

MOBILE DRILL B31
LOG #27

9/16/15

8/16/16

Forestry Suppliers, Inc.

1-800-847-5368

49354 Level Book

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.



FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

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Printed on Recycled Paper. www.dep.state.fl.us

7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.5	11.7	11.9
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4



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31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4

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

couldn't catch previous fall back.

water run

110-115 112.5 gray sand (cuttings)

lime stone (Avon park ???)

112.5-115 AVON PARK, tan gray brn
L/S

115-120 Avon park, same, drk gray
blk, gray L/S

120-125 Same, tan brn sandy
L/S

125-130 ~~same~~ brn tan avon park,
Lt gray tan brn A.P.

130-135 tan brn avon park w/
drk gray blk phosphates ???

we have had continuous artesian flow

135-140 tan brn gray drk gray blk
avon park

140-145 tan brn avon park w/
organics

145-150 Same brn tan L/S avon park,
Lt gray wht cavity filled lime stone avon
park

150-155 Lt gray wht tan porous

L/S avon park

Rig 4492

155-160 even park
securing well & site
@ hotel 5 pm.

9-17-15 ET & GR met loaded bags
7:30 leaving hotel headed to
secure site & travel to Jolly

9-21-15 ET @ office 9:30
GR & MP 8 am.

loaded trimmie, etc.
Travel to study area
unloaded trimmie back on site
@ hotel 5:20 pm

9-22-15

ET, MP & GR 7:30 headed
to site to abandon well. Trip out via
mixing Baroid 41 to stop flow,
Mixed 6 bags through three
or four attempts. Drilled out 35' ft
3" casing, casing locked inside of
4". Drilled everything to free up
Well pumped out Baroid & dark grout

Doug Keller
Barred

407-790-0205

9-23-15

Rig 4492 a.m. 11:30 a.

Rig 4493
p.m.

We attempted this process a few times. Securing site and attempting again tomorrow

5 p.m.

9-23-15

ET, MP, & CR met @ 7:30 on site talked w/ DTP & BC to get suggestions on dealing w/ artesian flow.

Pumped 250 gallons of Barior 41 (all 3 tanks) through 3" casing & swivel. Pumped 11-batch of Quik-Grout & 45 gals. of water to keep well pressurized. Well leaked from around the 4" casing.

Securing site & keeping well pressurized for 5 hours and coming back this afternoon to check for progress. Back towards site @ 3:55 p.m. on site well is still flowing a little. Measured to bottom of well. Well is @ 82' Ft. BLS. More Barior 41 & one more batch of grout pressurizing over night. Securing site.

9-24-15

GP, MP & GR heading to site
to attempt to stop flow.
grout is 60'-69' inside of
3" casing. 9' run up. (at this point
the well is somewhat slowed
in return. But we have no
choice but to pull drill rods
w/ are sand-locked between
the 3" & 4". 4" casing out
25' ft x 4" casing. / 65' ft of 3" pulled.
45' ft, 3" casing BLS
Pumped Baroid 41, pushed 1 bag
w/ hole plug down thru dry bags
1-cup full of hole plug, and
one more dry bag on top down
to 50' BLS. Worked up head
to 3" casing & pumped one batch
of grout. Rig a.m. 4496 hrs.
Put @ 12:30 to hotel to get
grout seats.

9-25-15

met w/ GR & MP @ truck 8 a.m. / 7:30 a.m.
to site, measured to bottom. Grout
still @ 22' BLS. Packed out
bottom of 3" w/ bags & train 5

hole plug 2-bgs & pushed out
of 3" w/ trimmer. There was
a little of flow from well so
we pumped more Bariad 4)
more hole plug. Two sandbag
quick gel bgs. & pushed out the
bottom of 3" casing. Pulled remaining
casing. 2-bgs. of portland cement,
really thick pumped to the surface
covered well w/ mud tub & rested
the head and a 5' ft. stick of 3"
casing to keep pressure on the
well hoping that everything
cures to plan. Securing the site
& cleaning tools. Heading to Valley

9-28-2015

met w/ M.P. & C.R. @ whse 8:45 a.m.
they were there earlier. Load
after papers work and headed to the
study area. On site @ 4:21 p.m. NO
LEAKS!!! The well is dead... now
we can start the cleanup process. Cleaning
tools, securing site and headed for
lodging.

9-29-15

E.T. Met w/ Co. R. & M.P. 7:30 a.m.,

headed to site on site loading, equip.
hoses, drill rod, pumps etc.

moved mobile rig off of hole. Re set rig
to load grout etc. (pump out)

Headed to lodging. @ hotel 12 noon.

Working on Budson Plan.

• Heading back to site @ 2 p.m.

Loaded, and cleared site.

securing equipment and headed for
lodging. @ hotel 5 p.m.

Rig 4499

9-30-15

Monday Clay & Jennings sites
11-23-15 Nassau County

Eric Thomas & Phil Bombach
headed into the study area to
visit two sites for State Map core.

I-10 to exit 305 to Jennings State Forest

Met w/ Fred Burley of the State
Forestry. Located site under
access points. 2nd site Camp

State Park to meet w/ Conrad
Forestry officer. He showed us

3 separate sites and found good
access. Driving back to Tallahassee.

On to 3K to drop off Expedition
and back @ Wiser @ 5:20 pm.

01-11-2016

ET, MP, KMC, BC mobilizing to
Jennings State Forest W-19561

- 9 a.m. meeting / ~~10:30~~ 11 a.m.
- Hook up cargo trailer to dually
- Fuel up on Polar / Coa. Pkwy.
- Stopped @ Wal-Mart Live Oak
 - water
 - Gatorade
 - Bunting west
- Wrong turn
- Met B.C. on site
- parked vehicles
- Headed to Logging
- end of day 8 p.m.

W-19561

Red Land

phone 904-266-9759

fax? 904-266-9759

Rig 4517 Start 1-12-2016

4518 ending known 1-12-16

JENNINGS STATE FOREST

LAT: N30°10'01.2"

LONG: W081°52'57.4"

Way Point #23, (GPS)

(GPS III Plus) unit

Water T - 3' FT BLS

Jennings State Forest

01-12-2016

MP & ET headed to site

36° outside @ 8 a.m.

on-site - park equipment

• get water

• clear site

• set up tent

• First push as far as possible
hopefully 1st, 10' FT. BLS

0 - 2.5' brn drk brn silty sand, lt gry brn
fine sand

2.5 - 4.25' drk gry brn, lt gry, drk brn
silty sand, water would not allow me
to continue to push sample

Securing site & heading for lodging
@ hotel 6:45 p.m.

1-13-2016

ET & MP headed to site

• Jay to DTP

• on site

• set up for coring

4.25 - 5' drk gry brn silty sand

Rig 4521 end 1-13-16
bullseye
shop towels

St. Johns
Robert Story
386-937-0571

5-10 lt gry sandy clay

10-15 lt gry sand

15-20 lt gry sand ^{hotel}
securing site, heading for ~~the~~
(@ hotel 5:12 p.m.
(31.5 hours worked @ this point)

1-14-2016

ET & MP met @ 8 a.m.
headed to site, full out pumps
& tools. Circulate fluids

20-25 lt gry silty sand

25-30 ~~sand as above~~ same as above
Loss of sample, washed away??

30-35 brn gry silty sand, drk gry clay
last two inches of the run

35-40 wood (pink) clay first inch of
run, gry silty sands

Rig 4526 1-14-2014

repairing throttle on mud pump,
throttle is sticking. Replacing basket in
ex-chal

40'- pumped water out of bore hole @
37.5' BLS, looks like make up water

40'-L going to 2 1/2 ft run to improve
recovery

40-42.5 Lt grey tan silty sand

loss of sample

42.5-45 same as above, loss of sample
Recovery did not improve, trying a 5' ft run.

45-50

If things don't improve we will have to
run casing

45-50 drk grey blk silty clay sands
full recovery (😊)!!!!

50-55 drk grey silty clay sands

55-60 drk grey silty sand w/ clay

60-65 ~~60~~ drk grey sandy clay

65-70 drk grey clay, drk grey clay w/
sand. Email pictures of core

Pulling NQ & running casing

- trip out 70' ft x NQ
- put away tools & pumps
- secure site
- heading for ~~lodge~~ hotel

Rig 4531 / 1-15-16

@ hotel 6:10 p.m.

1/15/16

ET & MP met @ 7 a.m.

headed to site, on site pulling 4" & 3" casing

- rain delay
- open up, samples out to dry
- circulating fluids
- repair pull string on mud pump
- on/off switch on mud pump
- advancing 4"

4" casing @ 46' BLS / 48' string
running 3" casing

3" casing @ 69.5' - 70' ft BLS / 72' string

- closing site
- securing site
- headed to hotel

@ hotel 7:30 p.m.

1-16-16

ET & MP headed to site @ 7 a.m.

- on site

Rig 4535

1-16-16

- * pull out mud pump
- * clear mixing tub
- * reconnect 4" / dropped 7' FT
- * try to repair 6"x6"x4"-T
- * run to Lowes or Home Depot
- * back on site
- * clear out back down to 70' BLS
w/ NQ
- * start coring

4" @ 54' BLS

Run up to 23' FT BLS inside 3"
70 - ~ 73.25' dk grey clay sand,
dk grey clay w/ Phos. "hard"

~~73.25~~ Securing site, headed to hotel
@ hotel 6 p.m.

1-17-2016 My Birthday, 21st MP
met @ 8 a.m. headed to site

on site, tools, repairing pull string
on mud pump. Conditioning fluids

73.25 - 75 Lt grey clay (hard),
dk grey clay (Fuller's Earth ??)
Lt grey rock ??

4541 Rig 1-17-16

75-80 Lt gry grainy lime stone, w/
some clays

80-85 gry lime stone

85-90 Lt gry tan sand, limestone, sand
stone w/ some sands

90-95 gry lime stone w/ clays, drk
gry blue clay, gry rock w/ some
clays

95-100 solo stone, lt gry white clay
loss of sample, it felt hard through-
out but I may have crushed some
going to 2 1/2 ft. seems to get better recovery
~~100'-102.5~~ (water run)

"L.O.C." if get circulation back
100'-102.5 gry white limestone

102.5-~~104~~ 103.75

last foot of run broke through some-
thing. Drill had dropped, last circulation
formation was soft

~~104-105~~

103.75-105 very hard lime stone
Hawthorne?

Securing site, headed to hotel
@ hotel 6:45 p.m.

1-18-16 ET & MP met @ 7
check out, talked to DTP @ 7:30
on site pull NO up inside 3"
load sample, pump, venturi
and secure site to head home.
We are in a good position to
stop now. We may have the
litho needed for the project.
Regardless we need to push
3" casing down to 105' BLS, due
to no returns & having better
hole stability if the SM. crew
wants to go deeper.

- pulled 35' of NO / 30 ~~some~~ water truck
to 73' string
- NO @ 76' BLS inside 3"
- put away all hoses
- all pipe wrenches in dually
- securing site, headed to Tally
back @ 1:45 p.m.

J.S.F.
W-19561

1-25-2016

Rig 4543

Still @ where doing paperwork

1-25-2016 8 a.m. ET, MP

- paperwork
- load mud pump, ball eye grease, Bob's pump
- 5-bgs. Quik-gel, 2-bgs. soda ash
- and tools

Leaving office @ 11:02 a.m.

- go over all site sheet, nothing stolen
- driving to site
- alternate route
- on site, clean tubs - discard, prep site
- securing site

(@ hotel 7:15 p.m.)

1-26-2016 ET, MP met @ 7 a.m.

headed to site, stopped to fuel
car w/ diesel

- mix fluids
- water run
- pull NB
- pull 2' Ft / 3" casing
- add 5' x 3" casing, advance casing to
105' Ft. BLS

(Casing)

105' - w 10000 sample took 20 mins.
to cut, then it got softer!

1-26-2015

Rig 4548

so we pulled the sample
105-106.00 dolomite

106-110 Lt gry tan lime stone
mud color changed to a light tan
almost milky color

Securing the site & heading to
110 - hotel. @ hotel 7:15 pm.

01-27-2016

ET & MP met @ 7:30

• headed to site

• set up pumps, pull tools out)

• coring

(water @ 7' BLS inside HQ)

110-115 Lt gry limestone, w/lt limestone
w/ Phos.

115-120 Lt gry tan mud stone w/ Phos.
salt @ the bottom, lost some in retrieval

120-122.5 gry mud stone w/ Phos
and sands Hawthorne ? 3' of sample

122.5-125 Same as above

125-130 Same as above/Hawthorne

1-27-2016

Rig 4554

130 - 135 Same as above

135 - 140 Hawthorne

140 - 145 Same as above

145 - ~~148.75~~ Same as above, hard limestone (dolostone)

N148.75 - 150 Lt grey tan limestone w/ Phos.

150 - 155 grey Lt grey limestone, last 2' ft. grey mud stone w/ Phos. Hawthorne ??

securing site, headed to hotel
@ hotel 6:15 p.m.

01-28-2016

ET & MP met @ 7 a.m. headed to site. P/U 10 gallons of non-Eth.

- onsite
- open up
- coring

5 gals. Hydraulic
fluid

1-28-2016

Rig 455C

(water 9.25' BLS)

Rain delay

155-160 Same as above

160-165 Same as above

165-170 Same as above, rain delay

- Hydraulic fluid is low
- Calling DTP for the day to
bring more, so from DT it should
be fine
- securing site
- 2pm @ hotel, rain out

1-29-2016

ET & MP met @ 7 a.m. headed to
site. • pull tooling out, pump,
condition fluids. called DTP, left mess.
• coring

170-175 lt gry mudstone w/ Phos.

175-180 same as above

180-185 same as above, lt gry harder
material w/ Phos.

185-190 dk gry blue clay sand

1-29-2016

Rig 4562

190-195 drk gry clay sand w/
Phos.

195-200 sand as above
(water run)

200-205 same as above not as
hard w/ more sands, less clays

205-210 same as above felt like some-
thing fell back when I retrieved sample

210-215 drk gry clay sand w/ Phos.

- securing site
- heading for hotel
- @ hotel 5:30 p.m.

1-30-2016

ST & MP met @ 7 a.m.

- headed to site
- pull out pumps, sampler, tools
- condition fluids
- coring

215-220 drk gry clay sand w/ Phos.
old mud is starting to get heavy, turned off mix new

220-225 gry brn ~~fine sand~~ w/ ~~clay~~
Phos.

Rig 4568

Block s
water
hand towels
Boxes
Mud pump

225-230 drk gry lt gry brn limestone
w/ fossils & Phos. (Ocala) ???

230-235 drk gry lt gry brn limestone
w/ some clays, some sands & fossils
(Ocala) ???

235-240 drk gry limestone w/ Phos. &
fossils, white lt gry lime stone w/
phos. (Ocala) ???

240-245 ~~drk~~ lt gry white l/s w-
Phos, drk gry sand stone w/ Phos,
drk gry clay sand w/ Phos

245-250 drk gry blk grn clay sand
w/ Phos.

250-255 drk gry green clay
• securing site
• heading to hotel
@ hotel 6 p.m.

1-30-2016
PT & MP met @ 7 a.m. headed to
site • pull drilling, pumps

Rig 4572

Coring

- pulled 20' FT x 5' - NQ out
- replace w/ 2-10' 20' FT x NQ
- Coring 255' - 257.5' core fell out upon retrieval, tried plumbing it out no luck, continuing the rest of the run. Hoping to capture it all.

255 - 260 - drk gry green clay (Fuller's Earth ??)

260 - 265 - sample took 30 (plus) mins. to cut. / drk gry green clay

- Trip out 165' FT. x NQ, pulled up inside 3" casing @ 105' FT. BLS

• securing site to be gone for 6 days pumps, hoses, tools, etc.

• heading to hotel

• @ hotel 6 p.m.

2-01-2016

ET & me met @ 7 a.m. checkout of hotel, driving to

Rig 2-08-16
4572

Seminole Co. / Lake Jesup. To
check site for well back.
Site looks good. Driving to
Tally. In Tally @ 3:45 pm.
Rebox samples @ whse.
off @ 5:07

2-08-2016

ET & MP leaving whse @ 11:15 a.m.

Heading to Jennings State Forest

- arrive 2:45 p.m.
- check equipment for tampering or theft (everything is here)
- level rig
- check water table 4.5' BLS
- measure to bottom of hole
- Blockage @ 182' BLS
- unload materials & product
- secure site, heading to hotel
@ hotel 5 pm

2-09-2016

ET & MP met @ 7 a.m. headed to site,
windy day temp. in the low 30's
Open up site, set up equipment.

2-9-16

Rig 4578

Conditioning fluids, ream hole back
to 265 BCS

• added 5 gal. hydraulic fluid

• trip in 160' ft of NA

• clear & condition bore hole

(@ 265' BLS / string; 268' of NA

• Coring

265 - 270 drk gry clay w/ phos.

270 - 275 ~~some~~ drk gry clay w/ phos.,
gry & gry rock fragments w/ clays

275 - 280 drk gry clay w/ sands &
phos., tan blk gry limestone (local)

280 - pumping fresh mud down hole
to secure hole til tomorrow

• email pictures

• pull mobile rig

• secure site, pump & drain &

put in cargo trailer to avoid freeze

• heading to hotel

• @ hotel 6:45 p.m.

2-10-16

Log 4583

Left site to meet J.H.

2-10-2016

ET & mp met @ 7am. headed to site. open up starting to core defect

280-285 sample well back, tried twice to go back and retrieve, no luck making a 1 foot run to get it 285-286

280-285 g/g sand line 5.5

~~285-286~~

trouble pulling inner lpl., called DTPC met J.H. @ exit 283, head back to pick up overshot tool. Back to site and ~~core~~ pulled core 280-285
285-290 dirt gray clay w/ Phos.
secured site, drained all pumps
head to hotel
in hotel 7:45 pm

2-11-2016

Met w. MP @ 7:30 a.m. headed to site. on site, open up, pull out pumps. Recondition fluids starting to core. ~~7:45 pm~~

Swatting to ex-shoe, to catch
a full run.

290 - 295 ~ 292.50 run got hard to
finish so we stopped and are pulling
the sample to go back to a rock
shoe to finish the run. - dk grey
green sand w/ clays

~ 292.50 - 295 kept ex-shoe on because
the last sample was very sandy, but
ex-shoe on allowed me to cut 30"
so we will pull sample and finish
the run w/ a rock shoe -

~ 292.50 - 292.75 sand w/ phos.

292.75 - 295 lost most of the 5' ft.
run, soft stuff got washed away,
we may be in the penny farms
formation

295 - 300 grey dk grey dol. - w/ clays
& sand

300 - 305 noticed fresh looking water $\frac{1}{4}$
way through the run, got some sample
dropped some sample back, attempted
to go back and get it, it keeps
puling back, it'll run 2 1/2 feet 27

2-11-2016
Rig 4588

to see if we can get it in
the next run 300-305 ?- dk gry
Hae clay w/sand
305-307.5 dk gry clay

307.5 - 310 dk gry clay w/sands

310 - 315 dk gry blk clay; 314.75'-
315' lt gry dk gry wht. limestone
this is a good stopping point for today

- securing site
- heading to hotel
- @ hotel 6:30 pm

02/12/2016

871 AM met @ 7:30 a.m.

- Load luggage
- check out
- headed to site
- water run
- coring

315 - 320 blk gry clay; tan wht lime
stone; gry clay w/ dk gry rock

2-12-16
Rig 4590

2-19-2016

Water 6' $7\frac{1}{2}$ "
6' $7\frac{1}{2}$ "

320 - 325 drk gry rock, drk gry
slay

- * securing site, putting away all
tools, pumps hoses
- * load samples
- * heading to Dallas area
@ whse. 4:45 p.m.

02-19-2016

ET, MP & D. Phelps, scheduled to
head to site and log J.S.F. well
(gamma) Filled out travel paperwork
Loaded green trailer w/ Brouter,
quik-groet and Subsea vibro
mud pump. Pulled trailer w/
the passenger van from 3rd.
* onsite, unload equipment,
mix drilling fluids, recondition well,
run logging equipment.

Rig 4591
Back in Valley @ 7:30 p.m.
out gate @ 7:30 p.m.

2-22-16

Rig 4595

ET & MP met @ 8 a.m. / whse
Went to pickup DEP 4894 from
Shive, Diesel. Truck was not ready.
Back @ Whse. Helping G.R. hang
door onto the Schramm cargo
trailer. Headed to site @ 11:20 a.m.
on site @ 3:30 p.m. / Check
site for vandalism. Securing
it & heading to the hotel.
@ hotel 5:30 p.m.

2-23-16

ET & MP met @ 7 a.m. - 8:05
• Walmart to pickup - water & Caterade
• onto site
• trip out 320' Et x NQ
• trip in 320' Et of trimmie
• mix 1-bq. of Quik-grout
• clog in trimmie
• pumped off rest of grout
• pulled 320' Et of trimmie
• cleaned trimmie of grout, all
320' ft.
• secured site, headed to hotel
• @ hotel 8:05 p.m.

2-24-16

ET met w/ MP @ 7:30 a.m.

Discussed plan of attack for today as we waited for the storm to pass.

Threatening weather, Tornado warning for the Baldwin Jacksonville area. Until 10 a.m. w/ Hail force winds.

There is a break in the weather now its east of us.

- Heading to site

- On site

- attempting to grab

- Trimmie down to 200' Ft.

pumped 2 bgs., measured & pulled 80', measured again
grout @ 137' BLS pulled
an additional 10 ft. of trimmie.

Now pumping one more batch of grout.

- measured - grout @ = ~~80~~ 80 Ft.

- pulling 3 "

- measure - grout @ = ~~40~~ 42 Ft.

- pulling 4 " casing

- measure - grout @ = 10'

2-24-2016

4600

Dust Masks

Leg for Tent

2-25-2016

4601

- Securing site
- headed to hotel
- @ hotel 8:05 p.m.

02-25-2016

7:30 a.m. ET & MS met checked out. Insite pulled 15' Ft. 4" casing measured - grant @ 12' Ft. BLS.

1 1/2 bgs. hole plug.

- cleaned site
- loaded drill rods & casing
- secured site
- headed to Ponte Vedra @ 1:17 p.m.
- @ Ponte Vedra 2:30 p.m.
- Leaving Ponte Vedra @ 3 p.m.
- head to Tallahassee
- @ whse = 7:05 p.m.

off compound @ =

✓ Dust mask
✓ Soda Ash

Guana River Wildlife
Management Area

N 30° 05' 09.3"

W ~~001°~~

W 081° 20' 58.4"

CPS #1 #024 way point

W - 19570

3-07-2016

MP & ET met @ wheel

ET in @ 9 a.m.

MP in @ 7:55 a.m.

- check email
- complete travel paperwork
- load misc. materials
- Drop award paper work off to Rick C.

Leaving to pick up Soda Ash from Gorman's Co.

- back to office to sign and turn in Cornell receipt
- Leaving dally @ 11:50 a.m.
- Headed to site
- Mobilize to Guana Wildlife Management Area
- head for lodging
- @ hotel 8 p.m.

3-08-2016

ET & MP met @ 7 a.m., headed to Cennings State Forest to move mobile rig to Guana River W.M.A. on site & set up

picked up 5-bys. Soda as
German-Tallahassee
Rig 4609

pushing the 1st - 10'

0-2.5 dk brn gry sand

2.5-5 brn tan sand

5-7.5 same as above

7.5-10 tan lt gry org sand, some fill
back, will collect upon coring
Securing site, headed to hotel
@ hotel 7:30 p.m.

3-09-2016

ET & MP 7 a.m. discussed today's
plan of attack & headed to site
• onsite, mixing fluids & set up
for coring. Coring beg 1:30 p.m.

~~8.5-10~~ 8.5-10 no luck box stay
the same

10-12.5 lost some - lt gry tan wht
sand

12.5-15 same

~~Pushing 10' @ 10:00~~

Slide is leaking
Hydro. fluid

water 4' 7"

it was difficult dealing
w/ the sands and
salt water, Quik-Tren
didn't help much
so we are adding NO SAG
to our fluids.

15.0 - 17.5 tan brn sand

17.5 - 20 same as above

20 - 25 gray tan sand w/ some
shell

- securing site
- heading to hotel
- @ hotel 6:30 p.m.

3/10/2016

ET & MP met @ 7 a.m.

- headed to site
- set up for the day, run 3" & 4" to
25' FT BLS / (4" x 25' string -
3" x 25' string = 4" - 25' BLS
3" - 25' BLS)
NA x 25' & 25' FT BLS, coring

25' - 30' drk gray sand w/ shell,
drk gray blk clay

30' - 35' drk gray blk clay w/ shell

35 - 40 Same as above

3-10-16
Rig 4612

- Carter Pigs
- Box 0' Rags
- Mobile Rig PM

• Securing site, headed for hotel
@ hotel 7 p.m.

3-11-2016

ET & MP met @ 6:45 a.m.

• on site

• drill last 10' FT to 50' FT. BLS

•

40-45 Same as above ^{upheld} of grey
dark grey sand w/ shell

45-50 Same as above

Taking off ram, on the slide-bo-
matic

pull WD to re-attach 3'
Casing

• 3" casing @ 50' BLS / 52'-string

• pulling hydro. ram

• Secure site

• load up to trailers & govt

• head to Tallahassee

• back @ WHP, 4:25 p.m.

• off compound @ 5:20 p.m.

3-21-2016
Rig 4615

Sunday 3-20-2016

ET & MP met @ 3:40 p.m.
load and head to study
area. Leaving Dallassee @ 4:40 p.m.
@ hotel 8:30 p.m.

Dually wouldn't start, tightened
battery cables. The truck started
and I noticed that the alternator
pulley is bent. Will call DTP in
the morning.

3/21/2016

ET & MP met @ 7 a.m., checking
dually for more repairs. It seems
that the alternator is the only
issue now. Emailed DTP and
awaiting a call. DTP called
a minority vendor (Evans Auto)
They repaired alternator and we
were headed to site @ 1:40 p.m.

On site unloading supplies, performing
PM on mobile rig, change oil & oil
filters. No ~~fuel~~ fuel for fuel filters
so we will change fuel filter
on 3-22-2016. Securing site
& heading to hotel. @ hotel → 37

3-22/16

King 4620

@ hotel 7pm

3-22-2016

~~3-28-2016~~

ET & MP met @ 7am.

Headed to drill site.

on site change fuel filters, talked
w/ RTP, set up to core. mix drill-
ing fluids etc., No water table,
run up @ 25' BLS inside 3" casing.
Clearing out to 50' BLS & resume
coring.

50' - 52.5' drk grey clay sand w/
shell w/ Rhos.

52.5 - 55' drk grey clay w/ shell,
tan brn sand w/ shell

55' - ~55.25' "REFUSEAL" w/ jax-stoe
sample. sand and shell

~55.25 - 60' drk grey tan clay sands
w/ shell

60 - 65' Same as above, mud stone?

3-23-2016
Rig 4625

65'-70' gray tan limestone w/
Phos., gray clay w/ Phos.

70'-75' dk gray clay w/ Phos.
Securing site & heading to hotel.
@ hotel 6 p.m.

3-23-2016

ST & MP met @ 8 a.m.
loaded to site.
• on site coring

75'-80' gray green hawthorne

80'-85' dk gray green clay, w/
Some Phos.

85'-90' dk gray green clay

pumped sample out w/ aux. hose

90'-95' Same as above, lt gray clay
w/ cemented mud stone

95'-100' dk gray lt gray mud stone

100'-105' bailing the sample out -
retrieved 1 ft., ran back to bottom

inner BBL locked in, sand locked
pulling drill string. NA x 100' +
8' core bbl, Inner bbl locked
between 10' FT NA rod & outer bbl
outer bbl fell to bottom of
hole. Going back in to get
outer BBL. NA x 100' to bottom
to retrieve outer BBL.

We got lucky & pulled all NA &
outer bbl to surface. - lt grey
clay w/ shell, shell

- securing site
- headed to hotel

@ hotel 7:35 p.m.

3-24-2016

MP ready @ 7 a.m., ET ready @ 7:30
a.m. headed to site

on site, water @ 6' ft.

open hole to ~ 99' BLS

- cleaning lower hole down to 105' BLS
and continuing to core

105-110 sand w/ shell, lost a lot

5-bgs. Quik-Gel

3-24-2016
Rig H632

110 - 112.75 ^{sand} gry clay w/ sand & shell

112.75 - 115 gry green clay w/ shell
bailing 2nd half of sample

~~115 - 120~~

115 - 120 something is still inside the
drill string and keeps trying to plug us
off, pulled inner bbl, flushed hole
now sampling. (cuts like clay)
dtk gry clay w/ some shell

120 - 125 dtk gry clay, sandy
clay

125 - 130 sandy clay
securing site for the week
@ hotel - 6 p.m.

3-25-2016

gt $\frac{1}{2}$ MP met @ 7 am.

- park
- checkout
- headed to Tally
- in Tally @

4-3-2016

MP @ office 4:45 pm

ET @ office 5:05 pm

driving to study area

@ hotel 10:30 p.m.

4-4-2016

water 7.05' BT BG

ET & MP met @

met @ 8 a.m. headed to site, open
up. Mixing drilling fluids.

At some point we need to
run 3" casing down to 105' BLS

but before we do that I want
to make at least 10 to 20 ft.

before we run 3" & 4" just to
see if we can get into some
limestone. Measured to bottom, open
to 130' ft. BLS. / into like clay

130' - sample fell back, put on
ex-shove and re-coring 135' - drk
gray clay / lost some while re-coring

135' - 140' drk gray clay, drk gray clay
w/ quartz sands

Rig 2/ 2/ 16
4635

140 - ~~145~~ 141.25 dk grey sand/
quartz w/ some clay
141.25 - 142.25 same as above

142.25 - 145 dk grey clay w/ quartz
sands

Securing site

off @ 5:30 p.m.

4-5-16 (winter @ 7' BLS)

ET & MP met @ 8 a.m.

- p/u winter & gatorade
- to site

conditioning fluids & bore hole

145 - 149.5 grey dk grey clay w/
quartz sand / dk grey blk sand, grey
sand

N 149.5 - ~~150~~ 149.6 mud stone w/
ex-shoe, back w/ ex-shoe wouldn't cut

149.6 - 150' lime stone, cut w/
rock shoe, back w/ rock shoe

150 - 155 sample fell out, w/ rock
shoe, back w/ ex-shoe, bailed
twice, recutting run w/ ex-shoe
we are in clay again. recording

now →

4-5-16
Rig 4640

Recovering run w/ ex-shoe
150-155 drk gry clay / I may have
crushed some sample while recovering
155-160 drk gry clay, cut slowly
w/ ex-shoe
160-165 cut w/ ex-shoe, drk gry
clay
~~165~~
165-170 drk gry clay / ex-shoe
170-175 same as above / ex-shoe
• securing site
• headed to hotel
• @ hotel 8 p.m.

4/6/16
5:00 p.m. met @ 7:30 a.m.
headed to site & fuel for
mobile rig.
Running 3" casing from 50' Ft
BLS to 105' Ft BLS
3" & 4" casing sand locked
allowing 3" & 4" pass
10' - 3" I add 10' 4" maybe it
will work ??
IT WORKED!!!! →

Rig 4645

- pipe clamp repair
- order 1 pipe clamp

4" casing @ 39.5' / string 42'
3" casing @ 76.5' / string 79'
3" needs to go to 170' BLS
next trip

Securing site
@ hotel 6:45 p.m.

4-07-16

ET & MP met @ 7:30 a.m.
pack up, head to Dally for
awards ceremony

12:03 p.m. @ office

4-25-16

MP @ office 8 a.m. E.T. in @
9:30 a.m. Trucks w/ shelving
in the driveway. Blocking egress.
Leaving Dally @ 11 a.m., onsite @
3 p.m. Condition bore hole, equip
ment check etc. Securing site
@ hotel 5 p.m.

3" @ 110' FT BLS
4" @ 41.5
NG inside of 3" clean,
cleaning bore hole
from 110' - to 175' BLS
to restart coring

Rig 4650

4/26/16
ET & MP met @ 7 a.m.
headed to site, extending 3" (adding
casing) casing to 110' FT. BLS from
46.5' FT. BLS, cleaned hole to
115' BLS. Securing site & head
to hotel. @ hotel 7 p.m.

4/27/16
ET & MP met @ 8 a.m.
on site continuing to clean
bore hole. @ 175' BLS, trying
to move inner bbl. down, still
wedged in drill rods, bang to bottom
m. Run a 2 1/2' FT run to see if
we are clear to the bottom of
the drill rods. got sample 1'

175 - 178.5 mud stone, clay grey
clay

178.5 - 180 Same as above

181 - 185 Same as above

185 - 190 Same

Rig 4656

190 - 195 drk gray clay

195 - 200 same as above

Securing site & heading to hotel
@ hotel: 6:47 pm.

4-28-66

ET & MP met @ 6 a.m. headed
to site, on site getting started

200 - 205 gray clay

205 - 210 same as above

210 - 215 gray clay

215 - 220 gray clay, ^{w/ Phos.} drk gray blk
clay w- Phos.

220 - ~ 220.75 drk gray clay w/ Phos
changing color from ex - to rock sh.
~~220.75 - drk gray clay - clay w/ Phos.~~

220.75 - 225 lime stone w/ wh. & clays, big Phos.

225-230 grgy sandy clay w/ Phos.
lost some back, tried hauling it out
no luck. making a 2 1/2' run

From 230 to 232.5 to see if
we can catch last run. Fall
back. (no luck) did not get it
back

230-232.5 dk grgy brn blk sandy
clay

232.5-235 dk grey clay lost most
of sample or crushed it IDK ???

235-240 dk grey clay/loss of
sample

240-242.5 hard to cut, switched
to rock shoe. little sample

We may have to pull all OR & check
the spacing of inner bbl & core bbl
after the next 2.5' run.

242.5-245 grey clay little
sample. We are pulling the
NO next trip out in the field.
lts 6pm now. Securing site.

Rig 4-28-16
4665

11:40 a.m. leave
5-9-16

Loading samples & heading to
the hotel.

@ hotel - 9pm

4-29-16

2T & mp met @ 7:30 a.m. loaded
to head home. Made it to Madison
County, got a call from DTP - well is
flowing. Turned around & headed to
site to kill the well. Onsite @
1:31 p.m. Nothing to stop it w/ but
4" casing.

6:30 pm

5-09-16 matt 3am

Met @ office 9 a.m. section meeting
after: travel paperwork, leaving
office @ 11:40 a.m.

in St. Augustine @ 4:30 p.m.

Pick up Period 41 tomorrow
morning. We would not have
made it to Orlando on
time before hole, Products
closed.

5-10-16
fig 4668

36" pipe wrench
need work
(pin)

5-10-2016
ET & MP met @ 6 a.m. headed to
Orlando to p/u Baroid #41
headed to site, @ site 12:01 pm
open up (set up)
pulled 5' ft x 4" casing, having
a little flour.
measured to bottom, drill
rods clear
- pulling 248X NQ out
- bottom foot of clogged w/ clay
- lengthen 8' bottom inner bbl.
- un load Baroid 41
- secure site, cap well
- heading to hotel.
(@ hotel 7pm)

NO SAC &
5-11-2016 added suit-TD 6012 LV
ET & MP met @ 6 a.m., headed to site
on site, set up & install 248' ft x NQ
NQ 5' ft off of bottom, flush hole
and wait for clean mud to return,
pulled inner bbl. 3/4' ft. sample - 245'
BLS

Changed to ex-shoe, coring the
first 2.5' to 247.50' Ft. BLS

245 - 247.50 245.25' too hard to
cut w/ ex-shoe, pulling sample and
running back in w/ rock shoe
something soft @ ~~247.25~~ 247.50
back into something hard @
~ 247.75' BLS

245 - 245.25 dot gray hard clay
very hard

245.25 - ~~248~~ ~ 248.75 clay, dot
gray blk sandy clay, sample stuck
in inner bbl., tried pumping,
pushing, heating tube. Nothing
worked. Changing bbls.
& continuing to core / sample inside
inner bbl.

248.75 - 250 sample fell back
may have it in previous run
inner bbl. was full on last
run - blk sandy clay / rock shoe

250 - ~~250~~ ~ 251 blk sand w/ clay /
ex-shoe

5-11-16
Rig 4677

251 - 255 drk gry blk clay, hard
lost or crushed softer sediment
on the bottom of the run / rock shoe

255 - 257.50
257.50 drk gry blk sandy
clay w/ silt / ex-shoe

257.50 - 260 drk gry blk silty
clay sand / ex-shoe

260 - 265 drk gry blk clay, drk gry
blk silty sandy clay

265 - 267.75 run got hard, having
to switch to rock shoe.

Securing site to head to hotel,
its been a long hot day.

pulling sample. / drk gry clay

@ hotel 7:30 p.m.

5-12-2016

ET & MP met @ 7 a.m., headed
to site. On site getting started

Rig 4682

267.75 - 270 grey tan limestone

270 - 275 lt grey drk grey clay
pumped sample out w/ aux. hose
275 - added 15 gal. to Mobile Rig

275 - 279.25 drk grey clay w/ rock
phos.

279.25 - 280 drk grey LS
Had to break off to meet
~~280~~ S.I.R.W.M.D. to p/u
samples for Bri

280 - ~ 281 hard dolomitized
rock drk grey blk w/ phos
Bit isn't cutting well, we both
are tired.

Securing site, and coming
back tomorrow to pull JPO
and take both core bbls. & inner
bbls. back for repair.
@ hotel @ 3:30 p.m.

Primary: 463
FS 090

Secondary: MMRB

5-13-16

Rig
4623

Rig
5-23-2016
4685

5-13-16

ET & MP met @ 6:30 a.m.
pack truck, check out of hotel &
head to site. On site to bag
and finish run, spinning
for an hour. @ 6" to 7"
of sample

~281 - ~281.5 g/y hard
rock, penny-farmer??
securing site & heading home
@ office 3:06 p.m.

5-23-2016

MP - 8 a.m.
ET - 8:15 a.m.
MP & ET met @ where
load and head to G.N.M.A. leave @ 10:40
on site. 3:20 p.m.

unload materials, house keeping
secured site. Head to hotel
@ hotel 6 p.m.

5-24-2016

ET & MP met @ 6 a.m., heading to
site. on site pulling NQ x 281' out
replace core bit w/ series 2" coring bit.
install NQ x 281' and start to core.
Hopefully Series 2 coring bit speeds things 54

Rig
5-24-2016
#1693

NO WATER TABLE
ARTESIAN FLOW

up a little & cuts better.

~281.50 - 285 same as above,
Penny farms, tan brn L/s w-Quartz
& heavy Phos.

285 - 290 brn tan mudstone ??
w/ Phos.; brn tan clay

290 - 295 camo mudstone, same
w/ more clay, L/s camo colored w/
Phos. / Penny farms

295 - 300 lt gray wht chalky L/s @
295.5 "OCALA LIMESTONE" (i)
- ARTESIAN PRESSURE - (i)

300 - 305 OCALA LIMESTONE
- STRONG ARTESIAN -

305 - 310 OCALA LIMESTONE
Securing site

@ hotel 6:30 p.m.
(5-25-16)

ET & MP met @ 7:30
15 gals. Fuel

- CORING

310 - 315 OCALA

5-25-16

Rig

4698

5-26-16

A.M. 4702

P.M.

315-320 Ocala

320-325 Same as above

DAVE & PHIL COBBING WELL

- GAMMA, ET & MP, PULLED NO X 322'
- CALIPER DIDN'T WORK

SECURING SITE

HEADING TO HOTEL

@ HOTEL 6:15 PM

5-26-2016

ET & MP met @ 7am.

- ~~Town~~ to P/U PORTLAND CEMENT

- HOME DEPOT 6-Bags.

ON SITE MIXED 4-bags Baried 41
w/ 125 gals. drilling fluid.

- Hook up to 3" casing, pumped
under pressure.

- 28 gals. water w/ Quik-gel
& portland cement 1-bg.
pumped.

- measured to 112' inside bore hole
cap and return @ 6 p.m. today
off from 4-5 pm, headed back to
site. Stopped @ Home Depot for

5-27-16

4785

PVC glue.

on site @ 6:05 measured to
87' FT. BLS, pulled 115' FT x 3"
casing, measured to 87' FT. BLS
capped 4" casing & secured site.
headed to hotel.

@ hotel 9:15 pm

5-27-16

ET & MP met @ 7 am. Check out
of hotel, head to site

• measure to 87' BLS

• Grout through 4" up to 52'
BLS

• Grout through 4" on 2nd batch
up to 11' BLS, 1'

• Pull 4" casing x 43'

• Pump 2nd batch to surface

• clean site

• secure site

• head home

• @ office 4 pm

Rig 4707
needs:
Replace 3 tires on
cargo trailer

6-02-2016

ET & MP met @ 7:30 a.m.

- Paperwork
- 3-K to confirm Matt's travel w/ Sarah Erb
- leaving Tally @ 9:15 a.m.
- on site loading, drill rod, cleaning site
- rig must down & ready to roll
- securing site & headed to hotel
- @ hotel 6:30 p.m.

6-03-16

7am ET & MP met checkout

- replace trailer tire
- 3 - bad tires / wait til next trip and replace all 3 (DTP)
- headed to Tally 2:45 p.m.
- off @ 5:30 p.m.

FORBESS / WALKER PARCEL
Panther Pt.

N $30^{\circ}19'49.2''$
W $081^{\circ}54'28.6''$
W-19587

6-27-2016

ET & MP met, checked fluids
& oil in Sep. 4824 & DEP. 21656
9:30 a.m. leave time

- Drive to site, park mobile rig on site.
- Drive Buena Vista to pick up cargo trailer, the green trailer & DEP 1017
- Cargo trailer to tire shop
- Getting late / 6:20 p.m.
- Drive to hotel
off @ 7:20 p.m.

6-28-2016

- ET & MP met @ 7 a.m.
- called Jives Plus to have them wait for comp.
- Calling DTP @ 8 a.m.
- Drive to site & start drilling

0'-2.5 drk gray blk silty sand

2.5-5 drk gray blk silty sand, tan
brn silty sand

5-7 same as above

Rig 6-28-16

4718

(NEXT TRIP)

✓ BOXES

SUN BLOCK

AAA-BATTERIES

WHEEL FOR WHEEL BBL.

SAW HORSES

✓ TENT SUPPLIES

✓ BOX-O-RAGS

✓ WATER DIVERTER

hole collapsed @ 26" BLS

Set-up to core drill.

Storm clouds approaching
securing site. Head to hotel
& filling water truck.

@ hotel 5:30 p.m. Truck full @
= 6 p.m.

6-29-2016

ST & MP met @ 6 a.m.

• onto site

• set up coring equip.

• lengthen inner bbl.

7-10 drk grey blk brn very silty
sand

10-12.5 drk brn silty sand

12.5-15 Same as above

15-17.5 tan brn sand

17.5-20

Bad recovery

20-22.5

Bad recovery

Rig 6-29-16
4923

22.5-25

• Recovery didn't pick up, even we tried to make 2 1/2' ft. runs from the start to get good recovery & it did not help the situation so we are now running 3" casing to help w/ hole stability & recovery.

• Running 3" casing x 27' ft. string 25' ft. BLS.

• Rain delay

• Finishing 3" casing

• Pulled 4" to run tomorrow

• securing site & heading to hotel @ hotel 6 pm / Thunder storms

6-30-2016

ET & MP met @ 7 a.m.

• on site, running 4" x 27' ft. string - 25' ft. BLS

• hole open to 22' BLS, ran NQ x 28' clean put to 25' BLS.

• Coring

25' - 27.5" gray brown silty sand

Rig 6-30-16
4727

27.5-30 same / ^{gray} tan brn silty sand
Rick, Bri, Phil on site
30-32.5 Same as above

Thunderstorms, secured site
@ hotel
4:30 off

7-01-2016

ET & MP met @ 7am.

- on site
- conditioning mud
- set up, hoses, pumps etc.

32.5-35 lt gray brn tan silty
sand (soup)

35-37.5 Same

37.5-40 Brn drk gray silty sand

Reg 7-01-2016
4730

7-11-16
4731

40-42.5 drlc gcy silty sand

42.5-45 same as above

Recovery isn't picking up, we
are going to extend 3" casing
• 3" @ 45' to BLS

• securing site

• waded to Tally
in Tally @ 4pm

7-11-16

ET & MP met @ 8am. where

• 8:30 a.m. meeting

• load to leave

• Leaving Tally @ 9:53 a.m.

• on site @ 1 p.m.

• put up tent

• go get water (make up water)

• push 3" to 43'

• lower NR; set up to drill in
the morning

• securing site

• @ hotel 6 p.m.

7-12-16

4735

7-12-16

- ET & MT met @ 6 a.m.
- onsite set up, condition fluids
 - Lower NG & 45' BLS
 - clean & condition bore hole
 - coring

45 - 47.5 tan brown sand w/ clay

47.5 - 50 grey tan sand

- sand locked w/ NG & 3" casing
- Working on freeing up a couple of hours before. Thunderstorms

5:30 PM - securing site.

More thunderstorms this evening.

@ hotel 6:05 p.m.

7-13-16

ET & MT met @ 7 a.m.

- onsite pulling NG & 3" casing
- 3" & NG out, losing core bbl
- & 3" bit

Running 4" down 28' BLS to 50' BLS
no circulation throughout advancing.
The formation is not allowing fluids

Rig 7-13-16
4743

to return to the surface.

Stopping @ 33' FT BLS (4")

Advancing 3" casing down to 50' BLS
3" casing set @ or by 4:15 p.m.

Lowering NB to 50' BLS to continue
to core.

50'-52.5 drk gray tan silty sand

Last. First & last run of the day.

Today like yesterday the temp. was
in the 100's, it's about 6:30 pm now
and we are going to call it a day.

Securing site & headed to the
hotel.

@ hotel 7pm.

7-14-16

ET & MP met @ 7:30 a.m.

Headed to Jacksonville to pick up
6" PVC to replace old drill
neck. On site, replace 6" drill
neck.

Logging

52.5-55 Sandlocked w/ 3" & NB
again, sand ran up over night and
locked inner bbl. inside core bbl.
also 3" & NB locked

7-14-16

4746

- + - storms -

- 1/2 hour lunch

Pulled 58' Ft x ND
3" dropped to 56' Ft BLS
added 10' x 3" picked up string, take off 10'
break off 2' ~~ND~~ Ft. x 3"
add 5' 3' x ND = 8', put 3" back
down to 56' Ft BLS.

clear out ~~ND~~ core bbl & inner bbl
& try to pump out sample to
56' Ft. BLS & continue to core
Securing site @ 7:30 PM -
@ hotel 8:05 PM.

7-15-16

ET & MP met @ 6:30 a.m.

check out of hotel, head to site

on site pull hoses & pumps out
set up start coring

water: NO TABLE

3" casing @ 56', sand inside 3" @
40' = 10' Ft. of run-up.

cleaning out 3" to start coring

52.5-55 grgy tan silty sand

55-60 grgy tan silty sand
w/ some clay

66

08/310

7-15-16
~~4751~~
4751

60-65 drk gray brn silty sand
Sand is trying to run up the bore
hole after each sample, we are having
to pump mud in between each run.

65-70 drk gray clay sand

70-75 same as above

- Securing site / filling NO & TB
- Securing site / leaving site @ 1:30 PM
- heading to Tully
- In Tully @ 4:45 p.m. off 5:30

7-24-16 Sunday

ET & MAP met @ 10:00
M.P. in @ 12 P.M.

E.T. in @ 12:27 P.M.

leaving the office @ 1pm.
headed to site, on site.

- Relevel rig
- water run
- drive 10017, back to site
- secure site & head for lodge
- @ hotel 8 P.M.

(fig 4752 / 7-24-16)
8 pm

7-25-2016

ET & MP met @ 6:30 a.m.

- on site, set up hoses & pumps
- re condition drilling fluids
- water @ 5'6"

- measure to bottom (58' ft) open
- advance 3" to (66') + 2' H₂O = 68' BLS
- advance 4" to (66') from 33' BLS

Starting to core

Clear 3" & pore hole back to
75' BLS & core

75'-79' ^{dark gray clay} had to stop run, sampler
full; gray clay w/ shell
pumping sample out of inner
bbl.

79'-80' gray clay w/ shell & H₂O

80-85 dark gray blk. clay sand

85-90 dark gray blk. clay w/ sand

90-95 dark gray blk. clay sand;
lt gray green clay

352-343-0091

7-25-16

Rig 4759

switching over to a rock shoe
95-100 drk gry clay, lt gry tan
clay w/ rock frags, gry clay

100-105 lt gry clay, drk gry
clay, drk gry lt gry clay

securing site & heading for hotel.
@ hotel - 6:50 p.m.

7-26-16

ET & MP met @ 7 a.m.
on site, pull out hoses & pumps
condition drilling fluids.

105-110 gry grng clay (HRC)

110-115 drk gry clay w/ rock frags,
limestone frags, gry tan brn clay
& having trouble baiting sample

115-120 115.75 sand, sand stone
plugging off, trouble pulling sample
115.75 ex-shoe, back to rock
shoe for next run.

115.75-120 sand, gry drk gry cl/s

6-26-16

Rig 4765

120-125 tan gray silty sand, gray clay sand, tan brn limestone, gray limestone (l.o.c.) w/some voids

125-128.75 gray tan limestone w/ shell & sand dollars

128.75-130 trouble pulling the sample. Struck in the bottom of the hole. May have core stuck in the bottom of the core bbl.

We also need to run 3" down to 129-130' B/S to regain circulation & finish out the bore hole.

Call in DTP to report progress.

• Pulling NO

• NO & 133' ft out, rock stuck in the core bbl. bit

• clear out core bbl. bit

• secure site, hoses, pumps & cover mud tubs w/ tarps

@ hotel 7pm

Reg 7-27-2016
4772

7-27-2016

ET & MP met @ 7 a.m.

• on to site

• water run

• extending 3" from 68' BLS to
129' BLS 125' FT. BLS

• pushed 3" to 100 FT. BLS, couldn't
push any more, run up to @ 80
BLS.

• running NQ to 125' BLS, then ex-
tending 3" to 125' BLS, for hole stability
• 4" casing now @ 77' FT BLS

Wow!!! hard work & patience
goes a long way

3" @ 125' BLS

4" @ 77' BLS

NQ @ 125' BLS w/ circulation

too tired to continue, we will
pick up where we left off
tomorrow

securing site, put away hoses,
pumps, etc.

@ 7:30 p.m.

Rig 7-28-16

4774

7-28-2016

- ET & MP met @ 7 a.m.
- check out hotel
- fuel for Mobile Rig
- on site, set up hoses, pumps etc
- flush bore hole, coring
- lost circulation again, pushing 3" another 3' deeper to 128'-130'
- ~~128-75~~ BLS, I over shot the depth on the 3" a little but I think the 1.25' we need is still in the 3" casing.
- regained circulation
- 128-75 - 130 VOI(?)??

130 - 135 gray L/s w/ shell

135 - 140 L.O.C., regained circulation
same as above

- Securing site
- @ office 3:30 pm

08-01-2016

ET & MP loaded 20' FT 3" HW
leaving office @ 12:30 PM

~~on site~~ on site, weather app.

- Running to get make up water.
- Back on site, Thunder storms
- securing site
- headed to hotel
- @ hotel 6 PM

08-02-2016

ET & MP met @ 7:30 a.m.

- ~~on~~ on site
- set up pumps, hoses, drilling fluids etc.
- re conditioning bore hole, open to bottom
- water @ 8.25' FT. BLS
- Running w/ extended shoe.
- 140 - 142.5 - lt grey sandy clay
- 142.5 - 145 - circulation is on & off
- lt grey clay w/ sand
- 145 - ~~145.5~~ - too hard to cut w/ ex-shoe
- switching to a rock shoe 145' - 145.25'
- grey clay hard
- (no circulation)
- 145.25 - 147.5 grey lime stone

8-02-16

Rig

4778

no circulation

147.5-150 gry limestone, gry clay
sand

150-~~155~~155' NO cir. / gry limestone,
gry clay sand, gry limestone, gry clay
155-157.5 Lt gry sand w/ mika

no circulation, we are going to
keep drilling out ahead of the 3" to get
sample asap & find a good spot
to set the 3"

no circulation

157.5-160 Lt gry sand w/ mika
Lt gry clay

160-162.5 Lt gry sand w/ mika
NO circulation

162.5-165 Lt gry sand w/ mika
NO circulation (162.5-165)

- pulling 35' FT NO out over night
- Securing site
- Calling BTP for suggestions
- headed to hotel
- @ hotel 6pm

8-03-16

BT & MR met @ 7am., headed to
site. On site set up hoses, pumps,

two pits of drilling fluids.

Drill out NQ X 168' FT string 165' FT BLS
advance 3' casing, hopefully down to
165' FT. BLS / 3" in. casing @ 168' FT.
BLS. Must have been a void @ 165' FT
BLS., we quit advancing @ 165' BLS
After measuring the bore hole tape
stopped @ 168' BLS. We are calling
this a void and are continuing to
drill from 168' FT BLS on.

"165'-168' VOID" (we have circulation
168'-170.0 limestone, gray clay
w/ Phos.

170-172.5 gray clay w/ Phos.

172.5-175 gray clay w/ Phos.

175-177.5 lt gray clay sand (mudstone?)
w/ Phos.

177.5-180 lt gray limestone w/ Phos.

180-182.5 lt gray dk gray mudstone
w/ Phos.

182.5-185 lt gray mudstone w/ Phos.
dk gray clay w/ Phos.

08-03-16

Rig

4786

water label 11.9'

08-04-16

morning 4786 / 4790

• Securing site

• headed to hotel

• @ hotel 7:30 pm

08-04-2016

MP & ET met @ 7:30 a.m.

• on site

• took up hoses, pumps etc.

• coring

185.0 - 190 Lt gry mudstone w/ Phos

190 - 195 Same as above, drk gry clay w/ sand

195 - 200 drk gry clay w- sand
(T- storms appr.)

2-hour rain delay, Thunderstorms
in the area & Jando watches
coring

205 - 210 drk gry clay w/ sand, & some
Phos.

210 - 215 Lt gry sandy clay w/ Phos.,
drk gry clay w/ Phos.

- BOXES
- Check for P.M.
on all vehicles
- NON-ETH.
- DIESEL

8-4-16

Rig
4190

- securing site
- headed to hotel
- @ hotel 6 pm

08-05-2016

- ET & MP met @ 7 a.m.
- Check out of hotel
- headed to site
- onsite, setup pumps, hoses, condition
drilling fluids etc.

215-220 drk grey clay sand w/ Phos.

220-225 same as above

225-230 drk grey sandy clay w/ Phos.

230-235 drk grey sandy clay w/ Phos.

235-240 Same as above

- securing site & headed back to
Dally.

- @ office 3:45 pm

Rig 4193 (8-05-16)

- Paperwork @ office 4:45 pm

Looking for the Marked
Formation

9:56 am leave

08-15-16

4796 Rig

(Issues w/ DET 4874)

08-16-16

4802

08-15-16

ET & KMC met @ office 8 a.m.
Load Luggage.

Headed to field. @ 9:56 a.m. 9:56 a.m.

• p/u water, gatorade, Fuel, reg. gas
• on site, clear up after cows.

• water run
• set up site, coring, recondition bore
hole & core

240-245 clay Phos. sand

245-250 same as above w/ more clay

250-255 Lt gray sandy Phos. stone

255-260 Lt gray sandy Phos. clay w/
some some stone

260-265 ~~same~~ Lt gray clay Phos.
stone

securing site & headed to hotel.
@ hotel 8pm

08-16-2016

ET & KMC met @ 7 a.m.

water @ 18.8 BLS
 • Onsite, set up, trip out 40' x 5' NA to
 -coating trade for 40' x 10' NA to continue
 coating (swap 10's for 5's) coating
 265 - 270 Lt grey sandy Phos. limestone

270 - 275 Lt grey w/ heavy Phos. lime-
 stone w/ gypsum??

275 - 280 Lt grey w/ heavy Phos. sandy
 limestone

280 - 285 grey clay sandy Phos. limestone

285 - 290 Lt grey tan Phos. limestone w/
 shell, dk grey Phos. clay sand

290 - 295 Dk grey Phos. sandy clay

295 - 300 Dk grey Phos. limestone w/
 chunks of dolomite

300 - 302.5 Dk grey sand Phos. clay

302.5 - 305 Lt grey Phos. limestone
 w/ shell

Securing site, taking DEP 6012 to the
 hotel. Having issues w/ DEP 4829 @ hotel 7:15 PM

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
 $120.87 \div 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. I opp. 23° 20' = 1183.1
 $1183.1 \div 10 = 118.31$.

Correction for A. 23° 20' for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47 = \text{corrected Tangent}$.

(If corrected Ext. is required find in same way)
 Ang. 23° 20' = $23.33^\circ \div 10 = 2.3333 = \text{L. C.}$

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		

$100 - 53.53 = 46.47 \times 3' (\text{def. for 1 ft. of } 10^\circ \text{ Cur.}) = 139.41' =$

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.



