



KANSAS CORPORATION COMMISSION 1097697  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
June 2009

Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34357  
Name: Atlas Operating LLC  
Address 1: 15603 Kuykendahl, Ste 200  
Address 2: \_\_\_\_\_  
City: HOUSTON State: TX Zip: 77090 + \_\_\_\_\_  
Contact Person: Zafar Ullah  
Phone: ( 281 ) 893-9400  
CONTRACTOR: License # 5822  
Name: Val Energy, Inc.  
Wellsite Geologist: Sean Deenihan  
Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well     Re-Entry     Workover
- Oil     WSW     SWD     SLOW
- 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

Conv. to GSW

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

Commingled    Permit #: \_\_\_\_\_

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

SWD    Permit #: \_\_\_\_\_

ENHR    Permit #: \_\_\_\_\_

GSW    Permit #: \_\_\_\_\_

<u>12/12/2011</u>	<u>12/21/2011</u>	<u>01/16/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-21776-00-00

Spot Description:  
E2 NW NW NE Sec. 28 Twp. 31 S. R. 8  East  West

330 Feet from  North /  South Line of Section

2200 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Harper  
Lease Name: Sanders-Schmisser Well #: 3

Field Name: Spivey Grabs-Basil  
Producing Formation: Mississippi

Elevation: Ground: 1585 Kelly Bushing: 1595  
Total Depth: 4951 Plug Back Total Depth: 4890  
Amount of Surface Pipe Set and Cemented at: 268 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: 0 ppm Fluid volume: 0 bbls  
Dewatering method used: Evaporated  
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

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: Deanna Garrison Date: 11/05/2012



1097697

Operator Name: Atlas Operating LLC Lease Name: Sanders-Schmisser Well #: 3  
 Sec. 28 Twp. 31 S. R. 8  East  West County: Harper

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: <b>Attached</b>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Datum</th> </tr> </thead> <tbody> <tr> <td>Heebner Shale</td> <td>3396</td> <td>-1801</td> </tr> <tr> <td>Lansing</td> <td>3735</td> <td>-2140</td> </tr> <tr> <td>Cherokee Shale</td> <td>4290</td> <td>-2695</td> </tr> <tr> <td>Mississippi</td> <td>4402</td> <td>-2807</td> </tr> <tr> <td>viola</td> <td>4746</td> <td>-3151</td> </tr> <tr> <td>Simpson</td> <td>4794</td> <td>-3199</td> </tr> </tbody> </table>	Name	Top	Datum	Heebner Shale	3396	-1801	Lansing	3735	-2140	Cherokee Shale	4290	-2695	Mississippi	4402	-2807	viola	4746	-3151	Simpson	4794	-3199
Name	Top	Datum																				
Heebner Shale	3396	-1801																				
Lansing	3735	-2140																				
Cherokee Shale	4290	-2695																				
Mississippi	4402	-2807																				
viola	4746	-3151																				
Simpson	4794	-3199																				

CASING RECORD <input checked="" 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
Surface	12.25	8.625	23	269	A	220	cc-3%; gel 2%
Production	7.875	4.50	10.5	4925	ASC	290	cc- 2% , kol seal 5%

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	-			
	-			

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
4	4403-4409	1000 gals 15 % Ne fe acid	4403-4409

TUBING RECORD:	Size: <u>2.375</u>	Set At: <u>4478</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
----------------	--------------------	---------------------	------------	--

Date of First, Resumed Production, SWD or ENHR. <u>01/27/2012</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____
--	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	13	39	94	3000	

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input checked="" 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>4403-4409</u> <u>Mississippi</u>
--	--	--

Form	ACO1 - Well Completion
Operator	Atlas Operating LLC
Well Name	Sanders-Schmisseur 3
Doc ID	1097697

All Electric Logs Run

DIL
CN-CDL
MEL
CBL



24 S. Lincoln Street  
P.O. Box 31  
Russell, KS 67665-2906

Voice: (817) 548-7282  
Fax: (817) 248-3361

325757  
328788

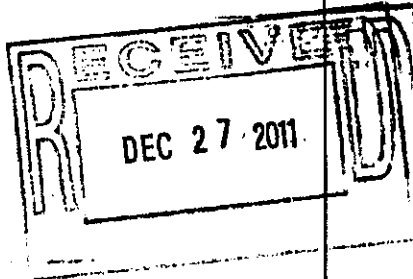
# INVOICE

Invoice Number: 129845  
Invoice Date: Dec 13, 2011  
Page: 1

Atlas Operating  
15603 Kuykendahl Suite #200  
Houston, TX 77080-3655

Atlas	Sanders Schmissour#3	Net 30 Days	
KS1-01	Mediche Lodge	Dec 13, 2011	1/12/12

Quantity	Unit	Description	Rate	Total
220.00	MAT	Class A Common	16.25	3,575.00
3.00	MAT	Gel	21.25	63.75
7.00	MAT	Chloride	58.20	407.40
230.00	SER	Handling	2.25	517.50
35.00	SER	Mileage	25.30	885.50
1.00	SER	Surface	1,125.00	1,125.00
35.00	SER	Heavy Vehicle Mileage	7.00	245.00
35.00	SER	Light Vehicle Mileage	4.00	140.00
1.00	EQP	8 5/8 Wooden Plug	92.00	92.00
1.00	EQUIP OPER	Matt Thimesch		
1.00	EQUIP OPER	Jason Thimesch		
1.00	EQUIP OPER	Adam Miller		



**ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF**

**ONLY IF PAID ON OR BEFORE**

Subtotal	7,051.15
Sales Tax	260.70
Total Invoice Amount	7,311.85
Payment/Credit Applied	
<b>TOTAL</b>	<b>7,311.85</b>





# INVOICE

Invoice Number: 129723

Invoice Date: Dec 22, 2011

Page: 1

24 S. Lincoln Street  
P.O. Box 31  
Russell, KS 67865-2906

Voice: (817) 546-7282

Fax: (817) 246-3361

328918  
328919

Atlas Operating  
15603 Krykendahl Suite #200  
Houston, TX 77090-3665

Atlas	Sanders Schmissour 3	Net 30 Days	
KS1-02	Medicine Lodge	Dec 22, 2011	1/21/12

30.00	MAT	Class A Common	16.25	487.50
20.00	MAT	Pozmix	8.50	170.00
2.00	MAT	Gel	21.25	42.50
290.00	MAT	ASC	19.00	5,510.00
1,450.00	MAT	KolSeal	0.89	1,290.50
8.00	MAT	Salt Flush	12.00	96.00
8.00	MAT	Cla-Pro	31.25	250.00
400.00	SER	Handling	2.25	900.00
35.00	SER	Mileage	44.00	1,540.00
1.00	SER	Production	2,405.00	2,405.00
35.00	SER	Heavy Vehicle Mileage	7.00	245.00
1.00	SER	Manifold Head Rental	200.00	200.00
35.00	SER	Light Vehicle Mileage	4.00	140.00
1.00	EQP	4 1/2 Reg Guide Shoe	192.00	192.00
1.00	EQP	4 1/2 AFU Insert	157.00	157.00
10.00	EQP	4 1/2 Centralizers	48.00	480.00
1.00	EQP	4 1/2 Rubber Plug	71.00	71.00
1.00	EQUIP OPER	Matt Thimesch		
1.00	EQUIP OPER	Jason Thimesch		
1.00	EQUIP OPER	Adam Miller		

Subtotal	14,176.50
Sales Tax	551.03
Total Invoice Amount	14,727.53
Payment/Credit Applied	
<b>TOTAL</b>	<b>14,727.53</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF



ONLY IF PAID ON OR BEFORE



# ALLIED CEMENTING CO., LLC. 037987

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665.

SERVICE POINT:  
*Adelbert*

DATE <i>12-22-11</i>	SEC <i>2-8</i>	TWP <i>3-15</i>	RANGE <i>8-2</i>	CALLED OUT	ON LOCATION	JOB START <i>12:00 am</i>	JOB FINISH <i>1:30 am</i>
LEASE <i>Edgar</i>		WELL # <i>3</i>		LOCATION <i>Atlas #11 to 130th st.</i>		COUNTY <i>Atchison</i>	STATE <i>MO</i>
OLD OR NEW (Circle one)				<i>2 E, 1 South, W. into</i>			

CONTRACTOR *WJ #5*

TYPE OF JOB *completion*

HOLE SIZE *5 7/8" T.D. 490'*

CASING SIZE *4 1/2" DEPTH 49.3'*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

FRES. MAX MINIMUM

MEAS. LINE SHOES JOINT *44'*

CEMENT LEFT IN CSG. *44'*

PERFS.

DISPLACEMENT *7 1/2" 666 2 1/4" 1111*

OWNER *Atlas operations*

CEMENT

AMOUNT ORDERED *5 sac 60:40: 4' each*  
*270 sac + 2 sac + 15' 1/2" 160' + 2 1/2" 160'*  
*10 gal. Edgar 8x soft.*

COMMON	<i>.30</i> sac	● <i>16.25</i>	<i>487.50</i>
POZMIX	<i>.20</i> sac	● <i>8.50</i>	<i>170.00</i>
GEL	<i>.2</i> sac	● <i>21.25</i>	<i>42.50</i>
CHLORIDE		●	
ASC	<i>20</i> sac	● <i>17.00</i>	<i>340.00</i>
<i>Kalscal</i>	<i>1450</i> gal	● <i>.89</i>	<i>1290.50</i>
<i>soft flush</i>	<i>8</i> gal	● <i>12.00</i>	<i>96.00</i>
<i>Clayco</i>	<i>8</i> Gal	● <i>31.25</i>	<i>250.00</i>
HANDLING	<i>400</i>	● <i>2.25</i>	<i>900.00</i>
MILEAGE	<i>211/400/35</i>		<i>1540.00</i>
TOTAL			<i>10,286.50</i>

EQUIPMENT

PUMP TRUCK CEMENTER *WJ #5*

# *709265* HELPER *Jim Smith*

BULK TRUCK

# *563200* DRIVER *Edgar*

BULK TRUCK

# DRIVER

REMARKS:

*at site pump to 4' through*

*all and pump 200' for 4' hole*

*all and pump 20' to 4' for cement*

*all and pump 800' for 4' hole*

*all and pump 800' for 4' hole*

*high pump + low cement*

*depth 8 1/2" 666 1 1/2" at 4' hole*

*low pump at 7 1/2" 666*

*1200' to 1700'*

*no hole*

CHARGE TO: *Atlas operations*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To Allied Cementing Co., LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME *Bob Younce*

SIGNATURE *Bob Younce*

SERVICE

DEPTH OF JOB	<i>49.3'</i>		
PUMP TRUCK CHARGE		● <i>2405.00</i>	
EXTRA FOOTAGE		●	
MILEAGE	<i>.25</i>	● <i>7.00</i>	<i>245.00</i>
MANIFOLD		●	<i>200.00</i>
<i>light vehicle</i>	<i>35</i>	● <i>4.00</i>	<i>140.00</i>
TOTAL			<i>2990.00</i>

*4 1/2" PLUG & FLOAT EQUIPMENT*

<i>1- 40' grade shoe</i>	●	<i>192-</i>
<i>1- 40' part</i>	●	<i>157-</i>
<i>10- control 2003</i>	●	<i>48-</i>
<i>1- 40' shoe</i>	●	<i>91-</i>
TOTAL		<i>900-</i>

SALES TAX (if Any) \_\_\_\_\_

TOTAL CHARGES *\$14,176.50*

DISCOUNT *20%* IF PAID IN 30 DAYS

*net \$11,341.20*

# Sean Deenihan

## Petroleum Geologist

15-077-21776

15-077-21776

### GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY Atlas Operating LLC  
 LEASE Sanders-Schmisser #3  
 FIELD Spivey- Grabs-Basil  
 LOCATION 330' FNL & 2200' FFL  
 SEC 28 TWSP 31 SRGE 8W  
 COUNTY Harper STATE Kansas  
 CONTRACTOR Val Rig #5  
 SPUD 12/12/11 COMP 12/21/11  
 RTD 4950' LTD 4951'  
 MUD UP 3295' TYPE MUD Chemical

#### ELEVATIONS

KB 1595'  
 DF \_\_\_\_\_  
 GL 1585'

Measurements Are All  
From Kelly Bushing

#### CASING

CONDUCTOR \_\_\_\_\_  
 SURFACE 8-5/8" @ 260'  
 PRODUCTION 4.5"

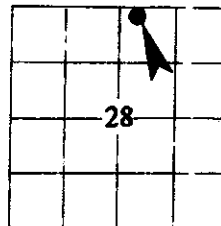
#### ELECTRICAL SURVEYS

CND DIL  
 MICRO  
 Superior

SAMPLES SAVED FROM 3700' TO RTD  
 DRILLING TIME KEPT FROM 3700' TO RTD  
 SAMPLES EXAMINED FROM 3700' TO RTD  
 GEOLOGICAL SUPERVISION FROM 3800'  
 REFERENCE WELL Sanders-Schmisser #2

Formation	Sample Tops	E-log Tops	Struct Pos.
Heebner Shale		3396 (-1801)	
Lansing	3740 (-2145)	3735 (-2140)	
Stark Sh.	4062 (-2467)	4062 (-2467)	
Cherokee Sh.	4290 (-2695)	4290 (-2695)	
Mississippi	4402 (-2807)	4402 (-2807)	
Viola	4748 (-3153)	4746 (-3151)	
Simpson Sd	4798 (-3203)	4794 (-3199)	
Simpson Sh	4870 (-3275)	4869 (-3274)	

Atlas - Green #8

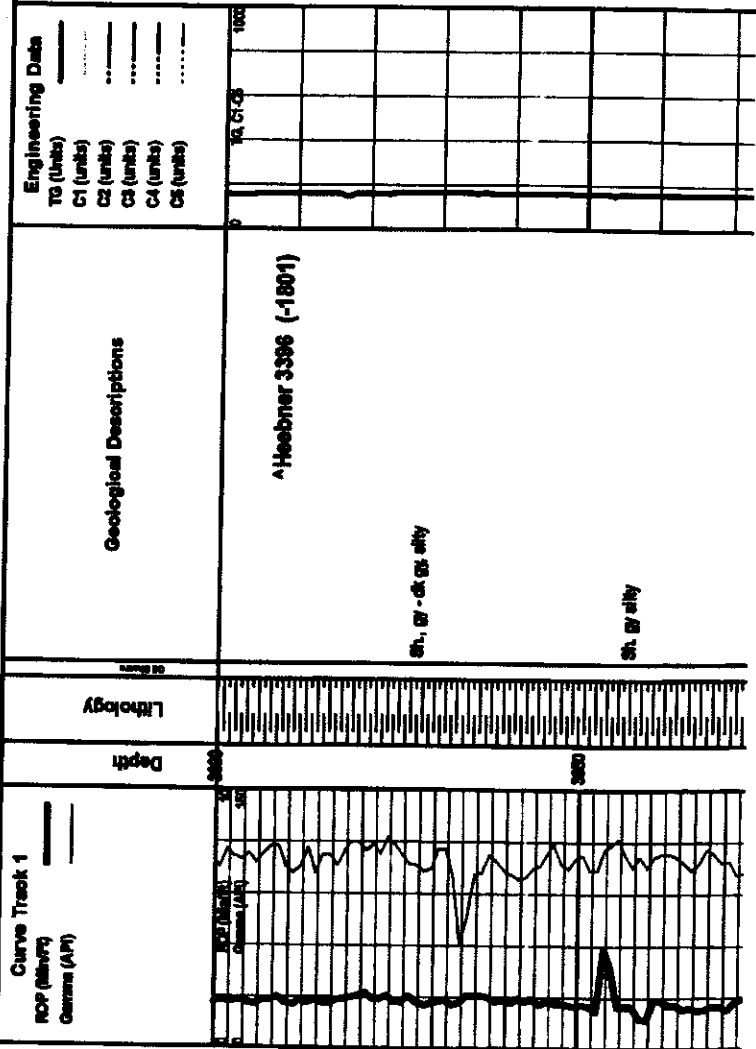


REMARKS The Sanders Schmisser #3 will be further evaluated through casing based on sample and log analysis.

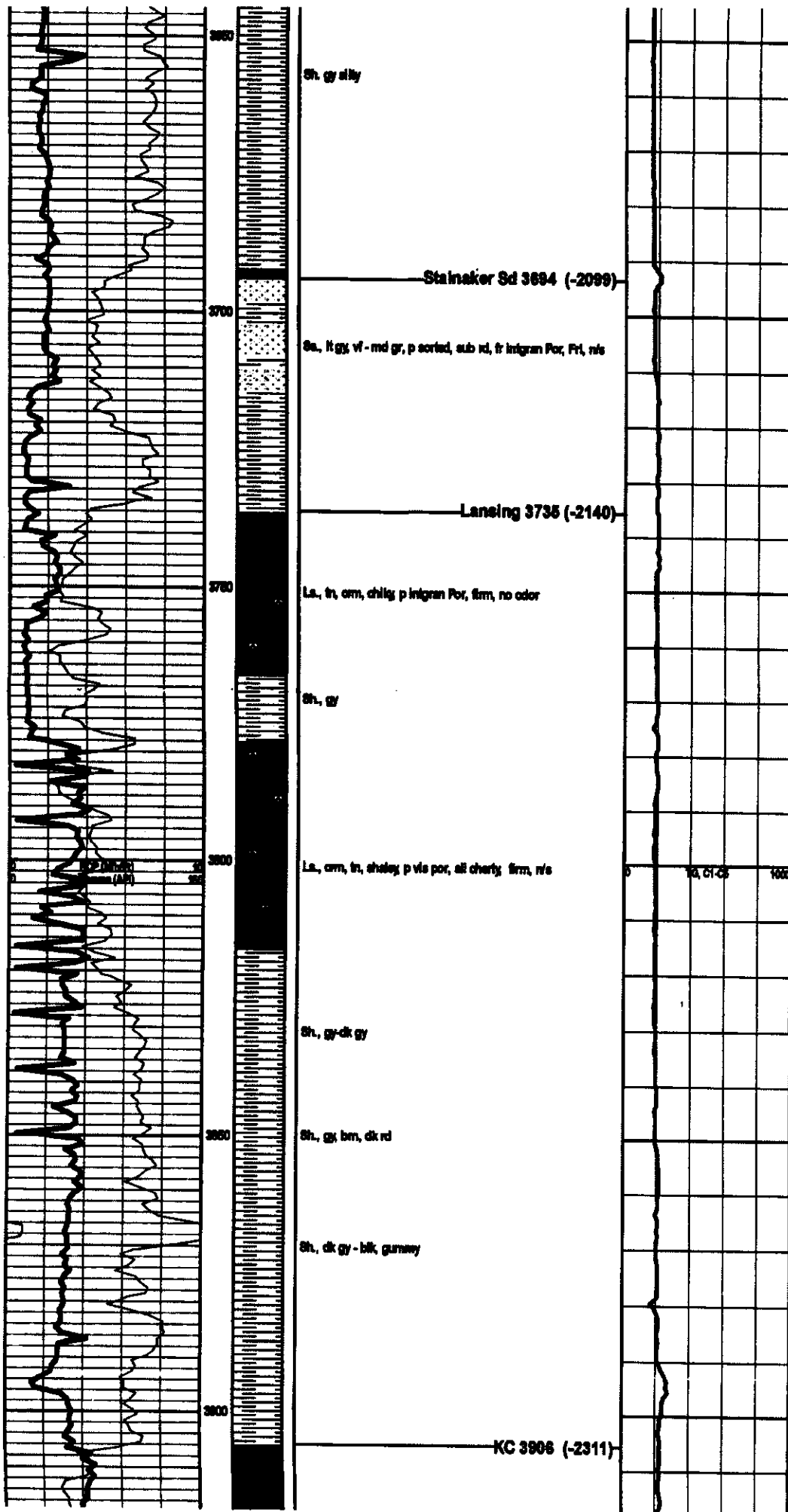
Respectfully Submitted,

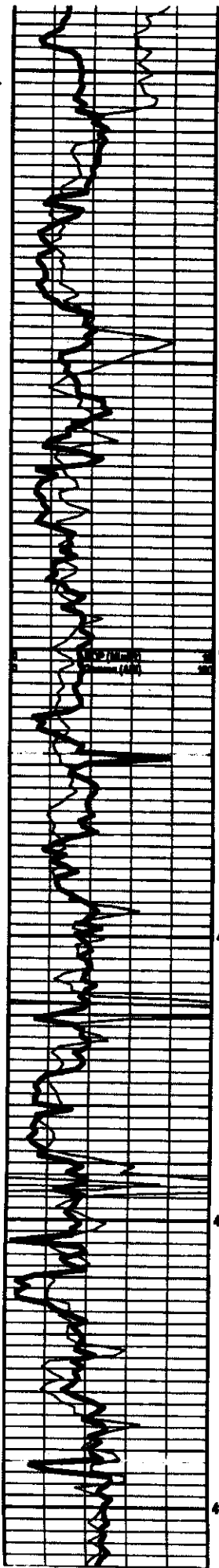
Sean Deenihan

15-077-21776









KC 3906 (-2311)

Sh, gy

Sh, gy

Dol, f xln, p intrin Por, fl, n/s

La., orn, vf gr, NVP, hd, n/s

La., orn, vf gr, p vis Por, chily, n/s

La., orn, tn, vf gr, p intran Por, fca frage- Pus, firm, n/s

Chl, gy, fresh, sharp spic, fca frage, hd

La., wh, orn, vf gr, chily, p vis Por, fl, no odor

La., wh, tn, xf gr, p Por, lnc, gy chert, firm

Stark Sh. 4062 (-2467)

Sh, blk

La., orn, vf gr, fca, p-fr intran por, shaley, fl, n/s

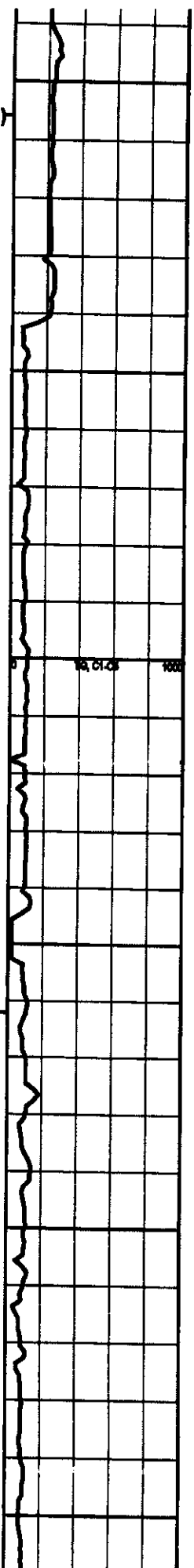
La., orn, fl brn, firm-hd, p vis por, ooc fca, n/s

La., orn, hd, vf gr, chily IP, sme ady, ooc Por, n/s

La., orn, vf gr, p intran por, firm, n/s

Sh, gy-dk gy brn

Sh, gy, tn, brn





4100 Sh, gr, bn, brn

Sh, dk gy

La, bn, brn, shaly; p vis por

4200 Sh, blk

La, orn, vf gr, fos, dolc, p vis Por, n/s

4250 La, orn, vf gr, p vis por, firm-hd, lnc. wh-gy Chl, fresh

La, wh, orn, vf gr, p intrgran por, abd rd/bn Sh, n/s

La, orn, vf gr, p vis Por, firm, n/s

Sh, blk

4300 Abd Sh, sd, brn, gy

Sh, blk

La, orn, Ool, MVP, brittle, n/s

4350 La, orn, f gr, p vis Por, hd, n/s

Sa, wh, vf gr, ab rd, well arid, well conrad p intrgran Por, barren, gassy?, no odr

Sh, vario

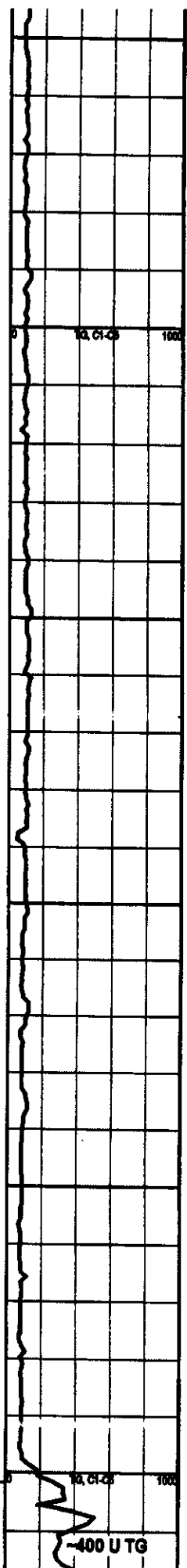
Sa, cl, wh, vf gr, abrd, mod arid, fr intrgran por, sh show live lt brn oil, lt odor, fluor

Sh, vario

4400 **Mississippi 4402 (-2806)**

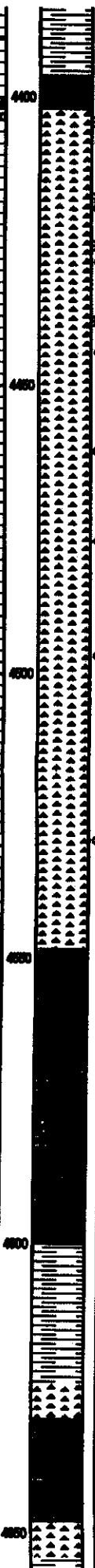
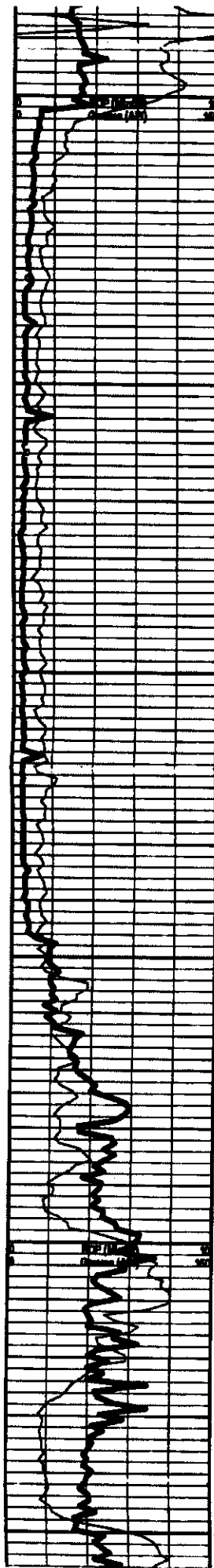
Chl, cl, wh, abd spic, gd-ano por, Trip, rapid gas bubble, FBFO - lt brn, mod odr, gd fluor

Chl (Tripartite), wh, gd-ano vug/trip Por, spic, wh-firm, sat w/ lt

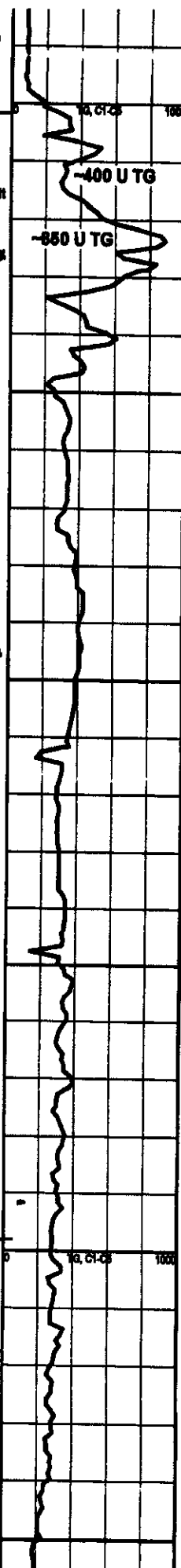


Mud 4280'  
vis 47  
wt 9.3#  
LCM 3#

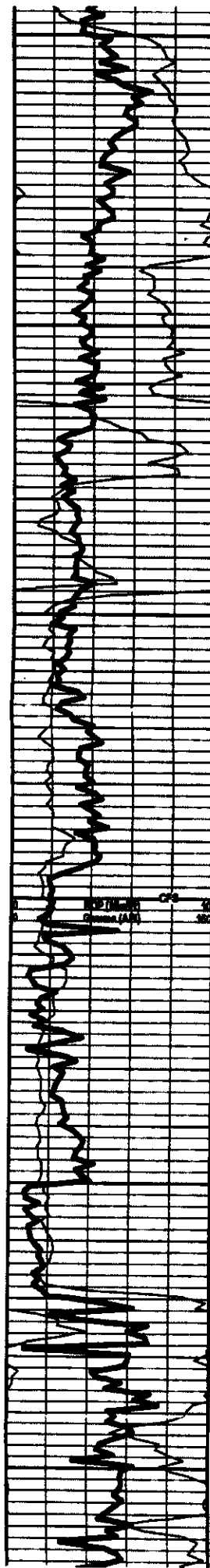
-400 U TG



Sh., ol, wh, v gr, abnd, mod arid, fr Ingran por, oil show live  
 It brn oil, st odor, fluor  
 Sh., varic  
**Mississippi 4402 (-2806)**  
 Chl., ol, wh, abnd spic, gd-ano por, Trip, rapid gas bubble,  
 FOF - It brn, mod odr, gd fluor  
 Chl. (Tripolit), wh, gd-ano vug/trip Por, spic, whi-firm, sat w/ It  
 brn Oil, gassy GFO, gd odr, gd bright fluor  
 Chl., wh-in, ano vug/foe east Por, trip, spic IP, firm-hd, oil chily,  
 good oil bleed, abd It brn Oil floating in tray, ano dk brn-blt  
 tarry oil, v gd odr, gd fluor  
 Chl., a.a  
 Chl., bright wh, most w/ gd trip Por, rr all-weathered/fresh,  
 Blm of mod brn tarry oil on sample cup, pred gd slow oil  
 bleed, ano w/ p O show upon crush, firm, dec. fluor  
 Chl., wh, trip, v gd Por  
 Chl., a.a, dec. spic, inc. diatoms, gd Moldic Por, abd slow oil  
 bleed, gd odr, gd fluor  
 Chl., wh, weathered-trip, drk brn - tarry/taky oil, rr gas bubble,  
 inc barren Por, dec. Sh., wk fluor  
 Chl., a.a  
 Tripolit, bright white, dec showrain, gassy odor, wk fluor  
 Ls., om, in, v gr, chily, NFO  
 Ls., om, gy, f gr, shaley, n/s  
 Ls., tr, v, gr, NVP hd,  
**Kinderhook 4598 (-3003)**  
 Sh., varic, hd  
 Sh., a.a  
 Ls., wh-om, v gr, P via Por, v hd n/s



Mud 4560'  
 vis 64  
 wt 9.2#  
 LCM 5#



Sh., aa

Sh., vario, silty r. Sa., gy, v. f. gr. p. Intragran Por, firm, n/s

La., orn, v. f. gr. NVP hd, acaly

Sh., gr, gm, bn

Sh., blk

Sh., gm, gy, firm

Sh., vario, firm, cong

**Viola 4750 (-3154)**

Dol., gy, v. f. xln, fr. Intra por, no show

Dol., wh, gy, v. f. xln, p. v. ug por, firm, Pyr, n/s

Dol., gy, p. via Por, n/s

**Simpson Sd 4794 (-3199)**

Sa., gy, cr, v. f. gr. p. Intragran Por, dirty IP, glauc, some bn sh, no odor, no fluor, no cut, no sh.

Sa., cr, sh, v. f. gr, ab ang, well sorted, well cemented, dirty, no show.

La., orn, gy, v. f. gr, p. Intragran Por, acaly, hd

Sh., vario

Sa., cr, gm, v. f. gr, Pyr IP, sh, dirty, n/s

Sa., cr, wh, v. f. gr, p. Intragran Por, mod eroded, ab rd, no odor, n/s

**Simpson Sh 4870 (-3275)**

Sh., gy-ck gy, mottled, pyr, n/s

Sh., gm, gy, purp, fis, n/s

