



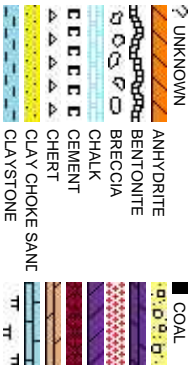
Scale: 5" / 100'  
Measured Depth Log

Well Name	Oscar Y10-79HN		
Location	NWSW SEC 10, T2N, R64W		
State	COLORADO	County	WELD
Country	USA	Rig Number	H&P 330
API Number	05-123-38191		
Region	DJ BASIN	Field	WATTENBERG
Spud Date	3/30/2014		
Surface Coordinates	2380' FSL, 550' FWL		
Ground Elevation	4943'	K.B. Elevation	4973'
Logged Interval	6324'	To	7926'
Formation	NIORARA C CHALK	Total Depth	7926'
Type of Drilling Fluid	LSND		

Company NOBLE ENERGY IN  
Address 1625 Broadway Suite  
Denver, CO 80202

Name RENEE CLACKLER  
Company NOBLE ENERGY IN  
Address 1625 Broadway Suite  
Denver, CO 80202

ANDREA ZUIDEMA  
JESSICA SIEBERG



# Operator

20.

2200

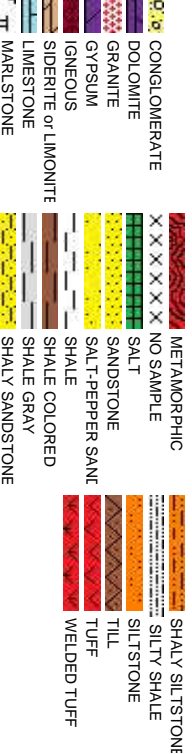
# Geologist

20.

2200
























































## Other

## Rock Types



## Accessories

## Fossils

<b>Fossils</b>	 F FOSSIL	 GLAUCONITE	 TUFFACEOUS
 GASTROPOD	 ARGILLITE GRAIN	 GYPSIFEROUS	
 OOLITE	 B BENTONITE	 HEAVY MINERAL	
 OSTRACOD	 BITUMINOUS SUBSTANCE	 INOCERAMUS	
 PELECYPOD	 BRECCIA FRAGMENTS	 KAOLIN	
 BIOCLASTIC	 CALCAREOUS	 MARLSTONE	
 BRYOZOA	 CARBONACEOUS FLAKES	 MINERAL CRYSTALS	
 CEPHALOPOD	 CHTDK	 NODULES	
 PLANT SPORES	 CHTLT	 PHOSPHATE PELLETS	
 CORAL	 COAL - THIN BEDS	 PYRITE	
 CRINOID	 DOLOMITIC	 SALT CAST	
 ECHINOID	 FELDSPAR	 SANDY	
 FISH	 FERRUGINOUS PELLET	 SILICEOUS	
 FORAMINIFERA	 FERRUGINOUS	 SILTY	
	 ANHYDRITIC		
	<b>Minerals</b>		
		 STRINGER	
		 ANHYDRITE STRINGER	
		 BENTONITE STRINGER	
		 COAL STRINGER	
		 DOLomite STRINGER	
		 GYPSUM STRINGER	
		 LIMESTONE STRINGER	
		 MARLSTONE (CALC) STRG	
		 MARLSTONE (DOL) STRG	
		 SANDSTONE STRINGER	
		 SHALE STRINGER	
		 SILTSTONE STRINGER	

**Springer**

	ANHYDRITE STRINGER
	BENTONITE STRINGER
	COAL STRINGER
	DOLOMITE STRINGER
	GYPSUM STRINGER
	LIMESTONE STRINGER
	MARLSTONE (CALC) STRINGER
	MARLSTONE (DOL) STRINGER
	SANDSTONE STRINGER

## Minerals

**Minerals**

- FERRUGINOUS PELLETS
- ✓ SLICEOUS
- ✗ FERRUGINOUS
- ✗ SILTY
- ✗ ANHYDRITIC

## Other Symbols

## Oil Show

**Oil Show**

 DEAD

 EVEN

 MOLDIC

 ORGANIC



















 PINPOINT

 VUGGY

# Engineering

Engineering

## Porosity

	REVERSE FAULT
	SIDEWALL CORE (LEFT)
	SIDEWALL CORE (RIGHT)
	CONNECTION (LEFT)
	CONNECTION (RIGHT)
	CONNECTION GAS
	SLIDE
	SURVEY
	TRIP GAS
	CORE - LOST
	CORE - RECOVERED
	DST INTERVAL
	INTERPOOLITIC
	EARTHY
	FENESTRAL
	FRACTURE
	INTERCRYSTALLINE
	FRACTURE

## Textures

BS BOUNDSTONE  
C CHALKY  
CX CRYPTOXLN

## Sorting

**M** MODERATE  
**P** POOR  
**W** WELL

Slide/Rotate

BEGAN DRILLING CURVE  
@ 02:30PM 04/01/2014

60' Sample Interval

ROP  
ROF

Total Gas & Chromatograph

GAS  
C1  
C2  
C3  
C4

COLUMBINE LOGGING INC.  
RIGGED UP ON 03/31/2014  
MANNED 2-PERSON LOGGING  
WITH BLOODHOUND GAS  
CHROMATOGRAPH UNIT #0595  
COLUMBINE BEGAN LOGGING  
ON 03/31/2014

Bit Data  
Bit #: 2  
Type: SMITH SD611  
Size: 8.75"  
Depth In: 6,324 '  
Depth Out: 7,362 '  
Jets: 3 X14 : 3X15  
S/N: JH5329

Depth Labels

% Lith

Gamma  
GAMMA

Well Bore  
TVD

Oil Show

Images

Acetone was used as the cutting agent with the dimple filled to the rim

The ratings are based on 7 descriptors:  
None, Slight trace, Trace, Fair, Moderate, Good, and Excellent. The descriptor used is based on the loggers observations and best judgment of brilliance, color and longevity of the cut.

SLTY SH: dk-med gy, sft, sb blk-y-sb pty, tr pty, rthy mtx, non calc, tr shy ss

SLTY SH: dk-med gy, sft, sb blk-y-sb pty, occ pty, rthy mtx, non calc

SLTY SH: gy-med gy, occ dk gy, sft blk-y-sb pty, occ pty, rthy mtx, non shy ss

MD: 6,356 '  
TVD: 6,293.23 '  
Inclination: 2.8 °  
Azimuth: 355.7 °  
VS: 210.3 '

MD: 6,404 '  
TVD: 6,341 '  
Inclination: 8.1 °  
Azimuth: 356.3 °  
VS: 214.86 '  
TVD (ft)

MUD WT 10.10 VIS 40

70

6000

ROP (ft/hr)  
500  
5000  
500000

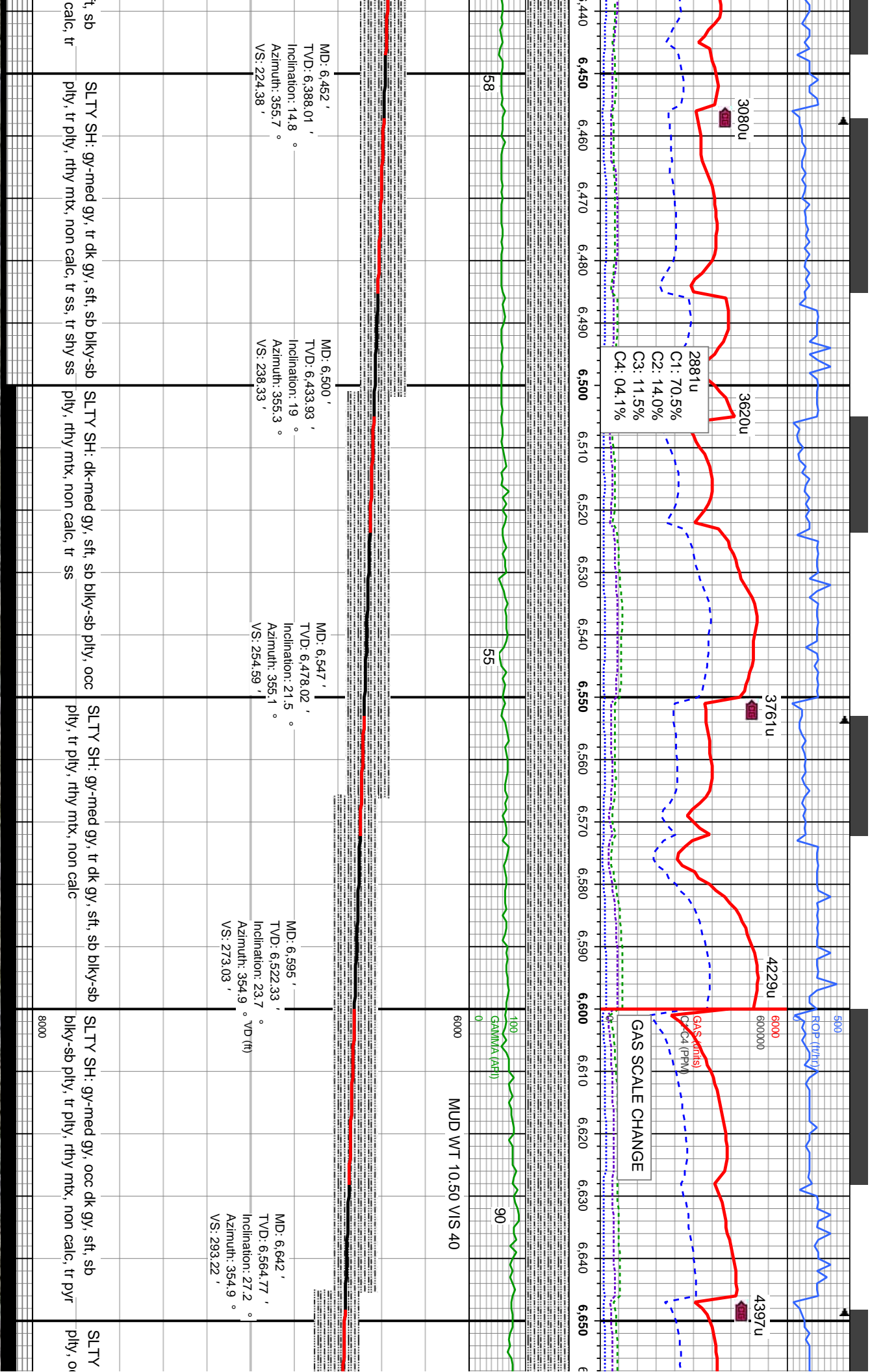
GAS (units)

C1 C2 C3 C4 (PPM)

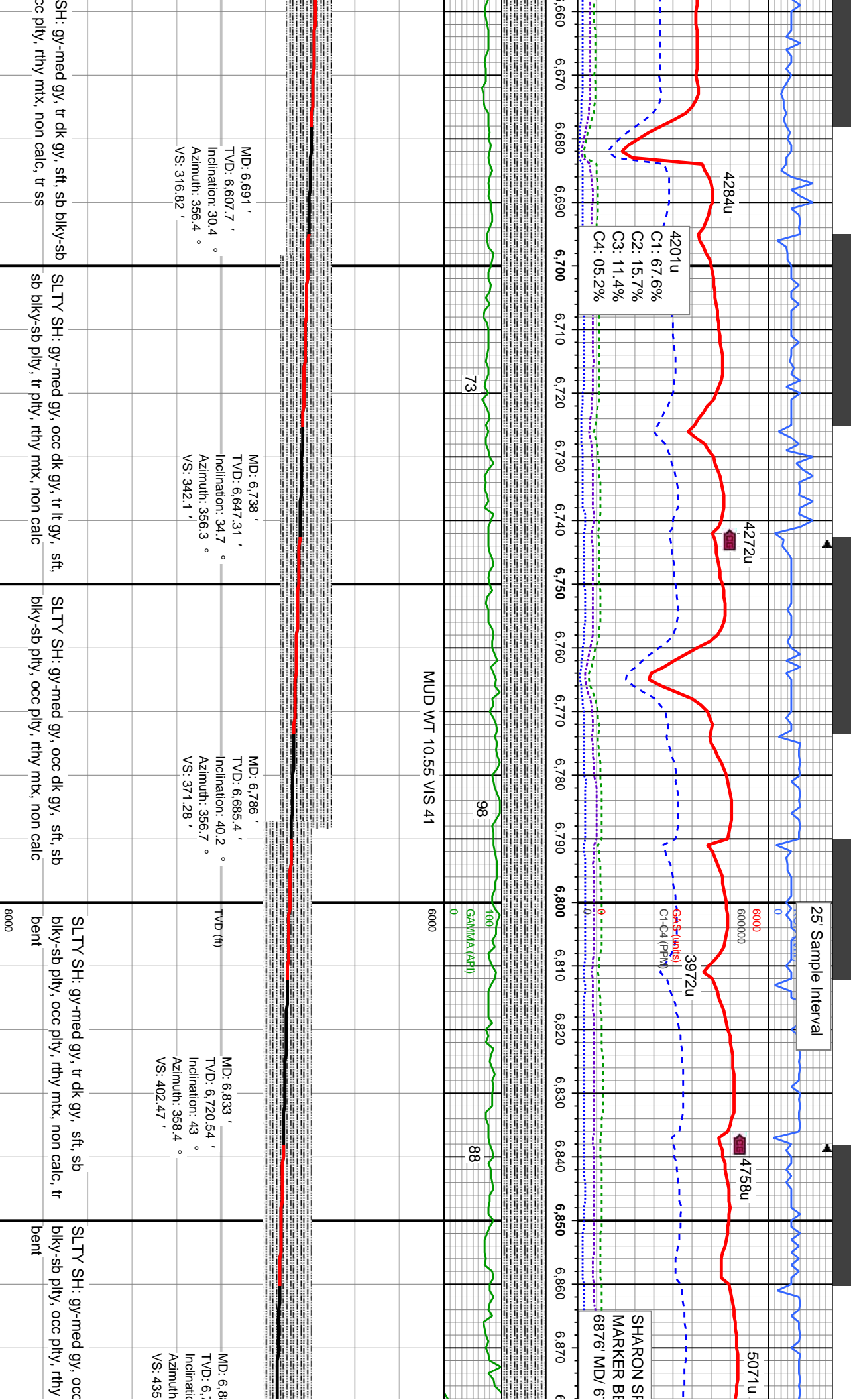
2431u

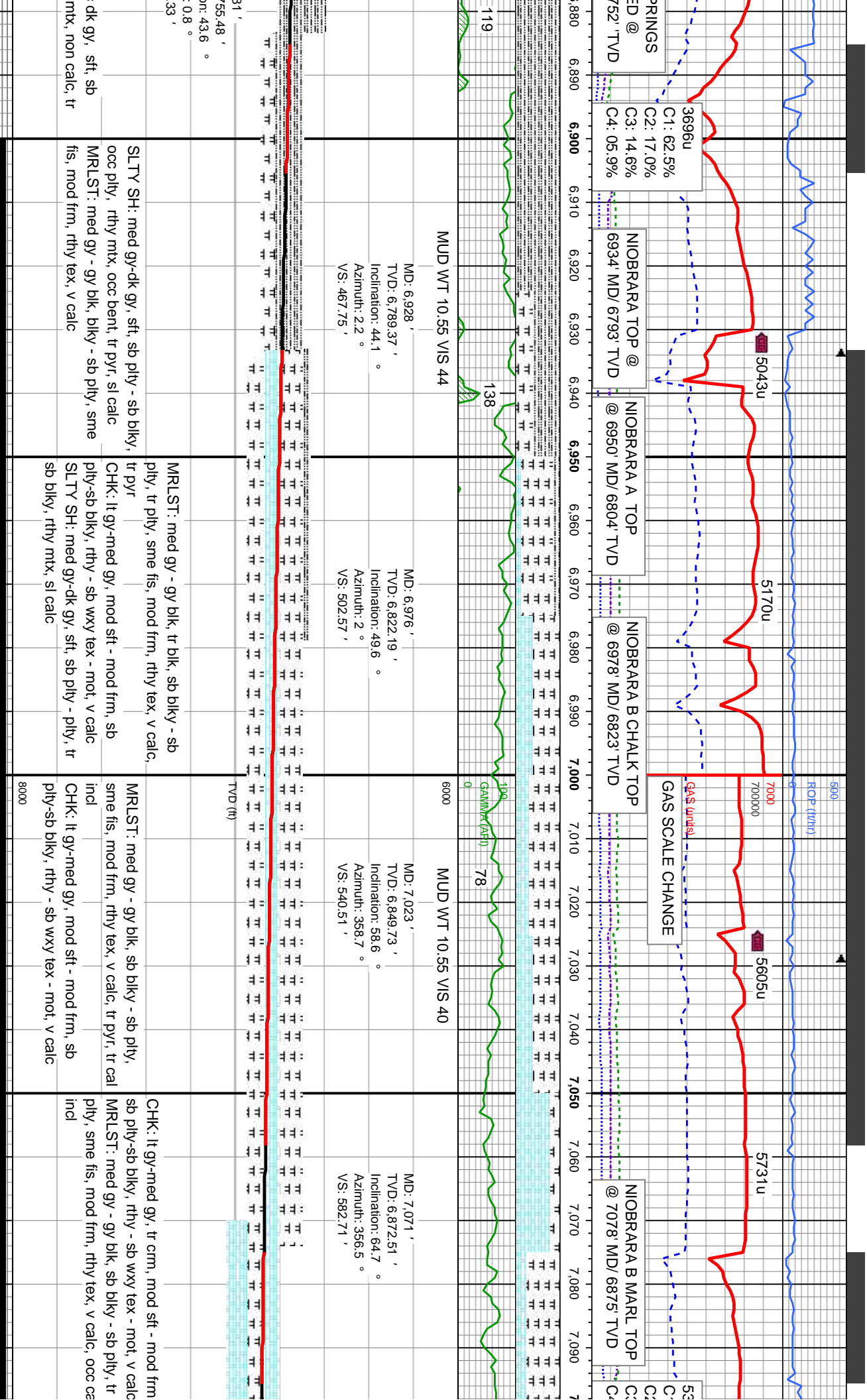
2961u













DATE: 04/02/2014

TIME: 00:00

ROP (ft/h)

7000

5509u

5358u

5521u

5502u

5641u

5668u

5685u

5698u

5711u

5724u

5737u

5750u

5763u

5509u

5358u

5521u

5502u

5641u

5668u

C1: 65.2%  
C2: 17.5%  
C3: 11.7%  
C4: 05.5%

NIORARA C CHALK TOP  
@ 7300' MD/ 6938' TVD

GA\$ (mils)  
C1-C4 (PPM)

6

190

GA/MMA (AFL)

0

6000

MD: 7.118'

TVD: 6.891.13'

Inclination: 68.6°

Azimuth: 356.3°

VS: 625.86'

MD: 7.166'

TVD: 6.907.35'

Inclination: 71.9°

Azimuth: 358.1°

VS: 671.02'

MD: 7.213'

TVD: 6.920.66'

Inclination: 75.2°

Azimuth: 359.8°

VS: 716.04'

MD: 7.261'

TVD: 6.931.7'

Inclination: 78.2°

Azimuth: 358.8°

VS: 762.68'

MD: 7.309'

TVD: 6.939.76'

Inclination: 82°

Azimuth: 0°

VS: 809.47'

MD: 7.357'

TVD: 6.947.89'

Inclination: 85°

Azimuth: 0°

VS: 855.14'

MD: 7.405'

TVD: 6.958.02'

Inclination: 88°

Azimuth: 0°

VS: 900.81'

MD: 7.453'

TVD: 6.968.15'

Inclination: 91°

Azimuth: 0°

VS: 946.50'

5641u

5668u

5685u

5711u

5724u

5737u

5750u

5763u

5776u

5789u

5802u

5815u

5828u

5841u

5854u

5867u

5880u

5893u

5906u

5919u

5932u

5945u

5958u

5971u

5984u

5997u

6010u

6023u

6036u

6049u

6062u

6075u

6088u

6101u

6114u

6127u

6140u

6153u

6166u

6179u

6192u

6205u

6218u

6231u

6244u

5641u

5668u

5685u

5711u

5724u

5737u

5750u

5763u

5776u

5789u

5802u

5815u

5828u

5841u

5854u

5867u

5880u

5893u

5906u

5919u

5932u

5945u

5958u

5971u

5984u

5997u

6010u

6023u

6036u

6049u

6062u

6075u

6088u

6101u

6114u

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6153u

6166u

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6231u

6244u

5641u

5668u

5685u

5711u

5724u

5737u

5750u

5763u

5776u

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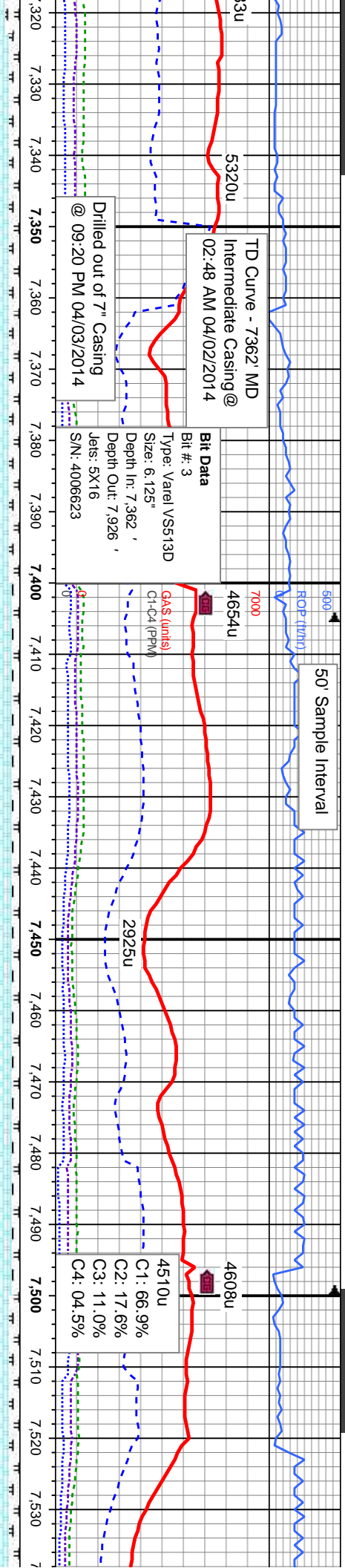
5945u

5958u

5971u

</

50' Sample Interval



MD: 7,344'   
 TVD: 6,943.54'   
 Inclination: 85.6°   
 Azimuth: 359.7°   
 VS: 844.19'

MUD WT 9.00 VIS 31

MD: 7,439'   
 TVD: 6,950'   
 Inclination: 86.6°   
 Azimuth: 359.8°   
 VS: 938.79'

MUD WT 9.00 VIS 30

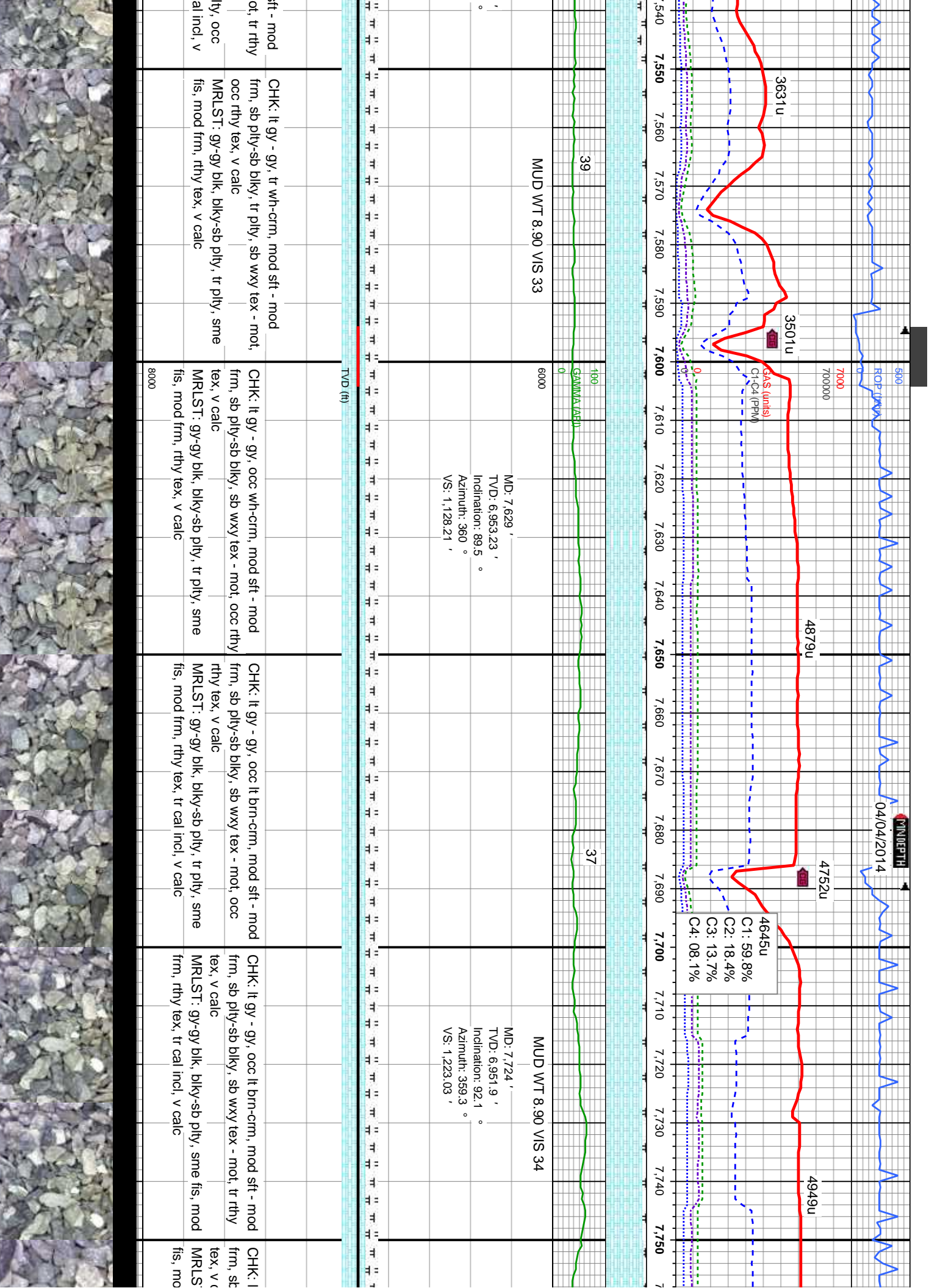
MD: 7,534'   
 TVD: 6,952.82'   
 Inclination: 90°   
 Azimuth: 1.1°   
 VS: 1,033.48'

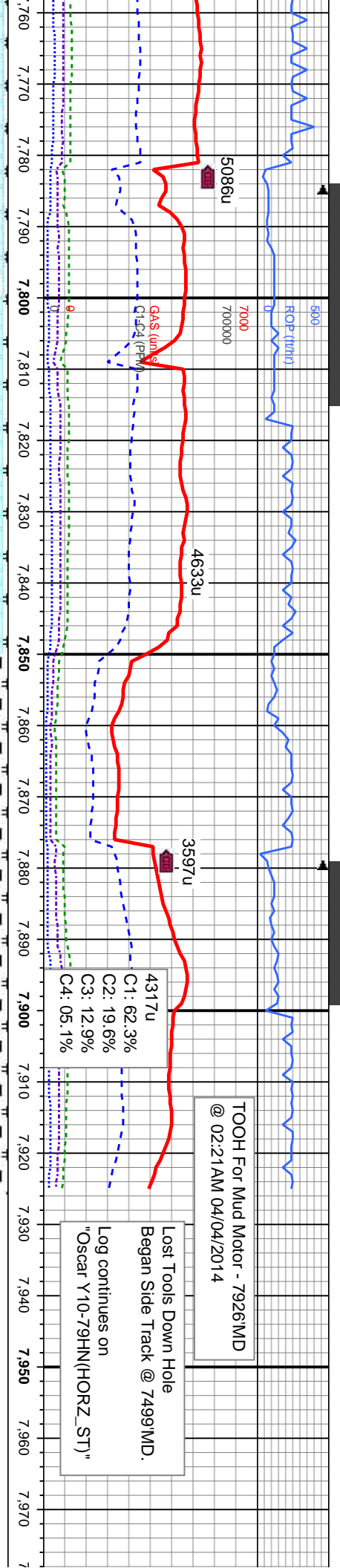
occ crm, mod sft - mod frm, sb wxy tex - mot, occ rthy tex,	CHK: lt gy - gy, tr med gy, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, tr rthy tex, v calc, tr cnt	CHK: lt gy - gy, occ wh-crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, occ rthy tex, v calc, tr cnt	CHK: lt gy - gy, occ crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, occ rthy tex, v calc	CHK: lt gy - gy, occ wh-crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, occ rthy tex, v calc	CHK: lt gy - gy, occ wh-crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, occ rthy tex, v calc
tr blk, blk-sb pty, occ pty	MRLST: gy-gy blk, occ blk, blk-sb pty, tr pty, sme fis, mod frm, rthy tex, v calc	MRLST: gy-gy blk, tr blk, blk-sb pty, sme fis, mod frm, rthy tex, tr cal incl, v calc	MRLST: gy-gy blk, tr blk, blk-sb pty, tr pty, sme fis, mod frm, rthy tex, tr cal incl, v calc	MRLST: gy-gy blk, tr blk, blk-sb pty, sme fis, mod frm, rthy tex, tr cal incl, v calc	MRLST: gy-gy blk, tr blk, blk-sb pty, sme fis, mod frm, rthy tex, tr cal incl, v calc
tr bent, v calc					

TVD (ft)









MD: 7,819 '  
TVD: 6,950.16 '  
Inclination: 90 °  
Azimuth: 0 °  
VS: 1,317.84 '

MUD WT 8.90 V/S 33

TVD (ft)

t gy - gy, occ lt brn-crm, mod sft - mod pty-sb blk, sb wxy tex - mot, occ rthy	CHK: lt gy - gy, tr lt brn-crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, tr rthy tex, v calc	CHK: lt gy - gy, tr lt brn-crm, mod sft - mod frm, sb pty-sb blk, sb wxy tex - mot, tr rthy tex, v calc
T: gy-gy blk, blk-ty-sb pty, tr pty, sme d frm, rthy tex, tr cal incl, v calc	MRLST: gy-gy blk, blk-ty-sb pty, tr pty, sme fis, mod frm, rthy tex, tr cal incl, v calc	MRLST: gy-gy blk, blk-ty-sb pty, tr pty, sme fis, mod frm, rthy tex, v calc



