

APPENDIX B
LOGBOOKS

SOKKIA

9403-010-0100

HENNING II

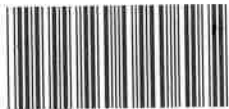
**FIELD
BOOK**

①

Property of ICON Environmental
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815260



INDEX

Boardwalk/Texas Gas
- David Richard

Wayne Landry/
- lease holder
337.319.3779

KC

10.28.19

11:50 On site

- mm & om on site conducting
EFEM survey

HET: Todd Webb

ERM: Shawn Wiggins

Patrick Baldwin

Wayne Landry (current leaseholder)

Boardwalk: Drake LeJeune

11:15 Scouting proposed boring
locations

1:30 LUNCH

14:20 Back on site

14:30 ~~Flagged~~ all locations

Flagging

~~14:35~~ Leaving site

1:40

KC

Kc,

10.29.19

0830 On site

Kc, JC, DW, MJ

mm & cm conducting GEM
survey

Jerry Fontenot, Wayne Landry

ERM: Patrick Baudoin

MET: Todd Webb

0910 Eteoprobe on site

- unloading equip

1000 Setting up on first location

1024 Testing HPT & EC comp.

- Wenner

1045 Stringing up HPT pipe

1100 Retesting

- Failed, restringing after lunch

1120 LUNCH

1225 Testing other HPT tool & probe

- Fail

1235 Testing EC probe & comp.

- Bottom Dipole

1325 Entering w/ EC probe to 60'

10.29.19

H-1 Probe

| Depth | [mS/m] EC | * H-1 Zip |
|-------|--------------|-----------|
| 2 | 57 | |
| 4 | 445 | |
| 6 | 454 | |
| 8 | 443 | |
| * 10 | 521 | |
| 14 | 372 | |
| 18 | 140 | |
| 22 | 131 | |
| 26 | 200 | |
| 30 | 184 | |
| 34 | 254 | |
| 38 | 204 | |
| 42 | 194 | |
| 46 | 262 | |
| 50 | 132 | |
| 54 | 326 | |
| 58 | 226 | |
| 60 | 273 | |
| 62 | 277 | |
| 64 | 154 | |
| 68 | 199 | |
| 70 | 289 | |
| 72 | 257 | |

TD @ ~73'

10.29.19

1400 Moving adj. to EC hole to soil sample to 40'

1415 Entering w/ 2.25" & cutting shoe

H-1

WTM: 0508288
NAD83: 3327845

| Lith | Rec | Ec | PI0 | |
|------|-----|------|-----|--|
| 0 | | | | |
| 4 | 2.5 | 1.36 | 0.0 | SiH top 3", Silty CLAY |
| 4 | | 6.36 | 0.0 | dk brn to gray w/ Fe |
| 8 | 3.2 | 7.04 | 0.0 | SAA, Ca @ 17.2', Fe |
| 8 | | 8.04 | 0.0 | stain throughout, blk stain ^{Fine sand} |
| 12 | 4.0 | 6.29 | 0.0 | Fine sand @ top 4" CLAY ^{brn} |
| 12 | | 8.15 | 0.0 | SiH lenses from 0.4-1.7' shell frags @ 2.4-3" |
| 14 | 4.0 | 7.08 | 0.0 | CLAY w/ SiH lenses, @ 2.4-2.9' |
| 14 | | 5.47 | 0.0 | stiff gray w/ Fe stain |
| 20 | 2.7 | 4.63 | 0.0 | CLAY w/ damp Silty CLAY lenses |
| 20 | 1.7 | 4.96 | 0.0 | gray, md stiff, bright yellow stain |
| 24 | 3.8 | 3.23 | 0.0 | H brn CLAY Fe stain, @ 23-21 |
| 24 | | 2.65 | | |
| 24 | 2.3 | 2.55 | 0.0 | md stiff Silty CLAY @ 22' |
| 24 | | 2.47 | | |
| 24 | 2.6 | 2.85 | 0.0 | Silty CLAY, damp, md soft |
| 24 | | 3.30 | | |
| 28 | 2.7 | 3.75 | 0.0 | H brn / gray, stiff @ btm |
| 28 | | 2.48 | | |
| 28 | 3.2 | 3.45 | 0.0 | SAA, Fe & blk stain, siltier w/ |
| 28 | | 3.45 | | |
| 32 | 2.2 | 3.06 | 0.0 | depth "Clayey SILT @ 30', nodules |

10.29.19

| Lith | Rec | Ec | PI0 | |
|------|-----|------|-----|--------------------------------------|
| 32 | 4.0 | 3.62 | 0.0 | CLAY brn, Fe & blk stain, stiff |
| 32 | | 3.99 | | |
| 34 | 4.0 | 2.40 | 0.0 | CL. SILT @ 3.5', damp, soft |
| 34 | | 2.03 | | |
| 34 | 2.6 | 1.91 | 0.0 | Silty CLAY / CL. SILT, inc. moisture |
| 40 | 4.0 | 2.08 | 0.1 | w/ depth Silty SAND sat. @ 38' CLAY |
| 40 | | 2.27 | | |
| 40 | 4.0 | 2.17 | 0.0 | CLAY, brn, md stiff @ 3.7-4.0' |
| 40 | | 1.60 | | |
| 44 | 3.8 | 0.87 | 0.0 | Fe & blk stain |
| 44 | | 0.96 | | |

time samples

1435 0-2'

1450 6-8'

1550 10-12'

~~time~~ samples

1645 32-34' L

0835 42-44'

1500 Rain delay - stop work

1545 Resuming

1730 Leaving site

KC, JC, DW, MJ

10.30.19

0815 On site

- oversight on site

0815 pushing another 4' to confirm btm of zone

- Lithology on previous page

0900 pulling sample barrels &

~~to enter w/ E-tip & 2.25"~~

~~to grout entering w/ tremie~~

- used 15 gal grout, bags Portland

0935 Moving adj. to set well @ 35-40'

- entering w/ 2.25" & E-tip to 40'

0950 Inserting well pipe thru 2.25" w/ filter sock & end cap

0952 Pulling 2.25"

H-1 Set

Screen: 35-40' pellets: 30'
 riser: 35' grout: surface
 native: 33' E-tip: 1
 Sand: —

10.30.19

1017 Pulling EC pipe

- tremie to TD & grouting

- used 12 gal, bags Portland

1130 LUNCH

1230 Grouting H-1 to surface

- used 4 gal grout, bags Portland

1240 Loading Geoprobe & equip on trailer to mob to next location

1335 FF Geoprobe mobbed

- RAIN delay

1410 Arrived @ H-2

- entering w/ 2.25" & sample shoe to ~40'

H-2

UTM: 0508069

NA083: 3328239

| | Lith | Rec | Ec | PIO | |
|----|------|------|-----|-----------|-------------------------------------|
| 0 | | | | | |
| 4 | 2.4 | 0.97 | 0.0 | CLAY | brn w/ Fe stain, md stiff |
| | | 1.69 | 0.0 | rocks | & oax @ top 2" |
| 8 | 1.8 | 1.91 | 0.0 | SAA, | Silt CLAY dk brn, md soft |
| | | 2.03 | 0.0 | 0.3'-1.2' | Fe & blk stain |
| 12 | 3.6 | 2.04 | 0.0 | CLAY | w/ Silt lenses, lt gray w/ Fe, |
| | | 1.19 | 0.0 | dk gray | & soft @ 0.7-1.5' shells @ 2.7-3.2' |
| 16 | 4.0 | 2.48 | 0.0 | CLAY | gray w/ Fe & blk stain, |
| | | 2.41 | 0.0 | stiff | |

10.30.19

H-2 cont.

| 16 | Lith | Rec | EC | PID | |
|----|------|------|------|-----|--|
| | | 3.2 | 2.62 | 0.0 | CLAY gray thin SILT lenses |
| 20 | | 3.28 | 0.0 | | throughout, Fe stains, stiff |
| | | 4.0 | 2.36 | 0.0 | Silty CLAY top 4" md soft. CLAY |
| 24 | | 2.04 | 0.0 | | @ 0.4' gray w/ Fe stain, stiff |
| | | 3.4 | 2.32 | 0.0 | CLAY gray, stiff |
| 28 | | 3.4 | 2.30 | 0.0 | SAA |
| | | 4.0 | 2.21 | 0.0 | SAA, blk nodules & stain |
| 32 | | 3.4 | 2.42 | 0.0 | |
| | | 2.8 | 2.78 | 0.0 | SAA; wet SILT @ 0.8-1.5' |
| 36 | | 2.2 | 2.77 | 0.0 | @ 2-2.4' brown & gray, Fe stain wet SILT, CLAY @ 1.3' |

| time | samples |
|------|--------------|
| 1450 | 0-2' |
| 1500 | 4-8' |
| 1510 | 10-12' |
| 1555 | 28-30' L |
| 1610 | 34-36' |
| 1630 | Leaving site |

KC

10.31.19

0800 On site

- Oversight on site: Todd & Patrick
- CRIS setting well in sample hole @ 30-35'
- inserting PVC w/ filter sock & end cap to 35'

H-2 Set

Screen: 30-35' pellets: 24'
riser: 30' gravel: surface
native: 32' E-tip: 1
Sand 29'

0830 Dave Angle on site

0900 Well set, testing EC

- Bottom Dipole

0923 Entering adj. to well & sample hole

H-2 Probe *H-2.zip

| Depth | EC | Depth | EC |
|-------|-----|-------|-----|
| 2 | 109 | 8 | 188 |
| 4 | 157 | 10 | 174 |
| 6 | 191 | 12 | 237 |

KC, JC, DW, MJS

10.31.19

H-2 Probe cont.

| <u>Depth</u> | <u>EC</u> |
|--------------|-----------|
| 14 | 173 |
| 20 | 200 |
| 24 | 235 |
| 28 | 281 |
| 32 | 215 |
| 36 | 246 |
| 40 | 300 |
| 44 | 307 |
| 48 | 283 |
| * 52 | 358 |
| * 54 | 248 |
| 60 | 140 |
| 61 | 130 |

0945 Pulling EC pipe

0957 Fronting thru trench

- used 8 gal grout, bags Portland

1030 Cold break

1045 Scouting access to H-3 & loading probe on trailer to mob.

1145 Arrived, probe unloaded
- LUNCH

10.31.19

1235 Testing EC probe & computer
- Weather

1250 Entering w/ EC probe to ~60'

H-3 Probe *H-3.zip

| <u>Depth</u> | <u>EC</u> [ms/m] |
|--------------|---------------------|
| 2 | 71 |
| 4 | 127 |
| 6 | 155 |
| 8 | 118 |
| 10 | 108 |
| 12 | 98 |
| 16 | 172 |
| 20 | 126 |
| 24 | 58 |
| 28 | 87 |
| 32 | 170 |
| 36 | 133 |
| 40 | 54 |
| 44 | 74 |
| 48 | 125 |
| 52 | 107 |
| 56 | 199 |
| 60 | 178 |
| 62 | 147 |

KC, JO, NW, DW

10.31.19

1315 Pulling EC pipe

1330 Re-entering w/ 2.25" & E-tip

- inserting Henie-tum 2.25"

- used 12 gal grout, 2 bags Portland Moving adv. to soil sample to ~40"

- entering w/ 2.25" & cutting shoe

H-3

UTM: 0509692
NAD83: 3327925

| Lith | Rec | Ec | PID | |
|------|-----|------|-----|---|
| 0 | | | | |
| | 3.1 | 1.73 | | SILT top 2" Alt. Silty CLAY/ |
| 4 | | 3.07 | | Cl. SILT, brn, organics, Fe stain, Fe |
| | 1.9 | 1.61 | | CLAY, gray/brn w/ Fe stain, |
| 8 | | | | soft clams @ 1.5" (2") |
| | 4.0 | 1.83 | | CLAY, gray w/ Fe & blk stain, |
| 12 | | 1.71 | | stiff |
| | 3.1 | 1.73 | | SAA Silty CLAY lenses @ top |
| 16 | | 2.30 | | half stiff |
| | 4.0 | 3.82 | | SAA Silty lenses throughout |
| 20 | | 3.27 | | btm half gray w/ Fe & blk stain |
| | 2.7 | 1.57 | | Silty CLAY to Cl. SILT moist |
| 24 | | 1.25 | | gray to brown @ 1.6', saturated |
| | 3.0 | 1.14 | | wet SILT; Cl. SILT @ 1.5'; CLAY @ bottom half |
| | 3.1 | 1.35 | | |
| | | 0.98 | | |
| 28 | | 1.11 | | lens @ 2.4' (3") & 1.5' |

10.31.19

| Lith | Rec | Ec | PID | |
|------|-----|------|-----|------------------------------------|
| 28 | 3.3 | 2.21 | | CLAY, brn, Fe stain, stiff |
| | | 1.54 | | |
| | 3.4 | 1.16 | | SAA |
| | | 1.50 | | |
| 32 | 4.0 | 1.47 | | SAA SILT @ 2.4' wet, brn, Cl. |
| | | 1.97 | | SILT @ 3.3'; CLAY, brn, stiff |
| 36 | 1.8 | 2.43 | | |
| | | 2.32 | | CLAY, gray w/ Fe stain, Ca nodules |
| | | 2.35 | | |
| 40 | 4.0 | 1.25 | | CLAY |
| | | 1.07 | | |

time

samples

1430

0-2'

1440

4-8'

1450

10-12'

1515

20-22' L

1600

38-40'

1600 Setting shallow well @ 22-27'

H-3 Set

screen: 22-27'

pellets: 18'

riser: 25'

grout: surface

native: 21'

E-tip: 2

sand: —

1700 Leaving site

KC, JC, DW, MW

11.1.19

0800 On site

- oversight on site

ERM: Charles Trahan

HET: Todd Webb

0805 Pulling sample barrels &
grouting thru tremie
used 12 gal grout- Tapping off H-2 & H-3
wells w/ grout

- 4 gal (H-3) 2 gal (H-2)

1130 Leaving site

KC

KC, JC, DW

11.4.19

1000 On site

- oversight on site

HET: Todd Webb

ERM: Charles Trahan

Jerry Fontenot

- KC, JC, DW

- Jake → MM2

1010 Marking Boardwalk locations
w/ David Richard1100 Loading up MM2 w/ pipe &
equip

1150 LUNCH

1300 Entering w/ 2.25' cutting shoe
@ H-4H-4

utm: 0509T58

NAD83: 3328169

| Lith | Rec | Eq | PIO | |
|------|-----|----|-----|----------|
| 0 | | | | 0.29 0.0 |
| 4 | 2.7 | | | 1.19 0.0 |
| 8 | 2.7 | | | 1.44 0.0 |
| | | | | 1.8 0.0 |
| | 2.4 | | | 2.09 0.0 |
| 12 | | | | 1.70 0.0 |

0.2' top 2" Silty CLAY @ 0.2'
 brn w/ Fe stain, md soft @ 1.9' & 2.2'
 CLAY gray w/ Fe & blk stain, soft
 Silty CLAY lenses throughout, siltier w/ depth
 CLAY rd brn Fe & blk stain
 stiff, Silty CLAY lens @ 0.3' Ca @ 2.3'

KC, JC, DW

11.4.19

| Lith | Rec | Ec | PID | |
|------|-----|------|-----|-------------------------------|
| 12 | | 2.95 | 0.0 | CLAY, gray w/ Fe & blk stain, |
| | 4.0 | 2.45 | 0.0 | stiff |
| 16 | | 4.94 | 0.0 | SAA - Silty CLAY @ 0.8', gray |
| | 3.2 | 2.81 | 0.0 | md stiff, rd/bwn @ 2' |
| 18 | | | | |

| time | samples |
|------|---------|
| 1325 | 0-2' |
| 1335 | 4-6' |
| 1345 | 8-10' |
| 1405 | 16-18' |

1400 Grouting thru tremie & pulling
2.25"

- used 4 gal grout

1500 Arrived @ H-5 to soil sample
- entering w/ 2.25" of cutting shoe

H-5

 UTM: 0509140
 NAD83: 3327865

| Lith | Rec | Ec | PID | |
|------|-----|------|-----|-----------------------------------|
| 0 | | 4.82 | 0.0 | Silty CLAY, bwn to gray w/ Fe |
| | 2.4 | 2.70 | 0.0 | stain, mid soft |
| 4 | | 4.46 | 0.0 | Silty CLAY, gray w/ Fe & blk |
| | 3.7 | 4.32 | 0.0 | stain, md soft, stiff on btm half |
| 8 | | | | |

H-5 cont.

11.4.19

| Lith | Rec | Ec | PID | |
|------|-----|-------|-----|---|
| 8 | | 5.85 | 0.0 | Clayey SAND, gray, CLAY @ 0.4' |
| | 4.0 | 14.72 | 0.0 | rd/bwn w/ Fe & blk stain, Ca ^{Silty muck} @ 2.8'(2') |
| 12 | | 6.45 | 0.0 | CLAY, blue-gray & Fe stain, stiff |
| | 3.9 | 6.43 | 0.0 | |
| 16 | | | | |

* grouted to surface → 4 gal grout

| time | samples |
|------|-----------------------|
| 1555 | 0-2' 1600 2-4' |
| 1605 | 4-6' 1615 8-10' |
| 1620 | 10-12' |
| 1630 | 14-16' (2-4' & 8-10') |

* Jerry Fontenot taking splits, ~~none~~

1700 Leaving site

* ERNT taking splits
on everything else

KC

KC, JC, DW

11.5.19

0800 On site

- over site on site

ERM: Charles Trahan

HET: Todd Webb

Jerry Fontenot

0830 Arrived @ H-6

- entering w/ 2.25" ϕ cutting shoe

H-6

utm: 050908333
NA083: 3327888

Lith Rec Ec PID

| | | | | |
|----|-----|-------|-----|--|
| 0 | 2.2 | 5.34 | 0.4 | Silty CLAY, org @ top, gray w/ Fe stain |
| 4 | 3.5 | 4.54 | 0.2 | SAA, silty/clayey muck @ 2.9' |
| 8 | 2.8 | 7.2 | 0.2 | Silty CLAY, gray w/ Fe stain, shell frag @ 1.2' & 1.8' |
| 12 | 3.9 | 14.4 | 0.1 | CLAY, gray w/ Fe stain, silt lens @ 0.9', stiff |
| 16 | | 12.85 | 0.0 | |

| time | samples |
|------|---------|
| 0905 | 0-2' |
| 0910 | 2-4' |
| 0920 | 6-8' |
| 0930 | 10-12' |
| 0940 | 14-16' |

* grouted to surface
- used 4 gal grout

11.5.19

* Jerry Fontenot taking 4-6' & 6-8'
* ERM taking splits on everything else except 0-2' & 2-4'

1030 Arrived @ H-7 to sample soil
- entering w/ 2.25" ϕ cutting shoe

H-7

utm: 0508192
NA083: 3328298

Lith Rec Ec PID

| | | | | |
|----|-----|------|-----|--|
| 0 | 1.5 | 2.63 | 0.1 | Soft Silty CLAY, brn, org; CLAY @ 0.4' |
| 4 | 3.8 | 4.24 | 0.3 | gray w/ Fe stain, md stiff |
| 8 | 2.8 | 4.24 | 0.3 | Silty CLAY, gray w/ Fe & blk stain, Ca nodules, silt @ 3.5', red/brn, damp |
| 12 | 4.0 | 1.28 | 0.3 | Cl. silt red/brn w/ blk stain; CLAY @ 1.6' shell layer 1.9-2.2'; Silty CLAY @ 2' |
| 16 | | 4.32 | 0.3 | CLAY, gray w/ Fe stain, silt lenses |
| | | 4.22 | 0.2 | throughout |

| time | samples |
|------|---------|
| 1105 | 0-4' |
| 1115 | 6-8' |
| 1125 | 10-12' |
| 1135 | 14-16' |

* grouted to surface
- used 4 gal grout

11.5.19

1100 Setting up on H-8 to sample
- entering w/ 2.25" ϕ cutting shoe

H-8

 utm: 0508087
 NAD83: 3328160

| Lith | Rec | Ec | PID | |
|------|------|------|-----|--|
| 0 | 2.9 | 2.08 | 0.8 | Silty CLAY, brn w/ Fe stain, |
| 4 | 2.73 | 0.3 | | stiff. CLAY @ 1.4', brn w/ Fe stain |
| 8 | 3.6 | 3.92 | 1.3 | CLAY, gray w/ Fe stain, md stiff |
| | 3.04 | 14.3 | | strong odor |
| 8 | 4.0 | 5.75 | 0.4 | CLAY, rd/brn ϕ gray w/ Fe ϕ blk |
| 12 | 6.23 | 0.2 | | stain, thin silt lenses, shell @ 2-3', no odor |
| 16 | 3.9 | 3.84 | 0.1 | CLAY, gray w/ Fe stain, thin silt |
| | 2.92 | 0.2 | | lenses throughout, stiff |

| time | samples |
|------|-----------------|
| 1245 | 0-2' |
| 1255 | 4-6' D ϕ 0 |
| 1300 | 6-8' D ϕ 0 |
| 1310 | 10-12' |
| 1320 | 14-16' |

1140 LUNCH

1240 processing soil @ trucks

* grouted to surface

used 4 gal grout

11.5.19

1345 headed to H-9 to sample
1400 Entering w/ 2.25" ϕ cutting shoe

H-9

 utm: 0507775
 NAD83: 3328206

| Lith | Rec | Ec | PID | |
|------|------|------|-----|--|
| 0 | 1.3 | 1.11 | | Silty CLAY, brn to gray w/ Fe stain, |
| 4 | 1.84 | 0.7 | | moist, soft |
| 8 | 3.6 | 2.15 | 0.8 | SAA |
| | 1.92 | 0.8 | | |
| 8 | 3.9 | 2.24 | 0.7 | CLAY, gray w/ Fe ϕ blk stain, shell |
| 12 | 1.17 | 1.3 | | @ 2.8-3.2' |
| 12 | 3.8 | 2.84 | 0.4 | CLAY, gray w/ Fe stain, moist silt |
| 14 | 3.95 | 0.6 | | @ 2.8' |
| 14 | 2.8 | 3.00 | 0.3 | Silty CLAY, gray, md soft; CLAY |
| 20 | 3.43 | 0.1 | | @ 1.2', gray, stiff |

| time | samples |
|------|---------|
| 1515 | 0-4' |
| 1520 | 4-6' |
| 1530 | 8-10' |
| 1555 | 18-20' |
| 1535 | 10-12' |

* grouted to surface \rightarrow used 4 gal grout

1630 Leaving site

11.6.19

- 0850 On site
 - oversight on site
 Todd Webb & Charles Trahan
- 1000 Chris & Mason on site
 - unloading Geoprobe
- 1120 Geoprobe & equip arrived @ H-10
- 1130 LUNCH
- 1150 KC testing HPT & computer
 - Wenner
- 1230 Stringing up HPT & re-testing
 - Bottom Dipole
- 1320 Entering w/ HPT probe

H-10 Probe *H-10.zip

| Depth | EC [mS/m] | Depth | EC |
|-------|------------------------|-------|-----|
| 2 | 82 | 28 | 312 |
| 4 | 166 | 32 | 269 |
| 6 | 231 | 36 | 192 |
| 8 | 264 | 40 | 249 |
| 10 | 101 | 44 | 280 |
| 12 | 229 | 48 | 321 |
| 14 | 150 150 (K) | 52 | 318 |
| 20 | 234 234 (K) | 56 | 212 |
| 24 | 246 | 60 | 232 |
| | | 62 | 158 |

11.6.19

- 1355 Pulling HPT pipe
 1416 Tremie to TD
 - used 8 gal grout
- 1420 Moving adj to Soil sample
 - entering w/ 2.25" & cutting shoe
- H-10 utm: 0508024
 NA085: 3328294

Lth. Rec EC PID

| | | | | |
|----|-----|------|--------|---|
| 0 | 2.9 | 0.5 | 0.7 | Silty CLAY, brn, md soft, moist; CLAY |
| 4 | 1.5 | 0.5 | @ 1.8' | gray w/ Fe stain |
| 8 | 3.3 | 2.02 | 0.8 | SAA, Silty CLAY @ 2', gray w/ Fe stain & blk mottles, stiff |
| 12 | 3.8 | 2.09 | 0.6 | CLAY w/ thin SILT lenses, gray/rd/brn, shell frags @ 2'-2.5', Silty CLAY @ 2.5' CLAY @ 2.4' |
| 16 | 3.9 | 2.4 | 0.8 | CLAY, gray w/ Fe stain, stiff |
| 20 | 3.6 | 2.26 | 0.6 | SAA, gray, moist Cl. SILT lenses @ 0.5' 0.7' & 1.3' (1" thick) |
| 24 | 4.0 | 2.83 | 1.4 | CLAY, gray w/ Fe stain, md stiff |
| 28 | 3.1 | 2.30 | 0.9 | SAA, blk mottles, Fe & blk stain, |
| | 3.5 | 2.34 | 0.9 | Ca nodules |
| | 3.7 | 2.7 | 0.6 | CLAY, gray w/ Fe stain |
| 32 | 3.3 | 2.21 | 0.7 | SAA |

11.6.19

Lith Rec Ec PID

| | | | | |
|----|-----|------|-----|---|
| 32 | 2.1 | 2.23 | 0.4 | CLAY, gray, md soft, Silty CLAY @ 1.4' |
| 36 | 2.7 | 1.87 | 0.3 | 2.2' md soft, Fe stain / CLAY to Si. CLAY |
| 40 | 3.0 | 2.02 | 0.1 | Silt wet, H. brn; Cl. SILT @ 1.7, damp |
| | 3.2 | 2.33 | 0.0 | Cl. SILT, gray/brn, CLAY lens @ 2-2.2' |

| time | samples |
|------|----------|
| 1505 | 0-2' |
| 1515 | 4-6' |
| 1525 | 8-10' |
| 1625 | 32-34' L |
| 1640 | 38-40' |

1700 Leaving site

- picking splits in AM

KC

"

11.7.19

0810 On site

- overnight on site: CT & TW

0820 Pulling sample barrels & re-entering w/ 2.25' & E-tip

0850 Inserting PVC w/ filter sock & end cap

H-10 Set

screen: 35-40' pellets: 25'
 riser: 40' grout: surface
 native: 38" E-tip: 1 (2")
 sand: 28'

1800 Arrived @ H-9 to continue soil sampling & HPT

1015 Testing HPT & computer
- Wenner1043 Stringing up HPT & re-testing
- Wenner

1115 Entering w/ HPT probe

11.7.19

H-9 Probe *H-9 Zip

| Depth | EC [ms/m] | Depth | EC |
|-------|--------------|---------------|-----|
| 2 | 208 | 76 | 104 |
| 4 | 271 | 80 | 89 |
| 6 | 238 | 82 | 109 |
| 8 | 185 | 84 | 100 |
| 10 | 199 | | |
| 12 | 194 | | |
| 14 | 285 | | |
| 16 | 308 | | |
| 20 | 290 | | |
| 24 | 154 | | |
| 28 | 135 | | |
| 32 | 144 | | |
| 36 | 141 | | |
| 40 | 197 | | |
| 44 | 204 | | |
| 48 | 374 | | |
| 52 | 472 | | |
| 56 | 631 | | |
| 60 | 605 | | |
| 64 | 303 | | |
| 68 | 222 | | |
| 72 | 180 | | |

* highest EC:
790 @ ~59'

11.7.19

1158 Pulling HPT

1215 Re-entering w/ 2.25" ϕ E-tip
to TD

- refusal @ 24', retrying after lunch

1240 LUNCH

1330 Reaming hole ϕ driving back down
w/ 2.25" ϕ E tip to ~~TD~~ thru 3.5"
~~used and sent RC~~~~1545 Raining LEAVE SITE~~

* 3.25" to 36'

~~2.25" to 84'~~

1530 Letting machine cool down

1545 Leaving site due to rain

RC

0800 On site
 - oversight on site: TW & CT
 0815 Finishing driving 2.25' to ~84'
 0845 TD reached
 - pulling 2.25' & grouting thru
 tremie
 - used 22 gal grout
 0919 Pulling 3.25'
 0950 Moving adj. to sample 20-60'
 - entering w/ 2.25" & discrete
 tip to 20'

H-9 cont.

| Lith | Rec | EC | PID | |
|------|-----|------|-----|---|
| 20 | 2.3 | 2.68 | 0.0 | CLAY, gray, yellow stain, md stiff |
| 24 | 3.0 | 2.25 | 0.0 | SAA |
| | 3.4 | 2.21 | 0.0 | SAA |
| 28 | 2.9 | 1.96 | 0.0 | SAA, gray w/ Fe stain, Ca nodules |
| | 3.3 | 1.89 | 0.0 | CLAY, gray w/ Fe & blk stain, Ca |
| 32 | 3.3 | 2.74 | 0.0 | throughout |
| | 2.7 | 2.42 | 0.0 | SAA ^{Ca nodules} @ 0.6'; Silty CLAY @ 2.4' |
| 36 | 1.8 | 2.22 | 0.0 | Cl. SILT, brn w/ Fe, soft; CLAY @ 1.4' |

| Lith | Rec | EC | PID | |
|------|-----|-------|------|--|
| 38 | 2.7 | 2.43 | 0.0 | CLAY, gray & brn w/ Fe & blk stain, Ca |
| 40 | 3.0 | 3.56 | 0.0 | SAA, rocks @ 1.1' |
| | 3.8 | 4.19 | 0.0 | CLAY, gray w/ Fe stain, stiff |
| 44 | 3.5 | 4.22 | 0.0 | SAA |
| | 4.0 | 5.12 | 0.0 | SAA |
| | 4.0 | 7.22 | 0.0 | SAA |
| 48 | 3.1 | 13.8 | 0.0 | SAA, damp SILT @ 1', some CLAY |
| | 2.6 | 0.2 | 0.0 | gray, clay lenses, saturated |
| 52 | 4.0 | 18.15 | 0.0 | SILT, gray, saturated; Cl. SILT @ |
| 56 | 2.2 | 15.4 | 30.0 | 1.1' w/ CLAY lenses; CLAY @ btm |
| | 4.0 | 16.07 | 0.0 | CLAY, dk gray, stiff |
| 60 | 4.0 | 14.6 | 30.0 | |

| time | samples |
|------|----------|
| 1045 | 30-32' |
| 1130 | 48-50' L |
| 1135 | 50-52' |
| 1155 | 58-60' |

1345 Leaving site

KC

KC, JC, MW, DW

11.11.19

1000 On site

- oversight on site

Todd Webb: ~~ERM~~ HET

Patrick Baudoin: ERM

1108 Arrived @ H-9 to set well adj. to sample hole

- entering w/ 2.25" ϕ oversized tip to ream hole to 20"

- entering w/ 3.25", then 2.25" thru
H-9 Set

Screen: 50-55' pellets: 43'

native: 49' gravel: surface

Sand. — E-tip: 2 (2")
2 (3")

1215 Pulling 2.25" after inserting well

1225 pulling 3.25" ~~gravel~~ ϕ allowing pellet hydration

1300 LUNCH

1400 Arrived @ H-10, testing EC ϕ computer

- Wenner

1440 Stringing EC ϕ retesting

- Wenner "

11.11.19

H-11 Probe

*H-11.ZIP

| Depth | [mS/m] EC | Depth | EC |
|-------|--------------|---------------|----------|
| 2 | 59 | 64 | 127 |
| 4 | 97 | 68 | 148 |
| 6 | 130 | 72 | TD = 66" |
| 8 | 139 | 76 | |
| 10 | 134 | 80 | |
| 12 | 210 | | |
| 14 | 229 | | |
| 16 | 204 | | |
| 18 | 234 | | |
| 20 | 173 | | |
| 24 | 144 | | |
| 28 | 158 | | |
| 32 | 230 | | |
| 36 | 306 | | |
| * 40 | 350 | | |
| 44 | 300 | | |
| 48 | 243 | | |
| 52 | 277 | | |
| 56 | 274 | | |
| 60 | 173 | | |

Kc, Jc, MJ, DW

11.11.19

1515 Grouting H-9

- used 10 gal grout

1535 Pulling EC pipe @ H-11

1546 Inserting tremie to TD of grouting
thru

- used 6 gal grout

1645 Leaving site

Kc

38°F, 15-20 mph winds

11.12.19

0800 On site - oversight on site

0815 Moving adj to EC hole to sample
soil

- entering w/ 2.25" of cutting shoe

H-11

utm: 0507827
NAD83: 3328234

| Lith | Rec | EC | PID | |
|------|------|------|------|---------------------------------------|
| 0 | 1.00 | 0.1 | | Silty CLAY, brn, SAND @ 0.4', rocks |
| 4 | 2.7 | 2.22 | 0.1 | @ 1', CLAY @ 1.1', md stiff, Fe stain |
| 8 | 3.7 | 3.09 | 0.1 | CLAY, gray w/ Fe stain, md stiff |
| | | 3.35 | 0.0 | |
| 12 | 4.0 | 2.89 | 0.0 | SAA, Fe of blk stain, shells @ |
| | | 3.51 | 0.0 | 3.5 to btm |
| 14 | 4.0 | 4.33 | 0.0 | CLAY, gray w/ Fe of blk stain, stiff |
| | | 4.73 | 0.0 | |
| 20 | 3.9 | 3.83 | 0.0 | SAA |
| | | 4.17 | 0.0 | SAA |
| 24 | 2.7 | 2.95 | 0.0 | SAA |
| | | 3.2 | 3.43 | 0.0 SAA |
| 28 | 2.7 | 2.77 | 0.0 | SAA |
| | | 3.3 | 2.99 | 0.0 |
| 32 | 3.7 | 3.9 | 0.0 | SAA, Ca nodules throughout |
| | | 3.9 | 4.83 | 0.0 SAA, large Ca nodules |

| Lith | Res | EC | AD | H-11 cont. |
|------|-----|------|-----|---|
| 34 | 3.0 | 5.30 | 0.0 | SAA, CI. SILT @ 2.9', gray, damp |
| 36 | 2.2 | 5.77 | 0.0 | CI. SILT, lt brn, damp; SILTY CLAY @ 1" |
| 38 | 3.3 | 6.23 | 0.0 | CLAY, gray w/ Fe stain; CI. SILT lens @ |
| 40 | 3.4 | 7.27 | 0.0 | 1.1 @ 2.4' (3') SILTY CLAY CLAY |
| 42 | 4.0 | 7.11 | 0.0 | CLAY, lt brn/gray, Fe stains, stiff |
| 44 | 3.9 | 6.28 | 0.0 | SAA, gray |
| 46 | 3.0 | 4.92 | 0.0 | SAA |
| 48 | 4.0 | 4.67 | 0.0 | |
| 50 | 4.0 | 3.97 | 0.0 | SAA |
| 52 | 4.0 | 4.14 | 0.0 | |
| 54 | 4.0 | 4.31 | 0.0 | CLAY, gray w/ Fe stain, Ca nodules |
| 56 | 3.9 | 4.62 | 0.0 | SILTY CLAY @ 3.1' CLAY btm |
| 58 | 4.0 | 4.51 | 0.0 | SAA |
| 60 | 4.0 | 4.12 | 0.0 | |

| time | samples |
|------|---------|
| 0920 | 0-2' |
| 0930 | 4-6' |
| 0940 | 8-10' |
| 1055 | 38-40' |
| 1145 | 58-60' |

1245 LUNCH

1315 split samples

- grouting sample hole thru tremie
used 16 gal grout

1400 Arrived @ H-12 to EC - testing

- Bottom Dipole

H-12 Probe *H-12.zp

| Depth | [ms/m] EC | Depth | EC |
|-------|--------------|-------|--------------------|
| 2 | 214 | 44 | 887 |
| 4 | 423 | 48 | 1438 |
| 6 | 440 | 52 | 2244 |
| 8 | 434 | 56 | 2600 |
| 10 | 463 | 60 | 2076 |
| 12 | 454 | 64 | 1149 |
| 14 | 509 | 68 | 522 |
| 16 | 490 | 72 | 174 |
| 18 | 373 | 76 | 184 |
| 20 | 251 | 80 | 1149 70 |
| 24 | 247 | | |
| 28 | 282 | | |
| 32 | 440 | | |
| 36 | 507 | | |
| 40 | 711 | | |

* Highest EC:

4050 ms/m @ 56'

KC, JC, MW, DW

11.12.19

- 1449 Pulling EC pipe
- 1500 Reaming hole w/ 2.25" ϕ oversized tip to 40'
 - 3.25' to 32'
 - 2.25" thru 3.25" to 80'

1645 Leaving site

KC

27° F, Sunny

11.13.19

- 0800 On site
 - oversight on site
- 0830 Arrived @ H-12, letting machine warm up
- 0849 Erecting turn tremie ϕ barrels, then pulling pipe
 - used 16 gal grout
- 1000 Moving adj. to sample soil
 - entering w/ 2.25" ϕ cutting shoe

H-12

UWI: 0507111

NAD83: 3328260

| Lith | Rec | Ec | PI0 | |
|------|-----|------|-----|---|
| 0 | 1.8 | 1.02 | 0.1 | CLAY w/ some Silt, dk brn w/ Fe stain, thin SAND lens @ 0.3' |
| 4 | 3.8 | 3.12 | 0.1 | CLAY, silt content dec. w/ depth, gray w/ Fe stain & blk mottles, stiff |
| 8 | 4.0 | 3.24 | 0.1 | CLAY, silty @ top, gray w/ Fe & blk mottling, shell frags @ 3.5' & 3.8' |
| 12 | 4.0 | 3.88 | 0.1 | SAA silt lenses throughout |
| 16 | 3.0 | 4.26 | 0.1 | CLAY, gray, wet SILT lenses throughout |
| 20 | 3.7 | 4.93 | 0.1 | CLAY, gray w/ Fe stain, mid stiff |
| 24 | 2.0 | 5.98 | 0.1 | SAA |

H-12 cont.

11.13.19

| Lith | Rec | EC | PID | |
|------|---------|------|------|--|
| 24 | 2.7 | 3.5 | 10.1 | CLAY, gray, Fe & blk stain, stiff |
| 28 | 3.3 | 3.3 | 0.0 | SAA Ca nodules throughout (sm) |
| 32 | 3.2 | 2.2 | 0.0 | CLAY, gray, Fe & blk stain, stiff, Ca |
| 32 | 3.4 | 4.4 | 0.0 | SAA, large Ca nodules (1.2" thick) |
| 36 | 2.4 | 2.9 | 0.1 | CLAY, gray/bwn, Ca nodules/rocks, ^{Cl. SILT} @ 1.2' |
| 36 | 2.7 | 3.8 | 0.0 | Silty CLAY to CLAY, gray w/Fe stain ^{md} |
| 40 | 3.9 | 4.1 | 0.0 | AH. CLAY & silty CLAY, H. bwn, soft |
| 40 | 4.0 | 6.1 | 0.1 | Silty CLAY. CLAY @ 1.5' |
| 44 | 3.6 | 5.2 | 0.1 | CLAY, gray, Fe stain, stiff |
| 44 | 4.0 | 5.3 | 0.0 | SAA |
| 48 | 5.7 | 6.0 | 0.1 | SAA, softer @ btm |
| 48 | 2.9 | 11.5 | 0.1 | Silty CLAY, H. bwn, Cl. SILT @ 1.5' ^{md} , soft |
| 52 | 3.3 | 16.4 | 0.1 | wet Cl. SILT, bwn w/Fe stain |
| 52 | 3.1 | OR | 0.1 | SILT w/some CLAY, bwn to gray |
| 56 | 3.4 | OR | 0.2 | SILT to silty SAND, grey saturated |
| 56 | FLOW-IN | | | |
| 60 | | | | |

| time | samples |
|------|----------|
| 1200 | 0-4' |
| 1205 | 4-6' |
| 1215 | 8-10' |
| 1330 | 38-40' |
| 1355 | 48-50' L |
| 1405 | 52-54' |

11.13.19

1100 Heading to Lake Arthur to buy
liner cutter blades

1130 LUNCH

1200 Back on site

- processing cores

1500 Finished processing cores

- setting well adj. to sample hole
@ 50-60'

- entering w/ 2.25" & E-tip to 60'
& inserting PVC filter sock & end cap

H-12 Set

Screen: 50-60' pellets: 43'

native: 50' grout: surface

sand: 47' E-tip:

1545 pulling 3.25" & 2.25" & allowing
pellet hydration

~~Moving to next location~~ (K)

1630 Leaving site

11.14.19

0800 On site

- oversight on site

0845 Arrived @ H-13 to EC

0900 Testing EC probe & computer

- Wenner

H-13 EC probe * H-13.ZIP

| Depth | EC [mS/m] | Depth | EC |
|-------|-----------|-------|-----|
| 2 | 108 | 48 | 161 |
| 4 | 180 | 52 | 182 |
| 6 | 213 | 54 | 200 |
| 8 | 240 | 60 | 192 |
| 10 | 235 | | |
| 2 | 273 | | |
| 14 | 278 | | |
| 16 | 214 | | |
| 18 | 227 | | |
| 20 | 135 | | |
| 24 | 125 | | |
| 28 | 144 | | |
| 32 | 145 | | |
| 36 | 135 | | |
| 40 | 154 | | |
| 44 | 156 | | |

Highest EC:
319 mS/m @ 13'

11.14.19

1000 Moving adv. to soil sample to 40'
- entering w/ 2.25" of cutting shoe

H-13

UTM: 0507189
NAD83: 3328106

With Rec EC PID

| | | | | |
|----|------|------|-----|--|
| 0 | 2.7 | 1.80 | 0.0 | CLAY, brn w/ Fe stain, md soft |
| 4 | 3.8 | 3.24 | 0.0 | |
| 8 | 3.8 | 3.43 | 0.0 | SAA, lt gray w/ Fe stain & blk nodules & stain, md stiff |
| 8 | 3.67 | 3.67 | 0.0 | |
| 12 | 4.0 | 3.74 | 0.0 | SAA, silt lenses throughout, shell frags 3-3.7' |
| 12 | 3.31 | 3.31 | 0.0 | |
| 14 | 4.0 | 3.89 | 0.0 | CLAY, gray w/ Fe stain, silt lenses throughout botm half (>1') |
| 14 | 2.91 | 2.91 | 0.0 | |
| 20 | 4.0 | 2.45 | 0.0 | CLAY, gray w/ Fe stain, damp silt lenses throughout |
| 20 | 2.67 | 2.67 | 0.0 | |
| 24 | 3.1 | 1.93 | 0.0 | CLAY, gray, Fe stain, md stiff |
| 24 | 3.2 | 1.87 | 0.0 | SAA |
| 28 | 3.9 | 1.87 | 0.0 | SAA |
| 28 | 3.5 | 1.91 | 0.0 | SAA |
| 32 | 3.8 | 2.52 | 0.0 | SAA, Ca nodules |
| 32 | 3.7 | 2.03 | 0.0 | SAA |
| 36 | 3.4 | 2.15 | 0.0 | SAA |
| 36 | 2.3 | 1.47 | 0.0 | AH, CL. SILT & Silty CLAY, #1 brn |

11.14.19

H-13 cont.

| Lith | Rec | Ec | PID | |
|------|-------|-----|-----|-----------------------------|
| 34 | 3.222 | 0.0 | | CLAY gray/born w/ Fe stain, |
| 40 | 3.420 | 0.0 | | stiff |

| time | Samples |
|------|---------|
| 1050 | 0-2' |
| 1100 | 4-6' |
| 1110 | 8-10' |
| 1155 | 12-14' |
| 1310 | 38-40' |

1100 Rain delay
 1145 Resuming
 1215 Rain delay
 1240 Resuming
 1330 Grouting sample hole thru tremie
 - used 12 gal grout
 1425 Arrived @ H-14, unloading
 1500 ~~leaving~~ Testing HPT & comp.
 - Wenner → stringing up
 1600 Leaving site

KC

11.15.19

0800 On site

- oversight on site

0815 Arrived @ H-14, retesting HPT

- Wenner

H-14 HPT probe *H-14.zip

| Depth | [ms/m] EC | Depth | EC |
|-------|--------------|-------|-----|
| 2 | 92 | 44 | 184 |
| 4 | 185 | 48 | 152 |
| 6 | 225 | 52 | 163 |
| 8 | 272 | 56 | 220 |
| 10 | 303 | 60 | 214 |
| 12 | 363 | 62 | 125 |
| 14 | 375 | | |
| 16 | 350 | | |
| 18 | 272 | | |
| 20 | 250 | | |
| 24 | 132 | | |
| 28 | 136 | | |
| 32 | 165 | | |
| 36 | 167 | | |
| 40 | 158 | | |

Highest EC:
425 @ 13'

0920 Pulling HPT
 0945 Grouting thru
 tremie
 - used 8 gal grout
 1000 Leaving site

1000 On site
 - oversight on site
 ERM: Shaven Wiggins
 HET: Todd Webb
 1015 Dw had a blowout, fixing
 1130 JC, MJ on site
 1145 LUNCH
 1210 Arrived @ H-14 to soil sample
 - entering w/ 2.25" ϕ cutting shoe

H-14

urn: 0507627
 NAD83: 332810.3

| Lith | Rec | EC | PID | Description |
|------|------|------|-----|--|
| 0 | | | | |
| 2.0 | 1.37 | 0.1 | | CLAY w/ some silt, dk brn, Fe stain |
| 4 | 2.82 | 0.0 | | md soft |
| 8 | 3.76 | 0.0 | | SAA, H. gray w/ Fe & blk stain |
| | 3.78 | 0.0 | | md stiff |
| | 3.67 | 0.0 | | SAA, Silty MUCK @ 0.7', gray, v. |
| 12 | 3.27 | 0.0 | | soft CLAY @ 1.2', stiff shell frags @ 2.1' |
| | 3.75 | 0.0 | | CLAY, gray w/ Fe stain, stiff ^{Silty CLAY @ 2.5'} |
| 16 | 3.86 | 0.0 | | thin silt lenses throughout |
| | 2.54 | 1.9 | 0.0 | SAA, damp silt lenses throughout |
| 20 | 3.33 | 1.5 | 0.0 | CLAY, gray, stiff |
| | 2.81 | 1.84 | 0.0 | CLAY, gray w/ Fe stain, stiff |
| 24 | 3.01 | 1.44 | 0.0 | SAA |

H-14 cont.

| Lith | Rec | EC | PID | Description |
|------|------|------|-----|---|
| 24 | 3.91 | 1.73 | 0.0 | SAA |
| 28 | 3.21 | 1.74 | 0.0 | SAA, Ca nodules |
| | 3.91 | 1.87 | 0.0 | CLAY, gray w/ Fe & blk stain, Ca throat |
| 32 | 3.32 | 2.2 | 0.0 | SAA |
| | 3.71 | 1.71 | 0.0 | Silty CLAY, H. brn Ca thru top half, CLAY @ 1.1' |
| 36 | 1.91 | 1.89 | 0.0 | CLAY, lt. brn/gray, soft moist ^{CL. SILT @ 3'} |
| | 3.82 | 2.36 | 0.0 | CLAY, brn & gray, stiff |
| 40 | 3.02 | 2.55 | 0.1 | SAA |

time samples

| | |
|------|--------|
| 1315 | 0-2' |
| 1325 | 4-6' |
| 1335 | 8-10' |
| 1355 | 16-18' |
| 1450 | 38-40' |

1445 pulling sample barrels, decon,
 grouting thru tremie
 Used 12 gal grout
 1530 Mobbing to next location
 1645 Leaving site

11.19.19

0800 On site

- oversight on site

TW of SW

0820 Setting up on H-15 to HPT

- Wenner

0850 Stringing & retesting

- Wenner

0920 Entering w/ HPT probe

H-15 HPT *H-15.zip

| Depth | EC [mS/m] | Depth | EC |
|-------|-----------|-------------------------|-----|
| 2 | 212 | 32 | 133 |
| 4 | 240 | 36 | 134 |
| 6 | 273 | 40 | 153 |
| 8 | 326 | 44 | 186 |
| 10 | 371 | 48 | 183 |
| 12 | 381 | 52 | 145 |
| 14 | 443 | 56 | 183 |
| 16 | 358 | 60 | 156 |
| 18 | 264 | 62 | 181 |
| 20 | 184 | * Highest EC: | |
| 24 | 153 | <u>438 mS/m @ 14.5'</u> | |
| 28 | 179 | " | |

11.19.19

0945 Pulling HPT

- grouting thru tremie from TD

used 2 gal grout

0955 Moving adj to soil sample

- entering w/ 2.25" & cutting shoe

H-15utm: 0508139
NAD83: 3328131

With Rec Ec PID

| | | | |
|----|------|------|---|
| 0 | 1.25 | 3.3 | Silt CLAY to CLAY, brn to gray |
| 4 | 2.68 | 1.1 | ora. @ top, Fe stain, md silt |
| 8 | 3.74 | 6.3 | CLAY, gray w/ Fe stain, ^{strong} HC |
| 8 | 3.35 | 18.7 | odor, stiff |
| 12 | 7.73 | 27.1 | CLAY, rd/brn & gray, strong odor |
| 12 | 10.4 | 53.4 | CL. Silt @ 0.5' CLAY @ 1.1' shells @ 1.7' Cl. |
| 14 | 5.67 | 0.8 | CLAY, gray & Fe stain, ^{sl. odor} silt lenses, silty |
| 14 | 4.87 | 0.3 | CLAY @ 1.6' odor in top half, CLAY @ 2.1' w/ silt lenses |
| 20 | 4.74 | 0.3 | CLAY, gray w/ Fe stain |
| 20 | 3.67 | 0.2 | damp silt lenses throughout |
| 24 | 3.11 | 1.96 | 0.3 CLAY, gray w/ Fe stain |
| 24 | 3.4 | 2.03 | 0.3 SAA |
| 28 | 3.7 | 2.10 | 0.2 SAA Ca nodules, stiff |
| 28 | 3.4 | 2.04 | 0.2 SAA Ca ^{nodules} layer @ 1.2' & 1.7'-2.5' |
| 32 | 3.9 | 2.19 | 0.3 CLAY, gray w/ Fe stain, Ca throughout |
| 32 | 2.9 | 1.90 | 0.0 SAA, S. CLAY @ 1.3' Cl. Silt @ 2.3' |

| Lth | Rec | EC | PID | |
|-----|-----|------|------|--|
| 32 | 11 | 2.93 | 0.0 | AH. Cl. SILT & damp SILT, H brn |
| 36 | 11 | 2.85 | 0.1 | CLAY, soft w/Cl. SILT lenses |
| | 11 | 2.22 | 1.9 | 0.0 SAA |
| 40 | 11 | 2.22 | 1.40 | 0.1 Cl. SILT, damp, gray Fe stain, CLAY @ 2' |

| time | sample | time | samples |
|------|-------------|------|-----------------|
| 1130 | 10-12' | 1105 | 0-2' |
| 1135 | 12-14' | 1115 | 4-6' D90 (P, G) |
| | D90, (P, G) | 1120 | 6-8' D90 (P, G) |
| | | 1125 | 8-10' " " |
| | | 1240 | 38-40' |

1300 Pulling 2.25" & grouting thru tremie from TD
- used 12 gal grout

1350 Moving to next location

1430 Arrived @ H-16, testing EC probe & computer
- middle dipole

1455 Stringing EC & retesting
- Wenner.

1501 Entering w/ EC probe to 60'

* Shells on disturbed ground

H-16 Probe * H-16.zip

| Depth | [ms/m] EC | |
|-------|--------------|-----------------------------|
| 2 | 144 | * Highest EC : |
| 4 | 238 | |
| 6 | 270 | 940 ms/m @ 15' |
| 8 | 316 | |
| 10 | 417 | 1525 Pulling EC pipe |
| 12 | 666 | 1535 Inserting tremie to TD |
| 14 | 817 | |
| 16 | 901 | - used 6 gal grout |
| 18 | 730 | |
| 20 | 344 | 1600 Leaving site |
| 24 | 327 | |
| 28 | 326 | |
| 32 | 394 | |
| 36 | 429 | |
| 40 | 474 | |
| 44 | 350 | |
| 48 | 220 | |
| 52 | 176 | |
| 56 | 192 | |
| 60 | 150 | |

KC, JC, DW, MJ

11.20.19

0730 On site

- oversight on site
TW @ SW

0740 Moving adj. to H-16 EC hole
to soil sample

- entering w/ 2.25" @ cutting shoe

H-16

utm: 0508143
NAD83: 3328218

| Lith | Rec | Ec | PI0 | |
|------|-----|------|-----|---|
| 0 | 3.1 | 1.5 | 0.5 | Silty CLAY, brn w/ Fe stain, org |
| 4 | 2.6 | 0.7 | | @ top: CLAY @ 0.5 md stiff |
| 8 | 3.9 | 3.5 | 2.1 | CLAY gray, Fe stain, Ca nodules |
| 12 | 4.0 | 4.2 | 0.8 | @ 0.4' md stiff |
| 16 | 4.0 | 5.5 | 2.8 | SAA, silty lenses throughout. Cl. |
| 20 | 4.0 | 8.3 | 0.7 | muck & shell frags @ 2.3' gray odor |
| 24 | 4.0 | 11.4 | 1.1 | CLAY gray, Fe stain, silty clay @ 3.1' |
| 28 | 3.3 | 12.7 | 2.5 | stiff wet silt lenses @ 3', 3.2' & 3.7' |
| 32 | 3.3 | OR | 1.2 | CLAY, gray damp silt lenses |
| 36 | 3.3 | 14.8 | 5.2 | throughout top half, blk stain @ btm |
| 40 | 2.9 | 4.0 | 0.3 | CLAY w/ some silt gray w/ yellow stain @ top, stiff |
| 44 | 3.3 | 3.9 | 0.3 | CLAY, gray, Fe stain, stiff |
| 48 | 3.9 | 4.1 | 0.8 | SAA blk nodules @ 2.7' |
| 52 | 3.6 | 4.1 | 0.7 | CLAY, gray, blk stain, stiff |

H-16 cont.

11.20.19

| Lith | Rec | Ec | PI0 | |
|------|-----|-----|-----|---|
| 28 | 3.9 | 4.8 | 0.3 | CLAY, gray w/ Fe & blk stain, Ca @ 2.3' |
| 32 | 2.6 | 4.8 | 1.6 | SAA, Cl. SILT @ 1.5', Fe & blk stain |
| 36 | 2.9 | 5.0 | 0.2 | Att. Silty CLAY & Cl. SILT, gray w/ Fe |
| 40 | 2.5 | 6.3 | 0.1 | Cl. SILT, H. brn, md soft |
| 44 | 3.9 | 8.0 | 0.9 | SAA, inc moisture |
| 48 | 3.1 | 7.4 | 0.8 | SILT/Cl. SILT, brn, wet, CLAY btm 2" |

time samples

0825 0-2'

0835 4-6'

0850 10-12' D90 (P&G)

0905 16-18'

0950 34-36' L

1000 38-40'

0900 Using ~~to~~ 14-16' D90 (P&G)

1005 Moving adj. to sample hole to set well
- entering w/ 2.25" @ E-tip to 40"

H-16 Set

Screen: 35-40' pellets: 31'

native: 37' grout: surface

sand: 34' E-tip: 1(2")

- 1100 Mobbing & trailering probe
- 1120 LUNCH
- 1225 Arrived @ H-17, clearing location
- 1240 Testing EC probe & computer
- Wanner
- 1250 Entering w/ EC probe

H-17 Probe *H-17.zip

| Depth | EC [ms/m] | Depth | EC |
|-------|-----------|-----------------------|-----|
| 2 | 83 | 40 | 167 |
| 4 | 175 | 44 | 138 |
| 6 | 183 | 48 | 181 |
| 8 | 176 | 52 | 202 |
| 10 | 240 | 56 | 164 |
| 12 | 283 | 60 | 122 |
| 14 | 282 | 62 | 168 |
| 16 | 226 | * Highest EC: | |
| 18 | 243 | <u>337 ms/m @ 13'</u> | |
| 20 | 142 | | |
| 24 | 119 | | |
| 28 | 128 | | |
| 32 | 126 | | |
| 36 | 169 | | |

- 1315 Pulling EC pipe ^(KE) Letting machine cool
- 1325 Pulling EC pipe & grouting - 6 gal
- 1335 Moving adj. to sample soil
- entering w/ 2.25" & cutting shoe

H-17 WTM: 050814#
NAD83: 3327835

| Lith | Rec | EC | PID | Description |
|------|-----|------|------|---|
| 0 | | 0.67 | 0.4 | SILT, brn, orax @ top; Silty CLAY @ |
| 4 | 2.0 | 2.17 | 0.6 | 1.8' gray w/ Fe stain, md stiff |
| 8 | 3.2 | 3.11 | 13.8 | Silty CLAY, gray w/ Fe stain, strong odor |
| 12 | 4.0 | 2.60 | 3.3 | SAA, CLAY lens 3.4-3.7'. CLAY @ |
| 16 | 4.0 | 4.35 | 49.2 | 2.8' Fe & blk stain stiff, odor |
| 20 | 4.0 | 2.95 | 13.2 | CLAY, gray, Fe stain, stiff, Silty |
| 24 | 3.9 | 3.59 | 31.4 | lenses throughout, odor |
| 28 | 3.9 | 2.74 | 1.1 | SAA, no odor |
| 32 | 3.0 | 3.07 | 0.6 | CLAY, gray, Fe stain @ botm, soft |
| 36 | 2.0 | 1.62 | 0.8 | Silty CLAY, lt. brn, Fe stain |
| 40 | 3.4 | 1.54 | 0.6 | GAT |
| 44 | 3.2 | 1.74 | 0.5 | SAA |
| 48 | 3.9 | 1.79 | 0.8 | CLAY, gray, Fe & blk stain, Ca |
| 52 | 3.2 | 1.87 | 0.3 | SAA |

Lth Rec Ec PID

| | | | | |
|----|-----|------|-----|---|
| 32 | 3.4 | 1.98 | 0.4 | CLAY gray/bwn; Silty CLAY @ 1.5' gwy |
| 36 | 2.8 | 1.75 | 0.2 | Silty CLAY; Cl. SILT @ 0.5' damp. CLAY @ 2.5' |
| | 4.0 | 1.92 | 0.0 | CLAY, bwn, stiff |
| 40 | 4.0 | 2.47 | 0.0 | SAA |

| time | Samples | (PAG) |
|------|--------------|------------------------|
| 1410 | 0-2' | 1445 14-16' |
| 1420 | 4-6' D90 (G) | ¹⁵⁴⁰ 38-40' |
| 1425 | 6-8' D90 (G) | ¹⁴⁴⁰ 7-74' |
| 1430 | 8-10' (PAG) | (PAG) |
| 1435 | 10-12' (PAG) | |

1530 Grouting sample hole thru tremie
- used 12 gal grout

1545 Moved to next location

1700 Leaving site

- will split samples in AMI

Kc

0730 On site

- oversight on ~~site~~ site0800 Testing EC probe & computer
@ H-18

- Midde Dipole

*H-18.zip

| H-18 Probe | | | |
|------------|--------------------|------------------------|-----|
| Depth | [ms/m] EC | Depth | EC |
| 2 | 220 | 36 | 493 |
| 4 | 305 | 40 | 401 |
| 6 | 318 | 44 | 374 |
| 8 | 534 | 48 | 274 |
| 10 | 738 | 52 | 582 |
| 12 | 822 | 56 | 283 |
| 14 | 900 | 60 | 277 |
| 16 | 1023 | 62 | 252 |
| | | 64 | 149 |
| 18 | 522 822 | Highest EC: | |
| 20 | 413 | <u>1068 ms/m @ 16'</u> | |
| 24 | 434 | | |
| 28 | 394 | | |
| 32 | 456 | | |

0835 Pulling EC pipe & grouting thru tremie
- used 6 gal grout

11.21.19

0900 Moving adj. to soil sample
- entering w/ 2.25' of cutting shoe

H1-18 utm 0508224
NA083: 3327588

| Lith | Rec | EC | PID | |
|------|-----|------|-----|--|
| 0 | 11 | 2.10 | | SILT, brn. CLAY @ 0.5, H. brn w/ |
| 4 | 2.2 | 2.72 | 0.3 | Fe stain, md soft |
| 4 | 4.0 | 2.13 | 0.1 | Silty CLAY, gray w/ Fe stain, stiff |
| 8 | 4.0 | 2.93 | 0.2 | g blk |
| 12 | 4.0 | 3.21 | 0.5 | SAA, dry SILT lenses throughout |
| 12 | 4.0 | 4.42 | 0.2 | SILT lens @ 2.3' dry; CLAY @ 2.7' shell head @ 3-32 |
| 16 | 4.0 | 5.93 | 0.3 | CLAY, gray w/ Fe & blk stain, SiH |
| 16 | 4.0 | 6.47 | 1.0 | lenses throughout btm half, stiff |
| 20 | 3.0 | 6.02 | 1.1 | SAA, Cl. SILT lens @ 0.5' (2" thick) |
| 20 | 4.0 | 4.94 | 0.5 | |
| 24 | 2.7 | 3.12 | 0.2 | CLAY, gray, md soft, Fe stain @ btm 2" |
| 24 | 2.8 | 3.71 | 0.6 | SAA, soft spot @ 1.8-2.4' |
| 28 | 3.6 | 3.38 | 0.6 | CLAY w/ some Silt, gray, md stiff |
| 28 | 3.4 | 3.08 | 0.3 | CLAY, gray, Fe & blk stain, Ca |
| 32 | 3.9 | 3.10 | 0.7 | CLAY, gray, Fe & blk stain, Ca |
| 32 | 3.7 | 3.24 | 0.6 | Silty CLAY, gray/red/brn. CLAY @ 2.1'. Cl. SILT @ 3.2' |
| 36 | 3.8 | 3.47 | 0.4 | Silty CLAY, gray & Fe stain, blk stain 1.4-2.3' |
| 36 | 3.4 | 3.71 | 0.1 | SAA, Ca; CLAY @ 1.6', stiff |

11.21.19

| Lith | Rec | EC | PID | |
|------|-----|------|-----|---|
| 36 | 4.0 | 3.89 | 0.6 | CLAY, brn, stiff |
| 40 | 4.0 | 3.47 | 0.4 | SAA |
| 44 | 4.0 | 2.94 | 0.6 | SAA, gray, stiff |
| 44 | 4.0 | 2.52 | 0.6 | SAA, gray/brn, Fe mottles |
| 48 | 4.0 | 2.54 | 0.4 | SAA, Silty CLAY @ 2.1' gray w/ Fe stain |
| 48 | 2.7 | 2.75 | 0.8 | Cl. SILT, gray, clay lens @ 2.2'; SILT @ 2.3' |
| 48 | 3.2 | 3.28 | 0.3 | SILT, lt. brn, wet; Cl. SILT @ 2.3' |
| 52 | 2.8 | 3.09 | 0.9 | SAA, Cl. SILT @ 0.5'. CLAY @ 1.7', stiff |
| 52 | 4.0 | 3.97 | 0.4 | CLAY, gray w/ Fe stain, stiff |
| 56 | 4.0 | 2.85 | 0.5 | SAA |
| 56 | 3.1 | 2.18 | 0.6 | SAA |
| 60 | 3.9 | 2.32 | 0.3 | SAA, some Silt @ top |

Time samples

0930 0-4'

0935 4-6'

0945 8-10'

1000 14-16' High EC

1110 42-44' L

1150 58-60'

1145 LUNCH

~~1230 Back on site~~ (20)

11.21.19

- 1200 ~~Re-entered~~ Grouted thru tremie thru 2.25" while pulling
- used 15 gal grout
- 1230 Set well adj to sample hole
- entering w/ 3.25" to 16' E-tip
- entering w/ 2.25" thru 3.25" to 50' w/ E-tip

H-18 Set

Screen: 45-50' Sand: —
native: 36' Grout: Surface
pellets: 29' E-tip: 1 (2")
1 (3")

- 1300 Pulling 3.25" & 2.25" & grouted (cc)
- 1325 Moved to H-19
- 1400 Testing HPT probe & computer
- Wenner
- 1430 Stringing & retesting
- Top Dipole

11.21.19

| H-19 | | *H-19.2ip | |
|-------|-----------|----------------|-----|
| Depth | EC [mS/m] | Depth | EC |
| 2 | 182 | 32 | 313 |
| 4 | 403 | 36 | 554 |
| 6 | 361 | 40 | 492 |
| 8 | 216 | 44 | 452 |
| 10 | 521 | 48 | 502 |
| 12 | 794 | 52 | 582 |
| 14 | 774 | 56 | 186 |
| 16 | 778 | 60 | 235 |
| 18 | 769 | | |
| 20 | 284 | * Highest EC: | |
| 24 | 334 | 923 mS/m @ 17' | |
| 28 | 342 | | |

1530 Pulling HPT & grouting thru tremie
- used 8 gal grout

1545 Decon & cleaning up, grouting H-18

1630 Leaving site

11.22.19

0730 On site

- oversight on site

0735 Moving adj. to soil sample

- entering w/ 2.25" g cutting shoe

H-19

utm: 0508251
NAD83: 3327873

| Lith | Rec | EC | PID | |
|------|------|-----|-----|--|
| 0 | | | | |
| 3.6 | 0.97 | 0.5 | | Silty CLAY, brn; CLAY @ 1' brn to gray w/ Fe stain, soft spot @ btm |
| 4 | 3.23 | 0.7 | | |
| 3.9 | 3.6 | 0.3 | | CLAY w/ some Silt, lt. gray w/ Fe & blk stain, soft spot 0.7-1.3', dk gray |
| 8 | 2.38 | 1.4 | | |
| 4.0 | 2.87 | 0.4 | | Cl. SILT, gray w/ Fe stain; CLAY @ 0.7' stiff, shell hash @ 2.5-2.9' |
| 12 | 4.8 | 1.1 | | |
| 4.0 | 6.2 | 0.8 | | CLAY, gray w/ Fe stain, silt lenses in btm half. |
| 16 | 5.8 | 1.0 | | |
| 3.6 | 6.91 | 1.0 | | CLAY, gray, damp Silt lenses throughout yellow stain @ 3' |
| 20 | 2.73 | 1.2 | | |
| 3.7 | 2.4 | 1.0 | | CLAY, gray w/ yellow stain, md stiff |
| 24 | 3.2 | 2.4 | 0.7 | |
| 3.2 | 2.4 | 0.7 | | |
| 3.2 | 2.5 | 0.9 | | CLAY w/ some Silt gray/brn, blk mottles |
| 28 | 3.6 | 2.4 | 1.0 | SAA, dec. Silt w/ depth Fe stain btm half |
| 3.3 | 2.5 | 1.0 | | Silty CLAY, gray, Fe stain; SILT @ 3' |
| 32 | 2.0 | 2.8 | 1.2 | Cl. SILT w/ CLAY lenses @ 0.4 & 1.4 (4" thick) |

11.22.19

H-19 cont.

| Lith | Rec | EC | PID | |
|------|------|------|-----|---|
| 32 | 3.23 | 4.1 | 1.1 | Cl. SILT, brn, Fe & blk stain, md soft |
| 36 | 3.4 | 3.6 | 0.8 | Silty CLAY, lt. brn, Fe stain & blk stain |
| | 3.3 | 4.12 | 1.0 | CLAY, brn, stiff |
| 40 | 3.4 | 4.2 | 1.0 | SAA, brn to gray, stiff |

time sample's

0745 0-2'

0750 4-6'

0800 8-10'

0915 38-40'

0845 Grouting sample hole thru tremie
- used 12 gal grout & pulling 2.25"

0945 Head readings

H-18 : 5.05'

H-16 : 5.74'

H-12 : ~~10.82~~ (R) 6.91'

H-9 : 5.61'

H-10 : ~~6.9~~ (R) 10.82'

H-3 : 5.20'

H-2 : ~~5.20~~ (R) 5.91'

H-1 : 5.85'

1030 Leaving site

KC

3.5.2020

0900 On site
 0910 Oversight on site
 - ERM: David Sanguinetti
 - Jerry Fontenot
 0945 Arrived @ H-12 to purge
 & sample

1015 Pump on
 - tubing ~60'
 ~H-12

DTW: 3.77' TD: 40.4' su: 1.2'

| time | temp | cond | pH | ORP | TDS | turb | vol |
|------|------|--------|------|-----|-------|------|---------|
| | | [ms/m] | | | (pPT) | | (gal) |
| 1020 | 20.5 | 79.80 | 5.38 | 183 | 113.8 | OR | Initial |
| 1023 | 20.5 | 82.82 | 5.79 | 113 | 115.4 | 36.4 | 1.0 |
| 1029 | 20.6 | 83.79 | 6.04 | 85 | 117.1 | 22.1 | 2.0 |
| 1034 | 20.6 | 83.94 | 6.17 | 74 | 118.2 | 15.0 | 3.0 |
| 1039 | 20.3 | 84.32 | 6.25 | 61 | 119.2 | 14.2 | 4.0 |
| 1050 | 19.9 | 84.44 | 6.34 | 52 | 119.3 | 5.43 | 5.0 |
| 1100 | 19.4 | 84.41 | 6.37 | 50 | 120.9 | 6.39 | 6.0 |

1105 Sample time
 - RADs, total metals

1137 Pump off

1140 LUNCH, buying gas & ice

1245 Arrived @ H-9 to purge & sample

3.5.2020

1303 Pump on
 - tubing @ ~54'

H-9

DTW: 2.95' TD: 55.75' su: 1.94'

| time | temp | cond | pH | ORP | TDS | turb | vol |
|------|------|--------|------|-----|-------|------|---------|
| | | [ms/m] | | | (pPT) | | |
| 1305 | 19.7 | 45.79 | 6.53 | 115 | 50.02 | 6.76 | Initial |
| 1310 | 20.1 | 47.51 | 6.36 | 66 | 52.06 | 26.4 | 1.0 |
| 1315 | 20.1 | 48.44 | 6.33 | 53 | 53.12 | 50.5 | 2.0 |
| 1321 | 19.8 | 48.84 | 6.44 | 53 | 53.96 | 21.2 | 3.0 |
| 1330 | 19.9 | 48.92 | 6.40 | 47 | 53.93 | 9.26 | 4.0 |

1335 Sample time

- RADs, total metals

1404 Pump off

1421 Arrived @ H-10 to purge & sample

1435 Pump on
 - tubing @ 39'

KC

3.5.2020

H-10

DTW: 6.40' TD: 40.4' Su: 0.9'

| time | temp | [$\mu\text{S}/\text{m}$] cond | pH | ORP | [ppm] TDS | turb | [gal] Vol |
|------|------|------------------------------------|------|-----|--------------|------|--------------|
| 1436 | 21.6 | 4925 | 7.18 | 128 | 3862 | OR | Initial |
| 1442 | 21.6 | 4901 | 6.95 | 103 | 3843 | OR | 1.0 |
| 1447 | 21.9 | 4903 | 6.89 | 119 | 3844 | 64 | 2.0 |
| 1452 | 22.2 | 4894 | 6.92 | 113 | 3833 | OR | 3.0 |
| 1507 | 22.1 | 4910 | 6.83 | 116 | 3848 | 11.2 | 4.0 |
| 1520 | 22.8 | 4903 | 7.16 | 104 | 3837 | 4.91 | 5.5 |
| 1526 | 22.4 | 4909 | 6.96 | 119 | 3845 | 4.78 | 6.0 |

1530 Sample time

- RADS, total metals

1603 Pump off

1613 Arrived @ H-2 to purge & sample

1621 Pump on

- tubing @ 34'

3.5.2020

H-2

DTW: 3.19' TD: 35.94' Su: 1.32'

| time | temp | [$\mu\text{S}/\text{m}$] cond | pH | ORP | TDS | turb | [gal] Vol |
|------|------|------------------------------------|------|-----|------|------|--------------|
| 1629 | 21.7 | 4809 | 7.22 | 121 | 3770 | 106 | Initial |
| 1632 | 21.4 | 4832 | 6.90 | 128 | 3773 | 48.5 | 2.0 |
| 1639 | 21.6 | 4815 | 6.80 | 130 | 3769 | 40.9 | 3.5 |
| 1642 | 21.6 | 4805 | 6.85 | 133 | 3759 | 24.3 | 4.0 |
| 1648 | 21.4 | 4815 | 6.97 | 133 | 3766 | 14.8 | 5.0 |

1655 Sample time

- RADS, total metals

* Turbidity: 3.39 NTU @ sample time

1715 Pump off

1745 Leaving site

KC

3.6.2020

0700 On site

- oversight on site

ERM David Sanguinetti

Jerry Fontenot

0715 Loading equip on UTV

0730 Arrived @ H-16 to purge & sample.

0747 Pump on

- tubing @ 39'

H-16

DTW: 3.22' TD: 41.9' su: 2.2'

| time | temp | cond [us/m] | pH | ORP | TDS | turb | vol |
|------|------|-------------|------|-----|-------|------|---------|
| 0748 | 19.0 | 28.15 | 6.68 | 76 | 28.18 | OR | initial |
| 0755 | 19.5 | 29.20 | 6.39 | 18 | 29.30 | 40.7 | 1.0 |
| 0800 | 19.6 | 29.22 | 6.32 | 63 | 29.22 | 27.8 | 2.0 |
| 0806 | 19.2 | 29.47 | 6.48 | 69 | 29.48 | 13.3 | 3.0 |
| 0812 | 19.2 | 29.34 | 6.48 | 73 | 29.42 | 9.55 | 4.0 |

0815 Sample time

- RADs total metals

0852 Pump off

0913 Arrived @ H-18 to purge & sample

3.6.2020

0920 Pump on

- tubing @ -50'

H-18

DTW: 2.0' TD: 51.03' su: 1.20'

| time | temp | cond [us/m] | pH | ORP | TDS [ppm] | turb | vol |
|------|------|-------------|------|-----|-----------|------|---------|
| 0925 | 18.8 | 9825 | 7.35 | 109 | 8309 | 3.89 | initial |
| 0931 | 19.5 | 10.24 | 7.12 | 122 | 8663 | 6.17 | 1.0 |
| 0935 | 20.1 | 0.28 | 6.84 | 116 | 8690 | 3.07 | 2.0 |
| 0940 | 20.3 | 10.33 | 6.75 | 112 | 8767 | 2.24 | 3.0 |
| 0946 | 20.4 | 10.30 | 6.77 | 110 | 8715 | 2.53 | 4.0 |

0950 Sample time

- RADs, total metals

1022 Pump off

1030 Arrived @ H-1 to purge & sample

1040 Pump on

- tubing @ -39'

Kc

3.6.2020

H-1

DTW: 2.3' TD: 40.7' Su: 1.03'

| time | temp | cond [us/m] | pH | ORP | TDS [ppm] | turb | vol |
|------|------|-------------|------|-----|-----------|------|---------|
| 1043 | 20.7 | 5297 | 7.66 | 50 | 4188 | 19.0 | Initial |
| 1047 | 20.9 | 5248 | 7.15 | 59 | 4145 | 13.1 | 1.0 |
| 1053 | 20.9 | 5220 | 7.09 | 92 | 4126 | 5.72 | 2.0 |
| 1058 | 21.1 | 5210 | 7.02 | 88 | 4115 | 3.20 | 3.0 |
| 1104 | 21.3 | 5207 | 7.08 | 103 | 4105 | 2.17 | 4.0 |

1110 Sample time
- RADs, total metals

1140 Pump off

1150 LUNCH

1235 Arrived @ H-3 to purge & sample

1245 Pump on
- tubing @ ~~39'~~ Kc ~26'

3.6.2020

H-3

DTW: 4.56' TD: 27.8' Su: 1.02

| time | temp | cond [us/m] | pH | ORP | TDS [ppm] | turb | vol |
|------|------|-------------|------|-----|-----------|------|---------|
| 1247 | 22.5 | 1027 | 7.79 | 143 | 723 | OR | Initial |
| 1254 | 22.2 | 1013 | 7.44 | 116 | 711.2 | 65.4 | 1.0 |
| 1259 | 21.6 | 1020 | 7.57 | 140 | 714.6 | 12.4 | 2.0 |
| 1304 | 21.4 | 1021 | 7.27 | 134 | 716.4 | 4.54 | 3.0 |

1315 Sample time
- RADs, total metals

1340 Pump off

Loading up equipment & UTV

1400 Leaving site

Kc

KC, JC, DW

3.9.2020

- 1100 On site
-Scouting access & unloading
- 1130 Jerry Fontenot on site as oversight
- 1215 David Sanguinetti (ERM) on site
- 1220 Moving to location
- job canceled
- 1230 Loading back up
- 1330 Leaving site

KC

CJ, JC, DW

3-24-2021

945 CJ on site, meeting w/ pipeliners

930 JC, DW on site, unloading

Jerry Fontenot
Charles w/ERM

1030 Set up to HPT

1100 Test 1, Wenner, Pass

1140 string pipe, 1200 lunch

H-20 HPT

508391

3328255

* 1300 Test wont pass after stringing pipe, move on to sampling

3-29-21

508391
3328255

H-20 Sampling

| 0 | Rec | EC | PSD | |
|----|-----|------|-----|--|
| | 1.6 | 0.80 | | CLAY, brn to dk gray, firm, orange mottling (0.5-1.6) |
| 4 | 3.4 | 2.10 | | CLAY, gray, orange mottling, firm |
| 8 | 4 | 2.32 | | CLAY (8-11.7), gray/tan, orange mottling |
| 12 | 3.2 | 1.00 | | firm; Clayey silt (11.7-17), ^{lt brn} damp |
| 16 | 4 | 2.54 | | CLAY, (lt brownish gray, firm, orange staining; Clayey silt lenses (12.3-12.7), damp & (13.3-13.6) orange brn) |
| 20 | 4 | 2.16 | | CLAY, gray, orange mottling, stiff (20-21) |
| 24 | 4 | 1.47 | | firm (21-24) |
| 28 | 4 | 1.94 | | CLAY, tan, firm, some orange mottling |
| 32 | 3.2 | 1.55 | | CLAY, tanish gray, firm to stiff, orange staining |
| 36 | 1.5 | 1.48 | | CLAY, reddish brn to gray, stiff |
| 40 | 2.3 | 1.26 | | silty CLAY, lt brownish gray, soft (0-2), firm (1-15) |
| | 2.5 | 2.03 | | CLAY, gray & red brn, firm |
| 44 | 2.4 | 1.92 | | CLAY, gray, orange staining, firm |

3-29-21

H-20 cont

| 44 | Rec | EC | PSD | |
|----|-----|------|-----|-----------------------------------|
| | 4 | 1.55 | | CLAY, gray, orange staining, firm |
| 48 | | 1.76 | | |

* From 36', liners slip off the ^{inner} pipe when pulled, have to pull outer pipe every time to get liner

Set H-20 well

Pull sample pipe reenter w/exp tip to 45'; set 3/4" PVC well w/ filter sock. Screen 35-45'

Native 34
Sand 33
Bent 30

1730 leave site, to Hotel in Scott

CS, IC, DW

3-30-21

730 On site,

Charles / EHM, Jerry Forknot

Testing HPT, pass

string pipe

Test, pass

900

HPT H-20

adjacent
to sample hole

EC Depth

192 @ 4'

135 @ 8'

115 @ 12'

189 @ 16'

207 @ 20'

104 @ 24'

118 @ 28'

148 @ 32'

EC Depth

118 @ 36'

148 @ 40'

192 @ 44'

189 @ 48'

199 @ 52'

196 @ 56'

153 @ 60'

126 @ 63'

TD = 63'
Pull HPT pipeTremie to 60', grout hole
to surface

~ 8 gal

3-30-21

1100 Lunch

1145 Mob to next location

1215

Sampling H-21

508135
3528315

| 0 | Rec | EC | PID | |
|-----|------|-----------------|-----|---|
| 2.2 | 1.61 | 1.61 | | CLAY, tan (0-0.5) + (1.7-2.2), brn ^(0.5-1.7) |
| 4 | 4.03 | 4.03 | | orange mottling (0.5-1.7) ; firm |
| 3 | 4.59 | 4.59 | | CLAY, tan/siy w/ heavy orange |
| 8 | 5.17 | 5.17 | | straining, firm, brn nodules 4.3, 5.5, 6 |
| 3.9 | 5.97 | 5.97 | | CLAY (8-8.4) silty tan, firm; silty CLAY (8.9-10) |
| 12 | 5.85 | 5.85 | | gray soft; silty CLAY, red brn, firm |
| 4 | 4.55 | 4.55 | | CLAY, gray + orange, shell hash (12-12.5) |
| 16 | 4.16 | 4.16 | | firm to stiff |

* PID doesn't seem to be working properly

Pull sample pipe, grout hole

1300 Fuse blown on Geoprobe, DW
to auto parts store1500 Leave site, CI + IC doctor's appts
in a.m. come back Thursday

CS, JC, DL

4-1-21

815 On site, Charles w/ERM Jerry
 set up to HPT Eric w/HPT

Test 1 - Pass; string pipe; Test 2 - Pass

925 HPT H-22 508089
 3328091

| | |
|----------|-----------------|
| 112 @ 4 | 121 @ 36 |
| 174 @ 8 | 93 @ 40 |
| 126 @ 12 | 120 @ 44 |
| 141 @ 16 | 157 @ 48 |
| 138 @ 20 | 85 @ 52 |
| 146 @ 24 | @ 56 |
| 136 @ 28 | @ 60 |
| 151 @ 32 | |

Pull HPT pipe TD-51'

4-1-21

adjacent to probe hole

Sampling H-22

| 0 | Rec | EC | PTD | |
|----|-----|------|-----|--|
| | 24 | 0.98 | | Silty CLAY, brn, firm, orange |
| 4 | | 2.30 | | mottling |
| | 3 | 3.08 | | CLAY, grey & orange, firm, |
| 8 | | 3.07 | | silty CLAY, grey, soft (6-6.5) |
| | 4 | 2.61 | | CLAY, grey & orange, very firm, |
| 12 | | 1.82 | | shell hash (11.3-12) |
| | 4 | 2.38 | | CLAY, grey & orange, very firm, |
| 16 | | 2.83 | | Clayey SILT lens (15.2-15.5), soft orange, moist |
| | 3.4 | 2.34 | | Silty CLAY, grey firm; Clayey SILT lenses (16.3- |
| 20 | | 2.63 | | 16.5)(17-17.1)(16.6-16.7), 1 brn, moist damp |
| | 4 | 1.8 | | CLAY, grey, orange staining, firm |
| 24 | | 1.92 | | |
| | 4 | 1.88 | | CLAY, grey, orange staining, very firm |
| 28 | | 1.78 | | |
| | 4 | 2.0 | | CLAY, grey, Ca throughout, very firm to |
| 32 | | 1.97 | | stiff, orange staining (30-32) |
| | 4 | 1.9 | | CLAY, grey, firm, orange staining |
| 36 | | 1.94 | | & mottling; Clayey SILT (35.7-36), brn, damp |
| | 3.2 | 1.23 | | Silty CLAY (36-36.4)(37-39.2), brn, grey w |
| 40 | | 1.42 | | orange mottling, firm; Clayey SILT (36.4-37), damp |
| | 2.6 | 1.32 | | Clayey SILT (0-1'), tan, moist; silty CLAY, tan, soft |
| 44 | | 3.2 | 2.1 | CLAY, brownish grey, very firm, orange staining w/ reddish brn |

4-1-21
Set H-22 well

Pull sample pipe, reenter w/exp lip
Set 3/4" PVC well w/filter sock
Screen 34-44'
Native 39
Sand 32
Bent 28

1400 Leave Site

25, Du, MS

4-5-21

900 On site,
Charles w/ERM
Jerry Fennot

MoB Geoprobe to next location
Clear path
string HPT pipe
Test, pass

1150

HPT H-23

508077,
3328396

107 @4'

108 @8'

130 @12'

172 @16'

127 @20'

128 @24'

144 @28'

121 @32'

74 @36'

171 @40'

175 @44'

198 @48'

195 @52'

156 @56'

TD @58'

Pull ~~Sam~~ Pipe, tremie to TD
grout to surface

1300 lunch

1400 sample

4-5-21

Sampling H-23

adjacent to probe hole

1400

Rec EC

| | | | |
|----|-----|---------------------------------|---|
| 0 | 2 | 1.40 | Silty clay, brn, soft; clay (0.5-2); lt brn, gray, firm |
| 4 | 2 | 1.21 | clay, gray + reddish brn; orange staining |
| 8 | | 0.91 | very firm (ca @ 4.7 + 5.9') |
| | 4 | 1.37 | clay, red brn + gray (8-11), very firm, (10.3, 11) |
| 12 | | 2.05 | shell hash (9.6-2'); clay (11-12), gray, very firm |
| | 4 | 2.00 1.88 2.20 | clay, gray + orange, very firm |
| 16 | 4 | 2.17 | SAF |
| | | 2.06 | |
| 20 | 4 | 1.81 | clay, gray, orange staining, very firm |
| | | 1.83 | firm |
| 24 | 4 | 1.80 | clay, gray, orange staining, Ca throughout |
| | | 1.96 | very firm |
| 28 | 3.5 | 2.15 | clay, lt brn, orange staining, Ca, stiff |
| | 3.1 | 1.95 | clay, lt brn, stiff; silty clay (2.8-3.1), lt brn |
| 32 | 2.6 | 0.98 1.45 | slut (0-0.7) brn net; clay (0.7-1.2), gray, firm; clay (1.2-3.2), med, lt brn |
| | 2.5 | 1.20 | slut (possible flow in); silty clay last 6" soft, lt brn |
| | 1.2 | 1.54 | slut (0-0.7), med, brn; clay (0.7-0.9), gray, brn; clay (0.9-1.2), med |
| 36 | 4.5 | 1.52 | clay, gray, firm, orange staining |
| 40 | | | |

liners keep coming off grabbers at depth started 1' pushes @ 34'

4-5-21

Set H-23 well

Pull sample pipe, reenter w/exp tip
set 3/4" PVC well w/filter sock
Screen 27-37
Native 33
Sand 26
Bent 22

1645 Mob Geoprobe out to front
Chris M. to site in a.m. to trailer
Geoprobe to next area

1700 Leave site, CS + MS to hotel in
Lake Charles

DW in Scott (no more rooms in LC)
*DW decided to stay and do completions

1830 DW leave site

CS, DW, MS

4-6-21

730 On site,
Charles -/Ehm
Jerry Fanknot

900 CM on site to trailer probe
Prep to mob Geoprobe
setup on location

1000 string pipe,
test, pass

1020 HPT H-24 508017
3321850

| | |
|-----------|-----------|
| 192 @ 4' | 176 @ 32' |
| 118 @ 8' | 146 @ 36' |
| 258 @ 12' | 143 @ 40' |
| 145 @ 16' | 107 @ 44' |
| 219 @ 20' | 105 @ 48' |
| 110 @ 24' | 215 @ 52' |
| 150 @ 28' | 140 @ 56' |
| | 166 @ 58' |

TD-58'

Pull pipe, frame to TD
Grant hole

4-6-21

1100 lunch

1200

Sampling H-24 ^{adjacent to probe hole}

| 2 | Rec | Fe | |
|-----|------|-------|---|
| 2.5 | 0.78 | | Silty CLAY, brn, firm, orange mottling (0.9-1.3) |
| 4 | 1.50 | A | |
| 3.5 | 2.46 | | CLAY, gray, orange staining, firm, |
| 8 | 2.53 | | brn nodules/mottling (6-7.5) |
| 4 | 2.49 | | CLAY, grey & orange, firm, shell hash (10.7- |
| 10 | 2.92 | 11.2) | |
| 2.2 | 3.28 | | CLAY, orange (2-13), grey (13-14.2), very firm |
| 2.3 | 2.63 | | CLAY, grey, orange staining, very firm |
| 16 | 1.7 | 1.47 | ^{silty} CLAY, grey & orange, firm, (layer of lens (16.1-16.2) ^{most} _{brn}) |
| 20 | 2.4 | 2.37 | CLAY, grey & orange, very firm |
| 20 | 2.3 | 1.38 | SAA |
| 24 | 2.4 | 1.31 | CLAY, tanish grey, very firm, blk string @ 23' |
| 28 | 2.7 | 1.45 | CLAY, lt brn, very firm, |
| 28 | 3 | 1.32 | SAA |
| 28 | 3 | 1.72 | CLAY, grey & orange, very firm |
| 32 | 2.8 | 1.55 | CLAY, grey & orange firm , very firm |
| 32 | 3 | 1.53 | SAA |
| 36 | 2.1 | 1.13 | CLAY, grey & orange, very firm; silty clay (34.5-35.5) ^{if brn soft} |
| 36 | 2.6 | 1.55 | Silty CLAY, lt brn, orange mott, soft (36-37) ^{firm} _(more silt & damp) |
| 40 | 3.8 | 1.42 | Silty CLAY (0-2'), grey/lt brn, orange mott, soft to firm ^{firm} |
| | | | CLAY (2-4'), grey & orange/brn, firm |

4-6-21

Sampling H-24 cont.

| | | | |
|----|--------|------|--|
| 40 | Rec EC | | |
| | 4 | 1.46 | CLAY, grey & orange, Firm |
| | 1.8 | 1.13 | SAA |
| 44 | 1.2 | 0.87 | CLAY, grey & orange, Firm; Silt (0.9-1.2), Firm, moist |
| 46 | 2.5 | 0.90 | Sandy SILT (14-45), Hoop, wet; Silty CLAY, moist Firm |
| 48 | | | |
| 50 | | | |

1430 Set H-24 well

Pull sample pipe, reenter w/exp hp
 Set 3/4" PVC well w/Filter sock
 Screen 41-46'
 Native 42
 Sand 39
 Bent 28

1500 Load up probe & ATV on trailer
 to mob to next area

1630 Set up on location, string HPT
 Fill water buckets

1700 Leave site, CS + MS - hotel in LC,
 DW - 1000s + hotel in Scott
 Per completion - material

CS, DW, MS

4-7-21

730 On site,
 Charles w/EAM
 Jerry

Test HPT, Pass

840 HPT H-25 50672
 3327901

45 @ 4'

47 @ 8'

44 @ 12'

45 @ 16'

49 @ 20'

@ 24'

@ 28'

@ 32'

@ 36'

@ 40'

@ 44'

@ 48'

@ 52'

@ 56'

PEC seems to be not working correctly
~~water down~~ keep log going for
 Lithology/Pressure
 readings

X @ 50' string pot stopped working
 TD = 50'

Pull pipe, tremie to TP
 Grout hole

930

Sampling H-25

4-7-21
adjacent
to probe hole

0 Rec EC

| | | | |
|-----|-------|---|---|
| 3 | 0.58 | CLAY, brn (0-25), grey w/ orange staining, | |
| | 2.64 | firm | |
| 4 | 2.15 | CLAY, grey & orange, very firm, | |
| | 1.83 | blk nodules (4.4-4.7) | |
| 8 | 1.76 | CLAY (S. 4.5-5.0- 5.2 5.2) firm; clayey silt/silty clay (4.3- 10) grey, ^{firm} silt; shell hash (0-11.7) | |
| 12 | 1.42 | | |
| 4 | 2.01 | CLAY, grey, orange staining, very firm, ^{firm} nodules (14.4-14.7); clayey silt (15.4- 15.7); lt brn, moist | |
| 16 | 1.08 | | |
| 2.7 | 1.213 | CLAY, grey, orange staining, firm. to silty clay | |
| | 1.22 | | |
| 20 | 4 | 1.52 | CLAY, lt brn, firm, blk staining, |
| | 1.57 | orange staining (23-24) | |
| 24 | 3.2 | 1.75 | CLAY, grey, orange staining, firm stiff |
| 28 | 2.5 | 1.96 | CLAY, brnish grey, orange staining, stiff ^{Ca-C1.6'} firm _{0.5-0.5} |
| | 2.6 | 2.20 | CLAY, grey & orange, stiff |
| 32 | 2.5 | 1.38 | SAA (0-9); silty clay, ^{lt brn} orange soft, some Ca |
| | 3 | 1.82 | CLAY/silty clay, grey, orange mottling, some Ca _{stiff} |
| 36 | 3.2 | 1.32 | CLAY, tanish grey & brnish orange, firm blk staining |
| | 3.2 | 1.27 | stiff CLAY, lt brn, orange staining, firm |
| 40 | 2 | 1.39 | CLAY, lt brn (40-41), grey, stiff, orange staining + blk |

* 1045 pushed to 40', no water zone. CS has
virtual dr apt at 1100, take lunch
open cores after lunch & sample deeper

4-7-21

Sampling H-25 cont

40 Rec EC

| | | | |
|------|------|--|--|
| 2 | 1.72 | CLAY, silt (0-0.7) lt brn, moist; CLAY, ^{grey, orange mottling} very _{firm} | |
| 44 | 3.2 | 1.53 | CLAY, greenish grey, orange mottling, stiff _{firm} |
| | 3.2 | 1.10 | SAA (0-1.5); clayey silt (1.5-2), orange, moist; silty clay, tanish _{firm} |
| * 48 | 2.5 | 1.53 | CLAY/silty clay, grey, orange mottling, very firm |

Set H-25 well

1330

Pull sample pipe, reenter w/ exp hp
Set 3/4" PVC well w/ filter sock
Screen 38-48'
Niche 44
Sand 36
Bent 33

1445 Mob to next location

4-7-21

1525 EC Probe H-26 506908
3327902

1515 Test, Wenner - Pass

1510 Tested string pot, working

165 @ 4' 151 @ 36'

127 @ 8' 141 @ 40'

104 @ 12' 155 @ 44'

168 @ 16' 100 @ 48'

105 @ 20' @ 52'

116 @ 24' @ 56'

132 @ 28' @ 60'

76 @ 32'

* EC got noisy & inconsistent @ 40' will test
TD-52' after pulledPull EC pipe, hemic to TD
Grout hole

Test Probe, Passed as Wenner

1615 Mob to next location to EC probe

1630x started to EC probe, EC malfunction
replace probe
Test, Pass Wenner

4-7-21

~~1620~~ 1650 EC Probe H-27 507108
3327897

168 @ 4'

154 @ 8'

90 @ 12'

53 @ 16'

92 @ 20'

103 @ 24'

111 @ 28'

111 @ 32'

116 @ 36'

142 @ 40'

144 @ 44'

95 @ 48'

124 @ 52'

TD-53'

Pull EC pipe, hemic to TD
Grout hole1800 CJ+MS leave site hotel in L. E.
DW to hotel in Scott

CJ, DW, MS

4-8-21

730 CJ+MS on site,

Did not get near ended on way here

Charles v/Ehm
Jerry Fontenot

1040 DW on site,

1100

Sampling H-26

adjacent to probe hole

Ree Ec

| | | | |
|----|---|------|---|
| 0 | 3 | 0.89 | CLAY, brn (0-1.5), grey to orange (1.5-3), |
| | | 2.63 | lim |
| 4 | 4 | 2.1 | CLAY, grey to orange, Ca nodules (5.4-5.7), |
| | | 2.15 | black staining (1.5-8) |
| 8 | 4 | 1.9 | CLAY, red/brn w/ some grey, very firm, |
| | | 1.84 | shell hash (3.7-4) blk staining |
| 12 | 4 | 1.86 | CLAY, grey, orange staining, very firm |
| | | 1.97 | |
| 16 | 4 | 2.05 | SAA |
| | | 2.04 | |
| 20 | 4 | 1.25 | CLAY, tanish grey, orange staining, very firm |
| | | 1.44 | |
| 24 | 3 | 1.44 | CLAY, brn orange staining, very firm |
| 28 | 3 | 1.46 | SAA |

4-8-21

Sampling H-26 cont

| | | | | |
|----|--------|-----|------|---|
| 28 | Ree Ec | 2.8 | 1.7 | CLAY, grey to orange staining, very firm, Fenodules @ 1.5 |
| 32 | | 2.5 | 1.48 | CLAY, grey, orange staining, firm; clayey silt last (0.3) ^{orange stain} |
| | | 2 | 1.30 | CLAY, brn (32-32.5), orange brn, moist; silty CLAY ^{orange stain} |
| 36 | | 2.2 | 1.67 | CLAY, orange (34-35.5), steep, firm ^{orange stain} |
| | | 1.3 | 1.50 | CLAY, grey, firm; silty CLAY last (36.6-36.8) ^{1.4 brn} SAA |
| 38 | | 1.3 | 1.33 | CLAY, f brn, orange staining, firm |
| | | 1.7 | 1.45 | SAA |
| 40 | | 2 | 1.62 | CLAY, f brownish grey, orange staining, very firm |
| | | 2 | 1.63 | SAA |
| 42 | | 2 | 1.71 | SAA |
| | | 1.8 | 1.71 | SAA |
| 44 | | 2.5 | 1.87 | SAA |
| | | 2.8 | 1.26 | CLAY, grey, orange staining, very firm |
| 46 | | 3.2 | 1.6 | SAA |
| | | 2.8 | 1.32 | SAA |
| 48 | | 2.3 | 0.91 | CLAY, grey, slight green tint, stiff, slightly silty |
| | | 2.2 | 0.74 | Sandy silt (48-48.5), f brn, net CLAY, f brn ^{silty} firm |

28-49 liner got stuck pull out pipe
set H-26 well

Enter w/exp to 50', set 3/4" PVC well
w/filter sock screen 45-50

Native 47 Sand 43 Bent 38

1745 Leave site

CJ & MI hotel in LC.

DW hotel in Scott

4-8-21

CS

CS, DW, MI

4-9-21

730 On site,
Charles w/ EAM
Jerry

Sampling H-27

adjacent
to probe hole

| Depth | Core | EC | Description |
|-------|------|------|---|
| 0 | 3 | 0.71 | CLAY, dk grey (0-2), grey (2-3), firm, orange staining (2-3) |
| 4 | 3.6 | 3.51 | CLAY, grey, orange staining, firm |
| 8 | 2.8 | 2.00 | CLAY, tannish grey, firm, brn staining, orange mottling |
| 12 | 3.8 | 1.15 | silky CLAY, tannish grey, firm, soft 12.4-13.5 |
| 16 | 3.8 | 0.73 | silky CLAY, tannish grey / lt grey, soft; silty, lt grey, wet |
| 20 | 2.7 | 1.57 | CLAY, grey + lt brn, firm |
| 24 | 3 | 1.51 | CLAY, grey + orange, firm to very firm |
| 28 | 3.2 | 1.25 | CLAY, lt brn blk staining, very firm |
| 32 | 3 | 1.49 | CLAY, grey, orange staining, very firm |
| | 2.7 | 1.89 | SAF w/ Fe nodules @ 28.1 |
| | 2.6 | 2.02 | CLAY, grey, orange staining, very firm |

27-9-21

Sampling H-27 cont

| 32 | Rec | FE | |
|----|-----|------|--|
| | Z | 1.85 | SAA |
| 36 | Z.2 | 1.54 | CLAY, grey, firm, orange staining |
| | 3 | 1.54 | CLAY/silty CLAY, grey, orange staining, firm |
| 40 | 4 | 1.84 | CLAY, brownish grey, orange staining, firm |
| | Z.3 | 2.23 | CLAY, grey to orange, very firm |
| 42 | 1.8 | 2.11 | SAA |
| | 2.1 | 1.81 | SAA |
| 44 | Z | 1.98 | CLAY, grey, orange staining, very firm |
| | Z.6 | 1.80 | SAA |
| 46 | Z | 1.33 | SAA |
| | Z | 2.59 | SAA |
| 48 | Z.2 | 1.65 | CLAY, brown, firm, orange staining |
| | 1.6 | 1.65 | SAA |
| 50 | 1.6 | 1.69 | SAA |
| | Z.5 | 1.33 | SANDY SILT (S-1), greenish dk grey, wet, silty CLAY, grey, orange staining, soft to firm |
| 52 | | | |

Set H-27 well

Pull sample pipe, 3/4" to 24', 2 1/4" to 51'

Set 3/4" PVC well w/ filter sock

Screen 46-51

Native 47

Barrels 24

Sand 44

Bent 40

4-8-21

- 1200 let pellets hydrate, lunch
 1300 well completions
 1400 Grout and pull ~~2 1/4~~ 3/4" pipe
 Clean up
 1500 Leave site

CS, DW, JC

4-12-21

1100 On site,

Bryce/ Airport specialties - Marsh Master

Charles w/ EHM

Jerry Fontenot

Denayre Corley

1145

Sampling H-28

508643

332822

Rec Ec PED

| Rec | Ec | PED | Description |
|-----|------|------|--|
| 2 | 1.56 | 1.8 | CLAY, dk grey, soft bottom, no odor |
| | | 1.82 | |
| 3.8 | 2.05 | | CLAY, grey, orange staining, firm |
| | 2.99 | | |
| 4 | 2.37 | | CLAY, grey, orange staining, very firm |
| | 2.88 | | shell hash (8.4-8.9) |
| 4 | 2.51 | | CLAY, grey, orange staining, very firm |
| | 2.98 | | refusal @ 15' |

APID not working

Pull pipe grout hole

0-2

4-6

6-8

14-15

4-12-21

Sampling H-29

507897

3328049

Rec Ec

| Rec | Ec | Description |
|-----|------|---|
| 2.2 | 0.97 | CLAY, brn (0-1.8), grey/orange staining (1.8-2.2) |
| | 1.35 | firm |
| 4 | 3.3 | 1.87 CLAY, grey, orange staining, firm |
| | 1.76 | |
| 8 | 3.1 | 1.67 CLAY, brnish orange, some grey, firm, |
| | 1.73 | shell hash (10-10.4) Ca @ 10.8' |
| 12 | | Pull pipe, grout |

Sampling H-30

507878

3328049

Rec Ec

| Rec | Ec | Description |
|-----|------|---|
| 2.3 | 0.66 | CLAY, brn (0-0.5), grey, orange staining |
| | 1.28 | firm |
| 4 | 3.3 | 1.58 CLAY, grey, orange staining, very firm |
| | 1.61 | Ca (4-4.5) |
| 8 | 3.7 | 1.78 CLAY, brnish orange, some grey, very firm, |
| | 1.99 | shell hash (10.1-10.6), Ca @ 11' |
| 12 | | Pull pipe, grout |

4-12-21

507826

3328065

Sampling H-31

see ee

| | | | |
|----|------|------|---|
| 0 | 1.3 | 1.0 | CLAY, dk grey, orange ; firm |
| 4 | 2.9 | 1.72 | CLAY, grey, orange staining, firm |
| 8 | 3.7 | 2.06 | CLAY, grey (5-8) (10-11), brownish orange (8-10-11) |
| 12 | 1.69 | | orange staining; shell hash (10-11); firm |

Pull pipe, goat hole

1430 DJ + JC well completions

1600 Leave site

CS

4-13-21

715 On Site, GW Sampling
Charles
Jerry

Raining,

830 Rain in forecast all week
Come back out Monday

CS

4-19-21

900 On site, GW Sampling
Hurt w/ EHM

923

H-20

DTW - 2.18 btoe

TD - 45.58 btoe

stick - 1.45

(PM)

| Time | Gal | Temp | pH | Cond (µS) | ORP | TDS | Turb |
|------|-----|------|------|-----------|-----|------|------|
| 930 | 1 | 20.1 | 6.09 | 2771 | 138 | 208 | 647 |
| 934 | 1.5 | 20.4 | 6.29 | 2883 | 113 | 2107 | 55 |
| 938 | 2 | 20.4 | 6.45 | 2923 | 97 | 240 | 20 |
| 942 | 2.5 | 20.4 | 6.57 | 2933 | 99 | 248 | 14 |
| 946 | 3 | 20.4 | 6.66 | 2936 | 96 | 249 | 10 |
| 950 | 3.5 | 20.6 | 6.72 | 2942 | 97 | 255 | 7 |
| 954 | 4 | 20.6 | 6.79 | 2941 | 102 | 253 | 6 |

1000 Sample Time #Collect DUP
1020 Finish Sampling

4-19-21

1036

H-22

DTW - 3.26 btoe

TD - 45.67 btoe

stick - 1.95

| Time | Gal | Temp | pH | Cond (µS) | ORP | TDS | Turb |
|------|-----|------|------|-----------|-----|------|------|
| 1042 | 1 | 20.9 | 7.02 | 2602 | 101 | 1877 | — |
| 1046 | 1.5 | 21.1 | 6.95 | 2668 | 90 | 1926 | 27 |
| 1050 | 2 | 21.2 | 6.97 | 2673 | 87 | 1932 | 36 |
| 1054 | 2.5 | 20.9 | 6.99 | 2677 | 92 | 1937 | 21 |
| 1058 | 3 | 21.0 | 7.01 | 2676 | 92 | 1935 | 17 |
| 1102 | 3.5 | 21.1 | 7.02 | 2679 | 94 | 1940 | 20 |
| 1106 | 4 | 21.0 | 7.10 | 2679 | 96 | 1939 | 19 |

1110 Sample Time

1130 Finish Sampling

1145 Lunch

~~1030~~

1259

H-23

DTW - 3.52 btoe

TD - 38.55 btoe

stick - 1.55

| Time | Gal | Temp | pH | Cond (µS) | ORP | TDS (PM) | Turb |
|------|-----|------|------|-----------|-----|----------|------|
| 1305 | 1 | 22.4 | 7.16 | 2827 | 90 | 2049 | 52 |
| 1311 | 1.5 | 22.0 | 7.21 | 2855 | 112 | 2072 | 30 |
| 1316 | 2 | 22.5 | 7.20 | 2862 | 110 | 2077 | 25 |
| 1320 | 2.5 | 22.3 | 7.22 | 2876 | 110 | 2088 | 22 |
| 1324 | 3 | 21.9 | 7.13 | 2859 | 113 | 2076 | 26 |
| 1328 | 3.5 | 22.2 | 7.13 | 2861 | 112 | 2089 | 17 |
| 1332 | 4 | 22.1 | 7.16 | 2874 | 112 | 2084 | 19 |

1335 Sample Time 1355 Finish Sampling

4-19-21

1420

H-24

DTW - 4.23 hloc
TD - 47.85
stick - 1.9'

| Time | Gal | Temp | pH | Cond (µS) | ORP | TDS (ppm) | Turb |
|------|-----|------|------|-----------|-----|-----------|------|
| 1428 | 1 | 23.0 | 7.17 | 2749 | 129 | 1982 | 25 |
| 1432 | 1.5 | 22.6 | 7.06 | 2743 | 114 | 1981 | 19 |
| 1437 | 2 | 22.8 | 7.11 | 2751 | 113 | 1989 | 9 |
| 1442 | 2.5 | 22.3 | 7.17 | 2756 | 115 | 1991 | 11 |
| 1446 | 3 | 22.4 | 7.09 | 2752 | 108 | 1994 | 11 |
| 1450 | 3.5 | 22.1 | 7.08 | 2765 | 106 | 1994 | 9 |
| 1454 | 4 | 22.1 | 7.11 | 2766 | 112 | 1998 | 7 |

1500 Sample Time

1600 Leave site, Hotel in L.C.

05

4-20-21

730

on site,

Kirk w/ ERM

Jerry

744

H-25

DTW - 3.83 hloc
TD - 49.85 hloc
stick - 1.9'

| Time | Gal | Temp | pH | Cond | ORP | TDS | Turb |
|--|-----|------|------|------|-----|------|------|
| 752 | 1 | 19.7 | 6.45 | 2273 | 142 | 1624 | 15 |
| Stop pump, head @ 33', go to next well | | | | | | | |
| 1250 Hand pump w/ check valve | | | | | | | |
| 1253 | 1.5 | 23.3 | 7.57 | 2240 | 85 | 1593 | - |
| 1256 | 2 | 22.5 | 7.42 | 2247 | 72 | 1598 | - |

Dry,

815

H-26

DTW - 3.30
TD - 51.62
stick - 2.05

| Time | Gal | Temp | pH | Cond | ORP | TDS | Turb |
|--|------|------|------|------|-----|------|------|
| 817 | 1/2 | 19.7 | 7.07 | 1946 | 113 | 1375 | - |
| 823 | 1 | 19.9 | 7.09 | 1966 | 44 | 1392 | 76 |
| Pump off, head @ ~30', go to next well | | | | | | | |
| 1243 Hand pump w/ check valve | | | | | | | |
| 1244 | 1.5 | 24.4 | 7.68 | 1942 | 71 | 1363 | - |
| 1246 | 1.75 | 23.4 | 7.64 | 1954 | 71 | 1370 | - |

Dry go to H-25

4-20-21

837 H-27 DMW - 5152'
FD - 52.85
stick - 1.8'

| Time | Gal | Temp | pH | Cond | OAP | TDS | Turb |
|------|-----|------|------|------|-----|------|------|
| 841 | 1/2 | 19.9 | 7.11 | 2837 | -19 | 2078 | - |
| 846 | 1 | 20.2 | 7.05 | 2877 | -60 | 2055 | - |

Pump off

900 Head of H-25 @ 24' after 1 hr
Meet S.S. in Scott for check valve
& check valve pump

1150 back @ H-27 w/ water pump

4-20-21

H-27 cont Using water pump

| Time | Gal | Temp | pH | Cond | OAP | TDS | Turb |
|------|-------|------|------|------|-----|------|------|
| 1202 | 1 1/2 | 21.6 | 7.52 | 2847 | -21 | 2068 | - |
| 1207 | 2 | 22.8 | | | | | |

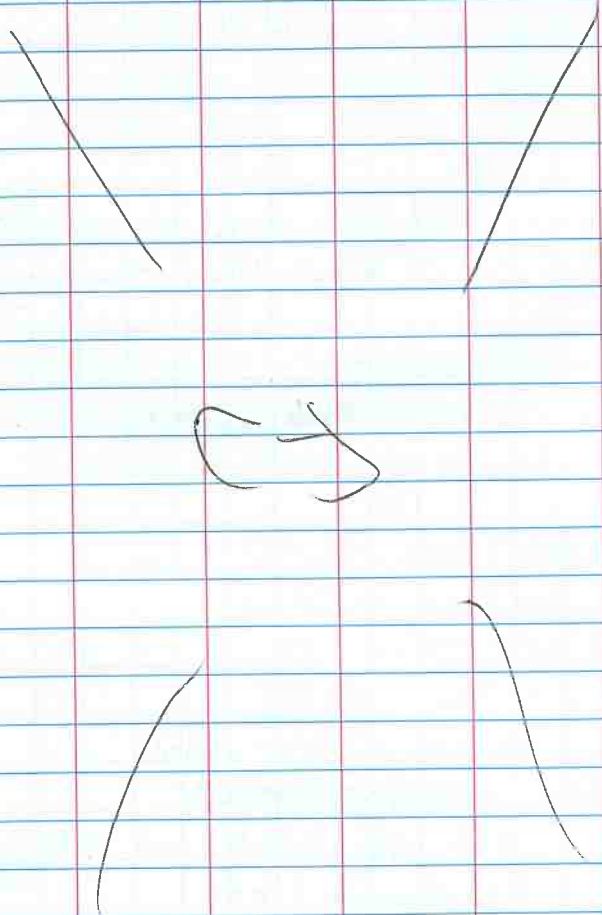
1219 2.5 22.7 7.36 2792 -6 2024

Dry before 3 gal, go to H-26 while recharging

1300 Pumped all wells dry, let recharge
one hour when start sampling1400 Sample Time - H-27
No rads, filter metals
*Turb 10 after 2 filters1425 Sample Time - H-26
Dry after ~275 ml
1530 Back at well, still dry1440 Sample Time - H-25
No rads, filter metals1445 Dry, ~~still need~~
Still need metals and salts for
let recharge 1 hr
oversite1345 Turb - 31, used 3 filters, ran out
Dry, oversight metals left

4-20-21

1615 Continue H-25
 Finish sampling
 Load ATV, Dump water
 1700 leave site, to office



5/24/21

DC

1310

⊙ site
 Jerry Pantelot on site
 Michael Goodman w/ERM onsite
 Delwayne Wiley onsite

DP w/LOW onsite - NOKM survey

- Survey + gauge wells

| well ID | DTW | well ID | DTW |
|---------|-------|---------|-------|
| H-1 | 2.08' | H-23 | 3.32' |
| H-18 | 1.84' | H-12 | 3.54' |
| H-24 | 4.07' | H-9 | 3.19' |
| H-3 | 3.53' | H-10 | 6.45' |
| H-20 | 2.00' | H-25 | 3.80' |
| H-22 | 3.16' | H-26 | 4.28' |
| H-2 | 3.14' | H-27 | 5.34' |
| H-16 | 3.09' | | |

1705

leave site

5/25/21

DC

0740

@ site

Eric w/ HET onsite

Michael w/ ERM onsite

Delwayne Corley onsite

Slung Test H-3

DTW 3.56'

-Add stackup DTW 5.58'

-Transducer set ~15' btrc

0828

Start logging

0833

Add ~8oz H₂O

0845

Add ~8oz H₂O

0855

Add ~8oz H₂O

0905

Stop logging

Slung Test H-9

DTW 3.21'

-Transducer set ~10' btrc

0933

Start logging

0940

Add ~8oz H₂O

0950

Add ~8oz H₂O

1000

Add ~8oz H₂O

1010

Stop logging

5/25/21

Slung Test H-20

DTW 2.10'

-Set transducer ~10 btrc

1030

Start logging

1035

Add ~8oz H₂O

1045

Add ~8oz H₂O

1055

Add ~8oz H₂O

1105

Stop logging

Slung Test H-8

DTW 1.88'

-Add stackup, DTW 3.91'

-Transducer set ~10' btrc

1122

Start logging

1130

Add ~8oz H₂O

1140

Add ~8oz H₂O

1150

Add ~8oz H₂O

200

Stop logging

5/25/21

Slug Test H-27

DTW 5.41'

- Add stickup, DTW 7.44

- Transducer set ~15' bpo

1435

Start logging

1440

Add ~4oz H₂O

1625

Stop logging

1650

leave site

GAM, JC
ERMI KB

8.17.21

1000 - On site

- move equipment to location
- move trucks to road due to rain

1110 - Rain delay; letting pipes

UTM: 0510598

H-32 NAD83: 3327475

E.C

| | | | | |
|----|---|------|------|---|
| 0 | X | 2.9' | 0.72 | Silty CLAY, brown w/ red, stiff, |
| 4 | X | | 0.48 | rootlets @ top, nodules |
| | / | 3.8' | 0.93 | CLAY, gray w/ orange & red, stiff |
| 8 | / | | 1.39 | |
| | / | 4' | 1.52 | CLAY, brown w/ orange, stiff, |
| 12 | / | | 2.70 | Ca nodules @ bottom |
| | / | 3' | 2.48 | CLAY, gray w/ orange, stiff. Ca nod. |
| 14 | / | | | Silt lens (1.5-2.1') w.t |
| | / | 3.2' | 2.31 | CLAY, gray/brown, stiff, Ca nod |
| 18 | X | 2.5' | 1.54 | Silty CLAY, gray w/ brown, med soft |
| | X | 2.5' | 1.71 | Silty CLAY, gray, med soft; clayey silt |
| 20 | / | | | bottom 1', red/brown, med st |
| | / | 3.1' | 1.23 | clayey SILT, red/brown, soft, damp to |
| 22 | / | | | wet |

8.17.21

H-32

| | Re | EC | |
|----|------|------|--|
| 22 | 3.8' | 0.84 | SILT, red/brown, soft, wet |
| 24 | 2' | 0.87 | SAA |
| 26 | 2' | 0.61 | SAA |
| 28 | 2' | 0.86 | SAA w/ clay lens @ (1.4-1.9') |
| 30 | 3.8' | 0.84 | SILT, red/brown, wet, soft |
| 32 | 2.9 | 1.00 | SILT to clayey SILT, red/brown, wet @ top |
| 34 | 2.3 | 0.81 | SILT, red/brown, wet |
| 36 | 3.7 | 0.95 | SAA; clay lenses throughout |
| 38 | 3.8 | 0.87 | SILT, red/brown, wet clay lenses throughout |
| 40 | 3.5 | 0.95 | SAA |
| 42 | 3.5 | 1.04 | SILT top 2' wet; CLAY 2-2.7', gray; clayey SAND gray |

8.17.21

H-32

| | | |
|-----|------|---|
| 2.9 | 1.53 | SAND top 3', wet, med gray; S. lty CLAY gray, stiff |
| 3.1 | 1.67 | SAND top 1', gray, med gray, wet; S. lty CLAY, gray, med soft |
| 2.8 | 1.60 | SILT CLAY, gray, stiff, wood |

Time Sample - 1600 pull sample barrels;
1355 2-4 re-enter sample hole w/ E tip to 50'
1400 4-6 - top add sand to pull
1410 8-10 - pre w/ filter sock &
1415 10-12 bottom cap
1435 18-20²
1550 48-50

~~H-32A set
SCREEN:
PELLETS: 60
SAND:
NATIVE~~

H-32B set
SCREEN: 40-50
PELLETS: 20
SAND -
NATIVE: 23'

1700 - Leaving Site

GAM, JC
FRM: KB / Jerry F.

8.18.21

0730 - On site

- Enter adj to H-32B w/E tip to 30'
- Insert pvc w/ filter sock & bottom cap
- fog; add sand & pellets

H-32A Set

SCREEN: 20-30

0810 PELLETS: 16'

SAND: 19'

NATIVE: 20'

0900 TEST & String Conductivity

| H-32 Cond | | | | | |
|-----------|-----|------|-----|------|-----|
| MS/M | FT | MS/M | FT | MS/M | FT |
| 42 | 4' | 47 | 28' | 156 | 56' |
| 84 | 8' | 62 | 32' | 112 | 60' |
| 107 | 10' | 86 | 36' | 168 | 64' |
| 121 | 16' | 59 | 40' | 161 | 68' |
| 55 | 20' | 70 | 44' | 183 | 72' |
| 50 | 24' | 112 | 48' | 194 | 76' |
| | | 93 | 52' | 125 | 80' |

8.18.21

1030 - CAM on site

- Pull F.C pip
- re-enter w/ E tip to 72'
- grate to surface
- track @ 15' on A & B
- grate to surface

11 - Decen

1200 - Lunch

1300 - Load equipment; track to next location

UTM: 0510201

H-33 NA083.3327159

| | | | | |
|----|----|------|------|--|
| 0 | X | 3.2' | 0.26 | Silty CLAY, gray/brown, med soft |
| 4 | X | | 0.50 | rodlets @ top |
| | / | 35' | 0.99 | CLAY, gray w/ orange, med soft, |
| | / | | 2.01 | trace silt @ bottom |
| 8 | / | 4' | 1.62 | CLAY, gray w/ orange, very stiff, Ca |
| | / | | 2.33 | nodules |
| | / | 4' | 2.17 | SAA |
| | / | | 2.27 | |
| | / | 4' | 2.61 | SAA top 2'; Silty CLAY, gray, |
| 20 | X | | 1.59 | med soft |
| | // | 4' | 1.20 | clayey silt top 2', brown, damp; silty |
| 24 | / | | 1.74 | CLAY, stiff, brown |

8.18.21

H-33

| 24 | L ₁ | R ₂ | E ₁ | |
|----|----------------|----------------|----------------|-----------------------------|
| | - | - | - | NR: Flavin/stuck line |
| 28 | - | - | - | SAA |
| 32 | X | 4' | 1.33 | Silty CLAY, brown, med soft |
| 34 | X | 3.7 | 1.46 | Silty CLAY, brown, stiff |
| 36 | X | 3.7 | 2.33 | SAA w/ Ca nodules |
| 39 | / | 4' | 2.53 | CLAY, brown/red, stiff |
| 40 | / | | | — liner stuck in barrel |
| 42 | | | | — |
| 44 | | | | |

Time Sample - Leaving Sample-barrels
in ground overnight

1535 2-4

1545 6-8

1550 8-10

1555 10-12

1610 16-18 L

1645 - Leaving site

8.19.21

0730 - On site

0830 - JC on site

H-33 cont

| mslm | FI' | mslm | FI' | mslm | FI' |
|------|-----|------|-----|------|--------|
| 102 | 4' | 84 | 24' | 150 | 44' |
| 118 | 8' | 82 | 28' | 165 | 48' |
| 191 | 12' | 100 | 30' | 223 | 52' TD |
| 173 | 16' | 179 | 36' | | 56' |
| 91 | 20' | 165 | 40' | | 60' |

0830 - pull E.C pipe

- pull Sample barrels (H-33)

- re-enter Sample hole w/ E tip to 40'

- Enter E.C hole w/ E tip to 52'

- Enter w/ E tip to 30'

- Insert pipe w/ filter sock & bottom cap

H-33 Sct

SCREEN: 20-30

PELLETS: 15

SAND: 18'

NATIVE: 22'

1015 Rain delay

8.19.21

1140 - Great Sample hole to surface

1200 - Lunch

1300 - Great E.C. hole to surface

* 4 bags perlite used so far

- Decon

- track to next location

UTM: 0510599

H-3A NAD83: 3326858

| Depth | R _c | E _v | Description |
|-------|----------------|----------------|--|
| 0.25 | 0.17 | | Silty CLAY, brown w/ red, |
| 4 | 0.49 | | med soft to stiff |
| 3.3' | 1.38 | | CLAY (4-5.7') gray w/ orange, med stiff; |
| 8 | 1.11 | | Silty CLAY, gray w/ orange, soft |
| 4' | 0.78 | | Silty CLAY, gray w/ red & orange, Ca |
| 12 | 2.20 | | red, SAND lens @ (8.8-9.2') down |
| 4' | 2.33 | | CLAY, gray w/ orange, stiff |
| 16 | 2.02 | | |
| 3.3' | 2.16 | | CLAY, gray, stiff |
| 18 | | | |
| 2.4 | 1.04 | | SAA w/ clayey SILT @ (0.7-1.4') |
| 20 | | | Wet |
| 2.7 | 0.97 | | clayey SILT, wet, brown |
| 22 | | | |

8.19.21

H-3A

| | | | |
|----|-----|------|------------------------------------|
| 22 | 3.2 | 1.70 | CLAY, red/brown, stiff, caned |
| 24 | 3' | 0.99 | SILT, red/brown, soft, wet, caned |
| 26 | 2.7 | 1.64 | CLAY, red/brown, stiff |
| 28 | 4' | 2.01 | CLAY red to tan, stiff to med soft |
| 30 | | | |

| Time | Sample | Notes |
|------|--------|---|
| 1445 | 2-4 | - pull sample barrels |
| 1450 | A-6 | - re-enter sample hole w/ E. tip to 28' |
| 1455 | 6-8 | - Insert PVC w/ filter |
| 1505 | 10-12 | sock & bottom deep |
| 1520 | 16-18 | - tag; add sand & pellets |
| 1550 | 28-30 | |

H-3A set

SCREEN: 18-28'

PELLETS: 14'

SAND: 17'

NATIVE: 19'

1620 - Leaving Site

GAM, CAM, SC
ERM:HM
Jerry F.

8.20.21

0730 - on site

| | | H-34 Cond | | | |
|------|-----|-----------|-----|------|-----|
| ms/M | FT | ms/M | FT | ms/M | FT |
| 80 | 4' | 156 | 24' | 128 | 44' |
| 103 | 8' | 159 | 28' | 180 | 48' |
| 180 | 12' | 85 | 30' | 203 | 52' |
| 160 | 16' | 158 | 36' | 81 | 36' |
| 74 | 20' | 143 | 40' | | |

- Pull E.C pp.
- Re-enter E.C hole w/ 2.25" w/ E. tip to 5c'
- Insert frame
- Grout through frame & 2.25" to surface

1030 - Leaving Site

GAM

GAM
ERM:HM
Jerry F.

8.23.21

0940 - on site; waiting on oversite

- JC & MS doing well completions
- Sampling H-34 first; H-34 will be P+Ac'd after its been sampled

H-34

DTW: 297

TD: 29.85

SU 0.75'

| Time | Temp | Cond (uS) | pH | ORP | TDS | Turb | Vel |
|------|------|-----------|------|-----|------|------|---------|
| 1026 | 29.3 | 1669 | 6.39 | 132 | 1202 | - | initial |
| 1030 | 24.2 | 1655 | 6.64 | 102 | 1199 | OR | 0.85 |
| 1035 | 23.9 | 1653 | 7.01 | 109 | 1194 | - | 1 |
| 1038 | 24.1 | 1660 | 7.10 | 112 | 1201 | 70.5 | 1.5 |
| 1040 | 24.7 | 1654 | 7.13 | 121 | 1193 | 23.8 | 2.0 |
| 1043 | 24.2 | 1657 | 7.21 | 122 | 1191 | 11.8 | 2.5 |
| 1046 | 24.4 | 1661 | 7.22 | 123 | 1198 | 7.01 | 3.0 |

1055 Sample time

GAM

8.23.21

H-32A

DTW: 2.70'

ID: 19.52*
25.05'

Flush

| Time | Temp | Cond | pH | ORP | TDS | Turb | Vel |
|------|------|------|------|------|------|------|---------|
| 1136 | 31.3 | 1419 | 7.71 | -45 | 1001 | - | initial |
| 1138 | 25.2 | 1406 | 7.68 | -173 | 1002 | - | 0.5 |
| 1142 | 24.6 | M24 | 7.67 | -214 | 1013 | - | 1.0 |
| 1146 | 24.0 | 1424 | 7.62 | -172 | 1014 | 23.7 | 1.5 |
| 1150 | 23.9 | 1420 | 7.57 | -162 | 1012 | 8.94 | 2.0 |
| 1155 | 23.9 | M15 | 7.50 | -142 | 1014 | 11.1 | 2.5 |

1200 Sample time

Well SCREENED @ 20-30'; First DTW @ 19.52', 2nd @ 25.05' (after being sampled)

H-32B

DTW: 2.70'

ID: 49.34'

Flush

| Time | Temp | Cond | pH | ORP | TDS | Turb | Vel |
|------|------|------|------|------|------|------|---------|
| 1311 | 30.6 | 316 | 8.81 | 12 | 209 | - | initial |
| 1314 | 25.5 | 1309 | 7.81 | -173 | 928 | - | 0.5 |
| 1318 | 24.6 | 1568 | 7.60 | -181 | 1121 | - | 1 |
| 1323 | 25.0 | 1763 | 7.46 | -169 | 1234 | 11.2 | 1.5 |
| 1307 | 24.6 | 1741 | 7.40 | -132 | 1261 | 4.53 | 2.0 |
| 1335 | 24.1 | 1772 | 7.34 | -99 | 1291 | 2.12 | 3.0 |
| 1345 | 25.1 | 1773 | 7.33 | -81 | 1290 | 3.82 | 4.0 |

1350 Sample time

8.23.21

H-33

DTW: 2.30'

ID: 29.90'

Flush

| Time | Temp | Cond | pH | ORP | TDS | Turb | Vel |
|------|------|------|------|-----|------|------|---------|
| 1430 | 30.4 | 2422 | 7.63 | -13 | 1785 | - | initial |
| 1433 | 25.5 | 2404 | 7.53 | -87 | 1785 | - | 0.5 |
| 1438 | 24.2 | 2412 | 7.34 | -25 | 1796 | 25.4 | 1 |
| 1443 | 24.8 | 2406 | 7.31 | 5 | 1797 | 11.7 | 1.5 |
| 1448 | 23.7 | 2419 | 7.25 | 7 | 1802 | 14.5 | 2 |

1450 Sample time

1525 - Leaving Site

GAM

11/9/21

DC Oversight of ERM

1150

@ site

Shawn + Jake w/ ERM onsite

- marking boring locations

1510

leave site

11/10/21

DC

Oversight of ERM

1120

@ site

Jake + Shawn w/ ERM onsite

GPRS crew onsite - Dustin Soteman

WFE crew onsite - Blake + Cecil

- clearing boring locations

Marshmaster w/ bush hog onsite

to cut access to locations

1635

leave site

11/1/21
0655

DL oversight of ERM
@ Site

Shawn + Jake w/ ERM onsite
Blake + Cecil w/ WTB onsite
- raining

0810

Hand augering around H-22 well

0855

~~H-22 W (0-2')~~ ^{WTM 508080} 3328087

EC: 0.85

PID: 0.0

ERM analysis
CLAY, gray-brn, med stiff
- Ba, % moisture, hold for SPLP

0910

H-22 R (0-2') ^{WTM 508091} 3328087

EC: 1.10 PID: 0.0

Silty CLAY, brn, loose/crumbly
- SPLP Ba, % moisture

0915

H-22 S (0-2') ⁵⁰⁸⁰⁹¹ 3328078

EC: 0.61 PID: 0.0

Silt/Silty CLAY, brn, loose
- Ba, % moisture, hold for SPLP

11/1/21

0925

H-22 N (0-2') ⁵⁰⁸⁰⁹¹ 3328097

EC: 0.47 PID: 0.0

Silt w/ silty CLAY, brn, loose
- Ba, % moisture, hold for SPLP

0935

H-22 E (0-2') ⁵⁰⁸¹⁰³ 3328087

EC: 1.01 PID: 0.0

CLAY brn, med stiff
- Ba, % moisture, hold for SPLP

- Backfill boreholes w/ cutting
- Begin hand augering @ H-8 location

1100

H-8 R (0-2') ⁵⁰⁸⁰⁸⁷ 3328161

EC: 1.33 PID:

Silty CLAY, gray-brn, loose to med stiff
- SPLP Ba, % moisture, Ba speciation

1110

H-8 E (0-2') ⁵⁰⁸¹¹⁸ 3328158

EC: 1.34 PID: 0.3

CLAY, gray-brn, med stiff
- Ba, % moisture, hold SPLP

11/11/21

1135 H-8W (0-2') 508052
3328155

EC: 1.74 PID: 0.0

CLAY brn, med soft
-Ba, % Moisture, hold SPLP1140 H-8 S (0-2') 508090
3328134

EC: 0.64 PID: 0.0

SILT to Silty CLAY, gray-brn, loose,
clay is stiff

-Ba, % Moisture, hold SPLP

1150 H-8 N (0-2') 508087
3328179

EC: 1.29 PID: 0.0

CLAY, gray-brn, Fe stains, med stiff
to stiff

-Ba, % Moisture, hold SPLP

- Backfill boreholes

Begin hand augering @ H-16 location

1310 H-16 N (0-2') 508140
3328231

EC: 1.39 PID: 0.0

CLAY, gray-brn, med stiff
-Ba, % Moisture, hold SPLP

11/11/21

1325 H-16 W (0-2') 508114
3328215

EC: 1.51 PID: 0.0

CLAY, gray-brn, Fe stains, med stiff
-Ba, % Moisture, hold SPLP1340 H-16 E (0-2') 508160
3328217

EC: 1.47 PID: 0.0

CL. SILT to Silty CLAY, dk brn, Fe stains
-Ba, % Moisture, hold SPLP1350 H-16 S (0-2') 508140
3328198

EC: 1.02 PID: 0.0

Silty CLAY, dk gray, med soft
-Ba, % Moisture, hold SPLP

- Backfill boreholes

1445 H-24 S (0-2') 508613
3327831

EC: 1.15 PID: 0.0

Cl. SILT to Silty CLAY, gray, soft, wet
-Ba, % Moisture, hold SPLP

11/11/21

1510 H-28 W (0-2') 508620
3327822

EC: 0.71 PID: 0.0

Cl. Silt to Silty CLT, dk gray, soft to med stiff, moist

- Ba, % Moisture, hold SPLP

1540 H-28 R (0-2') 508643
3327822

EC: 0.81 PID: 0.0

Cl. Silt to Silty CLT, dk gray, soft to med soft, moist

- % Moisture, SPLP Ba, SPLP Load, SPL SF, Ba specification

1615 H-28 S (0-2') 508641
3327801

EC: 1.29 PID: 0.0

Cl. Silt to Silty CLT, dk gray, soft to stiff, moist/wet

- Ba, % Moisture, hold SPLP

1640 H-28 E (0-2') 508661
3327821

EC: 1.07 PID: 0.0

Cl. Silt to Silty CLT, dk gray, soft to med stiff, moist

- Ba, % Moisture, hold SPLP

1655

Leave site

11/12/21

0705

De oversight of ERM

e site

Shawn + Jake w/ ERM onsite

Blake + Cecil w/ WIFE onsite

- Hand augering

0755

H-28 N (0-2') 508644
3327835

EC: 1.14 PID: 0.1

Cl. Silt to Silty CLT, dk gray, soft to med stiff, moist

- Ba, % Moisture, hold SPLP

0815

H-24 N (0-2') 508616
3327853

EC: 0.76 PID: 0.0

Cl. Silt to Silty CLT, dk gray, soft to med soft, moist

- Ba, % Moisture, hold SPLP

0850

H-24 E (0-2') 508630
3327847

EC: 0.97 PID: 0.5

Grain/sand @ top. Silty CLT, gray, brn, med stiff

- Ba, % Moisture, hold SPLP

11/12/21

0900

H-24 W (0-2') 5058601
3327849

EC: 1.05 PID: 0.1

Sand/Gravel @ top; Silty CLAY, dk gray, med soft

- Ba, % Moisture, hold SPLP

0910

H-24 R (0-2') 5058616
3327849

EC: 1.45 PID: 0.1

Sand/Gravel/Shell @ top; Silty CLAY, dk gray,
med soft

- % Moisture, SPLP Ba, SPLP Hg

1030

H-4 R (0-2') 509758
3328169

EC: 0.75 PID: ~~0.9~~ 5.6

CLAY, gray/bm, med stiff

- % Moisture, SPLP Ba

1040

H-4 N (0-2') 509754
3328201

EC: 0.40 PID: 1.5

Silty CLAY, bn, med soft, silty @ top

- Ba, % Moisture, hold SPLP

1050

H-4 E (0-2') 509781
3328170

EC: 0.47 PID: 3.5

Silty CLAY, dk bn, cm, med soft

- Ba, % Moisture, hold SPLP

11/12/21

1110

H-4 S (0-2') 509758
3328135

EC: 0.33 PID: 4.6

Silty CLAY, bn, med stiff

- Ba, % Moisture, hold SPLP

1120

H-4 W (0-2') 509722
3328169

EC: 0.36 PID: 5.1

Silty CLAY, bn, med soft to med stiff

- Ba, % Moisture, hold SPLP

11/15/21

Overview of ERM

1015

@ site

Shawn, Cory, & Blake w/ERM onsite

1130

Blake & Cecil w/ WTE onsite

1250

Sampling H-16R

- adjacent to H-16 well

- using Geoprobe 7822DT

| Depth | Rec | EC | PID | Desc |
|-------|------|------------------------|--------------|--|
| 2 | 2.1 | 1.07 1.67 2.44 | 5.0 6.2 | CLAY (2.1') dk gray to brn, stiff Nods + Mn @ top, Fe stains |
| 6 | 3.9 | 3.23 3.81 3.42 | 8.4 7.9 | CLAY (3.9') brn/gray, red-brn/pale gray @ bottom half, stiff, Fe + Mn stains |
| 10 | 4' | 4.02 2.68 6.13 | 6.8 8.5 | Silty CLAY (4') reddish-brn, stiff to med. soft, gray w/ shell frags @ 2.7-3.4' |
| 14 | 4' | 6.89 9.65 8.58 | 5.6 10.9 | CLAY (4') brn, lt gray mottling, stiff |
| 18 | 4' | 11.78 11.53 7.36 | 12.4 12.7 | Silty CLAY to CLAY (4') gray, stiff/med. stiff, softer areas, thin silt lenses in top half of clay |
| 22 | 4' | 3.93 3.71 3.97 | 5.7 | CLAY, lt gray, orange mottling, med stiff few Fe stains |
| 24 | 3.2' | 3.75 3.22 3.48 | 5.8 | CLAY, lt gray, orange to brn mottling, stiff, few Fe nodules stains |
| 26 | 4' | 4.10 4.02 4.22 | 7.7 | CLAY, lt gray, stiff, Mn nodules + stains |
| 28 | 2.8' | 4.14 4.14 4.14 | 7.1 | CLAY, gray, stiff, Mn nodules @ top, Ca concentration @ 2.2' |
| 30 | 4' | 3.23 3.23 3.23 | 5.8 | CLAY, lt gray w/ brn mottling, stiff, concrete frags @ 1.8' |
| 32 | 3.4' | 3.15 3.15 3.15 | 5.2 | CLAY/silty CLAY, gray/brn, stiff - med stiff |
| 34 | 3.4' | 3.15 3.15 3.15 | 3.3 | CLAY + silty CLAY, gray/brn, Mn stains, stiff bottom 3.5' lt. brn soft |

11/15/21

H-16 R cont'd

| | | | | |
|----|------|----------------------|-----|--|
| 34 | 4' | 4.65 4.65 4.65 | 6.1 | CLAY top; CL. SILT, brn, moist, med. conc. @ 1.2' |
| 36 | 4' | 7.16 7.16 7.16 | 7.0 | CL. SILT, brn, moist, soft-med, soft |
| 38 | 4' | 6.51 6.51 6.51 | 7.1 | CL. SILT, brn, med, soft |
| 40 | 3' | 5.94 5.94 5.94 | 8.5 | Silt (0.6') brn, wet - silty CLAY, brn, med stiff |
| 42 | 3.7' | 5.94 5.94 5.94 | 8.4 | CLAY, dk gray, stiff |
| 44 | 3.5' | 5.94 5.94 5.94 | 9.0 | CLAY, gray, stiff |
| 46 | 4' | 5.94 5.94 5.94 | 6.1 | CLAY, gray, stiff |
| 48 | 3' | 5.94 5.94 5.94 | 9.6 | CLAY, gray w/ orange mottling, stiff |
| 49 | 3.2' | 5.94 5.94 5.94 | 9.5 | CLAY, SAA |
| 50 | ~4' | 5.94 5.94 5.94 | 8.1 | CLAY, SAA *ERM capped bottom half for vertical permeability test |

TD 51', gran hole

*ERM sample intervals:

(0-2') @ 1655 % Moisture, SLP Br, SLP Ag, SLP B

(14-16') @ 1705 % Moisture, ESP, SAR

(50-50.5') @ 1710 % Moist, EC, ESP, SAR, SLP Cl

No Split { Geotech (38-40') @ (49.75-50.1')
 Vacuum seal (38.5-39.1') for relative
 vertical permeability + geotech (50.5-51')

1735

Leave site

11/16/21 DC Overight of BRM
 0700 @ site
 Cory & Jake w/ BRM onsite
 Blake & Cecil w/ wife onsite

0800 Sampling H-12 R
 - adjacent to H-12 well

| Depth | Rec | PC | PID | DESC |
|-------|------|------------------------------|-------------------|---|
| 2 | 2.7' | 2.01 0.95 1.48 | 9.9 9.6 1.7 | Silty CLAY, gray, some orange mottling @ bottom, med stiff silt lenses @ bot. concrete @ 0.7' |
| 4 | 3.8' | 2.03 2.72 | 1.9 | CLAY, lt gray/lt brn, med stiff, |
| 8 | 4' | 2.72 3.25 2.55 4.77 | 1.3 1.2 0.9 | Fe & Mn nodules CLAY, lt gray/red-brn, Mn stains, med stiff |
| 12 | 4' | 3.25 3.51 3.84 | 0.8 2.0 | CLAY, silty & med soft top 0.5', then stiff, lt gray/lt brn |
| 16 | 4' | 3.53 4.12 | 1.9 | CLAY/silty CLAY, gray, med stiff to stiff, thin moist soft lenses in upper 2.5' |
| 18 | 4' | 3.35 | 1.8 | CLAY/silty CLAY, gray, med stiff to stiff, thin moist soft lenses in upper 2.5' |
| 20 | 3.5' | 2.23 2.09 2.06 | 3.6 1.7 | Silty CLAY, lt gray w/ yellow mottling Fe mottling throughout, med stiff |
| 22 | 4' | 2.25 2.11 2.24 | 3.3 | CLAY, silty, pale gray w/ orange-brown mottling, stiff |
| 24 | 4' | 2.33 2.38 2.38 | 4.8 | CLAY, pale gray w/ lt brn & black flecks, Ca deposits, stiff |
| 26 | 3.3' | 2.33 2.38 2.38 | 4.0 | CLAY, SAA |
| 28 | 3.5' | 2.33 2.38 2.38 | 2.7 | CLAY, pale gray/brn, Ca deposits, some S, stiff |
| 30 | 3.1' | 2.33 2.38 2.38 | 4.7 | CLAY, SAA |
| 32 | 1.7' | 3.01 3.15 | 4.1 | CLAY, silty gray/brn, stiff |



11/16/21

| Depth | Rec | PC | PID | DESC |
|-------|------|-------------------------|-----|---|
| 33 | 1.4' | 3.40 3.13 | 6.2 | Silty CLAY, gray/brn, med stiff |
| 34 | 2.9' | 3.01 3.75 3.84 | 5.7 | Silty CLAY, gray w/ red-brn mottling, Fe stains, med soft to stiff, silt content decreases w/ depth |
| 36 | 3' | 3.73 4.15 3.92 | 5.3 | Silty CLAY, brn/lt gray, med soft to med stiff |
| 38 | 4' | 4.06 4.04 4.94 | 4.9 | Silty CLAY to CLAY, brn/lt gray, med stiff to stiff, silt decreases w/ depth |
| 40 | 4' | 5.11 4.75 4.51 | 7.0 | CLAY, lt gray/lt brn, stiff |
| 42 | 4' | 4.94 5.31 5.57 | 4.7 | CLAY, lt gray/lt brn, stiff |
| 44 | 4' | 6.12 6.34 4.77 | 6.9 | CLAY, gray/red-brn, stiff |
| 46 | 4' | 6.56 9.12 8.79 | 3.6 | Silty CLAY, gray/red-brn, med stiff, few Ca deposits |
| 48 | 2.2' | 8.64 | 2.8 | CLAY w/ silty CLAY layers, gray, Fe stains, silty clays soft |
| 50 | 1.7' | 11.35 13.63 | 4.6 | Silty CLAY (1.3') brn, Fe stains; Cl. SILT, brn, wet |
| 51 | 3.1' | 16.01 16.01 16.01 | 4.8 | SILT (1.5') gray, sat.; Silty CLAY/CL SILT alternating |
| 52 | 3' | 19.44 18.24 9.43 | 6.9 | SILT/CL SILT gray, sat., SAND @ bottom |
| 53 | 3' | OR 18.28 | 5.9 | SAND, gray, sat. |
| 54 | | | | * Flaring sand below 54', pull pipe - use point to push to bed |

11/16/21

H-12R Cont'd

| | | | | |
|----|----|------|-----|--------------------------------|
| 62 | | 9.08 | 0.3 | CLAY, gray, med stiff to stiff |
| 64 | 4' | 7.61 | | |
| 66 | | 5.97 | 1.2 | |
| 68 | 4' | 5.69 | 0.2 | CLAY, gray, stiff |
| 70 | | 4.64 | | |
| | | 3.85 | 0.2 | |

TD 70', pull pipe, grout hole

- will sample deeper tomorrow
- pushed (0-4') 2 more times for volume

*ERM Sample Intervals

(53-54') @ 1700 Geotech ^{vac seal} + for archive

1725

leave site

11/17/21

DC oversight of ERM

0655

@ site

Cory + Mike w/ ERM onsite
Chizo, Blake, + Cecil w/ WTE onsite

Collect shallow H-12R samples

- (0-1') @ 0740
 - (1-2') @ 0745
 - (2-3') @ 0750
- } % Moisture, SAR, ESP

H-12R Cont'd

- use point to push to 70'

| Depth | Rec | EC | PI | DESC |
|-------|------|-----------------|-----|--|
| 70 | | 4.03 | 1.9 | CLAY, blue gray, stiff |
| 72 | 3.5' | 4.43 | | |
| | | 3.06 | 5.5 | |
| 74 | | 4.43 | | Capped (74-76') for vertical permeability sample |
| 76 | 4' | 1.35 | | |
| 78 | | 1.83 | 5.4 | CLAY, blue gray, stiff |

ERM Sample Interval

(76-78') @ 1250 EC, SAR, ESP, SRF, CI, % moist

No split

(74-76')

Vertical permeability

(70-71')

Geotech Archive sample - vac seal

- pull pipe, grout hole

11/17/21

Sampling H-21R

adjacent to H-21 location

| Depth | Rec | EC | PID | Desc |
|-------|------|----------------------|------------|---|
| 2 | 2.6' | 1.29 1.81 3.25 | 6.5 4.5 | CLAY/silty CLAY, lt brown/lt gray, mottling to 1.5', then darker brn, silty, softer |
| 4 | 3.7' | 4.53 5.76 4.51 | 3.5 8.3 | CLAY, orange brn/lt gray, Fe nodules, med stiff |
| 6 | 4' | 4.85 4.37 4.56 | 6.7 5.9 | CLAY, orange-brn/lt gray + stiff to 1.7' brn, med soft silty clay @ 1.7-3', gray/brn, stiff to bottom |
| 8 | 4' | 3.16 3.91 4.62 | 7.4 7.2 | CLAY, brn/lt gray, med stiff to stiff, shell hash to 0.7', few Mn & Fe stains |
| 10 | 4' | 4.14 4.12 4.16 | 7.9 6.2 | CLAY, gray/brn, stiff, thin cl. silt + silty clay lenses thruout, few Fe stains |
| 12 | 4' | 3.91 2.63 1.94 | 3.3 8.4 | CLAY, gray, stiff, Fe stains in bottom foot |

TD 24', pull pipe

ERM Samples:

| | |
|-----------------|----------------------------|
| (0-1') @ 1605 | } % Moisture, EC, ESP, SAR |
| (1-2') @ 1610 | |
| (2-3') @ 1615 | |
| (10-12') @ 1620 | % Moisture, ESP, SAR |
| (22-24') @ 1700 | % Moisture, EC, ESP, SAR |

1720

leave site

11/18/21
0730

DC Oversight of ERM

@ site

Cory + David w/ ~~ERM~~ ERM onsite

Blake + Cecil w/ WHE onsite

0750

Sampling H-21W

URN 538103
3328312

| Depth | Rec | EC | PID | Desc |
|-------|------|----------------------|------------|---|
| 2 | 2.5' | 1.03 1.65 2.12 | 4.9 6.0 | Silty CLAY, dk brn to o.g., then lt brn w/ lt orange gray mottling, med stiff |
| 4 | 3.8' | 2.10 2.28 3.16 | 8.2 6.6 | CLAY, lt gray w/ lt orange to rd. brn mottling, Mn & Fe stains, med stiff |
| 6 | 2.9' | 3.75 3.25 | 6.4 | CLAY, lt gray/brn, stiff, thin cl. silt lenses, med stiff |

TD 10', pull pipe, grab hole

ERM Samples:

| | |
|----------------|--------------------------|
| (0-2') @ 0810 | } % Moisture, ESP, SAR |
| (6-8') @ 0835 | |
| (8-10') @ 0830 | % Moisture, ESP, SAR, EC |

11/18/21

0950

Sampling MW-6

UTM

508136

3328273

| Depth | Rec | EC | PID | Desc |
|-------|------|------|-----|---|
| 2 | 2.3' | 1.70 | 0.1 | Silty CLAY, dk brn to d' then lt gray - of argillaceous, med stiff, shell @ top |
| 4 | | 2.42 | 0.1 | |
| | | 3.03 | | |
| 6 | 4' | 3.06 | 0.1 | CLAY, lt gray/orange, st. ff, Mn nod |
| 8 | | 3.53 | 0.1 | |
| | | 3.22 | | |
| 10 | 4' | 3.26 | 0.1 | CLAY, gray/orange/red brn stiff, few thin cl. silt lenses, silty clay, silty clay @ 2.4-2.9' |
| 12 | | 4.05 | 0.0 | shell hash @ 3.7-4' |
| 14 | 4' | 4.16 | 0.0 | CLAY, lt brn/brn/lt gray, stiff |
| 16 | | 4.55 | | |
| | | 3.83 | 0.1 | |
| 18 | 4' | 3.92 | 0.1 | CLAY, pale gray to dk gray, med stiff, |
| 20 | | 4.66 | | |
| | | 4.73 | 0.0 | thin cl. silt lenses thruout |
| 22 | 4' | 2.49 | 0.1 | CLAY, gray, stiff, Fe stains |
| 24 | | 2.81 | | |
| | | 2.70 | 0.1 | |
| 26 | 4' | 2.15 | 0.1 | CLAY, gray, stiff, Fe stains |
| 28 | | 2.05 | | |
| | | 2.09 | 0.0 | |
| 30 | 4' | 2.56 | 0.0 | CLAY, SAA |
| 32 | | 2.38 | | |
| | | 2.31 | 0.0 | |
| 34 | 4' | 2.32 | 0.0 | Silty CLAY, brn, med soft to med stiff |
| 36 | | 2.57 | | |
| | | 2.50 | 0.0 | few Fe stains * Core/liner stuck in barrel, had to push out in sections |
| 38 | 3.3' | 2.34 | 0.1 | Silty CLAY, brn, silt inc. w/depth, stiff to med soft |
| 40 | 3.5' | 2.14 | 0.0 | Silt/cl. silt (d) brn wet/moist, Silty CLAY, brn med stiff |

TD 40', pull pipe, set 1" PVC well

11/18/21

MW-6 Sample intervals:

| | | |
|----------|--------|----------------------------------|
| (0-2') | @ 0950 | % Moisture, ESP, SAR |
| (4-6') | @ 0955 | % Moisture, EC, |
| (8-10') | @ 1000 | ESP, SAR |
| (18-20') | @ 1135 | % Moisture, EC, SPLP C |
| (30-32') | @ 1130 | % Moisture, EC, ESP, SAR, SPLP C |
| (38-40') | @ 1125 | % Moisture, EC |

MW-6 well:

Screen 30-40' prepack

Sand 28'

bentonite 25'

Sample H-15N

UTM

508134

3328151

| Depth | Rec | EC | PID | Desc |
|-------|------|------|-----|--|
| 2 | 2.3' | 1.03 | 0.0 | Silty CLAY, dk brn (b-i), lt brn w/Fe stains, med stiff |
| 4 | | 1.86 | 0.0 | |
| 6 | 3.7' | 2.94 | 0.0 | CLAY, orange brn/lt gray, Fe stains |
| 8 | | 3.08 | | |
| | | 3.72 | 0.0 | med stiff |

TD 8', pull pipe, grab hole

ERM Samples:

| | | |
|--------|--------|-------------------------------------|
| (0-2') | @ 1510 | % Moist, Br, SPLP B |
| (6-8') | @ 1520 | % Moist, TPH, Fractions hold PAH |

11/18/21

Sampling H-15W
UTM 508115
3328127

| Depth | Rec | EC | PID | Desc |
|-------|------|------|-----|-------------------------------------|
| | | 1.23 | 0.0 | Silty CLAY dk brn to lt. brn |
| 2 | 2.6' | 2.06 | 0.0 | w/ Fe stains, med stiff |
| 4 | | 3.13 | 0.0 | CLAY/Silty CLAY, orange brn/lt gray |
| 6 | 4' | 3.11 | 0.0 | med stiff, reddish brn, Mn nodules |
| 8 | | 2.97 | 0.0 | |

TD 8', pull pipe, grout hole
ERM samples:

(0-2') @ 1540 %Moist, Ba, SPLP Ba

(6-8') @ 1550 %Moist, TPH-Frac, hold PAH

Sampling H-15 R

~~adjacent~~ adjacent to H-15 location

| Depth | Rec | EC | PID | Desc |
|-------|------|------|------|--|
| 0 | | | | |
| 2 | 3.1' | 1.79 | 2.2 | Silty CLAY top half dk brn, then lt brn/gray, med stiff, Fe stains |
| 4 | | 2.76 | 2.5 | |
| 6 | 4' | 2.84 | 49.3 | CLAY gray/lt brn, Fe stains, med stiff, shodor |
| 8 | | 3.46 | 57.8 | |
| | | 3.56 | | |

TD 8', pull pipe, grout hole
ERM samples:

(0-2') @ 1610 SPLP Hg

(6-8') @ 1625 %Moist, PAH

K640

leave site

11/19/21

0700

DC Oversight of ERM

@ site

Cory + David w/ ERM onsite
Blake + Cecil w/ WTE onsite

- grouting MW-6

Sampling H-15 E

UTM 508164
3328105

| Depth | Rec | EC | PID | Desc |
|-------|-----|------|-----|--|
| 2 | 3' | 2.57 | 0.0 | Silty CLAY/CLAY, lt brn, med stiff |
| 4 | | 2.40 | 0.0 | |
| 6 | 4' | 2.95 | 0.0 | CLAY, lt gray/lt brn, Mn stains, stiff |
| 8 | | 2.32 | 0.0 | |
| | | 3.29 | 0.0 | |

TD 8', pull pipe, grout
ERM samples:

(0-2') @ 0845 %Moist, Ba, SPLP Ba

(6-8') @ 0850 %Moist, TPH-Frac, hold PAH

Sampling H-15 S

UTM 508132
3328105

| Depth | Rec | EC | PID | Desc |
|-------|-----|------|-----|--|
| 0 | | | | |
| 2 | 3' | 0.96 | 0.8 | Silty CLAY, dk brn to lt. 4', then brn, med stiff, Fe stains |
| 4 | | 2.03 | 0.5 | |
| 6 | 3' | 2.25 | 0.6 | Silty CLAY, brn/lt gray/reddish brn, Mn stains, med stiff to stiff |
| 8 | | 2.12 | 0.3 | |
| | | 1.94 | | |

TD 8', pull pipe, grout

11/19/21

H-155 Sample intervals:

(0-2') @ 0905 % Moist, Ba SPLP Ba

(6-8) @ 0915 % Moist, TPH, Fac, Hold Plat

0950

Hand auguring around H-11 location

1000

H-11 S (0-2') 507828
3328223

EC: 0.94 PID: 3.5

Silty CLAY, dk gray/bn, med stiff
% Moisture, Ba, hold SPLP Ba

1005

H-11 E (0-2') 507840
3328233

EC: 0.98 PID: 3.9

Silty CLAY, dk gray/bn, some li. silt
% Moisture, Ba, Hold SPLP Ba

1010

H-11 R (0-2') 507827
3328234

EC: 0.85 PID: 5.9

Silty CLAY, dk gray/bn, some silt, med soft
% Moisture, SPLP Ba

1015

H-11 N (0-2') 507827
3328246

EC: 1.36 PID: 5.2

SAND - Silty CLAY, dk gray, med stiff
% Moisture, Ba, Hold SPLP Ba

1110

beam size

CS

11-29-21

945 On site, Oversight

Jake & Corey w/ Ehm
WTE - Blake & CeciSampling MW-7 508220
3328163

| Depth | EC | PID | Description |
|-------|-----|------|---|
| 0 | 3.6 | 1.05 | CLAY, grey, orange staining, firm |
| | | 1.78 | |
| | | 2.29 | |
| 4 | 4 | 2.08 | CLAY, grey, orange staining, very firm |
| | | 2.13 | |
| | | 2.96 | red/bn staining (6-8), rocks (4.4-4.8) |
| 8 | 4 | 2.69 | CLAY, grey + red/bn (8-10), grey + (10.2-10.7) |
| | | 3.02 | |
| | | 3.33 | orange (10-12), very firm to shaft, shell hash |
| 12 | 4 | 3.78 | CLAY, grey, orange staining, (10.2-10.7) |
| | | 4.03 | |
| | | 3.61 | very firm to shaft |
| 16 | 4 | 4.21 | CLAY, grey, orange staining, very firm |
| | | 4.01 | |
| | | 3.76 | + mottling |
| 20 | 4 | 2.11 | CLAY, grey, very firm, orange staining |
| | | 2.03 | |
| | | 2.03 | CLAY, grey + li/bn, very firm |
| 24 | 4 | 2.10 | SAA |
| | | 2.01 | |
| | | 1.54 | |
| 28 | 4 | 2.04 | CLAY, grey + orange, very firm to shaft |

11-29-21

Sampling MW-7 cont

| Depth | EC | EC STD | Notes |
|-------|-----|--------------|--|
| 28 | 4 | 1.81 2.16 | 2.4 SAA |
| 32 | 4 | 1.90 2.52 | 1.9 CLAY, gray (0-3'), orange/brown (3-4'), very firm to stiff |
| 32 | 3.3 | 2.08 1.91 | 2.9 CLAY, orange/brown (0-2'), gray w/ orange (2-3'), SAA |
| 36 | 3.2 | 1.55 2.19 | 3.0 Silty CLAY, gray + orange/brown, soft (0-2'), firm (2-32') |
| 40 | 4 | 2.91 2.04 | 2.5 CLAY, gray w/ orange, very firm, brown (0-1.5') |
| 44 | 4 | 2.81 2.66 | 2.2 CLAY, brown, very firm to stiff |
| | | 2.55 | 2.7 |

* 2' pushes from 20'-36'

MW-7 Samples:

| Depth | EC | Notes |
|-------|------|--------------------------|
| 4-6 | 1255 | SAA %mo |
| 6-8 | 1300 | |
| 8-10 | 1305 | EC %mo |
| 12-14 | 1310 | |
| 16-18 | 1425 | EC %mo S&P CL, SAA/EC |
| 32-34 | 1420 | |
| 38-40 | 1415 | |

11-29-21

Set MW-7 well

Pull Sample Pipe, 3/4" pipe to 44'
Set 1" PVC well w/ prepack screen
Screen 34-44'

Bentonite

Sand 32

Bent 29

1790 Leave Site, to Hotel in Jennings

CS

11-30-21

700 On site, Oversight
Corey & Jake w/ERM
WHE

WHE down pipes

Grout MW-7 bent to surface

800 Mob to next location

Sampling MW-5

507937
3328245

| 0 | Rec | Ec | P.D | |
|----|-----|------|-----|--|
| | 1.9 | 0.75 | 1.9 | CLAY, brown/grey, firm |
| 4 | | 1.98 | 2.2 | |
| | 3.5 | 2.02 | 3.9 | CLAY, grey w/orange staining (4-6.2) |
| | | 2.26 | | |
| 8 | | 2.09 | 2.2 | CLAY, brownish orange (6.2-7.5), very firm |
| | 4 | 1.62 | 4.6 | CLAY, brownish orange (8-10.6), grey to orange (10.6-11.3) |
| | | 1.54 | | |
| 12 | | 2.46 | 2.6 | shell hash (10.6-11.3), very firm |
| | 4 | 2.33 | 3.2 | CLAY, grey, orange staining, very |
| | | 2.45 | | |
| 16 | | 2.37 | 2.9 | firm to stiff |
| | 4 | 2.58 | 3.8 | CLAY, grey, orange staining, |
| | | 2.53 | | |
| 20 | | 2.61 | 3.6 | stiff |

11-30-21

Sampling MW-5 cont

| 20 | Rec | Ec | P.D | |
|----|-----------------------------------|------|-----|--|
| | 4 | 1.97 | 1.9 | CLAY, tanish grey, very firm to stiff |
| | | 1.82 | | |
| | | 1.91 | 2.4 | |
| 24 | 4 | 2.10 | 2.7 | SAA |
| | | 2.09 | | |
| 28 | 4 | 2.00 | 3.5 | CLAY, grey, orange staining, stiff |
| | | 2.33 | | |
| | 4 | 2.29 | 2.7 | SAA |
| | | 2.56 | | |
| 32 | 4 | 2.50 | 3.2 | SAA |
| | | 2.51 | | |
| | 4 | 2.06 | 2.8 | Silty CLAY, tan, soft, SILT, tan, wet |
| | | 2.01 | | |
| 36 | 3.5 | 1.81 | 2.7 | CLAY, light brown, soft (0-1), stiff (1-3.5) |
| | | 1.77 | | |
| | 4 | 1.95 | 2.1 | CLAY, light brown to grey, stiff |
| | | 2.22 | | |
| 40 | 4 | 2.69 | 2.2 | CLAY, grey to orange, stiff |
| | | 2.48 | | |
| | 2 | 2.35 | 1.6 | CLAY, grey, stiff, minor orange stains |
| | | 2.61 | | |
| 44 | 4 | 2.52 | 1.3 | CLAY, grey, orange staining, stiff |
| | | 2.34 | | |
| | 2 | 1.93 | 1.4 | SAA |
| | | 1.71 | | |
| 48 | | 2.52 | 2.6 | |
| | 4 | 2.63 | 3.0 | SAA |
| | | 2.66 | | |
| 52 | | 2.27 | 2.6 | |
| | 4 | 1.83 | 3.2 | SAA |
| | | 1.49 | | |
| 56 | | 1.52 | 2.6 | |
| | + 2' pushes from 24' - 44', 56-60 | | | |
| 56 | 4 | 1.61 | 2.2 | SAA |
| | | 1.24 | | |
| 58 | 2.16 | 1.21 | 2.8 | SAA |
| | | 1.24 | | |
| 60 | | | | |

JD

11-30-21

Get MW-5 well

1445 Pull sample pipe, reenter w/ 3/4" to 35'
Set 1" PVC well w/ prepack screen

Screen 30-35'

Sand 28

Bent 25

* 3 1/2" refusal @ 29', Set 3/4" prepack
well w/ 2 1/4" pipe

1645 Leave site

CS

12-1-21

700 On site, Oversight

Take & Corey w/ ERM
WHE -

Grant MW-5 bent to surface

Sampling MW-1 507827
3328127

Rec. Ec P2D (CS) Proceeding up + re-do on next page

| | | | | |
|----|-----|------------------------------|------------|--|
| 0 | 3 | 0.84 0.85 | | CLAY, brownish grey, firm, orange staining (2.5-3) |
| 4 | 4 | 1.61 1.83 2.01 2.63 | | CLAY, grey, stiff, orange staining |
| 8 | 3.5 | 3.08 2.56 2.43 | | CLAY, grey w/ orange staining (8-8.5) + (10.7-11.3) brownish orange (8.8-10.7), stiff |
| 12 | 4 | 3.02 3.06 | | CLAY, grey + orange, stiff |
| 16 | 3.1 | 2.19 1.75 2.24 | | CLAY, orange (16-16.3), grey, stiff |
| 20 | 4 | 1.75 1.62 1.42 | 3.8 3.9 | CLAY, grey, stiff, orange staining mottling |
| 24 | | | | |

12-1-21

Sampling MW-1 cont

| 24 | Dec | EC | PED | |
|-----|--------------|-----|---|--|
| 4 | 1.61 1.72 | 3.6 | CLAY, gray, stiff, orange staining | |
| 28 | 1.52 | 4.5 | | |
| 4 | 1.71 1.71 | 1.7 | CLAY, gray, stiff, orange staining, | |
| 32 | 2.29 | 3.2 | Ca concretions throughout | |
| 4 | 1.74 1.67 | 1.9 | CLAY, gray, stiff, orange staining/ mottling | |
| 36 | 2.02 | 2.0 | | |
| 4 | 1.81 1.57 | 1.6 | SAA | |
| 40 | 2.18 | 1.2 | | |
| 4 | 1.87 2.11 | 2.1 | SAA | |
| 44 | 1.91 | 2.3 | | |
| 4 | 1.27 1.64 | 2.2 | SAA | |
| 48 | 1.54 | 1.9 | | |
| 4 | 1.53 1.41 | 2.3 | SAA | |
| 3.2 | 1.19 1.48 | 2.6 | silty CLAY (0-2), gray, soft; CLAY, gray, stiff | |
| 3.4 | 1.30 1.14 | 3.5 | silty CLAY, gray, firm, soft (1.2-2); silty (2.7) | |
| 4 | 1.26 1.58 | 3.9 | CLAY, gray, stiff (0-2), firm (2-4) | |

| # Samples | | | | |
|-----------|-------|------|--------------|------|
| | 0-2 | 945 | SAA | % mo |
| | 4-6 | 950 | SAA/ESP | % mo |
| 46 | 8-10 | 1500 | EC | % mo |
| | 48-50 | 1455 | EC, ESP, SAA | % mo |
| | 58-60 | 1450 | EC | % mo |
| | 20-22 | 1505 | EC, SPI, PLI | % mo |

12-1-21

Sampling MW-1 cont

| 36 | Dec | EC | PED | |
|----|--------------|-----|--|--|
| 4 | 2.45 2.51 | 4.6 | CLAY, gray, stiff | |
| 60 | 2.52 2.11 | 6.3 | CLAY, gray, firm, wood in clay (1-4') wood piece @ 2.6' | |

* PID was reading abnormally high 0-20'
* PID re-do: 0-20'

| | | | |
|------|-----|-------|-----|
| 0-2 | 0.6 | 10-12 | 1.4 |
| 2-4 | 0.8 | 12-14 | 1.7 |
| 4-6 | 2.0 | 14-16 | 1.1 |
| 6-8 | 1.6 | 16-18 | 1.7 |
| 8-10 | 1.7 | 18-20 | 0.7 |

Set MW-1 well

Pull sample pipe, reenter w/ 2 1/4"
to 60"
Set 3/4" PVC well w/ prepack screen
screen 50-60
band 46
Bent 45

1630 leave site

CS

12-2-21

700 On site, oversight
 Cory + Jake w/ ERM
 WHE - Blake + Cecil
 Grouting MW-1 bent to surface

Sampling MW-9

508266, 3327958

| Depth | Sec | EC | PDP | Description |
|-------|-----|------|-----|--|
| 0 | 2.6 | 0.57 | | CLAY, dk gray (0-2), grey + orange (2-2.6) |
| | | 2.00 | | Firm |
| | | 2.15 | | |
| 4 | 4 | 2.21 | | CLAY, grey to orange (4-6.3), brownish orange, stiff, brown mottling (6.3-8) |
| | | 1.78 | | |
| | | 2.22 | | |
| 8 | 4 | 2.22 | | CLAY, brownish orange (8-11), brown mottling (8-11) |
| | | 2.35 | | |
| | | 2.81 | | SAND; shell hash (11-11.6), grey to orange (11-12) |
| 12 | 4 | 3.37 | | CLAY, grey, stiff, orange staining |
| | | 2.98 | | |
| | | 2.27 | | |
| 16 | 4 | 2.23 | | SAA |
| | | 2.52 | | |
| | | 2.31 | | |
| 20 | 4 | 1.61 | | CLAY, tanish grey, orange staining, brown staining (22-23.4), stiff |
| | | 1.47 | | |
| | | 1.46 | | |
| 24 | 4 | 1.49 | | CLAY, tanish grey, stiff, Ca throughout |
| | | 1.40 | | |
| | | 1.46 | | |
| 28 | 4 | 1.63 | | CLAY, grey to orange, stiff, Ca throughout |
| | | 1.79 | | |
| | | 1.74 | | |
| 32 | | | | |

12-2-21

Sampling MW-9 cont

| Depth | Sec | EC | PDP | Description |
|-------|-----|------|-----|--|
| 32 | 4 | 1.95 | | CLAY, grey, orange staining, stiff, |
| | | 1.78 | | |
| | | 2.14 | | silty clay (35-35.5), soft, orange |
| 36 | 4 | 1.97 | | CLAY, lt brown, stiff, orange mottling |
| | | 1.73 | | |
| | | 2.48 | | |
| 40 | 4 | 2.51 | | CLAY, grey, stiff, orange staining |
| | | 2.36 | | |
| | | 2.18 | | |
| 44 | 4 | 2.49 | | CLAY , SAA |
| | | 2.14 | | |
| | | 1.83 | | |
| 48 | 2.3 | 2.56 | | CLAY (0.6-2.3), lt brown, wet, (CLAY (0.6-2.3), grey, orange staining) |
| | | 2.06 | | |
| 52 | 2 | 2.60 | | CLAY, grey, stiff, orange staining |
| | | 2.72 | | |

Set MW-9d well

Pull sample pipe, recenter w/ 2 1/4 to 50"
 Set 3/4" PVC well w/ prepack screen
 Screen 45' ~~50'~~ 40-50'
 Sand 38'
 Bent 35'

Samples: 0-2 1350 ^{ESP/HR/LMD}
 4-6 1355 ^{ESP} 14-16 1410
 8-10 1400 ^{ESP} 20-22 1415
 12-14 1405 ^{ESP}

12-2-21

1445 CS offsite, KB take over

* KB on site as oversight

Set MW-9 well

Screen: 31-36'

Sand: 29'

pebbles: 26'

1630 Leaving site

* ERM's PID meter malfunctioning
- taking samples offsite &
testing at later date

KC

KB

52°F, Heavy Fog

12.3.21

0700 On site as oversight

ERM: Cory & Jake

WHE: Blake & Cecil

0730 Grouting MW-9 wells thru
trench to surface~~used galgrout~~~~KB~~

0930 Sampling H-18R

H-18R wtm: 508225
NPO83 3327887

Lith Rec Ec

| | | | |
|----|------|------|--|
| 0 | 2' | 1.32 | CLAY, bn to Hbn, minor orange stain, md stiff |
| 4 | | 1.88 | |
| 8 | 3.8' | 1.85 | CLAY, grey w/ heavy orange stain, blk mottling. Silty CLAY @ 2', stiff |
| | | 2.13 | |
| | | 3.15 | |
| 12 | 4' | 3.32 | Silty CLAY, grey w/ heavy orange stain. |
| | | 4.75 | |
| | | 6.31 | CLAY @ 2' stiff, soft lens @ 2.6'-3.2' w/ shell frags |
| 16 | 4' | 6.86 | CLAY, grey w/ heavy orange stain, stiff |
| | | 6.11 | |
| | | 6.23 | |
| 20 | 3.1' | 5.89 | CLAY, grey, thin silt lenses @ top 1', minor orange staining, md stiff |
| | | 6.41 | |
| | | 3.73 | |
| | | 4.72 | |

H-26 4.8-21
 0-2 1215
 4-6 1225
 6-8 1230
 8-10 1235
 10-12 1240
 22-24 1310
 30-32 1330
 48-49 1500

H-27 4.9-21
 0-2 1015
 4-6 1025
 6-8 1030
 8-10 1035
 10-12 1040
 16-18 1055
 34-36 1140
 50-51 1220

H-18R cont

| Lith | Rec | Ec | |
|------|-----|--------------|--|
| 29 | 4 | 3.17 3.11 | CLAY, grey, md soft, minor orange stain in botm half |
| 24 | 4 | 3.08 | |
| 28 | 4 | 2.93 3.02 | CLAY, gray, md stiff, Ca concretions in botm half |
| | | 2.94 | * Continued in Book 2. |

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Henning's 2

SOKKIA

FIELD
BOOK

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FOUND *

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INDEX

HENNINGS 2

Mikumi & Chris M. 10/28/19
to GEM survey

1120 Arrive onsite.

1130 Mot well - owner, Wayne
Landry. (337-981-4657)

1135 Discusst property & pits.

1140 Start warm-up

Todd (HET)

Shawn Wiggins (ERM)

Patrick Baddins

- also: Katie C. w/ ICON

1155 Start GEM survey

* Much pipe scale over well pad
Ex-tank battery w/ steel,
rusty scale.

1217

End survey File: 276-d-280c-210
Survey around SN 206344

1230-1236 Add. survey on pad
File: 277-d-280c-120

10/28/19

Take Survey 278
in field around pad to
the East target & to the
three targets to the west.
File: 278-d-280c-268

TAKE Survey 279
to tie in around the two
targets just to the NW of
pad & the target to the
East of pad.
File: 279-d-280c-268

* VERY TALL GRASS, BRUSH,
standing water to the
Western portion of the
Property

COMBINE FILES: Process Data

1500 hours to SN 195098. Start
GEM survey. Two GPS TARGETS
509080, 3327866
509141, 3327863

10/28/19

1600 End survey. File: 280-d-280c-214
* Heavy small sapling forest,
MARSH GRASS ON WEST END
* CANAL BORDERS SOUTHERN EDGE

1640 Process data, move to
SN 195098. Well head area under
water will return tomorrow
to clear transects.



1

10/29

SIBBY 101

10/29/19

CM, MM

730 on Site

Warm tool up $\frac{1}{2}$ test
w/ ferrite cylinder

Run Survey 281

AROUND Hayes SN 195098
to the EAST of LA 14

PAD is UNDER 3" of water
but hard bottom

945 Survey 282. Fill in around
file 281.

1000 Finish survey. In water next
to road. Ponds on north side
of road. Well head area not
evident on old aerial photos.

1020 Move to north AOI, west of
Hwy. 14 & just north of parish
line.

1026 Start survey around well head.

1055 End survey File: 283-d-290c-0a0
* Around well head & surround-
ing heavy brush.

10/29/19

1105 Process data. Fetch 4-wheeler for
larger survey.

1150 Start GEM survey (sled)

1328 End survey File: 284-d-290c-1e4

- Lines 0 & 2 were taken
with Sled
- Line 1 is a WALKING SURVEY

810 Arrive. To GEM around
SN. 31298. 10/30/19

845 Visit w/ oversight; warm up
GEM 2-482.

930 Move east to north bend
in access road.

1030 End survey around SN 31298.

Files: 286-d-300c-00f
287-d-300c-00a

* Flat, grassy, variably
~~1000 287~~ wet grassy
area.

* Open, chained-locked gate
at north bend. Further
north, access directly w/

10/30/19

4-wheeler.

11:00 Finish processing.

12:00 Provide dated plots for
Mr. Landry.

12:10 Leave site.

Note: No well-head or
pump around SN 31298.

Cloudy
82°F

DP

5-24-21

1230 Arrive @ The site.
NORM Survey old Oil + Gas Production
areas. Survey where accessible.

Derek Pourciau RSO/Surveyor

Jerry Fontenot oversight.

~~Michael Goodman - EBM~~
Debraanne Corley

Using Ludlum Model 3
w/ 44-2 probe.

Cal date 5-12-21

sn 193876

Battery = Good

Cs 137 source = 80 $\mu\text{R/hr}$

Thick grass. Abandoned O+G
production. Few trees.

Very wet

Background 9 $\mu\text{R/hr}$

All soils around sn 206344

sn 103174/105169, ~~H-1~~ H-1, H-18 were
5-10 $\mu\text{R/hr}$. Tall thick grass, much water

near
H-1
area

P-1 15 R 0508338

3327867

2' pc of 2 5/8" flowline > 50 $\mu\text{R/hr}$

High reading 70 $\mu\text{R/hr}$

5-24-21

DP

Limited dry land to survey
on well pad sn 195098,
covered in 6-8" of water
all readings = 6 μ R/hr

Limited survey around
H-2, H-16, H-22, H-8, sn 26358,
sn 213760, grass very tall
all readings 5-10 μ R/hr

1640 Closing meter
source = 800 μ R/hr
leaving site

KB

12.1.21

1415 On site as oversight

Luther Holloway

ERM: Patrick Ritchie

Emily Martin

Sam Fung

1518 Scouting locations in rice fields
on East side of Hwy 14

1613 Conducting soil & root survey @
R-04 - { 509714 }
 { 3327627 }

1700 Leaving site

KC

KB
61°F, Heavy Fog

12.2.21

0850 On site as oversight

0915 ERM & Luther Holloway on site
↳ EM, PR, SF

Jerry Fontenot

0950 Driving up & down Peag Rd
Searching for Sweetgum trees

1025 Conducting root study on Sweetgum tree

- ICON notes "diver" root that drops ~16" subsurface before continuing laterally

* pictures taken

1315 LUNCH

1445 Relieving CI @ drilling location w/ other ERM crew

* NOTES IN BOOK 1

* CONT. FROM BOOK 1

1040 ERM pushing 0-4' again for add'l recovery

H-18R time sample

1035 26-28'

1040 18-20'

1105 0-1'

1110 1-2'

1115 2-3'

1055 0-4'

* ERM tossing all saved soil samples for PID testing

↳ PID still malfunctioning

1130 Sampling H-18NW

H-18NW

utm: 508214
NAD83 3327901

| Lith | Rec | Ec | |
|------|-----|------|--|
| 0 | | 0.52 | Cl. SILT, ^{dk} brn w/ minor orange stain, |
| | 2.6 | 2.53 | soft |
| 4 | | 6.13 | |
| | | 5.21 | CLAY, grey w/ heavy orange & blk stain, |
| | 3.4 | 6.12 | md stiff |
| 8 | | 6.31 | |
| | | 6.44 | Cl. SILT, grey w/ minor orange & blk |
| | 4.0 | 6.81 | stain, stiff |
| | | 4.21 | |
| 12 | | 3.67 | CLAY, grey w/ heavy orange & blk stain, |
| | 4.0 | 5.30 | stiff |
| | | 4.74 | |
| 16 | | 6.08 | CLAY w/ silt lenses throughout top |
| | 4.0 | 7.29 | top grey, orange & blk stain, stiff |
| | | 5.17 | |
| 20 | | | |

KC

H-18NW cont.

12.3.21

Lith Rec EC

| | | |
|-----|------|--|
| 20 | 2.85 | CLAY, grey w/minor orange staining md stiff |
| 4.0 | 2.14 | |
| 24 | 1.81 | |

time samples

| | |
|------|--------|
| 1215 | 0-2' |
| 1220 | 4-6' |
| 1225 | 8-10' |
| 1230 | 14-16' |
| 1235 | 16-18' |
| 1240 | 22-24' |

1300 Leaving site

KC

CS

12-7-21

745 On site, Oversight

Corey & Marthusa/Edm

Blaket Cecil w/WTE

Sampling MW-11

508382

3327866

| Rec | EC | MD | |
|-----|------|-------|---|
| 0 | 1.7 | 0.1 | CLAY, brn @ -1, grey (-1.7), firm |
| | 2.80 | - | |
| 4 | 3.06 | 0.2 | CLAY, grey, firm to stiff, orange |
| | 2.64 | | |
| | 2.75 | 0.1 | staining |
| 8 | 2.74 | 0.2 | CLAY, brownish red + ^{some} grey (8-10'), brownish |
| | 2.58 | | |
| | 3.18 | 0.3 | yellow to grey (10.7-12), stiff, shell hash (10.7-11.4) |
| 12 | 3.47 | 0.2 | CLAY, grey, stiff, orange staining |
| | 3.22 | | |
| | 2.82 | 0.2 | |
| 16 | 2.99 | 0.2 | CLAY, grey, stiff, orange |
| | 2.83 | | |
| | 2.85 | 0.2 | mottling & staining, silty & soft (16.5-16.8) |
| 20 | 1.91 | 0.2 | CLAY, grey & ll brn, firm, |
| | 1.92 | | |
| 24 | 1.90 | 0.2 | orange staining |
| | 1.85 | 0.1 | CLAY, ll brn (24-26), grey (26-28) |
| | 2.20 | | |
| | 2.01 | 0.3 | stiff, brn to orange mottling (27-28) |
| 28 | 2.05 | 1.8 | CLAY (28-29.5), grey, stiff; silty CLAY (29.5- |
| | 1.71 | | |
| | 2.07 | 30.5) | ll brn, soft to firm; CLAY (30.5-32), ll brn |
| 32 | | | (stiff, orange mottling) |

12-7-21

Sampling MW-11

| 32 | Rec | EC | PID | |
|----|----------------------|-----|-----|---|
| 4 | 2.12 2.15 | 0.3 | | CLAY, grey, firm, orange mottling |
| 36 | 2.16 | 0.4 | | staining |
| 40 | 1.92 2.09 2.55 | 0.4 | | silty CLAY (36-37.5), grey, soft, orange mottling |
| 44 | 2.15 2.30 | 0.3 | | CLAY, grey, stiff, orange staining |
| 48 | 2.46 | 0.2 | | |
| 52 | 3.6 2.59 1.53 | 0.2 | | CLAY, lt brown & grey, orange mottling |
| | 1.88 | 0.2 | | stiff, soft to firm (0-1), some silt (46-48) |
| | 2.76 2.64 | 0.5 | | CLAY, grey, stiff, orange & brown mottling |
| | 1.64 | 0.8 | | |

Ehm;

| Samples: | | Ehm; | |
|----------|------------|------|------|
| 0-2 | ESP/SAR | | 1200 |
| 4-6 | EC ESP/SAR | | 1205 |
| 8-10 | " " | | 1210 |
| 10-12 | EC | | 1215 |
| 12-22 | EC | | 1220 |

1300 Mike w/Ehm on site

1400 Shawn w/Ehm on site

1500 Dave Angle on site

WHE on site w/larger Geoprobe

↳ Wanya & Jimmie

Coney & Mathus off site

12-7-21

1600 Set MW-11 well

Pull sample pipe, center w/ 3/4 to 34'

Set 1" PVC well w/pre pack screen

Screen 29-34

Sand 27

Bent 24

1430

Sampling A-17 SW

508111

3321807

| 0 | Rec | EC | PID | |
|-----|----------------------|-----|-----|---|
| 2.8 | 0.50 1.52 1.95 | 5.8 | | CLAY, dk grey (0-1), grey staining |
| 4 | 3.9 | 0.4 | | Firm, orange staining (1-2.8) |
| 8 | 2.11 2.03 2.46 | 0.3 | | CLAY, grey, stiff, orange staining |
| 12 | 4 | 0.2 | | CLAY, brownish red (8-10.5) w/some grey, |
| | 2.89 2.45 2.92 | 0.3 | | grey w/orange & brown mott (10.5-12), stiff, shell rich |

(10.5-10.9)

Samples: Ehm;

| | | |
|------|-------|---------|
| 1500 | 4-6 | ESP/SAR |
| 1505 | 8-10 | ESP/SAR |
| 1510 | 10-12 | EC |

1700 Leave site, Hotel in Jennings

CS

12-8-21

700 On site, oversight

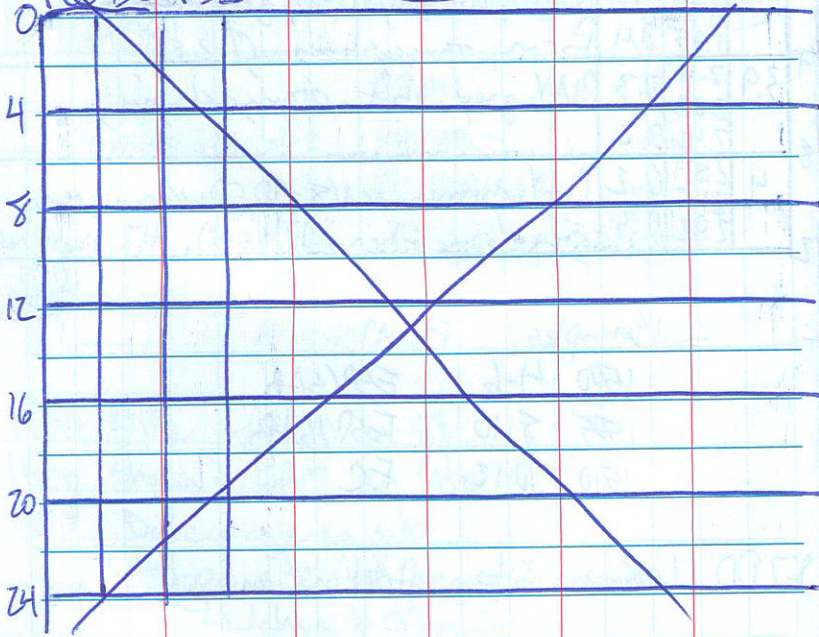
Shawn ~/Ehm + Jake
 Jimmie, Wanye → WHE
 Blake, Cecil

- Grant MW-11 bent to surface
- Mob to blowout area

Sampling MW-4

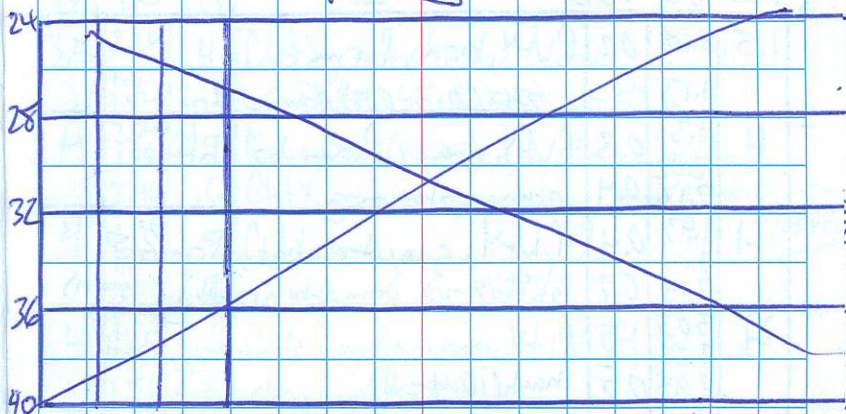
507844
 3328347

EC PID



12-8-21

Sampling MW-4 cont



* New Geoprobe head only
 pushes to 2' above ground
 have to re-do description
 table on next page
 - Sampling 1/3" pipe + 2" liners

12-8-21

Sampling MW-4

507844

3325347

Rec EC PSD

| | | | | |
|----|-----|------|-----|--|
| 0 | 1.5 | 0.68 | 0.2 | CLAY, brn, firm; SILT (0.3-0.5), orange, dry |
| 2 | 4 | 1.13 | | |
| | | 1.33 | 0.3 | CLAY, grey, firm to stiff, |
| | | 2.02 | 0.4 | orange staining |
| 6 | 4 | 1.93 | 0.4 | CLAY, grey & orange, firm (6-8), |
| | | 2.05 | | stiff (8-10), orange brn mottling (7.5-11) |
| | | 2.14 | 0.7 | |
| 10 | 4 | 3.03 | 1.0 | CLAY, grey, orange staining, shell |
| | | 3.28 | | wash (10.4-11) |
| | | 2.95 | 0.5 | |
| 14 | 4 | 3.13 | 2.5 | CLAY, grey, orange staining, stiff; |
| | | 3.23 | | |
| | | 3.43 | 0.4 | Clayey SILT (14.3-14.6) (15-15.6) (16.1-16.7) ^{grey to black} |
| 18 | 4 | 2.48 | 0.3 | CLAY, grey, stiff, orange mottling (18-20) |
| | | 2.45 | | |
| | | 2.20 | 0.6 | orange staining (21-22) |
| 22 | 3.3 | 2.72 | 0.3 | CLAY, grey, orange staining, stiff |
| | | 2.49 | | |
| | | 2.33 | 0.5 | Ca ₂ 24.1, brn staining (24-25.3) |
| 26 | 3.4 | 2.36 | 0.2 | CLAY, lt brn to grey, stiff |
| | | 2.29 | | |
| | | 2.26 | 0.1 | |
| 30 | 3.5 | 2.31 | 0.2 | CLAY, grey, orange staining, stiff; |
| | | 2.52 | | |
| | | 2.49 | 0.4 | silty clay (31-32), grey & orange, soft |
| 34 | 4 | 2.65 | 0.8 | CLAY, grey, orange staining, lt brn (34.5 |
| | | 2.72 | | 35), stiff; silty CLAY (35.6-36), soft, lt brn |
| | | 2.78 | 0.5 | |
| 38 | 4 | 2.52 | 0.6 | CLAY, grey, stiff, orange staining |
| | | 2.67 | | |
| | | 2.46 | 0.9 | |
| 42 | | | | |

12-8-21

Sampling MW-4 cont

Rec EC PSD

| | | | | |
|----|-----|------|-----|---|
| 42 | 3.5 | 2.24 | 1.4 | CLAY, grey/lt brn, orange mottling, |
| | | 1.87 | | stiff (42-44), firm (44-45.5) |
| | | 1.84 | 1.3 | |
| 46 | 4 | 2.04 | 1.5 | Clayey SILT (46-47), grey/lt brn, moist; |
| | | 1.99 | | |
| | | 2.46 | 1.6 | CLAY, grey, orange mottling, soft (47-48.2), firm |
| 50 | 4 | 2.35 | 1.5 | CLAY, grey, orange mottling, stiff (48.2-50) |
| | | 1.87 | | |
| | | 3.01 | 2.2 | staining |
| 54 | 4 | 2.53 | 2.6 | CLAY, grey & lt brn, stiff, orange |
| | | 2.47 | | staining (54-55) |
| | | 1.51 | 2.8 | |
| 58 | 4 | 2.23 | 2.1 | CLAY, grey/lt brn, stiff, orange |
| | | 2.4 | | |
| | | 1.76 | 2.1 | staining |

1400 Set MW-4 well

- Pull sample pipe, Reenter w/ 3 1/4" pipe to 52'
- Set 3 1" PVC well w/ prepack screen
- Screen 42-52'
- Sand 40
- Bent 37

Samples: 0-2, SAR
 F&M 4-6 ESP/SAR
 16-18 EC

40-42 EC, SAR, PCT
 48-50 EC
 58-60 E, SAR, PCT

12-8-21

1545

Sampling MW-3

507724
5328292

Rec EC PID

| Rec | EC | PID | Description |
|-----|----------------------|-----|---|
| 1 | 0.80 0.94 | 0.6 | CLAY, brownish grey, firm |
| 3 | 1.23 2.14 2.81 | 0.4 | CLAY, grey, orangestaining, firm |
| 4 | 2.66 3.16 2.60 | 0.7 | CLAY, grey, stiff, orangestaining |
| 4 | 2.43 3.23 3.46 | 0.5 | CLAY, grey, orangestaining, stiff |
| 4 | 3.56 2.07 | 0.8 | CLAY, grey, orangestaining, stiff |
| 4 | 2.24 | 0.7 | Silty CLAY (16.3-18), grey, soft to firm |
| 4 | 2.01 1.72 1.63 | 1.0 | CLAY, grey, orangestaining (21-22), stiff |

Samples: 0-2 1505 SAA
4-6 1510 ESP/SAA
14-16 1515 EC

1730 leave site

05

12-9-21

700

On site,

Shawn + Jake w/EHM

Wayne, Cecil, Jimmy w/WHE

Grant MW-4 bent to surface

Sampling MW-3 cont

Rec EC PID

| Rec | EC | PID | Description |
|-----|-----------------------|-----|---|
| 4 | 1.77 1.62 1.81 | | CLAY, grey, stiff, orangestaining |
| 4 | 1.75 1.86 1.98 | | SAA |
| 4 | 1.82 1.81 1.18 | | SAA |
| 4 | 1.163 1.43 1.41 | | Silty CLAY, lt brn, soft, more silt damp (35.4-35.7) (36-37.4) |
| 4 | 1.52 1.82 2.34 | | Silty CLAY (38-38.5), lt brn, soft, damp; |
| 4 | 2.16 2.33 2.03 | | CLAY, lt brn, stiff, orangestaining |
| 4 | 2.10 2.19 1.82 | | CLAY, grey, stiff, orangestaining |

12-9-21

Sampling MW-3 cont

| 50 | hec | EC | PID | |
|----|----------------------|----------------------|-----|---|
| 4 | 2.25 2.01 2.73 | | | CLAY, grey, stiff, orange staining |
| 54 | 4 | 3.06 2.75 2.69 | | SAA |
| 58 | 4 | 2.41 2.32 2.28 | | CLAY, grey, firm, wood fragments throughout |

*PID not working properly

Pull Sample, grout hole

Set MW-3 well

move adjacent, Enter w/ 3/4" pipe to 39'

Set 1" PVC well w/ prepack screen

Screen 34-39'

Sand 32

Bent 29

| Samples: | | 1245 | EC | ESP/SAR |
|----------|-------|------|----|---------|
| Ehm | 48-50 | 1250 | EC | |
| | 58-60 | 1255 | EC | |

12-9-21

Sampling MW-2

5077025
5328141

| 0 | hec | EC | PID | |
|-----|----------------------|----------------------|-----|---|
| 1.7 | 0.84 | | | CLAY, brnish grey, firm |
| 2 | 1.71 | | | |
| 4 | 1.51 3.61 3.62 | | | CLAY, dk grey (2-3), grey/orange staining firm |
| 6 | 4 | 3.58 2.59 1.92 | | CLAY, grey, orange staining, stiff |
| 10 | 4 | 3.00 2.75 3.56 | | Clayey SILT (11-10), grey/lt brn dry to damp, ^{brn/or staining} |
| 14 | 2 | 3.38 3.27 1.72 | | CLAY, grey, orange staining, stiff; Clayey SILT (17.3-18), grey, moist |
| 18 | 4 | 2.68 2.51 1.81 | | CLAY, grey, orange staining, stiff orange mottling (18.3-18.7), Fe nodules (21.3-22.2) |
| 22 | 4 | 1.66 1.71 1.77 | | CLAY, grey, stiff, orange mottling |
| 26 | 4 | 1.79 1.54 1.89 | | SAA |
| 30 | 4 | 1.90 2.02 1.98 | | CLAY, grey, orange staining & mottling, stiff |
| 34 | 4 | 1.84 1.75 1.77 | | CLAY CLAY, grey & orange mottling, stiff, firm (31-36) |
| 38 | 4 | 1.84 1.43 1.42 | | Clayey SILT (34.6-35.4), grey, moist |
| 42 | | | | CLAY, grey, orange staining, stiff |

12-9-21

MW-2 Samples: 0-2 SAR 1620
 4-6 SAR/ESP EC 1625
~~12-14~~ EC 1630
 32-34 EC 1635

1645 Leave site

CS

12-10-21

700 On site,

Shawn + Sate w/ ERM
 Cecil + Wanye w/ WAE

Sampling MW-2 cont

| Rec | Ec | SPS | |
|-----|-----|------------------------------|--|
| 40 | 3.3 | 1.47 1.34 | CLAY, grey, orange staining, firm |
| 46 | 4 | 1.48 1.14 0.93 0.55 | Silty CLAY (46-46.5), 11 mm, wet; Clayey SILT to SILT (46.5-47.7), 11 mm, wet; Silty CLAY (47.7-49), 11 mm, firm; SILT (49-50), grey, wet |
| 50 | 2.9 | 1.03 1.11 0.81 | Clayey SILT (50-50.7), grey, moist , silty CLAY (50.7-51.9) (52.2-52.6), grey, blue/green tint, firm; Clayey SILT (51.9-52.2) (52.6-52.9), grey, wet |
| 54 | 2 | 0.77 1.09 2.00 | CLAY SAND (54-57.5), grey, wet; |
| 58 | 4 | 2.28 2.31 1.98 | CLAY (57.5-58), brown, firm |
| 62 | | | CLAY, grey, wood @ 60 + 60.8-61, firm to SAND |

Samples: 42-44 905 ESP/SAR, EC
 48-50 910 EC
 58-60 915 EC

12-10-21

Set MW-2 ~~good~~ well

Pull sample pipe, reenter w/ 3/4" to 58' set 1" PVC well w/prepack

Screen 48-58'

Sand 46

Bent 43

*1000 ~~WHE~~ WHE off site to get more sand

1130 WHE back on site to complete well set

1200 - Finish setting well, let bent hydrate

- grout MW3 well bent to surface

- load and clean up while MW-2 bent hydrates

12

12-13-21

930 On site, oversight

Shawn + Chris w/EHM

Jimmy, Wanye, Cecil w/WHE

Sampling MW-10

508108
3327862

| 0 | Ree | EC | PID | |
|----|-----|------|-----|---|
| | 1.5 | 0.72 | 1.2 | silty clay, brown, firm, orange mottling |
| | | 1.40 | | |
| 2 | 3.6 | 1.94 | 1.9 | clay, grey/lt brown, orange staining, |
| | | 2.00 | | |
| | | 1.36 | 3.0 | firm |
| 6 | 4 | 0.52 | 2.6 | clay, grey, stiff, heavy orange staining, |
| | | 2.20 | | |
| | | 2.15 | 2.0 | brnish red staining (7.3-8.3) (6-8) |
| 10 | 4 | 2.56 | 3.8 | clay, grey, stiff, orange staining, |
| | | 3.54 | | |
| | | 3.17 | 1.7 | shell hash (10.3-11.1) |
| 14 | 4 | 3.03 | 3.7 | silty clay, grey & lt brown, firm to stiff |
| | | 2.07 | | |
| | | 1.83 | 2.6 | clay, stiff (16-16.3), grey & lt brown, wet; ^{clay/stiff} ^{micro nodules} ^{throughout} |
| 18 | 4 | 2.84 | 3.0 | clay, grey, orange staining (20-22), firm to |
| | | 1.60 | | stiff |
| 22 | 4 | 1.61 | 2.9 | stiff |
| 24 | 4 | 1.69 | 4.0 | clay, grey & lt brown, stiff, orange staining |
| | | 1.52 | | |
| 26 | 4 | 1.63 | 3.0 | |
| 30 | 4 | 1.60 | 1.8 | clay, grey, stiff, orange staining |
| | | 1.49 | | |
| | | 1.74 | 1.9 | brn nodules (27-28) |

12-13-21

Sampling MW-10

| | Rec | EC | PSD | |
|----|-----|--------------|-----|---|
| 30 | 4 | 1.58 1.96 | 1.3 | CLAY, gray + brn/orange, stiff |
| | | 1.63 | 2.6 | |
| 34 | 4 | 1.42 1.89 | 2.5 | Silty CLAY (34-36), soft to firm, grey, lt brn, ^{orange} not |
| | | 1.97 | 2.4 | CLAY, grey + lt brn, stiff, orange mottling |
| 38 | 4 | 2.68 2.27 | 1.5 | CLAY, grey, stiff, orange staining |
| | | 2.28 | 3.7 | |
| 42 | 4 | 2.51 2.16 | 3.1 | SAA |
| | | 1.76 | 2.0 | |
| 46 | 4 | 1.54 1.31 | 1.7 | Silty CLAY, grey, orange mottling, soft to |
| | | 1.35 | 1.7 | firm; Clayey silt (48-49.2), grey, damp |
| 50 | 4 | 1.21 2.37 | 2.8 | CLAY, grey, stiff, orange staining |
| | | | | TD-52' |
| 54 | | | | |

| Samples: | Time | EC | PSD |
|----------|------|------------|-----|
| 0-2 | 1330 | SAR/ESP | |
| 4-6 | 1335 | EC SAR/ESP | |
| 8-10 | 1340 | EC SAR/ESP | |
| 10-12 | 1345 | EC | |
| 12-14 | 1350 | EC | |
| 16-18 | 1355 | EC | |

12-13-21

300 Set MW-10 well

Pull sample pipe, reenter w/ 3/4" to 52'
 Set 1" pipe well w/ prepack screen
 Screen 42-52'
 Sand 40
 Bent 37

* WAE has no more 1" screen, pull barrels
 to 40' set tomorrow
 Mob to next location

Sampling H-15E

508303
3327823

| | Rec | EC | PSD | |
|----|-----|--------------|----------------|---|
| 0 | 1.9 | 0.05 | 0.1 | Silty CLAY, brn, firm, friable (0-1.5) |
| | | 1.40 | 0.1 | (pushes) |
| 2 | 4 | 1.83 1.79 | 0.1 | CLAY, grey + lt brn, orange staining, |
| | | 2.52 | 0.1 | Firm |
| 6 | 4 | 2.09 1.69 | 0.1 | CLAY, grey, stiff, orange staining; |
| | | 1.97 | 0.1 | CLAY (5.6-10), reddish brn, stiff, br staining |
| 10 | 4 | 2.92 2.81 | 0.2 | CLAY, ^{stiff} reddish brn (10-11.5), lt brn (11.5-12.8), |
| | | 2.72 | 0.1 | grey/orange staining (12.8-14), shell hash (10.3-11) |
| 14 | 4 | 2.89 2.55 | 0.1 | CLAY (14-16.1), grey, stiff, orange staining; |
| | | 1.85 | 0.1 | Silty CLAY, grey, orange staining, soft to firm |
| 18 | 4 | 2.49 1.86 | 0.2 | Clayey silt (16.2-16.4) (16.9-17.4), grey, moist to |
| | | 1.88 | 0.1 | CLAY, grey, orange staining, stiff |
| 20 | | | | |

12-13-21

1500

A-15E

Pull pipe, grant hole
get extra 0-2 for volume, grant

Samples: 0-2 1530 } ^{Bannin} Hydro Carbons, Salts
Hold PHT ^{3PLP Ba} hold
SAR/ESP

4-6 1535 } EC SAR/ESP

8-10 1540 } Salts EC

14-16 1545 } EC

1600 Hand auger locations

A-1 R

adjacent to A-1

Hand Auger

0-2 Silty CLAY, brown, friable, no odor

EC - 2.16

PID - 0.1

1620 Splice Ba, TPH fractions, hold PHT

" SAR only

12-13-21

A-1 E

508309

3327852

Hand Auger

0-2 Silty CLAY, brown, firm, no odor

EC - 0.63

PID - 0.0

1625 TPH fractions, hold PHT, Ba
SAR only ^{3PLP Ba}

1645 Leave site

05

12-14-21

700 On site, oversight
Shawn + Chris w/EHM
Jimmy, Cecil, Wanye w/WAE

Set MW-10 well, details
on previous page

9:30

Sampling MW-8

508216
332818

| 0 | Rec | EC | PTD | |
|-----|--------------|-----|-----|---|
| 1.8 | 0.16 | 0.1 | | Silty CLAY, greyish brn, friable |
| 2 | 1.15 | 0.2 | | CLAY (0.8-1.8), greyish brn, firm, staining orange |
| 4 | 1.42 2.11 | 0.2 | | CLAY, grey & lt brn, firm, orange staining |
| 6 | 2.18 | 0.3 | | staining |
| 4 | 1.53 2.00 | 0.3 | | Silty CLAY, orange & grey (6-7), brownish red |
| 10 | 1.95 | 0.3 | | stiff, shell hash (9.6-10.2), silt lens (8.7-9.2) ^{brn} |
| 4 | 3.03 3.37 | 0.2 | | CLAY, lt brn (10-12), grey w/ orange staining (12-14) ^{brn} |
| 14 | 3.34 | 0.2 | | stiff, shell hash (10-10.2) |
| 4 | 3.16 3.04 | 0.2 | | CLAY, grey, orange staining (14-15.7), stiff |
| 18 | 3.23 | 0.2 | | Clayey SILT lens (15.2-15.3)/15.7-16.3/16.5-16.7/16.9-17.1 ^{grey & lt brn, moist band} |
| 4 | 3.12 1.92 | 0.3 | | CLAY, grey, orange mottling (19-20.5), orange staining throughout firm |
| 22 | 1.95 | 0.3 | | staining throughout firm |
| 4 | 1.84 1.96 | 0.1 | | CLAY, lt brn, firm |
| 26 | 1.98 | 0.1 | | |

12-14-21

Sampling MW-8 cont

| 26 | Rec | EC | PTD | |
|----|--------------|-----|-----|---|
| 4 | 2.40 2.28 | 0.0 | | CLAY, lt brn to grey, stiff, orange staining |
| 30 | 2.10 | 0.0 | | brn nodules @ (29, 1-24.2) |
| 4 | 2.00 2.22 | 0.1 | | Silty CLAY/CLAY, stiff, soft (30-32.4)/(31.5-32)/(32.7-34) |
| 34 | 1.55 | 0.2 | | orange staining; Clayey SILT (33.2-34), grey/lt brn, moist |
| 4 | 2.00 2.27 | 0.4 | | Silty CLAY (34-35), lt brn, firm firm, orange staining |
| 38 | 2.29 | 0.4 | | CLAY, grey, stiff, orange mottling, lt brn/grey |
| 4 | 2.01 2.18 | 0.1 | | CLAY, grey, orange staining, stiff |
| 42 | 2.20 | 0.3 | | |
| 4 | 2.51 2.29 | 0.2 | | SAA |
| 46 | 1.38 | 0.6 | | |
| 4 | 1.79 1.29 | 0.1 | | CLAY, grey, stiff, orange staining; |
| 50 | 2.20 | 0.1 | | SILT lens (47.9-48.1), lt brn/grey, wet |
| 4 | | | | Held in Core for Geotech analysis |
| 54 | 2.12 1.87 | 0.1 | | CLAY, grey, stiff, orange staining |

Samples; 0-2 1125 SARIERS
4-6 1130 EC SARIERS
8-10 1135 EC
14-16 1140 EC
20-22 1145 EC

12-14-20

Set MW-8 well

Pull sample pipe, reenter, w/3/4" to 50', Set 1" PVC well w/prepack Screen 45-50
Sand 43
Bent 40

1230 lunch

1330 Hand Auger locations

*Ba + SPLP Ba on samples

1400 H-19 NE ⁵⁰⁸²⁸⁰
₃₃₂₇₈₈₅

0-2' Silty CLAY, dk grey/brn, friable/firm

EC - 2.64

PID - 0.0

1400 Sample time

Ba, hold SPLP Ba

*WAE doing well completions

12-14-20

H-19

508251

3327873

0-2' Silty CLAY, dk grey/brn, firm, roots

EC - 0.91

PID - 0.0

1405 Sample time

SPLP Ba, hold Ba

H-19 SW

508245

3327850

0-2' Silty CLAY, dk grey/brn, firm

EC - 1.22

PID - 0.0

1410 Sample time

Ba, hold SPLP Ba

H-18 SW

508191

3327864

0-2' Silty CLAY, dk grey/brn, firm/friable

EC - 1.11

PID - 0.0

1415 Sample time Ba, hold SPLP Ba

12-14-21

1500 Water Sampling

1507

MW-11

DTW - 6.85' bloc
TD - 36.70' bloc
stick - 3.28'

1" well

(gsal)

| Time | Temp (c) | DO (mg/l) | Cond (ms) | pH | ORP | Turb | Vol |
|------|----------|-----------|-----------|------|-------|------|-----|
| 1508 | 23.6 | 1.12 | 4.61 | 6.71 | 55.3 | 880 | 0 |
| 1514 | 22.8 | 1.05 | 4.65 | 6.75 | -98.3 | 127 | 1.5 |
| 1518 | 22.7 | 1.19 | 4.66 | 6.75 | -99.0 | 53 | 1 |
| 1526 | 23.2 | 1.16 | 4.67 | 6.79 | -96.3 | 83 | 1.5 |

1527 Dry, pump off

1542 Pump on

| | | | | | | | |
|------|------|------|------|------|--------|----|------|
| 1550 | 23.0 | 0.6 | 4.76 | 6.72 | -176.9 | 81 | 1.75 |
| 1557 | 23.0 | 0.65 | 4.78 | 6.73 | -152.5 | 61 | 2 |

1600 Dry, pump off

| | | | | | | | |
|------|----------|------|------|------|--------|----|------|
| 1620 | pump on | | 4.79 | 6.73 | -151.7 | 62 | 2.25 |
| 1623 | 22.4 | 0.82 | 4.82 | 6.72 | -179.7 | 23 | 2.5 |
| 1630 | 22.4 | 0.48 | 4.83 | 6.73 | -152.6 | 23 | 2.75 |
| 1638 | 22.3 | 0.41 | 4.82 | 6.79 | -123.4 | 33 | 3 |
| 1649 | 22.2 | 1.24 | | | | | |
| 1650 | pump off | | | | | | |

1700 off site

CJ

12-15-21

700 On site, oversight

Shawn

Mayeau Surveying on site

WTE - completions

MW-11

800 Sample

Turb before sampling metals: 13

850 Pump off, dry - heads left

Move to next well

920

MW-7

DTW - 6.99' bloc
TD - 46.58' bloc
stick - 3.50'

1" well (gsal)

| Time | Temp | DO | Cond (ms) | pH | ORP | Turb | Vol |
|------|------|------|-----------|------|-------|------|------|
| 919 | 21.2 | 1.61 | 6.29 | 6.81 | 157.7 | 27.2 | 0 |
| 925 | 21.2 | 0.61 | 6.22 | 6.77 | 143.2 | 8.13 | 0.5 |
| 930 | 21.3 | 0.59 | 6.12 | 6.76 | 133.3 | 8.65 | 1.0 |
| 934 | 21.3 | 0.63 | 6.19 | 6.75 | 127.1 | 5.0 | 1.25 |
| 938 | 21.5 | 0.67 | 6.21 | 6.78 | 123.9 | 3.33 | 1.4 |

Dry, pump off

Move to next well while recharging

| | | | | | | | |
|------|------|------|------|------|------|------|-----|
| 1139 | 22.9 | 3.01 | 6.00 | 6.70 | 47.5 | 220 | 1.5 |
| 1148 | 23.0 | 1.96 | 6.58 | 6.76 | 64.9 | 28.1 | 2.0 |
| 1153 | 23.3 | 2.39 | 7.10 | 6.81 | 76.9 | 10.9 | 2.5 |

Dry, pump off

12-15-21

1253

MW-1

DTW - 6.09' btoe
TD - 62.06' btoe
stick - 3.25

3/4" well

| Time | Temp | DO | Cond | pH | ORP | Turb | Gal |
|------|-------------|------|------|------|--------|------|-----|
| 1253 | 21.3 | 1.57 | 1.79 | 7.07 | -120 | 113 | 0 |
| 1258 | 21.2 | 0.29 | 1.76 | 7.14 | -123.6 | 0R | 0.5 |
| 1304 | 21.2 | 0.46 | 1.71 | 7.08 | -141.9 | 146 | 1 |
| 1310 | 21.4 | 0.38 | 1.69 | 7.10 | -145.9 | 65 | 1.5 |
| 1315 | 21.5 | 0.36 | 1.69 | 7.08 | -147.8 | 33 | 2 |
| 1321 | 21.3 | 0.34 | 1.69 | 7.08 | -147.7 | 25 | 2.5 |
| 1327 | 21.2 | 0.31 | 1.68 | 7.09 | -147.3 | 224 | 3 |
| 1332 | 21.2 | 0.29 | 1.68 | 7.06 | -147.4 | 14.4 | 3.5 |
| 1337 | 21.3 | 0.27 | 1.68 | 7.07 | -147.4 | 35.6 | 4 |
| 1342 | 21.4 | 0.25 | 1.68 | 7.11 | -146.2 | 29.5 | 4.5 |
| 1345 | Sample Time | | | | | | |

MW-7 cont

| Time | Temp | DO | Cond (ms) | pH | ORP | Turb | gal |
|------|------|------|-----------|------|-------|------|------|
| 1436 | 22.2 | 4.22 | 7.48 | 6.76 | 105.3 | 432 | 2.5 |
| 1441 | 22.1 | 4.08 | 7.98 | 6.77 | 98.9 | 7.76 | 3.0 |
| 1445 | 22.7 | 3.25 | 8.23 | 6.70 | 97.8 | 7.02 | 3.25 |

Dry.

12-15-21

1548

MW-8

DTW - 6.76' btoe
TD - 53.75' btoe
stick - 3.40

1" well

| Time | Temp | DO | Cond (ms) | pH | ORP | Turb | Gal |
|------|-------------------------------|------|-----------|------|--------|------|------------------|
| 1548 | 21.2 22.4 | 2.03 | 2.57 | 6.85 | -197.6 | 261 | 0 |
| 1554 | 21.6 | 0.46 | 2.35 | 6.93 | -426 | 342 | 0.5 |
| 1559 | 21.5 | 0.35 | 2.14 | 6.90 | -342.7 | 86 | 1.0 |
| 1605 | 21.5 | 0.32 | 2.14 | 6.90 | -372.1 | 416 | 1.5 |
| 1610 | 21.6 | 0.32 | 2.10 | 6.90 | -361.2 | 29 | 2 |
| 1615 | 21.6 | 0.32 | 2.09 | 6.90 | -345 | 21 | 2.5 |
| 1620 | 21.5 | 0.32 | 2.04 | 6.91 | -341 | 15 | 3 |
| 1624 | 21.4 | 0.33 | 2.04 | 6.90 | -341.3 | 151 | 3.5 |
| 1629 | 21.4 | 0.34 | 2.02 | 6.91 | -338.1 | 40.5 | 4.0 4 |
| 1630 | Sample, Turb before retals. 8 | | | | | | |

1700 leave site

05

12-16-21

700 On site, oversight
 Shawn w/ ERM
 WHE finishing
 Mayean Surveying

MW-7 cont

750 Sample, Turb-6
 Filled all but rads
 Dry

MW-9

820 Sample, Turb-3, before metals
 Dry, filled hydrocarbon ~~bottles~~
 bottles & 1/4 of Iron ^{TDS} ~~ANX~~
 Chlorides

* PVC shavings in a BTEX vial,
 poured out; 3 vials in sample kit

12-16-21

MW-9 d

840 Sample, Turb-32 before metals
 Dry, filled hydrocarbons
 & ERM ~~ATK~~, TDS, Chlorides bottle

900 Icke w/ ERM on site
 Claude / Diversified on site w/ boat
 for blowout pond

* Set up to sample surface water
 in pond

Blowout Pond

15' depth at deepest

5.5 to 15' gradual slope

SW-BO-13'

Surface water sample ~~at~~ depth
 ~13'

12-16-21

SW-BO-2'

Surface water sample ~2' depth

SB-BO-13' (13' depth)

| Time | Temp | DO | Cond | pH | ORP | Turb | Gal |
|------------------|------|------|-------|------|------|------|------|
| 1124 | 18.5 | 1.33 | 0.225 | 7.18 | 57.4 | 460 | 0 |
| 1127 | 17.7 | 0.74 | 0.189 | 6.93 | 9.9 | 24.3 | 0.25 |
| 1129 | 17.4 | 0.77 | 0.188 | 6.89 | 7.4 | 17.4 | 0.5 |
| 1133 | 17.6 | 0.94 | 0.187 | 6.86 | -3.6 | 20.8 | 0.75 |
| 1135 Sample time | | | | | | | |

SB-BO-2' (2' depth)

| Time | Temp | DO | Cond | pH | ORP | Turb | Gal |
|-------------|------|------|-------|------|------|------|------|
| 1216 | 21.9 | 3.03 | 0.184 | 7.03 | 57.4 | 73.9 | 0 |
| 1219 | 21.7 | 4.13 | 0.182 | 7.07 | 81.5 | 307 | 0.25 |
| 1222 | 22.1 | 4.47 | 0.182 | 7.08 | 90.1 | 251 | 0.5 |
| 1225 | 22.3 | 4.39 | 0.182 | 7.10 | 92.9 | 1.99 | 0.75 |
| 1230 Sample | | | | | | | |

12-16-21

1400 Back to MW-7, 9 & 9d
to continue sampling

1532

MW-6STW-7.15' biroc
TD-43.04' biroc
thick-3.00

1" well

| Time | Temp | DO | Cond | pH | ORP | Turb | Gal |
|---------------|------|------|------|------|--------|------|-----|
| 1533 | 21.9 | 1.27 | 4.85 | 6.34 | 156.5 | 149 | 0 |
| 1537 | 21.7 | 0.40 | 6.86 | 6.36 | 88.4 | 420 | 0.5 |
| 1542 | 21.8 | 0.51 | 8.36 | 6.35 | 588 | 258 | 1 |
| 1548 | 21.6 | 0.73 | 8.16 | 6.38 | 25.5 | 512 | 1.5 |
| 1554 | 21.6 | 0.55 | 8.25 | 6.35 | 26.5 | 859 | 2 |
| 1559 | 21.6 | 0.21 | 8.20 | 6.33 | -67.1 | OR | 25 |
| 1605 | 21.7 | 0.32 | 7.73 | 6.35 | -79.0 | OR | 3 |
| 1611 | 21.7 | 0.30 | 7.53 | 6.37 | -84.2 | OR | 3.5 |
| 1616 | 21.7 | 0.30 | 7.36 | 6.37 | -93.8 | 1000 | 4 |
| 1622 | 21.6 | 0.39 | 7.05 | 6.38 | -90.4 | 381 | 4.5 |
| 1627 | 21.5 | 0.39 | 6.99 | 6.38 | -90.5 | 682 | 5 |
| 1632 | 21.5 | 0.32 | 6.88 | 6.38 | -91.8 | 576 | 5.5 |
| 1638 | 21.4 | 0.25 | 6.69 | 6.37 | -97.5 | 873 | 6 |
| 1642 | 21.4 | 0.26 | 6.58 | 6.38 | -99.0 | 288 | 6.5 |
| 1647 | 21.4 | 0.23 | 6.51 | 6.37 | -100.4 | 181 | 7 |
| 1648 Pump off | | | | | | | |

1700 leave site

OS

12-17-21

700 On site, oversight
shown w/EFM

Back to MW-7, 9, 9d, 6
to continue sampling

MW-9 : ~~too~~ I won cut rods,
insufficient volume

Finish Sampling 7~~9~~ 9d

MW-6

Sample Time

| Time | Temp | DO | Cond(mS) | pH | ORP | Turb | Gal |
|------|---|------|----------|------|--------|------|-----|
| 800 | 20.5 | 0.99 | 6.39 | 6.40 | 138.4 | 562 | 7 |
| 804 | 20.9 | 0.72 | 6.39 | 6.34 | 97.2 | 39.5 | 7.5 |
| 808 | 20.9 | 0.54 | 7.26 | 6.31 | -91.9 | 15.9 | 8 |
| 813 | 20.9 | 0.44 | 6.76 | 6.32 | -115.8 | 4.8 | 8.5 |
| 818 | 21.0 | 0.38 | 6.55 | 6.33 | -113.6 | 3.3 | 9 |
| 823 | 21.0 | 0.41 | 6.46 | 6.34 | -110.5 | 4.31 | 9.5 |
| 827 | 21.0 | 0.26 | 6.49 | 6.32 | -113.9 | 85.3 | 10 |
| 830 | Sample, Filter, Metals - Turb after Filter: 4 Dissolved | | | | | | |

12-17-21

930

MW-10

DTW - 8.21' bto c
TD - 216.4 bto c
stick - 3.30

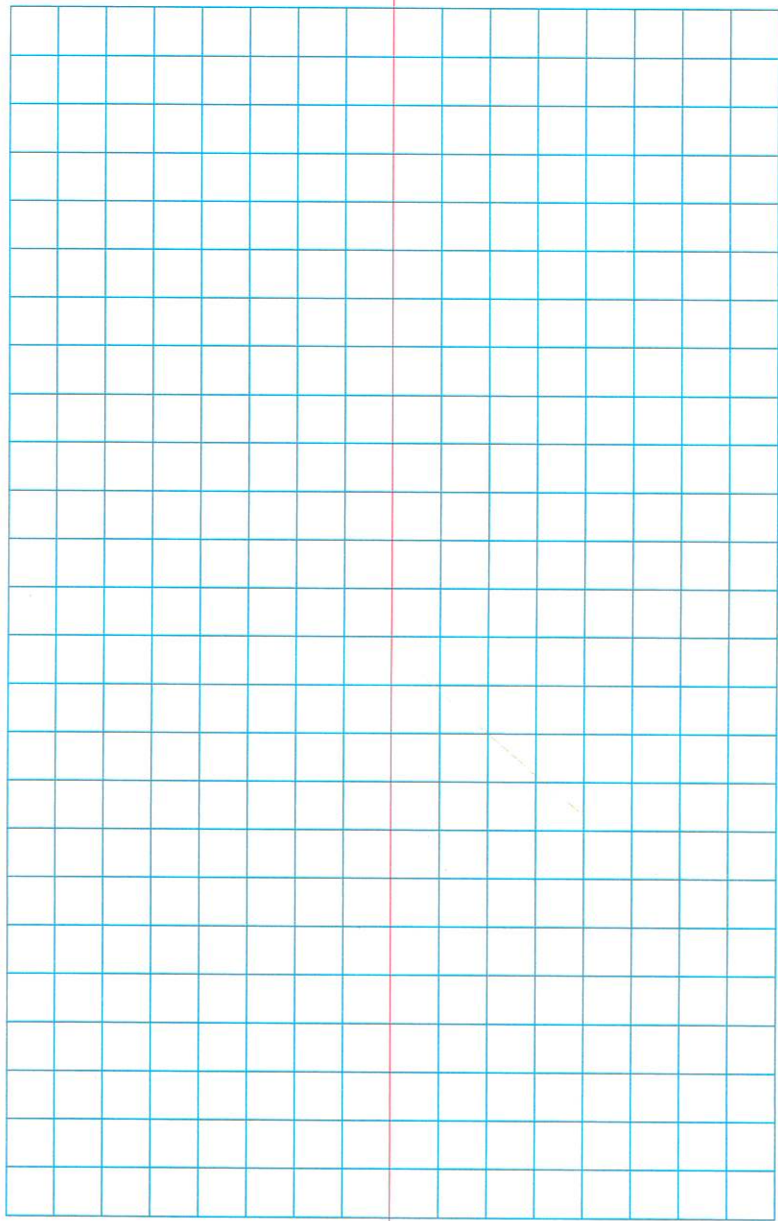
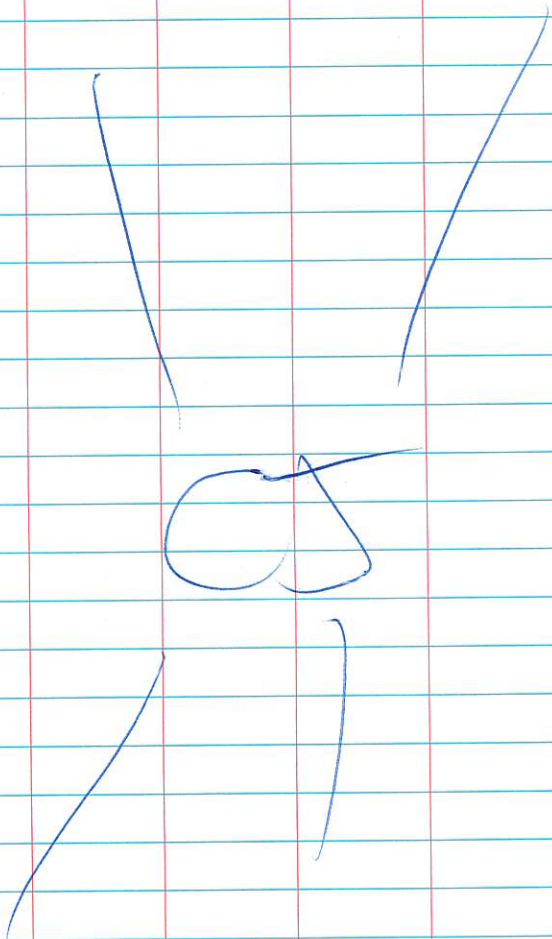
1" well

| Time | Temp | DO | Cond(mS) | pH | ORP | Turb | Gal |
|------|------|------|----------|------|--------|------|-----|
| 930 | 21.0 | 1.7 | 1.60 | 7.59 | 32.6 | OK | 0 |
| 936 | 20.9 | 0.58 | 1.53 | 7.51 | -222.6 | OK | .5 |
| 942 | 21.0 | 0.39 | 1.59 | 7.40 | -211.4 | OK | 1 |
| 950 | 21.2 | 0.28 | 2.13 | 6.99 | -243.7 | OK | 1.5 |
| 955 | 21.2 | 0.26 | 2.19 | 6.97 | -239 | OK | 2 |
| 1000 | 21.3 | 0.24 | 2.27 | 6.93 | -230.2 | OK | 2.5 |
| 1006 | 21.2 | 0.22 | 2.30 | 6.92 | -228.9 | OK | 3 |
| 1011 | 21.2 | 0.21 | 2.30 | 6.92 | -229.3 | OK | 3.5 |
| 1016 | 21.3 | 0.20 | 2.36 | 6.91 | -226.6 | OK | 4 |
| 1022 | 21.3 | 0.22 | 2.37 | 6.90 | -223.8 | OK | 4.5 |
| 1028 | 21.3 | 0.19 | 2.41 | 6.89 | -216.8 | OK | 5 |
| 1034 | 21.3 | 0.18 | 2.43 | 6.88 | -209.4 | OK | 5.5 |
| 1039 | 21.3 | 0.17 | 2.43 | 6.88 | -203.7 | OK | 6 |
| 1045 | 21.3 | 0.16 | 2.44 | 6.89 | -198.2 | OK | 6.5 |
| 1051 | 21.3 | 0.15 | 2.44 | 6.89 | -192 | OK | 7 |
| 1058 | 21.3 | 0.15 | 2.43 | 6.89 | -185 | OK | 7.5 |
| 1103 | 21.2 | 0.15 | 2.42 | 6.88 | -181.3 | OK | 8 |
| 1109 | 21.2 | 0.17 | 2.40 | 6.89 | -177 | OK | 8.5 |
| 1114 | 21.3 | 0.16 | 2.44 | 6.88 | -173.1 | OK | 9 |
| 1120 | 21.3 | 0.15 | 2.44 | 6.88 | -173 | OK | 9.5 |
| 1125 | 21.3 | 0.14 | 2.44 | 6.87 | -175.1 | OK | 10 |

pump off, return monitor to continue

12-17-21

1700 Level site



KB

+3" Rain overcast

12.20.21

0915 On sight as oversight

ERM: Shawn Higgins
Marcus Smith

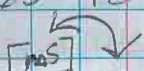
0930 ERM safety meeting

1010 Pump on

MW-10

DTW: 5.63' TD: 50.92' Su: 3.30' (1")

AVC



| time | temp | DO | cond | pH | ORP | TDS | turb | su |
|------|------|------|------|------|-----|-----|------|----|
| 1010 | 14.7 | 2.26 | 6.76 | 2.30 | 224 | 305 | 40 | |
| 1014 | 17.8 | 1.11 | 6.86 | 2.43 | 164 | 434 | 10.5 | |
| 1019 | 18.0 | 0.40 | 6.95 | 2.44 | 131 | OR | 11 | |
| 1025 | 18.3 | 0.44 | 6.80 | 2.45 | 110 | OR | 11.5 | |
| 1031 | 18.2 | 0.37 | 6.87 | 2.45 | 94 | OR | 12 | |
| 1036 | 18.0 | 0.33 | 6.85 | 2.45 | 83 | OR | 12.5 | |
| 1042 | 17.8 | 0.30 | 6.85 | 2.45 | 69 | OR | 13 | |

1045 sample time

-RADs, dissolved metals

1130 pump off

1200 LUNCH

1240 Arrived @ MW-5 to purge & sample

1245 Pump on @ MW-5

KB

12.20.21

MW-5

DTW: 6.99' TD: 37.90' su: 3.0 (3/1")
PVC

| time | temp | DO | cond | pH | ORP | turb | vol |
|------|------|------|------|------|-----|------|---------|
| 1244 | 18.4 | 1.10 | 4.25 | 6.95 | 139 | OR | initial |
| 1248 | 19.2 | 1.47 | 4.33 | 6.69 | 126 | OR | 0.5 |
| 1254 | 19.2 | 0.56 | 4.42 | 6.66 | 126 | 154 | 1 |
| 1259 | 19.2 | 0.47 | 4.42 | 6.61 | 120 | 118 | 1.5 |
| 1305 | 19.4 | 0.40 | 4.42 | 6.60 | 113 | 173 | 2 |
| 1310 | 19.3 | 0.34 | 4.41 | 6.64 | 107 | 112 | 2.5 |
| 1315 | 19.3 | 0.32 | 4.41 | 6.65 | 101 | 98 | 3 |
| 1319 | 19.2 | 0.31 | 4.40 | 6.61 | 96 | 83 | 3.5 |
| 1325 | 19.2 | 0.28 | 4.40 | 6.65 | 89 | 83 | 4 |
| 1330 | 19.1 | 0.26 | 4.40 | 6.68 | 84 | 50 | 4.5 |

1330 Sample time
- RAOs ^{total} ~~dissolved~~ metals

* turb was 16.7 NTU @ sample

1414 pump off time

1425 pump on @ MW-4

12.20.21

MW-4

DTW: 6.79' TD: 54.34' su: 3' (1")
PVC

| time | temp | DO | cond | pH | ORP | turb | vol |
|------|------|------|------|------|------|------|---------|
| 1428 | 17.2 | 0.86 | 3.41 | 6.88 | -68 | 356 | initial |
| 1432 | 19.2 | 0.32 | 4.39 | 6.68 | -147 | OR | 0.5 |
| 1437 | 19.4 | 0.87 | 4.22 | 6.65 | -144 | 304 | 1 |
| 1442 | 19.3 | 0.55 | 4.20 | 6.66 | -145 | 138 | 1.5 |
| 1447 | 19.5 | 0.40 | 4.17 | 6.64 | -142 | 59 | 2.0 |
| 1452 | 19.5 | 0.32 | 4.16 | 6.65 | -140 | 41 | 2.5 |
| 1457 | 19.5 | 0.30 | 4.16 | 6.67 | -139 | 21 | 3.0 |
| 1501 | 19.4 | 0.28 | 4.16 | 6.62 | -136 | 17 | 3.5 |

3
(K)

1505 Sample time
- RAOs, total metals

1540 Pump off

1550 Pump on @ MW-3

KB

12.20.21

Mw-3

DTW: 6.10' TD: 42.95' SW: 3' (1" PVC)

| time | temp [ms] | cond | pH | DO | ORP | turb | vol |
|------|-----------|------|------|------|------|------|---------|
| 1548 | 18.6 | 2.44 | 6.80 | 1.57 | -120 | 17 | Initial |
| 1553 | 19.2 | 2.44 | 6.62 | 0.53 | -125 | 6 | 0.5 |
| 1558 | 19.5 | 2.42 | 6.63 | 0.39 | -105 | 30 | 1 |
| 1604 | 19.2 | 2.41 | 6.56 | 0.32 | -99 | 4 | 1.5 |
| 1609 | 19.3 | 2.41 | 6.60 | 0.30 | -96 | 8 | 2 |
| 1613 | 19.4 | 2.41 | 6.59 | 0.26 | -95 | 29 | 2.5 |
| 1619 | 19.3 | 2.41 | 6.58 | 0.24 | -95 | 23 | 3 |
| 1623 | 19.4 | 2.41 | 6.58 | 0.23 | -95 | 27 | 3.5 |
| 1628 | 19.2 | 2.41 | 6.55 | 0.21 | -95 | 14 | 4 |

1630 Sample time

1700 pump off - RADS, total metals

1730 Leaving site

KB

KB

42°F, Mostly Cloudy

12.21.21

0730 On site as oversight

0750 Arrived @ Mw-2 to purge & Sample

0800 Pump on

Mw-2

DTW: 5.64' TD: 60.46' SW: 3' (1" PVC)

| time | temp | DO | cond | pH | ORP | turb | vol |
|------|------|------|------|----------------------|------|------|---------|
| 0802 | 18.8 | 1.70 | 1.58 | 7.32 | -164 | 197 | Initial |
| 0806 | 19.3 | 0.69 | 1.60 | 7.25 | -198 | 109 | 0.5 |
| 0810 | 19.5 | 0.39 | 1.59 | 7.24 | -201 | 147 | 1 |
| 0816 | 19.6 | 0.27 | 1.58 | 7.16 | -203 | 802 | 1.5 |
| 0820 | 19.8 | 0.23 | 1.54 | 7.13 | -195 | OR | 2 |
| 0825 | 19.7 | 0.21 | 1.53 | 7.10 | -191 | OR | 2.5 |
| 0829 | 19.8 | 0.19 | 1.53 | 6.98 | -190 | OR | 3 |
| 0833 | 19.9 | 0.17 | 1.52 | 6.99 | -189 | OR | 3.5 |
| 0838 | 19.9 | 0.17 | 1.52 | 7.08 7.08 | -188 | OR | 4 |
| 0842 | 19.9 | 0.16 | 1.52 | 7.02 | -189 | OR | 4.5 |
| 0847 | 19.8 | 0.16 | 1.52 | 7.07 7.07 | -190 | OR | 5 |
| 0852 | 20.0 | 0.15 | 1.52 | 4.99 | -189 | OR | 5.5 |
| 0858 | 20.1 | 0.14 | 1.52 | 6.95 | -191 | OR | 6 |
| 0903 | 19.6 | 0.18 | 1.52 | 6.95 | -167 | OR | 6.5 |
| 0908 | 19.7 | 0.17 | 1.52 | 6.93 | -174 | OR | 7 |
| 0913 | 19.7 | 0.15 | 1.51 | 6.92 | -180 | 704 | 7.5 |
| 0918 | 19.5 | 0.14 | 1.51 | 6.89 | -182 | 767 | 8 |

KB

12.21.21

MW-2 cont

| time | temp | DO | cond | pH | ORP | turb | vol |
|------|----------------------|-----------------|------|------|------|------|------|
| 0922 | 19.8 | 0.16 | 1.51 | 6.94 | -184 | 815 | 8.5 |
| 0928 | 19.7 | 0.17 | 1.51 | 6.92 | -85 | 866 | 9 |
| 0933 | 19.8 19.7 | 0.16 | 1.51 | 6.94 | -186 | 643 | 9.5 |
| 0938 | 19.8 19.8 | 0.15 | 1.51 | 6.90 | -186 | 535 | 10 |
| 0943 | 20.0 | 0.15 | 1.50 | 6.92 | -187 | 254 | 10.5 |
| 0947 | 20.1 | 0.14 | 1.50 | 6.93 | -188 | 248 | 11 |
| 0952 | 20.1 | 0.13 | 1.51 | 6.92 | -188 | 216 | 11.5 |

0955 Sample time

- RADs, dissolved metals

1031 Pump off

12.21.21

1042 Circling around to all wells & opening to allow equilibration & grab head readings

Well ID DTW

H-3 4.51

H-24 5.20

H-33 3.85

H-32A 3.36

H-32B 3.33

H-25 4.34

H-26 5.08

H-27 6.25

H-20 4.10

MW-6 3.98

H-16 5.40

MW-7 4.79

MW-9D 4.93

MW-9 4.71

MW-10 5.31

MW-8 4.59

H-1 3.42

MW-11 5.25

H-18 3.35

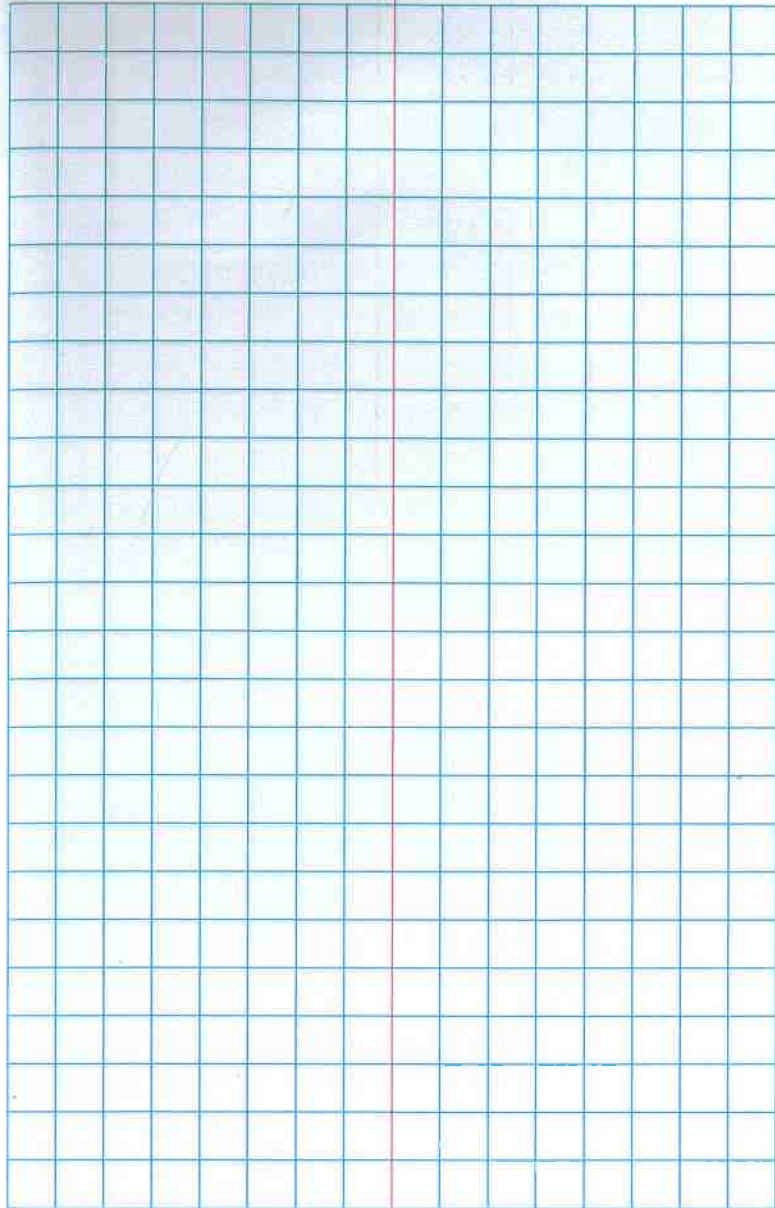
KB

12.21.21

| <u>Well ID</u> | <u>DTW</u> |
|----------------|------------|
| H-22 | 5.05 |
| H-2 | 5.81 |
| H-10 | 9.93 |
| H-23 | 6.33 |
| MW-5 | 6.73 |
| MW4 | 6.64 |
| H-12 | 5.37 |
| MW-3 | 6.01 |
| MW-2 | 5.65 |
| H-9 | 4.76 |
| MW-1 | 5.68 |

1445 Leaving site

KB



KB

12.21.21

| Well ID | DTW |
|---------|------|
| H-22 | 5.05 |
| H-2 | 5.81 |
| H-10 | 9.93 |
| H-23 | 6.33 |
| MW-5 | 6.73 |
| MW4 | 6.64 |
| H-12 | 6.37 |
| MW-3 | 6.01 |
| MW-2 | 5.65 |
| H-9 | 4.76 |
| MW-1 | 5.68 |

1445 Leaving site

KB

1-11-22

Icon : AC

Jerry Fontnoet (HA) crews

Home: 0800

Site: 0945

JF onsite marking locations
Area near H-5 (Icon)

JF work scope to HA-0-2' @ H-5
will collect 0-1, 1-2 also and hold
until lab data back on 0-2'

JF running Total Ba, SPLP Ba, ^{ME} Fraction
FOC - Fractions of organic carbon, %
moisture, PH

Jodi Shurgart onsite looking for ERM
crew.

JJ heading to find ERM crew

HH-5B (HA) next to drainage ditch near
Icon H-5

atm 509138, 3327865

TD@2' w/HA

→ cont

1-11-22

HH-SB

0-0.5' Clayey SICT w/ om dark gray
brn. soft moist;

0.5-1' Silty CHAT soft gray damp

1-2' Silty CHAT gray sl. form damp

no backfill / no grout

SF- 0-1, 1-2 6x1, 6x1 1110, 1125

HH-SB

0-2' split Icon / SF

Icon PK1, 6x1

Icon: Ba, % moisture only

SI: 1140

check in w/ ERM crew and b/m of Icon

Leaving site: 1:30

~~APC~~

Cloudy 85^{of}
Rain

DP

July 5, 2022

730 Mob to site.

DP oversight. Spotty Rain storms
Shawn Jiggins w/ ERM
Mike Purdom w/ ERM

Andrew Buckley w/ IMS
consulting taking drone photos

Annie Lemelin w/ Kean M. Her
on site

~~1540~~

1540 Leaving site.

SJS

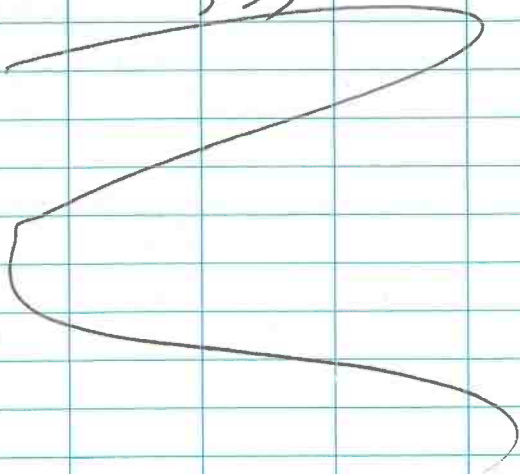
7-14-17

1000 - Load equipment + Geoprobe

1100 - CM bringing Geoprobe to shop,
SS + RM doing well completions1205 - Waiting for KC to finish water
sampling to complete last well

1400 - Leave site

SJS



1.10.22

1130 - On site

- Oversight on FEM (Shawn Wiggins)
- Hand auguring

UTM 0509828

H-4E2 NAD83: 3328167

| | |
|------|---|
| 0.47 | Silty CLAY, brown/gray w/ orange, soft to stiff, damp @ top |
|------|---|

| Time | Sample |
|------|--------|
| 1415 | 0-2 |

Ba % moisture

- Decen

UTM : 0509754

H-4NE NAD83: 3328243

| | |
|------|---|
| 0.70 | CLAY, brown w/ orange, stiff, root hits |
|------|---|

| Time | Sample |
|------|--------|
| 1450 | 0-2 |

%, Ba

- Decen

48 GAM
ERM, SW

1.10.22

UTM: 0509672

H-4W2 NAD83: 3328170

0.99 CLAY, brown w/ orange, stiff

| Time | Sample | % Ba |
|------|--------|------|
| 1520 | 0-2 | |

1547 - @ MW-9 + 9D

| Well | DTW |
|-------|-------|
| MW-9 | 5.77' |
| MW-9D | 5.69' |

- inserting transducer in MW-9' to ~ 20' bgs
- Same for 9D

1620 - SW marking HA location

- Leaving Site

GAM

49

1.11.22

0740 - on site

- surveys on site

0830 @ MW-9 + 9D for slug testing

- using 3/8" 5' slug; top of slug will be @ 10' bgs (10-15')
- using in-situ level troll

0836 - Slug in MW-9

0841 - starting log on MW-9D

- same type of slug
- slug will be placed in same spot @ 10-15' bgs

0846 - Slug in MW-9D

- slow recharge; will go HA then return to MW-9 + 9D

UTM: 0508095

H-8N2 NAD83: 3328201

1.23 CLAY, brown, stiff

| Time | Sample | E.C., % Ba |
|------|--------|------------|
| 1005 | 0-2 | |

- Decem

1.11.22

UTM: 0508095

H-832 NAD83: 3328115

0 2.21 CLAY, brown w/ orange, stiff

2
Time Sample
1010 0-2 E.C., % Ba

- Decen

UTM 0508097

H-2252 NAD83: 3328047

0 0.83 CLAY, brown, stiff

2
Time Sample
1015 0-2 E.C., % Ba

- Decen

UTM: 0508593

H-24NW NAD83: 3327880

0 0.82 CLAY, gray, stiff

2
Time Sample
11 0-2

UTM: 0508650

H-24NE NAD83: 3327879

0 0.80 Silty CLAY w/ sand, gray/orange, med soft

2
Time Sample
1125 0-2

UTM 0508691

H-28SE NAD83: 3327796

0 0.82 Silty CLAY, gray, soft, damp

2
Time Sample
1220 0-2

- Decen

UTM: 0508589

H-24SW NAD83: 3327803

0 1.13 CLAY, gray/green, stiff

2
Time Sample
1225 0-2

1.11.22

- 1300 - @ MW-9D
 1305 - pull slug out
 1306 - slug out on MW-9
 1311 - @ MW-10
 - DTW: 6.12'
 1316 - Inserting transducer to $\approx 20'$
 - using $\frac{1}{8}''$ slug.
 1320 - start log
 1351 - slug in
 1420 - pull slug
 1500 - stop log
 1505 - @ MW-8
 ↳ DTW: 5.89'
 1516 - transducer in; start log
 1541 - slug in
 1618 - slug out
 1631 - stop log; 1645: stop @ 9D, 1700: MW 9 stop log
 1705: MW-7 DTW 6.16 trans @ 21'
~~1710 - Leaving Site~~
 1715 - MW-11 DTW: 6.12', trans @ 20'
 1720 - Leaving Site
 GAM

1.12.22

- 0730 - on site.
 @ MW-11
 ↳ DTW: 6.12
 0747: start log
 0756 - $\frac{3}{8}''$ pie slug in
 (Data from yesterday no good; CT
 in Houston getting another transducer)
 0810 - start logging @ MW-7
 0814 - $\frac{3}{8}''$ slug in
 0820 - re-do of MW-9D
 0824 - start log
 0840 - slug in $\frac{3}{8}''$
 0900 - pull slug
 0920 - stop log
 1000 - attorneys on site for site visit
 1110 - CT on site
 1120 - @ MW-8
 ↳ DTW: 5.91'
 1125 - Transducer in, start log
 1134 - slug in
 1140 - slug out
 1146 - slug IN
 1151 - slug out
 1156 - slug IN

11.22

- 1201 - Slug out
 1208 - Stop log
 1216 - MW-10
 ↳ DTW: 6.12'
 1221 - Transducer in
 1245 - slug in
 1249 - Slug out
 1306 - Slug in
 1322 - Slug out
 1338 - stop log
 1401 - Pull Slug out of MW-7
 - MW-6
 ↳ 6.52'
 1410 - transducer @ 20'
 start log
 1433 - Slug in
 1455 - Slug out
 1515 - Slug in
 1542 - out
 1601 - stop log
 1617 - stop log @ MW-11
 1633 - stop log @ MW-7
 1645 - MW-9
 ↳ DTW: 5.85'
 1649 - transducer in

1655 Leaving Site

1.13.22

- 0730 - On site
 0815 - MW-9
 0819 - start log
 0820 - slug IN
 0830 - MW-5
 DTW: 6.89'
 0832 - Transducer in, 20'
 0835 - start log
 0916 - MW-4
 DTW: 6.76'
 0919 - Transducer @ 20'
 0922 - start log (1/2" stainless steel slug)
 0926 - ^{slug} IN
 0930 - ^{slug} out
 0937 - ^{slug} IN
 0942 - ^{slug} out
 0948 - ^{slug} IN
 0954 - ^{slug} out
 0958 - stop log
 1006 - @ MW-5
 1010 - Slug IN
 1015 - MW-1
 DTW: 5.63'
 1016 - Transducer IN

Rite in the Rain

GAM,
ERM: SW

1.13.22

1020 - start log
 1031 - slug IN
 1042 - slug out
 1050 - slug IN
 1058 - out
 1107 - IN
 1115 - out
 1125 - stop log
 1213 - mw-3
 DTW: 5.90
 1215 - T @ 20'
 1221 - start log (1/2 slug)
 1225 - IN
 1234 - out
 1241 - IN
 1248 - out
 1255 - IN
 1308 - out
 1317 - stop log
 1301 - mw-5
 1308 - pull slug out
 1332 - mw-9
 1334 - slug out

1.13.22

1345 @ MW-2
 ↳ DTW: 5.50'
 1348 - Transducer @ 20'
 1351 - start log
 1403 - slug IN (1/2")
 1415 - slug out
 1427 - slug IN
 1439 - out
 1450 - IN
 1507 - out
 1519 stop log
 1522 @ MW-5
 1539 stop log @ MW-5
 1557 @ MW-9
 1645 stop log

1700 - Leaving Site

GAM