

LOG BOOK 1



Rite in the Rain

ALL-WEATHER

FIELD

Nº 353-MX

TEAM 1

SURFACE SOIL SAMPLING

5/29/14

LIGHT WIND, SUNNY

0730 - TETRA TECH ARRIVED ON SITE AND BEGAN LOCATING THE SAMPLING POLYGONS FOR THE MORNING'S SAMPLING.

Polygon 21 Samplers Ryan Ford, Kyle Virva, & Felt Surbrugg

BC-SS-00021

0820 - Sample at 4845

Surface soil sampling

Older alluvium (disturbed) - Road graded strips
Veg cover 10-25% some cheatgrass, creosote, saltbush

Stoniness (26") 10-25%

Soil texture - Sandy loam (SL)

Slope nearly flat

Surface rock - red gty monzonite, some volcanics

GPS waypoint SS-21 30 aliquots

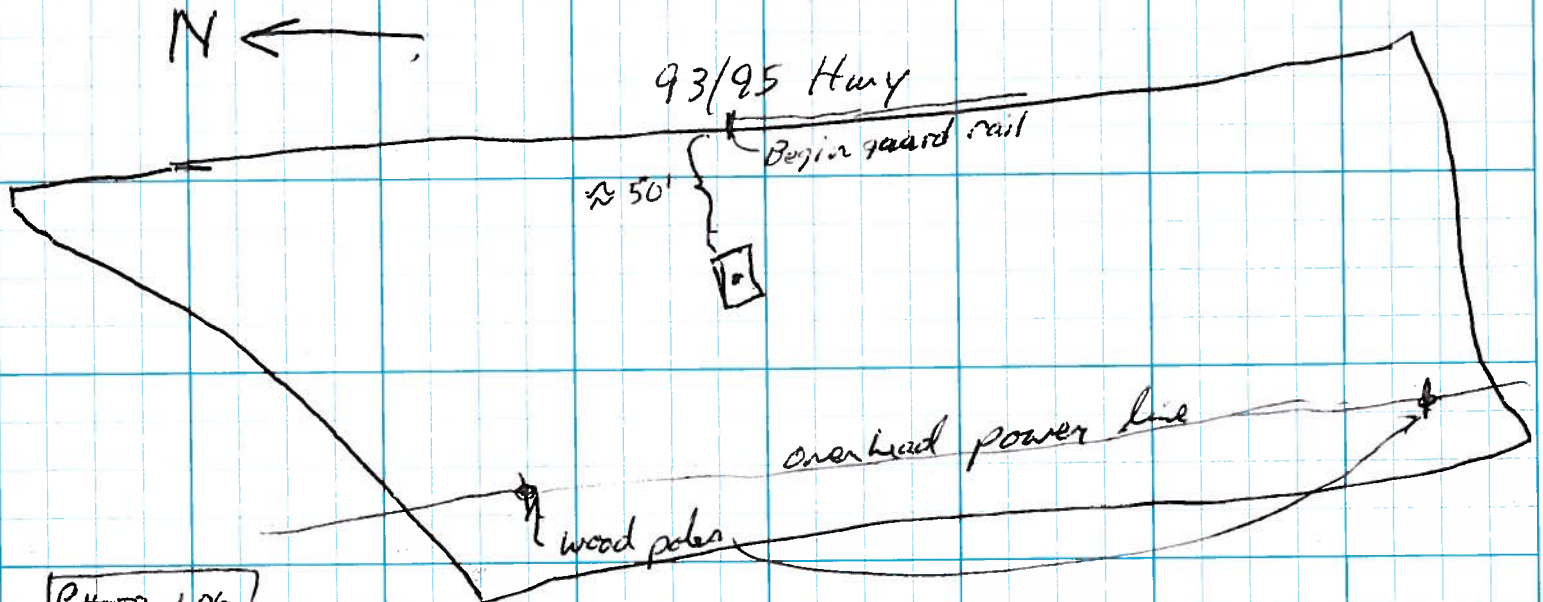
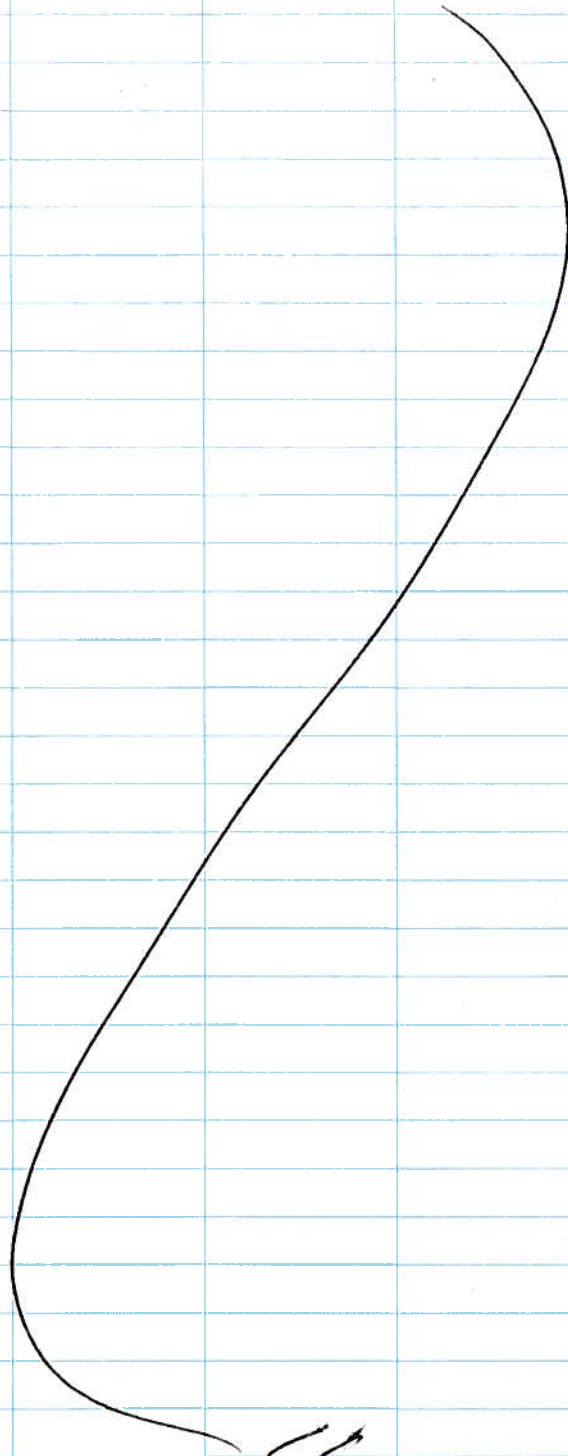


PHOTO LOG

SS-21 Pictures

- 1 poly
- 2 looking south
- 3 looking north (landscape)



55

SS-24 Samplers: Mark Stockwell, Kyle Urwe, Ryan Ford, & Ed Surbrings

Parent Material - Older Alluvium (disturbed but not drastic - a small bench)

Slope - slightly sloping $< 10^\circ$

Soil Texture - Sandy loam

Vegetation $< 10^\circ$ (bassnet, galthus, some chestgrass)

Stoniness $< 10^\circ$ lots of small cobbles & gravels but not large
- Red to tan volcanics.

30 aliquots

GPS Waypoint - SS-24

BC-SS-00024

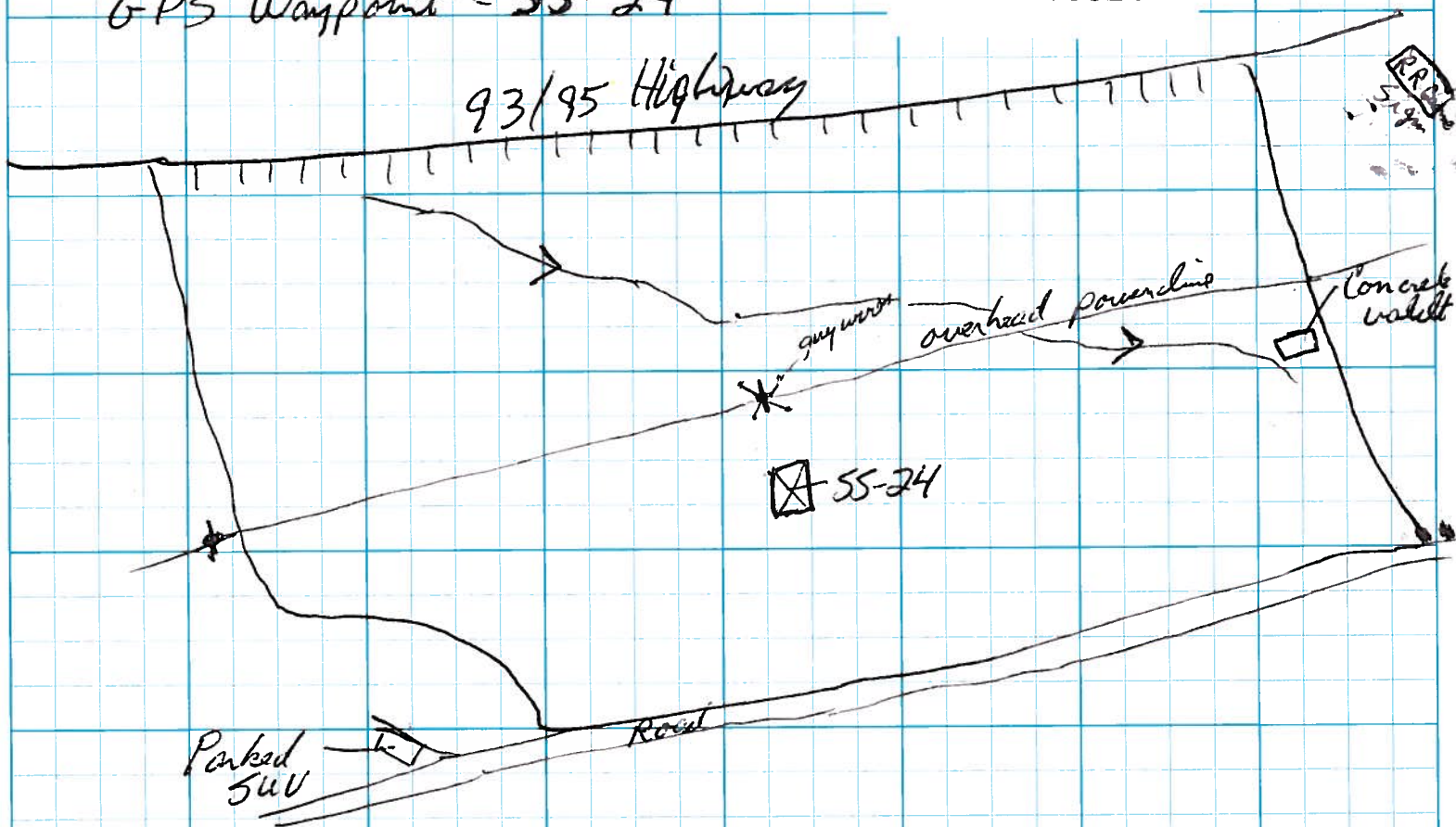
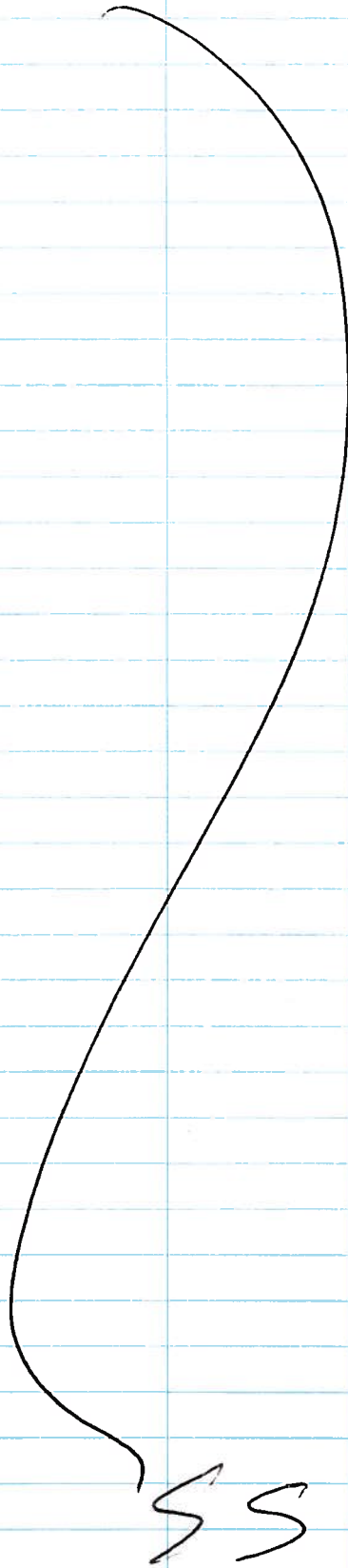


PHOTO LOG

SS-24 Pigs

- 1 grid
- 2 south
- 3 north
- 4 concrete vault



55-20 Samplers (RF, KU, ES)

General - on top of erosional nose with good desert pavement of small dark-colored volcanic rocks.

Parent Material - Old Alluvium (stable surface)
 Veg Cover % < 10% (cheatgrass, creosote, saltbush)
 and some small cactus

Stoniness < 10% but \approx 90% desert pavement

Soil texture Sandy loam

Slope - gently sloping to the SW

GPS Waypoint 55-20 (actually did 2 times -
 can delete one)

30 aliquots

BC-SS-00020

93/95 Highway

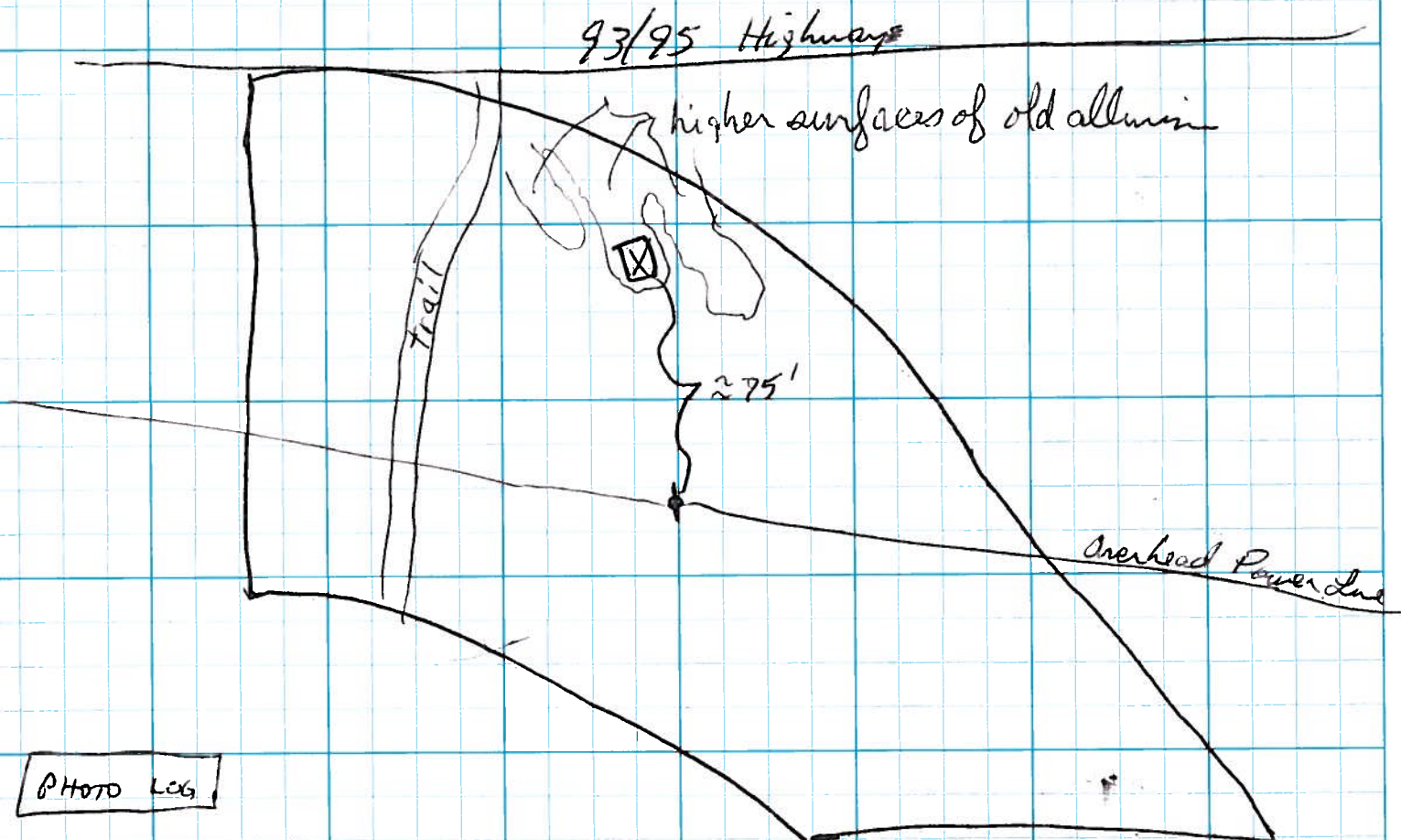


PHOTO LOG

55-20 pics

- 1 grid
- 2 looking north
- 3 looking south



SS

55-17 1050 Samplers RF, KV, ES

Parent Material - Old Alluvium (all disturbed -
below gravel stockpile)

Veg cover < 10% scattered creosote, saltbush
Stoniness < 10% regraded surface ^{smooth} may
be influenced by mining above, light tan
smaller rocks

Soil texture - Sandy loam

30 aliquots

Slope - Slightly sloping
to the east
toward 93/95

Gravel
Stockpiles

→ N
terrace
fins

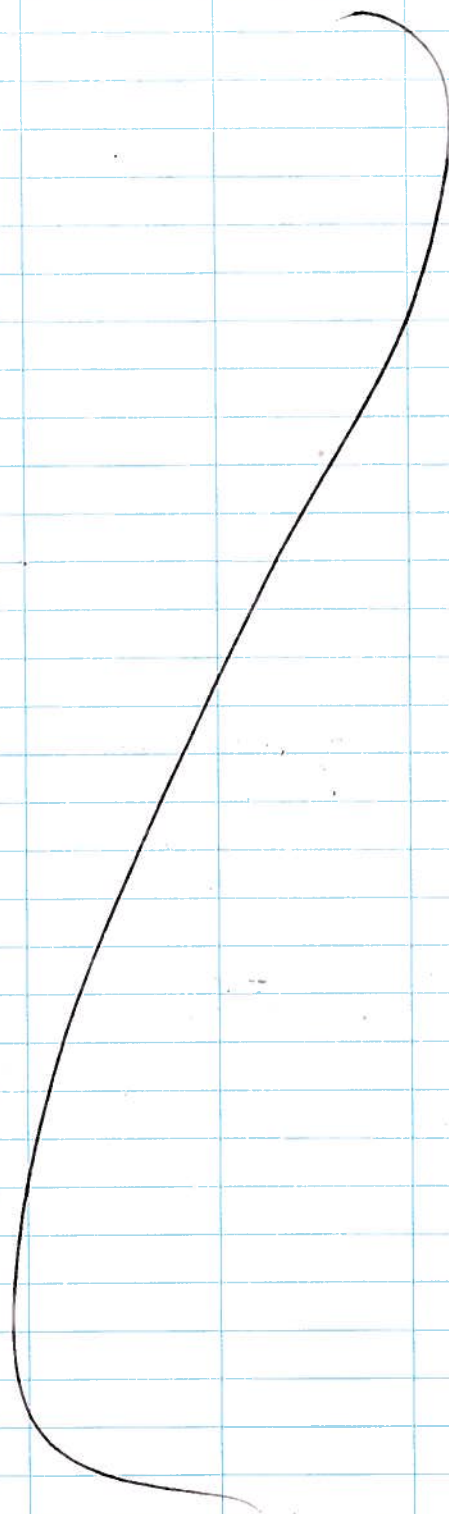
☒ 55-17

BC-SS-00017

Photo LOG

55-17 Pics

- 1 grid
- 2 looking west (toward gravel)
- 3 looking south



SS

SS-15 5/29/14 1320 (RF, KU, ES)

Switched to using F505 for most notes
temp $\approx 90^+$, strong breeze ≈ 20 mph
Sample poly is on side of east facing slope
Slope $\approx 4:1$ 20-25%

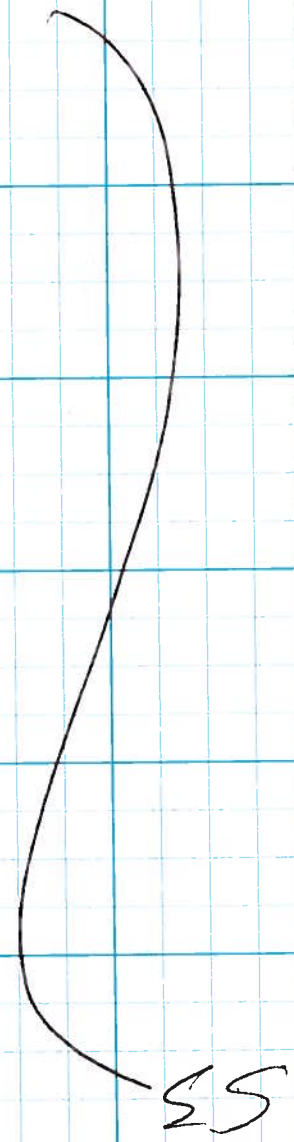
PHOTO LOG

BC-SS-00015

BC-SS-15-01 SAMPLE GRID LOOKING SOUTH

BC-SS-15-02 SS-15 POLYGON LOOKING WEST

BC-SS-15-03 SS-15 POLYGON LOOKING EAST





SS

SS-16 5/29/14 (Samplers RF, KV, MS, ES)
 Warm & windy - up to 20-30 mph gusts out of S or SSE

Shallow to bedrock on medium steep slope
 about 15%
 Slopes to the SE

Site below active gravel pit with obvious off-site
 dust from site

30 aliquots but 4 were not to 6" deep.

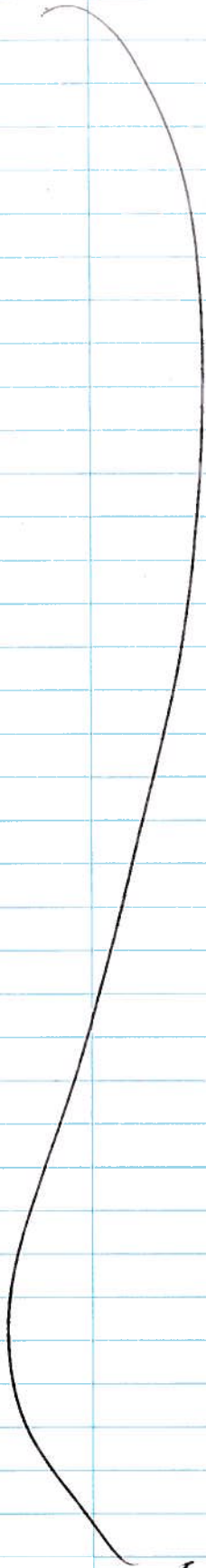
BC-SS-00016

PHOTO LOG

- | | |
|----|---|
| 01 | LOOKING NORTH AT SAMPLE GRID |
| 02 | LOOKING WEST AT GRID AND QUARRY IN BACKGROUND |
| 03 | LOOKING SOUTH |

Off-site for
 the day - 1500 PM

ES



59

5/30/14 0645 - Sunny warm ~ 80°
calm

At 55-11 (Team 1 RF, KU, ES)

ES wearing an ABS surface soil sample pump
at ~ 4 L/min.

Site on slope just north of RR tracks
Lots of desert pavement.

30 aliquots (a couple hit refusal at
4 inches)

Sample BC-35-00011
Ø715 5/30/14

BC-SS-00011

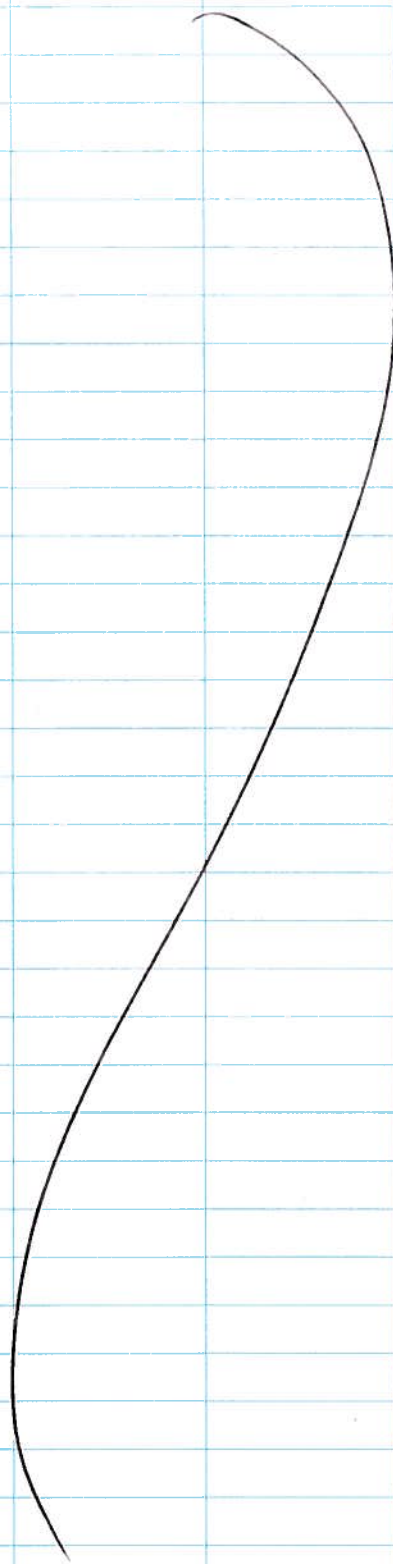
PHOTO LOG

55-11 PICS

- 01 LOOKING SOUTH AT SAMPLE GRID
- 02 LOOKING SOUTHWEST
- 03 LOOKING SOUTH



SS



SS

SS-7 0735 (RF, KU, MS, ES)

At site with essentially no vegetation, good desert pavement

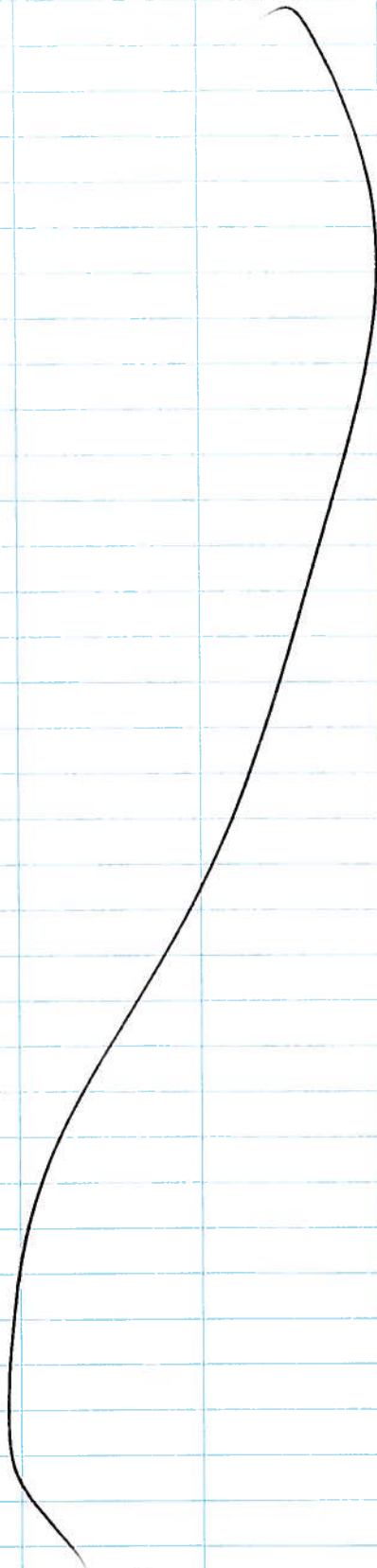
Sample BC-SS-00007
collected at 0745

BC-SS-00007

[Photo Log]

- 01 VIEW LOOKING NORTHWEST AT GRID
- 02 VIEW LOOKING NORTHEAST
- 03 VIEW LOOKING WEST

SS



SS

5/30/14 55-6 0810 (RF, KU, MS, ES)

At open slope below T-line

Great desert pavement

Minimal veg (<10%) - creosote & saltbush

BC-SS-00006

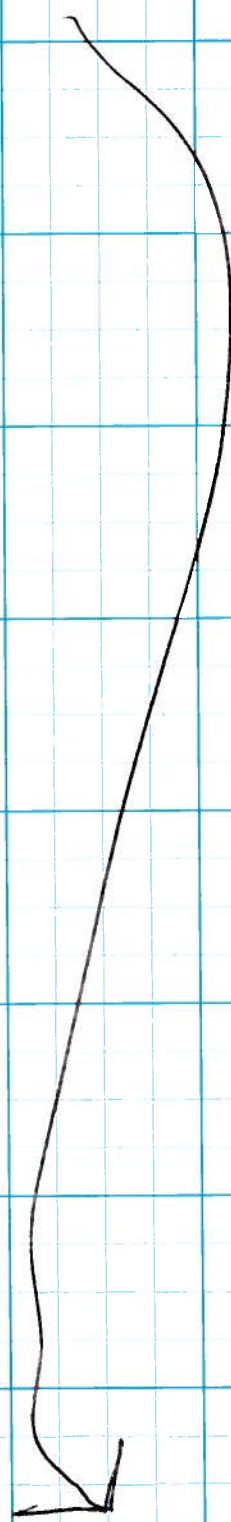
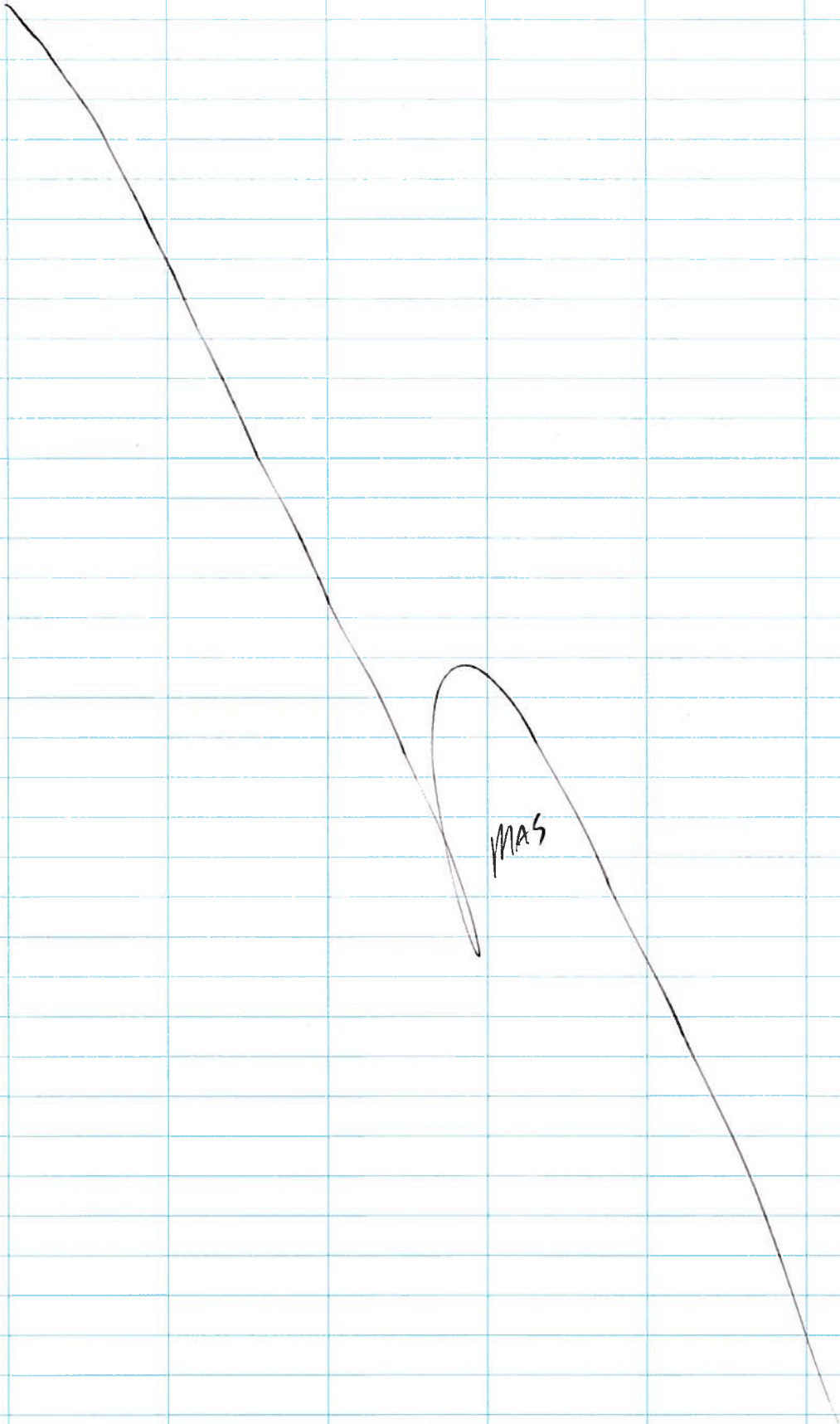


PHOTO LOG

- 01 SAMPLE GRID VIEW LOOKING WEST
- 02 VIEW LOOKING NORTH
- 03 VIEW LOOKING SOUTH



MAS

SS-1 5/30/14 (RF, KV, MS, ES)
0905

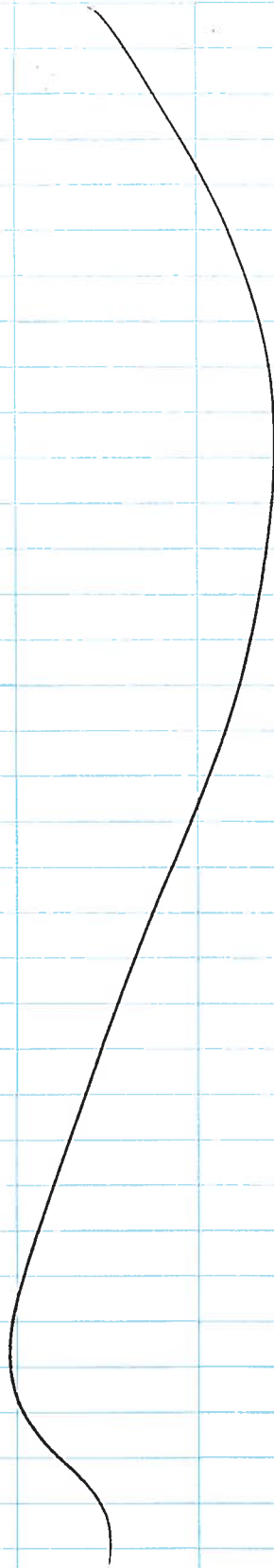
Location on east side of 93/95 Hwy
Some garbage on surface

Sample SS-00001 collected at 0910
Desert pavement dark stained

BC-SS-00001

PHOTO LOG

- | | | |
|----|--------------|-------------------|
| 01 | SAMPLE GRID | VIEW LOOKING WEST |
| 02 | VIEW LOOKING | NORTH |
| 03 | VIEW LOOKING | SOUTH-WEST |



SS

SS-4 0930 5/30/14

Location on east side of 93/95 Hwy
under the large T-lines.

- Mostly disturbed but may have some natural
sediment surfaces

0935 - LOCATION ON EAST SIDE OF 93/95 HWY.

- MINOR GARBAGE/DEBRIS ON SOIL SURFACES

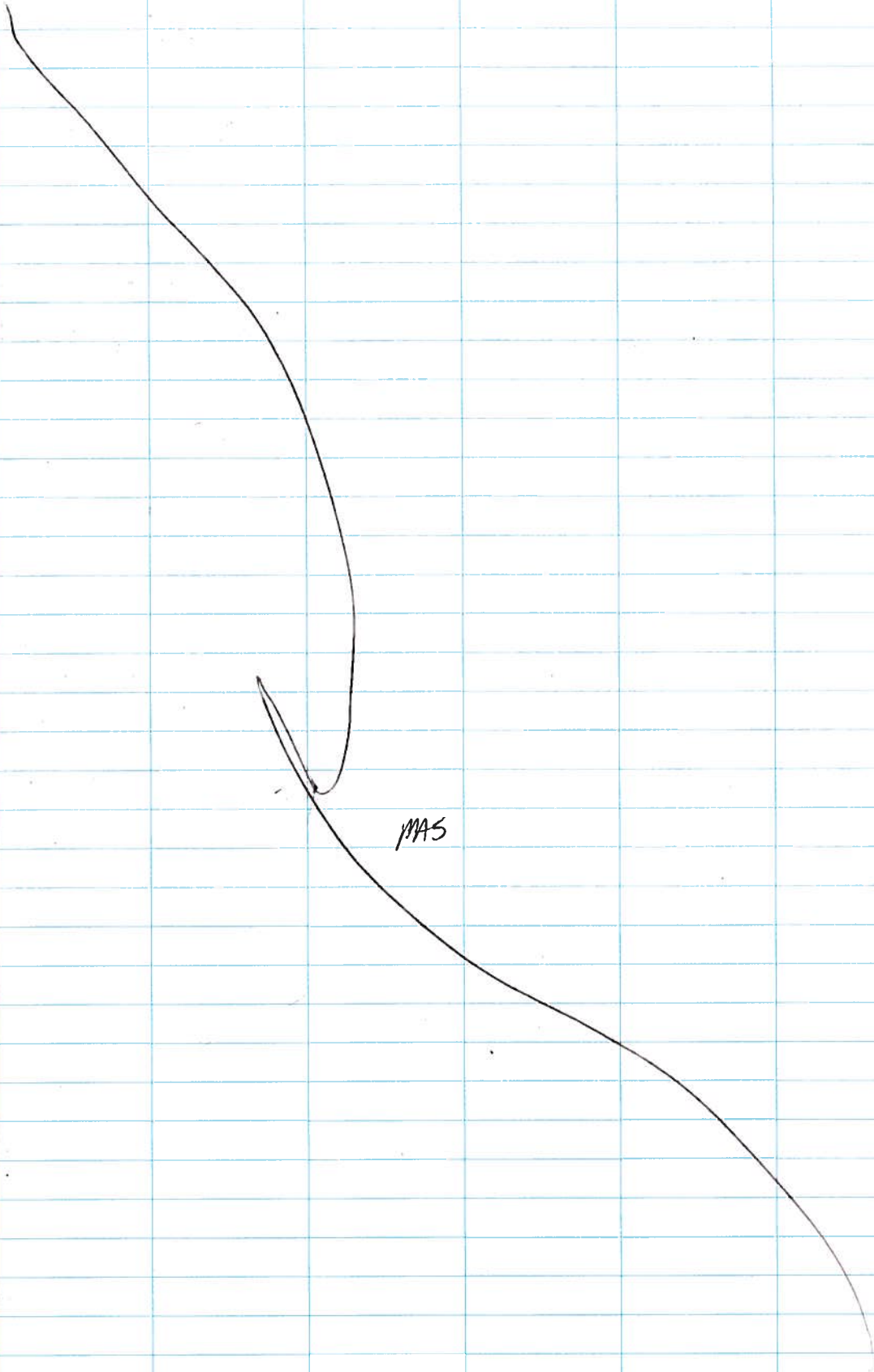
- SAMPLE SS-0004 COLLECTED AT 0930

BC-SS-00004

PHOTO LOG

- 01 SAMPLE GRID VIEW LOOKING WEST
- 02 VIEW LOOKING NORTH
- 03 VIEW LOOKING SOUTHWEST

SS



55-8

1015

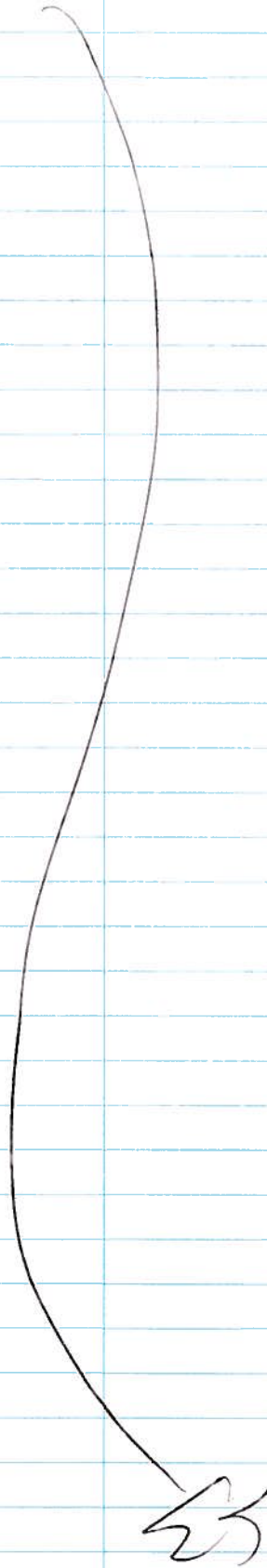
5/30/14

- LOCATED ON EAST SIDE OF HWY 93/95 SOUTHWEST OF LARGE POWER TOWERS
- GENERALLY NATURAL GROUND COVER LITTLE DISTURBANCE OR DEBRIS

1020 - SAMPLE SS-00008 COLLECTED

BC-SS-00008**PHOTO LOG**

- 01 SAMPLE GRID VIEW LOOKING WEST
- 02 VIEW LOOKING NORTH
- 03 VIEW LOOKING SOUTHWEST



55-13 1100 5/30/14 (RF, KU, MS, ES)

On hillslope on north side of major drainage.

Some vegetation along banks

Sample BC-SS-00013 collected at 1110.

Slope about 10-20%.

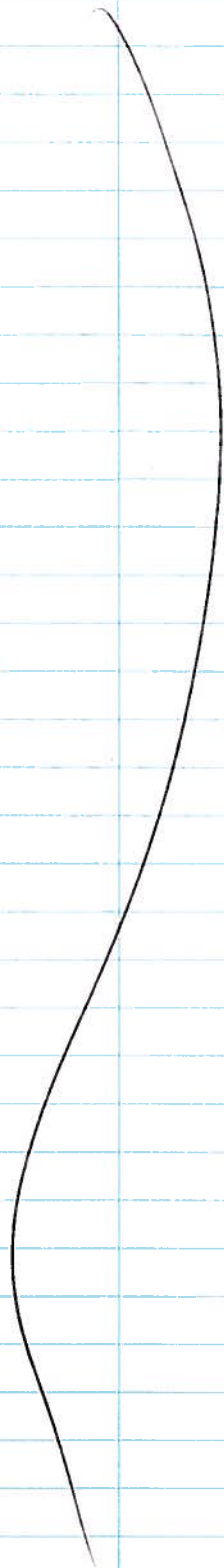
BC-SS-00013

Pics

1 - Down at grid

2 - Looking South across gully

3 - Looking North



SS

SS-19 5/30/14 1320
(RF, KV, ES)

Site located on east side of 93/95
Tortoise fence runs through poly

Sample BC-SS-~~000~~19

Slope - gentle slope 2-5% to the Southwest
- some erosional gullies toward SW.

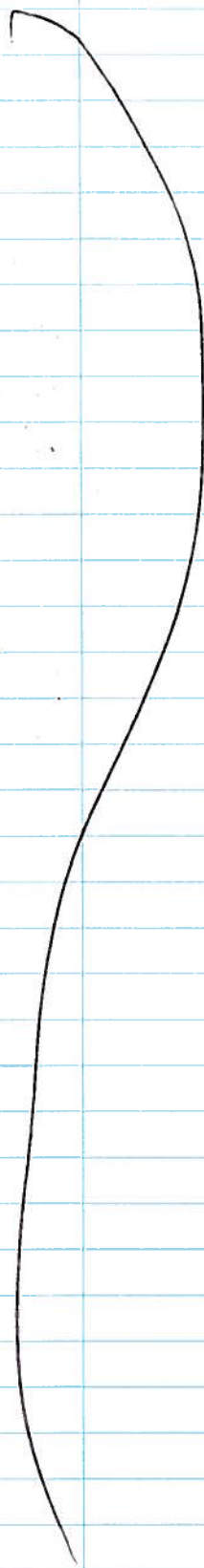
Sample BC-SS-00019
collected at 1335

BC-SS-00019

Pics at SS-19

- 1 - Aird looking north
- 2 - Area looking east
- 3 - Area looking south

SS



SS

SS-23 5/30/14 1350 Hot + Windy

Site on east side of 93/95, just north
of RR Pass Casino.

On end of small terrace nose b/t RR tracks
and tortoise fence

Soil quite silty ^{very} fine sandy.

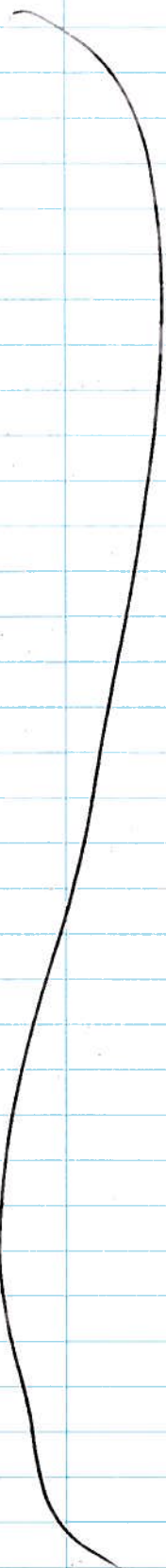
Sample BC-SS-00023 collected
at 1400.

BC-SS-00023

Pics:

- 1 - Dried looking north
- 2 - Area looking west
- 3 - Area looking southwest

SS



SS

5/31/14 0645

Started BC-ABS-00004 at 0655

At 55-38

Site located on slope on west side of project.

Bigger desert pavement

Noted - some greenish rock w lattice on surface

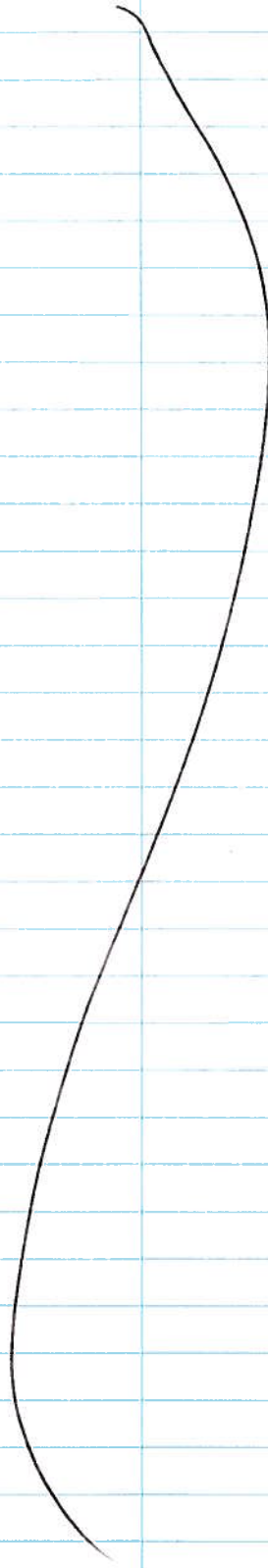
Pics:

1 - grid

2 - looking north - up hill

3 - looking south

ES



SS

SS-37

5/31/14

RF, KU, ES

ABS Sampling for SS

BC-ABS-00004

Lower location on west side of
main drainageYounger alluvium - mostly disturbed
by roads & tortoise fencing.Sample BC-SS-00037 collected
at 0745.

Pics

- 1 - grid
- 2 - looking north
- 3 - looking south

SS



SS

SS-39

5/31/14

RF, KU, ES

~~0800~~

Site on nose of slope on west side of project.

- Below mining area with stockpile of washed fines

- Some cactus removed, but not many (5-10)

Sample BC-55-00039 collected at 0815.

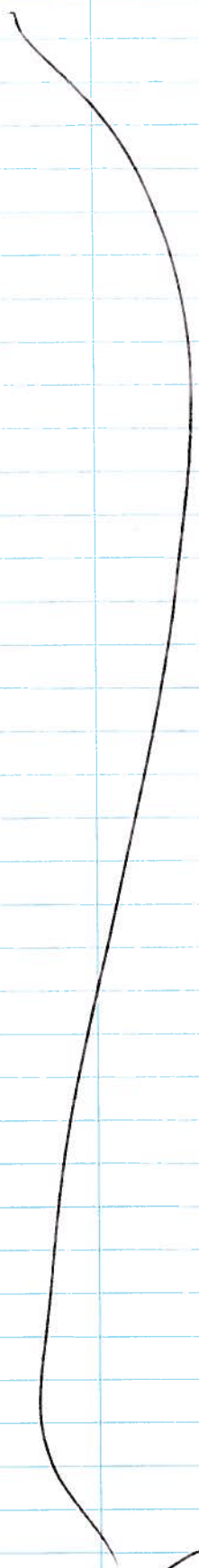
Pics:

1 - grid

2 - looking north

3 - looking south

SS



SS

55-40 5/31/14 0900 (RF, KU, ES)

- Site located on west side of project just below mine area.
- Surface may be influenced by fines stockpiled above via wind & water erosion.
- Area is predominantly a large colluvial surface on a hillside
- Sample BC-55-00040 collected at 0915.

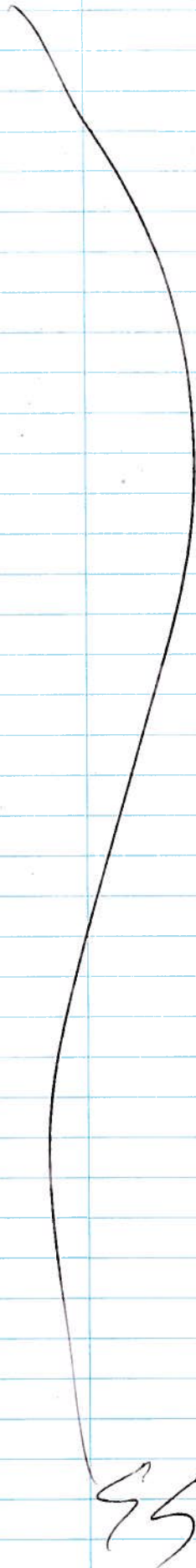
Pics

1 - grid

2 - looking north

3 - looking south

ES



95

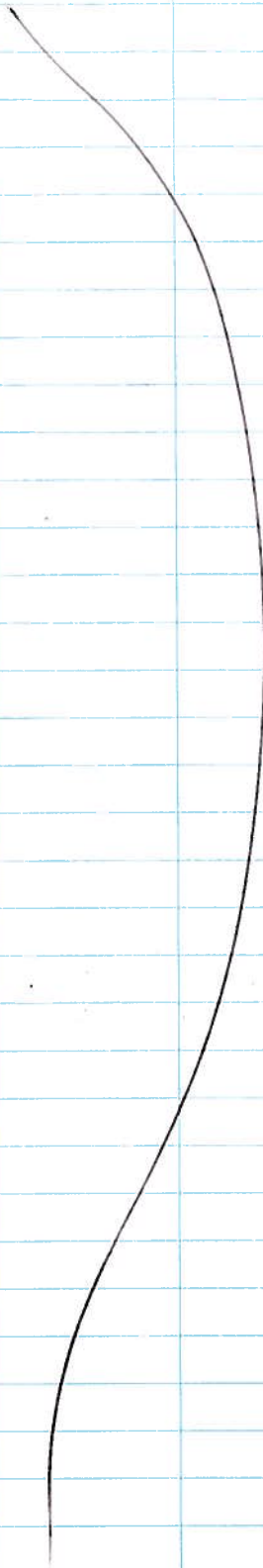
SS-41 5/31/14 0930 (RF, KV, ES)

Site located on lower area and includes the recent alluvium in main drainage through site.

- Many small little erosional drainages across site in the Northwest to southeast direction.
- More veg than average with catclaw and larger creosote.
- Sample BC-SS-00041 collected at 0945.

Pics

- 1 - grid looking southeast
- 2 - looking NE toward RR Cosmo
- 3 - looking west toward mine area



SS

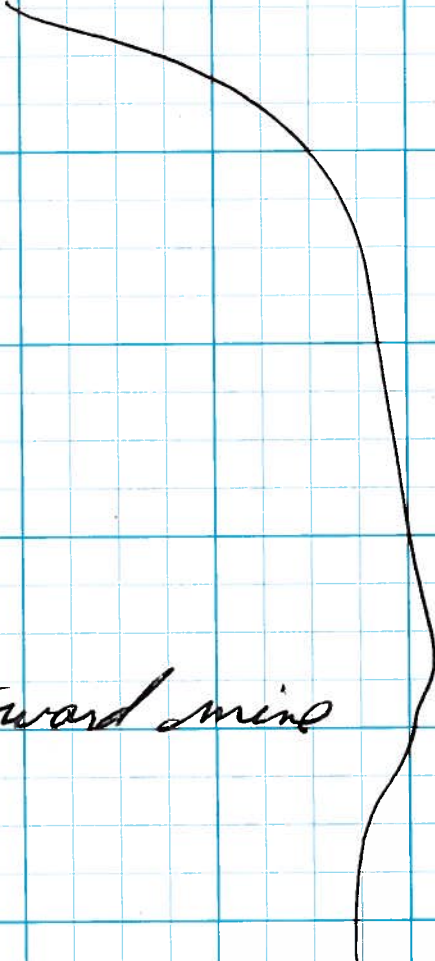
SS-46 5/31/14 1015 (RF, KV, ES)

- Site on gently sloping pediment surface just north of mine yard.
- General area has good dark-colored erosion pavement.
- Veg is mostly creosote + saltbush
- Slope \approx 5% to the Southeast

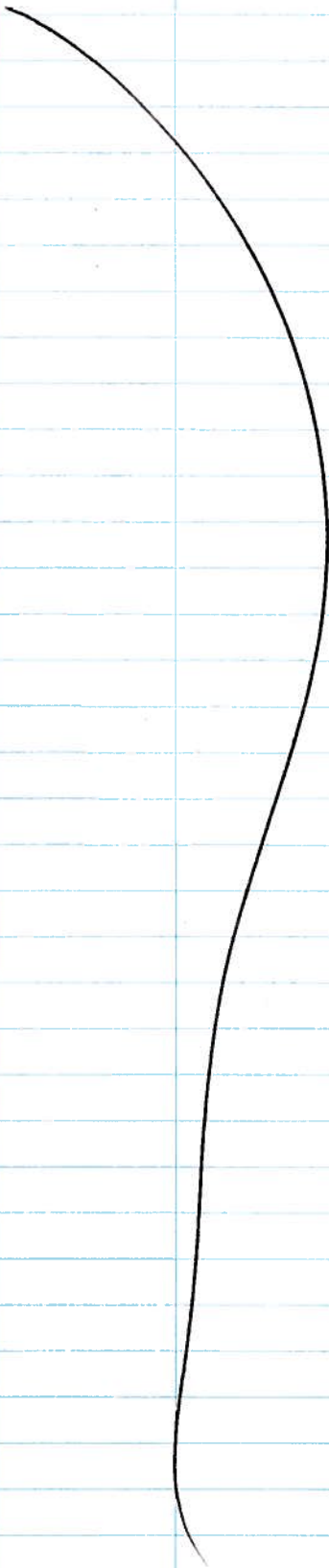
Sample BC-SS-00046 collected at 1030.

Pics:

- 1 - grid looking W toward mine
- 2 - looking north
- 3 - looking south



ES



SS

6/2/14 At TP-1 0800
 Samplers RF, LP, RJ, + ES

TP-1 moved to new location

BC-SB-00001 sample collected at 0830
 - Sampled each of 4 sides + on bottom.

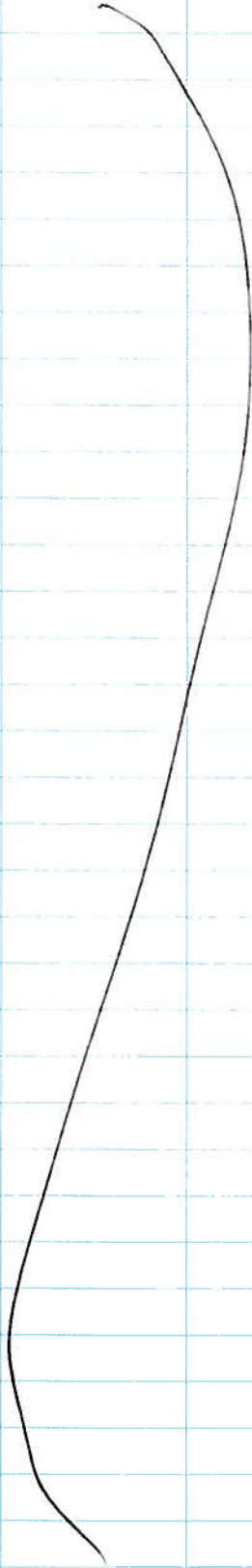
- From each bucket, collected 6 small aliquots of soil for total of 30 aliquots in the bowl

BC-SB-00001

Pics:

- ① - General backhoe - looking south
- ② - General backhoe w/ dust - looking south
- 3 - TP-1 looking down at completed test pit
- 4 - TP-1 looking north
- 5 - TP-1 looking south
- 6 - Ryan sampling - looking north
- ⑦ - " " " "
- 8 - Backfilling TP-1 looking west
- 9 - " " " "

Rite in the Rain



SS

6/2/14

Team 1 at TP-2 0850

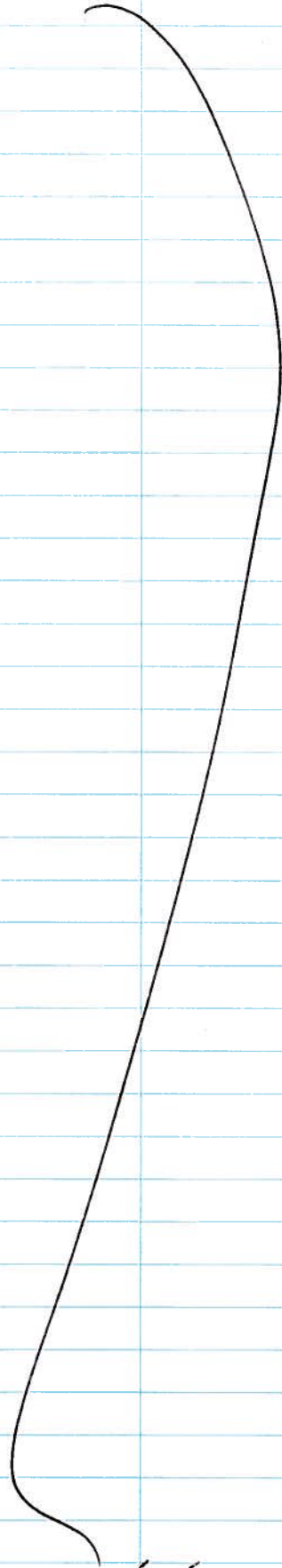
BC-SB-00002 collected at 0915

- Sampled each of 4 sides and bottom same as TP-1
- GPS point collected TP-2-SB
- Collected 6 small aliquots from each bucket for a total of 30 aliquots in sample ~~at~~ (P)

BC-SB-00002

Pic -

- 1 - looking down at TP-2, west wall in view
- 2 - looking down TP-2, north view
- 3 - looking south at TP-2
- 4 - wide view of TP-2 looking SW
- 5 - RJ collecting sample at TP-2



SS

TP-3 6/2/14 (RF, LP, RJ, ES) 47 of 84

On slope just north of RR Tracks in
SS-11 grid.

High Desert Petroleum digging

Desert pavement on surface 24" (2')

- Hit refusal at ~~24~~ inches. Believe caliche
layer extends across entire white-marked
grid

- Collected sample BC-SB-00003 at
0945

BC-SB-00003

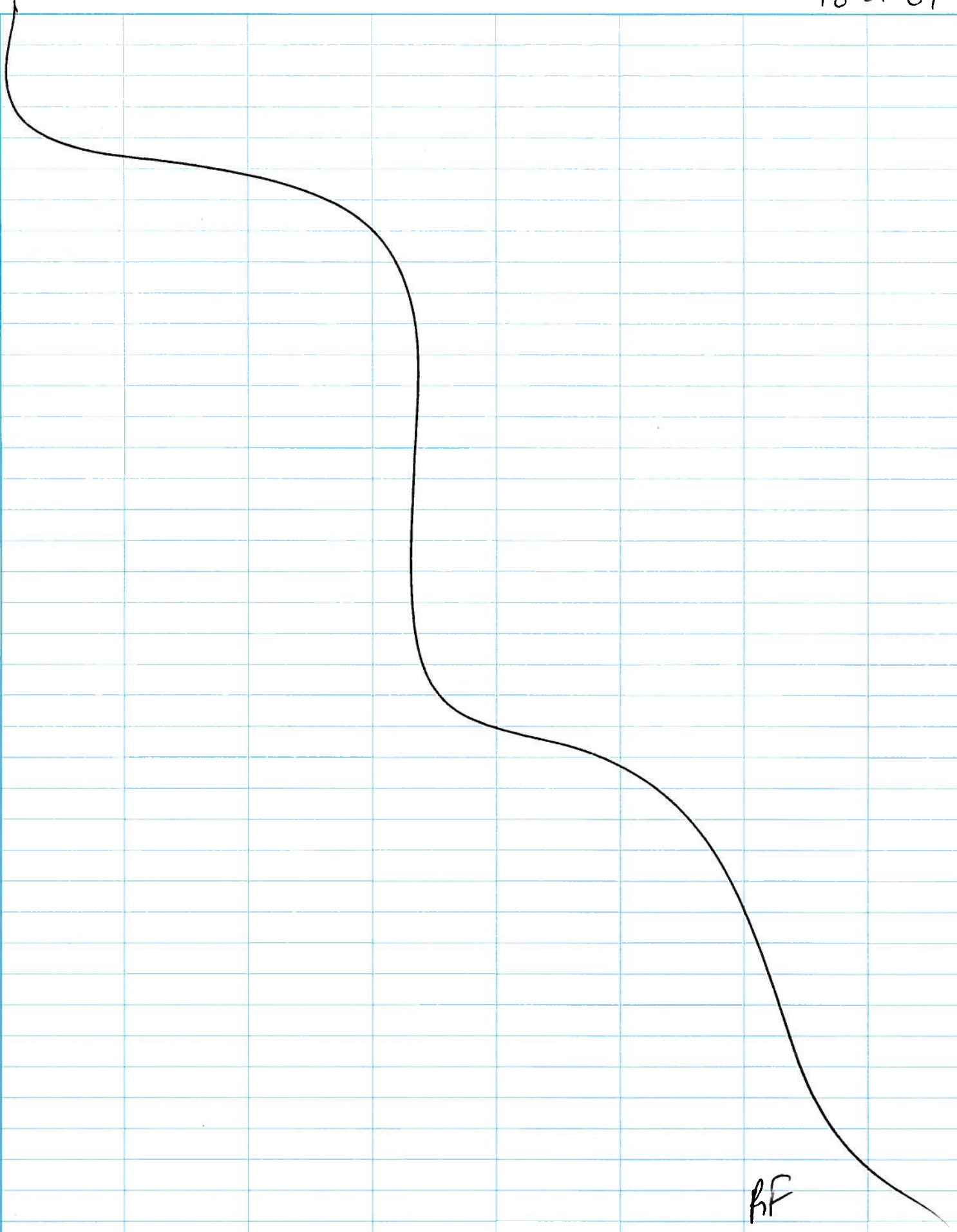
Pics

1 - Looking North, ES samplers TP-3

2 - Looking down at TP-3

3 - Looking down (South) at TP-3

4 - Close-up of TP-3 material, early refusal



RF

TP-4 6/2/14 (RF, R), LP, ES)

- BC-SB-00004 ~~collected at~~^{RF} not collected
- ~~Sampled each of 4 sides and bottom as at previous test pit locations~~^{RF} no sample collected
- ~~GPS point collected~~^{RF} TP-4-SB point deleted, location unsure

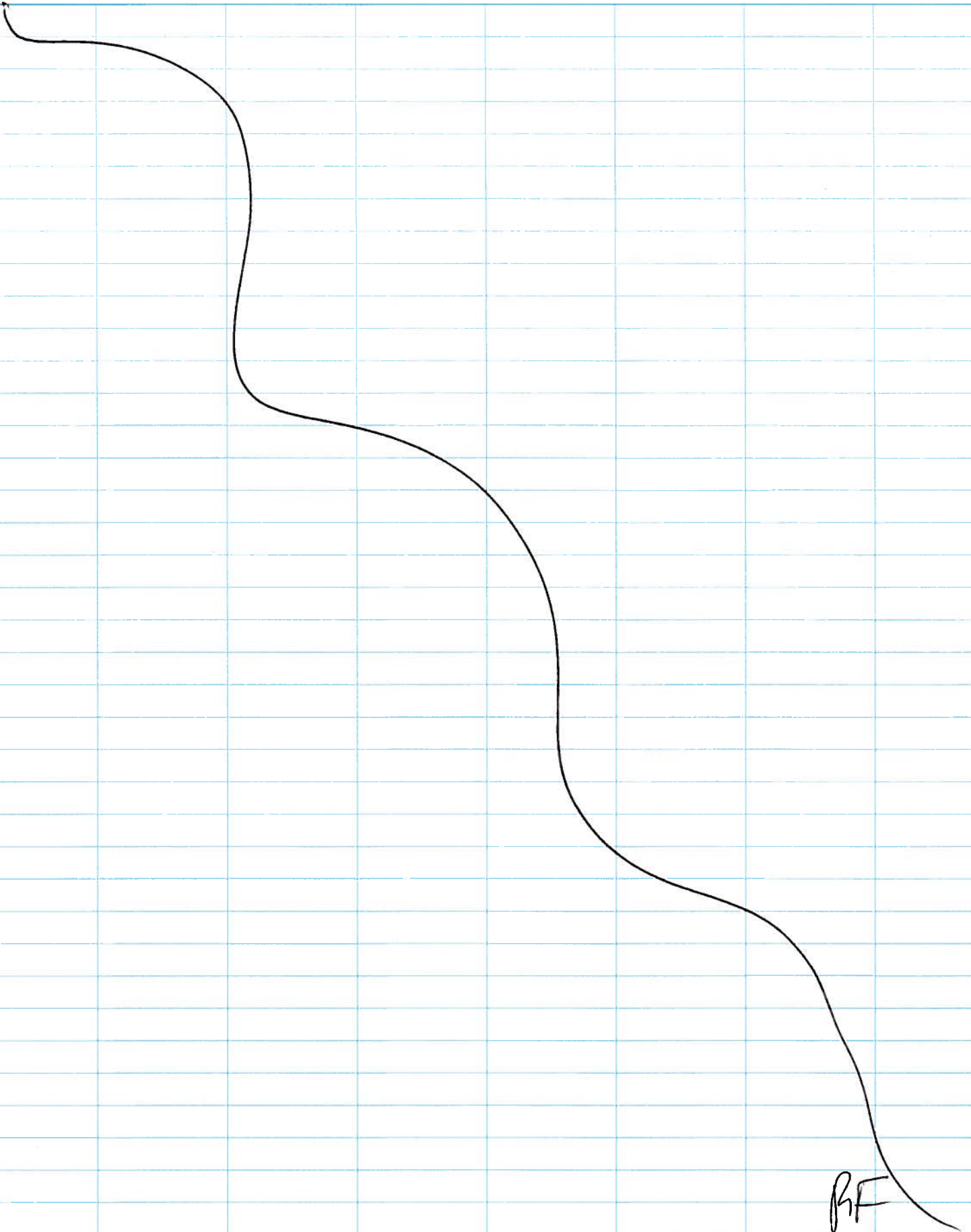
★ Evaluation Stopped, utility locate unclear
1045

1100 - Arrive at TP-5, need additional utility locate

1105 - Arrive at TP-6, need additional utility locate

Pics

1



6/2/14

RF, RJ, ES, LP

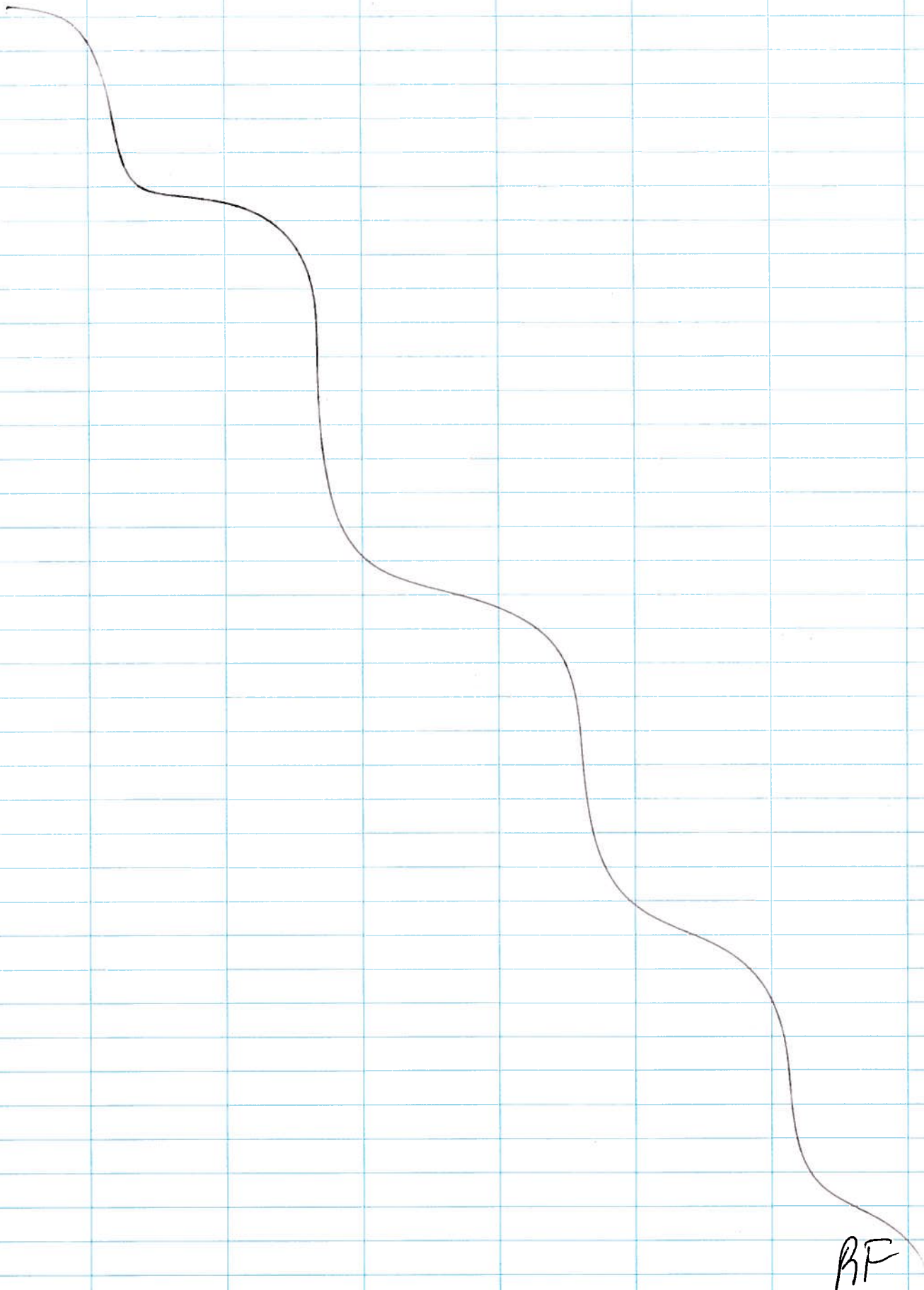
11:10 ARRIVE AT SB-07 AND BEGIN BACKHOE EXCAVATION

- SAMPLE BC-SB-~~0000~~7 Collected at 11:30
- Each side and bottom. Sampled 30 Augments each sample 6 per bucket.
- GPS Collected at TP-7-SB
- Total depth of test pit = 4 feet

BC-SB-00007

Pictures

- 1 Looking down into TP-7 excavation
- 2 Looking north over TP-7 location
- 3 Looking south over TP-7 location
- 4 Looking NE over TP-7 location



BF

6/2/14

RF, R, LP, ES

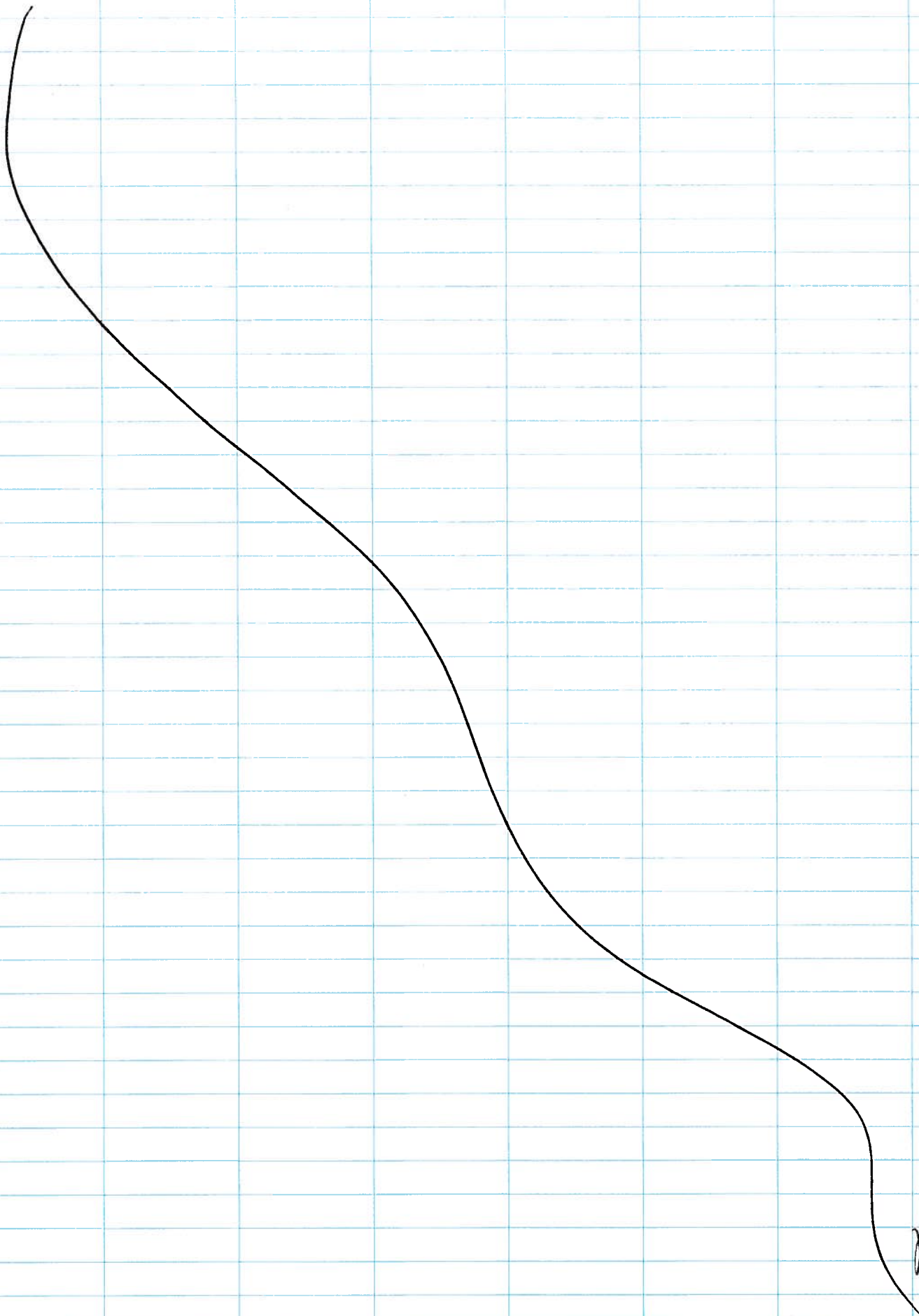
1145 - Arrive at TP-9 and begin bucket excavation

- Sample BC-SB-00009 collected at 12:00
- Each side and bottom. Sampled 30 aliquots, each sample, 6 per bucket = 5 large aliquots
- GPS collected at TP-9-SB
- Total depth of test pit = 5'

BC-SB-00009

Pictures

- 1 Looking down at TP-9
- 2 Looking east across TP-9 excavation
- 3 Looking west across TP-9 excavation
- 4 Sampling TP-9, (LP)



RF

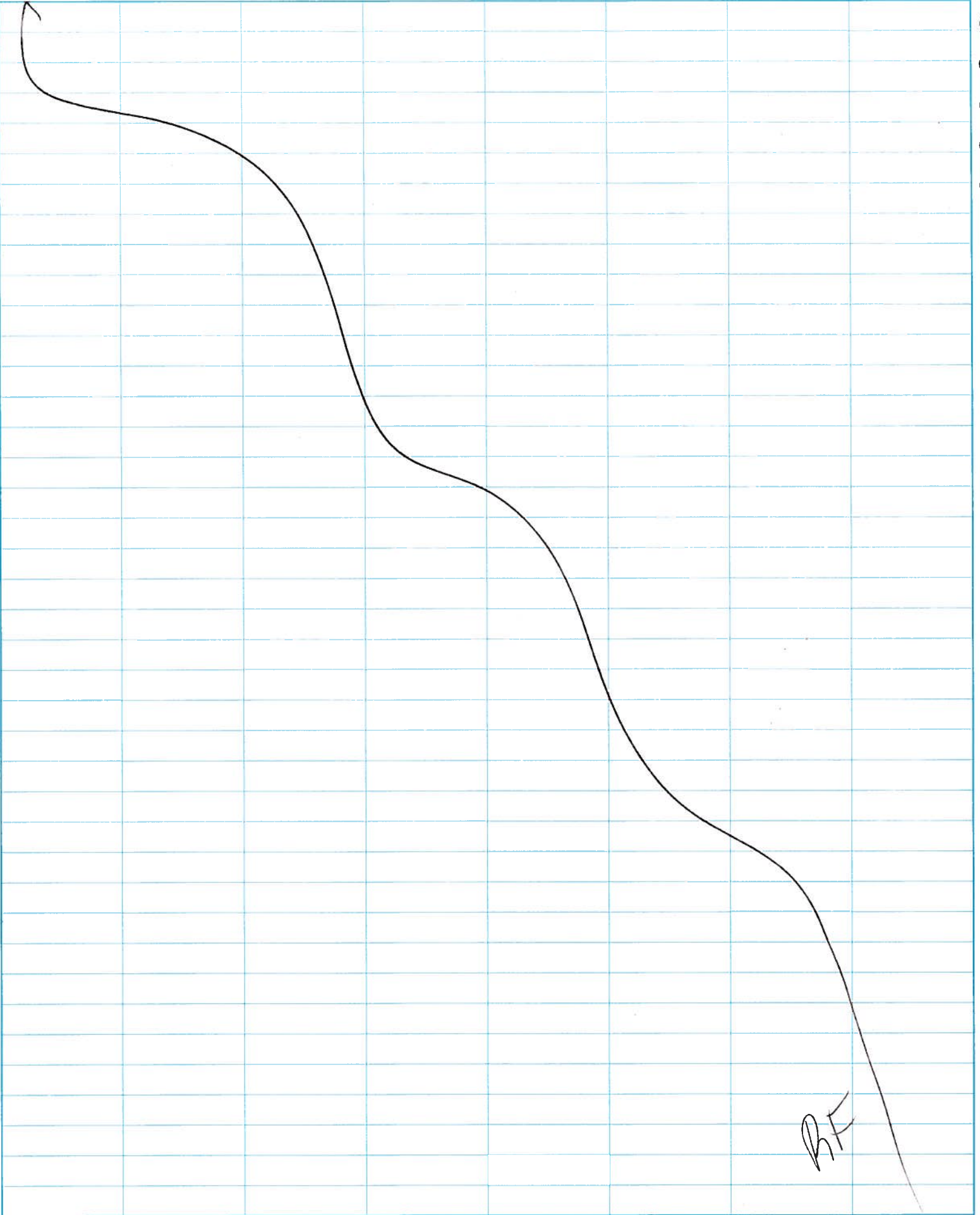
6/2/14 LP, RF, ES, RJ

1215-ARRIVE AT TP-10 AND BEGIN EXCAVATION OF TEST PIT

- ~~SAMPLE BC-SB-⁰⁰¹⁰0000 LP collected at LP~~
- Sample BC-SB-00010 collected at 1230
 - Each side and Bottom sampled 30 Aliquots each sample, 6 per bucket - 5 buckets..
 - GPS collected at TP-10-SB
 - Total Depth of pit = 5'

BC-SB-00010

- Pictures-
- 1 - Looking down at TP-10 excavation
 - 2 - Looking South at TP-10
 - 3 - Looking north at TP-10



BF

6/2/14 RF, RJ, LP, ES

1245 - Arrive at TP-11 and begin test pit excavation

- Sample BC-SB-00011 collected at 1300

- Each side and bottom sampled, 30 aliquots each sample
6 per bucket, 5 buckets

- GPS collected at TP-11-SB

- Total Depth of test pit = 5 feet

BC-SB-00011

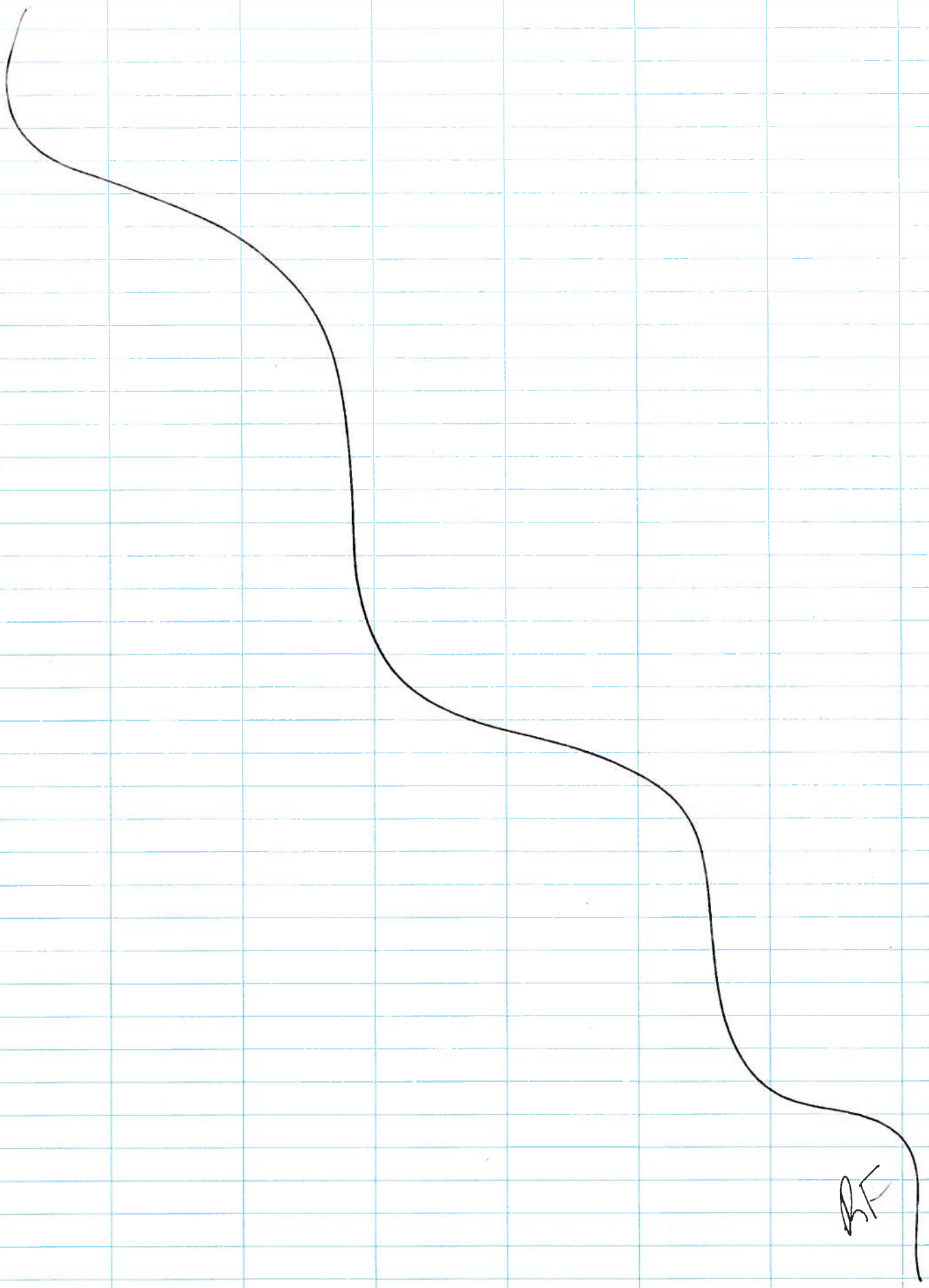
Pictures

1 - TP-11 looking down

2 - Looking North across TP-11 excavation

3 - Looking north at TP-11 sampling

4 - Looking down (SE) at TP-11 excavation



BF

6/3/14 RF, ES

ES

Sample BC-ABS-~~SB~~-00009
 0735 = Place ABS air monitor on Bill Allen in backhoe
 with High Desert, Sample = 09 Off at 1035,
 On at 12:00 - Off w/ 4 hrs at 1300

0744 - BC-ABS-00010 - Backhoe sampler
 started pump. Off at 1044, On at 1300
 off at 1400 for total of 4 hrs.

At SB-17 0800

Located on slope below 93/95 about
 1/4 mile south of RR Pass casino.

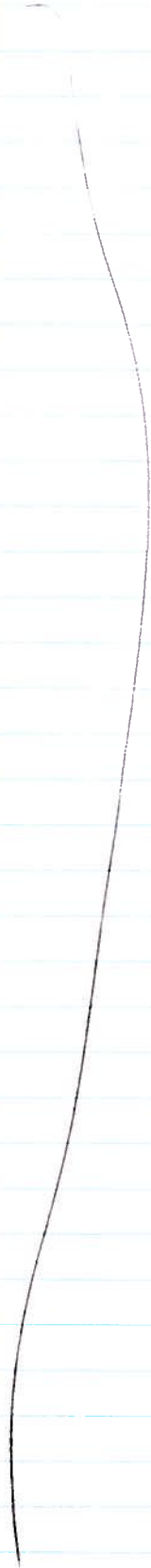
Collected 5-part composite sample, w/ about
 6 0.5cc/0.5g aliquots
 from the bucket

- bottom first
- then far wall
- then

Pics

- ① straight into TP-17
- ② SW overview
- ③ Looking west across area

ES



59

TP-19

6/3/14

0830

61 of 84
(RF, ES)

Area on slope of small ridge south & west of 93/95.

Probably recent relocation of a T-line tower in grid 55-61.

Outcrop on hill just to the west of TP-19

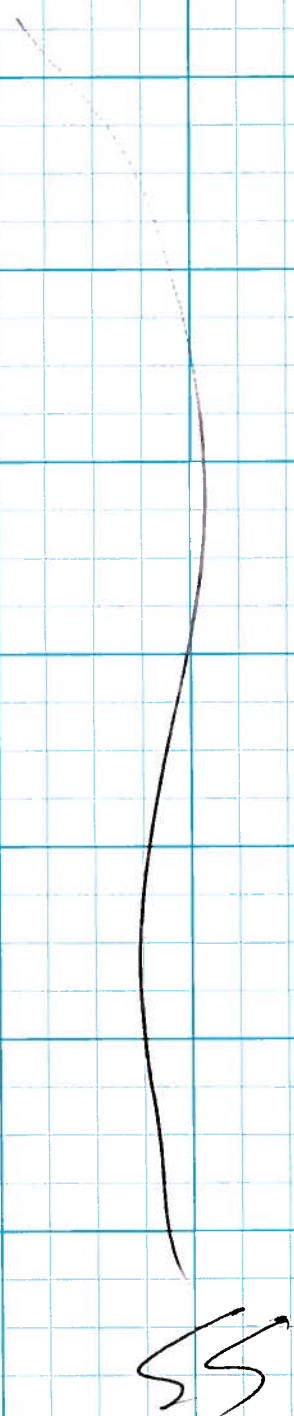
Pics

- 1 - Looking down at TP-19 excavation
- 2 - Looking North across TP-19
- 3 - Looking SW across TP-19



TP-20 6/3/14 0900 (RF, ES)

At site on slope gently sloping to the south, south-east below 93-95 Ridges are high & this is in the swale. Red gtr monzonite on surface ~ 10-25% > 6" size



Pics:

- 1 - Looking down at TP-20 Excavation
- 2 Looking north across TP-20
- 3 - Looking SW across TP-20 excavation



SS

TP-13 6/3/14 0935 (RF, ES)

At bench just north of Goodfellers yard
Pit located west of powerline

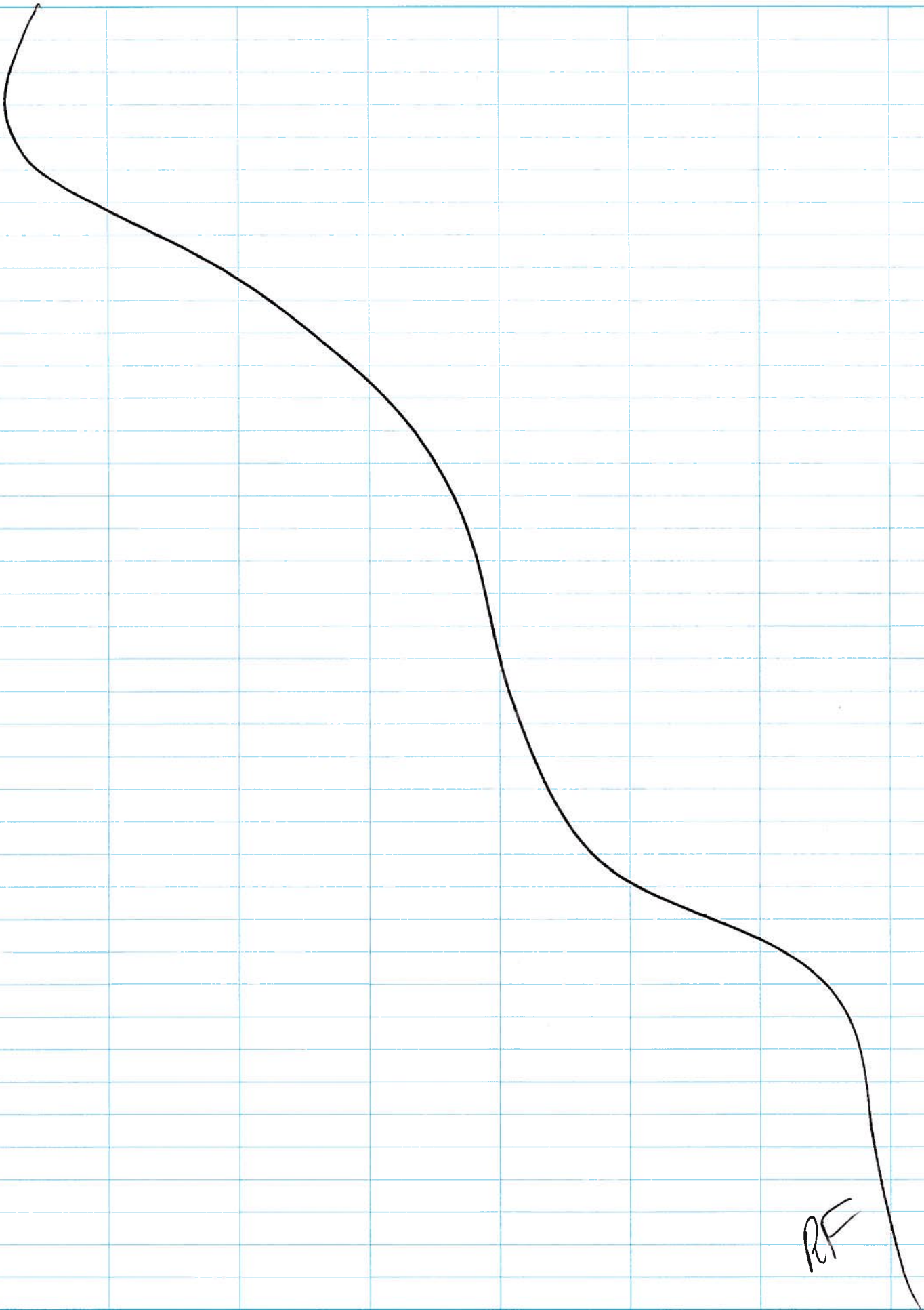
Reddish tan angular alluvium, somewhat
rounded but not much.

Fines are sandy

Veg - must have been lots of cactus.

Pics:

- 1 - Looking down at TP-13 excavation
- 2 - Looking north across TP-13 excavation
- 3 - Looking SW across TP-13 excavation.



RF

TP-12 6/3/14 1015 (RF, ES, DB)

At site below Goodfellows yard
between temporary silt fence & powerline

On east facing slope along west
side of project.

Many large boulders on surface of
alluvial fan.

Pics

- 1- Looking down at TP-12 excavation
- 2- Looking north across TP-12 excavation
- 3- Looking southwest across TP-12 excavation

SS-66 6/3/14 1040 RF, ES, DB

- Collected sample BC-SS-~~00066~~ along approximately 150 feet of spoil pile above SS-39 and SS-40

Pictures

- 1- Looking SW at pile on SS-66
- 2- Looking NW at pile on SS-66

The image shows a page of graph paper with a blue border and a vertical margin line on the right side. The grid is mostly empty, with a few faint pencil marks in the center. The page is numbered '70 of 84' in the top right corner.

TP-14 6/3/14 1200 (RF, ES)

- Site located SW of Goodfellow yard on desert pavement area
- Low vegetation concentration at test pit site
- Sample collected = BC-SB-00014 at 1230

Pictures

- 1 - Looking down at test pit-14 excavation
- 2 - Looking north across TP-14 excavation
- 3 - Looking SW across TP-14 excavation

TP-15 6/3/14 (RF) 1240

- Located on bench above wash below
Goodfellow yard.

- Angular alluvium, high stoniness ~~above~~ top layer of
site

- Sample collected BC-SB-~~0015~~

Pictures

1 - Looking down on TP-15 excavation

2 - Looking north across TP-15 excavation

3 - Looking SW across TP-15 excavation

TP-4 6/6/14 (ES, KU, LP)
Sunny & warm

Started 2 ABS samples at 0710
- one on backhoe, one on Lona (backhoe sampler)
Bill Allen + Jacc

Site TP-4 on older alluvium surface
gently sloping up to 93/95

Coarse angular cobbles and mixed alluvium

Collected sample BC-58-00004 at 0730.

Pit to 5.5 ft.

Pics

- 1 - Into pit looking north, w/ sign
- 2 - Looking north toward backhoe
- 3 - Looking south across site

TP-5 0740 (KV, LP, ES, SM)

At site along east side of 93/95 on gently sloping bench that slopes SE toward main drainage

Several large, possibly graded boulder area

Survey marker just east of TP-5

Sample BC-SB-00005 collected at 0750

Pit to 5.5 ft.

Pics

- 1 - Into pit looking west
- 2 - Looking north
- 3 - Looking south

TP-6 6/6/14 (KV, LP, ES, SM)

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on same slope as TP-5 but about 150 yards (500 ft.) ~~more~~ south.

Pit to 5' 8" deep.

Interbedded layers of different erosional events.

Lower material, angular, poorly rounded cobbles + boulders.

Sample BC-5B-00006 collected at Ø815.

Pics

1. Looking into pit toward the north
2. Looking north across site
3. Looking south across site

TP-8 0830 (KV, LP, SM, ES)

On slope just below 93/95 Hwy. Bank up to highway \approx 25 ft east of pit.

Area has been disturbed, graded smooth

Some creosote and silt but $< 10\%$ cover

Sample BC-SB-00008 collected at 0845

Alluvium may be more coarse-textured
so soil texture more sandy than previous
TP-6 and TP-5 samples

Pics

- 1 - Into pit looking south
- 2 - Looking east (water tank above RR Pass Casino)
- 3 - Looking northeast

TP-16 0915 6/6/14 (KV, LP, SM, ES)

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Site at far south end of Phase 1 about 40' north of Silverline Rd.

Site in active drainage and some piled asphalt and gravel are next to pit.

Material is fairly uniform sand + gravel mixed with some larger cobbles 3 to 6" in size.

Pit is 5.5 ft deep.

Pics

- 1 - Looking north before digging pit w/ stake in pic.
- 2 - Looking west w/ the board
- 3 - Looking SE across Silverline

TP-18 6/6/14 1000 (KV, LP, SM, ES)

Hiked from on-ramp to RR Pass at junction
93/95

Site on north side of 93/95 on
nose slope

Material is poorly sorted large cobbles
and rocks (mostly 6" to 12") with very
fine-grained intermixed silts and ~~sands~~
sands

Material on surface is primarily reddish
but some tans.

Sample BC-5B-00018 collected at ~~1030~~
1045.

Pics

- 1 - Into pit w/ sign looking SW
- 2 - Looking NW toward RR Pass
- 3 - Looking SE toward 93/95.

Done for day. Back to truck.