

# LITHOLOGY STRIP LOG

## WellSight Systems

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

Well Name: Werth Family #1  
Location: N2 SW NW NE  
License Number: API: 15-179-21359-00-00  
Spud Date: May 16, 2014  
Surface Coordinates: 825' FNL & 2310' FEL Section 9-TWP 10S - RNG 26 W  
Region: Sheridan County, Kansas  
Drilling Completed: May 22, 2014

Bottom Hole Coordinates: Vertical Hole

Ground Elevation (ft): 2624  
Logged Interval (ft): 3500 To: RTD  
Formation: Marmaton  
Type of Drilling Fluid: Chemical Displace at 3350  
K.B. Elevation (ft): 2629  
Total Depth (ft): 4160

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

### OPERATOR

Company: Eternity Exploration, LLC  
Address: 338 Spyglass Drive  
Coppell, Texas 75019+5430

### GEOLOGIST

Name: W. Scott Alberg  
Company: Alberg Petroleum, LLC  
Address: 609 Meadowlark Lane  
Pratt, Ks 67124

### COMMENTS

Surface Casing: Ran 5 joints new 23# 8 5/8" and set at 222', cement did circulate. Plug down at 8:45 pm, May 16, 2014.

Production Casing: None

Deviation Surveys: 1/4 degree @ 222'; 1 - 2875', 1 - 4033'.

Pipe Strap - 1st - 3544' - 2.27' Short to Board.

2nd - 4033' - 1.53' Long to Board.

Contractor Bit Record: 1-12 1/4" out at 222'  
2- 7 7/8" out at 2875'.  
3 - 7 7/8" out at 4033'  
4 - 7 7/8" out at 4155'.

Mud: Morgan Mud, Cade Lines, Engineer  
Logs: Superior Well Services, Inc, DIL, CDL/CDL, Micro  
LTD - 4160'.  
Gas Detector: None

## FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
ANHYDRITE		2262(+367)
BASE ANHYDRITE		2296(+333)
TOPEKA	3692(-1063)	3694(-1065)
HEEBNER	3851(-1222)	3852(-1223)
TORONTO	3873(-1244)	3875(-1246)
LANSING	3889(-1260)	3891(-1262)
'B' Zone	3918(-1289)	3919(-1290)
'F' Zone	3971(-1342)	3972(-1343)
'K' Zone	4089(-1460)	4090(-1461)
B/KC	4126(-1497)	4124(-1495)
RTD	4155(-1526)	
LTD		4160(-1531)

## DSTs

DST #1 4081 to 4160 (LTD) K Zone

Times 30-30-30-30

1st Opening - Fair blow, built to 4 inches, no blow back

2nd Opening - Fair blow, built to 5 inches, no blow back

Recovery - 20' GIP

25' OCM(30%% Oil, 70% M)

15' Free Oil

IFP 21-27# FFP 26-33#

ISIP 975# FSIP 853#

IHP/FHP 2119/2079#

Temp 123

## CREWS

Whote Knight Drilling, Rig #1

Tool Pusher - Terry Austin

Daylight Driller - Gary Chard

Evening Driller - Jerry Rowe

Morning Driller - Marlan Garcia

Relief Driller - Robert Galbavy

Based on sample shows, structural position and the results of the DST, it was recommended by all parties this test well be plugged and abandoned.

Respectfully,

W. Scott Alberg

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal

- Congl
- Sdy dolo
- Shy dolo
- Dol
- Gyp
- Sdy lmst

- Lmst
- Mrlst
- Salt
- Shale
- Sltst
- Ss

- Black sh
- Gry sh
- Shale
- Shyslts
- Sitysh

ACCESSORIES

MINERAL

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlit
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt

- Chlorite
- Dol
- Sand
- Sity

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Foram
- Fossil
- Gastro
- Oolite
- Ostra

- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

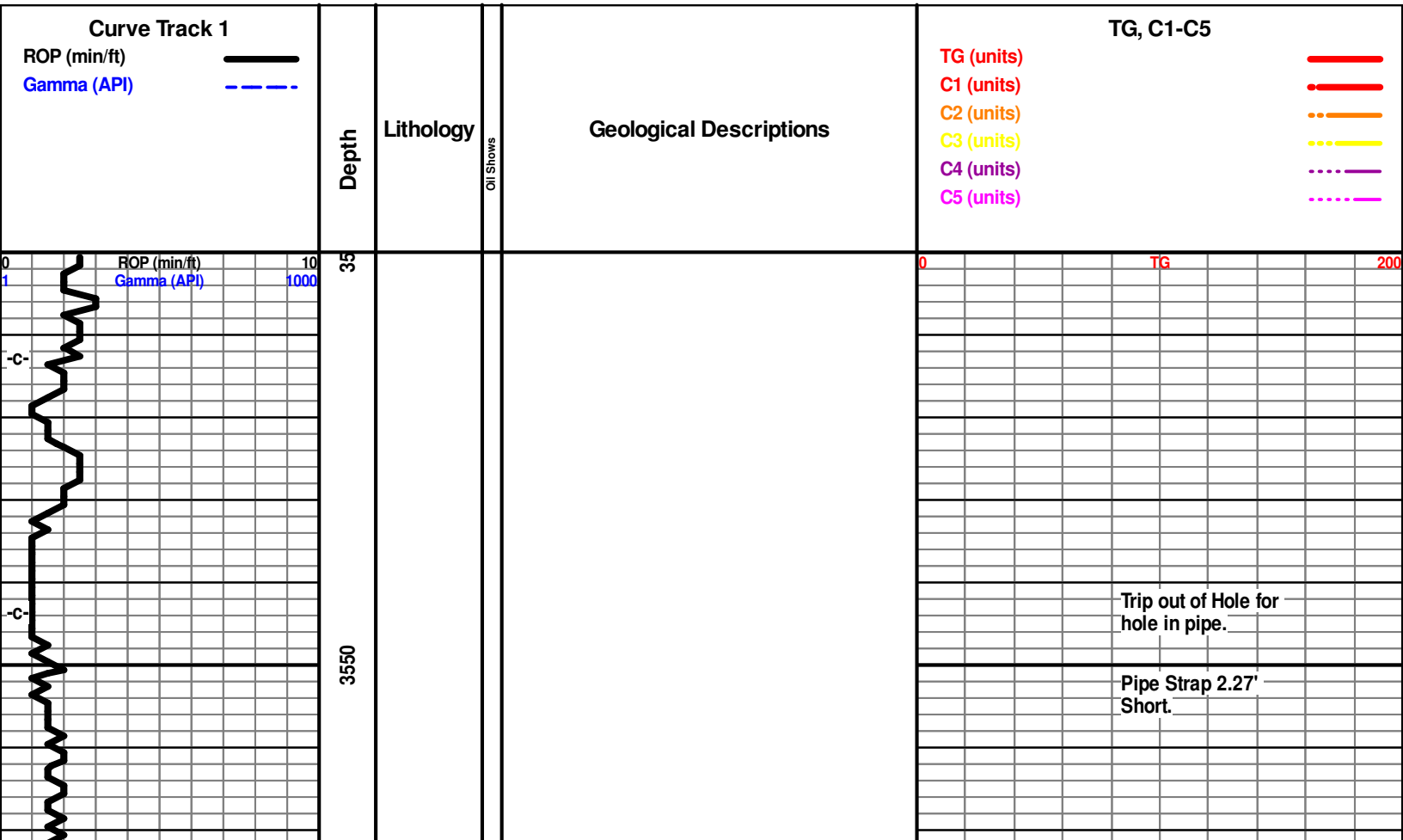
STRINGER

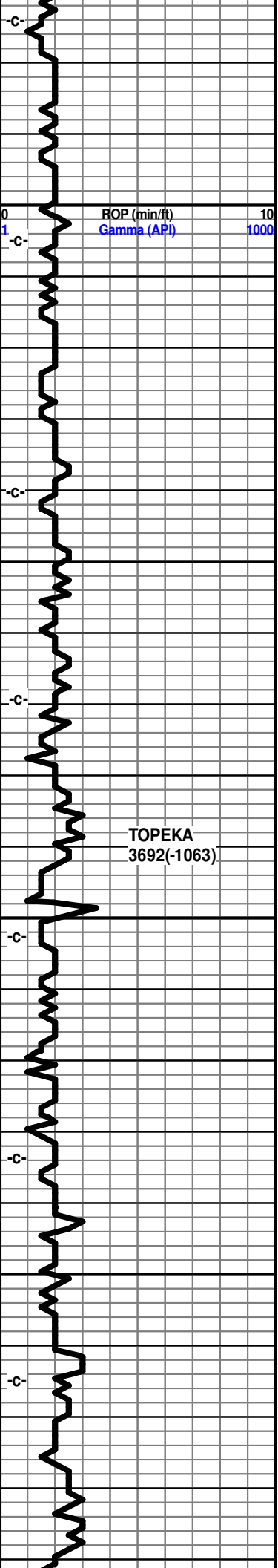
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol

- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

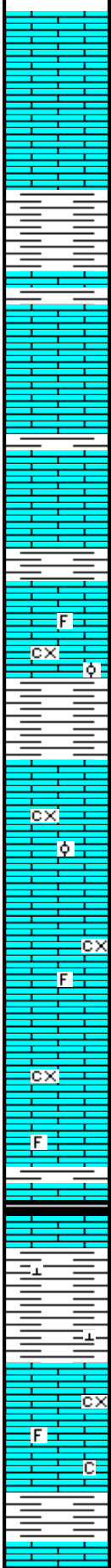
TEXTURE

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





3600  
3650  
3700  
3750



Limestone, cream, tan, grey, crystalline, fossils, oolites.

Shale, grey, red.

Limestone, cream, tan, finely crystalline, oolitic, trace oolitic porosity, barren.

Limestone, tan-white, cream, crystalline, dense, chalky, trace fossils.

Limestone, cream, grey-white, crystalline, dense, trace fossils.

Shale, grey-black.

Shale, grey-red, red, sandy, calcitic.

Limestone, cream-white, finely crystalline, trace fossils, fossiliferous porosity, chalky.

Shale, grey, red.

Limestone, cream, tan, finely crystalline

Vis 54  
Wt 8.8  
LCM 2#

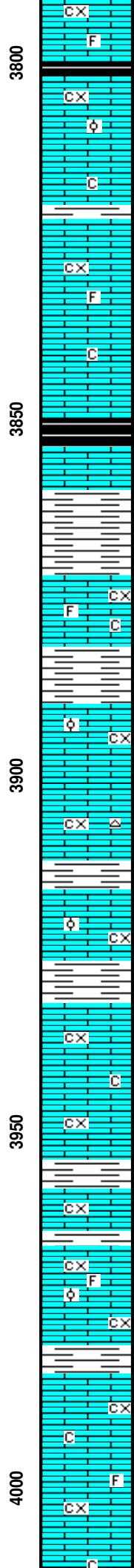
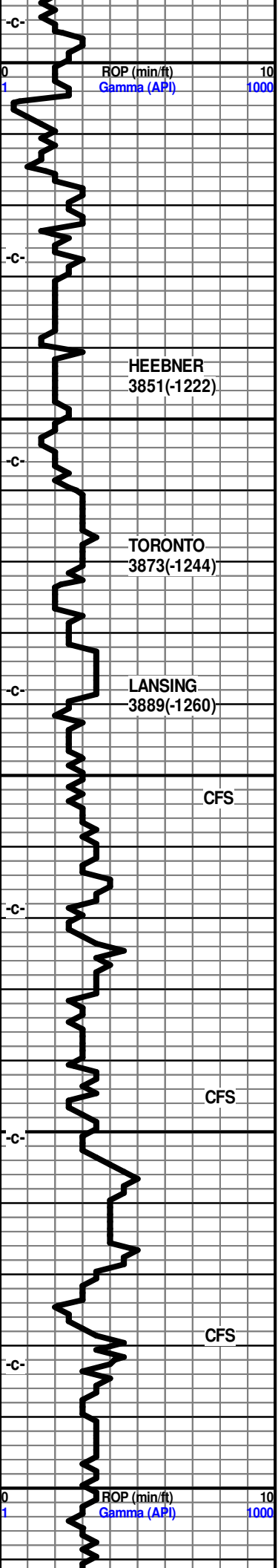
TG

Vis 54  
Wt 8.9

KB 2629'

Vis 50  
Wt 8.9

Morgan Mud Mud  
Check  
Vis 50  
Wt 8.9  
pH 10.5  
WL 8.4  
Chlor 3900 ppm  
LCM 1#



Limestone, cream, tan, finely crystalline, dense in part, fossils, trace fossilcast porosity, chalky.

Shale, grey-black.

Limestone, cream-tan, finely crystalline oolitic, oolimoldic porosity, trace chalky, no shows.

Shale grey.

Limestone, tan-white, cream, dense, trace fossils, chalky.

Shale, grey-black.

Limestone, grey-white, dense.

Shale, grey-white, red, firm.

Limestone, buff, cream-white, finely crystalline, partly dense, trace fossils, trace pin point porosity, chalky in part, no visible shows.

Shale, grey, light grey.

Limestone, cream, tan, finely crystalline, trace oolites, fossils, trace small vugs, trace crystalline porosity, very faint odor, spotty show dark oil, dull fluorescence, trace pyrite, chalky.

Limestone, cream-white, crystalline, dense, chalky, trace grey chert no shows.

Shale, light grey, red-brown.

Limestone, cream, tan, finely crystalline, partly dense, oolitic in part, trace light stain, trace crystalline porosity, inter oolitic porosity, no odor, very dull fluorescence, trace oolitic porosity.

Shale grey-red.

Limestone, cream, buff, finely crystalline, dense, trace crystalline, porosity, trace flakey dark oil, no odor, chalky in part, trace patchy stain, poorly developed.

Limestone, cream-white, finely crystalline, dense, trace fossils, chalky, trace chert.

Shale, grey, dark grey.

Limestone, tan, buff, crystalline, no odor, no fluorescence.

Shale, grey, dark grey.

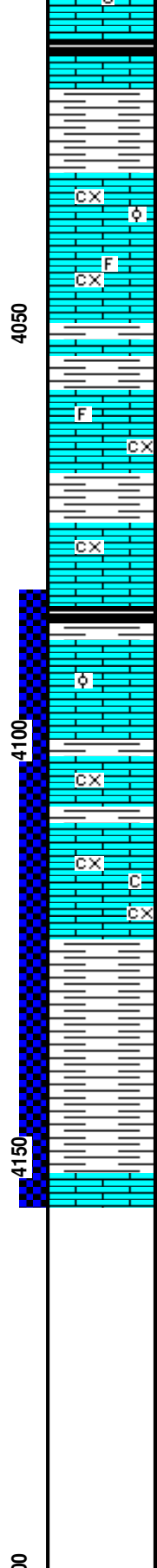
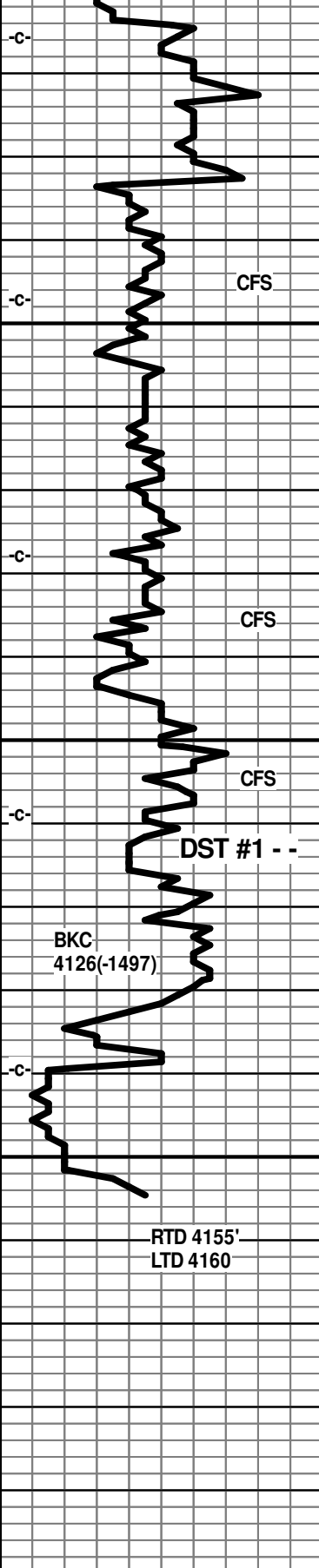
Limestone, cream-white, finely crystalline, partly dense, oolitic, trace flakey oil, no odor, dull fluorescence, light spotty stain, interoolitic porosity, trace crystalline porosity.

Shale, grey, red.

Limestone, cream-white, crystalline, dense, trace chalky, trace fossils.

Limestone, cream-tan-white, finely crystalline, dense, chalky, cherty in part.

0	TG	200
	Vis 57 Wt 9.0	
	Vis 55 Wt 9.3	
	Vis 59 Wt 9.3	
	Vis 68 Wt 9.4	
	Vis 60 Wt 9.4	
	Samples Very Poor	
0	TG	200



Shale, grey-black.

VERY POOR SAMPLES ????

Limestone, cream, tan, finely crystalline, slightly oolitic, trace stain, no odor, NSFO.

Limestone, cream-white, finely crystalline dense, trace fossils, no odor, dull spotty fluorescence, NSFO.

Shale, grey-red, blue-green.

Limestone, cream, tan, finely crystalline, mostly dense, trace fossils, patchy brown stain, no odor, NSFO, poor porosity.

Shale, grey-red, dark grey.

Limestone, cream, tan-white, finely crystalline, succrosic texture, trace crystalline porosity, spotty light to dark stain, no odor, NSFO.

Shale, grey, dark grey, reddish-brown.

Limestone, cream-white oolitic, inter oolitic porosity, trace show light oil, very faint fleeting odor, trace crystalline porosity, spotty brown stain, some darker stain.

Shale, grey, red-brown.

Limestone, buff, light grey, crystalline, dense, trace chert, crystalline, chalky in part, no visible shows.

Shale, red-brown, grey.

Shale, red-brown, orangish grey.

	Vis 55 Wt 9.4
Morgan Mud Mud Check 4033' @ 11:15 am May 21, 2014 Vis 51 Wt 9.3 pH 8.5 WL 10.0 LCM 1#	Pipe Strap 1.53 Long Pull Bit At 4033' Adjust Sample Box
	Vis 59 Wt 9.3
DST #1 4081 to 4060(LTD) Times 30-30-30-30 1st Opening - Fair blow built to 4 inches, no blow back. 2nd Opening - Fair blow builds to 5 inches, no blow back. Recovery: 20' GIP 25' OCM (30% O, 70 % M) 15' Free Oil IFP 21-27# FFP 26-33# ISIP 975# FSIP 853# IHP 2119# FHP 2079# Temp 123	Vis 58 Wt 9.3 Vis 58 Wt 9.2
	Vis 52 Wt 9.5