"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

Name Cedric Cascio
MagnaCore Drilling
Address 906 W. McDermott Dr., #116-313
Allen, TX 75013
Phone 972/881-7200

Project Oklahoma Poles Lumber Co
Broken Bow, OK

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	MagnaCore	
	Cedric Cascio	
	Apex Geoscience	
	Ed Wilson (Driller)	
	BAH	
	Wally O'Rear	
	EPA	
	Rob Luschek, Rick Ehrhart	

 9/20/10 OKPL, Broken Bow, OK

0745 arrive at OKPL with apex.
waiting for BAH, EPA at front gate.

0900 Set drill rig up at MW-11

0910 Begin drilling (CMESSO Truck rig).
34° 01' 25"
94° 43' 36"

MW-11

0-1 Tan sd, ~~med~~ fine gr, dry, loose
some roots

1-6.5 Orange & tan sand; dry; roots,
semi-cemented

6.5-7.5 Same, but cemented

7.5-8 red & lt gr clayey sand,
soft, slightly moist

8-9.5 Orange sand, trace clay,
sandstone ~~sandstone~~ fragments
slightly moist

9.5-10.25 Red, dry & lt gray clayey sand;
10.25-11 " " sandy clay
11-12 " " clayey sand

12-14.5 Lt brown, lt gray, red
sandy clay, dry, hard
sandstone lense 13.5'
(1/2")

14.5-15.5 Yellowish orange sand, loose,
sandstone fragments; gray sand
concretions; moist-to wet

15.5-25 Reddish orange sand; saturated (Fage)
to orange

All PID readings 0.0 ppm

Set the well at 25', 15' screen,
but due to flowing sands need to
ream bore hole and re-set well.

Set monitoring well @ 25' (screened to 10')
Sand to 8', bentonite to 6", cement grout
to surface

well is 2" diameter stainless steel

screen (10'-25') is 0.010 slot

Apex constructing well as above-ground
completion

OKPL - Broken Bow, OK 9/20/10

Apex installed 3 4" Ø steel bollards around 3'x3' concrete pad.

Apex introduced ~25 gallons of potable water to help w/ installation due to flowing stands

1515 Drill crew leaves site. (Apex)
Deconned augers at concrete pad near process building.

Drums

well
1 decon water
2 soil
2 empty for purge water

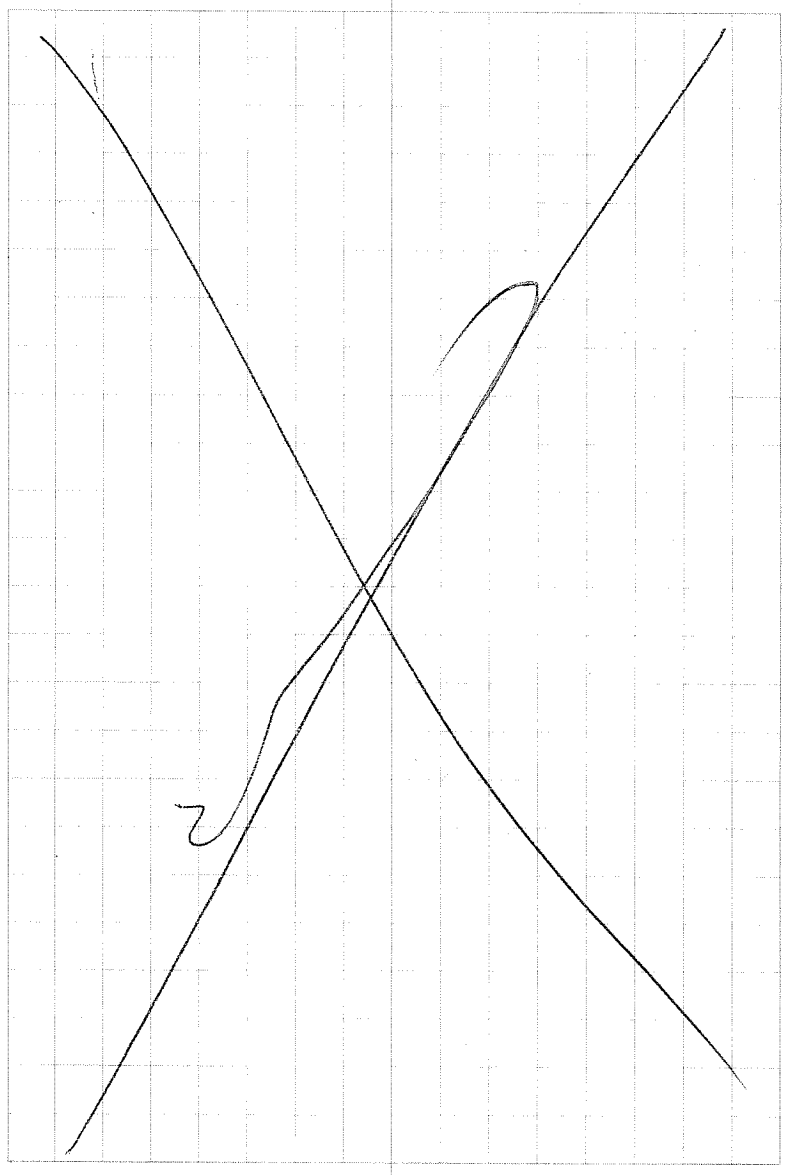
1 water
1 soil
DPT 9/22

1600 MagnaCore depart site ——— ~

* remaining stainless steel:

2"x10' riser : 4
2"x5' riser : 5

* we used: 3 2"x5' screens (1 w/bottom)
1 2"x10' riser
1 2"x5' riser (for stickup)



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	Huffman Wood Preserving/ Oklahoma Pole and Lumber Sites	
	Broken Bow, OK	
	EPA Task Order - R6022	

Wally O'Rear 9/20/2010

09/20/2010
Broken Bow

Huffman

0750 Arrived @ Oklahoma pole & Lumber. Wally O'Rear, BAH, Cedric Cascio, Magnacore and Apex Geosciences personnel were present.
Temp 70 °F light wind clear skies
Rick Ehrhart, Robert Luchock, EPA arrived.
We met with Jesse Barns, OPL, Plant Manager.
OPSL EPA selected site to drill boring hole
0901 Photo #1 Photo of drilling setting up in specified area. Looking East
0917 Photo #2 Photo of drilling activities looking W.
0920 Completed 1st 5 feet of drilling
0920 Photo #3 1st Core
TOC to the left. Looking down
0935 Completed 2nd Core
0938 Photo #4 Photo of taking VOC readings from Core 1 & 2. Looking down

Wally O'Rear 9/20/2010

9/20/2020

Huffman

Broken Bow, OK

0951 Photo #5 Photo of core #3 Looking down @

PID Reading of Cores 1 + 2 were 0.00 ppm @

PID Reading of Core #3 was 0.00 ppm. @

1005 Read 20 ft drilling and hit the top of water zone.

1015 Photo #6 of Core #4. It is the red soil we are looking down. @

PID Reading of Core #4 was 0.00 ppm. Water zone @ 15.5 ft. @

There is 15 ft of screen

Total Depth is 25 ft. bgl

1020 Photo #7. Photo of Core #5. @

PID Reading of Core #5 was 0.00 ppm @

The drillers encounter flowing sands

GPS Reading 34.02360
-94.72682

Well #11 is the well number for the

Wallace O'Rourke

Willy Dean
9/20/2010

9/20/2010
Broken Bow OK

Huffmer
new Well.

GPS Reading for 6A is 34.02334
94.72684

GPS Reading for 6C is 34.02334
94.72680

GPS Reading for 7C is 34.02318
94.72676

1430 The well is completed
1530 The bollards were painted yellow and the concrete is being poured. Photo #8
1600 left facility
1630 went to Huffmer to look at sampling locations for Wednesday
~~1020 The team started to move the pump down two feet and then up two feet.~~

Willy Dean
9/20/2010

1020 The team started to move the pump up ~~a down~~ @ two feet and then down two feet.

Wally O'Rear
9/21/2010

9/21
Huffman Broken Bow

0800 Arrived at facility
Weather 70°F light wind and Clear Skies.
0810 Arrived @ MW
0820 Water level 15.95
Total Depth 26.60
Wally O'Rear, BAH, Rick Ehrhart, Robert Luschick, EPA are on site
0930 Ended Bailing
Water Level 16.01
0945 After pump started pumping rate 1400, water level 17.01 ft
0950 WL 17.15
0954 Flow rate is 1400 mL/min
1000 TOC 17.19
1035 Water level 17.25
1043 Water level 17.29
1110 Water level 17.36
1118 Water level 17.36 - FR 425 mL/min
Turbidity 12.5
1130 Water level 17.36
12:00 Completed development of well #11

Wally O'Rear 9/21/2010

9/22/2010
William O Ron

9/22/2010
Broken Bow

Huffman

0800 arrived at site and met ODEQ + EPA personnel.

0810 Went from Huffman to ~~ODEQ~~ Oklahoma Pole to see the new well for ODEQ.

0820 direct push (Mangancore) personnel arrived @ site

Temperature 75°F, partly cloudy light wind.

0840 Started marking locations

B-1 locations GPS	34.02245 -94.73257
B-2 - GPS	34.02251 94.73280
B-3 - GPS	34.02259 94.73306
B-4 - GPS	34.02271 94.73319
B-5 - GPS	34.02287 94.73344
B-6 - GPS	34.02287 94.73368
B-7 - GPS	34.02325 94.73384

William O Ron 9/22/2010

William O'Ren 9/22/2010

9-22-2010

Huffman Broken Bow

B-8 GPS under trees
no reading
34.02311
94.73403
was able to move
three feet east to
get reading

B-9 GPS 34.02327
94.73402

0925 - Photo # 2 Photo of
borings from B-1 on the
left is 0-4 and the right is 4-8
0930 a water level was placed
down the hole and the hole
had caved in @ 5 feet. No
water was detected.
0940 left Huffman to go to
Oklahoma Pole & Lumber MW11.
The ODEQ personnel will take
sample @
0945 Photo # 3 Photo of purge
water drums (2). Looking SW
0950 Photo # 4 Photo of MW11
and (2) drums of drilling mud

William O'Ren 9/22/2010

Wally O'Ren
9/22/2010

9-22-2010
Broken Bow

Huffman

0955 - Took PID reading of well head. A high reading of 1.0 ppm.

9/22/10 10:05 a.m.

Taped depth to water - 16.0'
Total depth of well 26.7' - some mud at bottom, depth unknown
→ From Top of casing.
TOC ≈ 2.8' above ground level
Wally finished de-con on pump, installed pump in well at 10:20. Pump intake set at approx. 21.0'. W.L. still at 16.0'.
Pump started at 10:27. (Well was purged to 6 NTU on 9/21/10, so full purge not needed).
- Pumped approx. 3.0 gallons ~~as~~ to make sure we had fresh water. Pump set at approx 1.0 L/MIN.

(W) Ran out of Gas @ 10:30
Placed Non Hazardous labels on

Wallace O'Ren

Wally O Rear 9/22/2010

9/22/2010
Broken Bow

Huffman

Drums. Both Drilling mud + Purge Water

DAB Got Gas, restarted pump at 10:55. pump rate approx. 1100 ml/min Some Turbidity, elected to purge until NTU dropped.

- Took soil sample from waste drums used to collect boring cuttings, for characterization Sample taken at 11:05 am.
- Purged well untill 11:15, water dept at 16.95.

Completed sampling (sample + duplicate) at approx. 11:30. De-conned pump & tape, closed well, packaged samples & placed in Ice Chest.

(W) 1200 left Oklahoma Pole and returned to Huffman

B-10 GPS — 34.02307
94.73376

~~Photo #5~~

1202 Photo #5 Photo of purge water drums from previous sampling activities

1210 Placed Labels on drum

(W)

Wally O Rear 9/22/2010

Wallace O'Rear
9/22/2010

7/22/2010

Huffman Broken Bow

There is a drum of soil cuttings and a drum of ~~purge~~ decon water at Huffman. Labels were placed on drums.

Photo 6 - Photo of sampling locations at Huffman B-3 thru B-6

1645 left facility @ Huffman

1700 Purchased Ice for samples.

Wallace O'Rear
9/22/2010