



Scale 1:240 Imperial

Well Name: Hawes Ranch 2-22  
 Surface Location: 22-28S-23W NE NW NW SE  
 Bottom Location:  
 API: 15-057-20939-00-00  
 License Number:  
 Spud Date: 9/4/2014 Time: 1:37 PM  
 Region:  
 Drilling Completed: 9/12/2014 Time: 1:50 AM  
 Surface Coordinates: 2360 FSL & 2100 FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2480.00ft  
 K.B. Elevation: 2490.00ft  
 Logged Interval: 4200.00ft To: 5215.00ft  
 Total Depth: 5215.00ft  
 Formation: MISS  
 Drilling Fluid Type:

**OPERATOR**

Company: Vincent Oil Corporation  
 Address: 155 N Market Ste 700  
 Wichita, KS 67202  
 Contact Geologist: Dick Jordan  
 Contact Phone Nbr: 316-262-3573  
 Well Name: Hawes Ranch 2-22  
 Location: 22-28S-23W NE NW NW SE  
 Pool: API: 15-057-20939-00-00  
 State: KANSAS Field: Great Mogul Canyon  
 Country: USA

**LOGGED BY**

Company: Vincent Oil Corporation  
 Address: 155 N Market Ste 700  
 Wichita, KS 67202  
 Phone Nbr: 316-262-3573  
 Logged By: Geologist Name: Tom Dudgeon

**CONTRACTOR**

Contractor: Val Drilling  
 Rig #: 2  
 Rig Type: Rotary  
 Spud Date: 9/4/2014 Time: 1:37 PM  
 TD Date: 9/12/2014 Time: 1:50 AM  
 Rig Release: 9/13/2014 Time: 12:00 AM

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: 09 8208550  
 Latitude: 37 5022845

Longitude: -99.8208339  
 N/S Co-ord: 2360 FSL  
 E/W Co-ord: 2100 FEL

Latitude: 37.5932843

### ELEVATIONS

K.B. Elevation: 2490.00ft  
 K.B. to Ground: 10.00ft

Ground Elevation: 2480.00ft

### OPEN HOLE LOGS

Logging Company: Nabors Completion and Production Services, Co.  
 Logging Engineer: Jason Cappellucci  
 Truck #: 4854  
 Logging Date: 9/12/2014  
 # Logs Run: 4  
 Time Spent: 5  
 # Logs Run Successful: 4

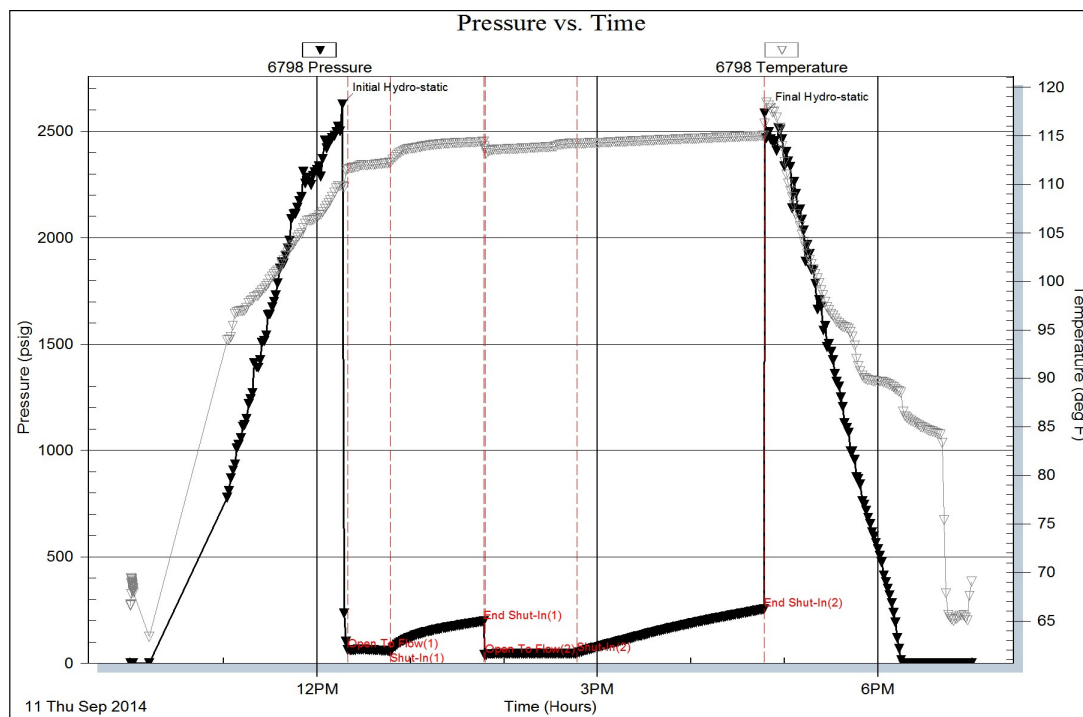
### LOGS RUN

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
Dual Induction	0.00ft	5214.00ft	2.00		1
Neu/Den/PE	4200.00ft	5214.00ft	2.00		1
Micro	4200.00ft	5214.00ft	3.00		2
Sonic	0.00ft	5214.00ft	3.00		2

### LOGGING OPERATION SUMMARY

Date	From	To	Description Of Operation
9/12/2014	0.00ft	5214.00ft	Logs ran successfully

Serial #: 6798    Inside    Vincent Oil Corporation    Hawes Ranch 2-22    DST Test Number: 1

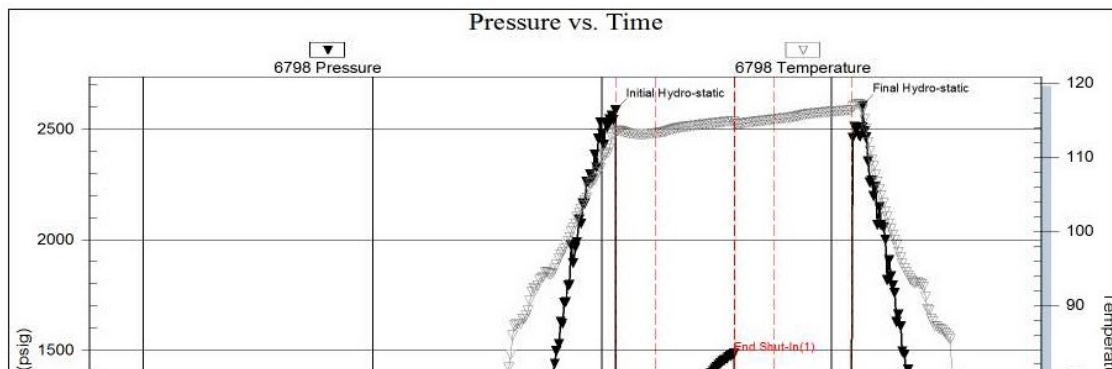


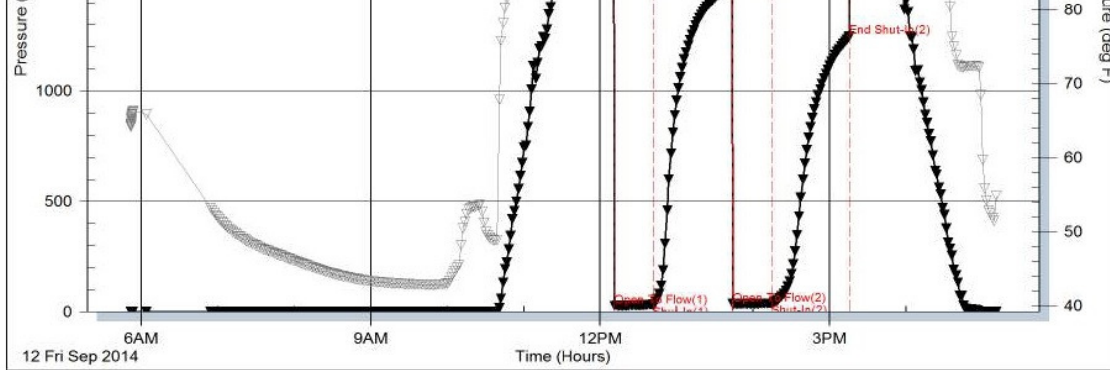
Trilobite Testing, Inc

Ref. No: 57759

Printed: 2014.09.11 @ 23:15:00

Serial #: 6798    Inside    Vincent Oil Corporation    Hawes Ranch 2-22    DST Test Number: 2



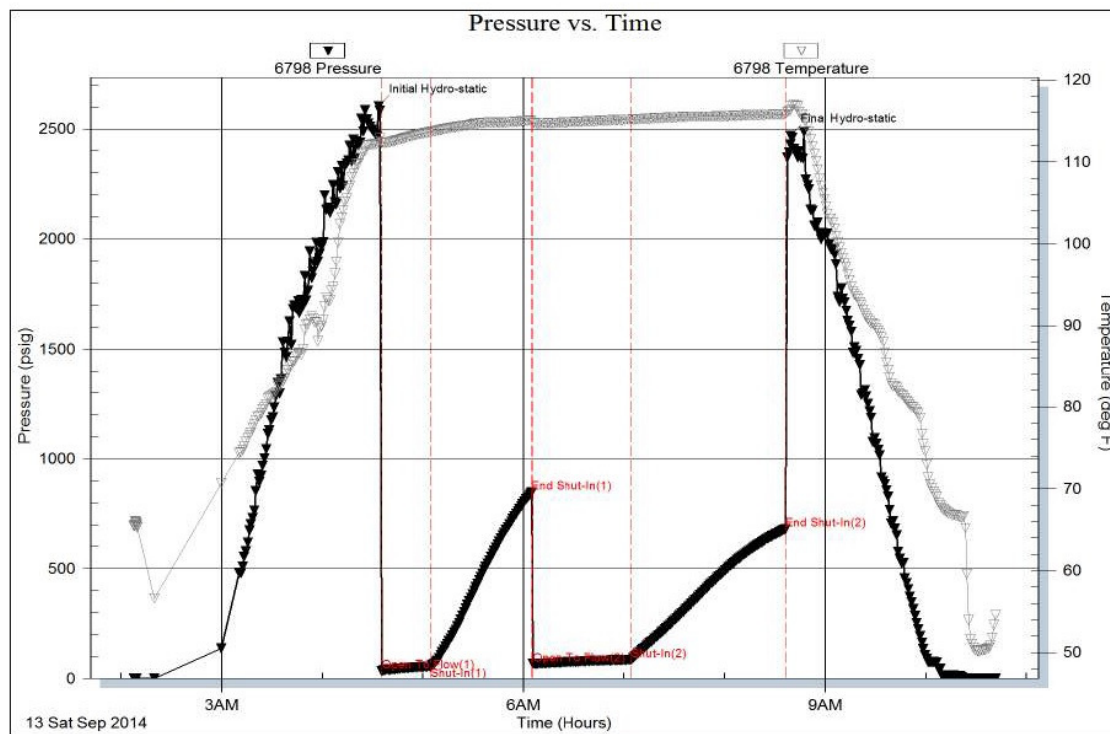


Triobite Testing, Inc

Ref. No: 57760

Printed: 2014.09.12 @ 18:34:17

Serial #: 6798    Inside    Vincent Oil Corporation    Hawes Ranch 2-22    DST Test Number: 3

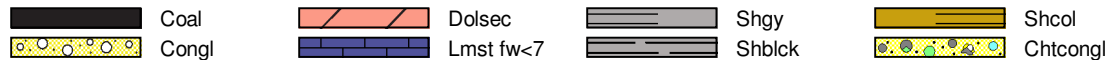


Triobite Testing, Inc

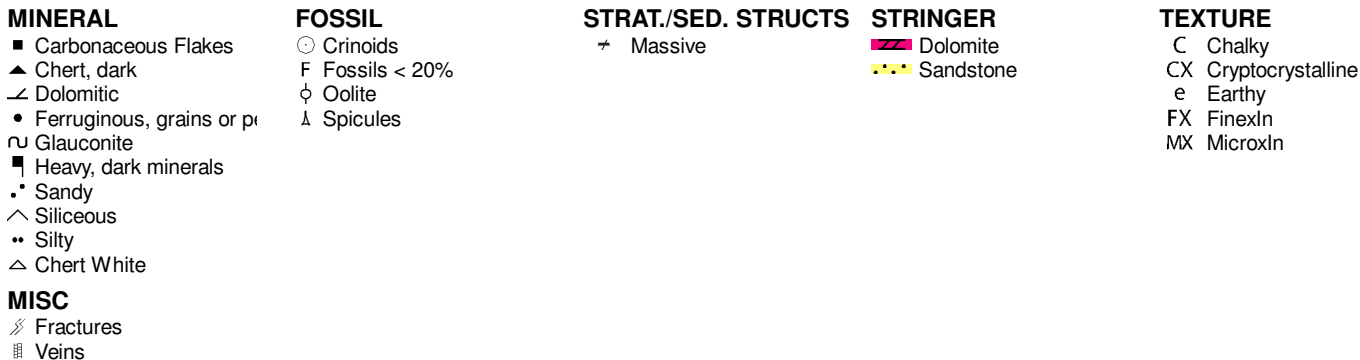
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Printed: 2014.09.13 @ 11:37:49

### ROCK TYPES



### ACCESSORIES



### OTHER SYMBOLS



- ▽ Interbedded
- V Vuggy
- P Pinpoint
- ∞ Moldic
- O Organic
- F Fracture
- e Earthy
- ▣ Fenestral
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Questionable Stn
- D Dead Oil Stn
- Fluorescence

Curve Track #01		Depth   Intervals	Porosity Types	Interpreted Lithology	Oil Shows	Geological Descriptions	Comment
Total Gas (units)	ROP (min/ft)						
1:240 Imperial							
0	0	50					
		4110					
		4120					
		4130					
		4140					
		4150					
		4160					
		4170					
		4180					
		4190					
		4200					
		4210					
		4220					
		4230					
		4240					
		4250					
		4260					

GEO ON LOC @ 12:00 PM 9/8/2014  
 GAS DETECTOR: BLOODHOUND UNIT 0779 provided by  
 BLUESTEM LABS  
 DRILL TIME KEPT FROM 4150 to TD  
 10' SAMPLES FROM 4200 to TD

MS, crm to off white, some pcs crystalline, soft, no fluor, NS  
 rare Chert, tan, oolitic, fossilif.

MS, crm, A.A., chalky matrix, soft, SH, gray, red

SH, gray to brn, brick red,  
 WS-PS, crm to gray, chalky in part, some large particles in a f-xln  
 chalky matrix

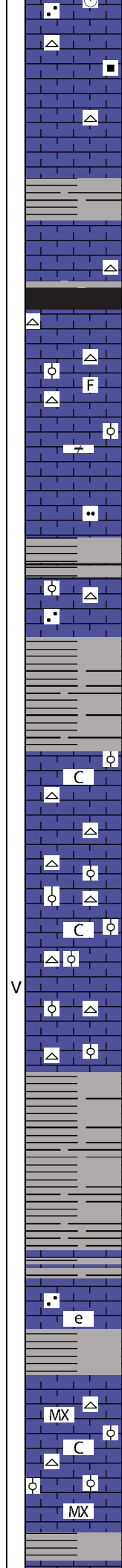
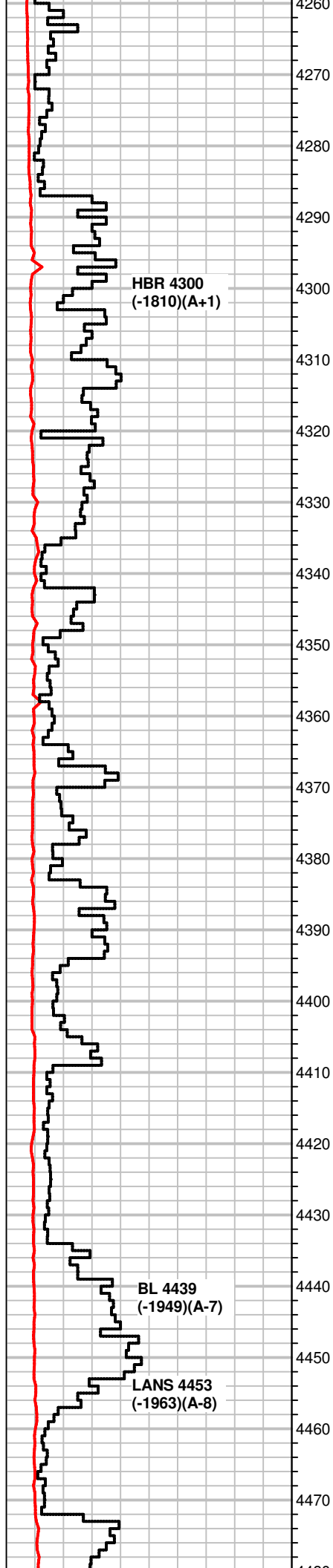
MS-WS, crm to gray A.A., some Chert, inclusions, white, rare SS  
 clusters in red SH, dull fluor, NS

MS, crm to tan, firm to soft, sandy in part, NS, dull fluor, rare Chert,  
 opaque white

MS, A.A., some pcs w/ dead blk stn, no fluor, Chert, white, fossils  
 (spicules)

SH, gray to brn, some blk pcs, MS, crm, A.A., firm to soft, siliceous  
 crinoid stem in MS matrix, some pcs silty, NS

SH, blk, brn, gray, some sandy, MS, A.A. friable, NS



SH, blk, gray, green, carbonaceous pcs,  
MS, A.A, rare dead wormy stn,

SH, more blk, brn, dk. brn, scatt MS, crm, chalky in part, soft, A.A.

SH, blk, carbonaceous, MS, crm to lt. gray, firm to hard, silty in part, dull fluor, fossils, some Chert, white

some SH, rare blk, gray  
MS, crm to lt. gray, firm to hard, silty in part, some fossils dull fluor,  
NS, Chert, white

MS, gray to crm, hard, massive txt, fossilif, NS

MS-WS, crm to lt. gray, silty in part, hard  
SH, gray

WS-MS, crn to brn, some gray, m-xln, fossilif, m-gr oolitic pcs, firm to hard, sandy, Chert, white, some inclusion  
rare SH, blk

MS, crm to off white, crypt-xln txt, dense, mineral fluor, calcite veins, NS,  
SH, gray, green

MS, A.A., some gray, brn specks in some pcs, rare fossils, some pcs silty, chalky in part

MS, off white to crm, earthy txt, chalky matrix w/ sand gr.'s scatt, rare co- gr Qtz pcs, Chert, white, angular/platy

MS-WS, brn to crm, oolitic to sub oolitic, fn-gr black ooids in chalky matrix, hard pcs throughout, dense, Chert, white  
rare SH, blk, gray

MS-WS, crm to off white, crypt-xln, soft/friable pcs, oolitic, vuggy por., Chert, white, frag, fossils

MS-WS, crm, off white, A.A., m-gr oolitic pcs, chalky pcs, bright min fluor, NS, Chert, white

SH, gray, green

SH, blk, green, gray

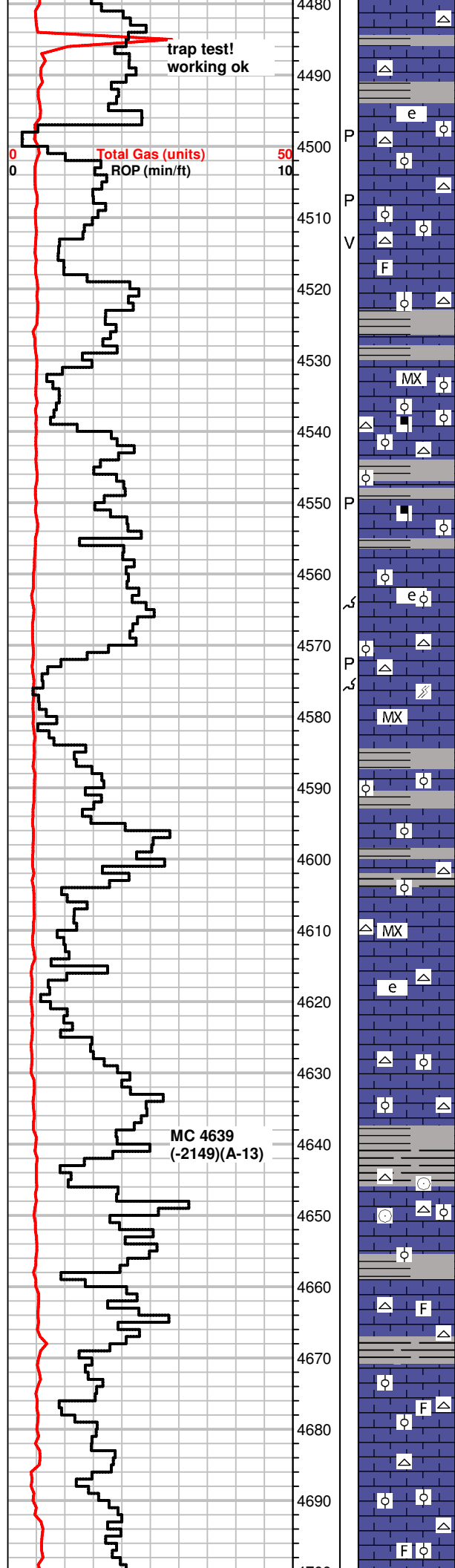
MS, crm to brn, dense, some sandy pcs, some pcs shaly, mineral fluor, NS

MS, crm to brn, earthy to sandy txt, dense, hard

MS-WS, crm to lt. brn, some off white, gritty txt, firm to hard, some micro-xln pcs, oolitic in part, fossils

MS, brn to crm, chalky matrix, micro-xln, hard, crinoids, NS Chert, white, crinoids

MS-WS, crm to off white, brn, gray, gritty txt, some m-gr oolitic, micro-xln, some chalky, mineral fluor, fossilif, scatt SH, blk



SH, gray, brn, MS-WS, gray to crm, A.A. dense  
Chert, white, some weathered on edges

MS, crm, earthy txt, dense, fusulinids,  
Chert, tan, white, micro oolitic

MS, crm, chalky pcs, firm, some soft, rare micro-xln pcs,  
Chert, white, sli. weathered looking

MS, crm, A.A., some fossils, f-oolitic pcs, Chert, white, fossilif,  
SH, gray, green

MS, crm to lt. gray, mirco-xln, sub oolitic pcs, some shaly, Chert,  
white, fresh and weathered,  
some SH, gray, green

MS, A.A., some brn, dense, micro-xln, sub oolitic pcs scatt.  
SH, brn, gray

WS, crm to lt. tan, f-gr oolitic pcs, sandy/gritty txt, black mineral  
inclusions, dense, hard pcs, dull fluor, NS  
Chert, white  
some SH, dk. gray, gray, green

MS-WS, lt. gray, f to m-gr oolitic, gritty txt, some dark mineral  
inclusions, A.A.,  
SH, dk. gray

MS, crm to lt. gray, decrease in oolitic pcs, mostly earthy txt,  
chalky, NS

MS, A.A., more brn to gray pcs, sub oolitic  
Chert, white, some SH, gray

MS, crm to gray, micro-xln, dense, some chalky, fractured pcs

MS, crm to off white, sub oolitic, fn-gr ooids, some dense pcs, scatt  
SH, gray, brn

MS, crm to brn, micro-xln, dense, some friable, sub oolitic pcs,  
Chert, white, gray  
some SH, gray, green

MS, gray, brn, some crm, micro-xln, dense, some pcs silty

MS, gray to crm, A.A., 50% dense pcs, earthy, Chert, white, gray  
SH, dk. gray, gray

SH, dk. gray, gray  
MS, crm, sucrosic txt, hard, dense, sub oolitic pcs rare, Chert,  
white, sub oolitic in part

MS, crm to tan, micro-xln, chalky matrix, soft, some dense,  
fractured pcs, Chert, white, fossilif, large crinoid stem sections

MS-rare WS, crm to gray, rare fn-gr oolitic pcs, most crm, chalky,  
silty, NS, Chert, white, gray, micro oolitic,  
SH, gray

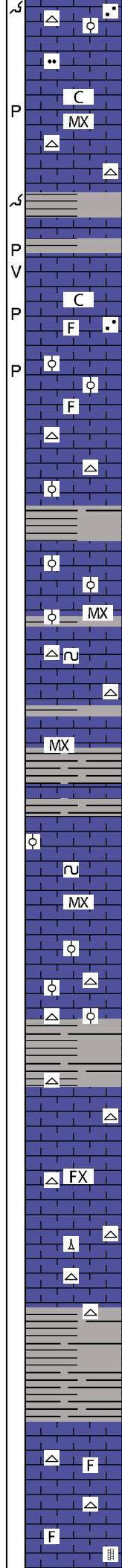
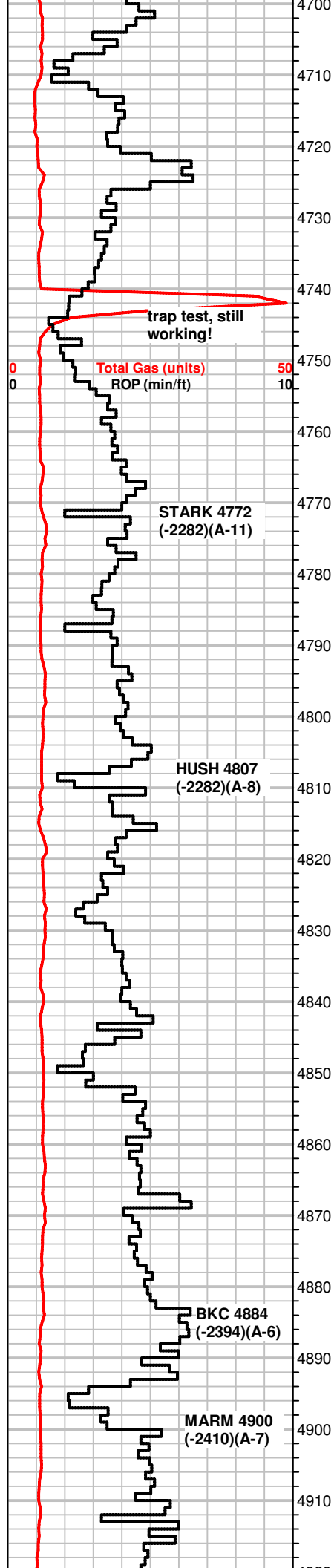
MS, A.A., crm, rare moldic pcs, brn, silty to sucrosic, dense,  
Chert, white, some fossils  
SH, gray, green, dk. gray

MS, crm, micro-xln to gritty txt, hard, NS  
Chert, tan, white, fossilif

MS, crm to gray/brn, micro-xln, A.A., silty brn pcs scatt.  
Chert, white

MS, crm, micro-xln, dense, some fn-gr oolitic pcs, firm, chalky  
matrix, Chert, white  
SH, gray, some brn

MS, tan to lt. gray, micro-xln, hard, sandy, some pcs fossilif, lt



MS, tan to lt. gray, micro-xln, hard, sandy, some pcs fossilif., lt edge strn in dry, Chert, white, some SH, gray, brn, silty

SH, gray  
MS, A.A, influx crm pcs, micro-xln, chalky matrix, mineral fluor, NS

MS, crm, earthy txt, gritty in part, chalky matrix in pcs, dense throughout tray, Chert, white

SH, dk. gray, gray, green/brick red, WS, tan, micro-xln, micro oolitic pcs scaatt. hard

MS, crm to tan, A.A., chalky matrix w/ dense pcs scaatt.

MS, crm to brn, some gray, micro-xln to f-xln, sli sucrosic txt, silty looking, mostly dense, rare chalky pcs, fossilif to sub oolitic some SH, gray, brick red, rare blk, brn

MS, crm A.A., mainly dense w/ fossils, no fluor, NS  
Chert, white

SH, gray, green, influx in large pcs

MS, crm, micro-xln, chalky matrix w/ sub oolitic particles, m-gr

MS, tan to brn, micro-xln, micro oolitic pcs, hard dense, mineral fluor,  
SH, gray, sandy w glauc and pyrite particles

MS, crm, A.A. barren in dry, NS, Chert, white  
some SH, dk. gray, green

MS, crm to gray, micro-xln, some chalky pcs, brittle to hard

SH, dk. gray, gray, green, brick red

MS, crm, earthy, chalky matrix, soft, rare crinoids

MS, A.A., inc in lt. gray pcs, mic-xln, some gritty pcs, v.f- glauc inclusions  
some SH, blk, gray

MS, gray to crm, f-xln, silty, some dense pcs, NS  
scatt SH, blk, gray

MS, crm to off white, chalky matrix, sub to micro-oolitic pcs in matrix, Chert, white, rare blk

MS, crm to off white, A.A., mic-xln, crinoids/fossilif, Chert, white, fossilif, scatt blk SH, looks rounded

MS, crm to off white, mic-xln to f-xln, gritty txt, some dense pcs, no fluor, NS, Chert, white, spicules

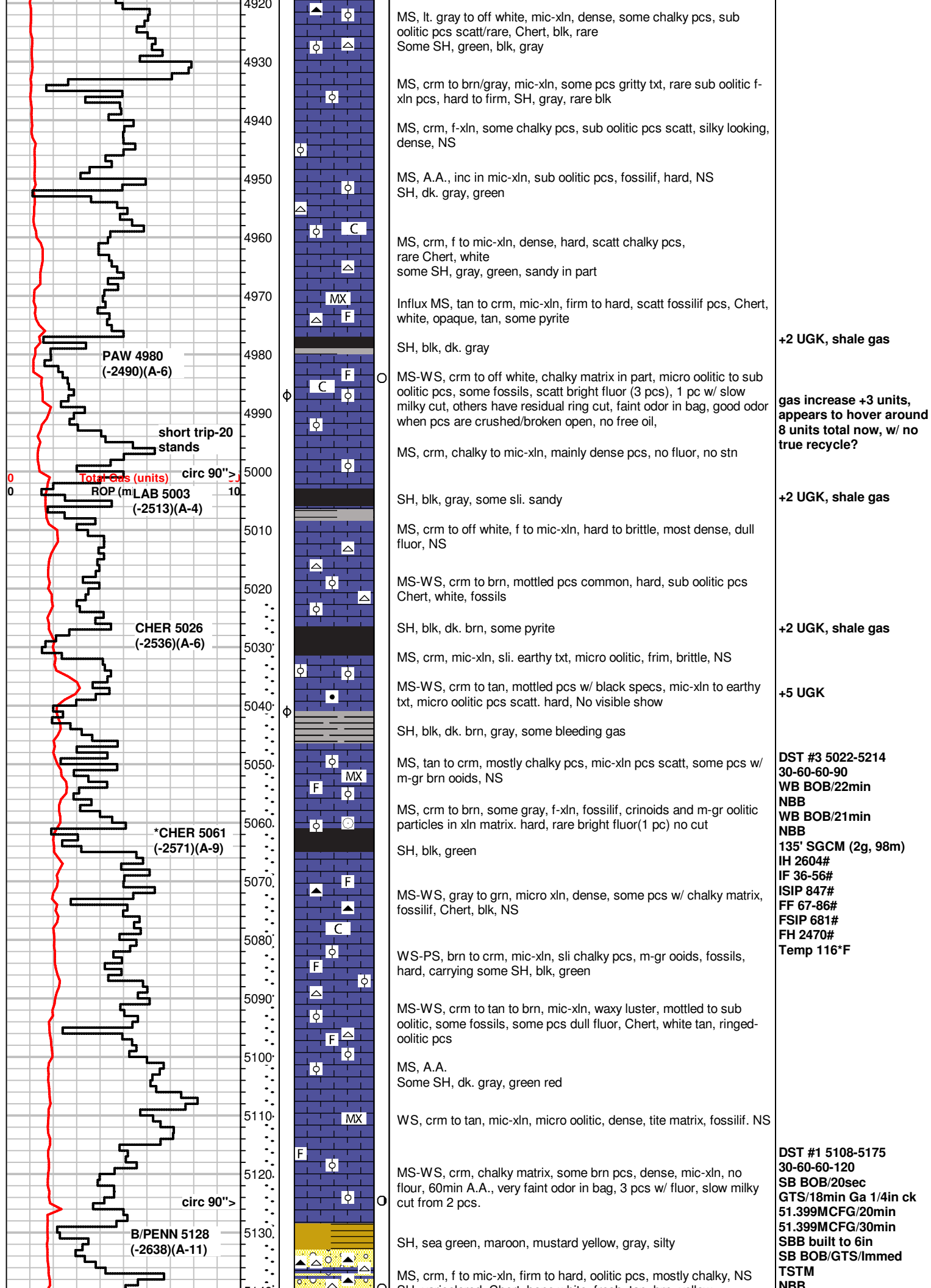
MS, A.A., some gray pcs, dense, still carrying Chert, white, spicules

MS, crm, to off white, scatt brn pcs, mic-xln, some fossils, chalky pcs throughout, Chert, bone white, fossilif.  
SH, dk. gray, gray, sandy to silty in part

SH, dk. gray to gray, some green

MS-WS, crm to tan, mic-sln, dense, some chalky, few pcs WS w/ fossils, some Chert, white, dec. amt

MS, crm to br, some lt. gray, vf-xln, to earthy txt, platy pcs, brittle, some calcite veins, Chert, brn, white, fossilif, NS



MS, lt. gray to off white, mic-xln, dense, some chalky pcs, sub oolitic pcs scatt/rare, Chert, blk, rare  
Some SH, green, blk, gray

MS, crm to brn/gray, mic-xln, some pcs gritty txt, rare sub oolitic f-xln pcs, hard to firm, SH, gray, rare blk

MS, crm, f-xln, some chalky pcs, sub oolitic pcs scatt, silky looking, dense, NS

MS, A.A., inc in mic-xln, sub oolitic pcs, fossilif, hard, NS  
SH, dk. gray, green

MS, crm, f to mic-xln, dense, hard, scatt chalky pcs, rare Chert, white  
some SH, gray, green, sandy in part

Influx MS, tan to crm, mic-xln, firm to hard, scatt fossilif pcs, Chert, white, opaque, tan, some pyrite

SH, blk, dk. gray

+2 UGK, shale gas

MS-WS, crm to off white, chalky matrix in part, micro oolitic to sub oolitic pcs, some fossils, scatt bright fluor (3 pcs), 1 pc w/ slow milky cut, others have residual ring cut, faint odor in bag, good odor when pcs are crushed/broken open, no free oil,

gas increase +3 units, appears to hover around 8 units total now, w/ no true recycle?

MS, crm, chalky to mic-xln, mainly dense pcs, no fluor, no stn

SH, blk, gray, some sli. sandy

+2 UGK, shale gas

MS, crm to off white, f to mic-xln, hard to brittle, most dense, dull fluor, NS

MS-WS, crm to brn, mottled pcs common, hard, sub oolitic pcs  
Chert, white, fossils

SH, blk, dk. brn, some pyrite

+2 UGK, shale gas

MS, crm, mic-xln, sli. earthy txt, micro oolitic, firm, brittle, NS

MS-WS, crm to tan, mottled pcs w/ black specs, mic-xln to earthy txt, micro oolitic pcs scatt. hard, No visible show

+5 UGK

SH, blk, dk. brn, gray, some bleeding gas

MS, tan to crm, mostly chalky pcs, mic-xln pcs scatt, some pcs w/ m-gr brn ooids, NS

DST #3 5022-5214  
30-60-60-90  
WB BOB/22min  
NBB  
WB BOB/21min  
NBB  
135' SGCM (2g, 98m)  
IH 2604#  
IF 36-56#  
ISIP 847#  
FF 67-86#  
FSIP 681#  
FH 2470#  
Temp 116°F

MS, crm to brn, some gray, f-xln, fossilif, crinoids and m-gr oolitic particles in xln matrix. hard, rare bright fluor(1 pc) no cut

SH, blk, green

MS-WS, gray to grn, micro xln, dense, some pcs w/ chalky matrix, fossilif, Chert, blk, NS

WS-PS, brn to crm, mic-xln, sli chalky pcs, m-gr ooids, fossils, hard, carrying some SH, blk, green

MS-WS, crm to tan to brn, mic-xln, waxy luster, mottled to sub oolitic, some fossils, some pcs dull fluor, Chert, white tan, ringed-oolitic pcs

MS, A.A.  
Some SH, dk. gray, green red

WS, crm to tan, mic-xln, micro oolitic, dense, tite matrix, fossilif. NS

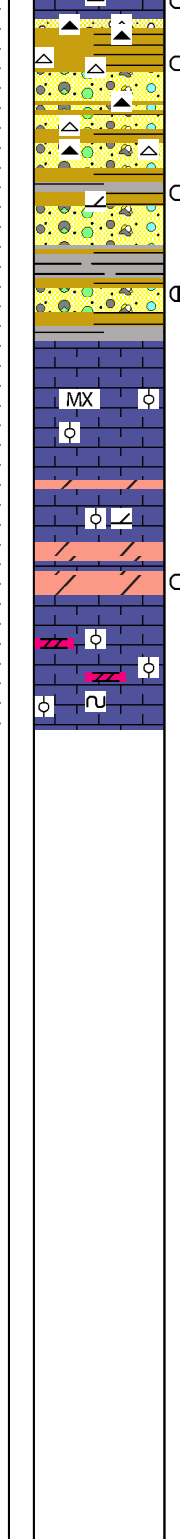
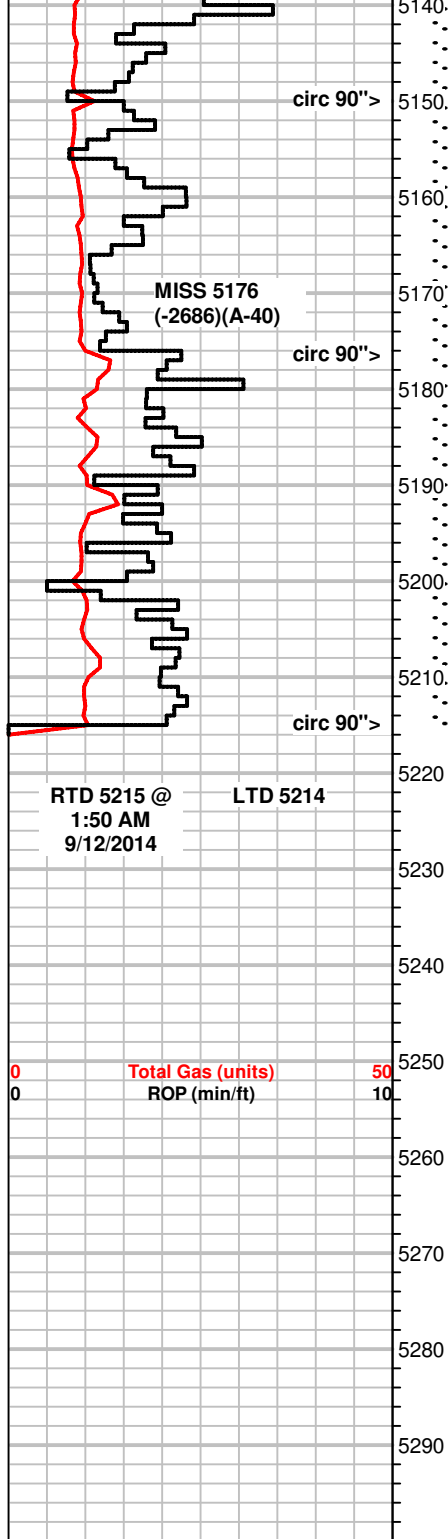
DST #1 5108-5175  
30-60-60-120  
SB BOB/20sec  
GTS/18min Ga 1/4in ck  
51.399MCFG/20min  
51.399MCFG/30min  
SBB built to 6in  
SB BOB/GTS/Immed  
TSTM  
NBB

MS-WS, crm, chalky matrix, some brn pcs, dense, mic-xln, no fluor, 60min A.A., very faint odor in bag, 3 pcs w/ fluor, slow milky cut from 2 pcs.

SH, sea green, maroon, mustard yellow, gray, silty

MS, crm, f to mic-xln, firm to hard, oolitic pcs, mostly chalky, NS





SH, varicolored, Chert, bone white, fresh, tan, brn, yellow, SS clusters, fn-gr, sorted, some indiv. co-gr Qtz xtals, still carrying MS, some pcs w/ flour and show from above?

Cong. SH, varicolored, Chert, yellow, white, blk, orange, fossilif, SS clusters, f-gr, loose Qtz co-grs

WS-MS, crm to off white, f-xln, chalky, brittle, glauc specs, sli. dolomitic?, rare pcs bright fluor, spotty edge stn, no cut, no odor

Dolo, gray to crm, vf-suc, firm, gold mineral fluor w/ spotty bright fluor, cut when broken(1pc), 1 pc w/ live oil droplets on it, streaming cut, faint odor in bag, 90"-few pcs(6) w/gold fluor, streaming cut, very faint odor in 90 bag

WS, crm to off white, mic-xln, micro oolitic pcs, hard, dull min. fluor in pcs, NS

MS-WS, vrm to off white, A.A., dense, scatt fossils, no fluor, NS

Scatt. Dolo, stringers?, tan to brn, vf-suc txt, firm, dull fluor, no cut, WS, off white, f-xln txt, oolitic in pcs, dec. amt, NS

Dolo., gray to brn, vf-suc. to f-xln txt, hard pcs scatt, most firm, bright mineral fluor, cut out of 1/3 of pcs tested

Dolo, A.A., bright mineral fluor, some milky cut, dec amt of dolo. WS-PS, off white, micro oolitic pcs in chalky matrix, firm to hard, scatt glauc specs, no fluor, NS

REC:  
 5004' GIP  
 90' SGCM (2g,98m)  
 IH 2627#  
 IF 64-58#  
 ISIP 197#  
 FF 39-47#  
 FSIP 254#  
 FH 2582#  
 Temp 115°F

+3 UGK

DST #2 5182-5215  
 30-60-30-60  
 WB built to 1/2in  
 NBB  
 WB surf blow  
 NBB  
 REC:  
 40' Mud  
 IH 2586#  
 IF 28-33#  
 ISIP 1486#  
 FF 37-39#  
 FSIP 1247#  
 FH 2607#  
 Temp 117°F