PETROLOG

ONE INCH ROP- MD

COUNTY Washington County
FIELD Giddings
LOCATION Washington County
WELL Levi Goodrich Unit 2 2H ST01
COMPANY Magnolia Oil & Gas

COMPANY Magnolia Oil & Gas
CONTRACTOR Patterson-UTI
RIG 248
WELL Levi Goodrich Unit 2 2H ST01
FIELD Giddings
COUNTY Washington County
STATE Texas

LOCATION LAT: 30.2294° LONG: -96.6734°

Other Services
Five Inch ROP-MD

API SERIAL NO	SECTION	TOWNSHIP	RANGE
42-477-31134			

SPUD DATE 4/26/2020
LOGGING STARTED 6/1/2020
LOGGING FINISHED 6/4/2020

TOTAL DEPTH 16,273'
@ 10,284'
@ 16,273'

Elev. KB 28'
D.F.
G.L. 305'
S.F.

BORE HOLE RECORD

HOLE SIZE	FROM	TO
6 3/4"	10,274'	16,273'

CASING RECORD

SIZE	WGT	FROM	TO
7 5/8"	29.7#	Surface	10,274'

REMARKS: All depths correspond to drillers tally.

LOGGING PERSONNEL L.J. Dufrene, Josh Wilson

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THE WELL NAME AND BOREHOLE REFERENCE DATA WERE FURNISHED BY THE CUSTOMER

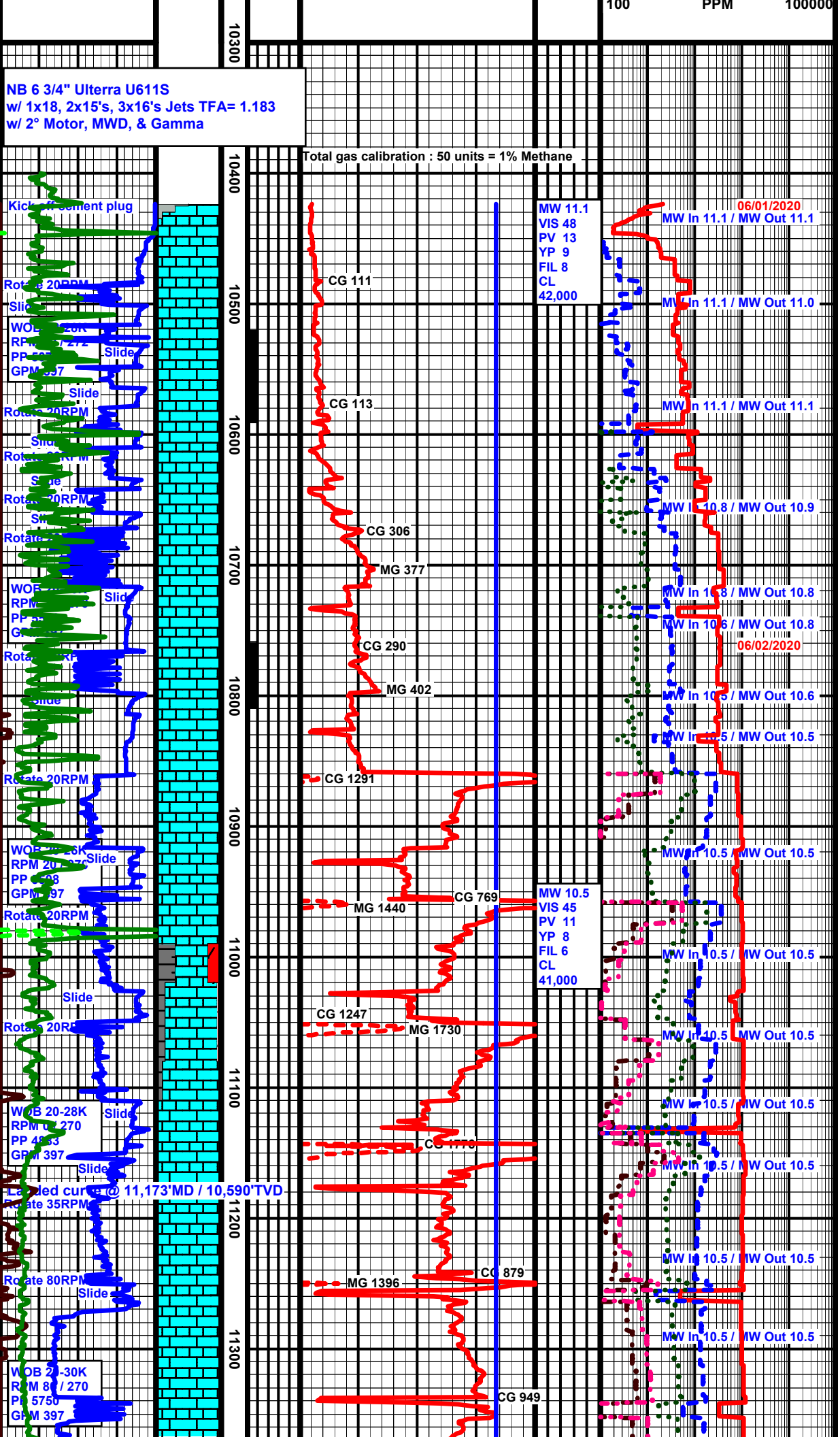
Company Magnolia Oil & Gas
Well Levi Goodrich Unit 2 2H ST01
Location Washington County
Supervisor LJ Dufrene
Unit LR05

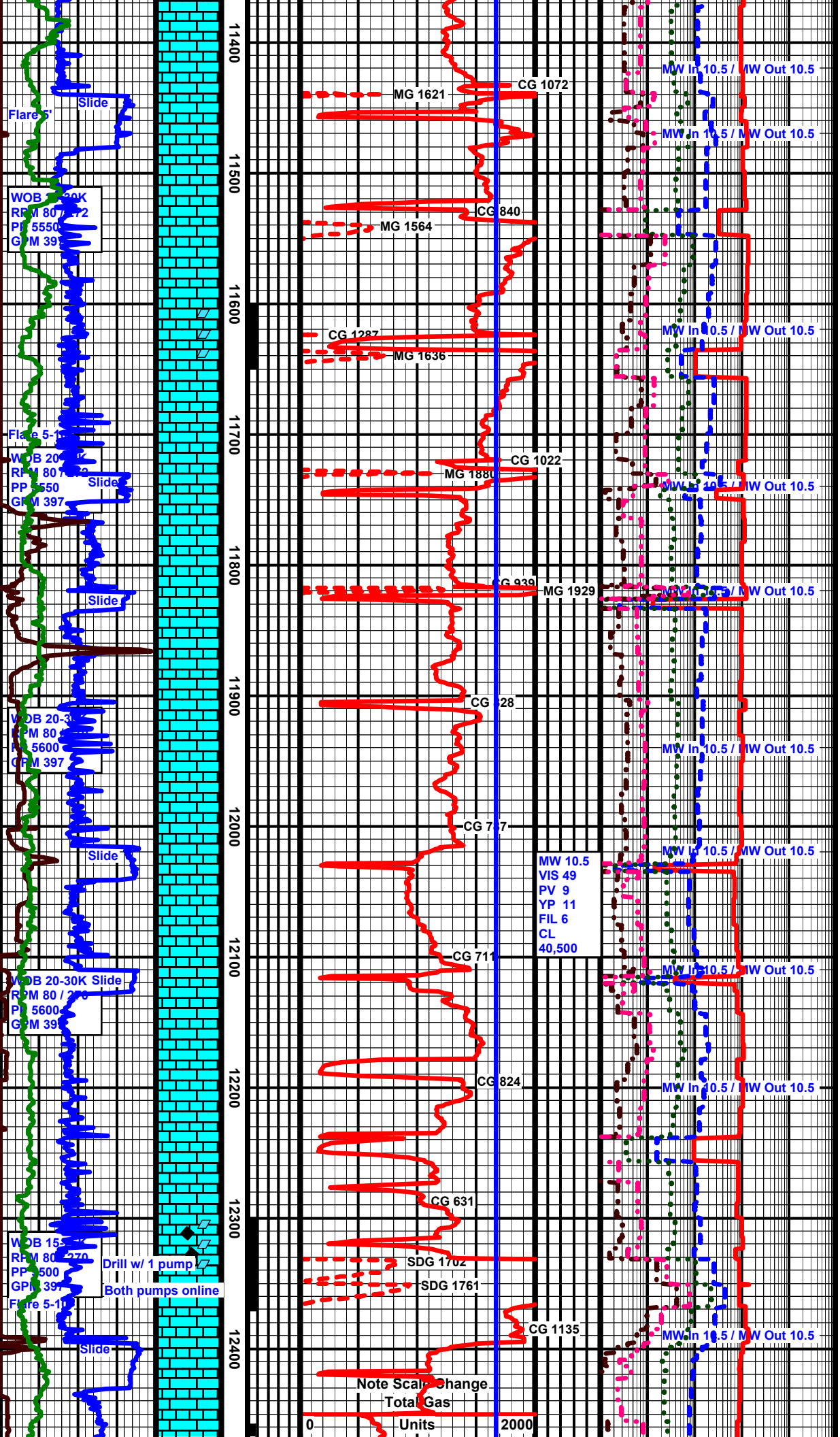
Shale, Limestone, Anhydrite, Dolomite, No Sample
Sandstone, Coal, Ash, Sandy Limestone, Salt - Na
Siltstone, Cement, Chalk, Marl, Salt - K

SHOWS HAVE THE FOLLOWING SIGNIFIGANCE
T - TRACE [ZONE OF INTEREST]
P - POOR SHOW PROBABLY NOT PRODUCTIVE
F - FAIR SHOW POSSIBLY PRODUCTIVE
G - GOOD SHOW PROBABLY PRODUCTIVE

NDB - NEW DIAMOND BIT
NB - NEW BIT
TG - TRIP GAS
UDB - USED DIAMOND BIT
CO - CIRCULATING OUT
LAT - LOGGED AFTER TRIP
CG - CONNECTION GAS
NR - NO RETURNS
DS - DIRECTIONAL SURVEY

ROP	Lith	Frac.	Gas	Fluor	Chromatograph	Remarks
ROP Ft/Hr 400 0; Casing Press PSI 0 1000; Gamma API 0 150			Total Gas Units 0 1200; Kick/Loss -5 1		Methane PPM 100 100000; Ethane PPM 100 100000; Propane PPM 100 100000; I-Butane PPM 100 100000; N-Butane	


NB 6 3/4" Ulterra U611S
w/ 1x18, 2x15's, 3x16's Jets TFA= 1.183
w/ 2° Motor, MWD, & Gamma
Total gas calibration : 50 units = 1% Methane
100
PPM
100000
10300
10400
10500
10600
10700
10800
10900
11000
11100
11200
11300
Kick off cement plug
Rotate 20RPM
Slide
Rotate 20RPM
Slide
Rotate 20RPM
Slide



ANG 95.90°
AZM 320.80°
TVD 10578.65'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 11457'
ANG 92.50°
AZM 321.00°
TVD 10571.76'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 11551'
ANG 88.80°
AZM 321.80°
TVD 10570.70'

Chlk: lt gry occ med gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ less than 5% Pyrite Tr Calcite

MD 11647'
ANG 89.10°
AZM 321.90°
TVD 10572.46'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 11742'
ANG 90.60°
AZM 324.00°
TVD 10572.71'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 11837'
ANG 93.40°
AZM 323.90°
TVD 10569.39'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 11934'
ANG 95.80°
AZM 323.70°
TVD 10561.61'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12029'
ANG 95.40°
AZM 324.20°
TVD 10552.34'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12124'
ANG 92.70°
AZM 325.20°
TVD 10545.63'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

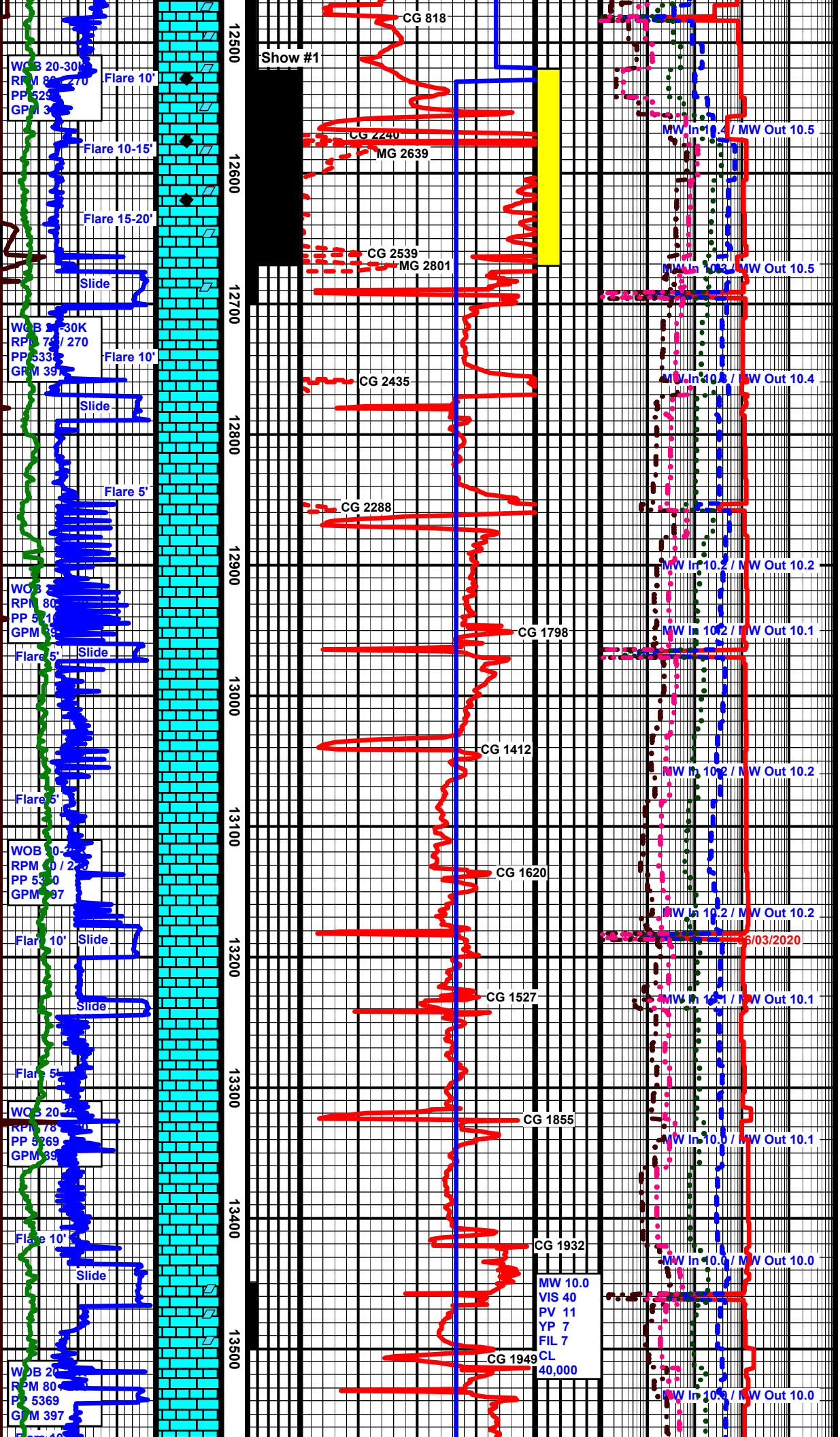
MD 12218'
ANG 93.70°
AZM 325.60°
TVD 10540.39'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12313'
ANG 95.10°
AZM 325.50°
TVD 10533.10'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ Tr Pyrite Imbed Calcite

MD 12407'
ANG 94.00°
AZM 325.70°
TVD 10525.64'



Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ Tr Pyrite Free Calcite

MD 12501'
ANG 91.80°
AZM 325.50°
TVD 10520.88'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ 10% Free Calcite Tr Pyrite yel flour crush

MD 12596'
ANG 93.00°
AZM 325.10°
TVD 10516.91'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ 10% Free Calcite Tr Pyrite yel flour crush

MD 12691'
ANG 93.10°
AZM 325.60°
TVD 10511.85'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12786'
ANG 90.70°
AZM 327.10°
TVD 10508.70'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12881'
ANG 90.80°
AZM 326.60°
TVD 10507.46'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 12975'
ANG 92.50°
AZM 325.60°
TVD 10504.75'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13069'
ANG 93.20°
AZM 328.00°
TVD 10500.08'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13164'
ANG 92.80°
AZM 327.70°
TVD 10495.11'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln Tr Imbed Calcite

MD 13258'
ANG 94.10°
AZM 323.90°
TVD 10489.45'

Chlk: med gry lt gry mott frm-mod hd brit i.p. blky-plty dull microxln

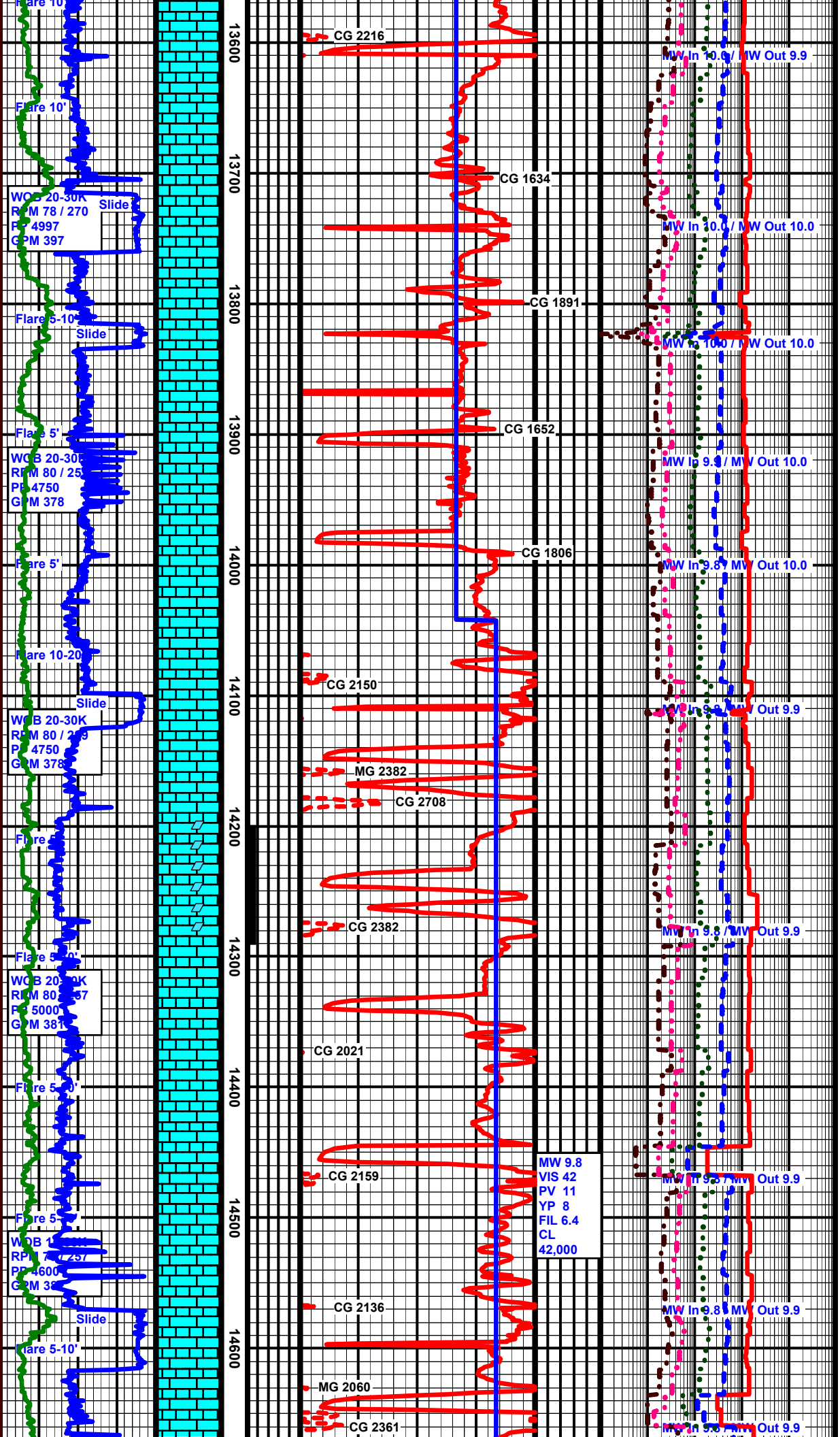
MD 13354'
ANG 95.80°
AZM 324.40°
TVD 10481.16'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13448'
ANG 96.40°
AZM 324.70°
TVD 10471.17'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln W/ Less than 3% Free Calcite

MD 13543'
ANG 93.70°
AZM 323.80°



TVD 10462.81'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13637'
ANG 95.90°
AZM 323.40°
TVD 10454.95'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13732'
ANG 95.20°
AZM 323.60°
TVD 10445.76'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13828'
ANG 90.20°
AZM 326.30°
TVD 10441.24'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 13924'
ANG 91.20°
AZM 326.90°
TVD 10440.07'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 14020'
ANG 93.30°
AZM 326.50°
TVD 10436.30'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 14114'
ANG 91.40°
AZM 327.10°
TVD 10432.44'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 14210'
ANG 90.90°
AZM 326.80°
TVD 10430.52'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ >5% free Calcite and imbed Calcite

MD 14304'
ANG 91.90°
AZM 326.50°
TVD 10428.22'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 14399'
ANG 94.70°
AZM 325.90°
TVD 10422.75'

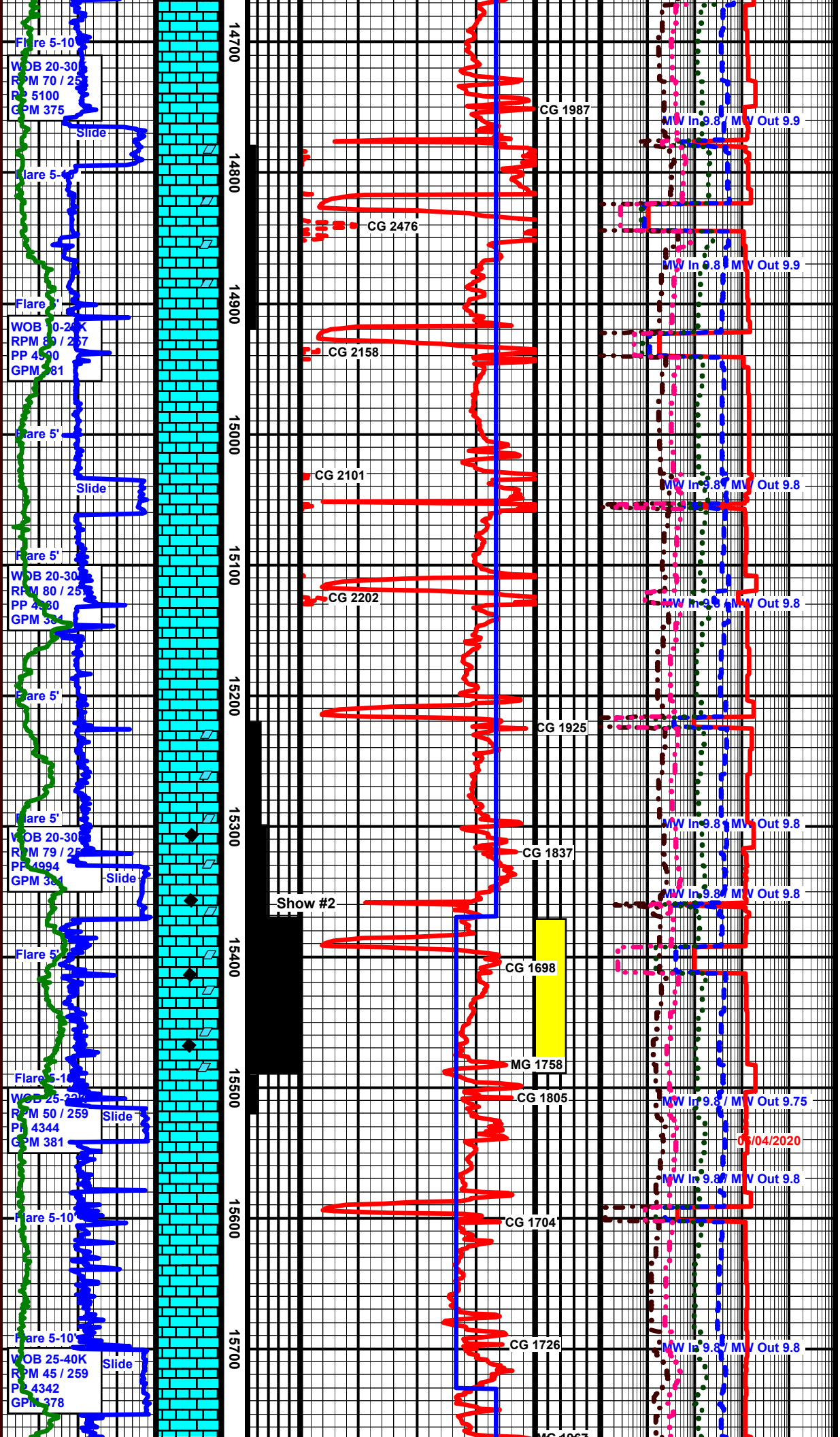
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

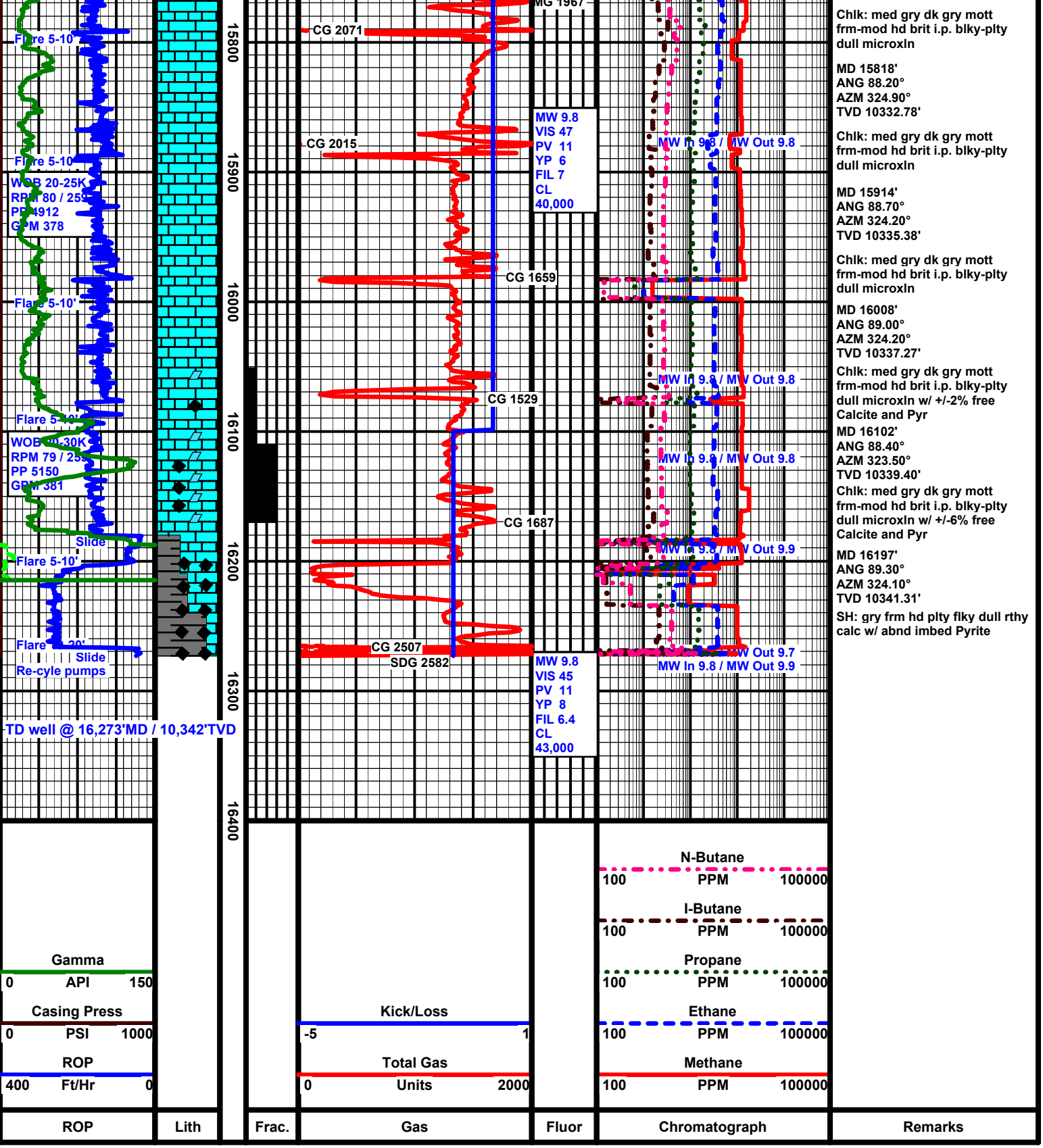
MD 14493'
ANG 97.20°
AZM 325.40°
TVD 10413.01'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 14587'
ANG 96.60°
AZM 324.80°
TVD 10401.71'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln


14700
14800
14900
15000
15100
15200
15300
15400
15500
15600
15700
Flare 5-10'
WOB 20-30K
RPM 70 / 25
PP 5100
GPM 375
Slide
Flare 5-10'
Flare 5'
WOB 20-24K
RPM 80 / 257
PP 4590
GPM 381
Flare 5'
Slide
Flare 5'
WOB 20-30K
RPM 80 / 25
PP 4980
GPM 381
Flare 5'
Flare 5'
WOB 20-30K
RPM 79 / 25
PP 4994
GPM 381
Slide
Flare 5'
Flare 5-10'
WOB 25-30K
RPM 50 / 259
PP 4344
GPM 381
Slide
Flare 5-10'
Flare 5-10'
WOB 25-40K
RPM 45 / 259
PP 4342
GPM 378
Slide
CG 1987
CG 2476
CG 2158
CG 2101
CG 2202
CG 1925
CG 1837
Show #2
CG 1698
MG 1758
CG 1805
CG 1704
CG 1726
MW In 9.8 / MW Out 9.9
MW In 9.8 / MW Out 9.9
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.75
05/04/2020
MW In 9.8 / MW Out 9.8
MW In 9.8 / MW Out 9.8
MD 14683'
ANG 93.30°
AZM 324.00°
TVD 10393.43'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 14777'
ANG 92.80°
AZM 325.40°
TVD 10388.43'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln Less than 5% Imbed & Free Calcite
MD 14873'
ANG 91.30°
AZM 325.80°
TVD 10385.00'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 14967'
ANG 93.70°
AZM 326.00°
TVD 10380.90'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 15062'
ANG 92.50°
AZM 325.80°
TVD 10375.76'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 15157'
ANG 93.70°
AZM 324.50°
TVD 10370.62'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln Less than 5% Free Calcite
MD 15251'
ANG 96.00°
AZM 324.30°
TVD 10362.67'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln 5% Free Calcite Tr pyrite
MD 15346'
ANG 96.10°
AZM 324.10°
TVD 10352.66'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln 20-30% Free Calcite Tr pyrite yel fluor crush cut
MD 15441'
ANG 93.80°
AZM 323.60°
TVD 10344.47'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln Tr Calcite and
MD 15535'
ANG 91.00°
AZM 321.90°
TVD 10340.53'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 15630'
ANG 93.10°
AZM 323.70°
TVD 10340.13'
Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln
MD 15724'
ANG 92.00°
AZM 325.50°
TVD 10332.95'



Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 15818'
ANG 88.20°
AZM 324.90°
TVD 10332.78'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 15914'
ANG 88.70°
AZM 324.20°
TVD 10335.38'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln

MD 16008'
ANG 89.00°
AZM 324.20°
TVD 10337.27'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ +/-2% free Calcite and Pyr

MD 16102'
ANG 88.40°
AZM 323.50°
TVD 10339.40'

Chlk: med gry dk gry mott frm-mod hd brit i.p. blky-plty dull microxln w/ +/-6% free Calcite and Pyr

MD 16197'
ANG 89.30°
AZM 324.10°
TVD 10341.31'

SH: gry frm hd plty flky dull rthy calc w/ abnd imbed Pyrite