

Captiva Energy II, LLC
Eakin Unit # 2-7
2051' FSL & 1500' FEL
Sec. 7, T22S, R16W
Pawnee County, KS

Poor samples, abundant shale cavings from up hole.

Mixed shales and limestone. Ls: mottled brown and tan, fossiliferous, pelletal, packstone w/ tr sparry calcite. Shale is gray to dark brown, calcareous.

Limestone: as above w/ some brown micrite. Fossils include fusulinids, brachiopods, echinoids.

Shale: gray to lt gray w/ dark specks of organic matter. Also brownish, calcareous, fossiliferous shale.

Limestone as above w/ brown, vitreous chert.

Shale, gray to lt gray, organic spots, calcareous, soft. Tr. pyrite.

Topeka 3079 (-1061)

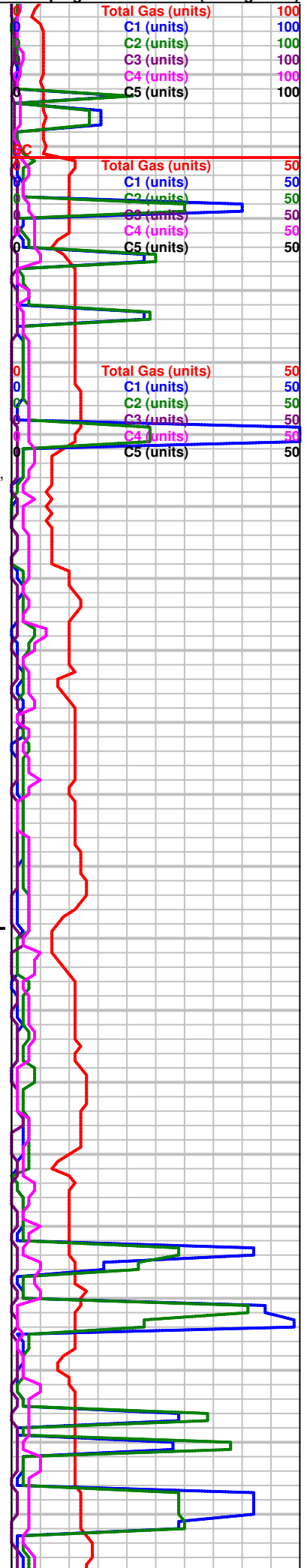
Limestone, tan to cream, micrite to lithographic, to sli fossiliferous wackestone. Fussulinids, pellets

Limestone: tan, more fossiliferous than above, Packstone.

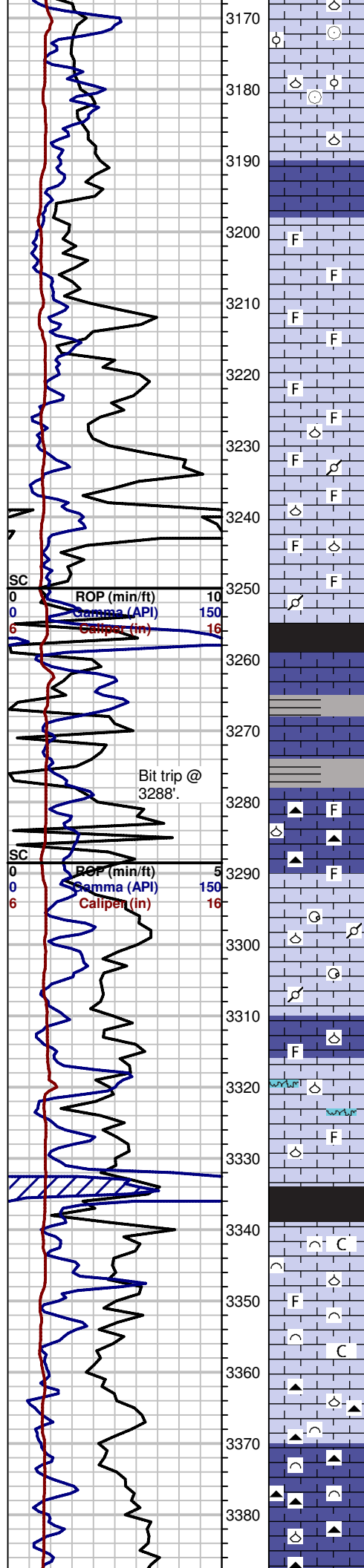
Limestone: tan to lt brown, fossiliferous packstone to oolitic grainstone. Dense, no porosity.

Limestone: tan to lt tan, fossiliferous, pelletal, oolitic, sparry, fair inter-xln porosity, packstone.

Limestone: tan to lt brown, fossiliferous, fusulinids, brachiopods, crinoids, packstone, w/ tr micrite, lithographic, sparry spots w/ fair porosity.



Depth (ft)	Total Gas (units)	C1 (units)	C2 (units)	C3 (units)	C4 (units)	C5 (units)
2950	100	100	100	100	100	100
2960	100	100	100	100	100	100
2970	100	100	100	100	100	100
2980	50	50	50	50	50	50
2990	50	50	50	50	50	50
3000	50	50	50	50	50	50
3010	50	50	50	50	50	50
3020	50	50	50	50	50	50
3030	50	50	50	50	50	50
3040	50	50	50	50	50	50
3050	50	50	50	50	50	50
3060	50	50	50	50	50	50
3070	50	50	50	50	50	50
3080	50	50	50	50	50	50
3090	50	50	50	50	50	50
3100	50	50	50	50	50	50
3110	50	50	50	50	50	50
3120	50	50	50	50	50	50
3130	50	50	50	50	50	50
3140	50	50	50	50	50	50
3150	50	50	50	50	50	50
3160	50	50	50	50	50	50



Limestone: tan to lt brown, more micrite than fossils, wackestone to mudstone, tight, dense no porosity.

Limestone, w/ porosity, packstone, tan, fossiliferous.

Limestone: cream to tan, more fossiliferous, fussulinids, brachiopods, pellets, packstone.

King Hill Shale 3255 (-1237)

Shale, black, organic, dolomitic.

Limestone as above w/ some micrite and interlayered with argillaceous ls and calcareous brownish-gray shale.

Limestone: tan, fossiliferous packstone to cream micrite, to lt brown, fossiliferous, succrosic wackestone. Also black chert w/ white fussulinids.Brachiopods.

Begin 10' samples @ 3300'.

Limestone: cream, weakly to moderately fossiliferous, succrosic wackestone to packstone w/ fair micro-porosity.

Fussulinids, brachiopods, packstone as above. Some thin streaks of organic matter (stylolites?).
Tr of black shale.

Queen Hill Shale 3332 (-1314)

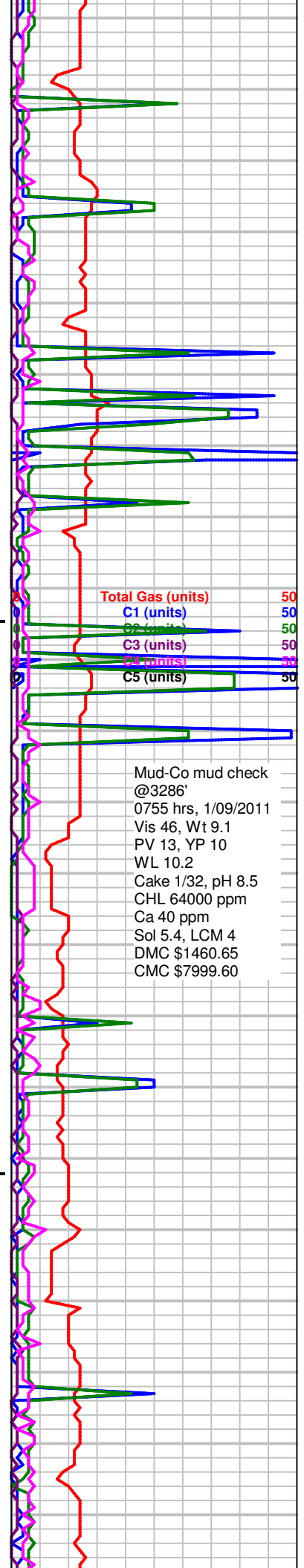
Black shale: dolomitic, carbonaceous

Limestone: cream to lt tan, chalky, broken fossil fragments, some granular/succrosic, some with thin organic laminations, packstone.

Limestone: cream to lt tan, succrosic to fossiliferous w/ broken fossil frags., some chalky. White to lt gray, mottled, pitted chert.

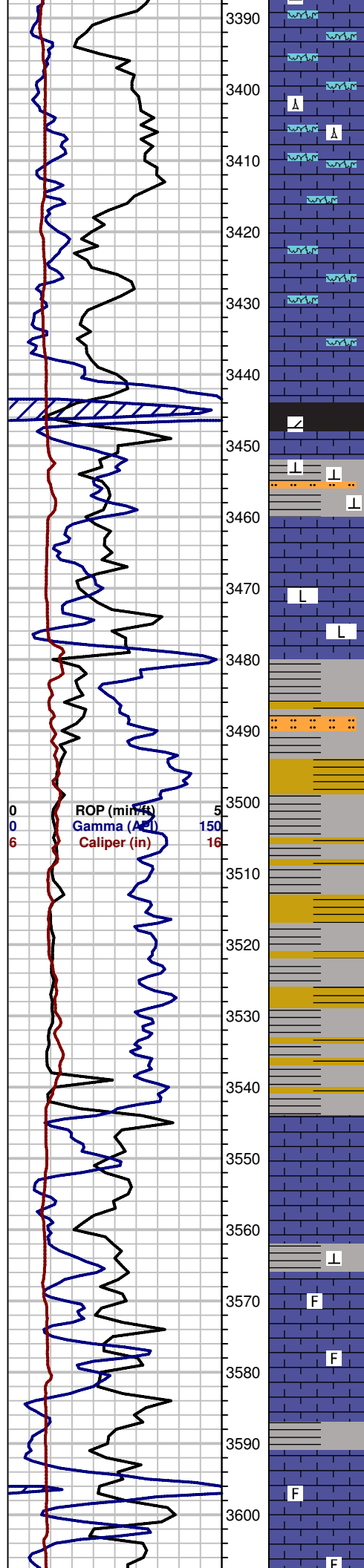
Limestone as above with lt brown, fossiliferous, mud-supported wackestone. More chert as above. Micro-*xl*n.

Some ls is chalky.



Total Gas (units)	50
C1 (units)	50
C2 (units)	50
C3 (units)	50
C4 (units)	50
C5 (units)	50

Mud-Co mud check
@3286'
0755 hrs, 1/09/2011
Vis 46, Wt 9.1
PV 13, YP 10
WL 10.2
Cake 1/32, pH 8.5
CHL 64000 ppm
Ca 40 ppm
Sol 5.4, LCM 4
DMC \$1460.65
CMC \$7999.60



Limestone: cream to tan, micritic to micro-xln, stylonitic, partly chalky, sli fossiliferous.

Limestone: cream to tan, crypto- to micro-xln, micritic, tr fossiliferous, spicules, stylonites.

Limestone as above.

Heebner Shale 3444 (-1426)

Shale: black, carbonaceous, dolomitic.

Shale: gray, calcareous, tr. fossil fragments, with silty streaks.

Toronto 3460 (-1442)

Limestone: lt brown to tan, micro- to crypto-xln, micrite, tr well-cemented oolites, tr sparry calcite, lithographic. No shows.

Douglas 3480 (-1462)

Shale: gray to brown, calcareous, brittle.

Still an abundance of limestone, (probably cavings, including Heebner shale).

Shale as above with some lt greenish-gray, and streaks of brown siltstone.

Shale as above. Noted one small (4mm) brachiopod. Still flooded with limestone.

Sample is dominated by limestone cavings, and we still have black shale from the Heebner.

As above, tr reddish-brown shale and siltstone.

Mixed, varicolored shales, siltstone and vf-gr sandstone.

Brown Lime 3544 (-1526)

Lansing 3552 (-1534)

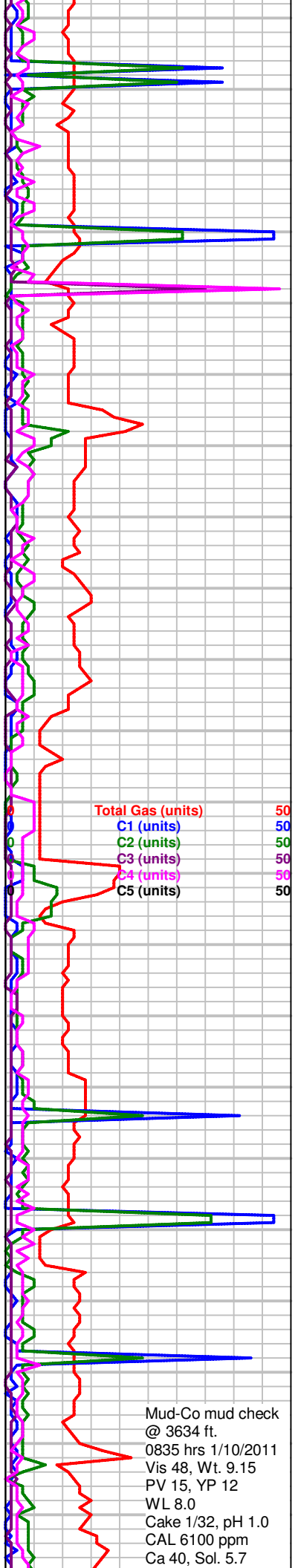
Limestone: lt brown micrite, no porosity.

Limestone: cream to lt tan, lithographic micrite to sli fossiliferous wackestone. Tr intercrystalline porosity in the sparry portions of the lithographic ls. Tr. sli fossiliferous wackestone.

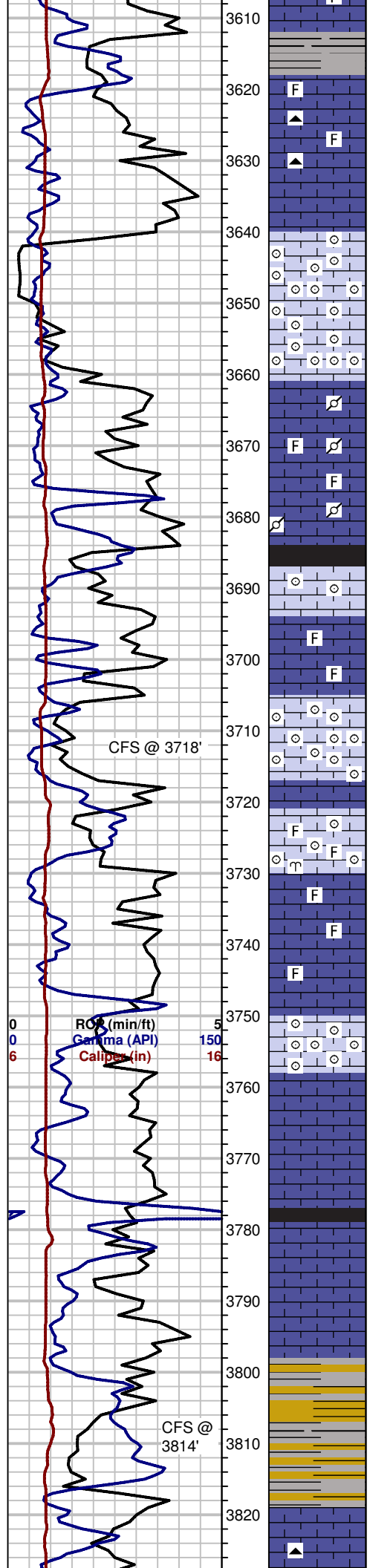
NOTE: The samples are carrying an abundance of shales, caving from the overlying Douglas interval.

Limestone: white to cream, micro-xln, tr fossiliferous, wackestone, weak porosity. No shows.

Limestone as above.



Mud-Co mud check
 @ 3634 ft.
 0835 hrs 1/10/2011
 Vis 48, Wt. 9.15
 PV 15, YP 12
 WL 8.0
 Cake 1/32, pH 1.0
 CAL 6100 ppm
 Ca 40, Sol. 5.7



Limestone: brown, agrillic, pelletal, tr fossiliferous, wackestone. Tr spiculated chert, vitreous, lt gray.

Limestone: Brown, sli fossiliferous, tight, mudstone. No shows. Trace amounts of lt gray, fossiliferous packstone.

NOTE: the sample catcher discarded the proper samples and saved those that he should have discarded, ie poor samples from 3640'-3700'

This type of drilling break is usually associated with porosity, generally oolitic in the L/KC, but the samples only show mud-supported fossils and pellets...no oolites.

The sample from 3670' has an oolitic grainstone with excellent oomoldic porosity, but lacks shows of oil.

Limestone: cream, micro-xln, sli fossiliferous, weak porosity, wackestone. Also brown ls, argillaceous, fossiliferous, pelletal, packstone.

Limestone: cream, oolitic grainstone w/ oomoldic porosity, no shows.

Limestone: cream to lt tan, micro-xln w/ limited porosity, tr fossiliferous, wackestone, tr sparry calcite.

Limestone: cream, oolitic grainstone w/ oomoldic porosity, no shows. Tr rhombopora.

Limestone: cream to lt tan, fossiliferous, micro-xln, weak porosity, packstone to wackestone. Tr oolitic grainstone, spicules, fossil debris, micro-xln w/ fair inter-xln porosity.

Limestone: lt tan, fossiliferous to micritic-lithographic, wackestone, weak inter-xln porosity.

Limestone: cream, oolitic grainstone w/ oomoldic porosity, no shows.

Limestone: white to cream, lithographic micrite, with inter-xln por in the sparry portions. No shows. Tr black shale.

Base KC 3776 (-1761)

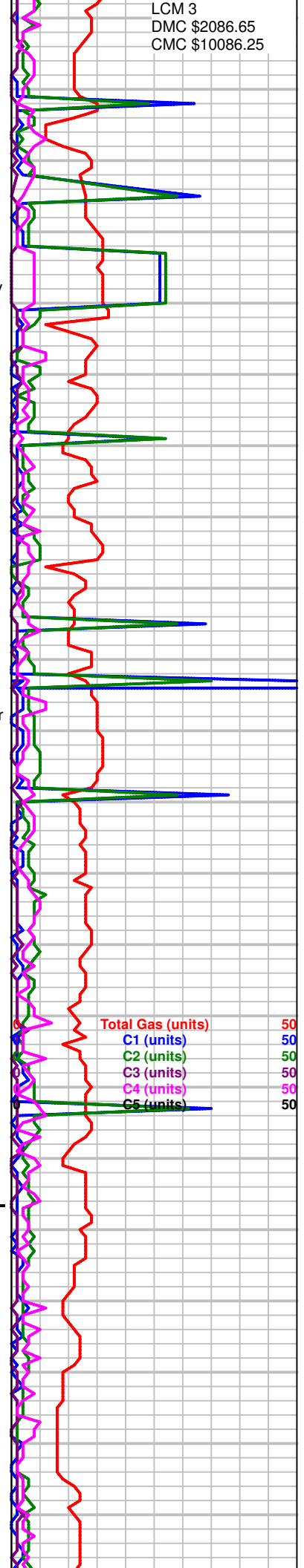
Limestone: lt brown, fossiliferous, pelletal, micro-xln wackestone to dense crypto-xln micrite.

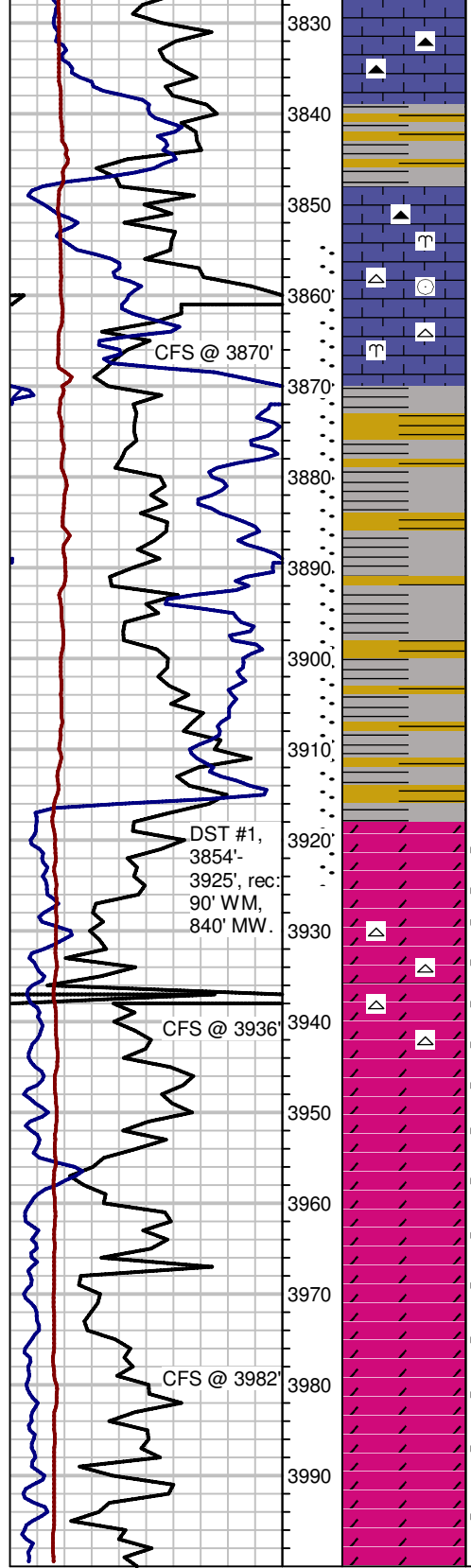
Shale: vari-colored, reddish, brown, and gray. Mixed with limestone, tan, tr fossiliferous, micro-xln, wackestone.

Shale as above with black also.

Vari-colored shale, red, brown, gray.

Shale: multi-colored as above, with lt greenish-aqua.





Limestone: tan, micro-xln, tr fossiliferous, mostly micritic w/ sparry calcite, lt orange, vitreous chert. I also see individual, vf-gr, sub-rounded qtz sand grains in the bottom of the tray.

Limestone: as above w/ red to orange, vitreous to tripolitic chert. Fenestrate bryozoans and crinoids in ls.

Mixed vari-colored shales and chert, with limestone: micro-xln to micritic, brown to tan. No shows. Tr pyrite, pyritized brachiopods 5mm in dia.

First sample after circulation shows everything that washed out from up the hole, mixed limestones, chert, and shales, including the greenish-aqua, waxy shale. Crinoids, bryozoans, pyritized gastropods, fussioninids.

As above: mixture of ls, shale and chert.

As above w/ a few fragments of f-gr, brown, qtzose ss.

As above: more ss fragments, layered w/ greenish-aqua shale. Much of the ls is micritic to micro-xln, cream to lt tan. Oolitic ls is present (cavings from L/KC?). Greenish-aqua shale has rather sharp, fresh, angular breaks and is more abundant here.

Arbuckle 3916 (-1898)

Dolomite: white to cream, good inter-xln porosity, spotty, streaky oil show, strong aroma, weak cut, looks rather heavy. When dissolved in acid, the dolo yields fine, black particulates of heavy to dead oil. Chert: white, included in the dolomite, also has a spotty oil show.

Dolomite: as above with succrosic texture and fair inter-xln porosity. The oil can be made to cut more easily with acid.

Dolomite rhombs as large as 0.3mm, with good inter-xln porosity, and oil staining, causing a brown color.

Dolomite as above, with odor, staining and cut. Also the same succrosic dolo is present without oil staining. Could the stained fragments be caving from above?

Dolomite: both succrosic w/ spotty staining, and w/o staining. Also micritic dolo, hard tight, no por., tan in color. Sample cup has odor.

Gas check

Mud-Co mud check @ 4009 ft. 0915 hrs, 1/11/2011 Vis 62, Wt. 9.4 PV 21, YP 22 WL 8.0 Cake 1/32, pH 9.5