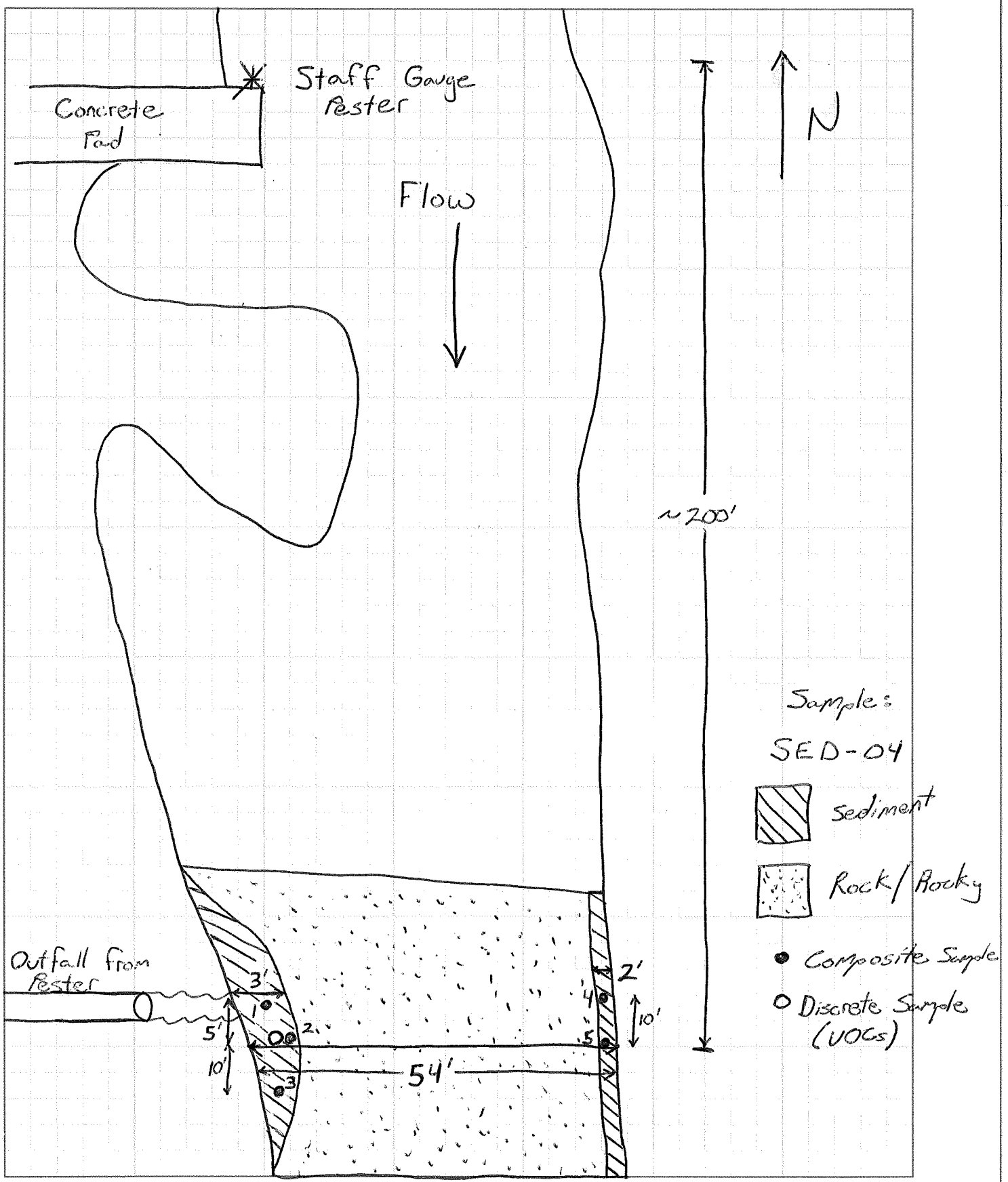
Appendix C

Field Notes / Log

MWH

By M. Warner Date 10/25/07 Client EPC Sheet 1 of 1

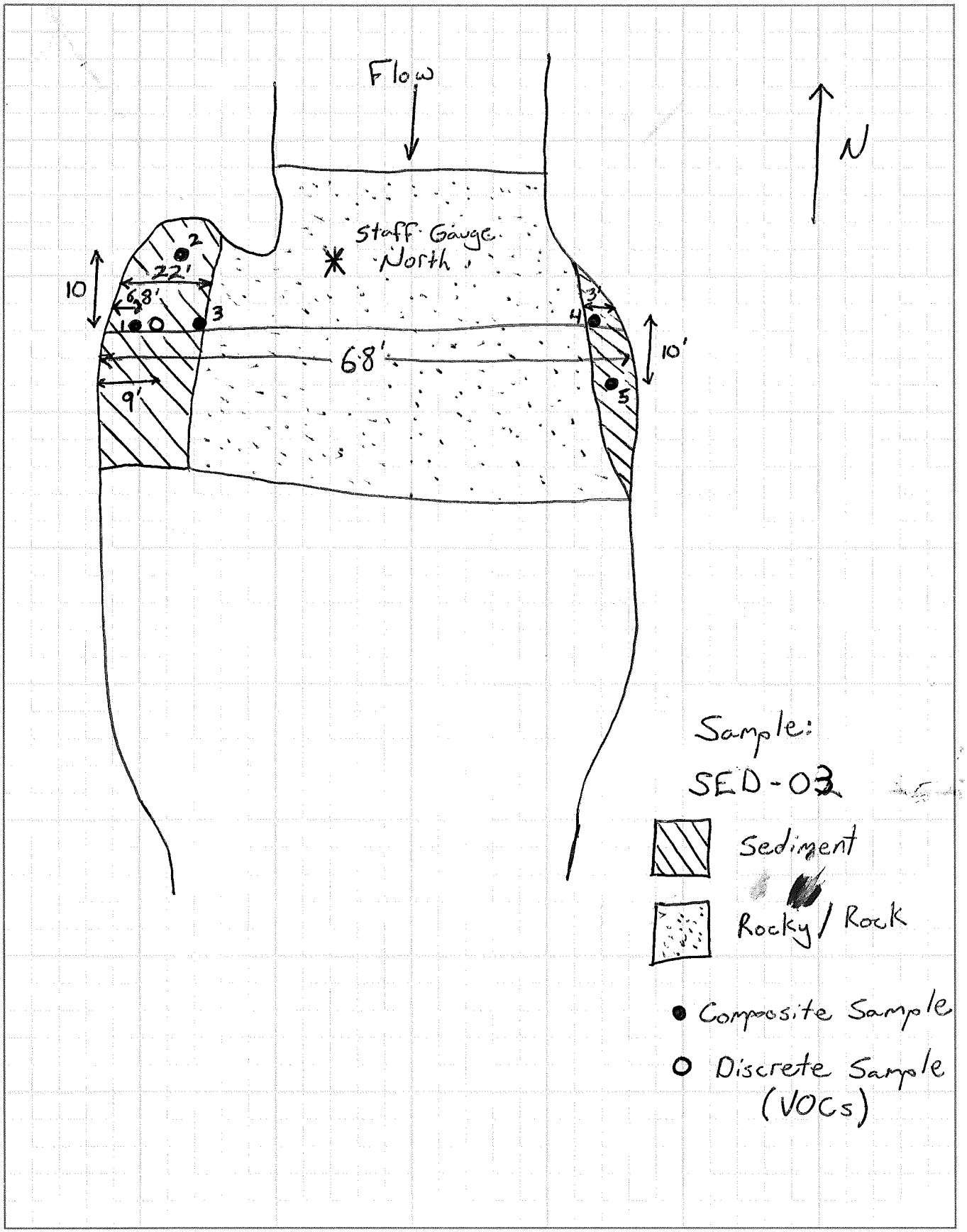
Chkd. By Description Transect #1 Job No.



MWH

By M. Warner Date 10/24/07 Client ERC Sheet 1 of 1

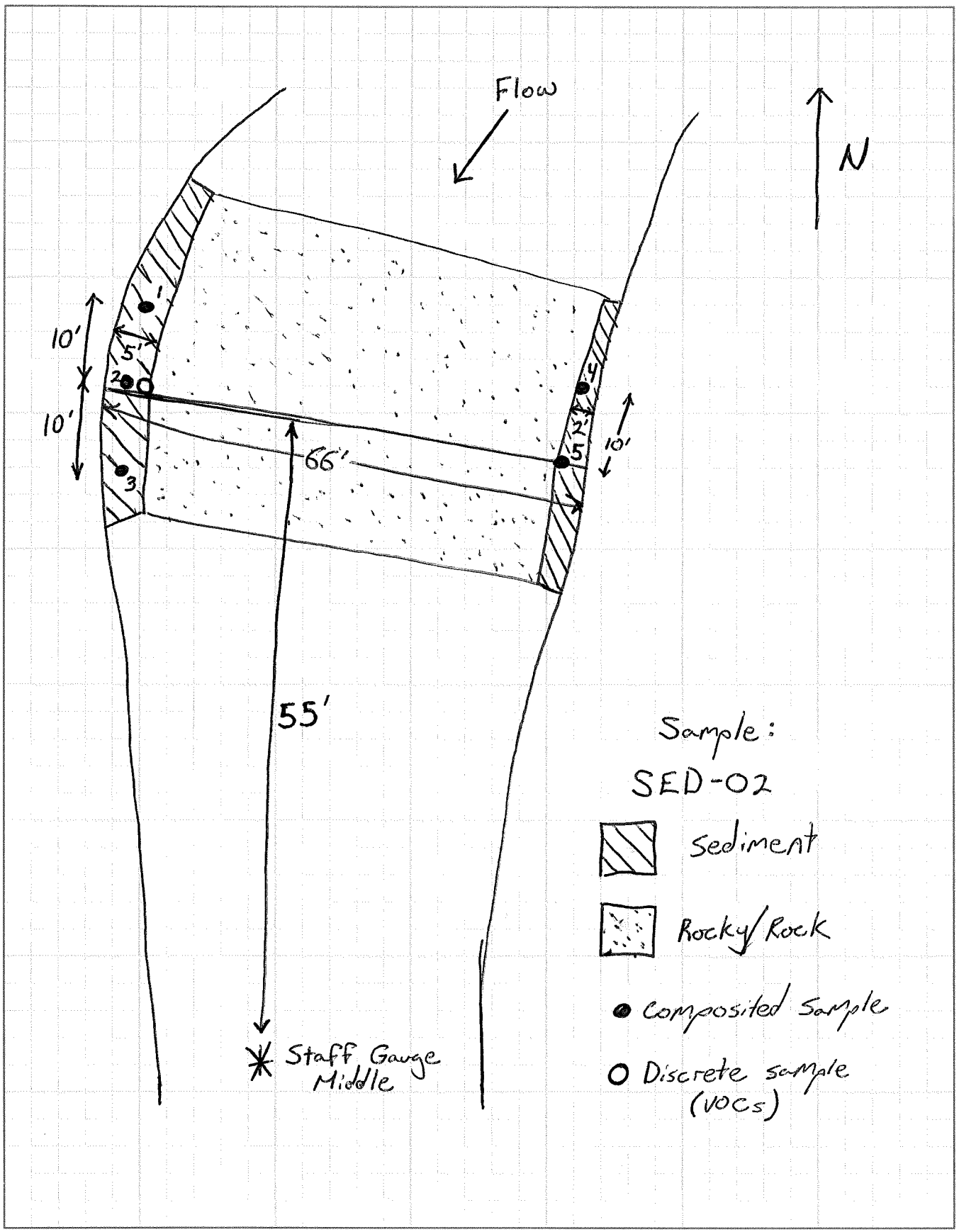
Chkd. By _____ Description Transect #2 Job No. _____



MWH

By M. Warner Date 10/24/07 Client EPC Sheet 1 of 1

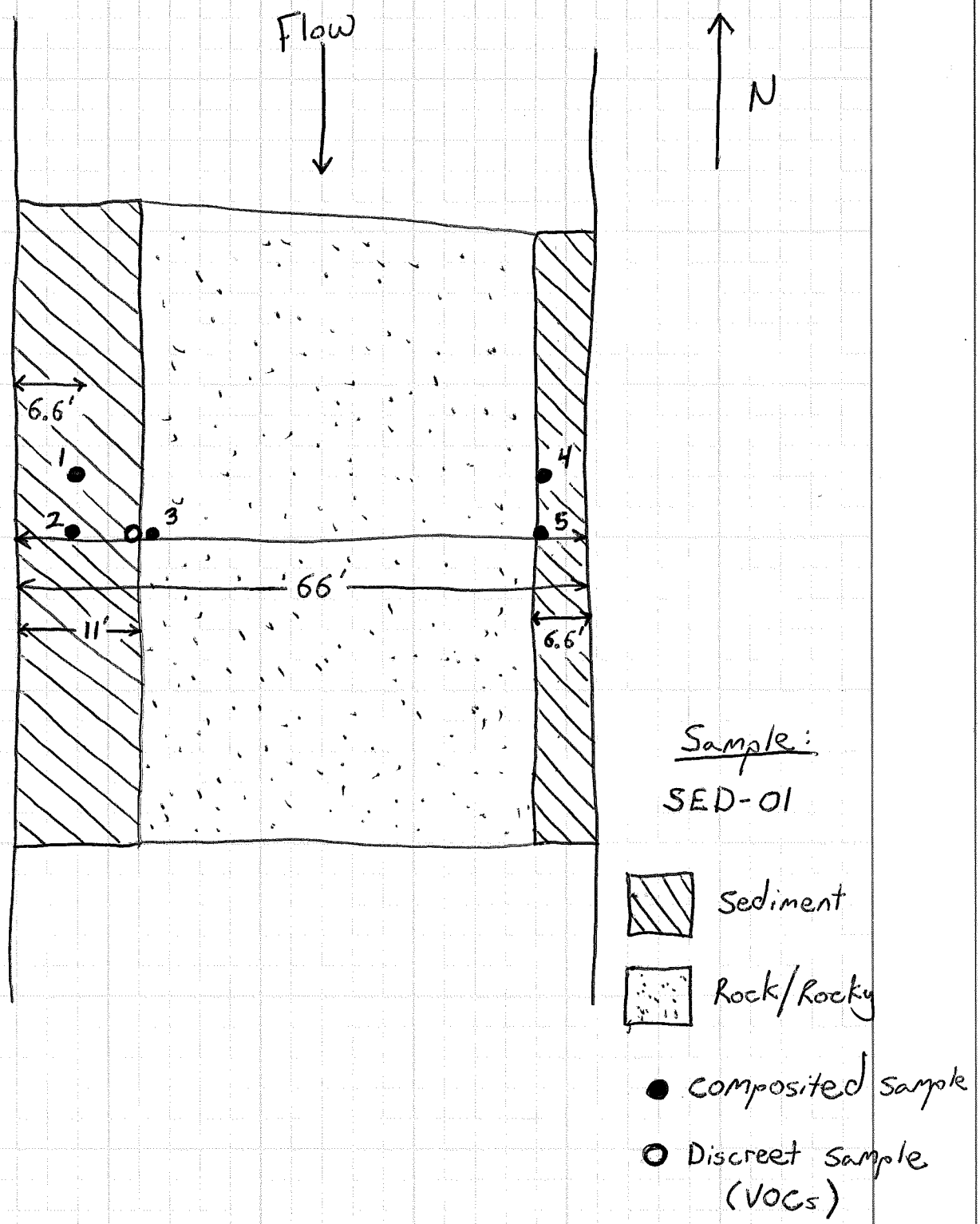
Chkd. By _____ Description Transect #3 Job No. _____



MWH

By M. Warner Date 10/24/07 Client EPC Sheet 1 of 1

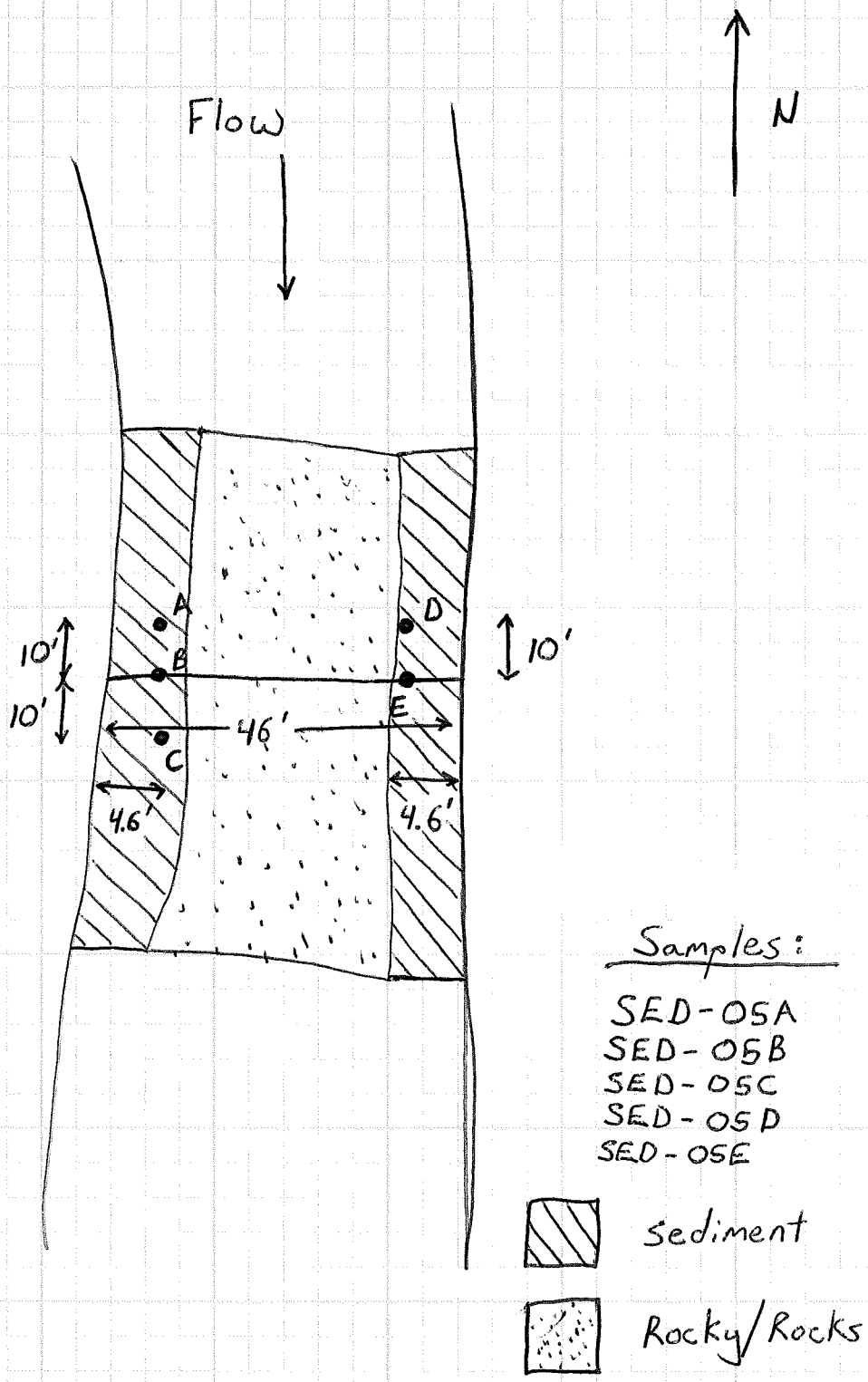
Chkd. By _____ Description Transect #4 Job No. _____



MWH

By M. Warner Date 10/24/07 Client ERC Sheet 1 of 1

Chkd. By _____ Description Transect #5 Job No. _____



CONTENTS

PAGE	REFERENCE	DATE

Location El Dorado Date 11-26-07

Project / Client EL PASO
Phase III Geoprobe

Weather: Sunny 30's to 40's
BGS - onsite 9:10

- Load up - Mwit.
- BGS Reading for work.

9:44 - Tail gate safety meeting
with BGS & Mwit.

10:00 MV Geoprobe 6620DT to
SB-4 location
- Calibrate Mini RAE 2000
w/ 100 GAS

1010 Ray H onsite to help sample.

10:25 Start SB-04

10:50 BGS to start setting 1' well
@ SB-04 sand to 6' screen
18-8'

Location _____ Date _____

Project / Client _____

11:11 SB-01 well set BGS moves to SB-8, SB-8 is located 25' west of original location which is in a natural low area and is full of water.

11:18 BGS having difficult time with panel.

11:20 Set-up 25' west of original set

11:25 Begin SB-08

12:05 Done w/ SB-08; BGS moves Rig to our locality, ready for lunch.

12:16 BGS offsite for lunch. MWH stays to finish collecting samples.

12:30 Done MWH to Lunch

Location _____ Date _____

Project / Client _____

MWH Back onsite 1:15
- Load up coolers

1:30 BGS Moved Geoprobe to SB-07.
- MWH Set up for work
- all soil cuttings placed on plastic for time being.

135 Start SB-07

145 BGS Hit Limestone @ 5.5'. Consult w/ Doug M. - No move over - TD @ 5.5'

155 - Move Geoprobe to SB-06

200 Start push @ SB-06
2:25 refusal @ 11' SB-06 TD = 11'
- BGS Moves to SB02
2:35 Begin Push SB02

Location _____ Date _____

Project / Client _____

2:45 Hit Refusal @ SB-02 @ 12'
TD SB-02 = 12'

3:14 MWH Processing samples from SB-02

3:20 BGS Begins cutting 2' liners for BH Borings to be done today

3:30 - BGS To install well in SB-08 19' deep 13' screen to 6" BGS sand 4' to 19'; 1" pvc & screen.

3:44 Borehole (BH-76) next
BGS moves to BH-76
3:45 Push BH-76 to 2'
3:50 mv probe to BH-74
Push BH-74 to 2'
3:55 mv probe to BH-75
Push BH-75 to 2'
4:00 BGS Plugs BH-74, 75, 76 w/ Bentonite & H2O.

Location _____ Date _____

Project / Client _____

410 - Discussion w/ BGS - Due to Full coolers & shipping will will not push any more today MWH Will Finish processing samples from BH-74-75-76. BGS will put up for the day.

4:25 - Offsite to office for sample shipping.

11-26-07

Location El Dorado Date 11-27-07

Project / Client EL Paso / Third Phase Geoprobe.

MVH - Matt W.; Dave B.; Ray H.

8:00 offsite - BGS Warms Geoprobe
Craig w/ BGS not here
Brian only - Begin Moving Rig to SB-09.

8:15 Health & Safety meeting
- BTEX, METALS, DECON!
- Trip, Slip w/ pipes.

Dave B to Log; Matt W. Label & PID readings; Ray sample collection

8:20 Calibrate PID MiniRAE 2000 w/ ISO GAS

8:25 Begin push @ SB-09

Sample	Time	
0-2'	0840	Stripe.
2-4'	0900	Hit
15-17'	0940	saturated

9:05 BGS gets 10-15' sample core stuck in Barrel.

Location Date

Project / Client

9:25 Stop push @ SB 09
- BGS begins to set SB-09 as well. Screen 20-6' Stand 4-20'.

9:35 BGS Decons Rods.

9:45 Talked w/ Doug M. we will check static H_2O before next SB-@ nearest well.

- Break for meeting

10:10 BGS MV's Rig to SB-10 Located 25' S of original location which is in water

Check levels in OW-25
ATP - 9.86
TF - 9.88

10:15 Start Push @ SB-10.

Location _____ Date _____

Project / Client _____

SB-10

Sample	Time	
0-2'	1020	
8-10'	10:40	
15-17	11:00	Saturated

10:40 BGS Plugs SB-10
Done w/ SB-10

11:00 BGS ready for next hole.
- MWH process samples

1110 Move to SB-13

Static H_2O - OW-22TR

ATP: 10:71
IF: 10.81

11:15 Start SB-13 - hit unknown @ 3'
moved over 2' to west of original location

11:30 Hit Limestone @ 7' - Refusal

Location _____ Date _____

Project / Client _____

Will Stop @ 7' @ SB-13'
GBS Plugs SB-13

Sample @ SB-13	Time
0-2'	11:20

11:40 Done w/ sampling process.

11:45 lock down for Lunch.

11:55 offsite MWH & BGS for Lunch.

12:30 onsite Ready for work

Rig @ SB-16.
12:40 - Start SB-16.
use static from OW-22T
ATP: 10.71
IF: 10:81

~~12~~ 10:00 Stop push - Refusal @ 14'
BGS Plugs SB-16

Location _____ Date _____

Project / Client _____

SB-16

Sample	Time	
0-2	12:50	
10-12'	13:15	Saturated

1:10 BGS onsite ready for SB-12
- Wait on MWH to process samples.

1:25 BGS Starts Direct Push @ SB-12

1:35 BGS Hits limestone @ 8'
BGS to plug SB-12.

#SB-12

Sample	TIME
0-2'	13:30
No other.	

1:45 BGS on location @ SB-15

Location _____ Date _____

Project / Client _____

1:50 BGS Begins @ SB-15

2:10 BGS hits refusal @ 12.5
— Stop - plugged By BGS

SB-15

Sample	TIME
0-2'	1400

2:20 BGS MW's Rig to SB-17

2:30 start SB-12.

N2-3 well check
ΔTP —
IF 5.89

2:45 BGS Hit Refusal @ 15' hitting Limestone. @ SB-17
- MWH continue to process samples
BGS set well @ SB-15 - screen 15-5'
Sand 3-15'

Location _____ Date _____

Project / Client _____

SB-17

Sample	Time	
0-2'	1440	
14-15	1500	Saturated

2:55 MWH Process samples
- BGS Mv's Rig to SB-14'

300 BGS Has delivery of screen onsite.

310 BGS Start boring @ SB-14

3:35 BGS Hits Refusal @ 17'
- BGS to set well @ SB-14
Screen: 17-5' & Sand 3'-17'
Bentonite to surface.

SB-14

Samples	Time	
0-2	1520	Surface.
8-11	1545	Nadose Hot
11-13	1600	Saturated

MSMSD in duplicate done @ SB-14 0-2'

Location _____ Date _____

Project / Client _____

400 BGS bring three 2' samples from 0-2' around SB-14 to do MSMSD tests

- MWH to Process MSMSD samples
- BGS to Finish completing SB-14, 17 & Develope them as well as SB-9

4:30 Done w/ sample processing Clean up -

- Check on BGS - They are having trouble settling SB-17. Due to Sand collasping at the 4-5' interval they can only set it temporarily at 12'. They will try to Adjust later. -

BGS & MWH offsite
4:40

Location EL DORADO Date 11-28-07

Project / Client

800 BGS & MWH onsite
- Gear up
D Bollenbach Logs & Fieldbook
M Warner PID & labels, Ray H - Samples

815 Tailgate meeting
- Slip Trip
- BTEX, metals
- Decone

8:25 - Calibrate PID w/ ISO GAS.

Nearest well - SB-14 to SB-11

SB-14
ATP 12:53 Dark Brn Product.
IF 13:51

8:30 BGS moves rig to SB-11
Continue ~~reading~~ gearing up.

Location Date

Project / Client

- Start SB-11 8:45

~~MASM~~ MAdep EPH sampling done.
SB-11 @ SB-11

Samples	Time	
0-2	0840	Surface.
6-8	9:30	UNSAT
14-16	9:40	Sat

9:20 BGS hits Refusal @ 19'
Set well @ SB-11 - screen 9-19'
sand 7'-19', Bentonite to surface

9:40 BGS Finishes setting well -
MWH finishes sample processing

9:50 Break down to move,

Location _____ Date _____

Project / Client _____

1000 - BGS mvs to SB-20
- Setup.

10:10 Ready to drill
- Check OW19T
well is Dry
will use
* N2-3 @ 5.89' as base static

10:15 Start boring @ SB-20

MADEP VPH Done @ SB-20

Sample	Time	
0-2'	1010	Surface
8-10'	1045	Sat.
Not high enough PID.		In Limited Unsaturated

Based on 5.82 @ N2-3.

10:45 Rog onsite
- BGS Done w/ SB-20
- Plugged SB-20

Location _____ Date _____

Project / Client _____

1102 Move Rig to SB-24
- Setup
Rog to do labels & Sample Direction w/ Matt
Dave Log & PID, Ray Sampling.

1105 Start Boring @ SB-24

Samples	Time,
0-2'	11:09

BGS Hit Refusal @ 2' then moved over 4' & Hit refusal @ 3', It appears to be cement, After Consulting Doug M. We will Attempt a Final third location 4' S of original location - No good, will Abandon SB-24 @ 3'

Location _____ Date _____

Project / Client _____

Weather change to cold windy & cloudy

11:30 BGS Mus Rig to SB-21

11:35 Start SB-21

11:40 BGS hits limestone @ 5'
Refusal.
MADEP Run on both 0-2 & 2-4'

Samples	Time	
0-2	1140	Surface
2-4	1200	

11:50 BGS offsite for lunch
- MWH processing samples

12:00 MWH offsite for Lunch

1:15 Back onsite -
BGS onsite.

Location _____ Date _____

Project / Client _____

1:20 - BGS Mus Rig to SB-26.
- SB-26 moved 2' SE of original Location due to Rubble & No good & New location 3' SE of original.

Start Boring 1:30

SB-26

Sample	Time
0-2'	1340
5-8'	1415

This includes MADEP sampling @ this location

- Poor recovery 0-5 0-3 recovered.
- Lime slow @ 5' & 8'.
- Refusal @ 8'
- only Sampleable intervals are 1-3' & 5-8'. Will sample those.

200 BGS moves rig to SB-28
MWH Process samples from SB-26

Location _____ Date _____

Project / Client _____

210 MWH Processing samples @ mw-26

215 Start @ SB-28

225 B&S Hits Limestone @ 3'
Limestone hard, compacted.

Stop SB-28 @ 3'

	Sample	Time
SB-28	0-2'	1430

2:35 Ray H offsite to Drill.
- B&S move Rig to SB-31

2:40 B&S Starts SB-31

245 B&S hits Limestone @ 5'

SB-31	0-2'	1445

Location _____ Date _____

Project / Client _____

3:00 B&S - Moves Rig SB-30
SB-30 in the middle of large cement pad, B&S will attempt to break through as we will have to move to location at least 15' away.

315 - Start boring past 1' cement.

MADEP Taken @ SB-30 as well

	Sample	Time	
SB-30	1-3'	1530	Surface
	5-7	1550	UNSAT
	9-7	1610	SAT

Will sample 1-3' zone as 0-2 due to cement.

3:35 Done SB-30 Hit Limestone @ 13'; B&S To set well 13-5 screen

Location _____ Date _____

Project / Client _____

3:45 BGS has trouble w/ hole collapse @ SB-30. Will set temporary at 4-7'. May fix nextweek.

400 BGS begin to clean up for day
- MWH process samples.
-

405 MWH Picks up for day.

4:15 BGS & MWH offsite

[illegible] 11-28-07

Location _____ Date _____

Project / Client _____

Location EL Dorado Date 11-29-07

Project / Client EL PASC

Geoprobe work

Weather; Sunny: 30's to 50's

815 onsite

BGS onsite already

MWH = D. Bollabrick, M. Warner, Ray Harrington

D. Bollabrick = Logs & Notes MATT Warner: PID & Ray H: Sample Labels

830 - H&S meeting

840 Calibrate PID w/ 150 gas

- BGS Moves Rig to SB-27

- Prepares for work

900 - Start SB-27 -

SB-27

Sample	Time
0-2	900
5-7	940

9:30 BGS Hits Limestone @ 15'

Done - BGS Plugs SB-27

Location Date

Project / Client

950 BGS - Moves Rig to SB-23

Will do Madep on this Boring

Start SB-23 @ 10:00

No wells in area.

Madep taken @ SB-23

Sample	Time	
0-2'	1010	Surface
8-10'	1040	unsat
12-14'	1050	Saturated

Not enough recovery for 2-3' so 8'10 possible Vadose Zone was sampled

Done SB-23 @ 10:15

- MWH Continue to process samples

11:00 BGS Moves Rig to SB-19

N2-3 is 50-60' from SB-19.

N2-3 ∇TOC = 5.90

Location _____ Date _____

Project / Client _____

Start SB-19 @ 11:05

	Sample	Time		
SB-19	0-2	1110	Surface	
	12-4	11:30	UnSAT	Hot
	12-13	11:40	Saturated	

11:25 B&S Hits Limestone Refusal @ 13' -
- MWH still Processing Samples
- B&S decons & Breaks down

1140 - Moves Rig to SB-18
- Begin Clean up for Lunch

1:00 Off site for Lunch

12:55 Back onsite -
Ble20DT already @ SB-18

Location _____ Date _____

Project / Client _____

Start SB-18 @ 105

CW-23T = TOC is 10.65

This location will be Macrep sampled.

	Samples	Time	
SB-18	0-2'	1310	Surface
	2-4'	1340	Hot Unsaturated
	10-12'	1400	Hot Saturated

1:40 Done w/ SB-18
- Plug SB-18 by B&S
- MWH continue to process samples
- B&S Decons

205 - B&S - Moves Rig to SB-22.

Location _____ Date _____

Project / Client _____

Start SB-22 @ 2:15

T-clip done @ 2-4

Sample	Time	
0-2	~~[illegible]~~ 1415	Surface
2-4	1450	Unsat
16-18	1510	Saturated

product in SB-22; Blk strodor @ 15'

2:45 Done SB-22 Refusal @ 20' -
No plug - may place screen for -
Doug m advise no well as MW-38 is nearby.
Hole ~~Well~~ Plugged.

Location _____ Date _____

Project / Client _____

3:20 BGS Moves to SB-25

Start SB-25 @ 3:25

SB-25 T-Clip done 4-6'

Sample	Time	
0-2	15:30	Surface
4-6	16:00	Unsaturated

Possible Water @ 12' But due to limestone not enough to sample.

3:40 - BGS Hit Limestone @ 13'
Done w/ SB-25 - Will Plug
- MWH Continue to Process Samples.

4:00 Begin cleaning up for day
MW-19 & 23 will be set as wells later.

4:20 Hosile to office

Location: EL DORADO Refinery Date: 11-30-07

Project / Client: EL PASO

Geoprobe Soil Borings

Weather: Cloudy, Windy, cold 30-40

8:25 onsite - B&S onsite
- B&S & MWH Jump in MWH Truck to recon SB's in area of Ponds -

8:30 H&S safety meet held in truck w/ B&S
- slip/trip
- Decon / BTEX issues
- Cold weather issues

MWH - Dave B. - Logging Matt W = PID & labels
Ralph = sampling

8:50 B&S Moves Rig to SB-29
- MWH Set up.

SB-29 will be located 3' west of surveyed location due to being place on East side of Fence line

Location: Date:

Project / Client:

900 - B&S & MWH Gear up for work

Start SB-29 @

SB-29 Non sample

Sample	Time
0-2	910
6-8	940

* N2-2 = TOC = 8.14 just N of SB-29

9:25 - Refusal @ 12' - Done w/ SB-29
- B&S Done - Decon & clean up
- MWH Process samples

Location _____ Date _____

Project / Client _____

10:00 BGS - Moves Rig to SB-32
- Begin Setting up.

Start SB-32 @ 10:10

OW-01 = TOC = 14.79'
located @ least 100' NW @ SB-32

SB-32 MADEP Done @ SB-32

Sample	Time	
0-2	1020	Surface
4-6	10:40	Hot Zone Both sat dusk

10:25 BGS Hits Refusal @ 7'
@ Limestone - BGS Plugs SB-32
- MWH Process samples
- Not enough soft sediment to sample 6-7'

Location _____ Date _____

Project / Client _____

- Taking MATH W. Advisement will sample 4-6' w/ full suite

1035 BGS - Ready to Move to Next location.

1050 BGS Moves Rig to SB-35

11:00 Begin coring @ SB-35

SB-35 MSMSD Done @ SB-35

Sample	Time
0-2'	1110
4-6'	1210

MADEP Done on 4-6'

11:15 BGS Hits Limestone @ 6'
- BGS To Plug
- BGS gather 3x 0-2' samples from location for MSMSD

Location _____ Date _____

Project / Client _____

11:30 MWH Processing samples
BGS – clean up.

12:00 MWH offsite for lunch

130 MWH & BGS Back onsite

– BGS Moves Rig to SB-33

Start SB-33 @

SB-33 MAdeps done @ SB-33

0-2'	1340
2-4'	1410
Sample	Time

– BGS Hits Refusal @ 7'

Location _____ Date _____

Project / Client _____

SB-33

– Relocated 5' West for another attempt, –
– Limestone refusal @ 3'

– Relocated SB-33 10' S of original location –
– Refusal @ 4'

We will use the 4' core to sample from.

Done SB-33 - 150

200 – BGS Moved to SB-34

210 Start SB-34 boring

SB-34 MAdeps done @ SB-34

Sample	Time
0-2	1430
4-6	1435

Location _____ Date _____

Project / Client _____

2:25 - BGS Hits refusal @6' @ Limestone
SB-34 done - BGS to plug
- MWH to process samples

2:40 BGS moves rig back to
main area to put in garage
for the weekend.
- MWH Process samples

2:55 MWH head to office
offsite -

11-30-07

Location _____ Date _____

Project / Client _____

Location: EL PASO ELDORADO Date: 12-3-07

Project / Client: G

Geoprobing.

Weather: 40s Windy, sunny

MWH onsite: DAVE B (Logging)
MATHW. (PID & Labels)
SCOTT Hansen (Sampling)
BGS: BRIAN & DAVE.

1:10 H&S meeting –
– Slip Trip
– Decone
– PPE.

120 MATT W. Calibrate PID w/ ISO GAS.

130 – Move to SB-38 Location

Location: Date:

Project / Client:

Start SB-38 @ 140

Non Source area SB-38

Sample	Time
0-2'	1350

220 Done w/ SB-38 @ Refusal @ 20.2

Set well 15' screen.
TOC: 13.40
TD: ~~20.7~~ 23.23
Casing 2.65' Above.
Sand 3-20'
Bentonite to Surface

Location _____ Date _____

Project / Client _____

300 BGS moves probe to SB-37.

310 BGS at location, SB-37

Start SB-37 @ 3:15

SB-37

Sample	Time:
0-2	1520
4-6	1545

SB-37 set as well - 1"
Screen measured 4-14'
Sand 3-14' Bentonite to surface.
SB-37 TOC: 14.78 TD 16.55 Casing ht: 2.72'

Location _____ Date _____

Project / Client _____

3:55 Done sampling SB-37 move on to SB-36.

Start SB-36 @ 4:00

SB-36

Sample	Time
0-2	1610

4:25 Done w/ SB-36 Refusal @ Limestone.

Set as well - 15' screen (Not cut) - Sand 3-19' Bentonite to surface.

SB-36 TOC: 4.91 TD: 21.64
Casing Ht: 2.75

Location _____ Date _____

Project / Client _____

4:37 BGS completes well
MWH No more samples so
begin to cleanup for day.

4:45 BGS & MWH offsite to
office

D L Ballesteros

12-3-07

Location _____ Date _____

Project / Client _____

Location _____ Date 12-4-07

Project / Client _____

800 onsite.

815 H&S Meeting

8:30 Calibrate PID w/ ISO 615

* all sampling to be done by mixing in stainless steel bowl to make 0.5-1.5 material homogenous.
* All Items decomed between samples.

Location _____ Date _____

Project / Client _____

9:00 @ BH-128

9:05 Begin Boring @ BH-128

Sample @ 0.5-1.5 taken 910

915 B&S mv's to BH-127

9:18 B&S Bores BH-127

Sample @ 0.5-1.5 taken 9:25

920 B&S on BH-125

BH-125 Sample @ 0.5-1.5 taken 0940

9:32 B&S Moves to BH-126 @ Begins to Bore

Sample taken @ 0.5-1.5 1000

Location _____ Date _____

Project / Client _____

9:50 BGS Starts BH-121

Sampled BH-121 @ 0.5-1.5 @ 1010

1000 BGS Starts BH-120

Sampled BH-120 @ 0.5-1.5 @ 10:25

1015 BGS Starts BH-117

Sampled BH-117 @ 0.5-1.5 @ 1040

10:30 BGS Starts BH-119

Sampled BH-119 @ 0.5-1.5 @ 1055

Location _____ Date _____

Project / Client _____

10:45 BGS Begin BH-116

Sampled BH-116 @ 0.5-1.5 @ 1110

1055 BGS Begin BH-118

Sampled BH-118 @ 0.5-1.5 @ 1130

11:20 BGS offsite MWH to continue to sample process.

11:40 MWH Begin to pick up for Lunch

12:50 onsite wait on BGS to Finish wells.
MWH set up for sampling

Location _____ Date _____

Project / Client _____

1:15 B&S onsite
- move to BH-124

B&S starts BH-124 @ 1:25

Sampled BH-124, 0.5-1.5 @ 13:30

1:45 B&S moves to BH-123
& proceeds to Bore.

Sampled BH-123, 0.5-1.5 @ 13:50

155 B&S Moves & Begins @ BH-122

sampled BH-122, 0.5-1.5 @ 14:10

Location _____ Date _____

Project / Client _____

2:15 B&S PICKS UPS. for
move to another location.

225 B&S Sets up on BH-107

Sampled BH-107, 0.5-1.5' @ 14:30

2:35 B&S sets up & works on BH-108

sampled BH-108 0.5-1.5 @ 1445

2:45 B&S Moves over & Bores BH-110

sampled BH-110, 0.5-1.5' @ 1510

Location _____ Date _____

Project / Client _____

2:50 BGS - moves to BH - 112

Sampled BH-112 0.5-1.5 @ 1520

3:10 BGS moves to BH-111

Sampled BH-111 0.5-1.5 @ 1530

3:20 BGS moves to BH-109 -

Sampled BH-109 0.5-1.5 = 1550

3:30 BGS off to work on wells.
MWH stay to process
samples

Location _____ Date _____

Project / Client _____

3:50 MWH Finish off samples &
Begins to clean up for day

400 MWH offsite to office

12-4-02

Location EL DORADO Date 12-5-07

Project / Client EL PASO

8:15 - MWH & BGS onsite

8:20 H&S meeting.
- Slip trip
- Decon
- PPE
- Cold

8:30 MWA Calibrate PID
w/ ISO GAS.

x All samples to be homogenized in stainless steel Bowl.

x All Equipment deconed between uses.

Location Date

Project / Client

8:40 BGS sets up @ BH-113

Sampled BH-113, 0.5-1.5' @ 08:50

8:55 BGS sets up @ bores BH-115

Sampled BH-115, 0.5-1.5' @ 0910

0913 BGS sets up @ BH-114

Sampled BH-114, 0.5-1.5' @ 0930
poor amount of none gravel material.

0928 - BGS to office for supplies.
MWH process samples.

Location _____ Date _____

Project / Client _____

0950 B65 sets up @ BH-106

Sample BH-106, 0.5-1.5' @ 10:00

1000 B65 - sets up @ BH-105

Sample BH-105, 0.5-1.5 @ 10:15

10:10 B65 sets up @ BH-104

Sample BH-104, 0.5-1.5' @ 10:30

10:25 B65 sets up @ BH-101

Sample BH-101, 0.5-1.5' @ 10:45

Location _____ Date _____

Project / Client _____

10:40 B65 sets up @ BH-102

Sampled BH-102, 0.5-1.5' @ 11:00

10:50 B65 sets up @ BH-103

Sampled BH-103, 0.5-1.5' @ 11:15

11:00 B65 Done - offsite for supplies, MWH continue to process samples

11:20 offsite for Lunch.

Location _____ Date _____

Project / Client _____

12:25 Back onsite w/ B6S

12:30 B6S sets up @ BH-100

Sampled BH-100, 0.5-1.5' @ 12:40

12:40 B6S sets up @ BH-98, 0.5-1.5'

sample BH-98 @ 0.5-1.5' @ 12:50

12:52 B6S sets up @ BH-99

Sampled BH-99, 0.5-1.5' @ 1310

Location _____ Date _____

Project / Client _____

1:10 - B6S - Moves to BH-97 & sets up

Sampled BH-97, 0.5-1.5' @ 1325

125 - B6S sets up @ BH-96

Sampled BH-96, 0.5-1.5' @ 13:40

145: B6S sets up @ BH-95

Sampled BH-95, 0.5-1.5' @ 1420
also MS MSD done.
Duplicate = 1450

- B6S offsite, MWH Process samples onsite

- Done Sampling BH-95

Location _____ Date _____

Project / Client _____

2:40 Back to office for supplies

3:15 MWH Back onsite -
BGS is on BH-69
BGS Hits Refusal @ 1' - offsets 10's of location
Sampled BH-69, 0.5-1.5' @ 1530

3:46 BGS sets up @ BH-68

Sampled BH-68, 0.5-1.5' @ 15:45

3:58 BGS sets up @ BH-70

sampled BH-70, 0.5-1.5 @ 16:00

405 - BGS done for day - offsite
MWH Continue to process sample

Location _____ Date _____

Project / Client _____

4:20 MWH Clean up -
head to office -
offsite

D L Baker
12-5-07

Location ELDORADO Date 12-6-07

Project / Client ELPASO

8:15 MWH & BGS onsite -
MWH - Dave B., Matt W, Scott G.

8:30 H&S meeting conducted
- ICE conditions
- Slip Trip
- BTEX, Etc.
- Decon.

8:40 MWH Calibrate MiniRAE 2000
w/ ISO GAS.

- Will begin day with 92, 93, 94.

Location Date

Project / Client

8:45 BGS sets up @ BH-94

Sampled BH-94, 0.5-1.5' @ 0850

905 - BGS sets up @ BH-93

Sampled BH-93, 0.5-1.5' @ 0910

920 BGS sets up @ BH-92

Sampled BH-93 @ 0.5-1.5' @ 0930

0940 BGS sets up @ BH-90

Sampled BH-90, 0.5-1.5' @ 0950

Location _____ Date _____

Project / Client _____

0955 B65 moves to BH-89

Sampled BH-89, 0.5-1.5' @ 1010

1010 B65 moves to BH-91

Sampled BH-91, 0.5-1.5' @ 10:20

10:30 B65 moves to BH-84

Sampled BH-84, 0.5-1.5' @ 10:45

Location _____ Date _____

Project / Client _____

1045 B65 set @ BH-85

Sampled BH-85, 0.5-1.5' @ 1100

1100 B65 set @ BH-83

Sampled BH-83, 0.5-1.5' @ 1115

11:10 B65 off for supplies & Lunch
- MWH stays to process samples

11:30 offsite for Lunch

Location _____ Date _____

Project / Client _____

12:45 Back onsite - MWH & BGS

BGS sets up @ BH-81

Sampled BH-81, 0.5-1.5' @ 1300

105 BGS sets up @ BH-80

Sampled BH-80, 0.5-1.5' @ 1320

115 BGS sets up @ BH-82

Sampled BH-82, 0.5-1.5' @ 1330

Location _____ Date _____

Project / Client _____

130 - BGS sets up @ BH-79

Sampled BH-79, 0.5-1.5' @ 1350

150 BGS sets up @ BH-78

Sampled BH-78, 0.5-1.5' @ 1400

200 - BGS sets up @ BH-77

Sample BH-77, 0.5-1.5' @ 1410

2:15 BGS setup @ BH-73

Sampled BH-73, 0.5-1.5' @ 1425

Location _____ Date _____

Project / Client _____

2:25 Set up @ BH-72

Sample BH-72, 0.5-1.5' @ 1440

2:40 B&S sets up @ BH-71

Sample BH-71, 0.5-1.5' @ 1500
a MS MSD was also done at this interval.

250 B&S offsite to work on wells
- MWH to Process Samples

330 MWH offsite
Back to Office

Del C Bello
12/6/07

Location _____ Date _____

Project / Client _____

Location ELDORADO Date 12-7-07

Project / Client EL PASO
offsite well install

7:45 onsite w/ BGS

8:00 H&S meeting w/ BGS.
- Traffic Safety
- Slip trip
- Decon.
- Bter, etc.

8:10 - MWA Calibrate PID w/ ISO GAS.

8:15 BGS Begin to set up @ TW-74.

* All sampled interval mixed in steel Bowl
* All soil cutting to be placed on Refinery site,
* All equipment deconed between uses.

Location Date

Project / Client

8:30 Start TW-74.
Sampled 0-2' & 14-15 @ 8:30 & 9:20

8:55 BGS Begin Augering TW-74
- BGS will set 10' screen
- 1' of sand over screen (10/20)
- Flush mount.

TW-74
TOC:
TD:

BGS still has to complete well w/ vault, Due to time constraints we measure TD & TOC at a later time.

9:40 BGS sets up @ TW-75

9:45 BGS Begin to Bore TW-75

10:05 BGS Begins to Auger TW-75

10:30 BGS preps & begins to set casing

Location _____ Date _____

Project / Client _____

TW-75
10' Screen (uneul) 0.10 slot
5' Blank
Flush mount.
Sand = 3.8' - 15.2'
Bentonite = 1.1 - 3.8'
Cement - to surface.
→ * Sampled 14-15 @ 10:20 *

1100 B&S set & Begin @ TW-76
- Unknown Caucasian pull over to ask what we where doing & if he could see the report once our work was done,
- Told him that he should talk w/ my PM, Doug Mich, and give him that contact number.

Location _____ Date _____

Project / Client _____

1120 - Done Boring, ~~S~~TW-76
w/ Auger down after Lunch

* Sampled TW-76, 13-15' @ 11:20 *

- 11:30 B&S offsite to get supplies & decon Augers.

- 11:50 Dave w/ B&S back onsite to place cement pad in TW-75. Will stay onsite while MWH Personnel grab Lunch to bring Back

- 11:55 MWH offside

- 12:30 MWH Back onsite.
B&S Has Augered & set TW-76

Location _____ Date _____

Project / Client _____

TW-76

TD Borehole 14.9
10' (uncut) screen
5' riser
Sand 3.8' - 14.9
Bentonite 1.2' - 3.8'
Cement & vault to surface.

12:50 B&S Cleans up & prepares to complete TW-76 w/ cement & vault

115 B&S Sets up @ TW-77
- Begins to push for Boring.

Sample TW-77 @ AB-20' @ 1420
TW-77 @ 20-22' @ ____

Location _____ Date _____

Project / Client _____

215 Done w/ TW-77
B&S Begin to turn Augers to complete well
- MWA to process samples

TW-77
1" casing.
TD Borehole: 22.3'
Screen = 15' uncut
Blank - 7'
Sand 5.8-22.3
Bentonite 1.1'-5.8'

2:40 - B&S Begin to set well (TW-77)

Location _____ Date _____

Project / Client _____

3:30 B&S Sets up @ TW-78
3:30 - Begins soil boring

4:17 Done w/ TW-78 sampling Boring.

TW-78 Sample When 16-18 @ 16:30

B&S will Auger & install well tomorrow.

- B&S & DaveB & MATTW offsite @ 4:35 - Back to office.
- Doug M still onsite.
-

12-7-07

Location EL DORADO Refining Date 12-10-07

Project / Client EL PASO

* All equipment to be decomed between uses.

Onsite w/ B&S - 1:30

Cold, Rain, 30°

MWH: DaveB, MATTW, Scott H.
B&S: Doug

1:40 Safety meeting w/ B&S -
- Cold
- trip/slip
- Decon
- PDE

1:50 Calibrate PID w/ ISOGAS
- B&S Sets up @ BH-87

MWH Sample BH-87, 0.5-1.5' @ 1350

B&S is using 5410 Geoprobe.

Location _____ Date _____

Project / Client _____

2:05 BGS Sets up @ BH-86

MWH Samples BH-86, 0.5-1.5' @ 1420

2:15 BGS Sets up @ BH-88

MWH Samples BH-88, 0.5-1.5 @ 1430

3:00 Move to South Tank Area
BGS Sets up. BH-27

MWH Samples BH-27, 0.5-1.5' @ 1510

3:15 BGS Sets up @ BH-26

MWH Samples BH-26, 0.5-1.5' @ 15:30

Raining hard now

Location _____ Date _____

Project / Client _____

3:25 - BGS Moves to BH-25

BH-25 MWH Samples 0.5-1.5 @ 1545

3:40 BGS sets up @ BH-28

MWH Samples BH-28, 0.5-1.5' @ 1550

Raining still -

3:50 BGS offsite for Day
- MWH to process samples

Location

Date 12-12-07

Project / Client

onsite w/ Geocore 8:45

Cold, ICEY, 20-30's

Onsite: Dave B, Roy M, CALVIND, Dave G, Danny P

8:55 MWH Calibrate PID w/ ISO GAS.

9:10 H&S meeting w/ Geocore
- Cold
- Slip Trip
- BTEX

9:20 Geo begins to Break off ICE & ready for continuing TW-42

NOW

Location

Date

Project / Client

9:30 Geocore has Air Leak
- Geocore trying to Fix problem.

9:40 Start to continue TW-42
Rig not @ 100% power.

10:30 Done Drilling TW-42. @ 28.4'
@ Limestone.

10:30 Geocore begins to complete TW-42 w/ 15' of screen, & Sand

TW-42

Screen: 15' uncut.	Riser:
TD: 28.4 Borehole	Stick up ht: 2.71
Sand: 11.95 - TD	TD: Well: 31.32
Bentonite: 2.1 - 11.95	Start: 20.91

11:15: Geocore begin placing holeplug.

11:40 Done completing TW-42.
- Will move to TW-48

Location _____ Date _____

Project / Client _____

11:50 Set up @ TW-48
- Brad Grim onsite to replace Roy M.
- Roy M. to go home to Houston.
- MWH Transfer material to & from Trucks

12:00 Geocore begins TW-48

12:30 Geocore hits Lime @ 5.6'
- Install Rock Bit

* Sampled 0-2' Shortset BTEX, GRO, DRO, metals @ 12:15

2:00 Drilling @ 26.0' - Hard drill TW-48

TD Bore:	28.4'	Sand	11.9'
TD Well:	31.50	Bentonite	2.2' - 11.9
Screen	15' Uncut	Casing Ht	3.10
Riser		Water:	6.74

Checked 12-13

Location _____ Date _____

Project / Client _____

2:15 Geocore begin to complete TW-48.
- 15' screen. (not cut)
- Sand (10/20)

2:50 Geocore done placing sand pack begin to Bentonite TW-48

3:00 Geocore pull last auger -
- casing pulled approx 1'
- Geocore managed to ~~ko~~ get it down,
- Will come back to do Static & TD @ AS H_2O is to turbid to register on probe.

3:15 Geocore off to decon Augers
- Rig Moves to TW-56'
-

Location _____ Date _____

Project / Client _____

3:30 Mast up - prepping to start TW-56.

—

400 Push First tubes for 0-2'

* BTEX, GRO, DRO, Metals @ 0.5-2' @ 1607

418 Geocore offsite for dry
- MWH process samples
- clean up.

420 MWH offsite to office

Location _____ Date _____

Project / Client _____

Location EL DORADO Date 12/13/07

Project / Client EL PASO

Onsite: 755 w/Geocore

800 H&S meeting
- COLD
- PPE
- Slip/Trip

810 MWH calibrate Mini RAE 2000 w/ ISO GAS,

onsite: Dave B, Brad G, Dave G. & Calvin D

* Notes

* Auger & equipment deconed between uses
* Stainless steel bowls used to mix samples before processing
* All bentonite hydrated.
* All Sand 10/20 silica

Location Date

Project / Client

8:15 Warmup Rig & Ready to continue TW-56.

8:30 No second spoon due to Rock/Gravel, Logged through Augers Gravel & Clay Will try spoon & 5'

8:30 Bill Pickens onsite
8:35 Bill Picken offsite

901 Brad G offsite to do GPS work

9:10 Geo continue to drill, now at 15'

9:30 Brad G Back onsite,

1010 Geo show H_2O @ 25' Approx Drilled to 30' to set well

Location _____ Date _____

Project / Client _____

TW-56

(0.00)	Screen	15' uncut	B.TD	~~30.1'~~	30.5'
	Riser	~~3.15~~	W.TD	33.35	
	Casing ht.	3.15	Sand:	13.9' - 30.5'	
checked 12-13-02	Static:	11.75	Bentonite:	1.8' - 13.9	

10:15 - Geocore begin setting well w/ 15' screen & 10/20 Sand Pack.

10:30 Geocore having minor issue w/ sand pack bridging, one of them went to Approved H_2O sourse to bring water

1045 Geocore has will have to redrill hole to set casing. Geocore pull casing & ready to redrill.
- Bill Ponsite

1050 Bill P offsite.

Location _____ Date _____

Project / Client _____

1100 Geocore begin to redrill TW-56.

1130 - No good, Geo~~pro~~core cannot set well due to hole being to "thick"
- Dave G. Suggests that if we want a better well we should offset & Redrill next to TW-56

11:50 Geocore pull augers & the hole is measured to Be 30.6', they asked if ~~the~~ open hole completion was ok.
- Consulted w/ Doug M. via phone regarding open hole completion of TW-56. It said if I am sure the hole is down 30' to go Ahead.
- Remeasured TW-56 Bore hole = 30.5'
- I told Geocore to begin completion TW-56 in the open hole.

11:55 Geocore begin placing casing & sand pack @ TW-56

Location _____ Date _____

Project / Client _____

12:05 Geocore done completing TW-56
— Clean up for Lunch.

12:50 Back onsite

12:55 Geocore setup @ TW-58

100 = Push first spoons @ TW-58

* Sampled 0.5-2', @ TW-58 @ 1300

130' Geocore hit Limestone At 2.3
Attempted 5' spoon @ 5' BGS
Recovered 0.3' of Limestone; placed
Rock bit on & drill.

Location _____ Date _____

Project / Client _____

230 Drilling @ 22.5' - Hard drilling

3:10 Bill Pickens & Doug m onsite
— Geocore to drill to 35' to look for water, but Bill D thinks that is not nessesary and we should set the well @ 30. TD = 30.1
— Bill & Doug offsite

3:15 Geocore begin to set well TW-58 w/ Casing & Sand.

TW-58

Screen = 15 ft (in cut)	B. TD = 30.1
Riser =	W. TD = 33.48
Sand = 13.9'-30.1	Casing Ht: 3.56'
Bentonite: 2.1'-13.9'	Static: 14:16

checked 12/14/02

3:45 Geocore Begin placing Bentonite Seal.

4:00 TW-58 complete - Geocore clean up for move off hole

Location _____ Date _____

Project / Client _____

4:15 Geocore moves rig to TW-70 for work tomorrow

4:20 offsite to office

Location _____ Date _____

Project / Client _____

Location: EL DORADO Date: 12/14/07

Project / Client: EL PASO
TW-Install

Onsite 8:10
- Geocore onsite

8:20 H&S Meeting
- Cold
- Slip trip
- BTXEX
- PPE

* Notes

8:30 MWH Calibrate PID w/ ISO GAS, - ok

9: Geo core sets up @ TW-70

8:40 Rig stuck in Tank Scar
- Rig cannot move due to material in scar
- Offsite to get help w/ Trench hoe

Location Date

Project / Client

- USA Agrees to use trench hoe to get the Rig out of the tank Scar @ TW-70.
- Need to let trench hoe warm up & get gate open.
- TW-70 will need thought on how to get the rig into tank scar or another drilling Avenue.

900 - USA Hooks up to Rig to pull it loose from sand.

905 - Rig Free
will move TW-62 for drilling & install

910 Rig at TW-62
- Mast up

Location _____ Date _____

Project / Client _____

915 Geocore begins TW-62

* Sampled TW 62, 5-20' @ 9:30; DRO, GRO, BTEX, Metals

0946 Geocore hit Limestone @ 7.6'

1015 @ 15'

1040 @ 20'

10:55 @ 25'

11:15 @ 30' Stop drill
- Geocore begin to set up to complete TW-62 w/ 15' screen.

TW-62	Screen	15' (uncut)	Product:	—	odor malfunction probe?? Visual Product
10/20 →	Sand	12.1'-30.2	Static	14.55	
	Riser:		B-TD	30.2'	
gauged 12/14/07	Case ht:	3.01	W-TD:	31.14	
	Bentonite	2.1'-12.1'			

Location _____ Date _____

Project / Client _____

11:20 Geocore Begin to set Well -

12:05 Geocore finishes completion of TW-62

- Geocore to clean up & decon the leave site for weekend.

- MWA offsite 12:10
- Geo core offsite @ 12:10

12-14-07

Location EL DORADO Date 12/17/07

Project / Client ELPASO
TW-install

11:15 Geo core & MWH onsite

Geo core fills tank w/ H2O
Ready for work

11:30 HAS meeting.

11:45 MWH Calibrates PID w/ Isobutylene

11:50 Geocore moves to TW-69

12:00 Geocore begin to drill - TW-69

* Sampled TW-69-0.5-2.0' @ 1215
BTEX, DRO GRO, Metals.

Location Date

Project / Client

12:25 Geocore hits Limestone @ 5.4'
Begin lossing off augers.

12:45 Geo core try to push spoon
@ 12.5'-10' - No good still
Limestone, Back to lossing off
Augers

12:55 Drilling @ 15'

1:10 @ 20'

1:35 @ 25'

TW-69

Screen: 15 (uncut)	Static: 13.39
Sand: 13.8 - 30.1	Product: —
Bentonite: 2.2' - 13.8	B.T.D: 30.1'
Riser	W.T.D: 33.14
Casing H: 3.37	

1:45 @ 30' Geo core to set well @ 30'
Geocore begin to ready for well completion

Location _____ Date _____

Project / Client _____

2:00 Geocore begin placing sand pack & completion TW-69.

3:00 Geocore done completing TW-69 - Begins to demobs.

3:10 Geo core line up @ TW-66 offset 3.5 W & 1' North of original location due to Rubble.

- Geo use cement Bit to Bust through cement @ TW-66

3:40 Geocore to stop for day @ 5' MWH to process samples.

Location _____ Date _____

Project / Client _____

* Sampled TW-66 -0.7-2.0 @ 1540 BTEX, DRO, GRO, Metals,

4:00 Geocore offsite
- MWH finish samples
- Cleanup & offsite.

4:10 offsite

12/17/07

Location EDR Date 12/18/07

Project / Client EL PASO
TW- Install

8:05 Geocore & MWH onsite @
TW-66

8:10 H&S meeting
- Slip trip
- Cold
- BTEX

8:00 MWH Calibrates PID w/
ISO GAS.

Notes:
All equipment deconed between uses
All units measured,
All Samples homogenized in stainless
steel Bowl.

Location Date

Project / Client

8:20 Geocore continue drilling @ TW-66

900 @ 20' Hard Drilling.

9:20 @ 25' saturated w/ Product & H2O
@ Approx 22'
will drill down to 27.5'
& set well.

TW-66

- Screen = 15' (new)

Sand: 11.0' - 27.1'	B.TD = 27.1
Bentonite: 1.9' - 11.0'	WTD = 26.40
Riser:	Static: 8.91
Casing Ht:	Product: 8.88

930 Geo core begin completing TW-66
w/ 15' screen

Location _____ Date _____

Project / Client _____

1035 Sand Pack & Bentonite placed.
Well has product will measure
@ end of day.

1040 Geocore need to buy diesel for
Rig & Trucks,
MWH to take bagged 25-27
sample to office for seperate
cooler. (In snow right now)

1040 MWH offsite -
1100 Back onsite to check static in
TW-69
- Geocore decoring & gasing up.

1130 Geocore onsite, line up w/ TW-65
must offset due to rubble
moved 11'W & 3.5'N of original
location

Location _____ Date _____

Project / Client _____

11:45 Geocore begins @ TW-65

Rubble hinders spoon recovery @ 0-2

Sampled 2-3' @ TW-65 @ 12:00
BTEX, GRO, DRO, metals
& MADEP

Hit Limestone @ 5.6': off Augers now

Hit H_2O @ 10' - good H_2O coming
up through Augers.

12:20 After consulting w/ Doug M. will
Drill to 13' & set 8' screen to
5',
TW-65

Screen: 8.0'	
Sand: 3.85'-13.0'	B.TD: 13.0'
Bentonite 2.1'-3.85'	W.TD 15.45
Riser	Static: 6.07
Casing Ht: 2.78	Product -

Location _____ Date _____

Project / Client _____

12:40 Geocore begins to set well @ TW-65

1:20 Geocore finish up completing TW-65
- Begin to clean up.

130 MWH & Geocore offsite
- Geocore to decon
- MWH to process samples

12/18/07

Location EL DORADO R. Date 12-19-07

Project / Client EL PASO
TW-Install

7:50 Geocore & MWH onsite

8:00 H&S meeting
- BTEX
- ICE & Mud
- Slip trip.
- Equipment

8:15 MWH Calibrate PID w/ ISOBUTS

*Notes

Location _____ Date _____

Project / Client _____

8:15 Geocore get ready for work
- We will start @ TW-64
- Dave6 set up Rig @ TW-64
- Geocore (Calvin) to set H_2O

8:40 Start TW-64

* Sample TW-64 @ 0.5-2.0 @ 0900
BTEX, C-20, DRO, Metals
MS/MSD taken some
Duplicate taken some

9:15 Geocore hits Limestone @ 6.1'
Start sample off Augers

9:23 Geocore try spoon @ 7.5 due
to soft zone - no good, rock.

Location _____ Date _____

Project / Client _____

0930 Water @ Approx 11'
Will Drill to 15' & set well
TW-64 w/ 10' screen.

TW-64

Screen: 10' (uncut)	B. TD - 14.9'
Sand: 3.9-14.9'	W. TD - 18.28
Bentonite: 2.2'-3.9'	Static: 7.21
Riser	Product: —
Casing Height 3.28	

0945 Geocore begin to set well @
TW-64.

10:25 Geo core done completing TW-64
- MWH to process samples
Before move on.

Location _____ Date _____

Project / Client _____

10:30 Must offsite to ~~change~~ get new cooler & Drop of sample

1100 More Rig to TW-60 – Hard Fit.

1110 Start TW-60

* Sampled TW-60, 0.5-2.0 @ 1120 BTEX, GRO, DRO, metals

1140 Geocore hit Rock @ 5.7'

1200 Geo core hits 'soft' zone @ 11' try to push spoon but no penetration. – Keep logging off augers.

12:15 Geo core hit H2O approx 16.5' Will continue to Drill to 20

Location _____ Date _____

Project / Client _____

then set well @ 20', 15' screen

12:25 Geo core begins to complete TW-60 @ 20'

1235 Geo having some issue adding sand Pack – claims no problem.

TW-60

Screen: 15 (in out)	
Sand: 3.8'-20.1'	B. TD: 20.2
Riser:	W. TD: 23.03
Bentonite: 2.0-3.8'	Static: 5.42
Casing height: 3.38	Product: –

2:05 Done setting well, Geocore begin to clean up for move.

Location _____ Date _____

Project / Client _____

110 Check out TW-50, possible water line in area.
- Called (Alan G) USA for advice,
- Alan want to come out & check location.
- Confirm this w/ Doug M.

115 Geocore are to decon Augers & equipment.
- MWH Sample processing
- Alan on his way

1:50 Talk w/ Alan, he is 15 min out. will start TW-50 once cleared w/ Alan G.

2:10 Alan G onsite - TW-50 good.

Location _____ Date _____

Project / Client _____

215 Attempts to setup @ TW-50 Failed due to mud. Rig Almost stuck.

2:25 Move Rig to TW-63, Location moved ____' & ____' from original location due to flooded tank scar. Suggested that we have Local GPS due to distance & Grade.

2:35 Start TW-63

Sample taken @ TW 63 @ 0.5-2.0 @ ~~2:45~~ 14:45

Hit Limestone @ 2.5' off Augers.

3:45 @ 20' sli Moisture will shut down for day. Come back in morning.

Location _____ Date _____

Project / Client _____

3:45 (cont) Geocore begins to clean up for day.
- MWH off to check statics in TW-66 & 65

400 offsite to office
Geocore offsite.

[signature]
12/19/07

Location _____ Date _____

Project / Client _____

Location EDR Date 12/20/07

Project / Client EL PASO
TW-INSTALL

7:55 Geocore & mwH onsite

8:00 Safety meeting
- ICE mus
- Slip Trip
- Melab

8:15 Calibrate PID w/ISO GAS.
- Geocore starts/continues TW-63.

8:20 Geo core hits H_2O @ Approx 11.5 will Drill down to 25' & set well.

- ~~Ge~~

8:30 Geo core begin to set TW-63 w/ 15' screen, @ 25.0

Location Date

Project / Client

TW-63

Screen: 15' (uncut)	
Sand: 8.8'-25.0'	Static: 7.09
Bentonite: 2.0-8.8'	Product: —
Riser:	BTD: 25.0'
Casing Ht: 3.11'	WTD: 27.11

8:45 Geo core is having trouble w/ sand sticking in Augers, Dave G asked to pull & set well open the rest of the way, I okay'd with his promise Well would be ok.

9:15 TW-63 complete.
- Will check out TW-50

Location _____ Date _____

Project / Client _____

0934 Geocore sets up @ TW-50

0935 Start TW-50

0950 Geo core hits what appears to be cement @ 2.5', under Doug M advice WE will offset.
Total hole 3' Deep to be plugged by Geo core

Will Move 10' N of original location

10:05 Start TW-50 @ New location
- No good spoon hits Concrete @ 2.0'
- Will move over to 3rd location
- ____ & ____ of original
Well should be GPS in.

10:40 Read base & Sand to 2' @ new location
- then Drillers hit an unknown metal object.

Location _____ Date _____

Project / Client _____

After consulting w/ Doug was told to stop for now to reattempt TW-50

10:45 Geo pick up -
- Will take Drivers w/me to look @ TW-41 & 70.

11:09 onsite @ TW-41 w/ Rig waiting on decoding of Augers to begin.

11:40 Start TW-41

Sampled TW-41 @ 0.5-2.0 @ 11:55
BTEX, GRO, DRO, Metals
MS/MSD
& Duplicate

1145 Mike G & Doug M. onsite for Safety Audit. No problems.

Location _____ Date _____

Project / Client _____

12:55 Rig has broken Bracket that holds up the cylinder, results in no up or down movement, Dave G says this is a large repair. No more work at this time, ~~Breaker~~ Broke @ 22' BGS

100 Call Doug M. – he is on his way

105 Doug onsite.

113 Geocore doing Field repair to lift Assembly off Sugers Rig w/ have to go back to Salina for repairs.

120 Geo has mast down & is ~~ready~~ getting rig for Travel.

Location _____ Date _____

Project / Client _____

150 offsite – to office

Location EDR Date 12/21/07

Project / Client EL PASO
TW-INSTALL

Onsite - 9:15 w/ Geocore

9:30 H&S meeting

9:40 MWH Calibrate PID
w/ ISO GAS.

- Plans to finish TW-41.
Geocore has brought a GUSPECH
GP-1000
- Geo ready to complete TW-41

TW-41

Screen: 10' uncut
Stand 10.9'-22.1' Slotted:
Bentonite 2.0-10.9' B.T.D: 22.1'
Pacer W.T.D: 20.35
Casing Ht: 2.84 Product:

~~TO turbid to register~~

Location Date

Project / Client

10:45 Geocore done completing TW-41
They Begin to clean up for decon
& to head back home.

- MWH to Gauge wells &
Clean out trough

- TW-41 Probe won't register H_2O
- too turbid

Location EDR Date 12/21/07

Project / Client EL PASO
TW-INSTALL

Onsite - 9:15 w/ Geocore

9:30 H&S meeting

9:40 MWH Calibrate PID
w/ ISO GAS.

- Plans to finish TW-41.
Geocore has brought a GUS PECH
GP-1000
- Geo ready to complete TW-41

TW-41

Screen: 10' uncut	
Stand 10.9'-22.1'	Static:
Bentonite 2.0-10.9'	B.TD: 22.1'
Pacer	WTD: 20.35
Casing Ht: 2.84	Product:

~~TO turbid to register~~

Location Date

Project / Client

10:45 Geocore done completing TW-41
Begin to clean up for decon
& to head back home.

- MWH to bring wells &
Clean out trough

- TW-41 Probe won't register H2O
- too turbid

12/21/07

Location EDR Date 1/10/08

Project / Client EL PASO
BH-Borings.

0750 MWH onsite
- Dave B. & Matt W.
Load up
Wait on BGS.

8:30 BGS onsite - CRAIG & Brian

8:40 H&S meeting
- slip trip
- weather.

Drill Rig: 6620DT
MWH Calibrate PID w/ ISOGAS.

Notes
all samples mixed in stainless steel bowl.
all equipment deconed between uses.

Location Date

Project / Client

900 BGS & MWH onsite @ STF.
BGS sets up & removes Rig from Trailer.

0920 BGS sets up @ BH-046

9:30 Sample BH-046 @ 0.5-1.5'
pid: 0.0 ppm
dsc: Brn silty Clay, No odor, Very moist
Roots, Med plastic.

0930 BGS moves to BH-045

09:45 Sample BH-045 @ 0.5-1.5'
PID: 16.5
DSC: Brn-silty Clay, moist, no odor

950 BGS moves to BH-044; moved 20' east & N of original.

1/10/08 Dal Bec

Location _____ Date _____

Project / Client _____

1010 Sample BH-044 @ .5-1.5'
PID: 1.1 ppm
DSC: Brn, soft, silty Clay, plastic
No odor, very moist

1000 BGS Moving to BH-042 -
which is in pond/wetland area
they will try and move to Eastern
edge of tank area or to edge of tank
pad if that is not feasible

- 30' E & ON of original

10:30 Sample BH-042 @ 0.5'-1.5'
PID: 1.4 ppm
DSC: DRK Brn/GRY; Very Moist to wet, silty Clay
No odor, Soft.

10:30 BGS heads to BH-40
- BH-40 in water & no steak found
- Will place in new position
& may have to be measured

Location _____ Date _____

Project / Client _____

of TW or Surveyed.
100' west of Corner & 100's of TW -

1045 Sampled BH-040 @ 0.5-1.5'
PID: 1.2 ppm
DSC Brn, very moist, silty Clay, very sli
odor, soft, plastic, few Black stains

1100 Discuss w/ Craig w/ BGS the issue
of ponds in ~~tank~~ tank & scars
around TW-35 & 31 locations
Stakes are not placed in original
planed location ~~so~~ & should be
where the water now is. After
Consulting Doug M. we will Attempt
to recover as many samples
in what locations are available
BGS will stake new locations for
GPS or survey to be done showing
locations.

1/10/08 Del L Bellman

Location _____ Date _____

Project / Client _____

11:15 BGS attempt to get 2 locations in TW-35 Tank scan.

~~BH~~ BH-50 in SW corner of TW-35

11:30 Sample @ BH-50 @ 0.5-1.5'
PID: 0.7 ppm
DSC Drk Brn/silty Clay, needs wet, soft, ~~st~~ med plastic

11:45 BGS moves to BH-51 to be staked & GPS'ed location in SE corner of TW-35 scan
sample BH-51 @ 0.5-1.5'
PID: 0.9
DSC: Gry/Brn to Brn, very moist silty Clay, Limestone @ 2.4
No odor.

Location _____ Date _____

Project / Client _____

1150 BGS @ BH-48 -
Hit Refusal @ 0.8' @ three near locations
Will move over South of original Locations to try again.

1210 Sample BH-48 @ 0.5-1.5'
PID 0.2 ppm
DSC. Limestone @ 1.5'; gray to lightgray clay, silty, very moist, No odor
Soft, Plastic,

12:15 Begin packing up for lunch

12:20 offsite w/ BGS -

1:10 Back onsite to load up more gear & move to STF

1/10/08 Dal Baker

Location _____ Date _____

Project / Client _____

1:30 BGS @ BH-22

1:40 sample BH-22 @ 0.5-1.5'
PID: 0.2ppm
DSC: Brn; silty Clay, moist, No odor
med soft to soft. Roots, plastic

1:45 BGS @ BH-23 - push @ Location

1:55 sample BH-023 @ 0.5'-1.5'
PID: 0.2ppm.
DSC: Dk Brn turning Brn; silty Clay
No odor, moist, tree roots,
Plastic,

1:50 BGS @ BH-024

2:10 sample @ BH-024 @ 0.5-1.5'
PID: 0.0 ppm
DSC: Brn, silty Clay, soft med soft
No odor, plastic, moist,

Location _____ Date _____

Project / Client _____

2:20 BGS & MWH @ OIL LAND FARM
- MWH check for oolitic nodules
- Found two small patches.
- Will place one BH-(143) at that location
- Will place others in a straight line Northward throughout Land farm.
- All location staked for GPS

2:30 BGS @ BH-143

2:45 Sample BH-143 @ 0.5-1.5'
PID: 0.0 ppm.
DSC - Brn silty Clay with oolitic nodules at surface, moist, No odor.
roots, plastic, medstiff

2:50 BGS @ BH-144 -

1/10/08 Del Ballin

Location _____ Date _____

Project / Client _____

2:55 Sampled BH-144 @ 0.5-1.5
PID: 0.0ppm
DSC: BRN, silty clay, moist, No odor
roots, plastic, med stiff

2:55 BGS moves to BH-145 @ North
end of Landfarm

3:10 Sampled BH-145 @ 0.5'-1.5'
PID: 0.0ppm
DSC BRN, Silty Clay, moist, No odor
plastic, roots, soft.

3:30 Pack up for day will do
TW-? & Shelby Tube tomorrow

- BGS back to office
- MWH Back to office.

Location _____ Date _____

Project / Client _____

1/10/03

Location EDR Date 1-11-08

Project / Client EPASO

BGS & MWH onsite 8:15

8:30 H&S meeting
- slip trip
- decon & safety

8:40 MWH Calibrate PID w/ ISO GAS.
- BGS Gears up to Attempt to install TW-LF

8:45 Start TW-LF

TD - 4.9'

- No well to be installed
- BGS Plugs TW-LF w/ Bentonite
- No samples due to Low PID

Location Date

Project / Client

9:00 BGS & MWH pack up to go

9:05 BGS & DaveB. onsite @ TW-13 to do GP-01 (Shelby tube)
MaH W. off to GPS.

9:10 BGS sets up 5' south of TW-13 to do GP-01

9:15 BGS Auger Flight down to 0.5'

9:20 BGS Pushes Shelby tube @ GP-01
Successful tube - 0.5-2.8'

Labeled by MWH
BGS will wax plug @ office @ ERD
BGS PLUGS GP-01

9:30 Move to TW-13

9:35 Arrive @ TW-20 Location

1/11/08 DL Baker

Location _____ Date _____

Project / Client _____

9:35 GP-02 is 5' South of TW-20
- B&S sets up to do GP-02

9:40 B&S Auges to 0.5'
- Push GP-02 to 2.7'

9:45 Successful tube.

MWH Labels Tube
- B&S Plugs GP02
- Pick up

9:50 Move to TW-30

9:55 Arrive @ TW-30
GP-03 will be 5' West of TW-30
No well @ TW-30
- B&S Sets up.

10:00 Start GP-03
- Auger to 0.5'
- Push GP03 - Tube

Location _____ Date _____

Project / Client _____

- Hit Rock @ 21.5'
Bent tube.

10:05 Consult w/ Doug M.
- will move location to TW-27
- B&S Plugs GP-03 here @ TW-30

10:15 Arrive @ TW-27
GP-03 to be 5' South of TW-27

10:20 Start push @ GP-03
Auger to 0.5'
Push to 2.7'
Successful Shelby Tube @ GP-03
B&S Plug GP-03

10:30 Arrive @ BH-129

10:35 Start GP-04 5' South of BH-129
- Gravel - to 2'
No good for Shelby Tube
B&S Plugs hole.

1/11/08 [illegible]

Location _____ Date _____

Project / Client _____

10:40 talk w/ Doug M regarding moving GP-04 to near BH-130. He agreed.
- BGS moves over to BH-130
- Will place GP-04 5' South of BH-130.

10:55 Auger down to 0.8' @ GP-04
push 0.8 to 3.0'.

- Shelby Tube broke @ Bolts.
- BGS work on pulling it out.

11:15 Shelby pulled out, slight odor
Black Clay, Gas odor.
MWH Labels tube
BGS plugs hole.

- After consulting Doug M
Due to Contamination we will try
Another Tube @ SB-07

Location _____ Date _____

Project / Client _____

11:50 Arrive @ SB-07
will put GP-04 5' North of SB-07

11:55 Start GP-04
Auger to 0.5'
Push 0.5 to 2.8'
Successful Tube -

MWH Labels tube
BGS Plugs Boring.

12:05 Move to BH-136
Will place GP-05 5' South of BH-136

12:10 - ~~with~~ Start GP-05 -
Auger .8' gravel.
- No Good for Tube

1/11/08 Dd Bolton

Location _____ Date _____

Project / Client _____

12:30 move to TW-69

12:40 Arrive @ TW69
- ~~[illegible]~~ GP-05 will be
1' N & 5W' of TW69

12:55 start GP-05
Auger to 0.5
Push 0.5 to 2.0'
only Recovered 1.5'
will send to lab as last
tube BGS has.
Limestone @ 2.0'

~~W~~ GP-05 labeled by MWH
Hole plugged by BGS.

105 Clean up to head back to office
BGS to Wax seal Tubes.

Location _____ Date _____

Project / Client _____

115 BGS & MWH Back @ office
BGS Finished WAX sealing All
five Shelby Tubes.

1/11/08

Location EDR Date 1/22/08

Project / Client

900 H&S meeting w/ BGS
— Craig onsite
Onsite w/ Rig GPDT @ 9:30

Start TW-47 @ 9:35

10:15 Sample 0.5-2' @ TW-47
for BTEX, GRO, DRO, Total metals
Do MS MSD / dup @
0.5-2.0'

10:15 BGS Refusal @ 8.3'
w/ Screen 5'
Screen set @ 8.3 - 3.3
Less than 0.5' sand over screen
Bentonite up.

TW-47
10:50 Sample 5-6' for BTEX, GRO, DRO
& metals.

Location Date

Project / Client

* TW-47

Screen: 8.3 to 3.3' B. Depth: 8.3
Sand: 8.3 to 2.9'
TOCR CASE Ht. 2.91
DTP =
TD =

1100 Titan onsite w/ well materials
— BGS to work w/ them to
drop off materials

1140 BGS offsite for Lunch & supplies
MWH stay onsite.

12:20 BGS Back onsite.
Move Rig to TW-45
12:30 Start TW-45

1/22/08 [illegible]

Location _____ Date _____

Project / Client _____

12:50 Sample TW-45 @ 0.5-2.0'
BTEX, GRO, DRO & metals

- B6S Begin to Auger to set well
@ TW-45 - 5' screen
TD - 9.9' (microcore) - 11.2 w/ Auger

13:00 Sample TW-45 @ 6-8'
* BTEX, GRO, DRO; metals

TW-45	
Screen: ~~5.0~~	Sand: 11.2-4.6'
TD.B = ~~10.2~~ 11.2'	Bent: 4.6-1'
TDW =	DTP
TOCE =	Casing ht:

200 MWH offsite to process samples,
B6S cleans up.

[signature] 1/22/08

Location _____ Date _____

Project / Client _____

Projects (continued)

El Dorado Refinery (EDR), El Dorado, KS
Phase III Investigation
Asphalt Handling Area (AHA) KHW
12/12/07

0738 Karin H. Wilhelm (KHW) of MWH arrived on site in OSHA Level D PPE and checked in ~~14~~ 10/12/07 at site office.

WEATHER: Overcast, 20°F, ground frozen.

0814 KHW calibrated PID for monitoring breathing zone and field-screening soil samples. USA is having trouble starting backhoe. KHW is assisting Matt P. Warner (MPW) of MWH with locating other soil investigation points.

0950 KHW conducted tailgate safety meeting with Matt Warner (MPW) of MWH and Wesley McMillian of USA.

1000 KHW called Bill Tickens. Bill left voice mail agreeing w/ plan to collect one "bucket scoop" per 2-ft interval due to size of bucket

12/12/07 AHA Soil Sampling KHW MPW

TR-01 Start: 10:31 End: 10:48

TIME	DEPTH	SOIL DESCRIPTION
1032	0-2 ftbgs.	Fill, Brown, and black, loose w/ up to 1-ft long clumps of very stiff but friable black material, moist, predominantly fine grained, clumps have medium cementation, overall nonplastic w/ some loose material having medium plasticity, slight odor, roots present.
1038	2-4 ftbgs.	Clayey Fill, Predominantly black with some brown, predominantly dry to moist very hard, moderate cementation, high plasticity, roots present, moderate odor - ammonia-like.
1048	4-6 ftbgs.	Silty clay CH, olive brown, very stiff, moist, trace coarse gravel and cobbles of limestone bedrock, weak to moderate cementation, high plasticity. fine roots
	6 ft bgs	Excavator Refusal on top of bedrock.

12/12/07 AHA SOIL SAMPLING KHW/MPW

TR-01 Trackhoe/MiniRae

DEPTH	PID VALUE	PID TIME	SUBMIT FOR ANALYSIS	ANALYSES
0-2	0.0/0.0	1152	N	None
2-4	72,000/25	1211	Y	BTEX, TPH-GRO, TPH-DRO, mod. Skin. metals
4-6	463/03	1217	Y	BTEX, TPH-GRO, TPH-DRO, metals.

Submitted TR-1-2-4 and TR-1-4-6 for laboratory analysis.

1050 KHW checked breathing zone w/ PID. Ambient air = ~~0.0~~ 0.3 ppm KHW 12/12/07 Soil in bucket (4-6 ftbgs) = 0.4 ppm KHW 12/12/07 Soil on plastic (2-4 ftbgs) = 0.5 to 0.7 ppm.

1120 KHW took pictures of bottom of TR-01 facing south, and then of boulder removed from bottom of trench, facing south. KHW also photographed each 2-foot interval with labels.

1130 Wesley filled excavated trench TR-01 with excavated soil.

1147 Checked PID, ambient air = 0.0 ppm Charged filter on PID, as it seemed to be reacting to high moisture giving increasing (continuously) readings.

12/12/07 AHA Soil Sampling KHW/MPW

1208 Recalibrated PID.

1252 KHW/MPW finished ~~jarring~~ KHW (12/12/07) Containerizing TR-01 samples.

1300 Doug Mick, MWH, field screened soil samples w/ Mini-Rae PID.

1305 KHW/MPW off site for lunch.

1350 KHW/MPW back on site

1435 Wesley backfilled TR-02.

1451 KHW checked calibration of MiniRAE 2000 PID.

1520 KHW field screened TR-02 sample w/ MiniRAE PID.

1626 Wesley Finished backfilling TR-04 excavation. Off to decon bucket w/ steam cleaner as has done between each trench.

1700 Chris Fitzgerald and Bill Pickins of MWH on site.

12/12/07 AHA Soil Sampling KHW/MPW

TR-02 Start: 1415 End: 1417

Time	Depth	Soil Description
1417	0-2	Silty clay (CL), orange brown, soft to medium stiff, moist, weak cementation, medium plasticity, roots, with clumps of black fill asphalt material, very hard, dry, strong cementation, nonplastic. with some glassy black appearance.
	2	Backhoe refusal on top of white limestone bedrock. 4-foot steel tube resembling drilling soil sampler was extruding from west excavation trench wall 0-1 ft. bgs.

TR-02

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	0.5	1520	Y	BTEX, TPH-GRO, TPH-DRO, metals

Submitted TR-2-02 for laboratory analysis.

Submitted two extra sample set volumes for MS/MS analysis

TR-2-0-2 MS : TR-2-0-2 MSD

Submitted duplicate sample set TR-2-50 (1447).

12/12/07 AHA Soil Sampling KHW/MPW

TR-04 Start: 1553 End: 1604

TIME	DEPTH	SOIL DESCRIPTION
1559	0-2	Silty clay Fill, dark brown, dry to moist, weak cementation medium plasticity when wetted, with small to large (>1ft) chunks of black asphalt fill, very stiff, strong cementation, dry.
1601	2-4	Silty clay Fill, predominantly dark brown with black and dark gray, moist to wet, soft (loose) friable to very stiff (large chunks of clay), medium plasticity, weak to medium cementation, with roots with roots. with white to yellow coarse subangular limestone gravel w/ small to large (>1ft) chunks of asphalt (as described 0-2). Black clay has odor
1604	4-6	Silty clay (CL), predominantly red brown with some dark gray to black, chunks of clay soft,

12/12/07 AHA SOIL SAMPLING KHW/MPW

TR-04 Continued

TIME	DEPTH	SOIL DESCRIPTION
1604 con't	4-6 con't	con't... moist, weak to moderate cementation, medium plasticity when wetted, with fine roots, with cobbles of white-yellow limestone bedrock, trace black asphalt (gravel to cobble size), black clay has odor.
1604	6	Yellow-white limestone bedrock encountered.

TR-04

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	0.0	1703	No	None
2-4	2.2	1703	Yes	BTEX, TPH-GRO TPH-DRO, metals
4-6	0.3	1703	Yes	BTEX, TPH-GRO TPH-DRO, metals

Submitted TR-4-2-4 and TR-4-4-6 for laboratory analysis.

BTEX and TPH-GRO samples collected as discrete sample. Soil was composited for TPH-DRO and metals analyses.

12/12/07 AHA SOIL SAMPLING KHW MPW

1727 KHW relinquished cooler of samples to Brad Grim of MWH to take to FedEx to ship to Severn Trent Laboratories (STL) in New York.

1757 KHW finished checking calibration of PhotoVac and MiniRAE PIDs.

1806 KHW | Scott Hansen signed out and offsite.

Karin H. Wilhelm 12/12/07

12/13/07 AHA SOIL SAMPLING KHW

0725 Karin H. Wilhelm (KHW) and Scott Hansen of MWH arrived on site in OSHA Level D PPE and signed in at site office. Wesley McMillian, Doug Mick, and Bill Pickens on site.

WEATHER: Overcast, 20°F, ground frozen

0730 KHW discussed AHA soil sampling with Bill Pickens & Doug Mick

0750 KHW calibrated MiniRAE 2000 PID for air monitoring and field screening.

0945 KHW conducted tailgate safety meeting with Matt P. Warner (MPW) and Wesley McMillian (of OSA). MPW has constructed berm with visqueen to contain water and sediment from decon. in the AHA.

AHA SOIL SAMPLING KHW/MPR

12/13/07

TR-06 Start: 10:12 End: 10:32

TIME	DEPTH	SOIL DESCRIPTION
1013	0-2	Silty Fill, tan, predominantly loose not not in clumps, dry, weak cementation, low plasticity when wetted, with roots, with cobble sized chunks of asphalt fill, black, hard, medium to strong cementation. No odor
1015	2-4	Silty Fill, tan, predominantly loose, dry, weak cementation, low plasticity when wetted, with roots, with gravel to cobble sized pieces of weathered yellow-white limestone, and with gravel to cobble to boulder size pieces of black asphalt as described 0-2 ft. No odor.

AHA SOIL SAMPLING KHW/MPR

12/13/07

TR-06 Continued

TIME	DEPTH	SOIL DESCRIPTION
1018	4-6	Silty clay (CL), red brown, hard, dry to moist, weak cementation, medium plasticity when wetted, with fine to coarse subround pieces of yellow-white limestone No odor.
	6	Limestone Bedrock

1031 KHW monitored breathing zone w/ PID = 0.1 ppm.

1037 Wesley Finished back filling TR-06. Headed to clean excavator bucket. Pictures were taken of soil and trench prior to backfill

TR-06

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	0.4	1110	N	None
2-4	0.6	1212	Y	BTEX, TPH-GRO, TPH-DRO, SVOCs, Metals
4-6	0.5	1213	Y	BTEX, TPH-GRO TPH-DRO, SVOCs, metals

12/13/07 AHA SOIL SAMPLING KHW/MPR

TR-07 Start: 11:23 End:

TIME	DEPTH	SOIL DESCRIPTION
1125	0-2	Silty Fill, tan, loose, dry, weak cementation, low plasticity when wetted with roots, with subangular to subrounded yellow-white pieces of limestone coarse gravel to cobble sized, with asphalt pieces, black, hard, dry, moderate to strong cementation, nonplastic, ~~with pieces~~ cobble-sized, with pieces of solid tar-like material, shiny black, ~~tik~~ resembling obsidian, very hard, dry, coarse gravel to cobble size, angular, moderate to strong cementation, shears, nonplastic.
1128	~~4-24~~ WW 12/13/07	Silty clay Fill, Tan to brown, very stiff, dry to moist, weak to moderate cementation, medium plasticity, odor, with pieces of asphalt, black, very stiff,

12/13/07 AHA SOIL SAMPLING KHW/MPR

TR-07 Continued

TIME	DEPTH	SOIL DESCRIPTION
	2-4 cont	dry, ~~to~~ KHW 12/13/07 coarse gravel to boulder-sized, moderate to strong cementation, nonplastic, contains black tarry material, odor, with roots, with pieces of solid tar-like material, shiny black, very hard, dry, coarse gravel to cobble size, angular, moderate cementation, nonplastic.
1130	4-6	Silty clay (CL), red brown, very stiff, dry to moist, weak cementation, medium plasticity, with roots, ~~with~~ trace limestone, (yellow-white, coarse gravel to cobble size, subangular to rounded), with trace solid tar-like material, shiny black, very hard, dry, fine to coarse gravel size, angular, strong cementation, nonplastic.
	6	Limestone Bedrock

12/13/07 AHA SOIL SAMPLING KHW MPW

1131 MPW monitored breathing zone PID = 0.0 to 0.1 ppm. Odor detected when 2-4 ft soil was excavated.

1200 Wesley backfilled TR-07 then headed to decon.

TR-07 Field-Screening

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES KHW
0-2	0.3	1217	N	NONETEX, TPH-GRO, TPH-DRO, SVOCs, Metals
2-4	31.2	1216	Y	BTEX, TPH-GRO, TPH-DRO, SVOCs, metals
4-6	1.2	1217	Y	same as above.

TR-7-2-4 and TR-7-4-6 will be ~~1210~~ submitted for laboratory analysis.

1225 KHW off for lunch.

1310 KHW back to project helping MPW jar soil samples

12/13/07 AHA SOIL SAMPLING KHW

TR-08 Start: 1345 End: 1353

TIME	DEPTH	SOIL DESCRIPTION
1349	0-2	Solid tar-like material, shiny black, ~~and~~ very hard, dry, gravel to boulder size, angular, moderate to weak cementation, non plastic, with silty clay fill (gray brown, loose, dry, weak cementation, medium plasticity when wetted, trace limestone, (yellow-white) gravel size, subangular to subrounded, with roots
1351	2-4	Silty clay fill, dark brown, loose, stiff in clumps, dry to moist, weak cementation, medium plasticity with roots, with solid tar-like material (black, hard, dry, gravel to boulder size, angular, moderate to strong cementation, non plastic), with limestone (yellow white, fine gravel to cobble size, subangular) piece of wood debris

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-08

continued

TIME	DEPTH	SOIL DESCRIPTION
1353	4-6	Clay (CL/CH), red brown with black, hard, dry to moist, moderate cementation, medium to high plasticity, with roots, with limestone boulder (yellow-white, subangular).
	6	Limestone Bedrock

1355 KHW monitored breathing zone PID = 0.0 ppm

1418 Wesely finished backfilling TR-08, headed to decon.

TR-08 Field Screening

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	0.5	1726	N	None
2-4	0.2	1724	Y	BTEX, TPH-GRO, TPH-DRO, SVOCs, Metals
4-6	0.3	1725	Y	same as above.

TR-8-2-4 and TR-8-4-6 were submitted for laboratory analysis.

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-09 Start: 1447 End: 1452

TIME	DEPTH	SOIL DESCRIPTION
1450	0-2	Gravelly, Silty clay fill, dark brown gray with black, soft, moist to wet, gravel fine to coarse, (multicolored subangular to rounded), weak cementation, low to medium plasticity, with solid tar-like material (black, hard, dry, moderate cementation, containing fine to coarse gravel (subrounded to rounded, multicolored), cobble to boulder size pieces, non plastic), with roots
1452	2-4	Silty fill, dark brown gray, stiff but friable, dry to moist, weak cementation, low plasticity when wetted, trace gravel (limestone, subangular, yellow-white), with solid tar like material (black, hard, dry, cobble to boulder size, moderate to strong cementation, non plastic), with limestone boulder (subrounded, yellow-white rubber gasket

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-09 Continued

TIME	DEPTH	SOIL DESCRIPTION
1452 1454 KHW 12/13/07	4-6	Clay (CH/MH), red brown, very stiff, dry to moist, moderate cementation, medium to high plasticity, trace solid tar-like material (as described at 2-4 ft), trace limestone cobbles and boulder (yellow-white)
	6	Limestone
1520		Wesely finished backfilling TR-09, headed to decon bucket

TR-09 Field Screening

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	2.2	1718	N	NONE
2-4	1.7	1719	Y	BTEX, TPH-GRO TPH-DRO, SVOCs, M
4-6	1.4	1720	Y	

TR-9-2-4 and TR-9-4-6 was submitted for laboratory analysis.

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-05 Start: 1613 End:

TIME	DEPTH	SOIL DESCRIPTION
1615	~~0-2~~ 2-4 KHW 12/13/07	Gravelly silty clay fill, black, medium stiff, moist, (gravel fine to coarse, white, subangular) weak to moderate plasticity, odor, embedded black, sticky tar material, roots present KHW (12/13/07)
1618	~~2-4~~ 4-6 KHW 12/13/07	Silty clay fill, black, soft, moist, with gravel (fine to coarse, subangular, white) with embedded black, sticky tar material (like taffy), roots present, odor. moderate cementation, medium to high plasticity
1620	~~4-6~~ 6-8 KHW 12/13/07	Silty clay (CH/MH), dark gray soft, moist, trace gravel (fine to coarse, subangular, white) moderate cementation, medium to high plasticity, odor, embedded black tarry material (taffy-like)
	8'10"	Limestone bedrock

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-05 Continued

TIME	DEPTH	SOIL DESCRIPTION
KHW 1818/1613	0-2	Gravelly, silty clay fill, dark gray, medium stiff, moist, gravel (fine to coarse, subangular, white), weak to moderate cementation, medium plasticity, odor, with black tarry material (taffy-like) embedded, trace solid tar-like material (shiny black very hard, dry, gravel to cobble size, strong cementation, non plastic), trace wood and sheet metal debris.

1620 ~~1613~~ KHW 12/13/07 KHW monitored breathing zone. PID = 0.0 ppm

1451 Wesely finished back filling TR-05, headed to decon bucket.

12/13/07 AHA SOIL SAMPLING KHW MPW

TR-05 Field Screening

DEPTH	PID VALUE	PID TIME	SOBMIT SAMPLE?	ANALYSES
0-2	2.1	1727	N	None
2-4	2.8	1728	Y	VOCs, SVOCs, metals, TCLP, MADEP VPH, EPH, TPH-GRO, TPH-DRO
4-6	2.5	1729	N	None
6-8	0.8	1729	Y	BTEX, SVOCs, metals, TPH-GRO, TPH-DRO

R-5-2-4 and TR-5-6-8 will be submitted for laboratory analysis.

* 1820 ~~1820~~ KHW KHW relinquished custody of samples in two coolers to Bill Pickens to deliver to FedEx

* ~~1825~~ 1805 KHW 12/13/07 Doug Mirk checked calibration of MiniRAE PID.

1844 KHW and Scott Hansen off site.

Karen A. Walter

AHA SOIL SAMPLING

KHW
MPW

12/14/07

0738 Karin H. Wilhelm (KHW) and Scott Hunsen of MWH arrived on site in OSHA Level D PPE.

WEATHER: Partly cloudy, 25°F, ground frozen.

0746 ~~0944~~ KHW checked calibration of miniRAE 2000 PID to be used for air monitoring and field screening.
KHW 12/14/07

Wesley loaded pressure washer to take to United Rental, part was broken off last night when going through door. ~~Unit~~

0840 Wesley checked w/ United Rentals - They do not have another pressure washer nearby. The mechanic will check to see if they have replacement part. If part is found, likely would not be replaced until noon.

AHA SOIL SAMPLING

KHW
MPW

12/14/07

0841 Mutt P. Warner (MPW) called Bill Pitkins, proposed to decon bucket by using driller's pressure washer and scrubbing by hand with degreaser instead of using steam pressure washer, which is broken. Bill agreed to this method.

0845 Drill rig for soil investigation is stuck in sand mud. KHW 12/14/07 Excavator is needed to pull it out.

0857 KHW/MPW opened gate to AHA.

0903 KHW/MPW off site to buy face shield for decon.

930 KHW/MPW back on site w/ face shield. Drill Rig has been pulled from sand.

0942 MPW starting to decon excavator bucket w/ degreaser and brush. MPW is wearing Tyvek suit over OSHA Level D PPE and a face shield

AHA SOIL SAMPLING KHW MPW

12/14/07

1030 MPW and Wesley finished deconning excavator bucket. They used shovels to remove soil, then brush w/ cleaner/degreaser, and then rinsed and finished with a pressure washer.

1045 KHW conducted tailgate safety meeting w/ MPW (AHA) and Wesley McMillian (USA).

1100 Strong odor from TR-03 as soon as surface is broken. PID = 0.0 ppm.

1125 KHW monitored black tarry material PID = 0.0 to 0.1 ppm.

1145 MPW placed remaining soil cuttings left over from field screening and sampling from previous trenches in bottom of TR-03 before backfilling.

AHA SOIL SAMPLING KHW MPW

12/14/07

TR-03 Start: 1100 End: 1108

TIME	DEPTH	SOIL DESCRIPTION
1104	~~2-4~~ 0-2 KHW 12/14/07	Gravelly silty clay fill, dark gray to black, stiff, moist, fine to coarse gravel (yellow-white limestone, subangular), moderate cementation, medium plasticity, strong odor, with debris, (metal drum, appears black sticky tar-like material came from drum [see photo]), metal debris, soda can) with gravel to cobble size pieces of solid black material (shiny, hard, very hard, dry, strong cementation, non plastic,) black plast
1106	2-4	Gravelly silty clay fill, olive gray, medium stiff to stiff, moist, moderate cementation, medium plasticity, odor, with limestone (f-c gravel to cobble size, subangular, yellow-white), shiny black solid material (as described above distributed throughout

12/14/07 AHA SOIL SAMPLING KMW MPW

TR-03 Continued

TIME	DEPTH	SOIL DESCRIPTION
1108	4-6	Gravelly silty clay fill, olive gray to black, medium stiff, medium plasticity, moist, limestone (gravel to cobble size, subangular, yellow white), moderate cementation, medium plasticity, odor, with areas of fines saturated with black product, trace metal debris, trace wood debris, 1 metal drum, 1 approximately 10-foot section of metal pipe with elbow joint at 1 end, trace red brick debris.
	6	Clay (CL), red brown, hard, dry, moderate cementation, medium to high plasticity, above yellow-white bedrock,

12/14/07 AHA SOIL SAMPLING KMW MPW

1152 Wesley finished back filling TR-03.

TR-03 Field Screening

DEPTH	PID VALUE	PID TIME	SUBMIT SAMPLE?	ANALYSES
0-2	4.4	12:19	Y	BTEX, TPH-GRO, TPH-DRO, SVOCs, Metals
2-4	3.4	12:20	N	None
4-6	8.4	12:20	Y	VOCs, TPH-GRO, TPH-DRO, SVOCs, Metals, MADEP VPH, EPH, TCLP (Metals, VOCs, SVOCs).

KMW 1214 Checked calibration of PID.

KMW 12/14/07. 3 KMW TR-0 TR-4-0-2 and TR-3-4-6 were submitted for laboratory analysis

12/14/07

SAH

El Dorado - Soil Sample 12/14/07

0730 Scott Hansen to mobalize. Load truck with Brad and Ray. Health + Safety meeting

0855 ~~0855~~ SAH BH-17 Soil Sample - Hand Augered Description: Dark Brown Silty Clay, no oder, medium to high plasticity,

0930 BH 29 0.5-1.5 Soil sample - Hand Augered Description: Lt brown Silty clay no oder, medium to high plasticity

0950 BH-30 0.5-1.5' Soil Sampling - Hand Auger Description: Lt to dark brown Silty Clay, High plasticity, High moisture, no oder,

1015 BH-33 0.5-1.5 Soil sample - Hand Auger Description: Dark brown Silty Clay ~~2000~~ SAH ~~pta~~ medium plasticity, Very high moisture, no oder,

1045 BH-38 0.5-1.5 Soil Sample - Hand Augered Lt brown, Silty Clay, medium plasticity, medium moisture and no oder;

12/14/07

SAH

El Dorado - Soil Sample

1110 BH 39 0.5-1.5 Soil Sample Hand Augered Dark brown to black, Silty clay medium plasticity + moisture and has oder,

1120 BH-40 0.5-1.5' moved 3' N + 5' W of stake. Hand Augered Lt brown/red silty clay, medium plasticity, Low to medium moisture and No oder,

1145 BH-43 - 0.5-1.5' moved 5' south of stake, Hand Augered, Lt brown to orange/red silty clay, medium plasticity, Low to medium moisture and no oder,

1200 Pump decon water and head back to office. (Scott Brad Ray)

1215 Pack coolers prepare for shipping

1230 PID (Mini Rae 2000)

ID	PID	ID	PID
BH-17	SAH ~~6.8~~ 0.5	BH-38	0.9
BH-29	0.9	BH-39	67.8
BH-30	1.3	BH-41	1.3
BH-33	0.7	BH-43	1.1

1300 SAH offsite

Scott Hansen 12/14/07

Cold, Sunny, 10s-30s

1/23/08 TW INSTALL EDR

8:00 B&S work on thawing H_2O.

8:40 H&S meeting
Brian & Craig-B&S, Matt & Dave-MW+1

0900 Brian to set up 6620 DT @ TW-046.
Craig w/ B&S to go get hose for water.

0910 B&S starts TW-046

0925 Sampled TW-46 @ 0.0-2.0
* BTEX, GRO, DRO, metals

0945 Sampled TW-46 @ 2-4'
* BTEX, GRO, DRO, metals

0950 B&S moves 5' East to probe for limestone.
Probe makes it to 10.0' @ Limestone
TW-46 w/ be set to 10' @
Location 5' E & 0' N of original

1020 B&S get one of their vehicles stuck in Icy terrain. B&S spends some time pulling out truck.

Gauge TW-45
TOC▽: 7.09 Case Ht: 2.65'
ΔTP: —
TD: 13.96

1100 B&S Begins to Auger TW-046
5' East of original TW-46
Based on 2nd probe.

Gauge TW-47
TOC▽ 4.52 casing Ht.: 2.91'
ΔTP: —
TD: 10.55

1133 B&S has completed TW-46

TDB:	9.9'	
TDW:		ΔTP:
Screen	5.0	TOC▽:
Sand	9.9-4.1'	Bent: 1'-4.1'
Caucht:		

11:35 B6S moves over to TW-44
which is located on Berm surrounds
Corner of Refinery told to move
off berm to begin.
moved 20' E of original
— hit Limestone @ 1'
& Refusal @ 3.4'
moved 5 E & 1' N
— same
moved 5' E & 1 N'
— same

Will put off for now &
clean up for lunch.

1200 offsite w/ B6S

100 B6S & MWH Back onsite

115 B6S Starts TW-49
10' south & 3' west of original
locations. due to Frozen
pond/wetland.
TD=10.1' to limestone

1325 Sample TW-49 @ 0-2'
* BTEX, GRO, DRO, metals

1330 B6S Begin to Auger TW-49

1350 Sample TW-49 @ 6-8'
* 8260 (VOC), DRO, SVOCs, GRO, metals
made of EPH & VPH

1400 TW-49 down

B Depth:	10.~~45~~ 5'	Sand	10.~~3~~'-4.2
W depth		Screen	10.1-5.1'
V TOC		Bentonite:	4.2-1'
DTP-		CASCHT:	

1/23/08 [signature]

1420 went to office for more terracores

1440 Back onsite

1500 Sampled 0-2' @ TW-51
BTEX, GRO, DRO, metals
plus MS/MSD & Duplicate
- B&S Begins Auging TW-51

1545 Sampled TW-51 @ 8-10'
* 8260 (VOC), DRO, SVOC, GRO, metals
MA dep - EPH & VPH

1600 B&S Done w/ TW-51

TW-51

B. Depth	16.8	TOC ☑:	
W. Depth		OTP:	
Screen:	10' uncut	Bent:	1-6.1'
Stand:	6.1-16.8		
Comments			

1605 - MWH offsite to office.

1/23/08