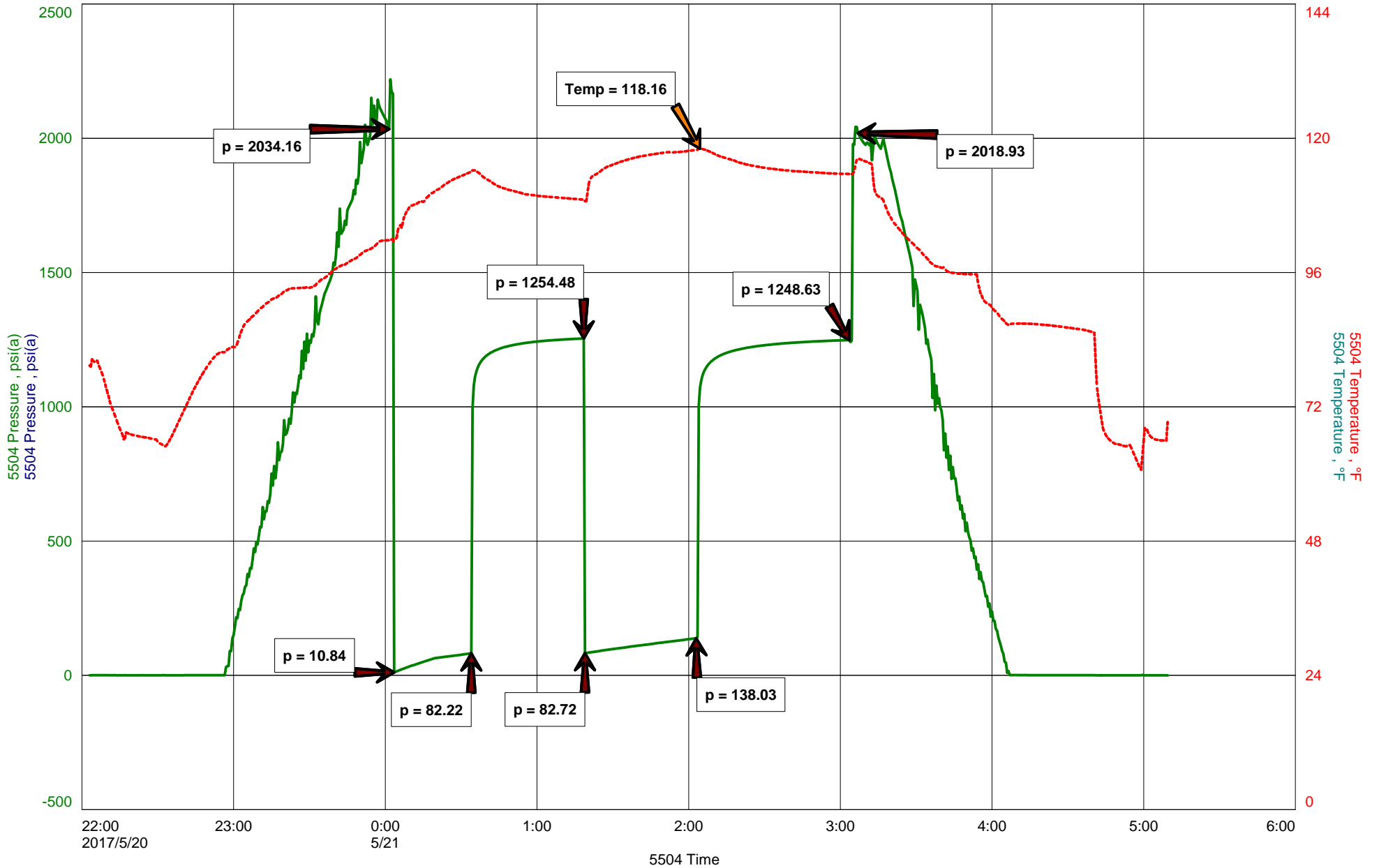
CHLORIDES: 24,000 ppm  
PH: 7.5  
RW: .38 @ 64 deg.



RITCHIE EXPLORATION, INC.  
DST #5, LANSING "J", 4314-4335  
Start Test Date: 2017/05/20  
Final Test Date: 2017/05/21

SCHROEDER 22C #1  
Formation: DST #5, LANSING "J", 4314-4335  
Pool: WILDCAT  
Job Number: T613

# SCHROEDER 22C #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST5

TIME ON: 22:03 5-20-17  
TIME OFF: 05:10 5-21-17

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation LANSING "J" Effective Pay \_\_\_\_\_ Ft. Ticket No. T613  
Date 5-21-17 Sec. 22 Twp. 15 S Range 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 5 Interval Tested from 4314 ft. to 4335 ft. Total Depth 4335 ft.  
Packer Depth 4309 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4314 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4295 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4332 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 54 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 5,200 P.P.M. Drill Pipe Length 4163 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 21 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING TO 8 INCHES. (VWS BB)  
2nd Open: WEAK SURFACE BLOW, BUILDING TO 10 INCHES. (NO BB)

Recovered 40 ft. of HO&MCW, 35% OIL, 42% WATER, 23% MUD  
Recovered 245 ft. of SO&MCW, 3% OIL, 86% WATER, 11% MUD  
Recovered 285 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 24,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 7.5	Other Charges
Remarks: _____	RW: .38 @ 64 deg.	Insurance
TOOL SAMPLE: 4% OIL, 84% WATER, 12% MUD		Total

Time Set Packer(s) 12:03 AM A.M. P.M. Time Started Off Bottom 3:03 AM A.M. P.M. Maximum Temperature 118 deg.

Initial Hydrostatic Pressure..... (A) 2034 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 11 P.S.I. to (C) 82 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1254 P.S.I.  
Final Flow Period..... Minutes 45 (E) 83 P.S.I. to (F) 138 P.S.I.  
Final Closed In Period..... Minutes 60 (G) 1249 P.S.I.  
Final Hydrostatic Pressure..... (H) 2019 P.S.I.

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# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXPLORATION, INC.	Contact	JUSTIN CLEGG	Job Number	T614
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.	Report Date	2017/05/22
Unique Well ID	DST #6, MAR./ALT. "A&B", 4434-4530	Well Operator	RITCHIE EXPLORATION, INC.	Report Date	2017/05/22
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS		
Well License Number					
Field	WILDCAT				
Well Type	Vertical				

## Test Information

Test Type	CONVENTIONAL
Formation	DST \$6, MAR./ALT. "A&B", 4434-4530
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/22	Start Test Time	01:31:00
Final Test Date	2017/05/22	Final Test Time	09:29:00

Gauge Name	5504
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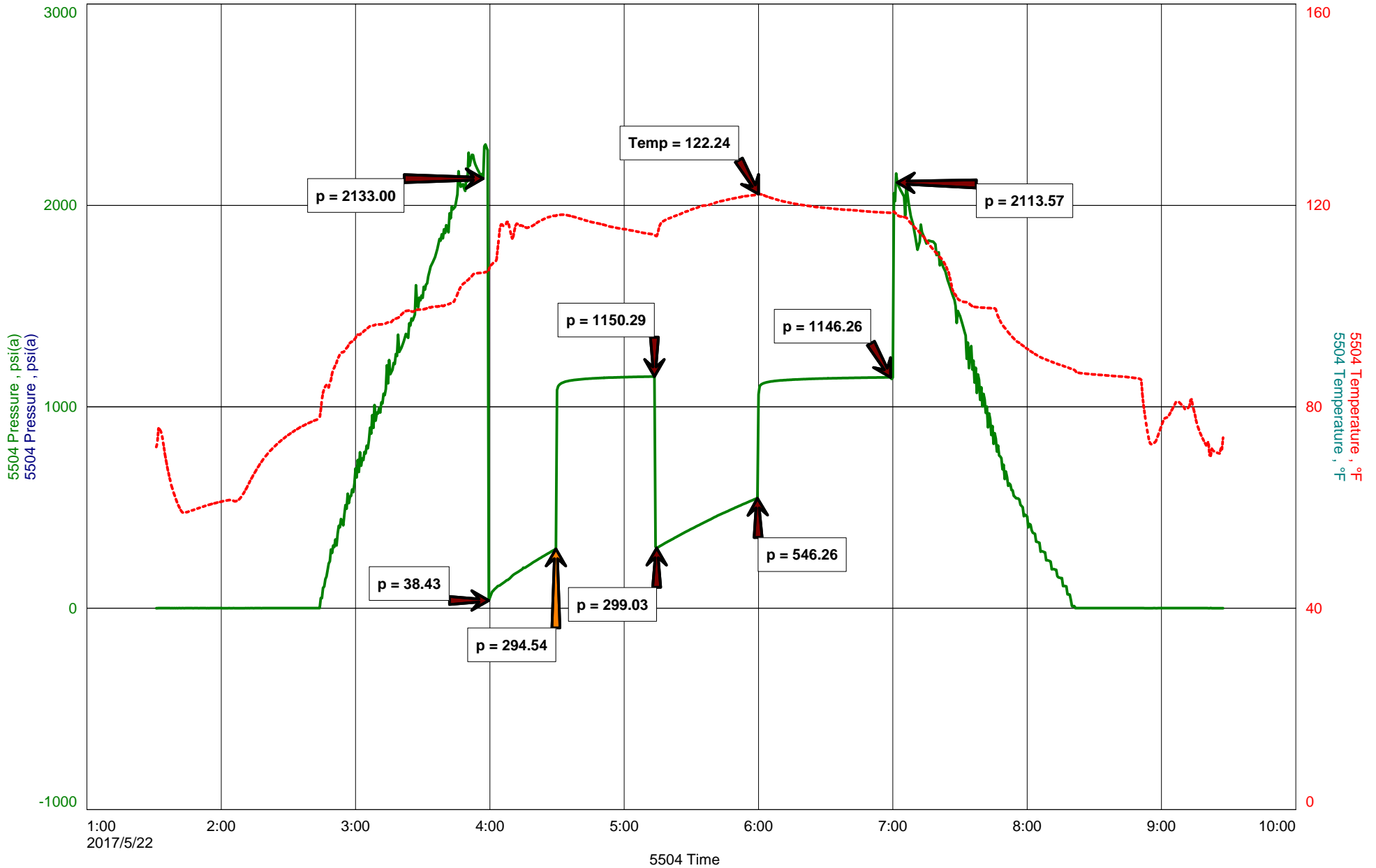
## Test Results

RECOVERED: 240' SOHWCM, 9% OIL, 32% WATER, 59% MUD  
500' SOHMCW, 6% OIL, 55% WATER, 39% MUD  
435' SO&MCW, 4% OIL, 87% WATER, 9% MUD  
1175' TOTAL FLUID

TOOL SAMPLE: 4% OIL, 92% WATER, 4% MUD

CHLORIDES: 28,000 ppm  
PH: 7.5  
RW: .28 @ 65 deg.

# SCHROEDER 22C #1







**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: SCHROEDER22C1DST6

TIME ON: 01:31  
TIME OFF: 09:29

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
Elevation 3304 KB Formation MARMATON/ALTAMONT "A&B" Effective Pay \_\_\_\_\_ Ft. Ticket No. T614  
Date 5-22-17 Sec. 22 Twp. \_\_\_\_\_ 15 S Range \_\_\_\_\_ 36 W County LOGAN State KANSAS  
Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 6 Interval Tested from 4434 ft. to 4530 ft. Total Depth 4530 ft.  
Packer Depth 4429 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4434 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4415 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4527 ft. Recorder Number 13819 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 73 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
Weight 9.1 Water Loss 9.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 7,500 P.P.M. Drill Pipe Length 4283 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 34 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. <sup>62' DP IN ANCHOR</sup> Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 7 MIN. (NO BB)  
2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 8 1/2 MIN. (NO BB)

Recovered 240 ft. of SOHWCM, 9% OIL, 32% WATER, 59% MUD  
Recovered 500 ft. of SOHMCW, 6% OIL, 55% WATER, 39% MUD  
Recovered 435 ft. of SO&MCW, 4% OIL, 87% WATER, 9% MUD  
Recovered 1175 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 28,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 7.5	Other Charges
Remarks: _____	RW: .28 @ 65 deg.	Insurance
TOOL SAMPLE: 4% OIL, 92% WATER, 4% MUD		Total

Time Set Packer(s) 4:00 AM <sup>A.M.</sup> P.M. Time Started Off Bottom 7:00 AM <sup>A.M.</sup> P.M. Maximum Temperature 122 deg.

Initial Hydrostatic Pressure..... (A) 2133 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 38 P.S.I. to (C) 295 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1150 P.S.I.  
Final Flow Period..... Minutes 45 (E) 299 P.S.I. to (F) 546 P.S.I.  
Final Closed In Period..... Minutes 60 (G) 1146 P.S.I.  
Final Hydrostatic Pressure..... (H) 2114 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING, LLC

TESTER : TIM VENTERS  
CELL # 620-388-6333

## General Information

Company Name	RITCHIE EXPLORATION, INC.	Job Number	T615
Contact	JUSTIN CLEGG	Representative	TIM VENTERS
Well Name	SCHROEDER 22C #1	Well Operator	RITCHIE EXPLORATION, INC.
Unique Well ID	DST #7, ALTAMONT "B", 4503-4520	Report Date	2017/05/25
Surface Location	SEC 22-15S-36W, LOGAN CO. KS.	Prepared By	TIM VENTERS
Well License Number			
Field	WILDCAT		
Well Type	Vertical		

## Test Information

Test Type	STRADDLE
Formation	DST #7, ALTAMONT "B", 4503-4520
Well Fluid Type	01 Oil
Test Purpose	Initial Test

Start Test Date	2017/05/25	Start Test Time	12:28:00
Final Test Date	2017/05/25	Final Test Time	20:22:00

Gauge Name	5504
------------	------

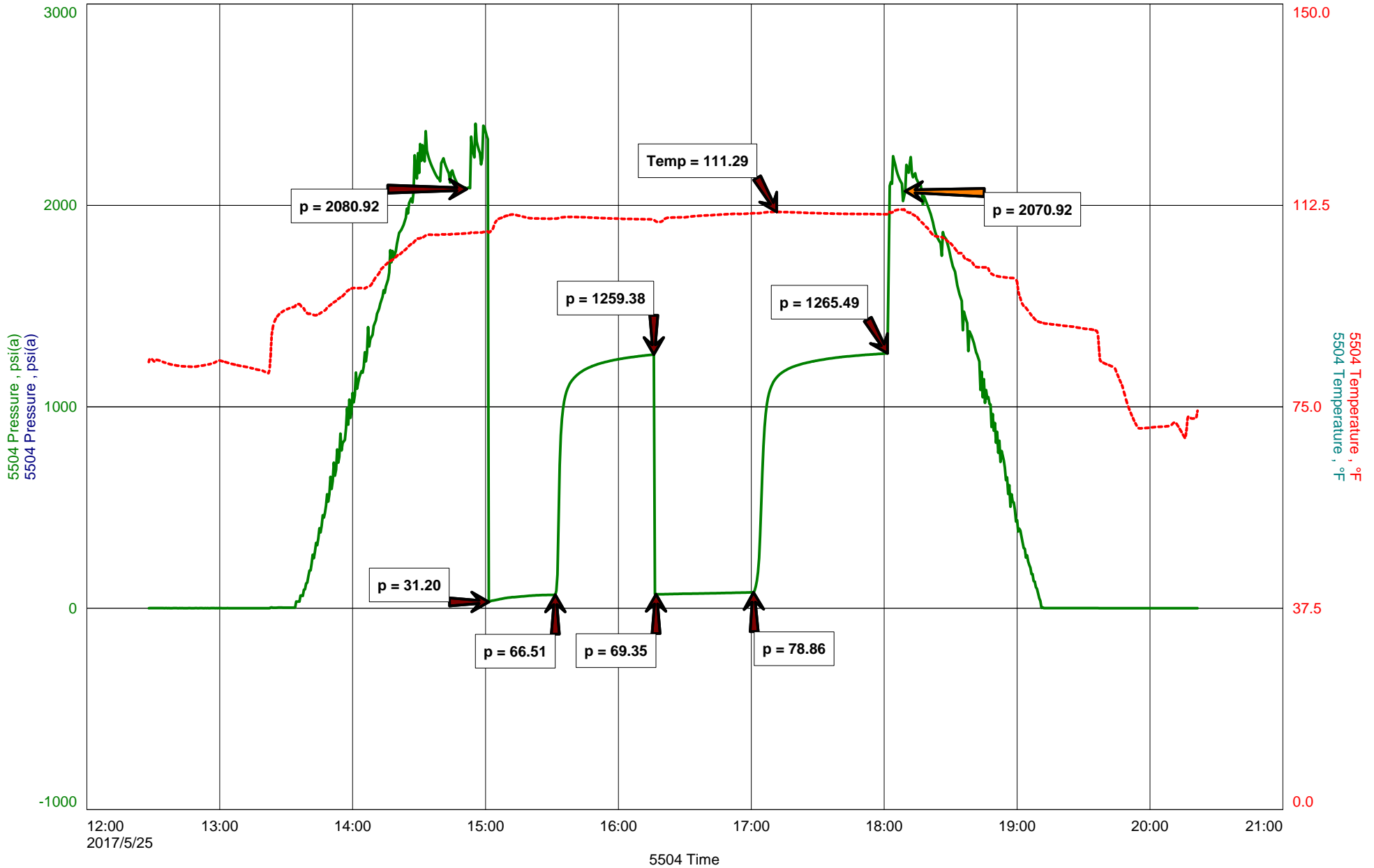
## Test Results

RECOVERED: 5' SW&MCO, 97% OIL, 1% WATER, 2% MUD, GRAVITY: 18  
30' SWHOCM, 49% OIL, 1% WATER, 50% MUD  
120' SO&WCM, 13% OIL, 9% WATER, 78% MUD  
155' TOTAL FLUID

TOOL SAMPLE: 26% OIL, 16% WATER, 58% MUD

CHLORIDES: 17,000 ppm  
PH: 8.5  
RW: .37 @ 77 deg.

# SCHROEDER 22C #1





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

TIME ON: 12:28  
 TIME OFF: 20:22

**DRILL-STEM TEST TICKET**  
 FILE: SCHROEDER22C1DST7

Company RITCHIE EXPLORATION, INC. Lease & Well No. SCHROEDER 22C #1  
 Contractor WW DRILLING, LLC RIG #10 Charge to RITCHIE EXPLORATION, INC.  
 Elevation 3304 KB Formation ALTAMONT "B" Effective Pay \_\_\_\_\_ Ft. Ticket No. T615  
 Date 5-25-17 Sec. 22 Twp. 15 S Range 36 W County LOGAN State KANSAS  
 Test Approved By MAX LOVELY Diamond Representative TIM VENTERS

Formation Test No. 7 Interval Tested from 4503 ft. to 4520 ft. Total Depth 4976 LTD ft.  
 Packer Depth 4498 ft. Size 6 3/4 in. Packer depth 4520 ft. Size 6 3/4 in.  
 Packer Depth 4503 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4484 ft. Recorder Number 5504 Cap. 5,000 P.S.I.  
 Bottom Recorder Depth (Outside) 4517 ft. Recorder Number 11029 Cap. 5,025 P.S.I.  
 Below Straddle Recorder Depth 4911 ft. Recorder Number 5514 Cap. 5,000 P.S.I.

Mud Type CHEMICAL Viscosity 58 Drill Collar Length 118 ft. I.D. 2 1/4 in.  
 Weight 9.2 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
 Chlorides 9,500 P.P.M. Drill Pipe Length 4352 ft. I.D. 3 1/2 in.  
 Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
 Did Well Flow? NO Reversed Out NO Anchor Length 17 ft. Size 4 1/2-FH in.  
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: VERY WEAK SURFACE BLOW, BUILDING TO 2 1/2 INCHES. (NO BB)  
 2nd Open: VERY WEAK SURFACE BLOW, BUILDING TO 2 1/4 INCHES. (NO BB)

Recovered 5 ft. of SW&MCO, 97% OIL, 1% WATER, 2% MUD, GRAVITY: 18  
 Recovered 30 ft. of SWHOCM, 49% OIL, 1% WATER, 50% MUD  
 Recovered 120 ft. of SO&WCM, 13% OIL, 9% WATER, 78% MUD  
 Recovered 155 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 17,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 8.5	Other Charges
Remarks: _____	RW: .37 @ 77 deg.	Insurance
TOOL SAMPLE: 26% OIL, 16% WATER, 58% MUD		Total

Time Set Packer(s) 3:01 PM A.M. P.M. Time Started Off Bottom 6:01 PM A.M. P.M. Maximum Temperature 111 deg.

Initial Hydrostatic Pressure..... (A) 2081 P.S.I.  
 Initial Flow Period..... Minutes 30 (B) 31 P.S.I. to (C) 67 P.S.I.  
 Initial Closed In Period..... Minutes 45 (D) 1259 P.S.I.  
 Final Flow Period..... Minutes 45 (E) 69 P.S.I. to (F) 79 P.S.I.  
 Final Closed In Period..... Minutes 60 (G) 1265 P.S.I.  
 Final Hydrostatic Pressure..... (H) 2071 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.