

LEVEL BOOK

#101596

CME 75
Drill Log
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8-05

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When
the
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18633/203.5

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18673/148.5

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DISTANCE

Cut or
Fill

0

0	0.0
1	1.5
2	3.0
3	4.5
4	6.0
5	7.5
6	9.0
7	10.5
8	12.0
9	13.5
10	15.0
11	16.5
12	18.0
13	19.5
14	21.0
15	22.5
16	24.0
17	25.5
18	27.0
19	28.5
20	30.0
21	31.5
22	33.0
23	34.5
24	36.0
25	37.5
26	39.0
27	40.5
28	42.0
29	43.5
30	45.0
31	46.5
32	48.0
33	49.5
34	51.0
35	52.5
36	54.0
37	55.5
38	57.0
39	58.5
40	60.0

55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	57.1	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	60.1	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	61.5	61.7	61.8	62.0	62.1	62.3	62.4	62.6	62.7	62.9	63.0	63.2	63.3	63.5	63.6	63.8	63.9	64.1	64.2	64.4	64.5	64.7	64.8	65.0	65.1	65.3	65.4	65.6	65.7	65.9	66.0	66.2	66.3	66.5	66.6	66.8	66.9	67.1	67.2	67.4	67.5	67.7	67.8	68.0	68.1	68.3	68.4	68.6	68.7	68.9	69.0	69.2	69.3	69.5	69.6	69.8	69.9	70.0	70.2	70.3	70.5	70.6	70.8	70.9	71.1	71.2	71.4	71.5	71.7	71.8	72.0	72.1	72.3	72.4	72.6	72.7	72.9	73.0	73.2	73.3	73.5	73.6	73.8	73.9	74.1	74.2	74.4	74.5	74.7	74.8	75.0	75.1	75.3	75.4	75.6	75.7	75.9	76.0	76.2	76.3	76.5	76.6	76.8	76.9	77.1	77.2	77.4	77.5	77.7	77.8	78.0	78.1	78.3	78.4	78.6	78.7	78.9	79.0	79.2	79.3	79.5	79.6	79.8	79.9	80.0	80.2	80.3	80.5	80.6	80.8	80.9	81.1	81.2	81.4	81.5	81.7	81.8	82.0	82.1	82.3	82.4	82.6	82.7	82.9	83.0	83.2	83.3	83.5	83.6	83.8	83.9	84.1	84.2	84.4	84.5	84.7	84.8	85.0	85.1	85.3	85.4	85.6	85.7	85.9	86.0	86.2	86.3	86.5	86.6	86.8	86.9	87.1	87.2	87.4	87.5	87.7	87.8	88.0	88.1	88.3	88.4	88.6	88.7	88.9	89.0	89.2	89.3	89.5	89.6	89.8	89.9	90.0	90.2	90.3	90.5	90.6	90.8	90.9	91.1	91.2	91.4	91.5	91.7	91.8	92.0	92.1	92.3	92.4	92.6	92.7	92.9	93.0	93.2	93.3	93.5	93.6	93.8	93.9	94.1	94.2	94.4	94.5	94.7	94.8	95.0	95.1	95.3	95.4	95.6	95.7	95.9	96.0	96.2	96.3	96.5	96.6	96.8	96.9	97.1	97.2	97.4	97.5	97.7	97.8	98.0	98.1	98.3	98.4	98.6	98.7	98.9	99.0	99.2	99.3	99.5	99.6	99.8	99.9	100.0	100.2	100.3	100.5	100.6	100.8	100.9	101.1	101.2	101.4	101.5	101.7	101.8	102.0	102.1	102.3	102.4	102.6	102.7	102.9	103.0	103.2	103.3	103.5	103.6	103.8	103.9	104.1	104.2	104.4	104.5	104.7	104.8	105.0	105.1	105.3	105.4	105.6	105.7	105.9	106.0	106.2	106.3	106.5	106.6	106.8	106.9	107.1	107.2	107.4	107.5	107.7	107.8	108.0	108.1	108.3	108.4	108.6	108.7	108.9	109.0	109.2	109.3	109.5	109.6	109.8	109.9	110.0	110.2	110.3	110.5	110.6	110.8	110.9	111.1	111.2	111.4	111.5	111.7	111.8	112.0	112.1	112.3	112.4	112.6	112.7	112.9	113.0	113.2	113.3	113.5	113.6	113.8	113.9	114.1	114.2	114.4	114.5	114.7	114.8	115.0	115.1	115.3	115.4	115.6	115.7	115.9	116.0	116.2	116.3	116.5	116.6	116.8	116.9	117.1	117.2	117.4	117.5	117.7	117.8	118.0	118.1	118.3	118.4	118.6	118.7	118.9	119.0	119.2	119.3	119.5	119.6	119.8	119.9	120.0	120.2	120.3	120.5	120.6	120.8	120.9	121.1	121.2	121.4	121.5	121.7	121.8	122.0	122.1	122.3	122.4	122.6	122.7	122.9	123.0	123.2	123.3	123.5	123.6	123.8	123.9	124.1	124.2	124.4	124.5	124.7	124.8	125.0	125.1	125.3	125.4	125.6	125.7	125.9	126.0	126.2	126.3	126.5	126.6	126.8	126.9	127.1	127.2	127.4	127.5	127.7	127.8	128.0	128.1	128.3	128.4	128.6	128.7	128.9	129.0	129.2	129.3	129.5	129.6	129.8	129.9	130.0	130.2	130.3	130.5	130.6	130.8	130.9	131.1	131.2	131.4	131.5	131.7	131.8	132.0	132.1	132.3	132.4	132.6	132.7	132.9	133.0	133.2	133.3	133.5	133.6	133.8	133.9	134.1	134.2	134.4	134.5	134.7	134.8	135.0	135.1	135.3	135.4	135.6	135.7	135.9	136.0	136.2	136.3	136.5	136.6	136.8	136.9	137.1	137.2	137.4	137.5	137.7	137.8	138.0	138.1	138.3	138.4	138.6	138.7	138.9	139.0	139.2	139.3	139.5	139.6	139.8	139.9	140.0	140.2	140.3	140.5	140.6	140.8	140.9	141.1	141.2	141.4	141.5	141.7	141.8	142.0	142.1	142.3	142.4	142.6	142.7	142.9	143.0	143.2	143.3	143.5	143.6	143.8	143.9	144.1	144.2	144.4	144.5	144.7	144.8	145.0	145.1	145.3	145.4	145.6	145.7	145.9	146.0	146.2	146.3	146.5	146.6	146.8	146.9	147.1	147.2	147.4	147.5	147.7	147.8	148.0	148.1	148.3	148.4	148.6	148.7	148.9	149.0	149.2	149.3	149.5	149.6	149.8	149.9	150.0	150.2	150.3	150.5	150.6	150.8	150.9	151.1	151.2	151.4	151.5	151.7	151.8	152.0	152.1	152.3	152.4	152.6	152.7	152.9	153.0	153.2	153.3	153.5	153.6	153.8	153.9	154.1	154.2	154.4	154.5	154.7	154.8	155.0	155.1	155.3	155.4	155.6	155.7	155.9	156.0	156.2	156.3	156.5	156.6	156.8	156.9	157.1	157.2	157.4	157.5	157.7	157.8	158.0	158.1	158.3	158.4	158.6	158.7	158.9	159.0	159.2	159.3	159.5	159.6	159.8	159.9	160.0	160.2	160.3	160.5	160.6	160.8	160.9	161.1	161.2	161.4	161.5	161.7	161.8	162.0	162.1	162.3	162.4	162.6	162.7	162.9	163.0	163.2	163.3	163.5	163.6	163.8	163.9	164.1	164.2	164.4	164.5	164.7	164.8	165.0	165.1	165.3	165.4	165.6	165.7	165.9	166.0	166.2	166.3	166.5	166.6	166.8	166.9	167.1	167.2	167.4	167.5	167.7	167.8	168.0	168.1	168.3	168.4	168.6	168.7	168.9	169.0	169.2	169.3	169.5	169.6	169.8	169.9	170.0	170.2	170.3	170.5	170.6	170.8	170.9	171.1	171.2	171.4	171.5	171.7	171.8	172.0	172.1	172.3	172.4	172.6	172.7	172.9	173.0	173.2	173.3	173.5	173.6	173.8	173.9	174.1	174.2	174.4	174.5	174.7	174.8	175.0	175.1	175.3	175.4	175.6	175.7	175.9	176.0	176.2	176.3	176.5	176.6	176.8	176.9	177.1	177.2	177.4	177.5	177.7	177.8	178.0	178.1	178.3	178.4	178.6	178.7	178.9	179.0	179.2	179.3	179.5	179.6	179.8	179.9	180.0	180.2	180.3	180.5	180.6	180.8	180.9	181.1	181.2	181.4	181.5	181.7	181.8	182.0	182.1	182.3	182.4	182.6	182.7	182.9	183.0	183.2	183.3	183.5	183.6	183.8	183.9	184.1	184.2	184.4	184.5	184.7	184.8	185.0	185.1	185.3	185.4	185.6	185.7	185.9	186.0	186.2	186.3	186.5	186.6	186.8	186.9	187.1	187.2	187.4	187.5	187.7	187.8	188.0	188.1	188.3	188.4	188.6	188.7	188.9	189.0	189.2	189.3	189.5	189.6	189.8	189.9	190.0	190.2	190.3	190.5	190.6	190.8	190.9	191.1	191.2	191.4	191.5	191.7	191.8	192.0	192.1	192.3	192.4	192.6	192.7	192.9	193.0	193.2	193.3	193.5	193.6	193.8	193.9	194.1	194.2	194.4	194.5	194.7	194.8	195.0	195.1	195.3	195.4	195.6	195.7	195.9	196.0	196.2	196.3	196.5	196.6	196.8	196.9	197.1	197.2	197.4	197.5	197.7	197.8	198.0	198.1	198.3	198.4	198.6	198.7	198.9	199.0	199.2	199.3	199.5	199.6	199.8	199.9	200.0	200.2	200.3	200.5	200.6	200.8	200.9	201.1	201.2	201.4	201.5	201.7	201.8	202.0	202.1	202.3	202.4	202.6	202.7	202.9	203.0	203.2	203.3	203.5	203.6	203.8	203.9	204.1	204.2	204.4	204.5	204.7	204.8	205.0	205.1	205.3	205.4	205.6	205.7	205.9	206.0	206.2	206.3	206.5	206.6	206.8	206.9	207.1	207.2	207.4	207.5	207.7	207.8	208.0	208.1	208.3	208.4	208.6	208.7	208.9	209.0	209.2	209.3	209.5	209.6	209.8	209.9	210.0	210.2	210.3	210.5	210.6	210.8	210.9	211.1	211.2	211.4	211.5	211.7	211.8	212.0	212.1	212.3	212.4	212.6	212.7	212.9	213.0	213.2	213.3	213.5	213.6	213.8	213.9	214.1	214.2	214.4	214.5	214.7	214.8	215.0	215.1	215.3	215.4	215.6	215.7	215.9	216.0	216.2	216.3	216.5	216.6	216.8	216.9	217.1	217.2	217.4	217.5	217.7	217.8	218.0	218.1	218.3	218.4	218.6	218.7	218.9	219.0	219.2	219.3	219.5	219.6	219.8	219.9	220.0	220.2	220.3	220.5	220.6	220.8	220.9	221.1	221.2	221.4	221.5	221.7	221.8	222.0	222.1	222.3	222.4	222.6	222.7	222.9	223.0	223.2	223.3	223.5	223.6	223.8	223.9	224.1	224.2	224.4	224.5	224.7	224.8	225.0	225.1	225.3	225.4	225.6	225.7	225.9	226.0	226.2	226.3	226.5	226.6	226.8	226.9	227.1	227.2	227.4	227.5	227.7	227.8	228.0	228.1	228.3	228.4	228.6	228.7	228.9	229.0	229.2	229.3	229.5	229.6	229.8	229.9	230.0	230.2	230.3	230.5	230.6	230.8	230.9	231.1	231.2	231.4	231.5	231.7	231.8	232.0	232.1	232.3	232.4	232.6	232.7	232.9	233.0	233.2	233.3	233.5	233.6	233.8	233.9	234.1	234.2	234.4	234.5	234.7	234.8	235.0	235.1	235.3	235.4	235.6	235.7	235.9	236.0	236.2	236.3	236.5	236.6	236.8	236.9	237.1	237.2	237.4	237.5	237.7	237.8	238.0	238.1	238.3	238.4	238.6	238.7	238.9	239.0	239.2	239.3	239.5	239.6	239.8	239.9	240.0	240.2	240.3	240.5	240.6	240.8	240.9	241.1	241.2	241.4	241.5	241.7	241.8	242.0	242.1	242.3	242.4	242.6	242.7	242.9	243.0	243.2	243.3	243.5	243.6	243.8	243.9	244.1	244.2	244.4	244.5	244.7	244.8
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HOLLEY, INC. TLH	(850) 576-2131
CHRISTENSEN BOYLES	(800) 453-8418
FAX-A-LOCATE	(800) 638-4097 PH
	(800) 826-9063 FAX
TALLAHASSEE WELDING	(850) 576-1596
CME	(800) 325-8827
BOART LONGYEAR	
CLARENCE MORGAN BWSF	(850) 957-6140
BOB STRINGER - COLLIER CO.	(941) 643-8457
CAROLE MADDOX SFWMD	(561) 696-8800
SFWMD	(800) 226-1066
JODY LEE SJRWMD	(904) 329-4812
USGS - MIAMI	(305) 526-2895
GARY MADDOX (AMBIENT)	921-9425
MIKE DICKSON (SITE INV.)	921-9950
	524-2053 cell
GEORGE FOXER NFWMD	(850) 539-5999
BILL MAPHIS, Manager FL CAVERNS ST PK	(850) 482-1226

TRUCKS INC.

464 opp. Circle N

David Myers (850) 574-~~1068~~

1243

CME REPAIRS

Ardaman + Assoc

Phil Smith 576-6131

RE CME rip

18633/203.5
CMAA / LATE

18672/118.5
DART DART

18673/148.5
DART DART

CONTENT

100

NAME

W 18633

STAR LAKE

S 20 cda T 115 R 23E

LAT 29° 31' 18.2"

LONG 82° 01' 18.8"

ELEV. 94

TD 203.5'

CO. PUTNAM

QUAD HAWTHORNE

AVG 760 readings

8/18/05

D. PAUL / S. RAMDEEN start 8am

0-2.5' poor rec., br. org. clayey sand

2.5'-5' br / black argill. cl. sand to or. sand

ADV. 3" CSG. S

5'-8.5' NQ2 root; br. org. clayey sand

ADV. 3" CSG. 10' (less stickup)

endday @ 6:45pm

rig mileage: 42641

hrs: 2275

8/19/05

SR: DTP Sunday @ 7:15am

18633 / 203.5
STAR LAKE

18673 / 148.5

8735 / 353

* Chain Vise on Casing in Mud tub
head (30")

Directions: South on 301 F/ Hawthorne
cross RR tracks, take 2nd
left @ Chevron station
"HOLDENS POND ROAD"
follow until it turns to dirt,
keep going. You'll pass a
dog kennel/training facility
called "Sun Kiva", take
your next right through
gate. 60 ~ 1 mile, take
left turn as road bends
right. Rig is on left 50 yds
in.

* get H₂O @ boat ramp on Holden's Pond.

8.5' - 13.5' br. gray clayey sand to
gray clayey sand

13.5' - 18.5' lt. br. sand

18.5' - 23.5' lt. br. sand

23.5' - 28.5' AS ABOVE, then clean near
POOR REC.

28.5' - 33.5' NO REC. clean white fine
sand, SAND LOCKEN NO
INSIDE 3" CSG. AFTER
washing NO back to bottom
of hole after un sand lock...
transmission failed — fix. *

KC pulls
backman

Rig hours 2279

8-23-05 KC, JH 9am (one
whse - ARR in vicinity -

* Can't get trash pump to run.
to sight
met quick gel
drill

33.5 - 38.5' ~ 4" clay sd recovered

38.5 - 43.5' ~ 1.5' sd recovered

~ 7' of hole collapsed

mix full tub gub pl - attp ³

stabling hole

43.5-48.5' ~ 3' run 1 1/2 gal br f. sel
48.5-53.5' 1 1/2 gal fine sand ~ 1.6' run

~~53.5~~ END CORING BORDEN

Ris home 2282

END day 6:45 pm

8-24-05 KC, VH 6:30 start
load water

Wk on trash pump - water in fuel
- pull fuel tank + valve, clean out
reassy.

Run desander, mix mud
pump run add csq

even w good mud - hole
tight - csq string will not
slide to btm.

drill in 30' 4 1/4" true spin
auger - go inside then
w 3" csq

drill in 55' NW csq (~54' bcs)
53.5-58.5' ~ 6" recovery - sand

Bottom @ 57'

WATER RUN —

END CORING for day @ 6:25 pm⁴
Rig hours 2288
END day 8:00 pm

8-25-05 KC, JH, BC 6:30 AM
START.

mix mud wash back to btm

58.5-63.5' - drilled w/o inner bbl
sample pulled from desander
fine sd w med-crs black grain
clay(?) plus(?)

63.5-68.5' fl. gn clay w phos sd
+ granules + cinn clay blebs

will set 3" csg. - 72' nw set
w ~ 1.25' sticking

68.5-73.5' fl. gn clay / clay sd
~ 50 p REC

73.5-78.5' fl. gn clay / clay sd on
shore. tan clay sd lost 1"

78.5-~80' REFUSAL w EXT.

} shore: finish run w/ rock shore
- poor recovery - prob plugged shore
83.5'

hd. cable clamps tied
~~to socket set~~
1" fm OC
6' of 1" press. hose

END coring for day 2294
Rig down ~~set~~
END day 7:15 pm

8-26-05 KC, VH, BC

6:45 AM start

mix mud. EXT 3" CS9 to 85'
hold in place w chain vise
started coring:

83.5 - 88.5 Used rock shoe
and lost sample. ran back
in with extended shoe and
caught representative sample
fine sand with some phosphate
gravel and sand sized phosphate

88.5 - 93.5 top 3.5' soft. lost
6"m finer sd, chy + phos pbls
93.5 - 98.5 lt sl. v sl. chyd, w/
occ phos pbls,
98.5 - 103.5 lt gy v sl. chy
sd some phos?
103.5 - 108.5 ~~thick~~ Aqua
colored clay w/sand.



Load lift

3/8" + 1/2" drill bits

Quick gel

gunkhol lv

fittings for valve tower

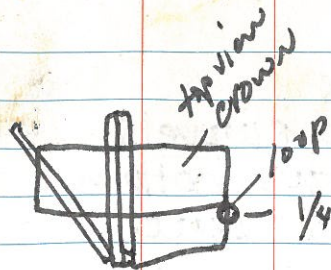
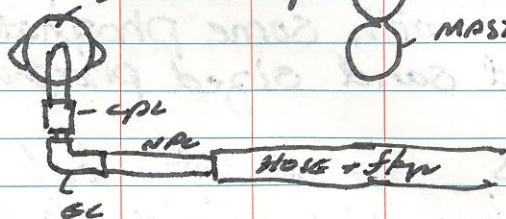
fittings for swivel restraint

5' NQ

5' NW csg

swivel top view

MAST uprights



8-26-05 (Cont)

Stopped coring for the day.
took 20' of NQ off.

77' of NQ Left in hole,

85' of 3" casing

108.5' cored.

Packed up

returned to whse @ 6:15pm

8-29-05 BC, LB

Came to site n stormed
out for afternoon. Filled up
gas cans + truck.

18741
18738/102
18672/118.5
18673/148.5
8735/353

* Need old swivels
to change out bottom
half that is bent.

(scribble)

⑦

8-30-05 BC, LB

Arrived @ site, fueled
up CME. Flushed out NQ hole
to 104', broke swivel.

repaired swivel and continued to
flush out hole.

- Ran 3" to 105 and Seated
it into clay.
- ran in inner barrel and began
Coring.

108.5 - 113.5' sandy, phosphatic clay
rain stormed out.

8-31-05 BC, LB

113.5 - 118.5 top of run
dry clay, attapulgit?
last 1' of run Limestone
w/ sand sized phosphate.

Clay plugged up inner
barrel and had to be
picked out with 1" trimmy.

8-31-05 (Cont)

Plugging off on top of hard rock. Need to fix pull down valve and pull down rate knob.

118.5 - 119.5' → rubble dolostone with clay.

119.5 - 121' very hard rx dolostone.

Samples very difficult to get out of winer barrel.

trying to finish 118.5 - 123.5
NQ not cutting rock.
Stormed out @ 5:00 pm.

9-1-05 LB, BC

Tripped out NQ inbetween major thunderstorm.
Crackerjack bit completely worn out. Changed bit

to an impregnated diamond.
ran NQ back in and
resumed coring.

* Pulldown switch not
functional.

121. - 123.5 Fractured
dolostone with sand,
phosphate and clasts
in the matrix.

at 122' ^{123.5'} dolostone ends
and a clayey sand
w/ some phosphate
mostly unconsolidated.
shows up.

123.5 - 125 plugged off had
to pull inner barrel.
rubbly dolostone w/ sand
& phosphate in matrix.
Drilled a large piece of
gravelly phosphate that
could be bone or plant.

18741

18738/103

18672/118.5

18673/148.5

18735/353

@ 124.5 we drilled through
chert and the last 4"
is massive gray dolostone.

ran inner barrel back in and
resumed run.

124.5 - 128.5 mostly
massive gray dolomite,
but from ~~#~~ 126 - ~~127~~
127 there is soft clayey
sand and phosphate. Possibly
fill.

128.5 - 133 Hard, gray,
vugular dolomite.

133.5 - 135.5 Clayey coarse
sand with phosphate.

Shoe plugged off. Need
to run 3" casing down.

* Don't forget: Need to finish
running 1st 1/2 of stroke to
138.5'.

18741
18738/103
18672/118.5
18673/148.5
18735/353

11
packed up and called it
a day. Thunderstorm
moving in.

8-6-05 BC, LB

arrived @ site @ 2:30 pm
worked on guide wire system
for Kelly these. Stormed out.
off and on.

rig hours: 23 09

mileage 042641.5

8-7-05 LB, BC ^{30 am}

arrived @ Site 6. Site partially
underwater due to over
night thunderstorms.
raining!!

133.5-138.5 only caught
2' of run. Sandy clay
w/ phosphate

138.5-143.5 dark gray clay
@ beginning, then into dolostone
rotating back to a sandy
clay. Clay and sand
probable fill.

Top of ocala ~ 147

12

143.5 - 148.5

First 1.5" clayey sand.
Switches to a dolomite
with phosphate and sand.

~~poor~~ cavity @ ~ 145.5 for
a 1'. After this cavity
we get into a shelly
white limestone.

148.5 - 153.5 poorly indurated
creamy limestone w/ lops +
mollusc shells.

153.5 - 158.5 Foram + mollusc
Hash. Creamy + white LS.

158.5 - 163.5 Slightly
lx LS w/ forams +
molluscs. SAA
Slightly gray in colour
Lost circ. in this
interval

163.5 - 168.5 -

SAA slightly gray

168.5 - 173.5 SAA

only caught first 6"
of run. Rock too soft
and lost sample.

173.5 - 178.5

LS w/ forams (grainstone)
partially rx. gray color
Sample is rubby and
poorly indurated. losing
sample.

^ added core catcher to shoe
to see if that would prevent
sample loss.

178.5 - 183.5 SAA

Core catcher rode up into
inner barrel. Bad idea.

183.5 - 188.5 JAA

Caught more this run.

188.5 - 193.5 Still poor recovery
only caught 2" of entire
run. SAA

193.5 - 198.5 rubbly LS w/forams
poor recovery.

198.5 → 203.5 (TD) SAA.

TD' hole, pull NQ and
prep for grouting
end day at 5:30pm

8-8-05 BC, LB start day at
6 am

Pull Augers, grouted,
pulled 3". used 6 bags of
grout

picked new site in a.m. and
bought rubber steel toed
boots.

end day at 8pm

18741

18738/203

18672/118.5

18673/148.5

8735/353

Need:

1 1/4 hose

rig mileage

Hawthorne → Rochelle

Begin 42641.5
ending 42663.7

8-9-05 W 18672

15

GROVE PARK CORE / 118.5' TD

T11S, R21E sec 16

LAT: N 29° 31' 55.1"

LONG: W 082° 12' 19.2"

Alachua Co.

LOCATION OFF 346 in GROVE PARK
WILDLIFE MGMT AREA

BC, CB start day @ 6:30
~Set up site **Start**
Coring.

BIT ON CORE ROD - DIAMOND
LENGTH OF CORE BARREL = 8.5'

0-5 Brown Sand

5-8.5 SAA

8.5 → 13.5 - poor rec. Brown sand
w/ Clay

13.5 - 18.5 Sand that grades
into clay

18.5 - 23.5 - tan sand w/
clay lost last 2' of
run

ran in 20' of sand 3"
end day at 6:30 pm.

25' of 3"

38' of NQ in hole.

Start day @ 6:30 am 16
9-10-05 BC, LB

23.5 - 28.5 Brown clayey
Sand

28.5 - 31.5 Clayey sand
kept plugging off.
ran another 510' of 3" casing

31.5 - 33.5 LS with
Sand + phosphate in
matrix. Hard rock

33.5 - 38.5 lost First 1.5-2.0'
of run b/c we didn't stay
in hard rock. Soft sandy Seds.
lost on way up.

ran back in w/ extended shoe
plugged off in first 1.5'. Hard
rock jammed and clay below
couldn't push it up.

put rock shoe back on.

- drilled remaining ~1.5'. Got
nothing!! put extended shoe
back on. keep fingers
Crossed.

38.5-43.5 Full Run!!
TIGHT CLAY, TAN
IN COLOR UNTIL ~~39.5~~ 40.5'
TURNS DARK GRAY
DRY!! LIKE MODELING CLAY

* INNER BARREL WAS OVER
STUFFED. QUITE POSSIBLE
THAT I PICKED UP 6" or
SO FROM LAST PREVIOUS RUN

ig hours 2323

End day @ 5:30 pm
9-11-05 start @ 6am BC, CB
tripped out NQ.

ran 3" down to 37'.
top piece on 3" is a T.
worked on greasing rig,
pumping off bad mud.

3" hard to drill in clay.
Finally got it seated down.
ran NQ back in hole, had to
clean it out.

Ran out of H₂O. while
trying to get water trash

pump pull start + broke.

Taken apart. Spring is worn out. Couldn't fix.

- No way to get water.

- Worked on Kelly system.

- unloaded truck

- cleaned up and secured
left and returned to hotel at
5 pm

9-13-05 KL, CK 9AM on rd
to site - run NQ back in
wash out to ~ 38' - sticky +
tight -

fix swirl + kelly hose

~38 - ~42' clay - same on

orig cored - squeeze?

refusal w ~1.25' left of run

run back w rock shoe

~42 - ~43.5' rock - dk bn/ol. w sl.

gn + blue clay

18741
18738/203
Greenfield

18673/148.5'
1 mi from CK

8735/353
0.5 mi from CK

to LOAD
soda ash
red loessite
2" x 1 1/4" bush

19
43.5-48.5 bl. gy clay w some
rotten shell/ls frag. - grad to gy bd at botm
48.5-53.5' bn + gray ls(?) dolo(?) phosphatic
fossil moldic

core to 53.5' - Rig house 232E
Rig mileage 42663
ckin mtd 7:30 pm

9-14-05 KL, CK 7AM start
load WATER, mix mud, rework
kelly hose

53.5-56' ~ 8" recovered - gy +
bn brittle burrowed dolomite, some
moldic por.

56-58.5' ~ 8" recovered - hard dolomite
rubble + blue green clay

58.5-61.5 - blue gy clay + bn ls, dolo.
por - well ind

18741
18738/203
GREENFIELD

18673/148.5'
last hour CK

8735/353
hours 01

61.5-63.5' ~ 1.25' sec 15/dsls ²⁰

chunks brn clay + sl. grn clay w
ls drg duparc)

63.5-68.5' clay interbedded w ls
~ 3' measured. btm 1' is all carbonate

68.5'-73.5' gy + brn dolomite,
grn clay on above - brn
sl. clay sd in middle (only ~ 5"
caught) w bed dsls at btm

73.5-⁷⁶ 540, gy + brn banded clay
+ ol. grn clay

76-78.5' brn + gy sl. clayey sand
~~78.5'~~ mix mud - 9K gal/624
mud/quicksilt/penetr.

to handle sd + clay

78.5-83.5' brn sand thin blue clay
w/ls frg. through out then
thin calc? clay, ls + bk into
blue clay at btm

83.5-85.5' clay + rubble ls

END CORIG for clay -

Rig transmission shifter jammed
pull up rods 60'

Rig hours 2335

END DAY 6:30

18741
GR 7
GREENFIELD

18738/203

18673/146.5'

8735/353

9-15-05 KC, CK 7:00 AM start
 load water, fuel to rig
 speed 6 hr At top put rig
 trans. back together
 will return to H, send M & L. out
 back to finish hole

leave site 3:00, AM
 TH ~ 6:30 PM

9.19.05 BC, DP, LB leave TH
 @ 10:45 am and head to
 G'ville.

- repaired transmission
- located new drill site
 in Orange Heights/Windsor
 5' top 5:00

9.20.05 BC, LB 5:45 am start
 load water, locate tools, mix
 mud. run 40' of NQ back
 in hole. Hole filled and
 had to re-drill.
 got back down to 85.5'
 and drilled to 88.5'
 lost circulation.
 Drilling hard rock.

18741
 18738/203
 Greenfield

18673/148.5'
 8735/353
 18741

85.5 - 88.5 Hard ls? mostly
dolomitized.

H₂O run

88.5 - 89.5 Hard dolostone

89.5 - 90.5 porous LS, gray

90.5 - 91.5 cavity

91.5 - 93.5 drilled extremely
soft, unable to catch

(sample if any was even
catchable).

93.5 - 94.5 dark gray moldic LS

94.5 - 97 possible cavity or
~~bottom~~ really soft sed.

97 - ~~97.5~~ 97.5 dark gray moldic
LS w/ a hint of
creamy LS in shoe.

97.5 - 98.5 head dropped down
CAVITY!!

98.5 - 103.5 caught first
part (1') of run Had
a hard piece of dolomite
jam inner barrel. Water
still passed through and
used the dolomite as a
drill bit.

18741
18738/203
GREENFIELD

18673/148.5
Lumber Co

8735/353
Boulder Co

H₂O run

103.5 - 104.5 cavity

104.5 - 106.5 - rubble, gray ls

106.5 - 107.5 CAVITY

107 - 108.5 DARK GRAY LS? w/
visible cavity space.

108.5 - 109 SAA

* Dark Green clay appears
to be the fill in void
space.

109.5 - 109.7 CAVITY

109.7 - 113.5 dark gray
ls or dolostone.went soft towards the
end of run and didn't catch it.
possibly more clay fill.113.5 - 115.5 dark gray
dolostone w/ clay fill.

BAD RECOVERY

115.5 - 118.5 SAA, but caught
some of the clay fill.
end day @ 5:30 pm18741
BR 7
18738/203
GREENFIELD18673/148.5
Inland CL18735/353
Grades PL

9.20.05 BC, LB Start day at 6am

Arrived at site to load water, trash pump pull start breaks again. Not Fixable!!

Head to Newberry, then alachua to get new assembly. Head back to site, load water. Examined core and discovered foram to indicate ocala.

TD hole @ 118.5'. Clean up site, pull NQ. Load equipment.

Thunderstorm moved in. ended for the day.
End day at 5pm

9-21-05 BC, LB Start day at 6am
prepare to grout.
used 4 bags of grout. Cleaned up site and started moving equipment.

See NEXT PAGE
* upon arrival @ site

CME Brakes Gave out!

Rig hours @ end of
Grove park hole:
2343

Mileage: 42676
end day at 6:30 pm

25

W 18673 NEW SITE

NAME: Lochloosa Creek Alachua Co

Lat: N 29° 38' 56.4"

Long. W 082° 09' 59.5"

~~Michigan~~

T 10S, R 21E, Sec 01

Set up new site and prepared
to core.

9-22-05 trash pump broke

9-23-05 LB PC start day at
make mud, Blk Blk (and)
Core!

0-5 gray to brown sand

5-8.5 clayey gray sand

8.5-13.5 gray to white

clayey sand.

13.5-15.1 Brownish / gray clayey
sand

15-18.5 Brown / gray clayey
sand.

18.5-23.5 Brown / gray sandy
clay

23.5-28.5 white fine sand
w/clay

28.5-30.5 white sandy clay
w/phosphate @ 22.5'

18741

18738/203
GREENFIELD

18673/148.5
Lochloosa Cr

18735/353
Boulder Pt

Had to stop coring. Hit
hard dolomite w/ extended
shoe.

Trip out NQ $\frac{1}{3}$ run 3" to
30'.

Just beat the storm.
Packed up, and returned
to hotel.

rig hours 2349
end day at 4:30pm

9-24-05 BC, LB

get #20, Start day at 6:00am
Trip in NQ, clean out hole.
Start coring.

30.5 - 33.5 Switched to
rock shoe, didn't recover
any sample. Put extended
shoe back on.

33.5 - 38.5 clay first 2.5"
pick up a sandy, phosphatic

Clastic sed for 4". Tight
Clay for rest of run. plugged
extended shoe off.

- put rock shoe back on

38.5- 43.5 Clay first 3",
then a limestone w/ phosphate.
grade back into clay at
~40'. Tight brown/gray
Clay.

43.5- 48.5 - tight gray clay
118.5- 53.5 limestone w/ fossils +
phosphate

stop 4:00

rig hours 2355

9-25-05 BC, LB

Start day at 7:00

53.5- 58.5 dolomite / LS? w/
green clay filling voids.

58.5- 63.5 poorly indurated LS
w/ green clay filling voids.

63.5- 68.5 LS w/ Lots of
Clay.

18741
ER 7

18738/203
GREENFIELD

18735/353
ER 7

68.5 - 73.5 weird ^{green slightly gray} clay
 very tight and dry.
 pieces of organics?? or
 black clay in matrix.
 grades into a gray clay
 ~ 70' then picks up olive
 colored clay @ ~ 72'
 very dry!!

73.5 - 78.5 Hard packed green
 clay to ~ 74'. Drilled like
 hard rock. picked up loose
 calcarenite w/ sand, clay +
 phosphate.

78.5 - 79.5 first 1" is tan clay.
 then followed by dolostone.
 last ~~1" of sample~~ 1" of sample
 is a tan dolomite.

79.5 - 83.5 - Sandy clay, w/ dolostone
 cleaned up site and called
 it a clay. 5' ^{1" in} _{15" BC}

rig hours 2359 which is
 impossible. Rig has been
 running non-stop.
 gauge is broken.

18741
 SR 7
 GREENFIELD
 18738/203

18735/353
 18741
 SR 7
 GREENFIELD
 18738/203

9-26-05 BC, LB

H2O run

Start day at 7:00 am

83.5 - 88.5 dolomite

88.5 - 93.5 shells (mollusc)

very rubbly, hard to catch.

last 1.5" clay (green).

picked^{NG!} up 40' off the bottom.

Casing in hole 30' of 3"

Cleaned up site. packed up
and left for TLH!

Return to TLH

Rig hours 2360

10.3.05

picked up int'l @ dealership,
loaded up and left for
G'ville @ 10:45 am.

- parked on I-75 10mi

N of G'ville bad accident.

Stuck for 3 hrs.

18741
18738/203
GREENFIELD

18735/353
Duke's DL

NEED FOR 10-3-05
MONDAY:

~~LOAD UP DUALITY~~

Quick Grouse

~~311 - ??~~ How many

$$H_2O$$

Gatorade

(3-4Q+s) Brake fluid for CME

* see if we can get brakes working.

Don't forget in Ken's office
New inner barrel tube
& core extruder

10.4.05 BC, LB

Start @ 6 am

load gas, H₂D. Mix mud.
trip NW back in.

93.5 - 98.5 Dolomite tan to gray
w/ Sand and Sand sized
phosphate.

'n 95.5 grades back into a dark clay.

@ 98.1 Dolomite

98.5 - 101.5

First 1.5' clay

grades back into dolomite

101.5 - 103.5 First 1' dolomite
grades back into a clay.

103.5-108.5 Clayey rock w/ sand
and phosphate.

possibly dolomite.

108.5-113.5 possibly dolomite
w/ Sand + phosphate.

113.5 - 118.5 Dolomite w/ Lots of Sand + phosphate. grades into Dark gray ~~gr~~ rock w/ lots of sand.

(cont.)

31

grades back into a
rock w/ hard dolomite in
the last 3" of run.

Had to hotwire the remote
ignition switch. Finally
gave out. Have to disconnect
battery @ end of day and
use the "kill switch" to
shut off rig.

Thunderstorm moved in
and had to sit in truck.
Back out of truck
resumed coring

118.5 - 123.5 Dolostone
w/ phosphate, Sand & Clay.
Storm moved in again.
Back in truck.
end day @ 5pm

18741
SR 7

18738/203
Greenfield

18735/353
D. W. Rader, Jr.

10.5.05 BC, LB

DAY 2 in the elusive
ocala formation hunt.

Start day @ 1am.

- get fuel for international
- H2O run

123.5-128.5 Dolomitic rock w/
sand & clay & phosphate128.5-133.5 Sand, clay, phosphate
1st 1'. Hard dolomite
w/ phosphate & sand.133.5-138.5 First 1' hard
dolomite w/ phosphate.
from 134.5 - 138.5 cavity
last 1" probable cavity
fill that I couldn't catch.

138.5-143.5 1st 1" dolomite

139' - Top ocala!!

139-143.5 ocala

143.5-148.5 ocala TD
RAINING!!~~#1 White dolomite with black
and then some #1. stops!~~# on the last run, we pulled
out a sample and found18741
18738/203
GREENFIELD18735/353
D. R. R. R. R. R.

the front diamond end of the bit. I thought I somehow did it, but upon examination of the pieces it looks like it literally broke apart. probably on the extremely hard dolomite from the previous run. Diamonds are still intact on the pieces. Weird.

- Tripped NQ out of hole.
- ran trimmy down.
- prepped for grouting.

~ Sarah came @ 12:30pm
picked up green trailer
and core.

- ~~ran~~ # H2O run
 - Stormed out.
- Returned to hotel at 5pm.

18741
SR 2
GREENFIELD
18738/203

18735/353
SR 2
GREENFIELD

34

10-6-05 BC, LB
6 am start

6 am start

H₂O van

- H₂O run
- grout 4 bags used
- clean up, load up
- Back to TCH
- return to whse @ 3:30 pm

18741
ER 7

18738/203
Greenfield

18735/353

$$\begin{array}{r} 71.6 \\ 68 \overline{) 1900} \\ \underline{18} \\ 10 \\ \underline{8} \\ 40 \\ \underline{26} \\ 14 \end{array}$$

3.22.06

SRWD Gate: 1001
Steven Foster Gate: 4562

$$\begin{array}{r} 11 \\ 16.47 \\ 23.81 \\ \hline 402.8 \end{array} \quad \begin{array}{r} 1 \\ 42.81 \\ 61.90 \\ \hline 104.71 \end{array}$$

W- 18735

35

NAME: CONE BRIDGE ROAD CORE

S 30 CCAC T ØIN RITE

LAT: 30° 27' 30.8"

31.6 min Avg

LONG: 82° 39' 33.3"

ELEV: 116'

TD: 353'

COUNTY: COLUMBIA

QUADRANGLE: BENTON

3/27 Steve Petrushek / Dave Paul 7:30am
depart warehouse ~ 8:30am

0 - 2.5' brown med-gr. sand
2.5' - 5.0' brown organic med-gr. sand
5.0' - 8.0' poor rec. br. slightly clayey sand
8' - 13.0' sand to clayey sand w/ blebs of
clay + chunks of limnic sandstone;
then clayey gray sand
13' - 18.0' gray clayey sand
18' - 23.0' gray/mottled w/ or. + white clayey sand
to lt. olive gray sand
end day 8pm. rig hrs:

18735/353
Cone Bridge Rd

18741
18136/203
GREENFIELD

TH @ ~37' →

3/28 start day 9am (broke camp)

36

ADV 25' 3" CSG. (less stickup)

23'-28' lt. olive green-gray to orange clayey sand.

28'-33' poor rec. olive gray clayey sand

33'-38' lt. or. sand w/ or. clay blubs to olive gray clayey sand, then phosphatic-clayey sand ~ last foot.

TH?

38'-43' olive gray phosphatic sandy, clayey sand

- ADV 3' CSG to 45' (less stickup)

43'-48' olive dk. gray phosphatic, clayey sand

48'-53' AS ABOVE, poor rec.

saved some cuttings from reinforcement + subsequent plugging of inner barrel

53'-58' dark gray phosphatic clayey sand

end day 7:50pm

rig hrs. 13.0

3/29 ————— 8am —————

58'-63' sharp break into phosphatic-pebble rich LS, bryozoa, molluscs, barnacles.

18741
SR 2
18738/203
GREENFIELD

LOST CIRC. →

37

ADN. 3' CSG to 65' (less stickup)

63'-68' NS recovered. collected a representative sample of cuttings phosphatic/qtz sandy clay samp.

68'-73' alternating layers of phosphatic/qtz sand with LS excellent rec.

73'-78' plugged shoe early in run; washed remainder of 5' run. phosphatic; qtz sandy LS.

78'-83' phosphatic + qtz sandy LS interbedded w/ cleaner limestone; washed out same unconsol. sands in upper 4'. lower 1' was solid core, PO₄ + Qtz sandy LS

83'-88' olive gray phosphatic sandy clay to brecciated hard LS w/ gray clay clasts

88'-93' waxy-moldic redd LS on blue-gray clay, then friable fine gr. clay/silt.

93'-98' Plugged off due to cuttings accumulation inside inner barrel.

rights : 20.1

end day: 7:30 pm

18741
SR 2
18738/203
Greenfield

TO GET:

- EZ Mud
- 3" casing
- drill rod
- feed valve
- ext. shoe backside piece
- grant
- tub for granting.

3-27	7:30am - 8pm	12.5 hrs
3-28	9am - 7:30am	10.9 hrs
3-29	8am - 7:30pm	11.5 hrs
3-30	7am - 8pm 1hr lunch	12 hrs
3-31	7:45am - 7:30pm	

3/30 — Stone, Dave 7:00am 38

fuel 6017 + fill gas cans

PCS tour

ARR. site ~ 3:30pm

98' - 103' dark gray clay into ~ 1' bed
black rock then med-gray
sandy clay.

103' - 108' med-dark ~~to~~ gray friable clay
into green-gray sandy clay @ end of run

108' - 113' green-gray sandy clay to light gray
sandy clay

113' - 118' lt. gray LS into green gray clayey sand,
then lt. gray clayey sand into
brecciated zone w/ dolomite?

118' - 123' brecciated / laminated LS for 3" then
sharp contact into green gray clayey
sand / sandstone // ~~at~~ sandy clay.
w/ some phosphate clasts.

* note cored 25' in 3 hrs.

rig hrs 23.1

end day 8pm

3/31 — Stone, Dave 7:45am

Rig FAILED TO START... hrs 23.8

searce site; depart 5:17pm end day: 7:30pm

18741
SR 7
GREENFIELD
18738/203

State Park gate: 4679

4/10/06 DTP & SP 8am

39

123'-128' blue green clay / LS unit w/
phosphate pebbles

128'-133' blue green clay into bluish-gray
phosphatic clayey sand back to
calic blue-green clay.

133'-138' blue-green dry, friable clay/mudstone
drilled with low H₂O PSI; high feed in
5th gear

138'-143' phos. + glz sandy blue-gray sand
to sandy clay.

143'-148' blue-green clay.

148'-153' blue-green clay to limestone / LS -
cemented sandstone

RIG HRS 28.6

END DAY 7pm

4/11/06 _____ 8am

153'-158' blue green clay then gray clayey sand +
sandstone. 153' with clay, then gravel
sandy LS, then clayey sand

158'-163' lost some sample @ beginning of run
in clayey sand, then sandy/clayey
Limestone / Dolomite

18741
18738/203
GREENFIELD

- 163'-168' successic dolostone, friable tan
 168'-173' dolostone with a clay layer @
 ~ 170' then more sandy dolomitic LS.
 173'-178' clayey ol. gray sand into blue-green clay,
 then sandy LS again.

→ water trip.

- 178'-183' gray sandy LS
 183'-188' SAA
 188'-193' SAA, brecciated
 193'-198' gray sandy LS / dolostone, fossiliferous
 moldic to gr. brown dolostone
 198'-203' gr. brown phos. + qtz sandy LS / dolostone
 203'-208' dk. gray clayey + phosphatic sand
 into sandy carbonate again
 208'-213' gray qtz + phos. sandy LS, brecciated
 after 210'

rig hrs : 36.1

endday : 8:25

rig hrs 43.9 hrs. →
 to TX 11:30pm

4/12/06

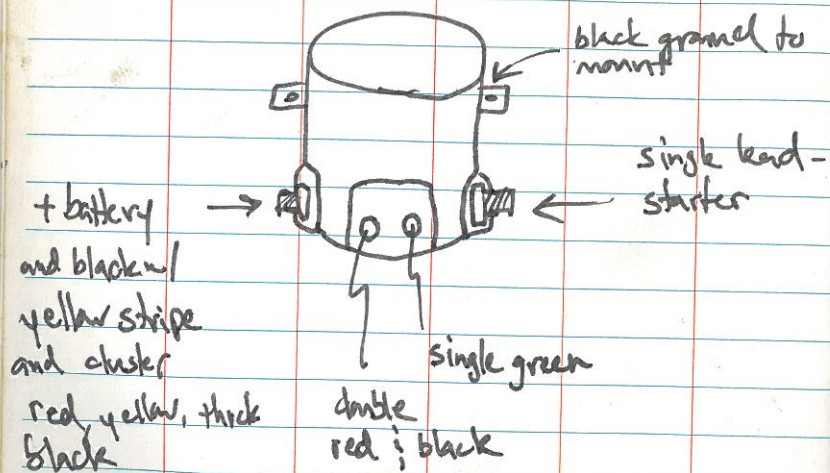
SP DTP

Sam

18741
 SR 7
 18738/203
 Greenfield

- replaced ignition module →
- replaced ign. mod. harness plugs
- replaced battery cables
- adjust chain tension on start box
- grease slide

CME TRUCK SOLENOID



42

4-13-06 ——— SP, DTP ——— Sam
"RV MAINTENANCE"

283'-288' gray packstone
288'-293' gray packstone into finer laminated LS, then dolomite? cavern wall + fill // breccia into dark gray dolomite then creamy LS followed by green-gray chert + finally rexd LS in shoe.

293'-298' brecciated + rexd LS / dolomite; kst ~1' moldic fossiliferous + rexd.

hrs: 46.5

end day: 9:30pm

4/14/06 ——— SP, DTP ——— Sam
RV ELECTRICAL PROBLEMS!

298'-303' rubble fossiliferous dolomite

303'-308' SAA

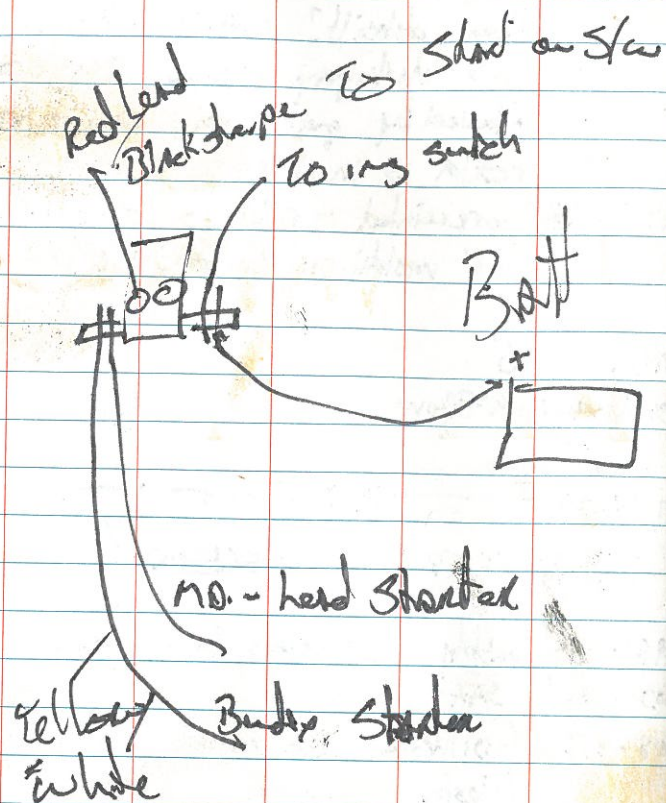
308'-313' fossiliferous wackestone / packstone to dolomite

313'-319' gray packstone to grainstone, soft but indurated LS.

end day: 10pm

rig hours: 49.5

18741
SR 7
18738/203
Greenfield



Should we wire ~~lead~~ lead to
Stand post on my switch to
Red leads (in wire unit) on my
harness

4-24-06 KC Steve Petr. 43

9am start

Fuel, water, rig starts
right up.

- 318-323 grey var fossilif ls
323-328' mostly grey crin. ls.
ls. fine fossils burrow etc
328-333' lt grey/brown fossilif ls.
muddy matrix
333-338' lt grey fossilif ls. burrowed
btr 1/2 more clayey than upper
338-343' lt grey var fossilif
ls. soft zone ~ 1' down
343-348' as above - finer -
more calcareous
348-353' - top half crin. ls.
btr primarily v. s. gr -
out of water 5:20 pm
end day 6:30 pm
353' TD

4-25-06 7:45 start

taxi travel from dar S.P. for
Ranger station
to work

Pull NQ by 10:15

1001 gate
Combo Cone Bridge

1 1/4" pvc ftg
pvc glue
primin
long bsta
scrub brush
2" VALVE

Bob Hecke - SRWMD



gate

7393

pump to box 15 bags
Quik graft
(not quite 4 borehole
volumes so far)

unload grout, sort tremmie^{.44}
need pvc ftg - to wht. spgs
+ back pump 6 bags Quik
grout

leave site 6:00 pm

END Day 6:30 pm

4-26-06 - 8:15 start after
breaking camp

SWC 46.6' BTOC - ~2' NW

ran tape to tag top of grout
- tape went full 300'

w no sign of grout
wash in 3/4 bag bentonite chips
sd top at 300.6' btoc

pump 2 bags quik grout - tremmie
to 290' - first bag did not
reach bot of tremmie, second did
- thunderstorms - wait in truck

pump 7 add'l. bags quik grout
to ~ 55' bw out of grout
=

Call Bob Hecke got ok to leave
region site

18741
LR 2

18738/203
GOENF, old

Leaving site 4:20 pm
End day 6:45 pm

45

5-1-06 BC, JH

BC Load up leave w/H
w/H @ 7:45 am.

Stopped, and got fluids.

~~On site @ site trip over 5' BC
and grout.~~

Tagged bottom @ 37.5'
trip out 3" casing
difficult to pull out. Casing
filled with grout.

Tagged bottom @ 14'.

Cleaned up, mixed grout
in a bucket.

Packed up site, dropped
drill rig off at SRWMD.
returned to whse 7:45 pm

18741
SR 2

18738/203
GREENFIELD

W:

NAME: Greenfield Core

Lat: 30° 17' 31.5"

Long: 82° 35' 56.1"

Av. Speed 11.3

S 27 DCAB T 2S'

R 17E

County: Columbia

Elevation: 126'

TD: 203'

QUAD: Deep Creek

grease
~~toothbrush~~ wire brush
hammers
paper towels
~~staples~~
Staples
~~trash~~ Bags
Sye
Machetti
ax

5-30-06 BC, LB

46

7 am start Load up
truck, misc paperwork,
leave warehouse @ 8:30 am.
Head to site. Hard to find!
Picked up drill rig from
SRWMD.

Set up site after recon.
got water.
ended day @ 4:15 pm.

5-31-06 BC, LB 10 am start
Mix mud and hurt down
needed tools.
Start drilling!

0-3.5 → NS
3.5-8.0 Sand @ 5' w/ blue clay
8-11 Blue clay
11-13 washed out sand
ran 13' of 3" casing
Hydraulic chuck is giving
us problems.
13-18 gray clay
18-23 Sandy clay
poor rec. last 6"
yellow clay

18741
SR 7
18738/203
Greenfield

12
From
Hyd. filters
pk 47

5-31-06 cont

47

Storm moved in.
packed up and headed
for lowes.

end day @ 4pm.

6-1-06 BC, LB (can start
- load H₂O

- wash back down to bottom

23-28' Sand + top lost it.
poor rec.

28-33 sandy clay that is
impossible to catch.

last 1' clayey limestone.

Run casing to 33'.

33-38 more soft sedls lost.

last 1.5' of run caught
rubby clay.

38-43 rubby clay to a

Soft clayey sand.

possible cavity.

poor rec.

Ran casing to 45'

Having issues w/ Hyd.
system.

18741
50234

Hydraulic pump

Motion Industry motor
distributor: Permco
Model: P5000 B5315 PL/1232

↓
Under it: SPL/A 101 or SPL 7A101
Serial # AL 10-4867P

6-1-06 cont

48

* when pump is running
(H₂O) we can't use
anything else hydraulic.
checked fluid. Half full!!
Made run to napa
to get Hyd. fluid.

Back to site. didn't help.
- thunderstorm moved in
so we went back to
napa and got filters.
Ended our frustrating day
at 4:15 pm!!

6-2-06 BC, LB team start
* changed filters, didn't
help. greased head & cored.

43-48' first 2' of run washed
out by 3". Remaining
45-46.5' Rubby clay
last 1.5' soft sand
couldn't catch.

Hydrocarbon

6-2-06 cont

49

put back on extended shoe

48-53' gray clay w/ ~~intermittent~~
soft seds in b/w.

53-58 Soft clay + sand,
greasy clay + then
possible dolostone.

58-61 NS drilled well, but
she gave me nadda!
put back on extended shoe.

61-63 dolostone/silt
w/ clay nodules.
extended shoe, bad idea!
jammed it w/ rock.

63-68 hard clay? (gray)
moved into soft clay.
last 1' dolosilt

68-73 good rec!! dolosilt w/
sand

73-78 SAA

Cleaned up site called it
a day! @ 4:30 pm

18741
SR 734

6-3-06 BC, LB 6am start 50
Loaded H₂O

mixed mud, cleaned out hole.

78-83 dolostone w/sand

83-88 SAA

88-93 SAA

93-98 SAA

98-103 Sand, clay, fossil hash
Semi consolidated.

103-108 top of run dolostone,
@ 105 moved into a
looser sand, mollusc
hash.

108-113 Back to dolostone.

@ ~110' Chert!

back into dolostone.

Ran casing to 115' less
stick up. (113')

Needed to case off to

keep sand out.

tripped 100 back in + cleaned out
cleaned up, packed up
ended day @ 6pm.

NEXT WEEK!

- ① Gas ^{↑ Cans} for CME
- ② Box Supplies
- ③ Stapler (New)
- ④ Blocks
- ⑤ EZ MUD
- ⑥ Small 1 1/4 hose.
- ⑦ 5 gallons hydr. oil
- ⑧ 3" Casing
- ⑨ New field Book

- 6-4-06 BC, LB start team 51
- Load H₂O
 - Clean out hole
 - Mix mud.

- 113-118 6" of dolostone @ top.
grades into a semi
consolidated sand. last 6"
phosphate, sand, + limestone
rock? Very slow drilling.
- 118-123 Sandy rock, grades
back into a possible
dolostone. Last 1' Clayey
hash. Friable.
- 123-128 First 1' mollusc
crap rock. Grades into
a sandy clay.
- 128-133 Sandy clay! Bad!
Not enough casing to
run. 100% recovery.
- 133-138 top of run, rubbly
sandy clay, moved into
possible cavity fill.
last 1' of run hard
dolostone/limestone.
put X block in middle.

6-4-06 (cont.)

52

138-143 poor rec. top of
run soft sandy sedts,
Middle of run hard
rock (dolostone) Lost
circ.

Mixed heavy quick gel. Not
helping returns.

drilling has been very slow.

143-148 Clayey sandy sample.

Dark brown, almost black
clay inner mixed. Last
6" hard limestone w/
fossils.

Lost most circulation.

Drilling is slow.

took until 1:00 pm to get to 148'

★ 148-153 dark black clay @
top of run graded into
dolostone. Last 1'
gray grainy grainstone
full of forams.

5.30	10.25
5.31	10.0
6.1	10.25
6.2	10.5
6.3	12.0
6.4	12.0
6.5	

6-4-06 (cont)

53

153-158 foram gray
grainstone.

158-163' SAA, last 2' of
run not caught.

In shoe was a black
greasy clay, thin laminate.
poor recovery.

Spotted a lep @ top of
run.

163-168 poor rec. very fine
unconsolidated grainstone
followed by a foram hash.

168-173 poor rec. Foram hash
until 169.5, hard
dolostone graded back
into foram hash.

* No circulation.

pulled 60' of NQ
and hung out 20' so
we are inside 3" casing.
Clean up, load up.

End day @ 6pm

18741
BR 234

6-5-06 BC, LB 6:50 am start
checked out of Hotel.

Went to site, secured it,
and headed back to tally.
Returned to whse @ 11:30 am

6-19-06 DP & SP met @ whse 7:30 am
level rig, set NA on bottom, & start bp
10' csg. trip out NA to inspect bit, seems
OK really. rounded outer face surface,
gang stones OK, diamonds proud. Trip-in
as is. Top of 5 gal hydr. fluid.

173'-178' olive-green wackestone? 1 black
phosphate pebble some LS rubble
to gray wackestone with s & cuttings?

178'-183' gray wackestone 100% rec.

183'-188' gray packstone/wackestone forams,
molluscs 100% rec.

188'-193' red hard LS, molluscs dark gray
to *Lepidocyclina* packstone

193'-198' gray lep. rich packstone to
creamy white wacke/packstone

clean up & secure site end day: 8:45 pm
rig hrs 93.5

USED:

5 bags grout
2 bags hole plug

NEED:

full start cards for
grouter; trash pump, plus
1 extra per unit as repair-
in-field

Ed Christie @ Steve Foster St. Park

→ Sandra Cashe asst. Park Mgr.
386-867-1637
has ig. keys to CME

6-20-06

DP, SP

6:15am

55

198'-2005' difficult drilling, high H₂O psi
gray & creamy rockstone

200.5'-203' SA, inc. pebbles

203'- *refusal* plugged bit. tripped out, bit
is TOAST. repl. bit + reamer shell

rig hrs 98.4

end day 6:30pm

6-21-06

DP, SP

6:30am

grouting day 203' hole TD
113' 3" csg
~90' NG hole

- pumped 5 bags grout, up to 25' BLS
 - used hole plug to bring grout up to surface:
 - topped w/ cuttings 2 bags
 - hose grout out of csg
- end day 6:00pm

rig hrs:

6-22-06

DP, SP

8am

-clean up / loading / abandon site
arr whse 3pm

18741
LR 234

T15, R 17E, Sec 23 cdd
LAT 30° 22' 59.52" #
Lon 82° 34' 41.88" NAD83
Elev 126'
Columbia Co
Rig miles 43176
Hrs 106

18741

FR 234/43' 56

7-18-06 CB, LB

plu rig @ STEPHEN FOSTER
STATE PARK FUEL UP. H₂O UP.
ARRIVE @ SITE, SET UP.
MIX EZ MUD

- 0-2.5 DK BRN ORGANIC SAND TO 2.25.
2.25-25 LT. BRN / GRAY CLAYEY
SAND
2.5-6 GR. CLAYEY SAND.
6-8 GR. CLAYEY SAND.
8-13 GR. CLAYEY SAND.
13-18 GR. F. SAND TO 16 16-18
GR. CLAYEY SAND
18-23 GR. F. SAND
23-28 GR. F. SAND TO 23.5 GRN SANDY CLAY
TO 27. GR. PHOSPHATIC CLAYEY
SAND TO 28
28-33 GR. SANDY PHOSPHATIC CLAY
33-38 AS ABOVE LAST FOOT (37-38)
GR/BRN BRECCIA SAND
38-43 GR/BRN BUTTE BRECCIA SAND
TO core / LS 1175H

18741
FR 234

7-19-06

OS, LB

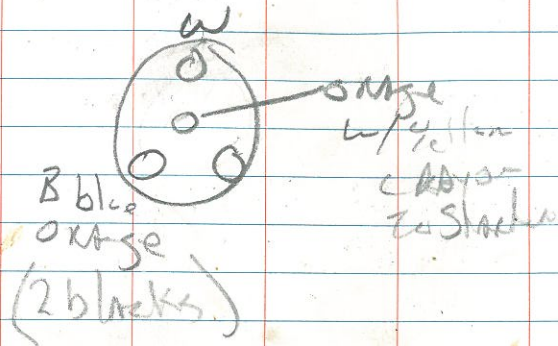
60 57

SANDLOCKED. CABLE RUPP, TI
LOWES TO GET CABLE CLAMP.
RAN TO SEAL, GET UP SANDLOCKER
CONE RAKE PAUL TO SEE HOW DOOR
TO DRUM. D.P. RAN 73' IS
GOOD MISS PPS FOR RUN
TO H₂O TOWER, GUST. CLEAN UP
DRUM RAN TO HORTON'S ON E 90
E OF LAKE CITY

607
INT
12241

73.5' of pipe

ing Switch



F2TE-6015-BA

CAATD Mark
575 8655

Craig or Jim in Secures

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.

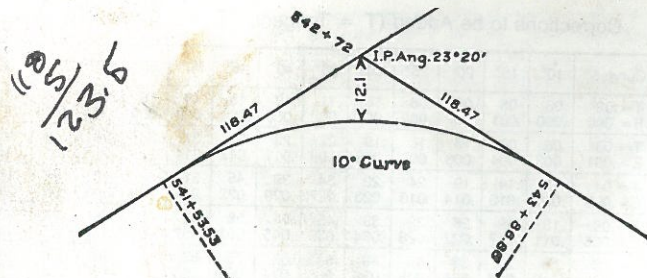
(If corrected Ext. is required find in same way)
Ang. 23° 20' = 23.33° ÷ 10 = 2.3333 = L. C.

2° 19½' = def. for sta.	542	I. P. = sta.	542 + 72
4° 49½' = " " "	+ 50	Tan. =	118.47
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 FRONT AXLE

N54-3200R1110

NK34? 0781

DATE 10-4-84

FORD HOUSING

ROCKWELL INTERNATIONAL

MODEL FD8S75CHX10

E4HS 3062-DA

SERIAL# KK 8453120

RATIO 683

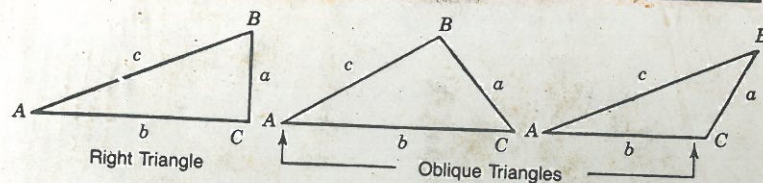
DATE 17-4-84-01

A93121-E-967

Serial# KN 00165N879

DATE 17-3-84

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

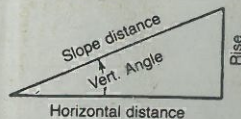
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{a}$, $\csc = \frac{c}{b}$

Given a, b	Required A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given A, B, a	Required b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$, $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2} A = \sqrt{\frac{(s - b)(s - c)}{bc}}$, $\sin \frac{1}{2} B = \sqrt{\frac{(s - a)(s - c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{b c \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX, $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ ft.
Horizontal distance also = Slope distance minus slope distance times $(1 - \cos \text{vertical angle})$. With the same figures as in the preceding example, the following result is obtained. $\cos 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.

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.

