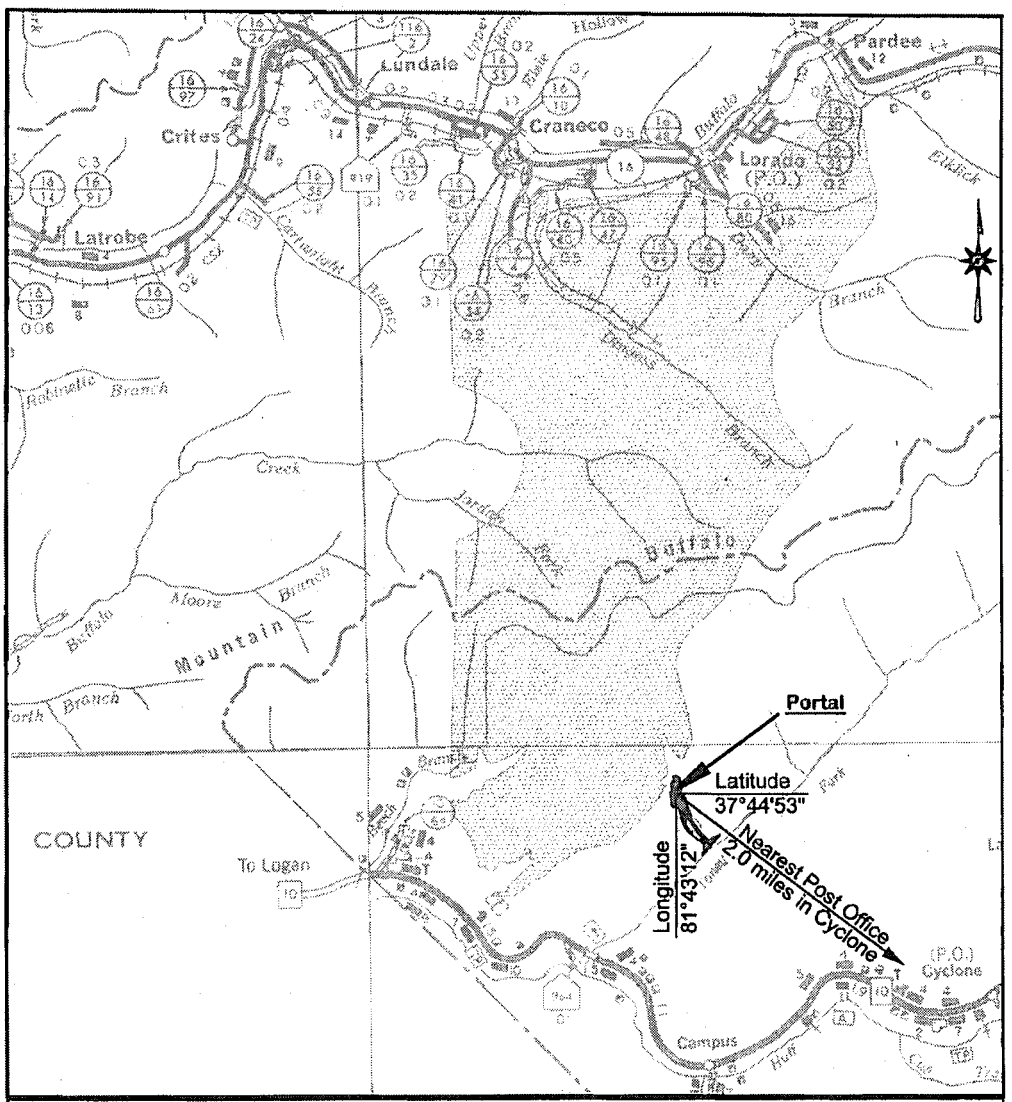
The following document is not readable via Optical Character Recognition. For more information or if you require the document to be read aloud please call: 304-399-5353

Exhibit 1



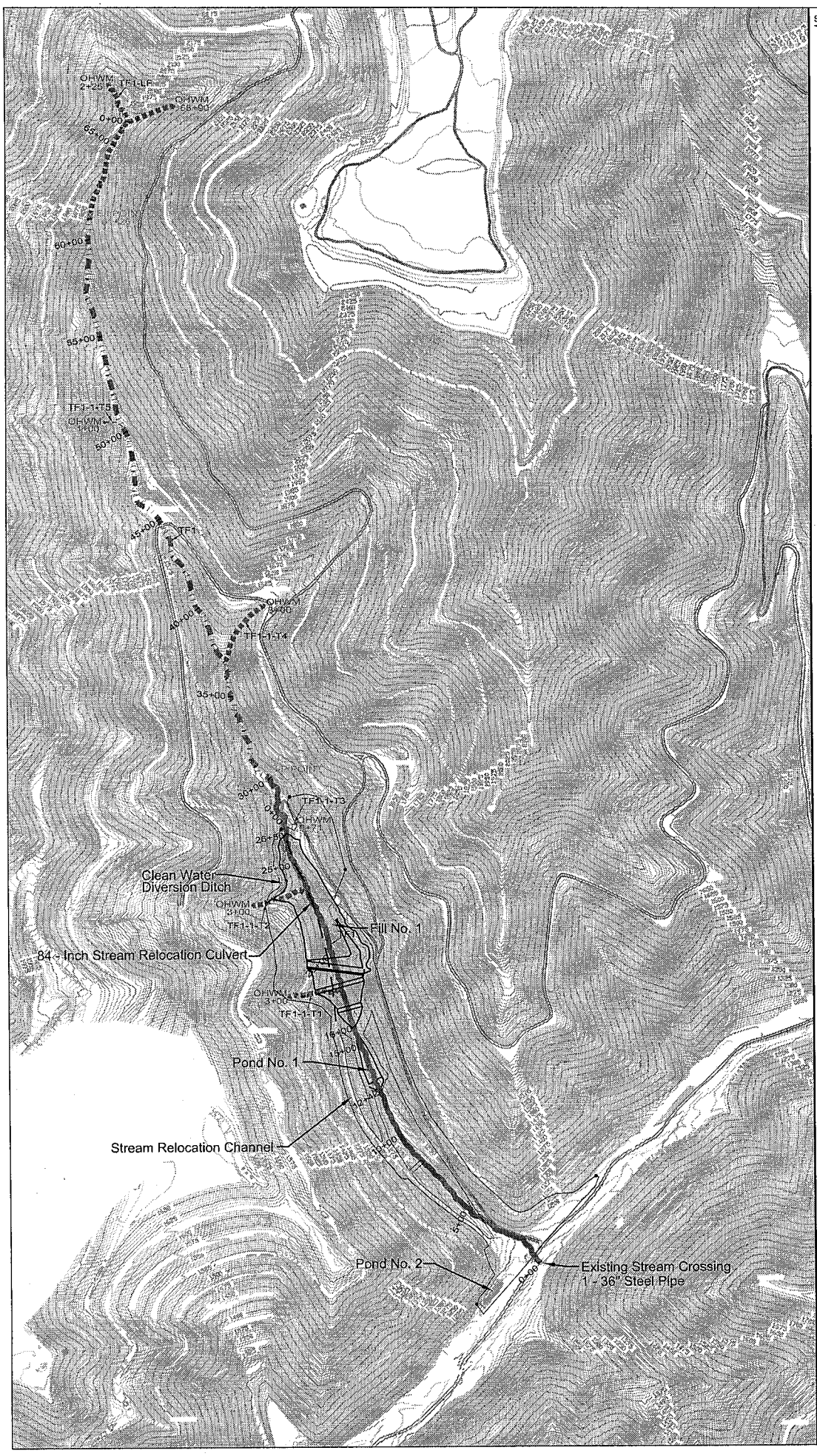
LOCATION MAP

PERMIT NO. U-5013-11 NPDES NO. WV1025139

PREPARED FROM WV GENERAL HIGHWAY MAP
OCEANA DISTRICT, WYOMING COUNTY
NEAREST POST OFFICE: CYCLONE
USGS QUADRANGLES (WV): OCEANA
RECEIVING STREAMS: UNNAMED TRIBUTARY OF/AND
TONEY FORK OF HUFF CREEK OF GUYANDOTTE RIVER
SCALE: 1" = 1 MILE

Stream and Wetland Delineation Map

Exhibit 2



LEGEND

- GAS WELL
- INTERMITTENT/PERENNIAL STREAM CONVERSION POINT
- EPHEMERAL/INTERMITTENT STREAM CONVERSION POINT
- ORDINARY HIGH WATER MARK
- PERENNIAL STREAM
- INTERMITTENT STREAM
- EPHEMERAL STREAM
- BIOLOGICAL ASSESSMENT STATION
- WETLAND AREAS 0.00 ACRES
- TOTAL PERMITTED AREA 17.22 ACRES

COORDINATE SYSTEM: WEST VIRGINIA SOUTH STATE PLANE, NAD 27

REVISION	DATE	DESCRIPTION	P.M.

Prepared By:

Marshall Miller and Associates

Geology, Environmental Sciences & Engineering, Geophysics

Blacksburg, VA · Lexington, KY · Raleigh, NC
Ashland, VA · Charleston, WV · Camp Hill, PA
Kingsport, TN · Lenexa, KS · Beaver Cr'ty, LA
Bowling, WV

WV138 1/11 TW
Stream Delineation Map.dwg

PERMIT No. U-5013-11 NPDES No. WV1025139

Stream and Wetland Delineation Map
EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA
Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
P.O. BOX 446, MAN, WV 25635
119 RICH CREEK ROAD, LYBURN, WV 25632

CAD BY	MU	10/11
CHECKED BY	JAA	10/11
APPROVED BY	PM	10/11

Scale In Feet
200 0 200 400

Exhibit 3

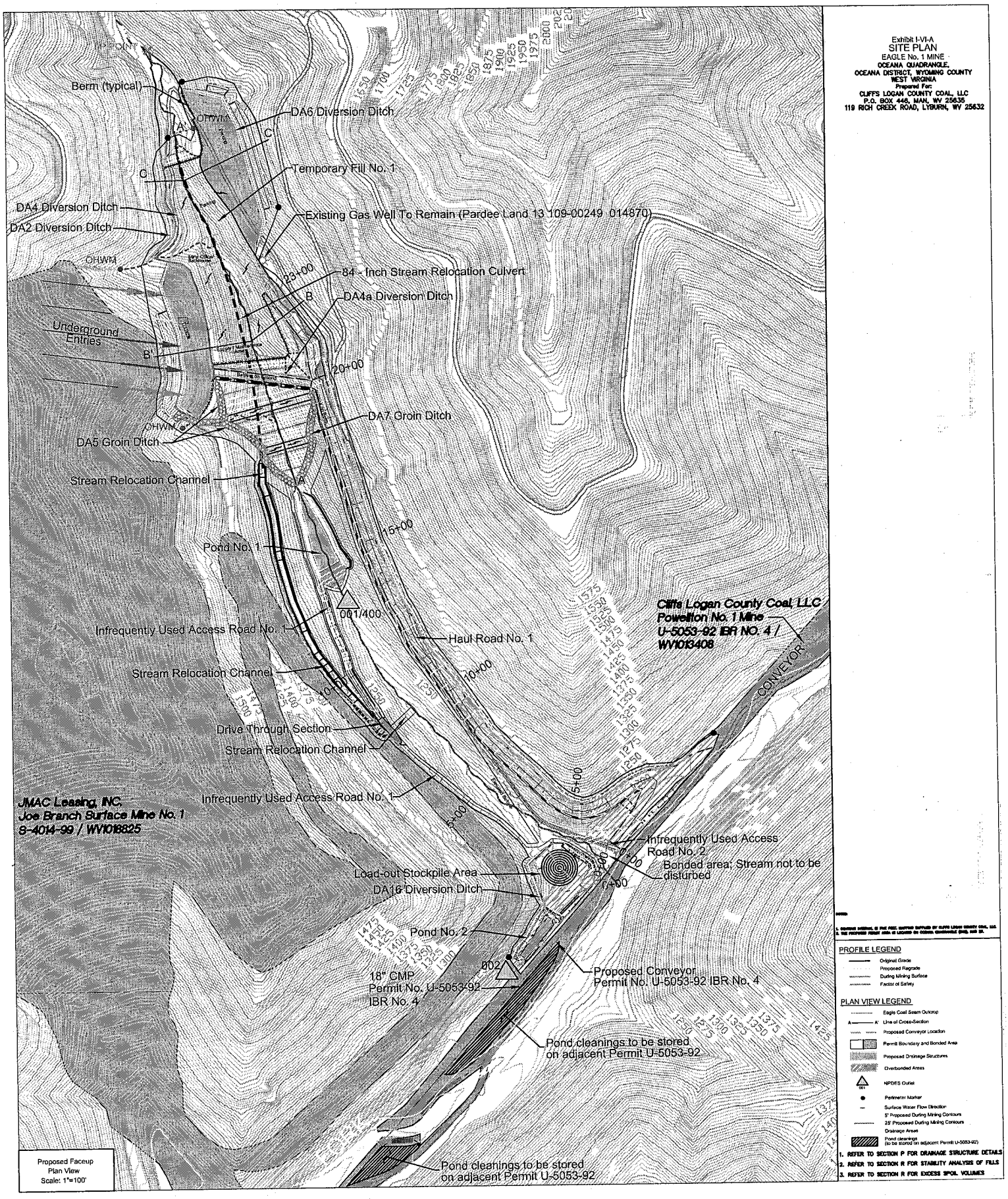
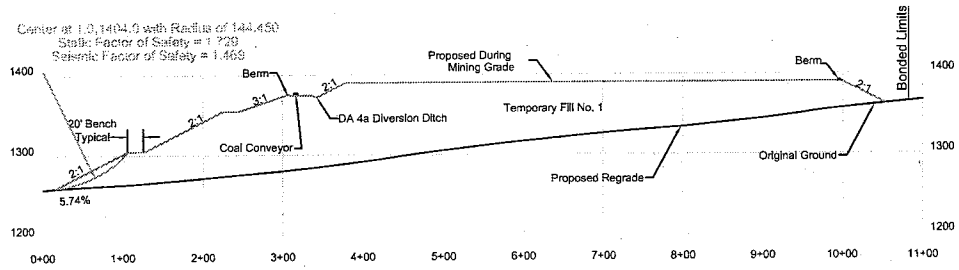
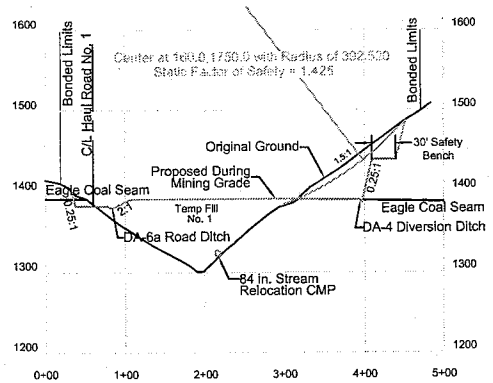


Exhibit I-VI-A
SITE PLAN
EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA
Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
P.O. BOX 446, MAN, WV 25635
119 RICH CREEK ROAD, LYBURN, WV 25632
Berm (typical)
DA6 Diversion Ditch
Temporary Fill No. 1
DA4 Diversion Ditch
DA2 Diversion Ditch
Existing Gas Well To Remain (Pardee Land 13 109-00249 014870)
84 - Inch Stream Relocation Culvert
DA4a Diversion Ditch
Underground Entries
DA7 Groin Ditch
DA5 Groin Ditch
Stream Relocation Channel
Pond No. 1
001/400
Infrequently Used Access Road No. 1
Haul Road No. 1
Stream Relocation Channel
Drive Through Section
Stream Relocation Channel
Infrequently Used Access Road No. 1
JMAC Leasing, INC.
Joe Branch Surface Mine No. 1
S-4014-99 / WV1018825
Cliffs Logan County Coal, LLC
Powellton No. 1 Mine
U-5053-92 IBR NO. 4 /
WV1013408
CONVEYOR
Infrequently Used Access Road No. 2
Bonded area; Stream not to be disturbed
Load-out Stockpile Area
DA16 Diversion Ditch
Pond No. 2
002
18" CMP
Permit No. U-5053-92
IBR No. 4
Proposed Conveyor
Permit No. U-5053-92 IBR No. 4
Pond cleanings to be stored on adjacent Permit U-5053-92
Pond cleanings to be stored on adjacent Permit U-5053-92
Proposed Faceup
Plan View
Scale: 1"=100'
PROFILE LEGEND
Original Grade
Proposed Regrade
During Mining Surface
Factor of Safety
PLAN VIEW LEGEND
Eagle Coal Seam Outcrop
Line of Cross-Section
Proposed Conveyor Location
Permit Boundary and Bonded Area
Proposed Drainage Structures
Overbonded Areas
NPDES Outlet
Perimeter Marker
Surface Water Flow Direction
5' Proposed During Mining Contours
25' Proposed During Mining Contours
Drainage Areas
Pond cleanings (to be stored on adjacent Permit U-5053-92)
1. REFER TO SECTION P FOR DRAINAGE STRUCTURE DETAILS
2. REFER TO SECTION R FOR STABILITY ANALYSIS OF FILLS
3. REFER TO SECTION R FOR EXCESS SPOIL VOLUMES

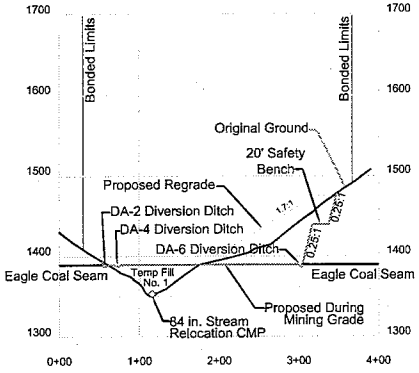
Exhibit 4



Profile A-A'
Scale: 1" = 100'



Profile B-B'
Scale: 1" = 100'



Profile C-C'
Scale: 1" = 100'

REVISION	DATE	DESCRIPTION	P.M.

Prepared By:

Marshall Miller and Associates

Geology, Environmental Sciences & Engineering, Geophysics

☐Bluefield, VA · ☐Lexington, KY · ☐Raleigh, NC
☐Ashland, VA · ☐Charleston, WV · ☐Camp Hill, PA
☐Kingsport, TN · ☐Lenexa, KS · ☐Bossier City, LA
· ■Beckley, WV

INR136 12/10 MU/ELC
Site Plan Map.dwg

PERMIT No. U-5013-11 NPDES No. WV1025139

Exhibit I-VI-A

Cross Sections

EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA

Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
P.O. BOX 446, MAN, WV 25635
119 RICH CREEK ROAD, LYBURN, WV 25632

CAD BY	MU	11/11
CHECKED BY	JAA	11/11
APPROVED BY	PIM	11/11

Scale in Feet
100 0 100 200

Exhibit 5

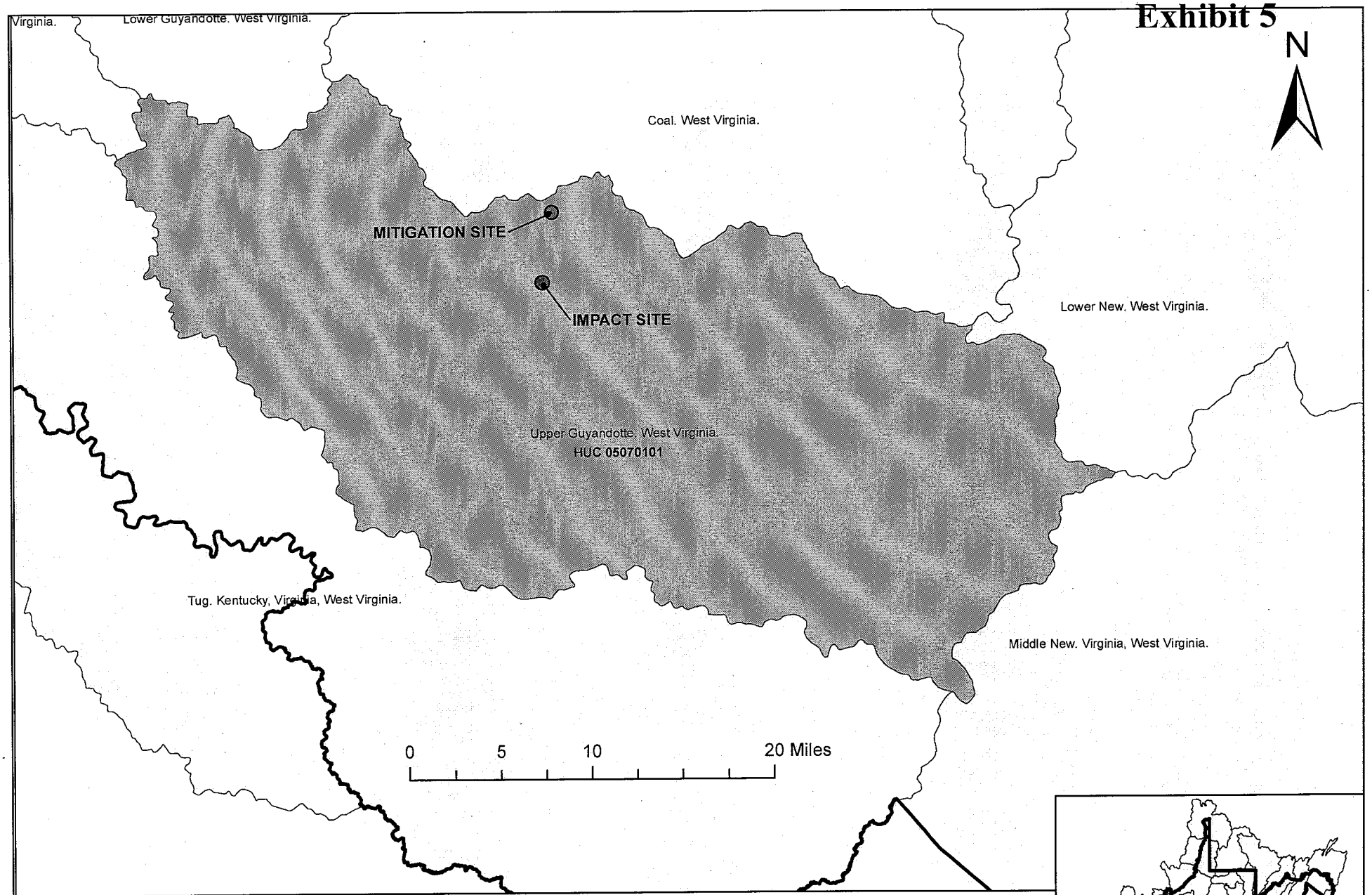


Figure 1: Impact and Mitigation Site Locations within Level 8 Hydrological Unit 05070101

Cliffs Logan County Coal, LLC
Eagle No. 1 Mine
Compensatory Mitigation Plan

WVDEP SMA No. U-5013-11; NPDES No. WV1025139

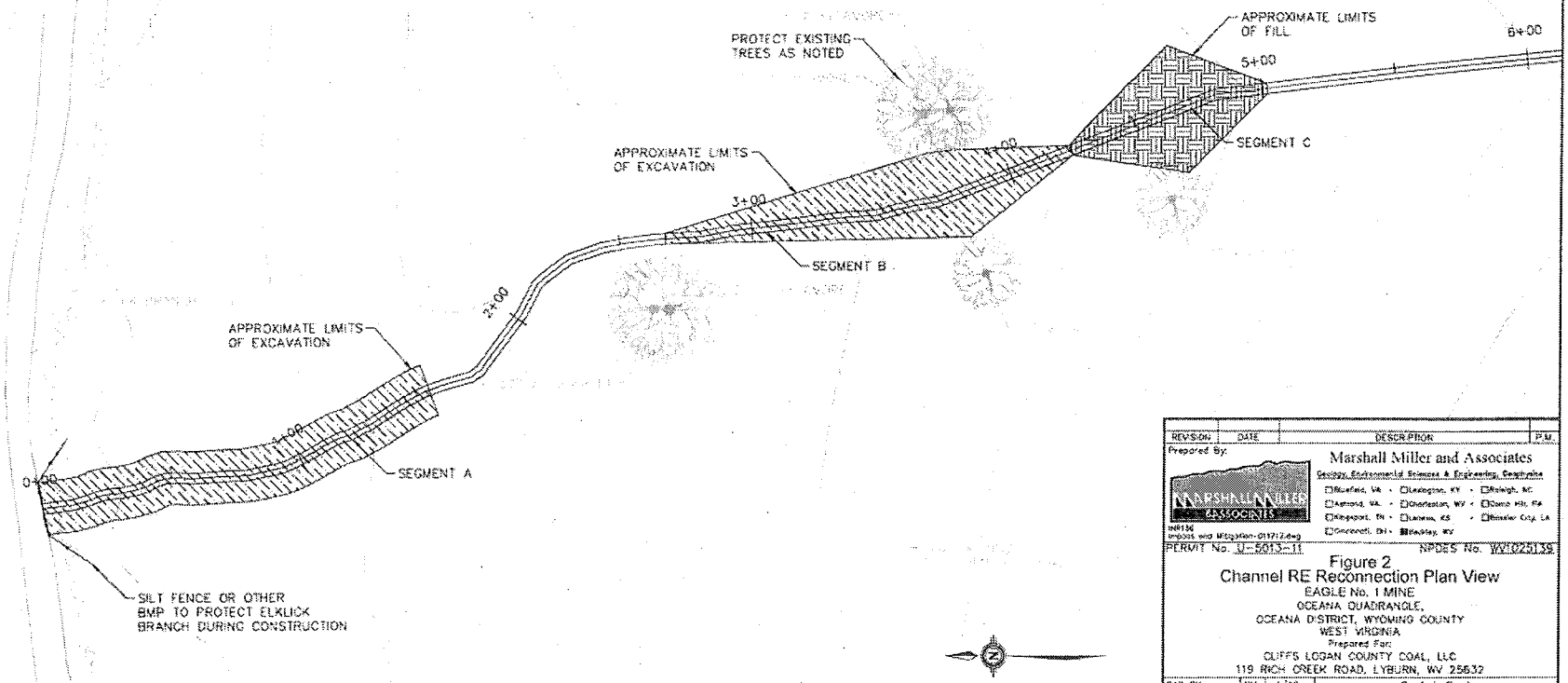
Date: 2/23/12 GIS: JL

Exhibit 6

NOTES:
1. INSTALL AND MAINTAIN APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
2. WORK THESE PLANS WITH MM&A CMP REPORT DATED APRIL 6, 2012.

STATION CONVERSION TABLE

PLAN VIEW STATION	SLOPE LENGTH	DESCRIPTION
0+00	0	CONFLUENCE OF RE WITH ELK LICK
1+55	160	UPSTREAM END SEGMENT A
2+67	280	DOWNSTREAM END SEGMENT B
4+24	446	ESTIMATED PAVEMENT EDGE
5+02	525	UPSTREAM END SEGMENT C
7+99	853	CONFLUENCE OF RET1 WITH RE
10+47	1,128	RE E/I POINT
11+13	1,203	RE OHWM
1+67	189	RET1 OHWM



REVISION	DATE	DESCRIPTION	P.M.

Prepared By:
Marshall Miller and Associates
Geology, Environmental Sciences & Engineering, Seaphyline
Bluefield, VA • Lexington, KY • Raleigh, NC
Ashland, VA • Charleston, WV • Dome Hill, PA
Kingsport, TN • Lenexa, KS • Bossier City, LA
Cincinnati, OH • Beckley, WV

MMA
Imports and Migration-011712.dwg

PERMIT No. U-5013-11 NPDES No. WV1025139

Figure 2
Channel RE Reconnection Plan View
EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA
Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
119 RICH CREEK ROAD, LYBURN, WV 25632

CAD BY	RM	4/12
CHECKED BY	RM	4/12
APPROVED BY	WDS	4/12

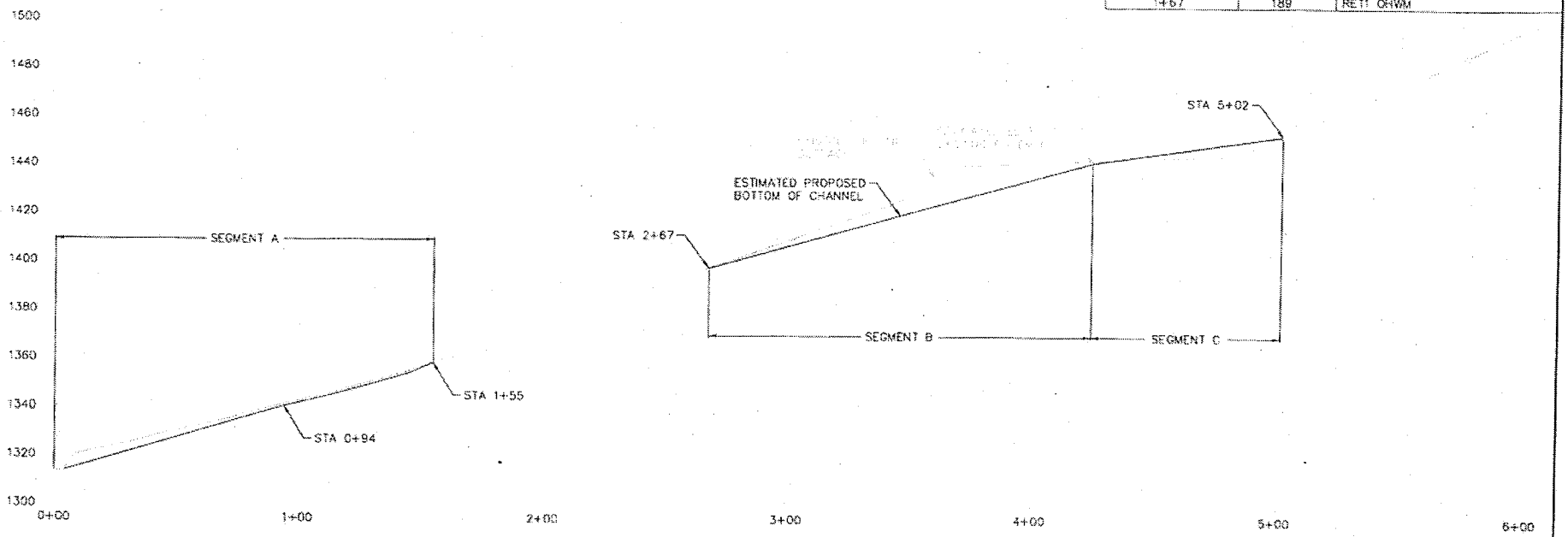
Scale in Feet
40 0 40

Exhibit 7

NOTES:
1. INSTALL AND MAINTAIN APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
2. WORK THESE PLANS WITH MM&A CMP REPORT DATED APRIL 6, 2012.

STATION CONVERSION TABLE

PLAN VIEW STATION	SLOPE LENGTH	DESCRIPTION
0+00	0	CONFLUENCE OF RE WITH ELK LICK
1+55	160	UPSTREAM END SEGMENT A
2+67	280	DOWNSTREAM END SEGMENT B
4+24	446	ESTIMATED PAVEMENT EDGE
5+02	525	UPSTREAM END SEGMENT C
7+99	853	CONFLUENCE OF RETI WITH RE
10+47	1,128	RE E/I POINT
11+13	1,203	RE OHWM
1+67	189	RETI OHWM



WORK PLAN:
1. BEGIN WORK BY EXCAVATING CHANNEL BETWEEN STA 1+55 AND STA 0+94. EXCAVATE CHANNEL TO CROSS-SECTIONAL DIMENSIONS OF FORMER CHANNEL BETWEEN STA 1+55 AND STA 2+67. FOLLOW APPROXIMATE GRADE OF EXISTING GROUND SURFACE.
2. EXCAVATE CHANNEL AT APPROXIMATELY CONSTANT GRADIENT FROM STA 0+94 TO 0+00. EXCAVATE CHANNEL TO CROSS-SECTIONAL DIMENSIONS OF EXCAVATED CHANNEL UPSTREAM.
3. LOCATE EDGE OF EXISTING PAVEMENT NEAR STATION 4+24.
4. EXCAVATE SEGMENT B BETWEEN STA 2+67 AND PAVEMENT EDGE TO APPROXIMATE CROSS-SECTIONAL DIMENSIONS OF CHANNEL UPSTREAM OF EXISTING BENCH.
5. CONSTRUCT SEGMENT C BETWEEN PAVEMENT EDGE AND STA 5+02 A 4% OR GREATER SLOPE. USE 2' OF IMPERMEABLE MATERIAL TO CONSTRUCT SEGMENT C (TAPERING DOWN AT UPSTREAM AND DOWNSTREAM ENDS). IT MAY BE NECESSARY TO OVER-EXCAVATE MATERIAL ON BENCH TO INSTALL 2' OF IMPERMEABLE MATERIAL. DO NOT EXCAVATE INTO OR OTHERWISE DAMAGE THE PAVEMENT, AS THIS MAY CAUSE SUBSIDENCE OF FLOWS.

REVISION	DATE	DESCRIPTION	P.M.

Prepared By:
Marshall Miller and Associates
Geology, Environmental Sciences & Engineering, Geophysics
Bluefield, VA • Lexington, KY • Raleigh, NC
Ashland, VA • Charleston, WV • Como Hill, PA
Kingsport, TN • Lenexa, KS • Sinkler City, LA
Cincinnati, OH • Beckley, WV

MMA136
Impact and Mitigation 011712.dwg

PERMIT No. U-5013-11 NPDES No. WV1025139

Figure 3
Channel RE Reconnection Profile View
EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA
Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
119 RICH CREEK ROAD, LYBURN, WV 25632

CAD BY	RM	4/12
CHECKED BY	RM	4/12
APPROVED BY	WDD	4/12

Scale in Feet
40 0 40

Exhibit 8

STATION CONVERSION TABLE		
PLAN VIEW STATION	SLOPE LENGTH	DESCRIPTION
0+00	0	CONFLUENCE OF RE WITH ELK LICK
1+55	160	UPSTREAM END SEGMENT A
2+67	280	DOWNSTREAM END SEGMENT B
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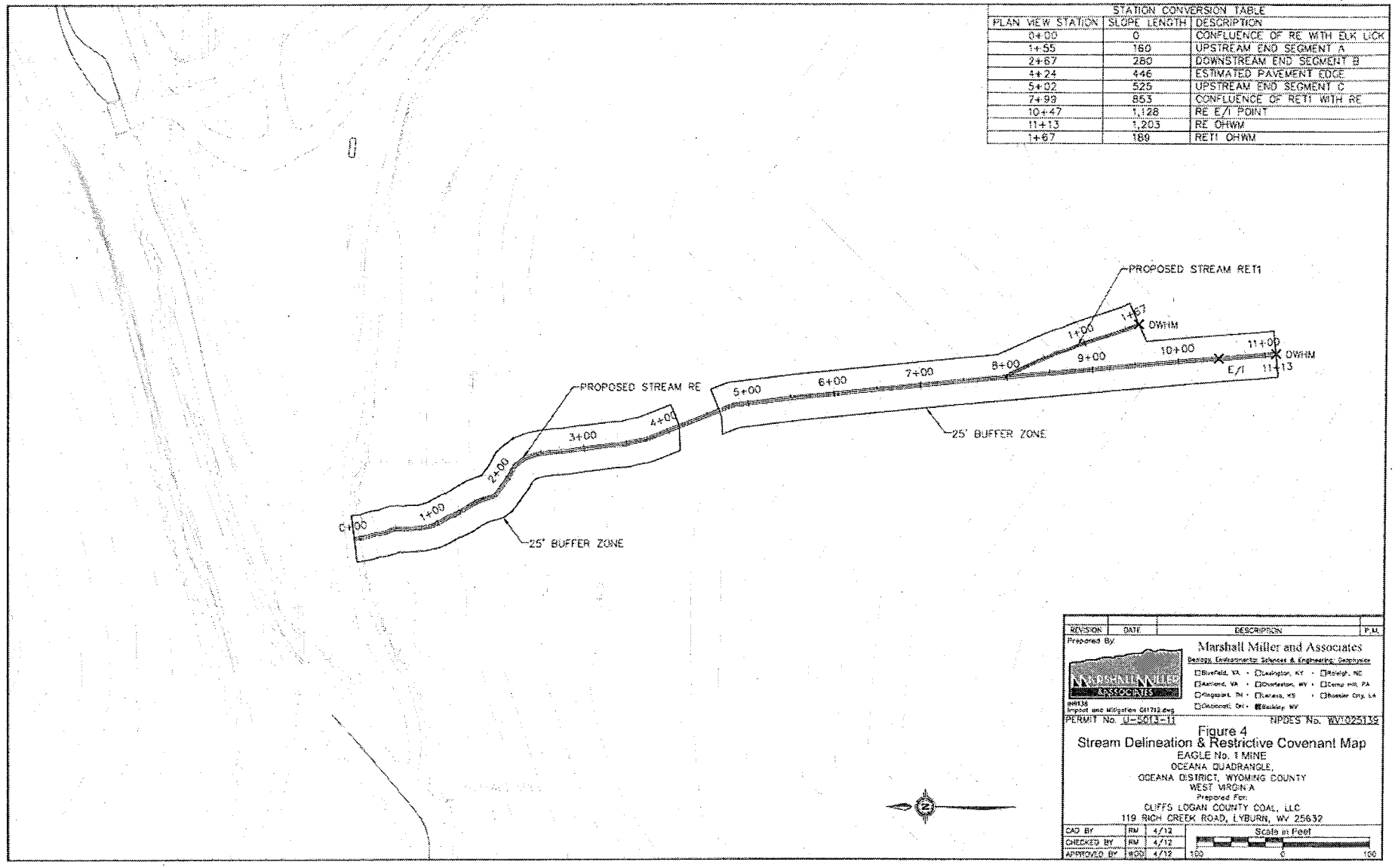

REVISION	DATE	DESCRIPTION	P.M.

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Geology, Environmental Sciences & Engineering, Geophysics

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☐Kingsport, TN • ☐Lenexa, KS • ☐Bossier City, LA
☐Cincinnati, OH • ☒Beckley, WV

IN9136
Impact and Mitigation 011712.dwg

PERMIT No. U-5013-11 NPDES No. WV1025139

Figure 4
Stream Delineation & Restrictive Covenant Map
EAGLE No. 1 MINE
OCEANA QUADRANGLE,
OCEANA DISTRICT, WYOMING COUNTY
WEST VIRGINIA
Prepared For:
CLIFFS LOGAN COUNTY COAL, LLC
119 RICH CREEK ROAD, LYBURN, WV 25632

CAD BY	RM	4/12
CHECKED BY	RM	4/12
APPROVED BY	WOD	4/12

Scale in Feet
100 0 100