

LOG BOOK 4



Rite in the Rain

ALL-WEATHER

FIELD

Nº 353-MX

5/29/14

0730 -

- TETRA TECH WILL BE STARTING SURFACE SOIL SAMPLING TODAY
- TETRA TECH ARRIVED ON SITE AND WILL LOCATE THE FIRST POLYGONS FOR SURFACE SOIL SAMPLING; POLYGONS 21 + 22.
- TETRA TECH STARTED COLLECTING THE FIRST 8-HR TWA PERSONAL SAMPLE

BC-HS-01

TETRA TECH PERSONNEL LONA PERASON
 START TIME: 0735
 FLOW RATE: 2.0 LPM START
 STOP TIME: 1125 STOP TIME
 FLOW RATE: 2.0 STOP
 START TIME: 1220 START TIME
 STOP TIME: 1530 STOP TIME
 VOLUME: 840 LITERS

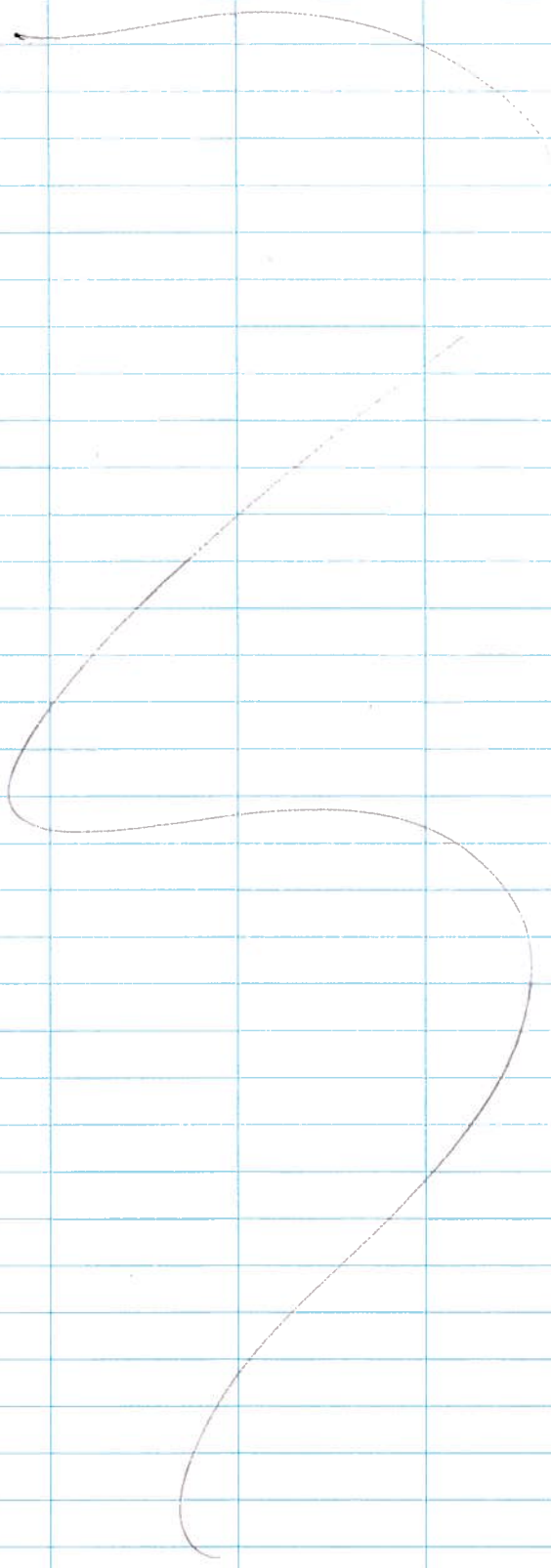
- TETRA TECH STARTED COLLECTING AN SHORT TERM EXPOSURE SAMPLE

BC-HS-02

TETRA TECH PERSONNEL RYAN FORD
 START TIME: 1008
 FLOW RATE: 2.0 LPM START
 STOP TIME: 1038
 FLOW RATE: 2.0 LPM STOP
 VOLUME: 60 LITERS

BC-HS-03

FIELD BLANK



6/2/14

Weather - Sun w/ light breezes
Temp 70's to 90's

Team 1 = ES, LP, RF, RJ

0620 - Tetra Tech will be starting Soil Boring today.

Tetra Tech calibrated two pumps at 2.0 LPM for
8-hr TWA & 30-min STEL. TETRA TECH STARTED 8 hr Sample.① BROADBENT
~~Tetra Tech~~ Personnel: Ryan Jones

START TIME: 0720

FLOW RATE: 2.0 LPM

STOP TIME: 1511

FLOW RATE 2.0 LPM

Start Time: ①P

Stop Time: ①P

VOLUME: 942 Liters

Tetra Tech started 30-min excursion

Tetra Tech personnel - Ryan Ford

BC-HS-05

Start Time - 0940 @ 2.0 LPM

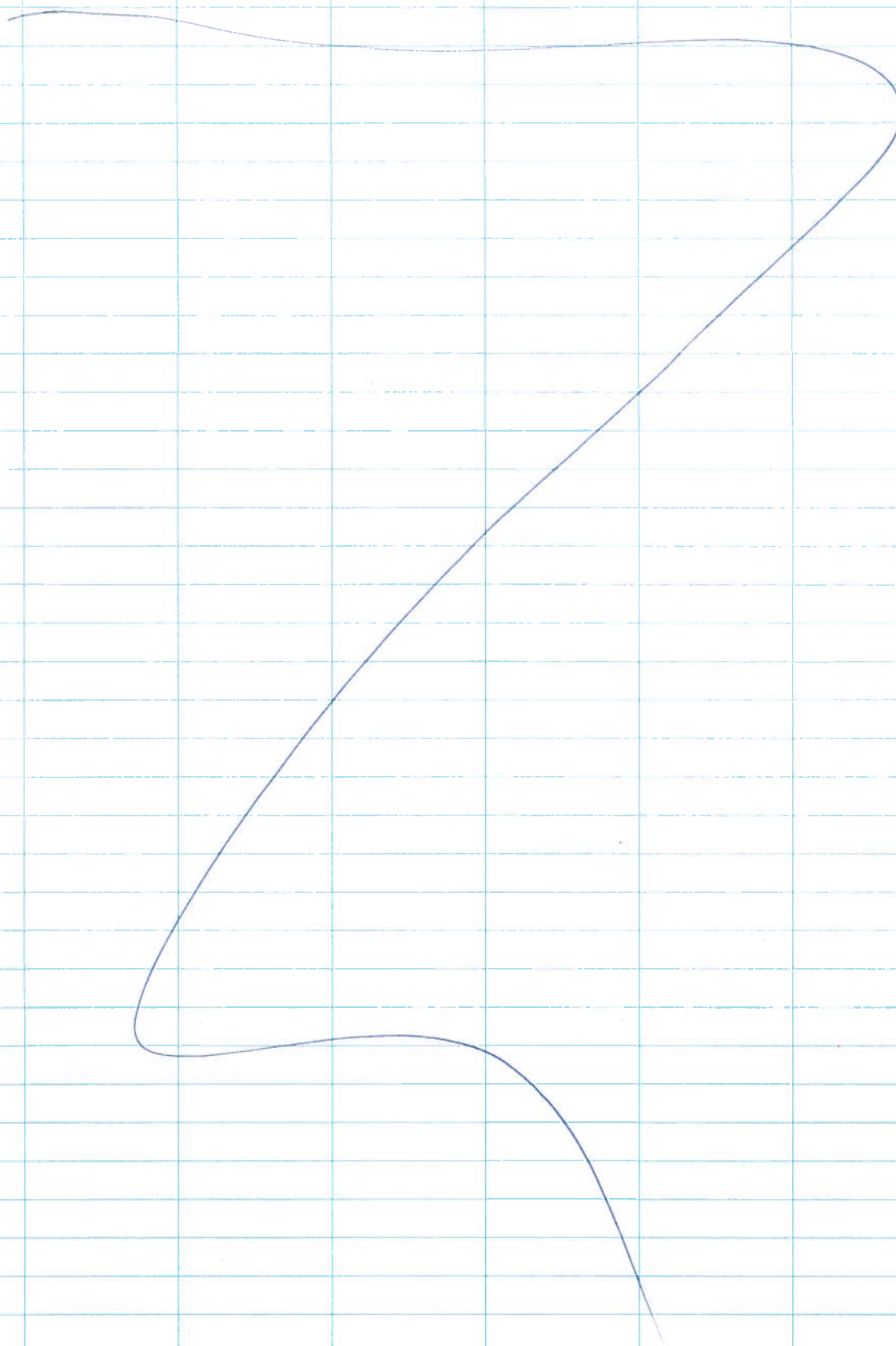
stop time - 1010 @ 2.05 LPM

Flow Rate - 2.025 LPM

Volume - 60.75 Liters

BC-HS-06 FIELD BLANK

Samples hand delivered to Forensic ANALYTICAL LAB
By BROADBENT for Rush analysis.



06/3/14

Weather Sun & Breezes
Temps 70^s - 90^s

0630 - Tetra Tech met with Eagle Drilling
Mobilized to HS-1 and Becky Dana held
Site Safety meeting with Drillers to begin
Hollow Stem Auger sampling today.

0648 Tetra Tech calibrated 2 pumps at 2.0 LPM
Sample BC-HS-08 started on Lora Pearson
for 8-hr TWA.

0715 Tetra Tech Team Members Met on site
AT HS-1 = BD, LP, DB & RJ.
Kyle Hanson with GES on site providing
H & S for Eagle Drilling; Personnel Certifications
for Eagle Drilling reported to be provided
to Steve Bradley and the crew Health + Safety
plan is on site with Drill Rig.

0730 Drill Rig is being set up for first length
of push. Driller: Edouardo Helper: Manuel

0750 First spoon collected @ 5' to ~~6.5'~~^{LP} 6.5'

0802 ^{LP} Second spoon collected @ 10' to ~~11.5'~~^{LP} 11.5'

0814 Third spoon collected @ 15' to ~~16.5'~~^{LP} 16.5'

0820 BD left site.

0828 Fourth spoon collected @ 20' to ~~21.5'~~^{LP} 21.5'

0837 Fifth spoon collected @ 25'

- see Next Page

- Sample BC-HS-00001 Homogenized and double bagged.

0930 - Drillers broke down rig and moved to next site HS-2.

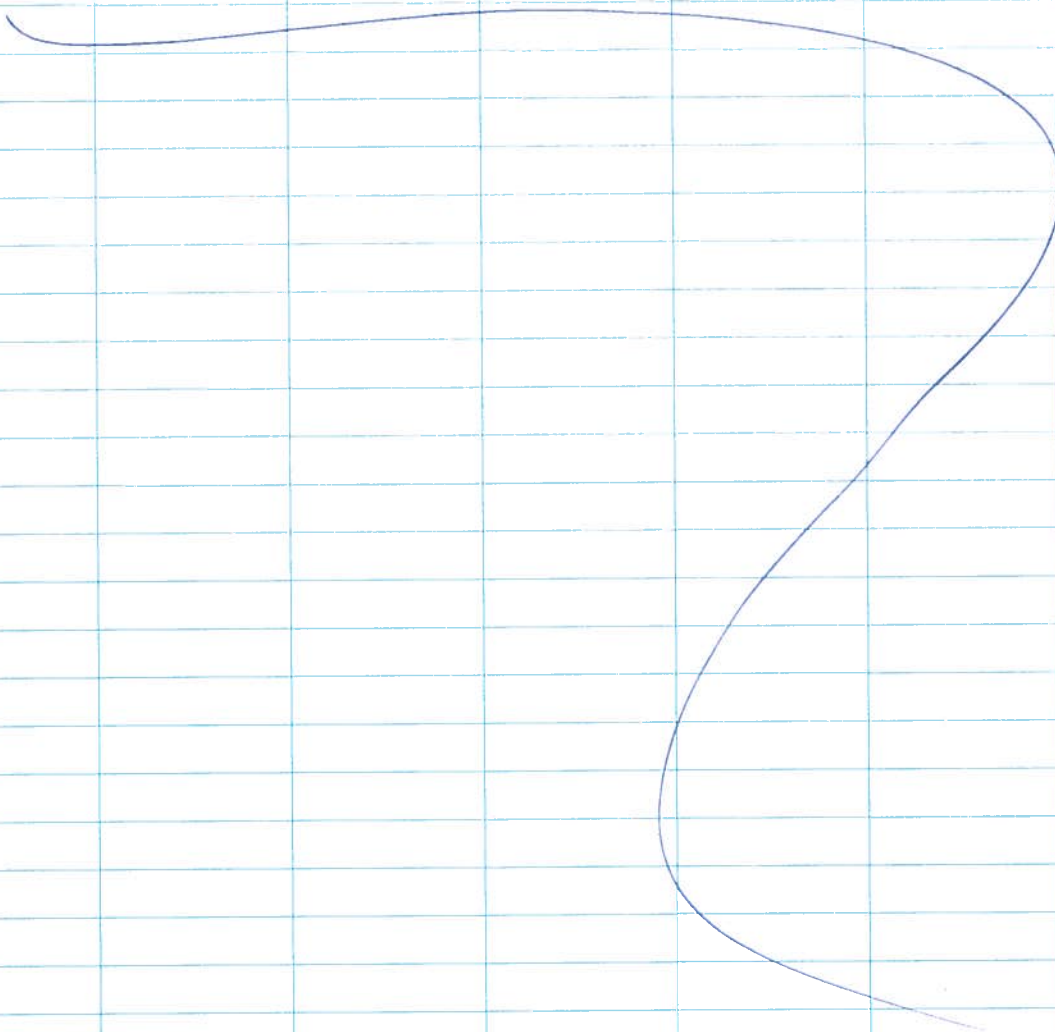
HS-1

Photo 1 - View of drilling HS-1, facing NE.

Photo 2 - View of drilling HS-1, facing NE.

Photo 3 - View of soil sampling (SPT) @ 25' for HS-1, facing N.

Photo 4 - View of soil sample @ 25' for HS-1.



6/3/14 HS-2 LP, RJ, DB, SB

0945 - Team & Drillers mobilized to HS-2; DB exited Site with SB. (Drillers Eagle, Eduardo & Manuel)

0950 - Drillers Began set-up of rig. Plan to reach depth of 45'

1002 - Began drilling -

1006 - Excursion sample started on Ryan Jones - 2.0 LPM

1014 - SB Returned to HS-2 - first spoon collected @ ~~5' - 6.5'~~ ^{5' - 5.5' (LP)}

1024 - Second SBT collected @ ~~10' to 11.5'~~ ^(LP) 11.5'

1035 - Third SBT collected @ 15' to ~~16.5'~~ ^(LP) 16.5'

1036 - Retrieved EL Sample from RJ

1049 - Fourth SBT collected @ 20' to ~~21.5'~~ ^(LP) 21.5'

1101 - Fifth SBT collected @ 25' - ~~26.5'~~ ^(LP); (complete Bag # 1)

1112 - Sixth SBT collected @ 30' - ~~31.5'~~ 31.5'

^(LP) 1129 - seventh SBT collected @ 35' to 36.5'

1139 - Eighth SBT collected @ 40' to 41.5'

1156 - NINTH SBT collected @ 45 to 46.5', end of sampling -

1210 - Break for lunch

1310 - RETURN TO Site AND Proceed to HS-3 -

Photolog on next page

HS-2

Photo 1: View of HS-2 sampling, facing North.

Photo 2: View of HS-2 (10') sample.

Photo 3: View of dust suppression @ HS-2, facing N.

Photo 4: View of HS-2 (45') sample.

6/3/14

HS-3 LP, SB, RJ + Eagle Drilling Services
(Eduardo & Manuel)

1345 - Begin Rig set up for HS-3 Hollow stem Auger sampling.
Plan to reach depth of 35'.

1350 - Drillers begin advancement of first section of drill bit.
Cemented Caliche encountered @ 4 to 5'.

1410 First Spoon sample collected @ 5' to 6.5'

~ Drillers advance 2nd section of Drill bit - Caliche encountered
at 7.5' - 8.5'

1428 - Second SBT collected @ 10 to 11.5'

~ Drillers advance 3rd section of Bit - Caliche encountered
@ 14'.

~~Third SBT collected @ 15' to 16.5' (LP)~~

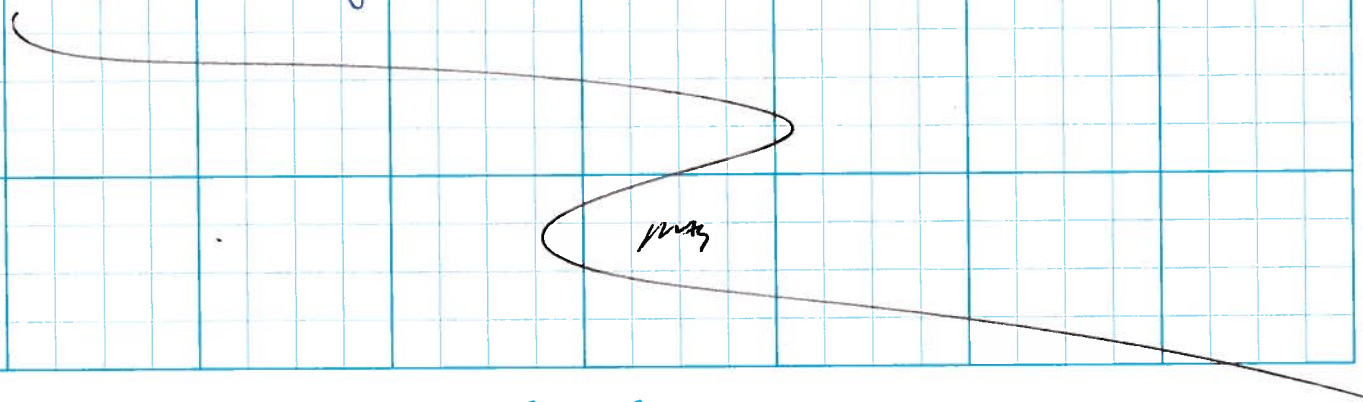
1448 - 8-hr TWA SAMPLE RETRIEVED FROM Lora Pearson.

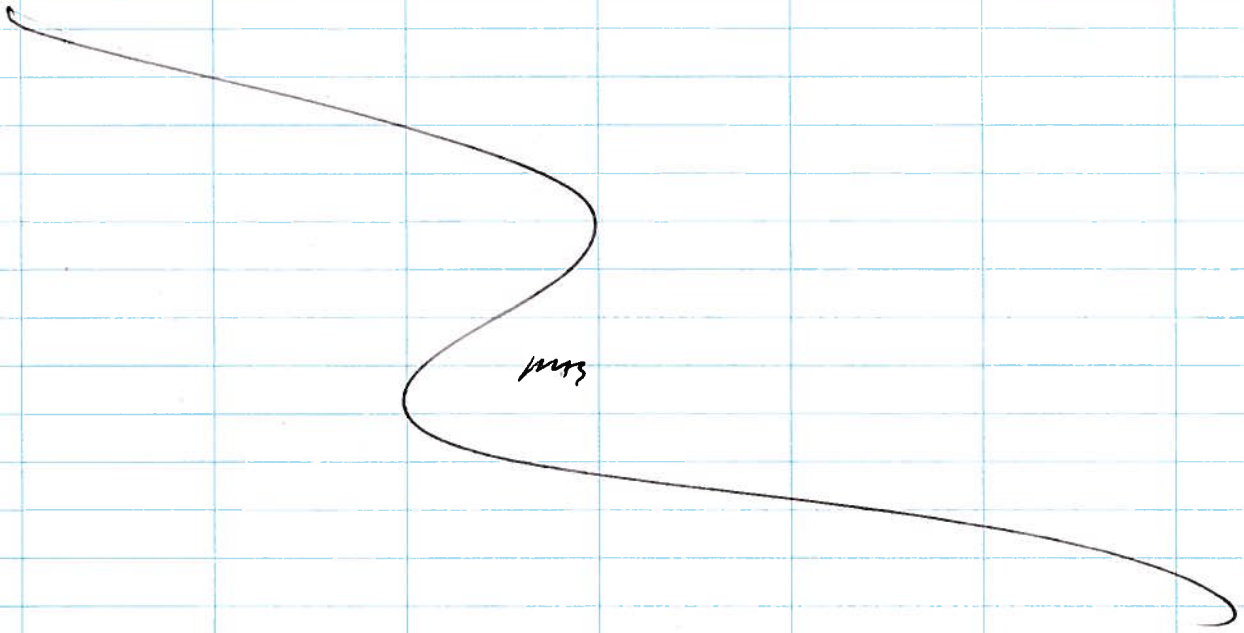
1500 - Drillers continue to work on Caliche/hard mass @ 14'

1530 Continued refusal @ 14 will resume in morning 6/4/14.

Total sample collection includes only from 5-6.5 + 10-11.5.

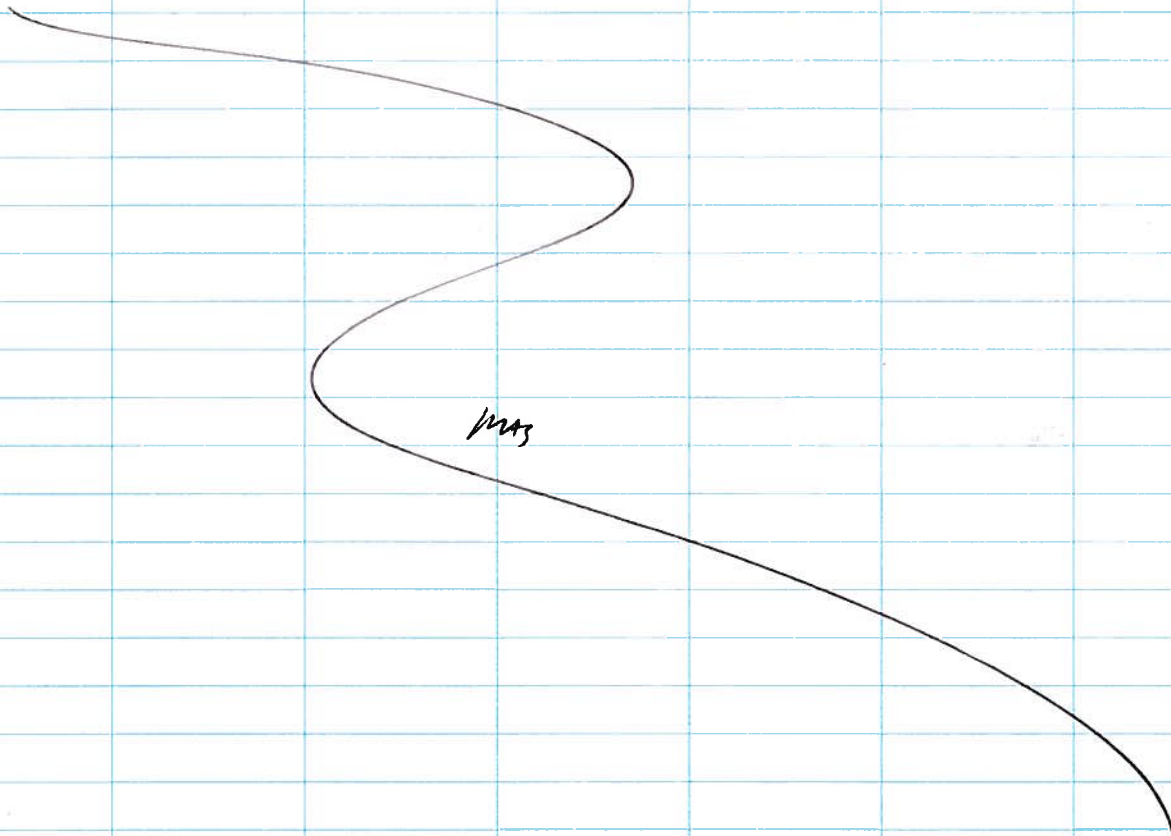
1545 left site for trailer + Eagle leaving rig on site
until morning.





HS-3

Photo 1: View of drilling, facing SE.
Photo 2: View of sampling, facing SE.



6/4/14
~~6/3/14~~ RF HS-3 (RF, LP, R)

0700 - Arrive at HS-3 site that was started yesterday. Plan to break down rig and move approximately 10 feet due to a boulder encountered at 15' in borehole yesterday
 14'

0730 - Eagle begins backing auger out of hole from yesterday. Drillers continue wearing Tyvek and respirators until personal air monitoring results are back from Lab.

0740 - Drillers finish backing out auger and move to new location
 New GPS location = HS-3-SB-2

0745 - Begin drilling HS-3-2, reach 15' and collect first split spoon sample @ 15'-16.5', SPT-3 = Aliquot #3, added to 2 aliquots collected at HS-3-SB yesterday. Will continue to add to sample BC-HS-~~00003~~ until 25'

0815 - Reach 20', collect SPT-4 from 20'-21.5'

0830 - Reach 25', collect SPT-5 from 25'-26.5'

Collect sample BC-HS-~~00003~~ - 5 aliquot composite, homogenized and bagged

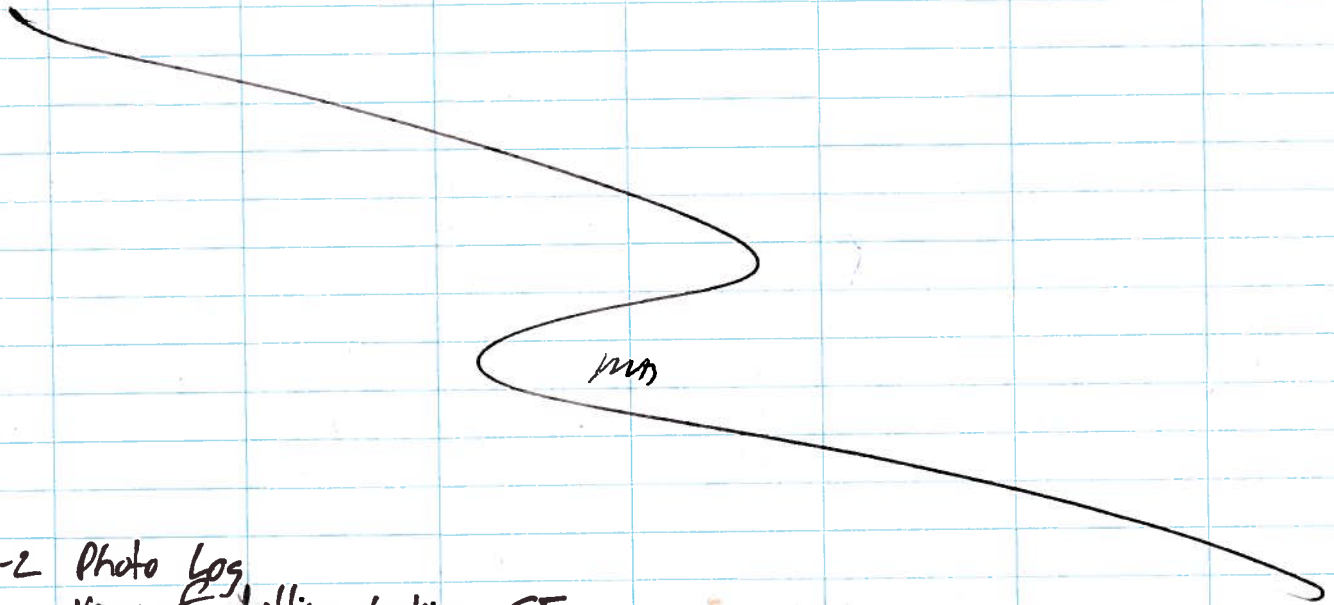
0850 - Reach 30', collect SPT-6 from 30'-30.5'

0905 - Reach 35', collect SPT-7 from 35'-35.5'

Collect sample BC-HS-~~00003~~(2) 25'-35', 2 aliquot composite, homogenized and bagged

0910 - Drillers back out auger.

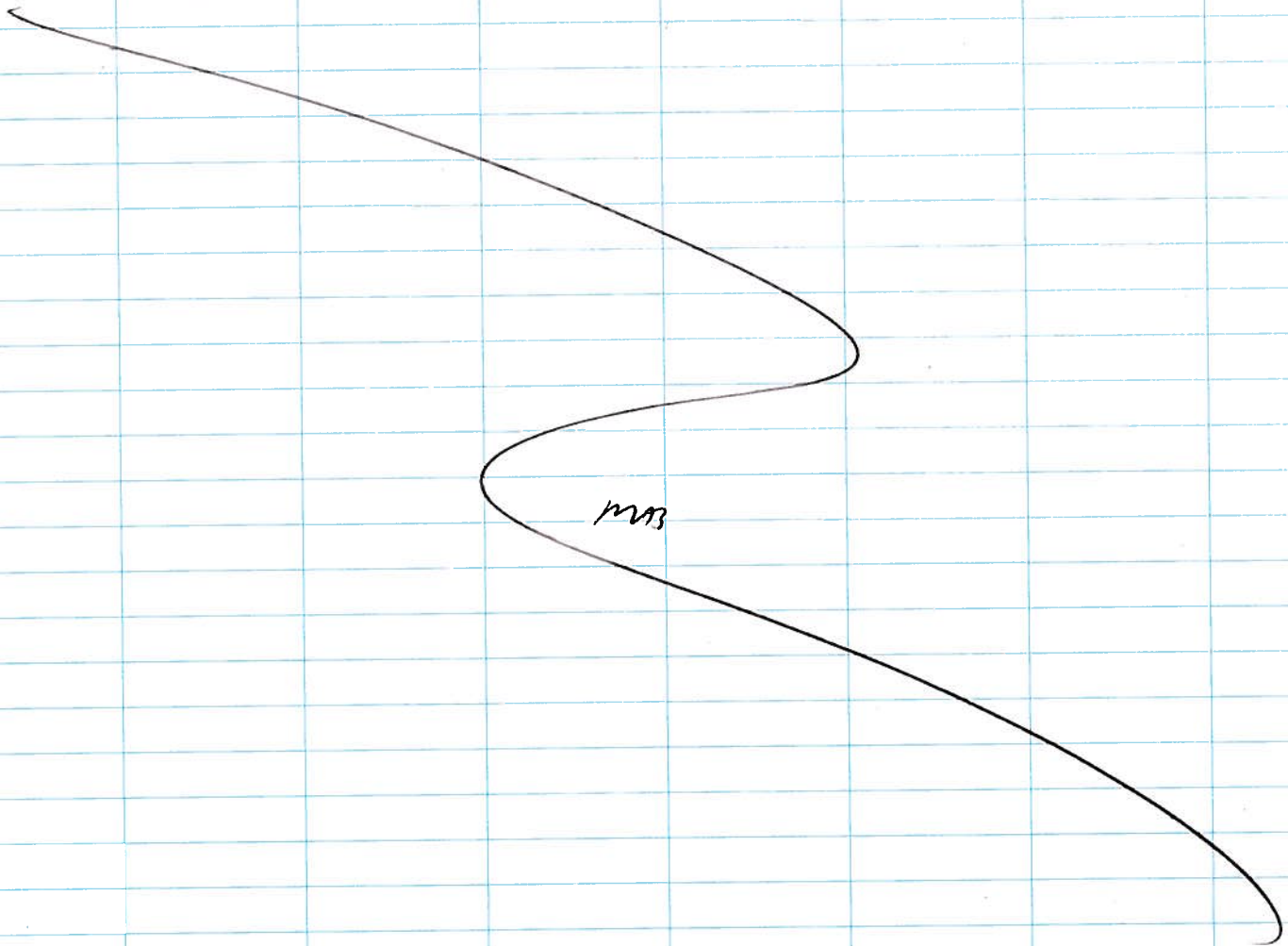
0940 - Finish getting auger out of HS-3-2 and move to HS-4.



mms

HS-3-2 Photo Log

1. View & drilling, looking SE
2. View looking SE, collecting split-spore sample @ 25'-26.5'
3. View looking SE, collecting split-spore from 35'



mms

6/4/14 RF, R, LP

0955 = Drillers arrive at HS-4, drillers helper not feeling well, showing signs of heat stress. Stop work until another staff member can get on drill rig and continue work.

1115 - Arrive back at HS-4, new drillers helper arrived.

Collect GPS point: HS-4-SB

1130 - Set up drill rig on HS-4,

1134 - Reach 5', SPT-1, 5'-5.5'

1148 - Reach 10', collect SPT-2, 10'-11.5'

1155 - Reach 15', collect SPT-3, 15'-16.5'

1205 = Reach 20', collect SPT-4, 20'-21.5'

1217 = Reach 25', collect SPT-5, 25'-25.5'

Collect sample BC-HS-00004, 5 aliquot composite, homogenized and bagged

1230 = Reach 30', collect SPT-6, 30'-31.5'

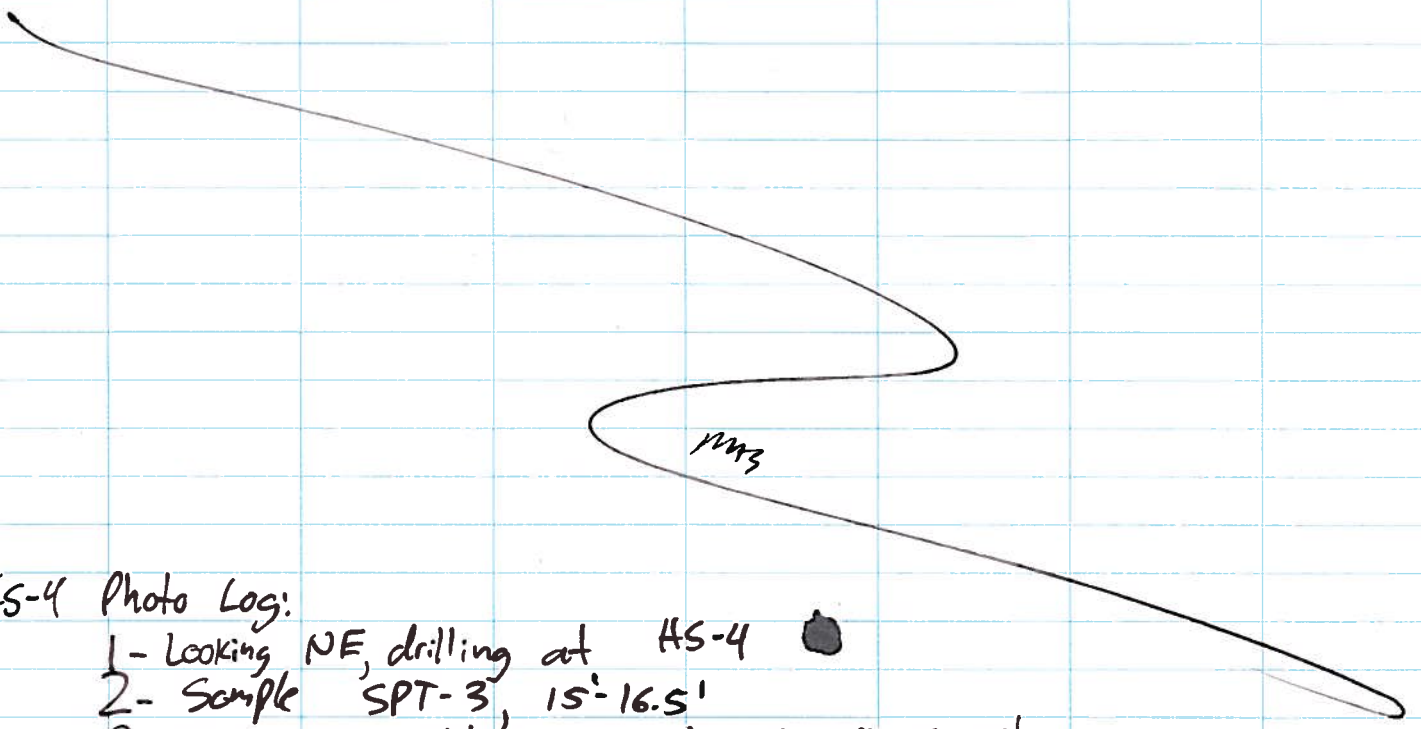
1245 = Reach 35', collect SPT-7, 35'-36'

Collect sample BC-HS-00004 (2), 2 aliquot composite, homogenized and bagged.

1250 - Drillers backing out auger, complete work at site

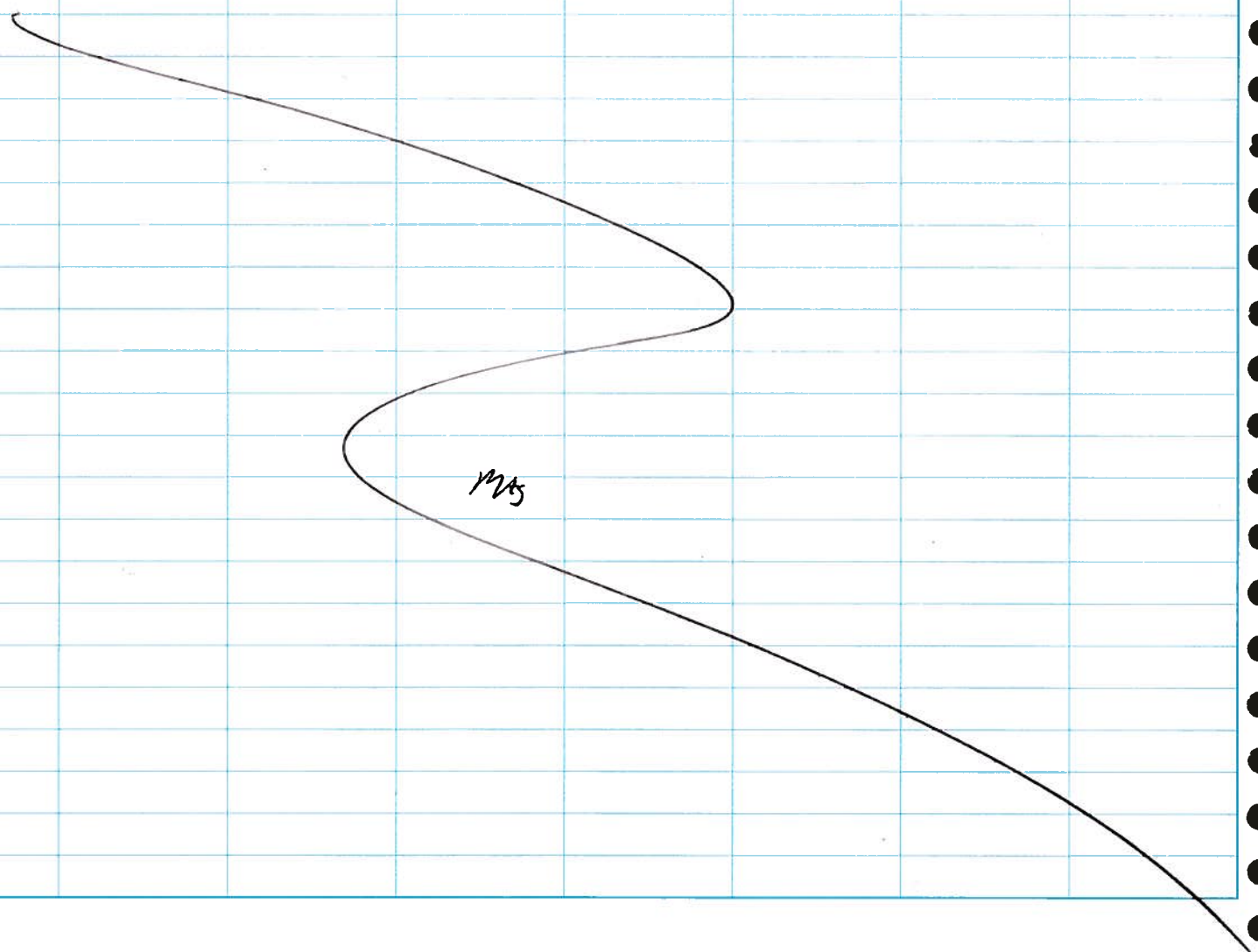
1305 = Drill rig de-mobilized

1330 - Arrive at HS-5, done working for the day. Drillers will continue work tomorrow.



HS-4 Photo Log:

- 1 - Looking NE, drilling at HS-4 ●
- 2 - Sample SPT-3, 15'-16.5'
- 3 - Looking NE, split spoon sample at SPT-6, 30'



6/5/14

Hollow Stem Auger Team - RJ, LP
 Drillers - Eagle ELS, operator; Co. helper

0800 Arrive on site @ HS-5 / SS-36

0805 Start BC-ABS-00018 ELS (Driller)
 BC-ABS-00019 LP (Sampler)

0810 Eagle began set up of Drill Rig.

0820 First Aliquot collected @ 5' ±.5

0830 Second SPT collected @ 10' - 11.5'

0843 Reach 15', third SPT collected @ 15 - 16.5'

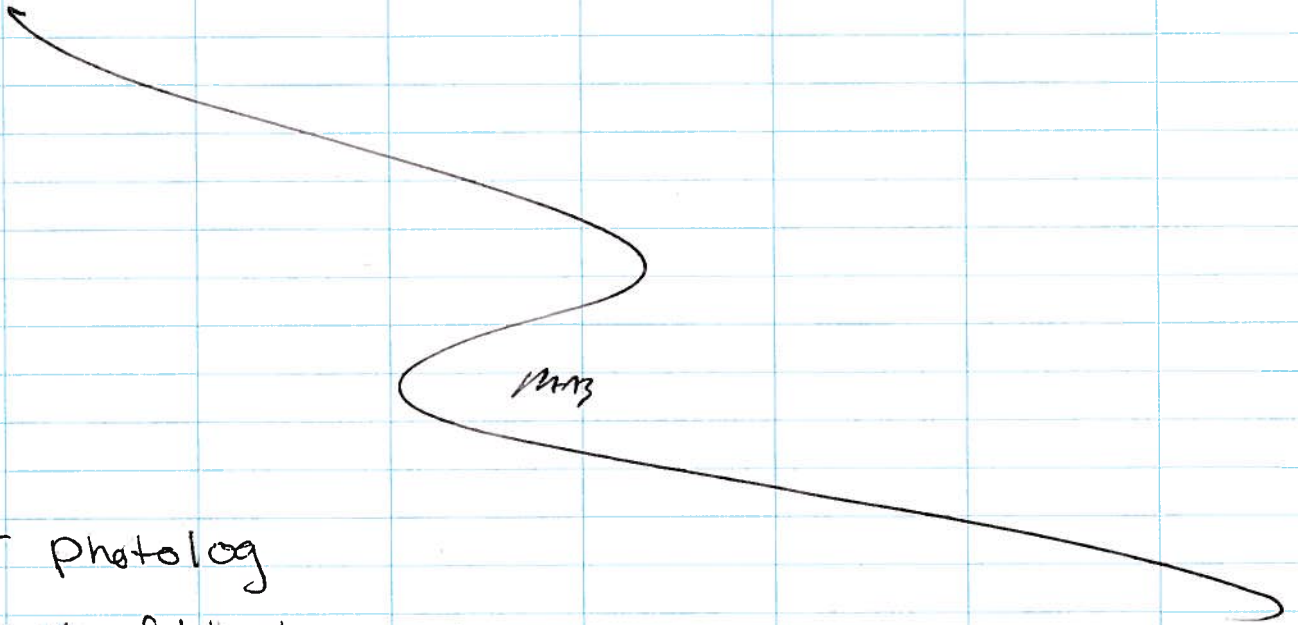
0900 Reach 20', fourth SPT collected @ 20 - 21.5'
 Limited sample aliquot (2-cach) returned.

0930 - Reach 25', Fifth SPT collected @ 25 - 26.5'
 Limited sample aliquot (.3-cach) returned.

Drillers H&S Rep (GES) Kyle Hansen ~~discussed~~ ^{LP}
 came out to check on crew - We discussed
 next phase (Rock Core) and PPE requirements.
 Field team directed Mr Hansen to Ed. Surbrugg.

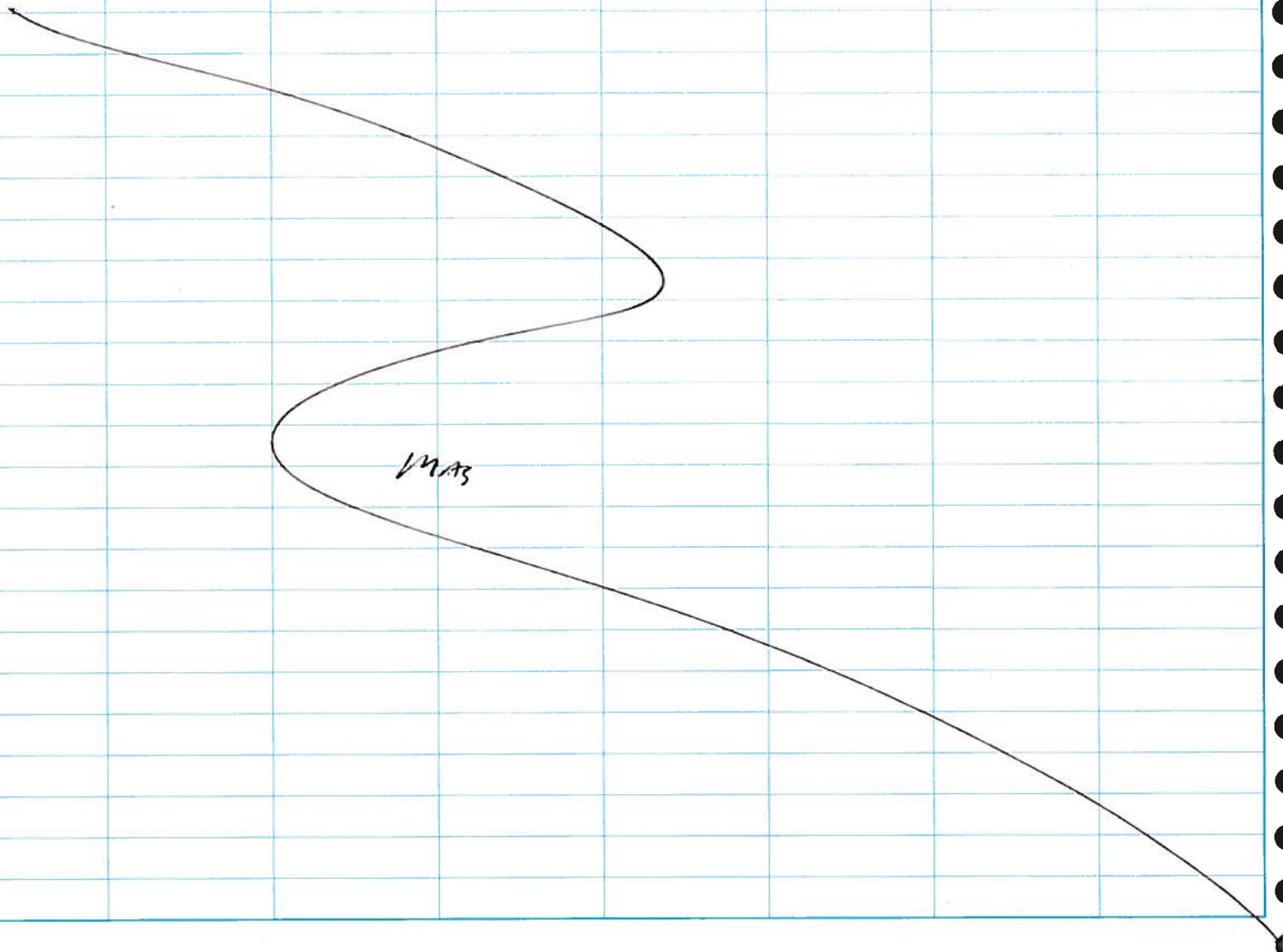
0945 Drillers began demob for next HSA site HS-6.

0950 Mob to HS-6 



HS-5 photolog

- 1.) View of drilling HS-5, facing SE
- 2.) View of sampling HS-5, facing SE



6/2/14

1005 - Tetra Tech LP, RJ arrive @ HS-6 with Eagle Drilling ELS Operator & Co helper
Eagle Drilling began Rig set up

1020 - Drillers began first Drill section.

1030 - Reach 5', SPT collected @ 5-6.5', 3-inch sample recovery.

1041 - Reach 10', SPT collected @ 10-11.5', 4-inch sample recovery.

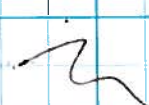
1055 - Reach 15', SPT collected @ 15-16.5', 4-inch sample recovery.

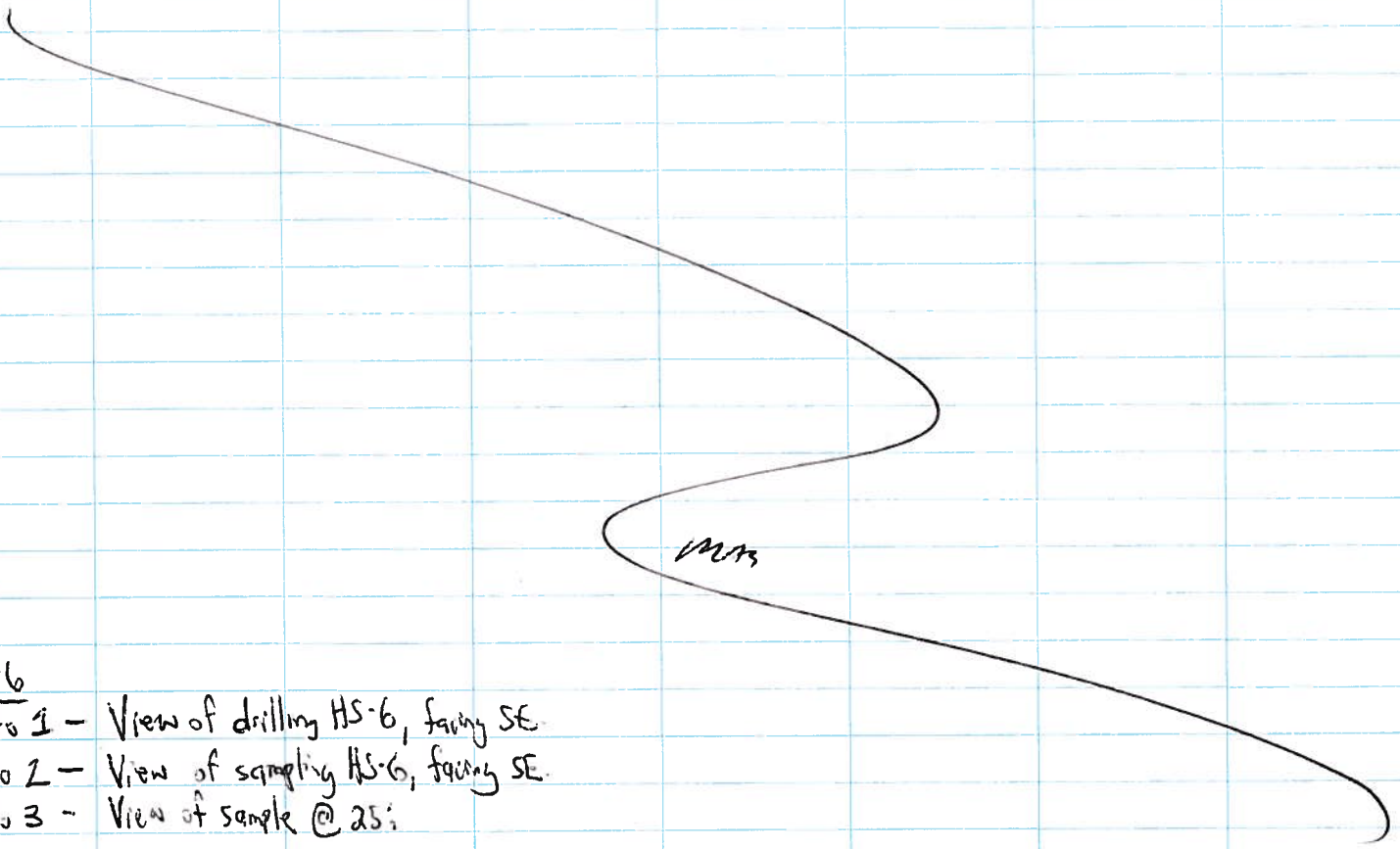
1101 - Reach 20', SPT collected @ 20-21.5', 6-inch sample recovery.

1117 - Reach 25', SPT collected @ 25-26.5', No sample recovery in first attempt - Driller attached a sample ~~collector~~ ^{catener} to end of SPT.

1120 - Second attempt sample collected, 4-inch recovery.
Drillers begin back-out of hole, and backfill hole.

1205 pulled ABS samples & conduct calibration check

1215 Left Site 

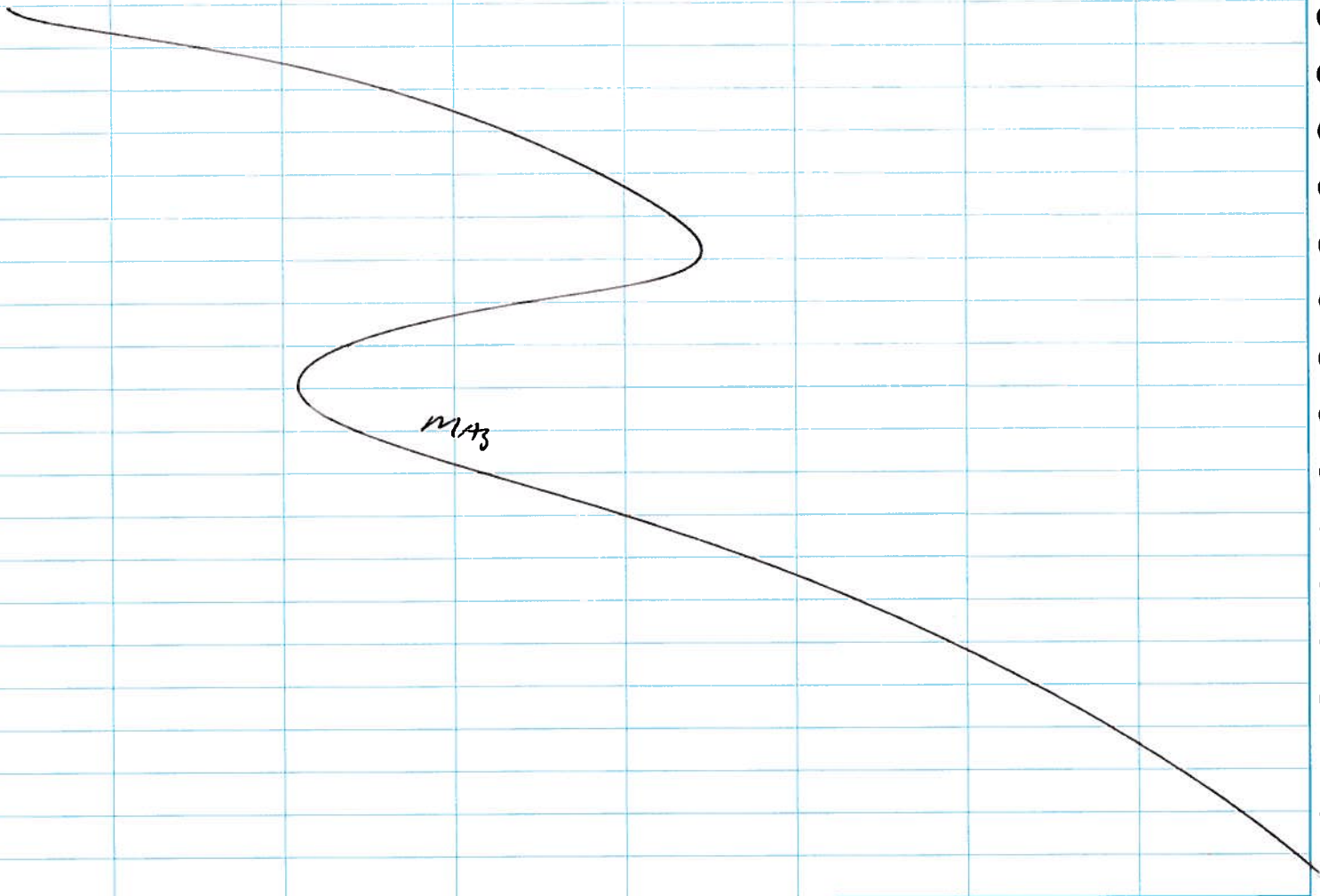


HS-6

Photo 1 - View of drilling HS-6, facing SE.

Photo 2 - View of sampling HS-6, facing SE.

Photo 3 - View of sample @ 25i



6/10/14

07-15 - WHILE COLLECTING THE BC-1 CORE DRILLING SAMPLE, TEAM TECH OBSERVED PLUMBS OF DUST GENERATED UPWIND FROM THE DRILL SITE APPROXIMATELY 100 YARDS SOUTH AT GRAVEL STORAGE PILES IN THE ADJACENT GRAVEL QUARRY. TEAM TECH DECIDED TO COLLECT AN AMBIENT AIR HEALTH & SAFETY SAMPLE TO MONITOR FOR AIRBORNE FIBER LEVELS. THE FOLLOWING SAMPLES WERE COLLECTED:

BC-1HS-13 FIELD SAMPLE

BC-1HS-14 - FIELD BLANK



MAS