



Scale 1:240 Imperial

Well Name: Hawes Ranch 4-27  
 Surface Location: 249 FNL 346 FWL NE NW NW NW  
 Bottom Location: 27-28S-23W  
 API: 15-057-20976  
 License Number: 5004  
 Spud Date: 11/12/2016 Time: 7:30 PM  
 Region:  
 Drilling Completed: 11/23/2016 Time: 1:41 AM  
 Surface Coordinates: 249 FNL & 346 FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2498.00ft  
 K.B. Elevation: 2510.00ft  
 Logged Interval: 4250.00ft To: 5270.00ft  
 Total Depth: 5270.00ft  
 Formation: Pawnee  
 Drilling Fluid Type: Native/Chemical

**OPERATOR**

Company: Vincent Oil Corp  
 Address: 200 W Douglas Ave  
 Ste 725  
 Wichita, KS 67202  
 Contact Geologist: Dick Jordan  
 Contact Phone Nbr: 316 262 3573  
 Well Name: Hawes Ranch 4-27  
 Location: 249 FNL 346 FWL NE NW NW NW API: 15-057-20976  
 Pool: Development Field: Mulberry Creek  
 State: KS Country: Ford

**CONTRACTOR**

Contractor: Duke Drilling Co., Inc.  
 Rig #: 1  
 Rig Type: Rotary  
 Spud Date: 11/12/2016 Time: 7:30 PM  
 TD Date: 11/23/2016 Time: 1:41 AM  
 Rig Release: 11/24/2016 Time: 12:00 PM

**LOGGED BY**

Company: Vincent Oil Corporation  
 Address: 200 W Douglas Ave  
 Ste 725  
 Wichita, KS 67202  
 Phone Nbr: 316-262-3573  
 Logged By: Geologist Name: Tom Dudgeon

**ELEVATIONS**

K.B. Elevation: 2510.00ft Ground Elevation: 2498.00ft  
 K.B. to Ground: 12.00ft

**TOTAL DEPTH**

Measurement Type:	Measurement Depth:	TVD:
RTD	5270.00	5270.00
LTD	5268.00	5268.00

**SURFACE CO-ORDINATES**

Well Type:	Vertical	Latitude:	37.5863403
Longitude:	-99.8309347		
N/S Co-ord:	249 FNL		
E/W Co-ord:	346 FWL		

**DRILLING FLUID SUMMARY**

Type	Date	From Depth	To Depth
Native Mud	11/17/2016	0.00ft	3791.00ft
Chemical Mud	11/28/2016	3791.00ft	5270.00ft

**CASING SUMMARY**

	Surface	Intermediate	Main		
Bit Size	12.25 in		7.88 in		
Hole Size	12.25 in		7.88 in		
	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8.625 in	639 ft	23#	14	11/13/2016 3:45 PM
Int Casing					
Prod Casing	4.5 in	5269 ft	11.6	130	11/24/2016 12:00 AM

**CASING SEQUENCE**

Type	Hole Size	Casing Size	At
	0.00 in	0.00	0.00 ft

**OPEN HOLE LOGS**

Logging Company:	ELI Wireline	Time Spent:	6
Logging Engineer:	Jeff Juebbbers	# Logs Run Successful:	4
Truck #:	922399		
Logging Date:	11/23/2016		
# Logs Run:	4		

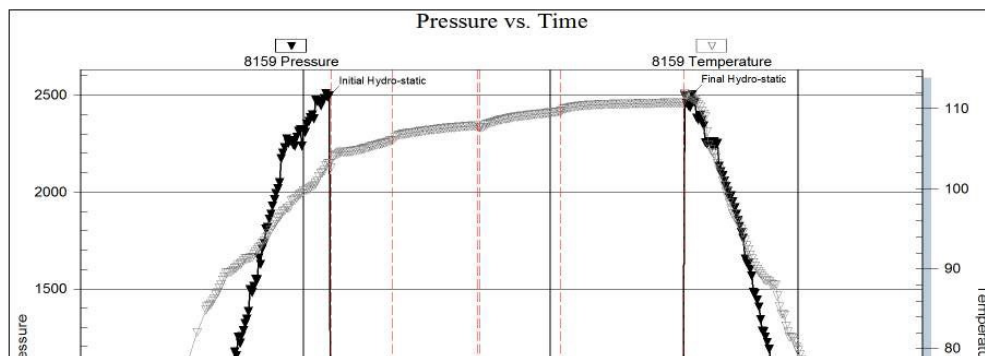
**LOGS RUN**

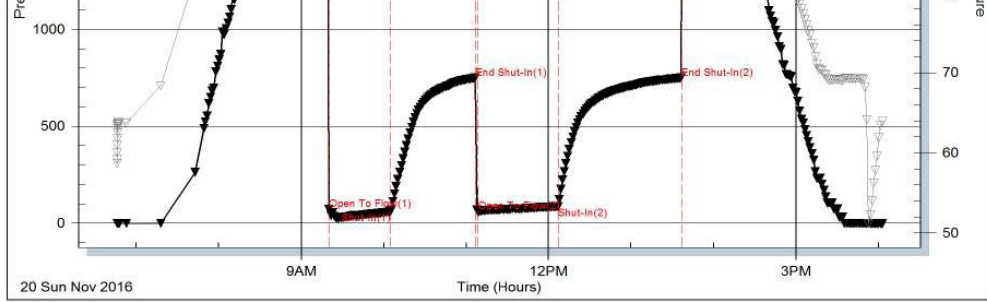
Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
DI	0.00ft	5270.00ft	3.00		1
NDE/NEU/PE	4100.00ft	5270.00ft	3.00		1
MIC	4100.00ft	5270.00ft	3.00		2
SON	0.00ft	5270.00ft	3.00		2

**LOGGING OPERATION SUMMARY**

Date	From	To	Description Of Operation
11/17/2016	0.00ft	0.00ft	Logs Ran Successfully

Serial #: 8159    Inside    Vincent Oil Corporation    Hawes Ranch #4-27    DST Test Number: 1



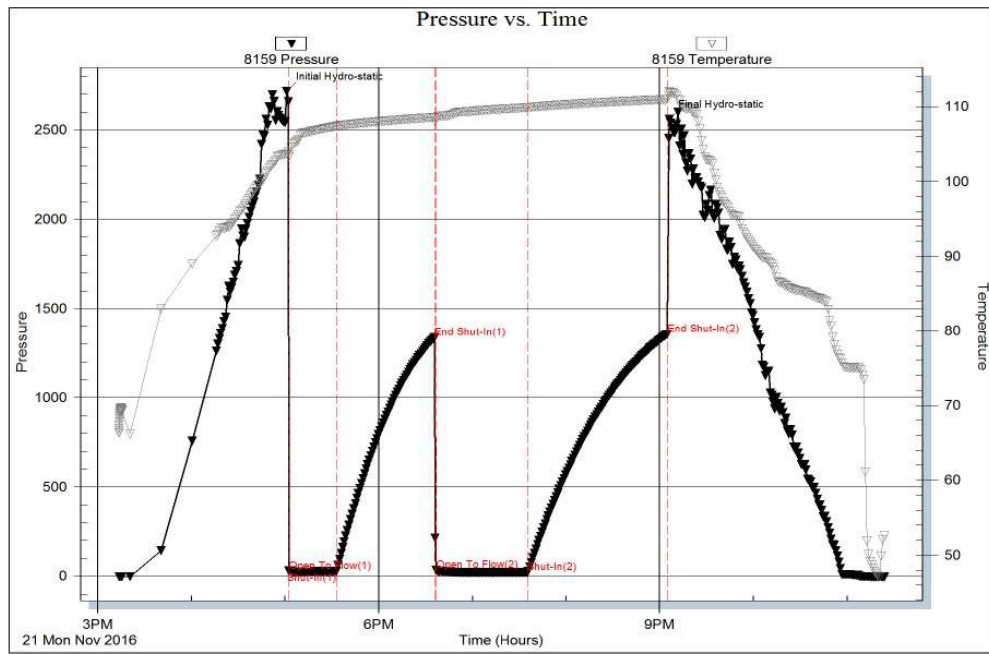


Trilobite Testing, Inc

Ref. No: 57971

Printed: 2016.11.23 @ 08:19:35

Serial #: 8159    Inside    Vincent Oil Corporation    Haw es Ranch #4-27    DST Test Number: 2

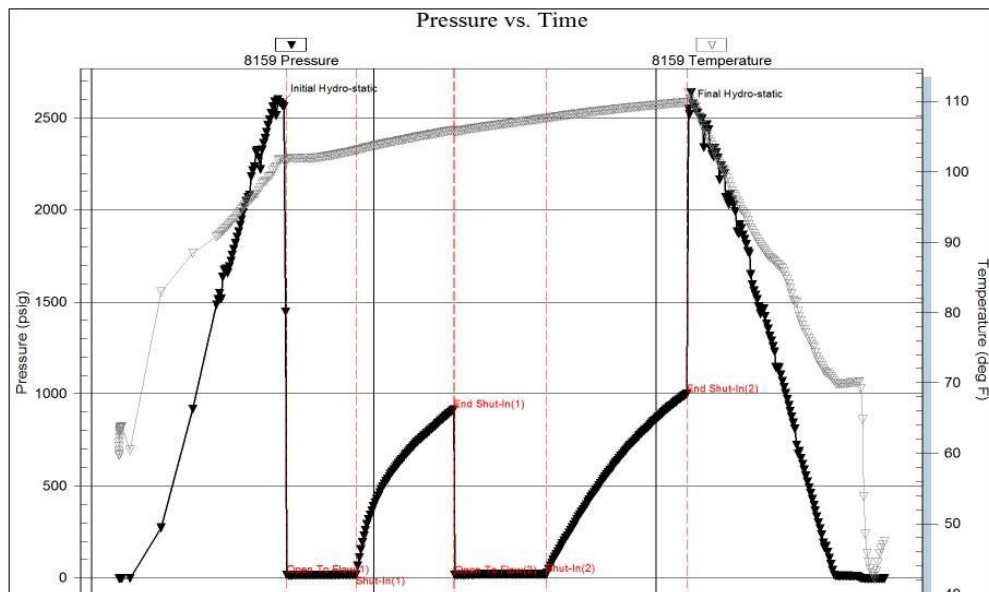


Trilobite Testing, Inc









Ref. No: 57972

Printed: 2016.11.23 @ 08:19:12

Serial #: 8159    Inside    Vincent Oil Corporation    Haw es Ranch #4-27    DST Test Number: 3



**ROCK TYPES**

 Coal	 Lmst fw<7	 Shgy	 Shcol
 Dolsec	 Lmst fw7>	 Shblck	 Cht vari

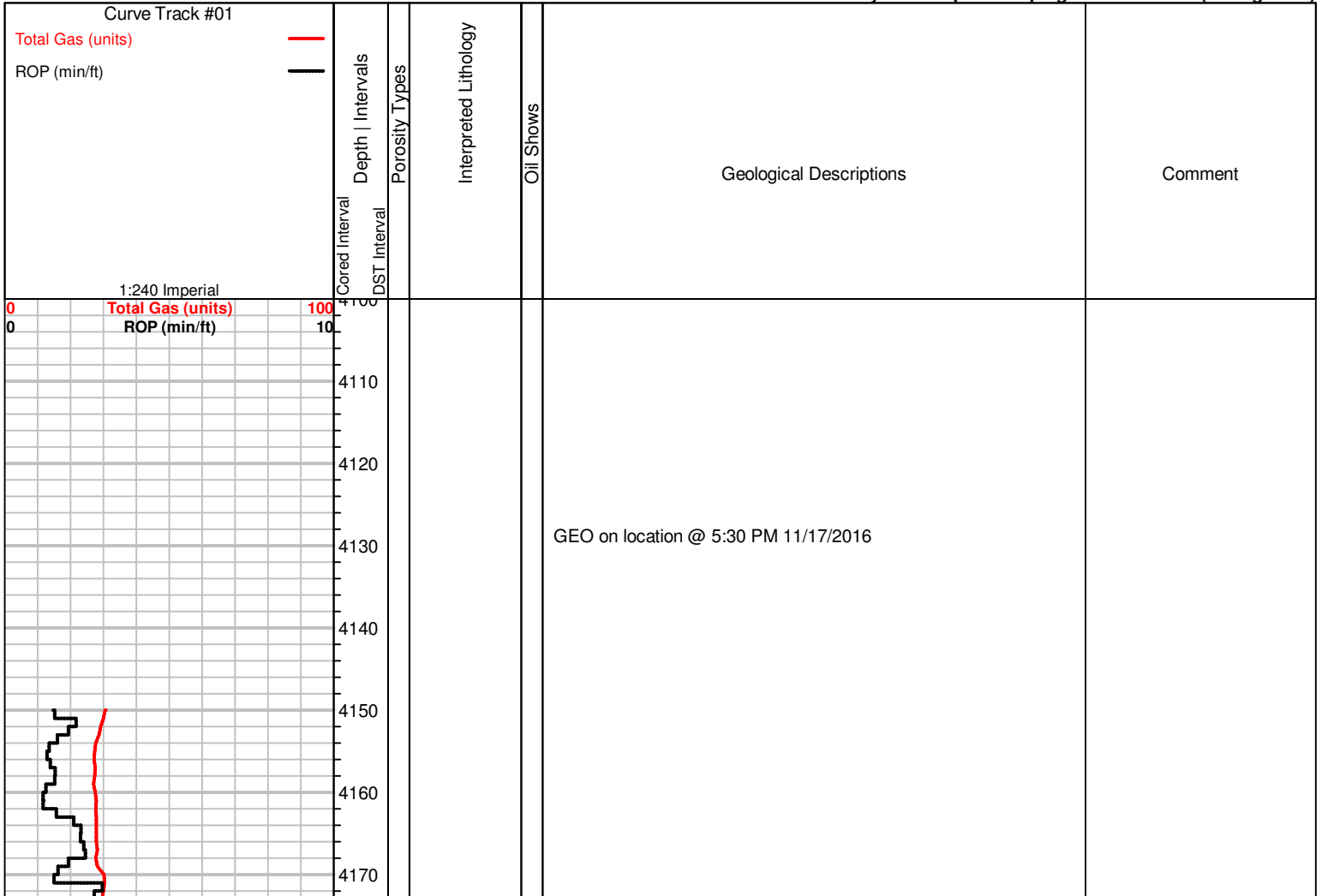
**ACCESSORIES**

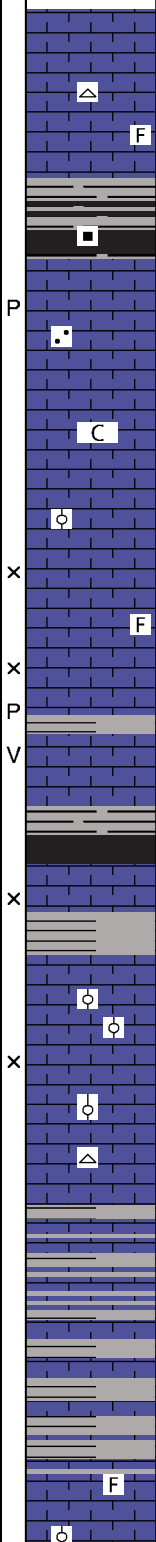
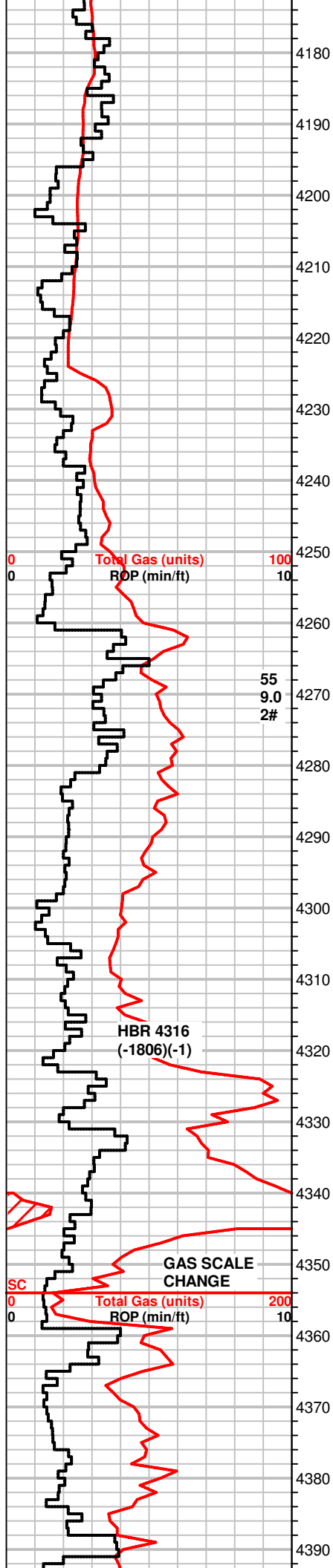
<b>MINERAL</b>	<b>FOSSIL</b>	<b>STRINGER</b>	<b>TEXTURE</b>
<ul style="list-style-type: none"> <li>■ Carbonaceous Flakes</li> <li>▲ Chert, dark</li> <li>∩ Glauconite</li> <li>■ Heavy, dark minerals</li> <li>P Pyrite</li> <li>• Sandy</li> <li>• Silty</li> <li>△ Chert White</li> </ul>	<ul style="list-style-type: none"> <li>◇ Brachiopod</li> <li>○ Crinoids</li> <li>F Fossils &lt; 20%</li> <li>φ Oolite</li> </ul>	<ul style="list-style-type: none"> <li>▨ Dolomite</li> <li>••• Sandstone</li> </ul>	<ul style="list-style-type: none"> <li>C Chalky</li> </ul>

**OTHER SYMBOLS**

<b>POROSITY TYPE</b>	<b>OIL SHOWS</b>	<b>INTERVALS</b>
<ul style="list-style-type: none"> <li>x Intercrystalline</li> <li>φ Interoolitic</li> <li>V Vuggy</li> <li>P Pinpoint</li> <li>✓ Moldic</li> <li>O Organic</li> <li>F Fracture</li> <li>e Earthy</li> <li>□ Fenestral</li> </ul>	<ul style="list-style-type: none"> <li>● Even Stn</li> <li>● Spotted Stn 50 - 75 %</li> <li>● Spotted Stn 25 - 50 %</li> <li>○ Spotted Stn 1 - 25 %</li> <li>○ Questionable Stn</li> <li>D Dead Oil Stn</li> <li>■ Fluorescence</li> </ul>	<ul style="list-style-type: none"> <li>■ Core</li> <li>• DST</li> </ul>

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





MS-WS, crm to tan, f-xln, sli. chalky to sandy txt in pcs, gritty, scatt fossils, firm, NS, dull mineral to no fluor. rare Chert, white, fossilif.

SH, red, gray, grn, blk, sli. carbonaceous

MS, tan to crm, f-xln to massive txt, rare chalky pcs, rare fossils, sandy frgmnts. Carrying SH, blk, gray, carbonaceous

MS, tan, f-xln to massive txt, rare chalky pcs, rare fossils/qtz grns.

MS-WS, crm to grya, some brn, f-xln to chalky txt, scatt oolitic pcs, rare fossil frgmnts. NS, Still carrying shales

MS, crm to gray, rare WS, f-xln, hard, fossilif(brach frgmnts), some SH, gray to blk, sli. carb.

MS, crm to gray, chalky txt, firm to hard, rare dead wormy stn, edge stn dry, no fluor, no cut

SH, blk, gray, some scatt pyrite development

Scatt blk SH, A.A., MS to WS, lt. gray, chalky in part, scatt micro oolitic pcs, firm to dense, some fusulinids, NS

MS-WS, crm to gray, f-xln, chalky pcs scatt., firm to dense, micro oolitic pcs, some mottled, fossils, NS

MS-WS, rare PS, gray to tan, m-xln to massive txt, micro oolitic, some pcs dense, scatt SH, gray, brn, blk

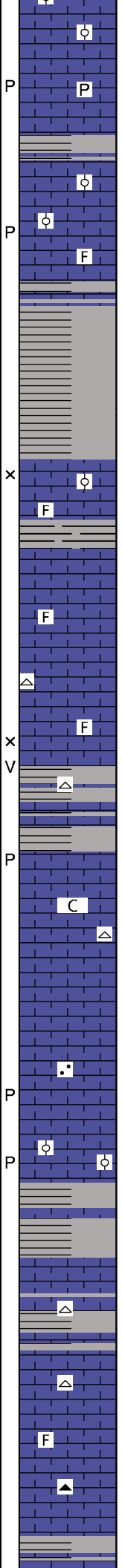
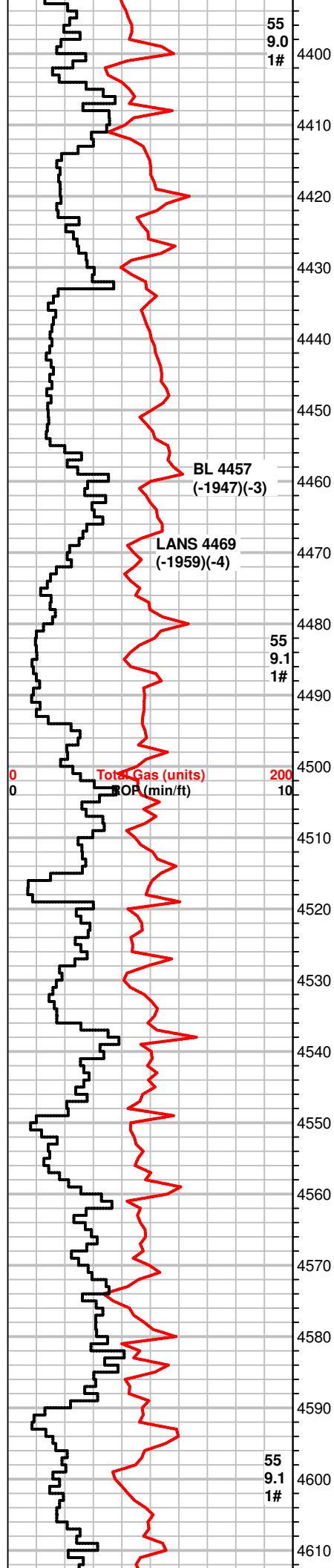
MS, crm to tan, scatt lt. gray, fpxln, firm to hard, scatt fossil frgmnts, chalky pcs throughout, lt. edge stn dry, NS Chert, white to opaque SH, gray, green

MS, crm to lt. tan, massive to chalky txt, firm to soft, rare mottled sandy pcs. NS, some SH, gray, blk

MS-WS, crm to lt. tan, f-xln to chalky txt, firm to soft SH blk, gray

WS-MS, crm to brn, m-xln, fossil frgmnts, hard, rare mottled pcs, lt edge stn dry, NS, SH, grays, brn

**+50 UGK, SHALE GAS!**



Scatt SH, brn, blk, gry  
MS, crm to lt. gray, earthy to massive txt, firm, NS

WS-PS, crm to lt. tan, fossilif/oolitic in part, firm to hard  
SH, grays, carb., pyrite

MS-WS, crm to tan, chalky to f-xln, earthy txt., firm, dark ringed fn  
to m-gr ooids in dense tan matrix, lt edge stn dry.  
SH, gray, green, pyrite

MS, crm to gray, f-xln, firm, some chalky, fossil frgmts, mottled  
pcs, NS, very light edge stn in dry  
SH, gray, blk

SH, gray, striated

MS-WS, brn, tan, crm, massive to f-xln, scatt chalky pcs, dense,  
micro oolitic pcs, scatt fossil frgmts.

SH, gray, brn  
MS, crm to gray, m-xln to earthy txt, hard to firm, some chalky,  
fossil frgmts. scatt dull fluor, NS

WS-MS, crm to lt. tan, brn, f-xln, some pcs fossilif, dense, NS

MS, crm to tan, f-xln to massive txt, dense, scatt fossil frgmts, rare  
Chert, white, NS  
some SH, gray

WS-MS, crm, tan, brn, mottled, chalky, firm to hard, NS, Chert,  
white, SH, gray, rare blk

SH, gray  
MS, tan to crm, some brn, f-xln to massive, dense, fossils, micro  
oolitic

MS, crm to lt. gray, f-xln, some dense, chalky in part,  
Chert, white  
scatt SH, gray, lt. green

MS, crm, f-xln to earthy txt, dense in part, NS, Chert, white, some  
pcs blocky and on egde of MS

WS-MS, crm to gray, scatt brn, f-xln, scatt fossil frgmts, micro  
oolitic in part, some sandy pcs  
SH, gray, brn, yellow, sandy

MS, crm, f-xln, dense, micro oolitic, rare gray waxy pcs, dull fluor,  
NS, lt edge stn in dry.  
rare blk SH

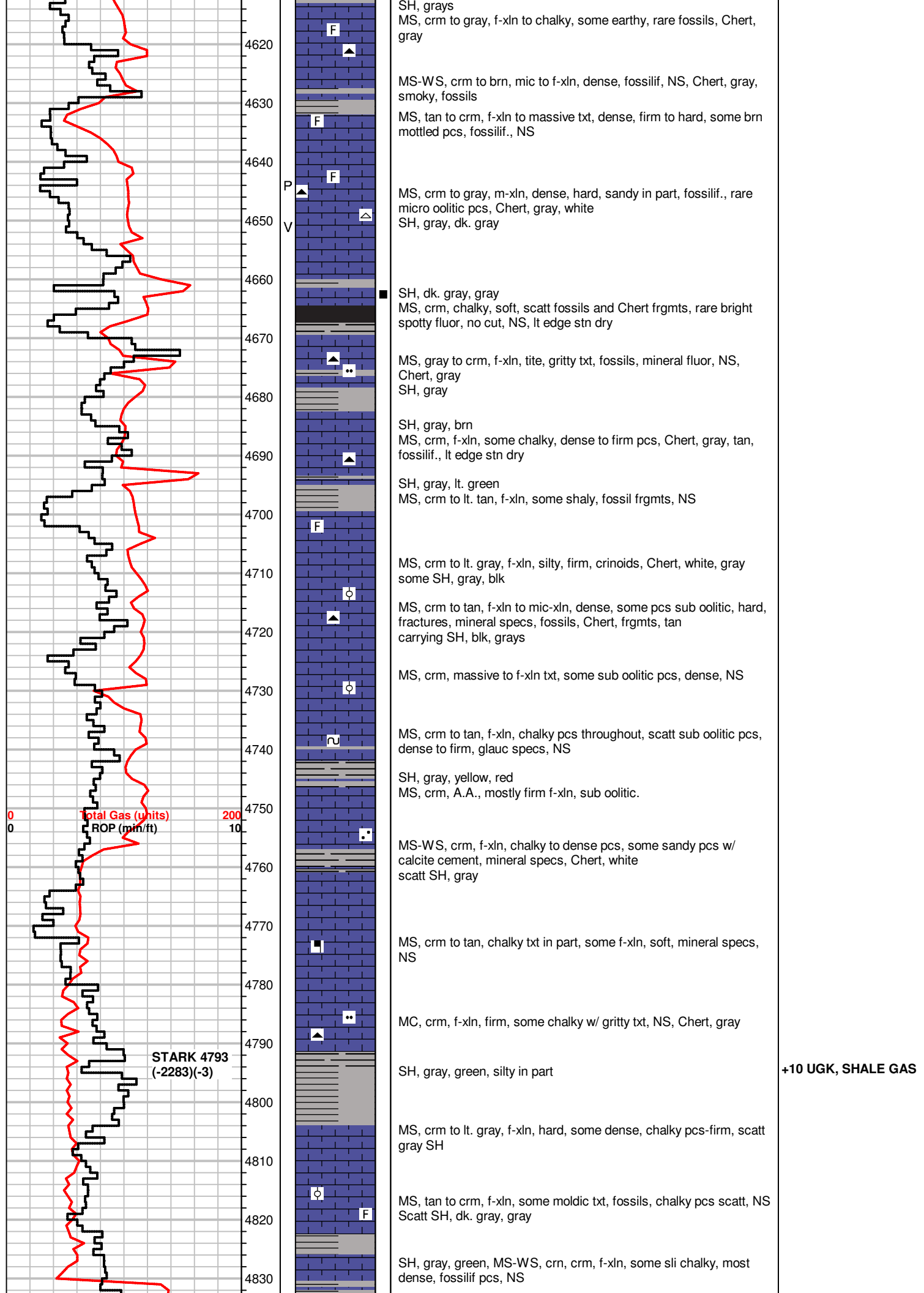
Scatt SH, blk, gray  
MS, crm to brn, chalky to f-xln, hard to soft pcs, fossilif, sub oolitic  
in part, some pcs sandy

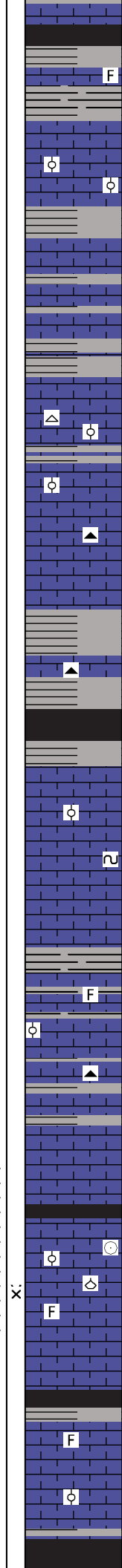
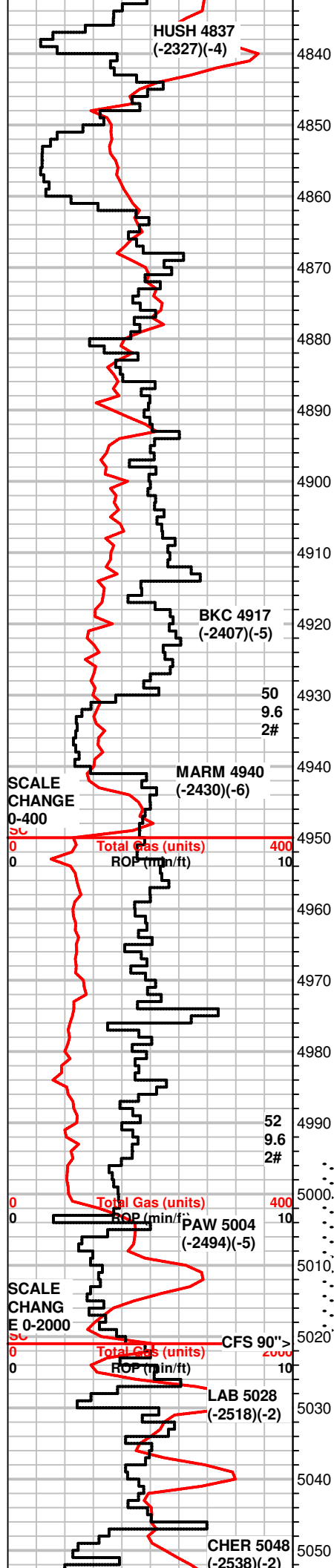
WS-MS, crm to tan, f-xln to chalky, soft, NS  
Chert, white, scatt SH, grays

MS, gray to crm/tan, earthy to massive txt, rare micro oolitic pcs,  
hard to dense, Chert, gray, white, blocky

MS, gray to crm, f-xln, chalky txt, soft to firm, rare fossils, gritty to  
silty txt in scatt pcs, NS

MS, crm, earthy to f-xln, firm, chalky, NS  
Chert, gray, blocky, scatt SH, gray, blk





SH, blk, carb. dk. grays  
MS, lt. gray, crm brn, f-xln to chalky, flaky brittle pcs throughout, some silty, scatt fossil frgmts, dense, NS

SH, grays

MS-WS, tan to gray, gritty f-gr txt, some pcs massive in apperance, firm to soft, micro oolitic to sub oolitic, fossils, pyrite some SH, gray, blk, silty

MS-WS, gray to crm, brn, fn-gr, fossilif, firm to chalky, soft crm pcs, scatt SH, gray

MS, crm to gray, f-xln, chalky i part, firm to hard, scatt dense pcs, sub oolitic, fossilif. Scatt SH, gray, dk. gray

WS, crm, gray, brn, m-xln, chalky to f-xln matrix, dense pcs scatt, most firm, sub oolitic to oolitic, fossilif, rare Chert, white some SH, blk, gray

WS, crm, lesser brn, gray, f-xln, gritty txt, brittle, hard to dense, oolitic, fossilif, Chert frgmts, tan, scatt SH, green, gray

Rare SH, blk, some gray, green  
MS, gray, crm, f-xln, silty in part, fn gr oolitic to sub oolitic pcs, hard, NS

MS, gray to scatt crm, f-xln, dense, some silty, fossilif, Chert, blk, tan  
SH, gray, green, very fine pyrite xtals, sandy pcs

SH, gray, brn  
MS, brn, tan, some gray, silty, fossilif, some dense

SH, mostly gray, brn, silty to sandy, mineral specs  
Scatt MS, crm f-xln to chalky, scatt fossil frgmts, NS

MS, crm to lt. gray, f-xln, chalkly matrix in pcs, most gritty to sli shaly, oolitic, crinoids, fossil frgmts, glauc specs.

some SH, gray, blk  
MS-WS, crm, earthy, chalky, gritty txt, some f-xln dense pcs, fossils, dull fluor, NS

MS, crm, lt. gray, f-xln to mic-xln, dense, some gritty/chalky, scatt fossils, rare oolitic pcs, m-gr ooids in tite matrix, NS  
SH, grays, striated

MS-WS, brn to crm, f to m-xln, firm, oolitic, fossilif, some dense, glauc, dull fluor, NS, Chert, tan, brn  
scatt SH, gray, silty

MS, crm, f-xln, mostly chalky matrix, dense to firm pcs, mineral fluor, NS, Chert, tan, some SH, gray

MS-WS, crm, mic-xln to massive txt, dense, rare sub oolitic pcs, glauc, dull min fluor, NS  
SH, blk, brn, gray, rare pyrite, bubbling gas

WS-MS, crm to off white, chalky to dense matrix, firm to hard, some pcs f-gr fossilif., crinoids, ooids, **rare spotty bright fluor, live oil in tray, strong odor, milky cut(10% of select pcs), edge stn in dry, int-xln por.**

SH, blk, dk. gray, silty to sandy  
MS, crm, f-xln, earthy txt, hard, sli. chalky, rare fossils, dull fluor, NS

MS, crm to gray, f-xln, dense/hard, rare gritty pcs, rare chalky pcs, some sub oolitic, dull fluor, NS

SH, blk, gray

**+120 UGK SHALE GAS**

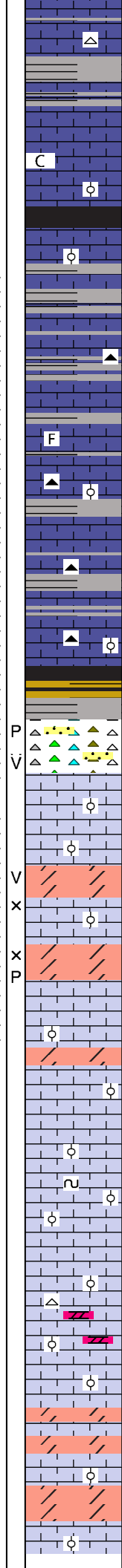
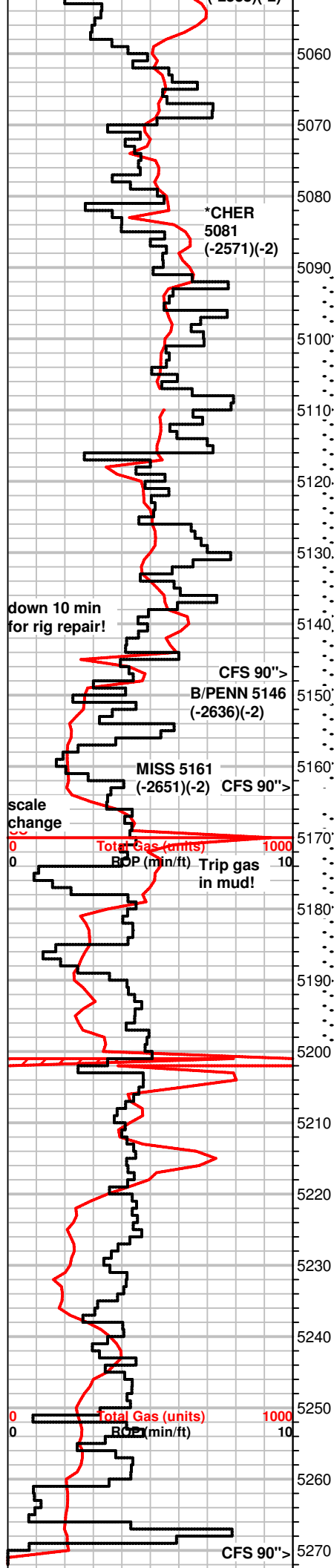
**DST #1 4995-5021**  
**45-60-60-90**  
**BOB/2"**  
**WBB**  
**BOB/30sec GTS/18"**  
**TSTM**  
**WBB**  
**4789' GIP**  
**Rec: 190' GMCO**  
**(20g, 50o, 30m)**  
**IH 2497#**  
**IF 70-59#**  
**ISIP 749#**  
**FF 59-84#**  
**FSIP 749#**  
**FH 2503#**  
**Temp 111°F**

**+90 UGK SHALE GAS**

**+164 UGK, FORMATION GAS**  
**+94 UGK RECYCLE**

**RECYCLING TRIP GAS IN MUD SYSTEM-MUTING SHALE GAS KICKS!**





MS, crm to gray, chalky to f-xln pcs, shaly in part, dull fluor, NS, Chert, white, dark fossil frgmts

MS-WS, crm to brn, f-xln to chalky matrix, some fossils, NS  
Scatt SH, gray

WS-MS, crm to gray, m-xln, chalky matrix, fossilif. pcs scatt, most soft to firm, NS

SH, blk, gray, fresh  
MS, crm to lt. gray, f-xln to chalky, some dense looking, brittle to firm, rare WS, tan, f-xln, dense, sub oolitic, NS

WS-PS, crm to tan, f-xln to chalky martix, dense to soft pcs, oolitic to fossilif, dull fluor, NS Chert, brn, fossilif.  
Scatt SH, gray, blk

SH blk, gray, silty in part  
WS-MS, crm, f-xln, some chalky in part, most massive txt, scatt fossils, minderal fluor, NS

WS-PS, crm to tan, some brn, m-gr oolitic in a chalky matrix, MS, crm m-xln, dense, dull fluor, Chert, tan, brn, fossilif.

WS-MS, brn, crm, f-xln, firm, chalky matrix, some dense, fossils, mineral fluor, **faint odor in bag, rare stn**, no cut  
Chert, brn, tan, SH, gray, blk

MS-WS, crm to brn, f-xln, dense, m-gr sub oolitic, hard, sli chalky pcs, dull fluor, Chert, brn, tan, NO vis por.

MS-WS, crm to tan, f-xln, earthy in part, cherty pcs, dense, firm, **faint to fair odor, rare spotty bright fluor, spotty stn(3pcs), inst cut(2pcs)**, SH, blk, gray, green, striated, silty

SH, varicolored, Chert, yellow, orange, off white, tan, scatt fossils, **faint odor, scatt spotty stn, rare vuggy por w/ bleeding oil, cut on break(tite)**, rare SS clusters, brn to clear, fn-gr, well sorted, sub angular, tite, pp, vuggy por.

PS, crm to off white, f-xln, sub oolitic firm

WS-PS, crm to off white, f-xln, firm to hard, oolitic to sub oolitic, **rare dead wormy stn**, dull fluor

Dolo, brn to gray, f-xln, sugary txt, firm/tite, vuggy and pp por., **good odor, rare bleeding gas & oil, spotty to even stn, bright fluor, inst cut.**

Dolo, brn to gray, f-xln, sugary to gritty txt, firm, **spotty stn, good odor, bright fluor, inst cut** int-xln por.

PS, off white, f-xln, firm to hard, brittle, oolitic, fossils, odor in sample bag, Dolo. brn, f-xln, slight spotty stn. some milky cut

WS-PS, off white, f-xln, firm, fn-gr oolitic to sub oolitic, halky matrix in pcs, dull fluor, NS

WS-PS, off white, A.A., hard, rare glauc specs, dead wormy stn  
rare Dolo, brn, f-xln, vf-grn sugary txt, firm, NS

PS-WS, off white to crm, f-xln, dense, sub oolitic to oolitic, fossils, dead wormy stn

WS-PS, off white, chalky matrix, oolitic, fossilif. some pcs sli. dolomitic, Chert, white, rare Dolo, brn, f-xln, firm, NS

WS-PS, crm to off white, A.A., scatt Dolo, limy, gray, firm, brittle, dull mineral fluor, NS

PS, off white, chalky to f-xln fossilif/oolitic, hard, some pcs dense, Dolo, gray, vf-xln, sugary txt, firm to soft, mineral fluor, NS

Dolo, brn to gray, some pcs limy, vf-xln, friable, mineral fluor, NS  
PS, off white, crm, f to m-gr oolitic, ringed ooids in sli chalky matrix, NS

DST #2 5090-5163  
30-60-60-90  
FB BOB/5"  
NBB  
SB BOB/immed GTS/15"  
TSTM  
NBB  
5053' GIP  
Rec: 20' GCM  
IH 2715#  
IF 30-29#  
ISIP 1338#  
FF35-21#  
FSIP 1355#  
FH 2650#  
Temp 112°F

+208 UGK

Pipe Strap .36' Short to board

+80 UGK

+100 UGK

DST #3 5166-5200  
45-60-60-90  
SB BOB/30sec  
NBB  
SB BOB/immed  
NBB  
421' GIP  
Rec:20' GOMCW  
(20g, 10o, 30m, 40w)  
IH 2576#  
IF 16-18#  
ISIP 915#  
FF 14-21#  
FSIP 998#  
FH 2548#  
Temp 111°F

+200 UGK? no recycle

RTD 5270'  
@ 1:41 AM  
11/23/2016

5280

5290

5300

5310

5320

5330

5340