1/5/05

PA-GW6

Sample time: 12:00

duration ~45 min.

Total drill depth: 134ft.

Collapsed to 130 ft.

DTW: [redacted] 124ft.

used 4" disposable bailer to sample

filtered: diss. Metals (500ml)

Rad (½ gal)

pH: 7.87

Cond: 1484 uS/cm

uRave: 16

uR max: 15

Was able to collect duplicate Sample GW6b & MS/MSD.

Field blank also collected

PA-GW6f [redacted] (15:30)

PA-GW6e (15:30)

Started drilling GW9



1/6/05

PA-GW9

Sample time:

Total depth: 138ft

DTW:

used hydropunch and stainless steel bailer to sample because hole collapsed.

filtered: 500ml metals/2(1L) Amber Rad

pH:

Cond:

uRave: 18

uR max: 17

Screen broke. Installed a temporary well.

1/7/05

Started drilling PA-GW13

1/8/05

PA-GW13
Sample time: 14:00
duration: ~2 hrs
Total Depth: 157 ft.
DTW: 152 ft.
used hydropunch & stainless steel bailer to collect sample.
pH: 7.31
EC: 1266 uS/cm
uRaca: 16
uRcore: 16



1/12/05

Took a sample of the threading (greased & not yet deconed) from the drill pipe for VOC & SVOC analysis. Sample was named PA-DP1E (12:20).

1/18/05

Started drilling PA-GW3 (MW3).

1/19/05

Completed. MW3 ; started MW2.

1/20/05

Continued drilling MW2

1/21/05

Completed MW2 ; started MW1

1/22/05

PA-GW9

Depth to Water : 123.9 ~~[illegible]~~ ft btoc
taken from N side of well.

Total Depth : 150.2 ~~[illegible]~~ ft btoc

Casing is about 2 ft above ground.

3 casing vol = 13 gal.

PARAMETERS ⟶

Sample time = 15:00

500ml metals & 1/2 gal
Rad filtered.

Used a submersible
grundfos (redi-flow) pump
to collect sample.

Sonic continued drilling
MW-1



GW-09

| DTW | TIME | TEMP | Sp. Cond. | pH | ORP | DO (mg/L) | TDS | TURBIDITY |
|---|---|---|---|---|---|---|---|---|
| 123.9 | 14:45 | 17.89 | 11.96 | 7.22 | -25 | 3.60 | 0.8 | |
| | | 17.99 | 12.0 | 7.23 | -27 | 3.61 | 0.8 | |
| | 14:55 | 18.05 | 1.223 | 7.22 | -28 | 3.72 | 0.8 | 39.5 |
| | | | 1.225 | 7.22 | -28 | 3.78 | ⟶ | ~~33.8~~ mf |
| | | | 1.238 | 7.21 | -30 | 3.97 | ⟶ | ~~35.8~~ mf |
| | | | 1.23 | 7.21 | ⟶ | 4.07 | 0.8 | 33.8 |
| | | | 1.24 | 7.21 | ⟶ | 4.08 | 0.8 | 35.8 |

1/23/05

PA-GW18

Depth to water: 115.93 ft btoc
Total Depth: 129.85 ft btoc
casing is ~1 ft. above ground surface

3 casing vol = 7 gal.

PARAMETERS →

Sample time = 10:50

500 ml metals &
½ gal rad filtered

used a submersible
grundfos (redi-flow) pump
to collect sample.

Sonic continued drilling MW-1.
Having a hard time.
Reached ~210 ft.



| Initial | 115.93 | Mowing 12:1.85 | GW-18 | | | | | |
|---|---|---|---|---|---|---|---|---|
| DTW | TIME | TEMP | Sp. Cond | pH | ORP | DO(mg/L) | TDS g/L | TURBIDITY(NTU) |
| 117.5 | 10:30 | 17.50 | 4.83 | 6.22 | -356 | 0.35 | 3.2 | 2000 |
| | 10:41 | 19.10 | 5.5 | 6.09 | -393 | 0.21 | 3.3 | 554 |
| | 10:45 | 19.93 | 5.16 | 6.07 | -398 | 0.21 | 3.3 | 221 |
| | 10:48 | 19.94 | 5.17 | 6.06 | -400 | 0.20 | 3.3 | 191 |

2/1/05
~~1/31/05~~ TUESDAY T. Cox
Started drilling PA-GW14. Ended at 50ft.

2/2/05 Wednesday T. Cox

Continued drilling PA-GW 14. Ended at 130ft.

2/3/05 Thursday T. Cox

PA-GW14
Sample time:
Total depth: Drilled to 152 feet; hole collapsed to 133 ft. Used hydropunch to collect sample to 150 feet.
Depth to water: 122 ft. before hydropunch.

Had to install a temporary well.



2/4/05 FRIDAY T. Cox

PA-GW14
DTW:
TD:

JESSIE
STEVE
BRENT - RED

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1-18-05

1430 C. GARDNER ONSITE, MET

1530 TINA COX, REVIEWED SITE.

1630 @ GW-3, ROTOSONIC BOREHOLE @ ~50 FEET, UTILIZING WATER TO MAKE HOLE. RIG → GEFCO SONIC. DESCRIBING CORE...

1730 BOREHOLE @ 110.9 FT

1-19-04

0700 C. GARDNER ONSITE. DRILLERS WARMING UP...

0815 DRILLING @ GW-3...

0900 DRILLED TO 129 FT, COLLAPSE TO 116 FT. CONF SAT ~111-122 FT. SOUNDER D/W @ ~114 FT, THEN COLLAPSED TO 114 FT.

1010 OUTER CASING @ 130', INSTALLING 2" PVC SCH 40... ~4' FILL, TOC ~4' a/s, DRILLED TOC CASING DOWN TO



1-19-05

GW-3 PIPE TALLY

| | LEN | Σ LEN | TYPE |
|---|---|---|---|
| 1 | 0.35 | 0.35 | SUMP |
| 1 | 10.03 | 10.38 | SCREEN (0.020" SLOT) |
| 2 | 10.03 | 20.41 | SCREEN |
| 3 | 10.05 | 30.46 | BLANK |
| 4 | 10.05 | 40.51 | |
| 5 | 10.05 | 50.56 | |
| 6 | 10.05 | 60.61 | |
| 7 | 10.05 | 70.66 | |
| 8 | 10.05 | 80.71 | |
| 9 | 10.05 | 90.76 | |
| 10 | 10.05 | 100.81 | |
| 11 | 10.05 | 110.86 | |
| 12 | 10.05 | 120.91 | |
| 13 | 10.05 | 130.96 | 135.47 |
| 14 | ~~10.05~~ 4.13 | ~~134.12~~ | LANDING JT |
| ~~15~~ | X | | STICK UP: 4.6 FT |
| ~~16~~ | X | | SCREENED INTERVAL: 110.7 - 130.8 FT |

35 SKS #3 SAND, MONTEREY CLEAN-GRADED-KILN DRIED, ON EACH PALLET (100 lbs/SK) (1 ft³/SK)

1030 INSTALLING FILTER PACK, EST 4 ft³...

1-19-04 RLG 05

1100 @ GW-3 4 SKS INSTALLED TO ~106 FT, SETTLING...

1125 INSTALLED 4½ 5+PARTIAL TOTAL SACKS OF #3 SAND TO 106 FEET.

1130 INSTALLING MONTEREY SAND #60 (MOTION SAND) TO ~105 FEET.

48 SKS BENTONITE CHIPS PER PALLET. PURE GOLD MEDIUM CHIPS. (50lb/SKS).

1140 INSTALLING BENTONITE CHIPS...

1230 DESCRIPTIONS COMPLETE @ GW-3. 13 SKS BENTONITE INSTALLED TO ~48 FEET.

1245 DRILLERS TAKING LUNCH. CG MOVING CONE. TO DESCRIBE WHILE DRLG.. GW-24 NEAR GW-2...

1430 DRILLERS DEMOBING FROM GW-3 TO GW-2 BENTONITE @ GW-2 @ 10'

1-19-04 RLG 05

WELL MATERIALS @ GW-3

#3 FILTER PACK 6 SKS
#6 SAND PARTIAL SK
BENTONITE CHIPS
SCREEN 20 FT
BTM CAP x1
CASING 11 x 10 ST, 1 PARTIAL 2T.
LOCKABLE CAP.

1435 RIGGING-UP @ GW-2...

1450 2 ~~UNKNOWN~~ PEOPLE (WDCI) + ESCORT INSPECTING RIG... CALLED TMA.

1455 INSPECTORS OFFSITE

1530 DRILLING GW-2...

1725 DRILLED TO 49 FT

1730 C.G. & CREW OFFSITE

CG

1-20-05

0715 C. GARDNER ONSITE, CREW WARMING-UP EQ... @ GW-2
0800 GW-24 LITH LOGGING COMPLETE.
0815 DRILLING GW-2...
1130 BH @ 109 FT, WOR...

1220 C.G. @ GW-19 TO LOG CUTTINGS CORE STORED OUTSIDE, MUCH CORE SATURATED FROM ELEMENTS.

1315 @ GW-2, COLLAR ~~FOR SAMPLE~~ ON DRILL ROD ~~TOOL~~ TWISTED OFF. RUNNING CASING AND WASHING DOWN TO TOOL... TD @ ~109 FT.
1420 TOOL @ TD, (TRIED STABBING)..
1420 CREW @ LUNCH, CG CONTINUING TO DESCRIBE GW-19.
1500 CREW ONSITE FISHING TOOL...
1600 GW-19 COMPLETELY DESCRIBED
1700 COULD NOT STAB w/ FISHING TOOL RUNNING IN OVERSHOT..
1730 RECOVERED CORE TO 125 FT CASING @ 130 FT.
~1745 DRILLERS ~~MOBING~~ OFFSITE 2Cg



FRI 1-21-~~04~~ 05 RLG

0700 C. GARDNER ONSITE @ GW-2 CREW WARMING-UP EQ...
CORE UNSATURATED TO ~125 FT.
DRILLER PRESENTED DAILIES:

| DATE | ITEMS |
|---|---|
| 1/18 | 109 FT DRILL, 2 HR MOB |
| 1/19 | 129 FT WELL, 1 1/2 HR, 69 FT DRILL |
| 1/20 | 76 FT DRILL |

SIGNED DAILIES.
0800 DRILLING GW-2 (TD @ ~125 FT), CASING DRIVEN TO 130 FT.
0825 BH @ 149 FT, MEAS DTW @ 140.4' bTOC TOC IS ~6" ALS.
0835 DTW @ 140.1 FT bTOC, HOWEVER FINE GRAINED MATERIAL IN CUTTINGS, ~~APPEARS SATURATED~~ @ ~140 #, MOIST @ 144, MOIST ~~TO DRY~~ @ 149 FT.
0900 DRILLED TO ~~159~~ 155 FT Cg, JT ABOVE TOOL WAS WET, SAT SAND IN SHOE.
0910 SOUNDER INOPERABLE, LOW BATT?
0915 COLLAPSE FILL @ 143.
0925 REPLACED BATT IN SOUNDER
0930 DTW @ 140.1 FT bTOC. ~139.6 FT bls

# 1-21-04 RIG 05

0930 WILL INSTALL SCREEN ~135-155 FT
0945 DRIVING CASING... GW-2 LOGGING COMPLETE.
1045 INSTALLING

## GW-2 PIPE TALLY

| | JT | LEN | ELEV | TYPE |
|---|---|---|---|---|
| ✓ | 1 | 0.35 | 0.35 | SUMP |
| ✓ | 1 | 10.03 | 10.38 | SCREEN (2" PVC, SLOT 0.020") |
| ✓ | 2 | 10.03 | 20.41 | ↓ |
| ✓ | 3 | 10.05 | 30.46 | BLANK |
| ✓ | 4 | | 40.51 | |
| ✓ | 5 | | 50.56 | |
| ✓ | 6 | | 60.61 | |
| ✓ | 7 | | 70.66 | |
| ✓ | 8 | | 80.71 | |
| ✓ | 9 | | 90.76 | |
| ✓ | 10 | | 100.81 | |
| ✓ | 11 | | 110.86 | |
| ✓ | 12 | | 120.91 | |
| ✓ | 13 | | 130.96 | |
| ✓ | 14 | | 141.01 | |
| ✓ | 15 | | 150.06 | STICK-UP: ↓ SCREEN |
| ✓ | 16 | 10.05 | 161.11 | LANDING JT |

COLLAPSE TO 156 FT

1105 INSTALLING #3 SAND...



1145 SAND #3 INSTALLED TO 131.3 FT → 4+ PARTIAL SKS
INSTALLING #60 SAND TO ~130 FT
1150 INSTALLING BENTONITE CHIPS TO 40'.

1200 C.G. @ GW-25 TO LOG CUTTINGS...
1300 GW-2 HAS BENTONITE TO 40'
DRILLERS TAKING LUNCH AND MOBILIZING TO GW-1...
1515 TOOLS DECONNED, RIG MOBILIZED TO GW-1
1520 DRILLING GW-1
1700 (DRILLED TO 52 FT)
DRIVING CASING TO 50
1730 GW-25 DESCRIBED
CONE TO 65 FT

FOR TOMORROW:
- GW-2 DRILL 125-155' (30')
  INSTALL TO 155' 52
- GW-1 DRILL TO 65 FT. 82

TOTAL DRILL: 86 FT

1745 CREW OFFSITE
1800 C.G. OFFSITE.

CG

SAT 1-22-05

0700 C. GARDNER ONSITE, CREW WARMING UP EQ & GW-1...
0800 DRILLING...
1530 DRILLED TO 130 FT, DRIVING CASING...
COLLECTED CUTTINGS FROM GW-12
1800 BOXING GW-1 CORE...
1700 COLLECTED SOME CUTTINGS FROM GW-26
1745 DRILLED GW-1 TO 152 FT.

FOR THE DAY & GW-1 DRILL ~~52-152~~ ~~65-152~~ 52-152

1800 C. GARDNER & CREW OFFSITE

CG



SUN 1-23-05

0700 C. GARDNER ONSITE, CREW WARMING-UP EQ & GW-1...
0800 CG FINISHED SAMPLING GW-26
DRILLING GW-1...
1200 BHA 191 FT, V.U. DENSE
DRILLER TAKING LUNCH
1230 GW-5 SAMPLED.
1430 GW-13 SAMPLED, DRIVING CASING... (TO 190')
1620 DRILLED TO ~210 FEET, FORMATION EXTREMELY HARD, DRILLER NEEDS TO VIB-OUT SAMPLE TOOL AFTER A 10' RUN. NO RECOVERY 201-210 C/ VIBE-OUT TOOL. DRILLER & CG WORRIED ABOUT BREAKING TOOLS IN HOLE. C.G. RECOMENDED TO CHUCK TO NOT DRILL FURTHER.
1630 DRILLERS OFFSITE, CG & GW-9 TO SAMPLE.
1800 C. G. OFFSITE.

CG

1-24-05

0715 C. GARDNER ONSITE, DISCUSSED GW-1 BOREHOLE. AGREED TO ABANDON THE BOREHOLE C/ DRY, TOO HARD TO ADVANCE W/O BREAKING TOOLS. CHUCK INDICATED THE FOLLOWING:
- GPS ALL GW SAMPLE LOCATIONS CREATE GW ELEVATION MAP.
- BOX ALL SAMPLES
- DESCRIBED ALL LOCATIONS.

0800 DRILLERS ABANDONING GW-1 W/ BENTONITE.

0940 DISCUSSED NEXT MW LOCATION W/ CHUCK. AGREED TO INSTALL WELL IN AREA NEAR GW-27, IN NE CORNER AREA OF FENCED "YARD" AREA, ~100-130 FT NE OF GW-27.

1100 GW-1 ABANDONED W/ BENTONITE & GROUT (0-10') MOBING TO NEXT LOCATION NEAR GW-27...



1-24-05

NEAR GW-27, NEXT LOCATION IS PAMW-1.

1130 DRILLING PAMW-1...

1600 PAMW-1 @ ~112 FEET WATER SLOWLY RISING...

1615 DTW @ 93.2' b/s COMMUNICATED W/ CHUCK W/R TO SETTING A WELL.

1630 RIGGING TO DRIVE 6" CASING TO TD...

1730 6" CASING TWISTED APART @ THREAD COMM TO HEAD, SECOND TIME...

1800 CASING DRIVEN TO 108 FT

1815 CREW & Cg OFFSITE

Cg

# 1-25-05

0700 C. GARDNER ONSITE, CREW WARMING-UP EQ...
DISCUSSED PAMW-1 BH w/ CHUCK. WE AGREED TO DRILL BH TO ~150 FT TO EVALUATE PERCHED AQ.

0720 DRILLER PRESENTED DAILIES...

| DATE | ITEMS |
|---|---|
| 1/23 | DRILL 58 FT (GW-1) |
| 1/24 | DRILL 112 FT (PAMW-1), |
| ↓ | DECON MOB |
| | ABANDON 210' (GW-1) |
| 1/21 | INSTALL TO 155' (GW-2) |
| ↓ | DRILL 82 FT (GW-2 30', GW-1 52') |
| 1/22 | DRILL 100 FT (GW-1) |

DISCUSSED CHANGES TO DAILIES (1/21) WHICH ARE REFLECTED ABOVE. CG SIGNED DAILIES.

~0800 DRILLING PAMW-1...
0810 DRILLED TO 117 FT.
0810 DTW e 111.15 FT BTOC (RESIDUAL FROM DRIVING CASING?)
0825 DTW e 110.88 FT BTOC (TOC IS 2' a/s)



# 1-25-05

0855 DRILLED TO 122
DTW 97.4 FT BTOC (TOC ê 2' a/s)
0905 DTW 95.9 FT BTOC
93.9 FT a/s
~ SAME LEVEL AS 1/24
0925 DRILLED TO 126 (V. HARD)
0927 DTW e 99.1
0945 DTW e 95.9, CALLED CHUCK, AGREED ON WELL DESIGN.
1000 INSTALLING SAND TO 108 FT.
1015 INSTALLING 2" PVC SCREEN & CASING
2 JTS SCREEN w/ SUMP
9 JTS BLANK
110.86 FT OVERALL
NEED ~2.5' STICKUP
1020 INSTALLING FILTER PACK TO ~
1035 WHEN PULLING 6" CASING TO 5 FEET (LAND SURF) WELL DRIFTED ~2.5 FEET
CAN'T PULL 2" PVC w/o RISKING BREAKING A CONN. TOP OF SCREEN ~90.5 a/s.

# 1-25-05

1050 #3 SAND TO ~87 ~~FEET~~, INSTALLING #60 SAND TO ~86 FEET.

1100 INSTALLING BENTONITE TO 10' b/s.

1245 GW-27 BOXED

1250 @ PAMW-2 (GW-2) TO BOX CORE.

1425 PAMW-2 BOXED, @ SITE @ PAMW-3 TO BOX...

1510 PAMW-3 BOXED, BROUGHT TO OUTSIDE OFC.

1620 GW-~~#~~6 SAMPLED.

1750 GW-6 & PAMW-2 BOXES STORED IN GARAGE/SHELF AREA.

@ PAMW-1 :
STICK-UP:
SCREENED INTERVAL:

1815 MOVED CORE BOXES TO GARAGE/SHELF STORAGE AREA.

CG



# 1-26-05

0700 C. GARDNER ONSITE, STORING CORE...

1100 SAMPLED, BOXED, & STORED GW-8

1310 BOXED & STORED GW-13.

1515 BOXED & STORED GW-18.

1630 BOX & STORED GW-17.
CLEANING EQ...

1730 CG OFFSITE.

CG