

AGENDA
REGULAR DRAINAGE MEETING
Wednesday, January 20, 2021 9:30 AM
Large Conference Room

Due to Covid-19 health concerns, this meeting is open to the public via conference call only. The meeting date and time will remain the same. You may call at that time to access the meeting by following the instructions below:

To access the meeting call: 1-(312)-626-6799, when prompted enter meeting ID code: 820 7567 2007

You can also access the meeting online at:
<https://us02web.zoom.us/j/82075672007>

1. Open Meeting
2. Approve Agenda
3. Approve Claims For Payment

Documents:

[PAYABLES-DRAINAGE PUBLICATION 01_22_20.PDF](#)

4. DD 26 Lat 4 - Discuss W Possible Action - Landowner Concerns
5. DD 42 WO 297 - Discuss W Possible Action - Contractor Update

Documents:

[DD 42 WO 297.PDF](#)

6. DD 11 WO 294 - Discuss W Possible Action - Project Estimate

Documents:

[DD 11 WO 294 INVESTIGATION SUMMARY W CCTV RESULTS 10_06_20.PDF](#)

7. DD 20 WO 302 - Discuss W Possible Action - Investigation / Repair Summary

Documents:

[DD 20 WO 302 - 6502.5 - INVESTIGATION-REPAIR SUMMARY 01_05_20.PDF](#)

8. DD 143 WO 305 - Discuss W Possible Action - Investigation Summary

Documents:

[DD 143 WO 305 - 6771.8 - INVESTIGATION SUMMARY 01_06_21.PDF](#)

9. DD 146 WO 228 - Discuss W Possible Action - Investigation / Repair Summary

Documents:

[DD 146 WO 228 - 6950.1 - INVESTIGATION-REPAIR SUMMARY 01_06_21.PDF](#)

10. DD H-F 4-53 WO 296 - Discuss W Possible Action - Investigation Summary

Documents:

[DD H-F 4-53 WO 296 - 6500.4 - INVESTIGATION SUMMARY 01_07_21.PDF](#)

11. DD H-F 4-53 WO 303 - Discuss W Possible Action - Investigation Summary

Documents:

[DD H-F 4-53 WO 303 - 6500.5 - INVESTIGATION SUMMARY 01_06_21.PDF](#)

12. DD H-F 4-53 Franklin Co. WO #143 - Discuss W Possible Action - Investigation Summary
Franklin County has submitted DD H-F 4-53 Work Order #143 Investigation Summary for review by Hardin County Drainage Trustees.

Documents:

[DD H-F 4-53 4-53 FRANKLIN CO WO 143 - 6500.2 - 01_06_20.PDF](#)

[DD H-F 4-53 FRANKLIN CO WO 143 - 6500.2 - INVESTIGATION SUMMARY 01_06_20.PDF](#)

13. Discuss W Possible Action - Drainage Assessments Project

14. Other Business

15. Adjourn Meeting



Hardin County

Drainage Claims with Pay Date of 1/22/2021

DD 25 WO 209 Crop Damage Claim 2021-02 Fincham1/2	David A Fincham	965.58
DD 25 WO 209 Crop Damage Claim 2021-02 Clark1/2	Alvin C Clark	965.58
DD 41 WO 194 - Crop Dmg Claim- C.Blome- 2021-01	Chris Blome	232.81
DD 41 WO 194 - Crop Dmg Claim- C.Blome- 2021-01	Homestead Partnership	18.81
DD 146 WO 228 - Tile repair, parts, labor & equip.	Honey Creek Land Improvement, LLC	8,850.00
DD 167 WO 260 Tile repair, parts, labor & equip.	Honey Creek Land Improvement, LLC	10,007.55

Total Regular Payables:	0.00
Total Stamped Warrants:	21,040.33



Drainage Work Order Request For Repair

Hardin County

Date: 6/15/2020

Work Order #: WO00000297

Drainage District: DDs\DD 42 (51067)

Sec-Twp-Rge: 35-88-22 **Qtr Sec:** 88223510003

Location/GIS: 88-22-35-100-003

Requested By: David Sweeney / James Sweeney

Contact Phone: (641) 373-3131

Contact Email: _____

Landowner (if different): Cynthia Iorger

Description:

DD 42 - David Sweeney reports a 3' diameter blowout/sinkhole over main tile approximately 50 yards upstream from where the Main tile crosses the south property line.

Repair labor, materials and equipment: _____

Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____



Drainage Work Order Request For Repair

Hardin County

Date: 5/1/2020

Work Order #: WO00000294

Drainage District: DDs\DD 11 (51024)

Sec-Twp-Rge: 13-88-22 **Qtr Sec:** _____

Location/GIS: 88-22-13-300-003

Requested By: Robert Smuck

Contact Phone: (641) 640-0132

Contact Email: _____

Landowner (if different): _____

Description: DD 11 - Robert Smuck reports 2' tile blowout along fenceline in SW corner of parcel # 882213300003, along fenceline shared with Shirley Madole's parcel to the south. Smuck had Gehrke out to look, and Gehrke states it is DD tile.

Repair labor, materials and equipment: _____

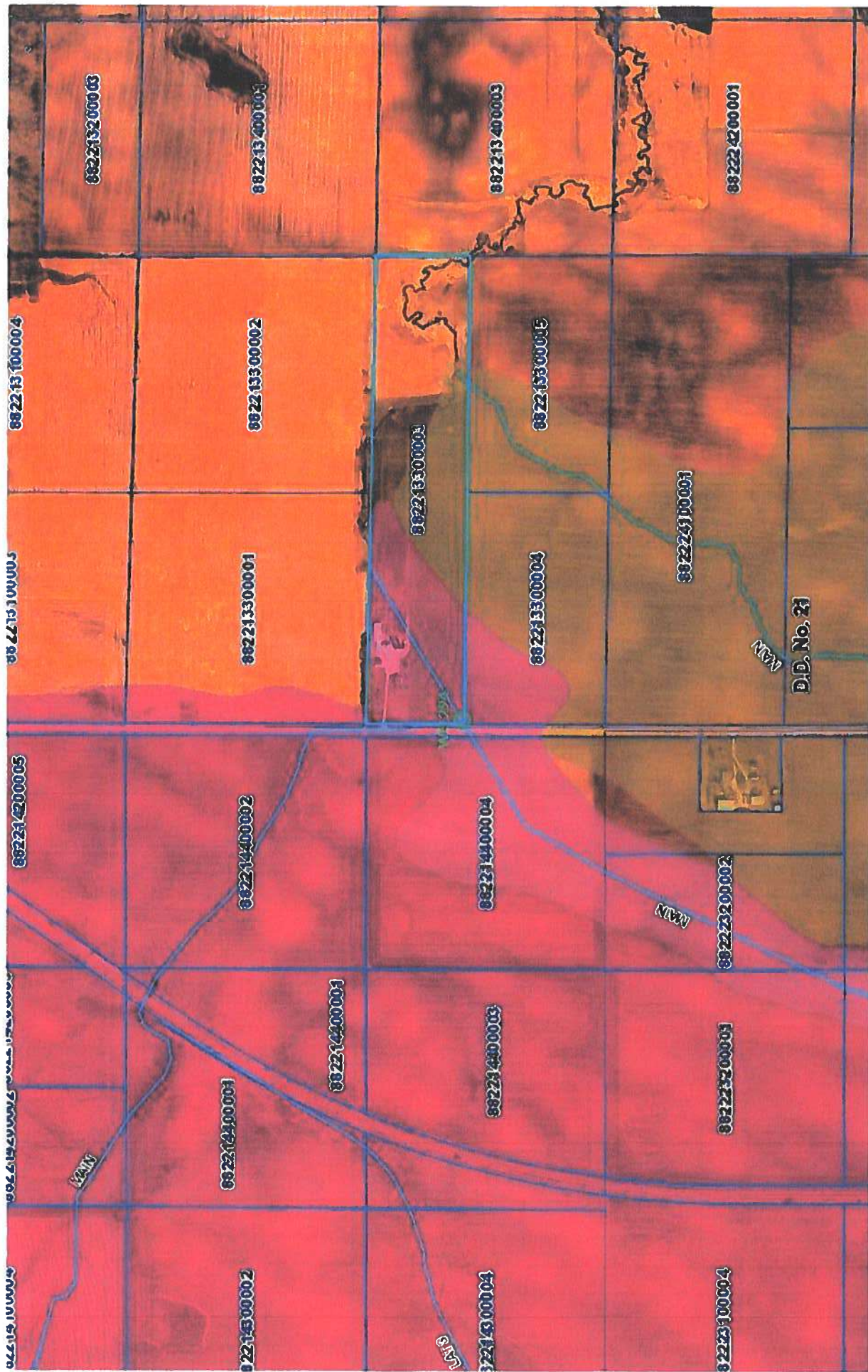
Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____



882213100004

882213100005

882213100005

882213100004

MAIN

882213100002

882213100001

88221400002

882213300001

882213300002

882213400003

882213200003

88221400001

LA 3

88221300004

88221400003

88221400004

882213300004

882213300005

882213400003

88221300004

882213200004

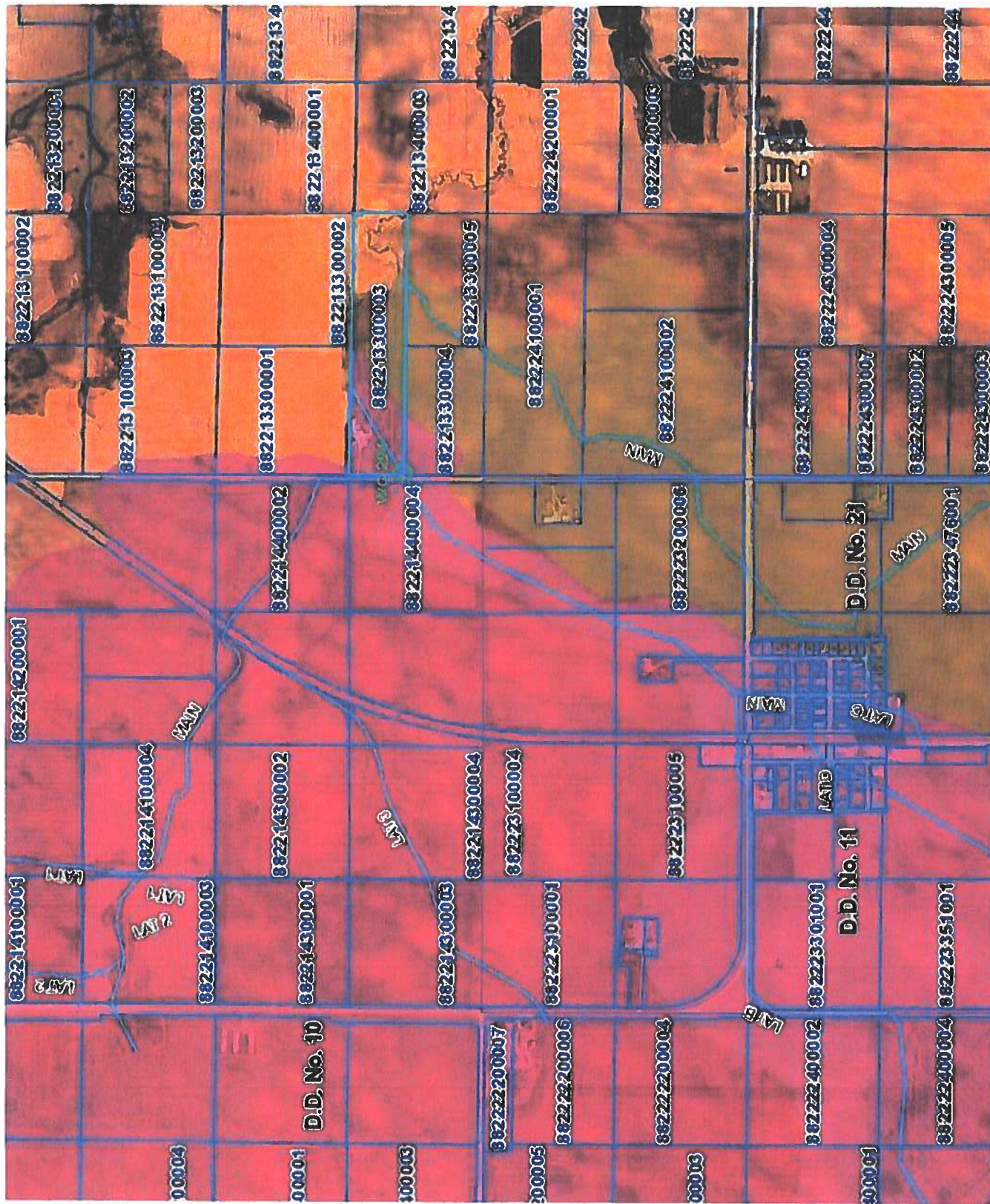
882213200002

MAIN

88221300001

D.D. No. 21

882214200001



Drainage District:

#11

Investigation Summary:

- Per the earlier recommendation and authorization, CCTV inspected the 21-inch VCP Main Tile starting at the existing 5 feet diameter by 2 feet deep blowout located in the NE¼ of Section 23, Township 88 North, Range 22 West. CCTV'ed for approximately 1320 feet west of G Avenue and approximately 1500 feet north of 195th Street.
- Televised 976 feet upstream (to the northeast) from said existing blowout and found 13 partial/imminent collapses. (see attached Tabulated Defects sheet)
- Televised 607 feet downstream (to the southwest) from said existing tile blowout and found 13 partial/imminent collapses. (see attached Tabulated Defects sheet)
- Temporarily repaired said existing blowout with 24-inch Dual wall HDPE tile with fabric wrapped joints and backfilled the area with on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials

Additional Actions Recommended:

It is obvious that the Main Tile is at the end of its useful lifecycle and needs to be repaired based on the CCTV results and the history of repairs in the area. If nothing is done, the tile's condition will only continue to deteriorate which will result in future blowouts and sinkholes that will impact the drainage capacity of the Main Tile and could result in siltation of the same. Therefore, we would recommend repairing the 26 collapse areas identified through 11 spot repairs which would consist of replacing approximately 475 feet of existing tile. It is our opinion that the total construction cost would be \$40,000-\$49,000. This cost is low enough that neither a hearing nor Engineer's Report would be required. Alternatively, the District Trustees could pursue replacement of the Main tile for its entire length of CCTV, the cost of which would exceed \$50,000 and require a hearing and Engineer's Report.

As noted on the Tabulated Contractor Time and Materials, crop damage was incurred. It is recommended that the District Trustees pay any damage claim brought forth.



Tabulated Contractor Time and Materials

Date	Totals	6/16/2020	6/17/2020	6/18/2020
Workman (hrs)	73 3/7	15 2/3	30 1/2	27 1/4
Mini Excavator (hrs)	21	6 1/2	7 1/2	7
Skidloader (hrs)	21	6 1/2	7 1/2	7
1" Clean Bedding Rock	Yes			
Concrete Collars	No			
24" Dual Wall HDPE Tile (ft.)	41 4/5			41 4/5
Crop Damage	1 1/4		1 1/4	

Tabulated Defects

	Total	GPS #392 UPSTREAM	GPS #394 DOWNSTREAM
Total Length Televised (ft)	1546.2	939.2	607
Date:		6/17/2020	6/17/2020
Top crack (ft)	1427	921.5	505.5
Side crack (ft)	489.6	196.1	293.5
Bottom crack (ft)	1427	921.5	505.5
Partial or imminent collapse (#)	26	13	13
Full collapse (#)	0	0	0
Debris (ft)	0	0	0
Offset Joint (#)	1	0	1
Soil/voids visible in offset joint (#)	1	0	1
Single Wall HDPE (non-deformed) (ft)	0	0	0
Dual Wall HDPE (ft)	0	0	0
CMP (rusty) (ft)	18.1	0	18.1
Holes (non-fixed) (#)	0	0	0
Holes (fixed) (#)	1	1	0
Alligator Cracks (ft)	0	0	0
Radial Cracks (# of tile)	0	0	0
Top of pipe missing(repaired with bats)#	0	0	0

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER: HARDIN DDWO # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD#11
ALONG 1/4-1/4 LINE WEST
OF GAVE 19TH TO 19 1/2 NORTH
OF E 19TH ST

SHEET NO.

1 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 23-88-22

LOW 60'S TO MID 80'S

INVESTIGATE TILE BLOWOUT ON DD#11 MAIN

SUNNY & BREEZY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

11:30 A.M. CREW AND OBSERVER ARRIVED ON SITE. ADAM, CARSON AND PERRY WITH KOLBELCO SK85LS MIN EXCAVATOR, AND CAT 299D XHP TRACKED SKIDLOADER.

11:40 A.M. ADAM MET WITH BOB SMUCK EARLIER THIS MORNING AND LOOKED AT REPAIR. ADAM WAS STILL TRYING TO CONTACT LAND OWNER ON EAST SIDE OF REPAIR TO INFORM OF REPAIR.

11:45 A.M. OBSERVER WALKED OUT TO REPAIR TO LOOK AT REPAIR AND TAKE SOME BEFORE REPAIR PICTURES.

12:00 P.M. PICTURE # 3774 & 12:03 P.M. PICTURE # 3775 SEE PICTURE FOR DETAILS.

12:28 P.M. PICTURE # 3776, 12:30 P.M. PICTURE # 3777, & 12:32 P.M. PICTURE # 3778 SEE PICTURE FOR DETAILS.

12:50 P.M. OBSERVER LEFT SITE TO SET UP GPS BASE ON HARDIN COUNTY GPS MONUMENT #8016 IN N.W. QUADRANT OF EXAVE & 190TH ST

1:00 P.M. JEFF ARRIVED ON SITE.

1:20 P.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS #320 1/2" Ø IRON ROD (0.1' DEEP) 2.8' ± WEST OF PP GUY ANCHOR ON WEST SIDE OF MAPLE STREET IN LINE WITH SOUTH ACC EDGE FOR ELLSWORTH AVENUE TO EAST. BOTH HORIZONTAL AND VERTICAL POSITION CHECKED GOOD.

1:30 P.M. OBSERVER BACK ON SITE. CREW WAS STILL PREPPING FOR TILE REPLACEMENT WITH 4 TILE REMOVED FOR REPLACEMENT SO FAR.

1:40 P.M. ADAM LEFT SITE TO GET ROCK AND DIFFERENT EXCAVATOR BUCKET.

1:55 P.M. PICTURE # 3779 & 1:56 P.M. PICTURE # 3781 SEE PICTURE FOR DETAILS.

2:15 P.M. CARSON AND PERRY LEFT SITE TO GET CONCRETE AND SOME OTHER SUPPLIES. JEFF CONTINUED TO REMOVE TILE TO GET TO GOOD TILE TO TIE INTO ON NE END.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

06/16/2020

Reviewed by:

☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7/ DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1924 NORTH
OF E 1ST ST

SHEET NO.

2 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD# 11 MAIN

LOW 60'S TO MID 80'S

SUNNY & BREEZY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

2:20 P.M. OBSERVER CALLED LEE ABOUT TILE
BLOWOUT DUE TO TILE BEING CRACKED AND SIDES OF TILE HAVING VOIDS WITH
NO SIDE SUPPORT CAUSING TILE TO COLLAPSE. TILE DOWNSTREAM IS IN BAD
IN CONDITION. LEE SAID TO CONTINUE EXCAVATE DOWNSTREAM
BUT STOP BEFORE REPAIR GETS TO BE 50'. IF IT GETS
TO BE 50 FT THEN WILL HAVE TO TALK TO SUPERVISORS
OR DISTRICT BEFORE ANY MORE WORK IS DONE.
2:24 P.M. PICTURE # 3781, 2:46 P.M. PICTURE # 3782, 2:48 P.M. PICTURE #
3783 & 2:51 P.M. PICTURE # 3784 SEE PICTURE FOR DETAILS,
3:30 P.M. ADAM BACK ON SITE WITH LOAD OF ROCK & ANOTHER
EXCAVATOR BUCKET.
3:47 P.M. PICTURE # 3786 & 3:57 P.M. PICTURE # 3787. SEE PICTURE FOR DETAILS.
4:05 P.M. PICTURE # 3789, 4:07 P.M. PICTURE # 3790, & 4:08 P.M. PICTURE # 3791 SEE PICTURE
FOR DETAILS.
4:15 P.M. PICTURE # 3792 & 4:22 P.M. PICTURE # 3793 SEE PICTURE FOR DETAILS.
4:21 P.M. OBSERVER CONTACTED LEE AND INFORMED HIM THAT CREW
IS UP TO 26 FT DOWNSTREAM OF GPS 392 WITH TILE
STILL HAVING ISSUES WITH CRACKS & CAVING DOWN.
TILE STILL HAS WIDE JOINTS COVERED WITH TILE PIECES ON TOP
BUT NOT ON SIDES CAUSING VOIDS ON OUTER BEWDS OF TILE.
LEE SAID TO KEEP EXCAVATING FOR GOOD TILE BUT
STOP @ 50' TO DISCUSS WITH DISTRICT AFTER THAT.
4:51 P.M. PICTURE # 3794, 5:09 P.M. PICTURE # 3795 SEE PICTURE FOR DETAILS,
5:26 P.M. PICTURE # 3796, 5:27 P.M. PICTURE # 3796, PICTURE # 3797, & PICTURE # 3798 SEE PICTURE
FOR DETAILS.
5:30 P.M. PERRY BACK ON SITE AFTER GETTING SUPPLIES
5:34 P.M. PICTURE # 3799, 5:45 P.M. PICTURE # 3800, 5:47 P.M. PICTURE # 3801
SEE PICTURE FOR DETAILS.
5:47 P.M. OBSERVER CONTACTED LEE THAT CREW EXPOSED TILE TO 41.8' DOWNSTREAM
OF GPS # 392 WITH VOIDS STILL ON SIDE AND CLAY TILE ABOVE TOP OF JOINT

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

06/16/2020

Reviewed by:

☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7/ DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E 135TH ST

SHEET NO.

3 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MAIN

LOW 60'S TO MID 80'S

SUNNY & BREEZY

JOB # 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

WITH TILE CRACKING & APPEARING TO BE CAVING DOWN.

5:50 P.M. CALLED LEE IF CREW COULD START ON REPAIR. LEE SAID
TELEVISIONING COULD SHOW A LARGER REPAIR AND WOULD HAVE
TO BID OUT PROJECT. ADAM WANTED TO START TELEVISIONING
1ST THING IN MORNING BUT LEE SAID IT WAS NOT A GOOD
IDEA SINCE NOT APPROVED FOR YET AND IF NOT APPROVED
WHO PAYS FOR TELEVISIONING

5:56 PICTURE # 3802, & 6:29 P.M. PICTURE # 3803 SEE PICTURE FOR DETAILS.
06/16/2020 PICTURE # 1 SEE PICTURE FOR DETAILS.

6:00 P.M. CREW WAS DONE FOR DAY & LEFT SITE. OBSERVER
SHOT LANE CROP DAMAGES OUT TO REPAIR AND TORE DOWN
GPS AND LEFT SITE.

QUANTITIES

ADAM 4 2/3 HOURS

CARSON 2 3/4 HOURS

PERRY 3 1/4 HOURS

JEFF 5 HOURS

1 3/4 HOUR GETTING LOAD OF 1 1/2" ROCK
? CARSON NEEDED
BACK TO SITE WITH PICKUP &
DUMP TRAILER

3 1/4 HOURS GETTING SUPPLIES

KOLBELCO SK8SCS MINI EXCAVATOR 6 1/2 HOURS

CAT 299D XHP TRACKED SKIDLOADER 6 1/2 HOURS

CONCRETE INC. TICKET # 43614 HARDIN AGGREGATE 1 1/2 CRUEL 8.2 TONS

PICKUP & TRIPLE AXLE DUMP TRAILER GETTING ROCK

NOTE: LEE IS TALKING TO DISTRICT/SUPERVISORS ABOUT TELEVISIONING
LINE TOMORROW AT MEETING

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

06/16/2020

Reviewed by:

☐ Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7/ DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E 195TH ST

SHEET NO.

4 OF 4

LOCATION:

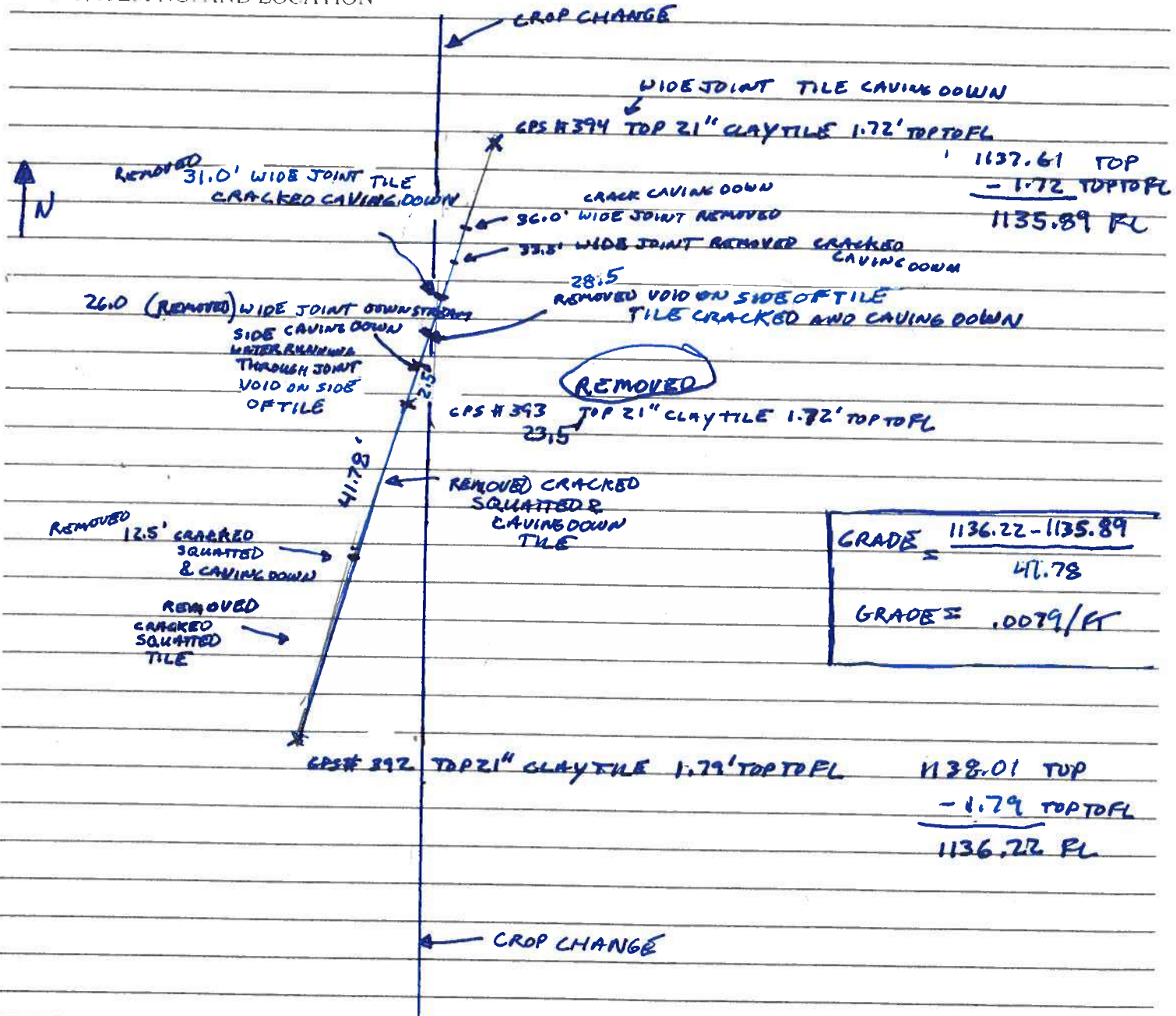
NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MAIN

LOW 60'S TO MID 80'S

SUNNY & BREEZY

JOB # 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

06/16/2020

Reviewed by:

☐ Engineer

Date Reviewed

Beacon™ Hardin County, IA

Layers - Map

Search Comp Search Results Comp Results Report Pictometry Imagery

Layer List Legend

Quick Links:

- Property Search
- View Map
- Drainage District Search

Layers:

- ☐ Address
- ☒ Corporate Limits
- ☒ Political Townships
- ☐ Geographic Townships
- ☐ Sections
- ☐ Subdivision Annotation
- ☐ Subdivisions
- ☐ Lot Annotation
- ☐ Lot Lines
- ☐ Road Dimensions
- ☒ Roads
- ☐ Road ROW
- ☐ Railroad Annotation
- ☐ Railroads
- ☐ Railroad ROW
- ☐ Water
- ☐ Parcel Dimensions
- ☒ Parcels
- ☐ Drainage Tiles
- ☐ Drainage Districts
- ☐ Cartography
- ☐ Landuse
- ☐ Soils
- ☐ Enterprise Zones
- ☐ Conservation Property
- ☐ Structures
- ☐ Garden Winds Turbines
- ☐ Airport Protected
- ☐ Airspace Surfaces
- ☐ Two Mile Boundary
- ☐ School Districts
- ☐ Voting Districts
- ☐ LOMR



Results

Parcel ID - 882223200004
Alt ID - 235000000
Address - 19131 GAVE
Owner - Smuck, Robert J
(Deed)
Acres - 4.24
[View Report](#) | [Pictometry Imagery](#)

Owner Address: Smuck, Robert J
19131 G Ave
Alden IA 50006

Alternate ID: 235000000
Class R
Acreage 4.24

Parcel ID 882223200004
Sec/Twp/Rng 23-88-22
Property Address: 19131 GAVE
HARDIN

District 63000
Brief Tax Description
COMM COR S51°E BEG NW442.5' S456.85' NE442.5' N445° BEG
SEC23-T88N-R22W
(Note: Not to be used on legal documents)

PICTURE#3774 IS LOOKING EAST TOWARDS ACREAGE @19131
G AVE - SHOWING 5.0' ϕ X 2.0' DEEP BLOWOUT IN BEAN
GROUND JUST WEST OF CROP CHANGE.



PICTURE#3775 IS LOOKING SOUTH TOWARDS 195TH STREET
AT 5.0' ϕ X 2.0' DEEP BLOWOUT IN BEAN GROUND
(WEST SIDE) OF CROP CHANGE

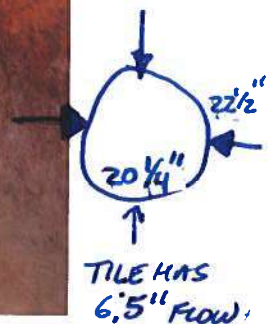
PICTURE #3776 IS LOOKING SW SHOWING EXISTING CLAY TILE
EXPOSED NEAR TILE BLOWOUT WITH NO VISIBLE ISSUES YET
(JOINT IS TIGHT)



TILE
SECTION
COLLAPSING
& BROKEN

PICTURE #3777 IS LOOKING SLIGHTLY NW SHOWING EXISTING
CLAY TILE TO SW IN GOOD SHAPE AND SECTION OF CLAY
TILE COLLAPSED (GOOD CLAY AROUND TILE)

PICTURE # 3778 IS LOOKING NE SHOWING TILE EXPOSED WHERE
SECTION OF TILE IS BROKEN & COLLAPSING NEAR BLOWOUT HOLE,



PICTURE # 3779 IS LOOKING SW UPSTREAM FROM GPS#392.
INSIDE- 21" CLAY TILE WITH SMOOTH CRACKS @ 6 & 12 O'CLOCK,
TILE IS CRACKED, SLIGHTLY SQUATTED, BUT DOES NOT APPEAR TO BE LEAVING DOWN.

PICTURE # 3780 IS LOOKING NE DOWNSTREAM APPROXIMATELY 12.5'
FROM GPS # 392 SHOWING TILE STILL CRACKED, SQUATTED,
AND CAVING DOWN. AFTER APPROXIMATELY 5 SECTIONS OF
TILE REMOVED



PICTURE # 3781 IS LOOKING NE DOWNSTREAM APPROXIMATELY
(23.5' FROM GPS # 392) (GPS # 393) SHOWING TILE STILL CRACKED, SQUATTED,
AND CAVING DOWN AFTER 4 SECTIONS OF TILE REMOVED.

PICTURE# 3782 IS LOOKING SLIGHTLY NW SHOWING $1\frac{1}{2}$ " TO 2" WIDE JOINT ON CLAY TILE @ 28.5' ± DOWNSTREAM FROM GPS#392 WITH CLAY PIECES OVER JOINT AND UPSTREAM TILE CAVING DOWN.



PICTURE# 3783 IS LOOKING NW SHOWING TOP OF CLAY TILE CRACKED AND CAVING DOWN @ 26.0' DOWNSTREAM FROM GPS#392.

PICTURE #3784 IS LOOKING SW SHOWING WIDE GAP & TOP OF TILE CRACKED AND CAVING DOWN

GPS #393 TOP 21" CLAY TILE



TOP TILE
CRACKED
& CAVING
DOWN.

1 1/2" TO 2"
WIDE GAP
@ 28.5' ±
FROM GPS #392

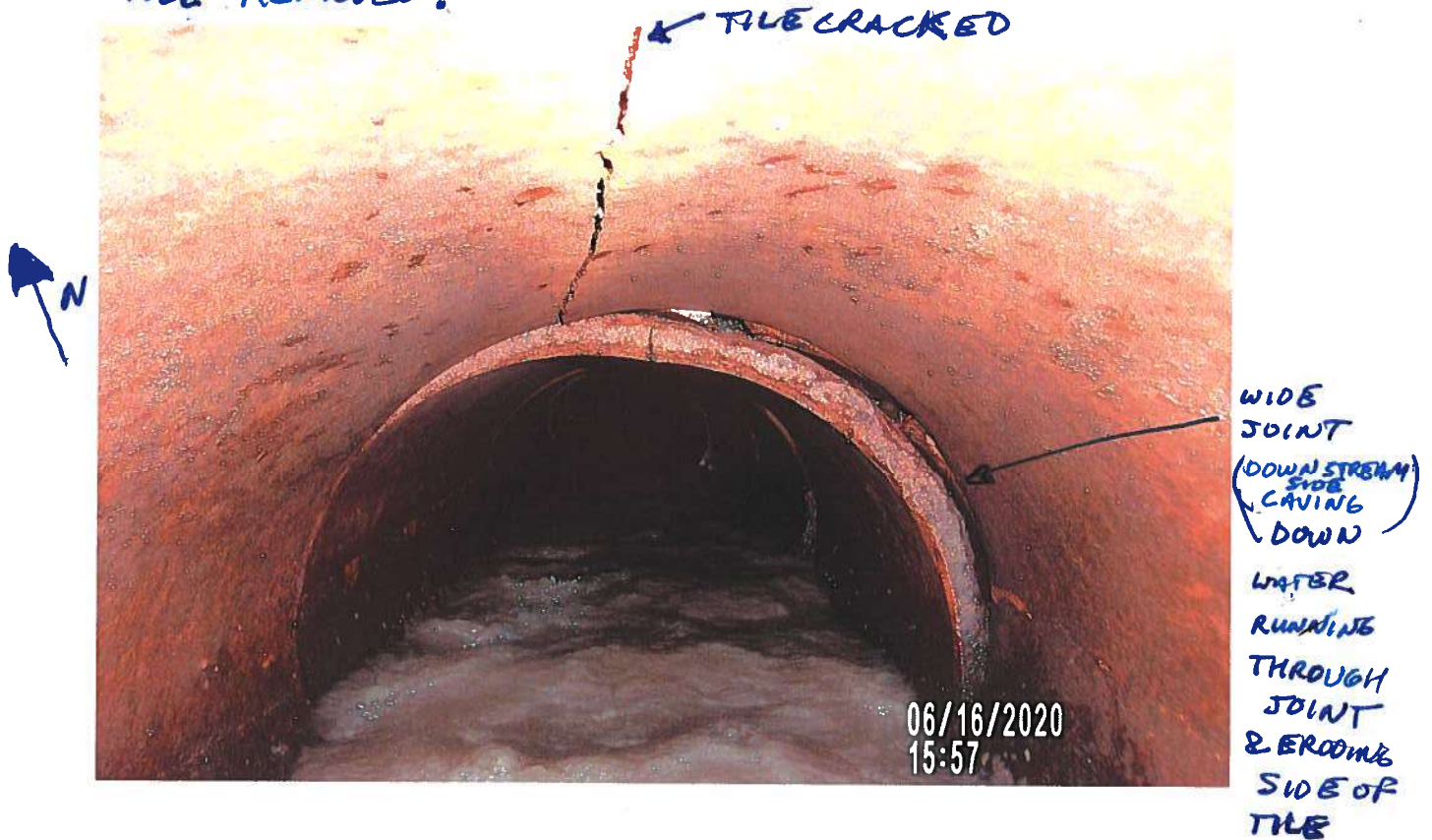
06/16/2020
14:51



06/16/2020
15:17

PICTURE #3786 IS LOOKING NE FROM GPS #393 INSIDE 21" CLAY TILE SHOWING TOP TILE CRACKED AND CAVING DOWN WITH JOINT O/S & WIDE JOINT 2 JOINTS DOWNSTREAM.

PICTURE #3787 IS LOOKING NE (2.5' NE OF GPS#393) SHOWING
INSIDE 21" CLAY TILE AFTER ANOTHER SECTION CLAY
TILE REMOVED.



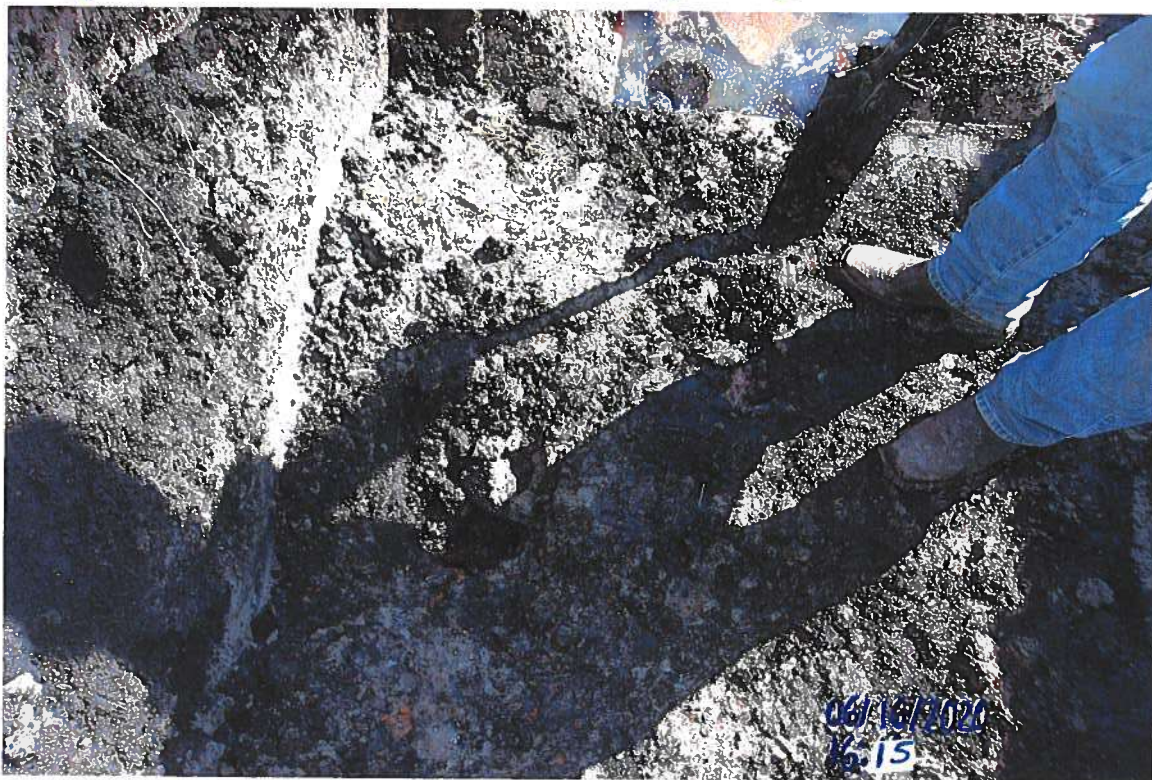
PICTURE #3789 IS LOOKING SOUTH SHOWING TILE CAVING
DOWN 5.0' DOWN STREAM FROM GPS#393.

PICTURE # 3790 IS LOOKING DOWN STREAM FROM 28.5'± DOWNSTREAM
FROM GPS # 392 SHOWING TILE STILL CRACKED AND CAVING
DOWN



PICTURE # 3791 IS LOOKING ON WEST SIDE OF 21" TILE
SHOWING VOID BESIDE TILE @ WIDE JOINT (28.5'± DOWNSTREAM
FROM GPS # 392)

PICTURE # 3792 IS LOOKING SOUTH SHOWING BOOT HOLE AFTER
CONTRACTOR STEPPED ABOVE VOID ON EAST SIDE OF TILE
31' DOWNSTREAM OF GPS # 392!



PICTURE # 3793 IS LOOKING EAST SHOWING 2" WIDE
JOINT WITH CLAY PIECES OVER ON EAST SIDE OF TILE (31' DOWNSTREAM
OF GPS # 392. CLAY PIECES ARE JUST ON TOP OF JOINT BUT NOT ON SIDES.
CAUSING VIDS ON SIDES

PICTURE# 3794 IS LOOKING NORTH @ 21" CLAY TILE SHOWING
TILE STILL CRACKED AND CAVING DOWN

31.00' DOWN STREAM FROM GPS#
392

N ↑



N ↑



PICTURE# 3795 IS LOOKING NORTH SHOWING TRENCH WITH
DAMAGED TILE REMOVED.

GPS # 392 TOP 21" CLAY TILE
SOUTHEAST

PICTURE# 379.6 IS LOOKING NW SHOWING JOINTS @ 33.5' & 36' DOWN STREAM FROM GPS #392 HAVING WIDE JOINTS



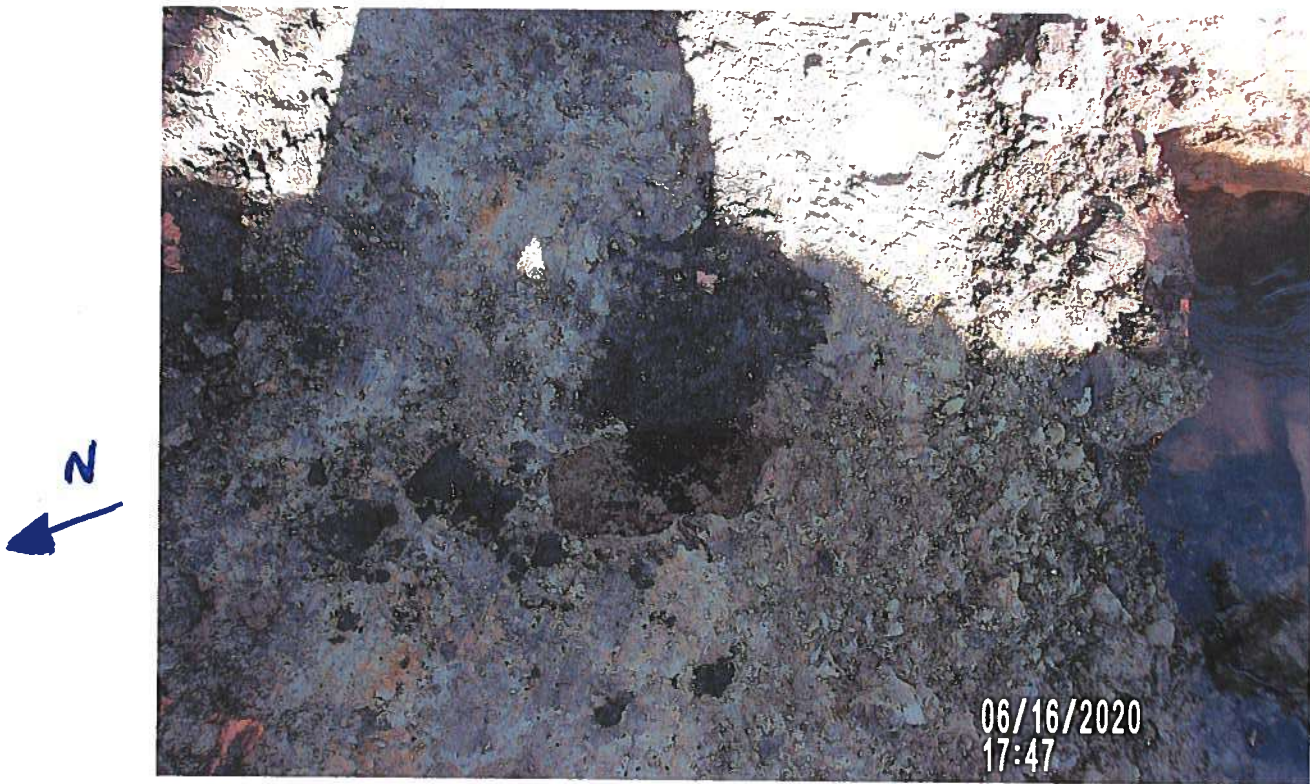
PICTURE# 379.7 IS LOOKING SW SHOWING TILE EXPOSED @ GPS 13 WITH TILE STILL CRACKED AND CAVING DOWN, (NO DIFFERENCE ON CONDITION) JOINTS ARE TIGHTER,

PICTURE# 3798 CLOSER UP PICTURE OF TILE CONDITION
TIGHTER JOINT BUT STILL CRACKED AND CAVING
DOWN.



PICTURE# 3799 IS LOOKING NE SHOWING TILE STILL
CRACKED, SQUATTED AND CAVING DOWN

PICTURE# 3800 IS LOOKING NORTH SHOWING ANOTHER WIDE JOINT
AT GPS# 394.



PICTURE# 3801 IS LOOKING SE SHOWING ANOTHER VOID BESIDE
WEST SIDE OF TILE

PICTURE # 3802 IS LOOKING NE FROM GPS # 394 SHOWING INSIDE OF 21" CLAY TILE WITH TOP CRACKED AND CAVING DOWN. APPEARS NEXT 3 JOINTS ARE IN SAME CONDITION BUT ARE CLOSE TO OUR 50' MAX REPAIR LIMIT. LEE WILL TALK TO SUPERVISORS IN MORNING ABOUT TELEVISIONING LINE,



TO SUPERVISORS
IN MORNING
ABOUT
TELEVISIONING
LINE,



(41.8' DOWNSTREAM
FROM GPS # 392)



CPS # 394 TOP 21" CLAY TILE (5.4' DEEP)



PICTURE # 3803 IS LOOKING NE SHOWING 41.8 LF OF TILE REMOVED WITH NEXT THREE DOWNSTREAM TILE IN SAME CONDITION. CREW IS WAITING ON DECISION FROM DRAINAGE DISTRICT ON HOW FAR TO REPLACE TILE

CPS # 392 TOP 21" CLAY TILE (4.8' ± DEEP)

PICTURE #1 ROCK TO BE USED FOR
BEDDING UNDER AND AROUND TILE
FOR TILE REPAIR.

CONCRETE, INC. 43614

A42512
HARDIN AGG

28295 4TH AVE
GIFFORD, IA 50259
PHONE 641-858-5637

TRUCK NO.

CHGE. ☒ CASH ☐ MONTH ☐ DAY ☐ YEAR

SOLD TO Adam Seward

ADDRESS _____

DELIVERED TO _____
 ADDRESS _____

14110 FA WASHED SAND	GROSS	
FILE SAND	16.300	DDY
SURFACING	102.40 PM	
PEA GRAVEL	30780	10 630/294
1 1/2 GRAVEL		
OVERSIZE		
OTHER		
TARE		
NET		14220
PU		16560

TRUCK RATE _____
 DRIVER SIGNATURE _____

TONS	AMOUNT
8.2	
SALES TAX	
HAULING	
TOTAL	

06/16/2020

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER: HARDIN DDWD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD#11

SHEET NO.

1 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD#11 MAIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

10:43 A.M. OBSERVER RECEIVED A TEXT FROM LEE THAT BOARD OF SUPERVISORS APPROVED TELEVISIONING AND TO GO TO JOB SITE ASAP.

10:45 A.M. OBSERVER LEFT OFFICE FOR SITE.

11:25 A.M. OBSERVER ARRIVED ON SITE WITH JEFF, CARSON, PERRY & ADAM ON SITE AND CAT 299D XP TRACKED SKID LOADER & KOLBELCO SK 85CS MINI EXCAVATOR. JEFF WAS ON SITE @ 9 WITH CARSON, ADAM, & PERRY ON SITE @ 9:30 A.M. CREW WAS CLEANING UP TRENCH BANKS AND WAITING FOR APPROVAL TO TELEVIEW LINE.

11:00 A.M. PAUL WITH TELEVISIONING CAMERA ARRIVED ON SITE

11:50 A.M. PAUL STARTED TELEVISIONING DOWNSTREAM FROM GPS# 394 (TOP 21" CLAY TILE 1.72' TOP TO FL (BACK WHEELS AT END OF TILE) (SOME OBSERVATIONS SEEN IN FIELD WHILE TELEVISIONING)

1.0' START TELEVIEW DOWNSTREAM.

13.4 CIRCUMFERENTIAL CRACKS (12 TO 12)

147.0 BROKEN PIECE (CAVING IN)

21.0 CRACKED CAVING DOWN (9 TO 1)

160.0 STILL CRACKED (CAVE IN)

24.8 CLAY TO CMP

170.4 TILE SUNK DOWN

41.8 CMP TO CLAY (546 @ CMP TO CLAY)

194.2 TILE BROKE LEFT SIDE

47.8

207.9 LOWER RIGHT CRACKED

49.9 TILE TOP TILE (CAVE DOWN)

227.2 CAVE DOWN

54.8 MULTIPLE CRACKS (CAVE DOWN)

228.2

59.1 WIDE GAP LEFT

230.1 GRADE CHANGE

61.2 CAVE DOWN

240.0 CRACKED CAVING DOWN

108.4 STILL CAVING DOWN

252.0 CRACKED CAVING DOWN

117.2 CRACKED CAVING DOWN

266.0 TILE LOOKED GOOD AS SAID

124.2

279.5

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature

Dean Penning

Date Prepared

06/17/2020

Reviewed by

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7 / DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E 19TH ST

SHEET NO.

2 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB # 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

300.0

412.8 CRACKED (CAVE DOWN)

315.5 CRACKS IN TILE

425.0 BETTER PIPE AGAIN

326.2 WIDE JOINT BATT'S OVER JOINT

475.0 CRACKED (CAVE DOWN)

332.0

550-562 CRACKED CAVING IN

335.3 CRACKED CAVING DOWN

562-569.5 TILE COLLAPSING DOWN /
(3,9,212)

331.6 CRACKED CAVING DOWN

586.5 TO 602 CRACKED CAVING DOWN

359.8 CRACKED CAVING DOWN

603.6 CHUNK CLAY TILE IN FLOW LINE
(TOP TILE CRACKED) END CAMERA
CAMERA CAN NOT GO PAST
CHUNK TILE IN FLOW LINE

370.8 BETTER TILE (MORE ROUND LESS SQUATTED)

382.8

395.8

1:05 P.M. PAUL WAS DONE WITH TELEVISIONING DOWNSTREAM AND
STARTED TO LOCATE TILE.

1:05 P.M. OBSERVER HEADED TO SET UP GPS BASE ON GPS # 8016
AT NW QUADRANT OF E AVE & 190TH ST.

1:35 P.M. OBSERVER HAD GPS BASE SET UP AND CHECKED INTO GPS # 320
1/2" Ø IRON ROD (0.1' ± DEEP) 2.8' ± WEST OF GUY ANCHOR ON WEST
SIDE OF MAPLE STREET IN LINE WITH WITH SOUTH ACC EDGE FOR ELLSWORTH
AVE TO EAST WITH BOTH HORIZONTAL AND VERTICAL POSITION
CHECKING GOOD.

1:40 P.M. OBSERVER BACK ON SITE AND CREW WAS DONE
LOCATING TILE DOWNSTREAM AND WAS PULLING CAMERA
BACK. OBSERVER SHOT TILE LOCATES (GPS # 394 TO GPS # 411)

2:04 P.M. PICTURE # 3810 SEE PICTURE FOR DETAILS.

2:20 P.M. PAUL HAD CAMERA TRAYTOR SET IN UPSTREAM TILE AND
READY TO START TELEVISIONING UPSTREAM FROM GPS # 392

2:25 P.M. PICTURE # 3811 SEE PICTURE FOR DETAILS.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared

06/17/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER:

HARDIN DD WO # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

6756.7 / DD # 11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E 1ST ST

SHEET NO.

3 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD # 11 MAIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB # 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

2:27 P.M. PAUL STARTED TELEVISIONING UPSTREAM

FROM GPS # 392 TOP 21" CLAY TILE (1.79' TO TOP FL) (BACK OF WHEELS
ON CAMERA AT END OF TILE) (SOME OBSERVATIONS SEEN IN FIELD WHILE TELEVISIONING)

1.5' START TELEVISION UPSTREAM. LONGITUDINAL CRACKS @ 12 START
(SLIGHT SQUAT)

4.7 LONGITUDINAL CRACK @ 12 SLIGHT SQUAT

8.8 LONGITUDINAL CRACK @ 6

15.2 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

44.3 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

55.9 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

67.9 LONGITUDINAL CRACK @ 12 (CAVING DOWN)

129.6 LONGITUDINAL CRACK @ TOP SQUATTING START

163.0 LONGITUDINAL CRACK (CAVING DOWN)

175.9 LC (CAVING DOWN)

191.2 LC (CAVING DOWN)

199.7 TO 205.1 LC (CAVING DOWN)

261.9 LC (CAVING DOWN)

300.6 TO 337.1 LC (CAVING DOWN)

340.8 LC (CAVING DOWN)

378.8 LC (CAVING DOWN)

473.8 TO 479.7 LC (CAVING DOWN)

516.0 TO 518.8 LC (SQUATTING)

526.7 TO 543.3 LC (CAVING DOWN)

552.0 LC (CAVING DOWN)

580.0 TO 754.2 LC (CAVING DOWN)

667.2 LATERAL LEFT (9 TO 10)

914.2 TO 929.8 LC (CAVING DOWN)

936.6 TO 945.9 LC (CAVING DOWN)

3:52 P.M. 976+1 END CAMERA (OUT OF CABLE) CREW STARTED LOCATING
TILE UPSTREAM

I Certify that the work described in this report was incorporated into this contract unless otherwise noted

Observer's Signature

Dean Penning

Date Prepared

06/17/2020

Reviewed by

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/17/2020

PROJECT NUMBER: HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.71 DD#11
ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E. 195TH ST

SHEET NO.

4 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD#11 MAIN

UPPER 50'S TO MID 80'S

SUNNY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

4:22 P.M. PICTURE# 3812 & 4:23 P.M. PICTURE
3814 SEE PICTURE FOR DETAILS.

4:28 P.M. CREW DONE LOCATING TILE & SHOOTING TILE LOCATES.

PAUL WAS PULLING CAMERA BACK TO BEGINNING AGAIN.

4:40 P.M. PAUL HAD CAMERA STUCK IN TILE AROUND 608 FT
ON PULLBACK BUT AFTER PULLING ON CABLE PAUL DID GET
CAMERA UNSTUCK.

5:00 P.M. ADAMS CREW QUIT FOR DAY. PAUL WAS GETTING
EQUIPMENT PUT AWAY. OBSERVER SHOT CORN
AND BEAN DAMAGES FOR TILE REPAIR AND ACCESS
TO REPAIR

5:30 P.M. PAUL HAD EQUIPMENT PUT AWAY AND LEFT SITE.

5:56 P.M. PICTURE# 3815, 6:20 P.M. PICTURE# 3816, & 6:21 P.M. PICTURE# 3817
SEE PICTURES FOR DETAILS.

6:00 P.M. OBSERVER TORE DOWN GPS & LEFT SITE.

QUANTITIES

JEFF 8 HOURS

ADAM 7 1/2 HOURS

PERRY 7 1/2 HOURS

CARSON 7 1/2 HOURS

CAT 299D XHP TRACKED SKID LOADER

KOLBELCO SK 85 CS MINI EXCAVATOR

NOTE: MOST OF DAY WAS

TELEVISIONING
TO FIGURE OUT HOW
MUCH TO REPAIR

7 1/2 HOURS

7 1/2 HOURS

PAUL & CAMERA EQUIPMENT 6 1/2 HOURS

CORN DAMAGE 465, 469, 463, 462, 461, 460, 431-433, 435, 0.324 AC

BEAN DAMAGE 428, 441, 444-448, 440, 439, 436, 431, 433, 435, 438, 441, 444, 443, 442, 437, 430, 0.946 AC

I Certify that the work described in this report was incorporated into this contract unless otherwise noted

Observer's Signature

Dean Penning

Date Prepared

06/17/2020

Reviewed by

Engineer

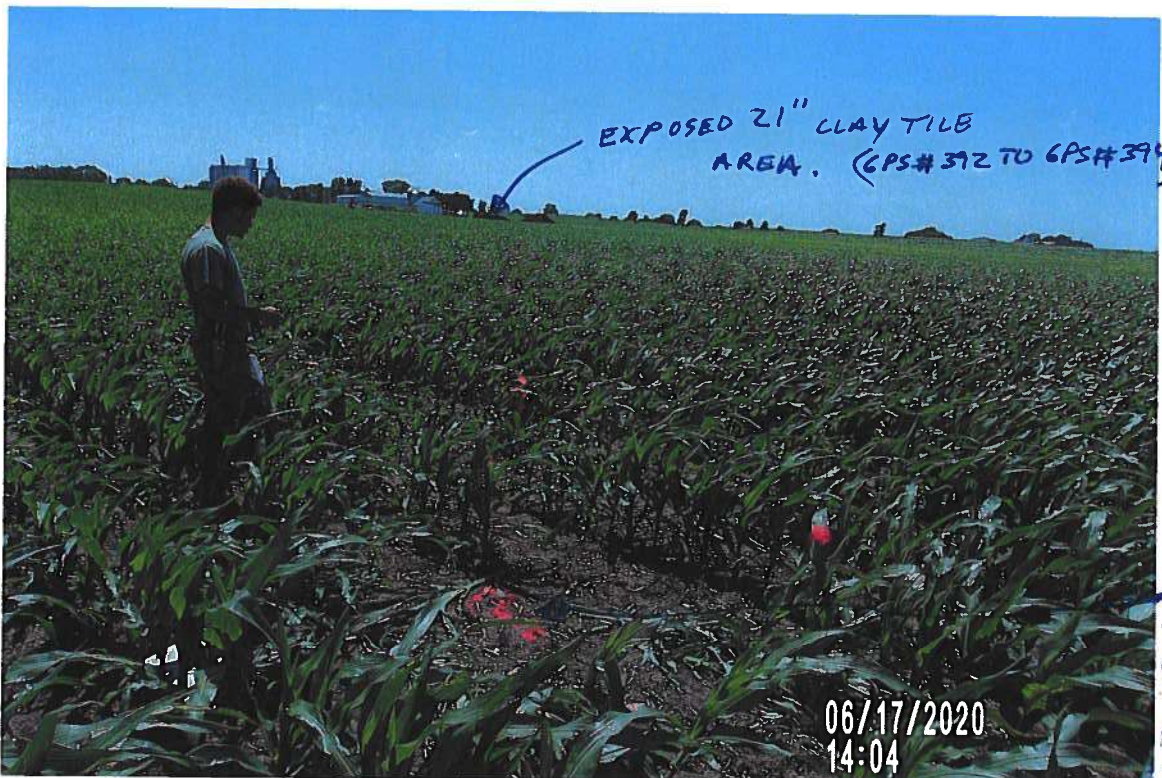
Date Reviewed

PICTURE# 3809 IS LOOKING NE SHOWING DOWN STREAM
END OF EXPOSED TILE WHERE PAUL STARTED TELEVISIONING
DOWN STREAM FROM WITH CAMERA IN TILE READY TO TELEVIEW.

GPS # 394 TOP 21" CLAY TILE
1.72' TOP TO
FL



06/17/2020
11:51



EXPOSED 21" CLAY TILE
AREA. (GPS# 392 TO GPS# 394)

GPS# 412
65 TILE LOCATE
CHUNK TILE
IN FL
CAMERA
UNABLE TO
GET PASSED -
LT

06/17/2020
14:04

PICTURE# 3810 IS LOOKING SW SHOWING TILE LOCATES FROM
GPS# 394 TILE BLOWOUT UP TO CHUNK TILE IN FLOWLINE
WITH CAMERA UNABLE TO GET PASSED @ 603.5'

PICTURE #3811 IS LOOKING SW SHOWING CAMERA TRACTOR
IN UPSTREAM SIDE TILE OF BLOWOUT AND READY
TO START TELEVISING UPSTREAM.
GPS# 392 TOP 21" CLAY TILE (4.8' DEEP)



(1.79' TOP
TO RL)



06/17/2020
14:25



06/17/2020
16:22

PICTURE #3812 IS LOOKING NE FROM END OF CABLE
TILE LOCATE GPS# 429 TOWARD TILE BLOWOUT START
OF LOCATES (976.0')

PICTURE#3814 IS LOOKING WEST TOWARDS 402 PRAIRIE AVENUE
FROM LOCATION OF END TILE LOCATE (END OF CABLE)



✓ CPS# 429 END OF TILE LOCATE
(END OF CABLE)



PICTURE#3815 IS LOOKING SOUTH AT BEAN & CORN DAMAGE
ON ACCESS LANE OUT TO TILE REPAIR

PICTURE # 3816 IS LOOKING NORTH FROM 195TH ST / PRAIRIE ST
(GRAVEL ROAD) @ CORN/BEAN DAMAGE ON ACCESS LANE OUT TO TILE
REPAIR.



PICTURE 3817 IS LOOKING NW AT BEAN / CORN DAMAGE
FROM FIELD ENTRANCE ON NORTH SIDE 195TH ST / PRAIRIE ST
(GRAVEL ROAD) TO ACCESS LANE OUT TO TILE REPAIR.

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1921 NORTH
OF E 195TH ST

SHEET NO.

1 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD#11 MAIN

MID 60'S TO MID 80'S

CLOUDY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

6:50 A.M. OBSERVER LEFT OFFICE FOR JOBSITE.

7:20 A.M. OBSERVER ON SITE AND SET GPS BASE ON HARDIN COUNTY
GPS MONUMENT #8016 IN NW QUADRANT OF EAVE & 190TH ST.

7:40 A.M. GPS BASE SET UP AND CHECKED INTO GPS #320 1/2" Ø IRON
RE ROD (0.1' DEEP) 2.8' ± WEST OF GUY ANCHOR ON WEST SIDE OF MAPLE
STREET IN LINE WITH SOUTH ^{PP} EDGE FOR ELLSWORTH AVENUE TO EAST
BOTH HORIZONTAL AND VERTICAL POSITION CHECKED GOOD.

7:45 A.M. OBSERVER AT REPAIR LOCATION TO TEMPORARY REPAIR
TILE UNTIL DISTRICT MAKES DECISION ON HOW MUCH
TO REPAIR. ADAM, JEFF, PERRY & CARSON ON SITE
WITH KOLBELCO SK85 CS MINI EXCAVATOR & CAT 299XHP
TRACKED SKIDLOADER ON SITE FOR EQUIPMENT. CREW
SAID THEY ARRIVED ON SITE ABOUT 7:00 A.M.

7:55 A.M. PICTURE #3818 SEE PICTURE FOR DETAILS.

8:09 A.M. PICTURE #3819 SEE PICTURE FOR DETAILS.

8:15 A.M. CREW WAS GRADING BOTTOM OF TRENCH
REMOVING SOME OF MUCK & PLACING ENOUGH ROCK
FOR A FIRM BOTTOM.

9:53 A.M. PICTURE #3820 SEE PICTURE FOR DETAILS.

9:30 A.M. BOB SMUCK WAS AT REPAIR LOCATION CHECKING ON
REPAIR. OBSERVER TOLD BOB THAT THERE IS A LOT OF
CRACKED AND CAVING DOWN SECTIONS OF TILE IN VIDEO
BOTH 976' UPSTREAM AND 605' ± DOWNSTREAM. AS OF NOW
WE ARE MAKING TEMPORARY REPAIRS UNTIL DISTRICT
DECIDES HOW MUCH TO REPAIR. OTHER ISSUE IS THE
CLAY TILE HAS VOIDS WHERE SOIL HAS ERODED AWAY ON OUTSIDE

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared

06/18/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER:

HARDIN DD WD # 294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

ALONG 1/4-1/4 LINE WEST
OF GAVE 1871 TO 1912 NORTH
OF E 19TH ST

SHEET NO.

2 OF 4

LOCATION:

NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE THE BLOWOUT ON DD#11 MAIN

MID 60'S TO MID 80'S

CLOUDY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

BENDS OF TILE DUE TO WIDE JOINTS. THIS
CAUSES TILE TO CAVE DOWN IN NUMEROUS SPOTS TO WEAKEN
TILE DUE TO LACK OF SIDE SUPPORT. PROBABLY EVERY BEND
ON OUTSIDE EDGE COULD BE DOING THIS.

9:45 A.M. CREW IS PREPPING REST OF TRENCH BY REMOVING MUCK
AND PLACING ENOUGH ROCK TO GET A FIRM BOTTOM FOR
TILE TO SIT IN

10:50 A.M. OBSERVER CHECKED GRADE ON DOWNSTREAM END
OF 1ST FULL SECTION DOWNSTREAM INSTALLED

GPS# 452 TOP 24" HDPE DW NONPERF TILE 1138.18

PLAN FL = $1136.22 - (19.02 \times .0079) = 1136.07 - 2.14$

1136.04' FL 24" TILE

.03' LOW PER
GPS
WITHIN REASON

10:58 A.M. PICTURE# 3822 & PICTURE# 3823 SEE PICTURE FOR DETAILS

11:32 A.M. PICTURE# 3824 & 11:33 A.M. PICTURE# 3825 SEE PICTURE FOR DETAILS.

11:25 A.M. OBSERVER CHECKED GRADE ON UPSTREAM END OF FULL
SECTION INSTALLED.

GPS# 453 TOP 24" HDPE DW NONPERF TILE 1138.15

PLAN FL = $1136.22 - (24.12 \times .0079) = 1136.03 - 2.14$

.02' LOW PER GPS
WITHIN REASON

1138.01

11:30 A.M. CHECKED TOP OF SMALL SECTION BY PLANING TOP OF
FULL SECTION. CREW TAMPED A LOT OF BEDDING ROCK
UNDER BUTT CONNECTION TO MAKE SURE IT STAYED
IN PLACE & WRAPPED A 2.0' X 5.0' PIECE OF FABRIC
OVER BUTT CONNECTION JOINT FOR TEMPORARY REPAIR.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Penning

Date Prepared:

06/18/2020

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/18/2020

PROJECT NUMBER: HARDIN DDWD #294

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD: 6756.7/ DD#11

SHEET NO.

3 OF 4

LOCATION: NW 1/4 NE 1/4 & W 1/2 NE 1/4 E 1/4 23-88-22
INVESTIGATE TILE BLOWOUT ON DD#11 MAIN

MID 60'S TO MID 80'S

CLOUDY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

11:44 A.M. PICTURE# 3826 & 11:51 A.M. PICTURE# 3827 SEE PICTURE FOR DETAILS.

11:50 A.M. RESHOT A COUPLE SHOTS OUT FURTHER FOR CROP DAMAGES.

12:30 P.M. ADAM AND OBSERVER HEADED TO 6845 DD31 TO CHECK ON COUPLE SINKHOLES JACK RUNGE STOPPED BY AND TALKED TO ADAM ABOUT FROM PREVIOUS REPAIR. CREW CONTINUED BACKFILLING TRENCH AND DRESSING UP REPAIR AREA.

1:15 P.M. ADAM HEADED BACK TO REPAIR. OBSERVER CHECKED ON DD26 SURFACE DRAIN REPAIR.

1:30 P.M. OBSERVER BACK ON SITE WITH CREW JUST FINISHING UP DRESSING UP REPAIR AREA.

1:51 P.M. PICTURE# 3842, 1:52 P.M. PICTURE# 3843, 1:53 P.M. PICTURE# 3844 & PICTURE# 3845, 1:58 P.M. PICTURE# 3846.

2:00 P.M. CREW HAD EQUIPMENT LOADED UP WITH OBSERVER AND CREW LEAVING SITE.

NOTE IF NO PERMANENT REPAIRS DONE WILL NEED TO REMOVE CHUNK OF CLAY IN FLOW LINE @ GPS# 412 WHEN CROPS ARE OUT.

QUANTITIES

ADAM 7-12:30 6 1/4 HOURS

JEFF 7-2 7 HOURS

PERRY 7-2 7 HOURS

CARSON 7-2 7 HOURS

KOLBELCO SK85CS MINI EXCAVATOR

CAT 299D XHP TRACKED SKIDLOADER

TEMPORARY REPAIR DUE TO CONDITION OF TILE 24" DW HDPE NONPERF TILE 41.8 LF

(NEED TO FIGURE OUT HOW MUCH TO REPLACE) 3-2.0' X 5.0' ENGINEER FABRIC

FABRIC TO FILL BELL JOINT

2.0' X 2.0' ENGINEERING FABRIC

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature

Dean Penning

Date Prepared

06/18/2020

Reviewed by

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

06/16/2020

PROJECT NUMBER:

HARDEN DDW#294

DAYS OF WEEK:

S M W T F S

COUNTY, ROUTE, ROAD:

6756.1/00#11

SHEET NO.

4 OF 4

LOCATION:

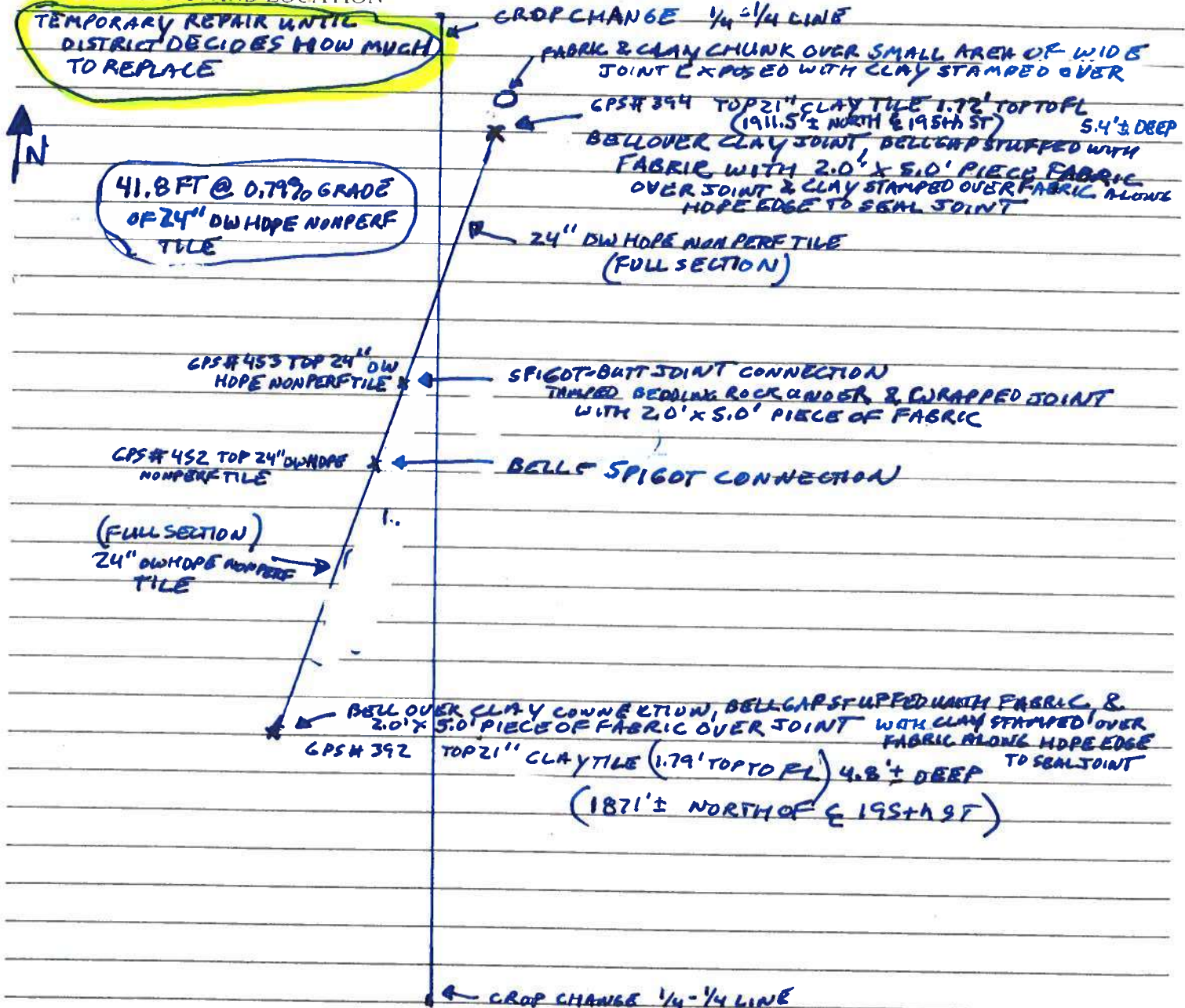
ALONG 1/4 1/4 LINE WEST
OF GAVE 1871'± TO 1916'±
NORTH OF E 195TH ST
NW 1/4 NE 1/4 & W 1/2 NE 1/4 NE 1/4 23-8822

MID 60'S TO MID 80'S

CLOUDY & WINDY

JOB# 6756 BUCKEYE SURVEY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION



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Observer's Signature:

Dean Pomy

Date Prepared:

06/16/2020

Reviewed by:

Engineer

Date Reviewed

PICTURE# 3818 SHOWING CREW DRILL HOLES IN
 BOTTOM OF 24" DW HOPE NONPERF TILE BEFORE
 INSTALLED TO PREVENT TILE FROM FLOATING UP,



06/18/2020
 07:55

4.8'± DEEP
 GPS# 392 TOP 21" CLAY TILE (1.7' TOP TO FL)



06/18/2020
 08:09

(TEMPORARY REPAIR)
 PICTURE# 3819

GPS# 394 TILE TOP 21" CLAY (1.72' TOP TO FL)
 5.4'± DEEP

IS LOOKING SOUTH UPSTREAM
 OUT OF BOTTOM OF TRENCH & READY TO INSTALL 24" HOPE DW NONPERF TILE. BOTTOM IS SOFT IN AREAS AND WILL USE SOME ROCK TO FIRM UP ON INSTALLATION WITH MUCK CLEANED

(TEMPORARY REPAIR)
 PICTURE # 3820 IS LOOKING NE SHOWING FIRST

FULL SECTION OF 24" DW HDPE NONPERF TILE IN PLACE
 WITH BELL END ON UPSTREAM END WITH JUST ENOUGH ROCK
 TO GET FIRM BOTTOM OF TRENCH. HDPE TILE WAS SET SO

INSIDE
 BOTTOM
 OF BELL
 IS RESTING
 ON BOTTOM
 OF CLAY
 TILE
 AT TIE IN



GPS # 392 TOP 21" CLAY TILE (1.74' TO TOP FL)
 4.8' ± DEEP

GPS # 392



GPS # 452
 TOP 24" DW
 HDPE
 NONPERF
 TILE
 2.14' TO TOP FL

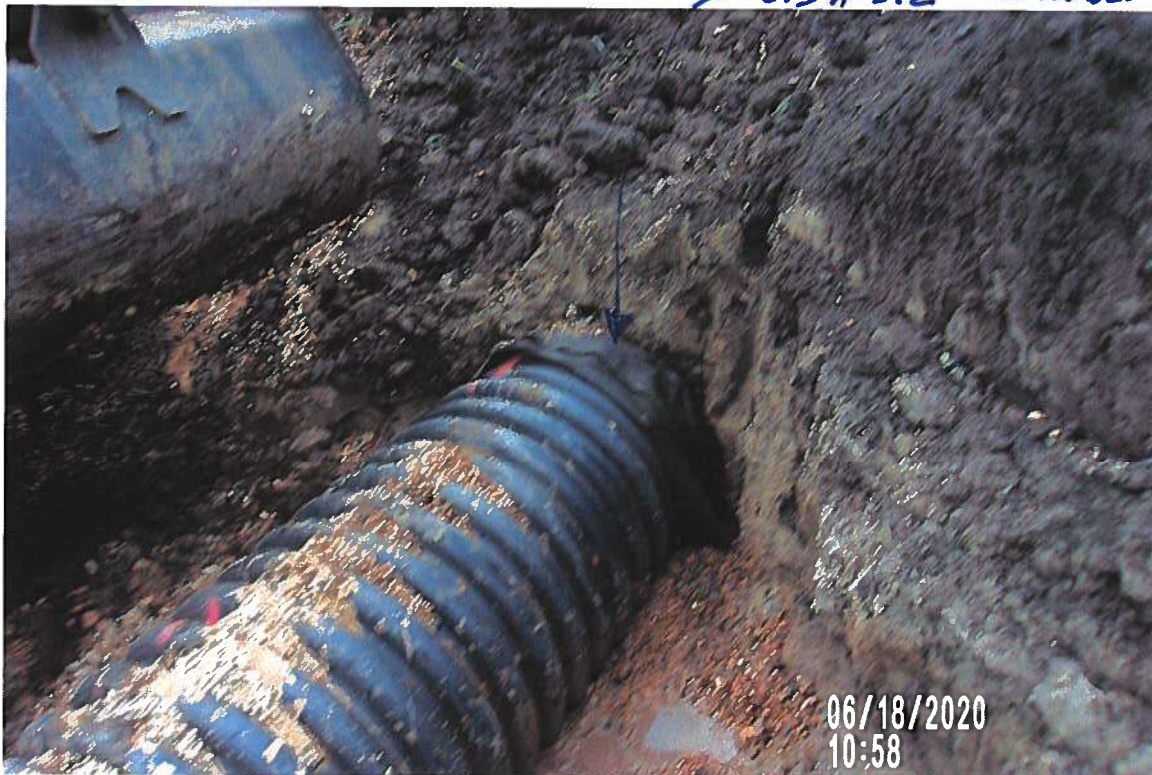


PICTURE # 3821

IS LOOKING SW AT FULL SECTION INSTALLED FROM
 DOWNSTREAM END (BELL END AT CLAY TILE TIE IN) WITH BELL END OF SMALL
 SECTION OF 24" DW HDPE NONPERF TILE INSTALLED ON SPIGOT END OF UPSTREAM SECTION
 & BUTT CONNECTION ON SPIGOT END FROM DOWNSTREAM FULL SECTION.

GPS # 453 TOP 24" DW HDPE NONPERF
 TILE 2.14' TO TOP FL

PICTURE #. 3822 IS LOOKING SE SHOWING BELL END OF 24" DW
 HDPE NONPERF TILE AT UPSTREAM TIE IN CONNECTION
 WITH FABRIC STUFF BETWEEN INSIDE BELL & OUTSIDE OF CLAY
 GPS # 392 WITH BEDDING ROCK



TAMPED
 IN UNDER
 HDPE TILE
 AND 2.0'
 X 5.0' PIECE
 ENGINEERING
 FABRIC OVER
 JOINT



GPS # 392



PICTURE # 3823 IS LOOKING EAST AT ENGINEER FABRIC STUFFED
 IN JOINT & OVER JOINT. CREW STOMPED IN CLAY AROUND
 HDPE EDGE BEFORE BACK FILLING SOIL IN TRENCH. BEDDING ROCK
 TAMPED IN UNDER TILE TO KEEP IT IN PLACE.

PICTURE# 3824 IS LOOKING SW SHOWING CREW BACKFILLING
SOIL AROUND NEW TILE WITH CREW TAMPING IN SOIL
AROUND HAUNCH OF TILE. SOIL IS GETTING LITTLE MURKY DUE
TO WATER AROUND TILE BUT WITH FIRM BOTTOM UNDER TILE;



N
↓



BUTT JOINT
CONNECTION
WRAPPED
WITH FABRIC

GPS#453

GPS#452

06/18/2020
11:33

PICTURE#3825 IS LOOKING NE SHOWING SMALL SECTION 24" Ø
HDPE NONPERF TILE WITH BELL-SPIGOT CONNECTION & SPIGOT
BUTT CONNECTION ON DOWN STREAM END WITH JOINT WRAPPED WITH
FABRIC & BEDDING ROCK TAMPED UNDER CONNECTION

PICTURE # 3826 SHOWING A PIECE OF FABRIC WITH CLAY TILE PIECES OVER A EXPOSED TILE JOINT THAT IS WIDER THAN NORMAL JOINT FOR NEXT JOINT NORTH OF TIE IN



CONNECTION,
CREW STAMPED
CLAY OVER
TOO.



BEDDING ROCK
TAMPED UNDER
HDP TILE
TO KEEP BOTTOM
OF INSIDE OF
BELL TIGHT
UP TO BOTTOM
OF CLAY TILE

PICTURE # 3827 AS LOOKING SW SHOWING LOOSE SOIL BEING BACKFILLED AROUND TILE. CREW STUFFED FABRIC IN GAP BETWEEN INSIDE BELL AND TOP OF CLAY. CREW PLACED 2.0' x 5.0' PIECE OF ENGINEERING FABRIC OVER JOINT AND STAMPED CLAY AROUND EDGE OF TILE BEFORE BACKFILLING

GPS # 394 DOWNSTREAM END TIE IN

PICTURE # 3842 IS LOOKING SOUTH SHOWING BEAN DAMAGE
IN REPAIR WITH AREA CLEANED UP.



↓ N



PICTURE # 3843 IS LOOKING SOUTH SHOWING CORN DAMAGE
IN REPAIR AREA WITH AREA CLEANED UP

PICTURE# 3844 IS LOOKING SOUTH AT BEAN/CORN
DAMAGE TO ACCESS LANE WITH AREA CLEANED
UP



PICTURE# 3845 IS LOOKING SE SHOWING BEAN DAMAGE
TO ACCESS LANE WITH AREA CLEANED UP

PICTURE # 3846 IS LOOKING SOUTH AT BEAN
DAMAGE TO ACCESS LANE WITH AREA
CLEANED UP.



Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – 6756.7

Date – 170620

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVE, ACKLEY, IOWA

50601,

641-485-3925

1 Drain / Sewer Survey

1.1 Survey Header

1.1.1	Surveyed by (Operator)	PAUL
1.1.2	Contract no.	
1.1.3	Job no.	6756.7
1.1.4	Catchment (Drainage area)	DD 11
1.1.5	Division	MAIN
1.1.6	District	
1.1.7	Pipeline length ref	1000
1.1.8	Date	170620
1.1.9	Time	11:43
1.1.10	Location	HOLE 394
1.1.11	Start manhole no.	
1.1.12	Start depth	m
1.1.13	Start cover level	
1.1.14	Start invert level	
1.1.15	Finish manhole no.	
1.1.16	Finish depth	m
1.1.17	Finish cover level	
1.1.18	Finish invert level	
1.1.19	Use of Drain	
1.1.20	Direction	D
1.1.21	Size 1 (diameter/height)	21mm
1.1.22	Size 2 (width)	mm
1.1.23	Shape	O
1.1.24	Material	VC
1.1.25	Lining	
1.1.26	Pipe length	1000m
1.1.27	Total length	
1.1.28	Year laid	
1.1.29	Video cassette number	
1.1.30	Comments: General	
1.1.31	Purpose	
1.1.32	Sewer category	
1.1.33	Pre-cleaning	
1.1.34	Weather	
1.1.35	Location code	
1.1.36	Further location details	

1.3 Observations

Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
0:03:54	13.4	YES	CM	2020_06_17- 11_56_45_767.jpg 		12	11			
0:04:50	21.0		CL	2020_06_17- 11_58_15_486.jpg 		12				TOPCRACKED BADLY
0:05:30	24.8		MC	2020_06_17- 12_00_19_434.jpg 						VCP TO CMP PIPE CHANGE
0:06:46	42.4		MC	2020_06_17- 12_02_13_273.jpg 						CMP TO VCP PIPE CHANGE
0:11:03	49.9	YES	B	2020_06_17- 12_06_51_666.jpg 		12	11			MULTIPLE CRACKS ALL AROUND AS FAR AS CAMERA CAN SEE
0:14:24	108.4	YES	B	2020_06_17- 12_12_01_891.jpg 		12	11			LOTS OF BROKEN PIPE AS FAR AS VISIBLE
0:15:06	118.4		B	2020_06_17- 12_13_30_307.jpg 		12	11			BROKEN AN BUCKLING DOWN
0:19:23	194.2		B	2020_06_17- 12_18_17_103.jpg 		06	09			TILE HAS BROKEN OFF AND INTRUDING INTO PIPE.
0:24:18	252.0		B	2020_06_17- 12_23_57_456.jpg 		12	12			BROKEN AT ALL CLOCK POSITIONS AND SQUATTING DOWN
0:31:32	335.3		B	2020_06_17- 12_32_05_562.jpg		11	12			MULTIPLE BREAKS ALL

1.4 Photographs

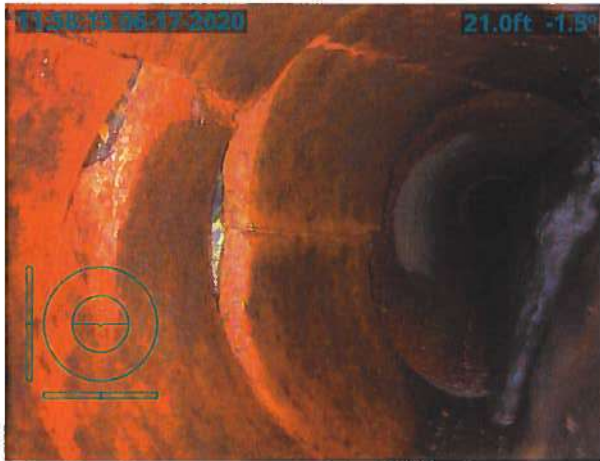
CM 2020_06_17-11_56_45_767.jpg



MC 2020_06_17-12_02_13_273.jpg



CL 2020_06_17-11_58_15_486.jpg



B 2020_06_17-12_06_51_666.jpg



MC 2020_06_17-12_00_19_434.jpg



B 2020_06_17-12_12_01_891.jpg



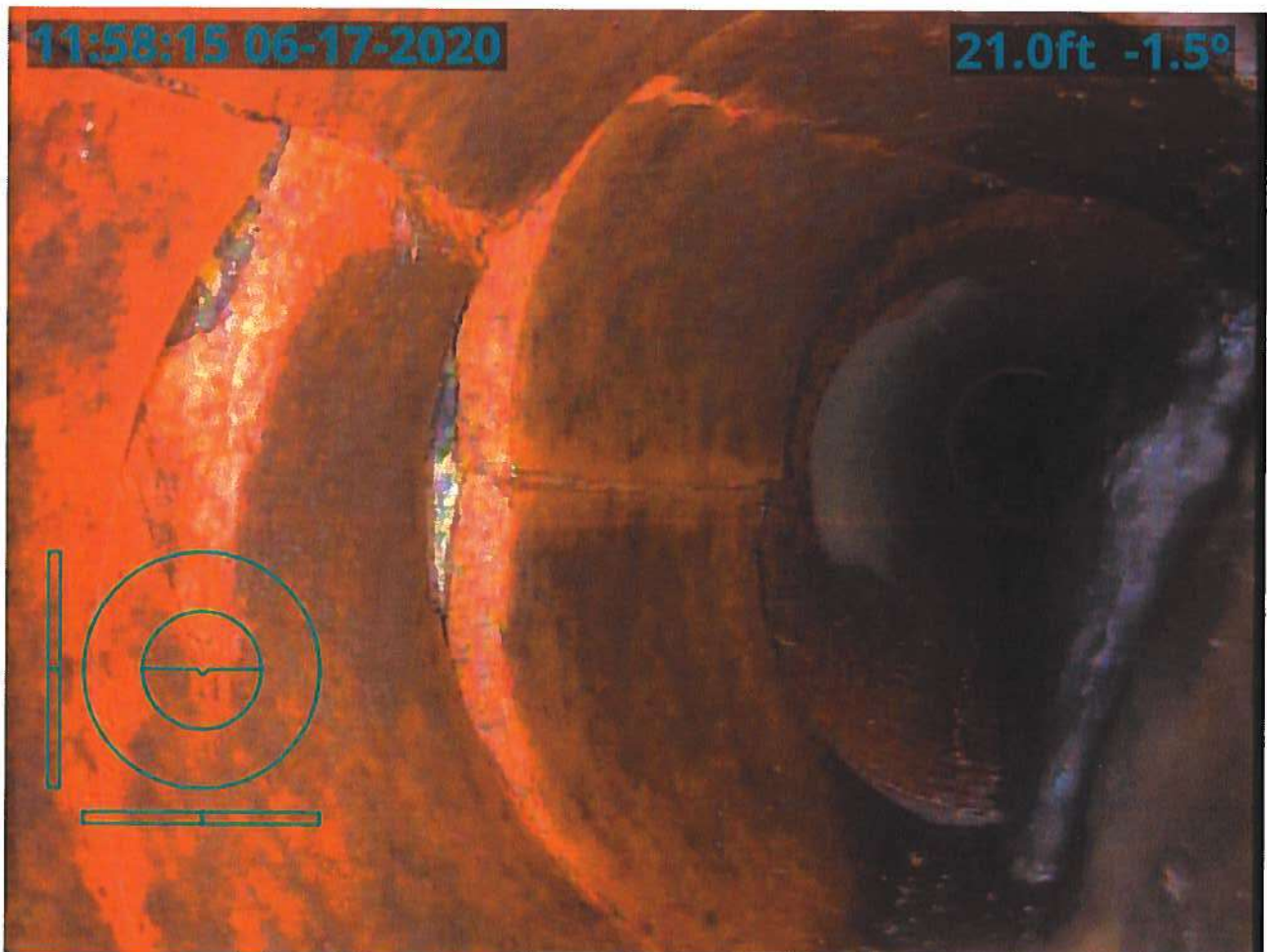
11:56:45 06-17-2020

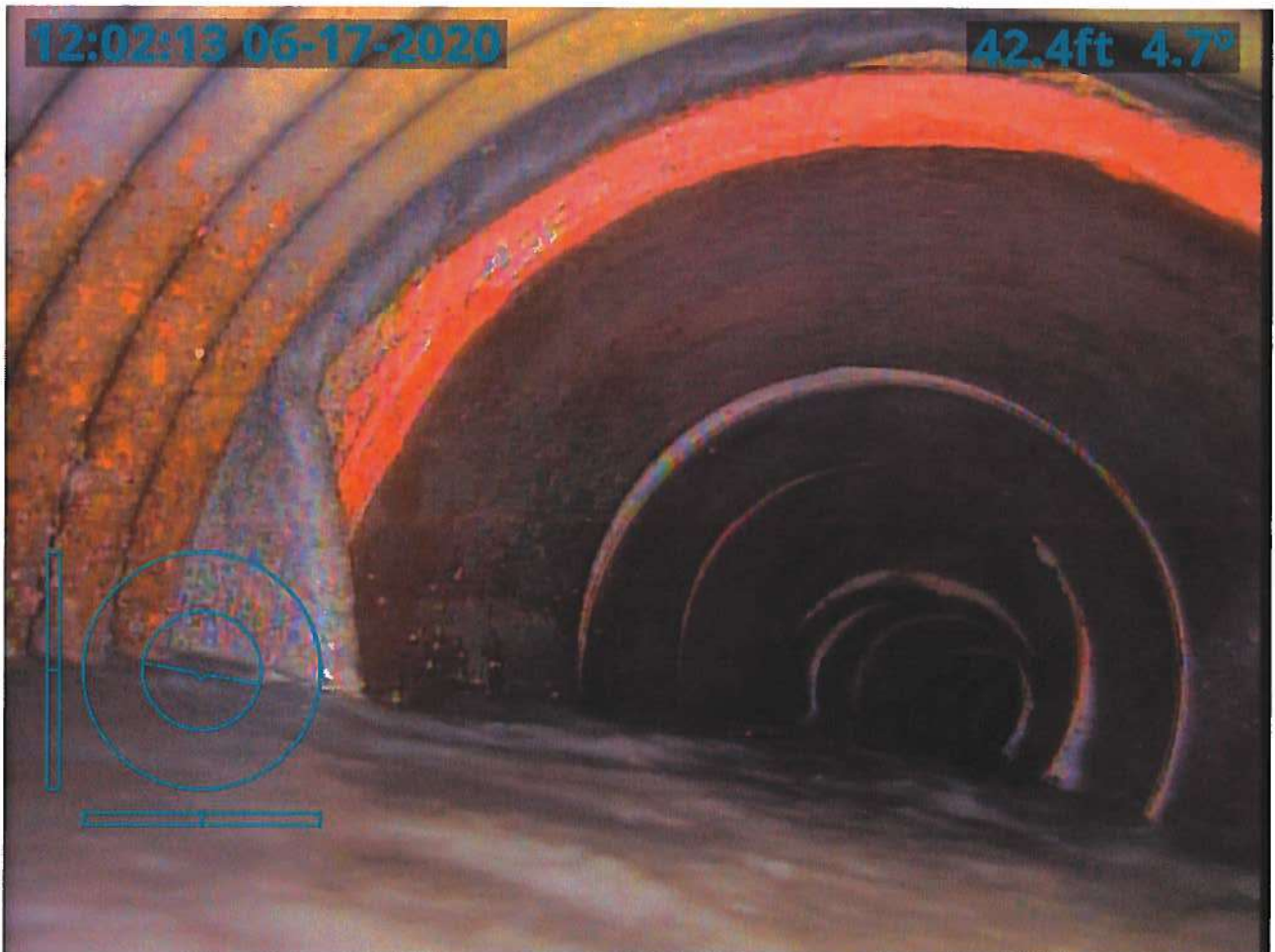
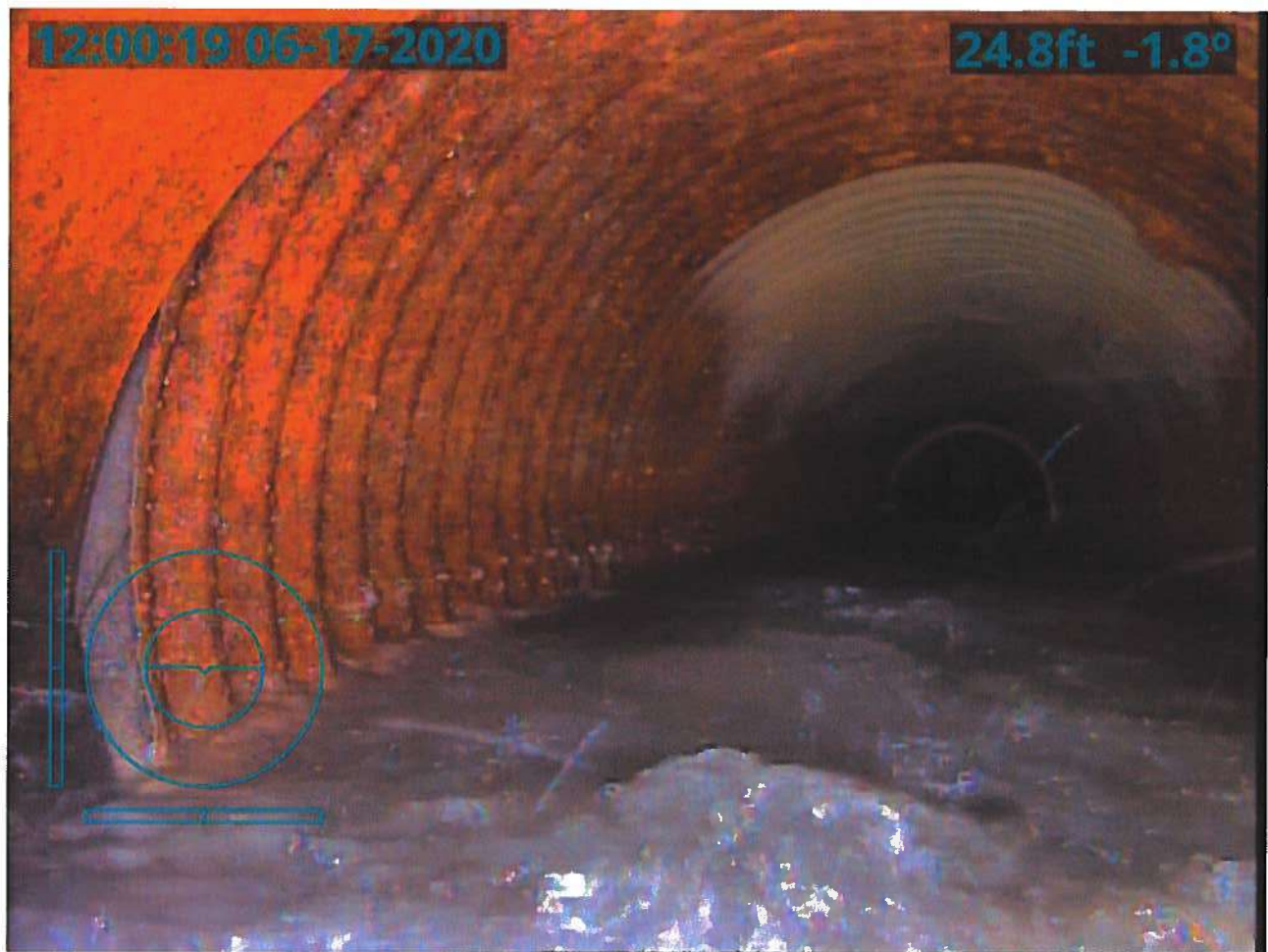
13.4ft -2.4°



11:58:15 06-17-2020

21.0ft -1.5°





12:06:51 06-17-2020

49.9ft -0.8°



12:12:01 06-17-2020

108.4ft -2.0°



12:13:30 06-17-2020

118.4ft -0.6°



12:18:16 06-17-2020

194.2ft -4.1°



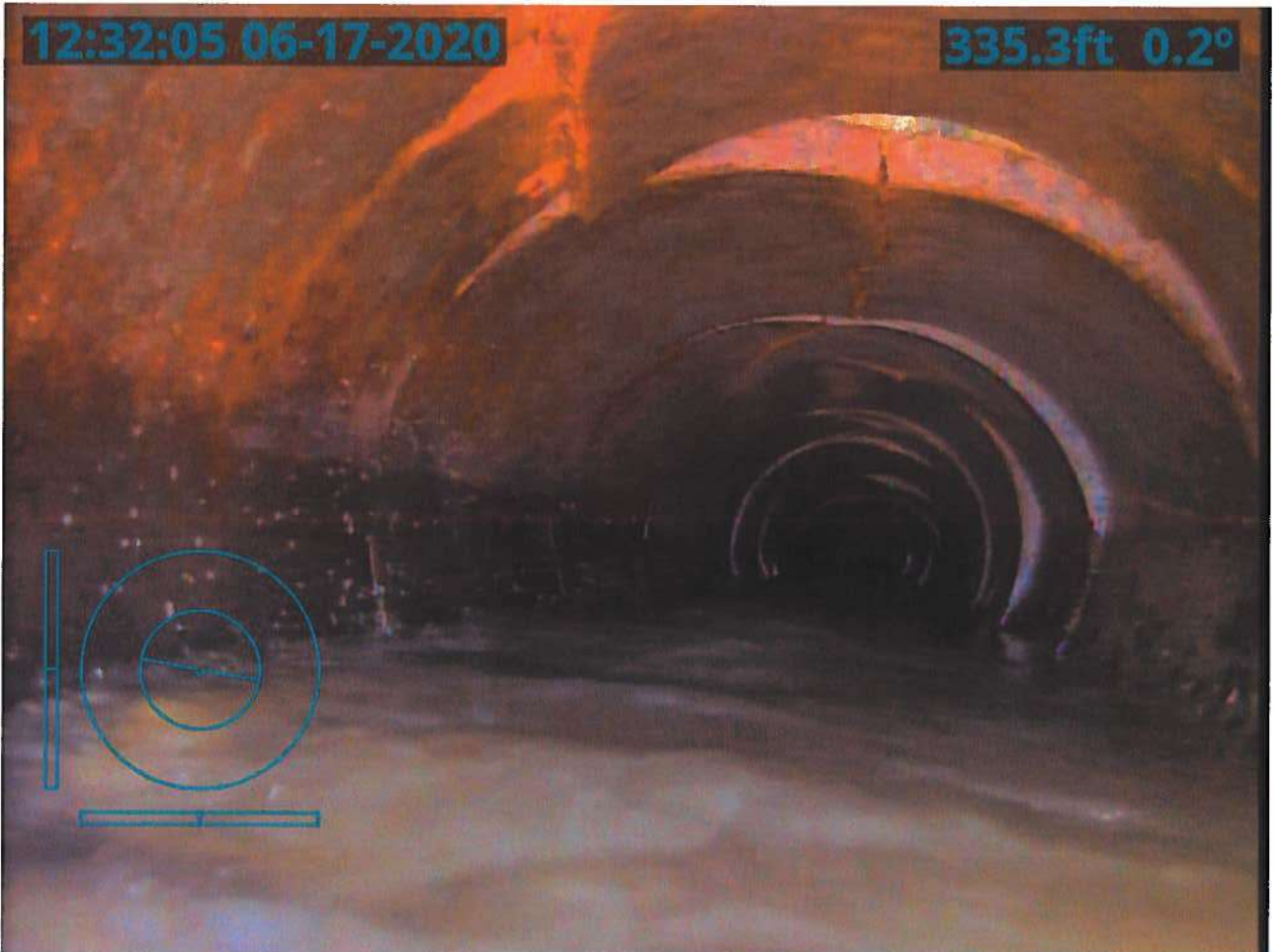
12:23:57 06-17-2020

252.0ft -0.3°



12:32:05 06-17-2020

335.3ft 0.2°



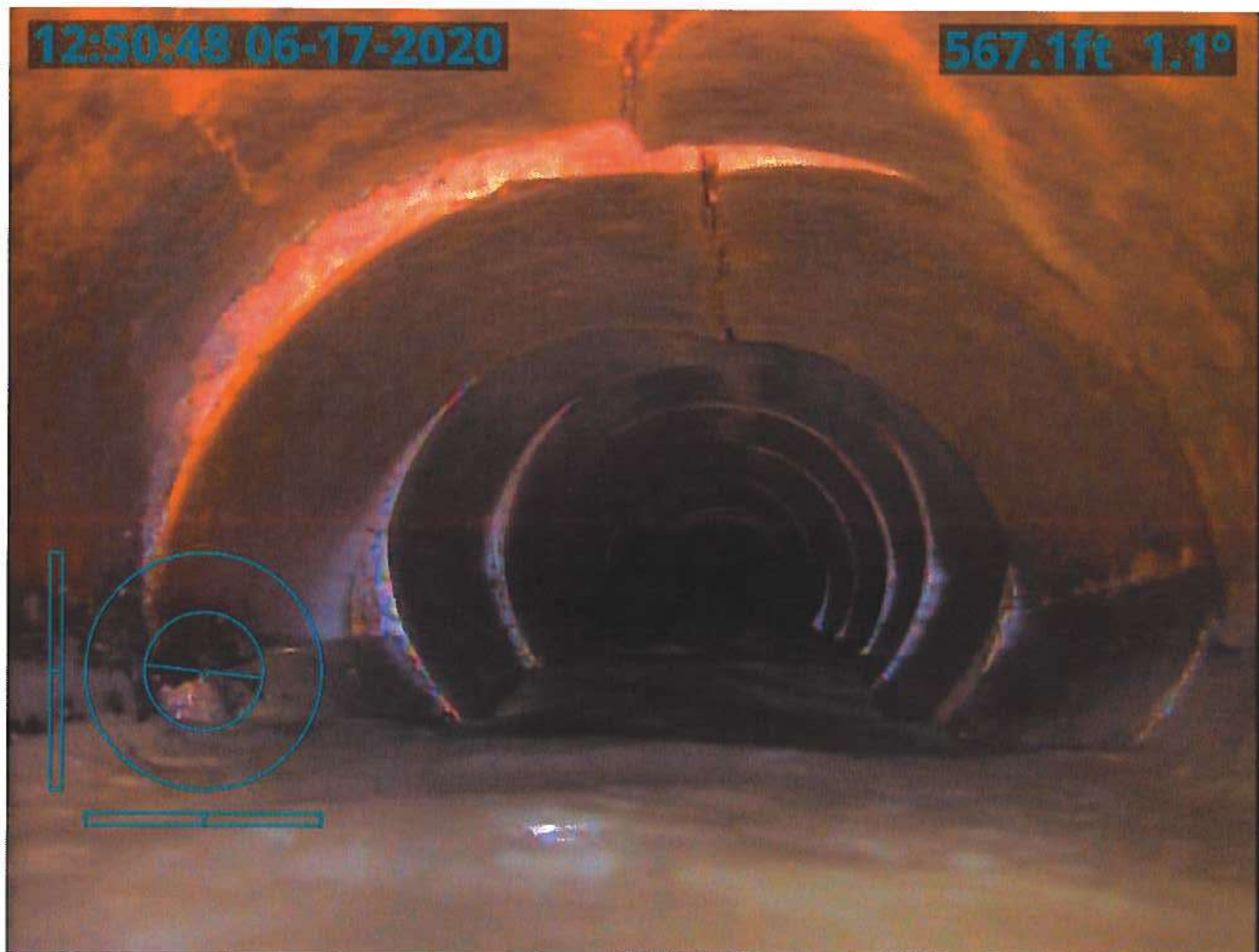
12:49:10 06-17-2020

562.2ft -3.1°



12:50:48 06-17-2020

567.1ft 1.1°



Inspection Report

Produced on behalf of – HARDIN CO

Site location – ,

Survey reference – W/O 295

Date – 170620

WILLIAMS UNDERGROUND SVCS.

102 INDUSTRIAL DRIVE, ACKLEY, IOWA

50601,

641-485-3925

Contents

1	Drain / Sewer Survey	Error! Bookmark not defined.
1.1	Site information	Error! Bookmark not defined.
1.2	Drain / Sewer Details	Error! Bookmark not defined.
1.3	Survey Details	Error! Bookmark not defined.
1.4	Drain / Sewer Diagram	Error! Bookmark not defined.
1.5	Observations	Error! Bookmark not defined.
1.6	Photographs.....	Error! Bookmark not defined.
2	Drain / Sewer Survey	Error! Bookmark not defined.
2.1	Site information	Error! Bookmark not defined.
2.2	Drain / Sewer Details	Error! Bookmark not defined.
2.3	Survey Details	Error! Bookmark not defined.
2.4	Drain / Sewer Diagram	Error! Bookmark not defined.
2.5	Observations	Error! Bookmark not defined.
2.6	Photographs.....	Error! Bookmark not defined.

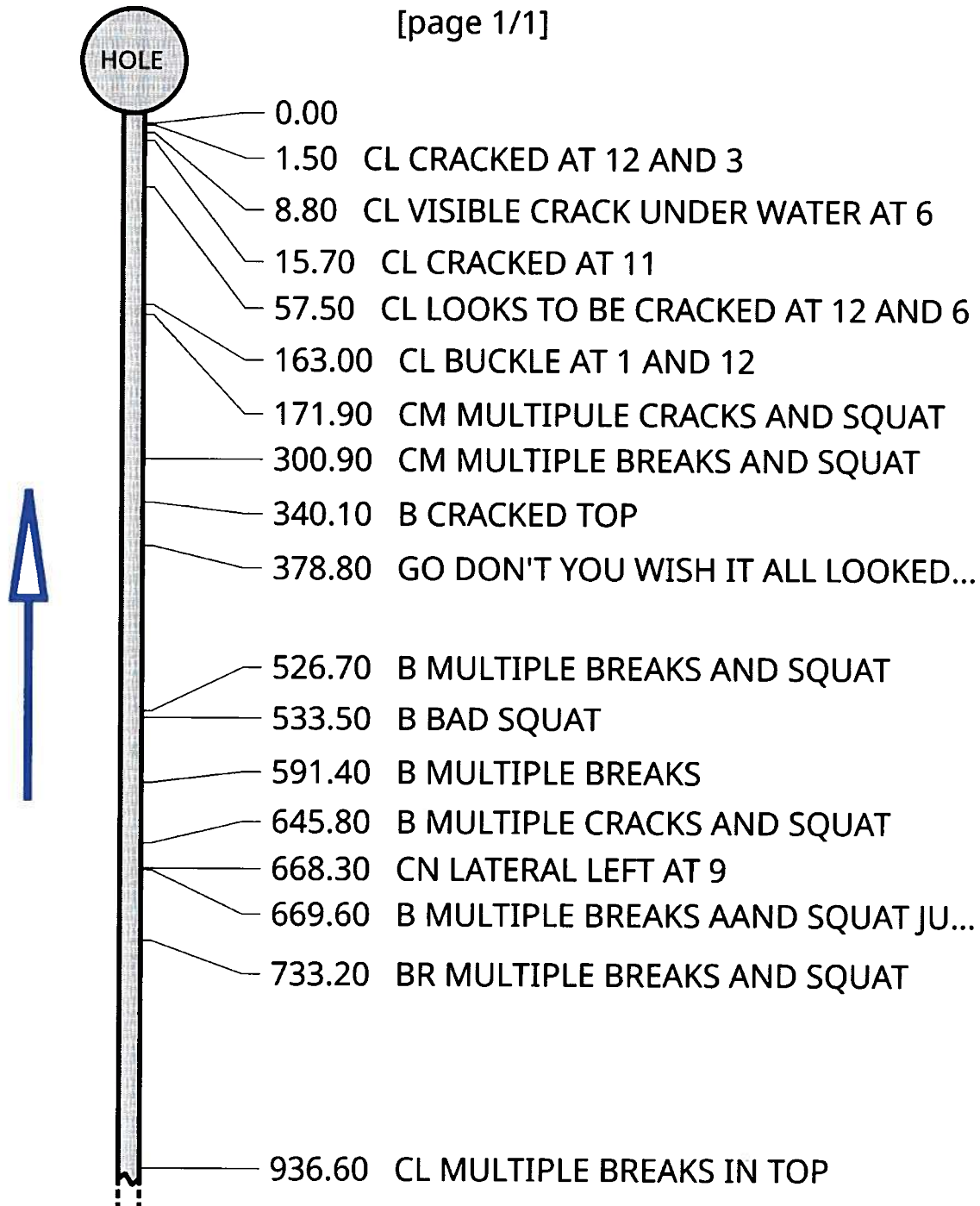
1 Drain / Sewer Survey

1.1 Survey Header

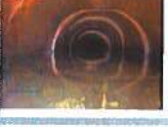
1.1.1	Surveyed by (Operator)	PAUL
1.1.2	Contract no.	6756.7
1.1.3	Job no.	W/O 295
1.1.4	Catchment (Drainage area)	DD 11
1.1.5	Division	
1.1.6	District	
1.1.7	Pipeline length ref	1000
1.1.8	Date	170620
1.1.9	Time	14:23
1.1.10	Location	
1.1.11	Start manhole no.	HOLE 392
1.1.12	Start depth	m
1.1.13	Start cover level	
1.1.14	Start invert level	
1.1.15	Finish manhole no.	
1.1.16	Finish depth	m
1.1.17	Finish cover level	
1.1.18	Finish invert level	
1.1.19	Use of Drain	W
1.1.20	Direction	U
1.1.21	Size 1 (diameter/height)	21mm
1.1.22	Size 2 (width)	mm
1.1.23	Shape	C
1.1.24	Material	VC
1.1.25	Lining	
1.1.26	Pipe length	1000m
1.1.27	Total length	
1.1.28	Year laid	
1.1.29	Video cassette number	
1.1.30	Comments: General	
1.1.31	Purpose	F
1.1.32	Sewer category	Z
1.1.33	Pre-cleaning	
1.1.34	Weather	
1.1.35	Location code	
1.1.36	Further location details	

1.2 Diagram

[page 1/1]



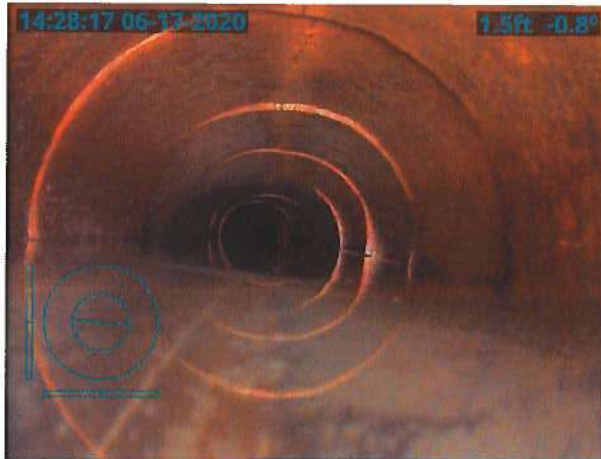
1.3 Observations

Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
0:01:04	1.5		CL	2020_06_17- 14_28_17_621.jpg 		12				CRACKED AT 12 AND 3
0:02:19	8.8		CL	2020_06_17- 14_30_17_404.jpg 		06				VISIBLE CRACK UNDER WATER AT 6
0:03:15	15.7		CL	2020_06_17- 14_31_45_663.jpg 		11				CRACKED AT 11
0:07:08	57.5		CL	2020_06_17- 14_36_00_095.jpg 		00				LOOKS TO BE CRACKED AT 12 AND 6
0:13:54	163.0		CL	2020_06_17- 14_43_22_128.jpg 		01				BUCKLE AT 1 AND 12
0:14:28	171.9		CM	2020_06_17- 14_44_27_712.jpg 		12	03			MULTIPLE CRACKS AND SQUAT
0:24:08	300.9		CM	2020_06_17- 14_54_52_873.jpg 		12	11			MULTIPLE BREAKS AND SQUAT
0:26:54	340.1		B	2020_06_17- 14_58_24_390.jpg 		12	12			CRACKED TOP
0:28:53	378.8		GO	2020_06_17- 15_01_02_821.jpg 						DON'T YOU WISH IT ALL LOOKED LIKE THIS?
0:40:16	526.7		B	2020_06_17- 15_13_26_542.jpg		10	06			MULTIPLE BREAKS AND

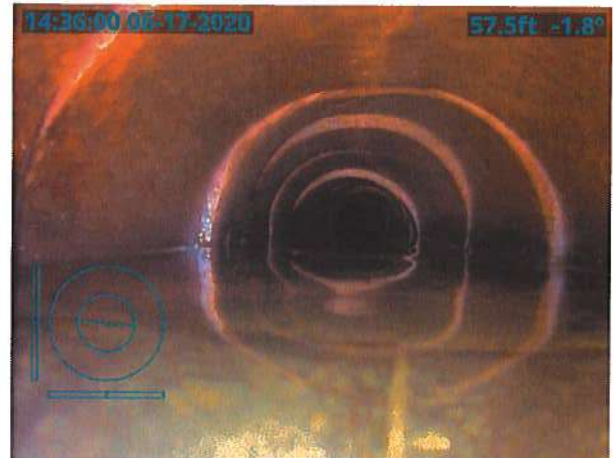
Video Ref	Dist (ft)	Cont Defect	Code	Photo Ref	Diameter/ Dimension	Clock		Intrusion		Remarks
						At	To	%	mm	
										SQUAT
0:41:11	533.5		B	2020_06_17-15_15_35_850.jpg 		10	06			BAD SQUAT
0:49:35	591.4		B	2020_06_17-15_24_28_350.jpg 		12	11			MULTIPLE BREAKS
0:53:26	645.8		B	2020_06_17-15_28_43_526.jpg 		06	05			MULTIPLE CRACKS AND SQUAT
0:55:10	668.3		CN	2020_06_17-15_31_02_162.jpg 	6?	09				LATERAL LEFT AT 9
0:55:50	669.6		B	2020_06_17-15_33_04_893.jpg 		12	11			MULTIPLE BREAKS AAND SQUAT JUST UPSTREAM OF LATERAL LEFT
0:59:39	733.2		BR	2020_06_17-15_37_42_522.jpg 	9	09	03			MULTIPLE BREAKS AND SQUAT
1:10:12	936.6		CL	2020_06_17-15_49_14_555.jpg 		01				MULTIPLE BREAKS IN TOP

1.4 Photographs

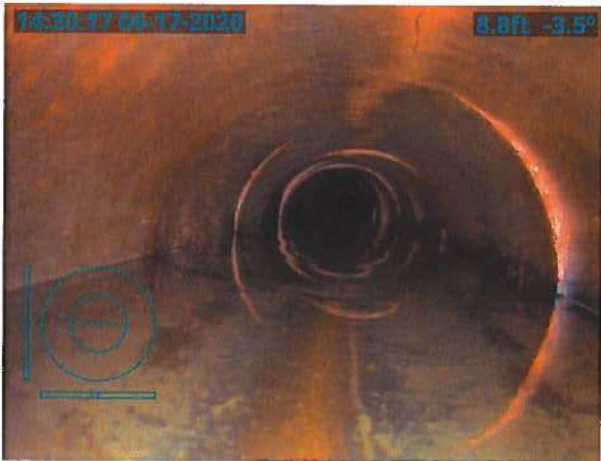
CL 2020_06_17-14_28_17_621.jpg



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CL 2020_06_17-14_30_17_404.jpg



CL 2020_06_17-14_43_22_128.jpg



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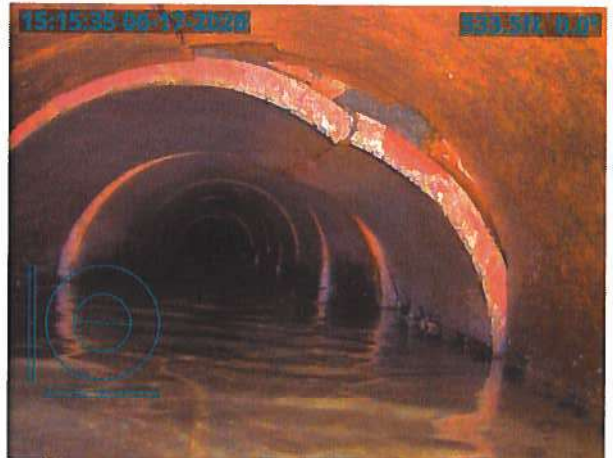
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B 2020_06_17-14_58_24_390.jpg



B 2020_06_17-15_15_35_850.jpg



GO 2020_06_17-15_01_02_821.jpg



B 2020_06_17-15_24_28_350.jpg



B 2020_06_17-15_28_43_526.jpg



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CN 2020_06_17-15_31_02_162.jpg



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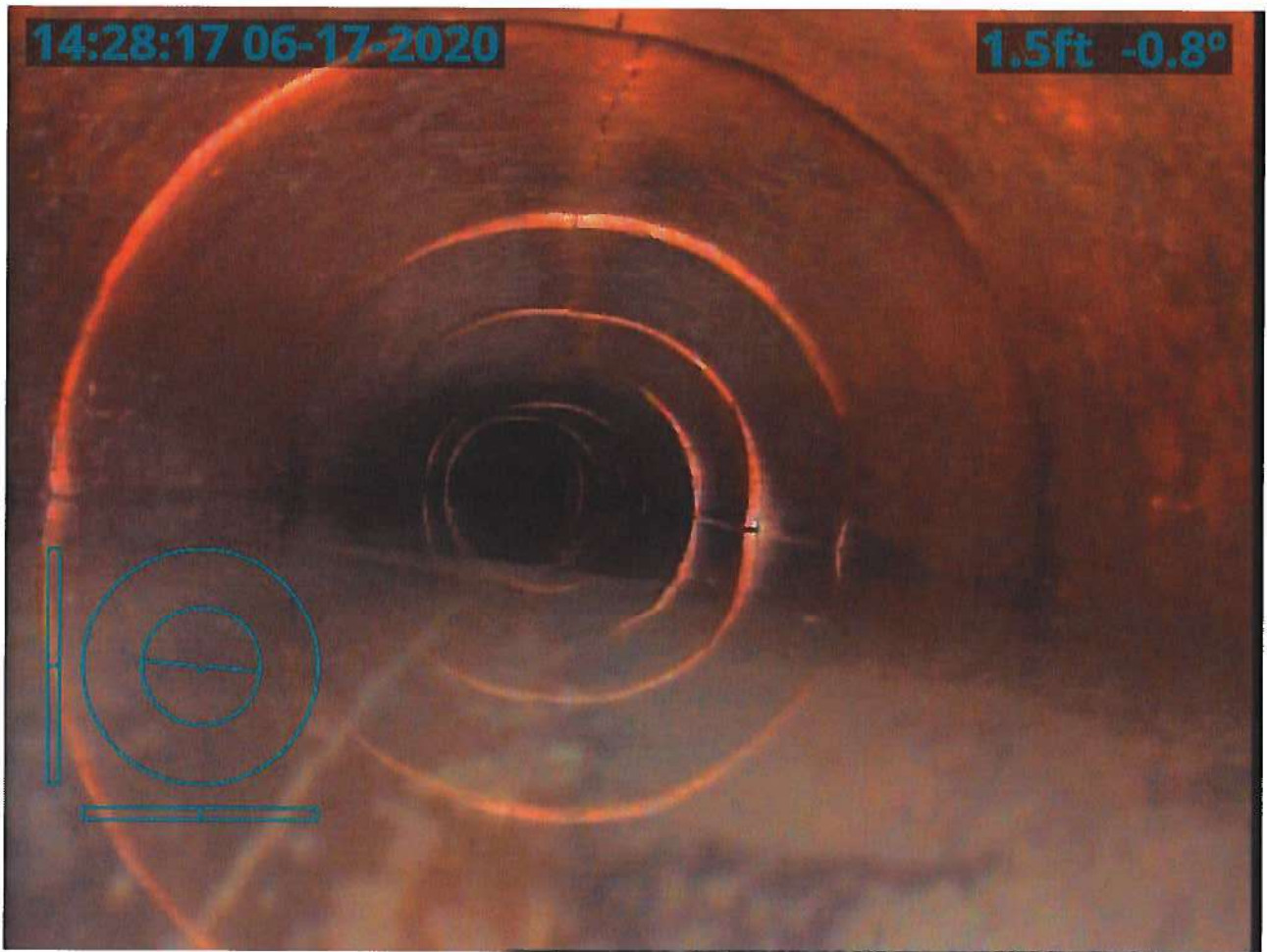


B 2020_06_17-15_33_04_893.jpg



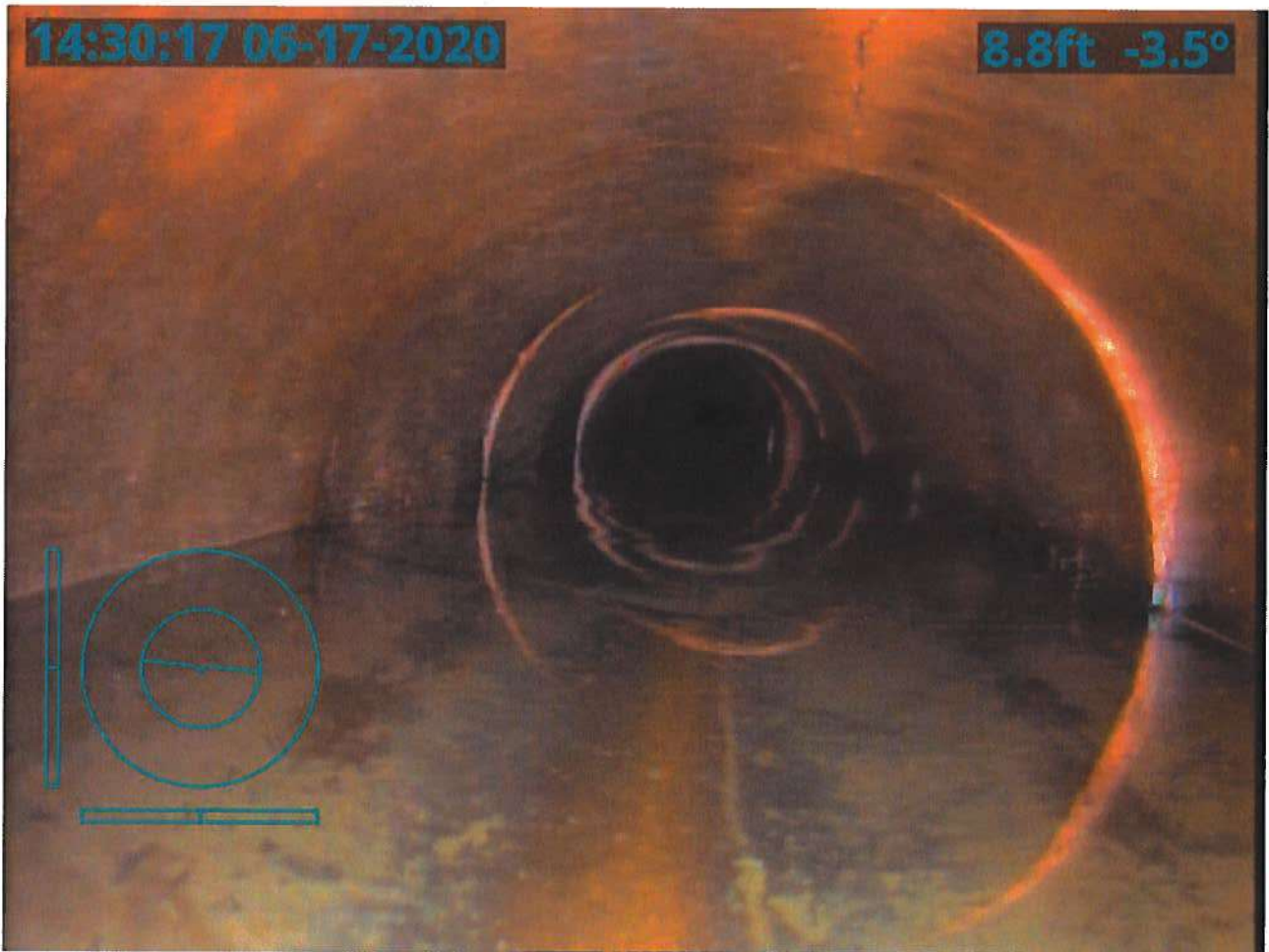
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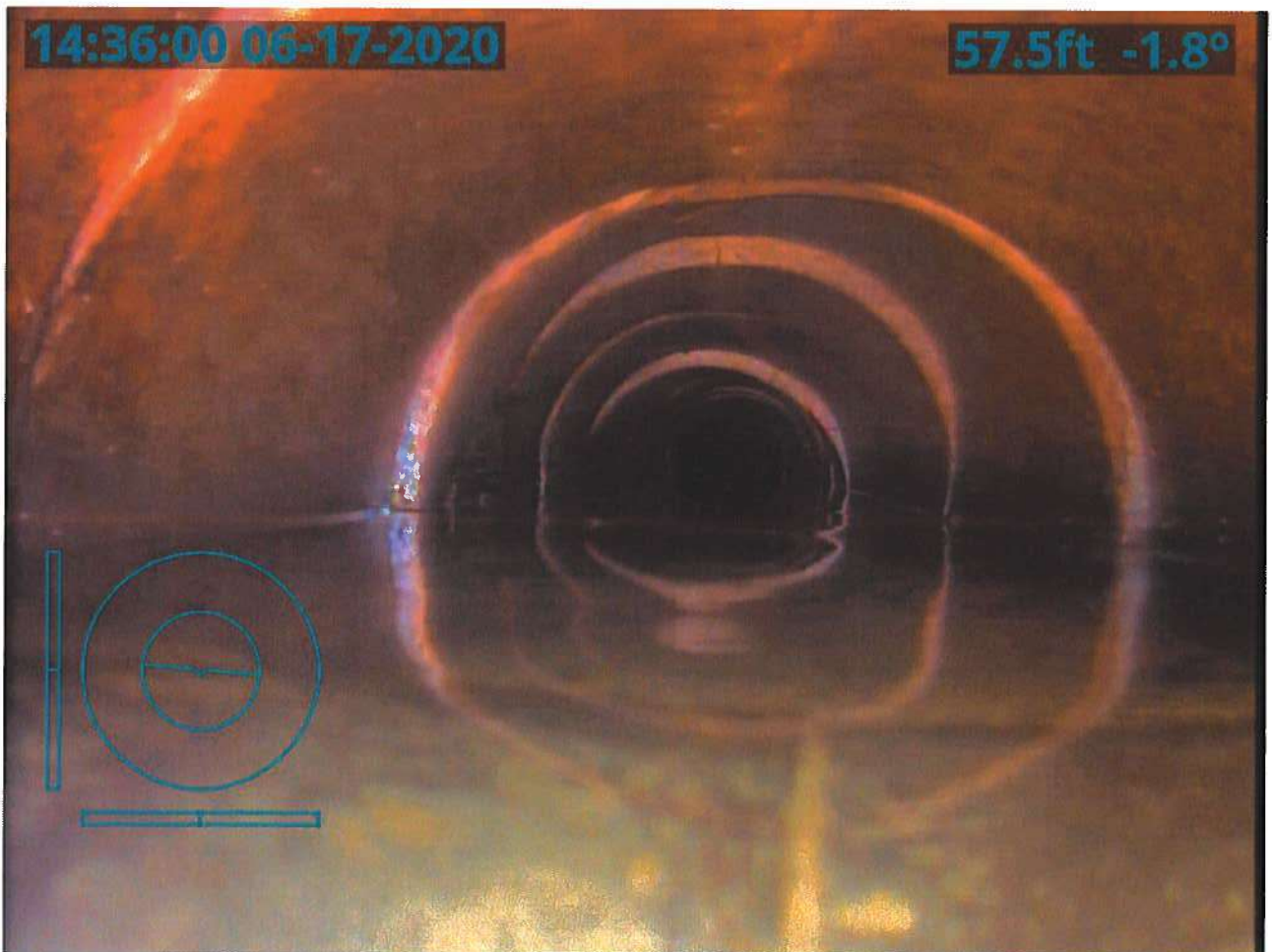
1.5ft -0.8°



14:30:17 06-17-2020

8.8ft -3.5°





14:43:22 06-17-2020

163.0ft 0.0°



14:44:27 06-17-2020

171.9ft -0.3°



14:54:52 06-17-2020

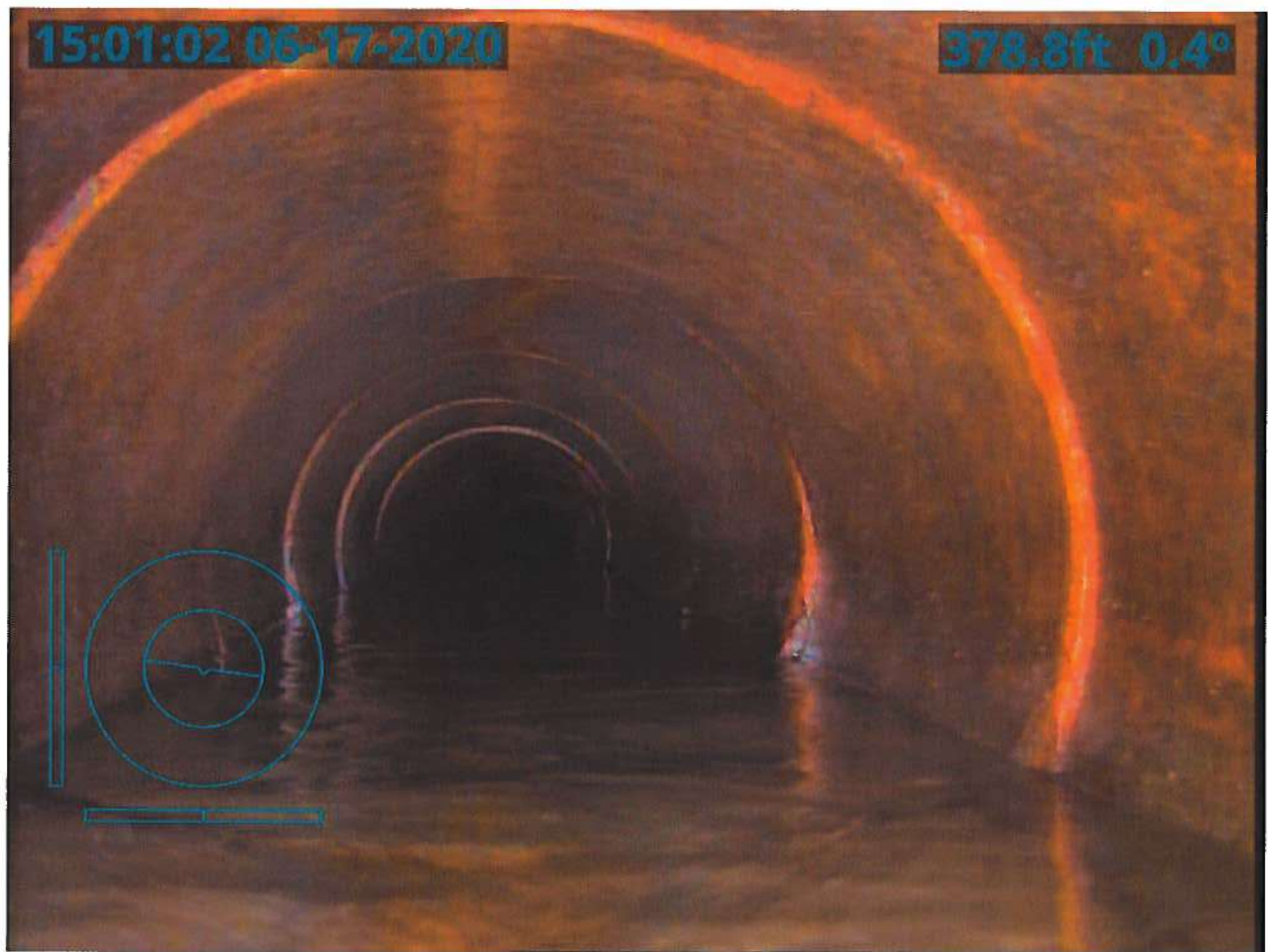
300.9ft -0.1°

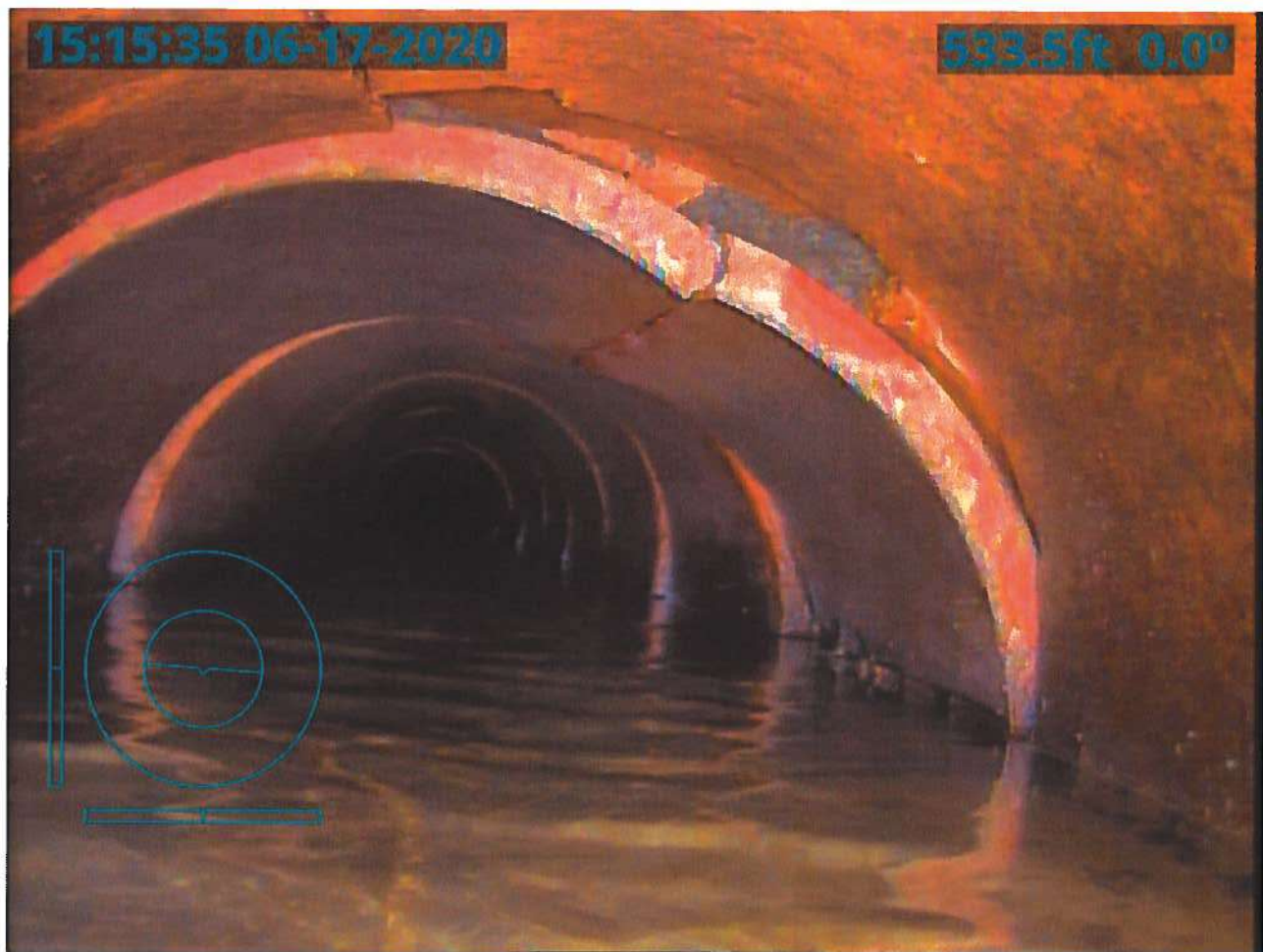


14:58:24 06-17-2020

340.1ft 0.8°







15:28:43 06-17-2020

645.8ft -1.6°



15:31:02 06-17-2020

668.3ft -1.0°



15:33:04 06-17-2020

669.6ft -1.0°



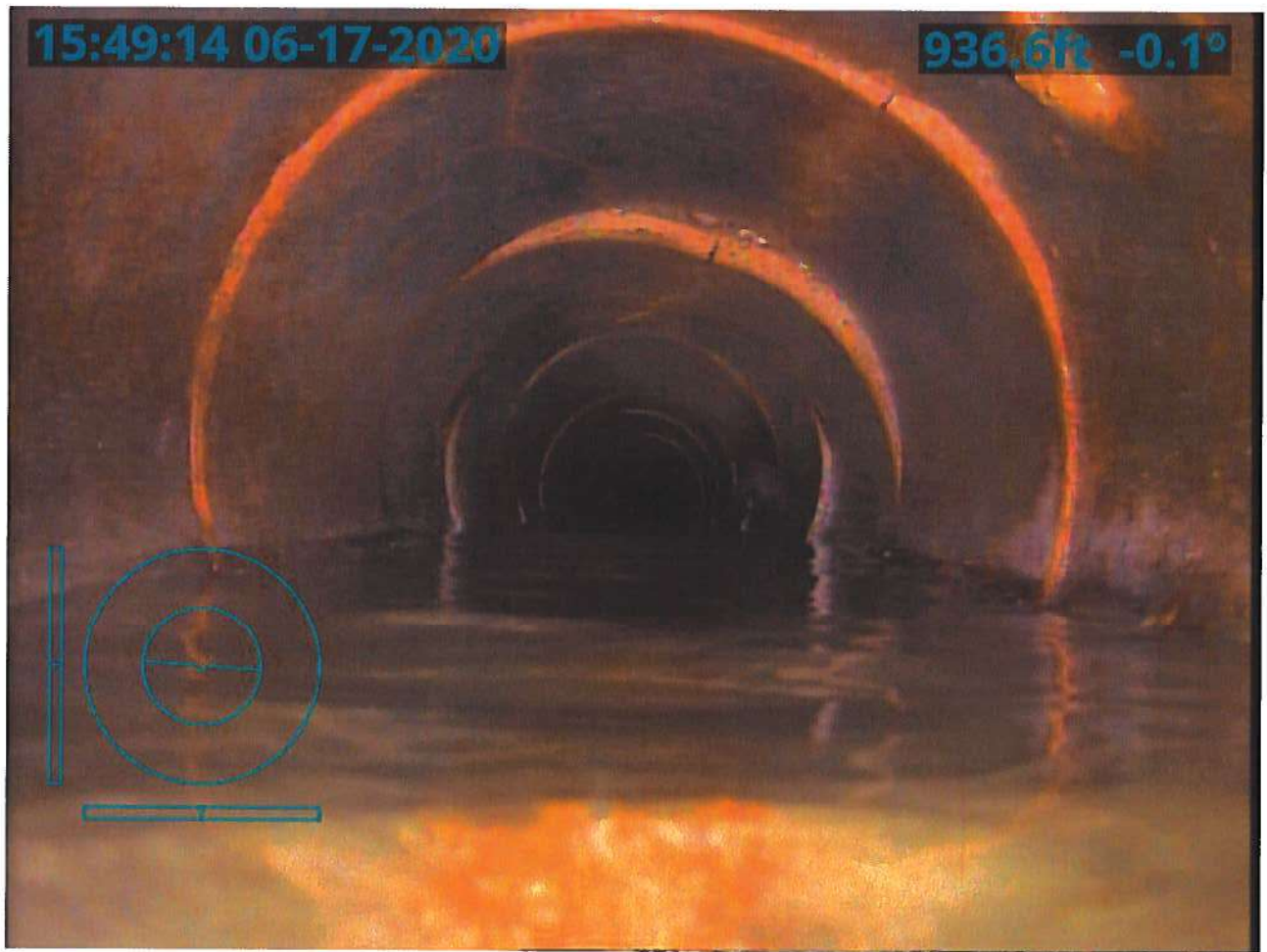
15:37:42 06-17-2020

733.2ft 0.2°



15:49:14 06-17-2020

936.6ft -0.1°



6756 BUCKEYE 2020-06-18 DP

320,3615120.403,4954117.674,1156.066,CPT 1/2 IRS
390,3617794.436,4956071.863,1142.777,gs above tile
391,3617829.995,4956083.523,1142.984,gs above tile
392,3617804.485,4956075.353,1138.008,TILE TOP 21" CLAY 1.79'TOPTOFL
393,3617827.092,4956081.777,1137.820,TILE TOP 21" CLAY 1.72'TOPTOFL
394,3617844.617,4956086.984,1137.608,TILE TOP 21" CLAY 1.72'TOPTOFL
395,3617886.545,4956099.047,1142.190,GS TILE LOCATE
396,3617933.617,4956131.299,1142.097,GS TILE LOCATE
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407,3618232.271,4956404.513,1141.047,GS TILE LOCATE
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409,3618264.056,4956433.994,1140.737,GS TILE LOCATE
410,3618282.303,4956448.945,1140.650,GS TILE LOCATE
411,3618288.853,4956454.033,1140.588,GS TILE LOCATE
412,3618305.947,4956468.984,1140.448,GS TILE LOCATE END TILE IN FL
413,3617756.520,4956059.852,1142.659,GS TILE LOCATE
414,3617710.224,4956044.598,1142.672,GS TILE LOCATE
415,3617659.684,4956028.147,1142.704,GS TILE LOCATE
416,3617609.085,4956010.781,1142.812,GS TILE LOCATE
417,3617560.396,4955996.027,1143.225,GS TILE LOCATE
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420,3617378.699,4955936.642,1144.379,GS TILE LOCATE
421,3617328.456,4955920.863,1144.660,GS TILE LOCATE
422,3617270.743,4955902.120,1144.857,GS TILE LOCATE
423,3617208.776,4955882.235,1145.286,GS TILE LOCATE
424,3617144.452,4955862.030,1145.791,GS TILE LOCATE
425,3617085.209,4955844.107,1146.181,GS TILE LOCATE
426,3617026.303,4955826.141,1146.867,GS TILE LOCATE
427,3616963.566,4955807.859,1147.270,GS TILE LOCATE
428,3616903.614,4955789.317,1147.106,GS TILE LOCATE
429,3616874.365,4955779.766,1147.225,GS TILE LOCATE END CABLE
430,3617551.528,4956070.130,1144.595,GS BEAN DAMAGE
431,3617900.958,4956083.145,1142.359,GS BEAN/CORN DAMAGE
432,3617766.676,4956083.960,1143.649,GS BEAN/CORN DAMAGE
433,3617738.753,4956083.917,1143.965,GS BEAN/CORN DAMAGE
435,3617570.610,4956084.472,1145.082,GS BEAN/CORN DAMAGE
436,3617570.029,4956089.061,1145.138,GS CORN DAMAGE
437,3617213.073,4956073.029,1150.058,GS BEAN DAMAGE

6756 BUCKEYE 2020-06-18 DP

438,3617213.491,4956087.438,1149.850,GS BEAN/CORN DAMAGE
 439,3617213.134,4956091.061,1149.693,GS CORN DAMAGE
 440,3616570.170,4956092.512,1149.778,GS CORN DAMAGE
 441,3616570.654,4956087.991,1149.804,GS BEAN/CORN DAMAGE
 442,3616572.458,4956075.955,1149.901,GS BEAN DAMAGE
 443,3615982.348,4956078.511,1149.331,GS BEAN DAMAGE
 444,3615981.966,4956090.214,1149.024,GS BEAN/CORN DAMAGE
 445,3615982.820,4956137.156,1148.983,GS CORN DAMAGE
 446,3616010.475,4956115.325,1148.071,GS CORN DAMAGE
 447,3616029.785,4956100.250,1148.066,GS CORN DAMAGE
 448,3616052.361,4956094.171,1148.223,GS CORN DAMAGE
 449,3615933.139,4956081.434,1152.817,CL GRAVEL
 450,3617844.616,4956086.984,1135.890,EXIST FL
 451,3617804.485,4956075.353,1136.220,EXIST FL
 452,3617822.763,4956080.623,1138.178,TILE TOP 24"HDPE NONPERF 2.14'OPTOFL
 453,3617827.657,4956082.050,1138.145,TILE TOP 24"HDPE NONPERF 2.14'OPTOFL
 454,3617613.055,4956058.222,1143.332,GS BEAN DAMAGE
 455,3617660.592,4956037.001,1142.797,GS BEAN DAMAGE
 456,3617677.742,4956007.776,1142.806,GS BEAN DAMAGE
 457,3617823.637,4956007.117,1142.592,GS BEAN DAMAGE
 458,3617900.967,4956037.523,1142.409,GS BEAN DAMAGE
 459,3617883.065,4956006.874,1142.794,GS BEAN DAMAGE
 460,3617869.234,4956126.122,1142.584,GS CORN DAMAGE
 461,3617797.977,4956125.120,1143.827,GS CORN DAMAGE
 462,3617778.361,4956105.990,1143.881,GS CORN DAMAGE
 463,3617737.438,4956106.252,1144.433,GS CORN DAMAGE
 464,3617710.142,4956088.792,1144.271,GS CORN DAMAGE
 465,3617626.187,4956088.866,1144.690,GS CORN DAMAGE
 8016,3618659.060,4946889.650,1169.720,GPS MON8016
 8016_GNSS,3618659.060,4946889.650,1169.720,Autonomous Setup

Drainage District:

#20

Investigation/Repair Summary:

- Landowner in the NE¼ NE¼ Section 32, Township 88 North, Range 22 West reported a 4-feet wide by 5-feet deep blowout/sinkhole above the assumed original Main tile route on the west side of the parcel.
- Visual observation found the blowout/sinkhole as described with the tile not visible.
- Excavation found a section of 30-inch or 32-inch VCP tile that had settled differentially compared to the tiles on each side, which allowed soil to enter through the resulting wide joint gap. Upon removal for the repair, said tile was found to be cracked and approximately 1/3rd full of sediment.
- Repaired the tile with rock bedding and backfill, 30-inch dual wall HDPE and 3/4 concrete collars at each end of the repair. Excavation was filled with on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.

Additional Actions Recommended:

The original main tile upstream and downstream of this repair is composed of VCP that is crushed and approximately 1/3rd full of sediment. This is just downstream of where the supplemental tile diverts all the flow to Main Open Ditch of DD 26. So, it is not clear how significantly this impacts the drainage capacity relative to the drainage need.



Tabulated Contractor Time and Materials

Date	Totals	12/9/2020
Workman (hrs)	15 3/4	15 3/4
Backhoe (hrs)	5 1/4	5 1/4
30" Dual Wall HDPE Tile (ft.)	8	8
1" Clean Bedding Rock	Yes	
Concrete Collars	Yes	



Drainage Work Order Request For Repair

Hardin County

Date: 10/15/2020

Work Order #: WO00000302

Drainage District: DDs\DD 20 (51043)

Sec-Twp-Rge: 32-88-22 **Qtr Sec:** _____

Location/GIS: 88-22-32-200-004

Requested By: Jim Kielsmeier

Contact Phone: (641) 373-0935

Contact Email: _____

Landowner (If different): _____

Description: DD 20 - Jim Kielsmeier reports 4' wide x 5' deep blowout in parcel #882232200004 on DD tile, blowout is straight across from the fence on west side of parcel. Crops are out, enter off D Ave.

Repair labor, materials and equipment: _____

Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____

Co Hwy D41

D.D. No. 123
(D.D. 26)

D.D. No. 20

882232200001

D.D. No. 26

882232200004

882232200002

MAIN

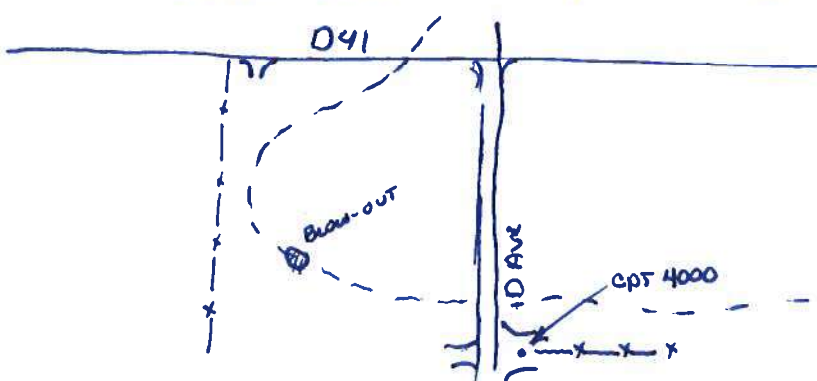
VO #32

22 2





Inspector's Project Diary

Project: <u>DD #20 HARDIN Co.</u>			
CGA PN: <u>6502.5</u>	Days Charged:	Report No. <u>1</u>	Proj. Mgr. ☒
Contractor:		Date: <u>10/23/20</u>	<u>LEE GALINTINE</u>
Superintendent:	Weather Conditions: <u>Cool, Windy, damp,</u>	Precip.: <u>2"</u>	Temp. Hi: <u>37°</u> Temp. Low: <u>25°</u>
INSPECTOR: Time Arrived: _____ Time Left: _____		Contractor: <u>YESTERDAY</u> Time Arrived: _____ Time Left: _____	
1. General Remarks and Work Accomplished: <u>Called and talked to Jim KIELSMIER, ABOUT LOCATION OF BLOW-OUT. SET X ON 4000 IN JOB 6502. 5/8" IR 2'-3"± WEST OF COR. POST FENCE TO EAST. ON E. SIDE D. AVE IN DOUBLE DRIVE. DROVE 4x4 TO BLOW-OUT, SHOT GS ON N. SIDE 5' Ø HOLE 5' DEEP. #77</u>  <u>Fix ASAP</u> <u>Access From D41 OR DAVE</u>			
2. Changes or Extra Work Ordered:			
3. Test Samples Taken:			
4. Visitors to Site:			
5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:			
6. Attachments (total sheets attached <u>0</u>):			

LOOKING WEST @ BLOW-OUT, NEW FENCE 200' WEST IN BACK GROUND

10/23/2020
14:24



Project Diary

Project: <u>Hardin County DD# 20</u>			
CGA PN: <u>6502.5</u>	Days Charged:	Report No. <u>1</u>	Proj. Mgr. ☒
Contractor: <u>Honey Creek Land Improvement</u>		Date: <u>12-9-20</u>	<u>Lee G.</u>
Superintendent: <u>Adam Seward</u>	Weather Conditions: <u>Sunny</u>	Precip.: <u>"</u>	Temp. Hi: <u>°</u>
			Temp. Low: <u>43 °</u>
INSPECTOR:		Contractor:	
Time Arrived: <u>8:48 a.m.</u> Time Left: <u>2:38 p.m.</u>		Time Arrived: <u>9:00 a.m.</u> Time Left:	
1. General Remarks and Work Accomplished:			
8:48 a.m. = set up GPS on CPT # 4000 and checked into # 54 Horizontal good vertical was off 0.18'. 9:24 a.m. = Returned to job site. Contractor was on-site beginning to expose repair. Crew exposed a 30" VCP tile at sink hole caused by mis aligned joints. # 77 is a ground shot by tile repair. Tile is cracked top and bottom. Removed 1 section of tile and took pictures up stream and downstream. 30" VCP is $\frac{1}{3}$ full of silt from sink hole, 10' $\frac{1}{3}$ of tile will need to be removed. Remaining tile is $\frac{1}{3}$ full of silt due to Flat grade. 9:55 a.m. = contacted P.M. and reported tile condition to him. He would like 10' to 20' repaired if possible. If more than 20' needs to be replaced due to tile condition we will need to contact him. Existing remaining pipe is oval shaped, no U shaped tile, but it does have silt $\frac{1}{3}$ full in it.			
2. Changes or Extra Work Ordered:			
3. Test Samples Taken:			
4. Visitors to Site:			
5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:			
6. Attachments (total sheets attached <u>0</u>):			

Inspector's Project Diary (continued)

CGA PN: 6502.5

Report

No. 1

Date: 12-9-20

1. General Remarks and Work Accomplished (Continued):

shot top of pipe where contractor found good pipe.

78 = South End of repair, top 32" VCP. Elevation = 1124.60

79 = North End of repair. top 32" VCP. Elevation = 1124.62

Length of repair = 7.74'

80 = ground shot

Crew will use 30" Dual wall HDPE non perforated for repair.

12:10 p.m. = 1 load of 1" clean rock arrived on-site.

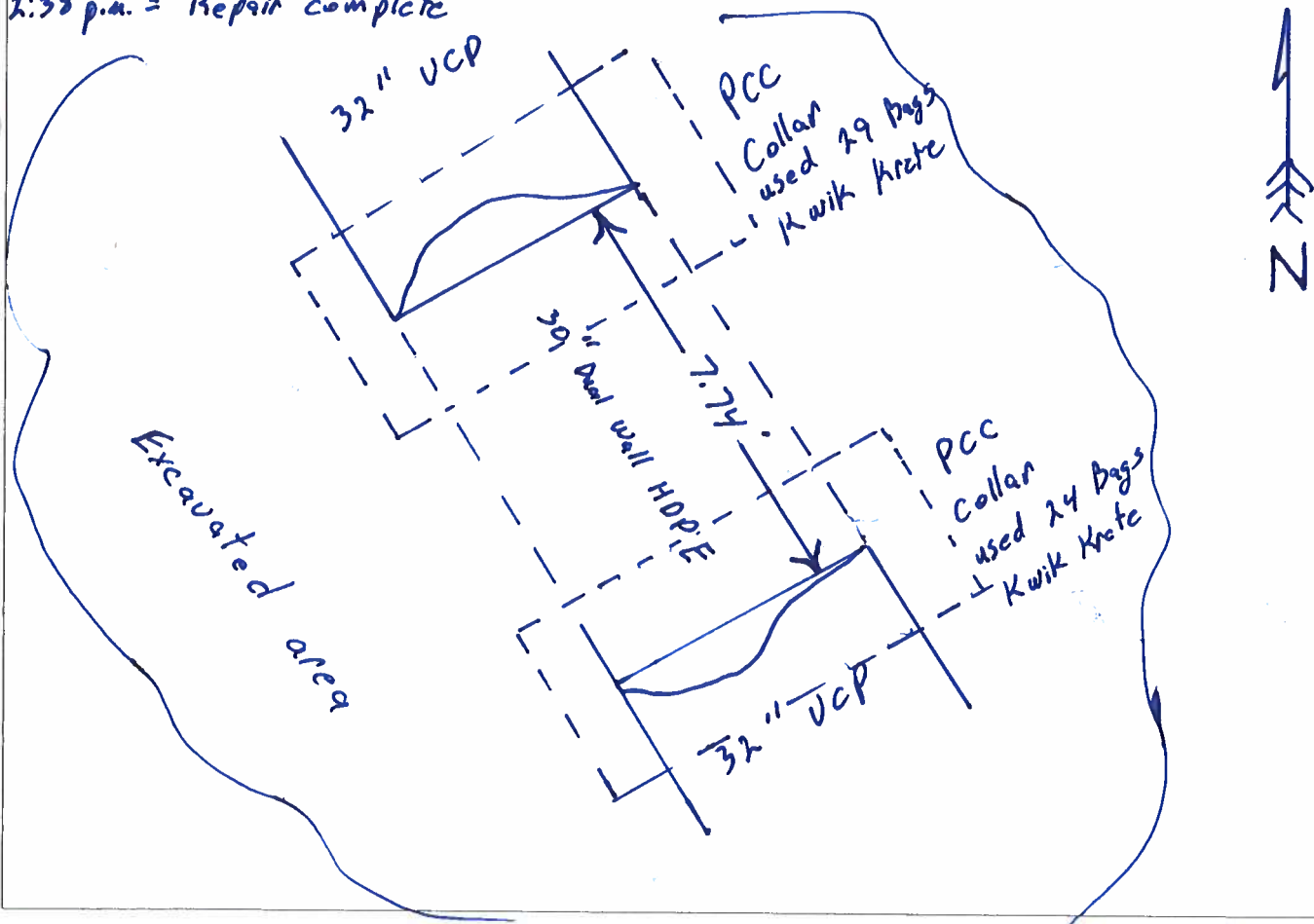
12:50 p.m. = Bedding rock for repair was in place.

1:00 p.m. = Pipe for repair arrived on-site.

1:20 p.m. = Crew placing fabric at joints after placing 30" Dual wall HDPE in repair.

2:06 p.m. = Concrete collars completed.

2:38 p.m. = Repair complete



Excavating spot repair

2020/12/09
18:35



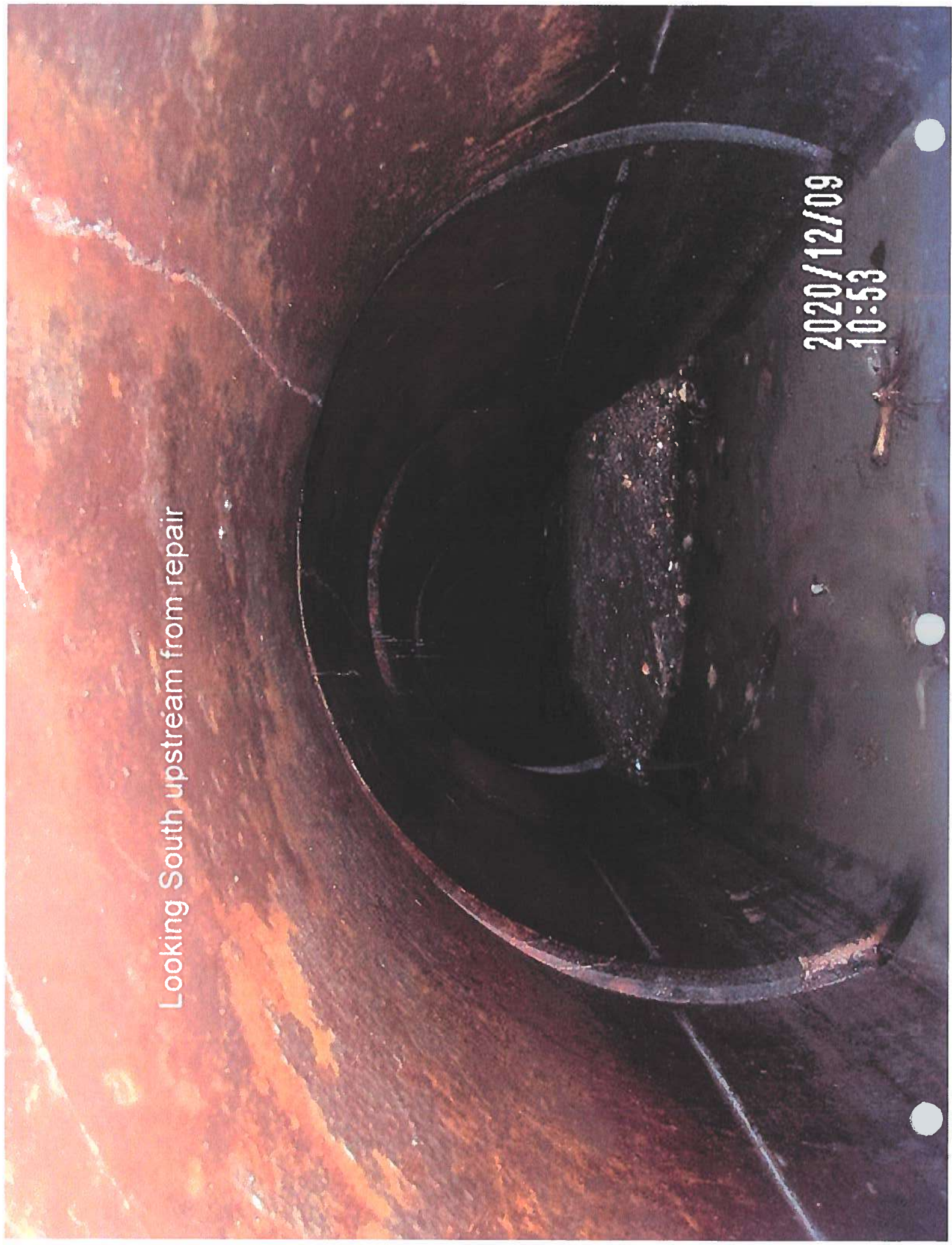
Excavating spot repair
open joint after removing batting

2020/12/09
10:41



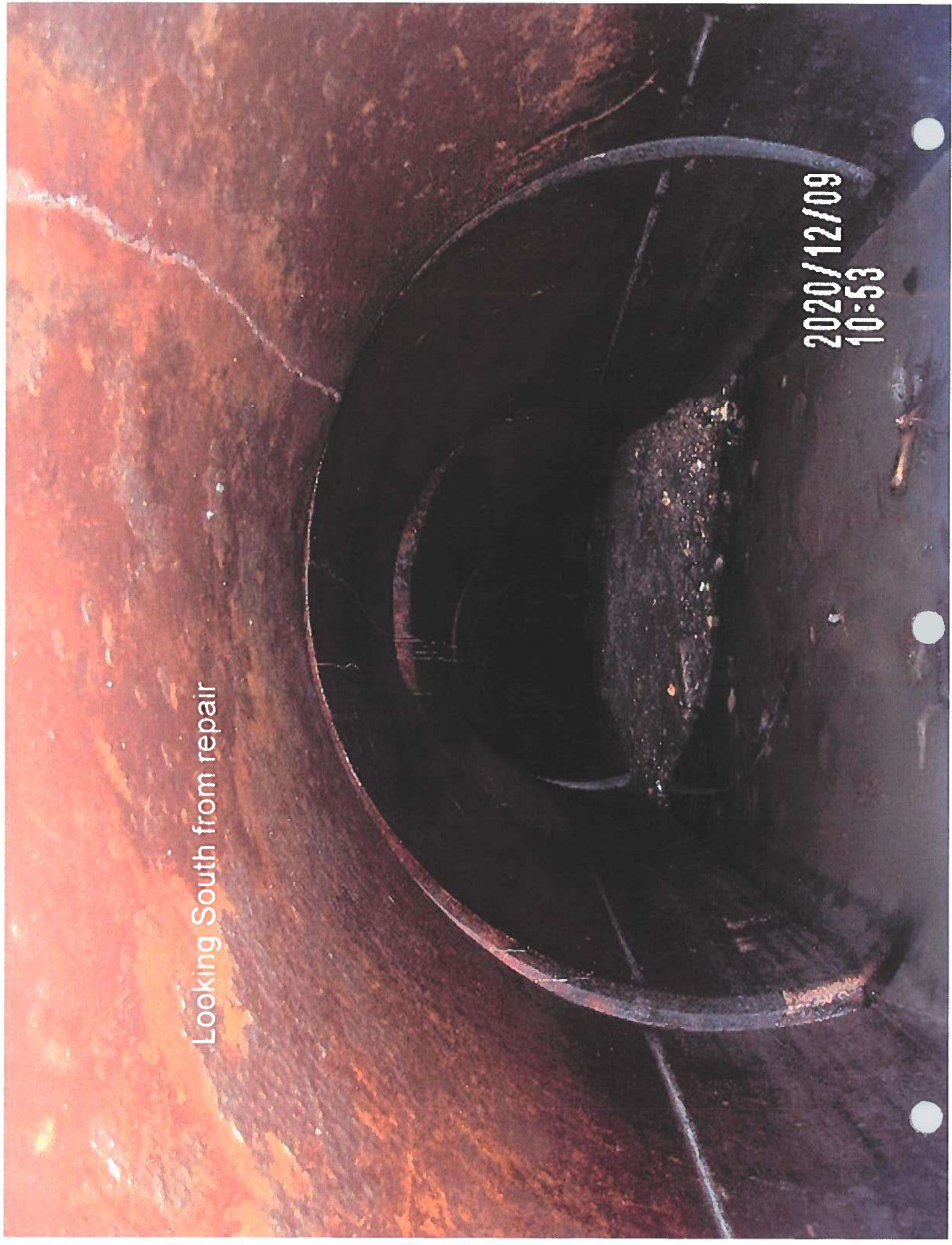
Looking South upstream from repair

2020/12/09
10:53



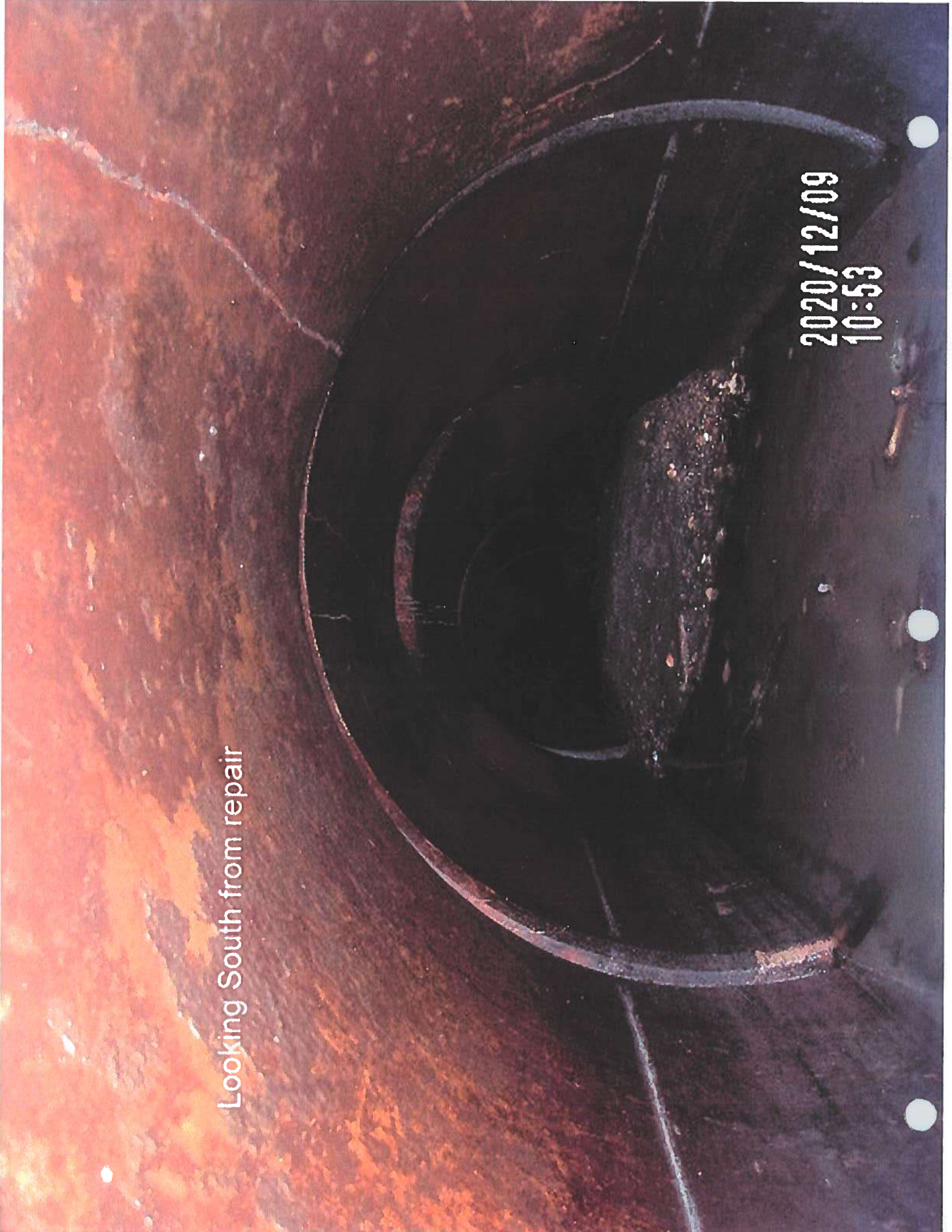
Looking South from repair

2020/12/09
10:53



Looking South from repair

2020/12/09
10:53



Looking North downstream from repair

0020/1200

0020/1200

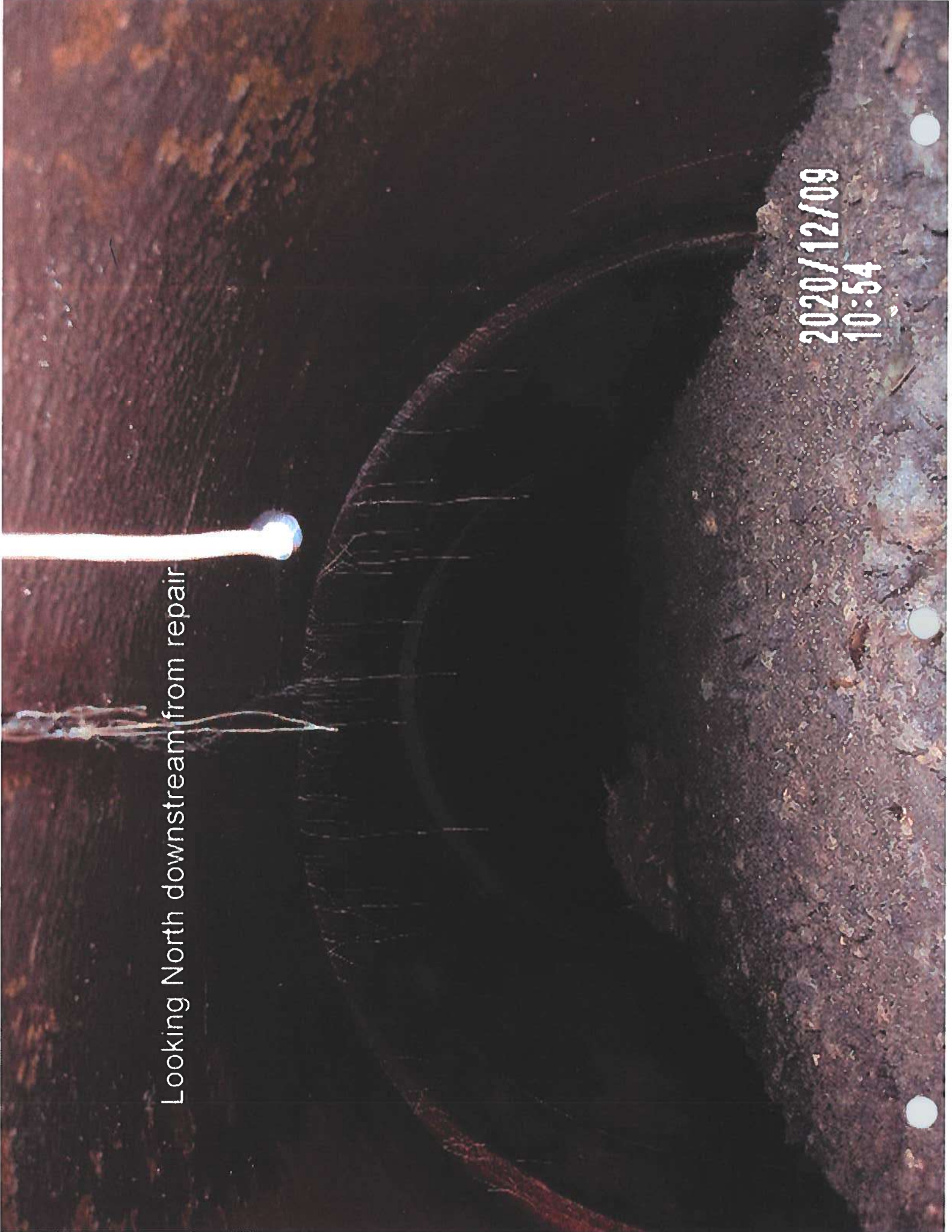
Looking North downstream

2020/12/09
10:58



Looking North downstream from repair

2020/12/09
10:54



Looking North from repair

60/71/02/1

148

1 Section of tile removed to take pictures

2020/12/09
10:58



1 section of tile removed
to inspect tile

2020/12/09
09:01
10:58



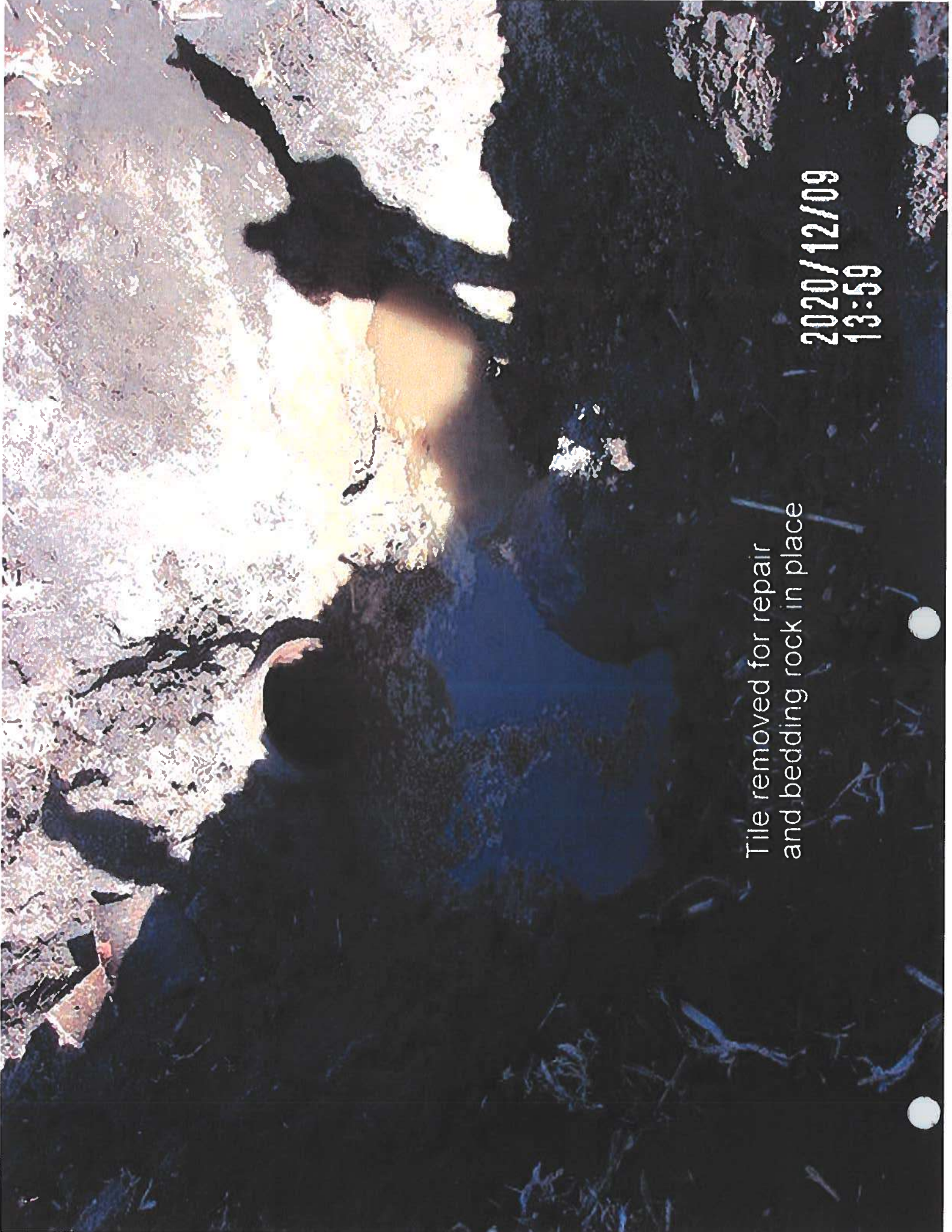
32" vcp removed for repair

2020/12/08
11:38



Tile removed for repair
and bedding rock in place

2020/12/09
13:59

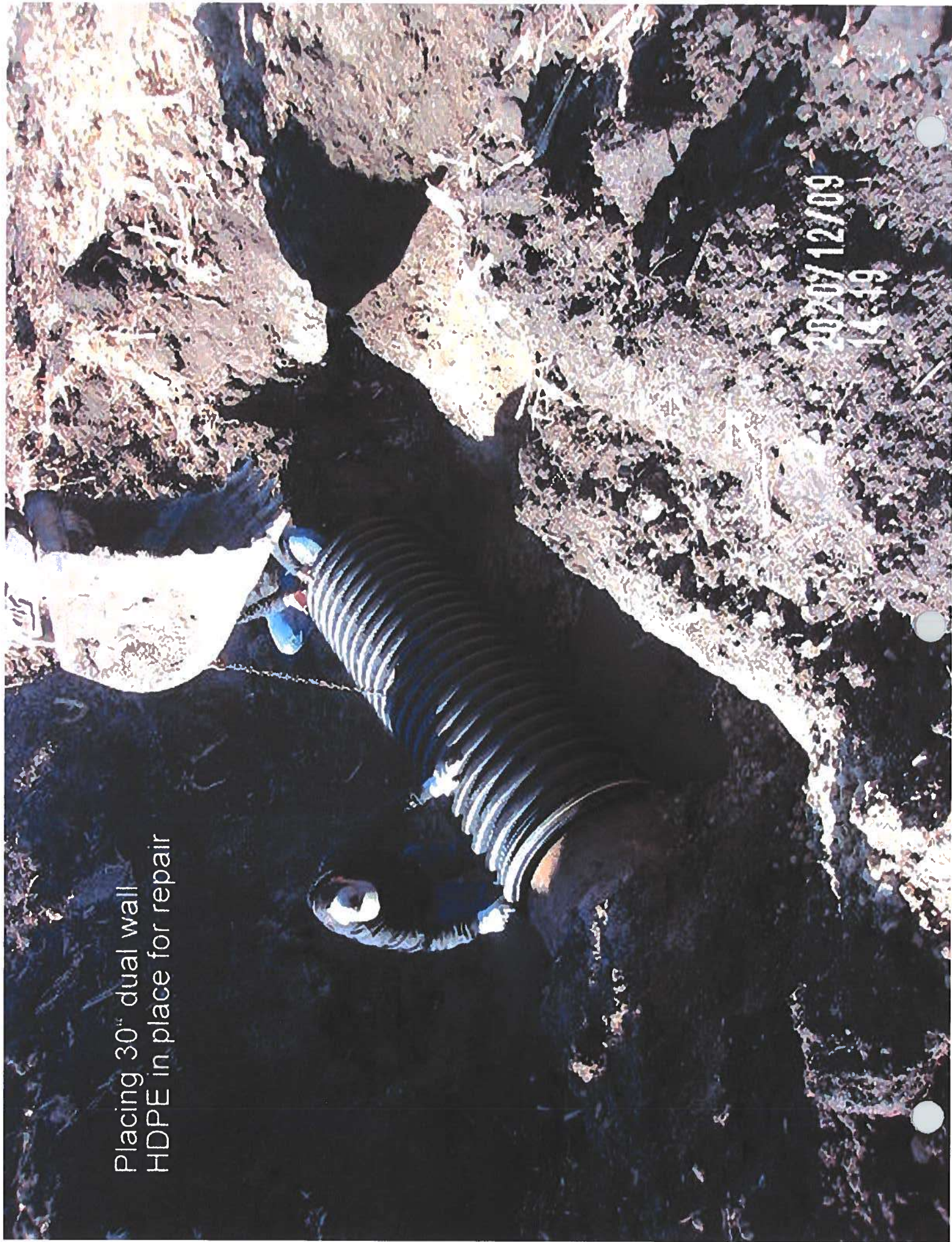


Bedding rock in place

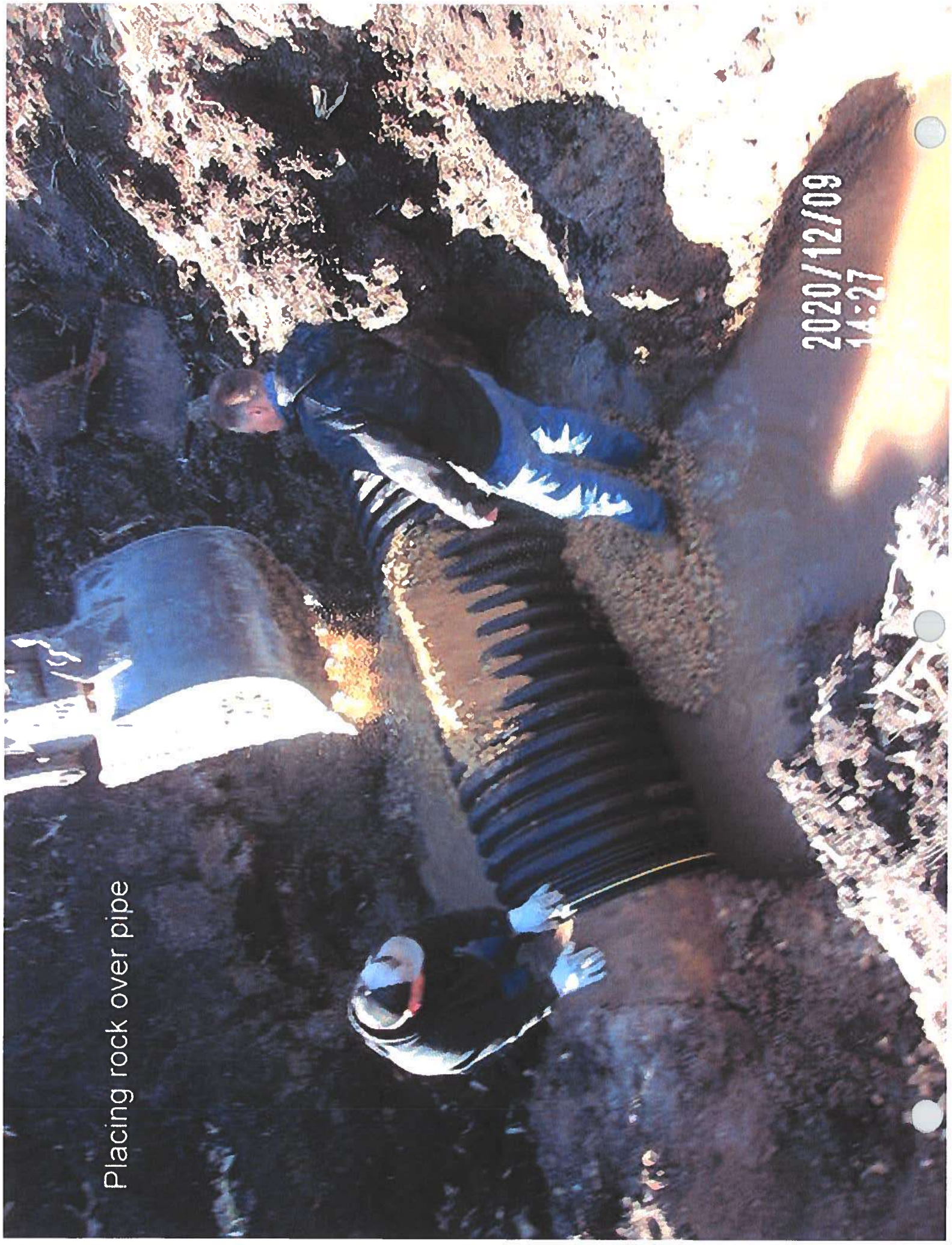
2020/12/09
13:59



Placing 30" dual wall
HDPE in place for repair



Placing rock over pipe



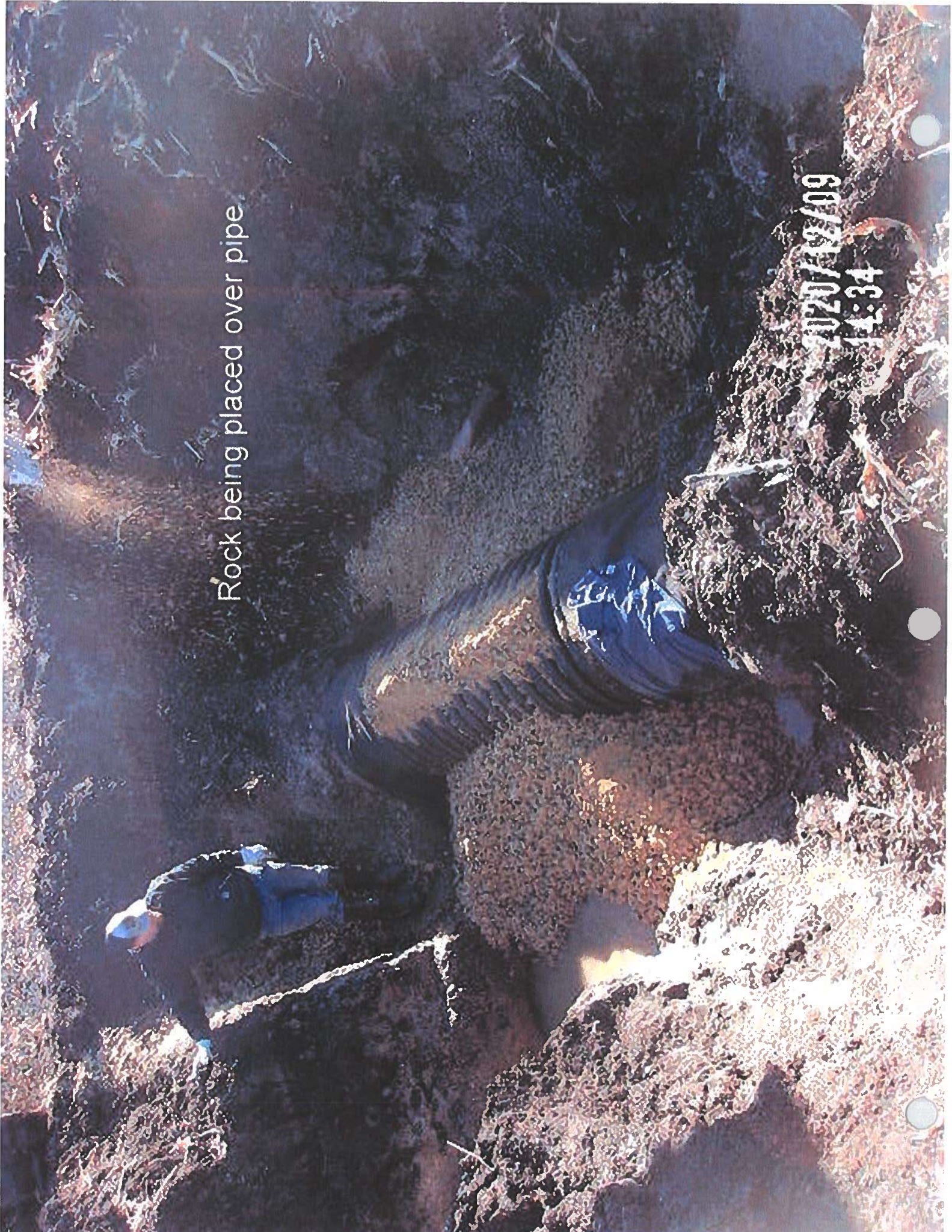
Placing fabric over joints
for concrete collars

2020/12/09
14:29

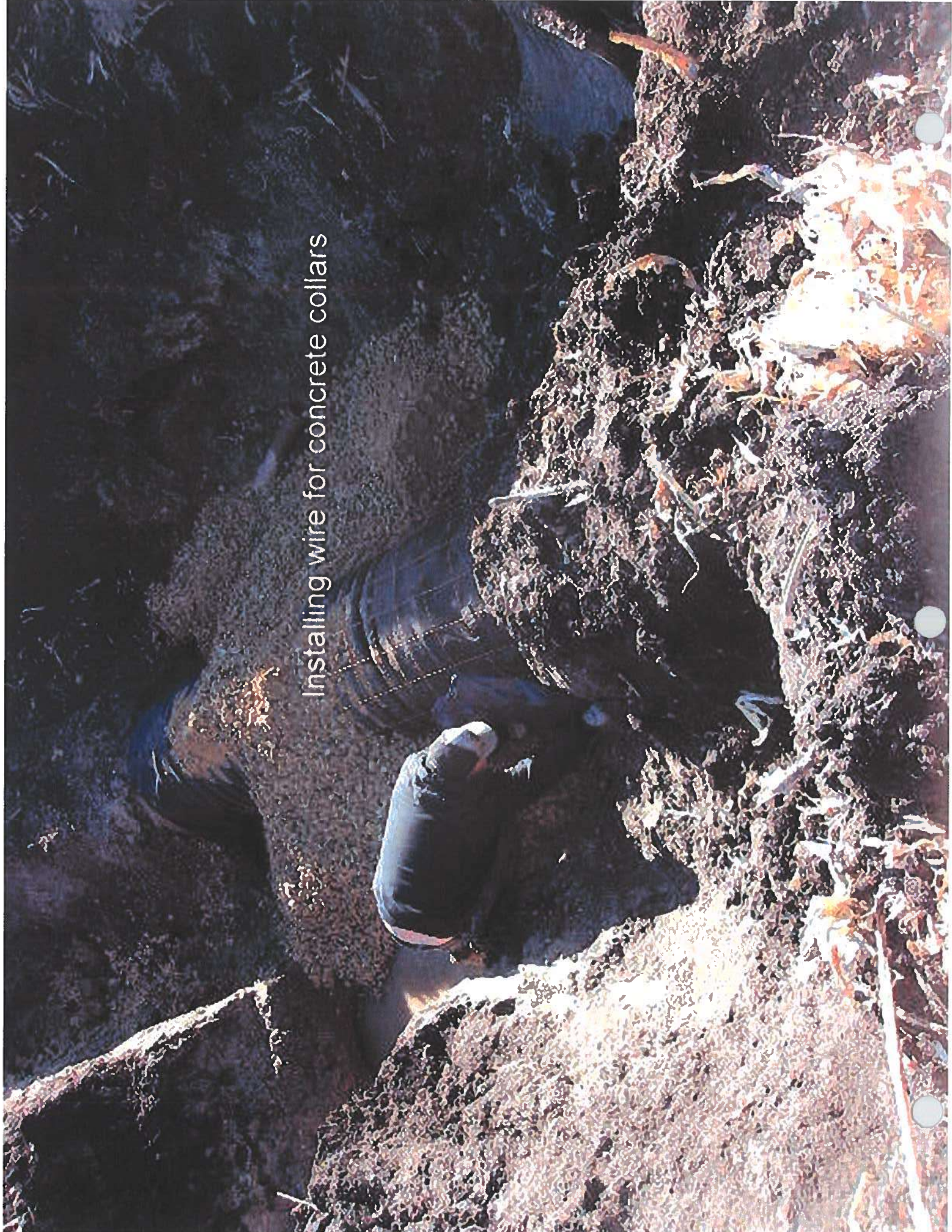


Rock being placed over pipe.

46:31
60/23/10207



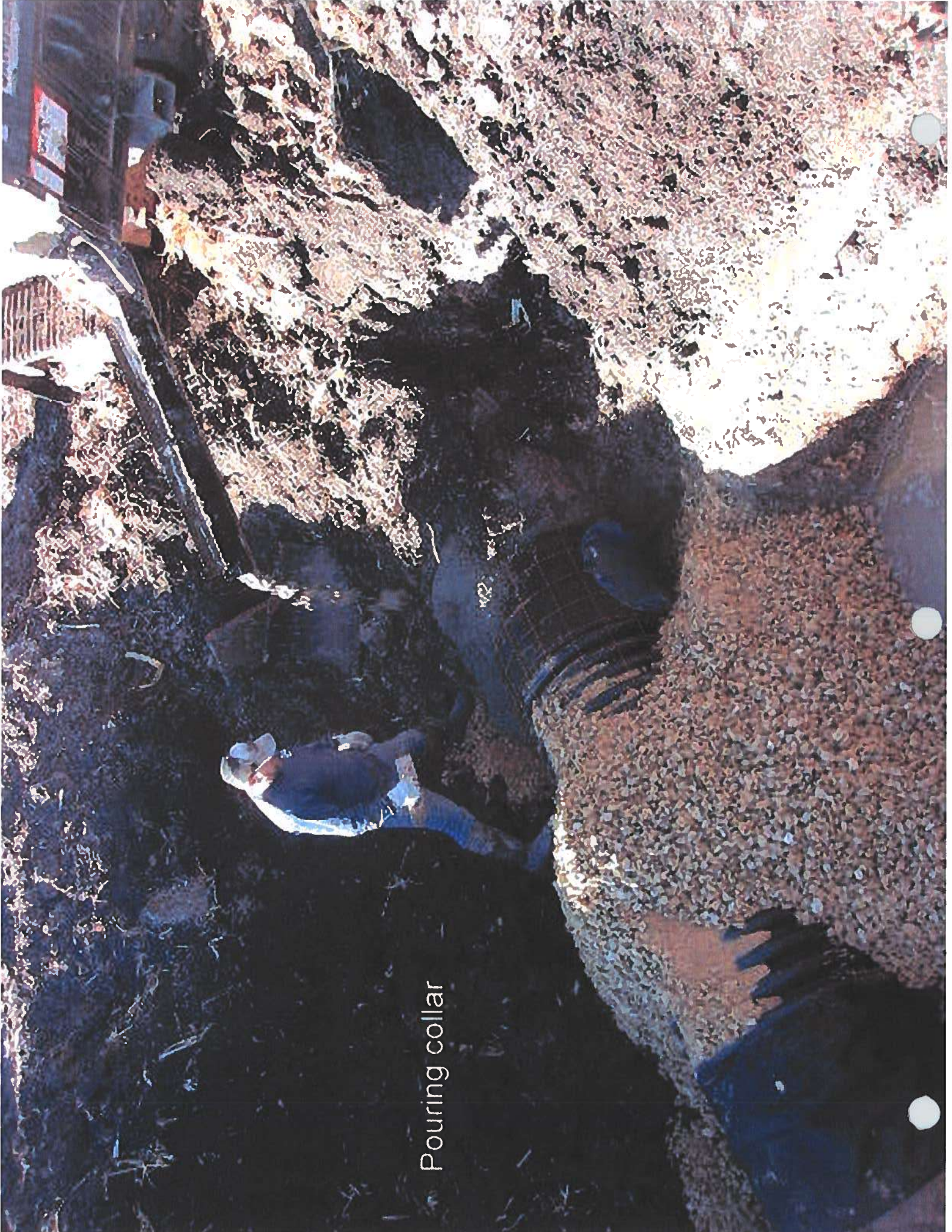
Installing wire for concrete collars



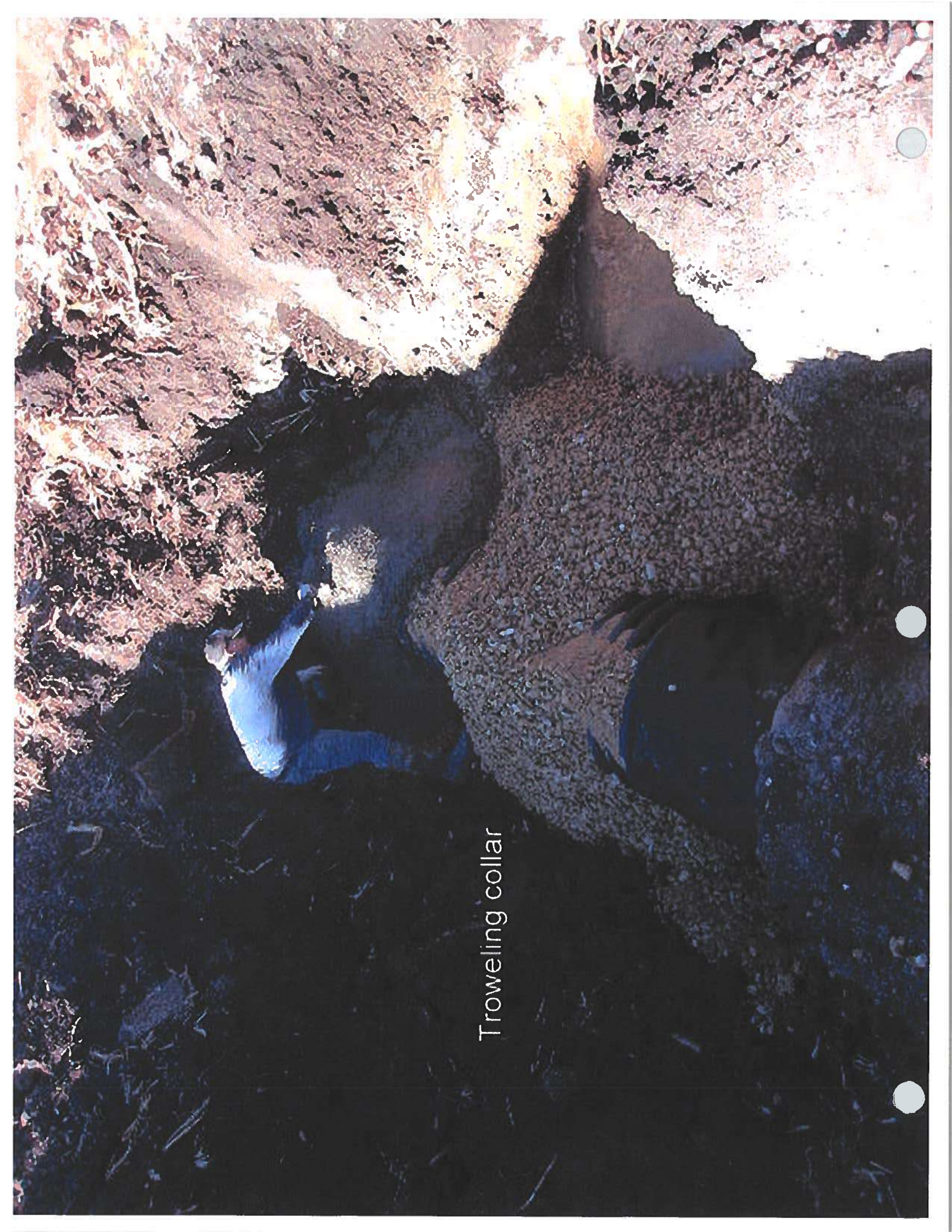
Beginning to pour North concrete collar

12/19

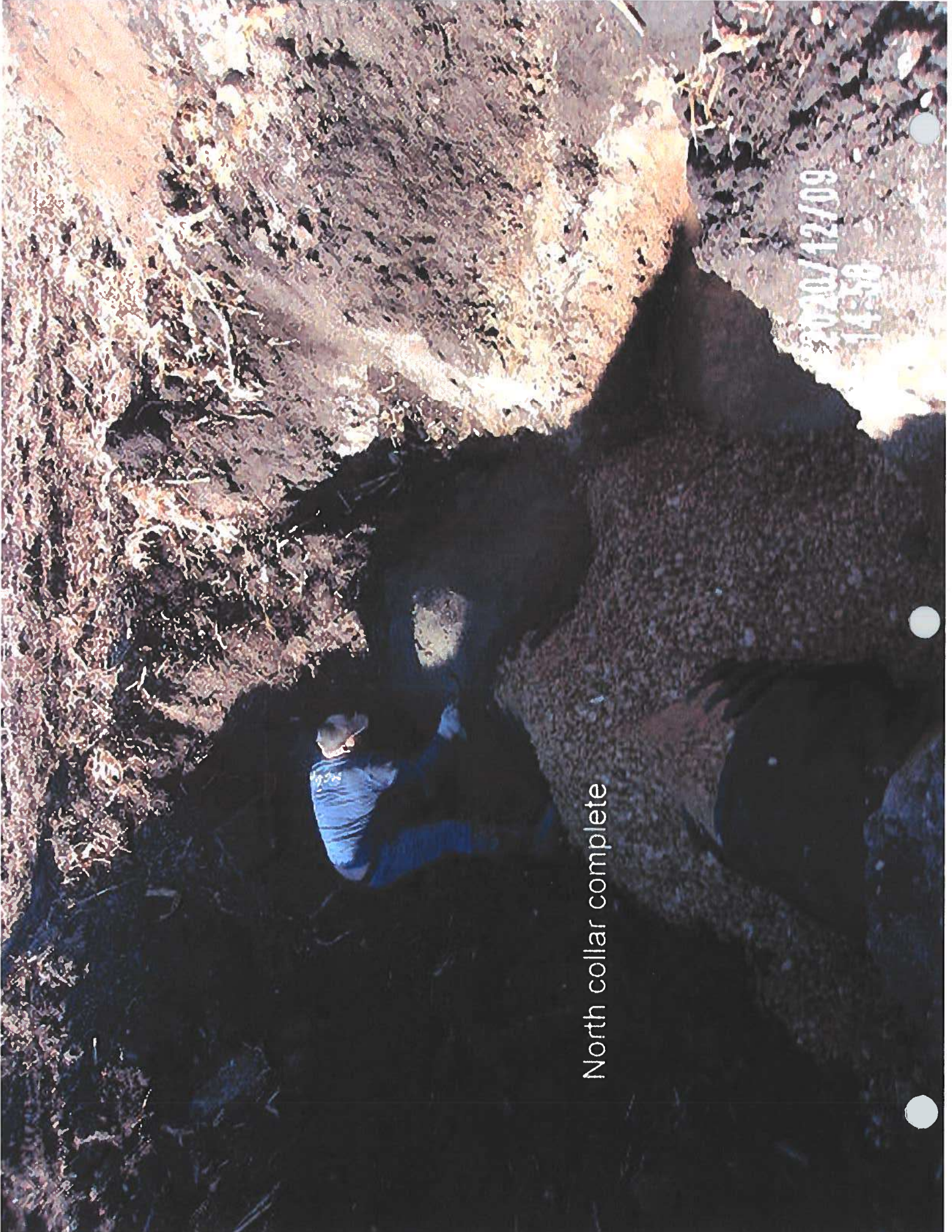




Pouring collar

A photograph showing a person in a blue long-sleeved shirt and dark pants kneeling in a deep, narrow trench. The person is working on a large, dark, textured object, likely a concrete or masonry structure, which is being prepared with a trowel. The trench walls are rough and uneven, with some debris and roots visible. The lighting is bright, casting shadows on the ground and the structure. The text "Troweling collar" is written vertically in white on the right side of the image.

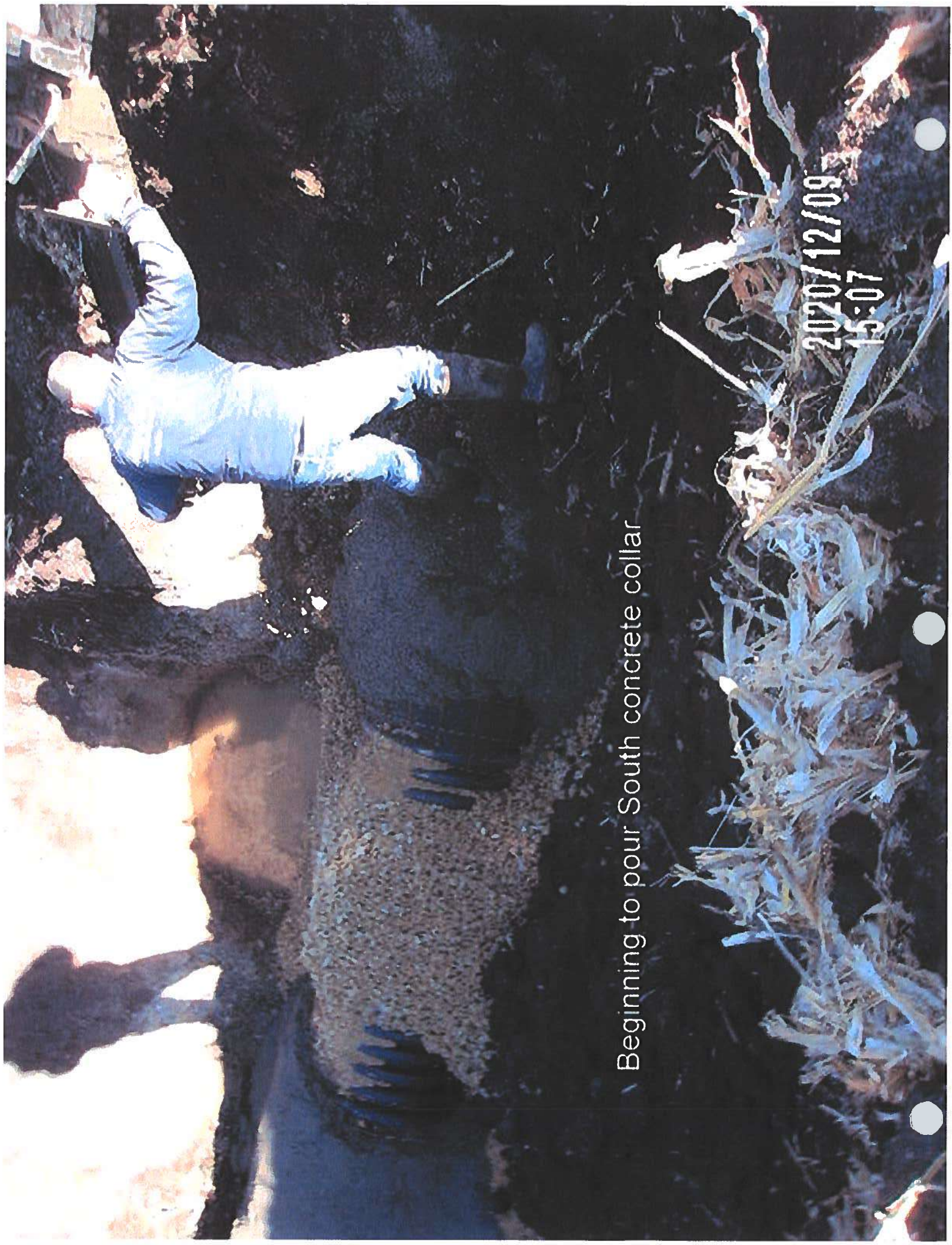
Troweling collar



North collar complete

Beginning to pour South concrete collar

2020/12/09
15:07



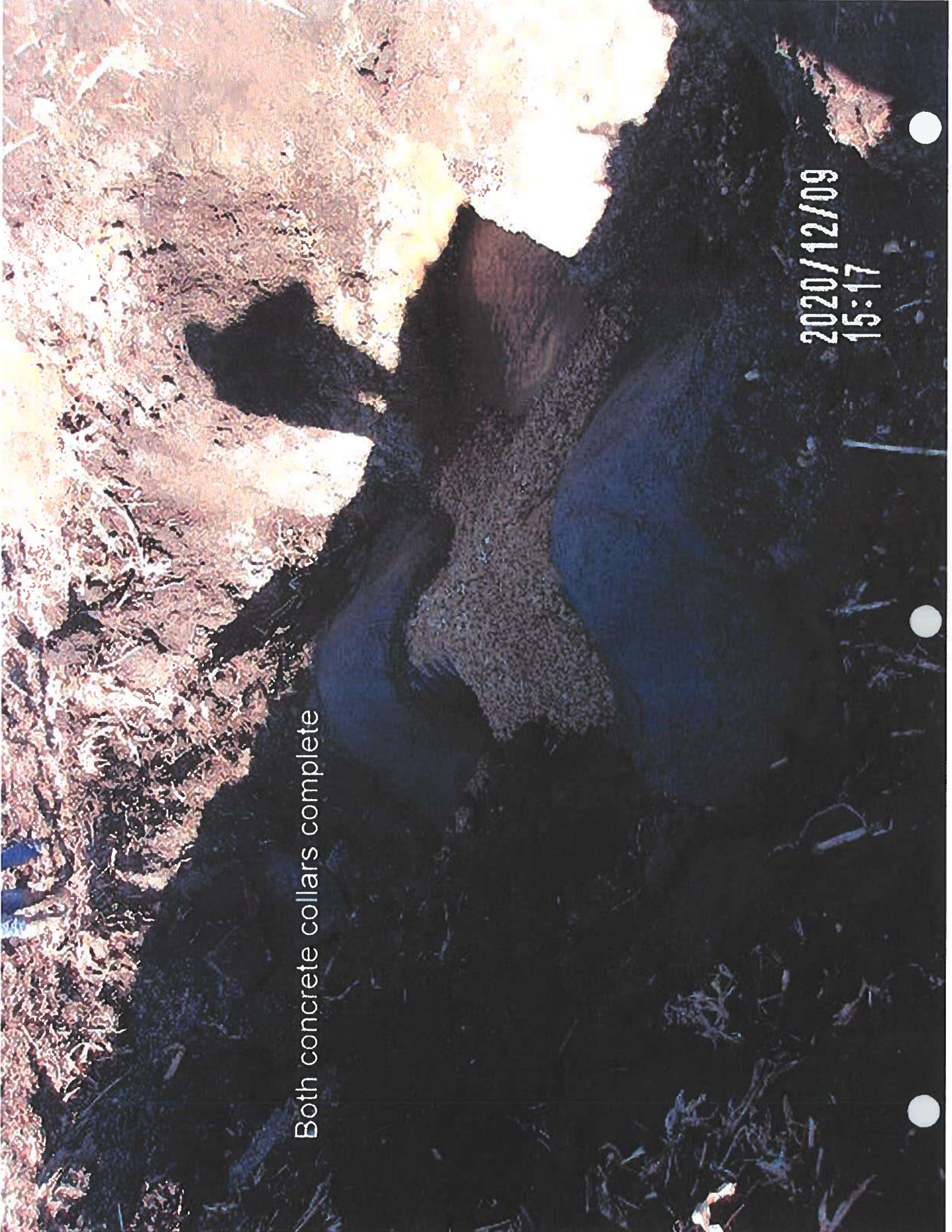
South concrete collar complete

2020/12/08
15:14



Both concrete collars complete

2020/12/09
15:17





Placing remaining rock over top of spot repair

2020/12/09
15:45

1,3602878.030,4947844.310,1135.050,HCGPS 8015
2,3586774.843,4946810.299,1151.546,HCGPS 8014
7034,3603592.812,4942418.115,1116.784, TOP CMP 24"
7400,3616689.561,4947340.971,1152.892,top 8" hdpe start
7401,3616912.692,4947466.145,1153.502,top 8" hdpe wye
7402,3616929.064,4947475.736,1153.416,top 8" hdpe start
7403,3616876.413,4947444.983,1153.206,top 8" hdpe start
7404,3616936.843,4947478.140,1153.883,top 6" cpp
7405,3616913.674,4947466.753,1153.407,top 8" hdpe
7406,3616930.850,4947455.303,1157.062,top 8" intake
7407,3617310.702,4947769.718,1154.240,top 8" vcp end
7408,3616963.831,4947497.486,1153.473,top 8" vcp
7409,3616981.278,4947508.218,1152.603,top rock
7410,3616980.864,4947507.952,1153.538,top 8" hdpe
7411,3616980.844,4947507.957,1153.483,top 8" hdpe
7412,3617014.925,4947529.884,1153.549,6" cpp wye
7413,3617014.240,4947529.414,1153.585,top 8" hdpe
7414,3617047.988,4947553.164,1153.656,top 8" hdpe
7415,3617080.721,4947576.248,1153.607,top 8" hdpe
7416,3617096.673,4947588.187,1153.697,top 8" hdpe
7417,3617142.179,4947627.554,1153.823,top 8" hdpe

Drainage District:

#143

Investigation Summary:

- Upstream landowner expressed concern for the potential proximity and effect of a pond under construction near the Main tile in the SE¼ SW¼ Section 29, Township 87 North Range 22 West.
- Conversation with the party constructing the pond indicated that the Main tile was located before constructing the pond and that it was not within the limits of the earth disturbing activities. The Main tile is reportedly not going to be used as an inlet or outlet for said pond, and they intend for evaporation to be the method of discharge. The pond is to use groundwater and surface water to obtain the water necessary to fill. When asked about the 15-inch HDPE standpipe that was observed on site, it is reportedly going to be used to pull water from a sand point to water an off-road track adjacent to said pond.
- Visual observation of the site confirmed details of the conversation as noted above and show on the attached drawing.

Contractor Time and Materials (spent while CGA was on-site):

None recorded as only visual observation was conducted.

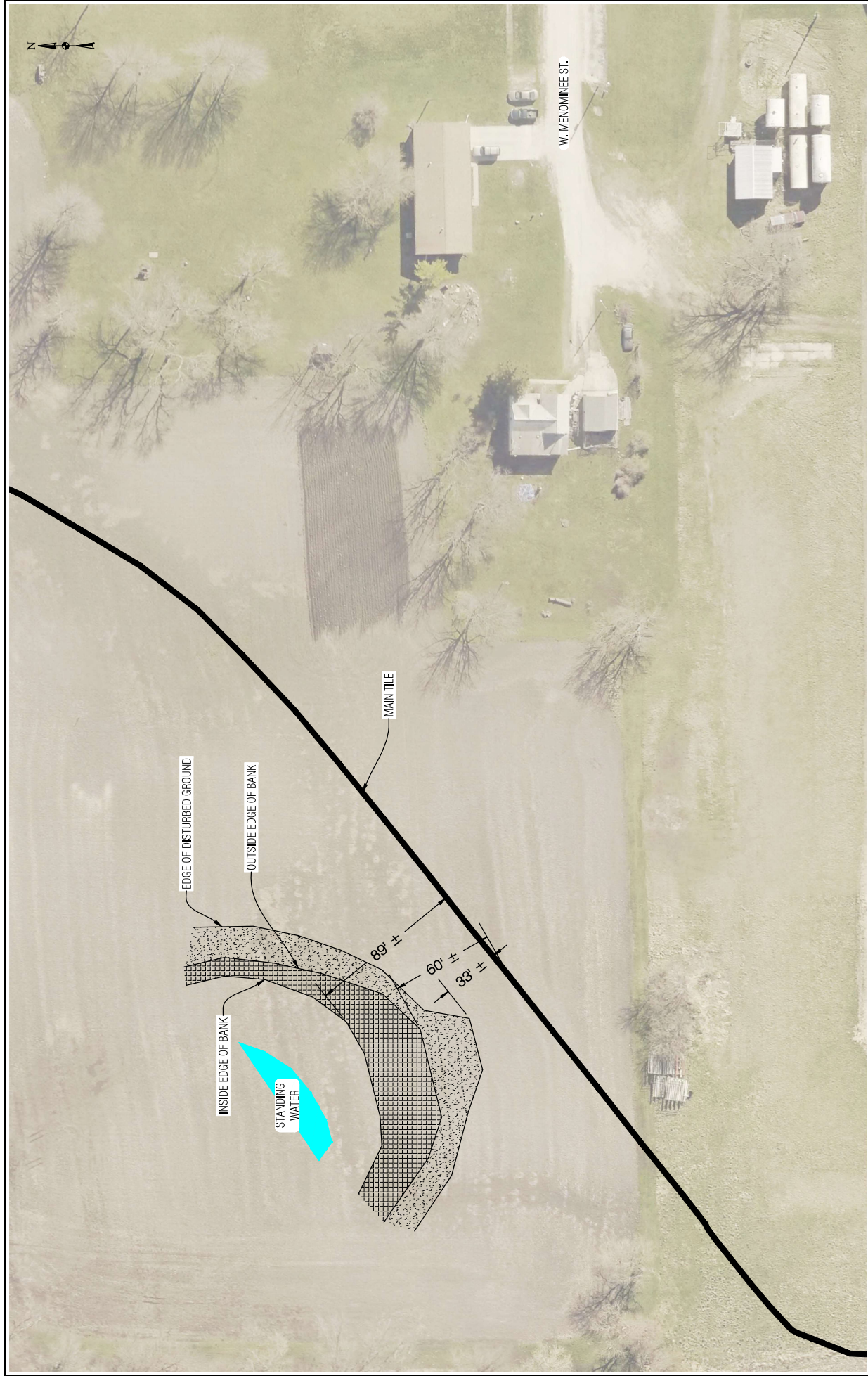
Additional Actions Recommended:

It is the opinion of CGA that although the pond elevation is higher than the Main tile, it should not affect the district facilities because:

1. Horizontal separation appears to be reasonable enough to preclude construction damage or excess water flows between the main tile and pond.
2. The pond is not directly connected to the tile by an inlet or outlet.

If desired by the District Trustees, the operation of the Main tile relative to the pond could be evaluated after pond construction has been completed and is stabilized.





GRAPHIC SCALE

0

20

40

NO.

REV.

DATE

BY

EXT.

NO.

DATE

BY

EXT.

DESIGNED: JAS

DATE: 11/11/2020

CHECKED: JAS

DATE: 11/11/2020

APPROVED: JAS

DATE: 11/11/2020

CGA

Chapman & Gable Associates, Inc.

1015 Pine Street, Suite 200

Des Moines, IA 50319

POND LIMITS CHECK

RADCLIFFE, IOWA

PROJECT NO.

87118

SHEET

1 OF 1

DD 143 - AERIAL VIEW

J:\717-0-20\workspace\DD143\p\ Pond Limits - JAS\CGA Map - 01-08-21 - 12.04pm - JAS23

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

12-8-2020

PROJECT NUMBER:

6771.8

DAYS OF WEEK:

S M T W T F S

COUNTY, ROUTE, ROAD:

SHEET NO.

OF

LOCATION:

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

GPS PLS 626-662

OUTSIDE TOE = 33.1'

OUTSIDE TOP = 50.2'

INSIDE TOP = ~~58.6'~~ 92.3' 88.8'

EDGE OF WATER = 130.1'

NE OF POND IS A 15" HOPE STAND PIPE (#651) OWNER
WAS NOT SURE WHAT THIS WAS FOR BUT SAID
IT WAS GOING TO BE COVERED

(649) EDGE OF WATER ELEV = 1178.04' (THIS APPEARS TO BE NEAR
BOTTOM OF POND)

(4008) TOP OF CLAY TILE ^{210'} S. OF POND = 1181.43'

(2021) TOP OF 14" VCP NE OF POND (1.27' ^{650'} TOE) = 1178.05'

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Chy [Signature]

Date Prepared:

12-9-2020

Reviewed by:

☐ Engineer

Date Reviewed







6771 DD143 2020-12-08 cs

600,3577741.058,4941947.373,1167.109,eoc new
601,3577744.494,4941938.266,1167.163,eoc new
602,3577764.225,4941945.129,1166.471,eoc new
603,3577760.800,4941954.244,1166.486,eoc new
604,3577819.251,4941726.306,1165.864,san ser 22.5 bend top
605,3577818.221,4941725.413,1165.855,san ser 22.5 bend top
606,3577817.649,4941725.443,1165.833,san ser wye top
607,3577816.373,4941725.553,1165.812,san ser exist top
608,3577770.195,4941947.177,1166.164,eoc
609,3577809.552,4941961.271,1167.940,eoc
610,3577806.369,4941970.365,1167.890,eoc
611,3577766.851,4941956.290,1166.072,eoc
612,3577773.445,4941958.759,1166.173,eoc
613,3577776.840,4941949.619,1166.165,eoc
614,3577936.456,4941726.409,1168.772,sanitary plug approx
615,3577962.669,4939325.382,1182.474,TRD 36"BURR OAK 16' E
616,3576965.741,4937799.271,1185.834,300 CROPDAMAGE HAY
617,3576999.714,4937801.988,1184.712,300 CROPDAMAGE HAY
618,3577013.154,4937762.482,1184.244,300 CROPDAMAGE HAY
619,3576967.404,4937710.720,1185.928,300 CROPDAMAGE HAY
620,3576814.875,4937721.026,1186.542,300 CROPDAMAGE HAY
621,3576814.616,4937707.344,1186.315,300 CROPDAM CORN
622,3576893.627,4937702.631,1185.953,300 CROPDAM CORN
623,3576906.776,4937741.983,1186.454,300 CROPDAMAGE HAY
624,3576941.103,4937751.379,1186.099,300 CROPDAMAGE HAY
625,3576958.486,4937768.931,1185.740,300 CROPDAMAGE HAY
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647,3577213.817,4937860.578,1178.257,5471
648,3577225.368,4937874.361,1178.176,5471

6771 DD143 2020-12-08 cs

649,3577240.423,4937883.991,1178.036,5471
650,3577255.178,4937889.184,1178.046,5471 e
651,3577327.855,4937948.244,1180.960,mh 15" top
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653,3577246.878,4937955.790,1182.954,3211 b
654,3577221.108,4937950.401,1183.000,3211 b
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661,3577133.430,4937813.092,1183.452,3211
662,3577154.624,4937781.373,1183.326,3211 e
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707,3577905.790,4938357.133,1185.872,nne bolt fhy
708,3577743.231,4938317.869,1182.015,n rim (pcc) mh 2.73 to fl pipe n
709,3577737.599,4938333.782,1180.570,n rim bint 1.44 fl ads ne 1.35 btm
710,3577499.040,4941154.710,1174.627,nnw bolt fhy
711,3577499.066,4941154.987,1174.601,cx nne bolt fhy
1000,3576926.866,4942789.480,1163.770,TOPBOLT SE BENT
1001,3576926.653,4942778.388,1161.939,TOPBOLT SE MID BENT
2000,3577911.440,4941721.268,1163.242,FL 24" RCP @ 2.0' BEEHIVE INTAKE
2001,3577950.237,4941214.846,1173.554,GS @ DEPOSITS IN FL/DAM
2002,3577950.909,4941183.149,1173.683,SANITARY MANHOLE
2003,3577927.325,4941364.174,1165.701,GS BLOWOUT
2004,3577918.452,4941352.596,1166.185,GS BLOWOUT
2005,3577949.670,4941300.495,1172.882,CL- CL E IONIA & PARK ST
2006,3577949.205,4941000.136,1174.582,GS ABOVE VCP TILE LOCATION SIZE CHANGE
2007,3577947.053,4940916.133,1174.728,CL-CL DEWEY&E IONIA ST
2008,3577927.851,4941261.059,1165.880,GS TILE BLOWOUT
2009,3577955.130,4941670.318,1176.145,CL-CL EAST ST & E IONIA ST
2010,3577953.595,4941363.236,1172.488,GS LATERAL N
2011,3577954.077,4941383.336,1172.438,GS LATERAL N & S
2012,3577941.253,4941652.352,1175.409,GS LATERAL S
2013,3577936.832,4941683.793,1175.780,GS LATERAL N
2014,3577926.741,4941702.443,1167.685,GS TILE LOCATE
2015,3577940.150,4941670.522,1176.057,GS TILE LOCATE @ CL
2016,3577942.908,4941652.668,1175.504,GS TILE LOCATE
2017,3577952.326,4941617.524,1174.775,GS TILE LOCATE
2018,3577952.641,4941511.930,1173.183,GS TILE LOCATE
2019,3577736.545,4938333.821,1181.437,BEEHIVE INTAKE
2020,3577722.146,4938355.806,1178.040,TOPTO 14" VCP (1.22'TOPTO FL)

6771 DD143 2020-12-08 cs

2021,3577720.230,4938354.841,1178.045,TOP 14" VCP (1.27'TOPTO FL)
2022,3577733.697,4938361.428,1181.613,GS ABOVE TILE LOCATE LATERAL
2023,3577736.285,4938362.304,1181.754,GS TILE LOCATE
2024,3577740.887,4938364.009,1181.781,GS TILE LOCATE
2025,3577749.805,4938367.185,1182.178,GS TILE LOCATE
2026,3577758.806,4938370.901,1182.214,GS TILE LOCATE
2027,3577766.375,4938374.528,1182.444,GS TILE LOCATE
2028,3577771.502,4938378.718,1182.428,GS TILE LOCATE
2029,3577735.160,4938355.264,1181.557,GS TILE LOCATE BEEHIVE
2030,3577736.862,4938347.749,1181.408,GS TILE LOCATE BEEHIVE
2031,3577738.508,4938362.888,1181.745,GS TILE LOCATE FOC IN TILE
2032,3577732.592,4938352.842,1181.481,GS TELEPHONE LOCATE E-W
2033,3577733.333,4938365.247,1181.742,GS TELEPHONE LOCATE E-W
2034,3577733.324,4938370.125,1181.788,GS TELEPHONE LOCATE E-W
2035,3577738.652,4938369.938,1182.031,GS TELEPHONE LOCATE E-W
2036,3577738.766,4938365.007,1181.797,GS TELEPHONE LOCATE E-W
2037,3577738.884,4938351.855,1181.550,GS TELEPHONE LOCATE E-W
2038,3577680.656,4938336.903,1180.822,GS TILE LOCATE
2039,3577646.171,4938321.837,1180.998,GS TILE LOCATE
2040,3577609.554,4938305.555,1181.519,GS TILE LOCATE
2041,3577572.657,4938289.312,1181.932,GS TILE LOCATE
2042,3577532.765,4938271.764,1182.768,GS TILE LOCATE
2043,3577493.265,4938254.329,1182.984,GS TILE LOCATE
2044,3577453.719,4938236.451,1182.872,GS TILE LOCATE
2045,3577415.934,4938219.148,1182.520,GS TILE LOCATE
2046,3577378.743,4938202.276,1182.493,GS TILE LOCATE
2047,3577345.213,4938182.410,1182.459,GS TILE LOCATE
2048,3577311.356,4938161.975,1182.353,GS TILE LOCATE
2049,3577278.442,4938136.584,1182.371,GS TILE LOCATE
2050,3577252.614,4938110.497,1182.415,GS TILE LOCATE
2051,3577222.789,4938078.851,1182.524,GS TILE LOCATE
2052,3577196.784,4938047.749,1182.716,GS TILE LOCATE
2053,3577171.798,4938016.869,1183.087,GS TILE LOCATE
2054,3577145.614,4937984.173,1183.163,GS TILE LOCATE
2055,3577124.570,4937957.099,1183.637,GS TILE LOCATE
2056,3577099.771,4937926.493,1184.218,GS TILE LOCATE
2057,3577075.646,4937896.056,1184.692,GS TILE LOCATE
2058,3577050.016,4937864.012,1185.050,GS TILE LOCATE
2059,3577025.281,4937832.347,1185.002,GS TILE LOCATE
2060,3576999.439,4937800.278,1184.792,GS TILE LOCATE
2061,3576988.126,4937785.443,1185.342,GS TILE LOCATE (END CAMERA)
4000,3590461.417,4941646.179,1151.183,GS TILELOCATE
4001,3590460.954,4941639.859,1147.145,TOP CONC TILE
4002,3590457.619,4941640.360,1144.424,TOP WATERLINE
4003,3591176.870,4941637.634,1165.621,CPT PAVNAIL
4004,3577938.503,4939536.310,1182.101,END TILERREPAIR
4005,3577938.883,4939556.270,1181.760,BGN TILERREPAIR
4006,3576994.477,4937793.309,1184.880,BGN TILERREPAIR
4007,3576839.044,4937712.474,1186.401,END TILERREPAIR

6771 DD143 2020-12-08 cs

4008,3576995.058,4937794.006,1181.432,TOP CLAYTILE15" STARTREPAIR
4009,3576991.562,4937789.357,1181.495,TOP 15"RCP@JOINT
4010,3576986.824,4937782.755,1181.571,TOP 15"RCP@JOINT
4011,3576982.197,4937776.461,1181.627,TOP 15"RCP@JOINT
4012,3576977.165,4937770.102,1181.517,TOP 15"RCP@JOINT
4013,3576972.256,4937763.833,1181.574,TOP 15"RCP@JOINT
4014,3576967.168,4937757.681,1181.581,TOP 15"RCP@JOINT
4015,3576962.252,4937751.249,1181.539,TOP 15"RCP@JOINT
4016,3576956.950,4937745.135,1181.694,TOP 15"RCP@JOINT
4017,3576951.856,4937739.085,1181.627,TOP 15"RCP@JOINT
4018,3576946.457,4937733.172,1181.628,TOP 15"RCP@JOINT
4019,3576940.999,4937727.152,1181.820,TOP 15"RCP@JOINT
4020,3576938.431,4937724.619,1181.715,TOP 15"RCP@JOINT
4021,3576935.111,4937722.925,1181.745,TOP 15"RCP@JOINT
4022,3576927.647,4937720.029,1181.807,TOP 15"RCP@JOINT
4023,3576920.199,4937717.059,1181.810,TOP 15"RCP@JOINT
4024,3576912.735,4937714.100,1181.812,TOP 15"RCP@JOINT
4025,3576905.118,4937711.240,1181.761,TOP 15"RCP@JOINT
4026,3576897.007,4937710.888,1182.013,TOP 15"RCP@JOINT
4027,3576888.969,4937710.686,1181.974,TOP 15"RCP@JOINT
4028,3576880.937,4937710.766,1182.009,TOP 15"RCP@JOINT
4029,3576872.943,4937711.097,1182.100,TOP 15"RCP@JOINT
4030,3576864.884,4937711.532,1182.112,TOP 15"RCP@JOINT
4031,3576857.365,4937711.826,1181.858,TOP 15"RCP@JOINT
4032,3576848.890,4937712.237,1181.820,TOP 15"RCP@JOINT
4033,3576841.069,4937712.353,1181.767,TOP 15"RCP@JOINT
4034,3576838.986,4937712.466,1181.723,TOP 15"RCP@JOINT

Drainage District:

#146

Investigation/Repair Summary:

- Per the recommended actions of the previous investigation summary, the District Trustees ordered the construction of the repairs to the Main Tile outlet in the SW¼ NE¼ Section 15, Township 86 North, Range 20 West.
- Removed trees and brush over the outlet path as well as the existing rusted 18-inch CMP tile outlet up to the existing 18-inch concrete tile. Excavated and graded the trench for the new outlet tile in an upstream direction, placing the bedding rock as work progressed. Replaced the outlet with new 18-inch CMP tile, rock backfill, and a ¾ concrete collar with existing concrete tile at the upstream end of the repair. Excavation was filled with on-site soil, then reinforced with Class E revetment to prevent future erosion and rodent guard on guard on CMP to prevent animal tampering.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.

Additional Actions Recommended:

Monitor area for beaver action, which may restrict drainage from the Main tile, and conduct trapping as necessary.



Tabulated Contractor Time and Materials

Date	Totals	12/3/2020	12/4/2020
Workman (hrs)	18	9 1/2	8 1/2
Mini Excavator (hrs)	4 3/4	4 3/4	
Skidloader (hrs)	4 3/4	4 3/4	
1" Clean Bedding Rock	Yes		
Concrete Collars	Yes		
18" CMP tile (ft)	40		40
Class E Revetment	Yes		
Band Coupler (ea)	1		1
Rodent Guard (ea)	1		1



Drainage Work Order Request For Repair

Hardin County

Date: 10/26/2018

Work Order #: WO00000228

Drainage District: Drainage Districts \DD 146 (51158)

Sec-Twp-Rge: 15-86-20 Qtr Sec: NE

Location/GIS: 86-20-15-200-004

Requested By: Kent Reinert

Contact Phone: (641) 640-5431

Contact Email: _____

Landowner (if different): _____

Description: DD 146 - Outlet is eroded with hole about 15 feet into field. Had a beaver dam last year so not sure if caused damage. End rows are harvested so have access from south edge of field.

Repair labor, materials and equipment: _____

Repaired By: _____ Date: _____

Please reference work order # and send statement for services to:

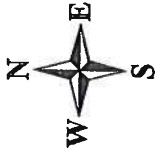
Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

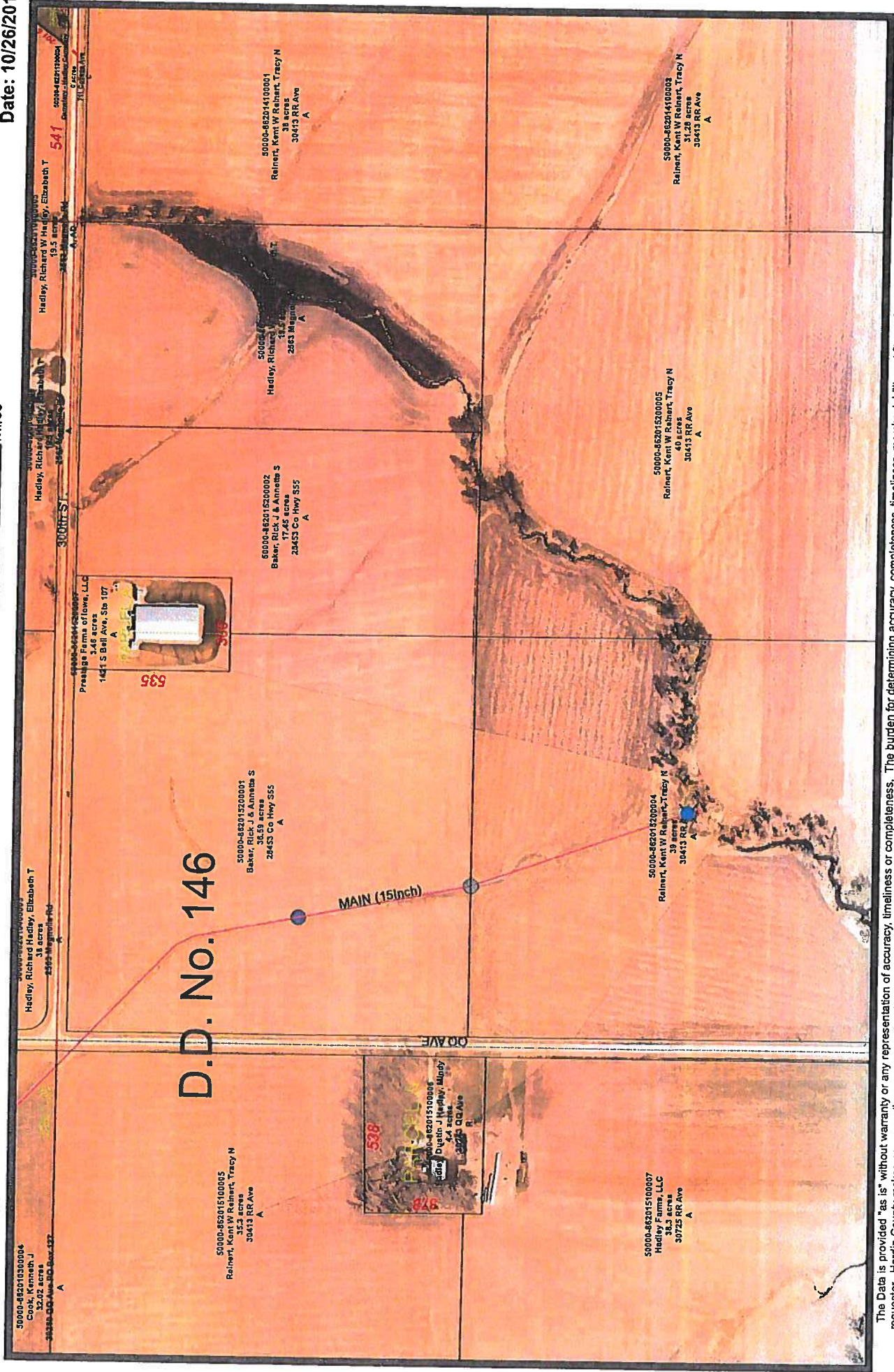
Approved: _____ Date: _____



Hardin County Auditor's Office



Date: 10/26/2018

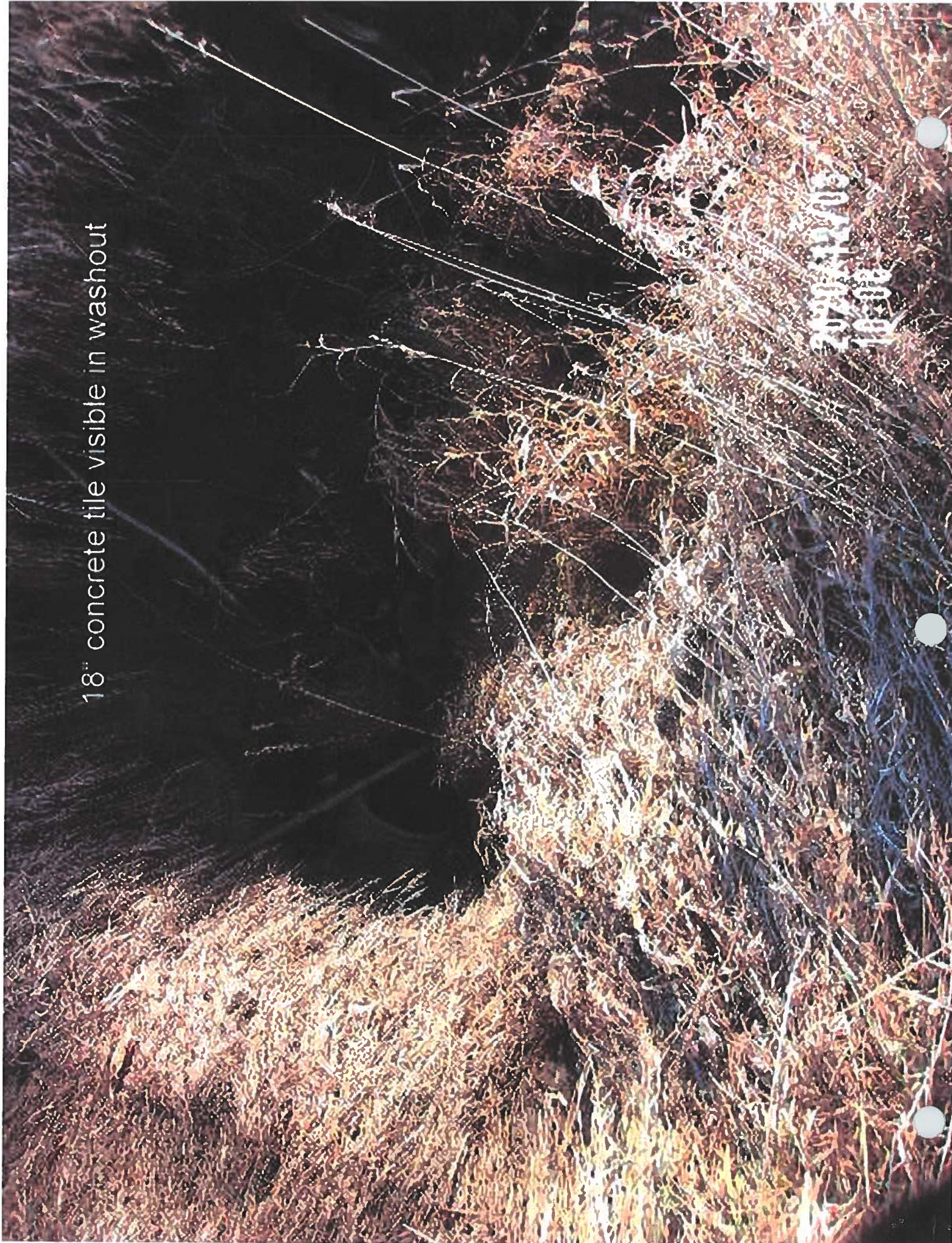


The Data is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. Hardin County makes no warranties, express or implied is to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update. Cadastral Data represents land ownership, but does not define it. This Data does not replace a legal survey.

Project Diary

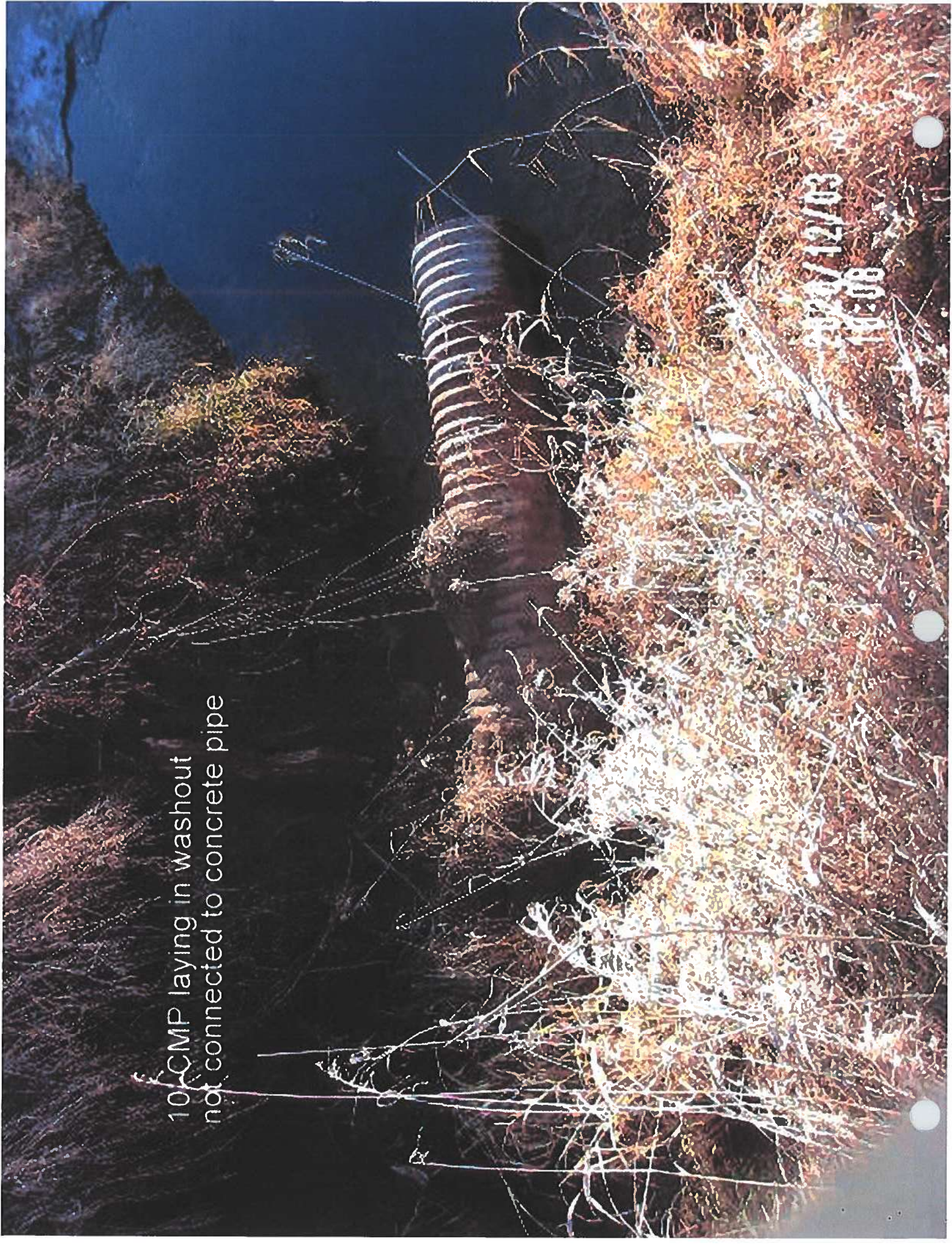
Project: <u>00 # 146 Hardin Co.</u>			
CGA PN: <u>6950.1</u>	Days Charged:	Report No. <u>1</u>	Proj. Mgr. ☒ <u>Lee G.</u>
Contractor: <u>Honey Creek Landscaping</u>		Date: <u>12-3-20</u>	
Superintendent: <u>Adam Sward</u>	Weather Conditions: <u>Clear, Sunny</u>	Precip.: <u>- "</u>	Temp. Hi: <u> </u> ° Temp. Low: <u>29</u> °
INSPECTOR: Time Arrived: <u>8:54 a.m.</u> Time Left: <u>1:38 p.m.</u>		Contractor: Time Arrived: <u> </u> Time Left: <u> </u>	
1. General Remarks and Work Accomplished:			
<u>8:54 a.m. = Arrived at job site. Contractor was clearing trees from project area.</u> <u>9:18 a.m. = Contacted P.M. on what size rip rap he would like. He stated he would like 50 tons of class D or E installed. Contractor began excavating over existing CMP and tile.</u> <u>9:23 a.m. = C.O. left to set up GPS on CPT # 518 and checked into Hardin Co. GPS monument # 8050. (Good).</u> <u>10:11 a.m. = Crew had existing 10' CMP removed and was removing brush and sticks. Contractor had, mini hoe and skid loader on-site for equipment and a 2 man crew.</u> <u>10:30 a.m. = Crew continues to excavate existing tile and place bedding rock as they excavate. Top rib of 18" RCP to F = 1.49'</u> <u>1:38 p.m. = Crew was done digging for day, will have 40' of 18" CMP in morning.</u>			
2. Changes or Extra Work Ordered:			
3. Test Samples Taken:			
4. Visitors to Site:			
5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:			
6. Attachments (total sheets attached <u>0</u>):			

18" concrete tile visible in washout



10 CMP laying in washout
not connected to concrete pipe

03/12/03
1000



- CMP visible in washout

2020/11/27/08
10:29



Existing CMP removed and
contractor excavating existing tile

2020/12/03
12:28



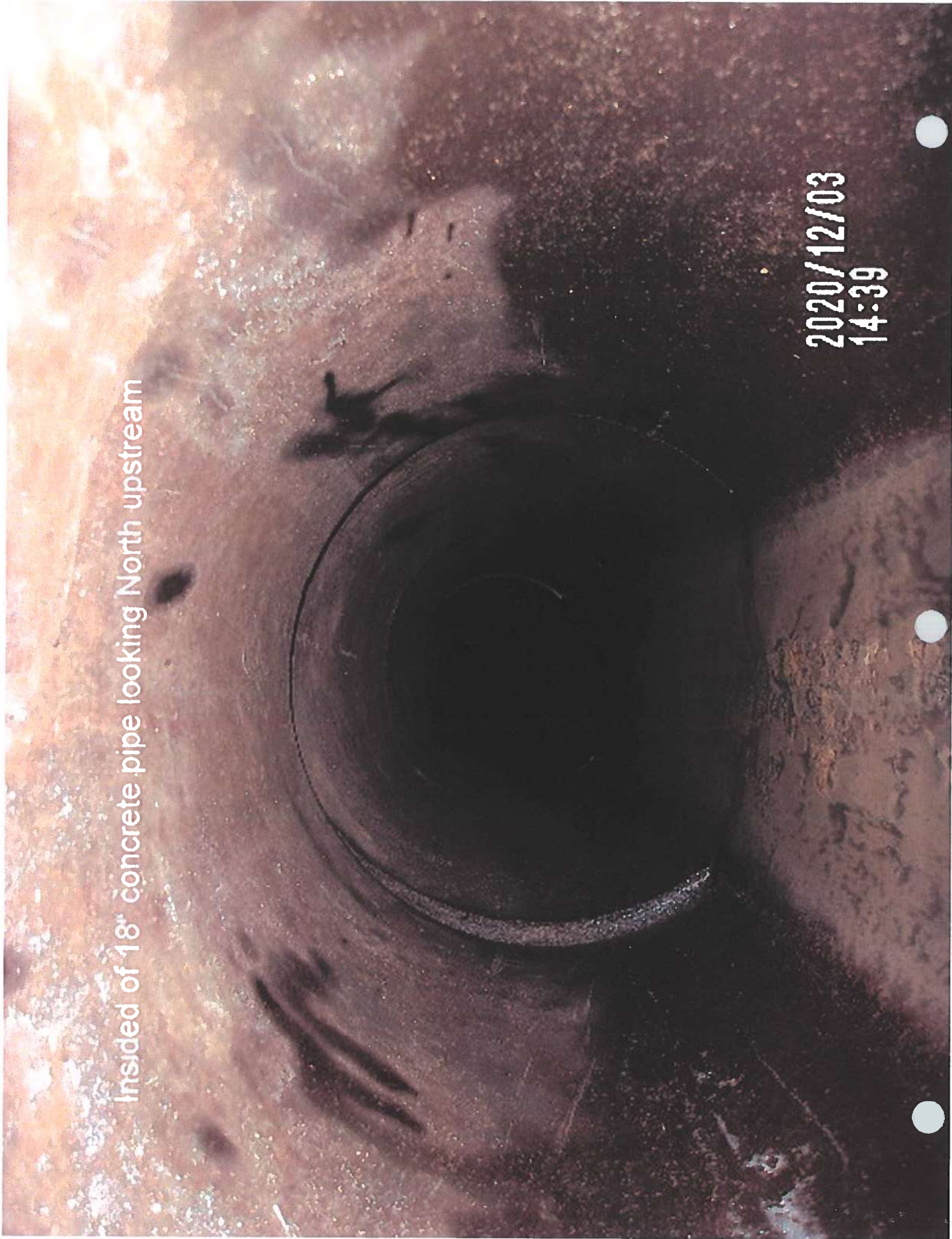
Placing bedding rock

2020/12/03
12:28



Insided of 18" concrete pipe looking North upstream

2020/12/03
14:39



Inside of concrete pipe looking North

2020/12/03
14:39



Inside of 18" concrete pipe-looking upstream

2020/12/03
14:40



Project Diary

Project: <u>DD #146 Hardin County</u>			
CGA PN: <u>6950.1</u>		Days Charged:	Report No. <u>2</u>
Contractor: <u>Honey Creek Land Improvement</u>		Date: <u>12-4-20</u>	Proj. Mgr. ☒ <u>hcc 6.</u>
Superintendent: <u>Adam Seward</u>	Weather Conditions: <u>clear, sunny</u>	Precip.: <u>- "</u>	Temp. Hi: <u>°</u>
			Temp. Low: <u>34 °</u>
INSPECTOR:		Contractor:	
Time Arrived: <u>8:46 a.m.</u> Time Left: <u>1:07 p.m.</u>		Time Arrived: Time Left:	
1. General Remarks and Work Accomplished: 8:46 a.m. = Arrived at job site and set up GPS on CPT #518 and checked into Hardin Co. GPS monument #8050. (Good). 9:13 a.m. = Returned to job site. Crew had 1 section of 18" CMP installed in trench. Pipe had 0.7% to 0.8% slope per digital level. 10:08 a.m. = Second section of CMP in place. Installing band clamp on 18" CMP. 10:14 a.m. = 1 load class E rip rap arrived on-site. 10:30 a.m. = Shot top 18" CMP. Top CMP to EL = 1.53' Point #15 = North end 18" CMP = 989.49 EL = 987.96 Point #16 = South end 18" CMP = 989.29 EL = 987.76 10:37 a.m. = Began mixing Kwik Kcrete for collar. Crew used approximately 2. Changes or Extra Work Ordered: 20 Bags Kwik Kcrete for collar, (CMP to existing 18" RCP) 10:41 a.m. = PCC collar complete. 11:01 a.m. = Crew went to lunch to let PCC collar set up. 11:58 a.m. = Contractor back filling over new CMP. 3. Test Samples Taken: 12:12 p.m. = Contractor began placing class E rip rap. 1:00 p.m. = Rip rap installed and shaped. Rodent guard installed on 18" CMP. 1:07 p.m. = C.O. left for day. Crew was cleaning up site. 4. Visitors to Site: 5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done: 6. Attachments (total sheets attached <u>0</u>):			

18' CMP in place

2020/12/04
10:30





Placing rock over 18' CMP

2020/12/04
11:20

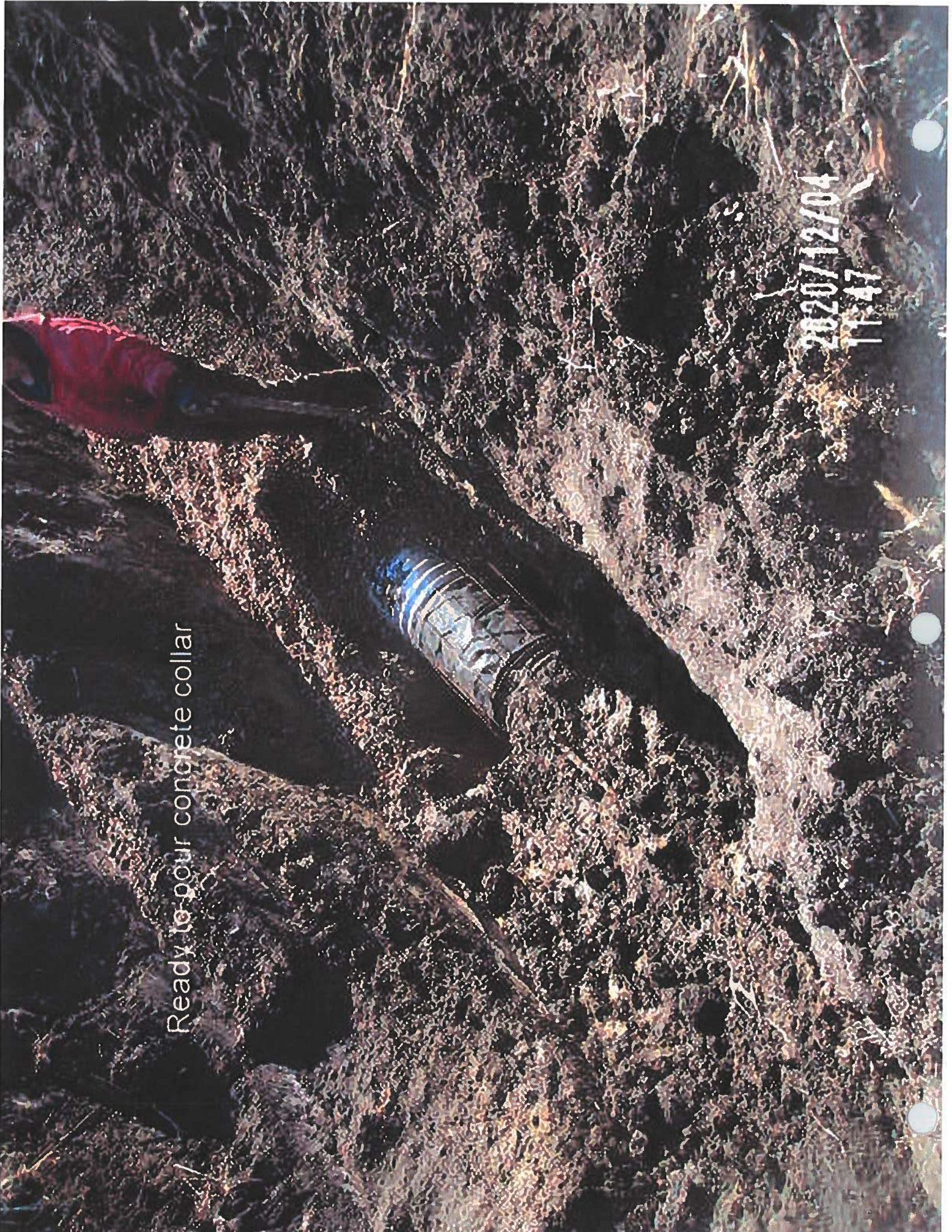


Placing-rock over 18" CMP

2020/12/04
11:26

Ready to pour concrete collar

2020/12/04
11:47



Concrete collar poured

69-11
10721/0207
2020/12/04



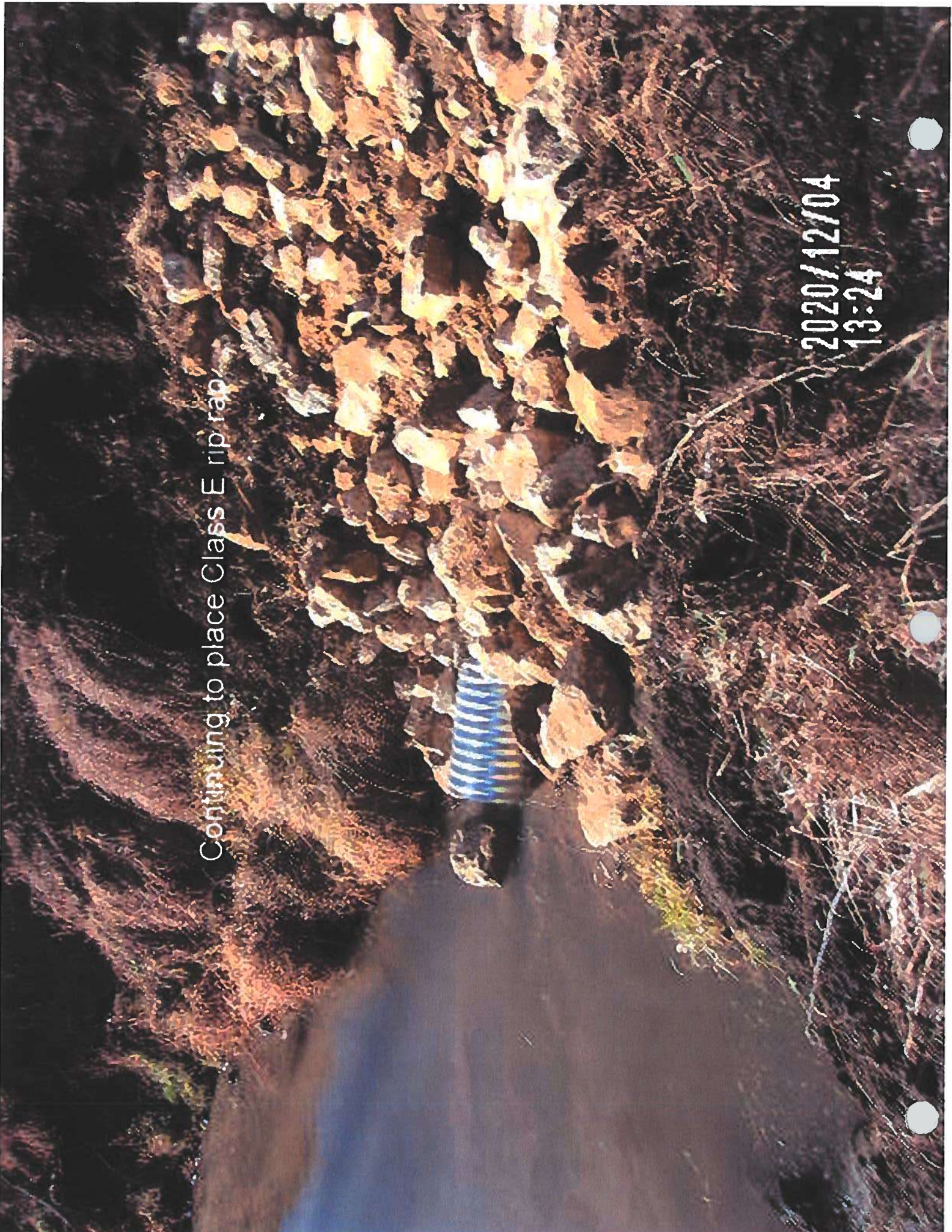


-Placing Class E rip rap-

2020/12/04
13:22

Continuing to place Class E rip rap

2020/12/04
13:24





Class E rip-rap installed

2020/12/04
14:01



Final shaping of rip rap

2020/12/04
14:01



Rip rap placed and continuing to shape

2020/12/04
14:01



2020/12/04
14:06

Rip-rap installation complete

Rip rap installation complete

2020/12/04
14:06





Rodent Gaurd installed in 18" CMP



Rodent Gaurd installed in 18" CMP

1,3559309.992,5011927.710,1001.864,GS EXPLORE LIMITS
2,3559318.637,5011975.916,1001.361,GS EXPLORE LIMITS
3,3559316.312,5011961.663,998.173,HOLE IN 6"PLAST TILE
4,3559304.112,5011964.750,1000.383,GS GRASS EDGE
5,3559338.588,5011961.296,1000.891,GS GRASS EDGE
6,3559345.074,5011930.808,1000.886,GS GRASS EDGE
7,3559292.141,5011938.348,1000.929,GS GRASS EDGE
8,3559128.608,5012053.965,1002.013,FNL WBP
9,3559129.957,5011920.037,1001.301,FNL WBP
10,3559132.508,5011516.949,1022.335,FNL WCP
11,3559132.469,5011484.804,1024.583,CL ROAD@FNL
12,3558429.566,5012196.270,993.826,GS
13,3558484.440,5012185.512,995.505,GS
14,3558460.464,5012174.386,989.521, TOP 18" PCC PIPE 1.49' TOP TO FL
15,3558460.275,5012174.554,989.489, TOP 18" CMP
16,3558422.120,5012187.210,989.285, TOP 18" CMP
100,3558465.016,5012327.690,989.849,513 6" spiral
101,3558462.465,5012327.827,989.704,513 6" spiral broke to s
102,3558457.952,5012327.590,988.123,513 6" spiral end
103,3558437.115,5012352.292,987.875,507 creek
104,3558438.735,5012352.771,988.229,300 toe creek
105,3558441.405,5012352.599,988.781,300
106,3558445.779,5012352.788,989.532,300
107,3558454.990,5012351.842,989.764,300
108,3558459.628,5012353.033,991.077,300
109,3558456.682,5012353.861,990.821,501 6"
110,3558469.004,5012352.782,991.727,300
111,3558479.274,5012350.280,994.410,323
112,3558507.424,5012353.912,995.352,300
113,3558542.296,5012353.107,995.634,325
114,3558587.862,5012354.654,995.493,300
115,3558629.846,5012355.655,995.706,300
116,3558629.067,5012305.143,995.686,300
117,3558585.142,5012303.938,995.814,300
118,3558546.879,5012305.677,995.719,325
119,3558555.938,5012272.005,995.511,325
120,3558576.855,5012235.423,995.124,325
121,3558590.174,5012217.243,994.782,325
122,3558590.597,5012213.528,994.188,325
123,3558590.821,5012210.719,993.958,325
124,3558591.817,5012206.735,994.388,325
125,3558591.460,5012196.572,995.214,325
126,3558570.976,5012184.639,995.367,325
127,3558539.695,5012182.965,995.377,325
128,3558492.569,5012179.310,995.443,325
129,3558460.266,5012168.990,995.429,325
130,3558421.639,5012143.427,995.326,325
131,3558394.544,5012125.084,995.597,325
132,3558384.632,5012120.294,995.131,325
133,3558377.642,5012117.865,995.856,325

134,3558366.334,5012114.985,995.587,325
135,3558520.433,5012303.597,995.129,300
136,3558463.245,5012310.141,995.528,300
137,3558473.683,5012319.553,995.269,300
138,3558483.792,5012337.349,995.259,300
139,3558472.101,5012342.843,993.517,323
140,3558465.059,5012343.393,991.208,300
141,3558459.494,5012344.190,990.214,300
142,3558453.137,5012345.524,989.748,300
143,3558447.239,5012342.021,988.888,300
144,3558448.404,5012343.694,988.926,300 toe creek
145,3558445.325,5012339.997,987.845,507 creek
146,3558454.387,5012332.609,988.592,300
147,3558462.370,5012335.030,989.104,300
148,3558466.696,5012335.786,991.299,300
149,3558469.666,5012334.494,994.583,323
150,3558469.007,5012329.705,994.750,323
151,3558472.082,5012328.048,994.940,323
152,3558470.921,5012324.858,995.180,323
153,3558466.861,5012324.952,995.085,323
154,3558464.326,5012325.857,990.494,300
155,3558458.868,5012326.559,988.644,300
156,3558458.919,5012328.759,989.379,300
157,3558464.030,5012329.319,988.769,300
158,3558468.002,5012326.208,992.673,300
159,3558466.812,5012328.308,991.892,300
160,3558469.558,5012327.045,992.253,300
161,3558455.514,5012327.874,988.779,300
162,3558455.211,5012328.004,987.988,300 toe creek
163,3558453.298,5012327.404,987.844,507 creek
164,3558451.679,5012313.741,987.809,507 creek
165,3558445.578,5012304.813,987.777,507 creek
166,3558453.337,5012312.451,987.902,300 toe creek
167,3558457.319,5012309.903,995.235,323
168,3558451.815,5012306.380,993.938,323
169,3558452.634,5012305.619,993.971,323
170,3558459.672,5012306.016,994.926,323
171,3558457.148,5012299.974,991.346,300
172,3558458.251,5012296.939,990.483,300
173,3558459.336,5012295.041,988.413,300 toe washout
174,3558460.520,5012294.262,988.235,507 washout
175,3558461.430,5012293.630,988.599,300 toe washout
176,3558454.312,5012289.016,988.494,300 toe washout
177,3558455.018,5012287.913,987.982,507 washout
178,3558455.684,5012286.369,988.343,300 toe washout
179,3558465.671,5012280.414,993.877,323 washout
180,3558456.182,5012278.939,994.832,323 washout
181,3558446.506,5012281.722,994.531,323 washout
182,3558443.473,5012283.681,993.947,323 washout
183,3558441.850,5012283.917,993.776,323 creek

184,3558433.249,5012279.714,993.435,323 creek
185,3558414.102,5012276.663,990.816,323 creek
186,3558412.937,5012278.132,988.697,300
187,3558410.950,5012280.321,987.949,300 toe creek
188,3558406.430,5012280.706,987.654,507 creek
189,3558425.557,5012285.059,991.129,323 creek
190,3558424.087,5012288.097,987.727,300 toe creek
191,3558422.267,5012290.010,987.822,507 creek
192,3558437.735,5012289.913,990.304,300
193,3558438.662,5012291.513,987.907,300 toe creek
194,3558432.539,5012294.570,987.943,507 creek
195,3558441.858,5012291.124,990.135,300 washout
196,3558445.328,5012286.383,991.030,300 washout
197,3558438.919,5012291.461,987.773,300 toe washout
198,3558440.284,5012292.202,988.058,507 washout
199,3558444.472,5012296.239,988.004,300 toe washout
200,3558447.446,5012298.450,990.558,300
201,3558454.148,5012291.419,990.391,300
202,3558451.191,5012294.422,990.614,300
203,3558447.505,5012288.351,987.894,507 washout
204,3558445.609,5012298.642,990.319,300
205,3558442.242,5012298.483,987.002,300 toe creek
206,3558447.379,5012303.332,987.911,300 toe creek
207,3558448.433,5012303.627,991.267,300
208,3558448.312,5012300.873,990.473,300
209,3558448.092,5012302.091,990.578,513 30" junk ne end
210,3558429.268,5012295.540,988.908,513 30" junk sw end
211,3558409.210,5012267.949,991.065,323
213,3558404.052,5012265.953,987.591,300 toe creek
214,3558399.392,5012267.844,987.627,507 creek
215,3558417.679,5012259.839,991.317,300
216,3558423.905,5012261.852,993.401,300
217,3558429.974,5012258.886,994.215,300
218,3558427.323,5012249.753,994.250,300
219,3558422.262,5012246.160,991.379,300
220,3558406.072,5012247.333,991.172,323 creek
221,3558403.853,5012247.958,987.688,300 toe creek
222,3558396.152,5012247.785,987.626,507 creek
223,3558404.597,5012219.700,987.624,507 creek
224,3558411.372,5012223.115,987.034,300 toe creek
225,3558413.500,5012224.326,990.101,323 creek
226,3558424.679,5012228.650,991.389,300
227,3558435.446,5012228.740,994.501,300
228,3558433.484,5012201.803,994.365,323 creek
229,3558440.105,5012207.363,994.539,323 creek
230,3558432.752,5012214.651,992.428,300
231,3558429.383,5012203.086,992.580,300
232,3558423.362,5012202.225,987.423,300 toe creek
233,3558415.626,5012201.485,987.531,507 creek
235,3558405.254,5012185.207,987.691,507 creek

236,3558414.714,5012188.066,987.074,507 creek
 237,3558417.814,5012193.914,987.326,507 creek
 238,3558403.912,5012177.396,987.654,300 toe creek
 239,3558405.442,5012174.543,990.623,507 washout
 240,3558407.825,5012173.925,991.037,300 toe washout
 241,3558404.040,5012174.246,990.718,300 toe washout
 242,3558400.235,5012171.419,994.202,323 creek/washout
 243,3558411.075,5012170.708,994.461,323 creek/washout
 244,3558406.386,5012169.748,991.026,507 washout
 245,3558407.834,5012166.445,991.850,507 washout
 246,3558406.277,5012159.324,994.677,323 washout
 247,3558411.089,5012166.694,994.661,323 washout
 248,3558402.625,5012164.640,994.674,323 washout
 249,3558418.319,5012164.897,994.822,323 washout
 250,3558422.879,5012168.821,994.970,323 washout
 251,3558418.569,5012175.086,994.458,323 creek/washout
 252,3558412.909,5012172.062,993.766,323 creek/washout
 253,3558419.340,5012167.060,994.015,507 washout
 254,3558415.486,5012172.091,992.844,507 washout
 255,3558412.908,5012175.498,991.339,507 washout
 256,3558412.886,5012179.762,987.710,300 toe creek
 257,3558420.601,5012184.194,987.618,300 toe creek
 258,3558421.299,5012187.738,987.405,507 creek
 259,3558423.269,5012192.950,987.566,300 toe creek
 260,3558423.063,5012188.511,987.825,300 toe creek
 261,3558422.670,5012186.426,987.956,300 toe creek
 262,3558425.496,5012185.461,987.891,300
 263,3558425.965,5012186.258,990.145,300
 264,3558424.187,5012189.144,988.737,300
 265,3558421.422,5012187.829,989.246,513 18" cmp outlet
 266,3558429.580,5012183.245,990.174,300
 267,3558432.976,5012181.770,990.968,300
 268,3558435.466,5012181.737,988.179,300
 269,3558433.944,5012184.923,990.889,300
 270,3558428.356,5012188.251,990.237,300
 271,3558436.372,5012182.474,989.232,510 15"? 1.42' top to fl end
 272,3558427.213,5012178.913,994.915,323 creek/washout
 273,3558433.621,5012177.558,994.603,323 creek/washout
 274,3558435.785,5012180.966,995.016,323 creek/washout
 275,3558437.051,5012182.667,995.240,323 creek/washout
 276,3558430.402,5012190.425,994.072,323 creek/washout
 277,3558430.270,5012196.038,994.371,323 creek/washout
 278,3558427.282,5012191.144,991.890,300
 279,3558425.794,5012193.109,991.540,300
 280,3558426.838,5012194.561,991.979,300
 281,3558386.884,5012132.842,995.142,323 crossing
 282,3558382.888,5012129.568,994.003,321 crossing
 283,3558375.255,5012125.481,994.429,321 crossing
 284,3558372.486,5012123.696,995.446,323 crossing
 285,3558361.740,5012134.319,994.322,323 crossing

286,3558364.657,5012137.925,992.216,321 crossing
287,3558372.257,5012143.269,992.259,321 crossing
288,3558377.204,5012145.844,993.968,323 crossing
289,3558373.288,5012167.291,995.928,323 crossing/creek
290,3558386.557,5012170.248,996.223,323 creek
291,3558388.774,5012160.142,994.477,300
292,3558362.522,5012168.668,991.794,321 crossing/creek
293,3558360.437,5012171.557,990.354,300
294,3558357.409,5012171.978,990.190,300
295,3558350.454,5012172.723,988.707,300 crossing
296,3558341.450,5012172.788,988.609,300 crossing
297,3558338.720,5012170.835,990.394,300 crossing
298,3558350.265,5012154.770,991.606,300 crossing
299,3558353.468,5012154.683,990.816,300 crossing
300,3558359.119,5012138.522,993.443,300 crossing
301,3558361.227,5012141.597,991.806,300 crossing
302,3558340.658,5012174.351,987.933,300 toe creekcrossing
303,3558351.101,5012173.823,987.979,300 toe creekcrossing
304,3558339.867,5012177.538,987.582,507 creekcrossing
305,3558350.229,5012177.713,987.084,507 creekcrossing
306,3558345.931,5012177.758,987.267,507 creekcrossing
307,3558369.933,5012174.578,987.500,300 toe creek
308,3558371.420,5012180.844,986.559,507 creek
309,3558384.521,5012175.708,990.184,300 creek
310,3558384.629,5012178.098,987.536,300 toe creek
311,3558384.579,5012182.969,987.386,507 creek
312,3558380.223,5012191.723,989.542,513 18" e side junk
313,3558375.576,5012184.505,987.914,513 18" w side junk
314,3558386.836,5012074.040,996.261,300
315,3558441.984,5012074.910,997.034,300
316,3558522.260,5012075.421,997.381,300
317,3558571.913,5012076.048,996.689,300
318,3558612.680,5012075.910,996.702,300
319,3558617.384,5012129.826,996.075,300
320,3558570.746,5012127.951,996.226,300
321,3558525.979,5012126.095,996.331,300
322,3558478.612,5012125.706,995.879,300
323,3558429.622,5012128.856,995.381,300
324,3558390.567,5012136.231,995.122,300
325,3558404.218,5012150.260,994.736,300
326,3558429.729,5012165.337,995.189,300
327,3558438.675,5012176.845,995.167,300
328,3558485.898,5012176.680,995.544,300
329,3558531.798,5012175.195,995.458,300
330,3558575.252,5012174.671,995.714,300
331,3558616.809,5012172.735,995.740,300
332,3558621.633,5012247.382,995.686,300
333,3558578.447,5012252.609,995.522,300
334,3558541.797,5012259.435,994.650,300
335,3558529.903,5012264.249,994.257,300

336,3558553.001,5012241.379,994.987,300
337,3558580.894,5012221.279,995.058,300
338,3558607.506,5012222.207,994.891,300
339,3558607.742,5012211.140,994.456,300
340,3558605.923,5012197.780,995.072,300
341,3558546.645,5012194.165,994.984,300
342,3558517.089,5012207.903,994.949,300
343,3558485.722,5012205.410,994.959,300
344,3558452.042,5012215.821,994.608,300
345,3558443.179,5012234.237,994.872,300
346,3558446.775,5012245.293,994.558,300
347,3558464.502,5012260.823,994.145,300
348,3558493.301,5012249.615,994.374,300
349,3558472.036,5012289.519,992.548,323 washout
350,3558471.798,5012292.220,991.191,300
351,3558470.090,5012296.056,990.571,300
352,3558468.790,5012298.690,988.269,300 toe washout
353,3558467.962,5012300.467,988.108,507 washout
354,3558467.381,5012301.878,988.360,300 toe washout
355,3558465.519,5012307.197,994.985,323 washout
356,3558476.818,5012315.680,995.097,300
357,3558483.665,5012319.589,994.674,300
358,3558486.316,5012316.037,993.571,323 washout
359,3558482.087,5012310.230,992.947,323 washout
360,3558489.619,5012314.044,991.383,321 washout
361,3558491.811,5012312.725,991.347,321 washout
362,3558489.516,5012308.596,990.556,321 washout
363,3558487.705,5012306.165,990.337,321 washout
364,3558485.696,5012308.017,990.897,321 washout
365,3558487.347,5012307.110,990.283,507 washout
366,3558494.581,5012310.148,992.104,507 washout
367,3558499.021,5012312.406,993.446,507 washout
368,3558501.048,5012313.367,993.988,323 washout
369,3558500.489,5012310.311,994.185,323 washout
370,3558499.844,5012314.454,994.299,323 washout
371,3558497.231,5012314.222,994.060,323 washout
372,3558502.659,5012323.624,994.208,323 washout
373,3558499.519,5012326.502,994.668,323 washout
374,3558492.930,5012329.482,994.636,323 washout
375,3558490.030,5012323.155,994.179,323 washout
376,3558484.929,5012335.363,995.292,300
377,3558505.703,5012328.852,994.874,300
378,3558498.291,5012322.600,992.013,300 toe washout
379,3558493.786,5012322.554,991.882,300 toe washout
380,3558481.543,5012306.268,988.981,300 toe washout
381,3558481.437,5012303.421,988.334,507 toe washout
382,3558481.431,5012301.684,988.462,300 toe washout
383,3558480.614,5012296.076,991.755,323 washout
384,3558478.079,5012291.469,991.624,300
385,3558477.490,5012283.141,993.169,300

386,3558491.230,5012290.265,992.293,323 washout
387,3558495.807,5012292.905,988.911,300 washout
388,3558497.539,5012295.000,988.476,507 washout
389,3558500.099,5012295.942,988.665,300 toe washout
390,3558508.513,5012300.252,994.157,323 washout
391,3558512.727,5012293.400,994.282,323 washout
392,3558518.593,5012290.032,994.468,323 washout
393,3558520.599,5012282.290,994.153,323 washout
394,3558524.128,5012275.774,993.972,323 washout
395,3558520.867,5012269.262,994.050,323 washout
396,3558508.084,5012273.316,992.719,323 washout
397,3558509.064,5012265.383,992.761,323 washout
398,3558521.266,5012261.730,993.915,323 washout
399,3558517.457,5012255.805,992.038,300
400,3558507.584,5012261.601,991.137,300
401,3558518.373,5012277.585,991.321,300 toe washout
402,3558519.110,5012274.603,991.416,300 toe washout
403,3558508.846,5012278.309,990.915,300 toe washout
404,3558503.957,5012279.425,990.285,300 toe washout
405,3558504.029,5012280.964,990.239,300 toe washout
406,3558510.641,5012281.821,991.131,300 toe washout
407,3558513.574,5012280.155,990.869,300 toe washout
408,3558519.257,5012284.979,993.038,300 toe washout
409,3558517.733,5012285.768,993.018,300 toe washout
410,3558504.605,5012282.782,991.341,300
411,3558503.252,5012281.852,989.173,300 toe washout
412,3558500.064,5012282.646,988.398,507 washout
413,3558497.897,5012280.143,988.838,300 toe washout
414,3558492.987,5012274.645,993.267,323 washout
415,3558495.161,5012261.345,993.945,323 washout
416,3558499.328,5012262.493,988.948,300 toe washout
417,3558501.253,5012263.170,988.761,507 washout
418,3558503.243,5012263.482,988.925,300 toe washout
419,3558511.250,5012265.339,993.378,323 washout
420,3558524.912,5012249.522,993.731,323 washout
421,3558533.506,5012241.453,994.062,323 washout
422,3558535.070,5012233.345,993.651,323 washout
423,3558525.591,5012240.973,991.253,300
424,3558525.155,5012245.865,992.195,300
425,3558521.308,5012248.244,989.023,300 toe washout
426,3558519.429,5012246.197,988.672,507 washout
427,3558517.289,5012243.606,989.131,300 toe washout
428,3558514.985,5012238.997,993.438,323 washout
429,3558520.794,5012221.235,993.965,323 washout
430,3558526.420,5012224.467,990.350,300 toe washout
431,3558528.945,5012225.896,990.124,507 washout
432,3558577.045,5012203.583,994.784,323 washout
433,3558577.245,5012208.004,993.692,300 toe washout
434,3558576.602,5012210.512,993.282,300 toe washout
435,3558576.377,5012211.851,993.436,300 toe washout

436,3558576.296,5012215.267,994.890,323 washout
437,3558583.523,5012214.507,994.591,323 washout
438,3558584.008,5012212.710,994.181,507 washout
439,3558583.297,5012211.639,994.138,507 washout
440,3558583.341,5012209.394,994.962,323 washout
441,3558583.397,5012206.601,994.246,507 washout
442,3558579.243,5012206.731,994.338,507 washout
443,3558588.305,5012207.453,994.194,507 washout
444,3558585.458,5012208.442,994.722,300
445,3558585.038,5012203.152,994.791,300
446,3558579.945,5012203.755,994.817,300
447,3558570.373,5012204.416,994.623,323 washout
448,3558570.195,5012209.558,993.233,507 washout
449,3558570.265,5012211.701,993.118,507 washout
450,3558570.857,5012217.397,995.057,323 washout
451,3558560.816,5012213.548,994.162,323 washout
452,3558560.283,5012211.367,991.911,507 washout
453,3558560.101,5012209.050,992.094,507 washout
454,3558558.761,5012205.852,994.312,323 washout
455,3558557.088,5012198.037,994.895,300 washout
456,3558558.604,5012199.797,993.846,300 washout
457,3558561.354,5012202.225,994.013,300 washout
458,3558566.036,5012197.913,994.735,300 washout
459,3558561.829,5012204.304,995.125,300 washout
460,3558560.467,5012207.245,994.676,300 washout
461,3558547.565,5012201.868,994.873,300 washout
462,3558551.349,5012204.973,993.849,300 washout
463,3558554.411,5012215.828,994.063,300 washout
464,3558554.575,5012219.455,994.352,300 washout
465,3558546.952,5012220.407,993.653,323 washout
466,3558549.514,5012220.137,993.975,323 washout
467,3558539.064,5012228.654,993.854,323 washout
468,3558532.458,5012237.160,993.723,323 washout
469,3558544.708,5012205.089,994.620,323 washout
470,3558534.519,5012212.825,994.559,323 washout
471,3558527.099,5012216.154,994.434,323 washout
472,3558544.203,5012209.522,993.463,300 washout junk fill
473,3558546.418,5012214.881,992.905,300 washout junk fill
474,3558547.626,5012217.740,991.508,300 washout junk fill
475,3558533.700,5012217.429,992.964,300 washout junk fill
476,3558535.487,5012221.087,992.627,300 washout junk fill
477,3558539.598,5012225.649,992.574,300 washout junk fill
478,3558526.788,5012221.262,992.000,300 washout junk fill
479,3558527.368,5012226.438,989.966,300 washout junk fill
480,3558530.763,5012229.589,992.824,300 washout junk fill
481,3558531.759,5012232.019,991.991,300 washout junk fill
482,3558525.296,5012239.935,991.168,300 washout junk fill
483,3558522.030,5012236.293,989.137,300 washout junk fill
484,3558529.056,5012227.754,990.075,300 washout junk fill
485,3558520.946,5012237.198,988.763,507 washout

486,3558474.240,5012237.408,994.718,300 rr tie pile
487,3558466.392,5012235.234,994.577,300 rr tie pile
488,3558457.687,5012238.771,994.633,300 rr tie pile
489,3558459.203,5012243.374,994.620,300 rr tie pile
490,3558474.858,5012242.215,994.420,300 rr tie pile
491,3558519.921,5012227.429,993.237,501 6" w side
492,3558519.242,5012230.117,993.854,501 16" w side
493,3558521.401,5012228.279,993.398,501 18" w side
494,3558518.365,5012251.736,991.717,501 12"
495,3558519.386,5012270.831,994.198,501 12"
496,3558502.575,5012269.177,990.058,501 8" e side
497,3558515.901,5012286.713,993.530,501 8" w side
498,3558504.977,5012295.516,992.838,501 10"
499,3558494.135,5012286.521,993.388,501 22"
500,3558494.201,5012283.540,992.330,501 8" s side
501,3558458.990,5012282.614,992.385,501 8" w side
502,3558451.040,5012283.297,991.857,501 6"
503,3558442.785,5012290.524,990.660,501 8"
504,3558445.392,5012296.794,989.522,501 8"
505,3558447.183,5012298.569,990.549,501 12"
506,3558451.344,5012304.654,993.680,501 10"
507,3558490.130,5012312.694,991.274,501 10"
508,3558491.397,5012302.804,993.505,501 28"
509,3558470.597,5012304.917,991.783,501 12"
510,3558464.837,5012332.630,992.004,501 6"
511,3558425.805,5012196.763,990.864,501 6"
512,3558439.687,5012213.446,995.090,501 24" e side
513,3558427.910,5012211.047,991.009,501 40" s side
514,3558419.554,5012248.249,993.229,501 8"
515,3558421.313,5012255.722,991.694,501 6"
516,3558425.992,5012257.411,994.067,501 12" nside
517,3558450.831,5012259.031,994.936,501 14"
518,3560484.876,5012828.221,1049.233,cpt ir 12 0.2'd
8050,3555145.290,5008787.520,1046.280,GPS8050
8050_GNSS,3555145.290,5008787.520,1046.280,Autonomous Setup

Drainage District:

#4-53

Investigation Summary:

- Landowner in the NW¼ NE¼ Section 4, Township 89 North, Range 21 West reported a blowout/sinkhole with standing water in the field over the assumed Lateral 4A tile route, just south of where it crosses Hardin Road (Highway C73).
- This reported issue was the same as Work Order #303.

Contractor Time and Materials (spent while CGA was on-site):

None recorded, as work was completed under a separate Work Order.

Additional Actions Recommended:

See the summary provided with Work Order #303 for actions taken and recommended.





Drainage Work Order Request For Repair

Hardin County

Date: 6/9/2020

Work Order #: WO000000296

Drainage District: DDs\DD F-H 4-53 (51213)

Sec-Twp-Rge: 04-89-21 **Qtr Sec:** N1/2 SE1/4

Location/GIS: 89-21-04-200-002

Requested By: Jim Ziesman

Contact Phone: (641) 648-4933

Contact Email: Cell - 641-640-0419

Landowner (if different): _____

Description: DD F-H 4-53 - Landowner Jim Ziesman reports blowout with standing water in field on district tile in parcel #892104200002, located near where tile enters field in grassy waterway.

Repair labor, materials and equipment: _____

Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____



6500 2020-12-07 cs

1,3666160.310,4968629.670,1166.150,gps 8022
2,3666160.310,4968629.670,1166.150,Autonomous Setup
3,3665601.308,4985365.258,1153.705,gps 8039
4,3662686.568,4971781.373,1146.882,2.5' dia sinkhole
5,3662687.541,4971779.329,1143.094,top existing 32" vcp 2.77'to fl
6,3662685.287,4971776.399,1147.833,gs above tile
7,3662691.009,4971783.732,1148.264,gs above tile
8,3663330.530,4968801.041,1150.586,4.5'n-s*5.5'e-w
9,3663332.192,4968805.303,1150.554,top 10" vcp 0.88'to fl
10,3663284.607,4968738.850,1153.044,2.5' dia sinkhole
11,3663286.605,4968735.137,1153.508,8" dia sinkhole
12,3663327.463,4968798.394,1150.579,top 10" vcp 0.88'to fl
13,3663335.000,4968803.834,1152.886,top 5" vcp full dirt
14,3663330.888,4968795.343,1152.932,top 5" vcp full dirt
15,3663696.190,4968805.479,1162.175,fence e-w
16,3663695.365,4968720.301,1159.861,fence e-w
17,3663333.674,4968808.383,1154.979,gs above existing tile
18,3663325.979,4968795.250,1155.014,gs above existing tile
19,3663287.204,4968739.933,1151.305,top existing 10" vcp 0.88' to fl
20,3663284.675,4968736.599,1151.305,top existing 10" vcp 0.88' to fl
21,3663281.406,4968733.016,1155.472,gs above existing tile
22,3663298.207,4968754.179,1155.152,gs above existing tile
23,3665601.320,4985365.261,1153.716,gps 8039
24,3663440.572,4972146.722,1152.562,cpt 34 ir
25,3663121.599,4972576.733,1144.300,gs above existing tile
26,3662854.138,4972856.960,1140.237,top 36" cmp outlet 3.01' to fl
27,3663115.447,4972584.564,1144.271,gs above existing tile
28,3663118.687,4972580.097,1140.912,top 34" vcp 2.78' to fl
29,3663300.267,4968762.985,1153.228,BLOWOUT
30,3663300.214,4968758.654,1151.097,10"CLAY CLEAN
31,3663305.081,4968765.715,1150.771,10"CLAY CLEAN
32,3671144.512,4972728.155,1195.694,top tile -4.05
33,3671061.498,4972739.434,1196.657,top tile -4.05
34,3670738.067,4972767.542,1195.245,crop dmg 2020-6-8
35,3670771.277,4972767.593,1195.233,crop dmg 2020-6-8
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37,3670736.726,4972636.791,1192.239,crop dmg 2020-6-8
38,3671512.707,4972786.250,1189.171,top 5" hdpe single wall
39,3671509.830,4972785.764,1192.291,gs
40,3671509.599,4972799.553,1192.261,crop dmg 2020-6-8
41,3671539.260,4972801.985,1192.368,crop dmg 2020-6-8
42,3671540.052,4972739.157,1192.600,crop dmg 2020-6-8
43,3671507.872,4972743.015,1192.506,crop dmg 2020-6-8
44,3671474.166,4972743.142,1195.877,tree os 33'+-s
45,3671475.598,4972729.307,1195.925,tree os 33'+-s
46,3671475.813,4972719.495,1196.002,tree os 33'+-s
47,3671455.090,4972744.540,1192.909,top cmp 18"
48,3671493.900,4972744.641,1193.147,top cmp 18"
49,3666044.827,4967907.559,1156.912,10"CLAY TILE @BLOWOUT

6500 2020-12-07 cs

50,3665195.129,4966858.093,1156.976,LOW WET AREA
51,3666091.534,4967940.481,1159.703,gs tile locate
52,3666120.642,4967976.600,1159.936,gs tile locate
53,3666156.036,4968022.468,1159.921,gs tile locate
54,3666176.084,4968044.347,1160.241,gs tile locate
55,3666247.982,4968121.293,1157.127,int 8" cmp fl
56,3667364.250,4969908.144,1156.485,int 10" hick fl
57,3667362.860,4969874.822,1158.138,top pcc 6" nw-se
58,3667352.683,4969905.385,1157.781,top 15" vcp n-s
59,3667205.816,4969877.603,1161.446,gs tile locate
60,3667135.035,4969857.761,1161.397,gs tile locate
61,3667087.745,4969834.074,1161.682,gs tile locate
62,3667434.389,4969795.562,1158.315,top 6x6x4 tee
63,3667435.049,4969796.055,1158.332,top hdpe 4" n
64,3667485.773,4969737.456,1161.183,int 8" hick
65,3666779.953,4970174.911,1163.503,int 6" hick
66,3667299.828,4969895.147,1157.625,top 15" vcp 1.28' to fl
67,3667076.270,4969827.174,1158.243,top 20" vcp
68,3667104.562,4969844.067,1158.202,top 20" vcp
69,3667150.913,4969862.605,1157.434,top 16" 18" vcp
70,3666021.796,4967902.974,1157.055,top 10" clay 0.95 to fl
71,3666048.785,4967909.858,1156.979,top 10" clay 0.90 to fl
72,3666051.869,4967907.293,1157.120,top 10" clay 0.90 to fl
73,3666267.996,4969388.082,1156.906,top 22" clay
74,3666293.230,4969401.072,1163.438,gs tile locate
75,3666326.644,4969410.758,1163.661,gs tile locate
76,3666361.776,4969420.926,1163.792,gs tile locate
77,3666742.611,4970176.033,1163.597,gs tile locate
78,3666699.571,4970182.051,1163.554,gs tile locate
79,3666802.245,4970171.072,1159.947,top 5 clay
80,3666681.406,4970183.461,1160.163,top 5 clay
81,3666832.370,4970167.948,1164.081,gs tile locate
82,3666884.145,4970161.938,1164.659,gs tile locate
83,3666905.915,4970159.744,1158.913,top 6 clay
84,3666918.111,4970138.911,1164.448,gs tile locate
85,3666939.141,4970096.684,1164.700,gs tile locate
86,3666962.405,4970047.413,1164.611,gs tile locate
87,3666989.862,4969991.061,1163.530,gs tile locate
88,3667021.781,4969918.846,1162.411,gs tile locate
89,3666932.784,4970109.017,1158.626,top 18 vcp
90,3666489.494,4971867.481,1162.503,int 8" hick fl
91,3666811.651,4972398.548,1165.263,962 10 n-s
92,3666813.848,4972384.939,1162.370,962 15 n-s
93,3666502.204,4972037.848,1162.566,952 -3.4 to fl
94,3666041.730,4967906.459,1153.072,421 10
95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow

Drainage District:

#4-53, Lat 4A

Investigation/Repair Summary:

- Landowner in the NW¼ NE¼ Section 4, Township 89 North, Range 21 West reported a blowout on the east side of HH avenue, south of the building site over the assumed route of the Main tile.
- Visual observation of the area described did not find any signs of a blowout/sinkhole over the Main tile but did find excess water/moisture in the area where the blowout was reported to be. Further observation of the parcel found a blowout/sinkhole over the connection between a private tile and the assumed Lateral 4A tile south of Highway C73.
- Upon excavation, the two upstream tiles were found to be 10-inch VCP tiles, with the west tile being approximately 60% full of sediment and no flowing water, while the east tile was found to be generally clear of significant debris and freely flowing water. The downstream 10-inch VCP was found to be collapsed and was excavated until cracked, but round, VCP tile was found. Downstream from this excavation, the tile was found to have a small amount of sediment in the base, with freely flowing water above. Upon running a locating cable up the east tile, found that it went diagonally (northeast) towards an intake located on the other side of Hardin Road (Highway C73).
- Repaired the connection with a 10-inch dual wall HDPE, 10-inch HDPE tee, and 10-inch HDPE 45° elbow. Repaired the surrounding tiles with rock bedding and backfill, 10-inch dual wall HDPE, and ¾ concrete collars at each connection to the original VCP tiles.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.

Additional Actions Recommended:

While the tiles repaired are near the Lateral 4A historical location, the 10-inch VCP tile that was found does not match the historical 14-inch diameter which is associated with the Lateral 4A in this location. Due to the topography, it appears that the west tile in this repair would be the likely Lateral 4A tile (if the Lateral 4A was one of the two). Given that this tile is over half filled with sediment, CGA recommends the following actions:

- Further investigation be conducted to determine if any of the tiles repaired is actually the Lateral 4A tile.
- If said west tile is confirmed to be Lateral 4A, determine the extent of the filling of the Lateral 4A with sediment and why the tile was installed as a 10-inch VCP instead of the record 14-inch VCP.
- If all the repaired tiles are determined to be private, the landowner should be made aware and the Trustees may determine how the repair should be billed.



Tabulated Contractor Time and Materials

Date	Totals	11/30/2020	12/7/2020
Workman (hrs)	11 1/2	6	5 1/2
Backhoe (hrs)	5 3/4	3	2 3/4
10" Dual Wall HDPE (ft)	30		30
1" Clean Bedding Rock	Yes		
Concrete Collars	Yes		
10"x10"x10" Dual Wall HDPE Tee (ea)	1		1
10"x45° Dual Wall HDPE Elbow(ea)	1		1



Drainage Work Order Request For Repair

Hardin County

Date: 10/20/2020

Work Order #: WO00000303

Drainage District: DDs\DD F-H 4-53 (51213)

Sec-Twp-Rge: 04-89-21 **Qtr Sec:** _____

Location/GIS: 89-21-04-200-002

Requested By: Jim Zeisman

Contact Phone: (641) 648-4933

Contact Email: _____

Landowner (if different): _____

Description: DD F-H 4-53 - Landowner Jim Zeisman reports blowout in field just east of HH Ave, not too far in field from the Rd and south of building site. Location is flagged, crops harvested. In same parcel as WO 296.

Repair labor, materials and equipment: _____

Repaired By: _____ **Date:** _____

Please reference work order # and send statement for services to:

Hardin County Auditor's Office
Attn: Drainage Clerk
1215 Edgington Ave, Suite 1
Eldora, IA 50627
Phone (641) 939-8111
Fax (641) 939-8245

For Office Use Only

Approved: _____ **Date:** _____

6500.5





Inspector's Project Diary

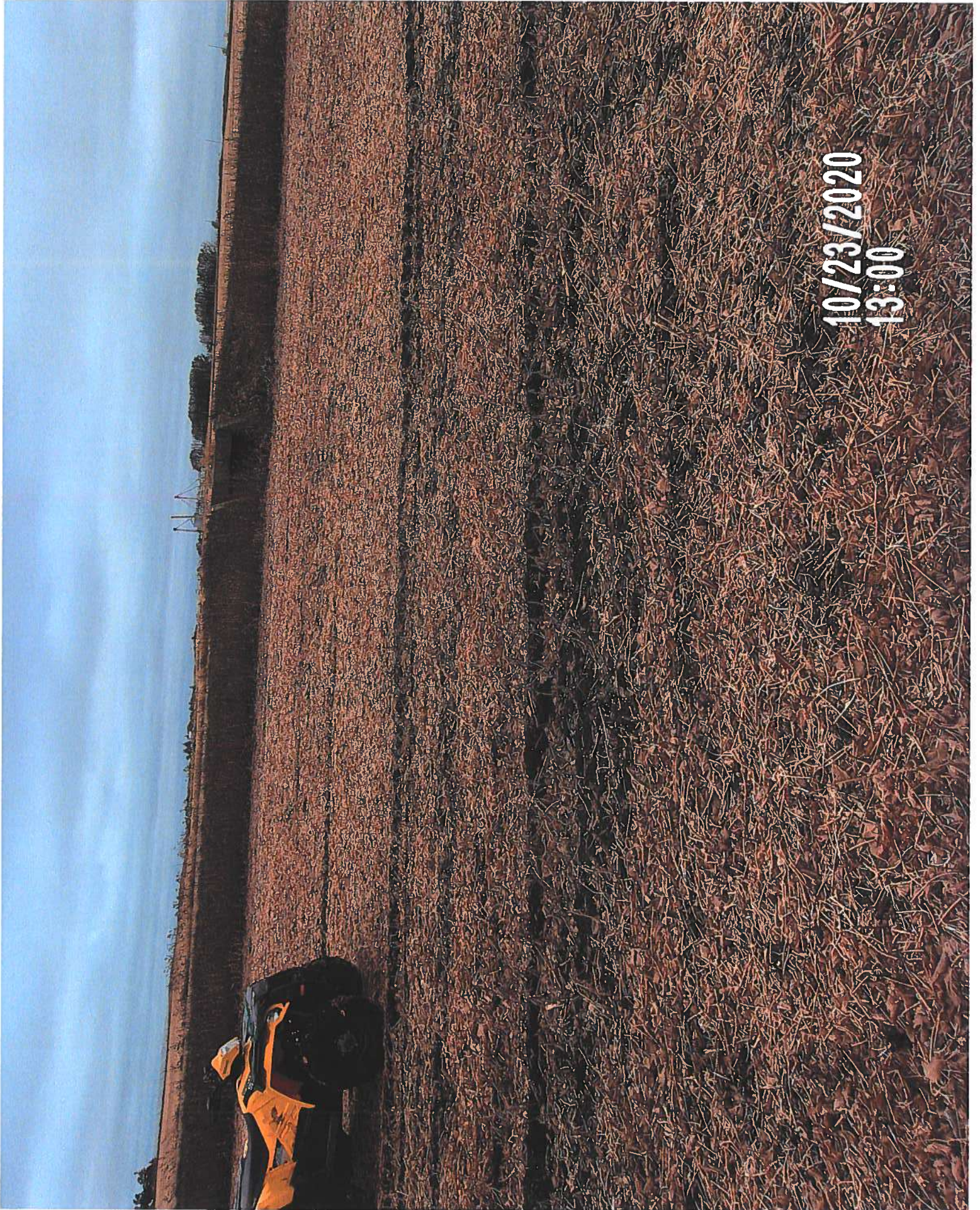
Project: <u>DD F-H 4-53</u>			
CGA PN: <u>6500.5</u>		Days Charged:	Report No.
Contractor:		<u>Fri</u>	Date: <u>10/23/20</u>
Superintendent:	Weather Conditions: <u>Windy, cold, damp</u>	Precip.: <u>1 1/2" RAIN Yesterday</u>	Proj. Mgr. ☒ <u>LEE GAUNTHER</u>
		Temp. Hi: <u>38</u> °	Temp. Low: <u>25</u> °
INSPECTOR:		Contractor:	
Time Arrived:	Time Left:	Time Arrived:	Time Left:
1. General Remarks and Work Accomplished: <u>Called Jim LIESMAN TWICE, NO ANSWER. DROVE OUT WITH 4x4 TO FIND 2ND BLOW-OUT IN FIELD, SHOT BLOW-OUT FROM THIS SPRING #49, DROVE TO DISCUSSION IN FILE, (E. OF HH AVE, AND S. OF ACREAGE) FOUND WET AREA #50. JIM'S SON ARRIVED, TALKED TO HIM, HE CALLED HIS DAD, JIM, HE ARRIVED AND TOLD MR. THUR WAS JUST THE 1 BLOW-OUT FROM THIS SPRING, HE CALLED IN TO DRAINAGE CLERK, TOLD THEM CROPS WERE OUT, THEY DIDN'T KNOW ANYTHING ABOUT IT. MADE OUT NEW REPORT.</u>			
2. Changes or Extra Work Ordered:			
3. Test Samples Taken:			
4. Visitors to Site:			
5. Other Work Crews or Project (utilities, subcontractors, etc.) and Work Done:			
6. Attachments (total sheets attached <u>0</u>):			

ORIGINAL SPRING 2020 Blow-out #49

10/23/2020
12:44



WET SPOT E. OF HH. AVE, S. OF AERRAGE, NO BLEW-OUT



10/23/2020
13:00

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11-30-20

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF

PROJECT NUMBER:

6500.4 + 5

COUNTY, ROUTE, ROAD:

E-73 DO F.H. 4-53

LOCATION:

LAT 4A S. OF C-73 & E.H.H

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

8:20 ARRIVED ON SITE SET UP BASE @ 2 (8022)

8:40 TALKED TO CREW ^(RUSS & FRANK) SAID THAT WE ARE GOING
TO S. END OF PROJECT 1ST

9:00 STARTED EXCAVATING @ SINK HOLE @ 49

9:30 EXPOSED THE 'Y' @ THE BLOWOUT TILE IS SITTING
60% FULL RAN THE LOCATOR DOWN THE TILE &
HIT A PLUG 6' ± DOWN THE TILE

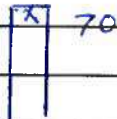
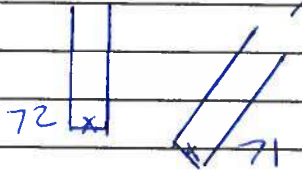
11:50 CREW LEFT SITE TO GET MATERIALS

1:00 CREW CALLED & SAID THAT THEY NEED TO GET SUPPLIES
AND WILL NOT BE ABLE TO FINISH THE REPAIR UNTIL
TOMORROW.

55

C-73

LOCATES 51-54



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Ann Humphrey

Date Prepared:

12-1-20

Reviewed by:

☐ Engineer

Date Reviewed

START OF DAY



2020/11/30



2020/11/30

LOOKING S. DOWN TO

@ 70 LOOKING @ 71 + 72



2020/11/30



2020/11/30

LOOKING N. DOWN ~~70~~ 71

LOOKING N. @ 72



2020/11/30



2020/11/30

LOOKING N. @ 72

▲
@ 72 Looking S. to 70



2020/11/30



2020/11/30

Looking NW @ 71 + 72

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

12-7-20

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF 1

PROJECT NUMBER:

6500.5

COUNTY, ROUTE, ROAD:

DD F.H. 4-53

LOCATION:

LAT 4A S. OF C-73 E. OF H.H.

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

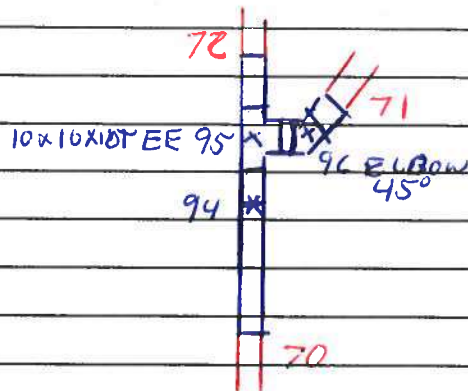
1200 STARTED REPAIRING TILE PLACED A 10X10X10
TEE @ 95 + A 45° ELBOW @ 96

2:15 POURED 3 COLLARS @ 70, 71, + 72

2:45 PICKED UP THE BASE OF AND LEFT THE SITE
CREW WAS GOING TO ANOTHER JOB WHILE THE
PCC CURES AND WILL COME BACK TO FILL IT IN.

CREW PLACED 1.5' OF ROCK ABOVE TILE

CREW POURED 1 CU YD OF PCC



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Chris A. [Signature]

Date Prepared:

12-7-20

Reviewed by:

☐ Engineer

Date Reviewed

START OF DAY



2020/12/07



2020/12/07

PIPE DRY FIT

DRY FIT TILE



2020/12/07



2020/12/07

S: COLLAR

[illegible]

020/12/07

S. COLLAR



2020/12/07



2020/12/07

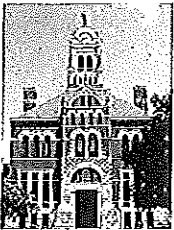
N. 2 COLLARS

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91,3666811.651,4972398.548,1165.263,962 10 n-s
92,3666813.848,4972384.939,1162.370,962 15 n-s
93,3666502.204,4972037.848,1162.566,952 -3.4 to fl
94,3666041.730,4967906.459,1153.072,421 10
95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow



Warrant #

DRAINAGE WORK ORDER REQUEST FOR REPAIRS FRANKLIN COUNTY, IOWA

Work Order #: 143
Fund #: 51162*Laterals not divided
out for review.*District # F-H 4-53 Lateral 4B1, 4B2, + 4B3 Date 9/6/19
Township Lee Section 34 SE 2 Twp 90 Rge 21Repair requested by Mike Nissley, Farm ManagerAddress PO Box 606, Iowa Falls, IA Phone 641-648-4285Landowner Corabel & Jerry MarkAddress PO Box 606, Iowa Falls, IA Phone 641-648-4285Site available for repair now? ☐ YES ☒ NO Date available After harvestIdentification of repair: Broken or plugged tileRequest taken by Julie PralleOriginal cost of the district \$ F = \$24,540.31 (60%) Hardin = \$16,429.50 (40%)Potential wetlands? ☐ YES--Repair existing tile only☒ NO--Repair and maintain tile

Repair assigned to _____ Date _____

**"ATTENTION: Engineer & Contractor – PLEASE contact the person requesting this repair
BEFORE beginning ANY work at this location."**

**Please send statement for services to:
FRANKLIN COUNTY AUDITOR**

ATTN: DRAINAGE
PO Box 26
Hampton, IA 50441

auditor@co.franklin.ia.us

| Please include the GPS coordinates of the location of the |
| repair on your bill to Franklin County |
| (For example, 93°18'39.67 W 42°39'31.7 N) |
Thank you!!

Latitude: _____

Longitude: _____

Phone: (641) 456-5622

Fax: (641) 456-6001



Sep. 6. 2019 3:05PM

Franklin County Auditor 641-456-6001

No. 4585 P. 1

RESOLUTION 2016-18

FRANKLIN COUNTY
INVESTIGATION OF DRAINAGE DISTRICTS PER REQUESTS

NOW, on this 31st day of May, 2016, the following resolution was presented to the Board of Supervisors acting as Drainage District Trustees:

WHEREAS, said Trustees believe that it is in the best interests of drainage districts that individuals, landowners, or entities making requests for district investigation of repairs be responsible for the costs of those investigations in the event that the source of the need for repairs would be privately owned tile and not part of the drainage district facilities or no problem is found and the drainage district facility is anything other than open ditch.

BE IT RESOLVED that in the event any individual or entity makes a request to the drainage district to investigate proposed repairs which require the district to expend funds to determine the location of needed repairs, feasibility of repairs, or any other costs incurred in connection with investigating the request and that in the event in the course of investigation it is discovered that the drainage tile or related structures needing repair are not under the drainage district's control, then the individual, landowner, or entity requesting the investigation shall be responsible for payment of any expenses incurred by the district. If said investigation results in no problem discovered, said requestor is responsible for payment of any expenses incurred by the district. This does not apply to drainage district facilities that are open ditches. If the investigation in the district finds a problem with district facilities, then said district will be responsible for payment of any expenses incurred by the district as allowed by Iowa Code.

The Board of Supervisors acting as Drainage District Trustees authorize the Franklin County Auditor to prepare the necessary form for the individual, landowner, or entity to execute prior to any investigation (except open ditches) in a form necessary to carry out the intent of this resolution.

BE IT DULY ADOPTED this 31st day of May, 2016, with the vote thereon being as follows:

AYES: Eberling, McVicker, Nolte

NAYS:

ABSENT/NOT VOTING:

FRANKLIN COUNTY BOARD OF SUPERVISORS

Corey Eberling
Corey Eberling, ChairmanGary McVicker
Gary McVickerMichael Nolte
Michael Nolte

I have read and agree to the terms of this Resolution:

Carol Mark & Terry Mark
Ms. Michelle S. Giddings
Requestor9/6/19
DateF-H-4-53
Drainage District

ATTEST:

Michelle S. Giddings
Michelle S. Giddings, Auditor & Clerk to Board



Franklin County Parcel Map

0 0.04 0.08 0.16 0.24 0.32
Miles



THIS MAP DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA DELINEATED HEREIN, EITHER EXPRESSED OR IMPLIED BY FRANKLIN COUNTY OR ITS EMPLOYEES. THIS MAP IS COMPILED FROM OFFICIAL RECORDS, INCLUDING PLATS, SURVEYS, RECORDED DEEDS, AND CONTRACTS, AND ONLY CONTAINS INFORMATION REQUIRED FOR COUNTY PURPOSES. SEE THE RECORDED DOCUMENTS FOR MORE DETAILED LEGAL INFORMATION. DIGITAL AERIAL PHOTOGRAPHY WAS FLOWN IN SPRING 2012.

MAP PREPARED BY THE FRANKLIN COUNTY AUDITOR'S OFFICE. CONTACT THEM AT 641.456.5622.



Drainage District:

#4-53; Lat 4 & 4B

Investigation Summary:

- Farm manager and tenant in the SE¼ Section 34, Township 90 North, Range 21 West reported a lack of drainage from the Laterals 4B1, 4B2, and 4B3.
- Visual observation found multiple areas of excess moisture and issues within the south half of said Section 34 and the NE¼ of Section 4, Township 89 North, Range 21 West as follows:
 - Lateral 4:
 - Ponding upstream and downstream of the Lateral 4 & Hardin Road (Highway C73) intersection.
 - Excessive Ponding near the Lateral 4 & 4B connection.
 - Excessive ponding upstream and downstream of the Lateral 4 & 30th Street intersection.
 - Lateral 4B:
 - Multiple wet areas found upstream of the 4 & 4B connection on both sides of Hardin Road (Highway C73).
 - A collapsed intake on the south side of Hardin Road (Highway C73).
 - Excess moisture near the connection of 4B & 4B4.
 - Ponding and pieces of broken tile near the intersection of Lateral 4B & the abandoned railroad.
 - Excess moisture near the connection of Lateral 4B & 4B2.
 - Lateral 4A:
 - A missing VCP wye at the connection with a private tile that is pulling soil into the Lateral tile (repaired under Hardin County Work Order 303).
 - A large amount of tile shards at the intersection of 4A and the east fenceline in the NW¼ of Section 4.
- Excavated the 15-inch VCP Lateral 4 tile upstream of its connection with the Lateral 4B tile, then moved intermittently further downstream to where it was found to be 15-inches, then 18-inches, then 20-inches in diameter. In said excavations found a large amount of debris in the tile taking up approximately 1/4 to 1/3 of the flowline. Above said debris was approximately 3-inches of water flowing slowly
- Excavated Lateral 4 again on the north side of Hardin Road (Highway C73) and found the tile to be relatively free of debris, and again, water flowing slowly at approximately 3-inches deep. At said excavation, also found a 4-inch HDPE private tile protruding approximately 2-3-inches into Lateral 4.
- Excavated the 18-inch VCP Lateral 4B tile approximately 300-feet upstream of its connection with the Lateral 4 tile and found it to have approximately 3-inches of slow-moving water in the flowline. Then excavated at the location where Lateral 4B intersects with the abandoned railroad East of Juniper Ave. and found the 15-inch VCP tile to have approximately 1 to 2-inches of debris in the flowline, with approximately 1 to 2-inches of slow flowing water above.
- All tiles broken in the process of investigation were temporarily repaired with dual wall HDPE tile of matching size and temporary fabric wrap at joints, then backfilled with on-site soil. All tiles that had an exploratory hole cut in the side were patched with engineering fabric and an HDPE tile cover, then backfilled with on-site soil.

Contractor Time and Materials (spent while CGA was on-site):

See attached Tabulated Contractor Time and Materials Sheet.



Additional Actions Recommended:

From the observations made, it is difficult to find a definitive cause for the reported lack of drainage. However, the following items are apparent:

- There is silt/debris in the flowline of both the Lateral 4 and Lateral 4B tiles.
- There is a hump in the Lateral 4 tile, wherein the downstream limits of the exploratory excavation were found to be higher in elevation than the upstream excavations and there is very little fall in the Lateral 4 tile north of Hardin Road.

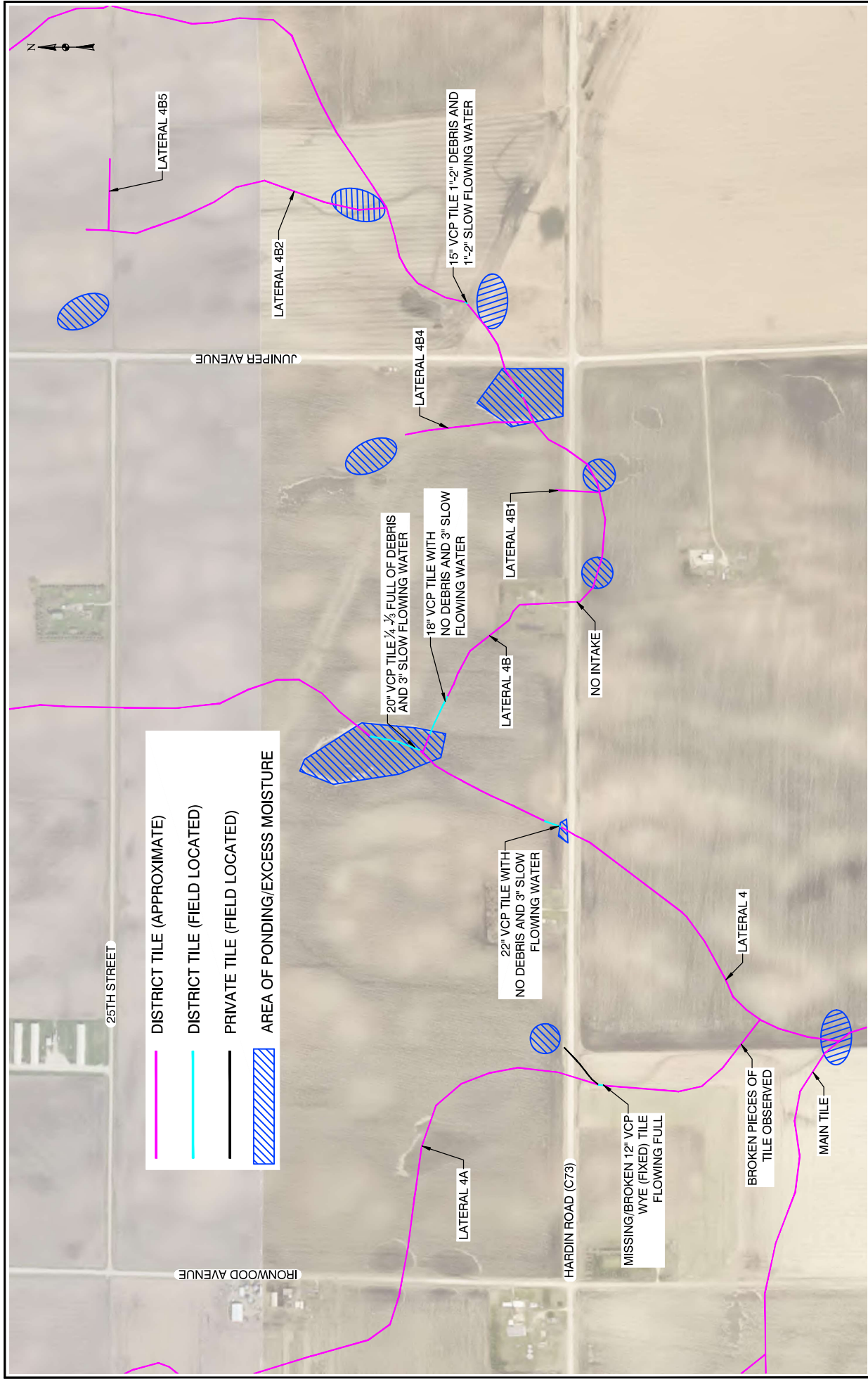
Neither of these observations by themselves are likely significant enough to be the cause of the reported problems, and current conditions make it difficult to pin down an exact location or cause. The District Trustees may consider one of the following recommended actions:

- Order CCTV inspections to be conducted at broad intervals to determine the overall condition of the tiles at issue and potentially find the cause. This may, however, be hindered by the amount of silt in the tiles at issue.
- Order more exploratory excavations at 100 to 200-foot intervals to potentially find differentials in flow, elevations, or silt that might indicate the location of problems.
- Wait until the issue becomes more pronounced so that a more definite location of the cause might be more easily found using the above-mentioned methods.



Tabulated Contractor Time and Materials

Date	Totals	11/30/2020	12/1/2020	12/7/2020
Workman (hrs)	28 1/2	5	17	6 1/2
Backhoe (hrs)	14 1/4	2 1/2	8 1/2	3 1/4



GRAPHIC SCALE
0 750' 500'

NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE

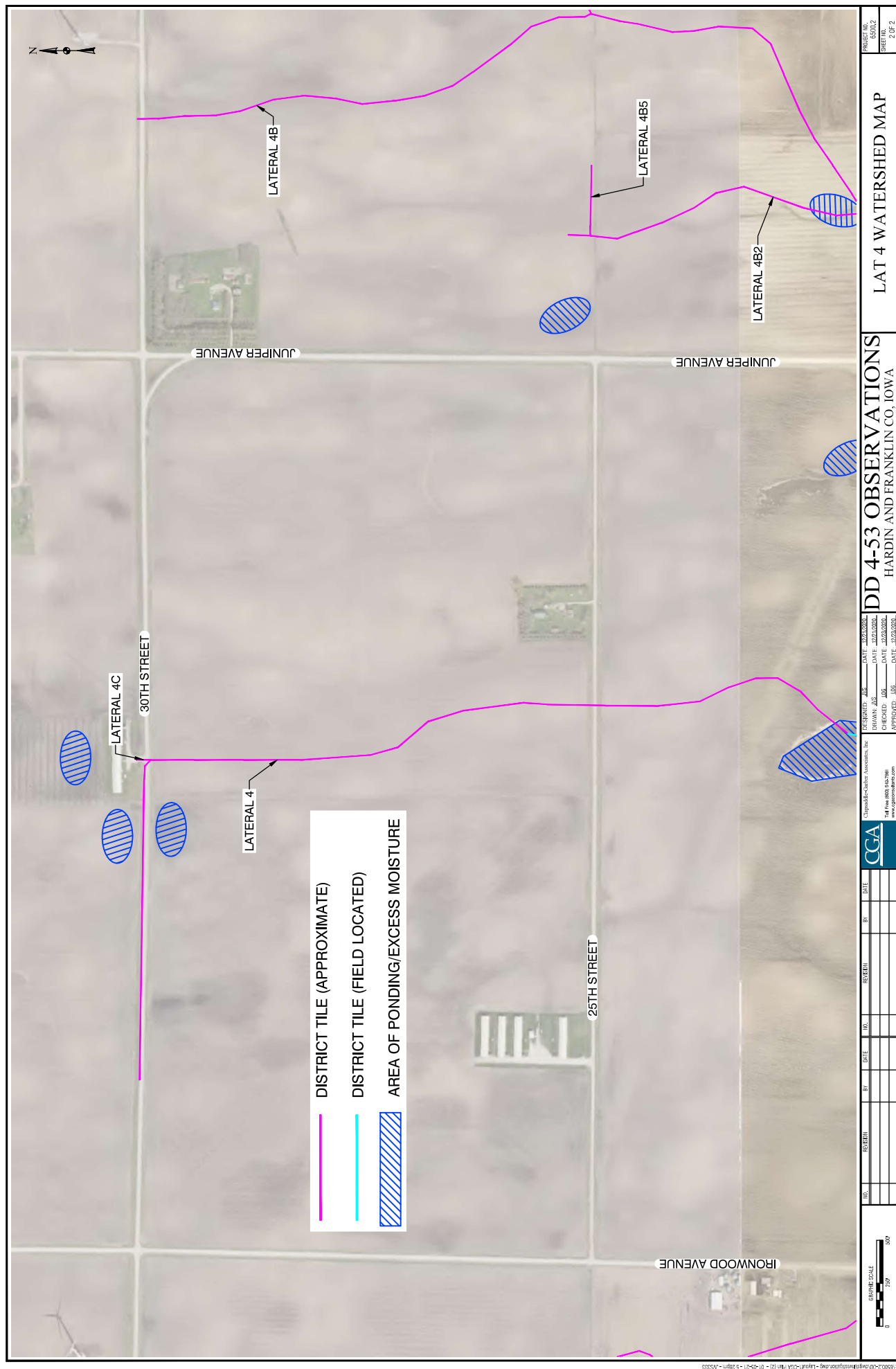
CGA
Chapman-Gillette Associates, Inc.
1411 First Street, Suite 200
Franklin, Iowa 50538
Phone: 515.281.1111
Fax: 515.281.1112
www.chapman-gillette.com

DESIGNED: JAS DATE: 10/27/2008
DRAWN: JAS DATE: 10/27/2008
CHECKED: JAS DATE: 10/28/2008
APPROVED: JAS DATE: 10/28/2008

DD 4-53 OBSERVATIONS
HARDIN AND FRANKLIN CO, IOWA

LAT 4 WATERSHED MAP

PROJECT NO.: 05042
SHEET: 1 OF 2





Warrant #

**DRAINAGE WORK ORDER
REQUEST FOR REPAIRS**
FRANKLIN COUNTY, IOWA

Work Order #: 143Fund #: 51162*laterals not divided
out for release*District # F-H 4-53Lateral 4B1, 4B2 + 4B3Date 9/6/19Township LeeSection 34 ^{SE 1/4}Twp 90Rge 21Repair requested by Mike Nissley, Farm ManagerAddress PO Box 606, Iowa Falls, IAPhone 641-648-4285Landowner Corabel & Jerry MarkAddress PO Box 606, Iowa Falls, IAPhone 641-648-4285Site available for repair now? ☐ YES ☒ NODate available After harvestIdentification of repair: Broken or plugged tileRequest taken by Julie PralleOriginal cost of the district \$ F = \$24,540.31 (60%) Hardin = \$16,429.50 (40%)Potential wetlands? ☐ YES--Repair existing tile only☒ NO--Repair and maintain tile

Repair assigned to _____

Date _____

"ATTENTION: Engineer & Contractor - PLEASE contact the person requesting this repair**BEFORE beginning ANY work at this location."**

Please send statement for services to:
FRANKLIN COUNTY AUDITOR

ATTN: DRAINAGE
PO Box 26
Hampton, IA 50441

auditor@co.franklin.ia.us

Phone: (641) 456-5622

Fax: (641) 456-6001

Please include the GPS coordinates of the location of the
repair on your bill to Franklin County
(For example, 93°18'39.67 W 42°39'31.7 N)
Thank you!!

Latitude: _____

Longitude: _____

RESOLUTION 2016-18

**FRANKLIN COUNTY
INVESTIGATION OF DRAINAGE DISTRICTS PER REQUESTS**

NOW, on this 31st day of May, 2016, the following resolution was presented to the Board of Supervisors acting as Drainage District Trustees:

WHEREAS, said Trustees believe that it is in the best interests of drainage districts that individuals, landowners, or entities making requests for district investigation of repairs be responsible for the costs of those investigations in the event that the source of the need for repairs would be privately owned tile and not part of the drainage district facilities or no problem is found and the drainage district facility is anything other than open ditch.

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The Board of Supervisors acting as Drainage District Trustees authorize the Franklin County Auditor to prepare the necessary form for the individual, landowner, or entity to execute prior to any investigation (except open ditches) in a form necessary to carry out the intent of this resolution.

BE IT DULY ADOPTED this 31st day of May, 2016, with the vote thereon being as follows:

AYES: Eberling, MoVloker, Nolte

NAYS:

ABSENT/NOT VOTING:

FRANKLIN COUNTY BOARD OF SUPERVISORS

Corey Eberling
Corey Eberling, Chairman

Gary MoVloker
Gary MoVloker

Michael Nolte
Michael Nolte

I have read and agree to the terms of this Resolution:

Corbett Mark & Terry Mark
Requestor

9/6/19
Date

F-H-4-53
Drainage District

ATTEST:
Michele S. Giddings
Michele S. Giddings, Auditor & Clerk to Board

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

04/14/2020

PROJECT NUMBER:

DD WO # 143

DAYS OF WEEK:

S M W T F S

COUNTY, ROUTE, ROAD:

6500.2/DD# F-H 4-53
SOUTH OF 25TH STREET
EAST OF JUNIPER AVE

SHEET NO.

1 OF 1

LOCATION:

JDD# F-H 4-53 LAT 4-B-2 W 1/4 SW 1/4
34-90-21 FRANKLIN

MID 20'S TO MID 30'S CLOUDY
& WINDY

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

8:44 A.M. OBSERVER CALLED MIKE NISSELY ABOUT BROKEN OR
PLUGGED TILE AND LEFT A MESSAGE.

9:47 A.M. MIKE CALLED BACK AND LEFT MESSAGE WITH TENANTS
NUMBER LANDON ALDINGER 515-689-1842.

10:50 A.M. OBSERVER CALLED LANDON AND HE WOULD STOP BY
TOD LOOK AT THINGS WITH ME.

11:10 A.M. LANDON ON SITE. LANDON SAID IN 2018 IT WAS
WET BUT COULD STILL FARM PLACES. 2019 IT WAS
WET ENOUGH THAT SOME SPOTS NOT PLANTED OR HARVESTED.
LANDON SHOWED OBSERVER WATER STANDING IN FIELD
EAST SIDE OF ACREAGE SOUTH OF 30TH STREET 532.8' ± EAST
OF EAST ROW JUNIPER AVENUE WITH COUNTY BEEHIVE UNDER
WATER WITH 85' NE-SW X 270' ± NW-SE AREA OF FIELD WITH
STANDING WATER. COUNTY MAP SHOWS JDD. F-H 4-53 LAT 4B RUNS
EAST OF 1/4 MILE LINE & WET AREA IS BETWEEN 532.8'
700'. LANDON ALSO NOTED THAT WHEN CREW WAS
PUTTING ON ANHYDROUS THEY DID NOT SEE ANY AREAS
THAT WERE BLOWN OUT OR WATER VISIBLE, OBSERVER
RODE OUT WITH FOUR WHEELER AND ONLY FOUND AREA
THAT WAS DARK WITH NO CROP & REWORKED. SEE -
ATTACHED SHEET 1 AND AREA NORTH OF ABANDONED
RAILROAD TRACKS SEE ATTACHED SHEET 2. LAT 4-B2 OR
LAT 4B ARE NOT NEAR THESE LOCATIONS

11:40 A.M. LANDON LEFT SITE. 12:13 P.M. PICTURE # 33478

12:31 P.M. PICTURE # 3348 SEE PICTURE FOR DETAILS.

12:30 P.M. DONE WITH THIS SITE.

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Dean Pearson

Date Prepared:

04/14/2020

Reviewed by:

☐ Engineer

Date Reviewed

SHEET #1

Beacon[™] Franklin County, IA

https://beacon.schneidercorp.com/application.aspx?appid=150&layerID=1&72&pageTypeID=1&pageID=975

Search

Layers - Map Search Compare Results Report Soil Report

Layers Legend

- Quick Links:
- ☐ Property Search
 - ☐ View Map

Layers:

- ☒ Geographic Township
- ☒ Corporate Limits
- ☒ Roads
- ☐ Road ROW
- ☐ Cadastre Lines
- ☐ Lot Lines
- ☐ Road Dimensions
- ☐ Sections
- ☐ Subdivision Annotations
- ☐ Subdivisions
- ☐ Lot Annotations
- ☐ Railroad Annotations
- ☐ Railroads
- ☐ Railroad ROW
- ☐ Water
- ☐ Parcel Dimensions
- ☒ Parcels
- ☐ Cartography
- ☐ Enterprise Zones
- ☐ Soils
- ☐ CSR Soils
- ☐ Conservation Lands
- ☐ Two Mile Boundary
- ☐ School Districts
- ☐ Voting Districts
- ☐ Zoning
- ☐ Flood Boundary
- ☐ Drainage Districts
- ☐ Land Use
- ☒ 2017 Imagery
- ☐ Restore Layer Defaults



Parcel ID	143440002	Alternate ID's	
Sec/Twp/Rng	34-90-21	Class	A
Property Address		Acres	39.75
District		Owner Address	Mark Corbel Revocable Trust
Brief Tax Description			c/o Nishy and Nishy PO Box 606 Iowa Falls, IA 50126

LEETIA FALLS BEN PILES
NE SE
[NOTE: Not to be used on legal documents]

Results:

Parcel ID: 143440002
Owner: Mark Corbel
Revocable Trust
c/o Nishy and Nishy (CEO)
Acres: 39.75
View Results | Soil Report | Google

Type here to search

SHEET 2

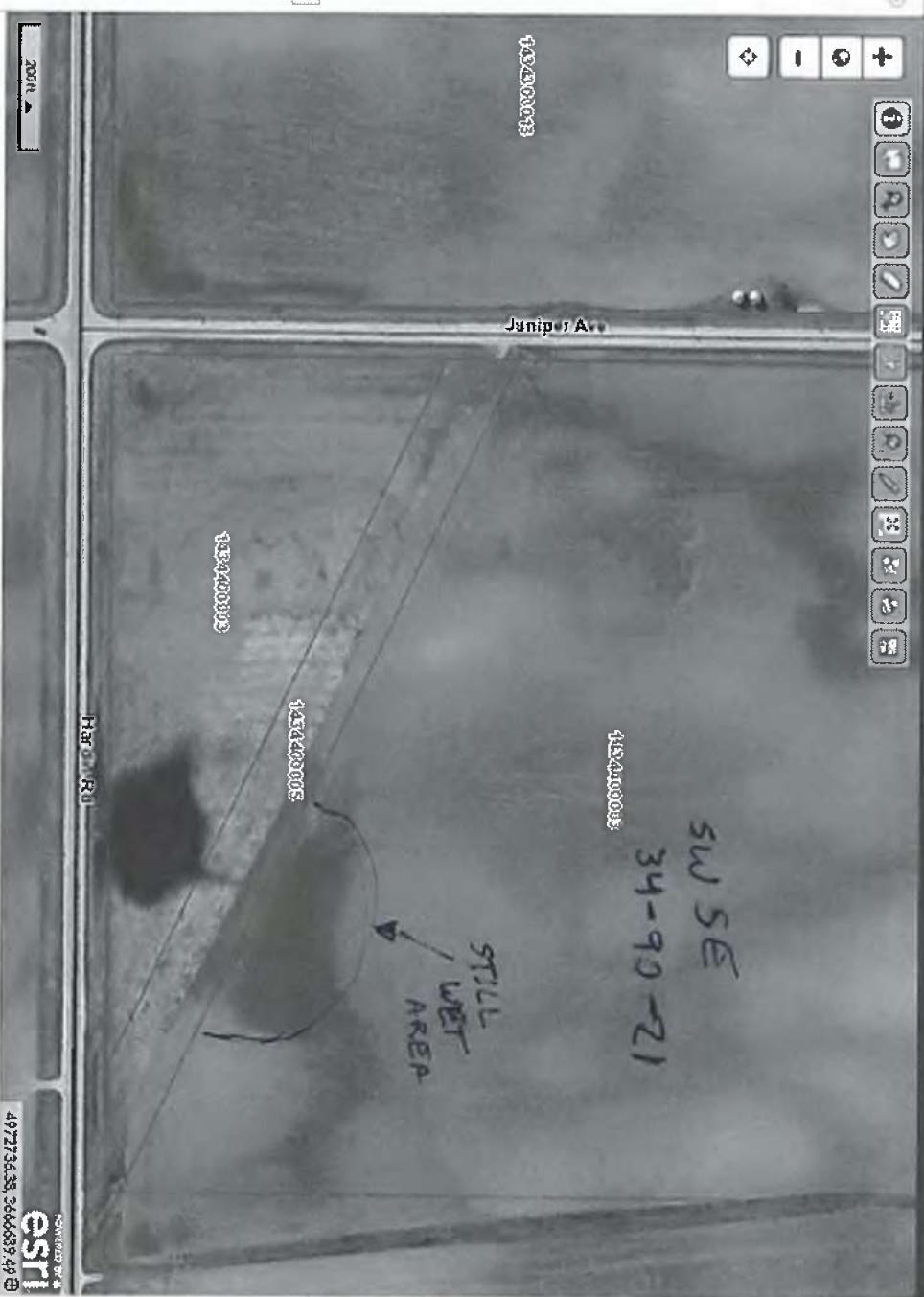
Layer List Legend + -

Quick Links:
Property Search
View Map

Layers:

- ☒ Geographic Township
- ☒ Corporate Limits
- ☒ Roads
- ☐ Road ROW
- ☐ Cadastre Lines
- ☐ Lot Lines
- ☐ Road Dimensions
- ☐ Sections
- ☐ Subdivision Annotation
- ☐ Subdivisions
- ☐ Lot Annotation
- ☐ Railroad Annotation
- ☐ Railroads
- ☐ Railroad ROW
- ☐ Water
- ☐ Parcel Dimensions
- ☒ Parcels
- ☐ Cartography
- ☐ Elevation Zones
- ☐ Soils
- ☐ CSR Soils
- ☐ Conservation Lands
- ☐ Two Mile Boundary
- ☐ School District
- ☐ Voting Districts
- ☐ Zoning
- ☐ Flood Boundary
- ☐ Drainage Districts
- ☐ Land Use
- ☒ 2017 Imagery

Recent Layer Data



Parcel ID	1434400002	Alternate ID - a	Owner Address	Mark Corabel Revocable Trust
Sec/Twp/Rng	34-90-21	Class	A	CO Nisly and Nisly
Property Address		Acreage	39.75	PO Box 606
				Low Falls, IA 50125
District	NE SE	LEF A FALLS BEN FRIES		
Brief Tax Description				

Result:
Parcel ID: 1434400002
Owner: Mark Corabel
Revocable Trust
CO Nisly and Nisly (DEO)
Acres: 39.75
View Report | Soil Report | Google



N-S SEE SHEET #2
PICTURE # 3347 IS LOOKING SOUTH AT 255' X 72' E-W WET
AREA THAT WAS REWORKED & WET AT ONE TIME, LAT 4-BZ OR
LAT 4-B NOT NEAR THIS AREA ACCORDING TO MAP

PICTURE # 3348 IS LOOKING NORTH AT 72' E-W x 255' N-S
AREA THAT WAS WET AND HAS BEEN REWORKED. LAT 4B-2
OR LAT 4B NOT IN THIS AREA



DATE:

6/1/20

PROJECT NUMBER:

650.2

6500 101

COUNTY, ROUTE, ROAD:

Jumper

LOCATION

DD. 00 4-53 FRANKLIN/HARDIN

DAYS OF WEEK:

S	M	T	W	T	F	S
---	--------------	---	---	---	---	---

SHEET NO.

OF

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

As usual there are multiple things that need repaired. Please link drawings to 005 is already completed.

WATER AREAS IN LAT 4-B SHED ARE
PROGRESSIVELY BEING PICKED UP BY
COUPONS @ 4 TO LAT 4

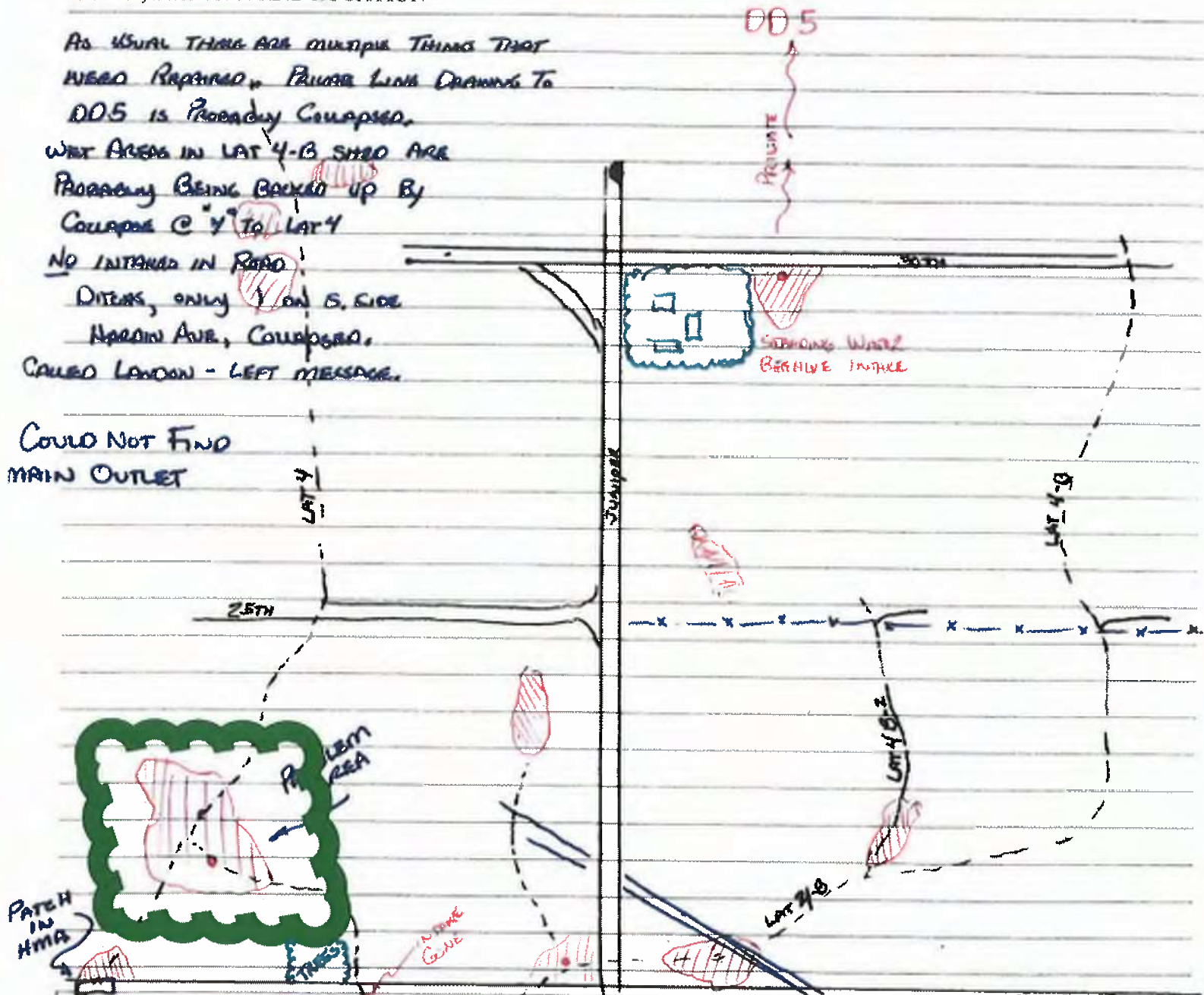
NO INTEREST IN R&D

DIRECTIONS, only 1 out of 5. Give

Neenah Ave., Coon Rapids.

Called London - Left message.

COULD NOT FIND
MAIN OUTLET



☒ Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature: _____

Date Prepared:

Reviewed by:

Engineer

Date Reviewed

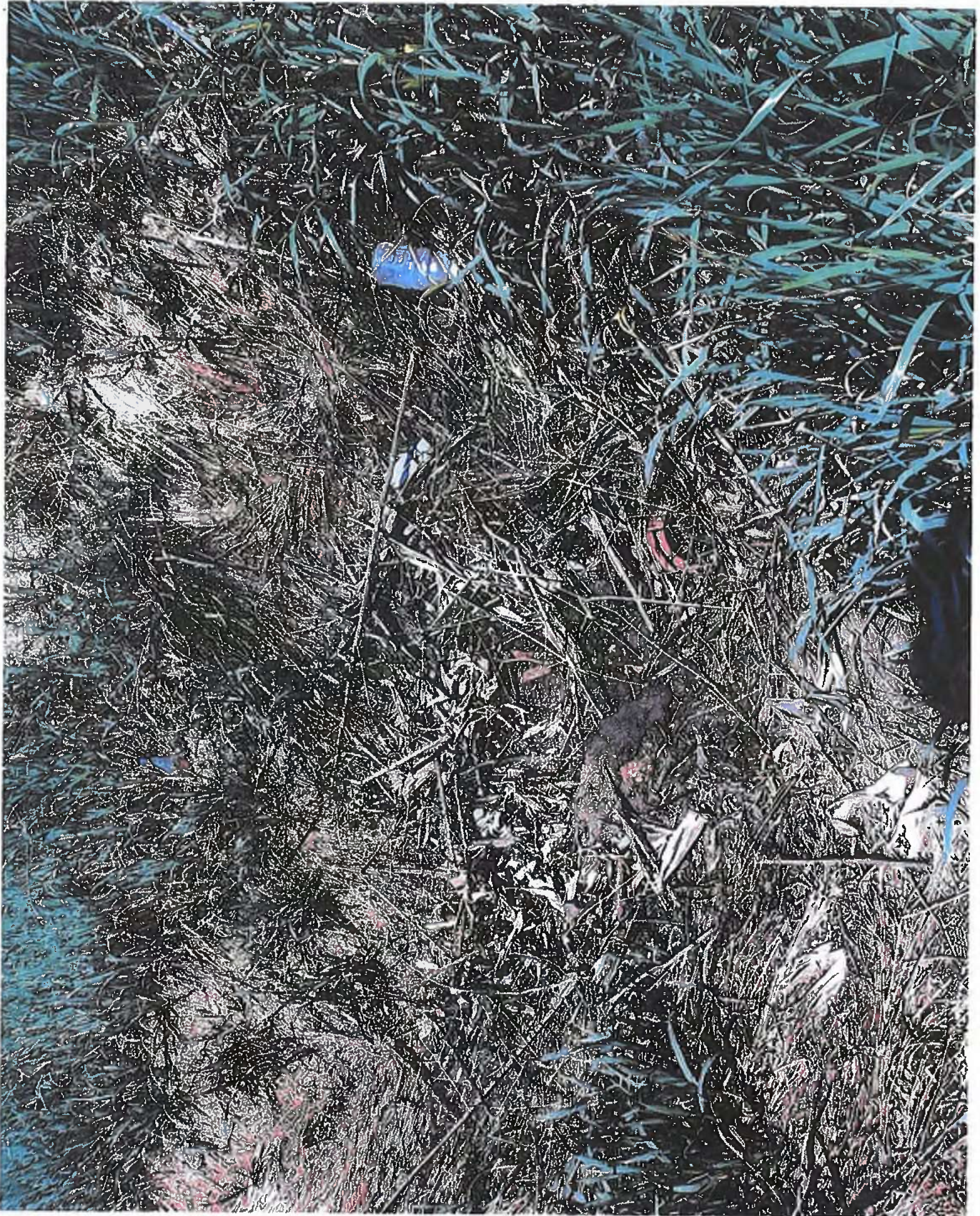
Problem Area @ LAT 4 / LAT 4B CONNECTION



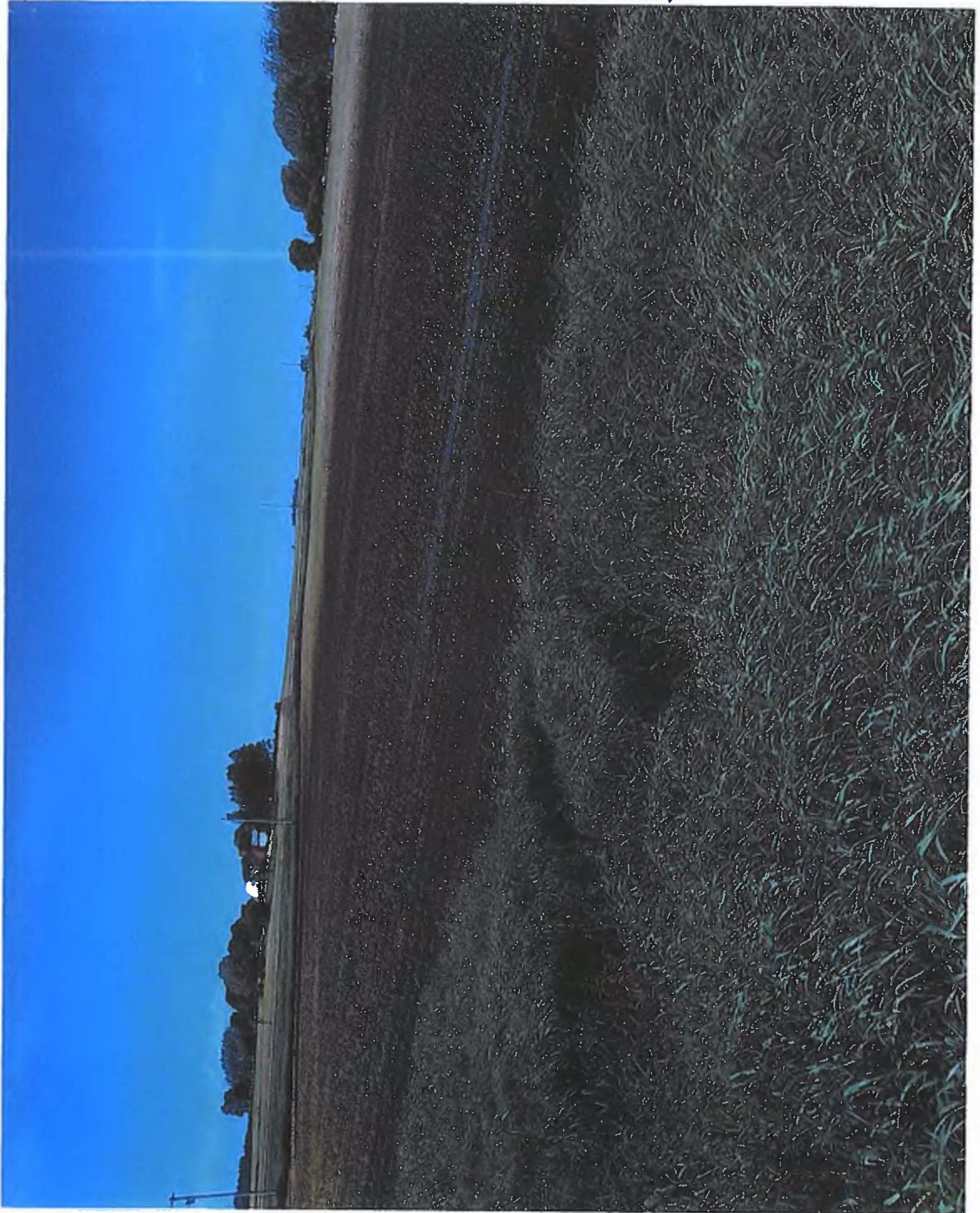
LOOKING DOWNSTREAM ON LAT 4B PASS AUSTREES + COTTONWOOD



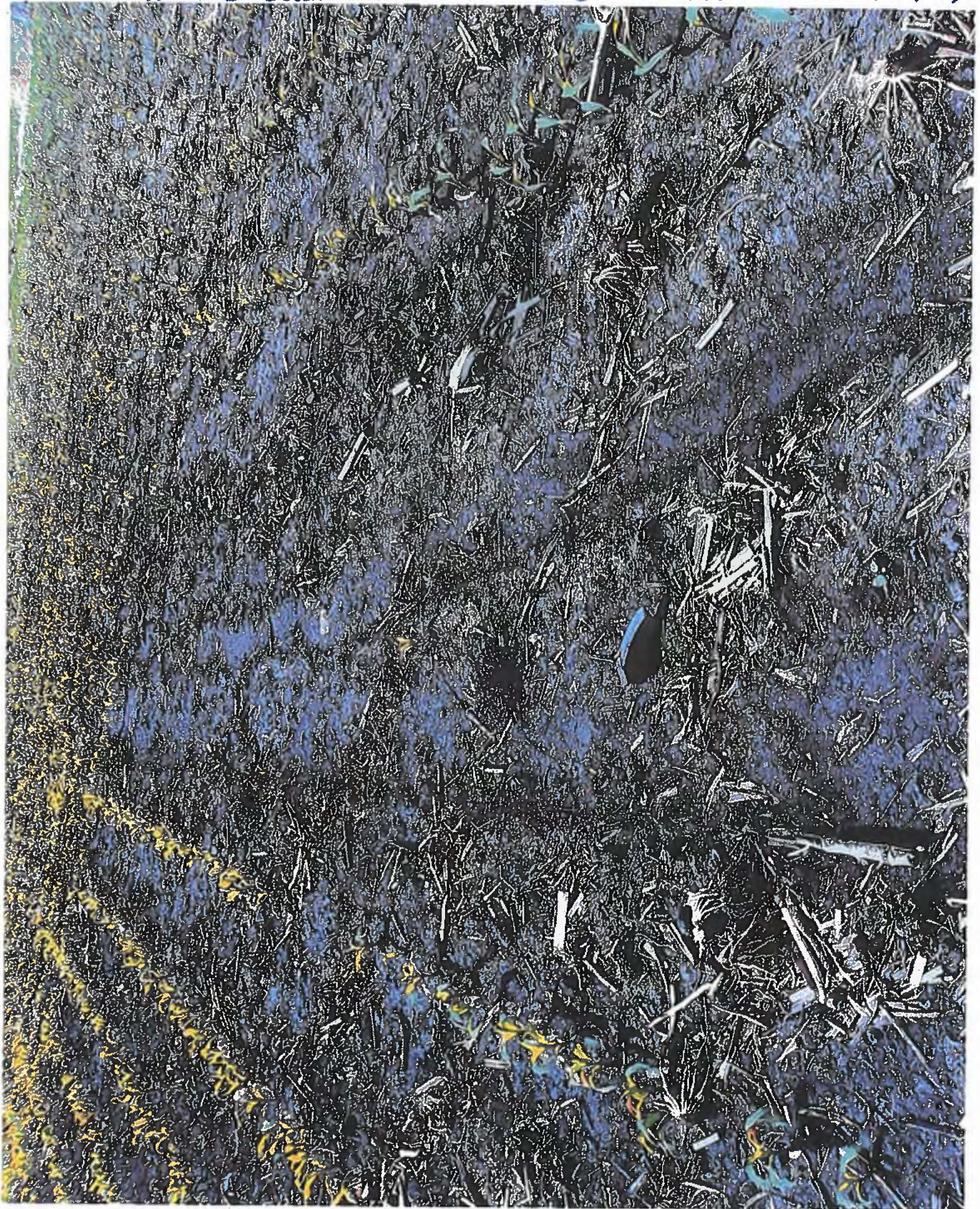
COLLAPSED INTAKE ON LAT 40, S. SIDE HARDIN ROAD (HMA) C73



LOOKING DOWNSTREAM ON LAT 4/B FROM JUNIPER ST. (N-5)



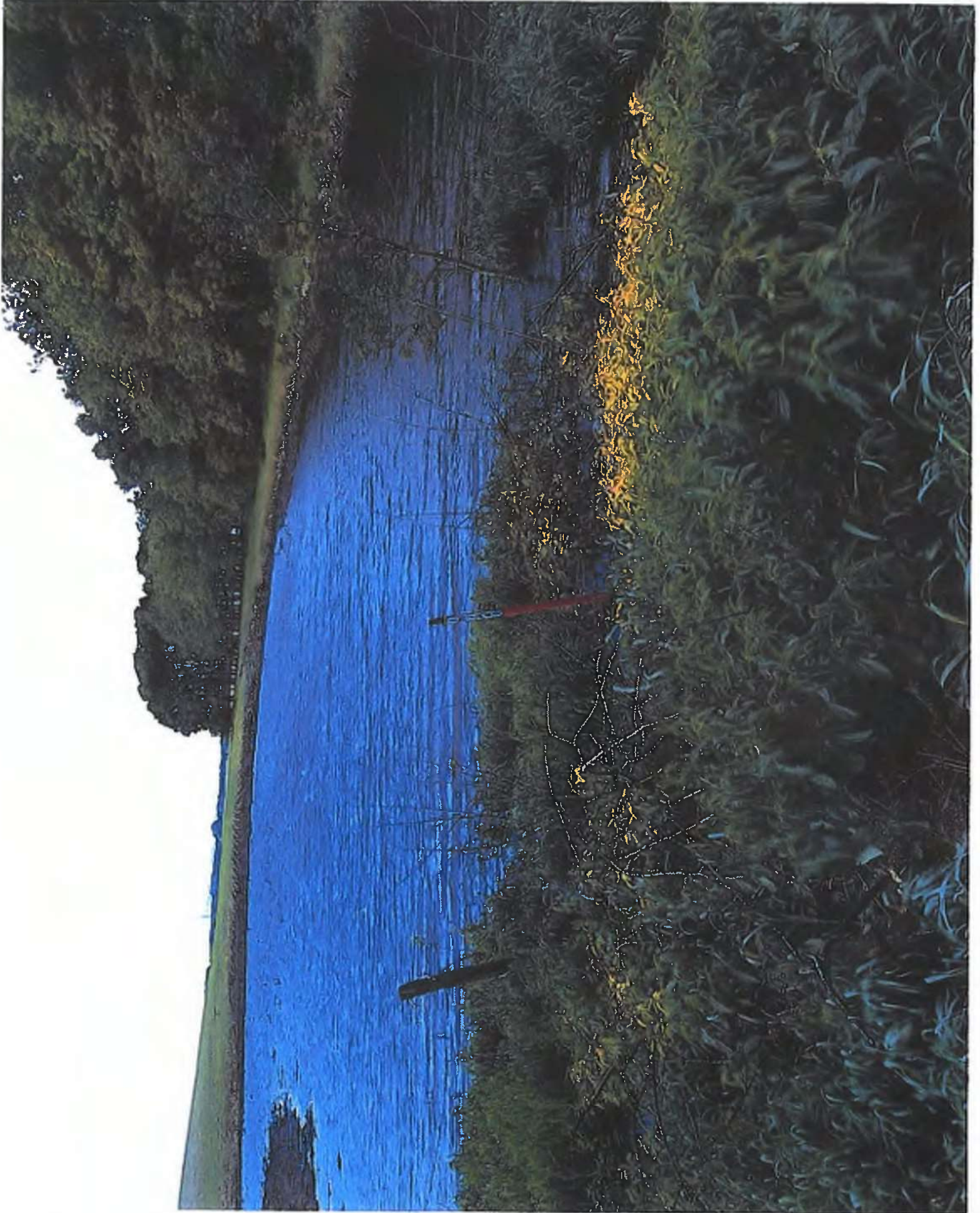
LOOKING DOWNSTREAM ON LOT 4B @ OLD RR. TIM CHARD (PURPLE)



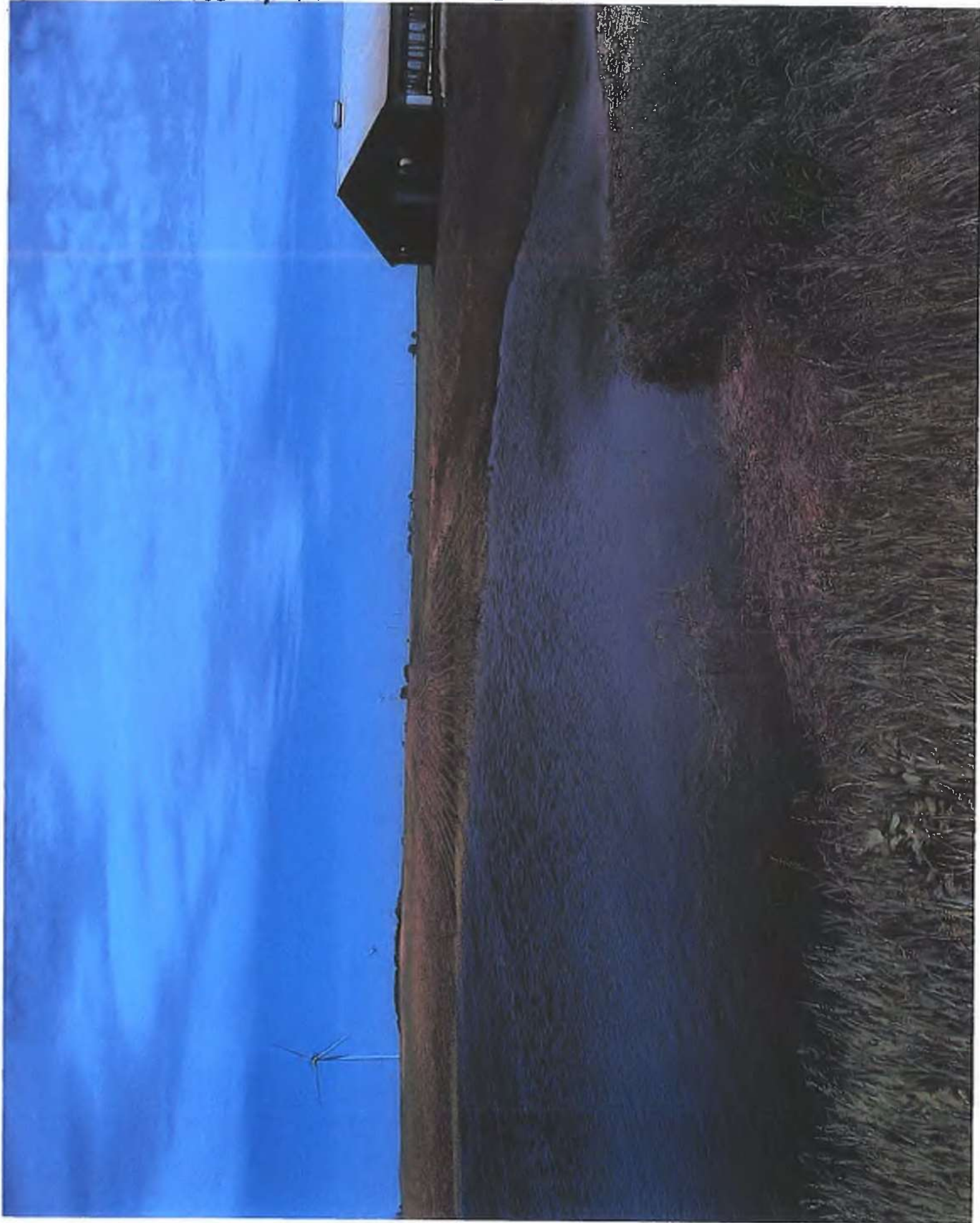
Looking upstream on LAT413 @ OLD RR



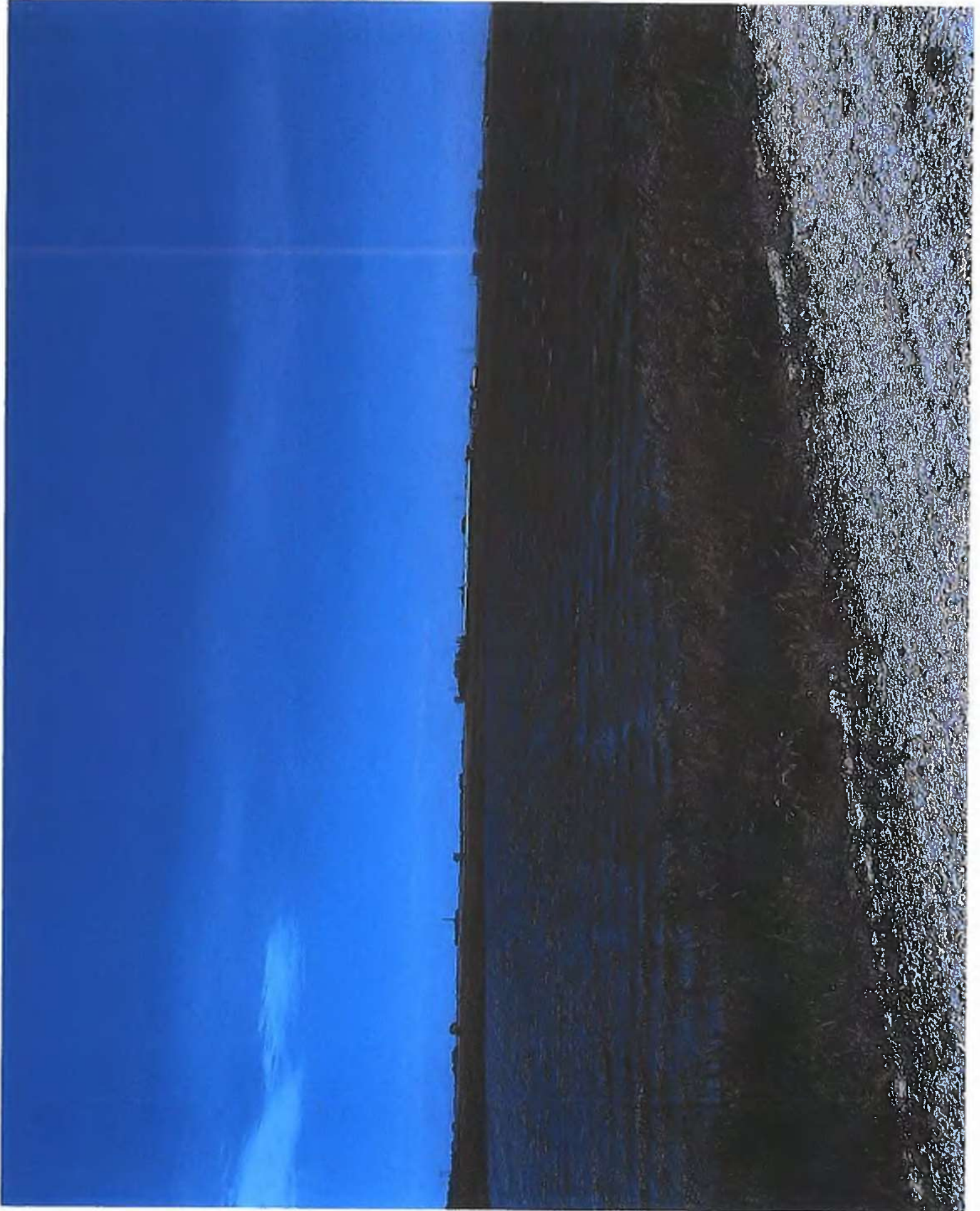
Looking upstream on Private Line in DD5 @ 30th St.



Looking upstream on Lat 4 @ 30th St.



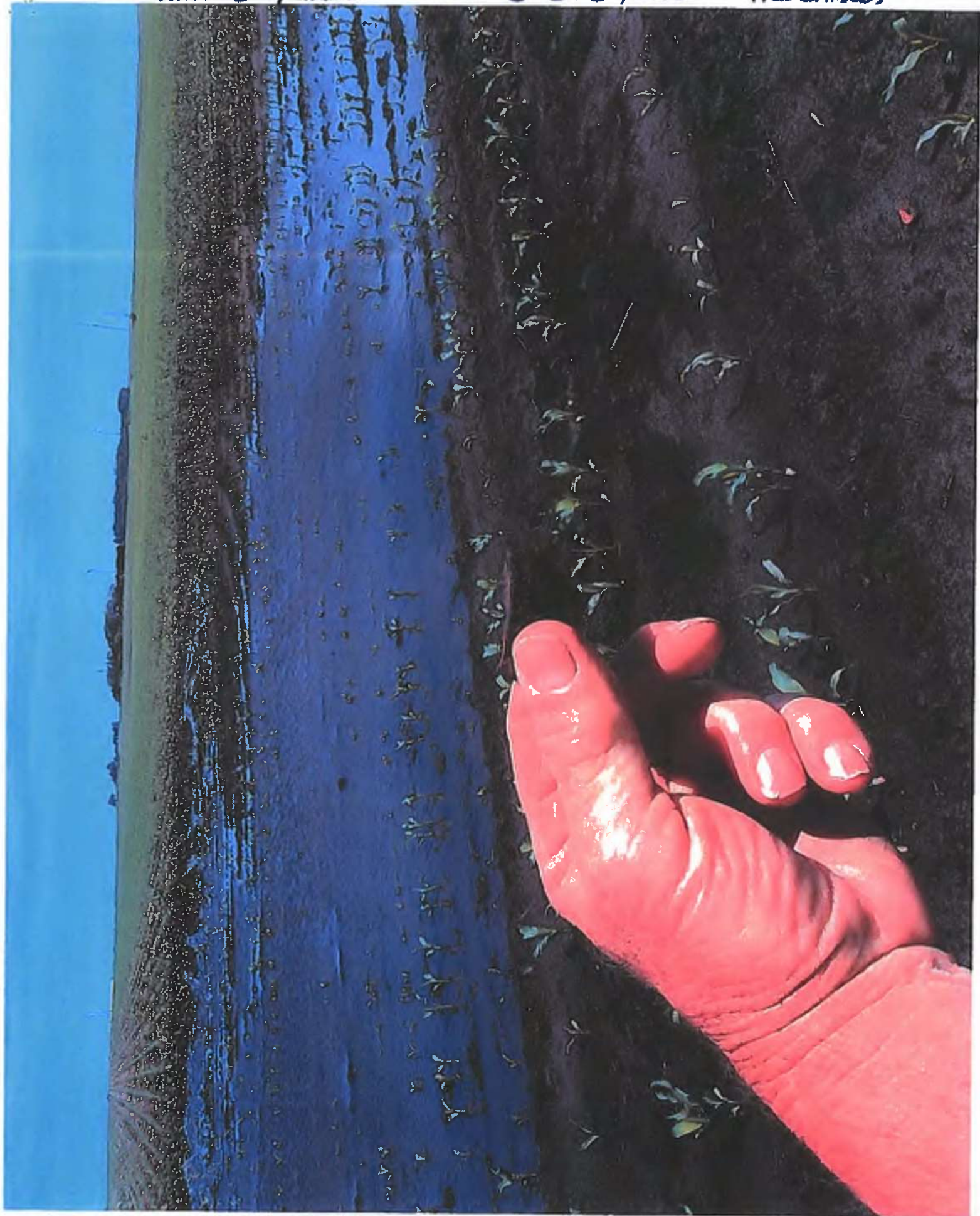
Looking downstream on Lat 4 @ 30th St.



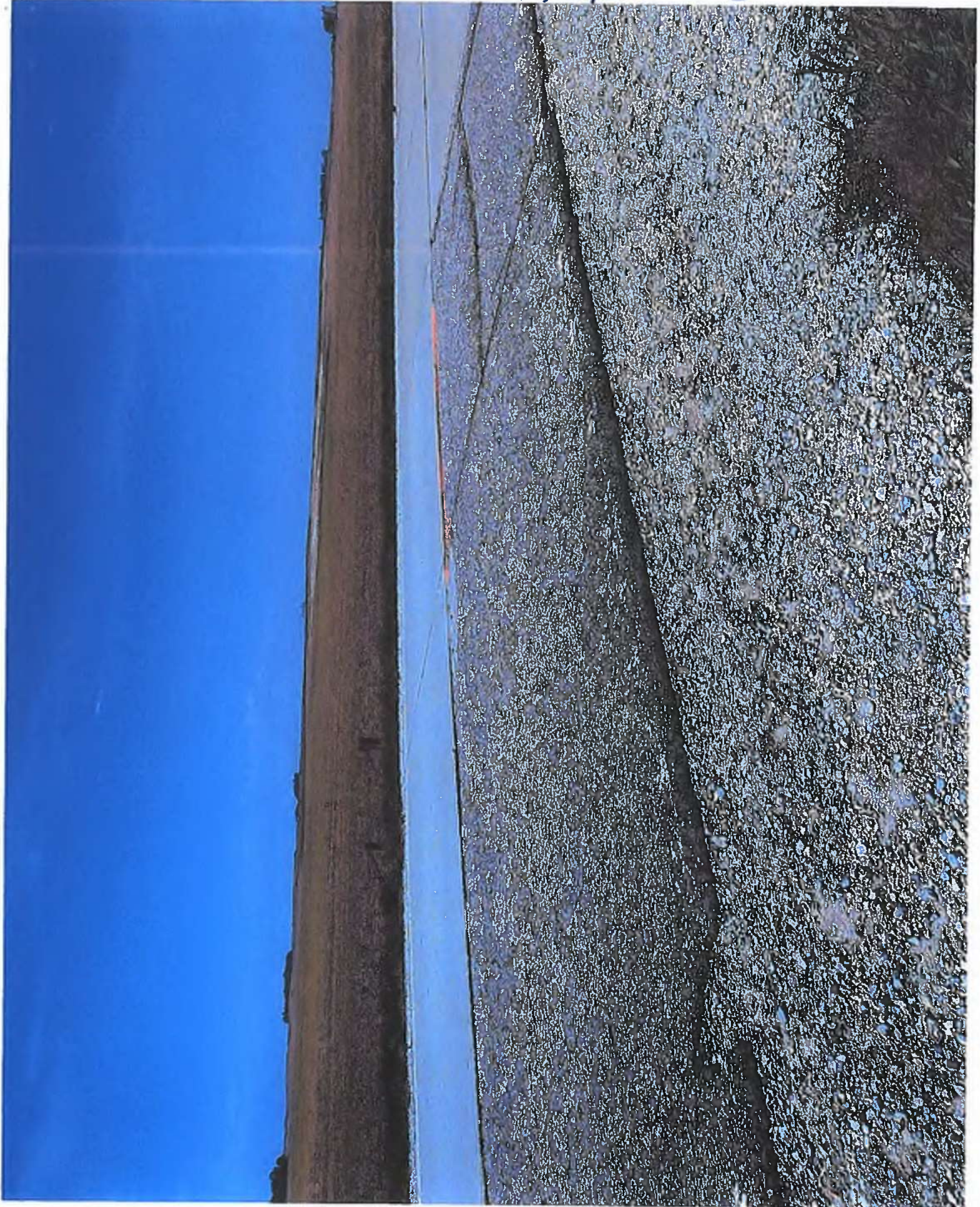
LOOKING UPSTREAM ON LAT 4 @ C73



LOOKING UPSTREAM ON LAT 4 @ C73, LOTS OF TILACITAROS



LOOKING DOWNSTREAM @ LAT 4, REPAIR IN C73



OUTLET AREA FOR JDD 4-53, CAN'T FIND EASILY, CAN'T HEAR WATER



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

6/12/20

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF 1

PROJECT NUMBER:

6500.2

COUNTY, ROUTE, ROAD:

DD F.H 4-33

LOCATION:

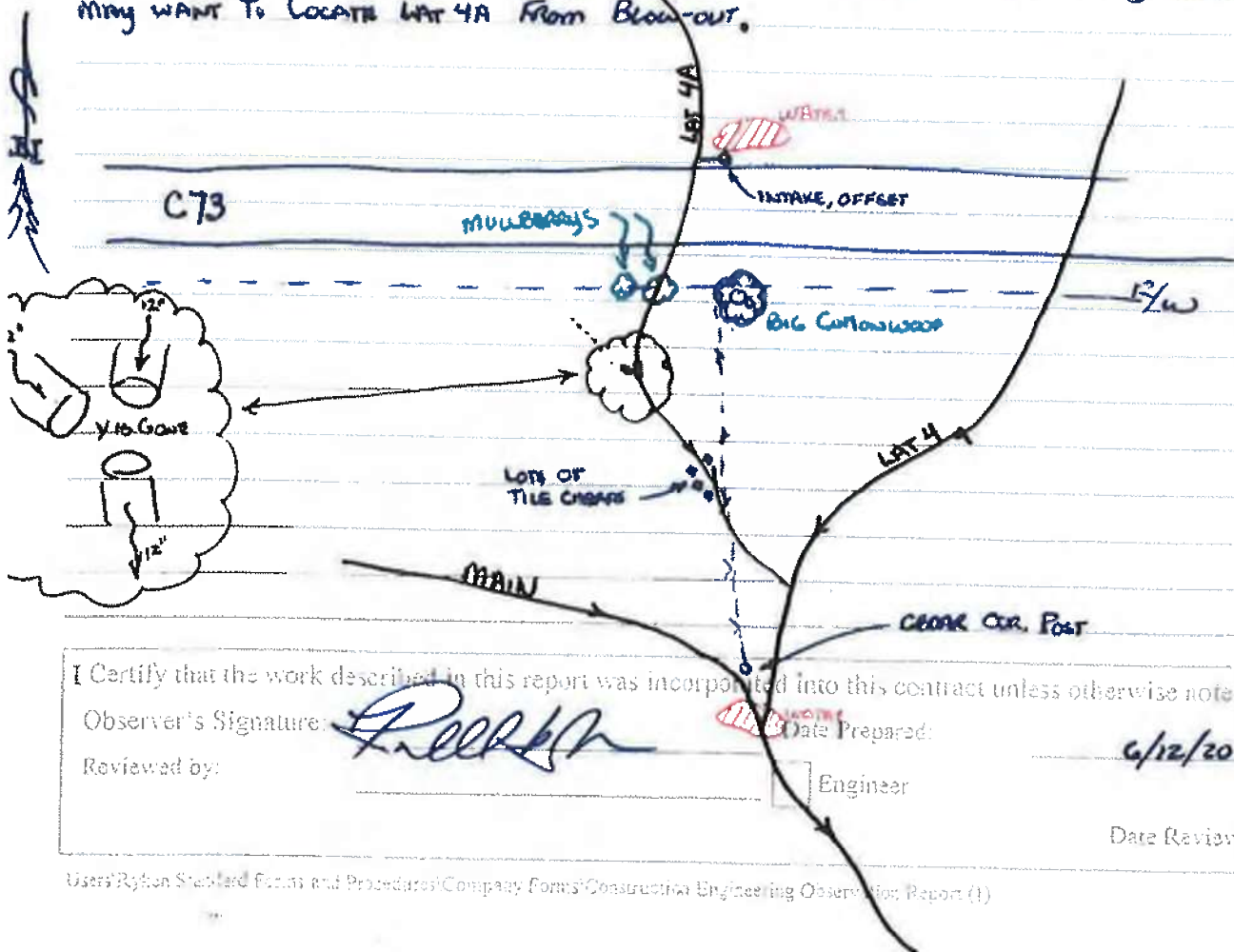
HARDIN ROAD SOUTH

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR SUB NAME, ITEM NO. AND LOCATION

Sunny, 70°, calm, drying day

Parked on S. Side Hardin Rd. (C73), walked to Blow-out in Field Found 12" x 12" x 12" clay 'Y' cone. Looks like Farmer was digging hole and exposed tile. Lat 4A is visibly flowing, Priv. Lat to NW, not so much. Tile is full 1" above tile top. Walked downstream to Lat 4A - Lat 4 connection. Lots of tile cracks on surface, no water standing. Walked downstream to Lat 4 - main connection, some water standing, no blow-outs. Walked back to C73, lined up 12" clay Lat 4A to NE to Mulberry tree @ R/W, Cottonwood tree to East may be @ 100'. Walked north across C73, found wet spot/tile cracks and 6" steel intake in N ditch of C73 (E-W) across from Cottonwood tree (that has bicycle in crown,

Repair Blow-out with man. HOPE 'Y', Pump up with short sticks of HOPE/long. Columns, Rock. Tile is 3' deep. Remove @ least the Mulberry on R/W may want to locate Lat 4A from Blow-out.



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

[Signature]

Date Prepared:

6/12/20

Reviewed by:

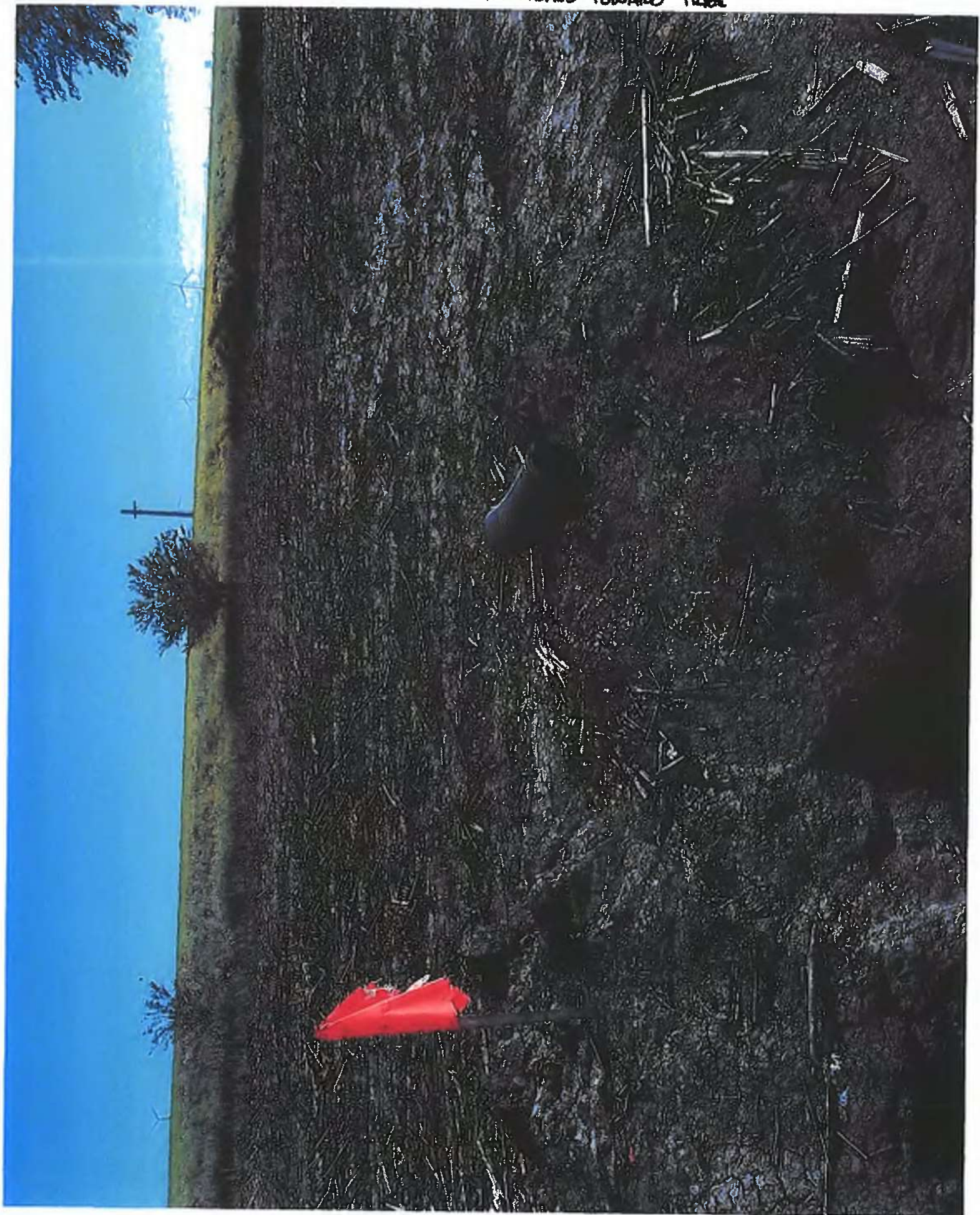
Engineer

Date Reviewed

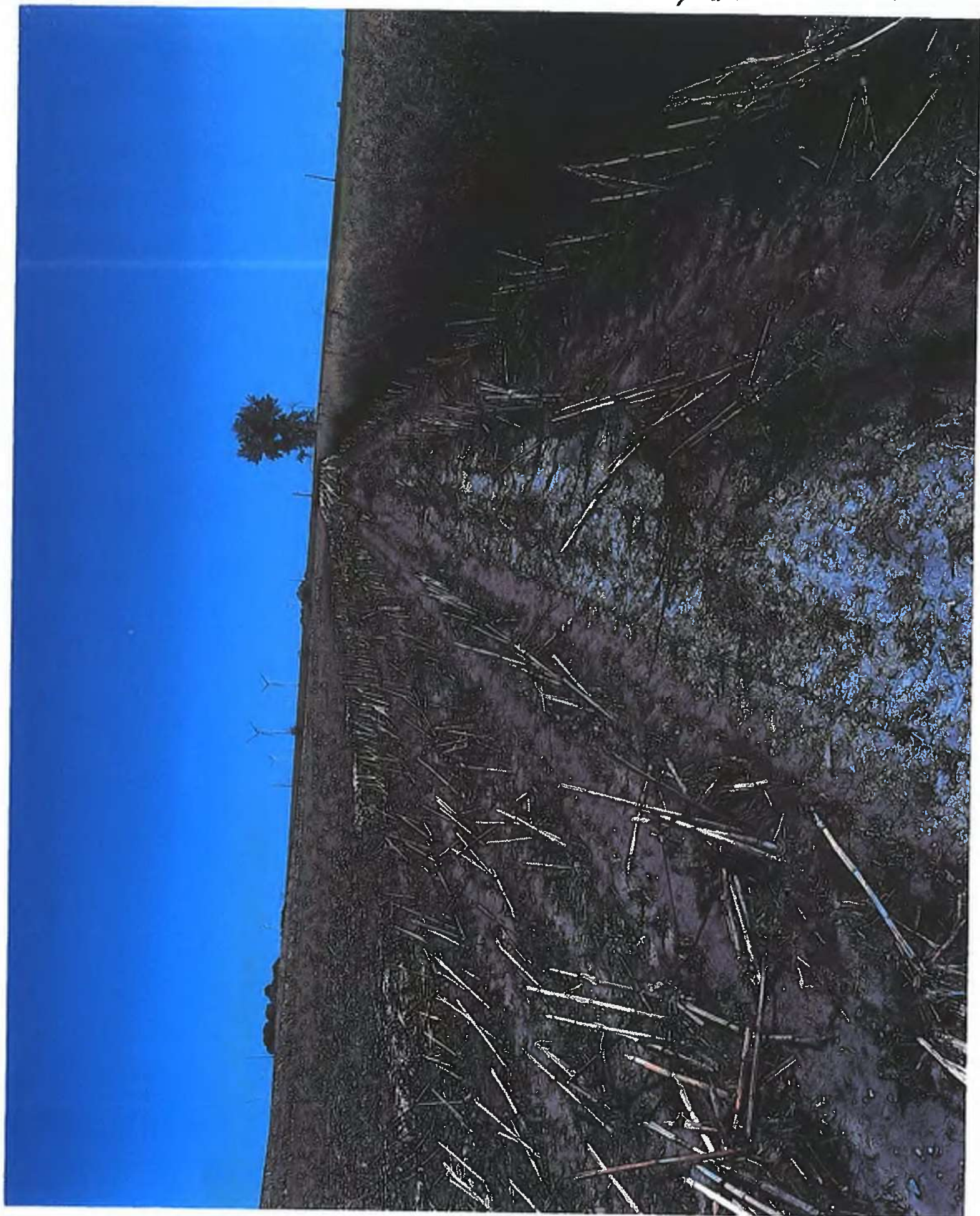
missing "y"



LOOKING N. LAT 4A HEADS TOWARD TREE



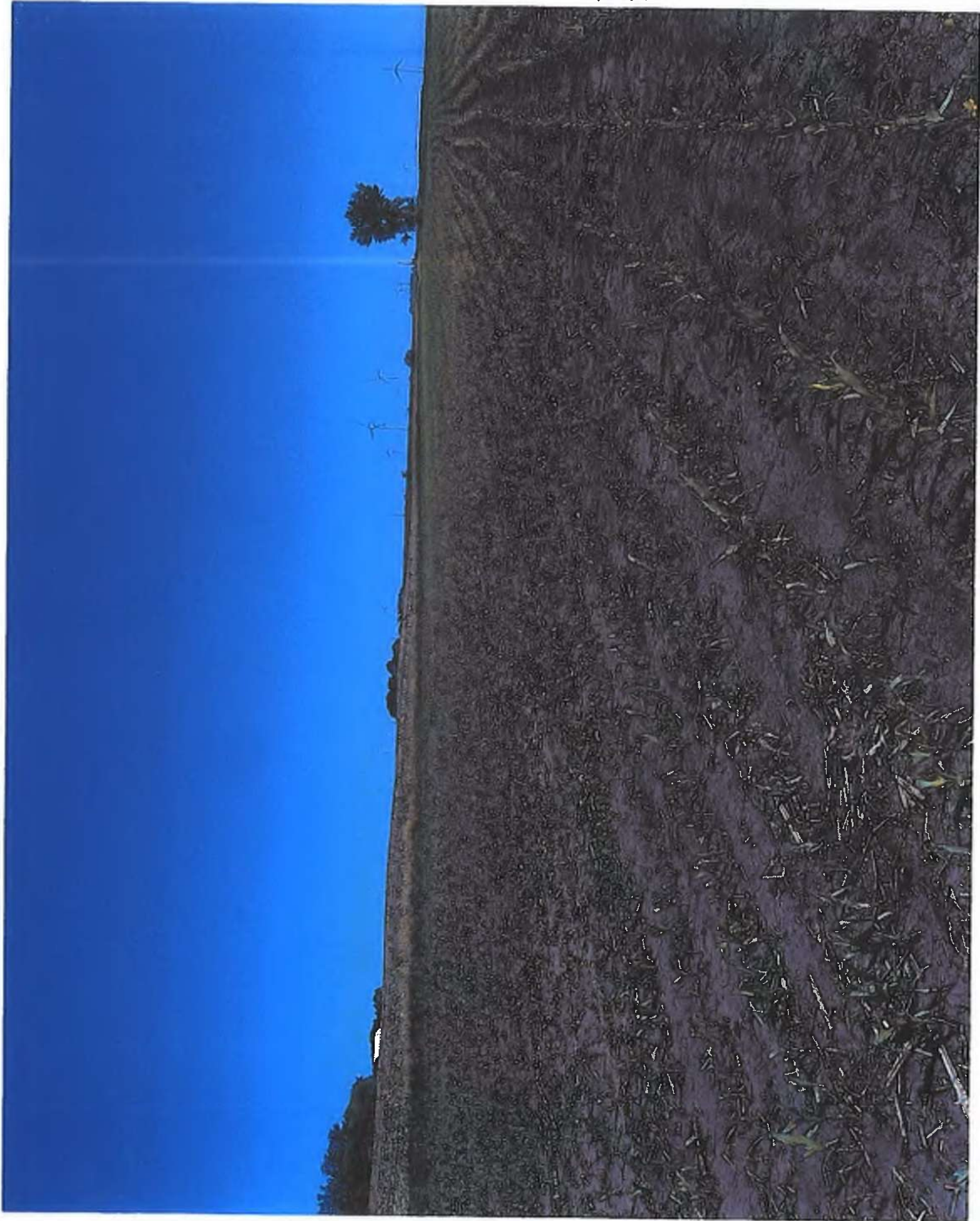
LOOKING N. ALONG FENCE @ TIRE/FENCE XING LATHA



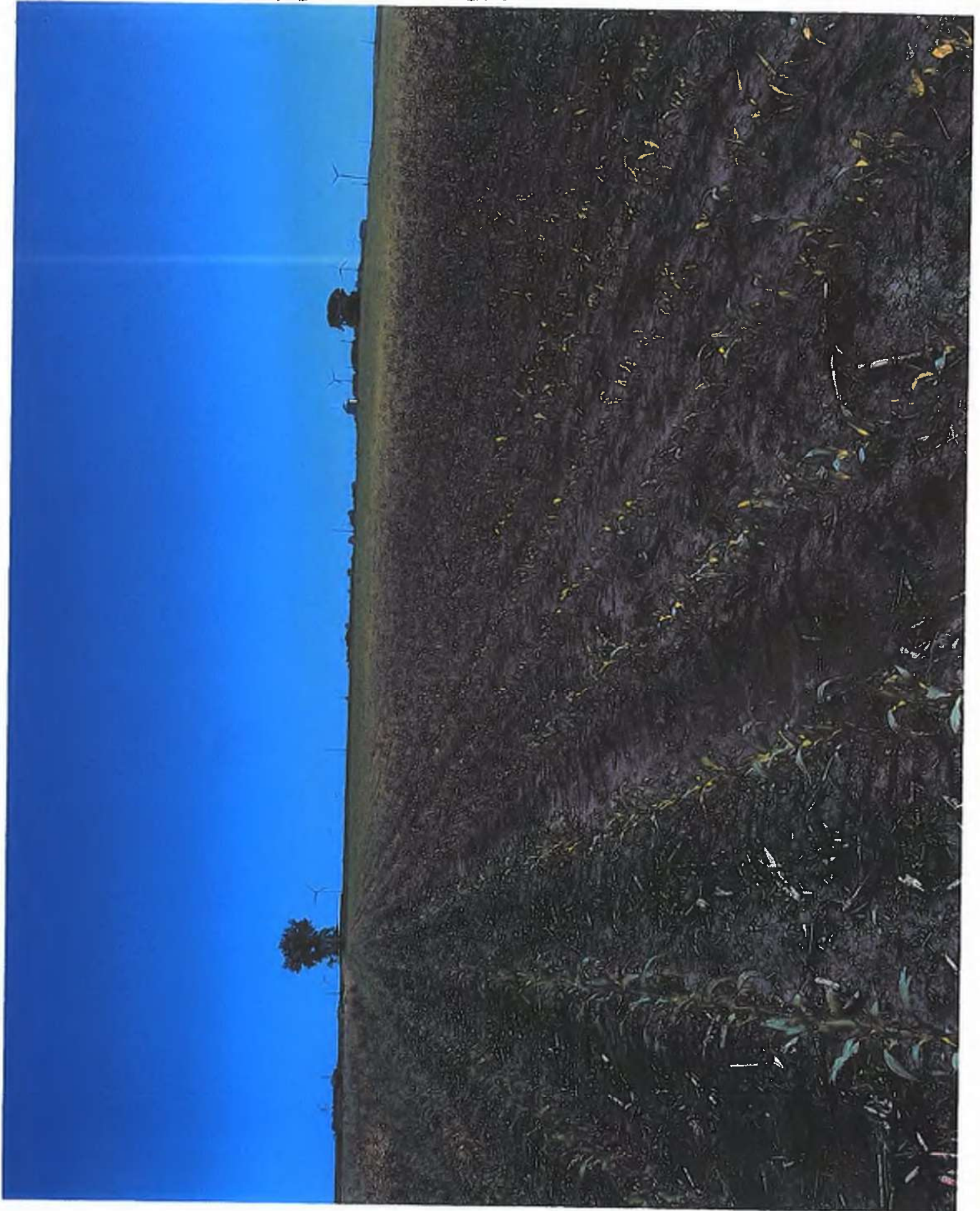
LOOKING N/E ON LAT 4 ROUTE @ LAT 4A CONNECTION AREA



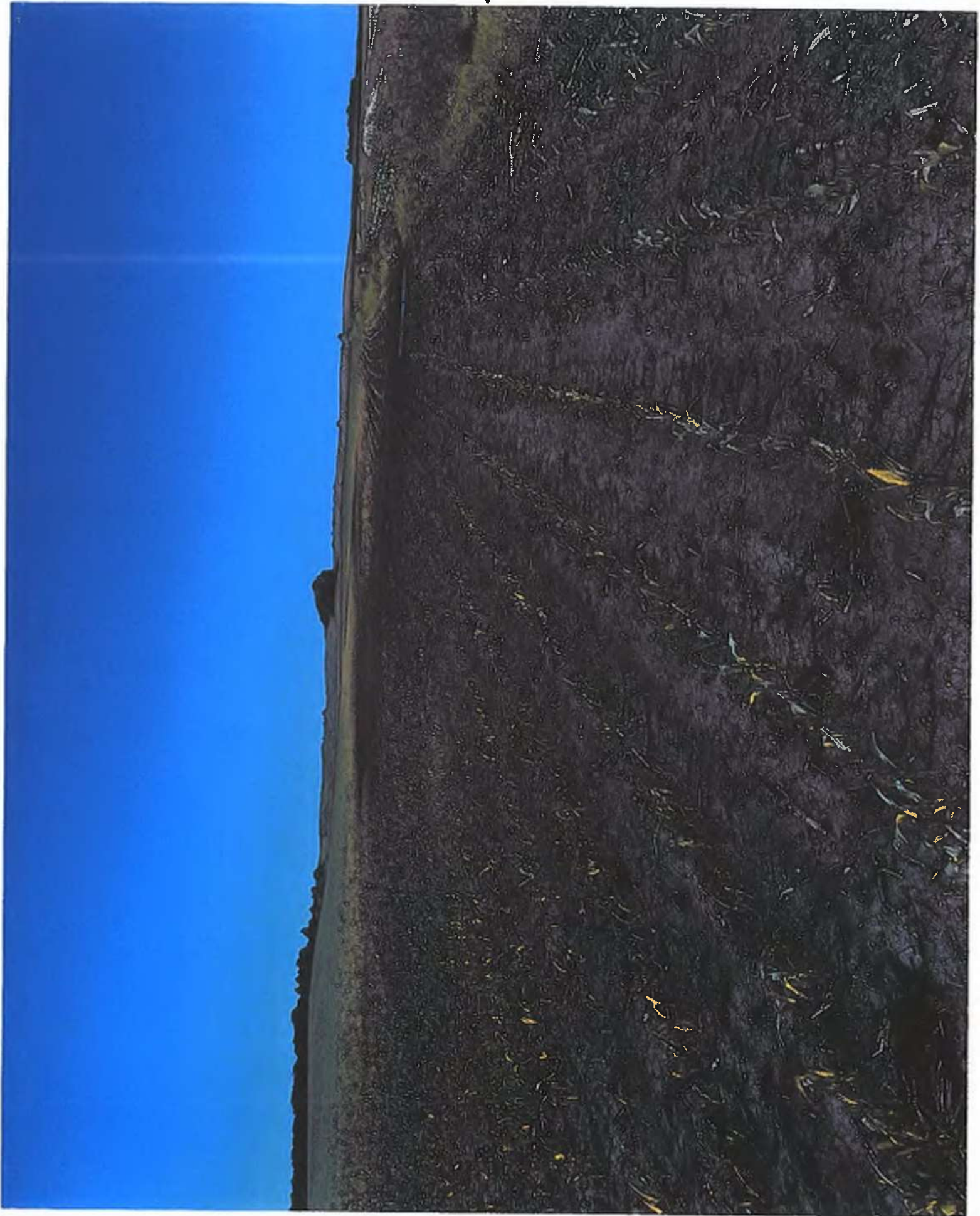
LOOKING NW @ LAT 4A ROUTE FROM LAT 4



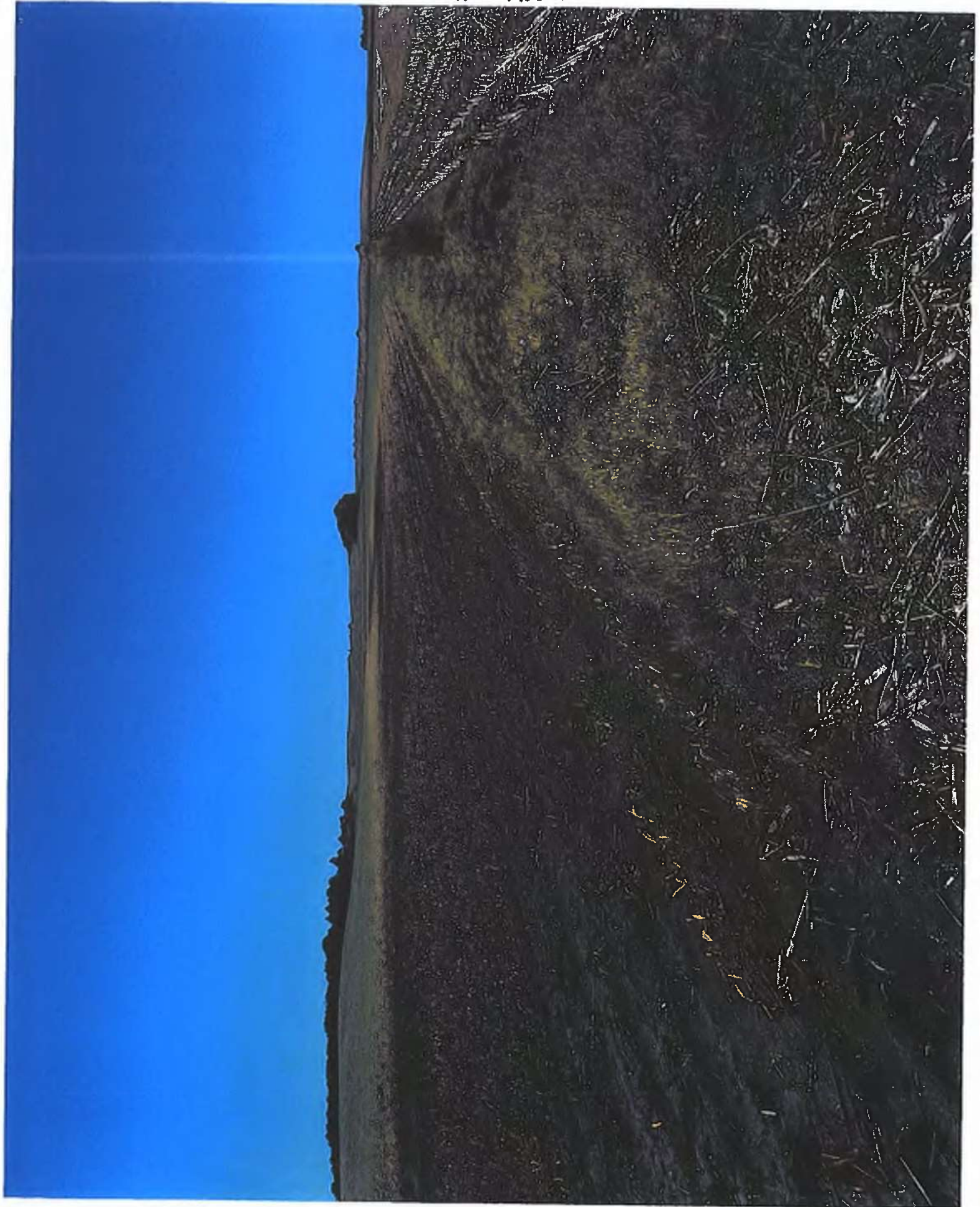
Looking N. down Fence



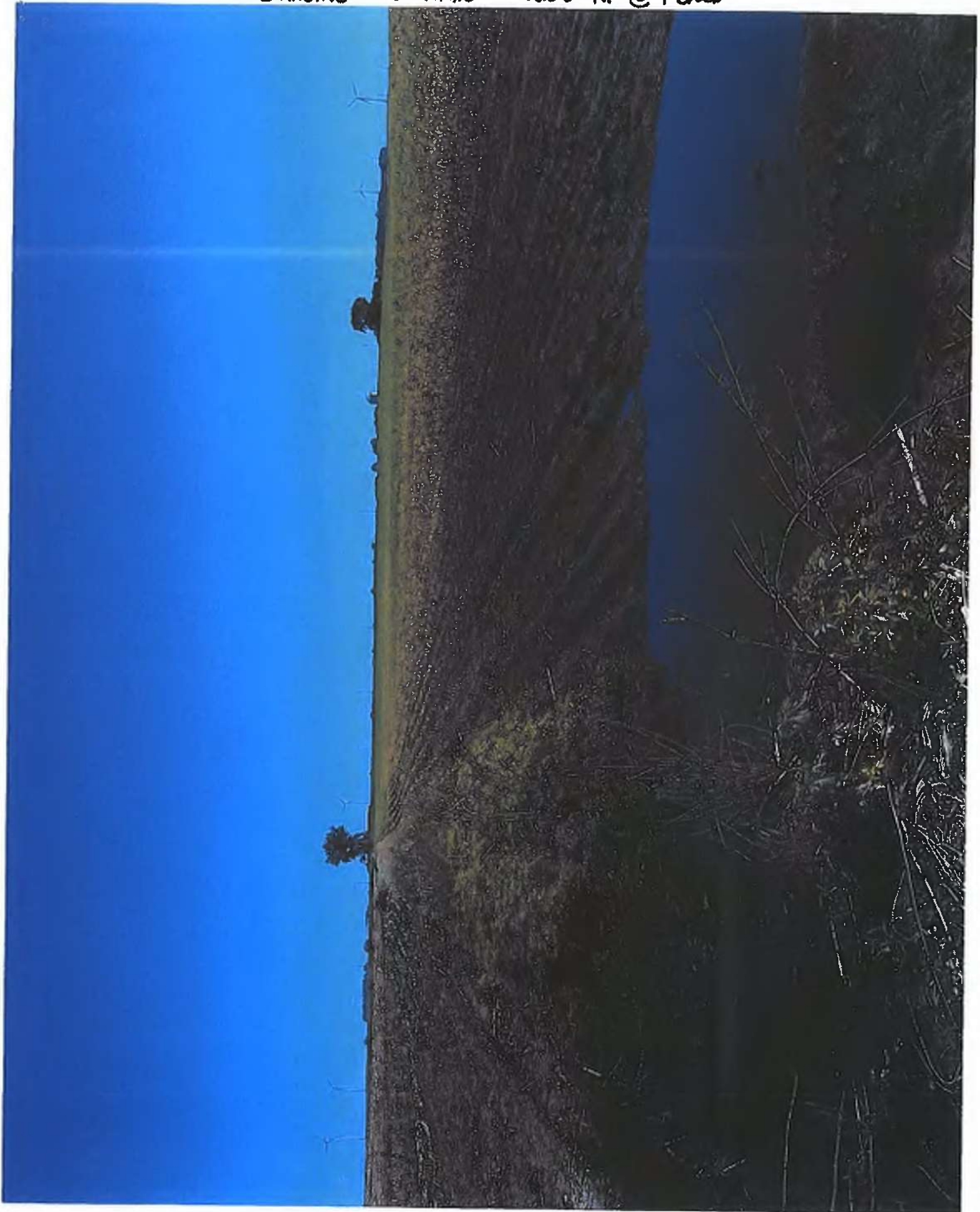
Wanna Stawame over Top main



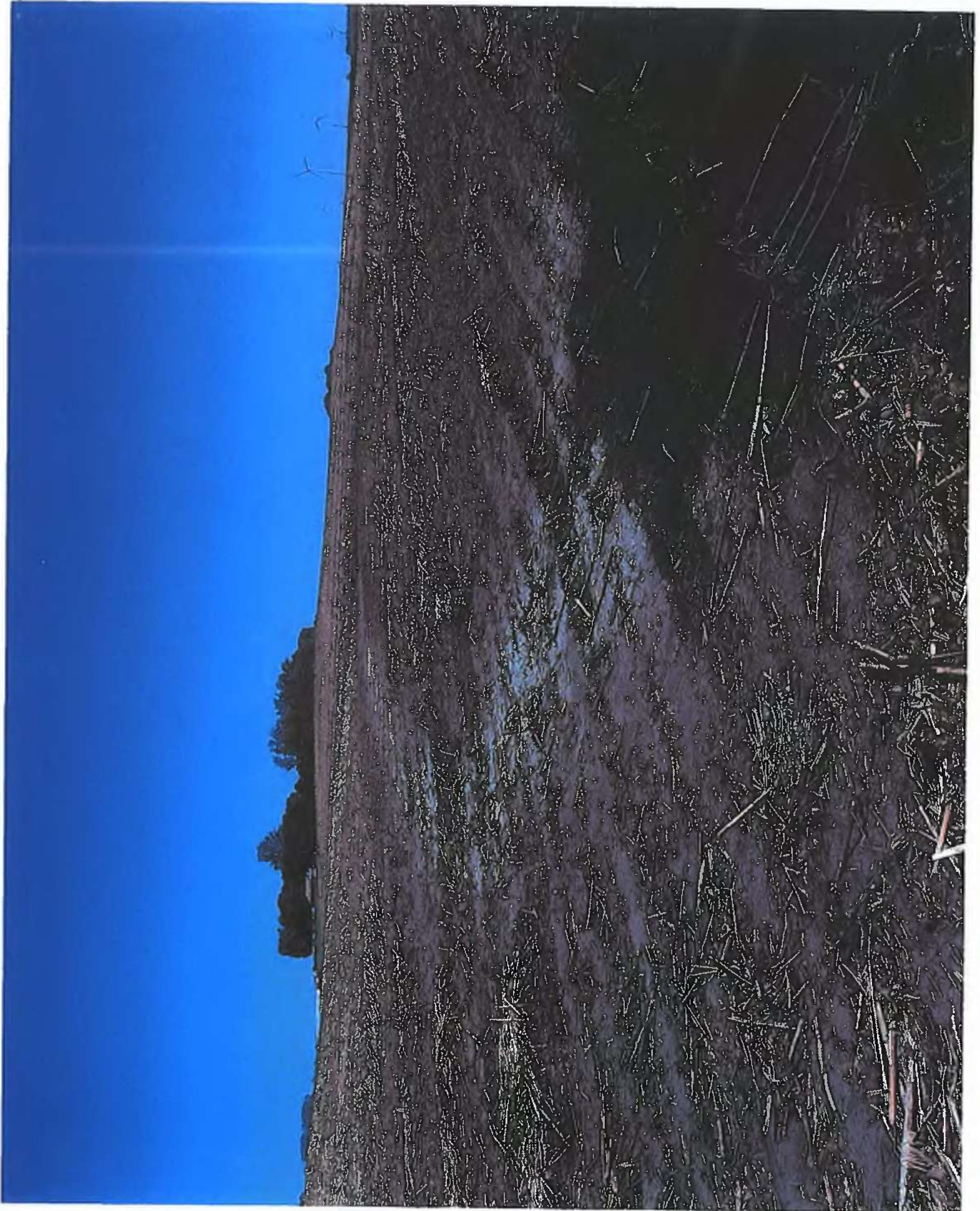
LOOKING SE @ main ROUTE



STANDING ON MAIN LOOKING N. @ Fence



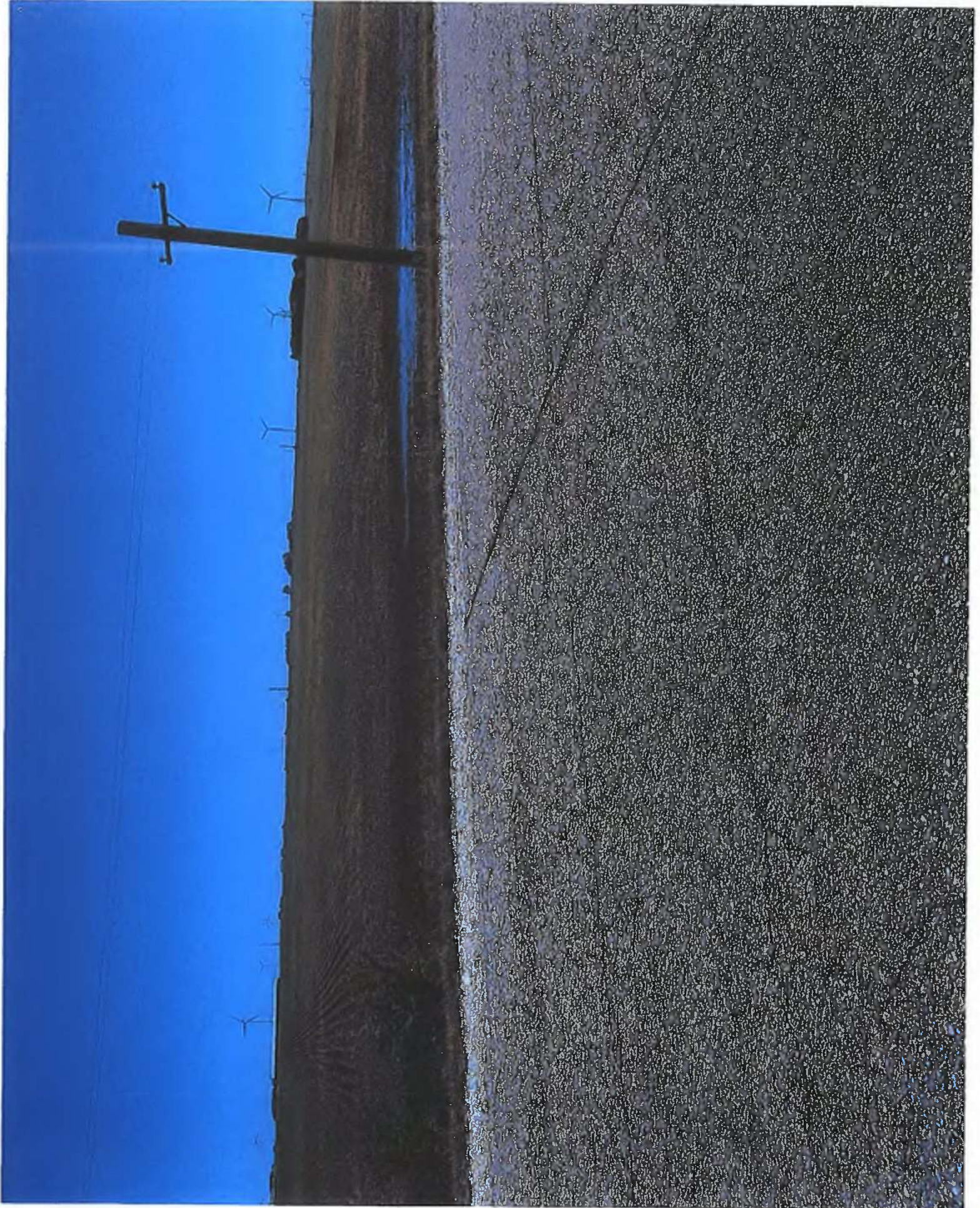
MAIN ROUTE



COTTONWOOD TREE E. OF LAT 4A @ S. R/W Hwy



Looking N. on LAT 4A



GRAND PIPER ON INTAKE OFFSET NEEDS WORK



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

11-30-20

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF

PROJECT NUMBER:

6500.2

COUNTY, ROUTE, ROAD:

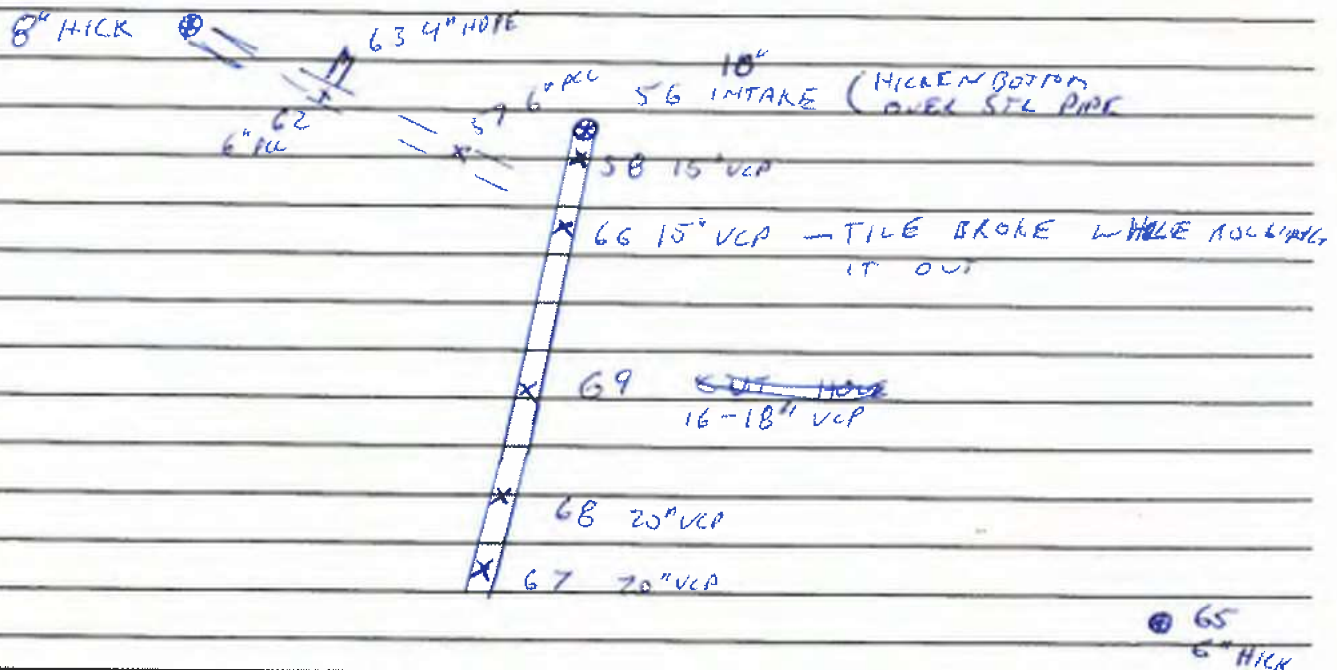
DD F-H 4-53

LOCATION:

N OF C-73 + W OF JUMPER

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB NAME, ITEM NO. AND LOCATION

- 1:30 STARTED EXCAVATING ON W SIDE OF INT. #56
FND 6" PCC TILE (DRY) @ #57 EXCAVATED
EIMORE + FND A TEE #62 OF PREVIOUS 6" PCC TILE
+ A 4" HDPE #63 HEADING N. PCC TILE APPEARS TO BE
HEADING TO 8" INTAKE @ #64
- 2:15 STARTED EXCAVATING ON S. SIDE OF INT @ #58
FND 15" VCP TILE RUNNING N-S @ #58 + #66
LOCATED S. TO PT #67 TILE IS TIGHT AT THIS LOCATION
STUCK A TILE PROBE FLAG DOWN CRACK + IT CAME UP
DRY. TILE @ 66 IS SITTING 1/2 FULL OF WATER NOT FLOWING
- 3:50 STARTED EXCAVATING @ 67 FND 20" VCP + @ 68
FND 16" OR 18" VCP @ 69



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

[Signature]

Date Prepared:

12-1-20

Reviewed by:

Engineer

Date Reviewed

CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

12-1-20

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF

PROJECT NUMBER:

6500.2

COUNTY, ROUTE, ROAD:

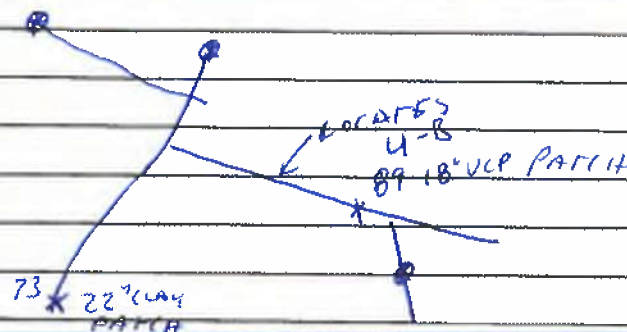
DD FH 4-53

LOCATION:

N. OF C-73 + W. OF JUNIPER

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

- 8:15 ARRIVED ON SITE SET UP BASE @ #12 (GAS METER 8022)
CUT A HOLE IN THE TOP OF TILE @ 69 TILE HAS
HAS ROCKS IN FLOW LINE W/ 3" OF SLOW FLOWING WATER
9:30 STARTED LOOKING FOR TILE @ N ROW OF C-73 FND
22" VCP @ #73 TILE IS FLOWING SLOWLY @ 3" DEEP
A 4" FIELD TILE IS STICKING INTO TILE @ 2' ± FURTHER
N.
12:00 STARTED LOOKING FOR TILE @ INT #65 FND 5" CLAY
TILE + STARTED LOCATING FND TILE @ #79, 80, + 83
RAN LOCATOR N.
2:00 FND TILE @ #89 CUT HOLE IN TOP TILE HAS 3" OF
WATER AND IS FLOWING SLOWLY
3:00 CREW BLEW A HOSE ON THE BACKHOLE AND HAD TO
REPAIR IT. I SCOUTED THE 6 NW QUAD OF THE
INTERSECTION OF JUNIPER + C-73 FOUND A 8" HICKY-
BOTTOM INTAKE W/ A HOPE TILE RUNNING N-S 3' E OF
INTAKE @ 90
4:45 PICKED UP BASE AND LEFT SITE CREW WAS GOING TO
BACK FILL HOLES



I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:

Am. King

Date Prepared:

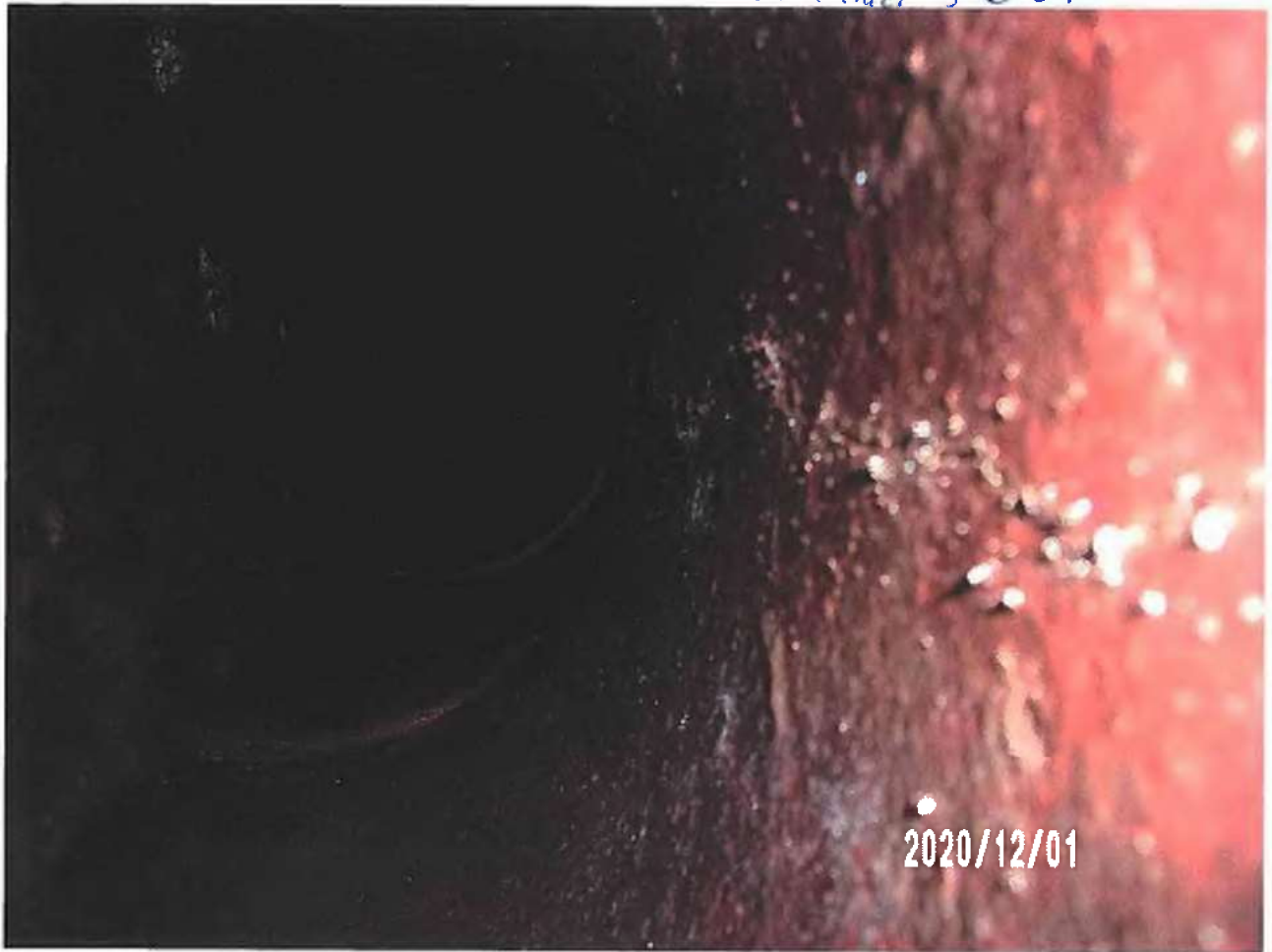
12-1-20

Reviewed by:

☐ Engineer

Date Reviewed

LOOKING S @ 69



2020/12/01



2020/12/01

LOOKING N @ 69

LOOKING N@ 69



2020/12/01



2020/12/01

LOOKING S@ 73

Looking N @ 73



Looking N. @ 73

LOOKING N @ 73



2020/12/01



2020/12/01

LOOKING N @ 73

TILE @ 73



LOOKING W @ 89

LOOKING E @ 89



2020/12/01



2020/12/01

LOOKING E @ 89

LOOKING E @ 89



HOLE @ 89

PATCH @ 89



PATCH AT 89

LOOKING E @ 90



CONSTRUCTION ENGINEERING
OBSERVATION REPORT

DATE:

12-7-20

PROJECT NUMBER:

6500.2

COUNTY, ROUTE, ROAD:

NE JUNIPER/C-73

LOCATION: LAT B-4

DAYS OF WEEK:

S M T W T F S

SHEET NO.

1 OF 1

DESCRIPTION OF WORK AND MATERIAL USED FOR EACH OPERATION, INCLUDING CONTRACTOR/SUB
NAME, ITEM NO. AND LOCATION

8:40 ARRIVED ON SITE 2 MAN CREW (RUSS/FRANK) W/
1 BACKHOE + 1 TRUCK CREW SAID THAT THEY HAD DRY
FIT THE PATCH IN HARDIN CO. THEY WERE WORKING
ON REPAIR @ 66

9:15 CREW STARTED DIGGING ON OF RR + FND A 10" CLAY (#91)
RUNNING N-S THIS TILE IS FULL OF DIRT FND 15" CLAY
TILE RUNNING N-S OPENED TILE @ 92 TILE HAS 1"-2"
OF DEBRIS + WATER IN THE BOTTOM OF TILE THE REST
OF THE TILE IS IN GOOD CONDITION. CREW PATCHED
TILE @ 92

CREW PATCHED TILE @ 73 + 69

CREW PATCHED BRO REPAIRED BROKEN TILE @ 66 W/
A 2' PIECE OF HOPE DUAL WALL TILE + WRAPPED IT
W/ FABRIC.

12:00 CREW MOVED TO OTHER JOB

I Certify that the work described in this report was incorporated into this contract unless otherwise noted.

Observer's Signature:



Date Prepared:

12-7-2020

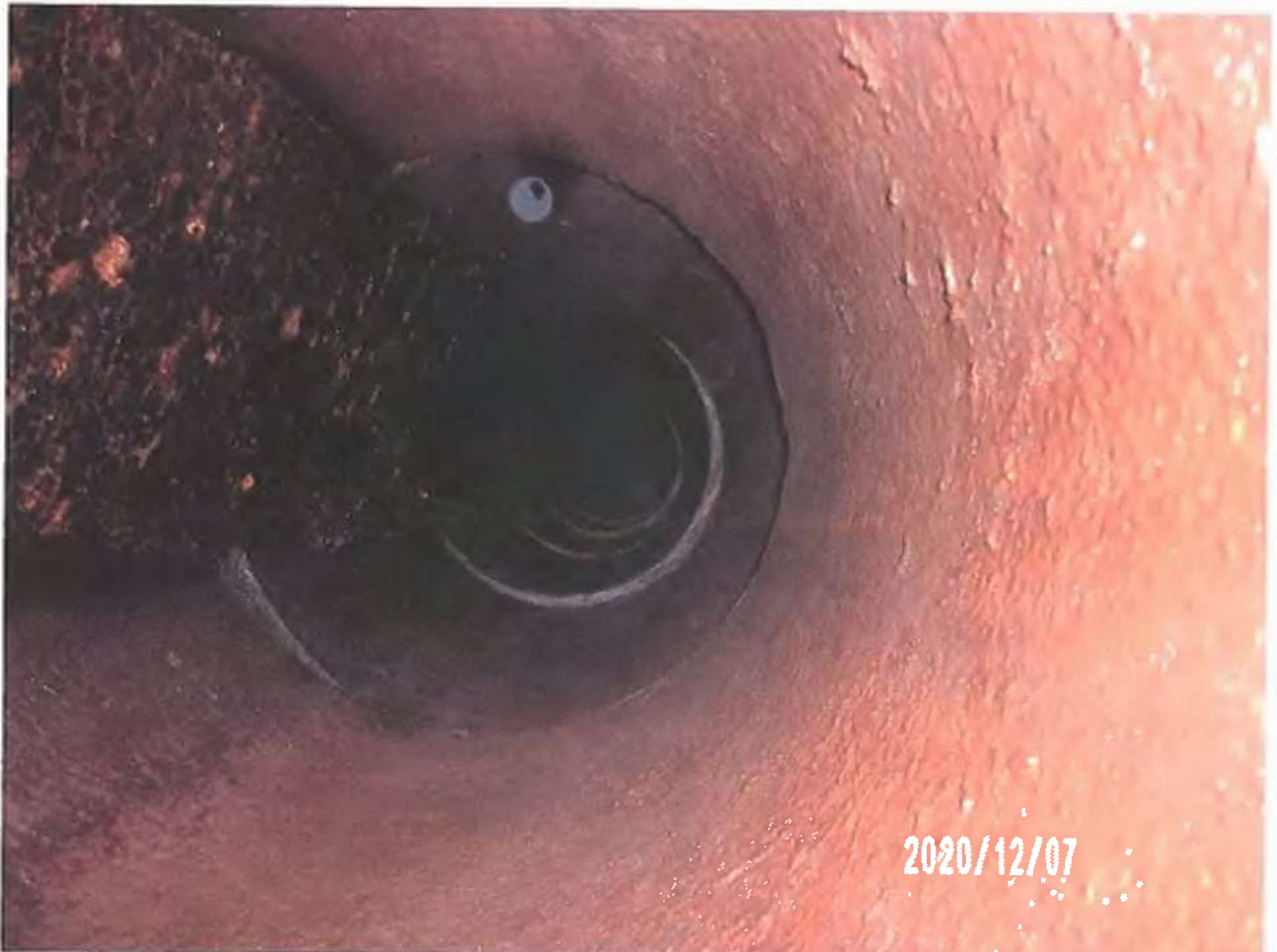
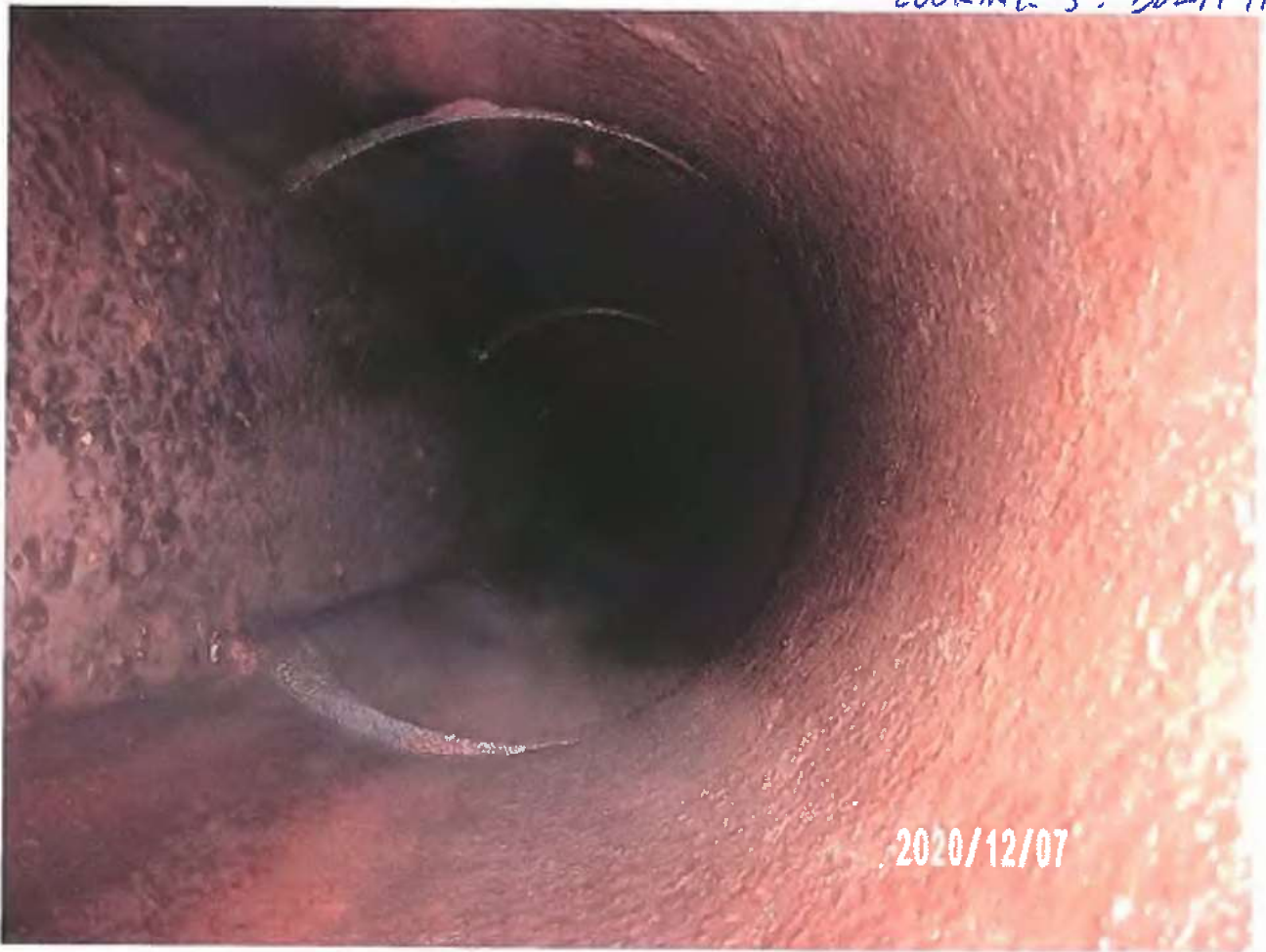
Reviewed by:



Engineer

Date Reviewed

LOOKING S. DOWN TILE @ 92



LOOKING N. UP TILE @ 92

10" TILE @ 91



CLEARING DIRT AROUND H92

PATCH @ 92



PATCH @ 92

PATCH @ 73



PATCH @ 69



PATCH @ 66

6500 2020-12-07 cs

1,3666160.310,4968629.670,1166.150,gps 8022
2,3666160.310,4968629.670,1166.150,Autonomous Setup
3,3665601.308,4985365.258,1153.705,gps 8039
4,3662686.568,4971781.373,1146.882,2.5' dia sinkhole
5,3662687.541,4971779.329,1143.094,top existing 32" vcp 2.77'to fl
6,3662685.287,4971776.399,1147.833,gs above tile
7,3662691.009,4971783.732,1148.264,gs above tile
8,3663330.530,4968801.041,1150.586,4.5'n-s*5.5'e-w
9,3663332.192,4968805.303,1150.554,top 10" vcp 0.88'to fl
10,3663284.607,4968738.850,1153.044,2.5' dia sinkhole
11,3663286.605,4968735.137,1153.508,8" dia sinkhole
12,3663327.463,4968798.394,1150.579,top 10" vcp 0.88'to fl
13,3663335.000,4968803.834,1152.886,top 5" vcp full dirt
14,3663330.888,4968795.343,1152.932,top 5" vcp full dirt
15,3663696.190,4968805.479,1162.175,fence e-w
16,3663695.365,4968720.301,1159.861,fence e-w
17,3663333.674,4968808.383,1154.979,gs above existing tile
18,3663325.979,4968795.250,1155.014,gs above existing tile
19,3663287.204,4968739.933,1151.305,top existing 10" vcp 0.88' to fl
20,3663284.675,4968736.599,1151.305,top existing 10" vcp 0.88' to fl
21,3663281.406,4968733.016,1155.472,gs above existing tile
22,3663298.207,4968754.179,1155.152,gs above existing tile
23,3665601.320,4985365.261,1153.716,gps 8039
24,3663440.572,4972146.722,1152.562,cpt 34 ir
25,3663121.599,4972576.733,1144.300,gs above existing tile
26,3662854.138,4972856.960,1140.237,top 36" cmp outlet 3.01' to fl
27,3663115.447,4972584.564,1144.271,gs above existing tile
28,3663118.687,4972580.097,1140.912,top 34" vcp 2.78' to fl
29,3663300.267,4968762.985,1153.228,BLOWOUT
30,3663300.214,4968758.654,1151.097, TOP 10"CLAY CLEAN
31,3663305.081,4968765.715,1150.771, TOP 10"CLAY CLEAN
32,3671144.512,4972728.155,1195.694,top tile -4.05
33,3671061.498,4972739.434,1196.657,top tile -4.05
34,3670738.067,4972767.542,1195.245,crop dmg 2020-6-8
35,3670771.277,4972767.593,1195.233,crop dmg 2020-6-8
36,3670770.462,4972641.626,1193.078,crop dmg 2020-6-8
37,3670736.726,4972636.791,1192.239,crop dmg 2020-6-8
38,3671512.707,4972786.250,1189.171,top 5" hdpe single wall
39,3671509.830,4972785.764,1192.291,gs
40,3671509.599,4972799.553,1192.261,crop dmg 2020-6-8
41,3671539.260,4972801.985,1192.368,crop dmg 2020-6-8
42,3671540.052,4972739.157,1192.600,crop dmg 2020-6-8
43,3671507.872,4972743.015,1192.506,crop dmg 2020-6-8
44,3671474.166,4972743.142,1195.877,tree os 33'+-s
45,3671475.598,4972729.307,1195.925,tree os 33'+-s
46,3671475.813,4972719.495,1196.002,tree os 33'+-s
47,3671455.090,4972744.540,1192.909,top cmp 18"
48,3671493.900,4972744.641,1193.147,top cmp 18"
49,3666044.827,4967907.559,1156.912, TOP CLAYTILE @BLOWOUT

6500 2020-12-07 cs

50,3665195.129,4966858.093,1156.976,LOW WET AREA
51,3666091.534,4967940.481,1159.703,gs tile locate
52,3666120.642,4967976.600,1159.936,gs tile locate
53,3666156.036,4968022.468,1159.921,gs tile locate
54,3666176.084,4968044.347,1160.241,gs tile locate
55,3666247.982,4968121.293,1157.127,int 8" cmp fl
56,3667364.250,4969908.144,1156.485,int 10" hick fl
57,3667362.860,4969874.822,1158.138,top pcc 6" nw-se
58,3667352.683,4969905.385,1157.781,top 15" vcp n-s
59,3667205.816,4969877.603,1161.446,gs tile locate
60,3667135.035,4969857.761,1161.397,gs tile locate
61,3667087.745,4969834.074,1161.682,gs tile locate
62,3667434.389,4969795.562,1158.315,top 6x6x4 tee
63,3667435.049,4969796.055,1158.332,top hdpe 4" n
64,3667485.773,4969737.456,1161.183,int 8" hick
65,3666779.953,4970174.911,1163.503,int 6" hick
66,3667299.828,4969895.147,1157.625,top 15" vcp 1.28' to fl
67,3667076.270,4969827.174,1158.243,top 20" vcp
68,3667104.562,4969844.067,1158.202,top 20" vcp
69,3667150.913,4969862.605,1157.434,top 16" 18" vcp
70,3666021.796,4967902.974,1157.055,top 10" clay 0.95 to fl
71,3666048.785,4967909.858,1156.979,top 10" clay 0.90 to fl
72,3666051.869,4967907.293,1157.120,top 10" clay 0.90 to fl
73,3666267.996,4969388.082,1156.906,top 22" clay
74,3666293.230,4969401.072,1163.438,gs tile locate
75,3666326.644,4969410.758,1163.661,gs tile locate
76,3666361.776,4969420.926,1163.792,gs tile locate
77,3666742.611,4970176.033,1163.597,gs tile locate
78,3666699.571,4970182.051,1163.554,gs tile locate
79,3666802.245,4970171.072,1159.947,top 5 clay
80,3666681.406,4970183.461,1160.163,top 5 clay
81,3666832.370,4970167.948,1164.081,gs tile locate
82,3666884.145,4970161.938,1164.659,gs tile locate
83,3666905.915,4970159.744,1158.913,top 6 clay
84,3666918.111,4970138.911,1164.448,gs tile locate
85,3666939.141,4970096.684,1164.700,gs tile locate
86,3666962.405,4970047.413,1164.611,gs tile locate
87,3666989.862,4969991.061,1163.530,gs tile locate
88,3667021.781,4969918.846,1162.411,gs tile locate
89,3666932.784,4970109.017,1158.626,top 18 vcp
90,3666489.494,4971867.481,1162.503,int 8" hick fl
91,3666811.651,4972398.548,1165.263,962 10 n-s
92,3666813.848,4972384.939,1162.370,962 15 n-s
93,3666502.204,4972037.848,1162.566,952 -3.4 to fl
94,3666041.730,4967906.459,1153.072,421 10
95,3666047.861,4967907.178,1153.058,421 10 tee
96,3666047.852,4967909.056,1152.927,421 10 45elbow