



Scale 1:240 Imperial

Well Name: Imel 4-5  
 Surface Location: NE NW SW SW  
 Bottom Location:  
 API: 15-057-20964-00-00  
 License Number: 5004  
 Spud Date: 7/1/2015 Time: 10:30 PM  
 Region: SW  
 Drilling Completed: 7/11/2015 Time: 6:44 AM  
 Surface Coordinates: 1050' FSL & 455' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2524.00ft  
 K.B. Elevation: 2537.00ft  
 Logged Interval: 4250.00ft To: 5400.00ft  
 Total Depth: 5400.00ft  
 Formation: MISS  
 Drilling Fluid Type: Chemical Mud

**OPERATOR**

Company: Vincent Oil Corp  
 Address: 155 N Market Ste 700  
 Wichita, KS 67202  
 Contact Geologist: Dick Jordan  
 Contact Phone Nbr: 316.262.3573  
 Well Name: Imel 4-5  
 Location: NE NW SW SW  
 Pool: Development  
 State: KS  
 API: 15-057-20964-00-00  
 Field: Kingsdown Northwest  
 Country: USA

**CONTRACTOR**

Contractor: Duke Drilling Inc.  
 Rig #: 9  
 Rig Type: Rotary (double)  
 Spud Date: 7/1/2015 Time: 10:30 PM  
 TD Date: 7/11/2015 Time: 6:44 AM  
 Rig Release: 7/12/2015 Time: 8:15 AM

**LOGGED BY**

Company: Vincent Oil Corp  
 Address: 155 N Market Ste 700  
 Wichita, KS 67202  
 Phone Nbr: 316.262.3573  
 Logged By: Geologist Name: Tom Dudgeon

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: 99.7556503  
 Latitude: 37.5445269

Longitude: -99.7556503  
 N/S Co-ord: 1050' FSL  
 E/W Co-ord: 455' FWL

Latitude: 37.5445269

**ELEVATIONS**

K.B. Elevation: 2537.00ft      Ground Elevation: 2524.00ft  
 K.B. to Ground: 13.00ft

**TOTAL DEPTH**

Measurement Type:	Measurement Depth:	TVD:
LTD	5406.00	5406.00
RTD	5400.00	5406.00

**DRILLING FLUID SUMMARY**

Type	Date	From Depth	To Depth
Chemical Mud	7/14/2015	3800.00ft	5400.00ft

**OPEN HOLE LOGS**

Logging Company: C J Energy Services  
 Logging Engineer: Ian Mabb  
 Truck #: 3802  
 Logging Date: 7/11/2015      Time Spent: 6  
 # Logs Run: 4      # Logs Run Successful: 4

**LOGS RUN**

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
Dual Induction	0.00ft	5406.00ft	3.00		1
Den/Neu/PE	4250.00ft	5406.00ft	3.00		1
Micro	4250.00ft	5406.00ft	3.00		2
Sonic	0.00ft	5406.00ft	3.00		2

**LOGGING OPERATION SUMMARY**

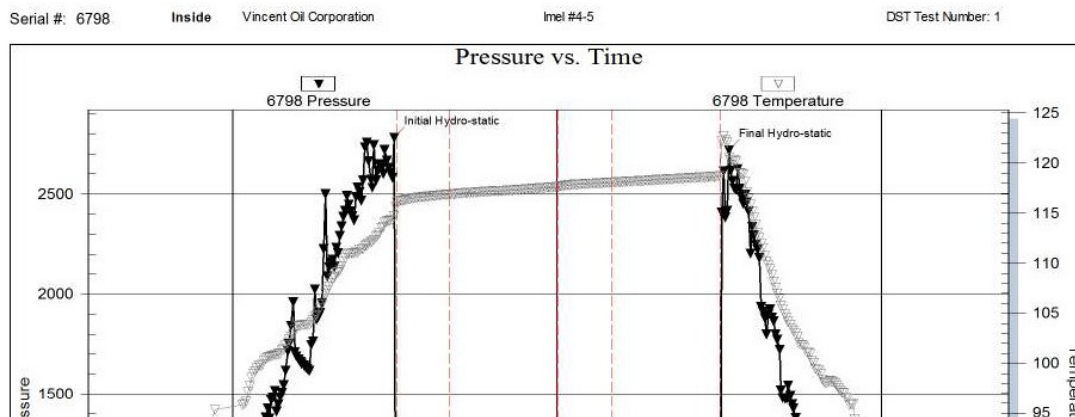
Date	From	To	Description Of Operation
7/11/2015	0.00ft	5406.00ft	Logs ran successfully

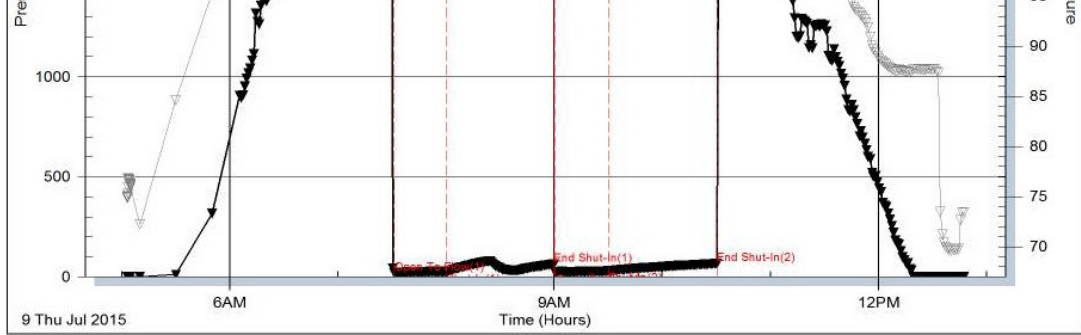
**CASING SUMMARY**

	Surface	Intermediate	Main		
Bit Size	12.25 in				
Hole Size			7.88 in		
	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8.625 in	688 ft	23#	16	7/2/2015 12:00 AM
Int Casing					
Prod Casing	5.5 in	5398 ft	14#	126	

**CASING SEQUENCE**

Type	Hole Size	Casing Size	At
Production String	7.88 in	5.50	5398.00 ft
Surface	12.25 in	8.63	688.00 ft

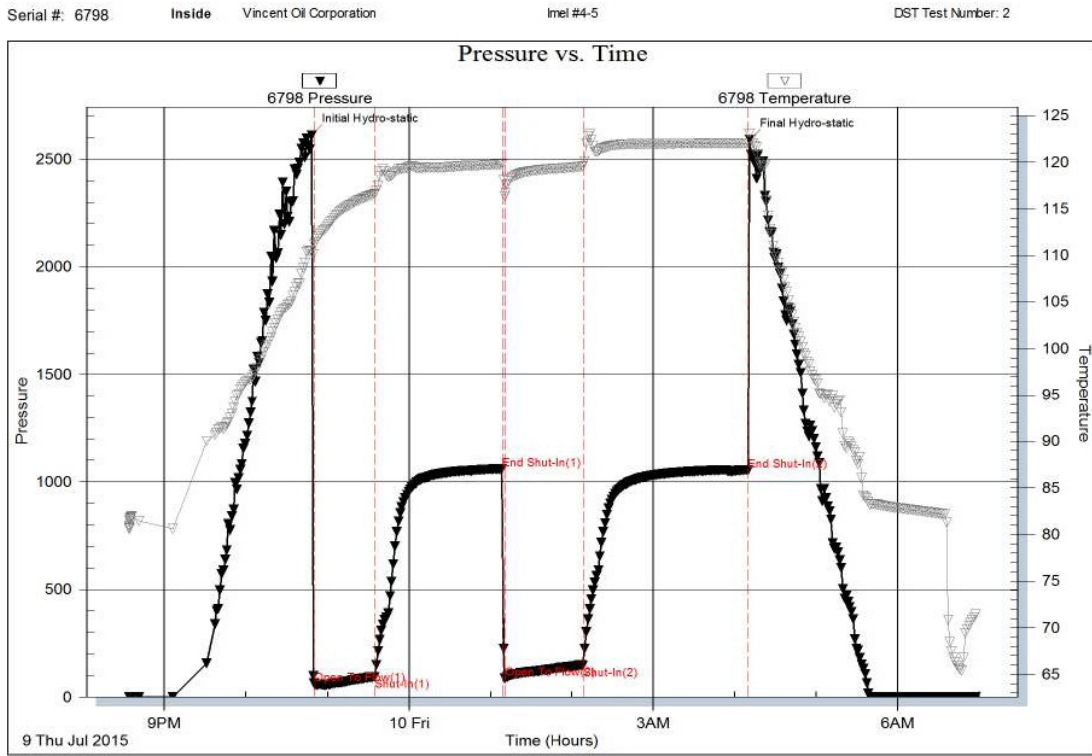




Trilobite Testing, Inc

Ref. No: 59775

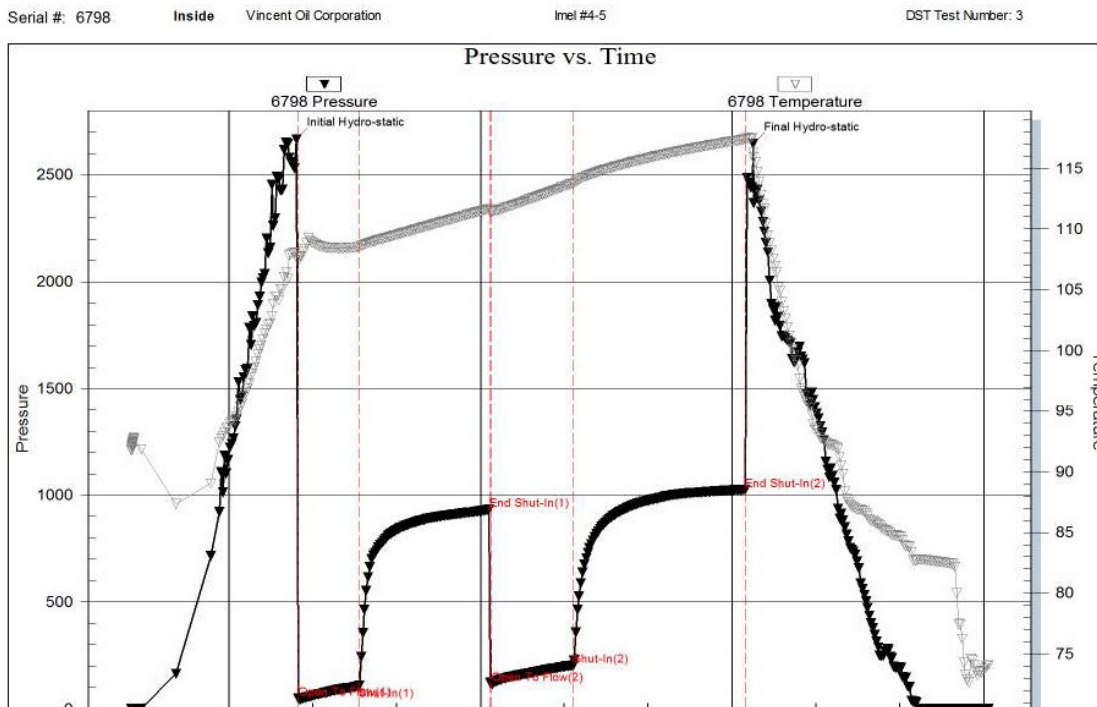
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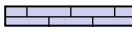


Trilobite Testing, Inc

Ref. No: 57901

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### ROCK TYPES

-  Coal
-  Lmst fw<7
-  Shgy
-  Shcol
-  Dolsec
-  Lmst fw>7
-  Shbck
-  Chtcong1

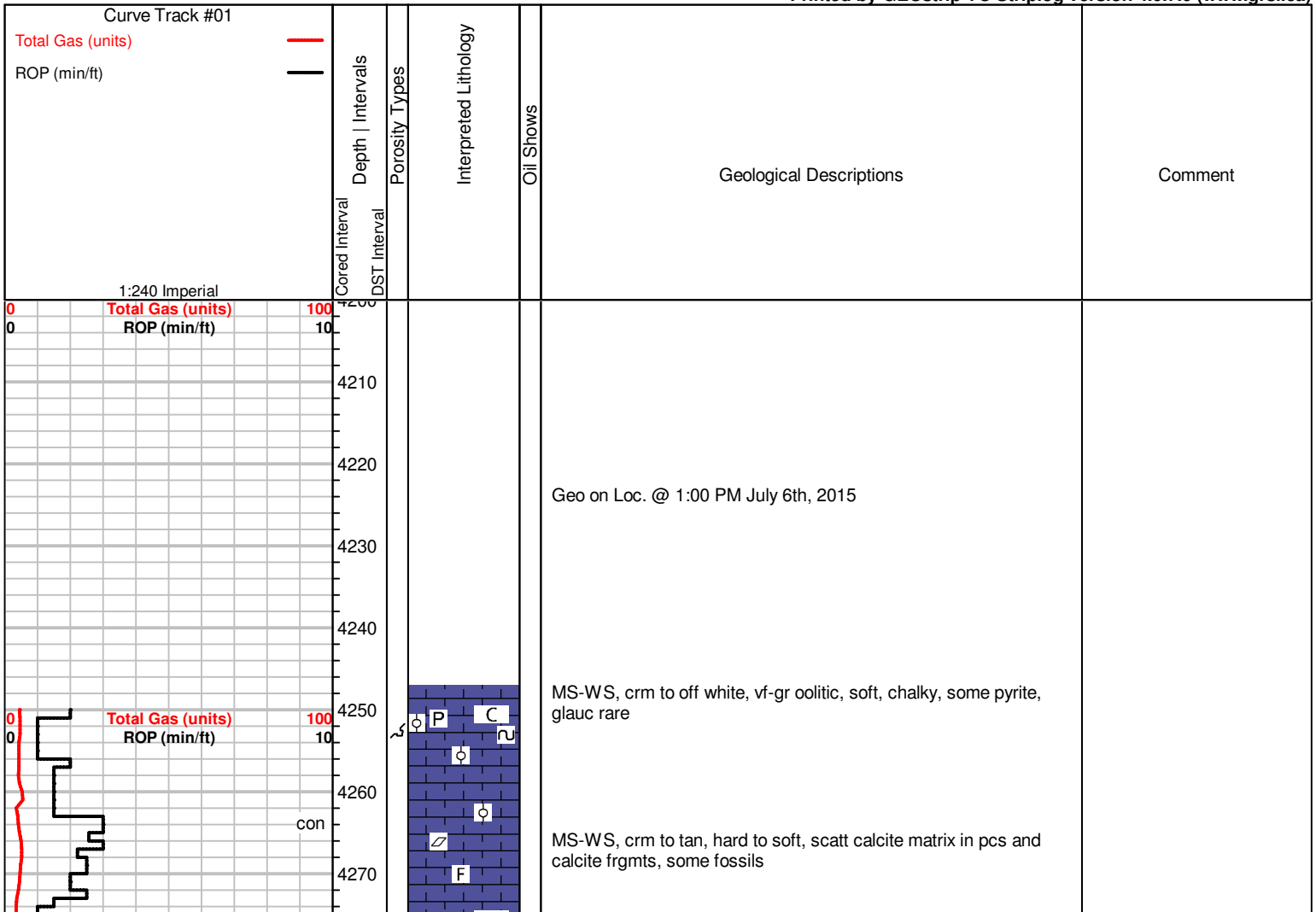
### ACCESSORIES

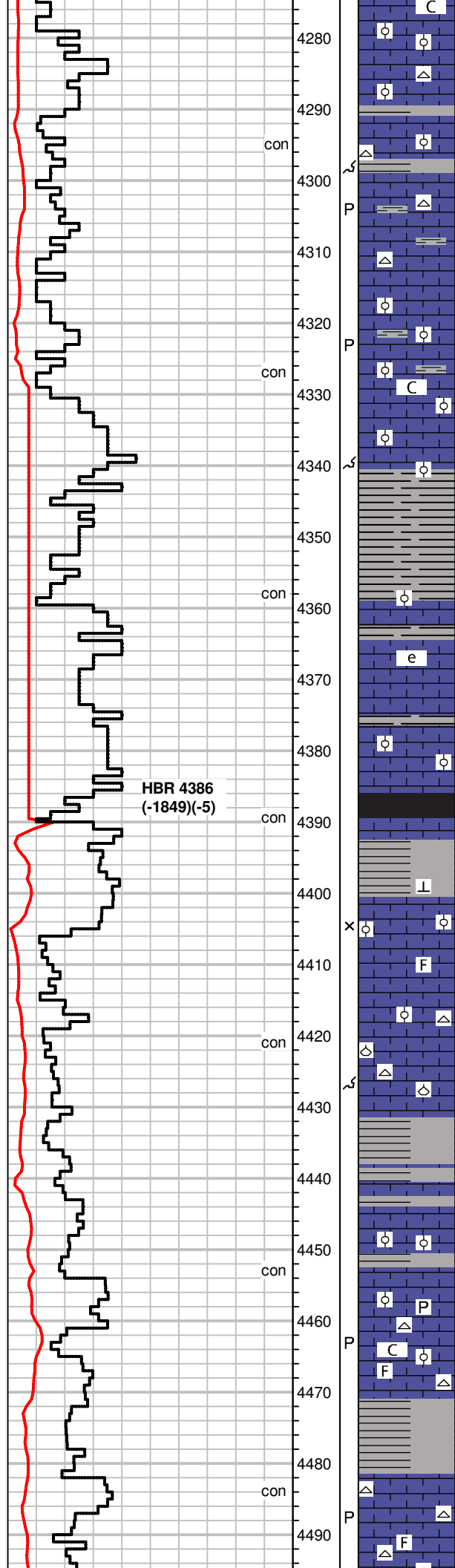
- |  |  |   |  |
|--|--|---|--|
| <b>MINERAL</b><br>⊥ Calcareous<br>▲ Chert, dark<br>∟ Dolomitic<br>∞ Glaucinite<br>■ Heavy, dark minerals<br>P Pyrite<br>• Sandy<br>•• Silty<br>/ Euhed rhombs of dol or<br>△ Chert White | <b>FOSSIL</b><br>◇ Brachiopod<br>○ Crinoids<br>F Fossils < 20%<br>⊕ Oolite<br>△ Spicules | <b>STRINGER</b><br>▨ Limestone<br>≡ Shale | <b>TEXTURE</b><br>C Chalky<br>e Earthy |
|--|--|---|--|

### OTHER SYMBOLS

- |   |  |                                     |
|---|--|-------------------------------------|
| <b>POROSITY TYPE</b><br>x Intercrystalline<br>φ Interoolitic<br>V Vuggy<br>P Pinpoint<br>∟ Moldic<br>O Organic<br>F Fracture<br>e Earthy<br>□ Fenestral | <b>OIL SHOWS</b><br>● Even Stn<br>● Spotted Stn 50 - 75 %<br>● Spotted Stn 25 - 50 %<br>○ Spotted Stn 1 - 25 %<br>○ Questionable Stn<br>D Dead Oil Stn<br>■ Fluorescence | <b>INTERVALS</b><br>■ Core<br>• DST |
|---|--|-------------------------------------|

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MS, crm to tan, earthy, soft, scatt fossils, oolitic pcs, chalky, NS rare Chert, white

MS, crm, chalky, soft, some earthy pcs scatt(tan), pyrite, rare Chert, white, scatt SH, gray, red

MS-WS, crm to off white, scatt tan, micro oolitic pcs, chalky matrix, soft, fossilif., rare Dk. gray SH, sea green

MS, tan, crm, lt. gray, scatt vf oolitic pcs, mostly massive txt, friable,

Influx SH, blk, dk gray

SH, blk, dk. gray, MS, crm to white, earthy, dense, scatt fossils, NS

MS, rare WS, white, some gray, scatt oolitic pcs, m-gr most chalky, some hard to dense,

SH, blk, dk. gray, some scatt

SH, gray

MS, off white to crm, f-xln, f-gr oolitic to sli fossilif pcs, hard, scatt SH, gray, dk. gray

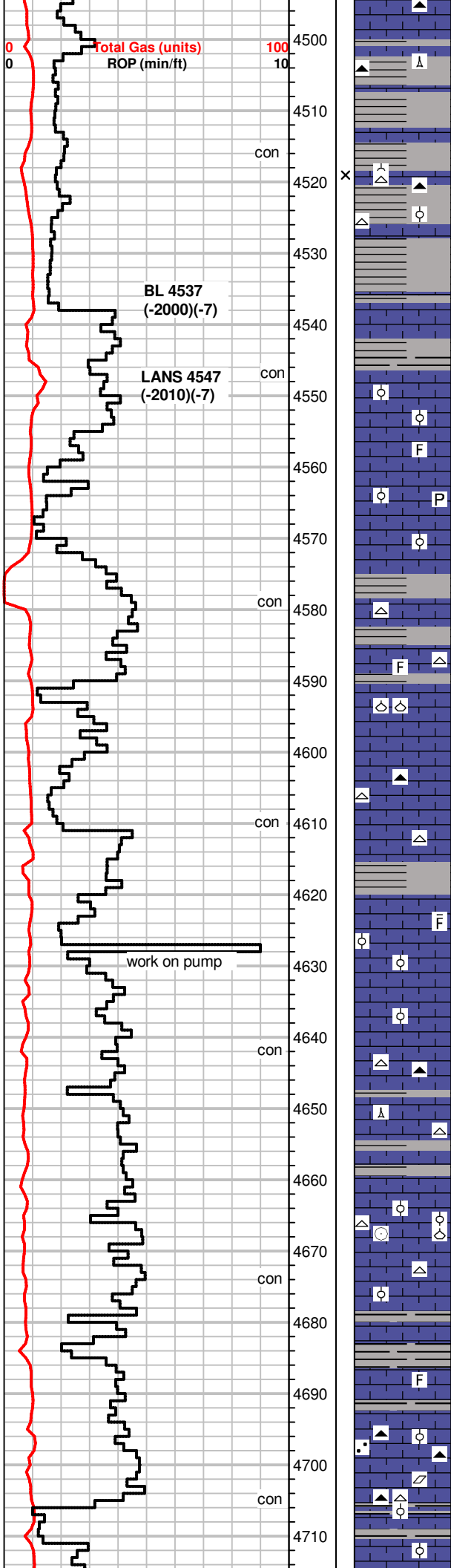
MS, crm to gary, earthy to waxy txt, hard, scatt fossils(brachs), pyrite, Chert, white

MS-WS, crm to tan, vf to f oolitic, hard, some gray pcs, mottled, dark ooids, m-gr, sugary txt in part, SH, blk, red

WS, crm to off white, some gray, m-gr oolitic pcs, some vf-g oolitic, scatt sub oolitic pcs, chalky, firm, pyrite, fossilif. Chert, white

MS, crm to brn, some gray, micro oolitic in part, chalky matrix, mottle pcs scatt, fossilif(brachs), pyrite, rare Chert, white, fossilif. SH, blk, gray

gas detector data error! + 7 UGK from hotwire



MS-WS, crm to gray, f-xln, some pcs oolitic, m-gr, chalky matrix, scatt dark ooids, mottled pcs, calcite(xtals and veins), Chert, gray, spicules

SH, gray, red

MS, tan to gray, f-xln, dense, rare sub oolitic pcs, scatt gray pcs w/ dark ooids in chalky matrix, Chert, white, brn, scatt SH, brn, gray

MS, brn, dense, scatt fossils, some gray A.A.  
 SH, dk. gray, gray

MS, crm, scatt brn, gritty txt, sub oolitic in part(rare), hard, pyrite common, dull fluor, light edge stn in dry samples, dead

SH, gray

MS, crm to tan, some gray, f-xln, some pcs mottled, fossilif., scatt chalky pcs, firm, Chert, white  
 rare SH, gray

MS-WS, crm to tan, chalky to massive txt, firm, sub oolitic, rare gray mottled pcs, heavy minerals, fossilif., Chert, gray, white, brn

MS, gray to crm, f-xln, dense, some pcs firm, scatt fossils, dull fluor, NS  
 SH, gray, rare

MS, brn to crm, f-xln, hard, sandy txt in part, Chert, gray, white, opaque, spicules,  
 SH, blk, gray

MS-WS, gray to crm, firm, chalky txt in crm pcs, sub oolitic to micro oolitic, gritty to silty pcs, fossilif., dead wormy stn on edge, Chert, tan, fossils  
 scatt SH, blk, some gray

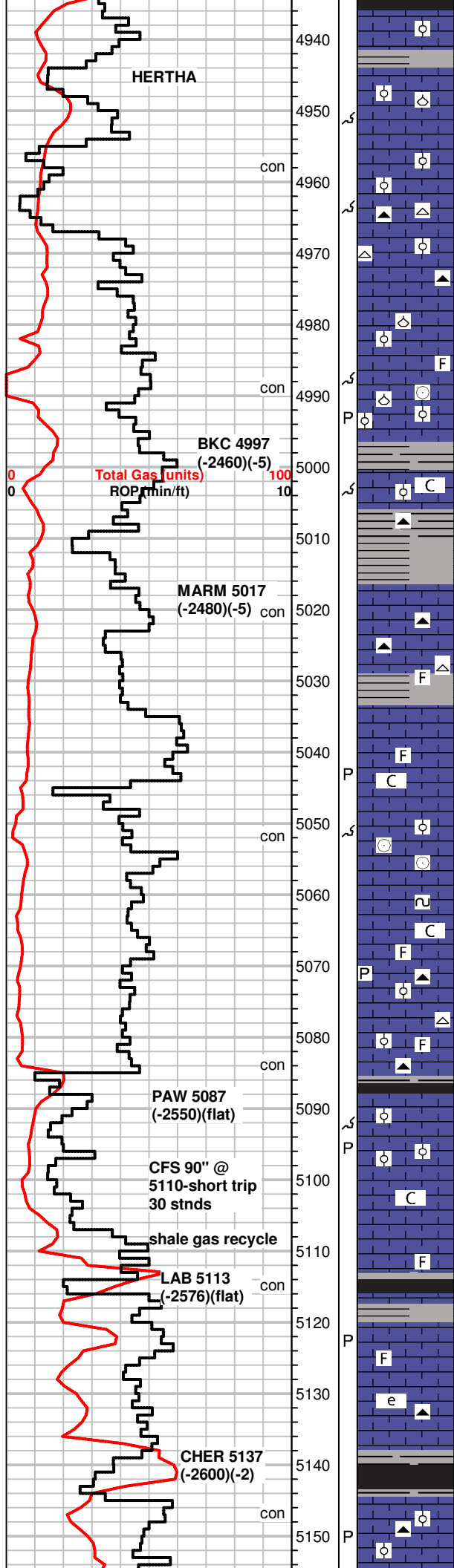
SH, blk

MS, tan to gray, brn, f-xln, m-oolitic pcs throughout, fossilif, sandy/silty txt, Chert, blk, brn

MS-WS, crm to gray, scatt brn, vf to micro oolitic, some pcs chalky, calcite xtals, Chert, opaque-blue, gray, NS  
 SH, brn, gray







MS, crm to brn, chalky to f-xln, oolitic, f-gr ooids, NS  
some SH, gray to blk

MS, brn to gray, f-xln, earthy to massive txt, dense, some m-gr dark ooids, NS

MS-WS, crm to off white, f-xln, micro oolitic, soft, friable, pyrite, dull fluor, NS, some SH, blk, gas bubbles

MS, crm to gray, chalky, gritty to silty txt in pcs, dense, rare fossils, NS, scatt Chert, blk, white, spicules  
scatt SH, gray

MS, A.A., some tan and brn, f-xln, dense, some fossils, sub oolitic pcs rare. NS

MS, crm to grayish brn, f-xln, hard, dense, some chalky pcs scatt., few fossils (crinoids, brachs, ooids)  
SH, blk, brn, gray

MS, tan to brn, f-xln, dense, scat chalky pcs, rare crinoids, NS

SH, gray, blk, brn, some MS, A.A., Chert, brn

SH, gray, green, scatt blk, MS, crm to tan, some gray, f-xln, dense, NS, Chert, brn

MS, crm to brn, f-xln, sli. chalky matrix, hard, dull fluor, NS Chert, white, fossilif.  
SH, gray, blk

MS, A.A., chalky mtrx, scatt fossils,

some SH, blk, grn  
MS-WS, crm to brn, f-xln, firm, sub oolitic, m-gr ooids, crinoids, NS

MS, crm to tan, f-xln, dense, firm to soft in chalky pcs, scatt chalky pcs, rare oolitic, some glauc, NS

MS, crm to tan, A.A., dense, lesser fossils, pyrite, Chert, white, opaque, rare lt edge stn in dry., rare SH, brn, gray

MS, tan to crm, f-xln, sub oolitic pcs common, chalky in part, A.A., Chert, tan, white, fossilif.

SH, blk, gray

MS-WS, crm to tan, f-xln, some chalky, firm to soft, sub oolitic, m-gr to f-gr, fossilif, dull fluor, lt. edge stn in dry., moldic and pp por. Chert, white, tan

MS, AA, inc in chalky pcs, dec in fossilif pcs

SH, blk, carbonaceous, some pyrite

MS, crm to tan, f-xln, chalky pcs common, scatt fossils, m-gr oolitic pcs, NS, Chert, tan, gray, fossils

MS, crm to gray, A.A., some earthy, soft, silty, Chert, tan, gray

SH, blk, gray, carbonaceous, dk. green,

MS, crm to tan, f-xln, dense, hard, rare m-gr ooids in tite matrix, Chert, tan, whit

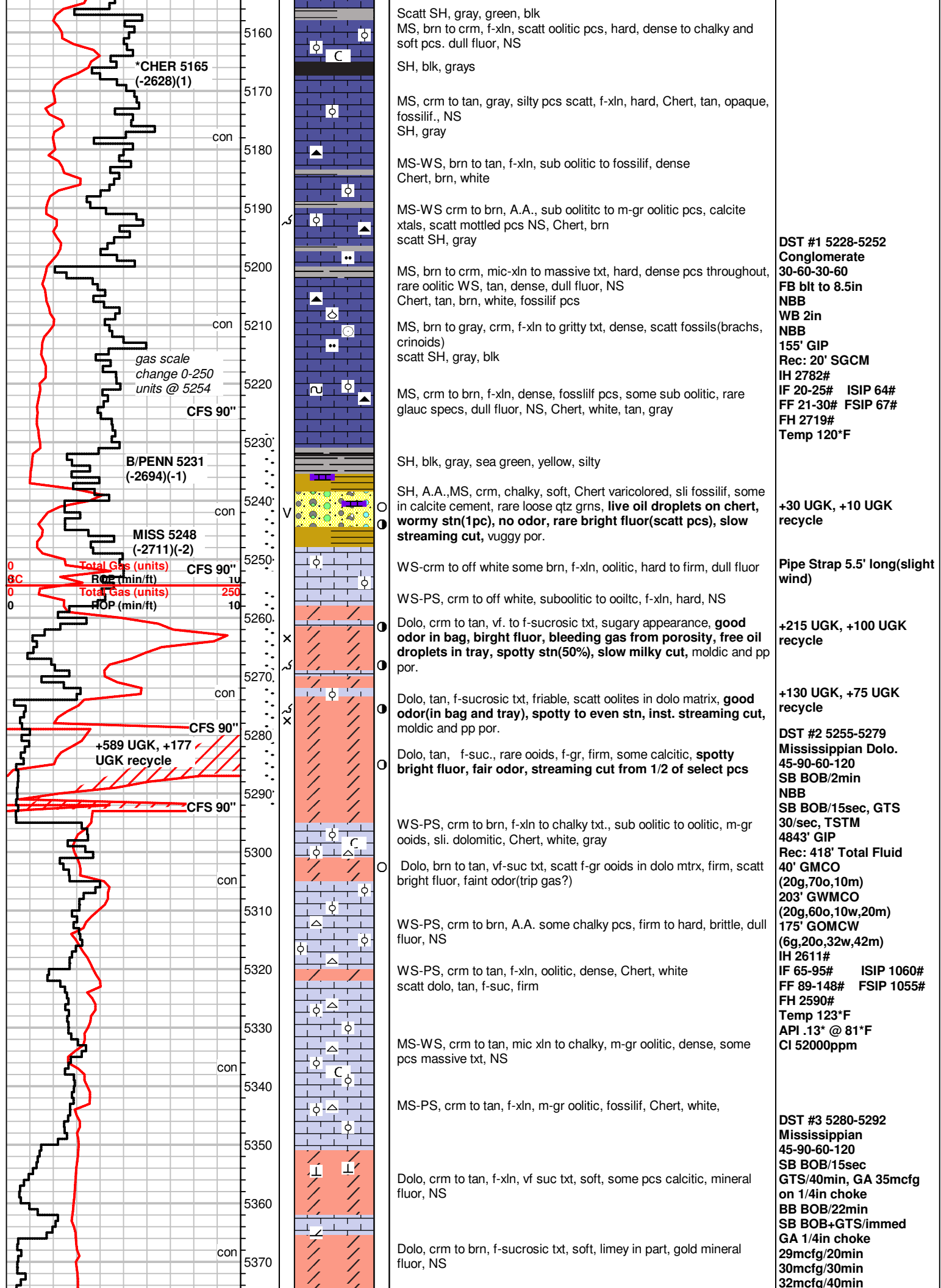
**+20 UGK, no recycle**

**+20 UGK, shale gas,  
+17 UGK recycle**

**+55 UGK, shale gas**

**+60 UGK, shale gas**





Scatt SH, gray, green, blk  
MS, brn to crm, f-xln, scatt oolitic pcs, hard, dense to chalky and soft pcs. dull fluor, NS

SH, blk, grays

MS, crm to tan, gray, silty pcs scatt, f-xln, hard, Chert, tan, opaque, fossilif., NS  
SH, gray

MS-WS, brn to tan, f-xln, sub oolitic to fossilif, dense  
Chert, brn, white

MS-WS crm to brn, A.A., sub oolitic to m-gr oolitic pcs, calcite xtals, scatt mottled pcs NS, Chert, brn  
scatt SH, gray

MS, brn to crm, mic-xln to massive txt, hard, dense pcs throughout, rare oolitic WS, tan, dense, dull fluor, NS  
Chert, tan, brn, white, fossilif pcs

MS, brn to gray, crm, f-xln to gritty txt, dense, scatt fossils(brachs, crinoids)  
scatt SH, gray, blk

MS, crm to brn, f-xln, dense, fossilif pcs, some sub oolitic, rare glauc specs, dull fluor, NS, Chert, white, tan, gray

SH, blk, gray, sea green, yellow, silty

SH, A.A.,MS, crm, chalky, soft, Chert varicolored, sli fossilif, some in calcite cement, rare loose qtz grns, **live oil droplets on chert, wormy stn(1pc), no odor, rare bright fluor(scatt pcs), slow streaming cut**, vuggy por.

WS-crm to off white some brn, f-xln, oolitic, hard to firm, dull fluor

WS-PS, crm to off white, suboolitic to oolitic, f-xln, hard, NS

Dolo, crm to tan, vf. to f-sucrosic txt, sugary appearance, **good odor in bag, bright fluor, bleeding gas from porosity, free oil droplets in tray, spotty stn(50%), slow milky cut**, moldic and pp por.

Dolo, tan, f-sucrosic txt, friable, scatt oolites in dolo matrix, **good odor(in bag and tray), spotty to even stn, inst. streaming cut**, moldic and pp por.

Dolo, tan, f-suc., rare ooids, f-gr, firm, some calcitic, **spotty bright fluor, fair odor, streaming cut from 1/2 of select pcs**

WS-PS, crm to brn, f-xln to chalky txt., sub oolitic to oolitic, m-gr ooids, sli. dolomitic, Chert, white, gray

Dolo, brn to tan, vf-suc txt, scatt f-gr ooids in dolo mtrx, firm, scatt bright fluor, faint odor(trip gas?)

WS-PS, crm to brn, A.A. some chalky pcs, firm to hard, brittle, dull fluor, NS

WS-PS, crm to tan, f-xln, oolitic, dense, Chert, white  
scatt dolo, tan, f-suc, firm

MS-WS, crm to tan, mic xln to chalky, m-gr oolitic, dense, some pcs massive txt, NS

MS-PS, crm to tan, f-xln, m-gr oolitic, fossilif, Chert, white,

Dolo, crm to tan, f-xln, vf suc txt, soft, some pcs calcitic, mineral fluor, NS

Dolo, crm to brn, f-sucrosic txt, soft, limey in part, gold mineral fluor, NS

**DST #1 5228-5252**  
Conglomerate  
30-60-30-60  
FB blt to 8.5in  
NBB  
WB 2in  
NBB  
155' GIP  
Rec: 20' SGCM  
IH 2782#  
IF 20-25# ISIP 64#  
FF 21-30# FSIP 67#  
FH 2719#  
Temp 120°F

+30 UGK, +10 UGK  
recycle

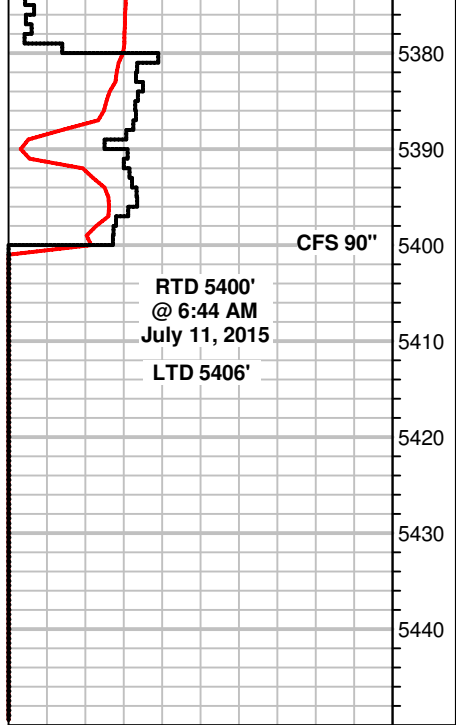
Pipe Strap 5.5' long( slight  
wind)

+215 UGK, +100 UGK  
recycle

+130 UGK, +75 UGK  
recycle

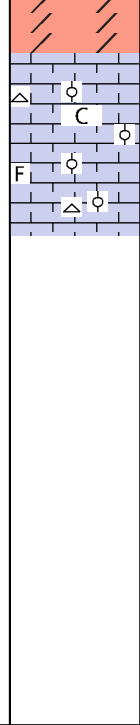
**DST #2 5255-5279**  
Mississippian Dolo.  
45-90-60-120  
SB BOB/2min  
NBB  
SB BOB/15sec, GTS  
30/sec, TSTM  
4843' GIP  
Rec: 418' Total Fluid  
40' GMCO  
(20g,70o,10m)  
203' GWMCO  
(20g,60o,10w,20m)  
175' GOMCW  
(6g,20o,32w,42m)  
IH 2611#  
IF 65-95# ISIP 1060#  
FF 89-148# FSIP 1055#  
FH 2590#  
Temp 123°F  
API .13\* @ 81°F  
CI 52000ppm

**DST #3 5280-5292**  
Mississippian  
45-90-60-120  
SB BOB/15sec  
GTS/40min, GA 35mcfg  
on 1/4in choke  
BB BOB/22min  
SB BOB+GTS/imm  
GA 1/4in choke  
29mcfg/20min  
30mcfg/30min  
32mcfg/40min



RTD 5400'  
 @ 6:44 AM  
 July 11, 2015  
 LTD 5406'

CFS 90"



Dolo, gray to crm, vf-xln, sugary txt, rare glauc specs

WS-PS, crm to off white, scatt brn, f-xln, oolitic, m-gr ooids in chalky matrix, scatt co-gr ooids/fossils, Chert, white

35mcf/50min  
 38mcf/60min  
 4722' GIP  
 Rec: 540' Total Fluid  
 365' GSY OIL(20g,80o)  
 63' GMOCW  
 (6g,40o,42w,12m)  
 112' Water  
 IH 2667#  
 IF 50-106# ISIP 933#  
 FF 119-205# FSIP 1025#  
 FH 2646#  
 API .12 @ 80°F  
 Gravity 39.8\*  
 Temp 117°F  
 CI 55000ppm