

Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Downey #1-36
API: 15-101-22600
Location: Section 36 - T18S - R27W
License Number: 31652
Spud Date: 1 / 25 / 2018
Surface Coordinates: 754' FSL and 2055' FEL
Approx. SE - NW - SW - SE
Region: Lane Co., KS
Drilling Completed: 2 / 4 / 2018
Bottom Hole
Coordinates:
Ground Elevation (ft): 2579' K.B. Elevation (ft): 2586'
Logged Interval (ft): 3600' To: 4591' Total Depth (ft): 4591'
Formation: Mississippi
Type of Drilling Fluid: Chemical - Andy's

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

OPERATOR

Company: Norstar Petroleum, Inc.
Address: 88 Inverness Cir E. Unit F104
Englewood, CO 80112 + 5514

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	16-16-16	278'	271'	3.25
2	7-7/8	HA20Q	14-14-14	4380'	4109'	119.25
3	7-7/8	HA25RR	14-14-14	4591'	211'	6.75/126.25

SURVEYS: 278'-.75, 795'-.75, 1795'-.5, 2263'-.5, 2763'-.25, 4108'-.75, 4380'-.75, 4520'-1.75, 4591'-.75

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 38,000 -40,000 lbs. on bit and approx 60-70 RPM.
Running 9.5 stands of collars; 568.28'
Pumping approx 800 psi at standpipe.

Daily Status

1/25/18 - Spud @ 6:30pm, Drilled to 278', ran 7 jts of new 8 5/8" 23# surface casing set @ 274', cemented w/ 185 sx. Common, w/ 2% gel & 3% CC, PD @ 2:00am. Cem circ.

1/26/18 - WOC, @ 278'

1/27/18 - Drilling, @ 1310'

1/28/18 - Drilling, @ 2169'

1/29/18 - Drilling, @ 2816'

1/30/18 - Drilling, @ 3295'

1/31/18 - Drilling, @ 3863'

2/1/18 - Drilling, @ 4205'

2/2/18 - TOOH, @ 4380', DST #1

2/3/18 - DST #2 @ 4520'

2/4/18 - DST #3, @ 4551', RTD @ 4591', LTD 4594'

2/5/18 - Plugged as follows: 50 sx at 2000', 80 sx at 1140', 40 sx at 600', 50 sx at 300', 20 sx at 60', and 30 sx in rathole. Hurricane Services cemented w/ 60/40 POZ, 4% gel, 1/4#/sx flocele.

DST #1

MARMATON 4360' - 4380'

5"-30"-30"-60"

IF: Build to weak surface blow

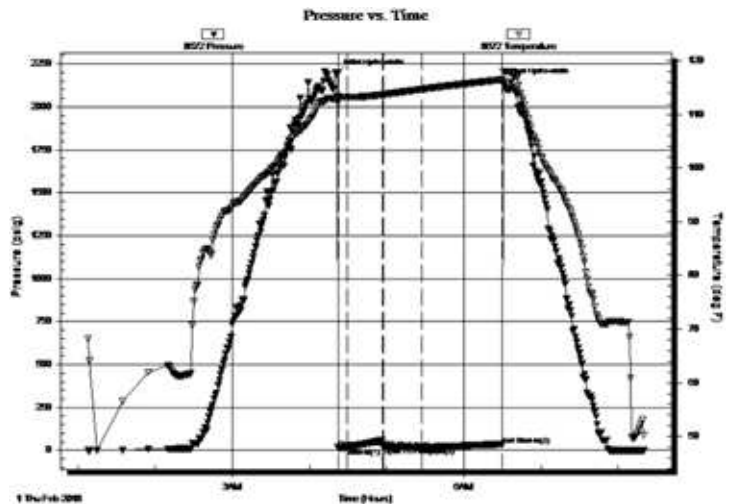
ISI: No blow

FF: No blow

FSI: No blow

Rec'd: 2' Mud

SIP: 114-116#, FP: 16-17#, 18-18#, HP: 2196-2144#



DST #2

CHEROKEE SAND 4498' - 4520'

5"-30"-30"-30"

IF: Build to weak surface blow

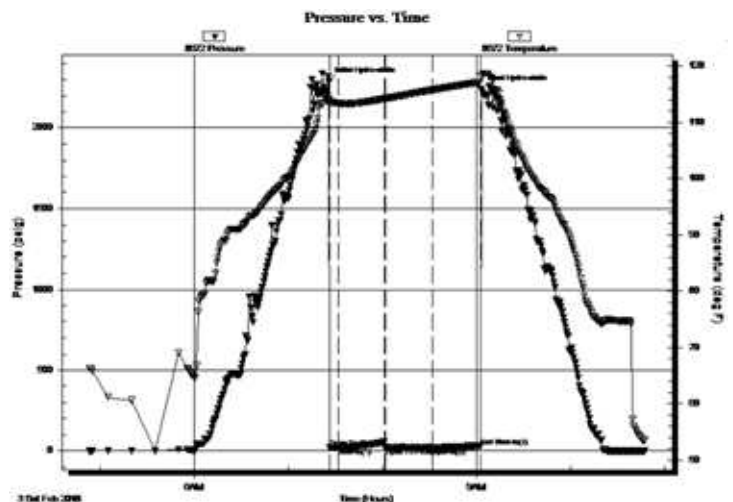
ISI: No blow

FF: No blow

FSI: No blow

Rec'd: 2' Mud

SIP: 56-29#, FP: 20-21#, 21-20#, HP: 2288-2238#



DST #3

MISS 4403' - 4551'

5"-30"-45"-90"

IF: Built to 1 1/2" blow

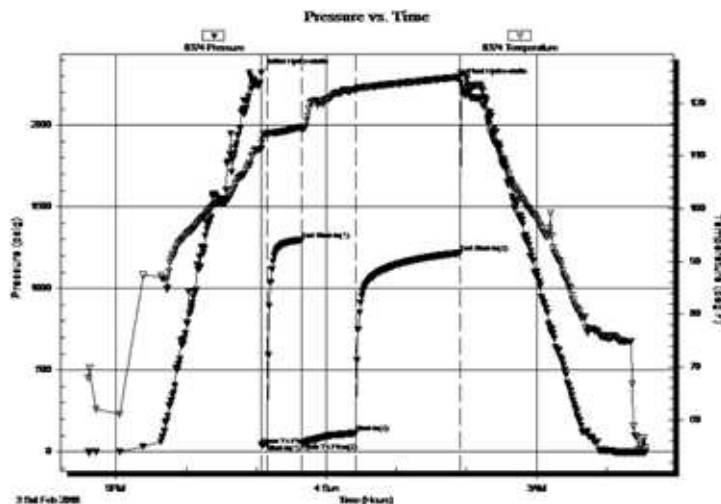
ISI: No blow

FF: Build to 5 1/2" blow

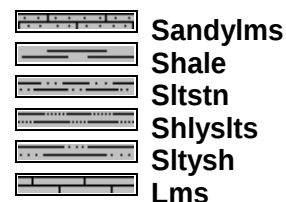
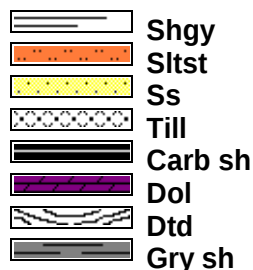
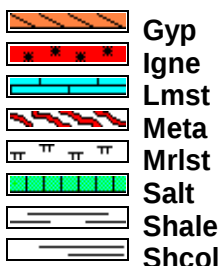
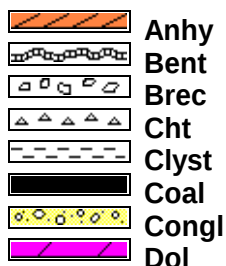
FSI: No blow

Rec'd: 183' Mud

SIP: 1297-1217#, FP: 40-51#, 55-115#, HP: 2320-2261#

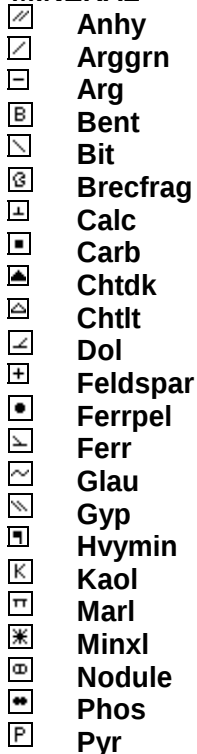


ROCK TYPES

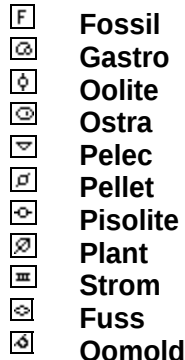
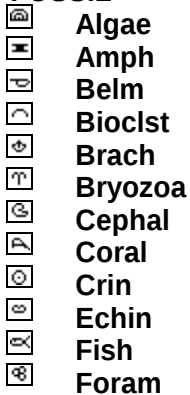


ACCESSORIES

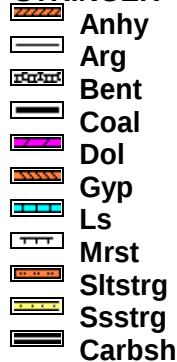
MINERAL



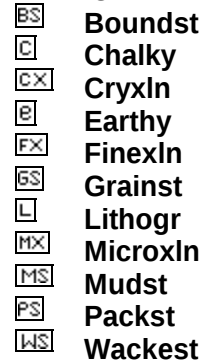
FOSSIL



STRINGER



TEXTURE



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

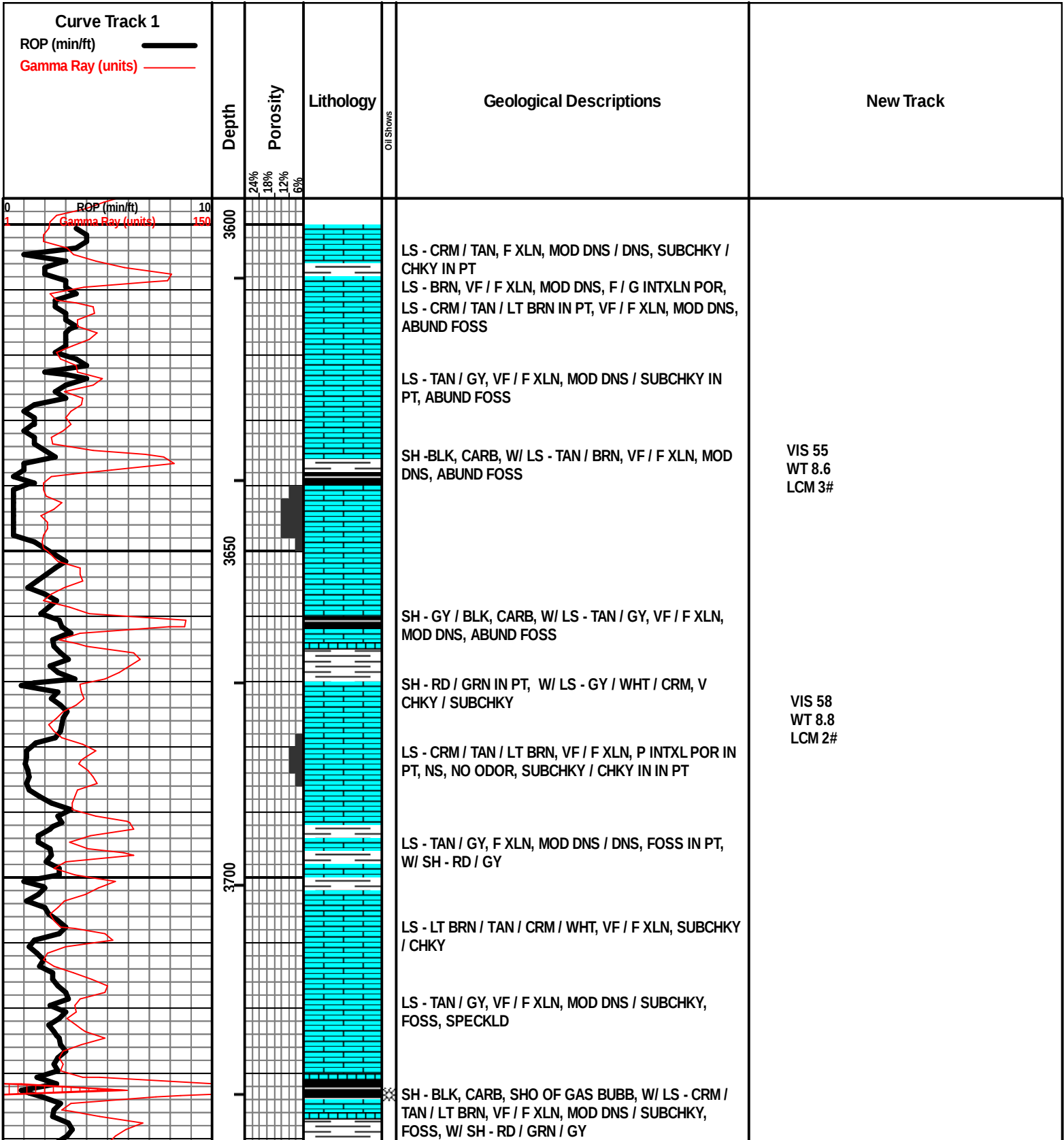
INTERVALS

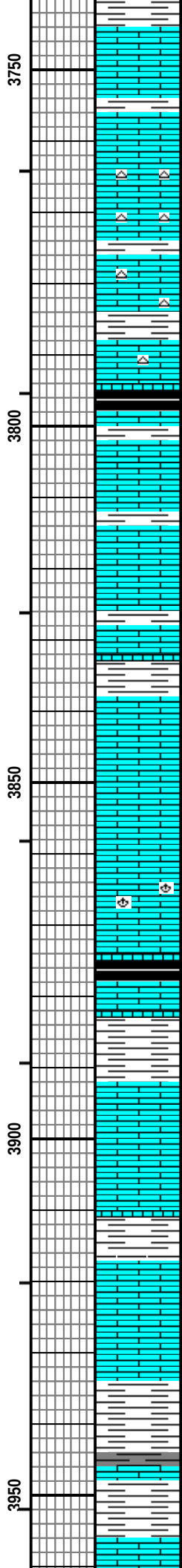
- Core
- Dst

Dst

EVENTS

- Rft
- Sidewall
- Conn





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

LS - WHT / CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, CHKY IN PT, W/ SH - RD / LT GRN

LS - WHT / CRM / TAN, VF / F XLN, SUBCHKY / CHKY, W/ CHT - TAN / GY, FRSH, PRED OPAQ, SLI TRANSLUCNT

LS - CRM / TAN / BRN, VF / F XLN, SUBCHKY / CHKY, MOD DNS IN PT, W/ SH - RD / GRN / MAR / RD-ORNG

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

SH - GY, V SOFT, W/ LS - BRN / TAN / GY, F / M XLN, DNS, FOSS

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

LS - WHT / CRM, V CHKY, VF / F XLN IN PT

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

LS - CRM / TAN / BRN, VF / F XLN, PRED MOD DNS / SUBCHKY, CHKY IN PT

LS - TAN / BRN, VF / F XLN, MOD DNS / SUBCHKY, FOSS, DK BRN SPEKS

LS - CRM / TAN, F XLN, MOD DNS / DNS IN PT, LRG FOSS FRAG (BI-VALVE)

SH - BLK, CARB, W/ LS - GY, F XLN, DNS, FOSS

SH - GRN / RD / GY

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

SH - GRN / RD-ORNG, W/ LS - CRM / TAN, VF / F XLN, MOD DNS, ABUND FOSS

LS - CRM / TAN, VF / F XLN, OOLITIC, CEM W/ CLR CALCITE CEM, DNS, NO VIS POR, NS, W/ CHT - WHT, FRSH, TRANSLUCNT / SLI OPAQ, FOSS

LS - CRM, VF / F XLN, SUBCHKY / MOD DNS, FOSS, W/ CHT - TAN, FRSH, SLI TRANSLUCNT, FOSS

SH - DK GY / BLK, V SLI CARB, PYRITIC IN PT, W/ SH - RD / GRN / GY, PYRITIC IN PT

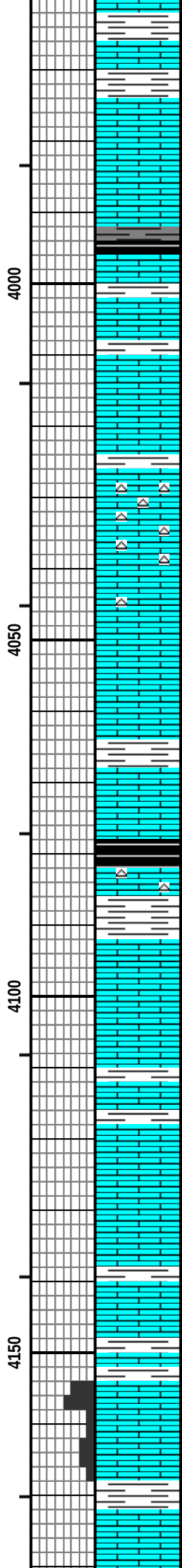
SH - GY / GRN / RD-ORNG, W/ LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, DNS IN PT, FOSS

VIS 55
WT 8.8
LCM 2#

VIS 55
WT 8.8
LCM 2#

VIS 56
WT 8.9
LCM 3#

VIS 56
WT 8.9
LCM 2#



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

SH - MAR / GRN / RD / RD-ORNG, W/ LS - CRM / TAN,
VF / F XLN, SUBCHKY / MOD DNS, V CHKY IN PT,
PRED FOSS

SH - GY / BLK, SLI CARB, W/ LS - CRM, F / M XLN,
MOD DNS / DNS, FOSS

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

LS - TAN / LT BRN / CRM IN PT, F / M XLN, VF XLN IN
PT, PRED MOD DNS / DNS, SUBCHKY IN PT, FOSS, W/
SH - RD / GRN

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

LS - CRM / WHT, VF / F XLN, SUBCHKY / CHKY, FOSS
IN PT, W/ CHT - PRED WHT / TAN, RD-ORNG / GRN IN
PT, FRSH, OPAQ, SLI TRANSLUCNT IN PT, FOSS

LS - WHT / CRM, VF XLN, CHKY

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

SH - BLK, CARB, W/ LS - CRM / TAN, F XLN, MOD DNS
/ DNS IN PT, FOSS, FOSS MOLDS FILLED W/ CALCTE
CEM

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

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

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

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

LS - CRM, VF / F XLN, SUBCHKY / CHKY, W/ SH - GY,
V SOFT

LS - WHT / CRM, VF XLN, V CHKY, W/ SH - GRN / GY /
MAR / RD

LS - CRM / TAN, F XLN, OOLITIC, P / F OOLMOLDIC POR IN PT, P
INTXLN POR IN PT, SOME OOLITES FILLED W/ CALCIT CEM, NS, NO
ODOR, NO FLUOR

LS - CRM / TAN, F XLN, OOLITIC, P OOLMOLDIC POR IN PT, OOLITES
PRED REPLACED W/ CALCTE CEM, NS, NO ODOR, NO FLUOR

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

VIS 58
WT 9.0
LCM 2#

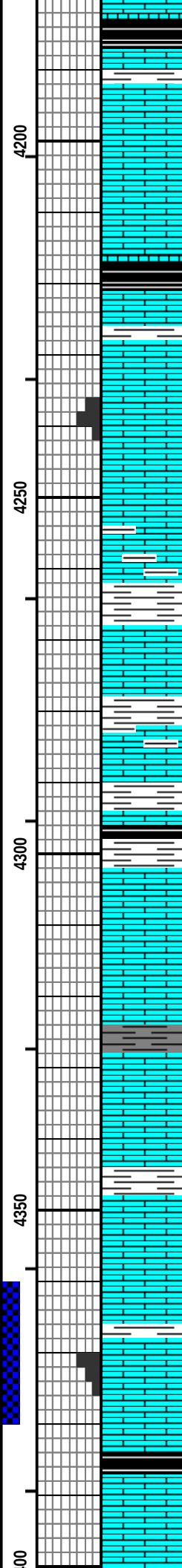
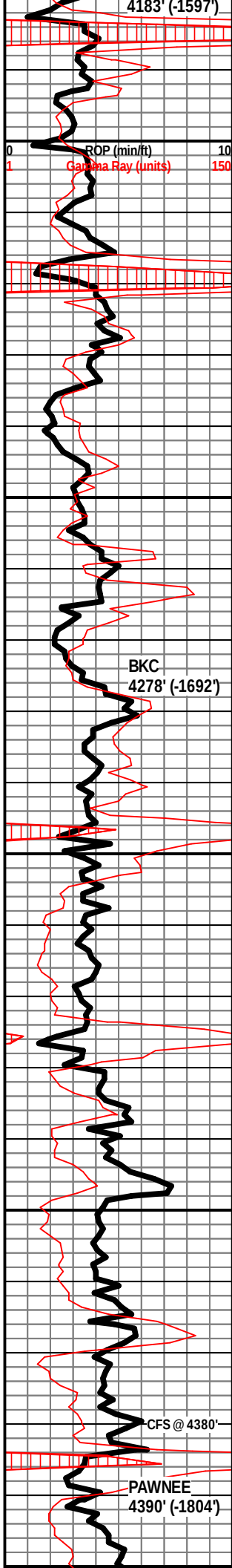
VIS 51
WT 9.1
LCM 3#

VIS 52
WT 9.1
LCM 3#

SHORT TRIP @ 4130'

VIS 50
WT 9.0
LCM 2#

VIS 50
WT 9.0
LCM 2#



SH - BLK, CARB, SHO OF GAS BUBB, W/ LS - TAN / GY, LT BRN IN PT, F / M XLN, DNS, FOSS

LS - CRM / TAN, F XLN, MOD DNS, OOLITIN IN PT, P / F OOLMOLDIC POR IN PT, NS, NO ODOR, NO FLUOR, W/ SH - GRN / MAR

LS - CRM / TAN, VF / F XLN, MOD DNS, SUBCHKY IN PT, FOSS IN PT, NO VIS POR, NS

SH - BLK, CARB, W/ LS - CRM / TAN / LT BRN, F XLN, MOD DNS, BRITTLE IN PT, NO VIS POR, NS, NO ODOR, NO FLUOR

LS - BRN / GY IN PT, F XLN, MOD DNS / DNS, FOSS, NO VIS POR, NS

LS - TAN / GY, VF / F XLN, GRITTY, P / F INTXLN POR, NS, NO ODOR, W/ LS - TAN / LT BRN, F XLN, MOD DNS / DNS, FOSS, NO VIS POR, NS

LS - CRM / TAN, F XLN, MOD DNS, P / F INTXLN POR IN PT, SSFO IN 1 PIECE, LT BRN OIL, SLI ODOR, G YEL-GRN FLUOR

LS - BRN / TAN, F XLN, DNS, FOSS, FOSS REPLACED BY DNS CALCTE CEM

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

SH - GY / GRN / RD

LS - CRM / WHT IN PT, VF XLN, SUBCHKY / CHKY, ARG IN PT

SH - GY / GRN / BLK, CARB IN PT, PYRITIC IN PT

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

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

LS - CRM / TAN, VF XLN, SUBCHKY / CHKY, W/ SH - GY

LS - CRM / TAN, F / M XLN, DNS / V DNS, ABUND OF FOSS IN PT

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

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

LS - CRM / WHT, VF / F XLN, F INTXLN & INTPART POR, GSFO, LT BRN OIL, SLI SHO OF GAS, F ODOR, SLI YEL-GRN FLUOR, ABUND FOSS IN PT, SUBCHKY IN PT

SH - BLK, CARB

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

VIS 56
WT 9.3
LCM 2#

DST #1
MARMATON
4360' - 4380'
5"-30"-30"-60"

IF: Build to weak surface blow
ISI: No blow
FF: No blow
FSI: No blow

Rec'd: 2' Mud

SIP: 114-116#, FP: 16-17#, 18-18#,
HP: 2196-2144#

VIS 67
WT 9.3
LCM 2#

STRAP 1.52' LONG
TO BOARD

VIS 57
WT 9.1
LCM 2#

VIS 52
WT 9.3
LCM 2#

