

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

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
--	---

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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Deutsch, Kent A. dba Deutsch Oil Company
Well Name	MARDIS 5-26
Doc ID	1519861

All Electric Logs Run

Micro
Frac Finder
Dual Induction
Comp. Neutron Density



Geologic Report  
**Aaron L. Young**

Drilling Time and Sample Log

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

**Well Name:** Mardis #5-26  
**API:** 15-151-22510  
**Location:** Section 26 - T26S - R12W  
**License Number:** 3180  
**Spud Date:** 12 / 19 / 2019  
**Surface Coordinates:** 1040' FSL and 2190' FEL  
Approx. NW - SW - SE  
**Region:** Pratt Co., KS  
**Drilling Completed:** 01 / 09 / 2020

**Bottom Hole  
Coordinates:**  
**Ground Elevation (ft):** 1858'      **K.B. Elevation (ft):** 1865'  
**Logged Interval (ft):** 3250'      **To:** 4286'      **Total Depth (ft):** 4286'  
**Formation:** Mississippi  
**Type of Drilling Fluid:** Mud-Co

Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

**Company:** Deutsch Oil Company  
**Address:** 8100 E 22nd St N, Bldg 600  
Wichita, KS 67226

**GEOLOGIST**

**Name:** Aaron L. Young, M. S.  
**Company:** Young Consulting LLC  
**Address:** 100 S Main Ste 505  
Wichita, KS 67202

**General Info**

**CONTRACTOR:** Pickrell Drilling, Rig #10

**BIT RECORD:**

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	RR	15-15-15	306'	306'	5.5
2	7-7/8	JZ HA20C	14-14-16	4286'	3980'	114.5

**Surveys:** 306'-.75, 1197'-1, 4286'-1

**GENERAL DRILLING AND PUMP INFORMATION:**

Drilling with 32,000 -36,000 lbs. on bit and approx 65-70 RPM.

















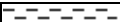
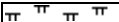








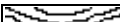



Running 7.5 stands of collars; 448.39'

Pumping approx 575 psi at standpipe @ 55 SPM

## Daily Status

- 11-12-19 Stake well and elevation. GL: 1858 ft. KB: 1865 ft.
- 12-12-19 Intent To Drill with Kansas Corporation Commission approved. API# 15-151-22510-00-00.
- 12-12-19 Level location.
- 12-13-19 Dig pits and prepare location.
- 12-14-19 Finish location.
- 12-16-19 Postponed rig move due to snow.
- 12-19-19 Move in Pickrell Drilling Rig #10. Spud well at 2:30 pm. Drilled 12 1/4" surface hole to 306 ft. Ran 7 jts. of new 8 5/8" 23# surface casing. Set at 306 ft. Cemented with 375 sx. Common, 2% gel, 3% cc. Cement circulated. Plug down at 11:00 pm. (12-19-19).  
Quality ticket #7301. WOC.
- 12-20-19 Shut Down rig for holidays.
- 01-02-20 Preparing to resume drilling. Resume drilling at 10:00 am.
- 01-03-20 1284 ft. at 7:00 am and circulating. Lost circulation at 642 ft. Drilled to 1284 ft. with partial returns. Will squeeze loss of circulation zone. Spotted 250 sx. common cement, 4% cc., 10# gilsonite/sx. Waited 5 hours for cement to set up. Run in hole, hit cement at 610 ft. drilled 30 ft. cement and had full returns. Go back to drilling.
- 01-04-20 1665 ft. at 6:00 am and circulating. Lost circulation again. Will squeeze again. Spot 250 sx. common cement, 4% cc, 10# gilsonite/sx at 500 ft. Waited 6 hours for cement to to set up. Ran in hole Hit cement at 520 ft. Drilled out cement, had full returns.
- 01-05-20 1828 ft. at 7:00 am and drilling ahead.
- 01-06-20 2459 ft. at 7:00 am and drilling ahead.
- 01-07-20 3046 ft. at 7:00 am and drilling ahead.
- 01-08-20 3704 ft. at 7:00 am and drilling ahead. Lost 70 bbls. circulation at 3970 ft., but got it back.
- 01-09-20 4124 ft. at 7:00 am and drilling ahead.
- 01-10-20 RTD: 4286 ft. Ran E-Logs: LTD: 4284 ft. Circulating preparing to run production casing. Run 103 jts. of used 5 1/2" 17#, K-55 casing. Set at 4274.78 ft. Circulate 1 1/2 hrs., good Circulation. Thin mud w/Desco. Run 8 centralizers and 1 basket. Quality Well Service and Cementing, pumped 30 sx. to plug rathole. Cement production casing with 170 sx. Pro C, 2% GEL, 10% SALT, 6% C16A, .25% C41P, 5#/SX. Kolseal. CLR 28, 500 gal. mud flush spacer 10 bbl. fresh water. Mix at 14.8 pump at 6 BPM. Good circulation. 600# lift pressure. Displace with 99.5 bbls. 2% KCL. Plug down at 6:55 pm. (01-10-20) WITH 1500#. Plug held. Set slips. Release rig.

## ROCK TYPES

	Anhy		Gyp		Shgy		Sandylms
	Bent		Igne		Slstst		Shale
	Brec		Lmst		Ss		Slststn
	Cht		Meta		Till		Shlyslts
	Clyst		Mrlst		Carb sh		Sltysh
	Coal		Salt		Dol		Lms
	Congl		Shale		Dtd		
	Dol		Shcol		Gry sh		

### 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
- Chlorite
- Dol
- Sand
- Silty

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram



- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh



- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

#### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

### OTHER SYMBOLS

#### POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

#### SORTING

- Well
- Moderate
- Poor

#### ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

#### OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

#### INTERVALS

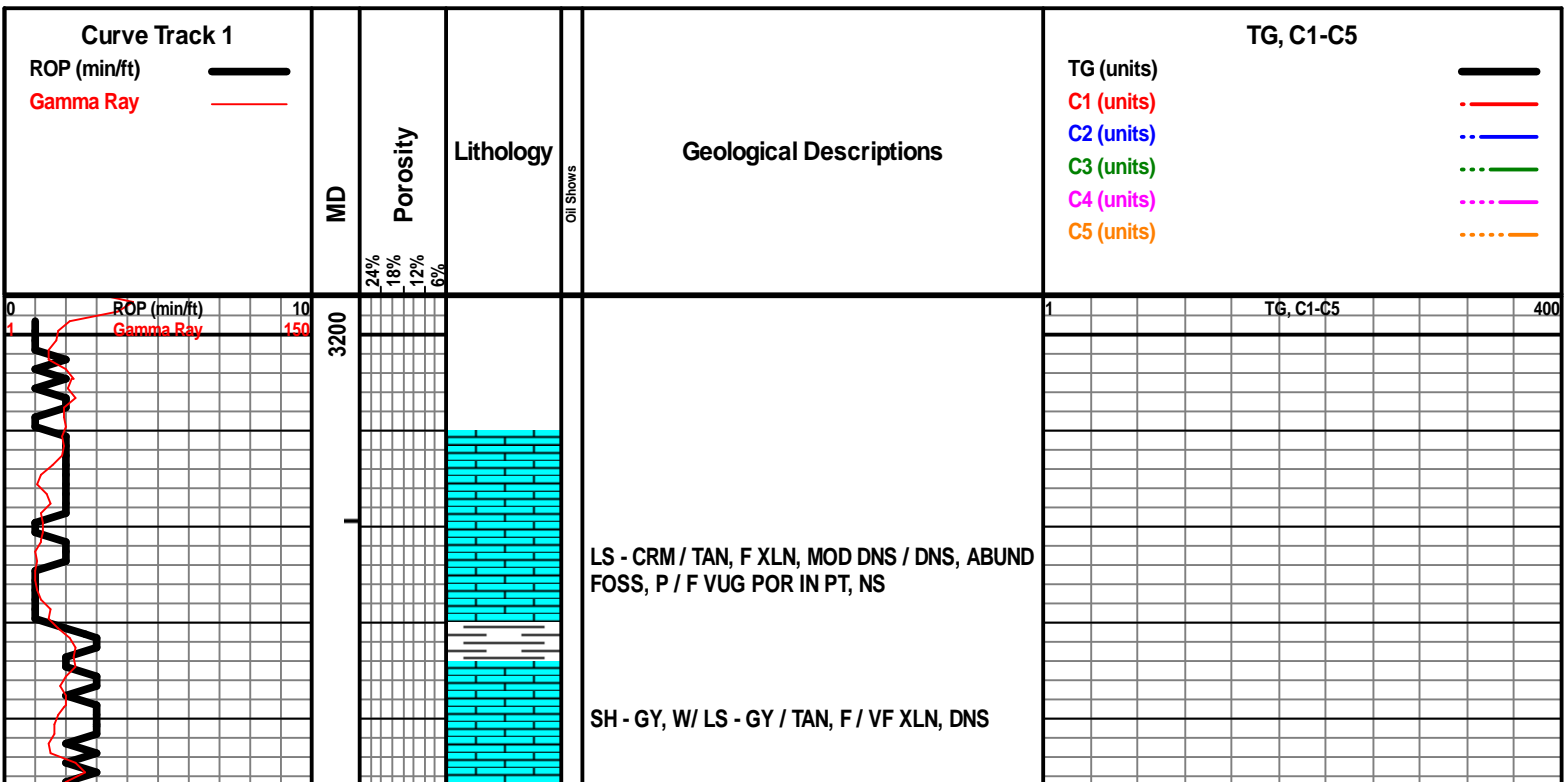
- Core
- Dst

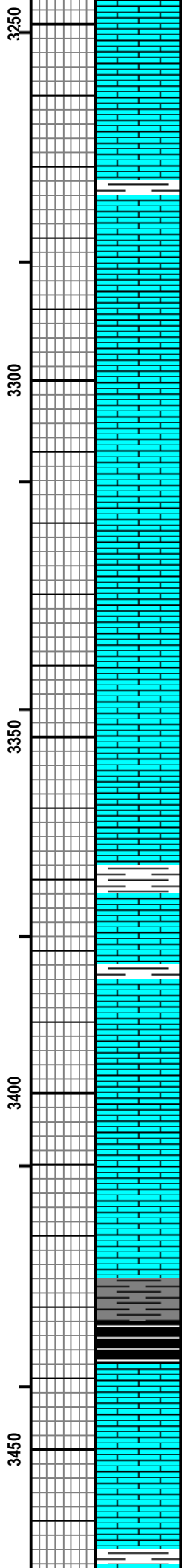
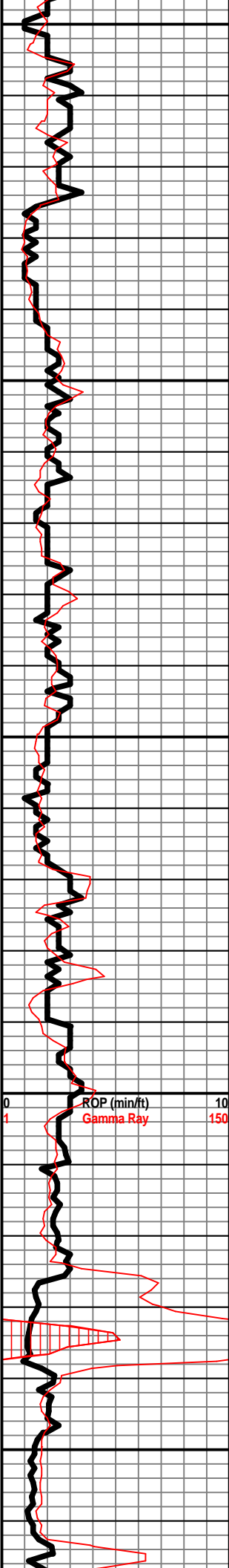


Dst

#### EVENTS

- Rft
- Sidewall
- Conn





LS - CRM / TAN / GY / WHT IN PT, VF / F XLN, MOD DNS / SUBCHY / CHKY IN PT, FOSS IN PT, STYLOLITIZED IN PT

LS - TAN / GY / CRM IN PT, F XLN, MOD DNS, ABUND FOSS

LS - CRM / TAN, F / VF XLN, MOD DNS / SUBCHKY, FOSS IN PT, W/ SH - GY / GRN IN PT

LS - CRM / WHT, F / VF XLN, MOD DNS / SUBCHKY / CHKY IN PT, FOSS IN PT

LS - CRM / TAN, F XLN, FOSS

LS - CRM, VF / F XLN, SUBCHKY / MOD DNS, FOSS IN PT

LS - CRM / WHT, VF / F XLN, MOD DNS / SUBCHKY / CHKY IN PT

LS - CRM / TAN, F XLN, MOD DNS, FOSS

LS - CRM / WHT, VF XLN, SUBCHKY / CHKY

SH - DK GY, W/ LS - CRM / TAN / GY, F XLN, MOD DNS / DNS, FOSS IN PT

LS - CRM / TAN, F / VF XLN, MOD DNS, FOSS IN PT

LS - CRM / TAN, VF XLN, SUBCHKY / CHKY

LS - CRM / TAN, VF / F XLN, MOD DNS, FOSS

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD DNS, FOSS

LS - TAN / GY, F XLN, MOD DNS, FOSS IN PT, W/ SH - DK GY

SH -BLK, CARB, G SHO GAS BUB

LS - TAN / CRM / WHT IN PT, F / VF XLN, MOD DNS / SUBCHKY / CHKY IN PT, FOSS IN PT

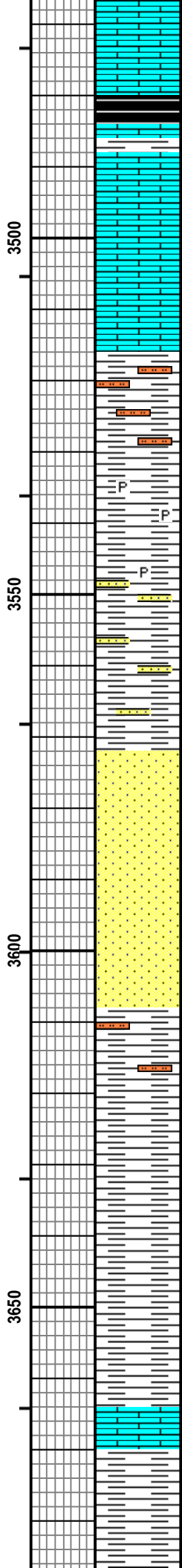
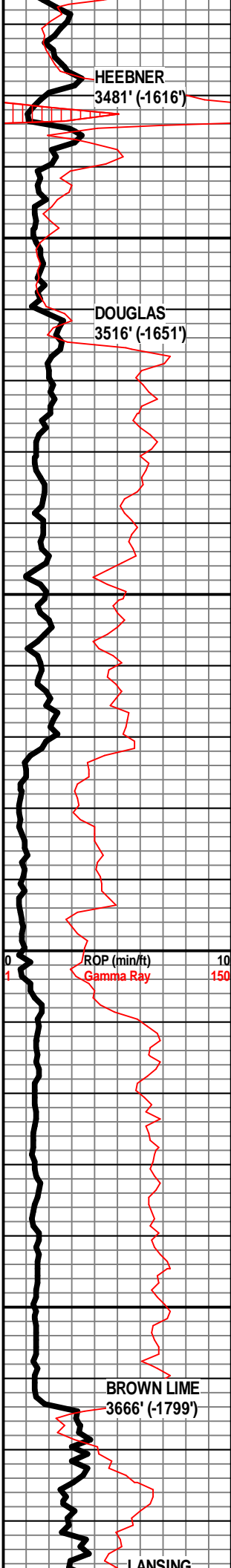
LS - CRM / WHT, VF XLN, MOD DNS / SUBCHY / CHKY, FOSS IN PT

WT 8.7  
VIS 47  
5#

TG, C1-C5

WT 8.7  
VIS 6  
LCM 5#





LS - CRM / TAN, VF / F XLN, MOD DNS,  
SUBCHKY IN PT, FOSS

SH - BLK, CARB, SLI SHO GAS BUB, W/ LS -  
CRM / TAN / GY, VF / F XLN, SUBCHKY / MOD  
DNS, FOSS IN PT

LS - TAN / GY, F XLN, MOD DNS / DNS, FOSS,  
W/ SH - GY

LS - TAN / GY, F / M XLN, DNS, FOSS, W/ LS -  
CRM / WHT, VF XLN, SUBCHKY / CHKY

LS - CRM / WHT, VF / F XLN, SUBCHKY / CHKY

SH - GY / GRN, SLTY IN PT

SH - GY / LT GY, V SOFT IN PT, SLTY IN PT

SH - GY / PYRITIC IN PT

SH - GY, W/ FEW PIECES OF SS - GY, VF GR,  
SUB-ANG, W CEM, DNS

SH - GY, SNDY IN PT, V SOFT IN PT

SS - GY, VF GR, SUB-ANG / SUB-RND, MOD  
CEM, P / F INTERGR POR, NS, NO ODOR, NO  
FLUOR, GLAUC IN PT

SS - GY, VF GR, SUB-RND, MOD / W CEM, P / F  
INTERGR POR, NS, SLI MOR DNS THAN ABOVE

SH - GY, SLTY IN PT

SH - GY, MOD DNS

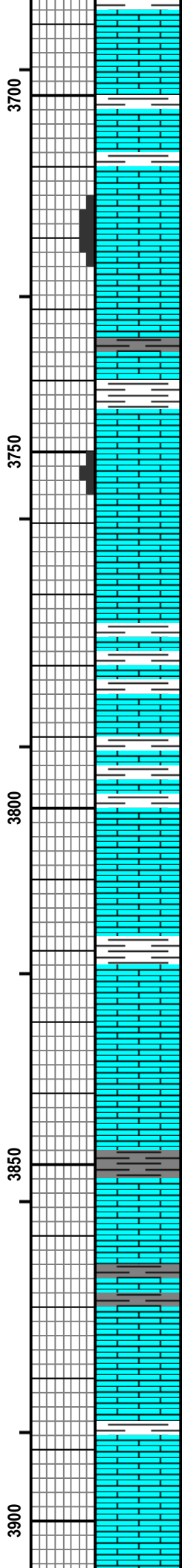
SH - GY / LT GY, MOD DNS

LS - GY / BRN, F XLN, MOD DNS / DNS, FOSS IN  
PT, W/ SH - RD / GRN / GY

LS - CRM, VF XLN, SUBCHKY, W/ SH - GY / GRN

1 TG, C1-C5 400

LANCING  
3688' (-1823')



LS - CRM, W/ XLN, SUBCHKY, W/ SH - GY / CRM / RD

LS - CRM / TAN / GY IN PT, VF / F XLN, SUBCHKY / MOD DNS / DNS, FOSS IN PT

LS - TAN, F XLN, MOD DNS / DNS, FOSS IN PT, W/ SH - GY

LS - CRM / TAN, F XLN, ABUND FOSS, P / F INTERXLN & INTERPART POR, VSSFO, OIL SHEEN, SLI ODOR, MOD YEL-GRN FLUOR

LS - CRM, VF / F XLN, SUBCHKY / MOD DNS

LS - TAN / BRN, F / M XLN, MOD DNS / DNS, FOSS IN PT, W/ SH - GY

LS - CRM, VF / F GR, SUBCHKY / MOD DNS, FOSS IN PT, W/ SH - PRED GY, GRN IN PT

LS - GY / TAN, F / M XLN, P / F INTERXLN POR, ABUND LRG CALCITE CRYSTALS, SSFO, FEW PIECES TARRY OIL, F ODOR, SLI YEL-GRN FLUOR, BIT TORQING AND JUMPING

LS - TAN, F XLN, MOD DNS / DNS, FOSS IN PT

LS - CRM / TAN / GY, VF / F XLN, MOD DNS / DNS, FOSS IN PT

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, W/ SH - GY

LS - TAN / BRN IN PT, F / M XLN, MOD DNS / DNS, FOSS, W/ SH - GY

LS - TAN / CRM, VF / F XLN, MOD DNS / SUBCHKY, ABUND FOSS, W/ FEW PIECES OF SH - BLK, GY

LS - TAN / GY, VF / F XLN, MOD DNS / DNS, FOSS, W/ SH - LT GY

LS - TAN / CRM, VF / F XLN, MOD DNS, FOSS IN PT

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, W SH - GY, GRN, RD

LS - CRM / TAN / WHT, VF / F XLN, MOD DNS / SUBCHKY, CHKY IN PT, FOSS IN PT, STYLOLITIZED IN PT

LS - CRM / TAN, F / M XLN, MOD DNS / DNS, FOSS, W/ SH - GY

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, FOSS IN PT, W/ SCAT SH - GY

LS - CRM / TAN, F XLN, MOD DNS / DNS, FOSS IN PT, W/ SCAT SH - GY

LS - CRM / TAN, F / VF XLN, DNS / MOD DNS / SUBCHKY, FOSS IN PT

LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, CHKY IN PT, FOSS IN PT

WT 8.8  
VIS 53  
LCM 6#

WT 8.9  
VIS 48  
LCM 8#

WT 9.0  
VIS 46  
LCM 6#

WT 8.9  
VIS 53  
LCM 6#

WT 9.0  
VIS 56  
LCM 5#

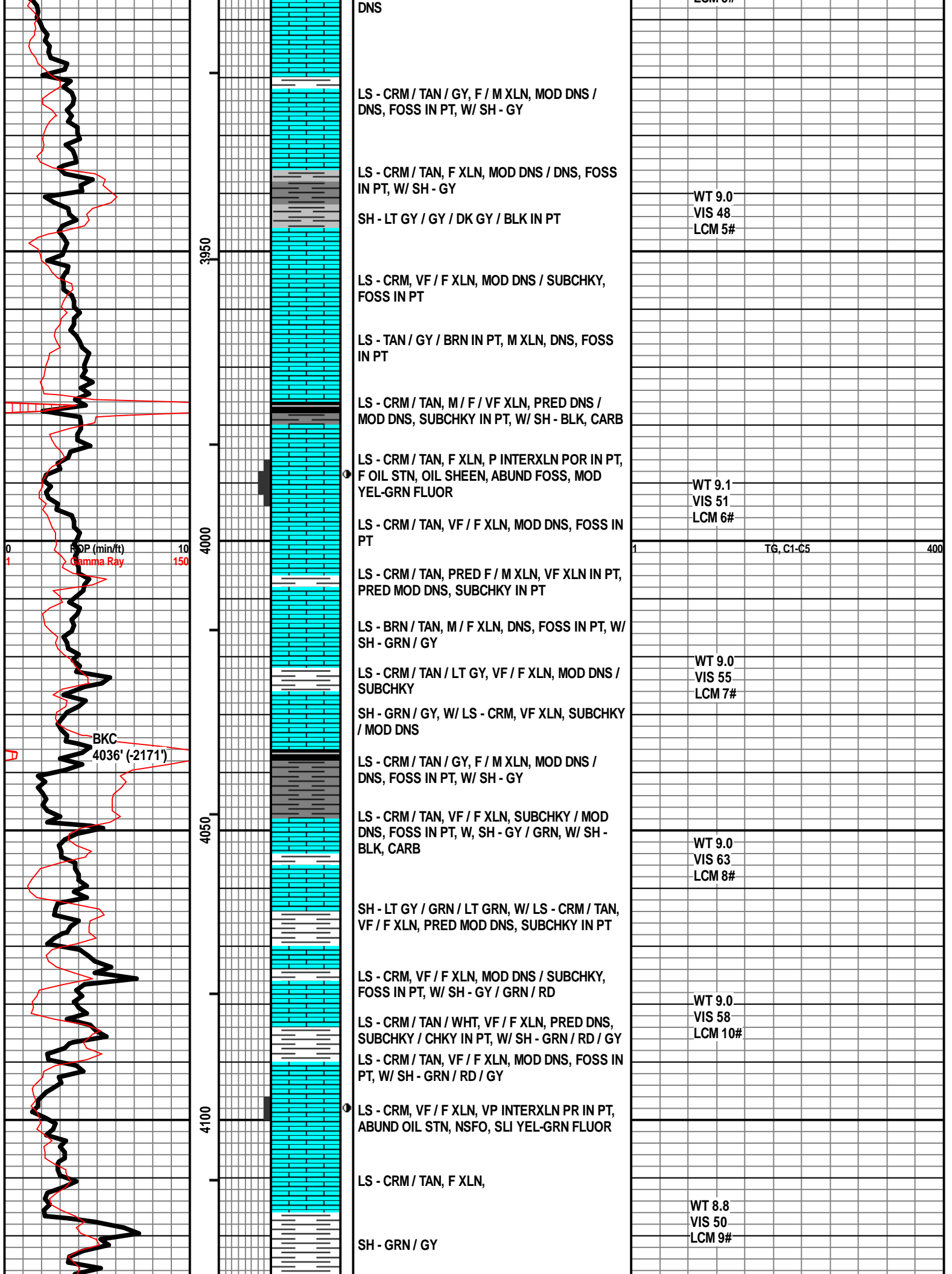
WT 9.0  
VIS 52  
LCM 5#

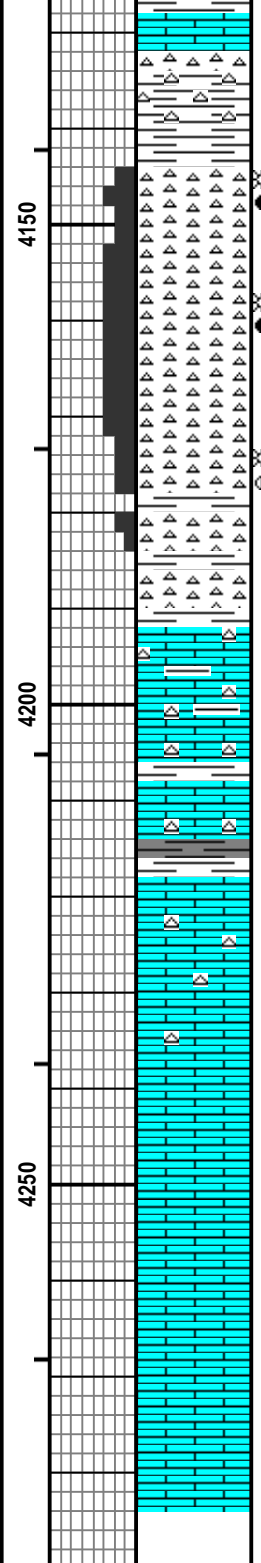
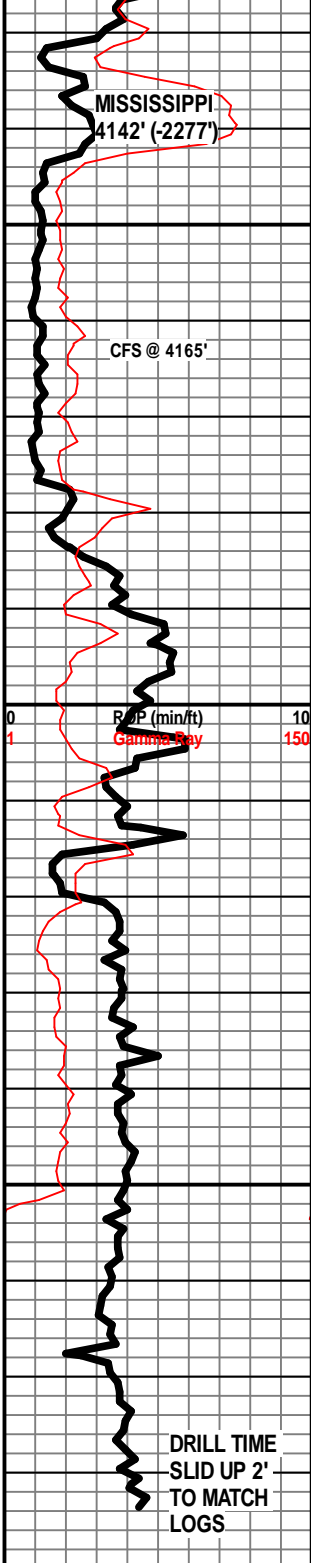
TG, C1-C5

ROP (min/ft)  
Gamma Ray

10  
150

400





SH - GRN, W/ LS - CRM, GRNISH TINT IN PT, SHLY, F XLN, DNS  
SH - GRN, W/ CHT - TAN / RD-ORNG / YEL / WHT, PRED FRSH, SLI TRANSLUCNT, FEW WEATH PIECES, PWEATH & VUG POR, COMP SAT STN, NSFO, SLI ODOR, SPOTTY YEL-GRN FLUOR

● CHT - WHT, SLI TRANSLUCNT IN PT, PRED FRSH, F WEATH POR IN PT, SAT STN, SSFO, OIL SHEEN, G SHO GAS BUB, BRI YEL-GRN FLUOR

● CHT - WHT, SLI TRANSLUCNT, 40% FRSH, 60% F / G WEATH POR, SSFO, G SHO GAS BUB, BRI YEL-GRN FLUOR

● CHT - WHT, PRED OPAQ, 50% FRSH, 50% P / F / G WEATH & TRIPOLITIC POR, SAT STN, NSFO, SLI OIL SHEEN, F ODOR, SLI SHO GAS BUB, SPOTTY YEL-GRN FLUOR

LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, CHTY, W/ SH - GRN / GY

LS - CRM / BRN, VF / F XLN, MOD DNS / SUBCHKY, FOSS, SHLY IN PT, W/ SH - RD / GRN, W/ CHT - TAN / GY, SLI TRANSLUCNT IN PT, FRSH

LS - CRM / TAN / MAR, F XLN, MOD DNS / DNS, SLI SHLY IN PT, SCAT WHT / TAN CHT I PT, W/ SH - GY

LS - CRM / TAN, VF XLN, MOD DNS / SUBCHKY / CHKY IN PT, W/ SCAT TAN / GY CHT

LS - CRM / TAN, F / VF XLN, MOD DNS / SUBCHKY

LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY

LS - TAN / GY, F XLN, DNS, FOSS IN PT

LS - CRM / TAN / GY IN PT, VF / F XLN, MOD DNS / DNS, FOSS IN PT

LS - CRM / TAN, F XLN, MOD DNS / DNS, FOSS IN PT

LS - CRM / TAN, F / VF XLN, MOD DNS / DNS

**RTD 4286'**

WT 8.8  
VIS 49  
LCM 10#

WT 8.9  
VIS 50  
LCM 8#

TG, C1-C5

WT 9.0  
VIS 49  
LCM 14#

WT 9.0  
VIS 49  
LCM 12#

WT 9.0  
VIS 53  
LCM 10#

STRAP 1.76' LONG  
TO BOARD

Fracture Start Date/Time:	3/4/20 8:59
Fracture End Date/Time:	3/4/20 18:57
State:	Kansas
County:	Pratt
API Number:	
Operator Number:	
Well Name:	Mardis 5-26
Federal Well:	No
Tribal Well:	No
Longitude:	
Latitude:	
Long/Lat Projection:	NAD83
True Vertical Depth (TVD):	
Total Clean Fluid Volume* (gal):	364,405



Total Slurry Mass (Lbs):  
2,226,746

Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments	Claimant Company	Claimant First Name	Claimant Last Name	Claimant Email	Claimant Phone (mm-nnn-nmm)
Water	Deutch Oil	Carrier/Base Fluid	Water	7732-18-5	100.00%	3,040,560	94.24229%						
30/50 Premium Sand	SPS	Propping Agent		Listed Below									
16/30 Premium Sand	SPS	Propping Agent		Listed Below									
16/30 Resin Coat Sand	SPS	Propping Agent		Listed Below									
Dry Biocide	Innospec	Bio Control		Listed Below									
FR-A-1 Friction Reducer (An)	Chemplex	Friction Reducer		Listed Below									
PB-1 FR Breaker	EES	Polymer Breaker		Listed Below									
KCL-LC Liquid KCl Substit	Innospec	Temporary Clay Stabilizer		Listed Below									
W-11 NE Surfactant	Innospec	NE Surfactant		Listed Below									
			Crystalline Silica	14808-60-7	100.00%	124,000	3.84288%						
			Crystalline Silica	14808-60-7	100.00%	44,000	1.36369%						
			Crystalline Silica	14808-60-7	99.00%	11,850	0.36817%						
			Polyurethane Resin (Nuisance Dust)	57029-46-6	2.00%	240	0.00744%						
			2,2-Dibromo-3-Nitropropionamide	10222-01-2	97.60%	41	0.00127%						
			Distillates (Petroleum), Hydroreated light	64742-47-8	30.00%	348	0.01077%						
			Citric Acid	77-92-9	5.00%	58	0.00180%						
			Alcohols, C10-16, Ethoxylated	68002-97-1	5.00%	58	0.00180%						
			Alcohols, C12-14, Ethoxylated	68439-50-9	5.00%	58	0.00180%						
			Alcohols, C12-16, Ethoxylated	68551-12-2	5.00%	58	0.00180%						
			Water	7732-18-5	50.00%	579	0.01796%						
			Sodium chlorite	7758-19-2	10.00%	48	0.00149%						
			Water	7732-18-5	90.00%	433	0.01343%						
			Ethaniminium 2-hydroxy-N,N-trimethyl-, chloride	67-48-1	50.00%	1,681	0.05209%						
			Water	7732-18-5	50.00%	1,681	0.05209%						
			Methanol	67-56-1	30.00%	223	0.00691%						
			Nonyl Phenol Ethoxylated	127087-87-0	30.00%	223	0.00691%						
			Water	7732-18-5	40.00%	297	0.00921%						

\*Total Water Volume sources may include fresh water, produced water, and/or recycled water  
 \*\* Information is based on the maximum potential for concentration and thus the total may be over 100% listed was obtained from the



# QUALITY WELL SERVICE, INC.

7301

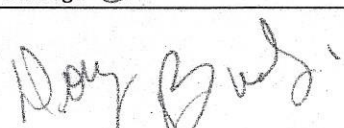
Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

Mailing Address P.O. Box 468

Office 620-727-3410  
Fax 620-672-3663

Rich's Cell 620-727-3409  
Brady's Cell 620-727-6964

Date	12-19-19	Sec.	26	Twp.	26S	Range	12W	County	PRATT	State	KS	On Location		Finish	
Lease	MARDIS	Well No.	5-26			Location TOLA - STAFFORD BIK TOP 1/2 E to tank									
Contractor	PICKRELL DELG RIG #10							Owner BATTERY W E into							
Type Job	SURFACE							To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	12 1/4		T.D.		306'		Charge To DEUTSCH OIL CO.								
Csg.	8 5/8 23#		Depth		306'		Street								
Tbg. Size			Depth				City								
Tool			Depth				State								
Cement Left in Csg.			Shoe Joint		25		The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line			Displace		17.98		Cement Amount Ordered 375 sl Common								
<b>EQUIPMENT</b>										2 1/2 GEL 3 1/2 CL 1/2" PS					
Pumptrk	10	No.					Common 375 sl								
Bulktrk	11	No.					Poz. Mix								
Bulktrk		No.					Gel. 705#								
Pickup		No.					Calcium 1050#								
<b>JOB SERVICES &amp; REMARKS</b>										Hulls					
Rat Hole							Salt								
Mouse Hole							Flowseal 138#								
Centralizers							Kol-Seal								
Baskets							Mud CLR 48								
D/V or Port Collar							CFL-117 or CD110 CAF 38								
Run 7 H's 8 5/8 23# CSG SET @ 306'										Sand					
START CSG CSG ON Bottom										Handling 403					
Hook up to CSG & BREAK CIRC W/ RIG										Mileage 151-6045					
START Pumping 10 Bbls H2O										<b>FLOAT EQUIPMENT</b>					
START Mix & Pump 375 sl Common										Guide Shoe					
2 1/2 GEL 3 1/2 CL 1/2" PS @ 14.8#/GAL										Centralizer					
START DISP										Baskets					
PLUG DOWN 150# 17.98 Bbls										AFU Inserts					
ADD CIRC thru JOB										Float Shoe					
CIRC CMT TO PIT										Latch Down					
										SERVICE SUPPLY 1EA					
										LMV 15					
THANK YOU										Pumptrk Charge SURFACE					
PLEASE CALL AGAIN										Mileage 30					
TODD IS JAKE															
<div style="display: flex; justify-content: space-between;"> <span>X Signature</span> <span>  </span> </div>										Tax Discount Total Charge					



# QUALITY WELL SERVICE, INC.

7339

Federal Tax I.D. # 481187368

Home Office 30060 N. Hwy 281, Pratt, KS 67124

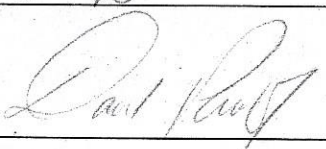
Mailing Address P.O. Box 468

Office 620-727-3410

Fax 620-672-3663

Rich's Cell 620-727-3409

Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-10-20	26	26S	12W	PRATT	Ks		
Lease MARDIS		Well No. 5-26		Location STAFFORD IKA BIK TOP 1/2 N E 10			
Contractor PICKRELL DRILL RIG				Owner			
Type Job 5 1/2 L.S.				To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size 7 7/8		T.D. 4286'		Charge To DEUTSCH OIL CO.			
Csg. 5 1/2		Depth 4279.62		Street			
Tbg. Size		Depth		City			
Tool		Depth		State			
Cement Left in Csg.		Shoe Joint 37.18		The above was done to satisfaction and supervision of owner agent or contractor.			
Meas Line		Displace 98.63		Cement Amount Ordered 2000# PRO C 2 1/2 GEL			
<b>EQUIPMENT</b>				10' SALT 5 1/8 KOLSEAL .6% C16A .25' C4IP 1/4" PS			
Pumptrk 8 No.				Common 200 sl.			
Bulktrk 10 No.				Poz. Mix			
Bulktrk No.				Gel. 376#.			
Pickup No.				Calcium			
<b>JOB SERVICES &amp; REMARKS</b>				Hulls			
Rat Hole 30#				Salt 110#.			
Mouse Hole <del>30#</del>				Flowseal 50#			
Centralizers 1-2-4-6-8-10-12-14-16-18				Kol-Seal 1000#.			
Baskets				Mud CLR 48 500 GAL.			
D/V or Port Collar				CFL-117 or CD110 CAF 38 C16A 113#.			
RUN 103 H3 5 1/2 17 # CSG SET @ 4279				Sand C4IP 47# CC-1-1.			
RIG RAN CSG CSG ON BOTTOM				Handling 253			
RIG CIRC THE				Mileage 20 / 5060			
START PUMPING 10 BBL H2O 12 BBL MF 10 BBL H2O				5 1/2 <b>FLOAT EQUIPMENT</b>			
START PLOG 2-HOLE 30#				Guide Shoe HEAD MANIFOLD 1 EA.			
START MIX PUMP 170# PRO C				Centralizer 10 EA.			
↓ CSG @ 14.8" / GAL				Baskets 1 EA.			
SHUT DOWN WASH UP TEL RELEASE 20 PLOG				AFU Inserts			
START DISP 2 1/2 KCL				Float Shoe 1 EA.			
LEFT PS 600" 80 out				Latch Down 1 EA.			
PLOG DOWN 1300" 99 1/2 out				SERVICE SUPV. 1 EA			
PS UP 26 1500"				LMV 20			
RELEASE! HELD 1/2 BBL BACK				Pumptrk Charge LS			
GOOD CIRC THRU JOB				Mileage 40			
THANK YOU TOM MIKE IS JAKE							
PLEASE CALL AGAIN							
Signature				Tax			
				Discount			
				Total Charge			