



Scale: 5" / 100'  
Measured Depth Log

ST-SW SEC 21 15N 46W

State Colorado

Country United States

API Number 05-123-42696-00

Geographic Region D.J. Basin

Spud Date 2/28/2016

Surface Coordinates 389 FSL x 1817 FWL (Lat: 40.337901, -104.33166)

Bottom Hole Coordinates 470 FNL x 2045 FWL (Lat: 40.40677, -104.33031)

Ground Elevation 4,634

Logged Interval 5850' ML To 16268' N

County Weld

Rig Number Xtreme 22

AFE # 16030

Field Wattenberg

Drilling Completed 3/6/2016

K.B. Elevation 4,651

Total Depth 16268' MD

### Operator

#### Company

#### Address

Bonanza Creek Energy  
410 17th Street  
Suite 1400  
Denver, CO 80202

### Geologists

Name Paul McKay

#### Company

Bonanza Creek Energy

#### Address

Bonanza Creek Energy  
410 17th Street  
Suite 1400  
Denver, CO 80202

### Zone Color C

Oil  
Note  
Error

Condensate  
Core  
Water

### Rock Type

UNKNOWN  
GYPSUM  
LIMESTONE  
CHERT  
COAL

MARLSTONE  
CLAYSTONE  
SHALE  
SHALE GRAY  
SHALE COLORED

Accessories

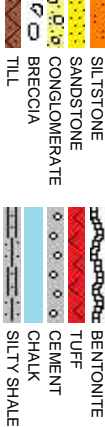
<b>Fossils</b>		FORAMINIFERA	GLAUCONITE	COAL STRINGER
FOSSIL	ANHYDRITIC	GYPSIFEROUS	DOLOMITE STRINGER	
ALGAE	GASTROPOD	BENTONITE	MARLSTONE	GYPSUM STRINGER
AMPHIPORA	OOLITE	BITUMENOUS SUBSTAN...	NODULES	LIMESTONE STRINGER
BELEMNITE	OSTRACOD	CALCAREOUS	PHOSPHATE PELLETS	MARLSTONE (CALC) ST...
BIOCLASTIC	PELECYPOD	CARBONACEOUS FLAKES	PYRITE	MARLSTONE (DOL) STRG
BRACHIOPOD	PELLET	CHTDK	SANDY	SANDSTONE STRINGER
BRYOZOA	PISOLITE	CHTLT	SILICEOUS	SHALE STRINGER
CEPHALOP...	PLANT REMAINS	COAL - THIN BEDS	SILTY	SILTSTONE STRINGER
CORAL	PLANT SPORES	DOLOMITIC	<b>Stringer</b>	
CRINOID	SCAPHOPOD	FELDSPAR	ANHYDRITE STRING...	SILTY SHALE STRINGER
ECHINOID	STROMATOPORO...	FERRUGINOUS PELLET	BENTONITE STRINGER	
FISH	FERRUGINOUS			

Minerals

Other Symbols

Oil Show		M MOLDIC	FORMATION TOP	S SUBANG	P5 PACKSTONE
D DEAD	O ORGANIC	OIL SHOW	SIDEWALL CORE (LEFT)	P SUBRAND	W5 WACKESTONE
● EVEN	V VUGGY	SIDEWALL CORE (RIGHT)			
○ QUESTIONABLE		SLIDE			
● SPOTTED STAINING	Engineering	0.5 SURVEY	TRIP GAS	CX CRYPTOXLN	W WELL
	BIT				
	CASING	WIRELINE TESTED - LEFT	WIRELINE TESTED - RT	E EARTHY	Cut
E EARTHY	CONNECTION (RIGHT)			FX FINELYXLN	
■ FENESTRAL	CONNECTION GAS			G5 GRAINSTONE	No Cut
F FRACTURE	CORE - LOST			L LITHOGRAPHIC	Fair Cut
X INTERCRYSTALLINE	CORE - RECOVERED	A ANGULAR		MX MICROXLN	Good Cut
● INTEROOLITIC	FAULT	R ROUNDED		M5 MUDSTONE	Blank

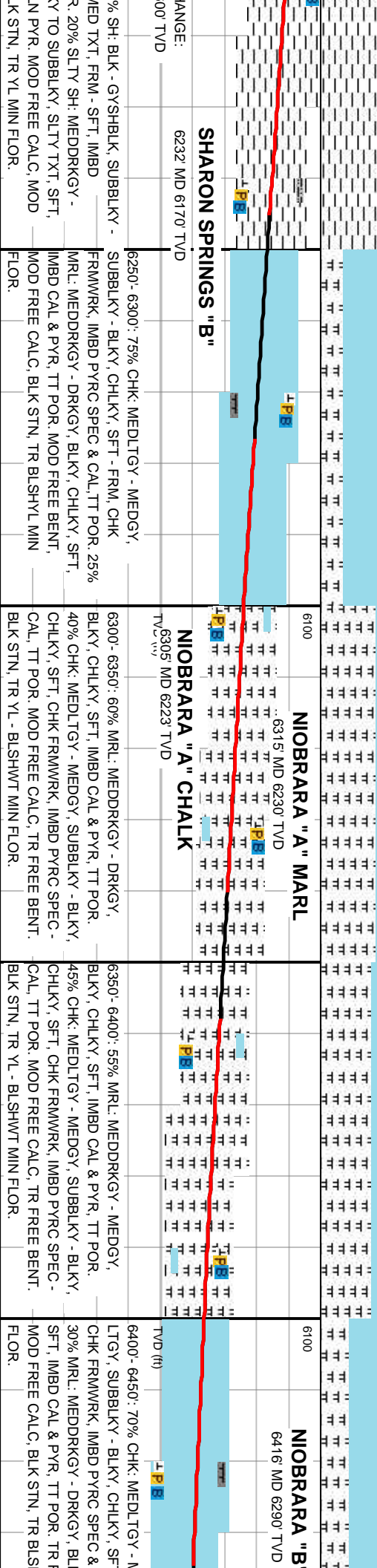
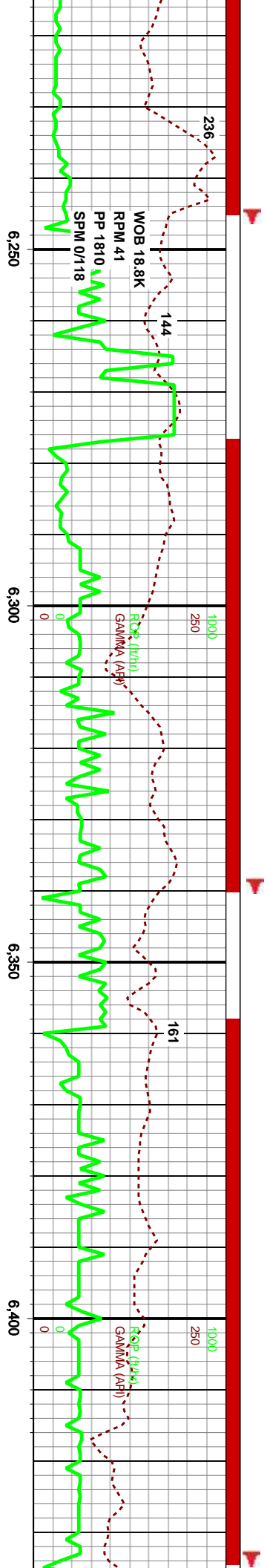
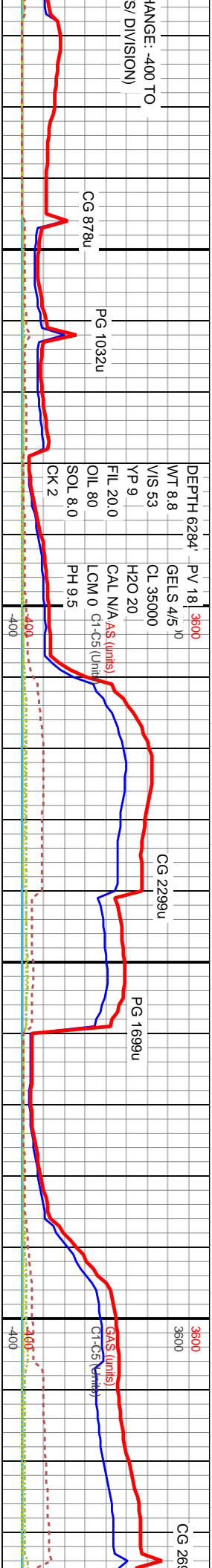
Logging









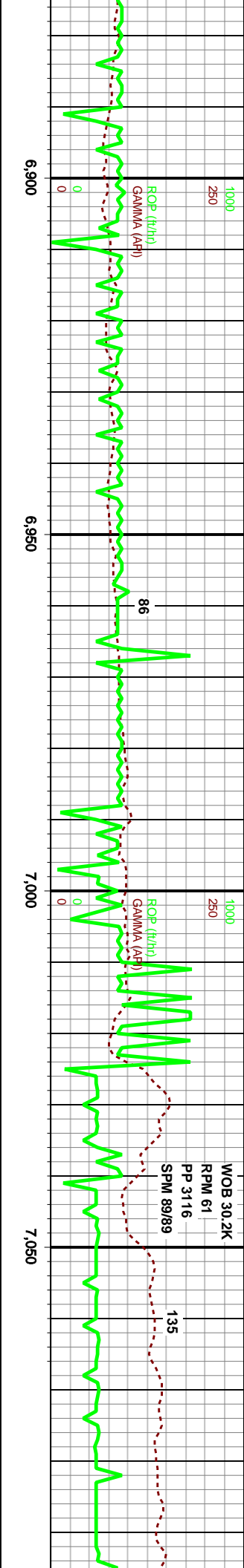
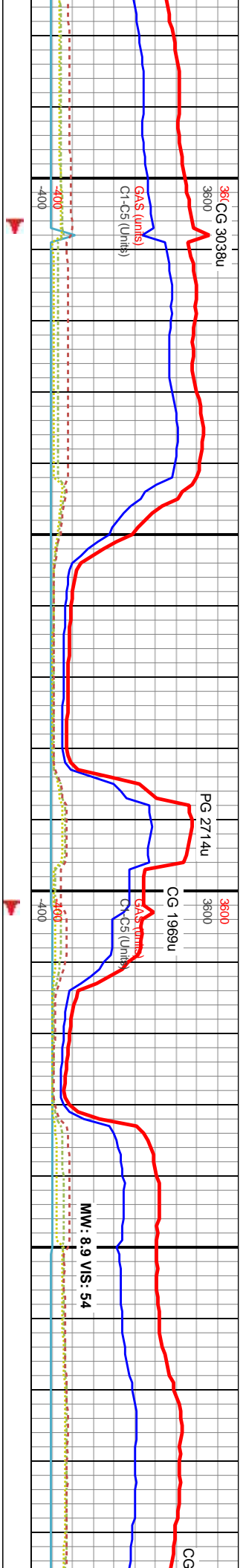


MD: 6,294'  
TVD: 6,216'  
Inclination: 45°  
Azimuth: 0°  
VS: -166'

MD: 6,388'  
TVD: 6,276'  
Inclination: 56°  
Azimuth: 360°  
VS: -93'





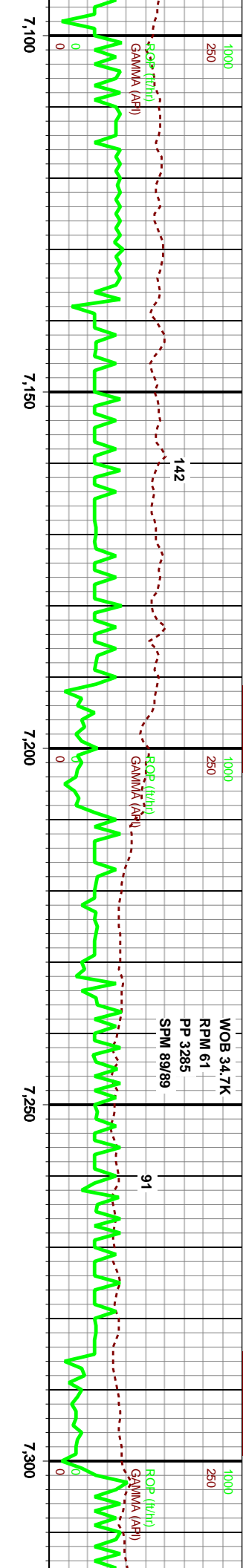
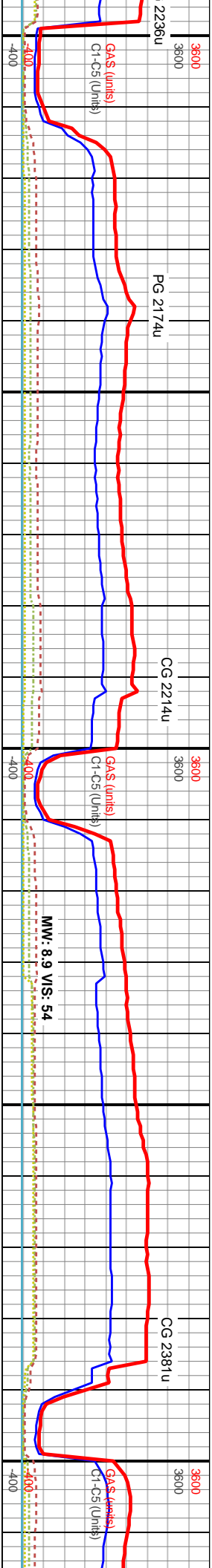


SWITCHING TO 100' SAMPLES		6250	6250		7029' MD 6395' TVD	
DLTGY - MEDGY - CHLKY, SFT - FRM, CHK			DLTGY - MEDGY - CHLKY, SFT - FRM, CHK		DLTGY - MEDGY - CHLKY, SFT - FRM, CHK	
TR FREE CALC, TR			TR FREE CALC, TR		TR FREE CALC, TR	
BLSHYL MIN FLO.			BLSHYL MIN FLO.		BLSHYL MIN FLO.	
6900 - 7000: 65% CHK, MEDLTGY - MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK			6900 - 7000: 65% CHK, MEDLTGY - MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK		7000 - 7100: 70% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, 30% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC - CAL, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR YL - BLSHWT MIN FLO.	
TVD (ft)			TVD (ft)		TVD (ft)	

MD: 6,954'  
TVD: 6,395'  
Inclination: 90°  
Azimuth: 1°  
VS: 449'

MD: 7,049'  
TVD: 6,395'  
Inclination: 90°  
Azimuth: 0°  
VS: 544'





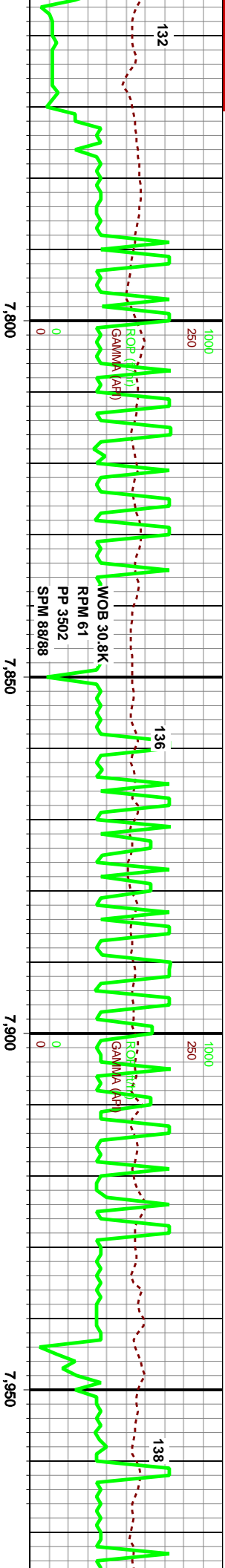
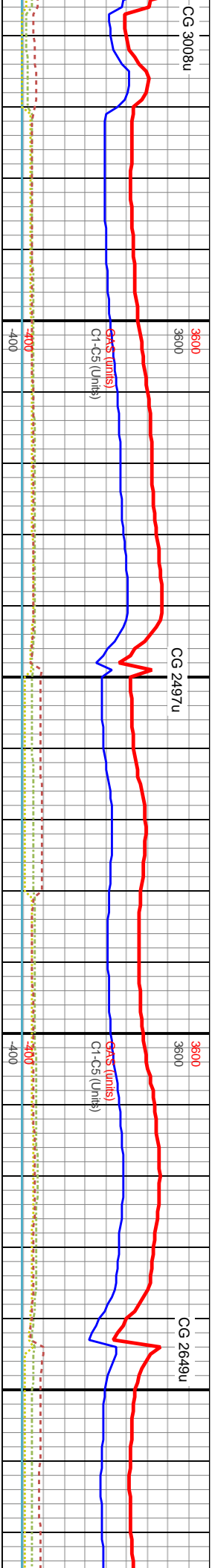
6250		6250		6250	
		7217' TVD 6392' TVD			
		NIOBRARA C CHALK			
7100' - 7200': 60% MRL: MEDDRKY - DRKY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR: 40% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC - CAL, TT POR: MOD FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR YL - BLSHWI MIN 6FLOP.		7200' - 7300': 70% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR: 30% MRL: MEDDRKY - DRKY, BLKY, CHLKY, SFT, IMBD CAL & #PYR, TT POR: MOD FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOP.		7300' - 7400': 80 FRMWK, IMBD IMBD CAL & PY	
TVD (ft)		TVD (ft)		TVD (ft)	

MD: 7,143'  
TVD: 6,394'  
Inclination: 91°  
Azimuth: 0°  
VS: 638'

MD: 7,237'  
TVD: 6,392'  
Inclination: 91°  
Azimuth: 2°  
VS: 732'





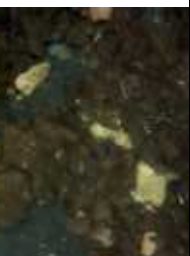
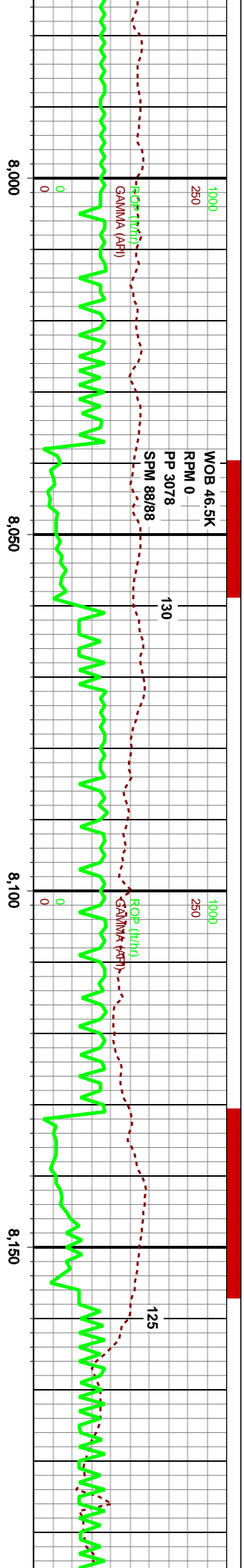
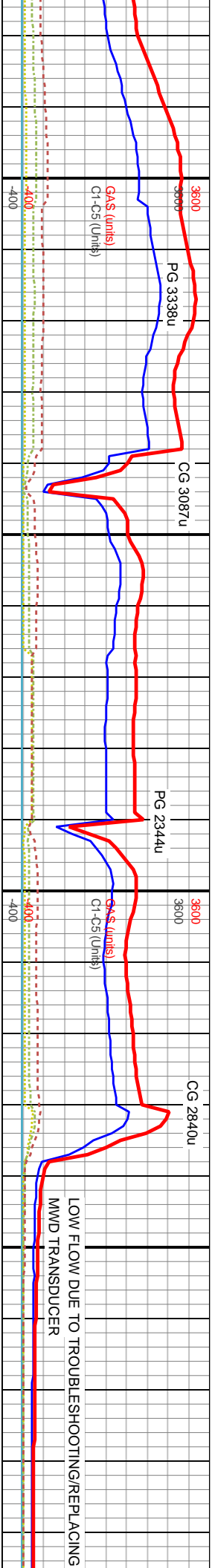


6250		6250	
TVD (ft)		TVD (ft)	
BLKY, CHLKY, SFT - FRM, CHK		7900 - 8000': 60% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & 40% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRI	
MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR		SPEC & CAL, TT POR, TR FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR	
BLSHYL MIN FLOR.		#FLOR.	

MD: 7,803'  
TVD: 6,387'  
Inclination: 90°  
Azimuth: 359°  
VS: 1,297'

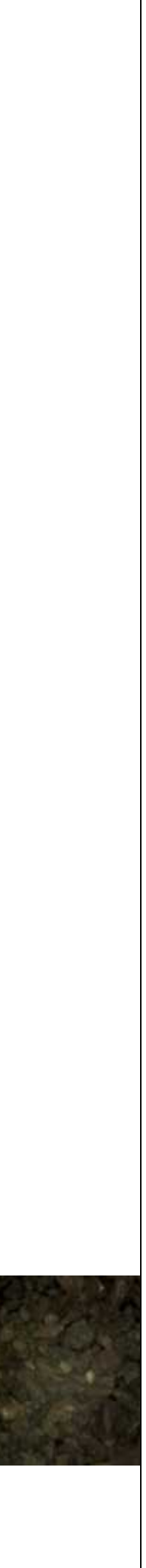
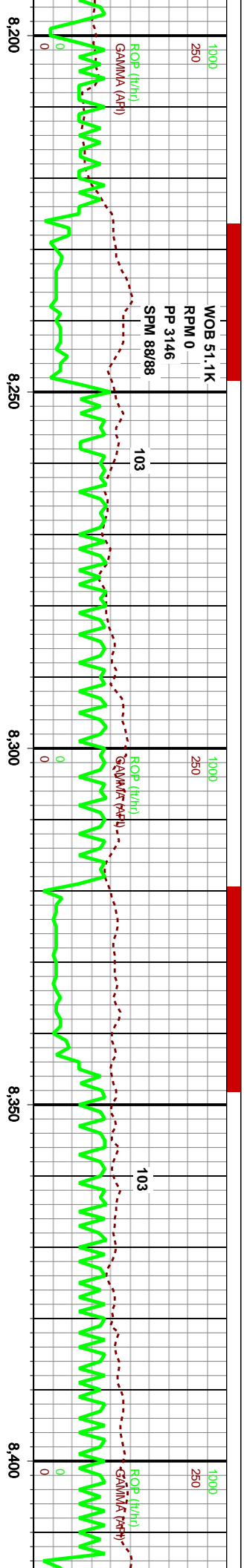
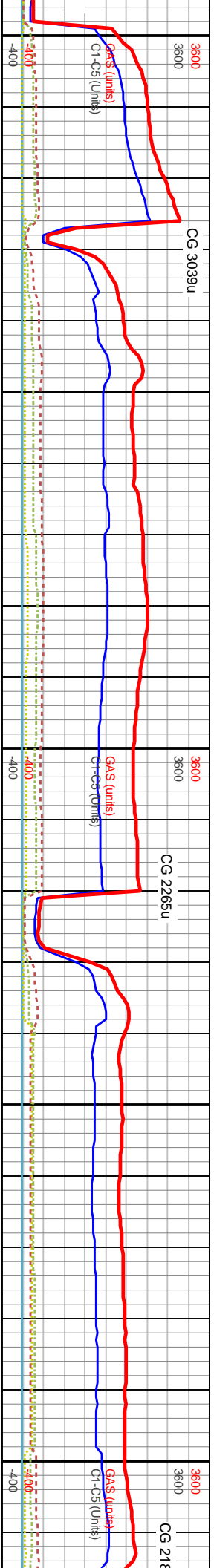
MD: 7,897'  
TVD: 6,387'  
Inclination: 90°  
Azimuth: 358°  
VS: 1,391'





PYR, TT POR.		8000' - 8100': 60% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK		8100' - 8200': 80% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK,	
IMBD PYRC		FRMWK, IMBD PYRC SPEC & CAL, TT POR, 40% IMRL: MEDDRGY - DRKG, BLKY, CHLKY, SFT, IMBD		CAL & PYR, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR	
N, TR BLSHYL MIN		BLSHYL MIN FLOOR.		MIN FLOOR.	
6250		6250		6250	
TVD (ft)		TVD (ft)		TVD (ft)	

MD: 7,992'	MD: 8,086'	MD: 8,179'
TVD: 6,387'	TVD: 6,388'	TVD: 6,386'
Inclination: 90°	Inclination: 89°	Inclination: 93°
Azimuth: 356°	Azimuth: 357°	Azimuth: 360°
VS: 1,486'	VS: 1,579'	VS: 1,672'

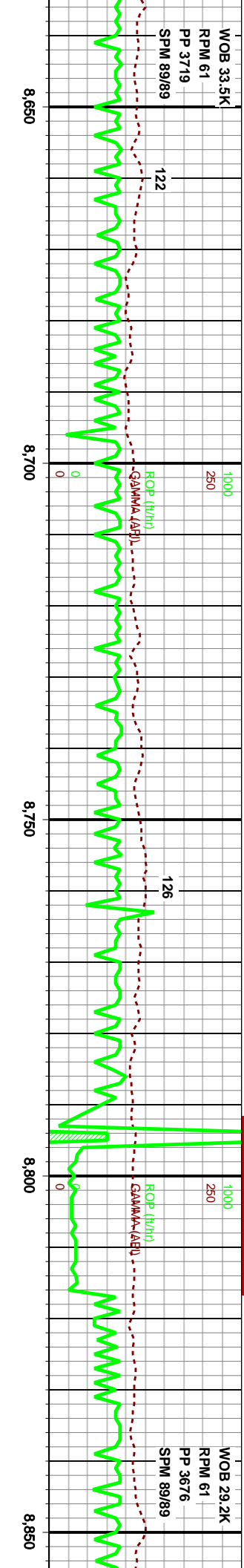
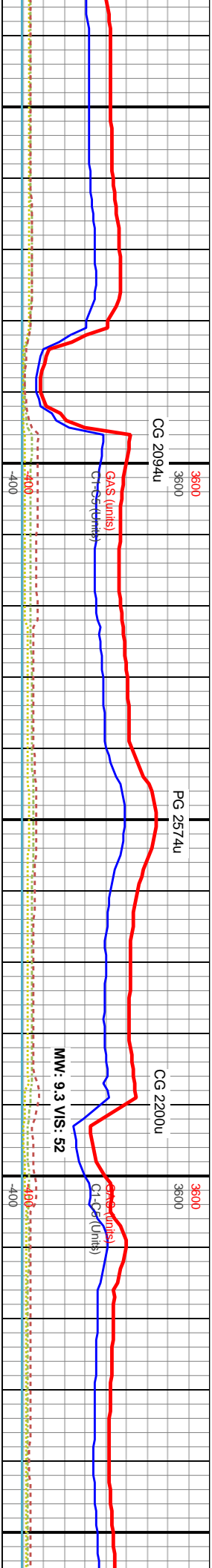


6250	NEW TARGET DEPTH: LEVEL OFF AT 6381' TVD	6250	6250	6250
8200' - 8300': 85% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 15% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		8300' - 8400': 75% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 25% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, MOD FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		8400' - 8500': 70% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 15% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.

MD: 8,273'  
TVD: 6,381'  
Inclination: 92°  
Azimuth: 360°  
VS: 1,766'

MD: 8,368'  
TVD: 6,379'  
Inclination: 90°  
Azimuth: 360°  
VS: 1,861'





L TGY W/ MEDGY, SUBBLKY - BLKY, CHUKY, SFT, CHK		8700 - 8800': 75% CHK, LTGY - MEDLTGY, SUBBLKY - BLKY, CHUKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 25% MRL: DRKGY - VDRKGY, BLKY, CHUKY, SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOP.		8800 - 8900': 75% CHK, LTGY W/ MEDGY - MEDDRKGY, SUBBLKY - BLKY, CHUKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 25% MRL: DIL: DRKGY - VDRKGY, BLKY, CHUKY, SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOP.	
L P		L P		L P	
L P		L P		L P	
TVD (ft)		TVD (ft)		TVD (ft)	

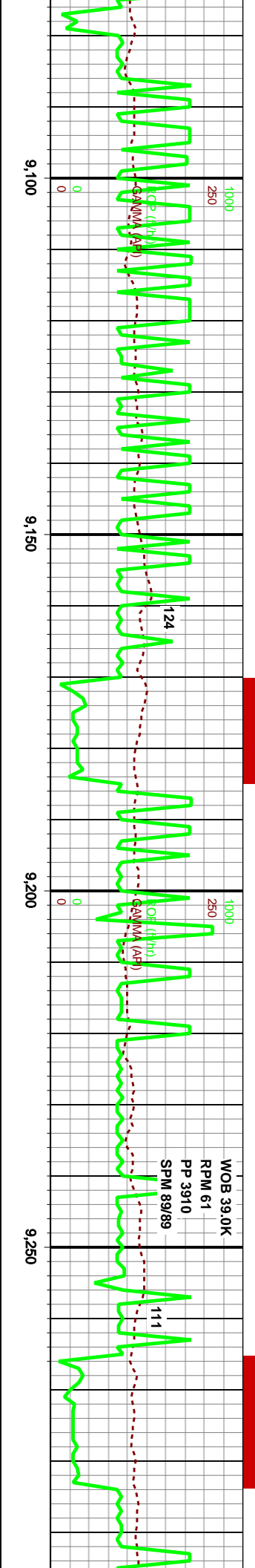
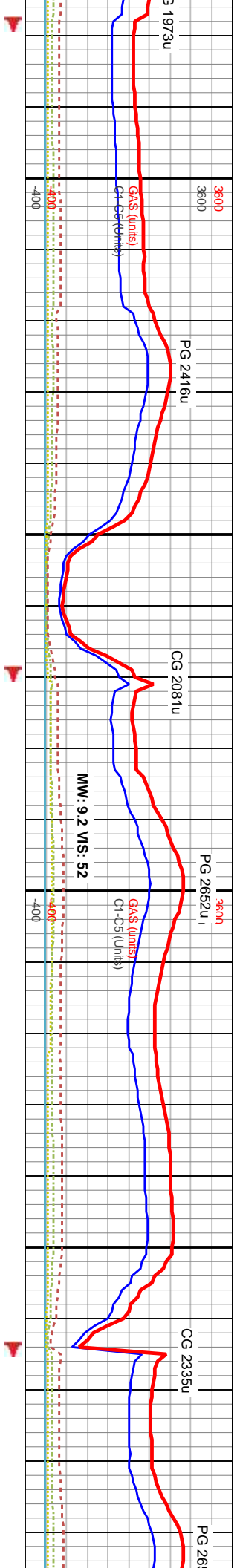
MD: 8,652'  
TVD: 6,379'  
Inclination: 90°  
Azimuth: 3°  
VS: 2,145'

MD: 8,746'  
TVD: 6,378'  
Inclination: 91°  
Azimuth: 4°  
VS: 2,239'

MD: 8,840'  
TVD: 6,378'  
Inclination: 90°  
Azimuth: 1°  
VS: 2,333'



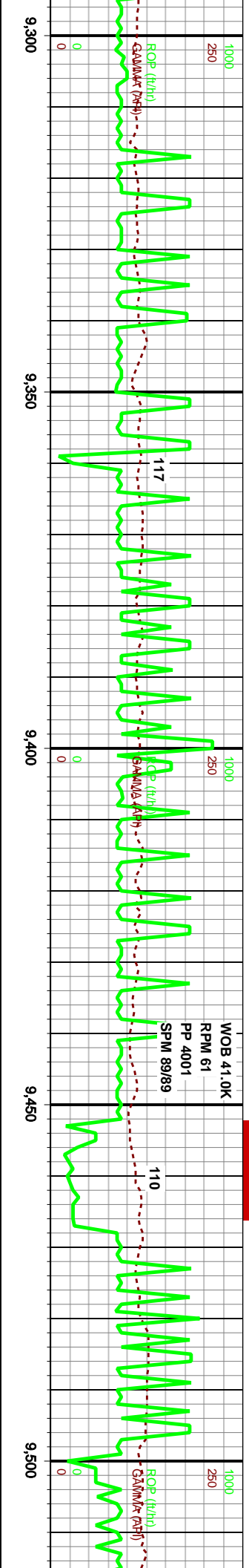
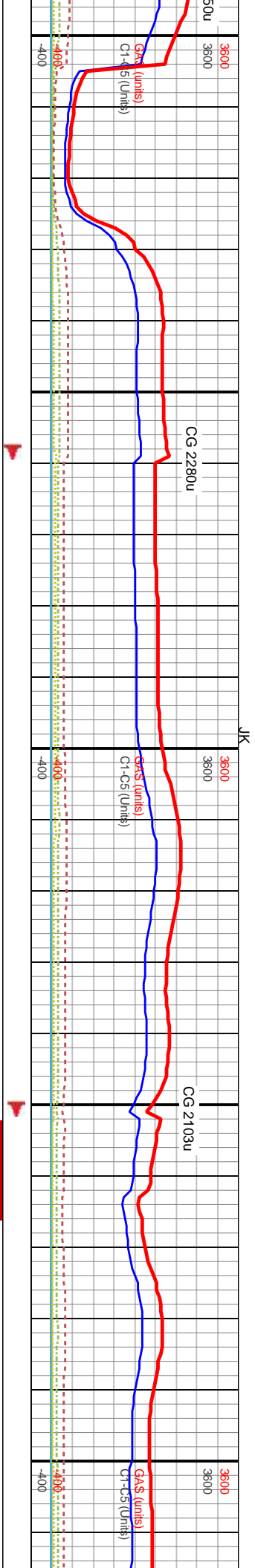




		6250		6250		6250	
L P		L P		L P		L P	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
FRMWK, IMBD IMBD CAL & PYR,		9100' - 9200': 80% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR: 20% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR: TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		9200' - 9300': 70% CHK: LTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR: 30% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR: TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.			

MD: 9,122'  
TVD: 6,381'  
Inclination: 90°  
Azimuth: 2°  
VS: 2.615'

MD: 9,216'  
TVD: 6,380'  
Inclination: 92°  
Azimuth: 359°  
VS: 2.708'



9300' - 9400': 66% CHK: LTGY W/ MEDGY - MEDDRKGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 35% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		9400' - 9500': 75% CHK: LTGY W/ MEDGY - MEDDRKGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 25% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		9500' - 9600': 70% CHK: LTGY W/ MEDGY - MEDDRKGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 35% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	
6250		6250		6250	
L P		L P		L P	
TVD (ft)		TVD (ft)		TVD (ft)	

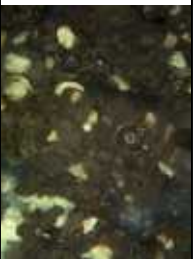
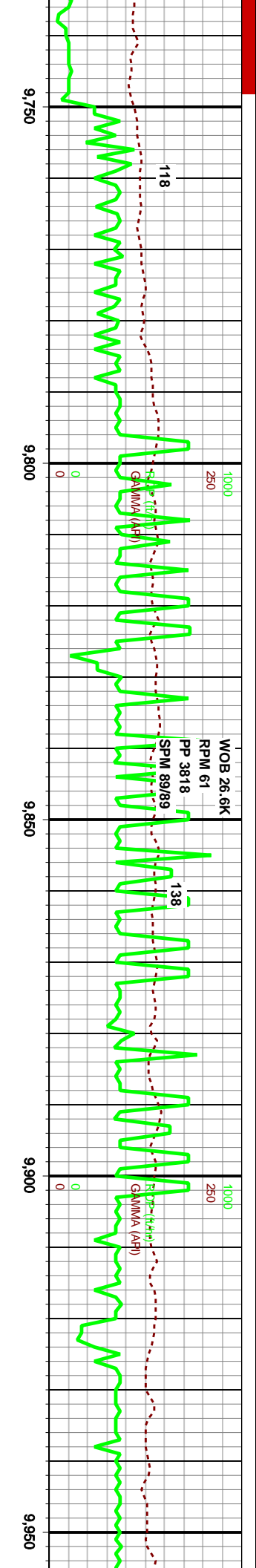
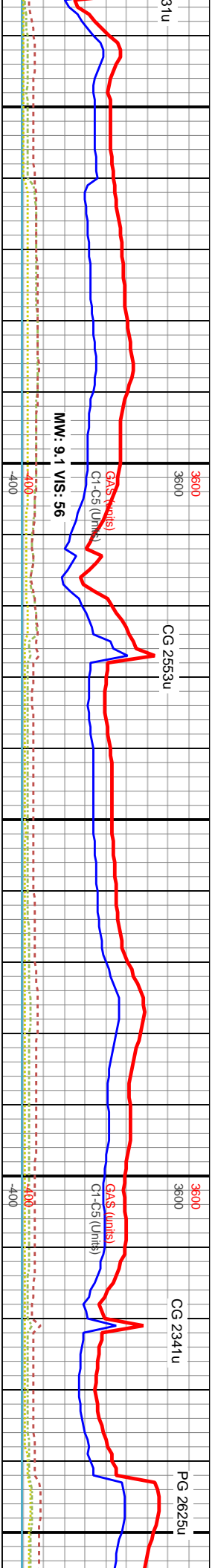
MD: 9,309'  
TVD: 6,379'  
Inclination: 90°  
Azimuth: 359°  
VS: 2,801'

MD: 9,403'  
TVD: 6,379'  
Inclination: 90°  
Azimuth: 359°  
VS: 2,895'

MD: 9,497'  
TVD: 6,380'  
Inclination: 89°  
Azimuth: 358°  
VS: 2,989'



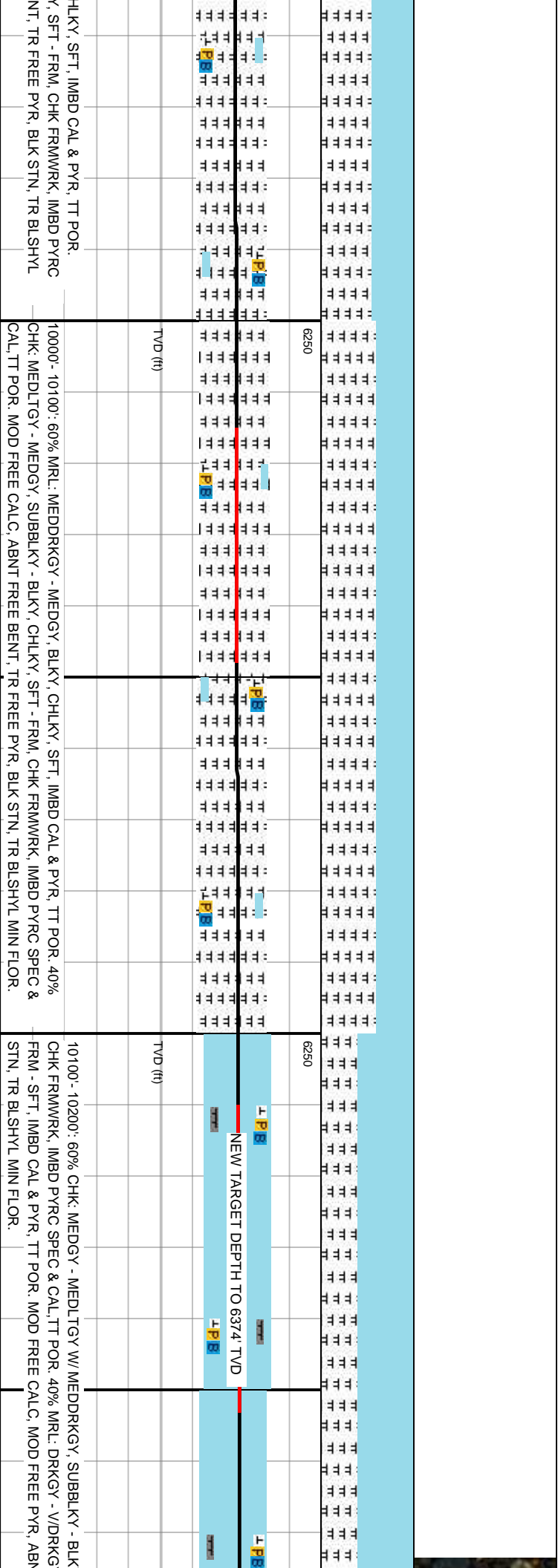
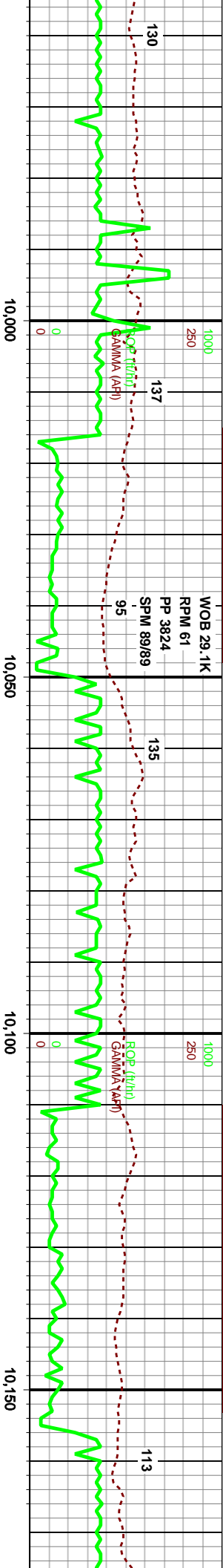
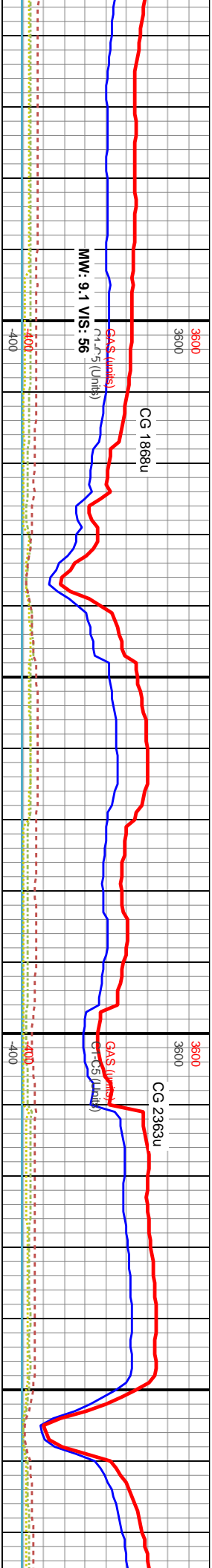




DLTGY W/ MEDDRKGY, SUBBLKY - BLKY, CHLKY, SFT, CHK		9800' - 9900': 60% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, 40%		9900' - 10000': 55% MRL: MEDDRKGY - MEDGY, BLKY, CHLKY, SFT, IMBD CAL & PYR, TT POR, 40%	
TT POR, 50% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM-		CHK, MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC &		SPEC & CAL, TT POR, MOD FREE CALC, ABNT FREE BE	
TR FREE CALC, TR FREE PYR, TR FREE BENT, BLK STN, TR		CAL, TT POR, MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLO.		6MIN FLO.	
NEW TARGET DEPTH TO 6377' TVD		NEW TARGET DEPTH TO 6377' TVD		NEW TARGET DEPTH TO 6377' TVD	
TVD (ft)		TVD (ft)		TVD (ft)	
6250		6250		6250	

MD: 9,779'  
TVD: 6,382'  
Inclination: 89°  
Azimuth: 359°  
VS: 3,271'

MD: 9,873'  
TVD: 6,383'  
Inclination: 90°  
Azimuth: 359°  
VS: 3,364'



MD: 9,968'  
TVD: 6,383'  
Inclination: 90°  
Azimuth: 355°  
VS: 3,459'

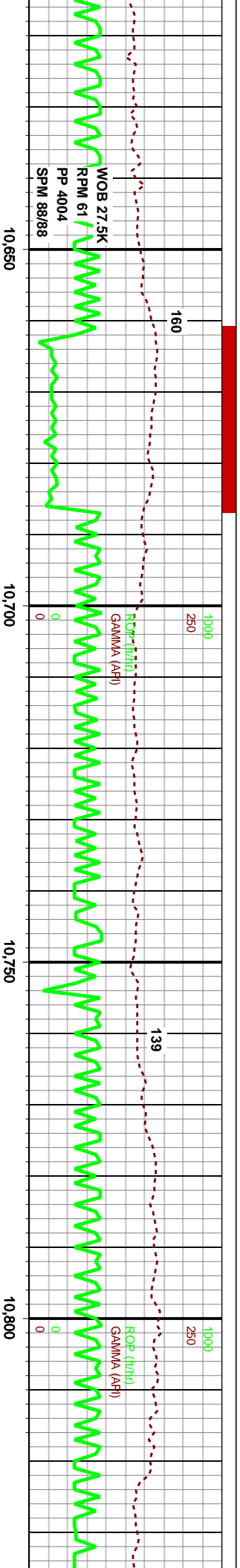
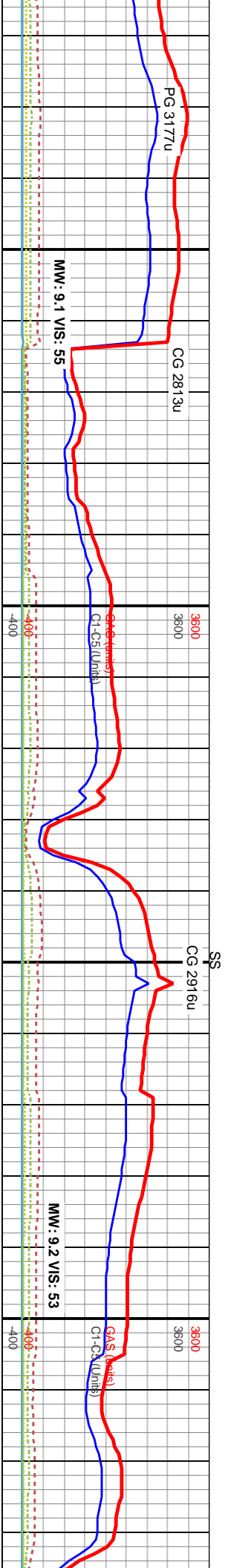
MD: 10,062'  
TVD: 6,380'  
Inclination: 94°  
Azimuth: 355°  
VS: 3,552'

MD: 10,156'  
TVD: 6,376'  
Inclination: 92°  
Azimuth: 359°  
VS: 3,646'





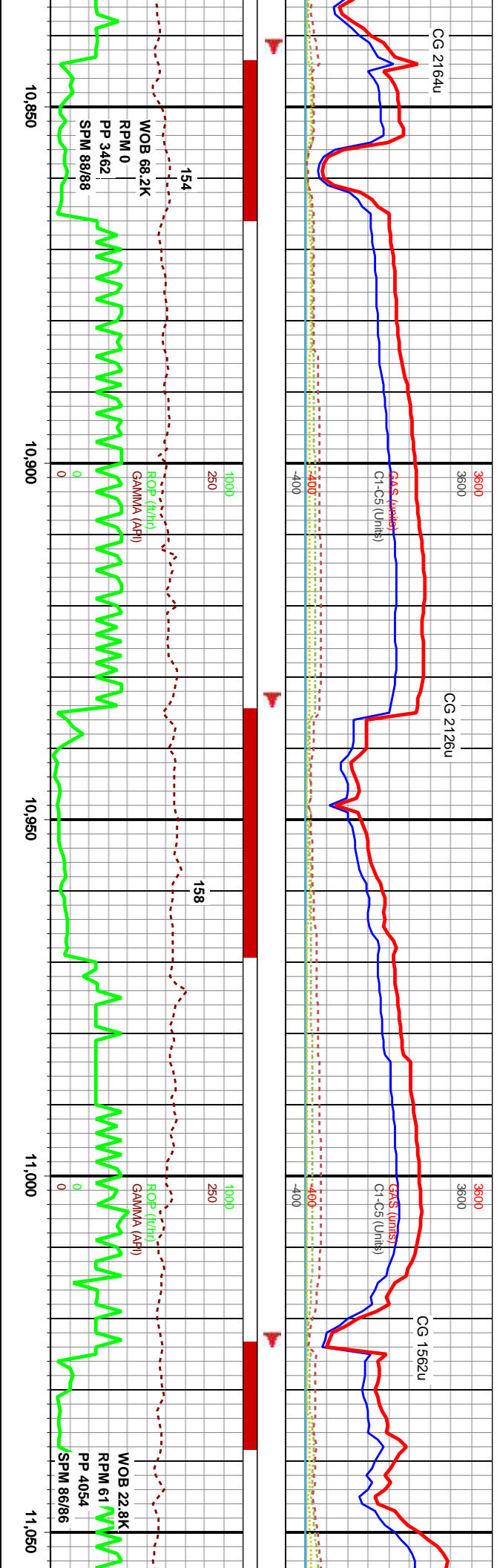


[illegible]

615'  
373'  
on: 91°  
n: 1°  
05'

MD: 10,706'  
TVD: 6,373'  
Inclination: 89°  
Azimuth: 2°  
VS: 4,196'

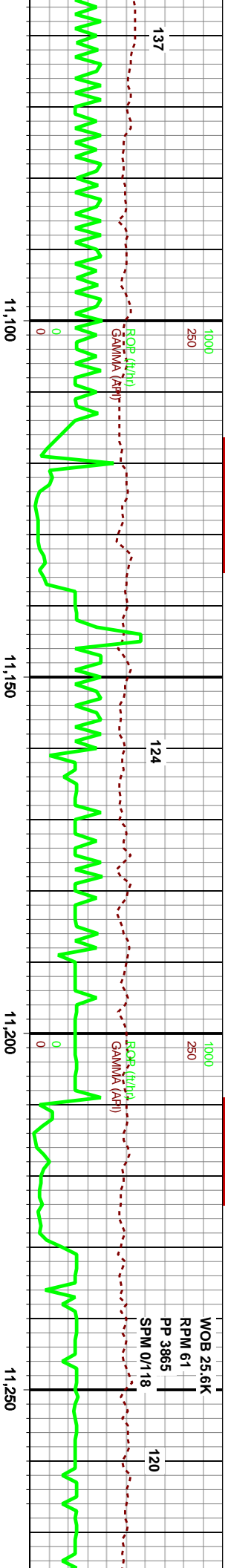
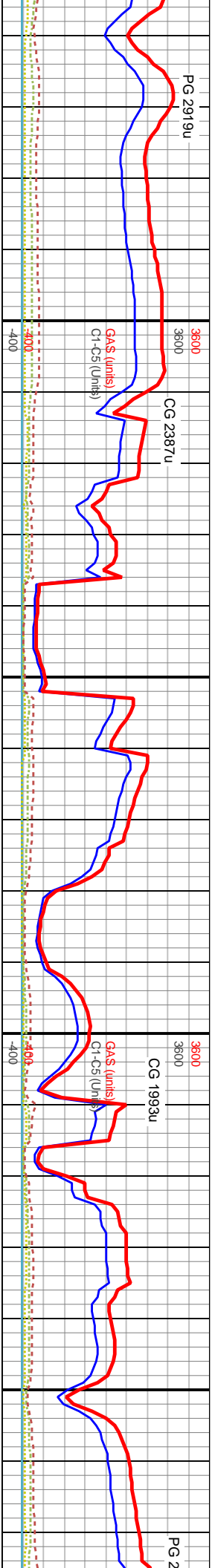
MD: 10,797'  
TVD: 6,373'  
Inclination: 91°  
Azimuth: 2°  
VS: 4,287'



10850 - 10900': 60% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 40% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		10900 - 10950': 60% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 40% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		10950 - 11000': 60% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 40% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		11050 - 11100': 50% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 50% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.	
10850 - 10900': 60% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 40% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		10900 - 10950': 60% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 40% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		10950 - 11000': 60% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 40% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC, TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.		11050 - 11100': 50% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, 50% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT - FRM, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, BLK STN, TR BLSHYL MIN FLOP.	

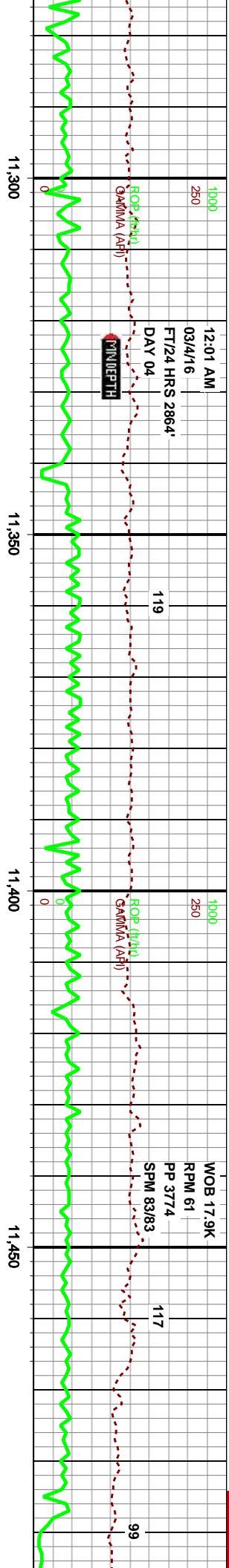
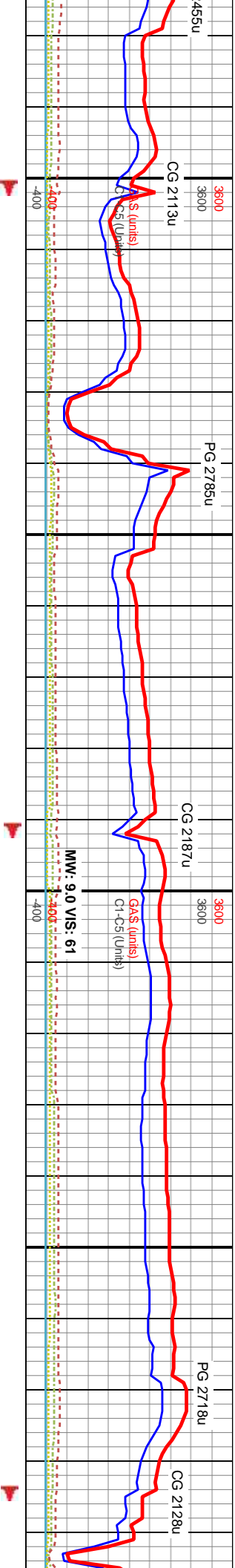
MD: 10,888'  
TVD: 6,371'  
Inclination: 91°  
Azimuth: 359°  
VS: 4,378'

MD: 10,979'  
TVD: 6,370'  
Inclination: 90°  
Azimuth: 1°  
VS: 4,469'



1100'-11100': 60% MRL: MEDDRKG - DRKG, CHLKY, FRM - SFT, IMBD CAL & PYR, TT	11000'-11150': 55% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK	11150'-11200': 60% MRL: MEDDRKG - DRKG, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT	11200'-11250': 65% MRL: DRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.	11250'-11300': 65% MRL: BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.
40% CHK: MEDGY - LTGY, SUBBLKY - FRMWWRK, IMBD PYRC SPEC & CAL, TT POR.	45% MRL: DRKG - V/DRKG, BLKY, CHLKY, FRM - SFT, IMBD CAL & PYR, TT POR, MOD	40% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC	35% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS),	35% CHK: MEDGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS),
FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	FREE BENT, BLK STN, TR BLSHYL MIN FLOR.

MD: 11,070'	MD: 11,159'	MD: 11,251'
TVD: 6,370'	TVD: 6,370'	TVD: 6,372'
Inclination: 90°	Inclination: 89°	Inclination: 89°
Azimuth: 1°	Azimuth: 1°	Azimuth: 2°
VS: 4,560'	VS: 4,649'	VS: 4,740'



DRKGY - V/DRKGY, CAL & PYR, TT POR, SUBBLKY - BLKY, IMBD PYRC SPEC & CALC (FOS), ABNT BLSHYL MIN FLOR.	11300 - 11350: 65% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 35% CHK: MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, ABNT FREE CALC (FOS), ABNT FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	11350 - 11400: 70% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 30% CHK: MEDDRKGY - MEDLGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), ABNT FREE BENT, BLK STN, TR BLSHYL MIN FLOR.	11400 - 11500: 60% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKGY - DRKGY W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), ABNT FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.
6250	6250	6250	6250
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)

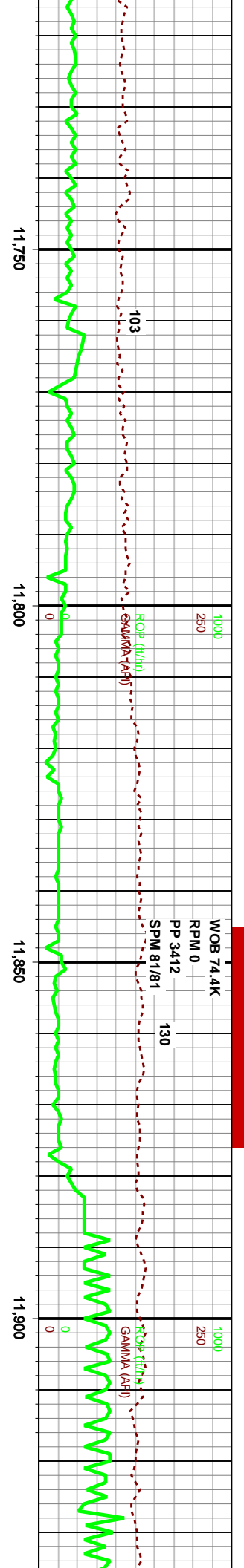
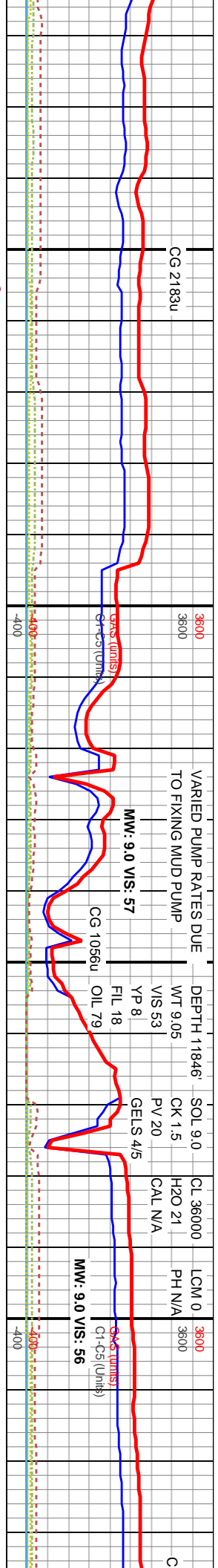
MD: 11,343'  
TVD: 6,373'  
Inclination: 90°  
Azimuth: 2°  
VS: 4,832'

MD: 11,433'  
TVD: 6,372'  
Inclination: 92°  
Azimuth: 2°  
VS: 4,922'





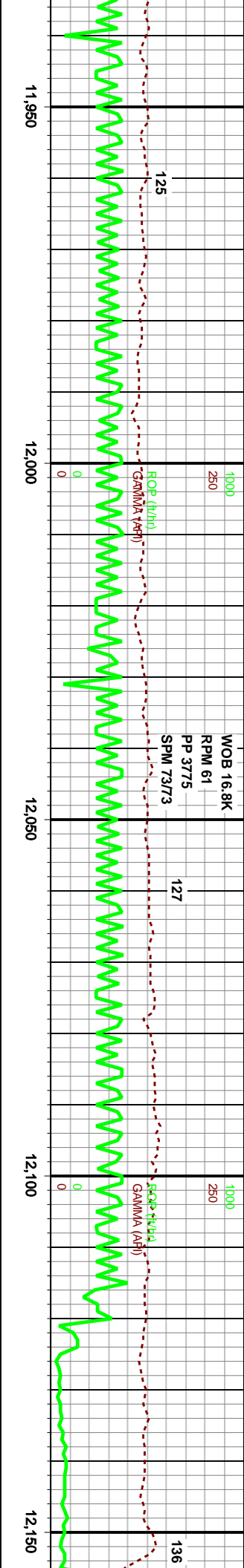
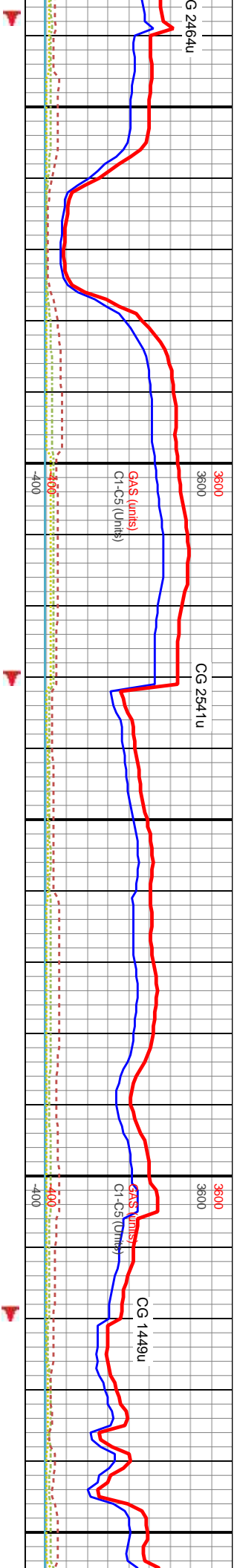




60% CHK: MEDDRKGY - MEDGY	11750' - 11800': 50% CHK: MEDDRKGY - MEDGY	11800' - 11850': 65% MRL: MEDDRKGY - DRKGY,	11850' - 11900': 75% MRL: MEDDRKGY - DRKGY,	11900' - 11950': 65% MRL: MEDDRKGY
BLKY - BLKY, CHLKY, SFT, CHK	W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK	BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.	BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.	BLKY, CHLKY, FRM, IMBD CAL & PYR
50% PYRC SPEC & CAL, TT POR, 40%	FRMWK, IMBD PYRC SPEC & CAL, TT POR.	35% CHK: MEDDRKGY W/ LTGY, SUBBLKY -	25% CHK: MEDDRKGY W/ LTGY, SUBBLKY -	35% CHK: MEDDRKGY W/ LTGY, SUB
50% MRL: MEDDRKGY - V/DRKGY W/ BLK, BLKY,	BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC	BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC	BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC	BLKY, CHLKY, SFT, CHK FRMWK, II
CHLKY, FRM, IMBD CAL & PYR, TT POR, ABNT	SPEC & CAL, TT POR, ABNT FREE CALC, TR	SPEC & CAL, TT POR, ABNT FREE CALC, TR	SPEC & CAL, TT POR, ABNT FREE CALC, TR	SPEC & CAL, TT POR, MOD FREE CA
FREE BENT, TR FREE PYR,	FREE BENT, MOD FREE PYR, BLK STN, TR	BENT, TR FREE PYR, BLK STN, TR	BENT, TR FREE PYR, BLK STN, TR	FREE BENT, TR FREE PYR, BLK STN
BLK STN, TR BLSHYL MIN FLOR.	BLSHYL MIN FLOR.	FLOR.	FLOR.	MIN FLOR.

MD: 11,799'  
TVD: 6,370'  
Inclination: 91°  
Azimuth: 3°  
VS: 5.288'

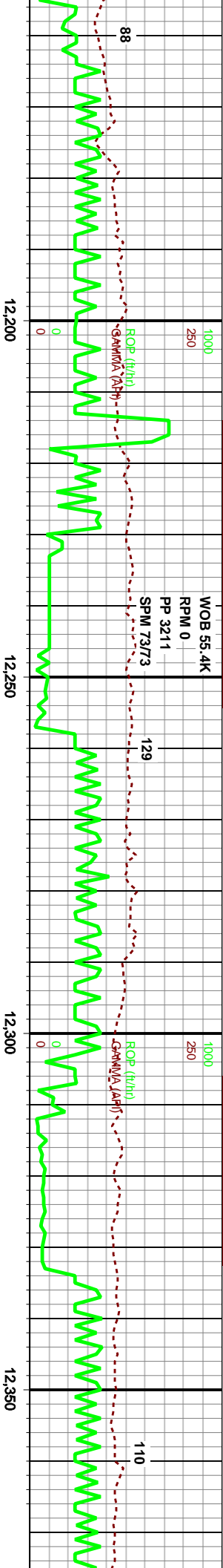
MD: 11,891'  
TVD: 6,370'  
Inclination: 89°  
Azimuth: 0°  
VS: 5.380'



11,950		12,000		12,050		12,100		12,150	
11950 - 12000': 70% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		12000 - 12050': 60% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		12050 - 12100': 70% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		12100 - 12150': 65% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		12150 - 12200': 70% MRL: MEDDRKGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.	
30% CHK: MEDDRKGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		40% CHK: MEDDRKGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		30% CHK: MEDDRKGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		35% CHK: MEDDRKGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, MOD FREE PYR, BLK STN, TR BLSHYL MIN FLOR.		45% CHK: MEDDRKGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, MOD FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
6250		6250		6250		6250		6250	

MD: 11,983'  
TVD: 6,372'  
Inclination: 90°  
Azimuth: 0°  
VS: 5,472'

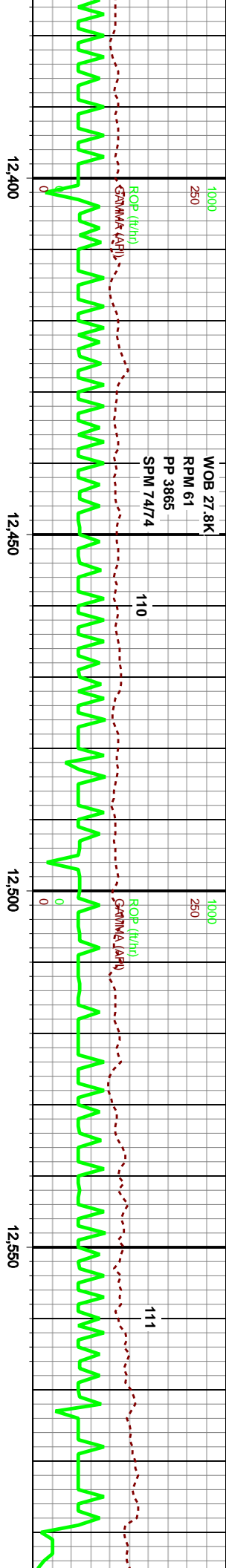
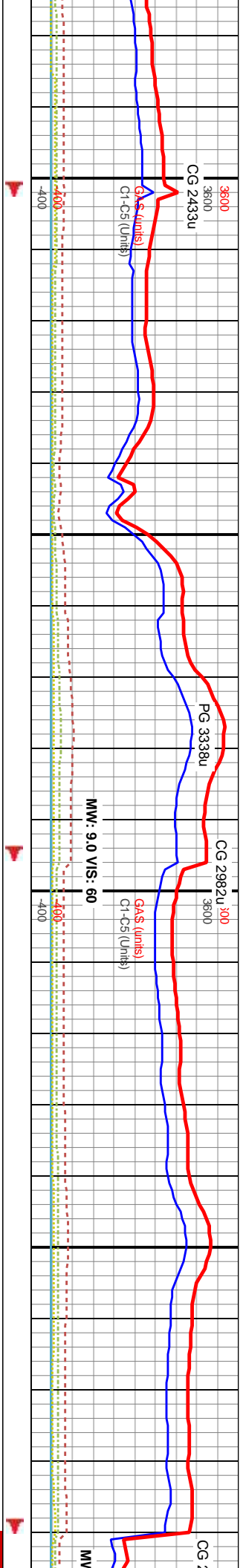
MD: 12,073'  
TVD: 6,372'  
Inclination: 90°  
Azimuth: 360°  
VS: 5,562'



12200'-12200': 55% MRU: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, ABNT FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12250'-12250': 60% MRU: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12300'-12300': 55% MRU: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 45% CHK: MEDDRKG W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12350'-12350': 60% MRU: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, ABNT FREE CALC, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12400'-12400': 50% CHK: MEDDRKG - BLKY, CHLKY, IMBD PYRC SPEC & CAL, TT POR, MEDDRKG - V/DRKG W/ FRM, IMBD CAL & PYR, TT POR, MOD FREE CALC, MOD FREE BENT, TR BLSHYL MIN FLOR.
6250	6250	6250	6250	
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	

MD: 12,166'	MD: 12,261'	MD: 12,355'
TVD: 6,373'	TVD: 6,375'	TVD: 6,376'
Inclination: 88°	Inclination: 90°	Inclination: 88°
Azimuth: 1°	Azimuth: 1°	Azimuth: 2°
VS: 5.655'	VS: 5.750'	VS: 5.844'





MEDDRKGY - MEDGY, SFT, CHK FRMWK, TT POR, 50% MRL: BLK, BLKY, CHLK, POR, ABNT FREE BENT, TR FREE PYR, BLK	12400' - 12450': 60% CHK: MEDDRKGY - MEDGY - MEDLTGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 40% MRL: MEDDRKGY, BLKY, CHLK, FRM, IMBD CAL & PYR, TT POR, MOD FREE CALC, TRFREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12450' - 12500': 55% CHK: MEDDRKGY - MEDGY - MEDLTGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 45% MRL: MEDDRKGY, BLKY, CHLK, FRM, IMBD CAL & PYR, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12500' - 12550': 60% CHK: MEDDRKGY - MEDGY - MEDLTGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, 40% MRL: MEDDRKGY, BLKY, CHLK, FRM, IMBD CAL & PYR, TT POR, MOD FREE CALC, TR FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.	12550' - 12600': 60% MRL: MEDDRKGY - DRKGY - BLKY, CHLK, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKGY W/ MEDLTGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLOR.

MD: 12,450'

TVD: 6,378'

Inclination: 90°

Azimuth: 3°

VS: 5.939'

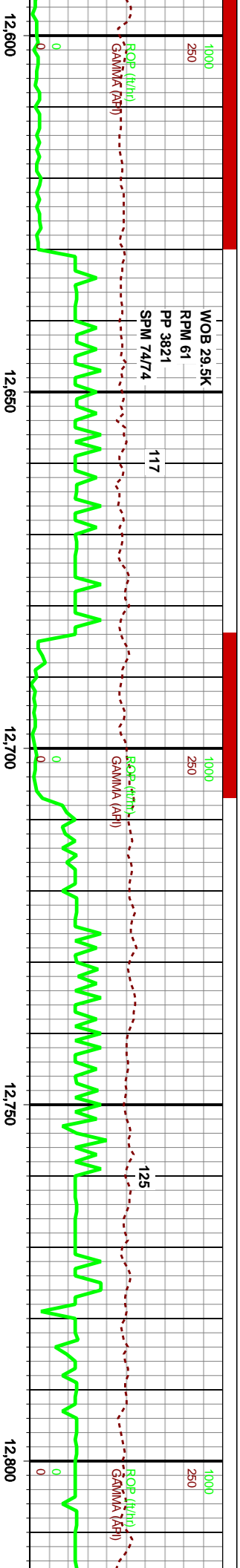
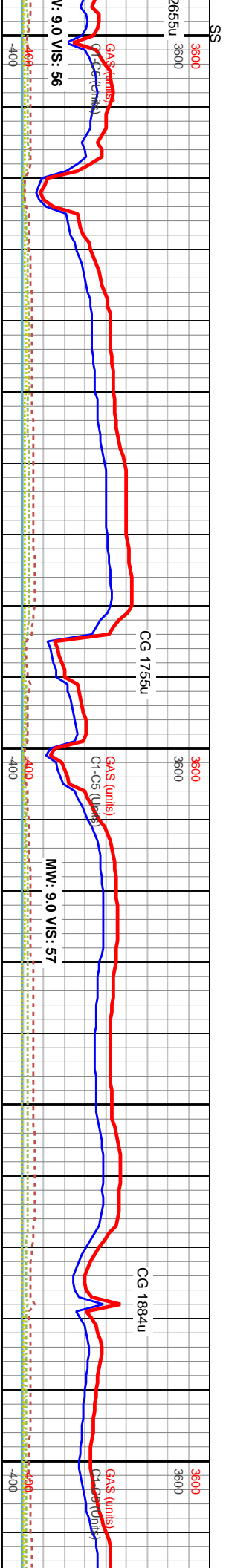
MD: 12,544'

TVD: 6,377'

Inclination: 92°

Azimuth: 2°

VS: 6.033'

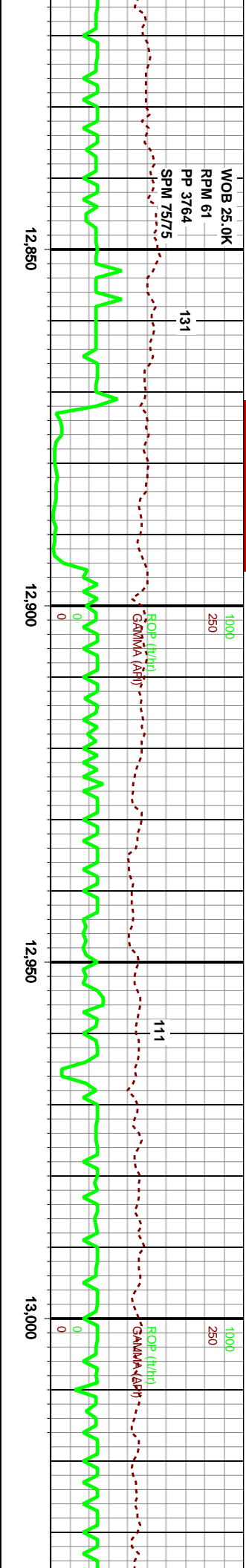
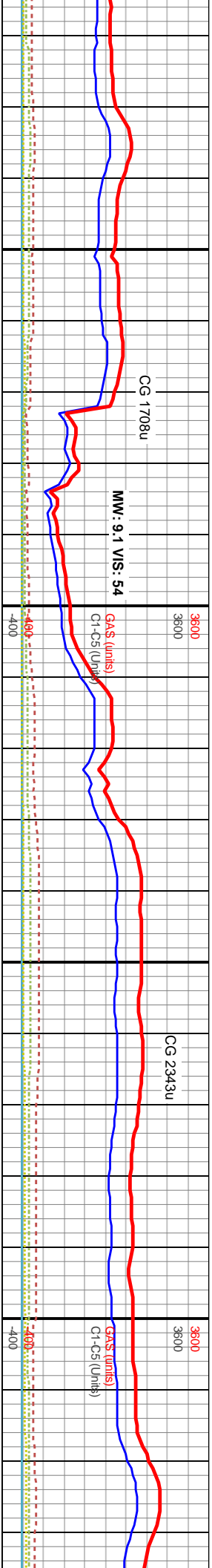


6250	12650 - 12700': 60% MRL: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLO	6250	12650 - 12700': 65% MRL: MEDDRKG - DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 35% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), MOD FREE BENT, TR FREE PYR, BLK STN, TR BLSHYL MIN FLO	6250	12700 - 12750': 70% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 30% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLO	6250	12750 - 12800': 65% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 35% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLO	6250	12800 - 12850': V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 30% G
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MD: 12,639'  
TVD: 6,375'  
Inclination: 90°  
Azimuth: 1°  
VS: 6.128'

MD: 12,733'  
TVD: 6,377'  
Inclination: 88°  
Azimuth: 2°  
VS: 6.222'



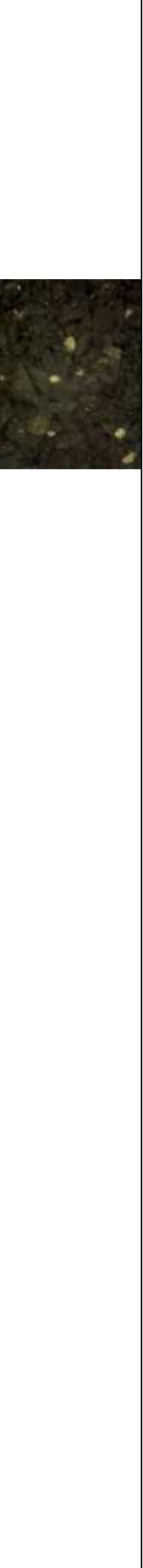
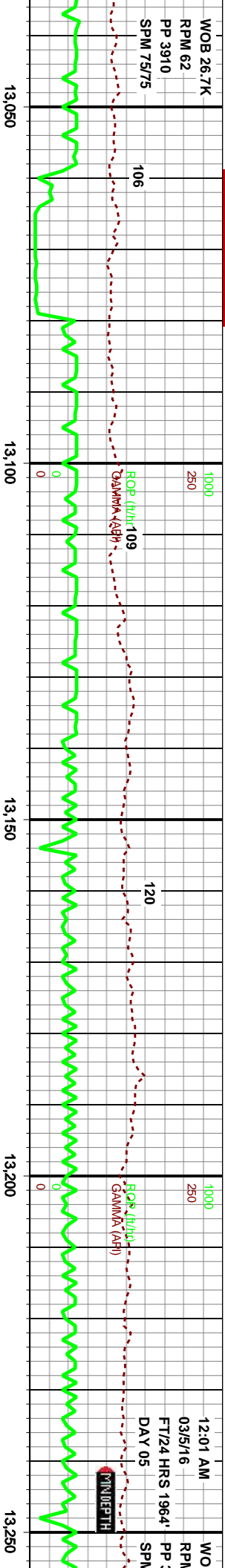
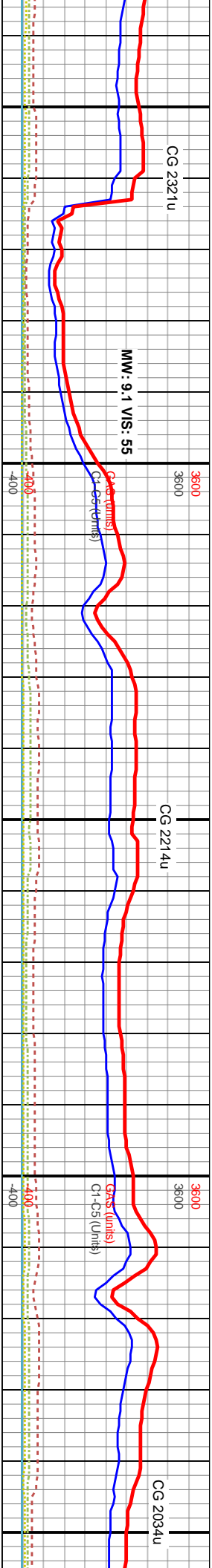


70% MRL: MEDDRKG - Y, CHLKY, FRM, IMBD CAL & PYR, CHK: MEDDRKG W/ MEDLTGY, CHK, CHLKY, SFT, CHK FRMWK, REC & CAL, TT POR, MOD FREE FREE BENT, TR FREE PYR, BLK MIN FLOR.	12850' - 12900': 60% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	12900' - 12950': 60% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	12950' - 13000': 60% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR, 40% CHK: MEDDRKG W/ MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	13000' - 13050': 60% MRL: MEDDRKG - V/DRKG, BLKY, CHLKY, FRM, IMBD PYR, TT POR, 40% CHK: MEDDRKG MEDLTGY, SUBBLKY - BLKY, CHLKY FRMWK, IMBD PYRC SPEC & CAL, MOD FREE CALC (FOS), ABNT FREE FREE PYR, BLK STN, MOD YL MIN FL
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MD: 12,827'  
TVD: 6,378  
Inclination: 90°  
Azimuth: 3°  
VS: 6,316'

MD: 12,921'  
TVD: 6,379  
Inclination: 88°  
Azimuth: 3°  
VS: 6,410'

MD: 13,015'  
TVD: 6,381  
Inclination: 90°  
Azimuth: 2°  
VS: 6,504'



WOB 26.7K RPM 62 PP 3910 SPM 75/75	106	ROP (ft/hr) 109 GAMMA (API)	120	ROP (ft/hr) GAMMA (API)	12:01 AM 03/5/16 FT/24 HRS 1964' DAY 05	MINDEPTH
13,050	13,100	13,150	13,200	13,250		
13,050'	13,100'	13,150'	13,200'	13,250'		
13050' - 13100': 70% MRL: MEDDRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR. 30% CHK: MEDDRKGY - MEDLTGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR. TR FREE BENT, TR CALC, MOD FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	13100' - 13150': 70% MRL: MEDDRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR. 30% CHK: MEDDRKGY - MEDLTGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR. TR FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	13150' - 13200': 70% MRL: MEDGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR. 30% CHK: MEDDRKGY - MEDLTGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR. MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	13200' - 13250': 65% MRL: MEDGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR. 35% CHK: MEDDRKGY - MEDLTGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR. MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.	13250' - 13300': 65% MRL: MEDGY - DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR. 35% CHK: MEDDRKGY - MEDLTGY W/ LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR. MOD FREE CALC, ABNT FREE BENT, TR FREE PYR, BLK STN, MOD YL MIN FLOR.		
13,050	13,100	13,150	13,200	13,250		
13,050'	13,100'	13,150'	13,200'	13,250'		

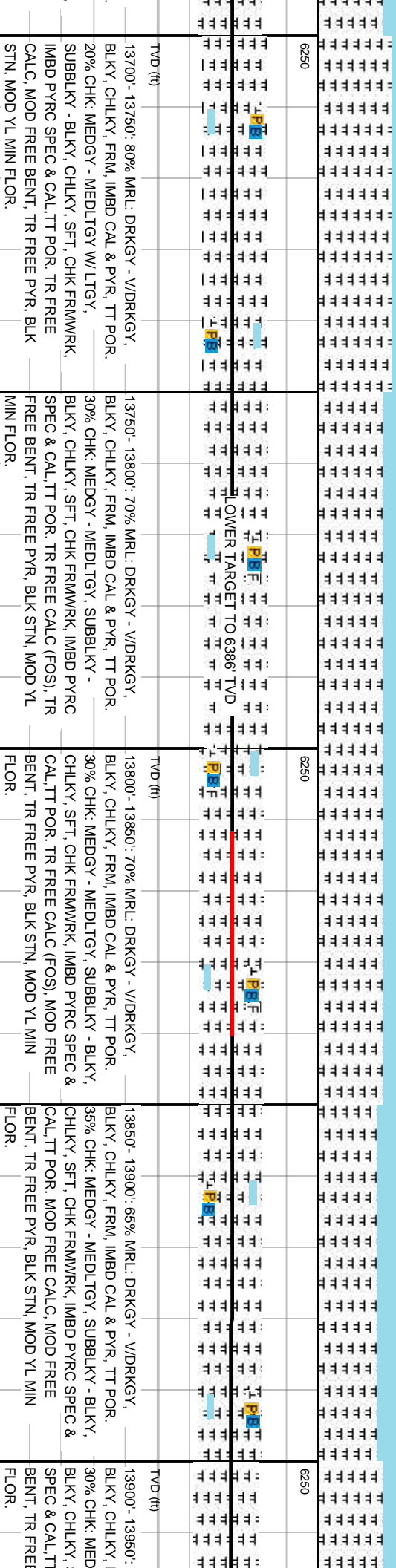
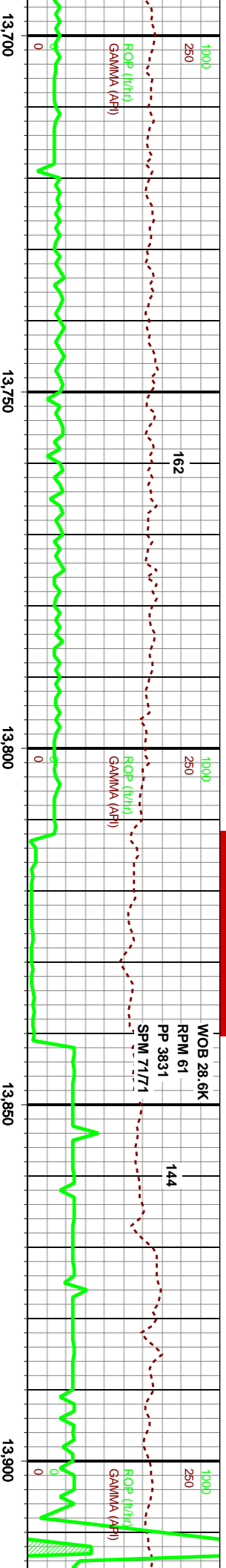
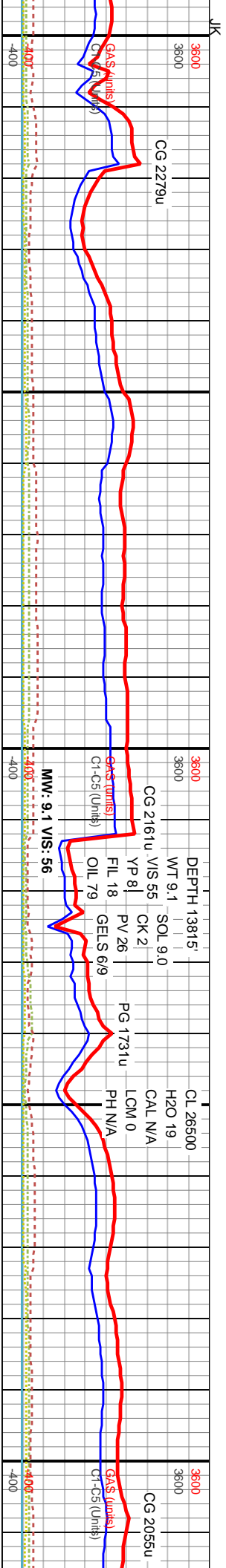
MD: 13,109'  
TVD: 6,382'  
Inclination: 89°  
Azimuth: 1°  
VS: 6,598'

MD: 13,204'  
TVD: 6,383'  
Inclination: 90°  
Azimuth: 1°  
VS: 6,693'





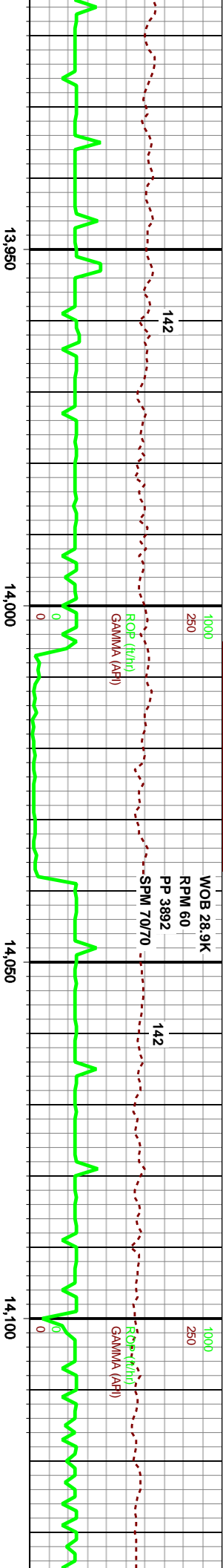
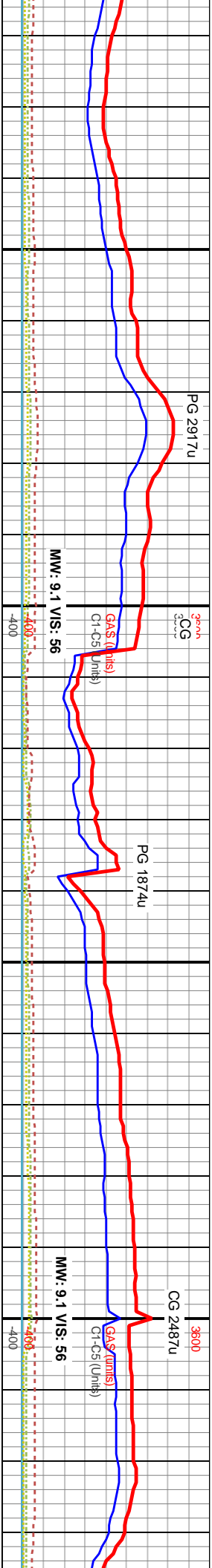




MD: 13,769'  
TVD: 6,384'  
Inclination: 91°  
Azimuth: 1°  
VS: 7.258'

MD: 13,863'  
TVD: 6,384'  
Inclination: 88°  
Azimuth: 360°  
VS: 7.352'





70% MRL: DRKGY - V/DRKGY, FRM, IMBD CAL & PYR, TT POR.		14000' - 14050': 70% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		14050' - 14100': 70% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.		14100' - 14150': 75% MRL: DRKGY - V/DRKGY, BLKY, CHLKY, FRM, IMBD CAL & PYR, TT POR.	
SFT, CHK FRMWK, IMBD PYRC		30% CHK: MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT,		30% CHK: MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT,		25% CHK: MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT,	
TR FREE PYR, BLK STN, MOD YL MIN		TR FREE PYR, BLK STN, MOD YL MIN FLOOR.		TR FREE PYR, BLK STN, MOD YL MIN FLOOR.		FREE PYR, BLK STN, MOD YL MIN FLOOR.	
BENT, BLK STN, MOD YL MIN FLOOR.		FLOOR.		FLOOR.		FLOOR.	
67/50		67/50		67/50		67/50	

MD: 13,957'  
TVD: 6,386'  
Inclination: 89°  
Azimuth: 0°  
VS: 7,446'

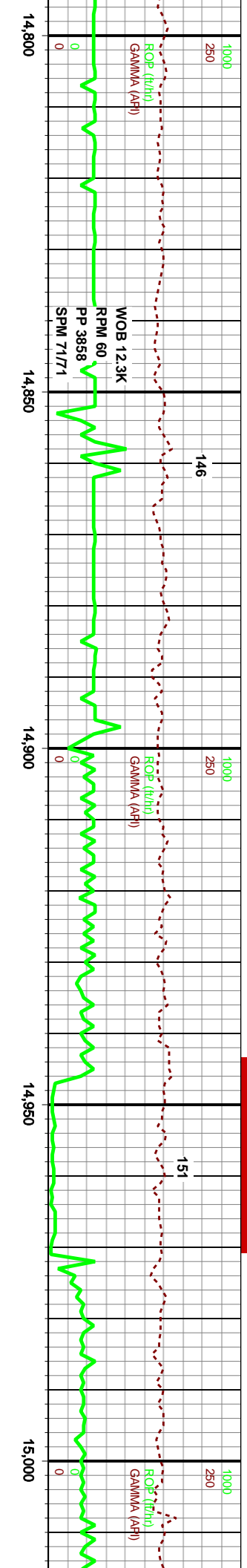
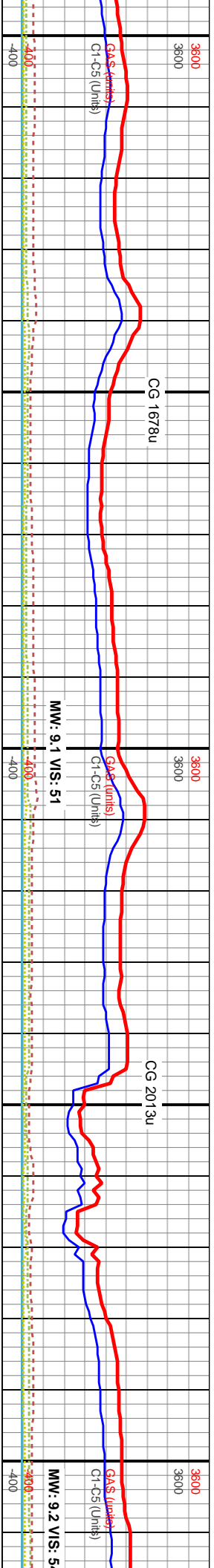
MD: 14,051'  
TVD: 6,388'  
Inclination: 89°  
Azimuth: 3°  
VS: 7,540'











6250		6250		6250	
14800' - 14850': 70% MRL: MEDGY - MEDDRKGY, BLKY, CHLKY, FRM, TR IMBD CAL & PYR, TT POR, 30% CHK: MEDLTGY W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	14850' - 14900': 70% MRL: MEDGY - MEDDRKGY, BLKY, CHLKY, FRM, TR IMBD CAL & PYR, TT POR, 30% CHK: MEDLTGY W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	14900' - 14950': 75% MRL: MEDDRKGY - MEDGY, BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR, 25% CHK: MEDLTGY W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	14950' - 15000': 70% MRL: MEDDRKGY - MEDGY, BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR, 30% CHK: MEDLTGY W/LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	15000' - 15050': BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR, 25% C	

MD: 14,806'

TVD: 6,387'

Inclination: 90°

Azimuth: 1°

VS: 8,294'

MD: 14,900'

TVD: 6,387'

Inclination: 91°

Azimuth: 0°

VS: 8,388'

MD: 14,994'

TVD: 6,386'

Inclination: 90°

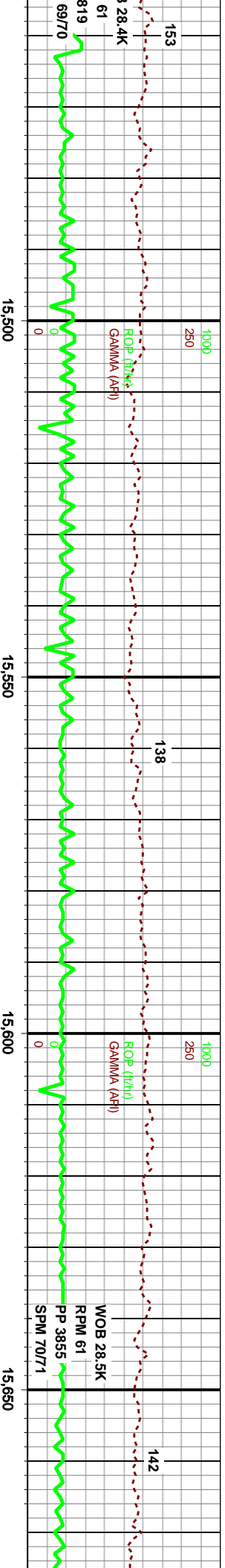
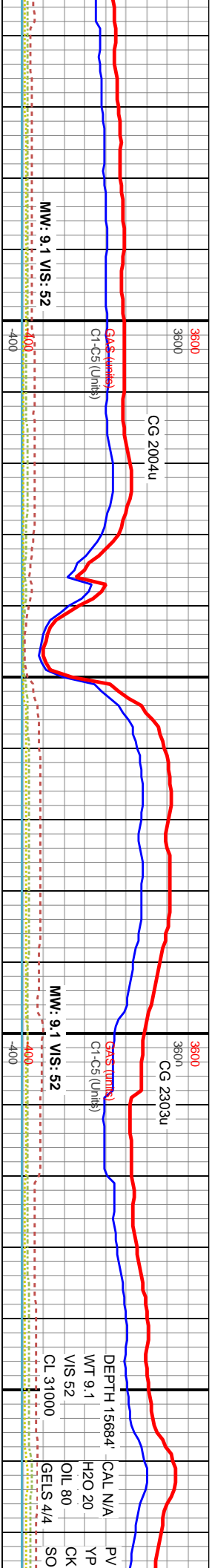
Azimuth: 1°

VS: 8,482'





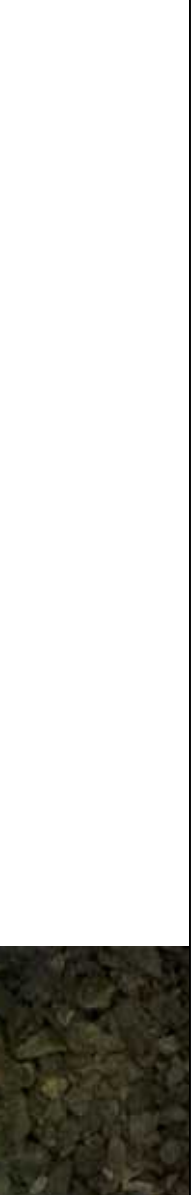
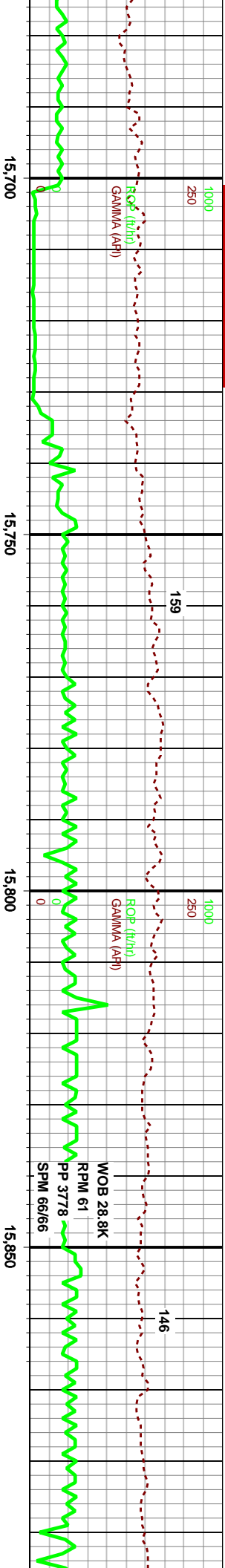
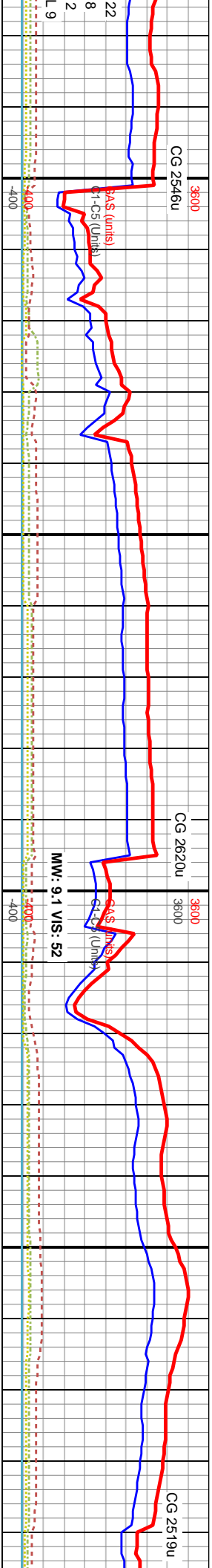




15500'-15550': 75% MRL: DRKG - MEDDRKG, CHLK, SFT - FRM, TR IMBD CAL & PYR, OR, 25% CHK: MEDLTGY - MEDGY, BLKY - BLKY, CHLK, SFT, CHK FRMWK, PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, L MIN FLO.	15500'-15550': 60% MRL: DRKG - MEDDRKG, BLKY, CHLK, SFT - FRM, TR IMBD CAL & PYR, TT POR, 40% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	15550'-15600': 70% MRL: DRKG - MEDDRKG, BLKY, CHLK, SFT - FRM, TR IMBD CAL & PYR, TT POR, 30% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	15600'-15650': 60% MRL: DRKG - MEDDRKG, BLKY, CHLK, SFT - FRM, TR IMBD CAL & PYR, TT POR, 40% CHK: MEDLTGY - LTGY, SUBBLKY - BLKY, CHLK, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, MOD FREE CALC (FOS), TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLO.	15650'-15700': 60% MRL: BLKY, CHLK, SFT, TR IM, POR, 40% CHK: MEDLTGY - BLKY, CHLK, SFT, CHK R SPEC & CAL, TT POR, TR FREE BENT, TR FREE PY
6250	6250	6250		
TVD (ft)	TVD (ft)	TVD (ft)		

MD: 15,466' TVD: 6,387' Inclination: 88° Azimuth: 2° VS: 8,954'	MD: 15,560' TVD: 6,389' Inclination: 89° Azimuth: 2° VS: 9,048'	MD: 15,654' TVD: 6,389' Inclination: 91° Azimuth: 1° VS: 9,142'
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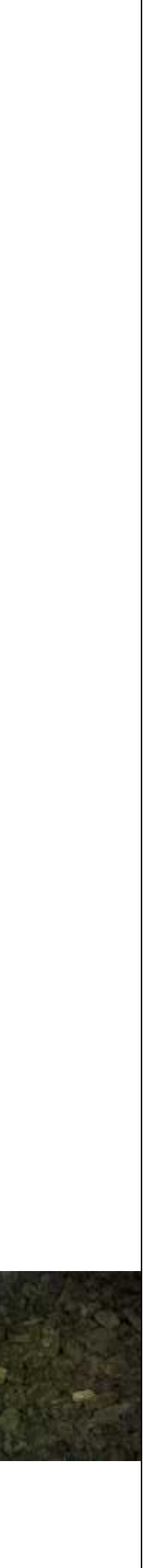
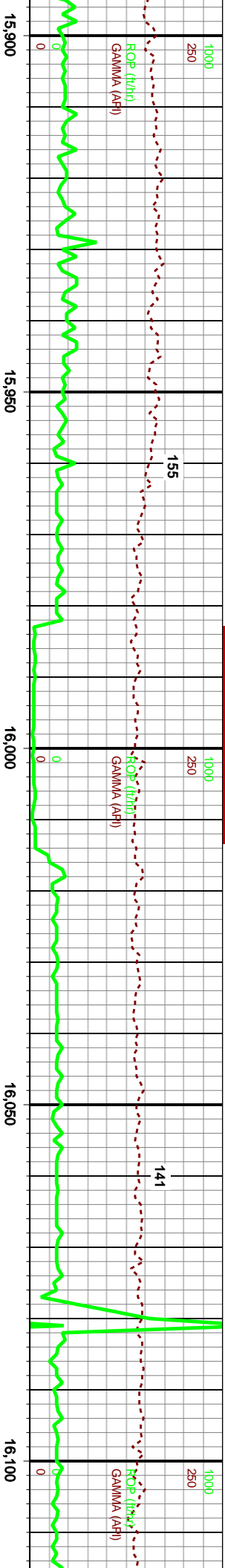
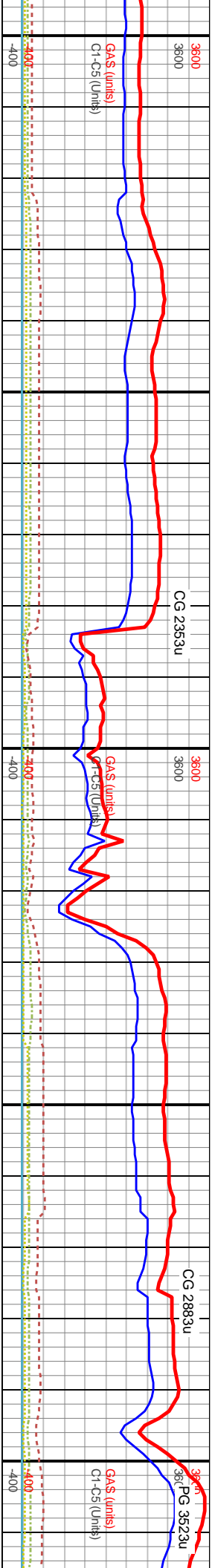


DRKGY - MEDDRKGY, BD CAL & PYR, TT	15700'-15750': 70% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 30% CHK, MEDLTGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLOR.	15750'-15800': 75% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 25% CHK, MEDLTGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLOR.	15800'-15850': 60% MRL: DRKGY - MEDDRKGY - MEDGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 40% CHK, MEDLTGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLOR.	15850'-15900': 70% MRL: DRKGY - MEDDRKGY - MEDGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 30% CHK, MEDLTGY - LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE BENT, TR FREE PYR, BLK STN, TR YL MIN FLOR.
6250	6250	6250	6250	6250

MD: 15,748'  
TVD: 6,389'  
Inclination: 89°  
Azimuth: 3°  
VS: 9,236'

MD: 15,843'  
TVD: 6,391'  
Inclination: 90°  
Azimuth: 3°  
VS: 9,331'

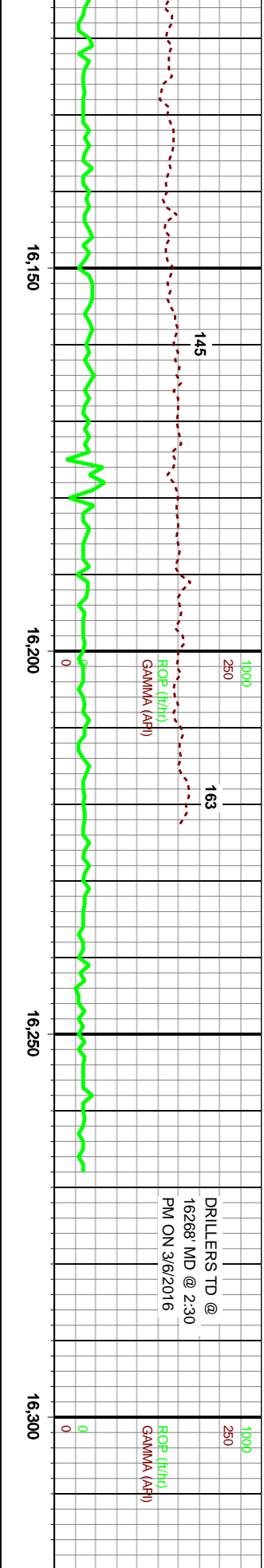
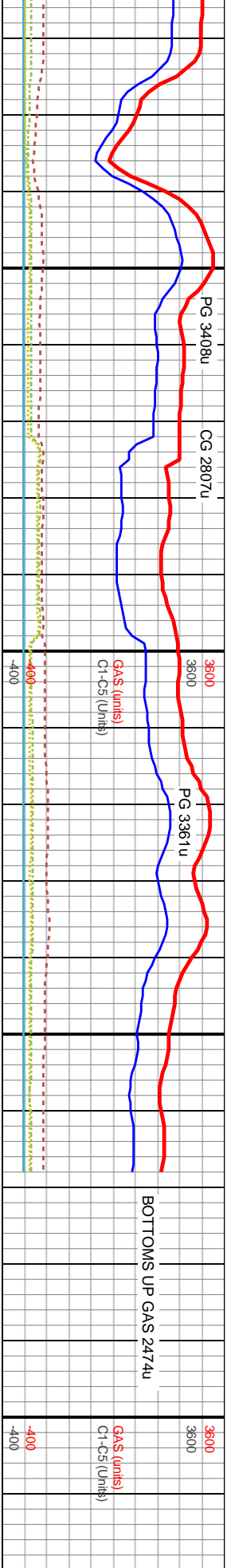




15,900 - 15,950': 80% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 20% CHK: MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	15,950 - 16,000': 75% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 25% CHK: MEDLTGY W/ TR LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	16,000 - 16,050': 75% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 25% CHK: MEDLTGY W/ TR LTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	16,050 - 16,100': 80% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 20% CHK: MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	16,100 - 16,150': 80% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT, TR IMBD CAL & PYR, TT POR, 25% C: MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWK, IMBD PYRC SPEC & CAL, TT POR, TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.
6250	6250	6250	6250	6250
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)

MD: 15,937'  
TVD: 6,390'  
Inclination: 91°  
Azimuth: 3°  
VS: 9,425'

MD: 16,031'  
TVD: 6,389'  
Inclination: 89°  
Azimuth: 4°  
VS: 9,519'



75% MRL: DRKGY - MEDDRKGY, SFT - FRM, TR IMBD CAL & PYR, CHK: MEDLTGY, SUBBLKY - BLKY, CHK FRMWWRK, IMBD PYRC SPEC & R FREE CALC (FOS), TR FREE , TR YL MIN FLOR.		16150 - 16200: 75% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR. 25% CHK: MEDLTGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC SPEC & CAL, TT POR. TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	16200 - 16268: 80% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR. 20% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC SPEC & CAL, TT POR. TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.	16268 - 16270: 80% MRL: DRKGY - MEDDRKGY, BLKY, CHLKY, SFT - FRM, TR IMBD CAL & PYR, TT POR. 20% CHK: MEDLTGY - MEDGY, SUBBLKY - BLKY, CHLKY, SFT, CHK FRMWWRK, IMBD PYRC SPEC & CAL, TT POR. TR FREE CALC (FOS), TR FREE BENT, BLK STN, TR YL MIN FLOR.
6250		6250	6250	6250
TD @ 16268' MD				
RELEASED ON 3/6/2016				
THANK YOU FROM JOE KLUMPSTRA, SAM STELZER, AND HORIZON WELL LOGGING, LLC				
MD: 16,220' TVD: 6,385' Inclination: 93° Azimuth: 4° VS: 9,708'				
MD: 16,268' TVD: 6,383' Inclination: 93° Azimuth: 4° VS: 9,756'				