

Curve Track #1
 ROP (min/ft)
 Gamma (API)
 Cal (in)

1:240 Imperial
 ROP (min/ft)
 Gamma (API)
 Cal (in)

ROP (min/ft)
 Gamma (API)
 Cal (in)

ROP (min/ft)
 Gamma (API)
 Cal (in)

cfs @ 3270 ft
 0815 hrs 11/16/11

cfs @ 3329 ft
 1210 hrs 11/16/11

Depth | Intervals
 DST
 Cored Interval
 DST Interval

Lithology
 Oil Show

Geological Descriptions

TG, C1 - C5
 Total Gas (units)
 C1 (units)
 C2 (units)
 C3 (units)
 C4 (units)

limestone, light gray mottled, cryptocrystalline, fossiliferous to cryptocrystalline, gray, lithographic

shale, gray, soft, some micaceous, salt and pepper siltstone with sandstone, gray quartz, very fine grained, well cemented, poorly sorted, round to sub round, no shows

limestone, light gray, cryptocrystalline, fossiliferous, dense, with limestone, gray to dark gray, cryptocrystalline, dense, lithographic, no shows

limestone, mixed dark gray, with dark gray shales and siltstones

limestone, mixed gray, micro-cryptocrystalline, fossiliferous to lithographic, with: limestone, cream to light gray, cryptocrystalline, fossiliferous, with pale green arenaceous

limestones, as above

shale, soft gray, with limestone, cream, slightly chalky, fossiliferous, no shows

limestone, mixed gray, dense, fossiliferous, chalky in part, pyritic in part, with: limestone, dark gray, cryptocrystalline, lithographic, no shows

Queen Hill Shale 3021 -1081
 shale, black carbonaceous

limestone, cream to light gray, crypto-microcrystalline, fossiliferous, slightly chalky, poor visible porosity, no shows, abundant gray shales

limestone, mixed non-descript fossiliferous, fairly dense, no shows

limestone, light gray to gray, cryptocrystalline, fossiliferous, trace sub-oolitic, poor visible overall porosity, some chalky, 2 small specimens spotty dead dark brown stain, no show free oil or odor

limestone, gray to tan mixed fossiliferous, dense to chalky, no visible shows

Heebner 3106 -1166
 shale, black carbonaceous

Toronto 3123 -1183
 limestone, white to light gray, cryptocrystalline, fossiliferous to lithographic, chalky to dense with poor visible porosity, trace questionable light brown spotty stain, no show free oil, no odor

Douglas 3133 -1193
 shale, gray, green and red, samples wash red

shale, grading to grays and green silty, some scattered brown to black carbonaceous

shale, gray to green, some very silty, trace green siltstone

Brown Lime 3188 -1248
 limestone, brown to tan, cryptocrystalline, dense, fossiliferous

Lansing 3200 -1260
 limestone, white to light gray, cryptocrystalline, slightly fossiliferous, smooth compact, no shows

limestone, similar as above, influx of some gray fossiliferous chert, possible fleeting odor, no visible shows, no fluorescence

limestone, gray, microcrystalline, fossiliferous, very dense, no visible show or porosity, with white chalky limestone, no odor or fluorescence

limestone, light gray to cream, crypto-microcrystalline, some secondary calcite, fossiliferous in part, some chalky mottled pelletal, poor visible porosity, no shows

flood gray chert in 3270 sample

limestone, white, cryptocrystalline, bioclastic, no shows, even interclast porosity, trace pyritic, crystals wash white, no shows, some pale blue fluorescence

limestone, white, cryptocrystalline, chalky, lithographic to sub-oolitic and pelletal, no visible porosity, with limestone, gray, microcrystalline, lithographic, dense, some fractures, trace questionable stain on fracture planes, no other shows

as above, influx cream to white, sub-oolitic/pelletal, some secondary calcite, no shows, some pyritic

as above, some very scattered dead black stain, no free oil, odor, or fluorescence

limestone, gray to tan, microcrystalline, pelletal, poor visible porosity, looks as if primary porosity has been filled/or crushed, some scattered dead stain, 1 specimen with slight oil show and odor on break, slow streaming cut, 60 min, some cream sub-oolitic/oolitic, poor porosity, trace light brown stain, free oil sheen on break, no odor

similar to above, chalkier, some slight brown stain, trace gas bubbles, no free oil, fleeting odor, good fluorescence, no cut, found 1 specimen, dark gray lithographic, dead black stain, few drops clingy oil, no odor or fluorescence

limestone, white to gray, mostly cryptocrystalline, dense, white more chalky, slightly fossiliferous to lithographic, no shows

1:240 Imperial
 Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

8 5/8" Surface Casing set @ 954 ft. KB

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100

Mud-Co Mud chk @ 3263 ft.
 0755 hrs. 11/16/11
 Vis. 62 Wt. 9.2
 PV 14 YP 28
 WL 8.0
 Cake 1/32,
 pH 10.0
 CHL 7800 ppm
 Ca 40 ppm
 Sol 6.0
 LCM 1/2#
 DMC \$1842.35
 CMC \$7169.45

as above

Stark Shale 3384 -1444

gray and green shale, dense, blocky

limestone, gray, cryptocrystalline, dense, fossiliferous to lithographic, with white to light gray and pale green, micro-cryptocrystalline, some questionable edge stain with light fluorescence, some secondary calcite, no show oil, no odor

Base KC 3406 -1466

soft red and gray shales, samples wash red, with chert, mixed red, yellow, gray, some quartz shards and pyrite nodules

mostly ls in 60 min

Arbuckle 3422 -1482

3428 30 min - dolomite, white to light gray, microcrystalline, some cryptocrystalline nodules in micro-matrix, some glauconitic, poor visible interxn porosity, some micro-fractures, wormy black asphaltic stain, trace tarry oil droplets, no odor, good green fluorescence, very faint cut, 60 min a.a. with some microcrystalline rhombic and lithographic, some with light brown stain, faint odor, oil sheen, few droplets in tray, good fluorescence, weak cut, abundant caliche

3428-33, as above, decrease show, no odor, few pieces tan cryptocrystalline with small solution vugs and fair brown stain

3434-3438, dolomite white to cream and light gray, cryptocrystalline, lithographic to sub-lithographic, trace black stain, some scattered microcrystalline, rhombic, mostly barren, caliche filled, some scattered light brown to black stain, light fluorescence, slight cut with halo, no odor, some boney white chert - 60 min flood of shale, dol. as above, two specimens rhombic, trace sheen and oil droplets, odor only on break

3439-3443 dolomite, light gray, micro-fine crystalline, rhombic, some fair intercrystalline and solution vug porosity, some caliche fill, fair dark brown to black staining, trace gas, free oil sheen in tray, fair show free oil on break, bright green fluorescence, instant good cut, fleeting odor

3445-3453 crystalline dolomite as above, marked decrease in staining, only trace oil, still some scattered porosity, some caliche fill, with: mostly smooth compact lithographic dolomite, barren of stain, and tan to white chert, abundant caliche in samples, no odor in wet cup

3454-3468, dolomite, gray to tan, microcrystalline, sub-rhombic to sub-lithographic, some scattered small vugs, mostly barren, very spotty light stain, trace free oil, no odor, flood boney white chert, abundant caliche, fairly even bright yellow fluorescence

3472-3500 dolomite, light gray to cream and tan, mixed micro-fine crystalline, rhombic to sub-rhombic, some fair intercrystalline porosity, barren, some scattered boney white and tan oolitic cherts

3504-TD dolomite, mixed gray to tan and white, micro-fine crystalline, rhombic, some cryptocrystalline, scattered fair intercrystalline porosity, with: dolomite, tan to brown, microcrystalline, oolitic, poor porosity, no shows, with abundant boney white chert, some caliche

Rotary TD 3527' @ 0430 hrs 11/19/11
Superior Wireline TD
Complete Logging Operations

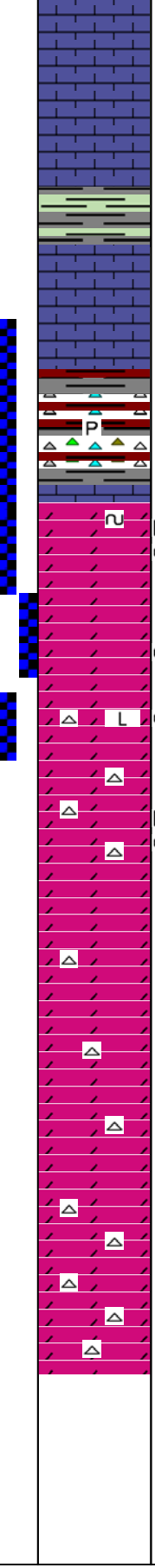
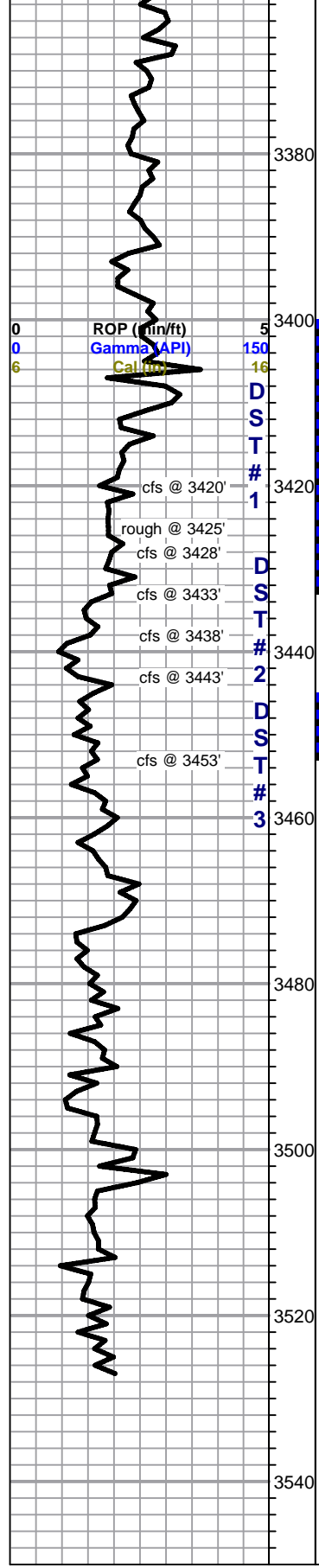
stop @ 3405',
run 15 stand
short trip

Total Gas (units)	100
C1 (units)	100
C2 (units)	100
C3 (units)	100
C4 (units)	100

pipe strap 0.55 ft
short to board

Mud-Co Mud chk
@ 3433 ft.
0710 hrs. 11/1711
Vis. 62 Wt. 9.4
PV 12 YP 35
WL 9.6
Cake 1/32,
pH 10.0
CHL 9200 ppm
Ca 40 ppm
Sol 7.6
LCM 1/2#
DMC \$94.75
CMC \$7264.20

Mud-Co Mud chk
@ 3443 ft.
0720 hrs. 11/1811
Vis. 48 Wt. 9.2
PV 12 YP 20
WL 7.2
Cake 1/32,
pH 11.5
CHL 7200 ppm
Ca 20 ppm
Sol 6.3
LCM 1/2#
DMC \$948.00
CMC \$8212.20



3380

3400

3420

3440

3460

3480

3500

3520

3540

