



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1197668  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

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       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

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
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1197668

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

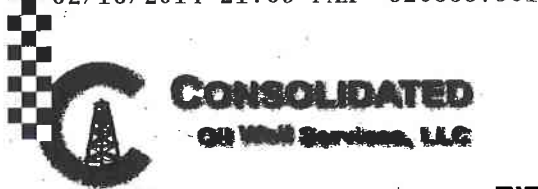
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	GRAU-REED 1
Doc ID	1197668

Tops

Name	Top	Datum
LANSING	1307	-103
BASE KASAS CITY	1659	-456
CHEROKEE	1855	-652
MISSISSIPPI	2546	-1393
KENDERHOOK	2656	-1453
HUNTON	2865	-1662
MAQ	3307	-2167
VIOLA	3431	-2228
SP DOL	3542	-2339



265975

TICKET NUMBER 45842  
LOCATION Eureka, KS  
FOREMAN David Gardner

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

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

API # 15-085-20088

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
2-13-14	4979	Grau-Reed #1	27	6 S	13 E	Jackson
CUSTOMER			Summit Drlg.			
MAILING ADDRESS						
CITY						
STATE	ZIP CODE					
L.D. Drilling Inc. 7 sw 26th Ave. Great Bend KS 67530			TRUCK #	DRIVER	TRUCK #	DRIVER
			485	Chris M.		
			667	Zevi A.		

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 357' CASING SIZE & WEIGHT 8 5/8"  
 CASING DEPTH 337' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 14.7 #/gal SLURRY VOL 48 Bbl WATER gal/sk 6.5 CEMENT LEFT in CASING 10' +/-  
 DISPLACEMENT 21.7 Bbl DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 5 BPM

REMARKS: Safety Meeting. Rig up to 8 5/8" casing w/ Head + Manifold. Break circulation w/ 5 Bbl Fresh water. Mixed 200 sks Class "A" Cement w/ 3% Cactz., 2% Gel, & 1/4" Flo-seal/sk. Shut down. Release Plug. Displace w/ 21.7 Bbls Fresh water. Shut well in. Good circulation @ all times. 20 Bbl good cement slurry to pit. Job complete. Rig down.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	870.00	870.00
5406	100	MILEAGE	4.20	420.00
11045	200 SKS	Class "A" Cement	15.70	3140.00
1102	565#	Cactz @ 3%	.78	440.70
11188	375#	Gel @ 2%	.22	82.50
1107	50#	Flo-seal @ 1/4 #/sk	2.47	123.50
5407A	9.4 Tons	Ton Mileage Bulk Truck	1.41	1325.40
4432	1	8 5/8" Wooden Plug	84.00	84.00
			Subtotal	6486.10
"Thank You"			7.55%	SALES TAX 292.23
			ESTIMATED TOTAL	6778.33

completed

Ravin 3737

AUTHORIZATION DAN COX TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's...

810 E 7<sup>TH</sup>  
 PO Box 92  
 EUREKA, KS 67045  
 (620) 583-5561

**Elite**

**Cementing & Acidizing  
 of Kansas, LLC**



**Cement or Acid Field Report**

Ticket No. **1104**

Foreman Kevin McCoy

Camp EUREKA

API # 15-085-20088

Date	Cust. ID #	Lease & Well Number		Section	Township	Range	County	State
2-24-14	1033	GRAU-Reed # 1		27	6S	13E	JACKSON	Ks
Customer			Safety Meeting Km SP RM	Unit #	Driver	Unit #	Driver	
Mailing Address				102	Shannon F.			
City				111	Rudy M.			
L.D. DRILLING, INC. 7 SW 26 <sup>TH</sup> AVE.		State	Zip Code					
GREAT BEND		Ks	67530					

Job Type P.T.A. Hole Depth 3570' Slurry Vol. \_\_\_\_\_ Tubing \_\_\_\_\_  
 Casing Depth \_\_\_\_\_ Hole Size 7 7/8 Slurry Wt. \_\_\_\_\_ Drill Pipe \_\_\_\_\_  
 Casing Size & Wt. \_\_\_\_\_ Cement Left in Casing \_\_\_\_\_ Water Gal/SK \_\_\_\_\_ Other \_\_\_\_\_  
 Displacement \_\_\_\_\_ Displacement PSI \_\_\_\_\_ Bump Plug to \_\_\_\_\_ BPM \_\_\_\_\_

Remarks: Safety Meeting: Rig up to 4" Drill pipe. Spot Cement Plugs as following.

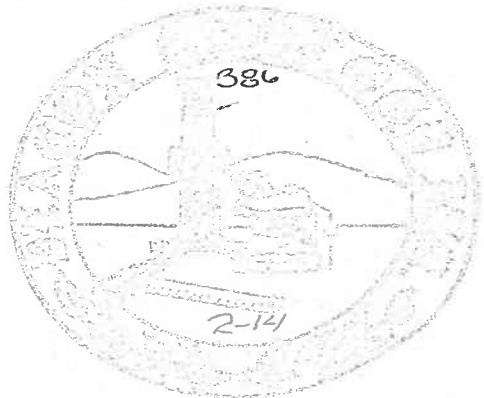
15 sks @ 3420' Viola  
15 sks @ 2865' HUNTON  
15 sks @ 1650' BKC  
105 sks 350' to SURFACE

150 sks TOTAL

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 103	1	Pump Charge	1050.00	1050.00
C 107	145	Mileage	3.95	572.75
C 203	150 sks	60/40 Pozmix Cement	12.75	1912.50
C 206	.515 #	Gel 4%	.20 *	103.00
C 108 B	6.45 Tons	Ton Mileage 145 miles	1.35	1262.59
<u>THANK YOU</u>			Sub TOTAL	4900.84
<u>7.55%</u>			Sales Tax	152.17
Authorization <u>Da Cup</u>	Title _____	Total		5053.01

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.





George E. Peterson a.p.g.  
consulting geologist

3223 McClure Rd.  
Topeka, Kansas 66614  
(785) 272-4363

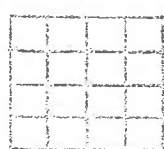
**GEOLOGIST'S LOG**

COMPANY: L.D. DRILLING Inc  
WELL NAME: GRAU-REED #1  
LOCATION: N<sup>2</sup>, SW, SE, NE 2210 FNL 990 FEL  
SEC. 27 T. 6 S. R. 13 E.  
COUNTY: JACKSON STATE: Kansas  
ELEVATION: GR 1193.23 KB 1263  
API #: 15-085-20088-00-00  
FIELD: Soldier  
CONTRACTOR: Summit Drilling Inc  
GEOLOGIST: George E. Peterson  
SPUD DATE: 2/13/14 COME DATE: 2/13/14  
SAMPLES SAVED FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
SAMPLES OBTAINED FROM: 1250 TO: TD  
RTD: 3570 LTD: —  
CORRE: NA

OPEN HOLE LOSS: N/A

SURFACE CASING SET: 300' PROD. CASING SET: —  
GEOLOGICAL SUPERVISION FROM: Surf TO: TD

COMMENTS: P&A Lack of shows of negative test results



**FORMATION TOPS & STRUCTURAL POSITIONS**

FORMATION	SAMPLE TOP	ELECT. POTENTIAL LOG TOP	TEST WELLS			
			A	B	C	E
Hebber	1507		+115	+111	+110	+111
Lansing	1307	-104	-101	-101	-101	-99
B/KC	1659	-456	-441	-436	-443	-439
Cherokee	1855	-652	-648	-639	-640	-638
Miss	2546	-1393	-1307	-1318	-1315	-1320
Kinderhook	2656	-1453	-1420	-1382	-1417	-1422
Hunton	2865	-1662	-1639	-1626	-1619	-1653
Maq	3307	-2167	-2123	-2122	-2119	-2122
Viola	3431	-2228	-2195	-2188	-2187	-2192
Sp Dol	3542	-2339				
Sp Sl	—					
Arb	—					

**REFERENCE WELL FOR STRUCTURE:**

- 1 Henry Trust #1
- 2 Henry Trust #2
- 3 Dougan #1
- 4 Dougan #2

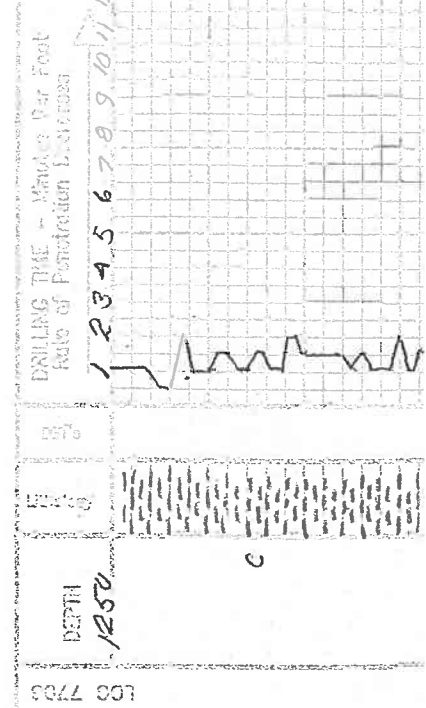
**DRILL STEM TESTS**

TEST	INT.	IPP	ISIP	FTP	PRF	RECOVERY
1	2860	1383.00	1010.54	1374.31	1003.47	63' 100% mud
	2892					
	Hunton					

**LEGEND**

- Dolomite
- Chert
- Oil Lime
- Limestone
- Carb sh
- Shale
- Sandstone
- Salt
- Anhydrite

SCALE 1" = 100'



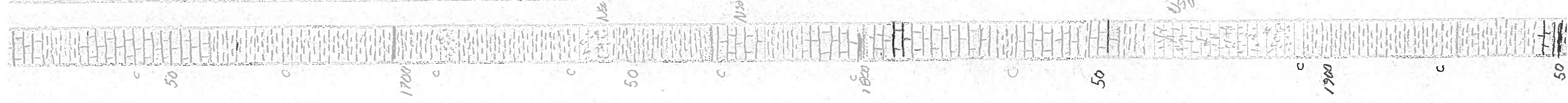
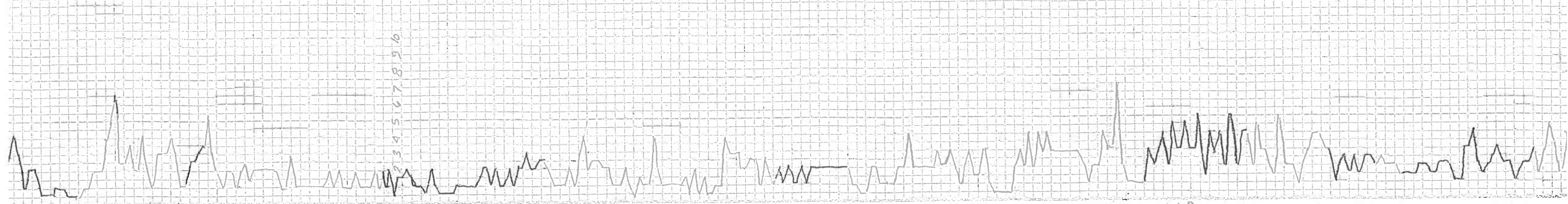
DEPTH	FORMATION	REMARKS
0 - 1250	Arb	54 gpy gas & H <sub>2</sub>
1250 - 1300	Maq	
1300 - 1400	Hunton	
1400 - 1500	Kinderhook	
1500 - 1600	Cherokee	
1600 - 1700	B/KC	
1700 - 1800	Lansing	
1800 - 1900	Hebber	







Sh blk dk gray gm	1620 8 PM
LS m dk brn vck lke	
LS 44	
LS 44	1648 9 PM
LS 40	Sample BKC 1659 (-456)
Sh dk gray gm 5 mly sandy, mly	
Sh 44	1675 10 PM
Sh 44	
Sh 44	
Sh 44	1700 10:30 PM
Sh 44	
Sh 44	
SS hard as gravel BKC	
Sh 44	1725 10:50 PM
Sh 44	
Sh 44	
Sh 44	1755 12:00 PM
LS m brn	
Sh 44	
Sh 44	1720 1 AM
LS 17-18-19-20	
LS 44	
LS 44	
LS 44	1822 2:01 AM
LS 44	
LS 44	
LS 44	1847 3:00 AM
Sh 44	1862 J.M. 1863 4 AM
Sh 44	Sample Top Chalk 1855-1852 1875 5:07 AM
Sh 44	
SS ea	
Sh 44	1898 6:01 AM
SS ea	
SS ea	
SS ea	
SS ea	1925 7:00 AM
SS ea	
SS ea	
SS ea	1957 8 AM



BKC  
BKC



1957 8:11 AM

aa

aa Troad

aa

1958 9 AM

SS F-mud

aa

sa

sa aa

2024 10:11 AM

SS irregular with thin sly  
found

aa

aa

aa

aa

2071 12:11 PM

sh dk gray blk coal

aa

aa

2100 12:55 PM

sl gray blk gm to sandy-mic

aa

aa

aa

aa

2140 2:01 PM

aa

aa

aa

aa

aa

aa

aa

sh aa Troad

sh blk Troad

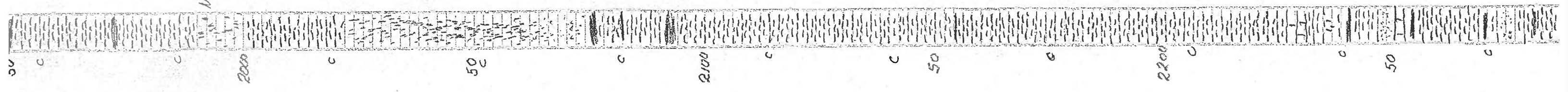
aa

aa

aa

aa

2203 7:00 PM



120

2000

50

2100

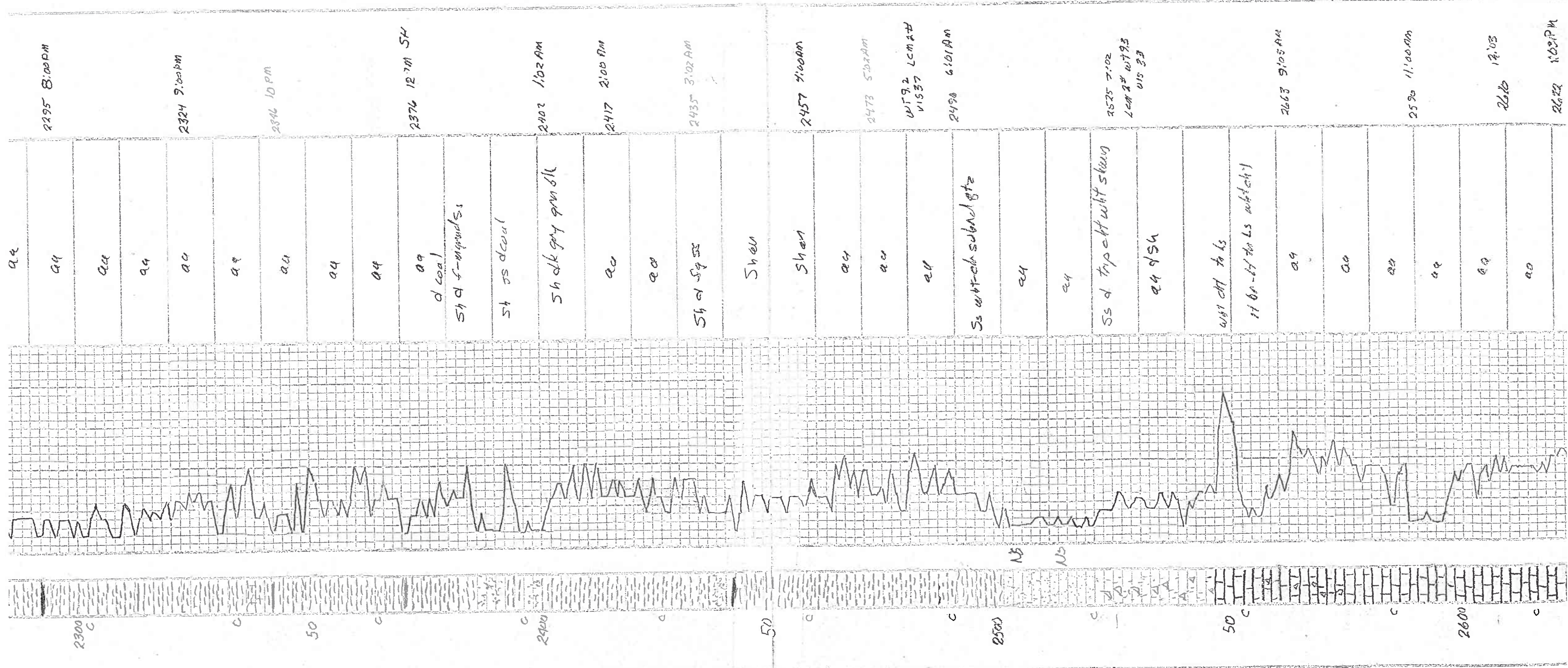
50

2200

50

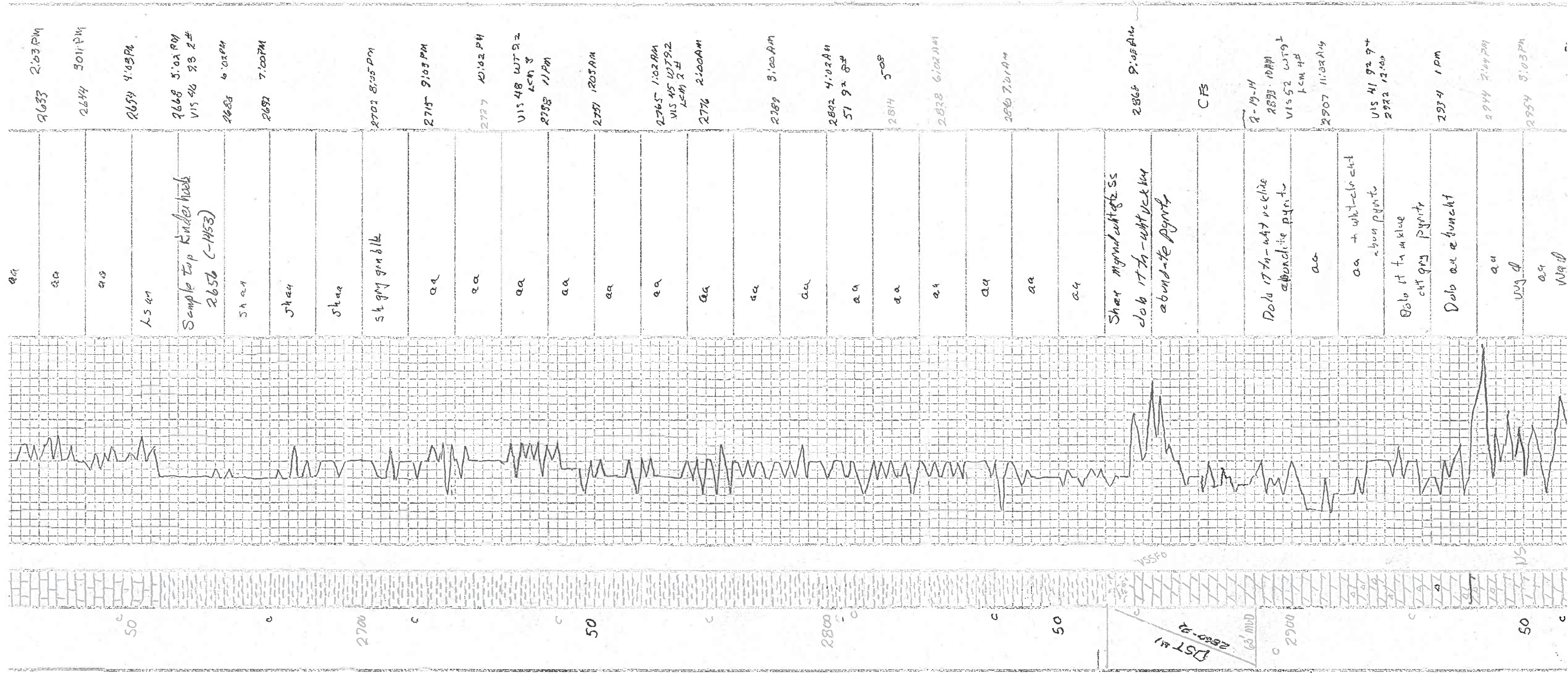
21345678910





K<sub>5</sub>





aa	2633	2:03 PM
aa	2644	3:01 PM
aa	2654	4:03 PM
LSM	2668	5:02 PM
Sample Top Kinderhook 2656 (-1453)	2683	6:02 PM
5A aa	2692	7:00 PM
Jhaa	2702	8:05 PM
Shaa	2715	9:09 PM
sh gray granite	2727	10:02 PM
aa	2748	WT 92 LSM 5
aa	2758	11 PM
aa	2757	12:03 AM
aa	2765	1:02 AM
aa	2765	1:02 AM
aa	2776	2:00 AM
aa	2789	3:00 AM
aa	2802	4:02 AM
aa	2814	5:05
aa	2828	6:02 AM
aa	2840	7:01 AM
aa	2866	8:05 AM
aa	2883	10 PM
aa	2907	11:02 AM
aa	2915	11:02 AM
aa	2922	12:00
aa + white chert blue granite	2934	1 PM
aa	2944	2:04 PM
aa	2954	3:03 PM
aa	2954	3:03 PM

CFS

Shale magn calcite ss  
chert in white chert  
abundant pyrite

Dolo in white chert  
abundant pyrite

aa + white chert  
blue granite

Dolo in marble  
chert gray pyrite

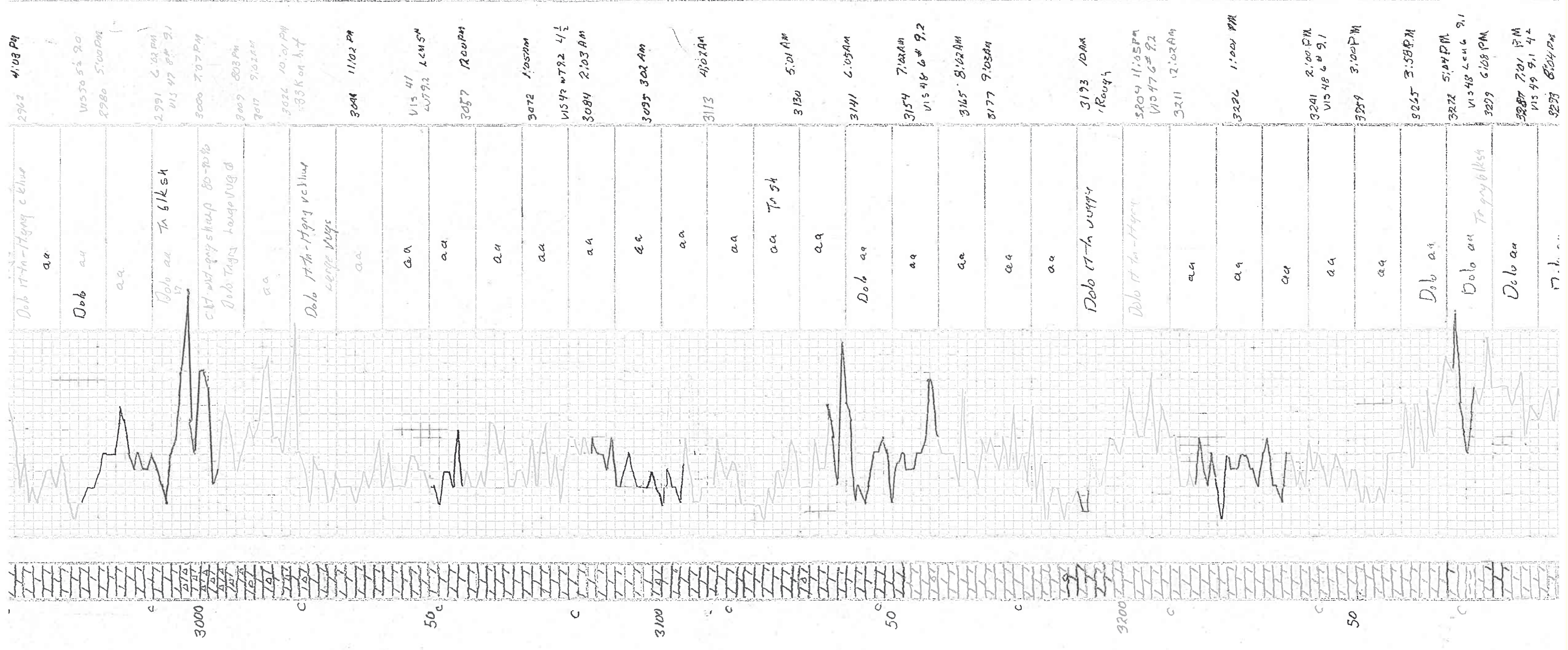
Dolo on chert

V5556

DST 21  
2800-2900  
(6' MID)

V5





2962	4:03 PM	aa	Dob 17th-Hygy c blue
1550 5 20		aa	
2980	5:00 PM	aa	
2991	6:02 PM	aa	Dob aa TA 61KSH
3000	7:07 PM	aa	abt wt-gy-sharp 80-80%
3009	8:03 PM	aa	Dob Tgyr large vug d
3017	9:02 AM	aa	
3026	10:01 PM	aa	Dob 17th-Hygy v blue
3033	10:01 AM	aa	large vugs
3044	11:02 PM	aa	
3051	12:05 PM	aa	
3057	1:00 PM	aa	
3072	1:05 PM	aa	
3084	2:03 AM	aa	
3095	3:02 AM	aa	
3113	4:02 AM	aa	
3130	5:01 AM	aa	aa Tgyt
3141	6:05 AM	aa	
3154	7:02 AM	aa	Dob aa
3165	8:02 AM	aa	
3177	9:03 AM	aa	
3193	10:00 AM	aa	Dob 17th vuggy
3204	11:05 PM	aa	Dob 17th-17404
3211	12:02 AM	aa	
3226	1:00 PM	aa	
3241	2:00 PM	aa	
3259	3:00 PM	aa	
3265	3:58 PM	aa	Dob aa
3272	5:04 PM	aa	Dob aa Tgy 61KSH
3287	7:01 PM	aa	Dob aa
3299	8:08 PM	aa	
3309	8:04 PM	aa	

3000

50

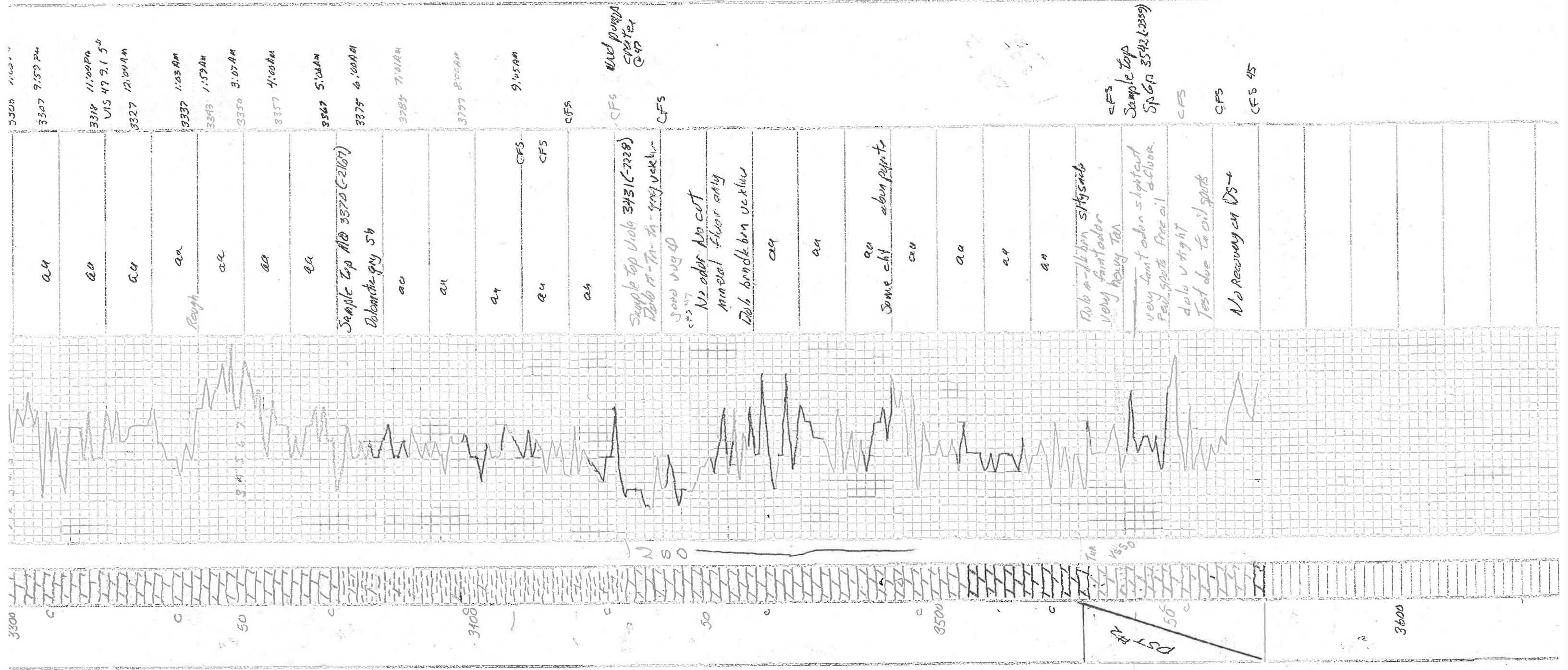
3100

50

3200

50





3300

3307 9:15 AM

3318 11:00 AM  
VIS 49.9.1 54

3327 12:00 AM

3337 1:03 AM

3343 1:59 AM

3350 3:07 AM

3357 4:00 AM

3367 5:00 AM

3375 6:00 AM

3383 7:00 AM

3397 8:00 AM

3408 9:15 AM

CFS Max powder  
center  
@ 47

CFS Sample top  
SPGR 3542 (2309)

CFS

CFS

CFS 45

aa

aa

aa

aa

aa

aa

aa

Sample top 110 3370 (2107)  
Dolomite gray sh

aa

aa

aa

CFS

CFS

CFS

aa

Sample top 110 3431 (-2288)  
Dark gray sh - gray uctious

Good very d  
CFS 47

No odor No cut  
mineral flour only

Del. brick/bn uctious

aa

aa

Some chl abou pypnts

aa

aa

aa

aa

Rob in dk bn silty shale  
Very faint odor  
Very heavy tan

very faint odor slightest  
Faint spots fine oil  
dab v tight

Test due to oil spots

No Recovery ch DS+

N 50

Tar  
K550

DS 1 FT  
50

3408

3500

3600



**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GR-RD1DST1

TIME ON: 2135 (2/18)  
TIME OFF: 0550 (2/19)

Company L.D. DRILLING, INC. Lease & Well No. GRAU-REED #1  
Contractor SUMMIT DRILLING COMPANY RIG 1 Charge to L.D. DRILLING, INC.  
Elevation 1203 KB Formation HUNTON Effective Pay \_\_\_\_\_ Ft. Ticket No. M616  
Date 2/18/2014 Sec. 27 Twp. \_\_\_\_\_ 6 S Range \_\_\_\_\_ 12E W County JACKSON State KANSAS  
Test Approved By GEORGE PETERSON Diamond Representative MIKE COCHRAN

Formation Test No. 1 Interval Tested from 2860 ft. to 2892 ft. Total Depth 2892 ft.  
Packer Depth 2855 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.  
Packer Depth 2860 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 2847 ft. Recorder Number 0063 Cap. 6,000 P.S.I.  
Bottom Recorder Depth (Outside) 2889 ft. Recorder Number 6884 Cap. 5,000 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEM Viscosity 52 Drill Collar Length 314 ft. I.D. 2 1/4 in.  
Weight 9.1 Water Loss 9.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 1,000 P.P.M. Drill Pipe Length 2519 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number SFTY JT Test Tool Length 27 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 32 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 3/4XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: 1 1/2" RIGHT AWAY, BUILT TO 3" (NO BB)  
2nd Open: WSB, INCREASE TO 1 1/2" (NO BB)

Recovered <u>63</u> ft. of <u>DM 100% MUD</u>	Price Job Other Charges Insurance Total
Recovered <u>63</u> ft. of <u>TOTAL FLUID</u>	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Remarks: <u>TOOL SLID 15'</u>	
TOOL SAMPLE: <u>100% MUD</u>	

Time Set Packer(s) 1:30 A.M. A.M. P.M. Time Started Off Bottom 3:00A.M. A.M. P.M. Maximum Temperature 107°F

Initial Hydrostatic Pressure..... (A) 1383 P.S.I.  
Initial Flow Period..... Minutes 15 (B) 23 P.S.I. to (C) 34 P.S.I.  
Initial Closed In Period..... Minutes 30 (D) 1011 P.S.I.  
Final Flow Period..... Minutes 15 (E) 34 P.S.I. to (F) 44 P.S.I.  
Final Closed In Period..... Minutes 30 (G) 1003 P.S.I.  
Final Hydrostatic Pressure..... (H) 1374 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

## Pressure Survey Report

### General Information

Company Name	L.D. DRILLING, INC.	Job Number	M616
Well Name	GRAU-REED #1	Representative	MIKE COCHRAN
Unique Well ID	GRAU-REED #1 DST#1	Well Operator	L.D. DRILLING, INC.
Surface Location	SEC.27-6S-13E JACKSON CO.KS.	Report Date	2014/02/19
Field	WILDCAT	Prepared By	MIKE COCHRAN
Well Type	Vertical	Qualified By	GEORGE PETERSON
		Test Unit	NO. 3

### Test Information

Test Type	CONVENTIONAL		
Formation	GRAU-REED #1 DST#1		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2014/02/18	Start Test Time	21:35:00
Final Test Date	2014/02/19	Final Test Time	05:50:00
		Well Fluid Type	01 Oil
Gauge Name	0063		
Gauge Serial Number			

### Test Results

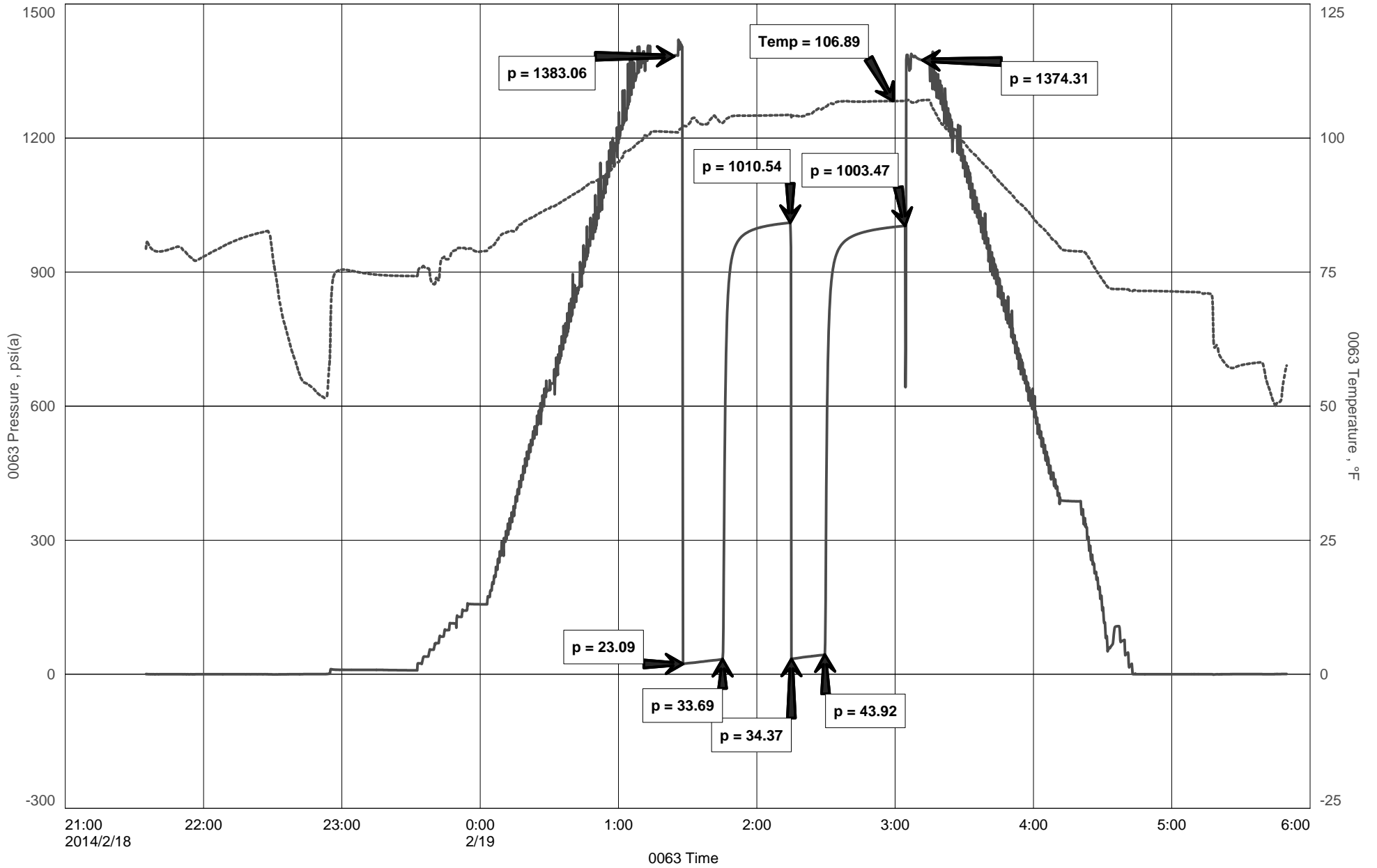
Remarks RECOVERED:  
63' DM 100% MUD  
63' TOTAL FLUID

TOOL SAMPLE: 100% MUD

L.D. DRILLING, INC.  
GRAU-REED #1 DST#1  
Start Test Date: 2014/02/18  
Final Test Date: 2014/02/19

GRAU-REED #1  
Formation: GRAU-REED #1 DST#1  
Pool: WILDCAT  
Job Number: M616

# GRAU-REED #1





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GR-RD1DST2

TIME ON: 1005  
TIME OFF: 1900

Company L.D. DRILLING, INC. Lease & Well No. GRAU-REED #1  
Contractor SUMMIT DRILLING COMPANY RIG 1 Charge to L.D. DRILLING, INC.  
Elevation 1203 KB Formation SIMPSON DOLO-SS Effective Pay \_\_\_\_\_ Ft. Ticket No. M617  
Date 2/23/2014 Sec. 27 Twp. \_\_\_\_\_ 6 S Range \_\_\_\_\_ 12E W County JACKSON State KANSAS  
Test Approved By GEORGE PETERSEN Diamond Representative MIKE COCHRAN

Formation Test No. 2 Interval Tested from 3530 ft. to 3570 ft. Total Depth 3570 ft.  
Packer Depth 3525 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.  
Packer Depth 3530 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 3518 ft. Recorder Number 0063 Cap. 6,000 P.S.I.  
Bottom Recorder Depth (Outside) 3567 ft. Recorder Number 6884 Cap. 5,000 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEM Viscosity 47 Drill Collar Length 314 ft. I.D. 2 1/4 in.  
Weight 9.3 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 1,000 P.P.M. Drill Pipe Length 3189 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number SFTY JT Test Tool Length 27 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 40 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 3/4XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: A FEW BUBBLES ON TOOL OPEN THEN A VERY WEAK INTERMITTENT SB (NO BB)  
2nd Open: NO BLOW (NO BB)

Recovered <u>&lt;1</u> ft. of <u>DM 100%</u>	
Recovered <u>&lt;1</u> ft. of <u>TOTAL FLUID</u>	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>100% DM</u>	Total

Time Set Packer(s) 2:00 P.M. <sup>A.M.</sup> P.M. Time Started Off Bottom 3:15 P.M. <sup>A.M.</sup> P.M. Maximum Temperature 113°F

Initial Hydrostatic Pressure..... (A) 1732 P.S.I.  
Initial Flow Period..... Minutes 15 (B) 14 P.S.I. to (C) 15 P.S.I.  
Initial Closed In Period..... Minutes 30 (D) 18 P.S.I.  
Final Flow Period..... Minutes 10 (E) 14 P.S.I. to (F) 15 P.S.I.  
Final Closed In Period..... Minutes 20 (G) 16 P.S.I.  
Final Hydrostatic Pressure..... (H) 1725 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

## Pressure Survey Report

### General Information

Company Name	L.D. DRILLING, INC.	Job Number	M617
Well Name	GRAU-REED #1	Representative	MIKE COCHRAN
Unique Well ID	DST#2 3530-3570 SIMPSON DOLO-SS	Well Operator	L.D. DRILLING, INC.
Surface Location	SEC.27-6S-13E JACKSON CO.KS.	Report Date	2014/02/23
Field	WILDCAT	Prepared By	MIKE COCHRAN
Well Type	Vertical	Qualified By	GEORGE PETERSEN
		Test Unit	NO. 3

### Test Information

Test Type	CONVENTIONAL		
Formation	DST#2 3530-3570 SIMPSON DOLO-SS		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2014/02/23	Start Test Time	10:05:00
Final Test Date	2014/02/23	Final Test Time	19:00:00
		Well Fluid Type	01 Oil
Gauge Name	0063		
Gauge Serial Number			

### Test Results

Remarks RECOVERED:  
<1' DM 100% MUD  
<1' TOTAL FLUID

TOOL SAMPLE: 100% DM

L.D. DRILLING, INC.  
DST#2 3530-3570 SIMPSON DOLO-SS  
Start Test Date: 2014/02/23  
Final Test Date: 2014/02/23

GRAU-REED #1  
Formation: DST#2 3530-3570 SIMPSON DOLO-SS  
Pool: WILDCAT  
Job Number: M617

# GRAU-REED #1

