APPENDIX E.2

Sample Technician Field Notes

Job Code # 4423 0220.44.00.000043.0.20

1

Rod Hickmon 7/10/00 7022

7:00AM - Drive to Atlus, OK
- w/Jerry Pionessa to Missile Site. Spoke to Jerry about details
- Speak to Phil Hammons about project. review equipment

5:30PM - Off

[signature]

Paul Hickman 7/11/00

8:00AM - Inventory Equip. make list of equipment that we may need more of
- To the Hardware, collect supplies
- To Missile Site, Stake out BH 9, 8, 7, + 6, meet Baker Tank Eqp. + Port-A-Potty was delivered
- Read over Site Safety plan
- Review how to Fill out COC + Labels for various containers
- Review how to pack sample coolers for shipping
- Review EnCore Sampling techniques

6:30PM - OFF

PJH

Rod Hickman 7022 7/12/00

8:00AM - Work on paperwork - ~~[illegible]~~ Samples - Fedex - QA, QC, etc
- TO Missile Site
- Bobcat Was Delivered. Wait on Drillers to arrive & make sure They can clear the gate (overhead)

12:00PM - Horizon Drilling Arrives
- Peterson Drilling Arrives
- Horizon ~~Sets up~~ decon pad
- Peterson Prepares to Drill BH09

2:00PM - Start Drilling @ BH09
Check properties of soil 0-2ft at BH09 Soil is SM type
Surface 0-2ft fine sands
- 20' fine sands
- 30' " "
- 40' " " w/caliche
- 60 " " w/more caliche
- 80 " " w/more silts & some caliche
84' Hit bedrock
- Drilled 4' additional
- 88' Total Depth to install casing

Rod Hickman 7022 7/12/00

Cont.

- Drilled Core at 88' bedrock level to 93' - Sandstone Core
- Reviewed Core - Simply Sandstone
- Decided to install casing tomorrow
- Back to Room
- Shop for supplies

6:00 PM - OFF

[signature]

927.24

Rod Hackman 7/13/00 7022

6:30Am - TO Missile Site
7:00Am - Safety Meeting
7:20Am - Drillers Start Reaming Hole & cut & weld casing
- Spoke w/ Carol Weis She said 230ft Max. Depth on BH09
- Drillers stopped Reaming at 95' - Prepare to install Casing
12:00PM - Casing Sticks at about 50'
- Drillers will have to pull casing back out hole & reream the hole
- Drillers Looking for Safety Harness so they can climb the tower (Peterson)
- Drillers start pulling Casing back out of hole
4:30PM - Mud Hole, Start pulling Bit backout to install casing
- Install Casing. Prepare to ground. Stopped work due to lighting/weather

Rod Hickman 7/13/00 7022

Attempt to get trence in hole. No luck
7:00 PM - left site

[illegible]

Rod Hickson 7/14/00 7022

6:30AM - Go to site
- Peterson Drilling works w/ Tremie pipe to Grout hole
9:00AM - Prepare to sample soils
Start w/ SS12
- Sample Surface Soils at SS10 & SS11
- Peterson Drilling finished while demobing
11:30AM - Help Peterson Demob
- Start Sampling SP508 (QA, QC)
- Take soil Samples at SS08 & SS09
- Take Soil sample SS11 & SS12 SS13 & SS14 Soil Samples
- Packed in Ice & took to FedEx for Shipping
4:30PM - OFF Work

Rod Hickman 7/17/00 TO22

6:30AM - Sort bottles for samples to be taken today
- Get Ice at Wal-Mart
- Drive to Site
- Take Soil Samples from SS05, SS06, SS07, & SS10 & Rinsate on SS06
- Pack Soil & Rinsate in Ice for Shipping

10:15PM - Took Soil & Water samples to Fedex
- Get Sample Jars & vials to take to field

3:00PM - Start taking Gw samples at BH07

0.0' (PID) - 0-1½ ft, 15:10 PID=0
05' (PID) - 5-6 ft, 15:20 PID=0
10' - 10 ~~ft~~ 11 ft, 15:25 PID=0
- Hit Groundwater at 11' Stopped Sampling
- Continue drilling to refusal.
- Drillers Get Spoon Stuck at 55'

5:00PM - Fill out COC for AMS-BH02-S-00 05 10

Rock Hickrob- 7022 7/17/00

Cont..

6:00PM - Drillers Start pulling augers out of hole to get spoon.

7:00PM - Exit Site

[illegible]

12
11 3/4
12
12 1/4
10 1/4
58 1/4

Rod Hickson 7/18/00 7022

6:30AM - Leave Room to go to site
7:00AM - Arrive at Site
- Check water in BH07, Water standing at about 11'
- Reduce COC for BH07
- Calibrate PID Meter to 100ppm using isobutylene
- Drillers continue down BH07 (Hole caved in at 18" overnight)
- Drillers change to 2" spoon
8:45AM - Drillers break cable for spoon Repair Cable
- Start Coring at 2' intervals from 65' on
65'-67' - Sandy (core)
67-69 - Sandy from water (core)
10:00AM - Drilled on down to 69'
69-71' - Sandy (mostly water) core
71-73' - Sandy (less water) Core
Drilled to 73'
73-75' - Sand comes into hole. Drillers have trouble getting next core
73-75' Sandy (less water) Core
11:00AM - Drill to 75'

Pool Hickman 7/18/00 TO22

cont...

- Drillers Change Cable so they can use hammer or spoon

12:00PM - Start Surface Soil Sampling
- BH06
- BH08

1:00PM - Drillers Continue to clean sand out of auger at about 75'
- Drillers retrieve core sample at 75-77' - Sandy

2:30PM - Repack samples for Shipping Via FedEx

3:00PM - Drillers reach bedrock @ 85'

3:30PM - Took Samples into FedEx

5:00PM - Back at Site
- BH08 caved into 11'
- Drillers Clean up

5:40PM - Took soil samples at 85' of BH08

6:45PM - Exit Site

[illegible]

Rod Hickmon 7/19/00 TO22

6:20AM - Arrive at Site
- Drillers set up on BH09
- Flush Mud out of BH09

7:20AM - TO Best Western, Altus OK
To meet Jerry Pioneer
to take water samples
- TO AMS#11 Take water
Samples at 95' & 135' in
Silo & in Nitrogen Vault

12:00PM - Back at AMS#7

12:30PM - Horizon Drilling starts Decon
& Setting up at BH06

2:00PM - Drillers start on BH06

2:15PM - Take soil samples at
5' & 10' & 18' at BH06

3:15PM - Take Samples to Fedex
Get more water, Fuel Pickup

4:45PM - Back to AMS#7
- Drillers drill to bedrock

6:15PM - Take Soil sample at BH06 at 76'

6:45PM - Exit Site

[signature]

Rodney Hickman 7/20/00 T022

05:45Am - To Wal-Mart to get ice, Repack samples for shipping (Fedex)

~~08:00~~

07:30 - Back to Wal-Mart - Get Bags, Distilled water & Ice

08:00 - To Fedex ship samples

08:30 - Arrive at site

- Loggers arrive at site

- Drillers set BH06 Well

09:45 - Drillers Set up on BH09 - for Loggers 10:00Am - Log BH09

10:15 - Meeting with Jerry Pioneer, Phil Hammons & Alan Brantley about Peterson's Work

11:15Am - Lunch

11:45Am - Drillers continue set up on BH08

- Radied sample equipment

12:20 - Drillers pulled first Core out of BH08

12:50 * - Took Sample at 5' Soil Fissed in Sodium Bisulfate

* PID Meter >2000 ppm

Rodney Hickmon 7/20/00 7022

Cont

1300 - Took soil sample at 10'
Soil Fissed Slightly in Sodium
Bisulfate
* PID Meter >2000
- Took soil sample at 15'
PID meter 50ppm
13:25 - Took soil sample at 15'
PID meter ~~50~~ 0ppm
13:40 - Took soil sample at 18'
QA, & QC Samples also
- Drillers continue to core
down hole
14:00 - Prepare for Next Sample above
Bedrock (Rinsate, Sample.)
- Temperature is 111°F
- Drillers continue downward
~~1750~~ 1650 - Take Last sample above
bedrock at BH08. Not
Full recovery, only about 3"
Filled VOA, TPH, Metals only
17:30 - Drillers Clean up
18:30 - Exit Site

[signature]

Rodney Hickman 7/21/00 7022

5:45 - TO Wal-Mart. Get Ice & Freezer Bags for sampling
- Pack Samples in Ice (3 coolers)

8:00 - TO Fedex. Send samples
- TO Wal-Mart Get 2 more bags of ice
- TO Site

8:45 - Drillers Down to 25' at ~~BH08~~ MW08
- Start setting well at MW08

9:45 - Well complete
Start setting pool

11:30 - Grout ~~BH07~~ & MW07.

12:00 - Finish setting pool at MW08
- Start setting pool at MW07

2:00PM - Finish setting pool at MW07
- Start setting pool at MW06

4:00PM - Finish MW06
- Drilled Pump water out of trailer into tank

4:30PM - Exit Site

RH

58½ hours

Rod Hickman 7/24/00 7022

8:00AM - TO Wal-Mart. Gather Supplies for the day.
- TO Site (AMS#7)
- Prepare to test MW's for water Level & Bottom,
- MW06 = 24.22 to water from top of MW06 Case. Bottom of well 33.25'
2.1' Stickup on casing
22.12 to water from bgs
MW07 - 14.38 to water from top of MW07
26.24 to bottom of well
2.5 stickup of casing
11.88 bgs to water
- MW08 - 23.28 to water from [illegible]
28.00 TO bgs water
2.76 Stickup of Casing
20.52 to water bgs
10:00 Finish with water levels
Start Water Quality testing at MW07. PH was 6.61 (OK)
11:00 Safety Meeting
- Horizon Arrives on Site
Prepares to develop wells
12:00 - Horizon surges MW06
- Pumps well

Red Hickman 7/24/00 Todd

CONT..

- Filled out Monitoring well development log on well
12:45 - Start Surging MW07
- Start Pumping MW07 & Filling out MW Development Sheet
- Pumped well dry
13:20 - Start on MW08 while MW07 recharges - Surging
13:40 - Start filling out well Development log on MW08.
Pump well dry. Needs to recharge
14:00 - Finish MW08
- Back to MW07 to bail
14:10 - Start Bailing MW07
14:30 - Finish bailing MW07
15:30 - Arrive back at Holiday Inn

Rod Hickman 7/28/00 7022

7:30 - To Wal-Mart, Gather supplies
9:30 - Leave for Site
10:00 - Arrive at Site
- Pump 10 gallons from MW07
- Patterson Drilling & Sub. - FCI
Prepare to pressure grout BH09
- FCI Grouts BH09 (Grout comes out at surface)
12:00 - FCI & Patterson's leave site
- Horizon sets up to drill into BH09 Thurs.
12:30 - Start Developing MW08 again
- Remove 5 gallons from MW08 until (hole is dry)
- To Wal-Mart - Get Pickup Serviced
3:30 PM (15:30) - Back to Room

Rod Hickman 7/26/00 7022

6:45AM - TO Wal-Mart, Gather supplies
- TO Site
- Prepare to take water samples from MW06
- Check PID on MW06, Received reading of 1100 PPM but meter won't clear possibly due to moisture - Good Reading is 140 PPM

10:00AM - TO Altus, OK to get Connections for holding tank

10:50 - Start taking readings from MW06

12:00 Water stabolizes

12:05 Start collecting samples

14:00 - Finish Collecting Samples. Clean up equipment (decon)

15:00 - Pack Samples in ice for Shipping

16:00 - Take samples to FedEx

16:30 - Back to room, clean up

17:00 - OFF

RGH

Rod Hickman 7/27/00 TO22

6:30 - TO Wash Mart Gather supplies for day
- Fax timesheet
- TO Site
- Drillers set up to Air Core BH09

8:15 Drillers start Air Coring hole (BH09)
- Air Core out concrete grout

9:15 Drillers at 91' water comes up hole. Casing not sealed well
- Drillers drill on down to 96½'

9:45 - Drillers pull equipment out of hole in preparation for the Loggers

10:30 [illegible] arrive & setup on hole
Log [illegible] concrete better seal than [illegible] questionable from 87' down

12:00 - Wireline Services exits site (Left Copies of Log)
- Allan From Horizon went to Fax Log from to Peterson Drilling
- Horizon MKS Peterson talk about what to do about BH09

40

41

Rodney Hickman 7/27/60 7022.

3:30 - Exit Site

RSH

Rodney Hickman 7/28/00 7022

6:30 - To Wal-Mart. Gather supplies
7:00 - To Site
7:30 - Prepare to sample water at MW07
- Fill out logs on MW07
9:15 - Start taking water samples from MW07
10:15 - Finished taking Groundwater samples from MW07
- To Atlus OK, Pack samples in Ice to go to Fedex
12:00 - Back to Site. Prime Rentals picking up equipment for Horizon Drilling
- Back to room, prepare equip for next sample
14:30 - OFF [signature]

Rod Hickman 7/31/00 TQD

6:30 - To Wal-Mart to get supplies
- To Site
7:30 - Set up water testing equipment on MW07
8:00 - Start pumping MW07
8:30 - Take sample for F, NO_2, NO_3
- Decon Equip
8:45 - Set up on MW08
9:10 - Start pumping
- Sand clogs pump. Clear pump
- Start pumping again
- Sand clogs pump.
10:45 - Pumped well dry
- Decide to let well sit & bale it tomorrow
11:30 - In to Altus.
- Wait for Stainless Steel Funnel to come in via FedEx
2:00 - Do Rinsate on MW07
- Pack Samples in Ice & Prepare for FedEx
3:20 - Phil takes samples to FedEx
- CPF

Rod Hickman 8/1/00 T022

6:30 - TO Wal-Mart - get supplies for Day.
- TO Site

8:00 - Start taking samples from MW08 (Baling) Take all but 1 sample, Waiting on call from Ellen McEdoe

8:30 - Set up on MW07. Start pumping well
- Check parameters on well, wait for them to stabilize

9:50 - Start sampling water at MW07

10:30 - Back to MW08, Resample 1 bottle of water.

11:30 - To Red Ex, Send Samples

12:00 - Meet w/ Jerry Pronessa at Lunch talk about Schedule / costs etc

2:30 - OFF

Rod Hickman 8/2/00 T022

6:30 - Leave to go to site
7:00 - January waiting at Gate to deliver 3rd Rolloff
7:40 - Horizon Drilling arrives at site
- Safety Meeting w/ Phil Hammins
- Horizon prepares to pump well
8:40 - Compressor arrives for drillers
Drillers wire pump & put down hole
9:30 - Horizon pumps well
10:15 - Horizon finishes pumping well, starts pulling pipe out of hole
- Sets up to start coring hole (sets PVC pipe in hole)
12:30 - Horizon starts drilling
13:05 - First Core Comes up
14:30 - Ran PID Meter on Core at 118' (0)
15:00 - Ran PID meter on Core at 128' (0)
15:30 - Ran PID Meter on Core at 138' (0)
16:00 - Ran PID Meter on Core at 148' (0)
16:30 - Ran PID Meter on Core at 158' (0)
17:00 - PID on Core at 168' (0)
17:30 - Drillers stop for evening
18:00 - Arrive at Room

[signature]

Rod Hickman 8/3/00 T022

6:15 - Leave for Site
7:00 - Horizon Arrives on site, prepares to drill
- Horizon pumps water into rolloff
8:15 - Starts drilling at 168'
9:15 - Run PID Meter on Core at 178' (Small reading of 1 ppm and could not verify again)
10:00 - Horizon pulls barrel at 188'
Run PID meter on Core
Received reading of 25 PPM
- Jerry Tionessa & Lacy Key visit site
11:15 - Horizon hits 198'
Run PID meter on Core
12:00 >2000ppm!!!
12:30 Run PID meter on Core at 198' <2000ppm!!!
1:15 - Horizon hits 203'
Run PID on Core
- Horizon breaks chain. Fixes
- Continues Drilling
2:30 - Horizon Hits 208' PID Read (0)
3:10 - Horizon Hits 210'
PID Meter reads (0)

Rod Hickman 8/3/00 7022

CONT...

- Horizons starts demobilizing

5:00PM - Leave site, Horizon Leaves

5:30PM - Arrive at Rom

[illegible]

8/4/00 Rod Hickman TOW

6:30 - TO Wal-Mart, Retrieve Supplies
- TO Site
- Take soil samples from Rolloff bin
- Pack Samples in ice
- Take samples to Fedex

~~8:00 - Hori~~

9:00 - [illegible]

[signature]

8/7/00 Rod Hickson 7022

7:00 - Leave for Site
8:00 - Horizon prepares site for Venture
9:00 - Set equipment up on MW06 to be sure generator doesn't trip breaker when we resample MW06 for the Corps Lab
10:00 - Horizon Continues to setup for Venture, Wait on Venture
- Venture calls, says they are running Late, it will be 1-2 hours before they arrive
11:30 - Check Headspace on BH09 with PID Meter > 2000ppm !!! (Natural Gas?)
12:00 - Lunch
12:30 - Wait on Venture
1:00 - Venture Drilling arrives at site
- Prepares equipment
2:15 - Venture starts down the hole (BH09)
5:00 - Venture hits Depth (total) 220
- Venture pulls Approx 125' of pipe out of hole
6:15 - Arrive back at room

RJH

8/8/00 Rod Hickman 7022

6:15 - Leave for site
7:00 - Horizon Drilling arrives
7:15 - Venture Drilling arrives
7:30 - Venture starts Down BH09 - to clean out Sediment
7:45 - ~~Horizon~~ Venture reaches bottom of hole
- Horizon prepares to install casing
- Venture pulls pipe from hole
8:45 - Venture gets pipe out of hole
9:00 - Horizon & Venture start installing casing
10:45 - Horizon & Venture get casing to bottom of hole.
11:05 - Set up on MW06 to resample Start purging it.
11:35 - Start taking readings at MW06
12:25 - Start to taking samples
1330 - ~~Horizon gets pump~~ Finished Sampling MW06
1330 - Horizon gets pump down BH09
- Starts pumping BH09
- Stops pumping. Starts on Filter Pack
18:00 - Horizon stops with Filter Pack
- Sticks tape measure in hole.
18:30 - Horizon retrieves tape from hole
- Prepares to Leave Site

8/8/00 Fred Hickman TEDD

19:00 Arrive at Pam

[illegible]

8/9/00 Rod Hickman 7022

6:15 - To Wal-Mart pick up iced water
- Pack Samples in ice
8:00 - Take Samples to Fedex for Shipping
- TO Site
- Horizon prepares "draw down" well
- draw well down - it did not Settle at all. (BH09)
- Horizon prepares to pump bentonite Slurry down hole (BH09)
9:10 - Horizon pumps slurry down hole
11:00 - Bentonite slurry stops at 146' (BH09)
- Horizon Mixes grout
12:15 - Horizon Flushes Grouting (BH09)
- Pulls pipe & pump from hole
13:45 - Horizon starts cleaning up area
14:30 - Horizon starts pumping water from Frac tank to Frac Tank
16:00 - Horizon starts grouting top of Casing (BH09)
- Continues to clean up site
18:00 - Leave Site
18:30 - Arrive at Room

RH

8/10/00 Rod Hickson T022

6:15 - TO Wal-Mart, get supplies for day
- TO site
7:00 - Arrive at site
- Run PID Meter on BH09 (0 PPM)
- Check Water Level at BH09 28.30'
7:30 - Horizon shows up - Picks up site
Smooths dirt out around BH09
- Horizon prepares to pump (develop) BH09
9:54 Horizon starts pumping well at 4.56 PM
- Pump stops pumping, water level is Approx 75'
11:00 - Horizon decides to bale water out
13:40 - Horizon bales hole dry
- Recharge is 1 ft per 7 min Starting then it changed to 1 ft per 8 min
14:45 - Horizon cleans area prepares to Set BH09 Pad.
15:15 - Take Soil Sample from Roll off
- Take Water Sample from Roll off
15:50 - Checked water level it is at 200'
1585 - Started taking readings on BH09 with Water Quality tester.

8/10/00 Rod Hickson 7022

17:00 - Horizon decides to surge BH09
Put 40 gallons of water down hole.
- Water level at 163'
- Horizon starts to surge hole. Sees that surge block is too large. pulls out surge block makes it smaller, than surges hole

19:30 - Horizon gets water pumped (bailed) out of BH09
- Prepares to leave site
- Leave site

20:00 - Arrive at Roon

[signature]

8/11/00 Rod Hickman

6:15 - TO Wal-Mart, Retrieve Supplies
- Pack Samples in R.e
8:00 - TO ~~Fed Ex~~, Send samples
8:30 - Arrive at site. Horizon is setting up well
8:45 - Horizon starts bailing well
9:00 - Start ~~taking~~ readings from bailing
9:40 - Take water level, water at 200bgs
Horizon took 40gal out of well
to reach this level
- Horizon working on welding up gate (Lifting gate 3' so high clearance vehicles may clear)
10:00 - Surveyors Arrive
- Start Surveying
12:00 - Surveyors equipment does not make good connection
they work on equip
12:30 - Surveyors finish up
~~1:15 - Horizon welds~~
1:15 - Horizon drills holes for bollards on MW09
14:30 - Horizon finishes bollards & painting bollards on MW09

8/11/00 Rod Hudson 7200

16:00 - Leave site
16:30 - Arrive at Motel
18:20 - Back to Site
- Tried to pump MW08 (Test)
- the Generator failed
20:00 - Left Site

[signature]