

# Décollement Consulting Inc.



Scale: 5" / 100'  
Measured Depth Log

Well Name North Platte P31-T34-34HNB\_Lateral

Location SE/SW Section 27, T5N - R63W

State CO

County Weld

Country USA

Rig Number Xtreme 22

API Number 05-123-41763

Field Wattenberg

Region D.J. Basin

Drilling Completed 9/20/2015

Spud Date 9/15/2015

Surface Coordinates 1256 FSL x 2531 FWL (Lat: 40.36657, -104.42225)

Bottom Hole Coordinates 470 FSL x 1639 FEL (Lat: 40.35004, -104.41855)

Ground Elevation 4,541

K.B. Elevation 4,558

Logged Interval 7,068 To 11,300

Total Depth 11,300

Formation Niobrara "B" Chalk

Type of Drilling Fluid Water Based Mud

## Operator

**Address** Bonanza Creek Energy, Inc.  
410 17th Street, Suite 1500  
Denver, Colorado 80202

## Geologist

**Name** Dan Kabala & Brian Spitzmiller  
**Company** Decollement Consulting Inc.  
**Address** 13300 Braun Rd.  
Golden, CO. 80401

## Zone Color Coding

- |       |            |          |
|-------|------------|----------|
| Oil   | Condensate | Gas      |
| Note  | Core       | Pressure |
| Error | Water      | Seal     |



## Rock Types

Blank

CEMENT

MPF

SHALE S

CHALK

LIMESTONE

SHALE SF

CPF

MARLSTONE

SHALE

## Accessories

### Fossils

- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHIOPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA

F FOSSIL

GASTROPOD

OOLITE

OSTRACOD

PELECYPOD

PELLET

PISOLITE

PLANT REMAINS

PLANT SPORES

SCAPHOPOD

STROMATOPOROID

### Minerals

ANHYDRITIC

ARGILLACEOUS

ARGILLITE GRAIN

BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

CALCAREOUS

CARBONACEOUS FLAKES

CHTDK

CHTLT

COAL - THIN BEDS

DOLOMITIC

FELDSPAR

FERRUGINOUS PELLET

FERRUGINOUS

GLAUCONITE

GYPSIFEROUS

HEAVY MINERAL

KAOLIN

MARLSTONE

MINERAL CRYSTALS

NODULES

PHOSPHATE PELLETS

PYRITE

SALT CAST

SANDY

SILICEOUS

SILTY


TUFFACEOUS

### 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



Other Symbols

 FORMATION TOP

Oil Show

 PINPOINT

 GAS SHOW

 MICROXLN


Rounding


DEAD  VUGGY


 MN DEPTH

 ANGULAR

 MUDSTONE

EVEN  NORMAL FAULT

 ROUNDED

 PACKSTONE

Engineering

QUESTIONABLE  OIL SHOW

 SUBANG

 WACKESTONE

SPOTTED STAINING  BIT

 OVERTURNED STRATA

 SUBRAND

Sorting

 CASING

 REVERSE FAULT

Porosity

 CONNECTION (LEFT)

 SIDEWALL CORE (LEFT)

 MODERATE

Textures

EARTHY  CONNECTION (RIGHT)

 SIDEWALL CORE (RIGHT)

 BOUNDSTONE

 POOR

ENESTRAL  CONNECTION GAS

 SLIDE

 CHALKY

 WELL

RACTURE  CORE - LOST

 SURVEY

 CRYPTOXLN

INTERCRYSTALLINE  CORE - RECOVERED

 TRIP GAS

 EARTHY

INTEROOLITIC  DST INTERVAL

 WIRELINE TESTED - LEFT

 FINELYXLN

MOLDIC  FAULT

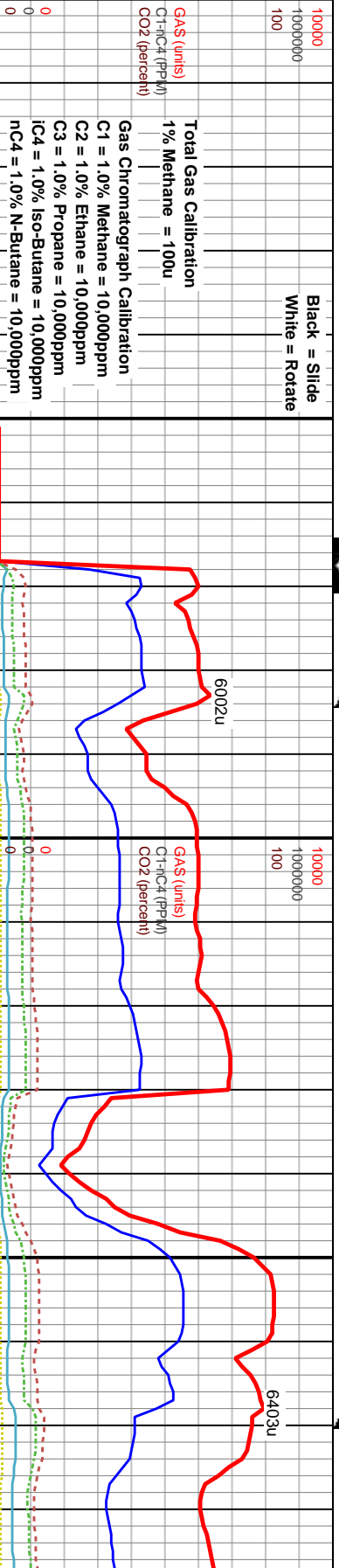
 WIRELINE TESTED - RT

 GRAINSTONE

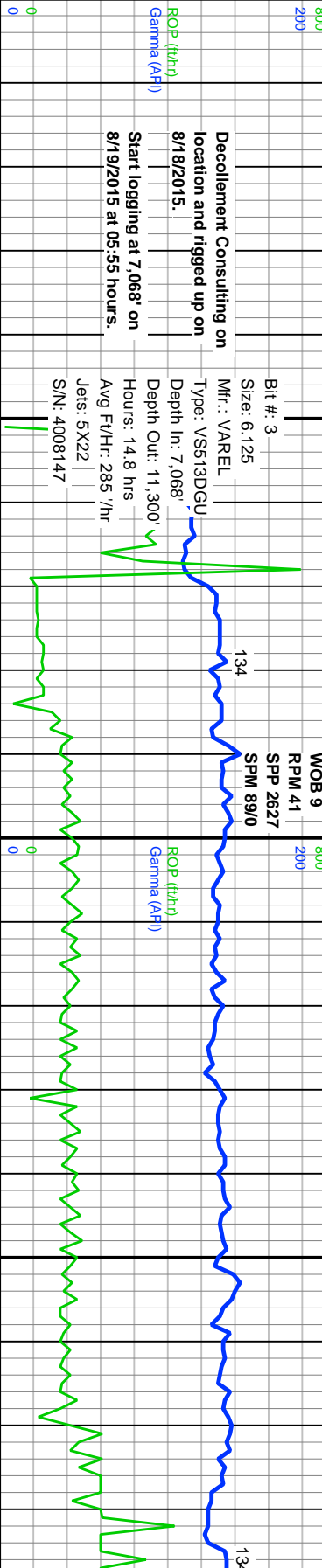


Total Gas & Chromatography

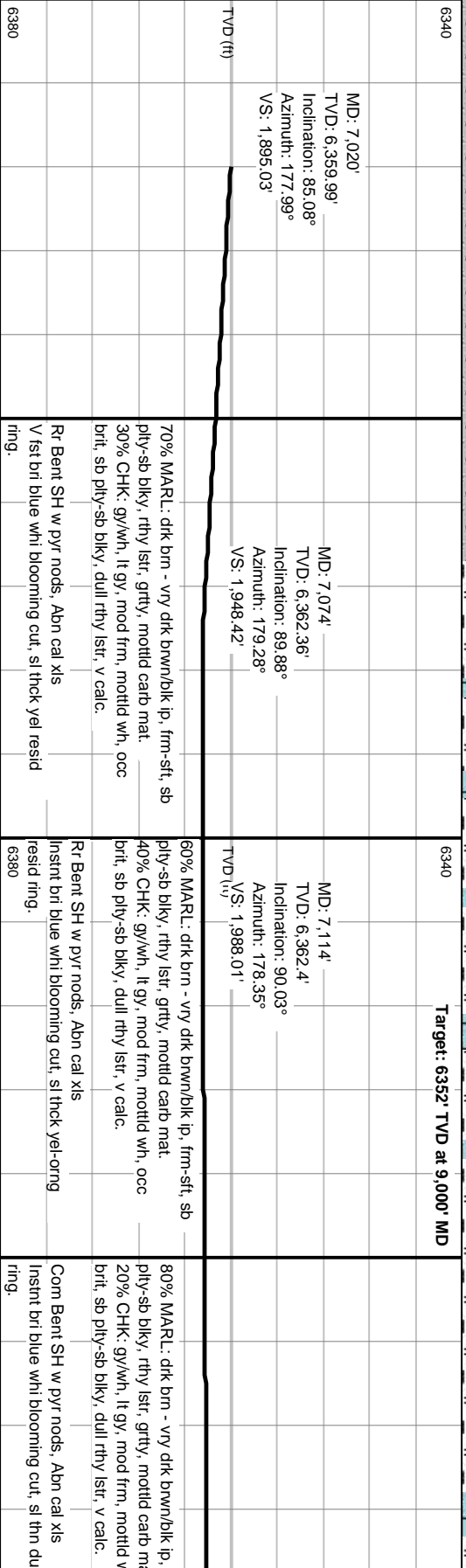
GAS  
C1  
C2  
C3  
iC4  
nC4  
CO2



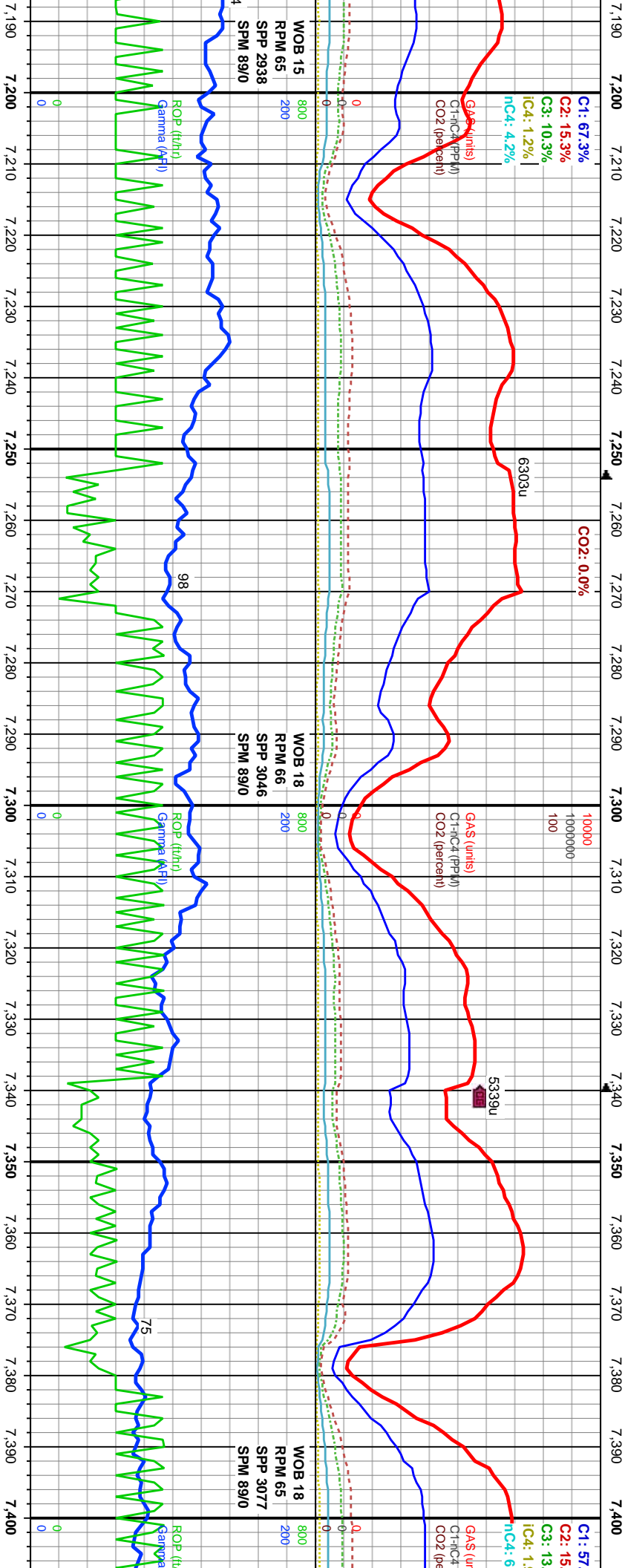
Curves  
ROP  
Gamma



Well Bore  
TVD

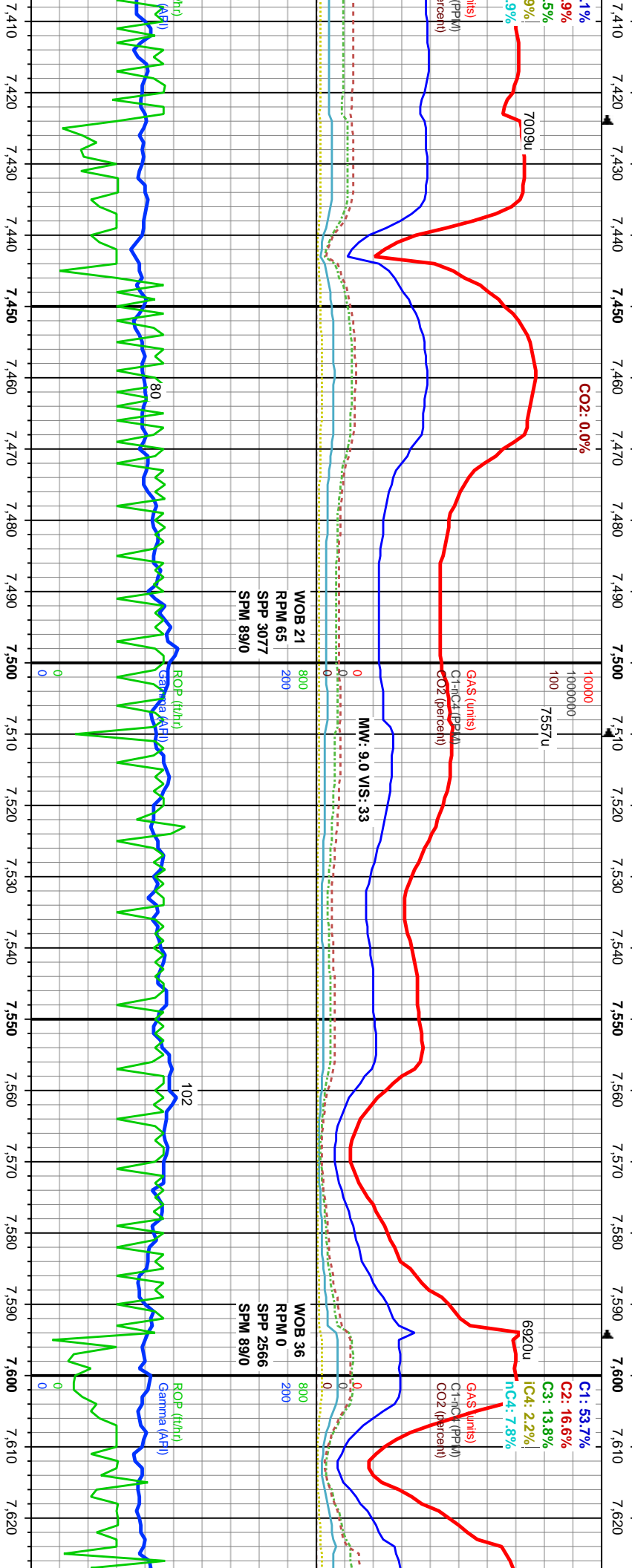






MD: 7.199'		MD: 7.285'		MD: 7.370'	
TVD: 6.362.03'		TVD: 6.360.58'		TVD: 6.359.18'	
Inclination: 90.46°		Inclination: 91.48°		Inclination: 90.4°	
Azimuth: 178.93°		Azimuth: 180.31°		Azimuth: 180.95°	
VS: 2.072.15'		VS: 2.157.05'		VS: 2.240.72'	
TVD (ft)		TVD (ft)		TVD (ft)	
90% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb		60% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb		60% CHK: gy/wh, lt gy, mod frm, mottld wh, occ	
ply-sb blk, rthy lst, grtty, mottld carb mat.		ply-sb blk, rthy lst, grtty, mottld carb mat.		brlt, sb ply-sb blk, dull rthy lst, v calc.	
10% CHK: gy/wh, lt gy, mod frm, mottld wh, occ		40% CHK: gy/wh, lt gy, mod frm, mottld wh, occ		40% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb	
brlt, sb ply-sb blk, dull rthy lst, v calc.		brlt, sb ply-sb blk, dull rthy lst, v calc.		ply-sb blk, rthy lst, grtty, mottld carb mat.	
Rt Bent SH w pyr nods. Abn cal xls		Rt Bent SH w pyr nods. Abn cal xls		Com cal xls	
Mod fst bri blue whi rad strng cut, good blue whi		Mod fst sl bri blue whi rad strng cut, good blue whi		V fst bri blue whi strng rad cut, good blue whi resid	
resid ring.		ring.		ring.	
yel resid		6380		6380	



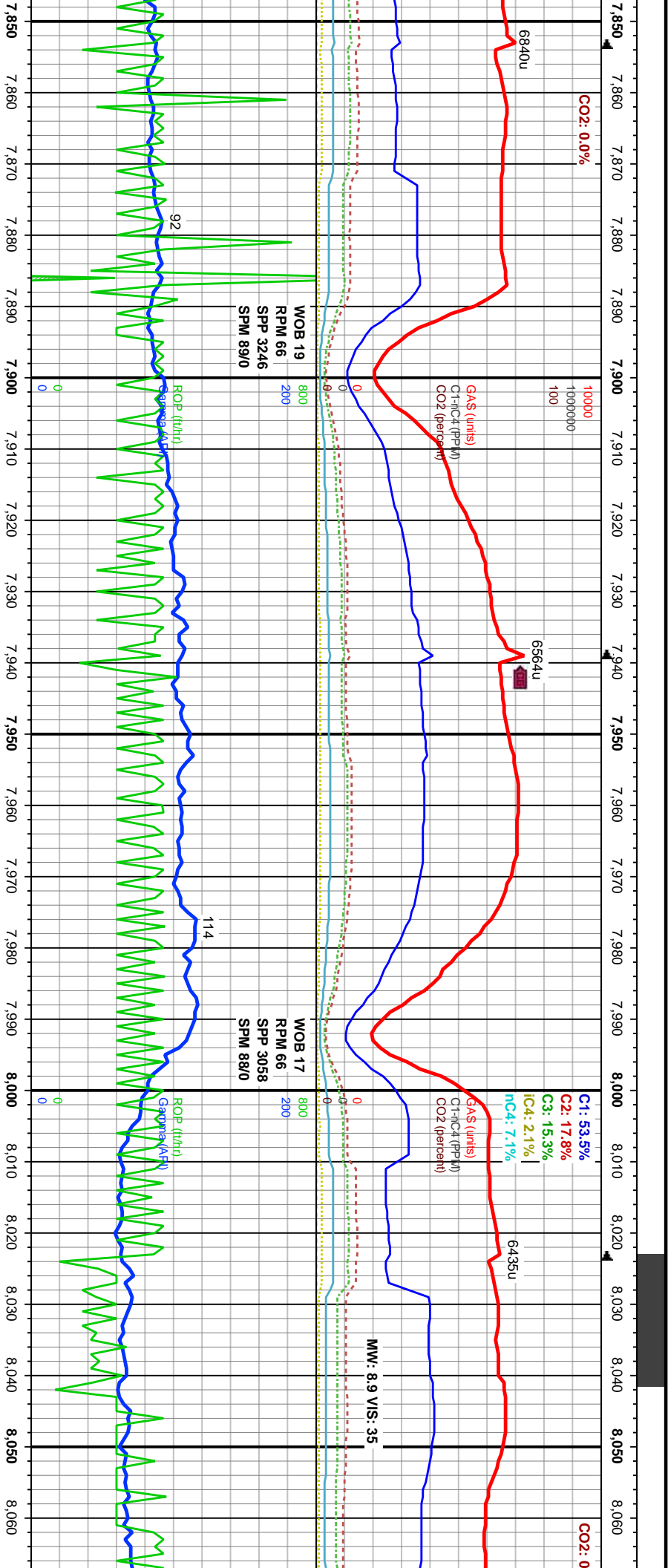


MD: 7,456' TVD: 6,359.42' Inclination: 89.29° Azimuth: 180.87° VS: 2,325.31'		MD: 7,541' TVD: 6,359.83' Inclination: 90.15° Azimuth: 181.04° VS: 2,408.9'		MD: 7,627' TVD: 6,36' Inclination: Azimuth: VS: 2,493	
80% CHK: gy/wh, lt gy, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lst, v calc. 20% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lst, grtly, mottld carb mat.		90% CHK: gy/wh, lt gy, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lst, v calc. 10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lst, grtly, mottld carb mat.		90% CHK: gy/wh, lt gy, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lst, v calc. 10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lst, grtly, mottld carb mat.	
Rr cal xls, Rr BENT w/ pyr nodes Insist bri blue whi blooming cut, good blue whi resid ring.		Rr cal xls, tr BENT w/ pyr nodes Insist bri blue whi blooming cut, good blue whi resid ring.		Rr cal xls, tr BENT w/ pyr nodes Vst bri blue whi rad string cut, mod thick blue whi resid ring.	
6340		6340		6340	









MD: 7.887'  
TVD: 6.360.29'  
Inclination: 90.22°  
Azimuth: 178.74°  
VS: 2.750.66'

TVD (ft)

100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blk, dull rthy lstr, v calc.  
10% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, gtrty, mottld carb mat.

Rr cal xls  
Insint bri blue whi rad strng cut, good blue whi sl grn resid ring.

95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blk, dull rthy lstr, v calc.  
5% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, gtrty, mottld carb mat.

Rr cal xls, Occ BENT frags  
Insint bri blue whi rad strng cut, mod thick blue whi resid ring.

MD: 7.972'  
TVD: 6.359.53'  
Inclination: 90.8°  
Azimuth: 178.45°  
VS: 2.834.81'

TVD (ft)

80% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blk, dull rthy lstr, v calc.  
20% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, gtrty, mottld carb mat.

Com cal xls, Occ BENT frags  
Insint bri blue whi blooming cut, good blue whi resid ring.

90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blk, dull rthy lstr, v calc.  
10% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, gtrty, mottld carb mat.

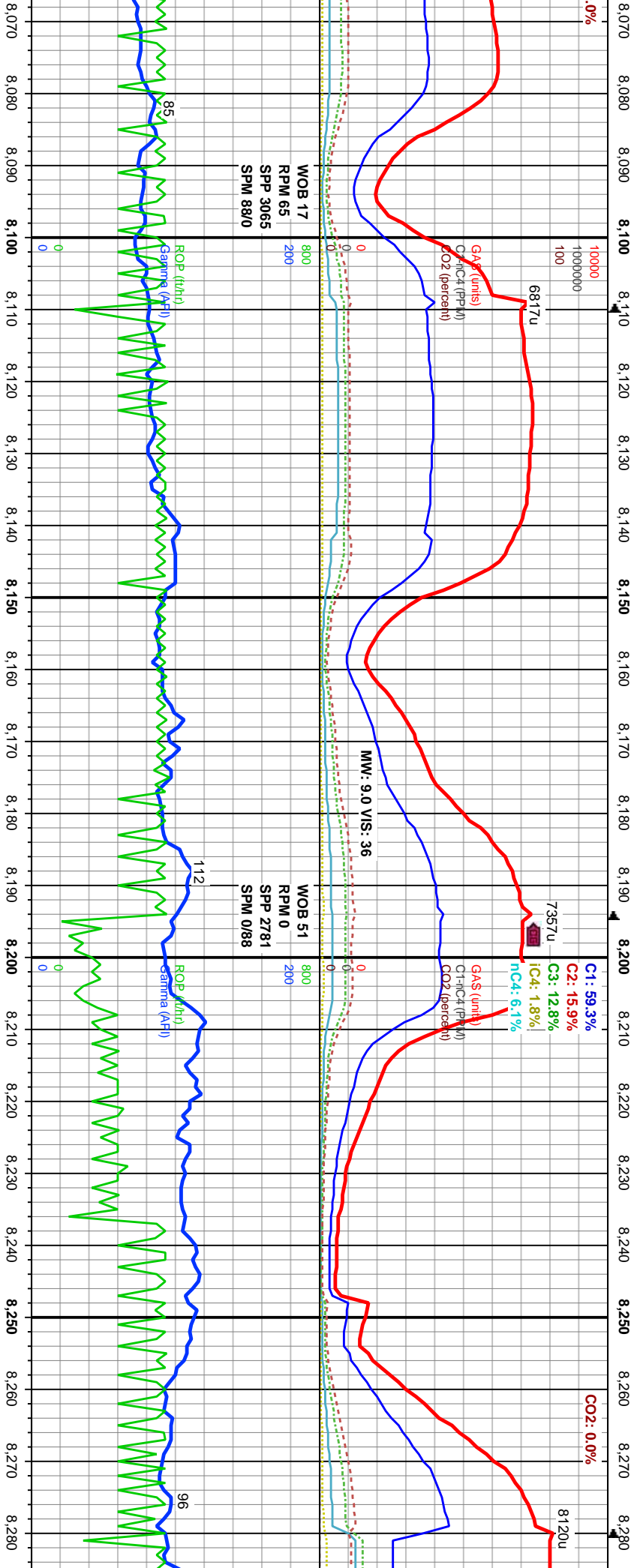
Com cal xls  
Insint bri blue whi blooming cut, good blue whi resid ring.

MD: 8.057'  
TVD: 6.358.64'  
Inclination: 90.4°  
Azimuth: 179.77°  
VS: 2.918.85'

90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blk, dull rthy lstr, v calc.  
10% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, gtrty, mottld carb mat.

Com cal xls, rr BENT frags  
Insint bri blue whi blooming cut, good blue whi resid ring.





WOB 17  
RPM 65  
SPP 3065  
SPM 880

MW: 9.0 VIS: 36

WOB 51  
RPM 0  
SPP 2781  
SPM 0/88

MD: 8,143'  
TVD: 6,357.45'  
Inclination: 91.19°  
Azimuth: 179.29°  
VS: 3,003.78'

MD: 8,230'  
TVD: 6,356.38'  
Inclination: 90.22°  
Azimuth: 180.49°  
VS: 3,089.61'

gy/brn, mod frm, mottld wh, blkly, dull rthy lstr, v calc.	95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lstr, v calc.	100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lstr, v calc.	100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brlt, sb ply-sb blkly, dull rthy lstr, v calc.
- vry dtk brwn/bk lp, frm-sft, sb r, grtty, mottld carb mat.	ply-sb blkly, rthy lstr, grtty, mottld carb mat.	ply-sb blkly, rthy lstr, grtty, mottld carb mat.	ply-sb blkly, rthy lstr, grtty, mottld carb mat.
Occ cal xls, r BENT	Occ cal xls, r BENT	Occ cal xls, r BENT	Occ cal xls, r BENT
Insint bri blue whi rad strng cut, good blue whi resid ring.	Insint bri blue whi rad strng cut, good blue whi resid ring.	Insint bri blue whi strng cut, good blue whi resid ring.	Insint bri blue whi strng cut, good blue whi resid ring.
6380	6380	6380	6380











8.730 8.740 8.750 8.760 8.770 8.780 8.790 8.800 8.810 8.820 8.830 8.840 8.850 8.860 8.870 8.880 8.890 8.900 8.910 8.920 8.930 8.940

1-3' Flare

C1: 49.9%  
C2: 17.9%  
C3: 15.9%  
iC4: 2.3%  
nC4: 8.6%

GAS (units)  
C1-iC4 (PPM)  
CO2 (percent)

CO2: 0.0%

10000  
1000000  
100

GAS (units)  
C1-iC4 (PPM)  
CO2 (percent)

WOB 16  
RPM 65  
SPP 3259  
SPM 0/89

WOB 63  
RPM 0  
SPP 3025  
SPM 0/89

115

112

ROP (t/hr)  
GAS (t/hr)

8.730 8.740 8.750 8.760 8.770 8.780 8.790 8.800 8.810 8.820 8.830 8.840 8.850 8.860 8.870 8.880 8.890 8.900 8.910 8.920 8.930 8.940

F

B

F

P

F

P

F

MD: 8.743'  
TVD: 6,355.94'  
Inclination: 90.12°  
Azimuth: 180.39°  
VS: 3,594.77'

MD: 8.829'  
TVD: 6,355.53'  
Inclination: 90.43°  
Azimuth: 180.97°  
VS: 3,679.42'

MD: 8.914'  
TVD: 6,354.46'  
Inclination: 91.02°  
Azimuth: 178.58°  
VS: 3,763.3'

TVD (ft)

TVD (ft)

od frm, mottld wh,  
hy lstr, v calc.  
wn/bk lp, frm-sft, sb  
mottld carb mat.

95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brlt, sb ply-sb bkly, dull rthy lstr, v calc.  
5% MARL: dk brn - vry dk brwn/bk lp, frm-sft, sb  
ply-sb bkly, rthy lstr, grfly, mottld carb mat.

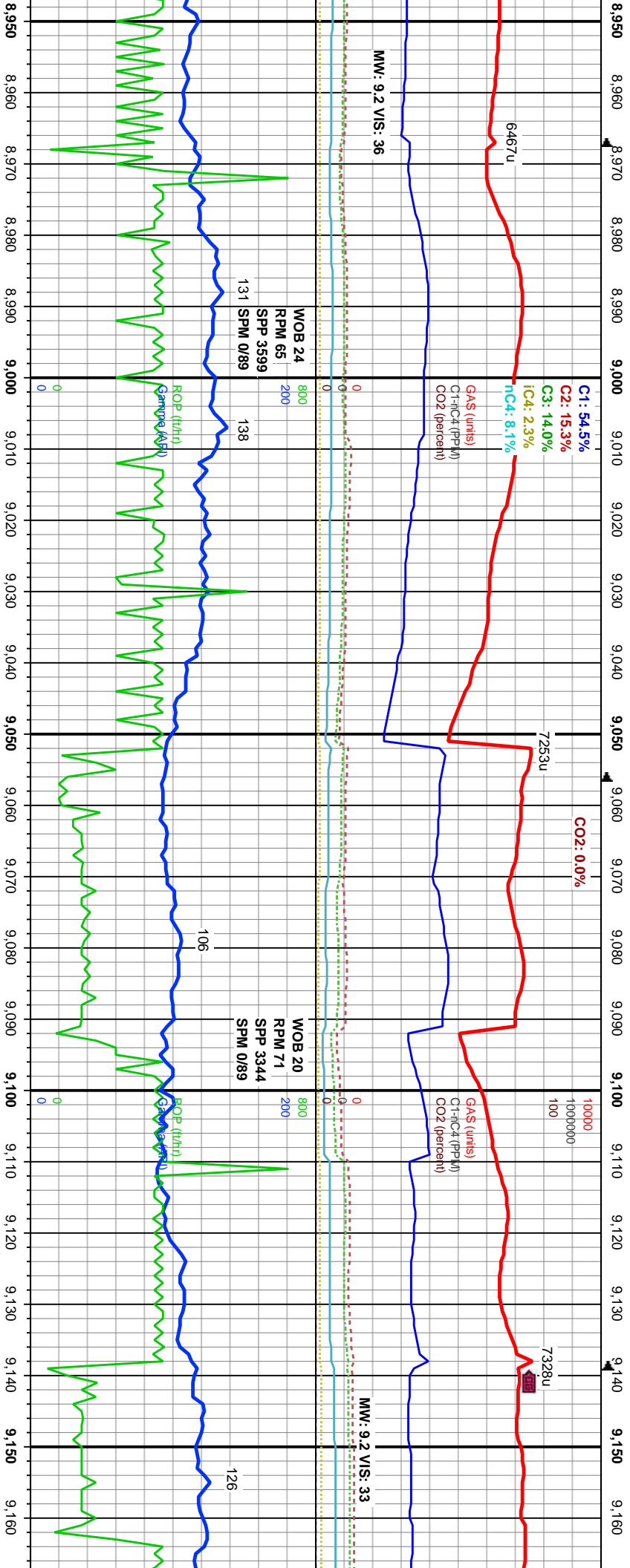
ods  
mg cut, sl thn  
blue-green resid ring.

com cal xls, tr BENT w/ pyr nodes  
Instnt mod bri blue whi rad strng cut, sl thn  
blue-green resid ring.

com cal xls, tr BENT w/ pyr nodes  
Instnt mod bri blue whi rad strng cut, sl thn  
blue-green resid ring.

tr cal xls, tr BENT w/ pyr nodes  
Instnt mod bri blue whi rad strng cut, sl thn  
blue-green resid ring.





MD: 9.000' 7340		MD: 9.085' 6340		MD: 9.150'	
TVD: 6,352.62'		TVD: 6,350.91'		TVD: 6,350.91'	
Inclination: 91.42°		Inclination: 90.89°		Inclination: 90.89°	
Azimuth: 176.88°		Azimuth: 178.23°		Azimuth: 178.23°	
VS: 3,848.59'		VS: 3,932.93'		VS: 3,932.93'	
90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, ply-sb blk, rthy lstr, grry, mottld carb mat.		90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc.		90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc.	
10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb brt, sb ply-sb blk, dull rthy lstr, v calc.		10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grry, mottld carb mat.		10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grry, mottld carb mat.	
Rt Bent SH w pyr nodes. Abn cal xls		Rt Bent SH w pyr nodes. Abn cal xls		Rt Bent SH w pyr nodes. Abn cal xls	
Inst mod bri blue whi rad strng cut, good blue whi resid ring.		Inst mod bri blue whi rad strng cut, good blue whi resid ring.		Inst mod bri blue whi rad strng cut, good blue whi resid ring.	
blue-green resid ring.		blue-green resid ring.		blue-green resid ring.	



9,170 9,180 9,190 9,200 9,210 9,220 9,230 9,240 9,250 9,260 9,270 9,280 9,290 9,300 9,310 9,320 9,330 9,340 9,350 9,360 9,370 9,380

C1: 46.0%  
C2: 18.5%  
C3: 16.4%  
C4: 2.7%  
nC4: 9.4%  
GAS (units)  
C1+HC4 (ppm)  
CO2 (percent)

CO2: 0.0%

10000  
1000000  
100  
6708u  
GAS (units)  
C1+HC4 (ppm)  
CO2 (percent)

MW: 9.2 VIS: 33

WOB 22  
RPM 72  
SPP 3703  
SPM 0/89

WOB 19  
RPM 72  
SPP 3494  
SPM 0/89

ROP (ft/hr)  
360 (ft/hr)  
142

ROP (ft/hr)  
360 (ft/hr)  
139

I: 9,173'  
D: 6,349.9'  
Inclination: 90.43°  
Azimuth: 179.04°  
4,020.05'

MD: 9,260'  
TVD: 6,350.64'  
Inclination: 88.59°  
Azimuth: 179.47°  
VS: 4,106.03'

MD: 9,345'  
TVD: 6,352.45'  
Inclination: 88.97°  
Azimuth: 179.85°  
VS: 4,189.93'

It gy/brn, mod frm, mottld wh,  
biky, dull rthy lstr, v calc.  
n - vry dtk brwn/blk ip, frm-sft, sb  
str, grrty, mottld carb mat.  
w/ pyr nodes  
a whi rad string cut, sl thin  
ng.

80% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb biky, dull rthy lstr, v calc.  
20% MARL: dtk brn - vry dtk brwn/blk ip, frm-sft, sb  
ply-sb biky, rthy lstr, grrty, mottld carb mat.  
tr cal xls, tr BENT w/ pyr nodes  
Insnt brl blue whi milky cut, sl thin blue-green resid  
ring.  
6380

90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb biky, dull rthy lstr, v calc.  
10% MARL: dtk brn - vry dtk brwn/blk ip, frm-sft, sb  
ply-sb biky, rthy lstr, grrty, mottld carb mat.  
tr cal xls, tr BENT w/ pyr nodes  
Insnt brl blue whi milky cut, good think blue-green  
resid ring.  
6380

90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb biky, dull rthy lstr, v calc.  
10% MARL: dtk brn - vry dtk brwn/blk ip, frm-sft, sb  
ply-sb biky, rthy lstr, grrty, mottld carb mat.  
abn cal xls, abn BENT w/ pyr nodes  
Insnt brl blue whi milky cut, good think blue-green  
resid ring.  
6380

60% CHK: gy/wh, lt gy/brn, mod frm, moi  
occ brt, sb ply-sb biky, dull rthy lstr, v ce  
40% MARL: dtk brn - vry dtk brwn/blk ip,  
ply-sb biky, rthy lstr, grrty, mottld carb m  
tr cal xls, abn BENT w/ pyr nodes  
Insnt brl blue whi milky cut, good think bl



9,390 9,400 9,410 9,420 9,430 9,440 9,450 9,460 9,470 9,480 9,490 9,500 9,510 9,520 9,530 9,540 9,550 9,560 9,570 9,580 9,590 9,600

C1: 43.5%  
C2: 20.7%  
C3: 17.7%  
iC4: 2.7%  
nC4: 9.1%  
7106u

GAS (units)  
C1+HC4 (PPM)  
CO2 (percent)

CO2: 0.0%

10000  
1000000  
100

1-2' Flare

7177u

C1: 53.  
C2: 17.  
C3: 14.  
iC4: 2.0.  
nC4: 7.

GAS (ur  
C1+HC4  
CO2 (pe

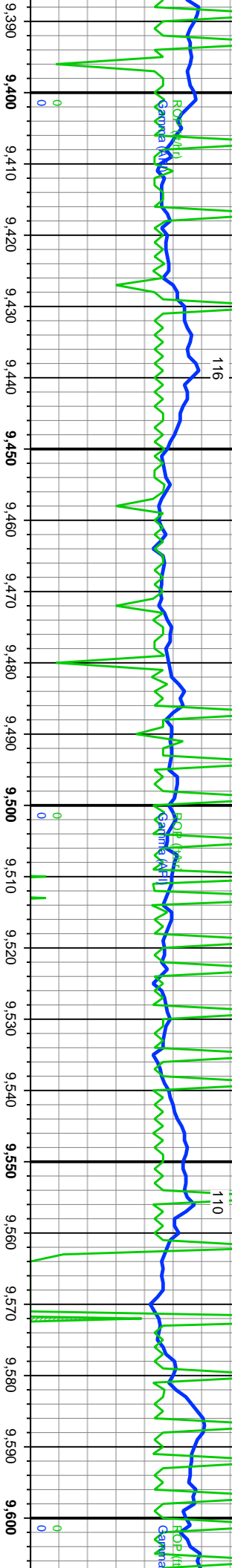
WOB 20  
RPM 72  
SPM 3538  
SPM 0/89

116

WOB 24  
RPM 76  
SPM 3771  
SPM 0/89

110

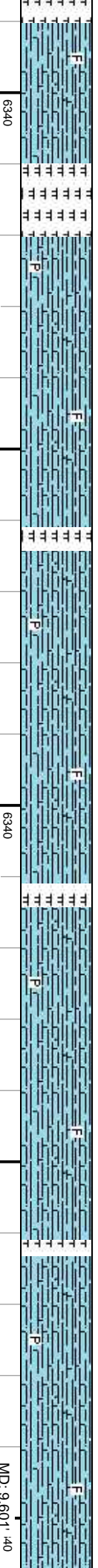
WOB 26  
RPM 75  
SPM 3773  
SPM 0/89



MD: 9,430'  
TVD: 6,353.65'  
Inclination: 89.41°  
Azimuth: 179.17°  
VS: 4,273.88'

MD: 9,515'  
TVD: 6,353.66'  
Inclination: 90.58°  
Azimuth: 179.63°  
VS: 4,357.86'

MD: 9,601' 140  
TVD: 6,352.16'  
Inclination: 91.42°  
Azimuth: 179.34°  
VS: 4,442.79'



80% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb blk, dull rthy istr, v calc.  
20% MARL: dk brn - vvy dk brwn/bk ip, frm-sft, sb  
ply-sb blk, rthy istr, gfty, mottld carb mat.  
abn cal xls, cmmn BENT w/ pyr nodes  
Insnt bri blue whi milky cut, good thnk blue-green  
resid ring.

95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb blk, dull rthy istr, v calc.  
5% MARL: dk brn - vvy dk brwn/bk ip, frm-sft, sb  
ply-sb blk, rthy istr, gfty, mottld carb mat.  
tr cal xls, tr BENT w/ pyr nodes  
Insnt bri blue whi milky cut, good thnk blue-green  
resid ring.

80% C  
occ brt, sb ply-sb blk, dull rthy istr, v calc.  
20% MARL: dk brn - vvy dk brwn/bk ip, frm-sft, sb  
ply-sb blk, rthy istr, gfty, mottld carb mat.  
abn ca  
Insnt bri blue whi milky cut, good thin blue-green  
resid ring.

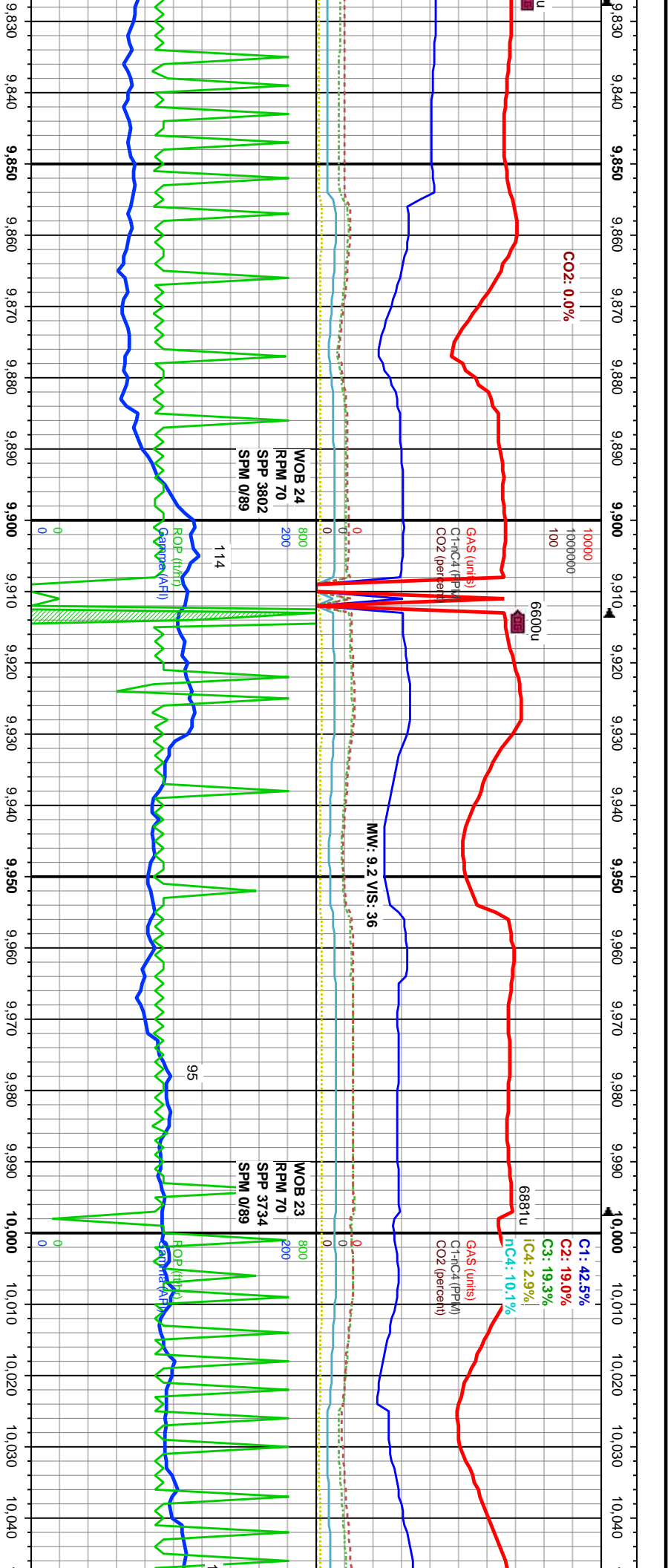
80% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb ply-sb blk, dull rthy istr, v calc.  
20% MARL: dk brn - vvy dk brwn/bk ip, frm-sft, sb  
ply-sb blk, rthy istr, gfty, mottld carb mat.  
abn cal xls, tr BENT w/ pyr nodes  
Insnt bri blue whi milky cut, good thnk blue-green  
resid ring.











<p>9,830 9,840 9,850 9,860 9,870 9,880 9,890 9,900 9,910 9,920 9,930 9,940 9,950 9,960 9,970 9,980 9,990 10,000 10,010 10,020 10,030 10,040</p> <p>MD: 9.857' TVD: 6.365.79' Inclination: 88.49° Azimuth: 178.1° VS: 4.696.04'</p> <p>95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 5% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grrty, mottld carb mat.</p> <p>abn cal xls, abn BENT w/ pyr nodes Instn bri blue whi milky cut, good thnk blue-green resid ring.</p>	<p>6340</p> <p>TVD (ft)</p> <p>MD: 9.942' TVD: 6.357.57' Inclination: 89.11° Azimuth: 178.38° VS: 4.780.25'</p> <p>90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 10% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grrty, mottld carb mat.</p> <p>tr cal xls, abn BENT w/ pyr nodes good bri blue whi milky cut, mod-good thin blue-green resid ring.</p>	<p>6340</p> <p>TVD (ft)</p> <p>MD: 10.027' TVD: 6.358.27' Inclination: 89.94° Azimuth: 178.24° VS: 4.864.46'</p> <p>95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 5% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grrty, mottld carb mat.</p> <p>abn cal xls, abn BENT w/ pyr nodes Instn bri blue whi milky cut, good thnk blue-green resid ring.</p>	<p>6340</p> <p>TVD (ft)</p> <p>MD: 10.027' TVD: 6.358.27' Inclination: 89.94° Azimuth: 178.24° VS: 4.864.46'</p> <p>95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 5% MARL: dk brn - vry dk brwn/blk ip, frm-sft, sb ply-sb blk, rthy lstr, grrty, mottld carb mat.</p> <p>abn cal xls, abn BENT w/ pyr nodes Instn bri blue whi milky cut, good thnk blue-green resid ring.</p>
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MINIDEPTH 10000 9/20/2015 100

CO2: 0.0%

9.3 WIS: 36

GAS (units)  
C1+HC4 (PPM)  
CO2 (percent)

7838u

6583u

CO2: 0.0%

CO2: 0.0%

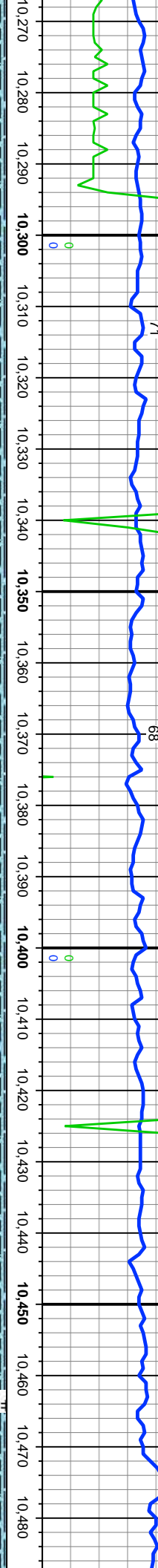
C1: 55.9%  
C2: 15.9%  
C3: 13.1%  
C4: 1.8%  
nC4: 7.4%

WOB 21  
RPM 71  
SPP 3773  
SPM 0/89

WOB 24  
RPM 71  
SPP 3916  
SPM 89/0

ROP (ft/m)  
Gamma (GSI)

ROP (ft/m)  
Gamma (GSI)



MD: 10,284'  
TVD: 6,355.21'  
Inclination: 90.15°  
Azimuth: 180.2°  
VS: 5,118.9'

MD: 10,369'  
TVD: 6,354.91'  
Inclination: 90.25°  
Azimuth: 179.86°  
VS: 5,202.73'

MD: 10,455'  
TVD: 6,354.03'  
Inclination: 90.92°  
Azimuth: 180.68°  
VS: 5,287.48'

New Target: 6,347' TVD at TD

It gy/brn, mod frm, mottld wh,  
biky, dull rthy lstr, v calc.  
- vry drk brwn/blk ip, frm-sft, sb  
tr, grtty, mottld carb mat.

100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb pty-sb biky, dull rthy lstr, v calc.  
(tr) MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb  
pty-sb biky, rthy lstr, grtty, mottld carb mat.

100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb pty-sb biky, dull rthy lstr, v calc.  
(tr) MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb  
pty-sb biky, rthy lstr, grtty, mottld carb mat.

100% CHK: gy/wh, lt gy/brn, mod frm, mottld wh,  
occ brt, sb pty-sb biky, dull rthy lstr, v calc.  
(tr) MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb  
pty-sb biky, rthy lstr, grtty, mottld carb mat.

95% CHK: gy/wh, lt gy/brn, mod frm, mot  
occ brt, sb pty-sb biky, dull rthy lstr, v calc.  
5% MARL: drk brn - vry drk brwn/blk ip, lt  
pty-sb biky, rthy lstr, grtty, mottld carb mat

w/ pyr nodes  
Instnt bri blue whi milky cut, good thnk blue-green  
resid ring.

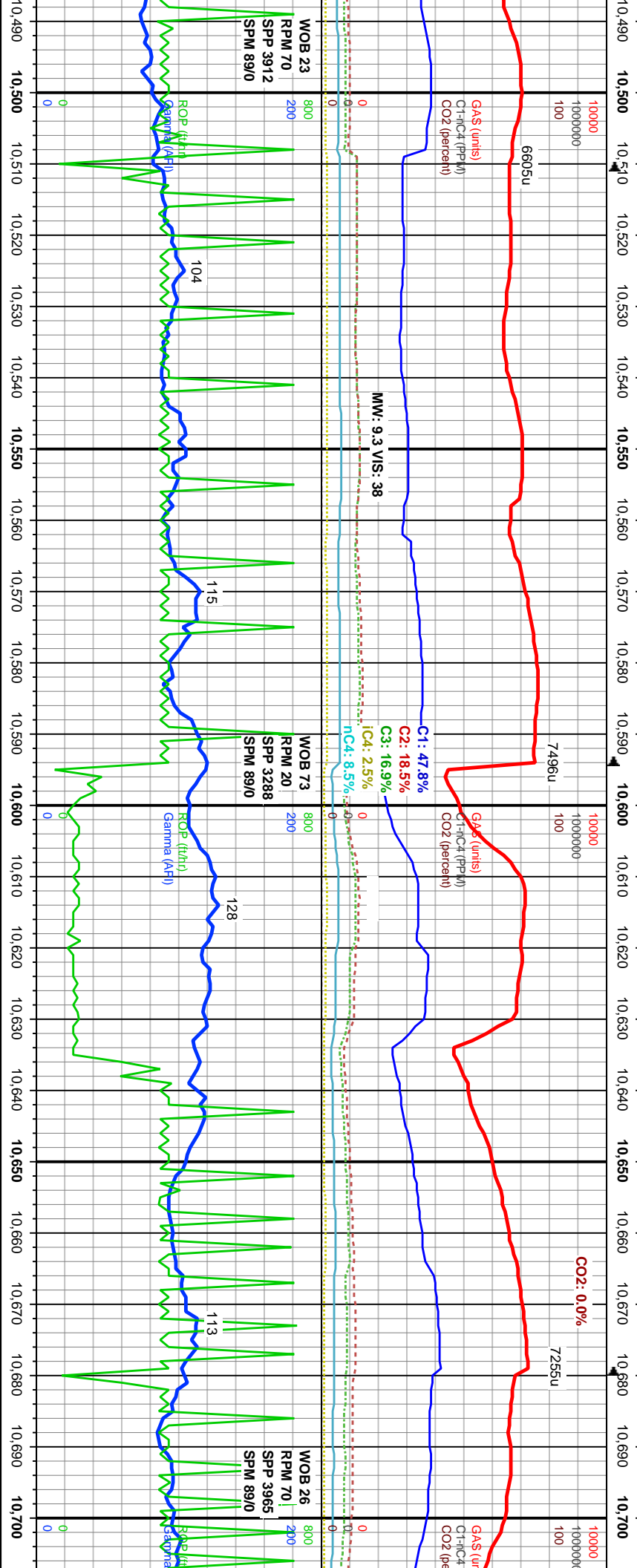
tr cal xls, tr BENT w/ pyr nodes  
Instnt bri blue whi milky cut, good thnk blue-green  
resid ring.

tr cal xls, vry tr BENT w/ pyr nodes  
Instnt bri blue whi milky cut, good thnk blue-green  
resid ring.

tr cal xls, vry tr BENT w/ pyr nodes  
Instnt bri blue whi milky cut, good thnk blue-green  
resid ring.

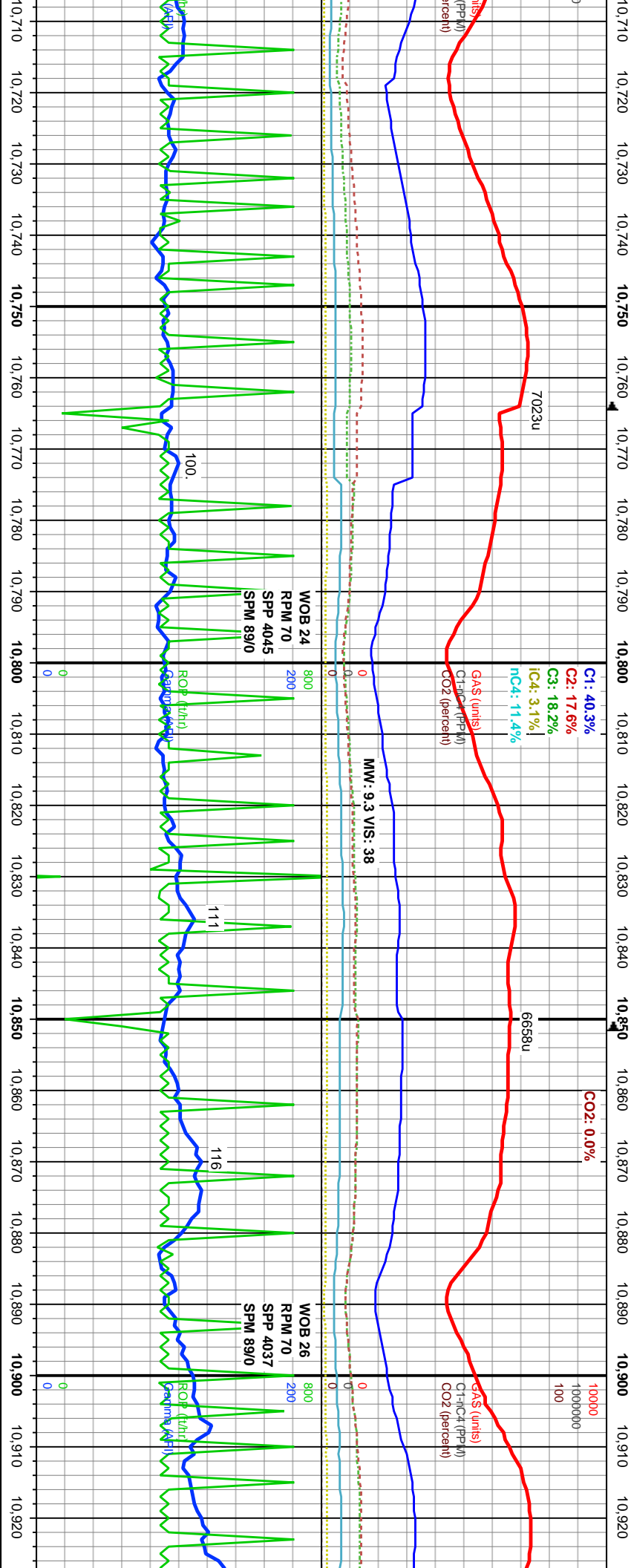
abn cal xls, abn BENT w/ pyr nodes  
good bri blue whi milky cut, good thin blue  
resid ring.





6340		MD: 10,540' TVD: 6,352.18' Inclination: 91.58° Azimuth: 180.08° VS: 5,371.21'	6340		MD: 10,626' TVD: 6,351.38' Inclination: 89.48° Azimuth: 179.35° VS: 5,456.09'	6340		6MD: 10,626' TVD: 6,351.38' Inclination: 89.48° Azimuth: 179.35° VS: 5,456.09'
TVD (ft)		95% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blkly, dull rthy lstr, v calc. 5% MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lstr, grtty, mottld carb mat.	TVD (ft)		90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blkly, dull rthy lstr, v calc. 10% MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lstr, grtty, mottld carb mat.	TVD (ft)		95% C occ brt, sb ply-sb blkly, dull rthy lstr, v calc. 5% MARL: drk brn - vry drk brwn/blk ip, frm-sft, sb ply-sb blkly, rthy lstr, grtty, mottld carb mat.
abn cal xls, abn BENT w/ pyr nodes mod-good brl blue whi milky cut, good think blue-green resid ring.			abn cal xls, abn BENT w/ pyr nodes Instnt brl blue whi milky cut, good think blue-green resid ring.			abn cal xls, abn BENT w/ pyr nodes Instnt brl blue whi milky cut, good think blue-green resid ring.		





0.711'					
6,352.15'					
Inclination: 89.48°					
azimuth: 179.23°					
VS: 5,625.1'					



10,930 10,940 10,950 10,960 10,970 10,980 10,990 11,000 11,010 11,020 11,030 11,040 11,050 11,060 11,070 11,080 11,090 11,100 11,110 11,120 11,130 11,140

1-3 Flare

6794u

C1: 51.8%  
C2: 17.8%  
C3: 15.3%  
nC4: 2.1%  
nC4: 7.6%

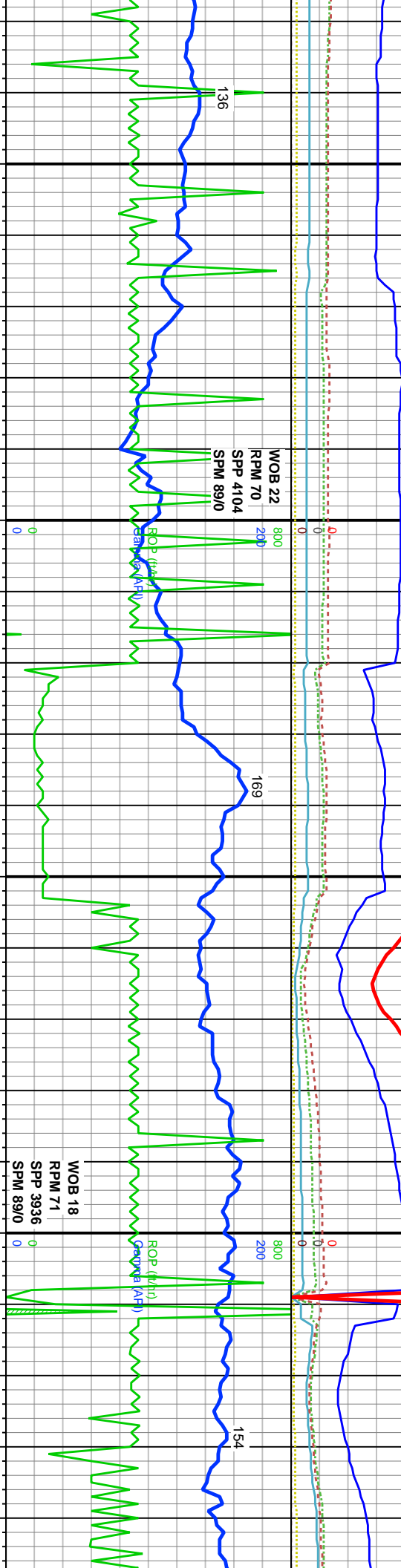
7440u

GAS (units)  
C1+HC4 (PPM)  
CO2 (percent)

CO2: 0.0%

10000  
1000000  
1007404u

GAS (units)  
C1+HC4 (PPM)  
CO2 (percent)



MD: 10,968'  
TVD: 6,350.26'  
Inclination: 91.45°  
Azimuth: 178.96°  
VS: 5,794.2'

MD: 11,055'  
TVD: 6,348.95'  
Inclination: 90.28°  
Azimuth: 178.06°  
VS: 5,880.35'

MD: 11,142'  
TVD: 6,348.1'  
Inclination: 90.8°  
Azimuth: 178.1°  
VS: 5,966.6'

od frm, mottld wh, shy lstr, v calc. brwn/bk ip, frm-sft, sb plty-sb blk, rthy lstr, mottld carb mat.	90% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 10% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, grry, mottld carb mat.	abn cal xls, abn BENT w/ pyr nodes Insint bri blue whi mlky cut, good thnk blue-green resid ring.
60% CHK: gy/wh, lt gy/brn, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc. 40% MARL: dk brn - vry dk brwn/bk ip, frm-sft, sb ply-sb blk, rthy lstr, grry, mottld carb mat.	80% MARL: dk brn - vry dk brwn, frm-sft, sb ply-sb blk, rthy lstr, grry, mottld carb mat. 20% CHK: gy/wh, lt gy, mod frm, mottld wh, occ brt, sb ply-sb blk, dull rthy lstr, v calc.	tr Bent SH w pyr nodes, tr cal xls Insint bri blue whi blooming cut, thn dul yellw-brwn resid ring.



