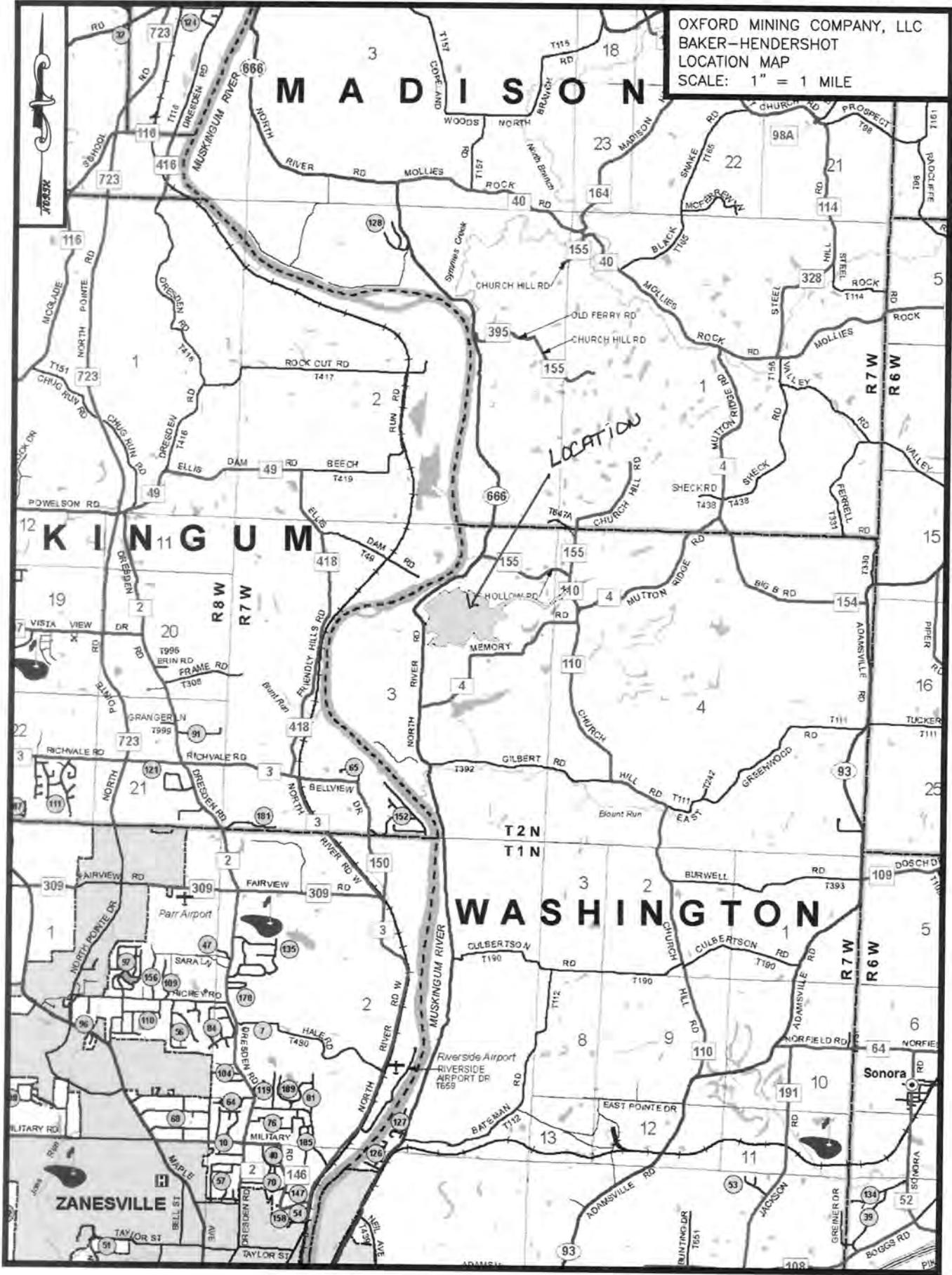


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LRH-2010-559. Exhibit 1a Proposed Discharges of Fill Material into waters of the U.S.

Stream ID	Flow Regime	HHEI Score	Mine Through (lf)	Waste Treatment (lf)	Temporary Pond Construction (lf)	Temporary pond and wetland mitigation area (lf)
S-3	Intermittent	55	591	134	160	
S-4	Intermittent	55	720		390	
S-5	Intermittent	55			275	98
S-8	Intermittent	28	186			615
S-9	Ephemeral	28			71	
S-10	Ephemeral	9				72
			1497	134	896	785

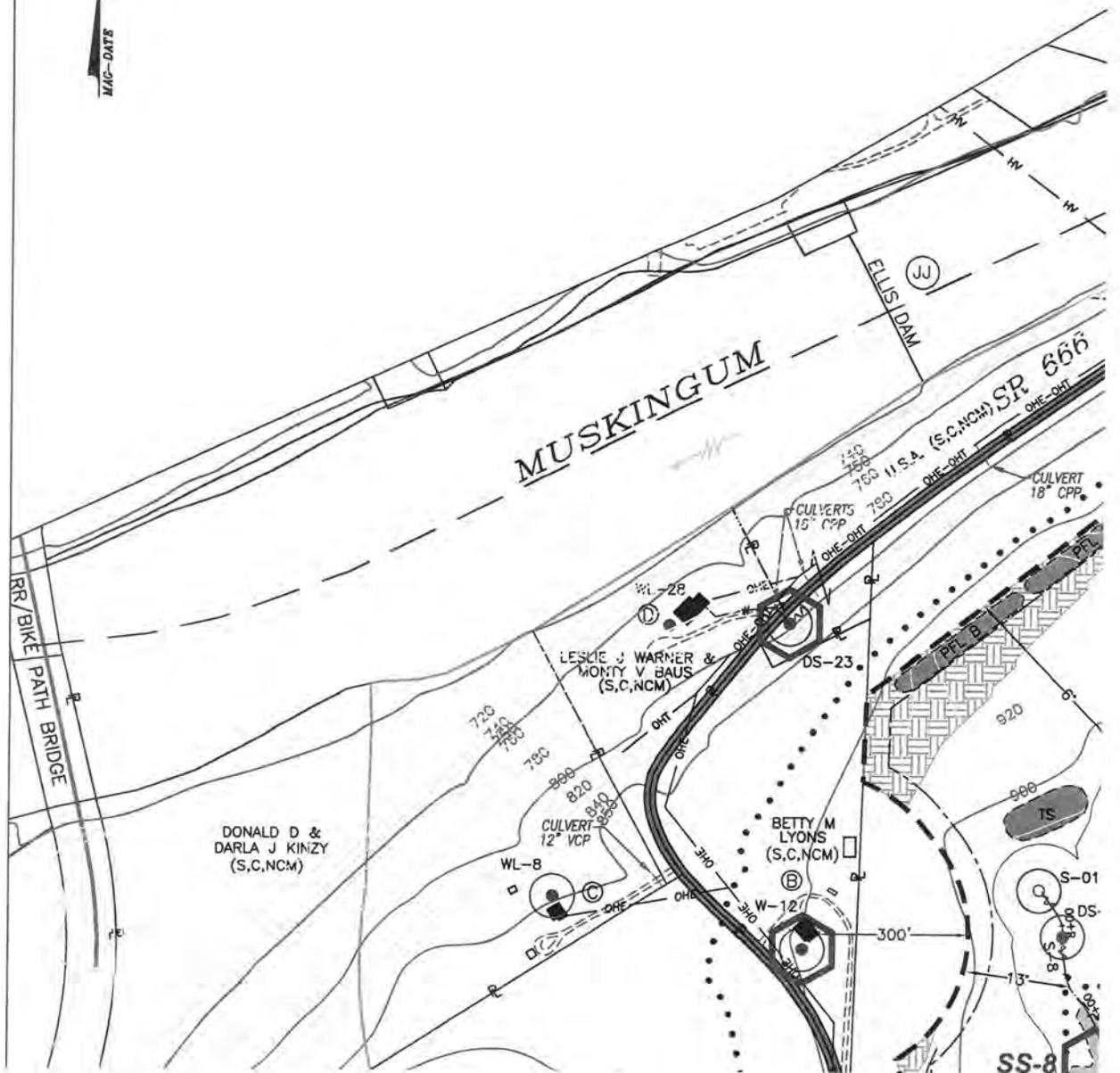
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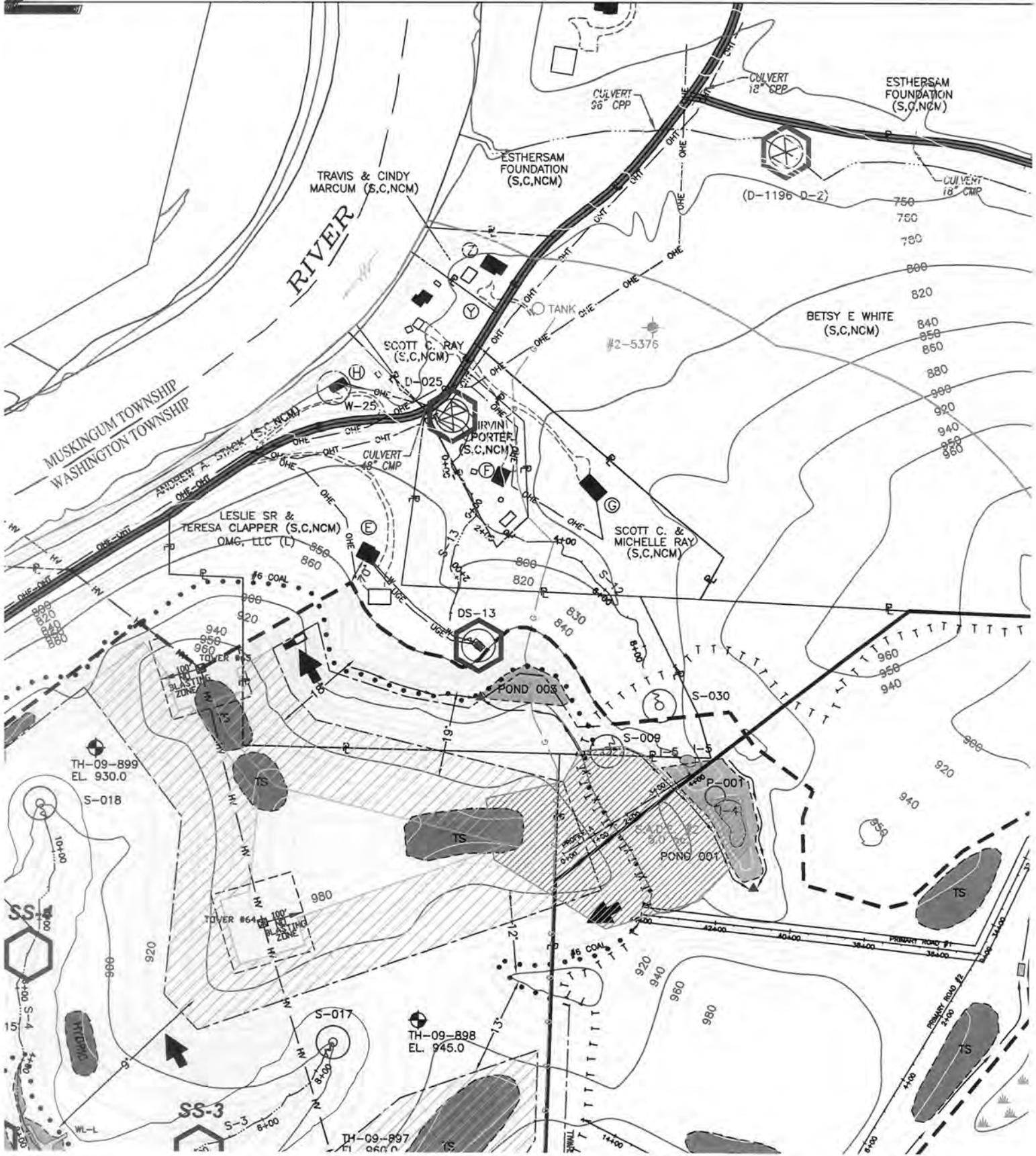
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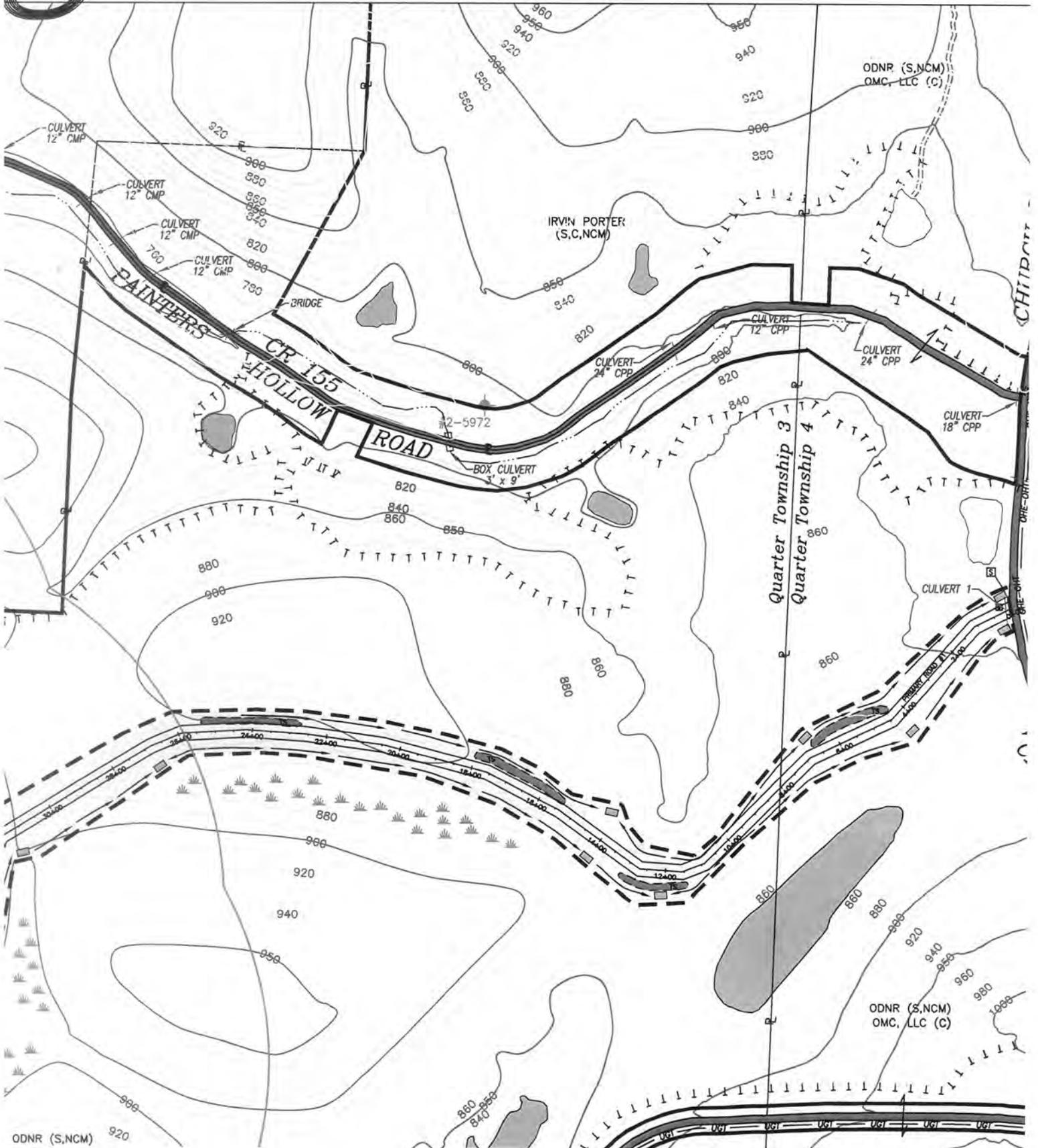
Exhibit 2 - Sheet 1 Application and Hydrology Map



1	2	3	4
5	6	7	8





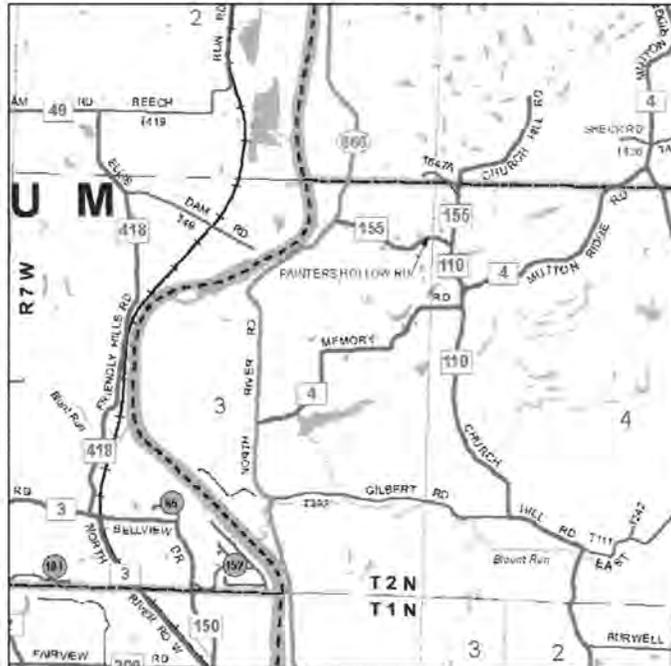


4

LRH-2010-559-MUS

USGS QUAD
ADAMSVILLE

DRAINAGE BASIN
MUSKINGUM RIVER



LOCATION MAP
SCALE: 1" = 1 MILE

LEGEND

- PERMIT AREA D-1196
- PROPOSED PERMIT AREA
- HYDROLOGICAL BOUNDARY
- TOPSOIL STORAGE
- HYDRIC SOIL STOCKPILE
- BUFFER ZONE VARIANCE AREA
- BUFFER ZONE AVOIDANCE AREA
- WETLAND MITIGATION AREA
- WETLAND AREA
- PUBLIC ROAD
- PROPOSED SEDIMENT POND
- EXISTING SEDIMENT POND
- EXISTING IMPOUNDMENT
- AUGER MINING
- UNDERGROUND MINES
- S.A.D.E. AREA
- NO SURFACE AFFECTMENT
- PRIME FARMLAND UNIT- AfB
- DRILLED WELL (W)
- DRILLED WELL WITH LOG (WL)
- DUG WELL (DW)
- DEVELOPED SPRING (DS)
- SPRING (S)
- UPSTREAM SAMPLING SITE (U)
- DOWNSTREAM SAMPLING SITE (D)
- BACKGROUND SAMPLING SITE
- CISTERN (C)
- WATER TREATMENT FACILITY
- SUMP
- GAS LINE
- OIL LINE
- OVERHEAD ELECTRIC (OHE)
- OVERHEAD TELEPHONE (OHT)
- UGT (UNDERGROUND TELEPHONE)
- PUBLIC WATER LINE
- PRIVATE WATER
- FENCE LINE
- TRAIL
- Proposed Biological Sampling Station

- LEASEE
- SURFACE OWNER
- COAL OWNER
- NON COAL MINERAL OWNER
- OXFORD MINING CO., LLC
- PREVIOUSLY MINED AREA
- EXISTING HIGHWALL
- PROPOSED FINAL HIGHWALL/LOWWALL
- BEGIN MINING
- END MINING
- COAL OUTCROP
- NO. 6 MIDDLE KITTANNING (El. ±865)
- NO. _____
- NO. _____
- TEST HOLE
- SIGN
- OCCUPIED DWELLING
- UNOCCUPIED DWELLING
- COMMERCIAL BUILDING
- HUNTING CABIN
- PERENNIAL STREAM
- INTERMITTENT STREAM
- DIVERSION DITCH
- SLOPE MEASUREMENT
- SEEPING ENTRY
- UNDERGROUND ENTRY
- SEEP
- EXISTING MONITORING STATION
- PROPOSED MONITORING STATION
- PUBLIC WATER SUPPLY SOURCE
- PROPERTY LINE
- CIRCLED LETTERS NEXT TO DWELLINGS, REFER TO "ANTICIPATED BLAST DESIGN"
- RADIO TOWER
- HIGH VOLTAGE TOWER
- HIGH VOLTAGE LINE
- UNVERIFIED WETLAND
- OIL / GAS WELLS

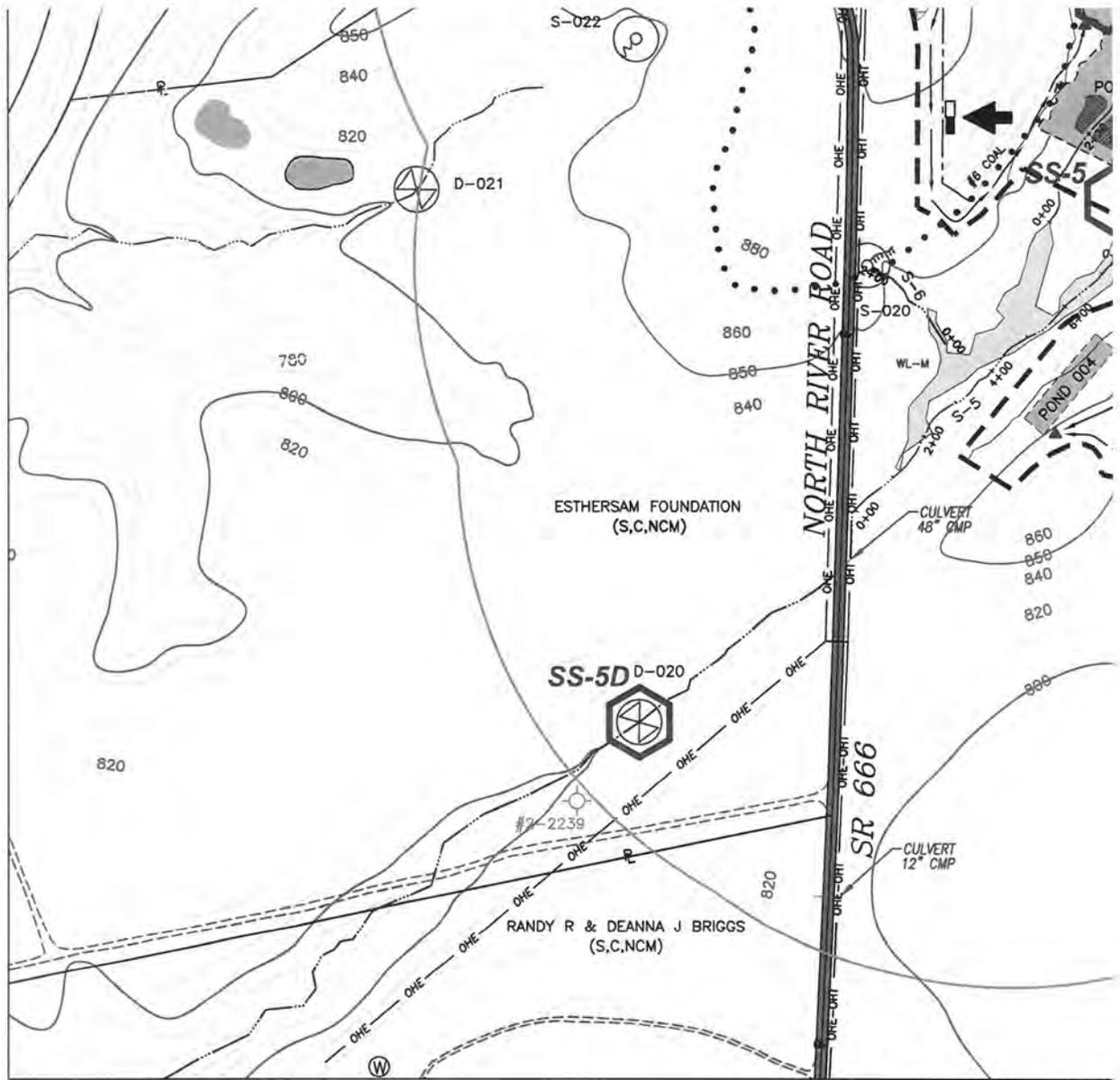


Exhibit 2 - Sheet 5

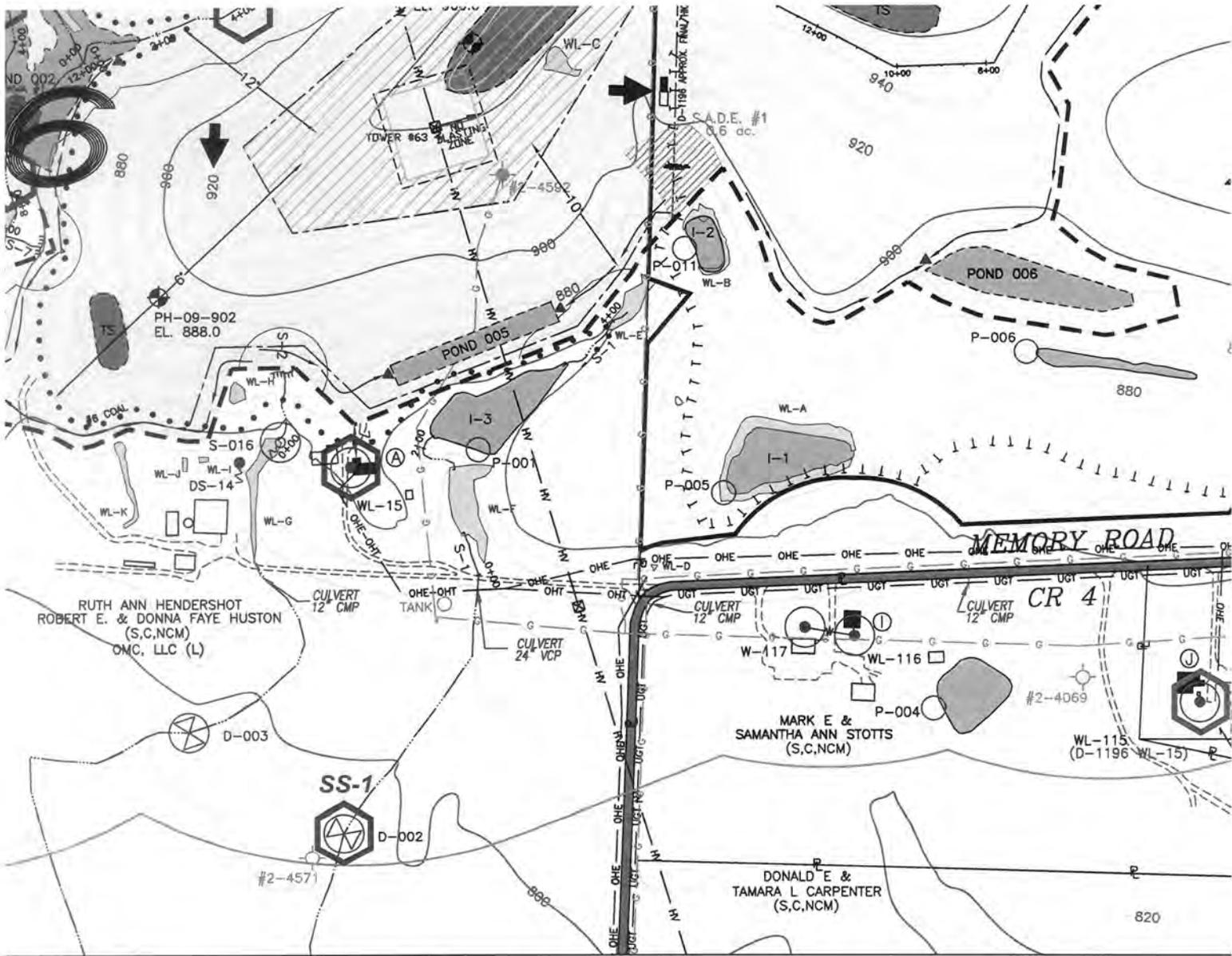
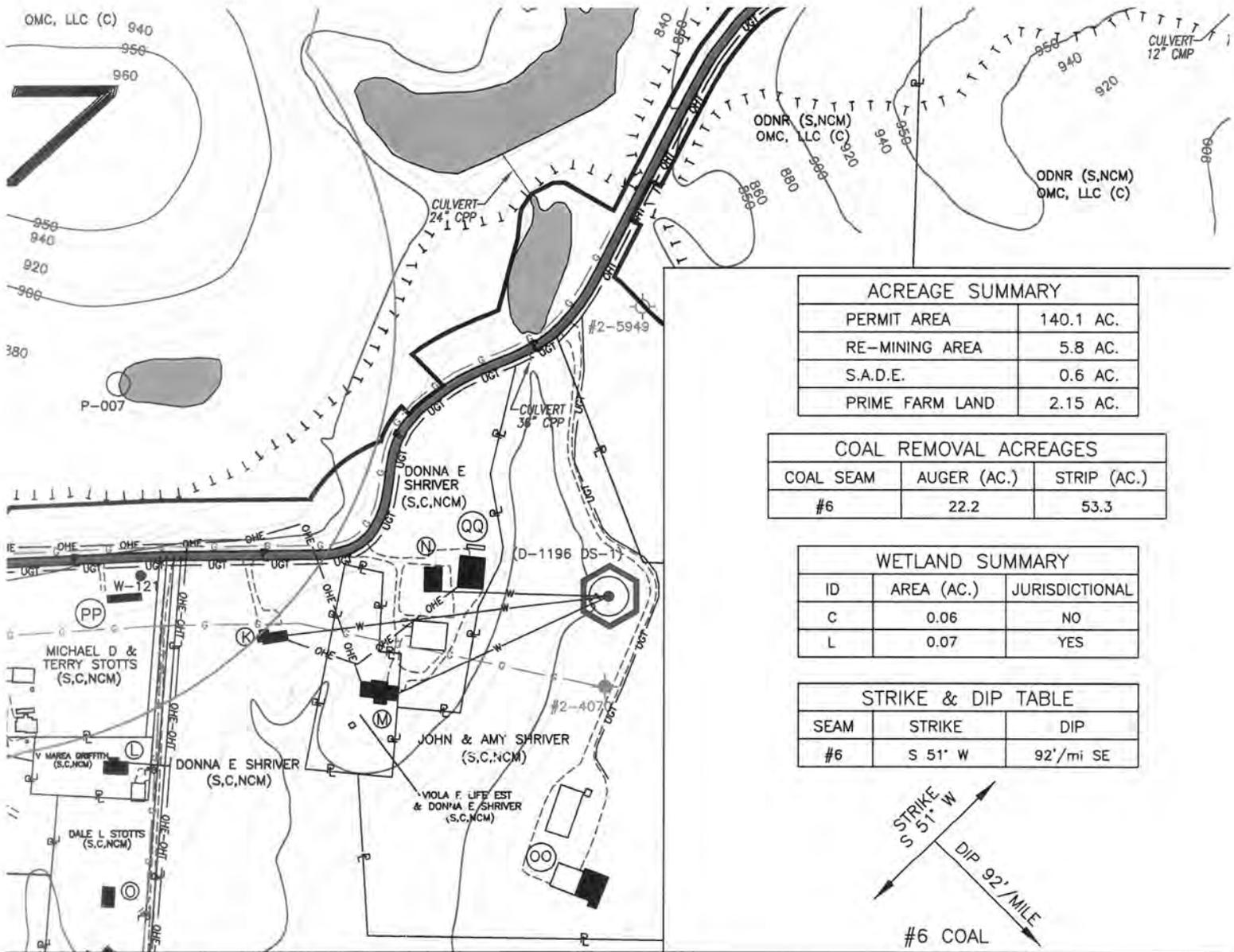


Exhibit 2 - Sheet 6



ACREAGE SUMMARY	
PERMIT AREA	140.1 AC.
RE-MINING AREA	5.8 AC.
S.A.D.E.	0.6 AC.
PRIME FARM LAND	2.15 AC.

COAL REMOVAL ACREAGES		
COAL SEAM	AUGER (AC.)	STRIP (AC.)
#6	22.2	53.3

WETLAND SUMMARY		
ID	AREA (AC.)	JURISDICTIONAL
C	0.06	NO
L	0.07	YES

STRIKE & DIP TABLE		
SEAM	STRIKE	DIP
#6	S 51° W	92'/mi SE

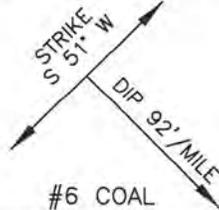
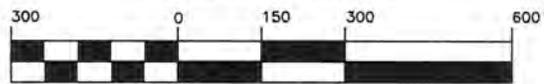


Exhibit 2 - Sheet 4

GRAPHIC SCALE



(IN FEET)
1 inch = 300 ft.

- ⊙ FINALED/PLUGGED
- ✦ NOT FINALED/PLUGGED

NOTES:

1. THIS MAP WAS PREPARED USING USGS QUADS, TAX MAPS, AERIAL PHOTOGRAPHY, AND GIS ELEVATION DATA. PROPERTY LINES ARE ASSUMED CORRECT, BUT HAVE NOT BEEN SURVEYED.
2. THE PROPER AUTHORITIES OF ANY UTILITY (OIL, GAS, ELECTRIC, PHONE, ETC.) WILL BE NOTIFIED PRIOR TO MINING, IF SUCH UTILITY WILL BE AFFECTED.
3. FOR HALF MILE BLASTING STRUCTURES REFER TO ADDENDUM TO PART 3, C(3).
4. PROPOSED STRIP MINING IS FOR THE #6 COAL AND PROPOSED AUGER MINING IS FOR THE #6 COAL.
5. OIL/GAS WELLS NOT FINALED/PLUGGED ARE ASSUMED ACTIVE.
6. WL-28 IS NOT PLUMBED INTO THE HOUSE.
7. W-25 IS LOCATED INSIDE THE HOUSE.
8. CHURCH HILL ROAD NUMBER CHANGES NORTH OF PAINTERS HOLLOW ROAD.
9. WMA #1 FALLS WITHIN POND 002.
10. EPHEMERAL STREAMS ARE NOT SHOWN ON THE APPLICATION HYDROLOGIC MAP. REFER TO THE AQUATIC FEATURES MAP (ADDENDUM TO PART 3, D(18)) FOR THEIR LOCATIONS.

"I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS MAP IS CORRECT AND SHOWS TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL THE INFORMATION REQUIRED BY CHAPTER 1513 OF THE REVISED CODE AND RULES ADOPTED THEREUNDER."

ACKNOWLEDGE BEFORE ME A NOTARY PUBLIC, ON THIS _____ DAY OF _____, 20_____.

MY COMMISSION EXPIRES:

 Linn Engineering, Inc.

534 Market Street
Zanesville, Ohio

P.O. Box 2086
(740) 452-7434

OXFORD MINING COMPANY, LLC
P.O. BOX 427
COSHOCKTON, OHIO 43812

TYPE OF MAP

- APPLICATION MAP
- HYDROLOGIC MAP
- APPLICATION TO REVISE
- ANNUAL MAP, YEAR _____
- ADJACENT AREA MAP

STRIP MINE LOCATION

SECTION QTR TWPS 3 and 4 T- 2 -N R- 7 -W
TOWNSHIP WASHINGTON COUNTY MUSKINGUM
MINE BAKER-HENDERSHOT STATE OF OHIO

Exhibit 2 -
Sheet 8

APPLIC.	SCALE	CONTOUR	DATE	REVISED
10462	1"=300'	10'	6/11	9/12

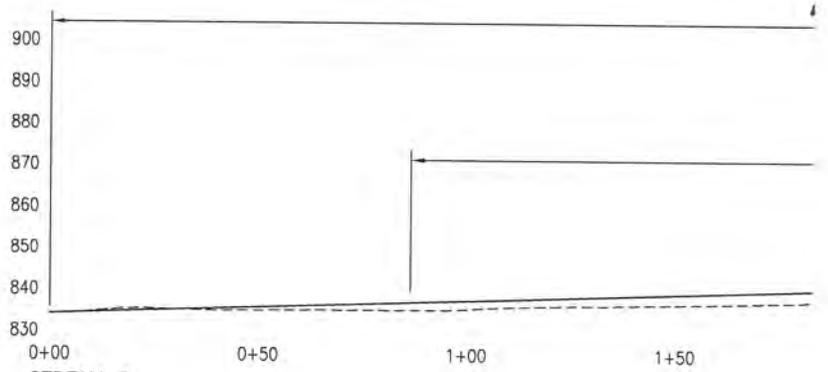
Stream Mitigation Profiles

Exhibit 3 Sheet 1

1

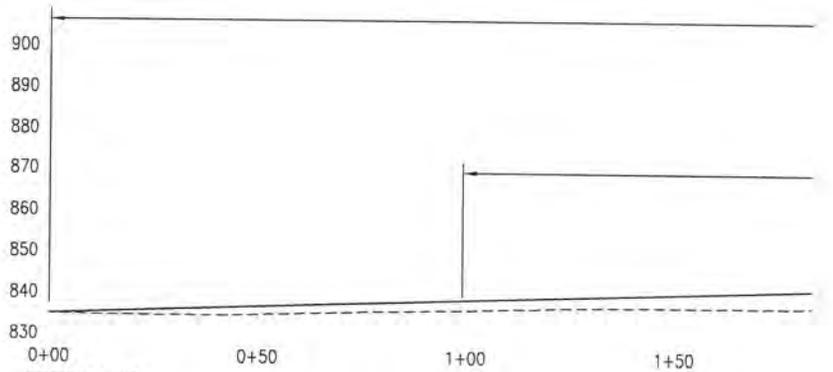
LRH-2010-559-MUS

1	2	3	4
5	6	7	8



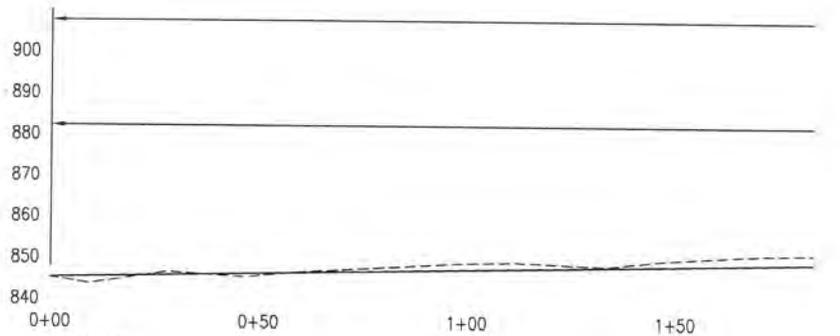
STREAM 8

1 inch = 40 ft.



STREAM 53

1 inch = 40 ft.



STREAM 4

1 inch = 40 ft.

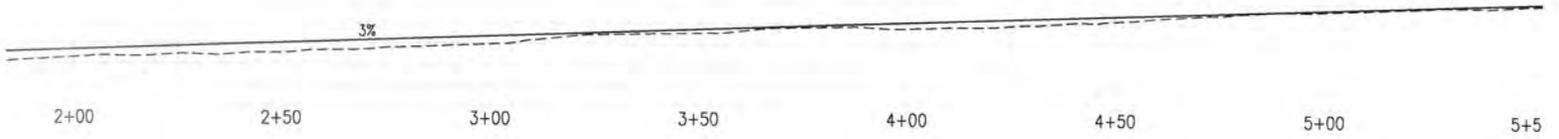
Exhibit 3 Sheet 2

2

LRH-2010-559-MUS

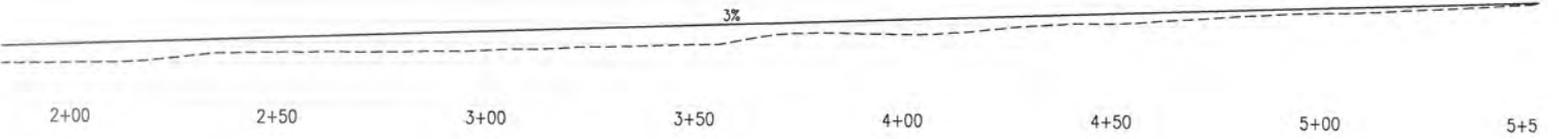
CHANNEL RECONSTRUCTION
0+00 TO 6+13

POND 002
(TEMPORARY)



CHANNEL RECONSTRUCTION
0+00 TO 6+62

POND 002
(TEMPORARY)



CHANNEL RECONSTRUCTION
0+00 TO 4+26

CHANNEL RECONSTRUCTION
4+26 TO 5+83

POND 002
(TEMPORARY)

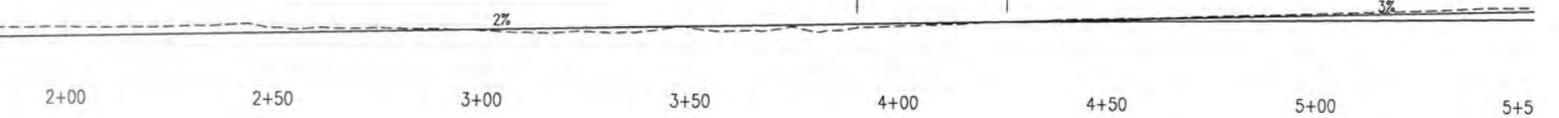
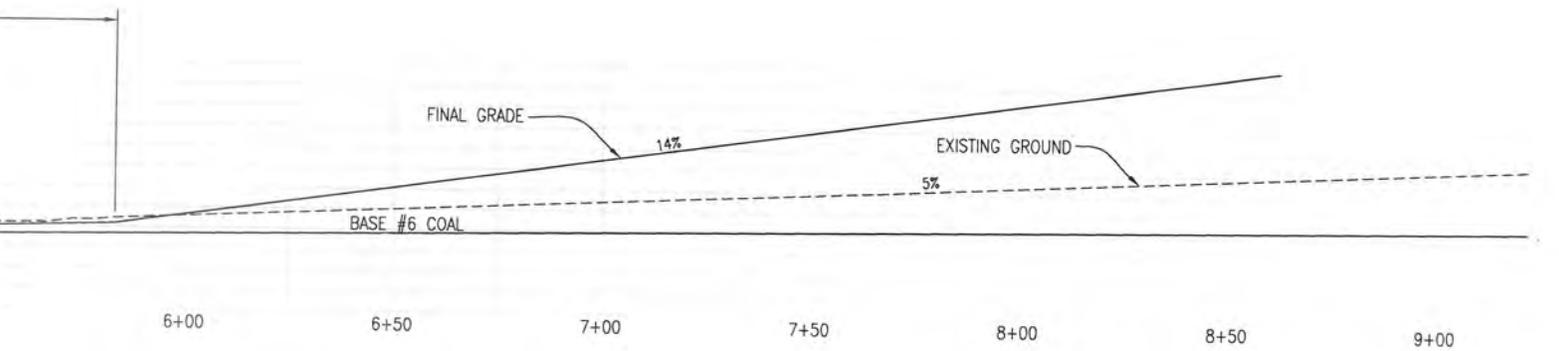
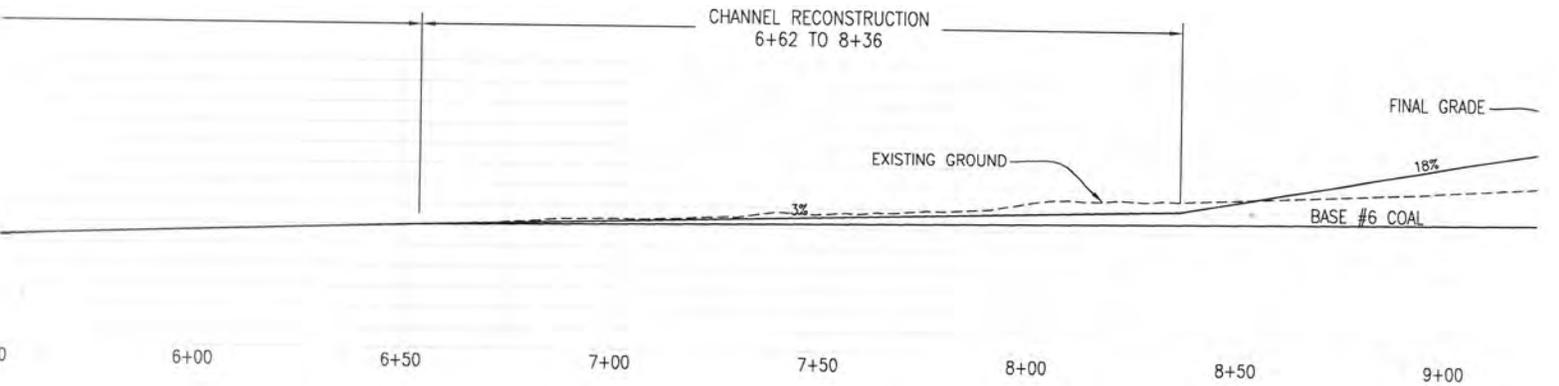
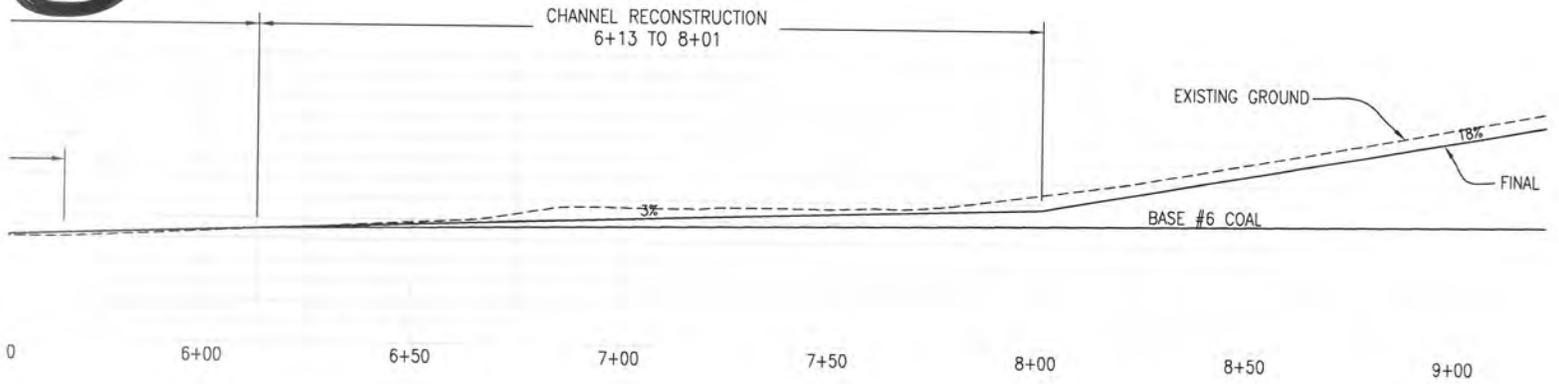


Exhibit 3 Sheet 3

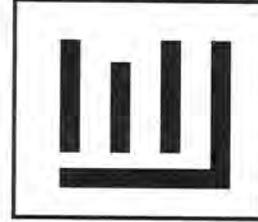
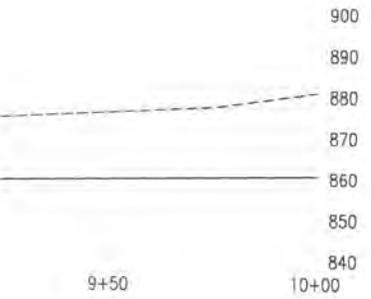
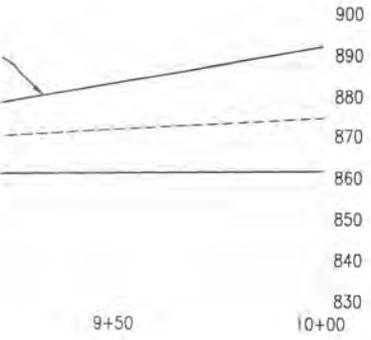
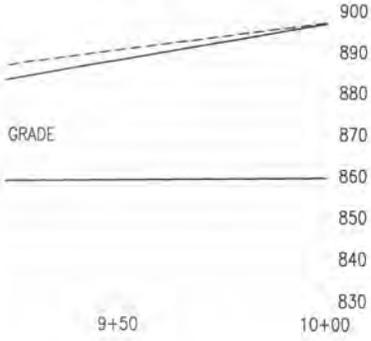
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LRH-2010-559-MUS



4

LRH-2010-559-MUS



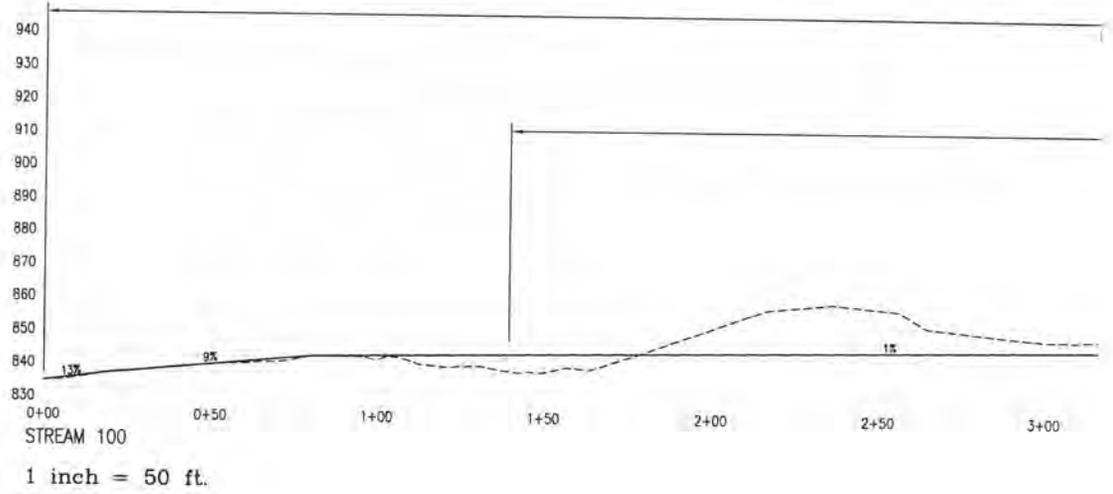
Linn Engineering, Inc.

Civil Engineering Consultants

P.O. Box 2086 Zanesville, Ohio 43702-2086 740-452-7434

NY, LLC
AREA
, H(4)
TIONS

5



Stream	Sta	Sta	Area	CN	Tc	Q100	Q1.5	S	B	H	D100	D1.5	V100	V1.5	CL	D50
8	0+00	6+13	9.3	82	0.1	29.9	8.6	4.0	3.0	1.0	1.0	0.6	5.4	3.1	A	--
	6+13	8+01	3.7	82	0.1	11.9	3.4	3.0	3.0	1.0	0.7	0.4	3.2	1.8	A	--
53	0+00	6+62	19.8	82	0.1	63.7	18.2	3.0	3.0	1.5	1.4	0.8	6.4	4.6	B	3
	6+62	8+36	14.6	82	0.1	47.0	13.4	3.0	3.0	1.5	1.2	0.8	5.8	3.4	A	--
4	0+00	4+26	17.9	82	0.1	57.6	16.5	2.0	3.0	1.5	1.5	0.8	5.4	4.2	B	3
	4+26	5+83	15.6	82	0.1	50.2	14.4	3.0	3.0	1.5	1.3	0.8	5.9	3.5	A	--
100	0+00	0+19	21.2	82	0.1	68.3	19.5	13.0	4.0	2.0	1.1	0.5	8.8	6.5	B	6
	0+19	0+81	20.2	82	0.1	65.0	18.6	9.0	4.0	2.0	1.1	0.6	7.7	5.9	B	6
	0+81	4+01	19.2	82	0.1	61.8	17.7	1.0	3.0	2.0	1.8	1.1	4.1	2.4	A	--
	4+01	5+28	15.8	82	0.1	50.9	14.6	22.0	4.0	2.0	0.9	0.4	9	6.6	B	9
	5+28	5+84	14.8	82	0.1	47.6	13.6	2.0	3.0	2.0	1.3	0.7	5.1	4	B	3
	5+84	7+13	13.8	82	0.1	44.4	12.7	17.0	2.0	2.0	1.0	0.5	8.8	6.6	B	6
	7+13	8+63	12.3	82	0.1	39.6	11.3	1.0	2.0	2.0	1.7	1.1	3.5	2.0	A	--
8+63	12+09	10.3	82	0.1	33.2	9.5	1.0	2.0	2.0	1.6	1.0	3.2	1.9	A	--	

Hydr
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 B:
 D:
 H:
 V:
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 Rock
 Chan
 Side :

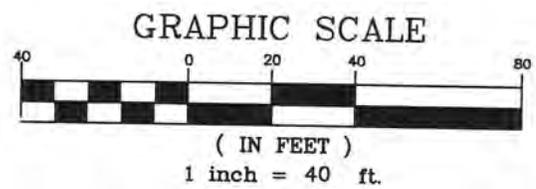
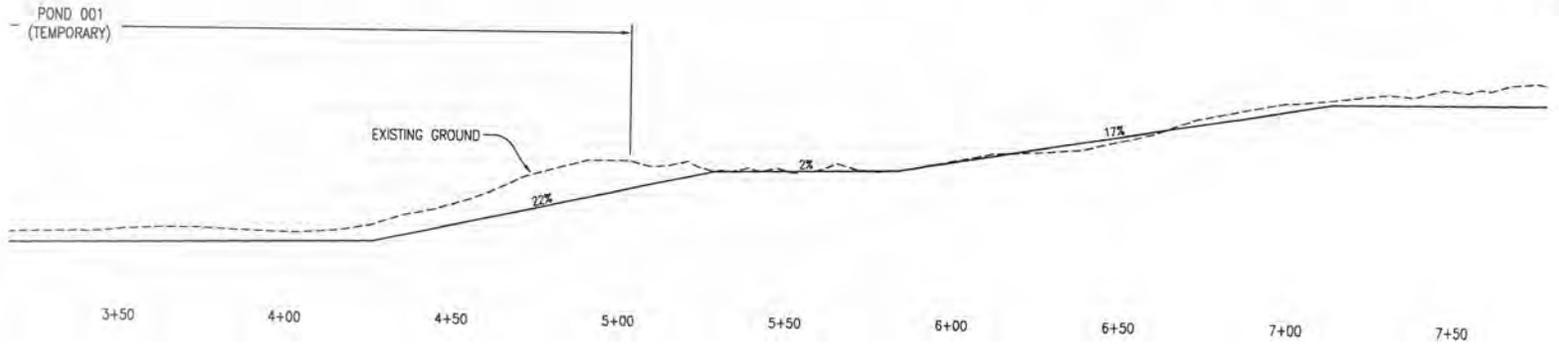


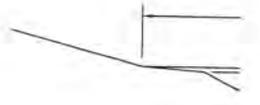
Exhibit 3 - Sheet 4

6

CHANNEL RECONSTRUCTION
0+00 TO 12+09

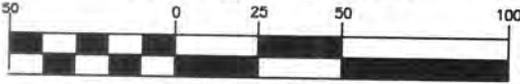


Logic Data		Base Flow 1.5yr 6hr 1.8"	Notes: 1. Peak runoff calculated using SEDCAD 4.0. 2. Channel design using sedcad 4.0. 3. Where a steep channel (>10%) transitions into a lesser sloped channel, rip rap channel lining will extend along the flatter channel for a distance of at least 10 feet. 4. Rip rap may consist of larger rocks that are partially buried. Void space between larger rocks shall be filled with smaller rock. 5. Channels may be stabilized with partially buried logs, stumps, root wads, rock check dams, wooden posts, and supplemental planting.
Design storm:	Channel 100yr 6hr		
Watershed (ac)	3.9"		
Time of concentration (hr)			
Hydrologic Data			
Peak runoff (cfs)			
Channel slope (%)			
Bottom width (ft)			
Flow depth (ft)			
Channel depth (ft)			
Velocity (fps)			
Channel lining type			
Type A:	vegetated-tall fescue		
Type B:	rock lined		
Rock size (in)			
Depth:	2 x D50		
Channel Shape:	trapezoidal		
Slopes:	3H:1V		



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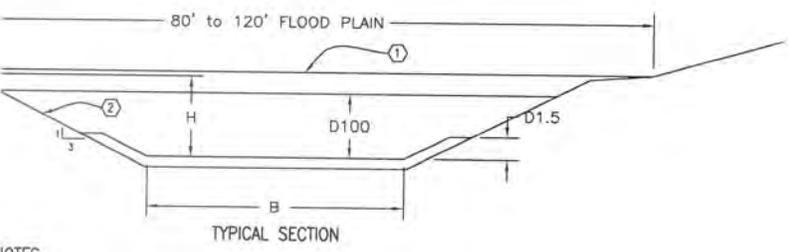
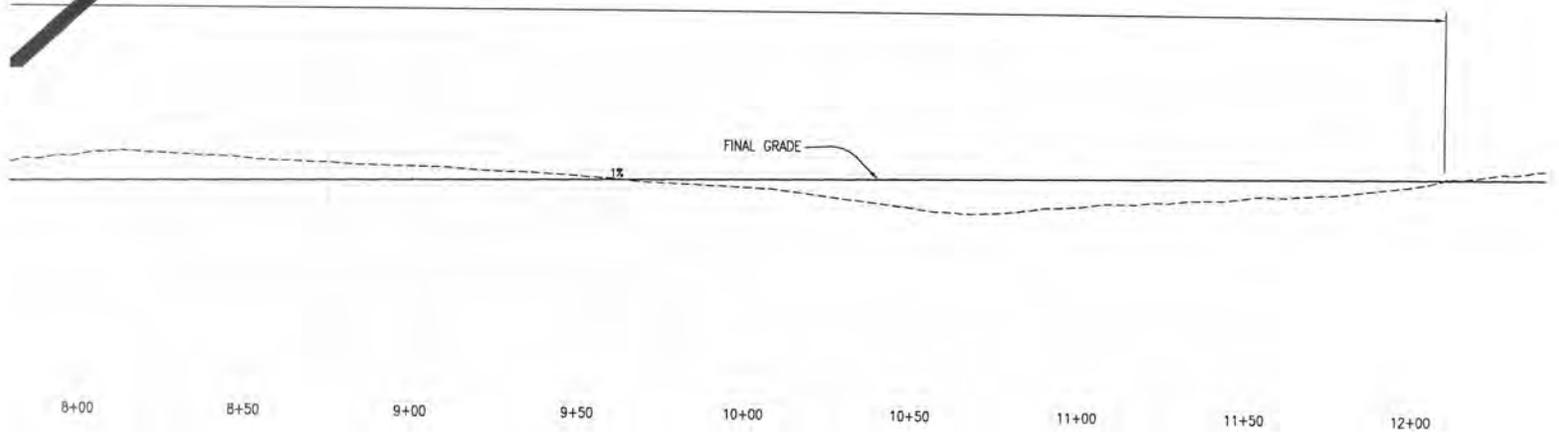
GRAPHIC SCALE



(IN FEET)
1 inch = 50 ft.

Exhibit 3 - Sheet 7

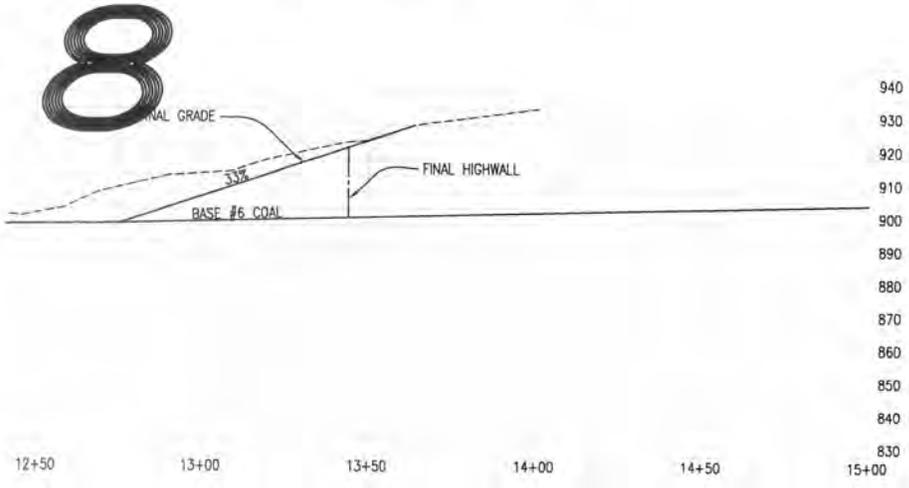
7



- NOTES:
1. THE IMPACTED LENGTH (
 2. THE IMPACTED LENGTH (
 3. THE IMPACTED LENGTH (
 4. THE IMPACTED LENGTH (

- NOTES:
- Channel:
 - Channel will carry the 100 year 6 hour storm. Flow depth = D100.
 - Base flow depth is flow from the 1.5 year 6 hour storm = D1.5.
 - Minimize use of riprap armored channels. Rip rap depth above channel bottom = D1.5.
 - If riprap is placed above D1.5 the normal low flow should be covered with soil and planted.
 - The flow length of the low flow channel should equal or exceed the original channel length.
 - Flood Plain:
 - Final grading will provide positive drainage to the channel.
 - Encourage natural vegetation in the Flood Plain for the benefits of water quality, bank stability and wildlife.
- KEYNOTES
- 1) Typical configuration of stream corridor / flood plain following rough backfilling and grading.
 - 2) Typical configuration of stream channel following final reconstruction.

Exhibit 3 - Sheet 8



- OF S-5 WILL BE RECONSTRUCTED IN ST-53
- OF S-3 WILL BE RECONSTRUCTED IN ST-53 AND ST-100.
- OF S-4 WILL BE RECONSTRUCTED IN ST-4 AND ST-100.
- OF S-8 WILL BE RECONSTRUCTED IN ST-8.

TIMOTHY H. LINN, PE, PS _____ DATE _____

LRH-2010-559-MUS

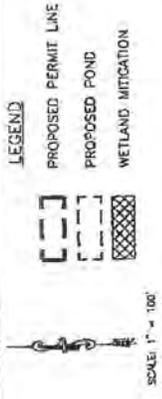
OXFORD MINING COMPA.
 BAKER-HENDERSHOT
 ADDENDUM TO PART 3
 STREAM RECONSTRUC

Designed	By	Date	Scale	Revisions	By	Date
	THL		Horiz. 1" = as shown Vert. 1" = as shown	REV 1	KHK	9/12
	VHC	3/18/11				
Checked	THL		Field Book No.			
Approved	THL					
Project No.						
APP# 10462						
Sheet No.		Of				
1		1				

Exhibit 4 Wetland Mitigation AREA #1

LRH-2010-569-MUS

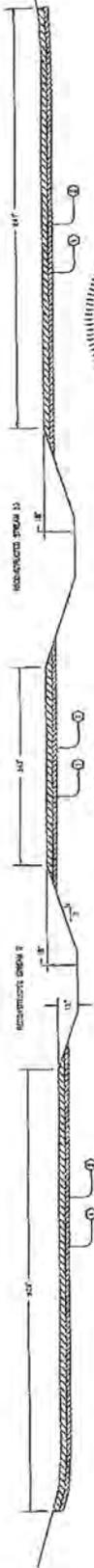
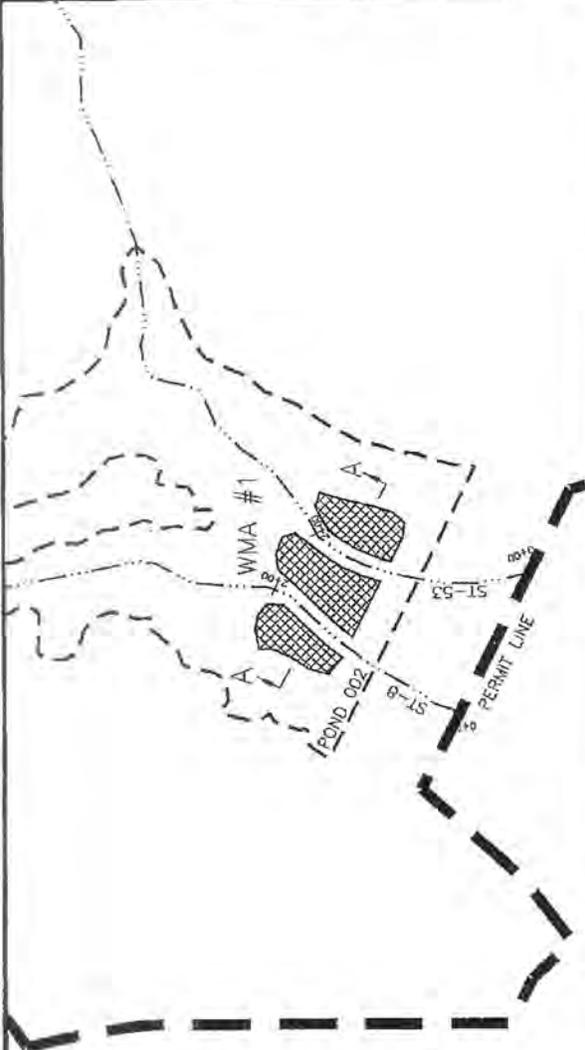
OXFORD MINING COMPANY, LLC.
BAKER-HENDERSHOT AREA
ADDENDUM TO PART 3, H(4)
WETLAND MITIGATION AREA #1



NOTES

Wetland Mitigation Area #1: Wetland mitigation for the functions that are west of Stream 8, between Streams B and S3 and east of Stream S3. Wetland mitigation will occur concurrently with the removal of Pond 002. The total watershed of WMA #1 is 47.6 acres.

Wetland Mitigation Area #1: Surface area = 0.22 ac. (min). Top of substrate = El. 839.5



KEYNOTES

- Substrate: Substrate shall consist of organic rich loam and silt loam soils. Soils shall have adequate texture and organic matter to retain moisture, allow diffusion of oxygen and carbon dioxide, and retain nutrients for absorption through the plant roots.
Filler and aggregate substrate to a total thickness of 9". Do not compact.
- Clay: Material used to construct the clay liner shall be clay material obtained in-3C.

Linn Engineering, Inc.
Civil Engineering Consultants
P.O. Box 2066 Zanesville, Ohio 43702-2066
740-462-7484