1/24/08 TW INSTALL EDR

8:50 MW4 & BGS onsite
Dave B, Brad G - MW4, Craig & Brian - BGS

900 H&S meeting
Cold - 8°, sunny

0910 BGS starts TW-52

0915 Sample TW-52 @ 0.5-2.0
* BTEX, GRO, DRO, metals

0945 - BGS Begins to Auger & complete TW-52
TD - 13.2 Screen - 8'

0945 Sampled TW-52 @ 10-11'
* 8260 (VOC), GRO, DRO, SVOC, metals & MADEP - EPH - VPH

TW-52

B depth	13.2	TOC:	
W Depth		ATP:	
Sand	4.1-13.2	Case Ht:	
Bent	0.5-4.1	Screen	8.1' (cat)

10:35 BGS Moves Rig to TW-53

10:40 BGS Start microcore TW-53

1055 Sampled TW-53 0.5-2.0
* ~~BTEX~~, DRO, GRO, metals, SVOC's 8260 MADep - EPH & VPH

1105 BGS Begin to turn Augers & set well @ TW-53 - ~~TD 13~~ 8' of screen.

1120 Sampled TW-53 @ 12-13.4'
* BTEX, GRO, DRO, metals

1/24/08

TW-53

B Depth 13.7'
W Depth DTP:
Sand 4.3-13.7 TOCR
Bent 0.5-4.3 Screen: 8.2'
Casing:

1300 Back onsite
- Meet w/ Doug M.
- Doug M wants to do a follow up Safety meeting.

1330 Doug M hold Safety meeting

1345 B&S & MWH onsite @ TW-54

1350 B&S Starts TW-54

1400 MWH samples TW-54 - 0.5-2.0
* BTEX, DRO, GRO, metal
* MS/MSD & Dup also

1420 B&S Hits Limestone & Refusal @ 3.5
- Move EAST 5' to try Again.
Hit @ 3.7' Limestone
- Move EAST 5' & North 2'
- Hit 3.4' Limestone
- No further Attempts for TW-54'

1430 B&S off to decon

1500 Doug M, onsite ok w/ locate move for TW-55

1510 B&S Moves to TW-55

1515 Start TW-55

1530 Sample TW-55 0.5-2.0
* BTEX, GRO, DRO, metal

1/24/08 DL Ben

1535 B6S to Auger to set well TW-55. 8' well hopeful

1545 Sampled TW-55-4-6'
* BTEX, GRO, DRO, metals

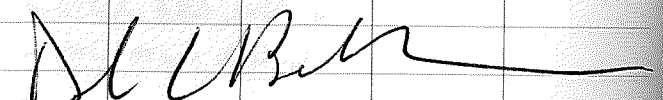
1555 B6S Begin to complete TW-55. @ 8.1' TD Boring

TW-55

D. Bore	8.1'	
D. Well		II TOC:
Sand	4.2-8.1'	Case Ht.
Bent:	0.0-4.2	
Screen	3.1 (cut)	
DTP		

1600 TW-55 Completed
- MWH & B6S offsite for clean & office work

[signature]
1/24/08



1/25/08 TW-INSTALL EDR

800 Onsite w/ BGS

830 H&S meeting.

840 Move to TW-80
- BGS must take down fence to access wood area & location

8:45 Doug M onsite.

900 Start TW-80
- Doug M offsite

0920 Sampled TW-80 @ 0.5-2.0'
* BTEX, GRO, DRO, metals.

9:25 BGS TD's @ 12.8' w/ Probe
Begin to Auger.

0945 Sample TW-80 10-12.6
* BTEX (VOCs), GRO, DRO, SVOCs, mets & inorgs - not enough material to do only Limestone

0950 BGS to complete TW-80 w/ 5' vent screen

10:05 TW-80 completed.

B Depth 12.6' w/Auger TOC II:
W. Depth MTP:
Screen 5' Case Ht:
Sand 6.2-12.6
Bent: 0.0-6.2'

10:20 Wait @ TW-79 for BGS
BGS Place soil cuttings from TW-80 on South Tank Farm side in plastic

10:35 BGS Start TW-79

1045 Sampled TW-79 @ 0.5-2'
* BTEX, GRO, DRO, metals

1/25/08

1100 B65 done sampling @ 18.2'

1115 All Screens show low < 11.0 ppm to bottom
Talk w/ Doug M. No samples but surface will be taken @ TW-79.
- Wait on B65 to Finish down & Return to complete well.

1120 B65 back onsite
Begin to Augur & Set TW-~~80~~ 79

1200 B65 Done w/ TW-~~80~~ 79 DLB

Well D		Bent:	0.5-7.1
Bore D	18.3	TOL:	
Screen	10' unit	BTP:	
Sand	7.1-18.3		
Grout:			

1210 Offsite for lunch

1300 Back onsite
- B65 to clean up TW-~~80~~ 79

1330 Start TW-50
- Flit cement @ 4.5'
- Move 5' 5 feet
- good

1350 Begin Sampling TW-50 -0.5-2.0
* BTEX, GRO, DRO, metals MS/MSD & Dup.

1440 B65 probs down to 24.1' @ Refusal @ Limestone

1450 Sample TW-50 @ 8-10
* ~~BTEX~~ 8260 (VOCs), GRO, DRO, SVOCs, metals & MADEP EPH & VPH

1/25/08

1505 Done for day - will Auger TW-50 on Monday morning B&S to clean up & ready gear for over weekend.
MWH to go back to office to process samples.

1510 Offsite

1/25/08

1/28/08 Well Development EDR
TW-79 & 80

ONSITE: 10:25.
Brad G & Dave B

TW-80
TOC V: —
TD: 15.16
CASE HH: 2.77'
No H_2O
No Developments.

10:30 @ TW-79

TOC V: 21.11'
TD: 22.26'
CASE HH: 3.78'

Doug M. says to bail dry.
& time it.

Start time: 10:37
END Time 10:45
Approx 1.5 gallons till Dry
~~[illegible]~~ Clear to Slightly Cloudy, No odor

10:55 Check Casing HH
@ TW-18; 72, 73

MW-18 3.02'
MW-72 2.47'
MW-73 2.10'

11:06 Check TW-79 = 21.81'
will wait more.

11:45 Check TW-79

— TOC V 21.69

11:50 Will Bail again.
pulled 0.5 gallons w/ Bailer
Slightly Cloudy, No oder
11:55 Bailed Dry

12:00 offsite for Lunch.

100 Back onsite.

1/28/08 [signature]

105 Check TW-79

TOC▽: 21.61

Will check wells for J-Plug while waiting ½ hrs.

145 Check TW-79

TOC▽: 21.49'

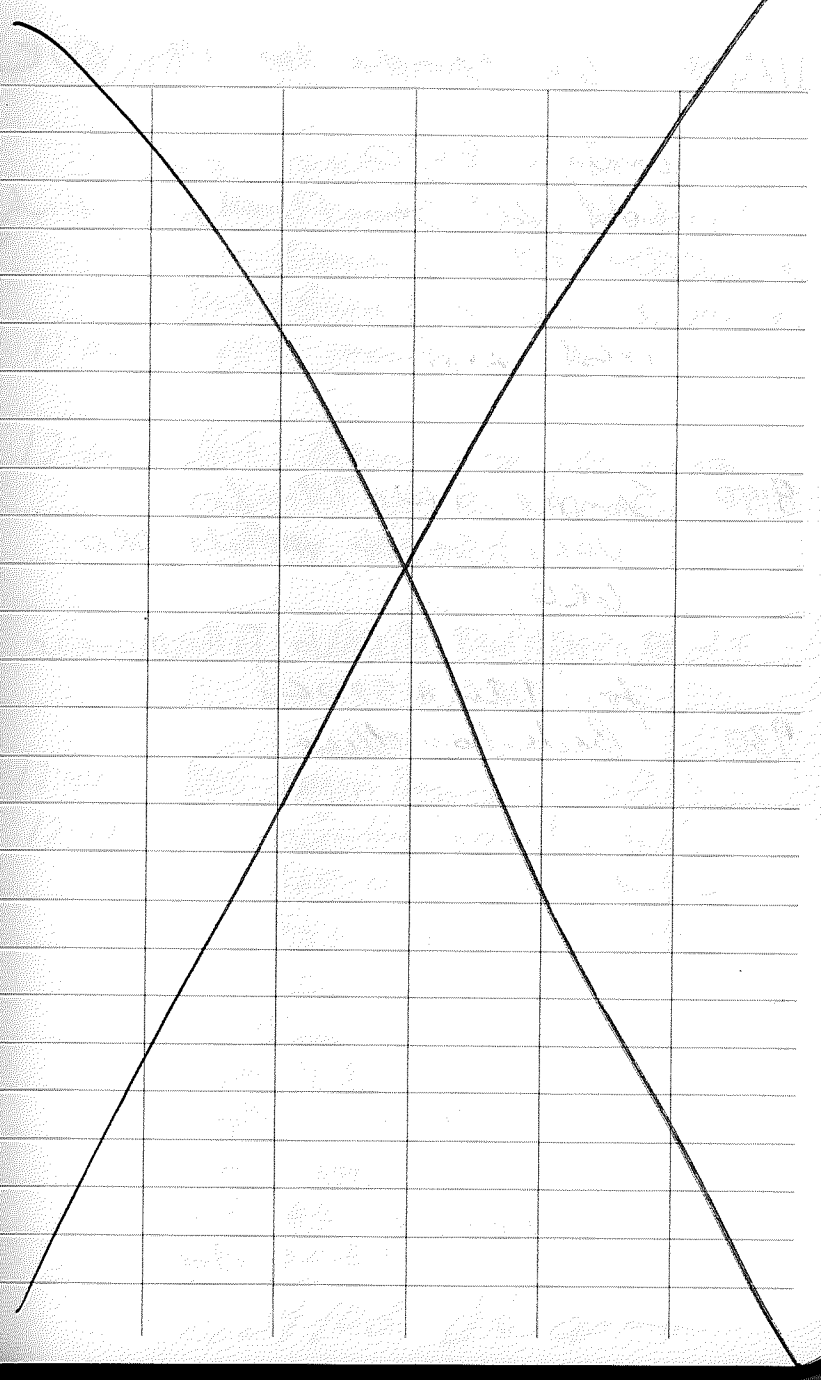
1:48 Bail #11 Dry –

1:53 Bail Dry after 0.7 gallons
Slightly Cloudy, No odor
Locking well cap

1:55 offsite.

205 Leave Refinery

1-28-08



1/29/08 GW Sample TW-79 EDR

onsite : 8:30
Cold, 22° Snow Flurries, very windy
TW-79

TOC#: 21.10

8:40 Sample TW-79 for
VOC's, SVOC's, Metals, DRO
GRO,
Insufficient H_2O to Fill backups
for DRO & SVOC's
930 Back to office

1/29/08 TW-Install EDR

B&S onsite @ 12:00
Weather: cold, high winds & 15°
Blowing Snow * Extreme conditions *
Dave & Brian B&S - Dave B. MWH
12:00 H&S meeting w/ B&S

12:20 B&S Begin prep for work
- warm up Rig.
- Ready equipment

- Will Drill TW-50 to 24'

12:40 B&S Begin Augering TW-50
12:48 - encountered cement @ 5.3'
- B&S will have to pull & try 1'S of sampled location

TW-50

B. Depth	21.3	TOC#:	
W. Depth		DTP:	
Screen:	15, 6ft	CASE HT:	
Sand:	@ 5.1'-21.3'	Probe Depth	24.1
Bent:	0.0 - 5.1		

1/29/08 DL Bu

1311 still hitting something hard @ 5'.
Talked w/ Doug M.; he wants to use original Boring if possible but if needed we should not move more than 10' from original.
- B65 uses probe to push through original Boring.

1321 - Success Augers are going past 5'
- B65 Plug secondary boring.
- Few bits of cement in clay coming up from boring.

1336 On Forth Auger now.

1347 On Fifth Auger

1350 Refusal @ 21.3'
Will set 15' screen
Sand to 5'

1355 B65 WARMS up in trucks
* Wind chill is extreme *

1405 B65 Begins to complete TW-50.

1435 Done w/ TW-50

- B65 Begin working on thawing out H2O spicket.

1540 Drive (B65) to Decon Brim & Drive to TW-59

15:20 Start TW-59 -

Hit Limestone @ 2.8'
Try two more locations 5' East & 10' East of original location
- Still hit Limestone.

1545 Sample TW-59 @ 0.5-2.0
* BTEX, GRO, DRO, Metals MS/MSD & Dup.

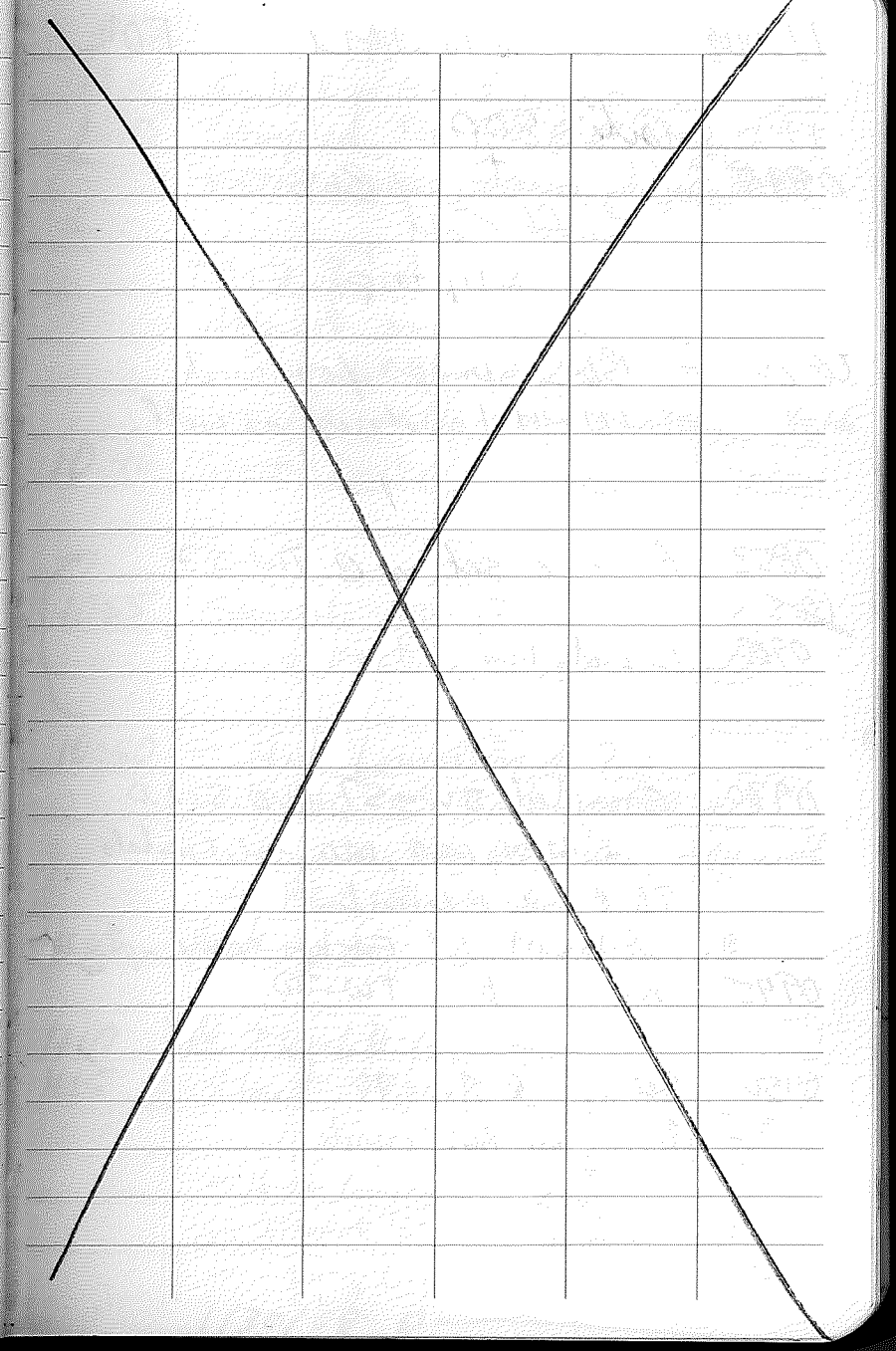
1129108 DdL

1545 Brian offsite

1620 Back to office for sample processing.

Dell Ballah

1/29/08



1/30/08 TW-INSTALL EDR

onsite: 800

0815 Safety meeting w/ BGS:
~~Cold~~ Cold
Slip trip-

0825 - BGS preps for work
- MWH loads up as well.

0853 Arrive & set up @ TW-57

~~0855~~
0900 Start TW-57

0930 Sampled TW-57 @ 0.5-2.0
* BTEX, GRO, DRO, Total metals
TD: @ 6.2 @ Limestone
Attempt 5' EAST - same - plug in

0945 Move to TW-70

0950 Set up @ TW-70
- Doug w/ BGS onsite

10:10 Kyle J w/ MWH onsite

10:15 Sampled TW-70 @ 0.5-2.0
* BTEX, GRO, DRO, Total metals

TD: 7.3' @ Limestone
Attempt one more 5' EAST
- Hit Lime @ 6.9'
- No well - Dry & Shallow - Plug hole

10 40 Start Drill @ TW-71

1055 Sample TW-71 @ 0.5-2.0
* BTEX, GRO DRO, metals

10:50 - Hit Limestone @ 7.2
- Probe 5' East - same 6.5'
- Limestone Dry & Shallow - No well
- BGS Plugs hole

1103 Pack up to move to TW-68

1110 @ TW-68 Location.

1115 Start TW 68 -

- Hit Limestone @ 7.1'
- Move 5' East & Probe - 7.3'
- Dry limestone & shallow - plug hole

1/30/08 D

12:00 Sample TW-68 @ 0.5-2.0
* 8260, DRO, SVOC's, GRO
metals & madep.

1220 Sample TW-68 @ 4-6'
* 8260, DRO, GRO, SVOC's
metals & madep.

1240 Dave B & Kyle off site
for Lunch

1310 Back onsite
BGS waiting

1315 @ TW-67
1320 Start TW-67
1335 Sample TW-67 - 0.5-2.0
* 8260, GRO, DRO, SVOC's, metals
- Refusal @ 9.2'
- No recovery from 7.6-9.2
- Samples wet - will try Auger

1350 BGS Begin to Auger TW-67
Probe went to 9.2'

1405 Done - Auger refusal @ 9.3'
Sand/Clay off Augers. odor

TW-67

B Depth	9.3	VTOC:
W. Depth		FDTP:
Screen	4.0' cut	Case Ht:
Sand	4.2'-9.3	
Bent	0.0-4.2	

1430 BGS Begins - to set well w/ 4' screen

1455 BGS completes TW-67

1505 Move to TW-61
1520 Start TW-61
- hit limestone @ 5'
- moved 5' E of original location
- hit limestone @ 6.8' - Sample from this location

1/30/08 Dal Belm

1540 Sample TW-61 @ 0.5-2.0
+ BTEX, GRO, DRO, METALS

- BGS Plugs TW-61

1555 BGS offsite to garage.

1600 MW-11 offsite to office

Dd Boller

11/30/08

1/31/08 Oversite Well Development EDB

MWH onsite 9:40
BGS onsite 10:00
Weather Blizzard conditions
10:30 H&S meeting
- Blizzard conditions
- overview of work

Will start w/ TW-48

10:45 gear up.

1050 @ TW-48
- BGS clears area w/ unloader,

1170 - Attempt to Gauge well w/ MWH IF Probe but probe not functioning,
- Second IF Probe also stopped working for water.
- Cold weather probable cause

1123 BGS has working H_2O probe But it is intermittent.
Will use bailer to visual check for product.

talked w/ Doug M. He says that way will work for now but that if current situation w/ weather & equipment is non-productive to stop

1036 After Discussion w/ BGS they feel work today is not productive & feel that Work should stop.
- I agreed

1145 Called Doug M - Explained situation.
- BGS Packs up

12:00 BGS & MWH offsite

[signature]
1/31/08

2-12-08 TW - Development.

0800 onsite w/ Doug M.
- load coolers

0830 Doug (B&S) onsite.
- Begin to set up.
- PID has bad lamp.

0850 H&S meeting

0900 off to TW-24

0915 @ TW-24

0935 DTW - @ TW-24 within 80%
pumped dry for 4 gallons - surged.
- pack up to go & decon pump.
to TW-09

0980 @ TW-09
near 100% Recovery
Bail Dry - no surge due to product.

~~095~~

1000 Head back to main site
- B&S to Decon at Main Svc
- Set up next @ TW-5
- PID still showing 'Lamp'

1015 Set up @ TW-50 - no tone on IF so did visual - over 2' of Product.
- No Surge - purge only
- Begin pumping

1100 still pumping.

1132 Pumped 82 gallons of H2O & product from TW-50.
Pumping clear -
Done developing TW-50

B&S Decons pump & Equipment.

2/12/08 D

1200 offsite for lunch

1300 Back on site from lunch
- head to TW-66

1305 set up & ready to develop TW-66
- Product no surge, pull H2O only

1315 Check well for product
>3' of Black product, (Checked w/ Baker)
No surge,
- Begin pumping from bottom

S TW-66
1340 Well begins to pump slowly,

1422 Well pumping seems slower now.

14:50 offsite for Batteries.
15:10 Back on site
- Still pumping

1555 Completed pulling 115 gallons of H2O from TW-66

1600 off to dump poly tanks in separator

1620 Finished depositing just over 200 gal into separator
- head to TW-09

1625 @ TW-09

1640 pumped dry after 6 gallons
- BGS Recon

1645 Back on office site
- transfer 7 gallons to separator

1700 BGS offsite

1705 MWH offsite

2/12/08

2/13/08 ONSITE well check

1100 onsite
- head to STF.

12:00 Checked on most wells in SW & SE of STF
TW-08 needs to be plugged.
TW-04 had bag of plug covering hole & I used it to plug hole.

12:40 offsite for fuel

1:00 Back onsite continue to check TW's at STF

2:15 Arrive @ TW-08 w/ Two bags of Granular Bentonite placed one bag in boring

2:35 Continue w/ well check

2:50 nearly got stuck trying to get at TW-18 & 72 & 73
will Try to climb fence from Topeka

3:40 Done checking & cleaning up TW's by Topeka

4:00 checked on TW-08 - plugged
- Begin to check wells in MPA.

5:00 Covered wells I could.
offsite.

[signature]

2/13/08

6/10/08 El Dorado
Water Well Survey

1300- Begin - meet @ site
1305- Tailgate H+S meeting
1320- Arrive @ 1ST Residence
Property # 4 + 5 1618
N. Topeka
Appear as though property is vacant. Noticed what appeared to be old abandoned well located just off the driveway on E. side of driveway. Attempted GPS for w/ assail.
1330- Visit # 2 1520 N. Topeka
Scott, Renter, indicated there are no wells + they are on city water.
1340- Visit # 13, 712 W. 14th
1345- Visit # 12, 720 W. 14th
No answer first visit
@ # 12 or # 13
1348 Visit # 10 516 W. 14th
No answer first visit

Photos
#1-4 Well + property # 4
#5 - 625 W. 14th plugged well
#6-7 - Possible plugged wells on property # 19

1350 - Visit #[illegible], 515 W. 14th
No Answer

1354 - Visit #23, 621 W. 14th
No Answer

1356 - Visit #22, 625 W. 14th
owner Michelle White showed us flipped well. Said it never worked so they filled in w/ dirt & planted grass over it.

1404 - Visit #20, 707 W. 14th
Brian stated NO wells to his knowledge. They have lived in home 6+ years.

1408 - Visit # 19, 1460 N. Topeka
Robert Wood property. He thought there might have been some ole old abandoned wells on S edge of his property where an old farm house used to be. He showed us the "well" location which was just concrete slab & allowed us to photo.
GPS - No signal

1415 - Visit w/ #28 @ 1450 W. Topeka spoke w/ young man said did not think there was well but to talk to his dad later.

1420 - Visit # 29
1448 N. Topeka
No Answer.

1425 - Visit #30, 618 W. 13th
No Answer

1426 - Visit # 35, 516 W. 13th
No well according to owner Marjorie Osborne

1428 - Visit # 36, 510 W. 13th
No Answer

1432 - Visit # 37, 502 W. 13th

1435 - # 79, 1402 N. taylor
No answer

1436 - #77, 1420 N. taylor
No answer. Plumber said they just left.

1440 - # 76, 1430 N. Taylor
No well according to owner Stacy Travnicek

1442 - # 68, 501 W. 13th
No well according to owner.
Martin Hays. Mr. Hays
indicated that his neighbor
(presumeably 509 W. 13th)
has water coming out of
their basement all the
time. Probably due to high
water table according to
Mr. Hays.

1447 - # 66, 515 W 13th
No Answer

1450 - #39, 705 W. 13th
Tommy Washington, owner
stated there are no wells
on property.
~~# 38,~~

1455 - # 38 707, W. ~~13th~~ 13th
No answer

1458 - #65, 1336 N. Joyce
~~No answer~~ DEN
No well according to
owner Coleen Wilhite

1500 - #44, 1331 N. Joyce
No answer

1505 - #45, 1319 N. Joyce
No answer

1508 - #47, 1301 N. Joyce
No answer

1512 - #49, 611, W 12th
No well according to owner
Diana Conrad

1514 - #50, 601 W. 12th
No answer

1516 - #51, 531 W. 12th
No answer
#52, 529 W 12th
Theresa - No well according
to Teresa. She said it is
her parent house. She
was adult.

1518 - #53, 523 W 12th
No answer

1520 - #56, 501 W. 12th
Ryman No well
according to home owner.

1523 - #57, 502 W. 12th
No answer

1525 - #59, 522 W. 12th
No answer

1530 - #69, 502 Linda LN.
No well according
to owner McALLA

1532 #72, 526 Linda LN
No well according to
Jim Lapenga owner

1534 - #75, 505 Linda LN
No answer

1538 - #82, 1336 N. Taylor
No answer

1541 - #84, 1318 N. Taylor
No well according to
owner Brenda Scaggel

1543 - #85, 1310 N. Taylor
No answer

1545 - #87, 1234 N. Taylor
No answer

1552 - #104, 1117 N. Taylor
No answer

1556 - #113, 1108 N. Taylor
No answer however
looks like there is a
well spigot on S side
of house. Took photo.

1557 - #114, 1106 N. Taylor
No answer

1600 - #115, 1104 N. Taylor
Janice Lister stated
no well @ property
her husband is property
owner.

1602 - #116, 1100 N. Taylor
- NOTE different address
than what we listed on
sheet.
No Answer

1604 - #109, 1103 N. Taylor
No well according
to owner Kenneth Hodges

1607 - #108, 1105 N. Taylor
No well according to
owner name Wood
- N/I to her knowledge -

1615 - #80, 1350 N. Taylor
No answer

1620 - #102 - ~~#8~~ (520, 518, 518½)
520 W. 10th - No Answer
518 W. 10th No well
owned. Amber Homes (Renter)
to her knowledge

516 ½ W. 10th - Spoke w/ Nicholas (hard of hearing) She did not know if there were any well @ her property that she rents.

1632 - #99, 608 W. 10th
No answer

1635 - #98, 610 W. 10th
No answer

1638 - #96, 630 W. 10th
No well according to well home renter Shannon McClure

1640 - #94, 706 W. 10th
Sam Burns home owner showed us well house & well. Took several photos. It is operational but not used. It is a home & garden well. Tried to GPS but to no avail. He asked if we would sample & told him probably so. His friend asked why are we doing survey. Told them it was related to the keeping & we are trying to get idea how many private wells there are in area. Told Mr. Burns if we do sample it would be @ our cost & we w/ his permission. He said fine though do not go in back yard unless he is present because of dogs.

1652 - #91, 1210 N. Taylor
No answer.

1654 - #90, 1220 N. Taylor
No answer - Daughter said back

1657 - #89, 1230 N. Taylor
No answer

1700 - Break for dinner

1810 - Return to site & then to #4, 1618 N. Topeka
No one home. Left door hanger

1814 - #10 516 W 14th
No well according to
owner Jennifer Lamb
1817 - #26, 515 W. 14th
No well according to
home owner's daughter
Rachael - adult.
They are on city water.
1820 - #23, 611 W. 14th
Friend of family said
there is/was well @
residence. The friend was
actually the home owner
of 515 W. 14th & she
confirmed that there
is/was well @ 515 W. 14th
1825 - #13, 712 W. 14th
Was home but did not
answer door - left door
hanger
1830 - #12, 720 W. 14th
JOANN - who is the
renter - said she did not
think there was a well. She
let us look in back yard &
No well were observed

1833 - #28, 1450 N. Topeka
NO Answer
1835 - #29, 1448
Brian Baker - owner
says NO wells
1838 - #38, 618 W. 13th
No well according to
land the home owner
1842 - #30, 618 W. 13th
No answer - left card
NOTE - While walking to
618 W. 13th & Brad was
approached by another
resident (Tobey Washington)
who asked if we were
looking for contamination.
Responded by stating we are
doing a background assessment
of area for EE data & in
cooperation w/ KDHE.
1848 - #36, 510 W. 13th
No answer, left card
1850 - #37, 502 W. 13th
Kayla Garmin - home
owner stated No wells

1855 - #44, 1331 Joyce ~~Ave~~ St.
John Scanlon, home owner
said No well.
1858 - #45, 1319 Joyce St.
No answer - left card.
1859 - #47, 1301 Joyce St.
No answer - left card
1901 - #50, 601 W. 12th
No well according to
owner Kelli
1904 - #51, 531 W 12th.
No answer, left card
1906 - #53, 523 W. 12th
No answer, left card
1908 - #59, 522 W. 12th
No answer, left card
1910 - #57, 502 W. 12th
No answer - left card
1913 - #75, 505 W. Linda Ln
No water well according
to home owner
1917 - #77, 1420 N. Taylor
No well according to
Reynaldo - his mother-
in-law owner home
1918 - #79, 1402 N. Taylor
No well according to
Judy Littlejohn owner
1921 - #80, 1350 N. Taylor
No answer, left card
1922 - #82, 1336 N. Taylor
No answer, left card
1926 - #85 1310 N. Taylor
No well according
to owner Bonnie Newsome
1930 - #87, 1234 N. Taylor
No well To knowledge
of Chris Crank (Renter)
On City water
1935 #113, 1108 N. Taylor
No well according to
owner Robert. There is
a spigot on ~~the~~ S. side
of house but it is City
water according to Robert.
1936 #104, 1117 N. Taylor
No water well according
to owner Karisa dog,
On City water

1940 - #114, 1106 N. Taylor
Lawrence MAUS - he is owner & said he used to have a well in the front of his yard. He said it was drilled about 75' + was a good supply well & used during drought. He said it was plugged in 1950's around 1956. Said they also tried to drill one in early 50's behind his home but it was oily & no good / it was drilled to about 50' deep & plugged due to bad water.

1948 - #116, 1100 N. Taylor
No well according to owner who did not provide last name (possibly Shafer) "Would like to have well left her ea door hanger.

1952 - #99, 608 W. 10th
No answer, left card

1955 - #98 610 W. 10th
No well according to owner Patricia Summers.

2000 - #66, 515 W. 13th
No answer, left card

2005 - Meet Matt & Cristy @ gate

2015 - Secure site & leave for day

6/10/08

CONTENTS

PAGE	REFERENCE	DATE

Location El Dorado Refinery Date 11-12-0-

Project / Client El Paso Merchant Energy

800 Met w/ Doug Mick.
Doug showed me the location of several of the monitoring well borings.

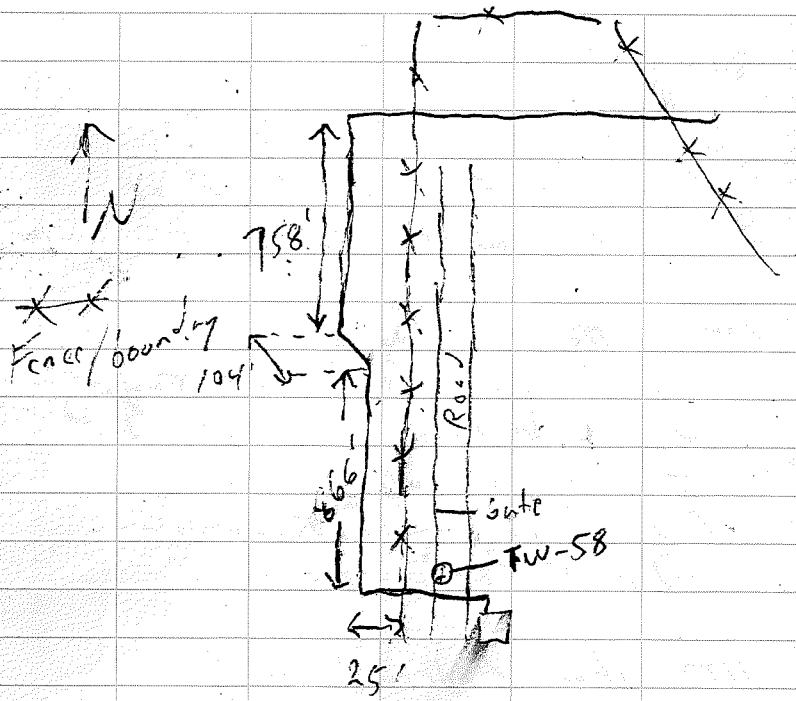
1045 Doug began to assist w/ sediment sampling at the treatment pond area. I continued to find boring locations in order to assess access

1100 Shane Andrews w/ Consolidated Utility arrived on site & we located one of their utilities.

Shane stated that the pipe ran off site ≈ 25' from the site boundary north.

Location _____ Date 11-12-07

Project / Client _____



1120 Shane left s.t.c.

1200 Arrived on s.t.c to locate lines. Myself and Doug went to clear lines.

Location _____ Date 11/12/07

Project / Client _____

1230 - 1315 Left s.t.c for lunch

1315 Geo Core Drills around on s.t.c.

Personnel: Cliff Bowers (helper) (for drills) David Graff (Driller)

Equipment on s.t.c. Bob Cat
work Truck
Pressure Washer

Geo Core, myself, & Doug went over scope of work & conducted tailgate safety meeting

1400 Geo core used a Bobcat to clear a path for the Drill rig leading to TW-01

Location _____ Date 11.12.07

Project / Client _____

1500
Began Drilling TW-01 on
the South west portion of
the site.

1524: Collected soil sample
TW-01 (0-2) for TPH (Gro/Dro)
BTEX, Total Metals
(Top 6" not included in sample)

Drillers Hit Refusal at
5' from the fractured limestone
Moved boring 10' north,
Drillers Hit refusal again
at 5'-bgs.

1730 I left site

Drillers Stayed on site
to decon. Doug Mick
also stayed on site.

Location El Dorado Date 11.13.07

Project / Client EPMEPC

7300 Arrived on site

Personal on site for
Drilling MWH Roy Moulin

Geo Corr
(helper) Cliff Bowels
(Driller) David Gaff

Magic Whiser

Equipment on site
CP-100C Drilling
Bob cat (not used)
Pressure washer
PID
Oil water pump.

Went over scope & conducted tail gate
~~Begin setting up~~ Safety

Began setting up on TW-04

Location _____ Date _____

Project / Client _____

829 Collected TW-04 (0-2)
(Top 6" not included in sample)

845 Collected TW-04 (2-4

Refusal at 4'

Break for a meeting w/ Bill Pickens and Doug Mick

Pickens gave us more details on the sampling plan

For TW-09, 14, 35, 57
02 39 59
08 42 50
07 38 63
19 29 33 65
03 41 70
20 40 68
31

Location _____ Date _____

Project / Client _____

For these sample we are to collect Metals, VOC, Semi, DRO, GRO, MADEP

For heavy contaminated soils also take TCLP Metals, VOC, Semi,

Assume 4 samples per Borg 2 saturated and 1 unsaturated

Also, 1 Geotech Shelby tube sample per area

1000 Set up on TW-04
Magic Weaver with KBHE
Arrived onsite on site
to collect split samples

Location _____ Date _____

Project / Client _____

1020 Collected Sample TW-09 (0-2)
Magic collected split Sample
(Top 6" not included in sample)
Drillers Hit refusal at 3'

Moved to TW-06, Drillers
went to ~~[illegible] Auger Gets~~
decon lead auger.

1118 Collected TW-06 (0-2)
Magic Collected split
Sample (Top 6" not included in sample)

1140 Drillers began drilling
< gain

Refusal at 6' due
to limestone.

Location _____ Date _____

Project / Client _____

1200 Broke for Lunch
1310 Returned from lunch

Began Setting up to drill
TW-11

1359 Collected TW-11 (0-2)

VOC, SVOC, GRO, DRO,
Metals, EPH, VPH

Drilled TW-11 to
10'-6 bgs

Packed up samples for
shipment to the lab
1401 Left site

Location El Dorado Date 11-14-07

Project / Client EDR / EPMEPC

700 Arrival on site

Begin getting jars and organizing for the day.

730 Drillers arrival on site

Personnel on site for drilling
Roy Morlan - MWH
Cliff Bowels - GeoCore
David Goff GeoCore

Went over scope of work and conducted tailgate safety meeting

Tailgate safety meeting adjustments

Clifford R. Bowles
David Goff
Roy

Same equipment as yesterday
Bob cat not used

Location Date

Project / Client

Begin setting up to drill TW-02

802 Collected TW-02 (0-2)
VOC, SVOC, GRO, DRO,
Metals, EPH, VPH, TCLP VOC, TCLP metal, TCLP SVOC
(Top 6" not included in sample)
Drillers encountered Rock at 4', we used the a rock bit to punch through it. ≈ 2' of lime stone. Once we passed through it we continued to use the sampler.

915 Collected TW-02 (10-11)
VOC, GRO, DRO
Metals, EPH, PPH
Very little recovery so metals Jar 1½ full
DRO ½ full, EPH ½ full, no SVOCs
No TCLP samples!

Location _____ Date _____

Project / Client _____

Drilled TW-02 to a
Total depth of 20'
Refusal at limestone.

1030 Checked TW-09 boring
for water. ≈ 1-foot
of PSH in the well.
At Bill Pickens request
we set a well.
5'-Screen, 8'-Casing, (3'-Stickup)
Sand 3'-10' bentonite 10.5'-3'

1104 Retuned to TW-11 to
drill 5' into the rock
in order to set a well
The intent of this
is to see if the PSH
from TW-09 extends northeast

Location _____ Date _____

Project / Client _____

PID TW-11 (5-7.5) 18.8
TW-11 (7.5-10) 8.9

re-Drilled TW-11 to
10'-bgs. Refusal at 10'
due to Limestone.

Set well at 10'
5' Screen, 8' Casing (3' stickup)
Sand 3'-10', Bentonite 1.5'-3'

1200 Broke for lunch
1250 Returned from lunch

Set up to drill TW-14

Location _____ Date _____

Project / Client _____

1325 Collected TW-14 (0-2)

for DRO, GRO, VOC, SVOC

VPH, EPH, Metals (Top 6" not included)

Due to presence of limestone

5'-20 was drilled w/ a Rock bit

Set well at 20'

10' screen 13' casing (3' stickup)

Set up to drill TW-19

1545 Collected TW-19 (0-2)

for VOC, SVOC, GRO, DRO,

VPH, EPH (Top 6" not included)

Drilling left site to fix tires

Drilling retained to drop off trailer. All personal left sites

Location ~~EDR~~ El Dorado, KS Date 11.15.07

Project / Client EDR / EPMEPC

700 Arrived on site

Personal on Site: Roy Morlan - MWH (for drilling)

(Helper) Cliff Bowels - Geo Core

(Driller) David Gaff - Geo Core

Equipment on site for drilling

CP1000C Rig - Geo Core

Pressure washer - Geocore

Oil water probe, PID > MWH Wichita Rental

Went over scope of work & conducted tailgate safety meeting.

Today we are to continue w/ monitoring well installation & soil sampling

Location _____ Date _____

Project / Client _____

Began setting up to drill

TW-19

8/8 Collect TW-19 (5-6)

for VOC, SVOC, GRO, DRO, Metals, VPH, EPH

We did not have enough soil to collect TCLP samples

Drilled well to total depth of 12'-bgs

Set well

Screen 4'-12' (8 feet of screen)

casing >4' (3 feet stickup)

Sand 2'-12' bentonite 1'-2'

Location _____ Date _____

Project / Client _____

Moved back to TW-02 to set a well.

There was 4' of caving in in TW-02 (current depth is 16', well was originally drilled to 20'.) We drilled out ~~well~~ hole and set the well.

Completed well

Screen 10'-20'

Casing 3' stickup - 10'

Sand 8'-20'

Bentonite 8'-6'

Set up to Drill TW-10'

8/9 Collect TW-10 (0-2)

for BTEX, GRO, DRO, Metals (Top 6" not included)

Location _____ Date _____

Project / Client _____

1130 Broke for lunch

1230 Returned from lunch

continued drilling TW-10

John Mills w/ Geo core arrived on site to assess the work has crew was doing

Drilled TW-10 to a total of 10' bgs. Heavy HC impacts visible from 7-8', limestone from 8-10'. Left hole open to see if water would infiltrate.

1321 TW-10 (7-8) collected

GRO, DRO, VOC, SVOC, metal VPH, EPH, TCLP VOC, TCLP SVOC, TCLP Metals

Location _____ Date _____

Project / Client _____

Set up to Drill TW-12

Drilled TW-12 to a total depth of 20'

Heavy Impacts visible at 10-11.5. Set well at 20'

Screen 5'-20'

Sand 3'-20'

Bentonite 1'-3'

1401 TW-12 (0-2) collected

BTEX, GRO, DRO, Metals (Top 6" not included)

1606 TW-12 (10-11.5) collected

VOC, SVOC, GRO, DRO, EPH, VPH, metals. Not enough sample to collect TCLP

1700 Left site

Location El Dorado, KS Date 11.16.07

Project / Client EDR / EPM LPC

700 Arrived on site

Began getting ready for drilling, restocking jars in the truck.

715 Drillers arrived on site

Personnel on site for drilling

Roy Morlan - MWH

Cliff Bowels
David Gaff > Geo Corr

Equipment on site

CP 1037C Drilling > Geo Corr
Pressure washer

PID
oil water probe > MWH Nichols Remedial

Location Date

Project / Client

Set up to continue drilling TW-10. hole was dry.

750 John Mills w/ Geo Corr Arrived on site

Drilled TW-10 to 15'

Gas - water observed at 10'

~~Set~~ Set

Sand 8-15'
~~Casing~~
Bentonite 6-8'
Screen 5-5'
Casing 5-0 + Stickup

800 David Bollenbach arrived on site

Location _____ Date _____

Project / Client _____

Begin drilling TW-13

845 collected soil sample

TW-13 (0-2) for

BTEX, GRO, DRO, Metals

(Top 6" not included in sample)

Dup-1 also

~~collected~~

Drilled TW-13 to

20' - 6 gs

Screen 5-20'

Casing 80-5 + stick up

Sand 3-20'

Bentonite 1-3'

Location _____ Date _____

Project / Client _____

1130 Left for lunch

1230 Retired from lunch

begin to setup on TW-16

1233 collected TW-16 (0-2)

GRO, DRO, BTEX, Metals

1343 Collected TW-16 (10-12)

GRO, DRO, BTEX, Metals

MS/MSD collected.

Set up to Drill TW-06

Location _____ Date _____

Project / Client _____

1443 collect TW-08 (0-2)

GRO, DRO, VOC, SVOC, metals, EPH, VPH

Packed samples for shipment to the lab

1705 left site

Location EDR El Dorado KS Date 11-17-07

Project / Client EDR

1405 Arrived on site

Gated equipment to take

Hand auger samples

1420 collect BG-11 (0.5-1.5)

8oz for metal

1-L Baggie for Geotech

1519 collect BG-10 (0.5-1.5)

8oz for metals

1-L Baggie for Geotech

1440 BG-09 (0.5-1.5)

8oz for metals

1-L Baggie for Geotech

Location _____ Date _____

Project / Client _____

1540 BG-08
(0.5-1)
8oz for Metals
1-L for Geotech

1645 BG-06 (0.5-1)
8oz Metals
1-L for Geotech

1600 Cobalt BG-05 (0.5-1)
8oz for Metals
1L for Geotech

1630 Left site

Location El Dorado, CA Date 11.19.09

Project / Client Ephemic / EDR

700 feet on site

Began collecting Hand auger samples.

Location _____ Date _____

Project / Client _____

1030 Drillers arrived on site

Personal on site Roy Morlan - MWH

David Graff
Calvin Davis
Clifford Bull
} GeoCore

Equipment on site

GP 1000c Drill rig
Pressure washer
two work truck
Bob Cat (not used)
} GeoCore

Rental Truck
PID
Oil water Probe
} MWH Rental

Location _____ Date _____

Project / Client _____

Began drilling TW-08

1135 Collected TW-08 (5-7)
For SVOC, VOC, EPH, VPH, metals, GRO, DRO

Broke for lunch

1237 Retained from lunch

Setup on TW-07

12510 Collected TW-07 (0-2
for GRO, DRO, VOC, SVOC, EPH, VPH, metals
(Top 6" not included in sample)

Location _____ Date _____

Project / Client _____

1337 Collect TW-07

VOC, SVOC, GRO, DRO,

Metals, VOH, EPH

1340 Grim and

On Site

Drill TW-07 to

13' -bgs

7'-Slotted

Sand 4-13'

Bentonite 2-4

1446 Collect TW-05 (0-2)

GRO, DRO, Metals,

BTEX

(Top 6" not included in sample)

Location _____ Date _____

Project / Client _____

1541 Collect TW-05 (05-7)

for BTEX, GRO, DRO, Metals,

Set well at 11'

5' of Screen.

Sand 4-11

Bentonite 2-4

Gauged wells

TW-13 10.54'-bgs

TW-12 9.85-bgs

TW-16 7.35-bgs

TW-07 9.50-bgs

1700 left Site

Location EDR Date 11-2-[illegible]

Project / Client EDR / EPMEPC

700 Arrived on site

Personnel on site for ~~S~~ well install

Roy Morlan - MWH
David Gaff
Calvin Davis
Clifford Bull
} Geo Corr

Went over scope of work & conducted tailgate safety meeting.

Begin drilling TW-03

736 collected TW-03 (0-2)

for GRO, DRO, VOC, SVOC, Metals, VPH, EPH.

Dup-2 collected (Top 6" not included)

Location Date

Project / Client

945 collected TW-03 (15-17)
GRO DRO VOC SVOC
Metals VPH, EPH

Drilled TW-03 to total depth of 23' bgs

15' of screen

Sand 6'-23'
Bentonite 4'-6'

Set up to drill TW-15

Drilled TW-15 (0-2)

1115 collected TW-15 (0-2)
GRO, DRO, VOC, SVOC,
Metals, VPH, EPH
(Top 6" not included in sample)

Location _____ Date _____

Project / Client _____

1218 collect TW-15 (5-7.5')
for GRO, DRO, VPH, EPH
Metals, VOC, SVOC,

Drill TW-15' to 17'-6"

10'-Screen
Sand 5-17
Bentonite 3-5

Set up to drill TW-22

1331 collect TW-22 (0-2)
BTEX, GRO, DRO,
Metals,
(Top 6" not included in samples)

Location _____ Date _____

Project / Client _____

1422 collect TW-22
(0-2)
DRO, GRO, BTEX, Metals

Drill well to 16'
Screen 10'
Sand 4-16'
Bentonite 2-4

Packed samples for shipment to the lab

1652 left site

Location El Dorado, KS Date 11-26-07

Project / Client EDR / EPM EPC

1130 Arrival on site.

Personal on site

Roy Morlan
Brad
> MWH

David Gaff
Calvin Davis
Clifford Bull
> Geocore

Equipment on site

GP-1000L
two work trucks
pressure washers
Bob cat (not used)
> Geocore

Rental truck
Rental PID
oil/water probe
> MWH
Rental

Location Date

Project / Client

Conducted tailgate safety meeting & went over scope of work. Today we are to continue drilling temp wells

Set up to drill TW-21

1215 collected TW-21 (0-2) for BTEX, GRO, DRO, Metals (Top 6" not included in sample)

On 11-21-07 while I was not here Geocore and Brad w/ MWH developed wells TW-11, TW-2, TW-7, TW-5, TW-13, TW-10, TW-12, TW-19, TW-14

Dumped Drag

Location _____ Date _____

Project / Client _____

	Pumped Dry	Gallons pumped	Well Volumes
TW-11	yes	~~10~~	~~10~~
TW-02	yes	8	4
TW-07	yes	11	13
TW-05	yes	2	2.5
TW-13	yes	15	~~7.5~~
TW-10	yes	4	3
TW-12	~~yes~~ no	9	4.5
TW-19	no	69	45
TW-14	no	>8	28

Location _____ Date _____

Project / Client _____

1309 Collect TW-21 (10-12)
for BTEX, GRO, DRO, Metals

Drilled TW-21 to 20'-6" bgs
Set well at 20' w/
15' of screen.

Screen 5-20'
Sand 3-20'
Bentonite 1'-3'

Setup to drill TW-20

1423 Collect TW-20 (0-2)
VOC, SVOC, GRO, DRO,
Metals, EPH, VPH
(Top 6" not included in sample)

Location _____ Date _____

Project / Client _____

524 TW-20 (10-12)

VOC, SVOC, GRO, DRO, Metals, VPH, EPH

Drilled well to TD of 20'

Screen 5-20'

Sand - 3-20'

Bentonite - 1'-3'

1700 packed up samples, sent them w/ Matt. Left site.

Location EDR Date 11.27.07

Project / Client EDR / EPMEPC

700 Arrived on site.

Personnel on site for well install

Roy Morlan - MWH

David Goff
Calvin Davis
Clifford Bull
} GeoCore

Equipment on site for MW install

GP-1000C
two work trucks
pressure washer
Bobcat (not used)
} GeoCore

Rental Truck
Rental PID
oil/water Probe
} MWH Rental

Location _____ Date _____

Project / Client _____

Conducted tailgate safety meeting & went over scope of work. Today we are to continue w/ the TW installs.

~~Stretch 240 ft~~

Drillers warmed up the drill rig.

245 Set up to drill TW-17

800 collect TW-17 (0-2)
GRO, DRO, BTEX, metals
(Top 6" not included in sample)

849 Collect TW-17 (10-12)
GRO, DRO, BTEX, metals

Location _____ Date _____

Project / Client _____

Drilled TW-17 to 17'-6" s
Installed well.

Screen - 7'-17'
Sand 5'-17'
Bentonite 3'-5'

950 Set up to drill TW-23

1002 TW-23 (0-2)
GRO, DRO, BTEX, Metals
(Top 6" not included in sample)

1050 TW-23 (10-11)
GRO, DRO, BTEX, Metals

Location _____ Date _____

Project / Client _____

Drilled TW-23 to 17'-6"
Installed well

Screen 7-17'
Sand 5-17'
Bentonite 3-5'

1200 Set up to drill TW-24

1215 Collect TW-24 (0-2)
GRO, DRO, Metals, BTEX
(Top 6" not included in sample)

1256 Collect TW-24 (6-7.5)
GRO, DRO, Metals, VOC, SVOC,
VPH, EPH, TCLP Metals,
TCLP VOC, TCLP SVOC

Location _____ Date _____

Project / Client _____

Drilled TW-24 to
12.5'-bgs. Installed well

Screen 5.5-12.5
Sand 3.5-12.5
Bentonite 1.5'-3.5

1330 Set up to drill
TW-25

1345 Collect TW-25 (0-2)
GRO, DRO, BTEX, Metals,
(Top 6" not included in sample)

1415 Collect TW-25 (2-4)
GRO, DRO, BTEX, Metals

Location _____ Date _____

Project / Client _____

Set up to drill TW-27

~~[illegible]~~

1515 Collect TW-27 (0-2)

GRO, DRO, BTEX, Metals

(Top 6" not included in sample)

1530 Drill TW-27 to

10'-bgs. Left to

complete tomorrow

Drillers wanted to leave early

Gauged walls & Cover soil piles

1600 Drillers left site

Location _____ Date _____

Project / Client _____

Well	DTW	DTP
TW-25		
TW-23	DRY	
TW-24		
TW-17	9.10	
TW-20	12.00	
TW-21	10.20	
TW-22	8.20	
TW-15	5.20	
TW-05	4.70	
TW-07	9.70	
TW-03	16.30	

1800 I left site

Location El Dorado KS Date 11.28.07

Project / Client EDO / EPMEPC

700 Arrival on site

Personnel on site for drilling

Roy Morlan - UGWH

~~David Gaff~~

Calvin Davis
Clifford Bull } GCO Corr
Jon Mills (driller)

Conducted tailgate safety meeting & went over scope of work. Today we are to continue well install

Resumed drilling ~~at~~ TW-27

~~Drill~~ When we got to 20' bgs at TW-27
~~I asked the driller~~
~~to~~ we hit limestone

Location Date

Project / Client

This ~~[illegible]~~ boring appears to be have a layer of hard material (very well compacted soil) then returns to clay for ≈ 10' until it finally hits limestone at ≈20' bgs. I asked the driller to use the spoon to collect a ~~[illegible]~~ soil samples within the clay above the limestone on future boring. Mr. Mills stated that he would not do that. I stated that the purpose of this work is to collect soil samples not just to drill wells. He still refused & said he we would need ~~[illegible]~~ to core to collect samples.

Location _____ Date _____

Project / Client _____

Drill TW-27 to

23'-6ss

Screen 8-23'

Sand 6-23'

Bentonite 4-6'

916 Setup to drill TW-26

950 Driller bent thier rods collecting split spoon sample 2→4', they left site to have them repaired

1145 Drillers return to the site w/ repaired equipment. ~~It has been decided~~ After consulting w/ Doug, Mick it has been decided they

Location _____ Date _____

Project / Client _____

once a hard layer is encountered drillers will switch to drilling without continuous sampler. If a soft layer is encountered after the hard layer drillers will collect split spoon samples again using direct push, pushing will be done without the use of a hammer as the rig is not equipped w/ one. The drillers brought a ~~3~~ 3" split spoon to collect these samples.

930 TW-26 (0-2)

GRO, DRO, metals, BTEX (Top 6" not included in sample)

1530 TW-26 (12-12.5)

GRO, DRO, metals, BTEX

Location _____ Date _____

Project / Client _____

Drilled TW-22 to 20.5'

Set well

Screen 7'-20'

Sand 5-7'

Bentonite 3-5'

Gauged wells

TW-25 9.70

TW-24 9.55

TW-23 DRY (<1' of water)

TW-26 DRY

TW-27 17.2

1745 left site

Location El Dorado KS Date 11-29-07

Project / Client EDR / EPMCPC

700 Arrival on site

Personnel on site for drilling TW

Roy Morlan - MWH

Jon Mills
Calvin Davis
Clifford Bull
> Geo Corr

Equipment on site

CP 1000C Drill rig
2 work trucks
Pressure washer
> Geo Corr

oil/waterproof
PID
Truck
> MWH Rental

Location _____ Date _____

Project / Client _____

Setup to drill TW-37

726 collected TW-37 (0-2)

BTEX, metals, GRO, DRO

(Top 6" not included in sample)

Drilling hit refusal at 5'

Moved drill location

44' east.

825 Started drill TW-37 again

Refusal at 3.5'

Setup to drill TW-38

Location _____ Date _____

Project / Client _____

913 collected TW-38 (0-2)

VOC, SVOC, EPH, VPH, metals,

GRO, DRO

(Top 6" not included in sample)

1021 collected TW-38 (10-12.5')

VOC, SVOC, EPH, VPH,

metals, GRO, DRO

Drilled TW-38 to 28'-6"

Installed well

Screen 13'-28'

Sand 11-28'

Bentonite 9-11'

Setup to drill TW-36

Location _____ Date _____

Project / Client _____

1723 TW-36 (0-2)

VOC, SVOC, Metals, GRO,
DRO, EPH, VPH
(Top 6" not included in sample)

1450 TW-36 (14-15)

VOC, SVOC, Metals, GRO,
DRO, EPH, VPH

Drilled TW-36 to 30' - 6,5
Set well

Screen 15-30
Sand 13-30
Bentonite 11-13

Location _____ Date _____

Project / Client _____

Gauged wells
TW-23 DRY (<1' of water)
TW-24 DRY (<1' of water)
TW-36 24'
TW-38

Left site

Location El Dorado, KS Date 11-30-07

Project / Client EDR / EP gen EPC

700 Arrived on site

Personal on site for work
I am conducting

Roy Morlin - MW 11

BGS

Conducted tailgate safety
& went over scope of work.
Today we are to collect
Surface samples w/ a
geoprobe

Equipment on site

Truck mounted Geoprobe - BGS

Location Date

Project / Client

All samples collected for BTEX, metals, GRO, DRO

815 Collected BH-005-0.5-1.5

820 Collected BH-004-0.5-1.5

845 Collected BH-006-0.5-1.5

900 Collected BH-008-0.5-1.5

915 Collected BH-009-0.5-1.5

920 Collected BH-007-0.5-1.5

945 Collected BH-002-0.5-1.5

950 Collected BH 001-0.5-1.5

Location _____ Date _____

Project / Client _____

1000 BH-003-0.5-1.5

1025 BH-010-0.5-1.5

1035 BH-012-0.5-1.5

1045 BH-011-0.5-1.5

1100 BH-015-0.5-1.5

1110 BH-014-0.5-1.5

1120 BH-013-0.5-1.5

Location El Dorado, KS Date 12.2.07

Project / Client EDR / EPMEPC

1000 Arrived on site

Personal on site for development

Roy Morlan - MWH

Equipment on site

Rental truck - Enterprise.

PVC down hole pump - Grocery

Today I am to develope wells

Called equipment to develope wells

Location _____ Date _____

Project / Client _____

Developed TW-27, TW-17,

TW-20, TW-21, ~~[illegible]~~ TW-25,

TW-24, ~~[illegible]~~, TW-34,

TW-36,

TW-36 + TW-23
were dry when gauged

1600 left site

Location El Dorado, KS Date 12.3.07

Project / Client EDR / EPMEPC

700 Arrived on site

Personal on site for well install

Roy Morlan - MWH

I got bottles together for the day

720 Left site to deliver empty Term Corr kits to the MWH Wichita office

930 Returned to site.

Labled jars for 2 days work.

Location _____ Date _____

Project / Client _____

1040 Geo Corr Arrived on Site

Personal

> Geo Corr

Equipment on Site
2 Work Trucks
Pressure washer > Geo Corr
GP1000C
PID
Rental Car > Mult Rental

Conducted tailgate safety meeting & went over scope. Today we are to continue installing TW wells.

Location _____ Date _____

Project / Client _____

Setup to drill TW-43

1140 Collected TW-43 (0-2)
BTEX, GRO, DRO, metals

Drilled TW-43 to a total depth of 25.5

Sand 25.53 - 7.95'

Set up to drill TW-35

1435 Collected TW-35 (0-2)
GRO, DRO, metals, VOC, SVOC, EPH VPH.

Location _____ Date _____

Project / Client _____

Drilled TW-35 to 205' bgs

Sand 8.1-205

Bentonite - 2-8.1

Screen length 10'

Packed samples for shipment to the lab

1700 left site

Location El Dorado, KS Date 12.4.07

Project / Client EDR / EP MEPC

730 Arrived on site

Personal on site for drilling TW

Roy Morlan
Brad Grim
> MWH

David Goff
Calvin Davis
Clifford Bull
> GeoCare

Had a meeting w/ Doug about logging Soil & Rock.

We are now to include a very detailed description of lithology that including color defined by munsul color chart dry st, % of particle sizes, ect.

Location _____ Date _____

Project / Client _____

Set up to drill TW-28

830 TW-28 (0-2)

GRO, DRO, VOC, SVOC,
Metals, VPH, EPH

941 Drilled TW-28 to 15
Rig broke a hydrolin
line - went down for
repairs.

1000 Repairs complete continued
drilling.

1030 TW-28 (2-2.5)
GRO, DRO, VOC, SVOC,
Metals, EPH, VPH

Location _____ Date _____

Project / Client _____

~~TW-2~~

1050 TW-28 (25-27.5)
GRO, DRO, VOC, SVOC,
Metals, VPH, EPH, TCLP VOC,
TCLP SVOC, TCLP, metals

Set up to drill TW-34

1215 cold TW-34 (0-2)
GRO, DRO, BTEX, metals

Drilled TW-34 to 33.8'

Location _____ Date _____

Project / Client _____

Sand 15.8-32.1

bentonite - 2.1-15.8

Screen length - 15'

Packed samples for shipment to the lab

1700 left site

Location El Dorado, KS Date 12.5.07

Project / Client EDR / EPMEPC

700 Arrived on site

Personnel on site for drilling

Roy Morlan - MWH

Brad - MWH

David Goff
Calvin Davis
Clifford Bull
} Geocorr

Equipment on site

GP1000C Drill rig
Pressure washer
two work trucks
} Geocorr

Rented truck
PID
oil water probe
} MWH Rented

Location _____ Date _____

Project / Client _____

Set up to drill

TW - 32

805 collect TW-32 (0-1)

GRO, DRO, BTEX, Metals

Drill TW - 32 to

30.4'

Sand - 13.9 - 30.4

bentonite - 2.05 - 13.9

Screen length - 15'

Location _____ Date _____

Project / Client _____

Set up to drill TW - 40 @

collect TW-40 (0-2)

GRO, DRO, BTEX, Metals

Drill TW - 40 @ to

29.39'.

Sand 19.5 - 29.3

Bentonite 2.07 - 19.5

Screen length 10'

Location _____ Date _____

Project / Client _____

Set up to drill TW-37

1457 collect TW-37 (0-2)

GRO, DRO, BTEX, metals

1543 collect TW-37 (2-4)

GRO DRO, BTEX, metals

Drilled TW-37 to 5'

left well to finish tomorrow.

Packed samples for the lab

1700 left site

Location El Dorado, KS Date 12.6.7

Project / Client EDR / EPMERC

700 Arrived on site

Personnel on site for drilling

Roy Morlan
Brad } MWH

David Gaff
Calvin Davis
Clifford Bull } GeoCore

Equipment on site

GP1000C
Pressure washer
Two work trucks } GeoCore

Oil water probe
PID
Rental Truck } MWH Rental

Location _____ Date _____

Project / Client _____

Continued drilling TW-37

Drilled TW-37 to 30.12'

Sand - 14.1-30.12'

bentonite 2.1-14.1

Screen length 15'

Location _____ Date _____

Project / Client _____

Set up to drill TW-33

1050 Collected TW-33 (0-2)

DRO, GRO, metals, ~~[illegible]~~
VOC, SVOC, EPH, VPH

1140 Collected TW-33 (4-4.5)

DRO GRO metals,
VOC, SVOC, EPH,
VPH

Location _____ Date _____

Project / Client _____

Drilled TW33 to 30.22

Sand - 13.9-30.22

Bentonite - 2.2-13.9

Screen length - 15'

Packed samples for the
Kub

1700 left site

Location El Dorado Hills Date 12.7.07

Project / Client EBM / EPMERC

700 Arrived on site

Personal on site for drilling

Roy Morlin
Brad } MWH

David Gaff
Calvin Davis
Clifford Bull } GeoCore

Equipment on site

GP 1000C
Pressure washer
Two work trucks } GeoCore

oil/water probe
PID
Rental truck } MWH
Rental

Location _____ Date _____

Project / Client _____

Setup + drill TW-31

400 collect TW-31 (0-2)
BTEX, GRO, DRO, Metals

408 collect TW-31 (12-13)
BTEX, GRO, DRO, Metals

Drilled TW-31 to
26.9'

Sand - 6.9-26.9
Bentonite - 1.84-6.9
Screen length - 15'

Location _____ Date _____

Project / Client _____

Setup + drill TW-39

collect TW-29 (0-2)
GRO, DRO, Metals, BTEX

Drilled
TW-39 to 23.1

Sand @ 7.0 - 23.1
bentonite 2.0 - 7.0
Screen length - 15'

Setup + drill TW-42

1315 collect TW-42 (0-2)
GRO, DRO, Metals, BTEX

Location _____ Date _____

Project / Client _____

1345 Tolled TW-42 (7.5-10)

GRO, DRO, Metals, BTEX
stopped drilling at 10'

Drillers pressure wash
was not working so they
could not decon and ran
out of clean augers.

Drillers left site to fix
augers

Packed samples for lab

1700 left site

Location El Dorado MS Date 12.8.07

Project / Client EDR / EPMERC

Arrival on site.

Personal on site for drilling
Roy Marlen - MWH

Two personal - BGS

Equipment on site

PID
Oil water probe
Rental truck
} MWH Rental

truck mounted Geoprobe
Work truck + trailer
pressure washer
} BGS

Location _____ Date _____

Project / Client _____

Drill TW-78 to

Completed wells
TW-74, 75, 76, 77, 78

Gauged all well

TW-74 - DRY
TW-75 - DTW-10.00 Bottom 15.25
TW-76 - DTW-10.49 Bottom 15.20
TW-77 - DTW-12.55 Bottom 22.50

All wells completed Flush

1400 All personal left site

Location El Dorado, KS Date 12-10-07

Project / Client EDR / EPM EPC

800 Arrived on site.

Cleaned out work truck and prepared jars for sampling today.

930 Doug Mack called and said Geocore would be late and probably arrive after 1200 as they had to repair their pressure washer.

1100 Drillers arrived on site

Personal on site

David Gieff } Geocore
Calvin Davis }

equipment -

GP1000C drilling } Geo Core
Pressure washer }
2 work trucks

Location _____ Date _____

Project / Client _____

Oil water probe
PID
Rental Truck
> MWH
Rental

Conducted tailgate
Safety mtg & went over
scope of work.

135 Drillers continued
drilling TW-42

1335 Drill rig lost torque
to the augers

Could not fix

1700 Left site

Location El Dorado Date 12.12.07

Project / Client EDR / EPMEPC

800 Arrival on site

Personal on site for
drilling

Roy Morlan
David Bollenbach
> MWH

David Goff
Calvin Davis
Clifford Bull
> Geocore

Equipment on site

GP1000C Drill rig
Two work trucks
Pressure washer
> Geocore

PID
Oil water probe
Rental truck
> MWH
Rental

Location _____ Date _____

Project / Client _____

Conducted tailgate safety & maintenance stop at work.

Set up to continue drilling TW-42

Drill TW-42 to 26.4'

Set up to drill TW-48

1200 Brad Grimm And on site

I began clean up work truck & left site

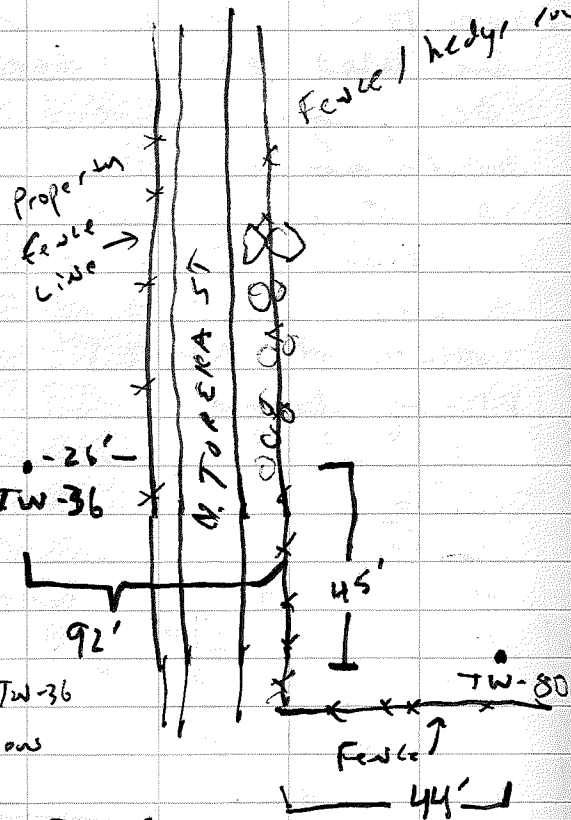
Location _____ Date _____

Project / Client _____

Location _____ Date _____

Project / Client _____

TW 80 Relative to TW-36



92' from TW-36 to hedge row

TW-36 to TW-80 about 150' SE.

1730 - Leave site for day

1/24/08

Location El Dorado Date 1/25/08

Project / Client El Dorado

0820 - Arrive @ site

0830 - Meet w/ Jerrold & clean TW-29 & look @ TW-50. Advise that former utilities are abundant in area & may have to stay moving around a bit.

0845 - Go w/ BCS & NWH crew to TW-80 & start surging

0900 - BCS begin @ TW-80

0915 - Back to Refining office to meet w/ Stan & Jerrold.

1130 - Leave site for day

1/25/08

Location El Dorado Date 1/30/08

Project / Client El Paso

0900 - Arrive @ site
0915 - Meet w/ Dave of BGS to discuss moving soil piles.
0930 - Move soil pile from TW-56 to landfarm. Place in area of landfarm just east of TW-71 tank scan. Spread out pile & remove plastic.
1030 - Unlock STF Gates
1100 - Work w/ Kyle to unlock back gate.
1300 - Lunch
1430 - Visit driller & Dave @ TW-67
1500 - Office work
1630 - Site visitor @ west gate (XUT-148 56) Green & Gold Cherry P.V. spoke w/ driver briefly said they were site seeing & asked about where tank used to be & who owned site.
1840 - Leave site

[illegible] 2/14/08

Location El Dorado Date 2/14/08

Project / Client El Paso

0700 - Arrive @ site
0730 - Unlock gates
0800 - HMI onsite, also Jerald onsite
0815 - Meeting w/ HMI about GW sampling & gauging
0915 - Tailgate safety meeting w/ HMI
0930 - HMI mobs to do GW gauging.
1100 - Measure staff gauges

N. Staff gauge = 2.24'
Photo documented x3

M. Staff gauge = 1.08'
photo documented x3

S. Staff gauge = 2.00
Photo documented x3

1230 - Leave Site

[illegible] 2/14/08

Location El Dorado Date 2/15/08

Project / Client El Paso

0800- Arrive @ site
0815- Meet w Jerald
0820- HMI onsite
1000- KDHE arrive onsite
Maggie Weiser & Stuart Allen
1010- Warren French from Arcadis onsite.
1020- Setup to sample W-24
1040- HMI & KDHE split samples @ W-24
1130- Arrive @ OW-01 for sample split
1200- Split sampler @ OW-01
1230- Discuss w/ KDHE method for low flow sampling including if >.33 drawdown is detected & ~~that~~ how wells will be purged before sampling which was OK by KDHE.
Also discussed AHA K what was found during sampling.

2/15/08

Location El Dorado Date 2/20/08

Project / Client El Paso

0600- Arrive @ Site
0805- Meet w/ HMI & Jerald Nordmyer
0830- Inspect STF area where fence was cut by Asplundh
0900- Inspect 2" & 4" product lines in intermittent creek area. (Photos)
0930- Inspect AHA pasture to see where cows might be getting through. Located drive through @ NE corner of pasture. This gate may have been left open by utility contractor.
1000- Drive inspection.
1015- Meet w/ HMI
1020- Leave site

2/20/08

Location El Dorado Date 3/3/08

Project / Client El Paso

0800 - Arrive @ site. Ray Harrington already onsite.
0830 - R+D out to look @ electrical in building.
0845 - Site inspections. Pond blowers off. Called Jerold about blowers.
0855 - Carlson Barghuma onsite for survey. Brian Peltier + Todd Hornbaker.
0900 - H+S tailgate meeting
0930 - Organize office area + coolers.
1000 - Check on survey crew
1030 - Leave site.

[signature] 3/3/08

Location El Dorado Date 4/1/08

Project / Client El Paso

0730 - Arrive @ site + meet Alan Grasso of USA
0745 - H+S tailgate meeting w/ Alan
0750 - Inspect landfarm
0830 - Review process w/ Alan
0900 - Site check
API - OK
Ponds - pretty high
STF - no issues other than fence
1020 - Leave site

[signature] 4/1/08

Location El Dorado Date 4/2/08

Project / Client El Paso

0815 - Arrive @ site
0835 - Check on Plan & do H+S
1009 - Leave sit to go for supplies
1015 - Return to site
10 30 - Admin Building
1045 - Measure TW-55 from BH-099
30.0' S
12.0' W
1100 - Visit STF
1135 - Leave site

Mz 4/3/08

Location El Dorado Date 4/4/08

Project / Client El Paso

0750 - Arrive @ Site
0830 - H+S tailgate w/ Alan
0100 - Review area for door to door survey
1015 - Visit Alan
1045 - Inspect Landfarm area
1100 - Meet w/ Alan RE: landfarm & soil transport work.
1135 - Leave Site

Mz 4/4/08

Location El Dorado El Paso Date 7/1/08

Project / Client El Paso El Dorado KS Historic Refinery Site MTBE Delineation

9:30 am On-Site
Sunny 70's - low 80's, Light Wind
Meet GSI On-Site
Max & Cory (Driller)

9:45 Move to Location / Spot Rig
Tailgate H&S Meeting
Review H&S Plan, Sign Forms, ...

10:00 Start Drilling TW-81
TD - 20'
Set Well w/ 10' Screen

11:45 Finishing TW-81 Surface

12:00 Move to DECON Pad

12:40 Finish DECON Augers/Bit

13:00 LUNCH

13:45 Return, Warmer 90's light S. Wind, Sunny!

1400 Starting TW-82

Location El Dorado Cont'd Date 7/1/08

Project / Client El PASO

1500 Drilled to ~ 12.5' Clay Becomes Soft / Saturated

1600 - Drilled to 20-21' starting to pick up small rock
- Water well up in boring

1615 - Set well - TW-82

1630 Setting Surface Completion Protective Riser Box

1700 Driller's Deconned & Mobed Off-Site

17:10 Begin well Development TW-80
Initial Development w/ 2" Weighted Bailer then with 12V Submersible Pump

Location El Dorado El Paso Date 7/1/08 Cont'd

Project / Client EL PASO

Sunny 90's Light Wind

1710 Begin Well Development

Purge ~ 2.5 gallons of Bailer Gray/Tan Silty Water w/ Trace fines, Clearing as Bailed

1720 - Begin Pumping w/ 12V Submersible, Surging as Pumping

1730 Pumped Total ~ 1/4 Drum ~14 gallons, Well Was almost Clear as finished, Cloudy only when pump was Surged - Well Pumped Dry - 3 time est flow 0.25 - 0.75 GPM

1740 Moved to TW-82 Bailed ~2.5 gallons Silty Water, Well began to clear

1750 - Started Pumping, Pumped ~1/3 Drum ~16-17 gallons Pumped Dry ~3 times est flow 0.5 gpm

1830 Finished Pumped Locked Wells - Off - Site

Location El Dorado El Paso Date 7/2/08

Project / Client

Sunny 90's & 90's, 5 Wind 10-20

8:15 On-Site

TW-81 Initial DTW = 13.69 ~ 22.9 T.D

TW-82 " " = 9.88 ~ 23' T.D.

TW-81 = 9.21 Sat Thick = 1.6 P.V.

TW-82 = 13.12 " " = 2.2 P.V.

TW-81 - 3x Vol = 4.7 gal

TW-82 - 3x Vol = 6.6 gal

Location: El Dorado - Elpaso Date: 7/2/08

Project / Client:

Purge Parameter(s) Sampling After Development on 7/1/08 (Yesterday!)

Date	Time	Purge Vol (gal)	Temp (°C)	SpC (mS/cm)	PH	TDS g/L	DO (%)	Turb NTU	ORP mV	DO mg/L
-TW-81		Initial	DTW = 13.69		Stickup =	2.91' AGS		~10' B.G.S to H_2O		
7/2/08	8:27	1.0 gal	16.08	1.95	7.32	1.3	18.7	5999	-112	1.90
	8:35	5.0 gal	16.69	2.00	7.23	1.3	36.7	"	-73	4.90
	8:37	7.0 gal	15.78	1.91	7.20	1.2	43.1	1245	-89	4.98
		Purged Dry @ 7.0 gal								
Sampled @ 9:15 am 6 VOA's (HCL) + 1-Amber Liter										
		Deconned Pump - Moved to TW-82								
-TW-82-		Initial	DTW = 9.88		Stickup =	3.00'	~6' B.G.S to H_2O			
7/2/08	9:45	2.0	14.45	1.61	7.69	1.0	31.6	1230	-76	2.87
	9:50	5.0	13.58	1.81	7.46	1.1	30.9	1134	-109	3.43
	10:00	7.5	13.59	1.79	7.28	1.1	27.8	643	-119	3.55
	10:05	12.5	13.55	1.82	7.20	1.1	46.1	759	-103	3.44
	10:10	15.0	13.82	1.81	7.20	0.9	23.8	2000	-125	3.47
		Purged Dry @ 15 gal								
Sampled @ 10:15 am 6-VOA's (HCl) + 2-Amber Liter's										
- Moved H_2O to Drum - Drum is Full! (Purged/Developed ~55 gallons From Both Wells in the 2 Days!)						- 11:00 Off-Site				

Location: El Dorado, KS - ElPASO Date: 7/2/08

Project / Client: Refinery MTBE Delineation

CONTENTS

PAGE	REFERENCE	DATE

Location EDR Date 10/23/07

Project / Client El Paso

M. Warner / K. Jackson

0930 - Arived onsite
1000 - Went to store to get sampling supplies
1030 - Calibrated minirae 2000
- 1000 ppm Span gas
- 0 ppm air
1100 - walked river from south Staff gauge
1230 - Break for lunch
1330 - Arived back onsite
1340 - Began loading truck for sampling
1400 - Arived at transect 5
1420 - located transect 5
1500 - Set up tape to collect samples
1620 Collected Sample ØSED-OSA
- see diagram for dimensions and sample locations
1630 - Identified applicable areas with sediment to sample.
1645 Collected Sample SED-OSB
* The width of the river in this area appears to be double what it was when flow measurements were taken.

Location EDR Date 10/23/07

Project / Client El Paso

M. Warner / K. Jalkson

1655 Began collecting sample SED-05C

1700 Collected sample SED-05C.

* We will return to this location tomorrow to collect samples SED-05D and SED-05E.

Location EDR Date 10/24/07

Project / Client El Paso

M. Warner / K. Jackson

0800 Left office for site.

0830 Stoped to get Ice and Tape.

0845 Arrived on-site and loaded vehicle

0915 Arrived at transect #5

0945 Collected sample SED-05D.

1000 Collected sample SED-05E.

1030 Arrived at office to grab sample containers.

1100 Arrived at Transect #4.
Total width: 66 ft.
Sediment: sides (banks) only

1145 Collected sample SED-01 (composite and discreet VOCs).

1300 Break for lunch

1330 Arrive back on-site

1345 Arrived at Transect #3
Total width: 66 ft.
Sediment: sides (banks) only

1440 Collected sample SED-02 (composite and discrete VOCs)

1500 Arrived at Transect #2
Total Width: 68 ft.
Sediment: sides (banks) only

1640 Collected sample SED-03 (composite and Discrete)

Location EDR Date

Project / Client

Location EDR Date 10/25/07

Project / Client El Paso
M. Warner / K. Jackson

0730 Left office for site.
0800 Stopped to get ice
0815 Arrived on-site & loaded truck
0845 Met w/ C/B Surveyors.
0930 Arrived at Transect #1
Width: 54 ft.
Sediment: On banks only
1030 Collected sample SED-04 (composite and Discrete).
1115 Conducted seep inspection:
- SG. 5 - No sheen, No Staining, No Odor
- 450 ft South of SG.M - Slight sheen on bank
  - Slight odor, No visible staining
  - This condition is intermittent all the way to SG. M in 20-30ft intervals.
- Main Seep - mostly dry
  - Slight sheen @ northern end.
  - No visible staining.
- ~45 ft N. of SG. M - Slight sheen
  - Slight odor
  - No visible Staining
- ~70 ft N. of Sg. M - No visible sheen
  - No visible stain
  - Slight HC odor

Location _____ Date _____

Project / Client _____

Location EDR Date 10/25/07

Project / Client ElPaso
M. Warner / K. Jackson

- ~200 ft N. of SG. M 1½" black poly pipe
  Cut in river
  - Strong HC odor comming from pipe
  - Slight HC odor in area
  - No sheen
  - No staining
- From SG. N south 50 ft moderate HC Odor
  - No visible sheen
  - No visible staining
- From SG N. on up to outfall, No Sheen
  No Stain
  No odor
- From outfall N. 50 ft
  - Moderate odor
  - Modgrate sheen
  - Slight Staining
  - Sheen seems to be popping up from river bottom.

1240 Break for lunch

1330 Arrived at Transect #2 to re-collect SED-03 with MS/MSD and Duplicate

1430 Collected sample SED-03, SED-03-MS & sed-03-MSD.

Location _____ Date _____

Project / Client _____

Location EDR Date 10/26/07

Project / Client El Paso

M. Warner / K. Jackson

0815 Left office for site.

0845 Got ice and measuring cups for sampling.

0900 Arrived on-site and took bottle inventory

1000 Arrived at SED-10 in the South Tank Farm.
Width: 16.5 ft.
Sample will be collected from sediment in the middle of the creek. (Discrete sample for VOCs and others).

1045 Collected Sample SED-10.

1130 SEEP INSPECTION - South Tank Farm
SED-11
- Sheen bubbling up from bottom
- Moderate to strong odor
- Walking through the creek seems to stir up sheen.
- along the bank - No visible sheen
- No visible staining

SED-11: Width: 12.5 ft.
Sample will be collected from the South side of the Stream, Approx 1 ft from the bank.

1200 Collected Sample SED-11.

Location EDR Date 10/26/07

Project / Client El Paso

M. Warner / K. Jackson

1230 Break for lunch
1330 Arrived back on-site.
1400 Arrived at SED-12
1430 Collected sample SED-12 & MS/MSD
1500 Collected Duplicate SED-12-SO.

Location EDR Date 10/29/07

Project / Client El Paso

M. Warner / K. Jackson

0800 Left for site.
0830 Stopped to grab ice and bags
0845 Arrived on-site and began repacking coolers.
0945 Arrived at Asphalt Handling Area spring (SED-13).
1000 Collected sample SED-13.
1020 Arrived at Walnut River Bank to begin collecting samples RB-1 to RB-05.
1115 Collected Sample RB-05.
1130 Deconed Hand Auger, Bowl & Scoop
1140 Collected Sample RB-04.
1200 Break for lunch.
1300 Arrived @ Main Seep
1330 Collected Sample RB-03 + MADEP
1345 Deconed Hand Auger, Bowl & Scoop.
1410 Collected Sample RB-02.
1425 Deconed Hand Auger, Bowl & scoop
1440 Collected Sample RB-01.
1520 Arrived at well N3-3
DTW: 17.34 TD: 19.46
1 × Well Vol. = 0.4 gal × 3 = 1.2 gals purge
1545 Bailed well Inv. @ 0.75 L/min

Location _____ Date _____

Project / Client _____

Location El Dorado Refinery Date 10/30/07

Project / Client Chloride GW Sampling

64° Sunny, Wind out of South

0730 Left for site.

0800 Stopped for Ice and bucketts.

0815 Arrived on site.

0830 Arrived at well N3-3

Purged Remaing 0.5 gals

0850 Collected Sample N3-3.

0910 Arrived at well W-01S

DTW: 16.15 T.D.: 20.03

Column: 3.88 ft. Purge Vol: 8 gals

0945 Collected Sample W-01S.

1000 Arrived at Extraction Sump ES-03.

DTW: 16.22 TD: 23.80

1015 Collected Sample ES-03.

1040 Arrived at Extraction Sump ES-02.

DTW: 19.18 TD: 24.67

1100 Collected Sample ES-02.

1110 Arrived at Extraction Sump ES-01

DTW: 15.45 TD: 27.13

1120 Collected Sample ES-01.

Location _____ Date _____

Project / Client _____

Location EL DORADO Ref. Date 11/1/07

Project / Client EL PASO

M. Warner / K. Jackson / D. Mick

0820 Arrived on-site & loaded truck

0910 Arrived at spray pond (see next page for sketch)

1020 - Collect sample Aliquot #A @ SW inlet area approx 4-5' from bank. Push core tool in to approx. 2' TD. Bank samples.

A -	10"	Water	24" push
B -	10"	water	18" push
C -	6"	"	24" "
D -	6"	"	24" push

1120 - Return to Aliquot #A location & do another push for VOC samples.

1125 - Collect VOC sample from Spray pond @ Aliquot A (SED-15A & SED-15)

1130 - Prepare composite sample & labeling @ COC.

1200 Break for lunch.

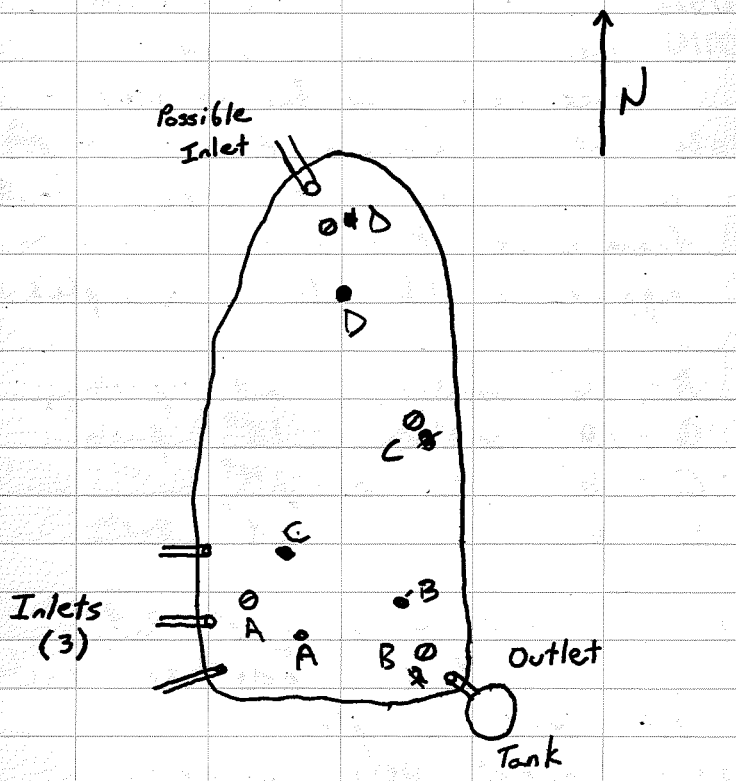
1245 Return on-site

1300 Arrive at Marley Pond

Location _____ Date _____

Project / Client _____

Spray Pond



⊘ Bank Sample Aliquot

● Pond bottom Sample Aliquot

Location _____ Date _____

Project / Client _____

1320 - Begin sediment sampling @ Marley Pond @ location A. SED-17 Aliquots (Bank)

A = 10" Water 12" Push

1335 - Move to Aliquot B (Bank) location @ Marley Pond + sample w/ 2 - 12" pushes required.

B = 12" H_2O + 12" x 2 Push

1350 - Move to Aliquot C (Bank) @ Marley Pond for sample collection.

C = 12" H_2O 10" push x 2

Refusal @ 10".

1400 - Move to Aliquot D

1415 - Sample collected @ Aliquot D using core sampler

D = 6" H_2O

24" Push (refusal)

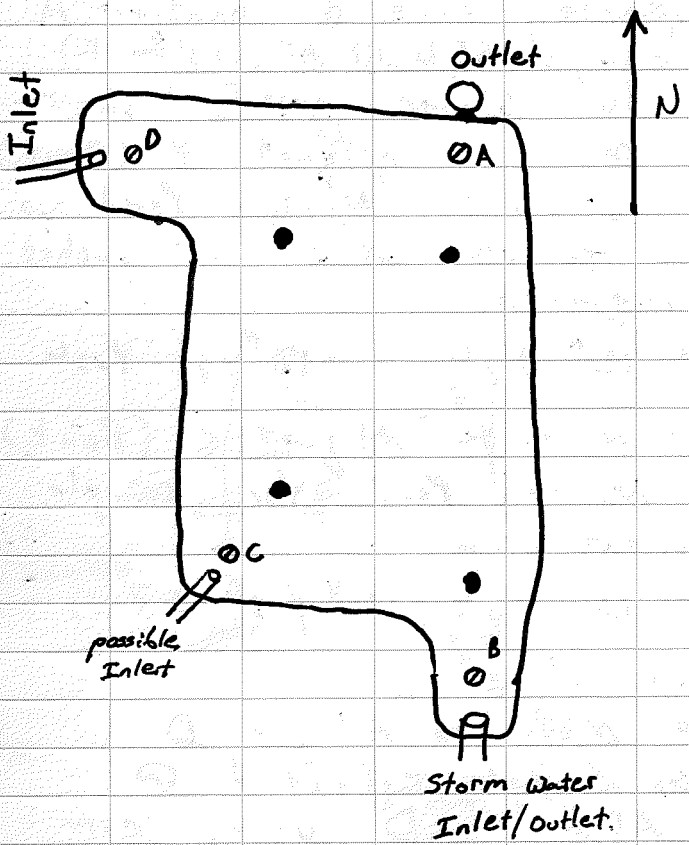
100% recovery

MR 11/1/07

Location _____ Date _____

Project / Client _____

Marley Pond



Location _____ Date _____

Project / Client _____

1430 - Collect VOC sample from Aliquot D (SED-17 DUP D & SED-17 DUP Samples)

1435 - PID Mini Rae 2000 SED-17 DUP A = 0.4 PPM
B = 4.0 ppm
C = 2.2 ppm

1440 - Label samples for Marley Pond Bank Comp and VOC's.

1450 - Begin to locate Spray and Marley Pond sample points w/ Trimble Unit.
Trimble Unit Not working battery possibly low.

1455 - Decon sampling equipment

1510 - PID SED 17 Aliquot D = 5.4 PPM

1530 - Go to get boat & move to Marley Pond

11/1/07

Location EDR Date 11/2/07

Project / Client El Paso - Third Phase

D. Mick, M. Warner, K. Jackson

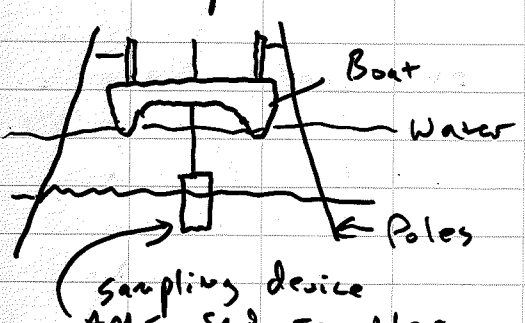
0830 - Arrive @ Marley pond & begin prep.

0845 - Calibrate PID

0900 - H&S tailgate meeting Discuss boat safety & sample handling precautions

0930 - Load Boat

0940 - Boat Launch - Matt & Kyle in boat, stabalize boat using metal poles



0945 - Trimble location PBSED-16B

0950 - Prepare decon equipment including 3 - 5 gallon buckets w/ Alconox, Rinse (primary) & secondary rinse stations

→ Mick 11/2/07

Location Date

Project / Client

0955 - Weather observations - Sunny & mild @ approx 50°F gentle breeze

1000 - Semi pulls onto site (USA)

1000 - Collect PBSED-16B aliquot

H_2O 47"

Push ~~→6"~~ Dem 29"

Push Refusal

1005 - Call Bill Pickens regarding sample collection methods. For pond bottom sample collection, go until push refusal, keep log of push resistance to track changes in lithology & to note top of soil (soil sed interface) Matt indicated that he can definitely feel a distinct change when he get into the soil. Sediment is very soft, soil more firm.

→ Mick 11/2/07

Location _____ Date _____

Project / Client _____

1020 - Split open PBSED-16B liner & photograph & log-

1025 Kyle & Matt collect PBSED-16C

H_2O 47.5"

Sed push 25"

TD = 72.5"

TD measured from top of water.

1050 - Decon sampling tip & set up for next aliquot locations.

1055 - Matt & Kyle launch for next aliquot collection.

1100 - Photo of Matt & Kyle in boat at PBSED-16A

1116 - Matt & Kyle deliver PBSED-16A.

H_2O 50"

Push 48" Push refusal @

Location _____ Date _____

Project / Client _____

1115 - Decon sampler

1120 - Launch boat for collection of PBSED-16D

1126 - Photograph PBSED-16A

1130 - Matt & Kyle sample @ PBSED-16#D DEM

1145 - Deliver sample PBSED-16AD DEM

H_2O 47"

SED push 49"

TD = 96"

push refusal

1152 - Photo of PBSED-16~~A~~D DEM

1155 - Collect laboratory sample from liner PBSED-16D

1240 - Not enough soil to collect TCLP from PBSED-16D so Kyle & Matt will collect 2 more pushes @ 16D aliquots.

1245 - DM offsite to get lunch

12/02/02

Location _____ Date _____

Project / Client _____

1245 - Matt & Kyle back to location D to get 2 more sample poshes.

1245 - PID Readings

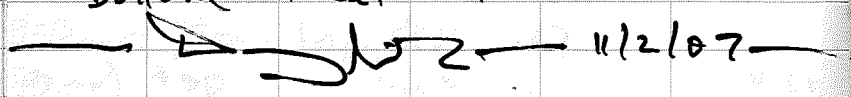
PBSED-16B - 3.1 ppm
16C - 3.6
16A - 1.0
16D - 24.5

1300 - Collect TCLP for laboratory @ Marley Pond PBSED-16D

1400 - Move to Spray Pond Decon tools & sampling equipment /prep for sampling Spray Pond.

1415 - Launch boat @ NW corner of spay pond.

1423 - Photo of Matt & Kyle @ Location B of spray pond bottom location.



11/2/07

Location _____ Date _____

Project / Client _____

1425 - Sample boring completed @ PBSED-14B.

H_2O = 27"

Push = 60"

Push Refusal @ 87"

1440 - Move to pond bottom aliquot location PBSED-14C

1445 - Core sample taken @ PBSED-14C

H_2O = 29" → photo of sample coll. taken

Push = 64

Push refusal @ 93"

1505 - Move to pond bottom Aliquot location PBSED-14D

1515 - Push core sample @ PBSED-14D

H_2O = 27"

Push = 50" TD = 77"

11/2/07

Location _____ Date _____

Project / Client _____

1518 - Receive samples from Matt & Kyle from Aliquots B, C, & D.

1520 - Photo of B.

1530 - Collect probe sample @ PBSED-14A

H_2O = 28"

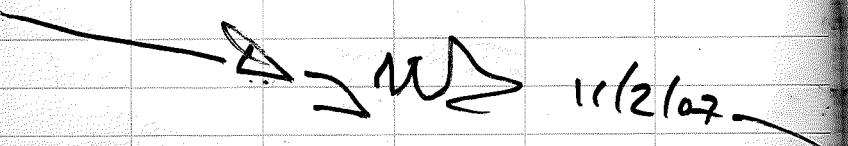
Push = 56"

TD = 84

1600 - Matt & Kyle remove boat from spray pond.

1601 - PID PBSED-14B = 320 ppm

1645 - Collect laboratory samples From PBSED-14A



Location _____ Date _____

Project / Client _____

1650 -

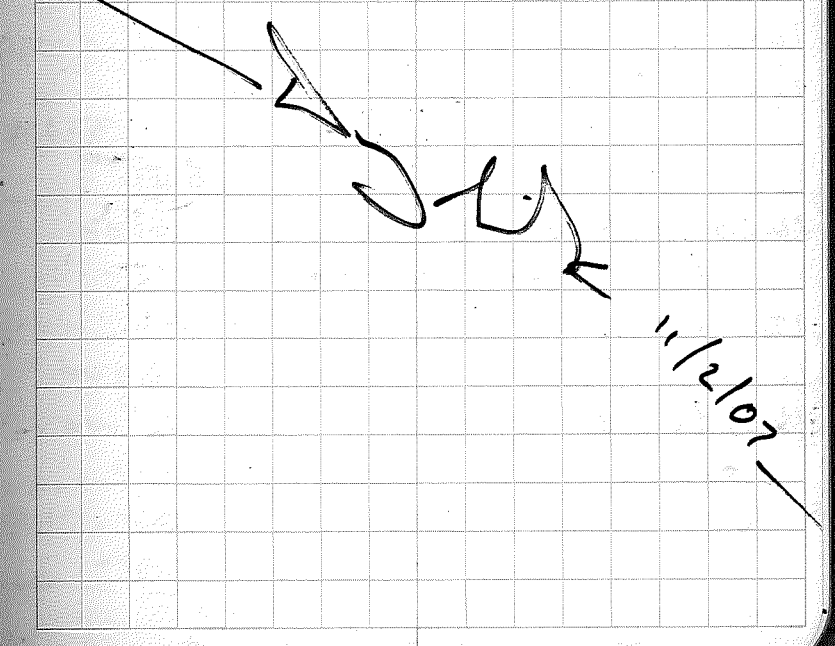
PID Readings

PBSED-14C - 128 ppm

14D - 72

14A - 158

1655 - Decon

1700 - Head to main office

1735 - Leave site for day