

CME DRILL
LOG #4

Forestry Suppliers, Inc.

888-647-5368

888-354 Level Book

FOLEY #4 ROSE CK
FOLEY SITE "A"

GILMAN

ORANGE CREEK

18831 / 18919

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	RC Bob Cleveland	
	Jake Mast	
	Eric Thomas	
	Drew Butler	
	Jim Boborycki	
	John Carroll	
* 5	Dallens	
	others - helpers	

Foley #4 Rose Creek

~~(cont)~~ 4-23-08

W# 18831

Country

S T R

LAT 30° 12' 5.0"

LONG 83° 50' 0.8"

ELEV TD 128'

~~Dist~~ Circulation @ 28.5'

Push-sample 0-8.5'

0-2.5' dark gray soil on brown clayey sand

2.5'-5' tan clayey sand

5'-7.5' tan to dark brown clayey sand on black organic clayey sand

* SWITCH TO NQ, SECURE SITE; RETURN TO TLH

RIG MILES: 43913

HOURS: 270.5

4/24/08

8.5'-13.5' black organic clayey sand, poor recovery. Dobstone shards in shoe

13.5'-18.5' used rock shoe, NO RECOVERY. -SOFT

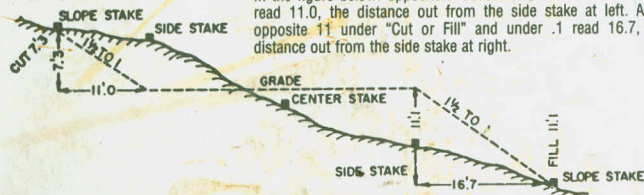
18.5'-23 ~1' brown clayey sand on tan dobstone.

* ADVANCE 25' 3" LOG to 23' (2' stickup)

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

1883 1/2 Foley #4 Rose Ck P 1
18832 Foley Site A P 5

1884 1/2 Gilman Cone p 17

18919/22.5 Orange Ck Rest. Area p 45

The paper in this book is made of 50% high grade rag stock with a WATER RESISTING surface sizing.

0-19.5' Qu
19.5'- TS

2

lost circulation @ 27.5'
23.5'-28' cream wackestone/packstone to tan
wackestone/packstone into gray dolostone

28'-33' gray/brown ruggy dolostone, cavity
@ ~ 31' (46")

33'-38' gray/brown dolostone; cavity @ ~ 35.5'
then no recovery of soft material below
to 38'.

38'-43' rubble brown dolostone to gray
dolostone.

43'-48' only ~1' recovered @ beginning of
run; softer and cavity ridden remainder
of run was not recovered. 1' gray
dolostone.

48'-53' NO RECOVERY. multiple cavities
and very rubble
53'-58' pushed much harder on feed; caught
brown rubble dolostone.

58'-63' tan moldic dolostone / rxd LS?
100% recovery!

63'-68' ~40% recovery -
rubby tan dolostone w/ cavities

68'-73' br./tan moldic dolostone, excellent recovery.

73'-78' br. to tan moldic dolostone to gray
hard dolostone or rxd LS?
w/ ripup clasts & laminae

76'-83' hard rxd LS, fossiliferous
+ fossil moldic to massive hard
dolomitic? br/gray rxd LS.

* 82'-83' Δ lithology, contact?
clay cavity fill into tan wacke/pack-
stone ~100% recovery

83'-88' ~80% recovery, hard tan wacke/packstone
to soft unconsolidated creamy
wackestone

88'-93' ~40% recovery tan wackestone/pack-
stone

93'-98' packstone to grainstone, fossiliferous
(oysters, bryozoans, bryotellids, bryozoans, i
leptocyclus) to packstone

pack up site, secure hole

rig hrs: 276.1

4/25/06

98'-103' Poor recovery, plugged bit fossil-
moldic rxd LS.

103'-108' fossil moldic tan to gray LS to
more massive tan packstone/grainstone

108'-113' tan massive packstone/grainstone

113'-118' tan fossiliferous packstone

118'-123' tan packstone ~80% rec.

123'-128' fossiliferous tan packstone (pectens, oysters)

TD

10032/330.25'

10011/439.5'

- Run Gamma log w/ NA on bottom
- trip out d/c
- Attempted caliper on open hole, failed -> recalibrate.
- clean up; secure site

RK6 Hours 279.1

5-5-08 KC, DW, 100 ft. 100 ft.

5000 200' hrs

100 ft. 100 ft.

5000 5000 100 ft. 100 ft.
 5000 5000 100 ft. 100 ft.
 5000 5000 100 ft. 100 ft.
 5000 5000 100 ft. 100 ft.

Clear 100 ft. 100 ft. site a
 Clear 100 ft. 100 ft.
 100 ft. 100 ft.

end day 7:30 pm
 100 ft. 100 ft.

100 ft. 100 ft.

100 ft. 100 ft.

100 ft. 100 ft.

repair
~~Chig~~ oil in same pump

✓ vehicle log for CME
INTC

quik gel

~~quik gel~~ gas for CME

✓ 180 myobi set

short rivets (pump starter
leaving)

~~pump pull cord~~

crabbing for driftless stop

large blocks

thermacells

✓ round wire brushes

18832/330

5-6 00 K. DW 745000 51101

Foley site "A" #5

LAT 30° 13.738 EPL
82° 33.551 17

30 minute average

SEC T R

Country

Elev

push spl

0-2.5" dk bn/bk organic
rich soil 0-6" ~~gravel~~ to

gray + bn to lt bn sd,
2.5'-5.0' push spl ~ 60%

clay - lt bn + iron staining

sand - bottom 1/2 soft -
prob. about 1/2 lost.

5.0-7.5' lt g. - br sand, sd clayey
upper 1/2 - br 1/2 lt g. clayey
mix mud -

SET 8 1/2' 7 NW CS9

7.5-12' brown/lt blue

sd clay sd w black blebs below

10-25' dk bn to black mud
(dk sd)

18832/330.25
Foley site "A"

6/10/02

18832/439.5

12-14.5' poor recovery - med bn sl. ch⁶
sd
14.5-17' same - btm 3" gray stuff ch⁶ sd
17-19.5' gy ch⁶ sd + sand
19.5-22' gray clayey sand
22-24.5' lt gray clayey sand
24.5-27' SAME
27-29.5' lt gy ch⁶ sd - poor
recovery
29.5-32 - SAME - lt gy bn clay
at base
32-37' lt gy ch⁶ sd - softer than
above - plugged after 1 1/2' -
33.5-37' NDSM.

37-

mix good bentonite mud -
condition hole prep for running
CASING in AM

End day 6:45 PM
6017 miles 23030

5-7-08 KC, DW 7:45 started
fuel for rig + wtl.
fix pull starter on intl pump

pull NQ

run 27' 43 1/2" CS9 - would not
set at 37' ∴ CS9 to 42'

Top of Sawannee

- 7
wash core bbl back to btm -
~ 1.5' gn sdy clay medium
~ 41 - 42.75
42.75 - 45.25²⁵ gn + arm mottled
variably sandy clay + weathered
carbonate
45.25 - 47.75' ~ 6" as above then
dk gn/blk clay/clay sd
- plugged - softer below - only
~ 1' medium
47.75' - 49.5' - gy + bn + gn.
clay, sel + ls frag.
49.5 - 49.6 - refusal w ext shales
49.5 - 52.75' 1/2 gy + bn se nodules
well ind li.
52.75 - 55.75' poor recovery - hard +
soft zones bn dolomite + dolosilt
55.75 - 57.75' bn dolomite + dolosilt
some soft stuff lost
57.75 - 59.75' hd bn dolomite - lost core
59.75 - 61' - v poor rec. - core laminated
siderite
61 - 62.75' ~ 1' medium - bn dolomite
some soft stuff lost
62.75 - ~ 63' - 2" hard dolomite -
then v soft or cavity

10011/439.5'
61m2

63-65 + 5 ft or cavity
 drilled to ~ 66.75' - int. hole sight
 66.75-67.75 - 1 poor recovery - jammed
 inner bbl.

- need to run 3" CSG - rubble falling
 in (?) each time Kelly picks up

Rig hours 290.8

INTL files 23115

END Day 6 30 pm

5-13-08 KC, NJ ^{John} ~ 9 AM Start
 pump off contaminated mud - mix new
 - pull NQ string

Drill in NW CSG to 67'
 run NQ back in

Drill bk to 67.5' - pu ~ 8"

dolomite - previously drilled

67.5-69' hard dolomite at top.

softer below - ~ 8" recovered

69-71' - picked up missing info. from
 last run - med br on moldic dolomite

71-73' br moldic dolomite

softer at bot

73-75.5' med br dolomite some
 hard + softer zones

10011/439.5'
 6/10/08

bad water
gas for rig & pumps

MARINE grease

~~adjust packing on~~
~~injection~~

core box mabl.

ALL RASZ

TOP OLALA
top of clay

75.5 - 78 med bn dolomite, some light
color w/ gas
78 - 80.5' SAME
80.5 - 83' bn + lt gr dolomite - some
soft zone last

END COING for day
Rig hours 296.5
END day 6:30 PM

5-14-08 KC, NJ 7:45 START
fuel for intl + rig
to site - fuel rig

83 - 85.5' - lt bn + crm ls/dls.
mostly well ind. some bedding,
some molds

85.5 - 88' crm ls on above top
1 1/2' then lt bn dolo - bedded
last 4-6" blue gr clay w ls frag.

88 - 90.5' 1/2" grn clay on above
then white + vlt yl. granular ls.
becoming more calcareous w depth?
90.5 - 93' lt gr bn granular ls - some
evidence of core grinding - more calcareous
at bottom

93 - 95.5' lt gr bn fossil moldic
ls, variably calcareous

10011/439.5'
Alameda

same soft zone

95.5-98' lt gy + br granular ls

98-103' lt gy granular fossiliferous ls
(lept) bottom coarser than the top

103-108 soft ls - poor recaying granular ls - oysters etc

108-110.5' ~18" rec. crin. - lt gy granular poor to med ind foss. ls?

110.5-113' - poor recaying (~6") poor to med ind gran. ls

113-115.5' soft chunky ls - granular v poor recaying - either washing out or disintegrating out.

115.5-118' top 1 1/2' soft, rubs in or above - v poor recaying last 1' med to well ind - crin 100% recaying

118-120.5' v lt br foss. ls. med-poor ind.

120.5-123' same

123-125.5' crin + lt br foss. ls. med ind. var. moldic

125.5-128' v lt br moldic ls granular-foss.

128-131' v lt br foss ls var moldic med ind

10011/439.5'

10011/439.5'

core box matl.
RA66S
marine gear
gas in rig
quik gel
core box matl

RA665

MARINE gear

grass in 'rig

quik gel

core box matl

131-133 Same

133-138 same + thin grey mollusc shells (?)

End coming for day

219 hours 302.6

ay eln 10

TANG 20

5/22/08 DTP/KC RKG HPS 306.1

wash back to bottom of hole

138' + 13' tan fossiliferous LS oysters, mollusks,
lcp, numms

143-148 Poor recovery; tan basilliferous LS

148'-153' Poor recovery, as above.

153'-156' Drilled in 2' 25' runs;
gray fossiliferous LS, ~ 1' cavity, then
~ 1' dolomite

158' - 163' brown dolomite, fossil moldic
cavity ~ 158.75'

163'-168' brown dolostone to ~166.5', then
soft material not recovered to 168'

168'-173' softer gray LS to lt. brown sugrosic dolostone, then hard brown dolostone in to cavity @ end of run.

173'-178' soft/cavity @ top of run; brown
dolostone to ~175.5' followed by
brown sacrosic dolostone; soft washed
away material.

100411/439.5.
Gilman
W/2835
PC at Port. Ave

5/23 KC/DTP

178' - 183' poor recovery; soft material
not recovered @ beginning of run; lt.
br dolosilt (or cuttings?) on lt. gray
v. fossiliferous LS / dolomitized LS

183' - 188' H. gray to tan fossiliferous LS / dol... LS

188' - 193' corad interval in 2 2.5' runs.

tan fossiliferous LS

193' - 198' tan fossiliferous LS to ~ 195 where

lt. brown dolostone is interbedded w/ the LS
198' - 203' bn to gy dolomite, var moldic
well to poor ind. 2 soft zones
at x & blocks

203' - 205.5 brittle fractured dolomite
med - dk br. poor to well ind.
var moldic + sucrosic.

205.5 - 208 SAME

208 - 213' Dolomite as above - hard +
soft zones, var ind + var moldic.

213 - 218' hard dolomite, var moldic

218 - 223' med bn well ind dolomite.

soft moldic zone ~ 219 - 219.75

fossiliferous

223 - 228' med + dk br dolomite -

poor to well ind, minor organic
laminae, & moldic

bring IR compressor
quick grant
fix trailer tire
fix Subsea pump

10041/233.5'

~ 219/223.5'

at end of run

228-230.5' MED bn dolomite. poor to
mod ind. - plugged off only 50% rec.

230.5-233 same or above -

hard - then soft - poss thin carbonat

233 - 238' lt bn mod ind dolomite
v friable + fractured.

238-243 dolomite as above but
sl better indurative

243-248' lt br. dolomite. var.
moldic, fractured zone ~ 244'

248-253' bn dolomite. thin v hard dolo.
~ 2' bk to bn + com dolo/ls

End coring for day first 1/2 of rod

ALHRS 311.4 drilled down

hang 20'

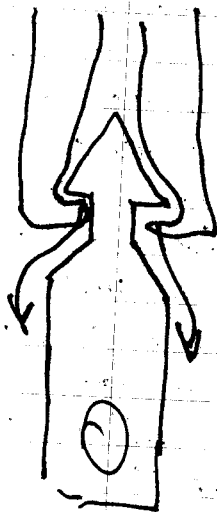
5-29-08 KC, DP ~ 9.30 start
to site w IR compr. stop fuel.
mix mud

253-258' bn dolomite, mod to
well ind. granular. sulfide
minerals

258-263' lt bn granular to recd.
moldic ls/dolo.

263-268' gy bn dolo. var moldic
some sulfides - poss org laminitic

100411/439.5
6/1/00



hook saws 24
 36
 heel saws 24
 36

AL 36" wrench

call JA. re expense, core bbl assay
 gas cans + gas for CME
 fix trailer time - gas trailer

268 - ~ 272' med bn, poor to med
 ind dolo. var moldic

272 - 273 - only one chunk of dolomite
 - jammed bbl. - out of place?

273 - 275.5' med bn moldic dolomite
 v poor recovery (~4.5")

275.5 - 278' N.S. - no recovery

278 - 283 - no recovery - inner bbl mismatch -
 core in outer bbl.

Flg 145 316.2 end day 8:30 pm
 trip pipe out/in to retr. core

5-30-08 KC, DP 7.45 start

280.5 - 283. some dolomite chunks
 as above then lt gy bn ls, fossilif
 forams, mollusca shells etc. - org
 fossil material remains ~1.25' sec.

283 - 288' lt bn + gy ls, fossilif.
 obviously ocala ~90% recovery.

some core grinding apparent on
 matching core surfaces

288 - 293' lt gy bn ls, fossiliferous
 med ind

293 - 298' gy + lt bn ls, fossilif.
 well to poor ind. somewhat mxl
 (lgs, mollusca etc)

100411/4395

Top Allen Park
302.75'

Bring

gas for cme
time for gas trailer
core box matl.
lg blocks 2"x2"
N4

investigate brake adj on
3000 lb hoist

locate pocket lightning
detector

16

298'-303' lt bn/gg granular to
mod-well ind, fossiliferous
abd surface minerals & organic
or surface staining.

x section of v. thin columnar
or ls planar form
variably calcareous & repl.
last 6" uncon. bn dolomite thin
hard dk bn dolomite

303-308' med to dk bn dolomite
poor to well ind, var repl
fossiliferous, sulfide/organic
stains inside forams

3" section lt gg/crm ls. - sm
foram packstone w calcareous
matrix.

308-313' bn dolomite, granular to
vexl. mod to well ind sulfide/
organics as above

313-318' lt bn ls (dolo?) granular
small foram packstone, sulfide or
org organic staining

318-323' lt bn + gg granular dolo/
ls. sulfide/organic var repl.
largely sm foram packstone

323-328' med to lt bn dolo,
med-well ind, var repl.

Calman

10041/431.5'

10041/431.5'

9-26-08 KC, GR. to
Foley A - grabbing

hemite ~~B~~ bags quick grab
6tm till water out top of
csq (65')

pull 18' csq. pump 1 add'l
bag - water out top of csq.

End day -

load up nets etc.

Mbz Dpt. hours 2654

End day 6:00pm

16
organics on packing faces. thin
laminae

328 - 330.25' grey, bn + bl.
dolomite, - poor to well ind
some mshs, some organics (?)

330.25' TD

end coring for day -
lay down 22 1/4"
haz 20'

RIG HRS: 321.4

6-11-08 KC, DP to Foley site "A"

pull NQ + deep hole.

shift thru NQ

Thunderstorm in pm - came
end of work

Rig hour 322.5

6-18-08 KC, VA - cont deep-

pull 30' NQ - A.R. lift

pull remaining NQ

run tape - ledge at ~275'
hole open to ~328.5'

180411/437.5

Galman

180411/2655'
at end of run

CME Auger rack dim.

23 $\frac{1}{2}$ " DEEP

30 $\frac{1}{2}$ " long

opening in 6' long

18 $\frac{1}{4}$ " high

GAS

Ampro etc

oil chaze pan

portable chain

hose 100'

Vickie Brown

Mad Co. reg. regent

850-973-3698

Vack Pickles Chief.

973-2585

home

GILMAN CORE
8-5-08 KC, GR

paperwork + load at in am
CME MAST cyl. seal blows out
- chg over to MBL DRL

W# 18841

GILMAN CORE

SET T R

LAT 30° 22.830 7 AUG

CON 83° 32.974 6301EAD

EST ACC 16.7'

Waypoint 27 in MBL DRL GPS
7 PM END day

8-6-08 KC, GR 7:15 A start

0-2.5' push spl - 0-1.5' lt to
dk br sand, grade to or
dry sd - v firm

2.5 - ~3.25' pushed to refusal

SET 4' 4" csq w 3" inside

3.25 - 5.0' or dry sd ~ 1' ne

5 - 6.5' brk org dry sd v firm

6.5 - 8.25 red + grey mottled clay

dry sd. 6" recovered - plugged

Gilman

10041/437.5'

10041/437.5'

Holiday Inn Exp.
Madison

850-973-2020

2 Rooms Aug ~~5+6~~ 110Nskt

State rate

~~Aug~~ 80.99 ea
CONF 64501022

18

8.25-10' same
10-11.75' or + bn clayey sd/clg
EXT shoe - wks btr.
11.75-13.5' brk red clay sd + clg
13.5-15.0' same but with
some sandier zones -
4 runs in 5' - keeps plugging
off
15.0-17' orange clay sd
17-19' SAME
19-20' same but sandier
20-22.5' or clayey sand
22.5-25 or clayey sand

pull NQ/run 25' NW csq
run NQ back in
clean out btm of hole,
pump off old mud/mix new

Rig hours 2591
end day 6:15 pm

8-7-08 KC, GR 7AM start
25-27.5' or clay sd
27.5-30' orange + brk red
clayey sand

18919/2635'
Change at 2635'

— load EXTRA EXT. shoe
for CME
swivel packing Western 2T

CALL
Bob Ranken
Gregg Nieto

19

30-32.5' y.l. or clay sd

32.5-35' ~~lt~~ y.l. or + gray mottled
clayey sand

35-40' gray, y.l. or sdy clay

40-45' - 5' run - only 50%
recovery - lt y.l. gy + orange
sdy clay - prob plugged 90
bore 1/2

45-47.5' y.l. y.l. or + gray clay

47.5-50.0 SAME

50-52.5' lt y.l. or clay -
~ 1.5' recovery

52.5-55 cream + lt y.l. clay,
mottled, organic streaks
+ blebs some sandy zone

55-57.5 SAME

57.5-60 SAME

60-62.5' clay or above then grad
color bk to gray

62.5-65' lt or clay, bn + blk
streaks sandy

65-67.5' SAME

67.5-70' lt y.l. + or mottled clay,
organic blebs + streaks, sandy

70-72.5' lt or sdy clay, phos?

72.5-75' gray + bn + orange clay,
sandy, phos? salt + pepper

18919/2635'
Orange at East Area

6th foot
 75-77.5' y.l. br + grey clay,
 mottled.
 77.5-80' vlt y.l. clay w org
 streaks

End coring for day - T.S.
 Rig hours 2597
 RETN where 4:45pm

8-13-08 KC, GR
 to Foley A pu GREEN trailer
 to Gilman
 pull NQ
 RUN 3" CSQ 25 → 70'
 Thunderstone back.
 Rig hours 2599

3" CASING
 10' + 5' sticks
 4719 Vaguen and #

8-14-08 KC GR 8:45 start
 to Gilman site
 Adv. 3" CSQ to ~85' 75' open
 inside CSQ
 desand mud wash CSQ
 clear to 6th
 80.0-80.3
 80.3-82.5' grey streaked + mottled
 clay - expanded section

Q

soda ash
N₂O X 10'

W

21

82.75 - 85.25 clay - as above
85.25 - 87.75' grey clay shift,
quartz sandy, mottled w/ sulfide(?)
87.75 - 88.25' bit refuse in
extended shoe

88.25' - 90.25' back in w rock
shoe - white weathered ls ~ 6"
then back into mottled clay

90.25 - 92.75' grey + blk mottled
clay, some iron staining

92.75 - 95.25' grey + black mottled
clay - only 6" recovered - plugged
at top - softer below

95.25' - 97.75' cream + grey mottled
clay - chert lens at btm

97.75 - 100.25' poor recovery - clay
w chert frag. - plugged shoe - softer
below

100.25 - 101.75' white weathered
ls and clay

101.75 - 103.75' ls and clay

103.75 - 105.25' white ls mottled
some organics + iron staining

END CORING FOR DAY

Rig hour 2604

18919/2605'
Change at 2605' and

19
8-13-08 KL, GR LOAD WATER. 22
CSG etc on intl. to drill site

SWL 69.25' bws

105.25 - 107.75' ls + clay
interbedded(?) - v poor recovery
107.75 - 110.25' clay, crm, lt br
+ gray - picked up ~ 2' from
previous run

110.25 - 112.75' clay as above
rubbly ls botm 1/2 w clay infilling
+ iron staining

112.75 - 115.25' rubbly ls + clay.
v poor recovery - bit plugged

115.25 - 117.95' - y.l. br clay at top
grd to gray, partly ls ~ 50% rec.

117.75 - 120.25' partly ls + y.l. br clay
- only 6" recovered - bit to
ext. shoe

120.25 - 122.75' v lt. y.l. or carbonate
sand than soft granular ls.
micro fossilif. poor to mod ind

122.75 - 125.25' cream granular ls.
~ 50% recovered

125.25 - 127.75' soft granular ls.
+ lb. or - bottom part softest

8'0" - 5/8 W 95 3/8
7.96875'
1.1875' 14 1/4" deep outside
1.25' (5" " indl.
11'11" L
11.91666'

Raggs
Quite gel
3" csq
10' NQ

112.766 ft

13368

127.75 - 130.25' - V stiff. pushed²³
w/o rotation - NO recording
130.25 - 130.75' 1 1/4" gl. granular ls -
EXT shore refusal
130.75 - 131.25' plugged off - hard
granular ls, btm rich dolo(?)
131.25 - 133.25' hard br dolo -
top 1.5" laminated
133.25 - 135.25' - br dolomite,
high angle fracture at btm - w
another healed high angle fracture

end coring for day
Rig down 2608
End day 5:50pm
8-20-08 KC, GR

pull NQ
run 3" csq to 131'
run NQ back in - sit out of S.
wash out cuttings for btm
of hole

shut down / look up
Rig down 2612
ETN when 5:45 pm

8-21-DB KC, GR

hole open to 135.5'

24

135.25 - 137.75 soft. - lost sp
dr core bbl - NO recovery
137.75 - 140.25' soft. - rubblely sand dolo
at top -
140.25 - 142.75 br fractured dolo
142.75 - 143.25 fractured dolomite
143.5 - 145.25 - NO spm - dr. t
like soft rock
145.25 - 146.75' br dolo. hard,
fractured
146.75 - 148 same
148 - 150.25 NO recovery.

pull NQ ck bit (ok) inner
bbl clearance (ok)

RUN 3" CSG to 150' to
straighten hole

150.25 - 152.75 - plugged off
hard dolomite w soft
interbedded

152.75 - 154.25' hard dolo w much
evidence of veining - n 1' me

154.25 - 155.25 competent lb br
ls/dolo. full recovery

1. how much
perm recovery
in casing?



soda ash
quik gel
3" csq

chg out mbl dual for
CME

195.25 - 157.75⁷⁵ lt. gy br dss²⁵
well ind. dss
157.75 - 160.25' ~ 1' record -
born at top + btm
160.25 - 163.25 - v soft - pushed
5' w little resistance till loc
8" ~ 10" NO RECORD
soft? cavity?
Rig home 2619

8-25-08 KC, GR After
T.S. Fay
WATER RUN TO NEW HOME VFD
MAST back up, mix mud etc
run inner bbl w EXT shoe -
per ~ 8" from 160.25 - 165.25
interval

165.25 - 166.5 btm of cavity @ 166.25
bailed small quantity of ls/dolo cuttings
+ chunks.
166.5 - 168.25 ls, as above ~ .25'
thin br dolomite + dolo slab
168.25 - 170.25 lt br dolomite
chunks ~ 6" record
hole acts as if core bbl
is set

18919/2635'
Change at next run

defective. inner bit will not
AND

- washed sud hole w/o inner bit
inner bit still wait go -

pull NQ

drill in NW csg, water
run. cont. drill csg to 169'

Rig hours 2623

End day 6:15 pm

8-26-08 KC, GR

WATER RUN - trip in NQ

XARST

170.25 - 175.25' soft - bright or
clay + ls or clay chunks (ext. sh.)

175.25 - 180.25' v soft - pushed

~ 1.5' recovered - orange, gr + blk

clay w ls or clay clasts

180.25 - 185.25' orange plastic

clay - sample bailed fr. outer
bit.

185.25 - 187.75' clay as above (?)

then finer

187.75 - 190.25 - ls. - rubble +

chunks - ~ 6" recovery

load

gunk gel

NQ

NW csq

170 3"
195 2"

190.25 - 195.25 - soft rock²⁷ (?)
& clay - NO recovery
need to attps bail sample if
tape shows sediment in outer
bbl.

Rig hours 2627

8-27-08 BC, GR
ran tape inside 2". Clean
to 194'.
Couldn't get inner barrel to
latch in. Picked up to 190
and washed. Inner barrel
went in. Drilled back
down to 195'. Took 5 off
and added a 10. Lost a 1' of
hole. Thunderstorm. Sat in
truck.

Drilled down to 197 w/
extended shoe hit rock.
Changed shoes.

Hit dolostone @ 197'.
couple zones washed out

195.25 - 200.25 washed out
first couple feet.
Dolostone, Grang

Need to set
3" to ~197-200'

RH 2630

boreside camera
20' 3" threaded PVC
AUS Rods
6x4x1/2" x 1/2" x 1/2" pin

28

another thunderstorm.
200.25-205.25 Brown grainstone.
poorly consolidated.
100% recovery (close)

205.25-210.25
Gray/Brown grainstone
some poorly indurated.
good recovery.

~ Couldn't get inner
barrel back in. washed it
out.

9-4-08 KL, JH
pull NQ drill casing into
cavity. Csg slipped from
Quick Clamp - w drive head +
NWT sub on top. At top,
pin w NWT - lands hard,
but not lined up enough for
threads to engage.

- Retn JH to pin fishing tools
AUS pipe + subs
3" thread PVC and
boreside camera

18919/2635'
Orange & Red: New

Check engine light came on
in Intl. - trip home.

Retn to sitz in DEP4894

Run 3" PVC to top -

run camera to see if on, or

over NWJ sub - on

stand rotation + PVC sat
down over sub

run NWJ/NQ to see CSQ

add 20' addl 3" CSQ (30 total)

66m foot drilled down (easy)

add 5' NW CSQ - drill until

out of mud in tub - should have

205 1/2' CSQ incl stickup

clean up / lock up Rig home 2633
end day

9-10-08 KC, VH 8:30 stand

mix mud Drill in 3" CSQ to 210'

trip in NQ

210 - N 213' ~ 1' recovered. blue

soft. lost fr barrel

213 - 215.5' soft, muddy, granular

216.5 - 220.5' SAME - N 50% recovery

220.5 - 223' bn granular (clay?)

mod ind. then con bn + grey
 laminated ls well ind - algal?
 223 - 225.5' ls as above first foot
 then softer dolo (?) high angle fractures
 more laminated ls at btm
 225.5 - 228 fractured ls, lots of
 chatter ~ 80% recovery btm of
 lt grey, well ind ls. somewhat
 moldic

End coring for day

Rig hours 2638

inner bbl is latched in place
 btm of hole conditioned w good mud
 btm 2 1/2' of 5' rod to be
 drilled down

End day 6:15 pm

9-11-08 KC, EH, 8:45 A start

228-230.5' lb y. or + tan ls,
 granular mod ind fossiliferous
 somewhat moldic. NOTE - 2 chunks
 blue grey clay recovered at top of
 run - not in place - from
 somewhere in ~~228~~ 210-228' int.
 230.5 - 233 small frag. bn debris
 caved fr. above at top of run

limestone as above first foot
then sharp color chg to
med gray otherwise identical
the same

233 - 235.5' gray ls gradual color
chg to tan some fissile tan
throughout

235.5 - 238.5' lt tan + gray ls. v
foss somewhat moldic

238.5 - 240.5' lt gy granular ls, med
ind, fossiliferous

240.5 - 245.25 SAME - some poor
ind

245.5 - 250.5' lt gy fossiliferous ls
poor to mod ind

250.5 - 255.5' same in upper 1/2
dk gy limestone below

255.5 - 260.5' lt to dk gy ls,
fossiliferous, moldic poor to
well ind.

out of water

Recl. Has. 2642 retn of c 5:15 pm

9-12-08 KC, EH ~ 8:30 start
mix mud

water
N Q rods
quick gel

18919/2655.
Orange & Red. mud

260.5-265.5 KC FLU. + NO INHER
 561 - couldn't pu

trip out NR retr w/ 1' spl

trip in - gray moldic ls

265.5-268.5 - picked up a

few shales dr. prisms run

gray br moldic ls

267-270.5 gy + br ls, foss, sl moldic

some dark gray shales + laminae

270.5-~~274.5~~ - ~~contin~~ to 274.5'

gray plastic clay fill some

rock fragments. dk gn/br clay

at base

274.25-275.5' ls gray br, foss.
 mod ind

END CORING FOR DAY

Rig hour 2645

INNER BARREL in INCL.

9/24 DTP, GR, CW

275.5'-280.5' excellent recovery, cream to gray
 fossiliferous LS; pyrite in gray portions.

280.5'-285.5' cream fossiliferous LS

285.5'-288.5' cream fossiliferous LS

288.5'-290.5' NS - soft

190.5' - 295' cream fossiliferous / foram hash
 195 - 295.5' as above, into pyrite cemented fracture zone

295.5' - 296.5' gray brown fossiliferous LS

296.5' - 300.5' NS - soft, was not recovered

300.5' - 305.5' cream to gray fossiliferous LS w/
 pyrite cemented zone @ ~ 302'

305.5' - 309.5' gray fossiliferous LS

309.5' - 310.0' ~~NS~~ recovered w/ CME gray fossiliferous LS

Secure site, 5' off bottom inner bbl in International

RK6 HRS. 2650

△ RK6S ONT; CME ON. HKE →

9/25 DTP, GR, CW

Take CME to Gilman, grease bearings, slide, moyno, + feed cylinders

Recovered last ~1' of final run, working height ~6" higher. ~~could~~ recovered rubble in bottom of hole + real core.

310' - 315' cream LS to pyrite cem. LS then cavity ~311-314

315' - 320' ~2' cavity then hard dolostone

320' - 325' hard rld/dolostone

325' - 330' 100% recovery! gray to tan + brown fossil moldic to massive tan dolostone

After 315' - 320' *
 could not drop in 10' NQ for next run; re-cored 315' - 320' and included in box →

330'-335' Hard gray-brown dolostone, healed fractures/brecciated

335'-338' Hard massive gray-brown dolostone refusal 3' into 5' run & no more

* H₂O. LAST 2' OF 10' stick, bottom of Kelly Stroke!

Secure site

RK HRS 332.2

MLG 44 103

Inner bbl in international

9/30 DTP & GR

~~338'~~ - Blew tower-to-mast H₂O hose - return to TLT to have replacement made @ Capital Rubber

10/1 DTP & GR repl. H₂O hose, try for core again - refusal. Trip out NA - bit is - smooth - repl. core bbl, core

Rig hrs 337.5

338'-340' hard gray/brown dolostone, xHd LS

- blew new H₂O hose off king nipple
- removed 2" coupling: King nipple F / water standpipe on mast
- bought hose back with us

NEED:

- 2" pipe thread die
- appropriate high psi 2" fittings
- 600 psi / 300 psi H₂O gauge

10/02 DTP, GR

35

340' - 345' hard, tan-brown massive dolomite - ~1 cavity @ 340.75'
 345' - 350' as above, sulfides in fractures
 100% recovery
 350' - 353' as above

RK WES: 341.0

10.3.08 BC, GR

arrived @ site. Replaced King nipple and put nose back on.

353' - 355' Cored nice dolostone

★ W / some healed fractures.

AVPK Last 1/2" dolomitized granstone.
 @ 355' possible avon Park fossil!

355' - 360' Gray, brown, highly fractured dolomite.

* cavity from 359.25 - 359.75

360' - 365' hard, massive, gray mottled dolostone. Cracked through to cavity.

• 360.5 - 361.5 cavity

18919/2635'
 Orange & Red: new

• 361.5 - 365' grainstone, gray
graded into creamy tan
packstone @ 364'.

• Bryozoans, algal frags,
echinoids & some kind of
leps. possible *Neolaganum Dalli*

365-370' First 3" of rubble
stuff trash!

creamy tan packstone to 367'.

367-370 brown dolostone
w/ visible fossils. Echinoids

ran out of H₂O. Cleaned up.

* If we decide to drill
more need to add a 10' stick.
did not trip any NQ out of
hole.

RH: 344

arrived @ warehouse @ 5:15pm

10-7-08 BC, GR - forgot rig keys,
met V.H. at hwy 19
Repaired wireline

37
370-375' - hard dolo. brn, graded into
dolomitic packstone @ ~ 371'. @ ~ 372.75'
cavity. brn of run granitic loaded
with bentonite from

loaded trailer w extra hoses, brd
drill pipe etc. Thunderstorm cut day
short return ~ 5:15 w trailer

10-8-08 KC, GR -

375-380' gy bn fossil moldic
dolomite med-well ind

380-385' as above w some 2 int.
of poorer indurification

385-390' med grey + lt bn fossil
moldic ls/dolo. lt. bn last 2"

390-395' 395' - grey fossil moldic
ls as above top 2' then bn
cavity @ ~ 393.75' - bn fossil
moldic ls/dolo last 6ft.

395-400' lt bn fossil moldic ls
some soft zones

400-405' lt bn poor to well ind
fossil moldic ls/dolo. brittle
some soft crumbly zones

END coring for day
reg hours 349.5

inner bbl is greased and in
the truck - good landing
end day @ where 545 pm

10-9-08 KL, GR.

405-410' lt. br + gy br fossil
moldic ls/dolo. med to well ind
- thin zone ~ 407.5 w organic? lam
+ small carbonate clasts, minor trace
sulfide min.

410-415 lt br fossil moldic ls/dolo
muddy zone at ~ 413.5 to 414

415-418' lt br + gy br fossil moldic
dolo well to v well ind - breakout
into softer stuff at 418

418-420 med br well ind ls/dolo
fossil moldic ~ 1.5' record
last 6" record muddy texture
soft - lks like pore organic lam
(?) - then back into cryst. dolomite
420-423 br brittle well ind dolo.
fossil moldic trace sulfide min.

- inner bbl plugged - water pump
spiked - hope I didn't trash the bit
423-424.5' plugged off - rubble br dolo
at top lv small echinoid, organic lam
zone at ~ 423.5' fossil moldic

gas for rig

39

424.5 - 429' bn dolomite, fossil
moldic - muddy matrix, brittle,
429.5 - 434.5 bn + gy bn dolo.
fossil moldic. some unreplaced
fossil mod to well ind

End coring for day rig has

354.2

6' of rod hanging to be drilled down
inner bbl latched in place

10-10-08 KC, BC

434.5 - 439.5' bn + gy fossil moldic
ls/dolomite. predominantly well ind
some muddy zones
439.5' TD

SET up to run Nat. gamma log
4 hrs NQ

rig hours 356.1

18919/2635'
Orange & Red. Area

Cavities:

420-421

373-374.5 Big one

312-318.5 Huge

305-306

285.5-286.5

268.5-272 HUGE!

255? - 262.5

470
- 300
170

+70
150
-320
315

40

Tripped out NR, ran rat gun
+ caliper.

pumped 1/2 bag of grout

10/30/08 BC, GR

pumped (7.5) bags of
grout.

11-12-08 BC, GR

pumped (5) bags of grout.

Cavities @ 312-318.5, and
305-306'.

Trimmy is @ 300'.
Not getting anywhere.

Ph: 357.8

11-13-08 BC, GR

tried to tag bottom, couldn't
get it. Poured (1) bag of
gravel. Tagged bottom @ ~315'.

- pouring more gravel.
tripped out trimmy. Last
170' broke off.

Now I don't know where
the true grout is. But, the
top of the broken trimmy is
@ 315'.

18919/2635'
Orange & Red: New

Tomorrow

Quik Gel
mud tub
trash pump

* Find bolt for mast

41

poured @ 1.5 bags of gravel
and bridged @ 135' inside
3" casing.

Rh: 359

12.3.08 BC, BRC, GR

Out to site. hole not clear.

Got 3" free, rotated, and pumped.
finally cleared obstruction from
3".

Set back down, ran tape.

Tagged bottom @ 312.4

pulled 105' of 3" casing.

ran measuring tape.

Stopped @ 130'. Hole caved in.

Rh 365.8

12.8.08 KC, BC head to site @

10am to install new cable

(which). Ran casing back down
to 200'.

Can't keep hole open. Need

Quik Gel.

RH: 367.5

RH 367.5

18919/2635'
Orange & Red: Area

Repair note:

* Find and repair
leak in rotary box!

12-10-08 KC, BC

Ran 3" to 160'. Couldn't
keep hole clear.

Decided to run NQ. We
got down to 170' and couldn't
keep hole clean and free of
cuttings to advance.

Cleaned up a site, bringing
back Ingersoll Rand to air
lift cuttings.

RH 370.7

ended day and returned to whse
@

12-11-08 BC, JH

Loaded air compressor,
headed to site. lost 10' of
hole. Tried air lifting cuttings.
Only air lifted fines. Still
can't get NQ down past blockage.
Cleaned up. Going to add some
airline and see if that makes
a difference.

RH 371.5'

18919/26351
Orange & Rest. Area

Gravel
14 #2

5 buckets
hole blok

4 bags of
grout

RTT 380.8

7244 Int'l mileag

1-2-09 BC, JH

Head to site.

Tagged bottom @ 85'

Dumped (2) bags of grout.

Hit cavity @ 50'. poured (1)

bag of gravel and pumped

(1) bag of grout.

Total product used:

4 bags of grout

17 bags of gravel

5 buckets of hole blok.

Hole is grouted!!

Cleaned up.

RTT 380.8

1-8-09 DP, BC, JH

Cleaned up site,

move everything back to

tally!

Done!!

Next week:

*Remember to get:

- ①
 - ②
 - ③
 - ④
 - ⑤
 - ⑥
- Orange Ck RA
core
W 18919
- tape
e trays
g tape
X reader
gauge
gauge
side.

get plastic table

RP 40
29° 26' 20.71"
82° 03' 19.54"

0-23' UDSC

~23 Clay, chert + dolo - HTR

~73.25 OLAL

223 Avpk TD

45

left @ 8⁰⁰am

7-8-09 BC, JM, ET mobilize
to new state map hole.
Met RH Davis from SJRWMD
Site under water.
Found new entrance and set
up.

W# 18919

Well name: Orange Creek Restoration
Area 20.58"

Lat 29° 26.343" (~~29.343~~) {10min}

Lon 82° 03.329" (~~82.329~~) {10min}

TRS TICS, R23E ~~SL~~ 19.74"
elev ~64' TOPD

checked into hotel @ 7pm

7-9-09 BC, ET, JM 6³⁰am
(Started Raining) to Site.

Set up, mix mud,
dug 1st 2' and cored rest.

0-2' Sand dark gray

2-4.5 dk brn sand @ 4.2 tan

4.5-13.5 Brn tan sand some
clay.

13.5-18.5' tan brn w/clay
(small amount)

18919/2635'
Orange Ck Rest. Area

18.5-23.5 → Coarse sand gray
@ 23' grades into sand shell
hash, then into yellow good
clay.

23.5'-28.5' → lt gray clay (maybe elastic
silt, cl-cl) green cl-cl, end of
sample got an X-black (lost some)
couldn't keep hole open
running 3" to ~28'

this is the 2nd rain delay we have
undergone today. Now we are attempt-
ing to continue drilling in light (lite)
rain.

28.5'-33' gray w/ limestone chunks
milky substance (w-sc) ^{clear}
~33'-33.5' gray sc (got an X-box sample _{lost})
33.5'-38.5' → gray hash clay
kind of dry w/ ls mixed
in.

• Ran 3" to 39'. couldn't keep
hole open so ran it into clay.
cleaned up site
rig hours: 400

7-10-09 BC, ET, UM

Fam start. Check out of hotel. Head to site after getting H₂O from fire station.

~ Hole gave lots of trouble couldn't core w/o blowing pressure. Called bob and guy ended up having to push through clay that was giving us so much trouble. ~~so~~ jammed liner barrel w/ clay. taking it back to shop.

changed bit to carbide. ran back in. Hit rock.

38.5-~39. blow sample out while setting 3".

39' → 43.5 Clay sample in tube

43.5 → ~47' Clay in tube + chert!!

need to change bit again.

* get transponder # for Sun
pass in truck.

Call Ken in morning

- bring stuff
- gear oil + mushroom
cap - leaking bad

48

changed bit back to diamond
and hit clay again. go figure.

~47" → 48.5' olive chert (1")
grades into a hard
clay w/ heavy minerals and
rip up clasts.

48.5 - 53.5' gray clay

53.5 - 58.5' (53.5 - 55') gray clay

55' - 58.5' dolomitized gray
mudstone.

cleaned up and ended for
day.

Rig hours: 406

Returned to whse @ 6:40 pm

~~Call Ken in morning~~

- ~~- Remind him to bring stuff
forgotten, gear oil and a
mush room cap~~

* Lost circulation @ 64'

7-21-09 BC, DB

48

Loaded up left + LH @ 9am.
headed to Gainesville to
Gormons. pick up pallet of
quick cgl. get fuel + gas.
Head to site.

58.5 - 63.5 gray, hard, dolostone
w/ phosphate. @ 60.5 grades
into dark clay w/ lots of
phosphate and sand. (weathered
phosphate also.)

63.5 - 64' gray clay as above

* 64 - 67' cavity

67 - 67.5 hard gray dolostone
w/ lots of phosphate

67.5 - 68.5 ~~clay~~ cavity.

a made more mud. Cleaned
up site and headed to
hotel. Ended day @ 7:40 pm.

Rig Hours: 407.4

* Hour meter possibly not working

7-22-09 BC, DB

Headed to site @ 6:30 am.

Loaded H₂O @ fire station.

68.5 - 73.5 - very soft dark

gray clay & sand, + phosphate

*Hit Ocala Formation @

73.2'.

need to run 3". Trip about

73.5 - 78.5 & gray LS partially
dolomitized w/ leps.

very poor recovery.

Ran 3" to ~68'. Need to add
5 more feet.

cleaned out hole.

78.5 - 83.5 no recovery. I

drilled soft rock but
unable to retrieve.

~~83.5 - 88.5 gray LS lephash.~~

~~only a few inches of
sample recovered for 5'.~~

~~88.5 - 93.5 gray, white LS lep~~

~~hash rubble @ top of run~~

~~93.5 - 98.5~~

83.5 - 88.5 no recovery

88.5 - 93.5 gray dolomitized
lephash

93.5-98.5 gray, brown, micritic
Ls, Leps dolomitized.

very poor recovery.

Tried to core next run. plugged
off. Ended for day.

took 10' off

Went to South Marion Co. site
to pick up KC, ET, UM. Drally
broken down @ their site.

ended day @ 7:45 pm.

7-23-09 started day @

6:30 am. Took KC, ET, UM to
S. Marion Co. site. Drally
working. Headed out to our
site. Fire station for H₂O.

Started coring.

98.5-~~103.5~~ 103.5 no recovery

103.5-108.5 added extended
Shoe. f. Couldn't advance
drill rod. pulled ex. shoe
off.

108.5-113.5 gray brown Ls w/
leps. dolomitized.

113.5-118.5 dolomitized gray Ls
3" of recovery.

^{Ken's}
K MES = Modified extended Shoe.

9700 05 1000 1000 52
couldn't retrieve inner barrel. Had to pull NQ and take apart core barrel to get it. bad end on core to inner barrel. Needs to be fixed.

running 5 more feet of 3" to 74'. (75' of 3")

tripped back in NQ and called it a day. clean up site, get H₂O.

Rig hours: 416

ended day @ 6:00 pm

7-24-09 BC, DB

Started day @ 7:00 am.
traded vehicles w/ KC's crew.

Headed out filled tank w/ H₂O and onto site.

118.5-123.5 no recovery. ran regular rock shoe.

123.5-128.5 brn, slightly dolomitic
lep hash. ran MES.

128.5-133.5 brn, ls, lep hash (Fruite)
(KMS) 1' of recovery

This pay
period

Draw: 20 WQTP
IA011

RH 419.7

3:45 pm personal time
drew returned to
whse @ 6:20 pm

53

133.5-138.5 brn, Ls, slightly
(KMS) dolomitic, Lep hash. (Friable)
poor recovery

138.5-143.5 SAA
KMS 4 inches of recovery

#143.5-145.0 plugged off
burned up bit

Tripped out and repaired
core barrel.

Cleaned up site and headed
back to TLT. Drew on
personal time @ 3:45 pm
returned to whse @ 6:30 pm
RH: 419.7

8-4-09 BC, UB, JC

Met @ WH 8 am. Loaded
up headed out @ 10 am.
Stopped in citra to get
water & gas.

Set up

Safety talk

Safety check list

Started tripping back in
NQ and couldn't get

past a bad piece of 3".
pulled NQ. pulled 40'
of 3" until we located
bad spot.

drilled back in ~~3~~ 3".
Started drilling back in
NQ at ~70'.

Storm moved in, cleaned
up site and arrived @
hotel @ 6:10 pm.

Rig hours: 421.7

8-5-09 BC, UC, UB
6:30 am start

Start tripping in rest of NQ.
get back to bottom

145-148.5 tan, cream grainstone
w/ leps.

148.5-153.5 Brn, tan grainstone
w/ leps. Tried to use KMS
but plugged off. Switched to
rock shoe.

153.5-158.5 @ Brn, tan grainstone
w/ brugozoans, molluscs and
Some leps @ top.

Country Inn and Suites
352-237-0715

33.5

55

Lunch → called KC.
* Thunderstorm. Cleaned
up site and headed out
to get H₂O and gas to
make best use of our time
during the storm.
Came back and started
drilling again.

158.5-163.5 Brown, moldic
LS grades into harder
possibly dolomitic LS w/
molds.

163.5-168.5 ~~g~~ brown grainy
LS w/ molluscs + numulites.

168.5-173.5 Brown grainstone
w/ molluscs + numul. Very
~~173.5~~ poorly indurated. 100%
recovery

173.5-178.5 Brn moldic grainstone
w/ benthic forams.

Thunderstorm. Pack + run.
ended day @ 6:10pm.
High hours: 427.1

RH 429
returned to TLH
7:30pm

183-188
188-193

235

①

56

8-10-09 BC, UB, JC

Fam start BC

6³⁰ start UB, JC

H20 to site

178.5 - 183.5 Brown, poorly indurated
grainstone

183.5 - 188.5 - ~~same~~ as Brown,
grainstone, poorly indurated

188.5 - 193.5 Brown, grainstone
grades into bluish, gray,
dolostone @ ~190'. it is ~1.5'
thick. grades back into grainstone.
193.5 - 198.5 grainstone, brown
poorly indurated.

@ 10:30 am Tom greenhough called
JB to direct he and JC
need to return to TLH ~~to~~ tonight
went back to hotel room and
checked out. went back to
site and drilled what we
could before a storm moved
in.

Returned to TLH @ 7:30pm
Righours: 429

Next week:

- 1.) Load more NQ
- 2.) get gas for pump
(cans in 6017 tool box)
- 3.)

57

~~8-12-09 KC, JH to~~
~~N.E. Co. Food, tex. gold site~~
~~SWL~~

8-13-09 KC, JH 7:15 AM
START. LOAD WATER @ Cotva
Fire station then to
OR. CK Rest. then site

198.5 - 203.5' ~ 1.5' reformed -
soft ls., mod ls + carbonate mud
203.5 - ~ 204' sticky calcil. plugged
SP
204 - 206.5' gray bn granular ls
mod ind - poor ind.
206.5 - 208.5' same
208.5 - 213.5' grey + bn mottled
granular/battered ls
213.5 - 218.5' grey ls. v muddy, poor-
good ind.
218.5 - 223.5' gray ls
223.5 - 228.5' bn granular ls/dolo
foss. possibly some organics
228.5 - 233.5' bn + grey ls. poss
organics, fossiliferous
out of water - and coring
for day

Rig hours 435.2
 picked up rods 20'
 inner bbl in in hole
 first 1/2 of rod drilled down

8-14-09 KL, VH. 7:15 AM start.
 load water

- 233.5-238.5 greyish bn, var. granular
 to muddy ls. harden great base
- 238.5-243.5 grey + bn ss ls/dolo
 large echinoid frags, bn moldic
 dolomite mid way (~8") ls
 burrowed, var. moldic
- 243.5-248.5 hard grey-bn ss moldic
 ls, granular, foss. mottled. lots of
 individual grains are grey (org?)
- 248.5-253.5 gy + bn ls/dolo, well ind.
 some poorer ind. zones, some moldic
- 253.5-258.5 busted run - recovered
 ~ 1 1/4' dk bn dolomite - plugged off
 + grnd up soft sed below(?)
- 258.5-263.5 grey + bn mod ind ls,
 foss, var. moldic, last 8" hard
 dk bn dolo.

SODA ASH

59
End coring for day - out of
water 263.5' TO

P.U. rods 20'

Insert $\frac{1}{2}$ of rod drilled down
inner bbl in International

Rig hours 438.7

miles 44368

Retn to TCH 5:45 PM

9/10/09

DTP/CPW

- Clint K drive down dually to retrieve
green trailer & SJRWMD cores &
cuttings
- meet Jeff Davis & Craig to log
site
- trip out NO
- run logs
- secure hole

Rig hrs 439.8

10-19-09 KC, NH leave wfr.

• 9:30 AM to German Grille
pu group, have deposit for fence
stuff - to LE-pold site -
meet LEpolds - express appreciation
repair fence then to

600
orange ck. fuel inth.,
off load granter, pvc etc
arr mobil 2:30pm

10-20-09 KC, Jesse H. 7:45 start
to orange ck. site. prep for granthg

pull 1 bag Quick Grant 250' tremmie
tremmie pulled apart 100' down

to orange per 150' 1" pvc/capline
etc.

run tremmie to btm - pump
4 bags ^{both} CANT get top to go
past ~~1st~~ "original" tremmie

will need fork block to work
in to tag top (~~steel~~ STEEL
strap weighted bag gone to btm

Rig hour 440.5
leave site 3:45pm

11/34 PM on DEP 3673

Δ oil

Δ fuel filter

examine air filter - OK

✓ Power steering - OK

✓ Power brake - OK

- a little low on coolant overflow

mileage 44366 Rig hours 440.8

fd grant @ 242' bws

poured 3 bags fine gravel -

brought it up to 208' bws

pump 1 bag quick grant - brought
grant to 148' bws

end day 6:15 pm

11-5-09 KL, DP 7:15 A start

fd grant at 148' bws

pumped quick grant 2 bags -

second bag started lifting water
from casing

time to pull some csg

pull 25' new csg - top of grant
at 48' bws

wash in bentonite chips to 43.5' bws

242-263'
5 bags quick
grant

208-242'

3 bags quick

grant

148-208'

1 bag

quick grant

0-148'

5 bags

quick grant

pull remainder of NW CS9
pump 3 add bags Quik
grout to surface
5 total today

11 bags quikgrout
3 bags gravel
pack + hydrate bentonite clips at top
Pack up / load up / return to

Atlantic Drilling Supply
800-569-8950

CURVE TABLES

HOW TO USE CURVE TABLES

Table I. contains Tangents and External to a 1° curve. Tan. and Ext. to any other radius may be found nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and External: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table I.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

EXAMPLE

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = 23° 20' to the R. at Station 542 + 72.

Ext. in Tab. I opposite 23° 20' = 120.87
120.87 ÷ 12 = 10.07. Say a 10° Curve.

Tan. in Tab. I opp. 23° 20' = 1183.1
1183.1 ÷ 10 = 118.31.

Correction for A. 23° 20' for a 10° Cur. = 0.16
118.31 + 0.16 = 118.47 = corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. 23° 20' = 23.33° ÷ 10 = 2.3333 = L. C.

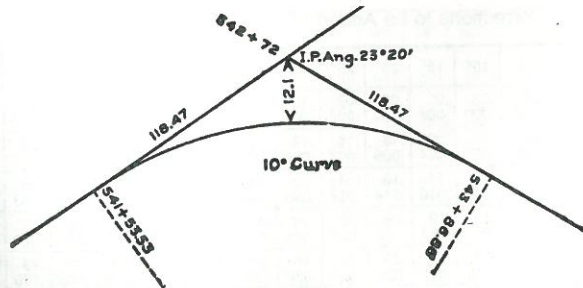
2° 19½' = def. for sta.	542	I. P. = sta.	542 + 72
4° 49½' = " " "	+ 50	Tan. =	1 18.47
7° 19½' = " " "	543	B. C. = sta.	541 + 53.53
9° 49½' = " " "	+ 50	L. C. =	2 33.33
11° 40' = " " "	543 +	E. C. = Sta.	543 + 86.86
	86.86		

100 - 53.53 = 46.47 × 3' (def. for 1 ft. of 10° Cur.) = 139.41' =

2° 19½' = def. for sta. 542.

Def. for 50 ft. = 2° 30' for a 10° Curve.

Def. for 36.86 ft. = 1° 50½' for a 10° Curve.



CME 800-325-8827

Carlos Herd 386.362.1001
386.362.8314

Twin Rivers 386.208.1460

Ken Campbell Hm 850.668.4437
pers. cell 850.545.8125

Brie Coane 850.321-7377

When t
of the rise
distance =

Borehole volumes and yield of portland cement and bentonite grouts

Hole Volume

Diameter	Volume (cubic ft)/10'	Volume (gallons)/10'
3"	.5	3.7
4"	.9	6.7
5"	1.4	10.5
6"	1.9	14.7
7"	2.67	20
8"	3.5	26.1
9"	4.4	33.1
10"	5.5	40.8
11"	6.6	49.4
12"	7.85	58.75

6 gallons of H₂O per bag of bentonite grout

Grout yield (per bag)

Diameter	Portland cement	20% solids bentonite grout
3"	22'/bag	70'/bag
4"	12.2'/bag	38.8'/bag
5"	7.8'/bag	24.7'/bag
6"	5.7	17.7
7"	4.1	13
8"	3.1	10
9"	2.5	7.8
10"	2.0	6.4
11"	1.6	5.3
12"	1.4	4.4

8.5 gal of H₂O + 4 lbs of bentonite and 94 lbs of cement

TRIGONOMETRIC FORMULAE



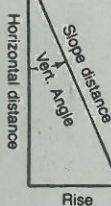
Solution of Right Triangles

For Angle A, $\sin A = \frac{a}{c}$, $\cos A = \frac{b}{c}$, $\tan A = \frac{a}{b}$, $\cot A = \frac{b}{a}$, $\sec A = \frac{c}{a}$, $\csc A = \frac{c}{b}$

Given	Required
a, b	A, B, c
a, c	A, B, b
A, a	B, b, c
A, b	B, a, c
A, c	B, a, b

Solution of Oblique Triangles

Given	Required
A, B, a	b, c, C
A, a, b	B, c, C
a, b, C	A, B, c
a, b, c	A, B, C



Horizontal distance = Slope distance $\times \cos A$
Vertical distance = Slope distance $\times \sin A$
Slope distance = $\frac{\text{Horizontal distance}}{\cos A}$
Slope distance = $\frac{\text{Vertical distance}}{\sin A}$

REDUCTION TO HORIZONTAL

When the rise is known, the horizontal distance is approximately: - the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

