



# MID CONTINENT WELL LOGGING SERVICE, INC.

CONTINUOUS WELL LOGGING / COMPLETE HYDROCARBON ANALYSIS

2222 WESTPARK DR. STE. A  
NORMAN, OK 73069  
OFFICE (405) 360-7333  
OPERATIONS (405) 590-3655  
SALES (405) 203-9989

Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: ANN 3404 2-21H Sandridge Energy  
Location: SUMNER COUNTY, KANSAS  
License Number: 15-191-21502-00-00 Region: 4w  
Spud Date: 10/29/2013 Drilling Completed: n/a  
Surface Coordinates: 200' FSL & 700' FWL OF SECTION 21-T34S-R4W  
Bottom Hole Coordinates: 330' FNL & 1,980' FWL OF SECTION 21-T34S-R4W  
Ground Elevation (ft): 1201 K.B. Elevation (ft): 1219  
Logged Interval (ft): 2900 To: 8461 Total Depth (ft): 8461  
Formation: MISS  
Type of Drilling Fluid: MUD

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

Company: Sandridge Energy, INC.  
Address: 123 Robert S. Kerr Avenue, Ste. 2430  
Oklahoma City, Oklahoma 73102-6406

## GEOLOGIST

Name: Tammy Alcorn  
Company: Sandridge Energy, Inc  
Address: 123 Robert S. Kerr Avenue, Ste. 2430  
Oklahoma City, Oklahoma 73102-6406




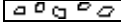
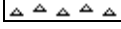
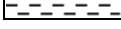







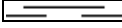
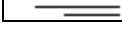
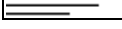


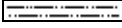
## Cores

## DSTs

## Comments




















**Directional Company: Archer**  
**Mud Loggers: Andrew Yates And Steve Fulton**











## ROCK TYPES

 Sndylm  Anhy  Bent  Brec  Cht  Clyst	 Coal  Congl  Dol  Gyp  Igne  Lmst	 Meta  Mrlst  Salt  Shale  Shcol  Shgy	 Ss  Till  Hotsh  Sltst
--	---	---	--









## ACCESSORIES

### MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl

	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff

### FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral












	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom

### STRINGER

	Anhy
	Arg
	Bent
	Coal
	Dol










	Gyp
	Ls
	Mrst
	Ssstrg
	Sltstrg




### TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

## OTHER SYMBOLS

### POROSITY





	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy
	New symbol

	New symbol
	Sndylm
	New symbol

### SORTING

	Well
	Moderate
	Poor

### ROUNDING

	Rounded
	Subrnd
	Subang
	Angular

### OIL SHOW

	Even
	Spotted
	Ques

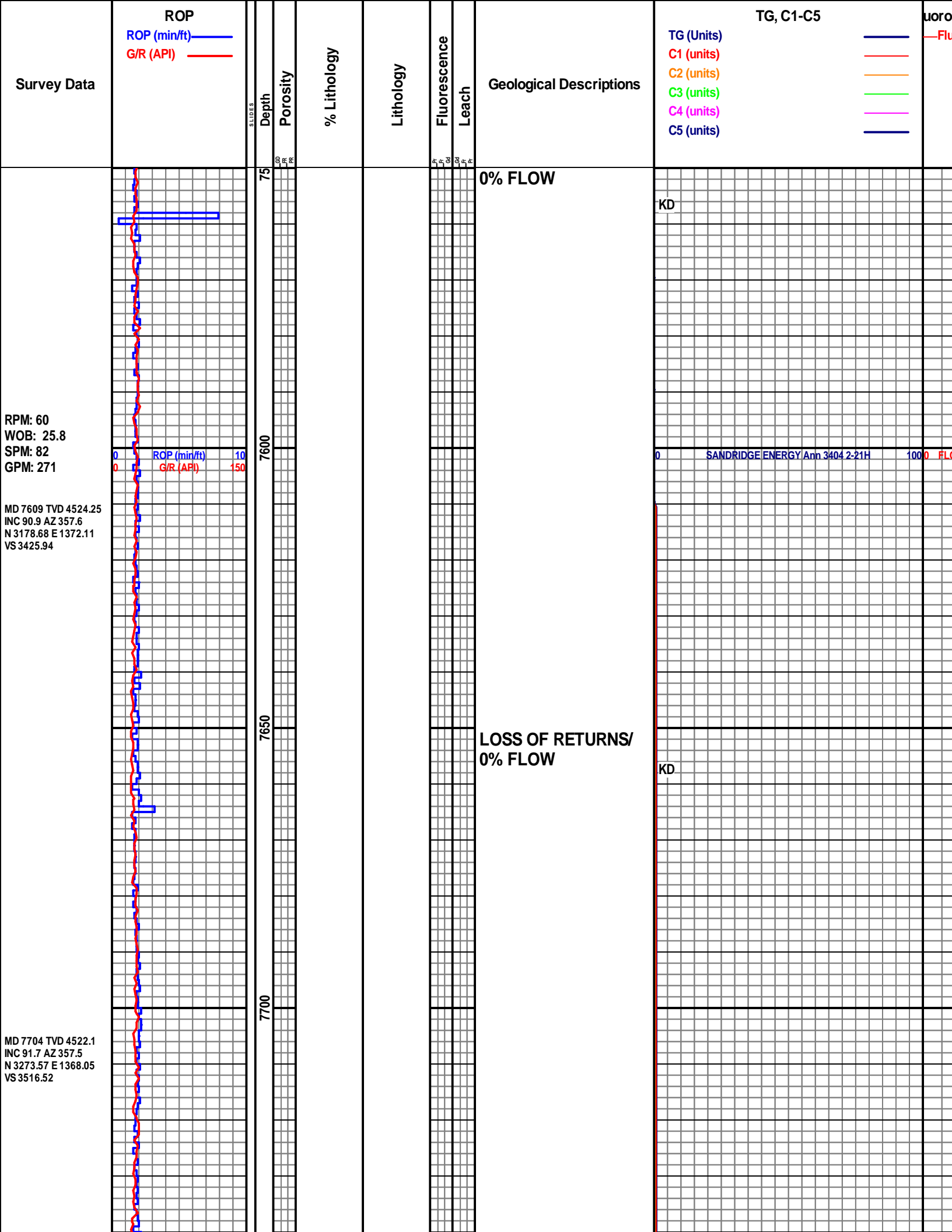
	Dead
---	------

### INTERVAL

	Core
	Dst

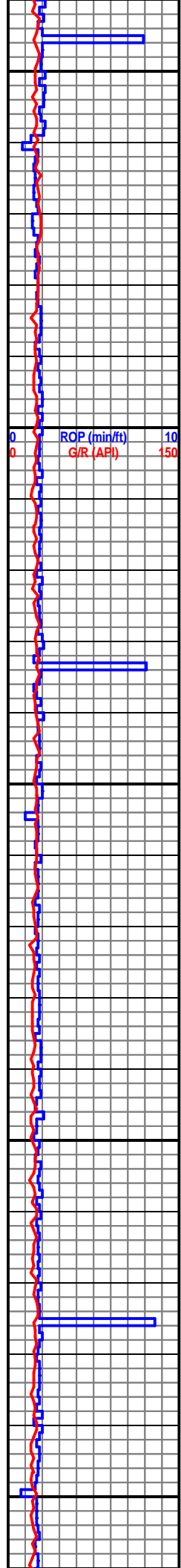
### EVENT

	Rft
	Sidewall



RPM: 60  
WOB: 33.2  
SPM: 80  
GPM: 265

MD 7798 TVD 4519.31  
INC 91.7 AZ 357.5  
N 3367.44 E 1363.95  
VS 3606.1

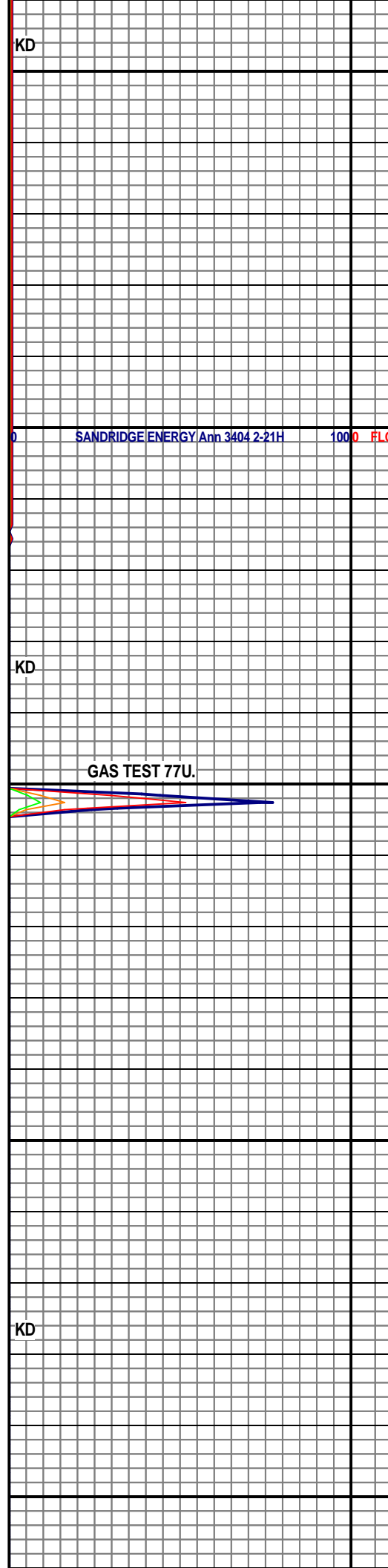


7750  
7800  
7850  
7900  
7950

LOSS OF RETURNS/  
0% FLOW

LOSS OF RETURNS/  
0% FLOW

LOSS OF RETURNS/  
0% FLOW



KD  
KD  
KD

SANDRIDGE ENERGY Ann 3404 2-21H 1000 FL

GAS TEST 77U.

MD 7892 TVD 4516.6  
INC 91.6 AZ 357.3  
N 3461.3 E 1359.69  
VS 3695.64

MD 7987 TVD 4513.7  
INC 91.9 AZ 358.1  
N 3556.18 E 1355.88  
VS 3786.27

RPM: 64  
WOB: 32.6  
SPM: 79  
GPM: 262

RQP (min/ft) 10  
G/R (API) 150

8000

SANDRIDGE ENERGY/Ann 3404 2-21H 100.0 FL

MW: 9.10  
FV: 27  
PV: 1  
YP: 1  
GEL: 1/1  
API: 60.0  
CAKE: 1/32  
SOL: 5.6  
OIL/WAT: 0.0/94.4  
SAND: .1  
PH: 9.0  
M/A: 0  
FA: /  
CHL: 66000  
Hard: 2000  
SW LUBE: 4

KD

LOSS OF RETURNS/  
0% FLOW

MD 8080 TVD 4510.62  
INC 91.9 AZ 358.3  
N 3649.09 E 1352.96  
VS 3875.23

8050

KD

LOSS OF RETURNS/  
0% FLOW

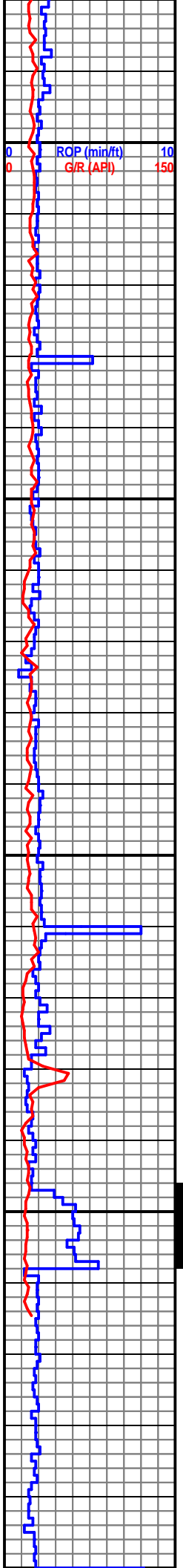
8100

8150

MD 8175 TVD 4508.71  
INC 90.4 AZ 358.1

N 3744.02 E 1349.97  
VS 3966.13

RPM: 65  
WOB: 37.4  
SPM: 77  
GPM: 260



8200

8250

8300

8350

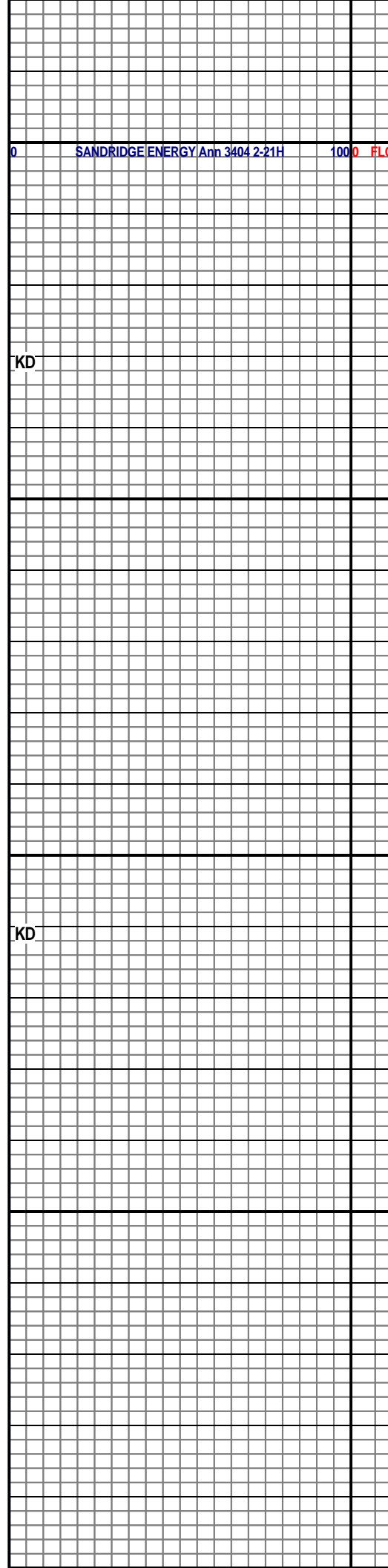
8400

MD 8269 TVD 4508.63  
INC 89.7 AZ 357.2  
N 3837.94 E 1346.12  
VS 4055.83

MD 8365 TVD 4505.03  
INC 94.6 AZ 357.3  
N 3933.73 E 1341.52  
VS 4147.14

LOSS OF RETURNS/  
0% FLOW

LOSS OF RETURNS/  
0% FLOW



KD

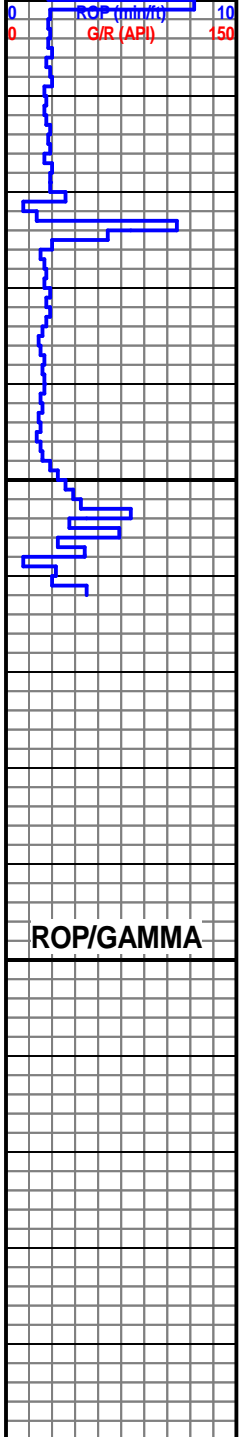
KD

SANDRIDGE ENERGY Ann 3404 2-21H

100 0 FL

RPM:61  
WOB: 34  
SPM: 78  
GPM:260

11/20/2013  
8,430'



ROP/GAMMA

LOSS OF RETURNS/  
0% FLOW

T.O.O.H @8,461' FOR  
NEW BIT #9 6.125,  
BAKER, STX44CDX2,  
5231062, 3X16S

SANDRIDGE ENERGY  
INC.  
Ann 2-21H  
SEC. 21-T34S-R4W  
Sumner CO.

GL: 1,201' KB: 1,219'

RELEASED DUE TO  
NO RETURNS ON  
11/20/2013

(KD SANDRIDGE ENERGY Ann 3404 2-21H 100.0 FL

MW: 9.20  
FV: 27  
PV: 1  
YP: 1  
GEL: 1/1  
API: 60.0  
CAKE: 1/32  
SOL: 6.3  
OIL/WAT: 0.0/93.7  
SAND: .1  
PH: 9.0  
M/A:  
FA: /  
CHL: 70000  
Hard: 2000  
SW LUBE: 4

@ 8,461' RELEASED DUE  
TO NO RETURNS

GAS