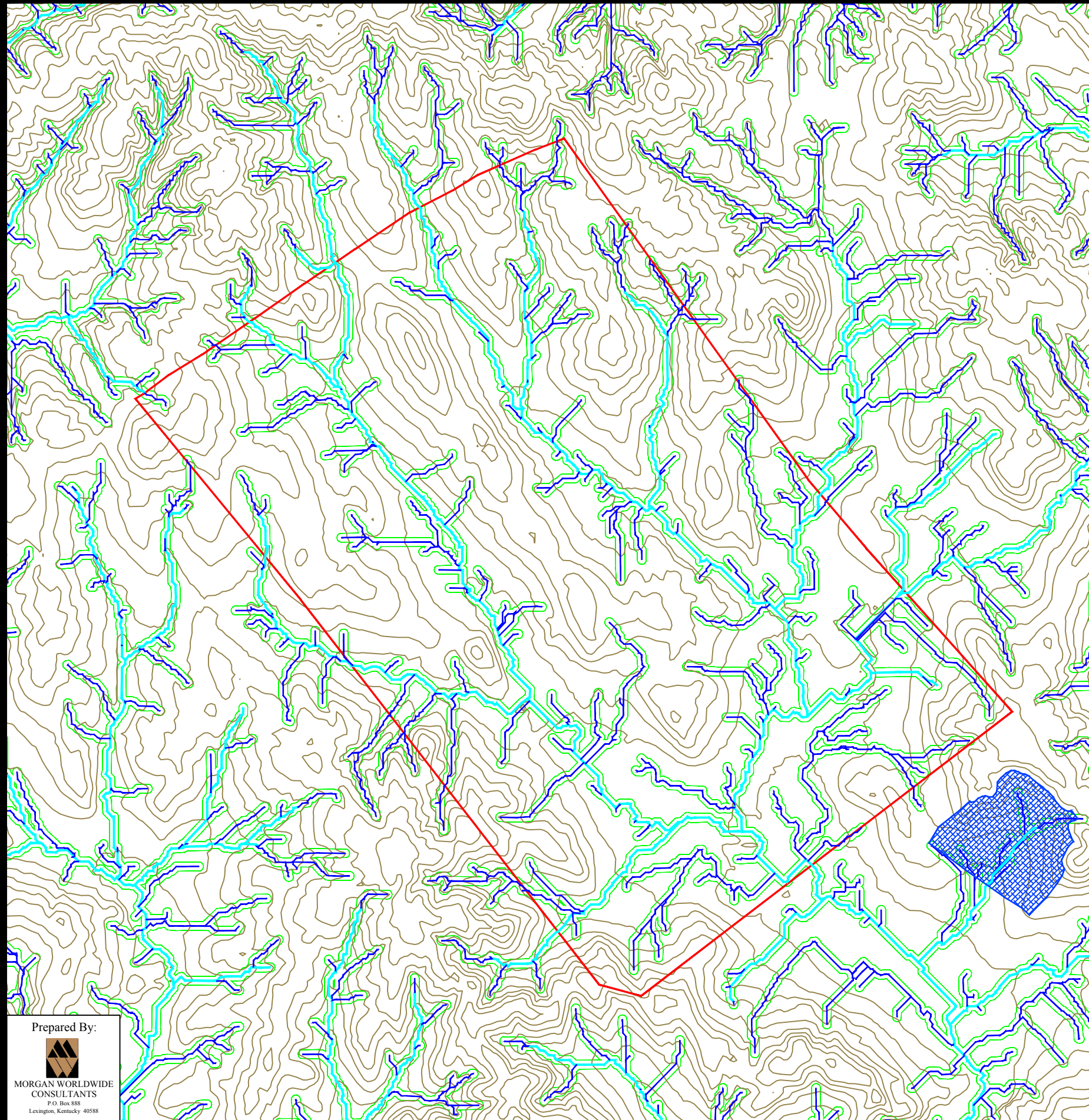
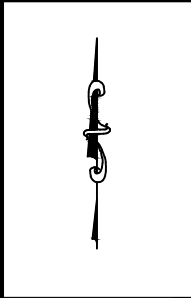


Appendix C contains numerous maps showing the model mines used in the analysis and is not Section 508 compliant. Please contact Mark Gehlhar at OSMRE 202-208-2716 for assistance.



Pre-Mining

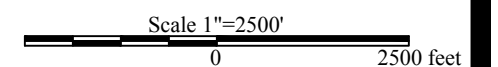
- 10 ft contours taken from USGS Seamless Server
- 7.4 acre ephemeral drainage requirement based on original streams delineated within permit files. Streams were generated based on drainage requirement until stream length was within 1% of the streams sampled from the permit file. This drainage requirement was then applied to the sample mine topography to generate the final streams. The Illinois Basin has multiple large production mines that produce coal strictly with continuous miner sections.



**Legend**

- Original Topography (10 ft Ctrs)
- Generated Streams (7.4 acre drainage)
- Generated Streams-Intermittent (hydraulically defined)
- 100 ft stream offset
- ▭ Mineral Removal Area

**Illinois Basin  
Region**  
Underground Room  
and Pillar Mine  
Pre-Mining

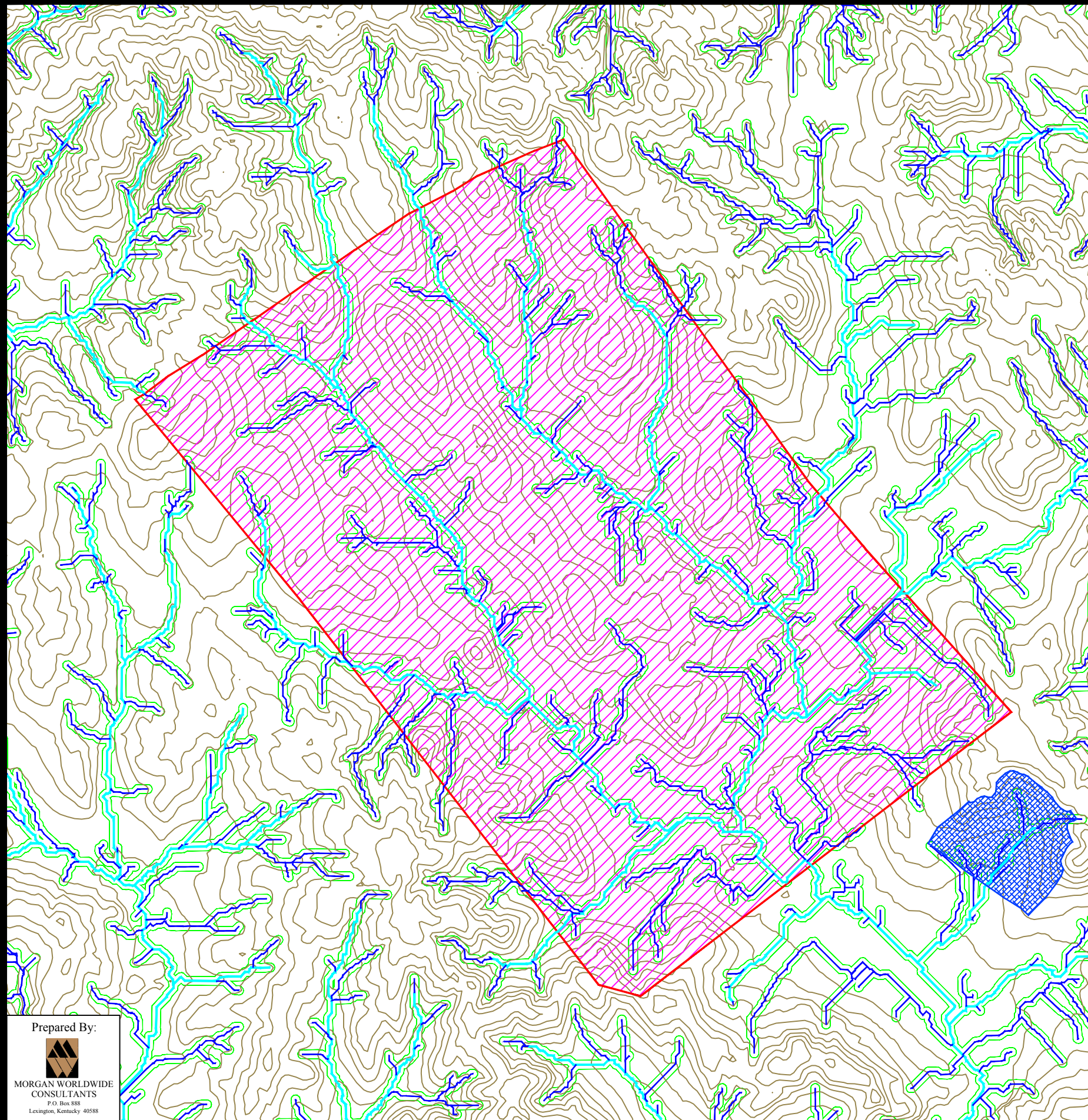


Prepared By:



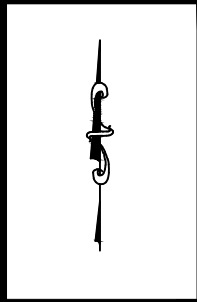
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CONSULTANTS  
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Lexington, Kentucky 40588












Alternative 1

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 1

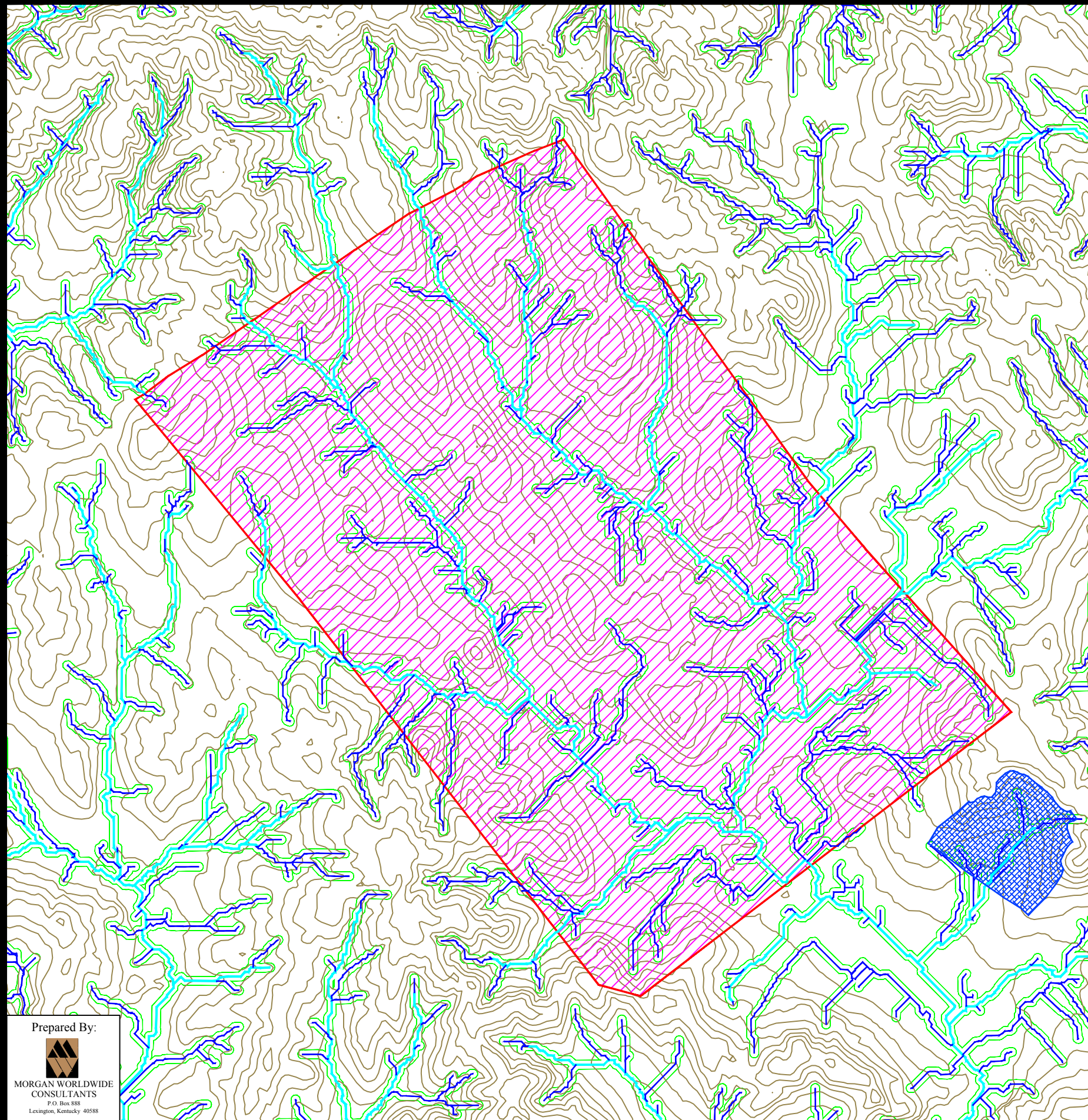
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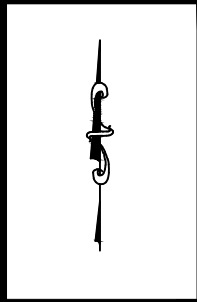
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Alternative 2

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region  
Underground Room  
and Pillar  
Alternative 2**

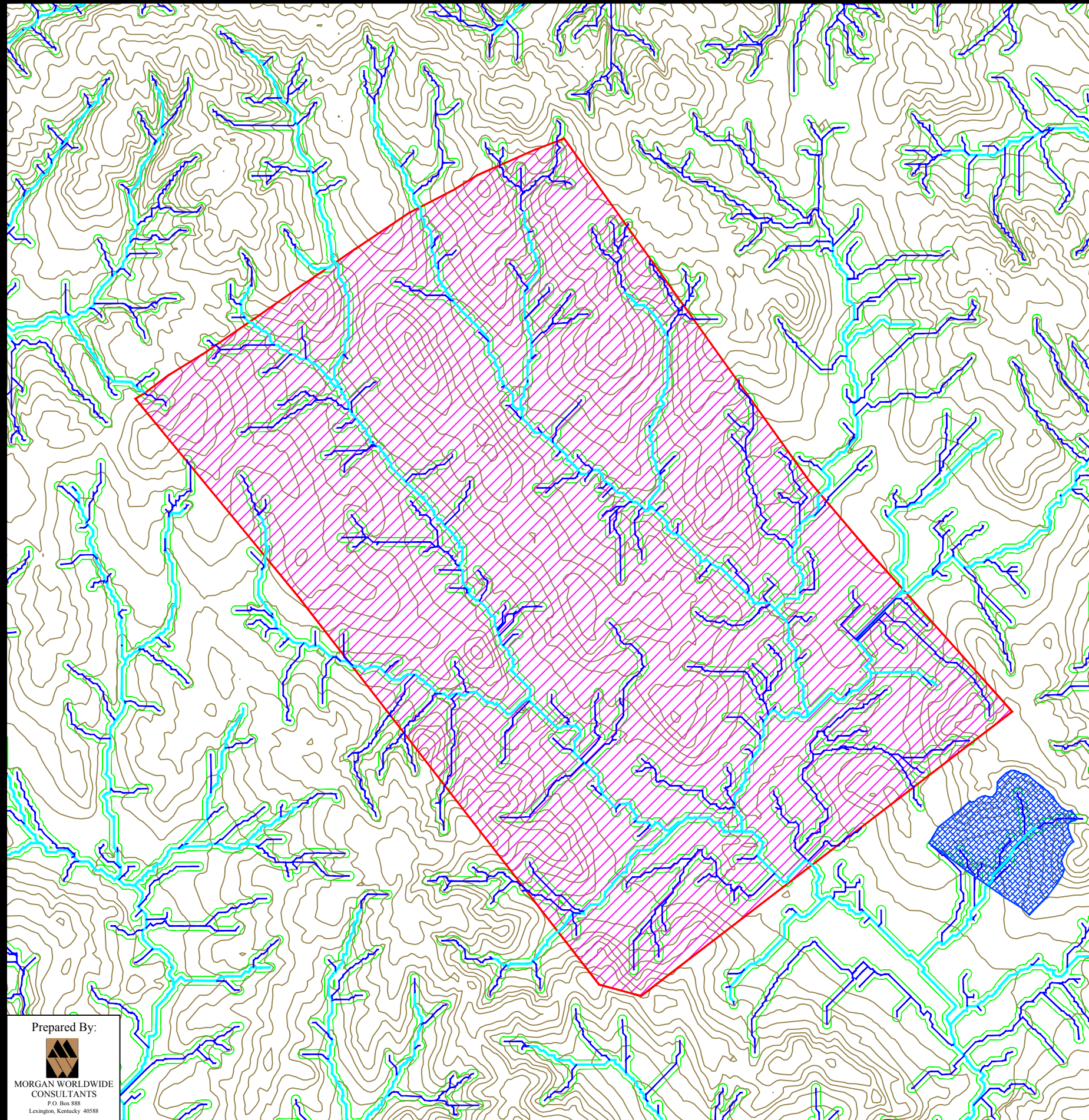
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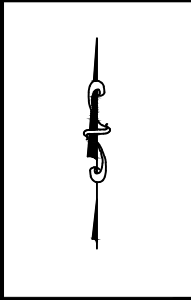
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Alternative 3

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 3

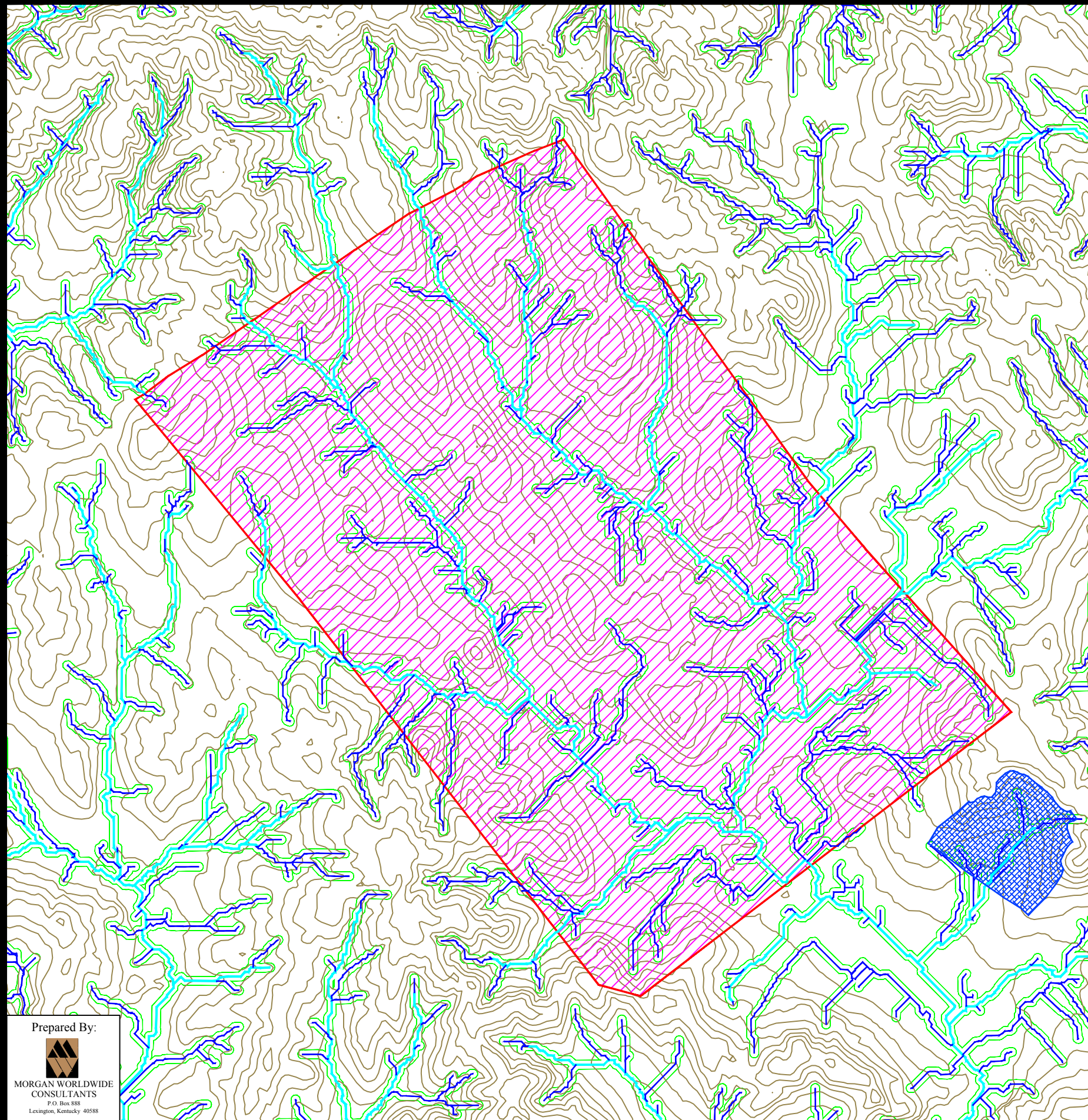
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Prepared By:



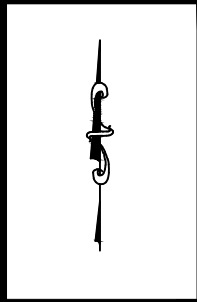
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Alternative 4

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 4

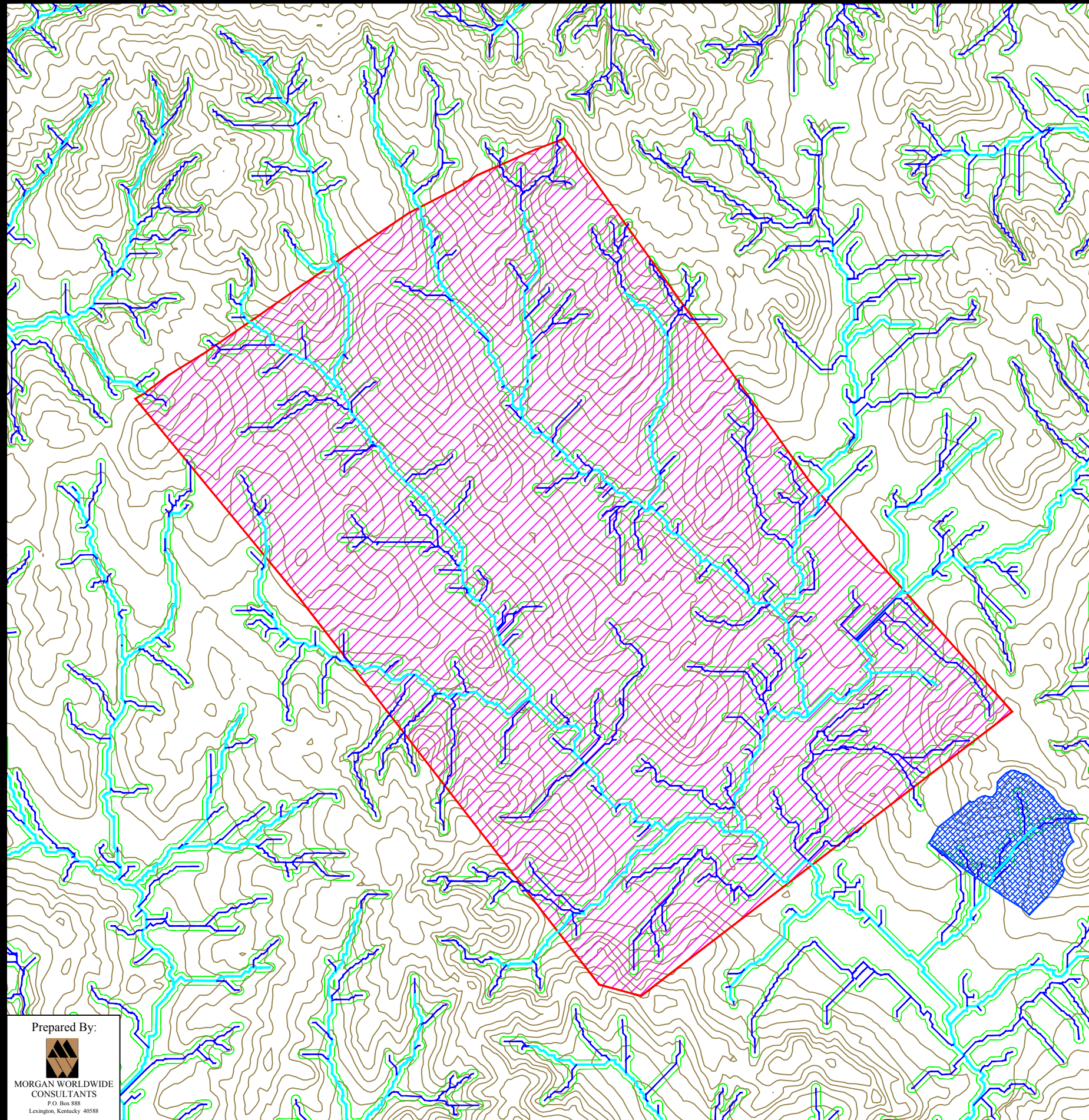
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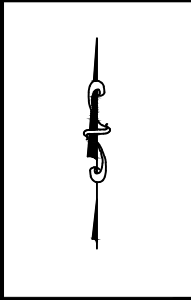
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Alternative 5

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 5

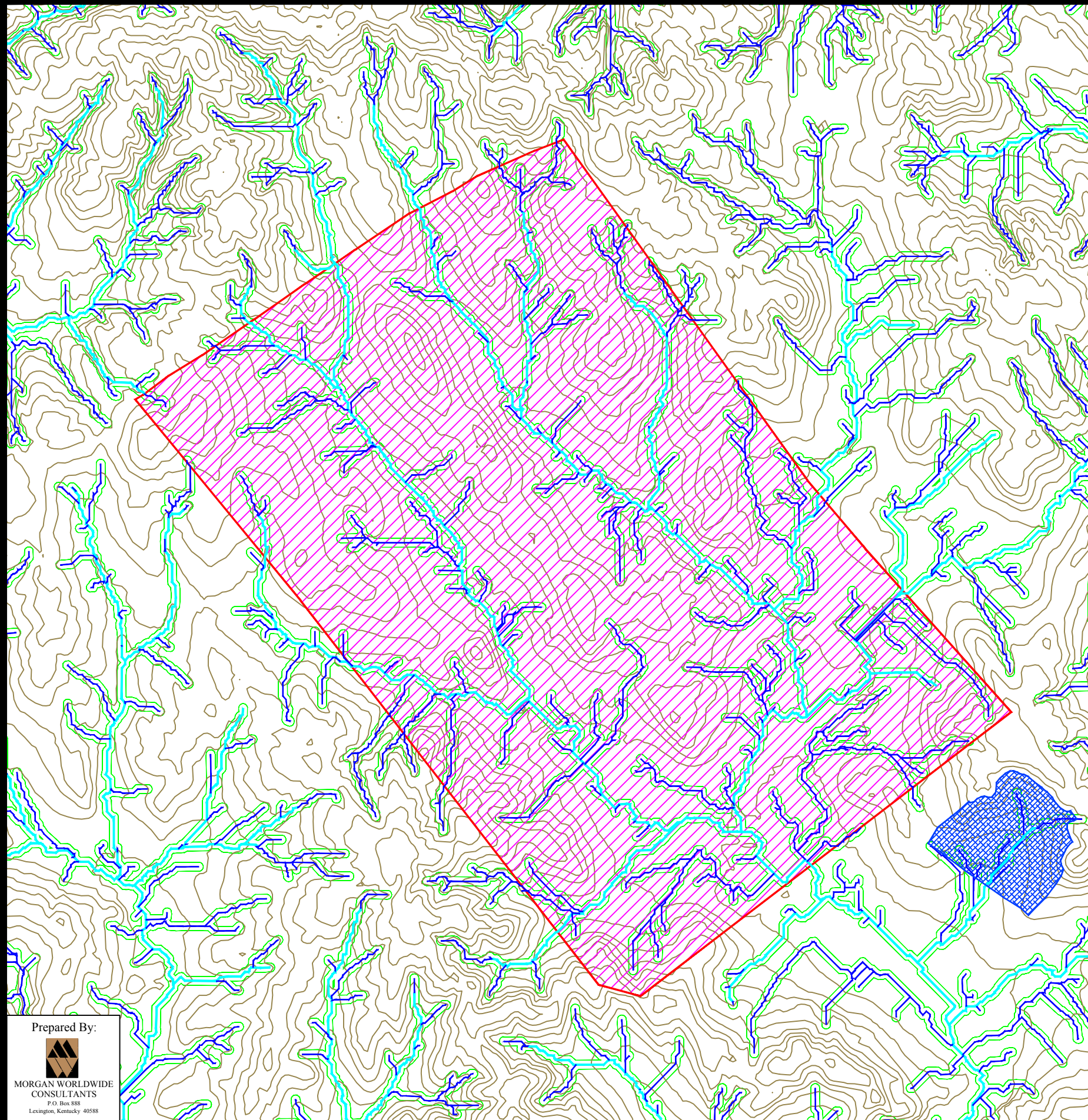
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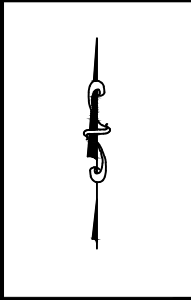
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Alternative 6

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 6

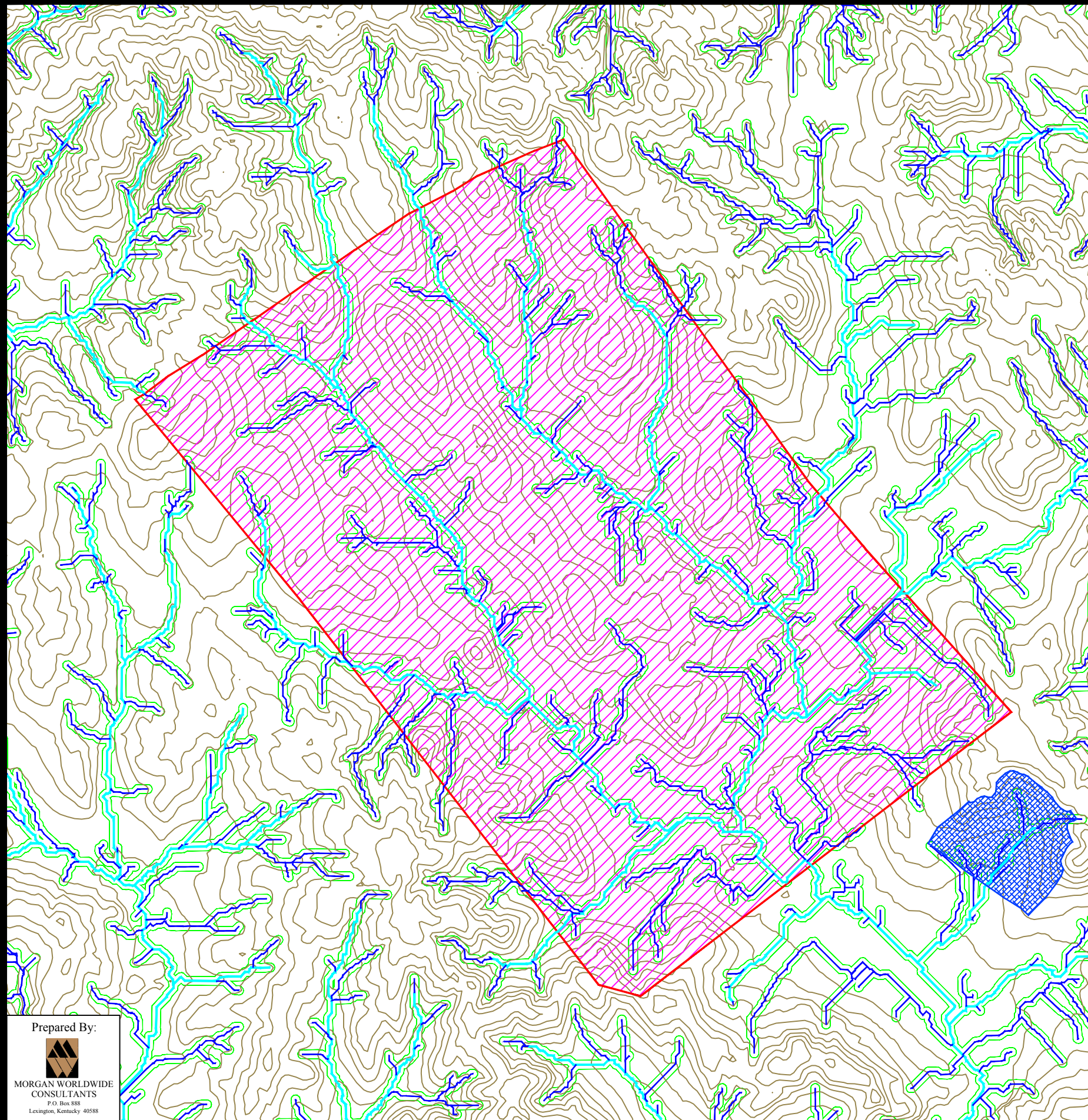
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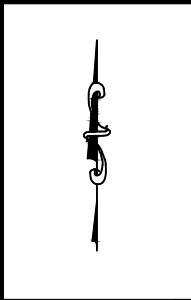
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Alternative 7

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region  
Underground Room  
and Pillar  
Alternative 7**

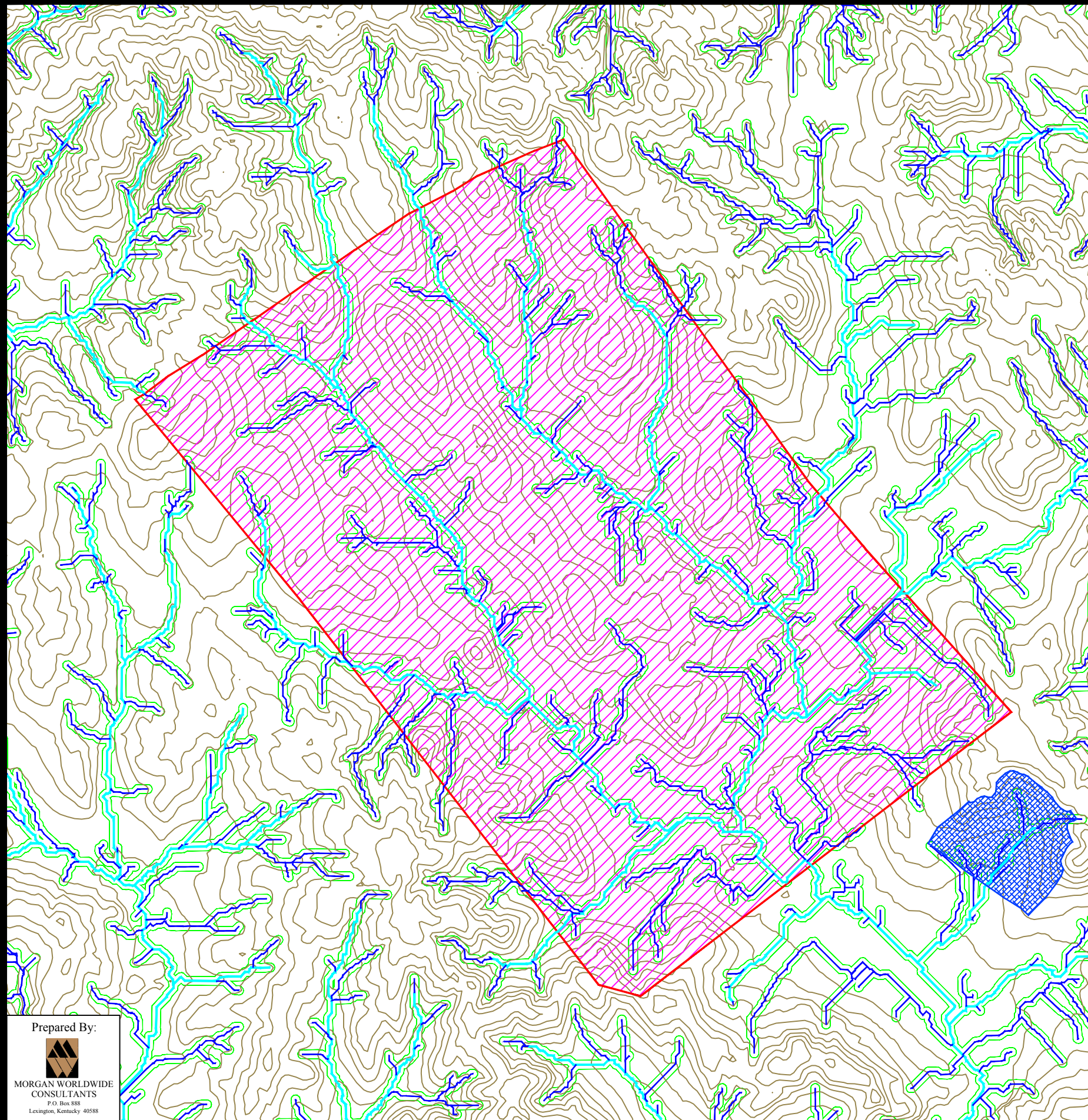
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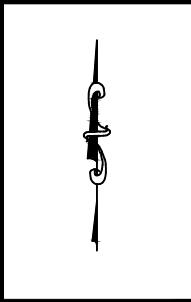
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Lexington, Kentucky 40588












Alternative 8

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region  
Underground Room  
and Pillar  
Alternative 8**

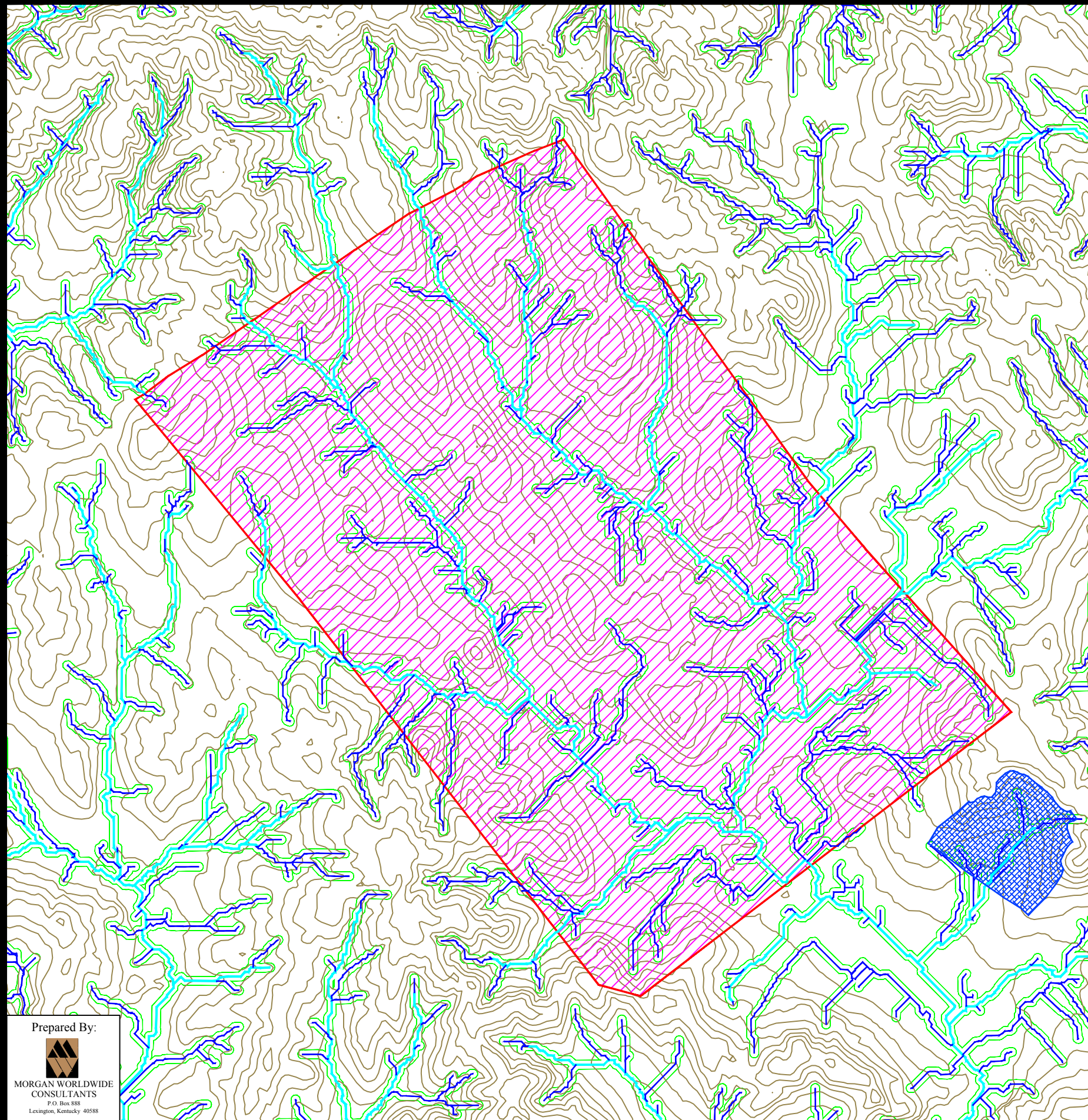
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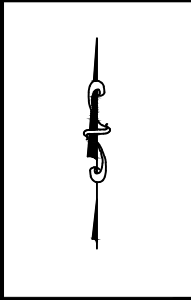
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Alternative 9

- 2.1 million tpy
- 35 million tons coal resource
- 19.1 million tons recoverable coal
- 4,146 mine acres
- 45 acres of disturbed area
- Stream Impacts
  - 2,112 ft ephemeral stream impacts
  - 299 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Conventional R&P Area
-  Refuse Impoundment

**Illinois Basin  
Region**  
Underground Room  
and Pillar  
Alternative 9

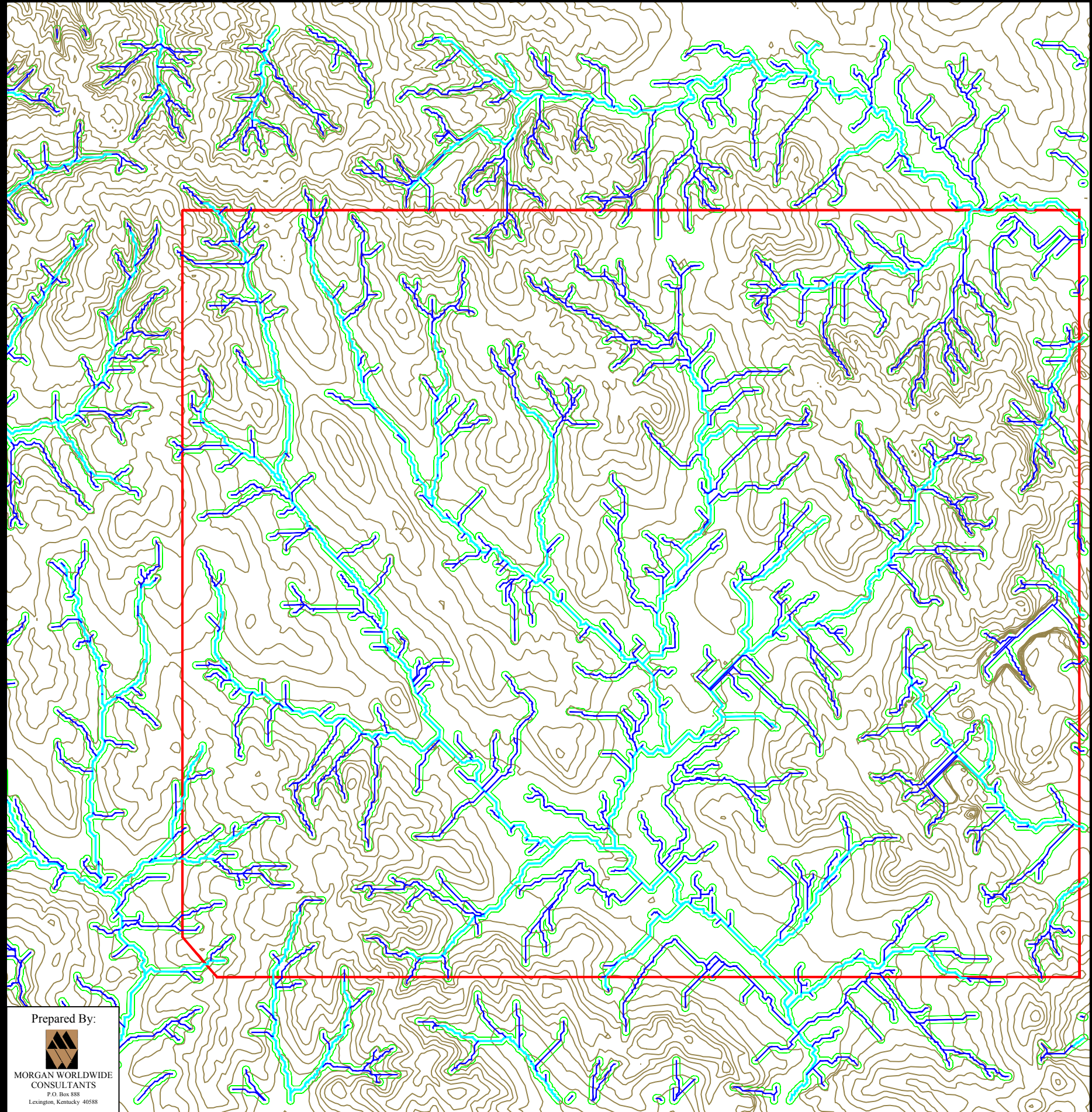
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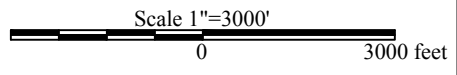
- Pre-Mining
- 10 ft contours taken from USGS Seamless Server
  - 7.4 acre ephemeral drainage requirement based on original streams delineated within permit files. Streams were generated based on drainage requirement until stream length was within 1% of the streams sampled from the permit file. This drainage requirement was then applied to the sample mine topography to generate the final streams.



**Legend**

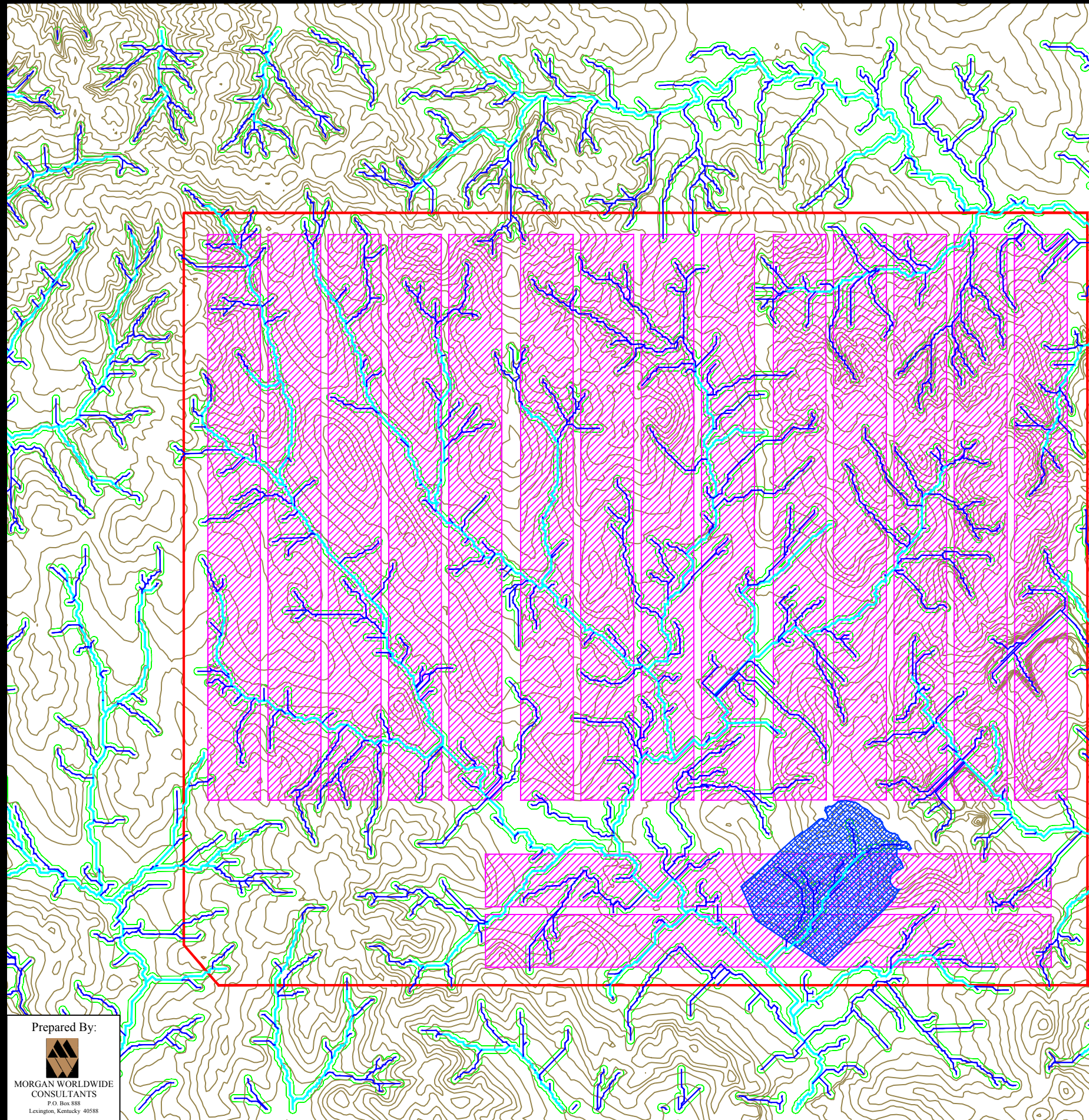
- Original Topography (10 ft Ctrs)
- Generated Streams (7.4 acre drainage)
- 100 ft stream offset
- ▭ Mineral Removal Area

**Illinois Basin  
Region**  
Underground Longwall  
Pre-Mining



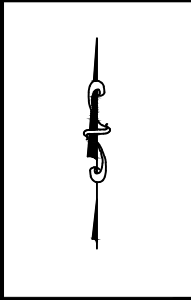
Prepared By:  
  
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Alternative 1

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts

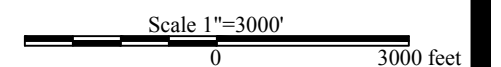


**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 1**

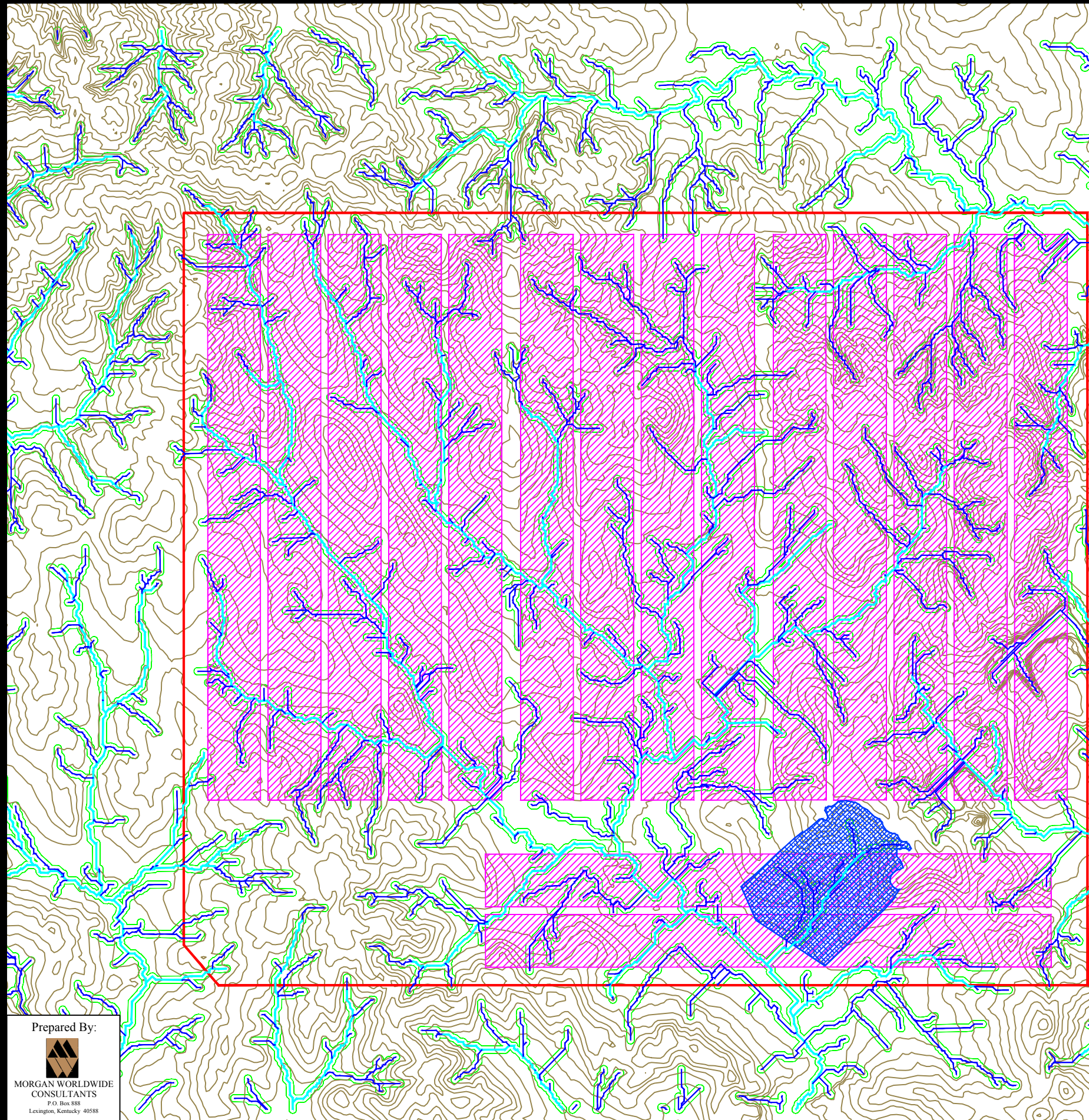


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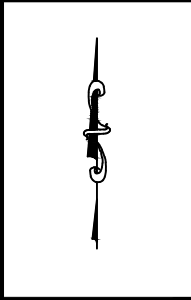
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Lexington, Kentucky 40588












Alternative 2

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 2**

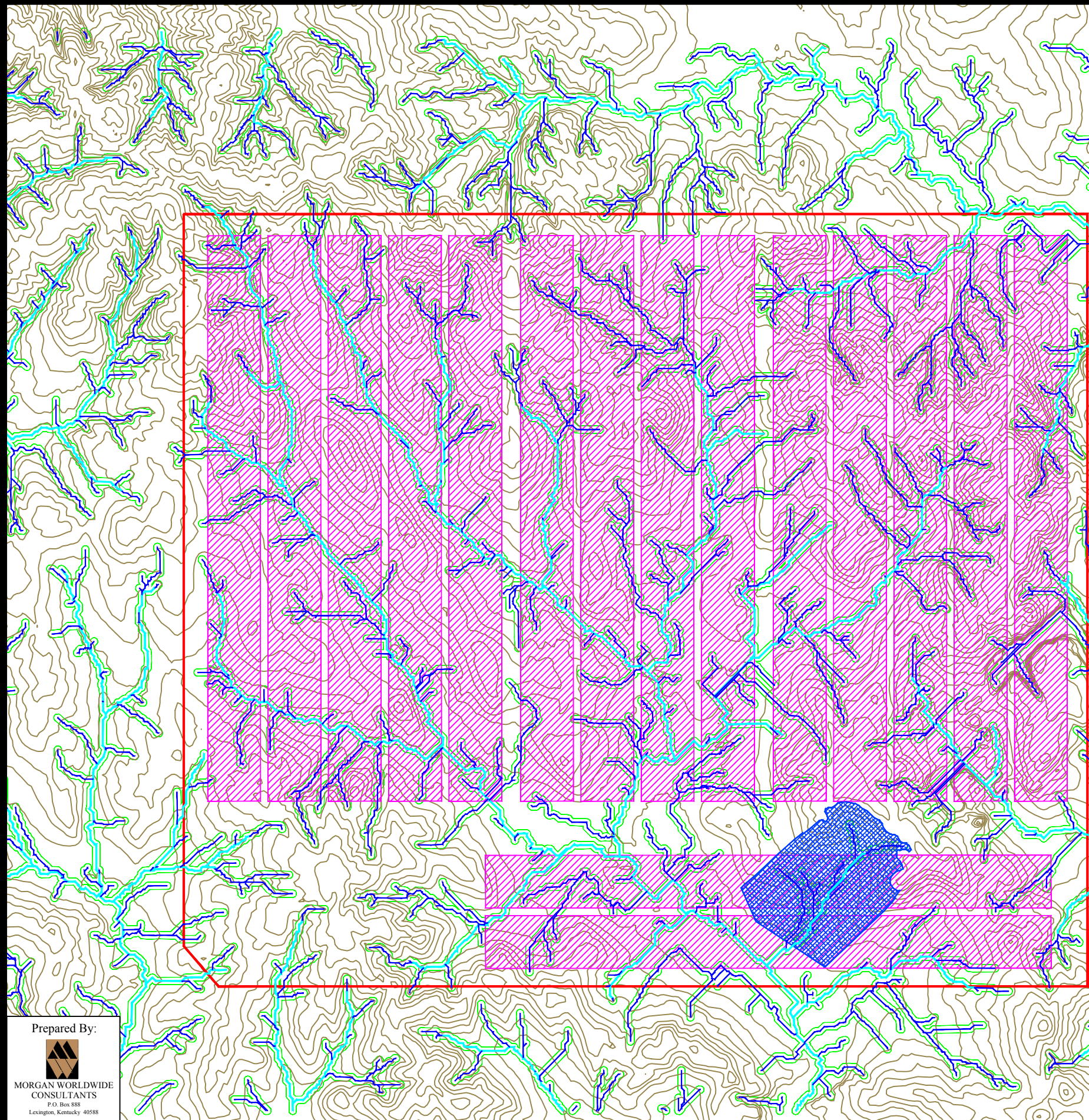
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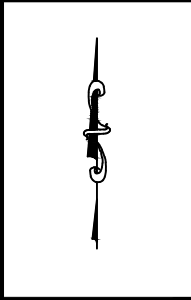
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Alternative 3

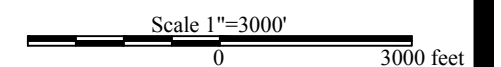
- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region  
Underground  
Longwall Mine  
Alternative 3**

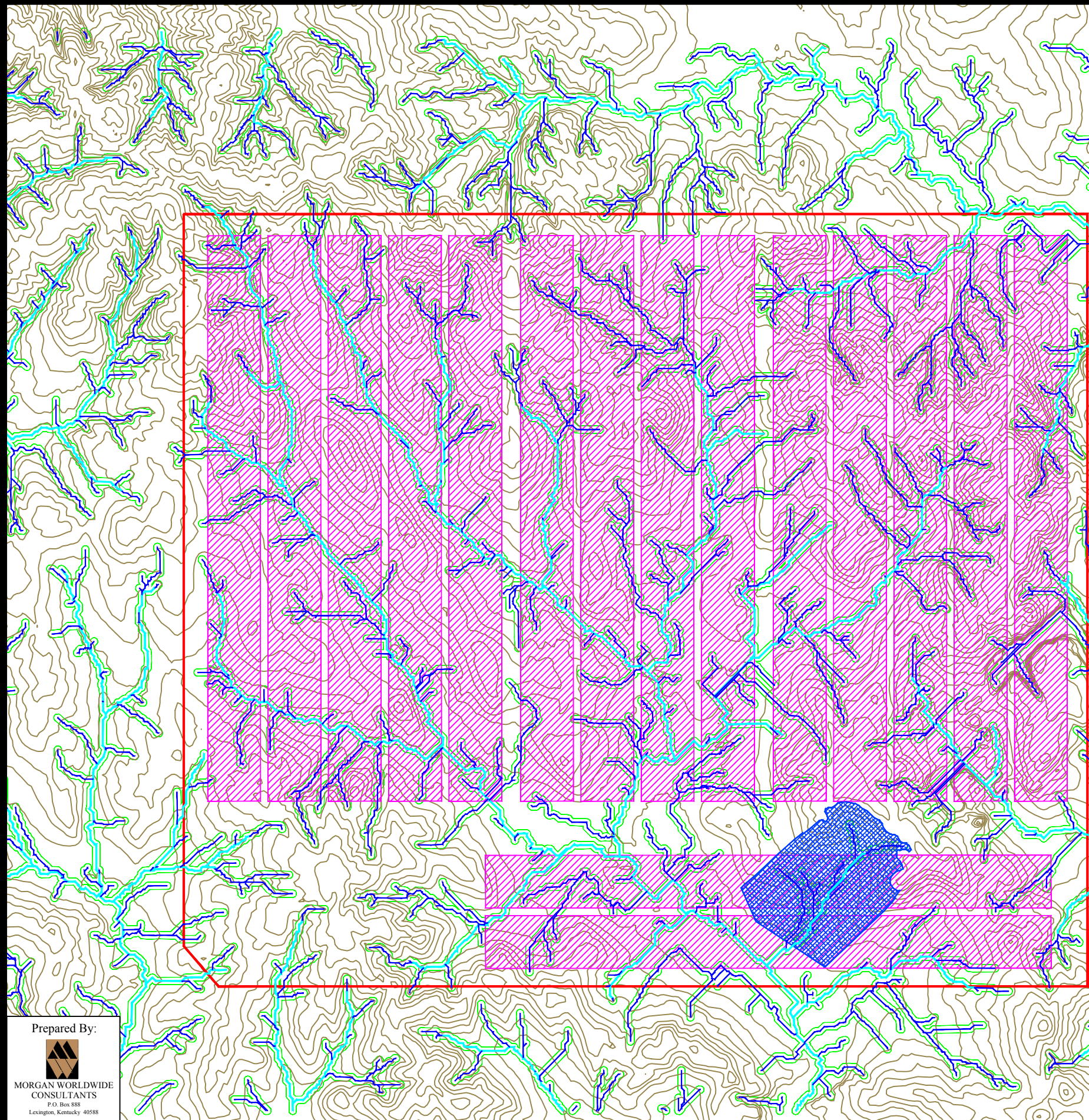


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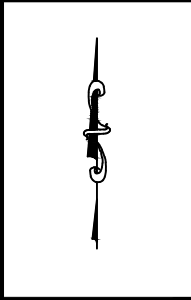
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Alternative 4

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 4**

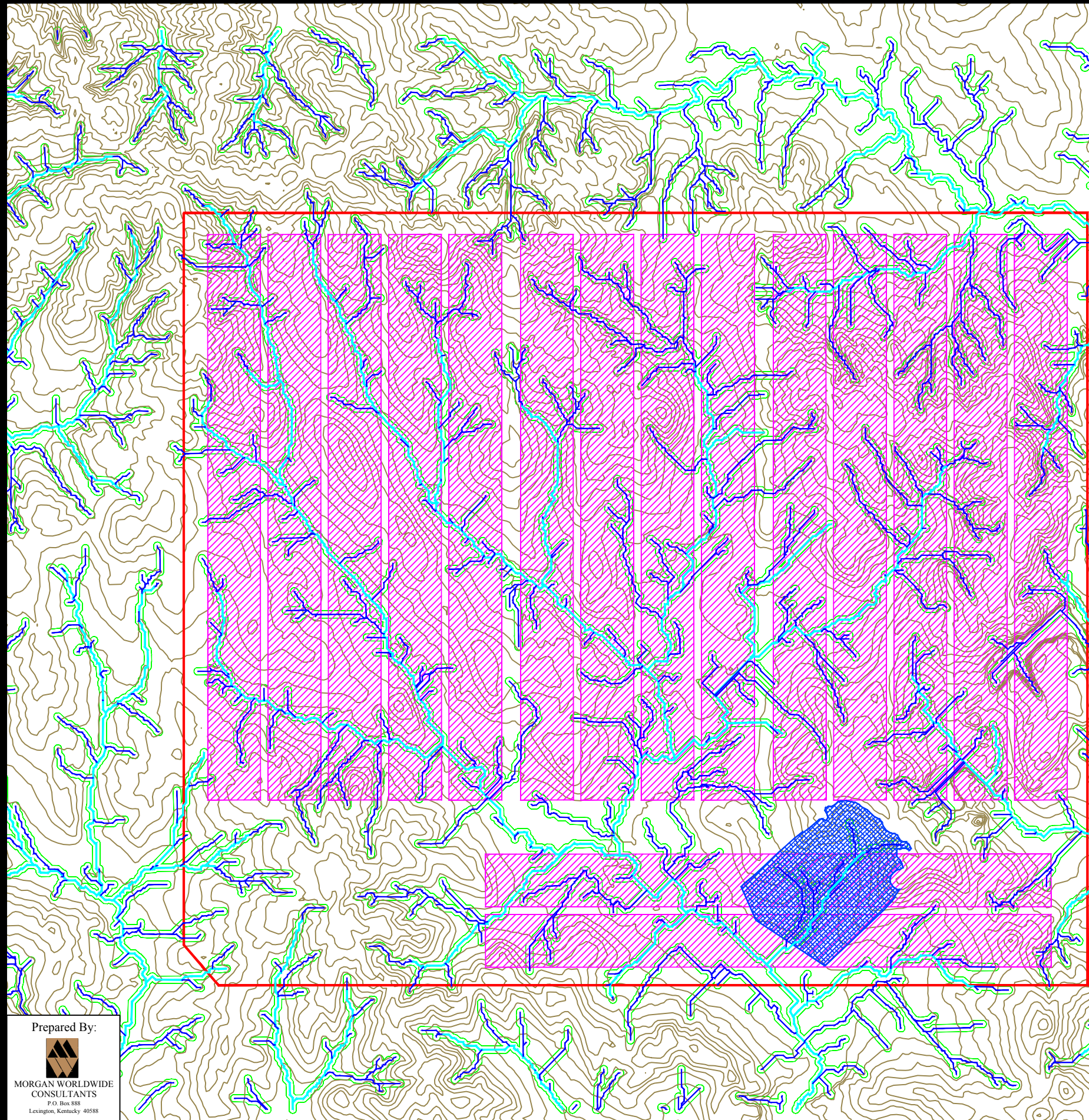
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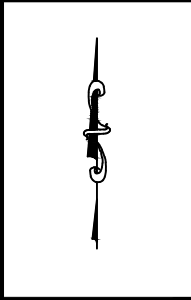
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Alternative 5

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts

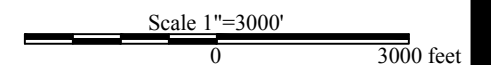


**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 5**

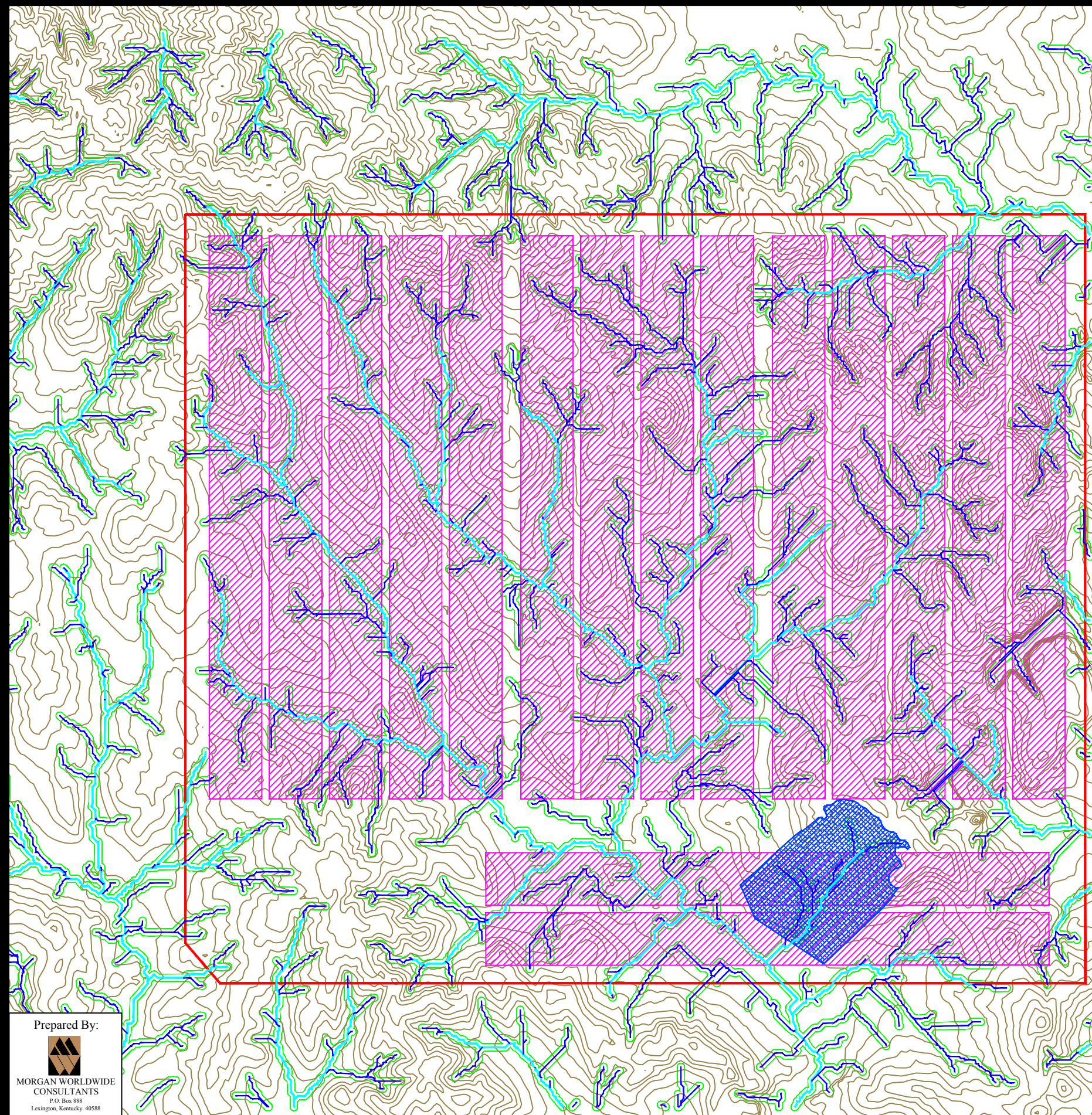


Prepared By:



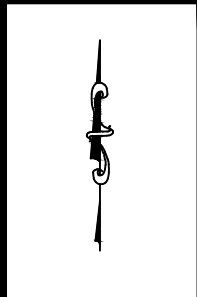
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P.O. Box 888  
Lexington, Kentucky 40588












Alternative 6

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts

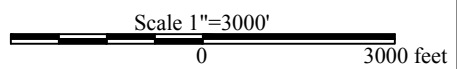


**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

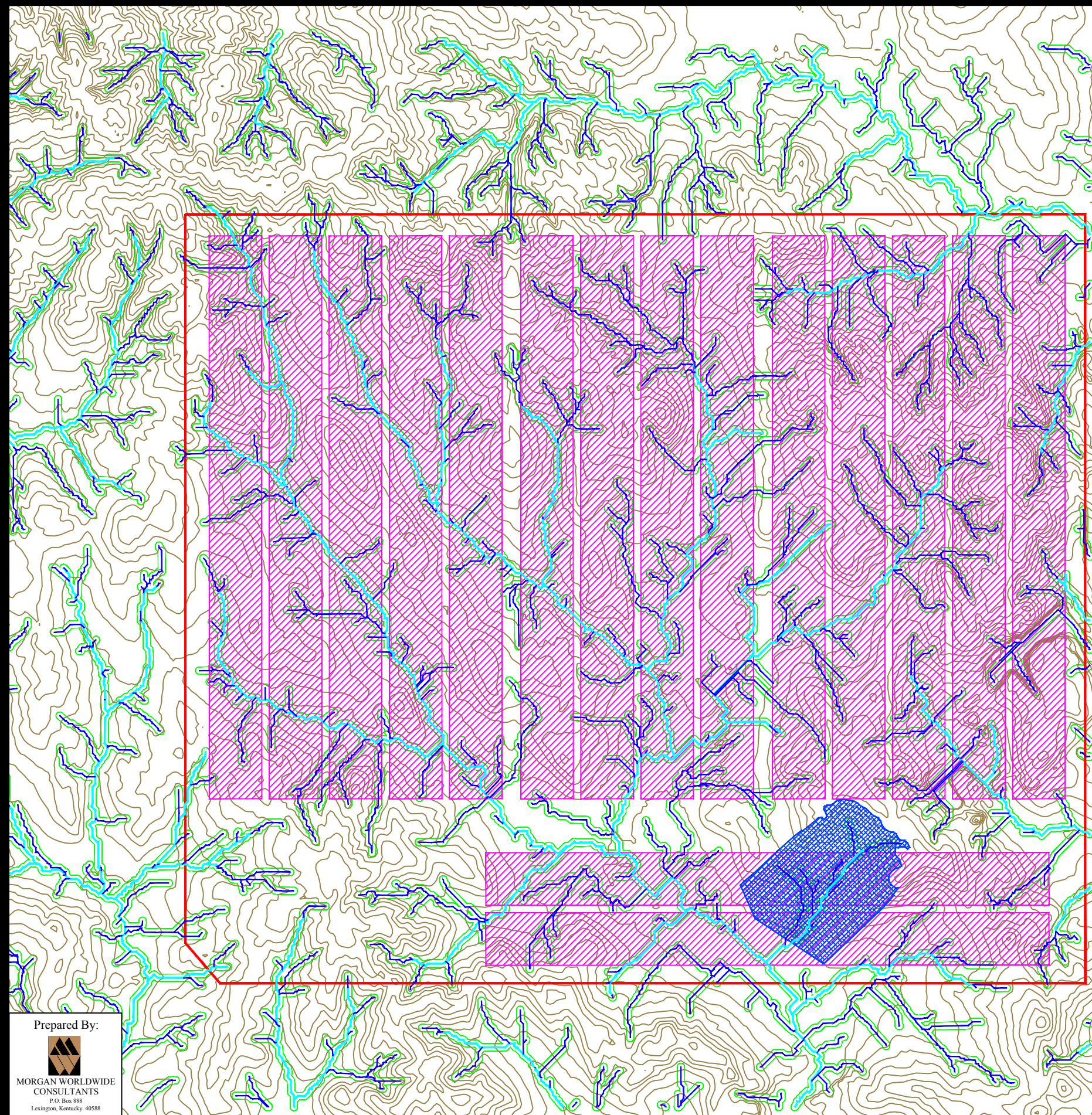
**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 6**



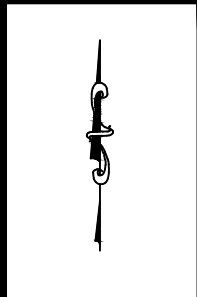
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Alternative 7

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
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  - 1,756 ft intermittent stream impacts

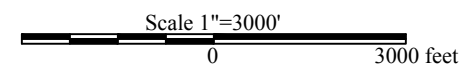


**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 7**

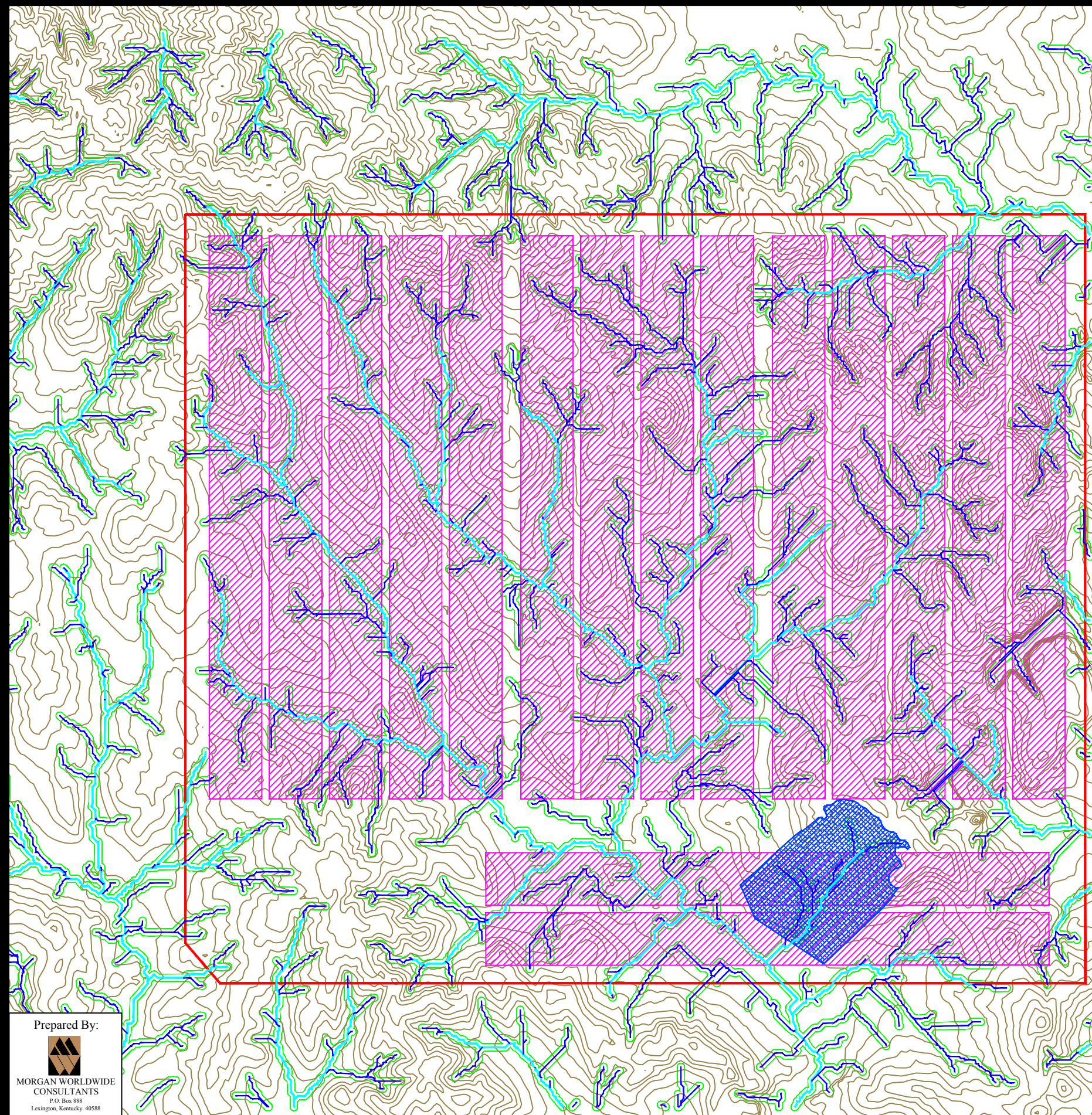


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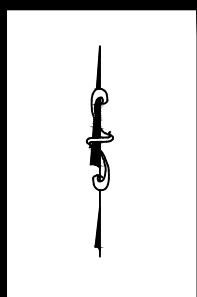
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Alternative 8

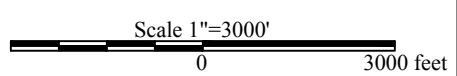
- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts



**Legend**

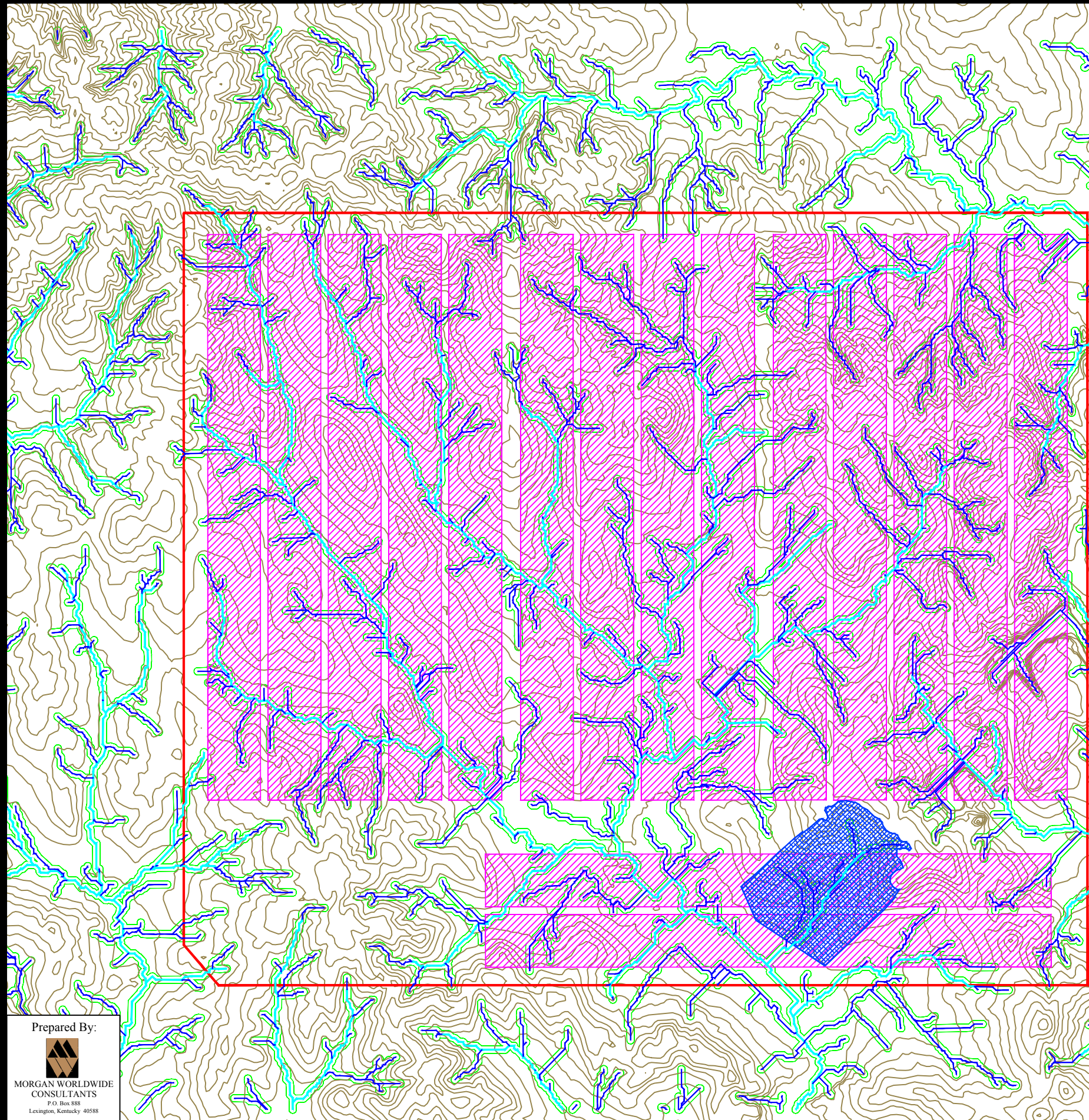
- Original Topography (10 ft Ctrs)
- Generated Ephemeral Streams (7.4 acre drainage)
- Intermittent Streams
- 100 ft stream offset
- Mineral Removal Area
- Longwall Panel
- Refuse Impoundment

**Illinois Basin  
Region**  
**Underground  
Longwall Mine  
Alternative 8**



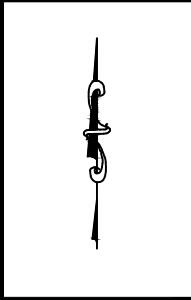
Prepared By:  
  
 MORGAN WORLDWIDE  
 CONSULTANTS  
 P.O. Box 888  
 Lexington, Kentucky 40588












Alternative 1

- 6 million tpy
- 129 million tons coal resource
- 106 million tons recoverable coal
- 11,265 mine acres
- 134 acres of disturbed area
- Stream Impacts
  - 5,173 ft ephemeral stream impacts
  - 1,756 ft intermittent stream impacts



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Ephemeral Streams (7.4 acre drainage)
-  Intermittent Streams
-  100 ft stream offset
-  Mineral Removal Area
-  Longwall Panel
-  Refuse Impoundment

**Illinois Basin  
Region**

**Underground  
Longwall Mine  
Alternative 9**

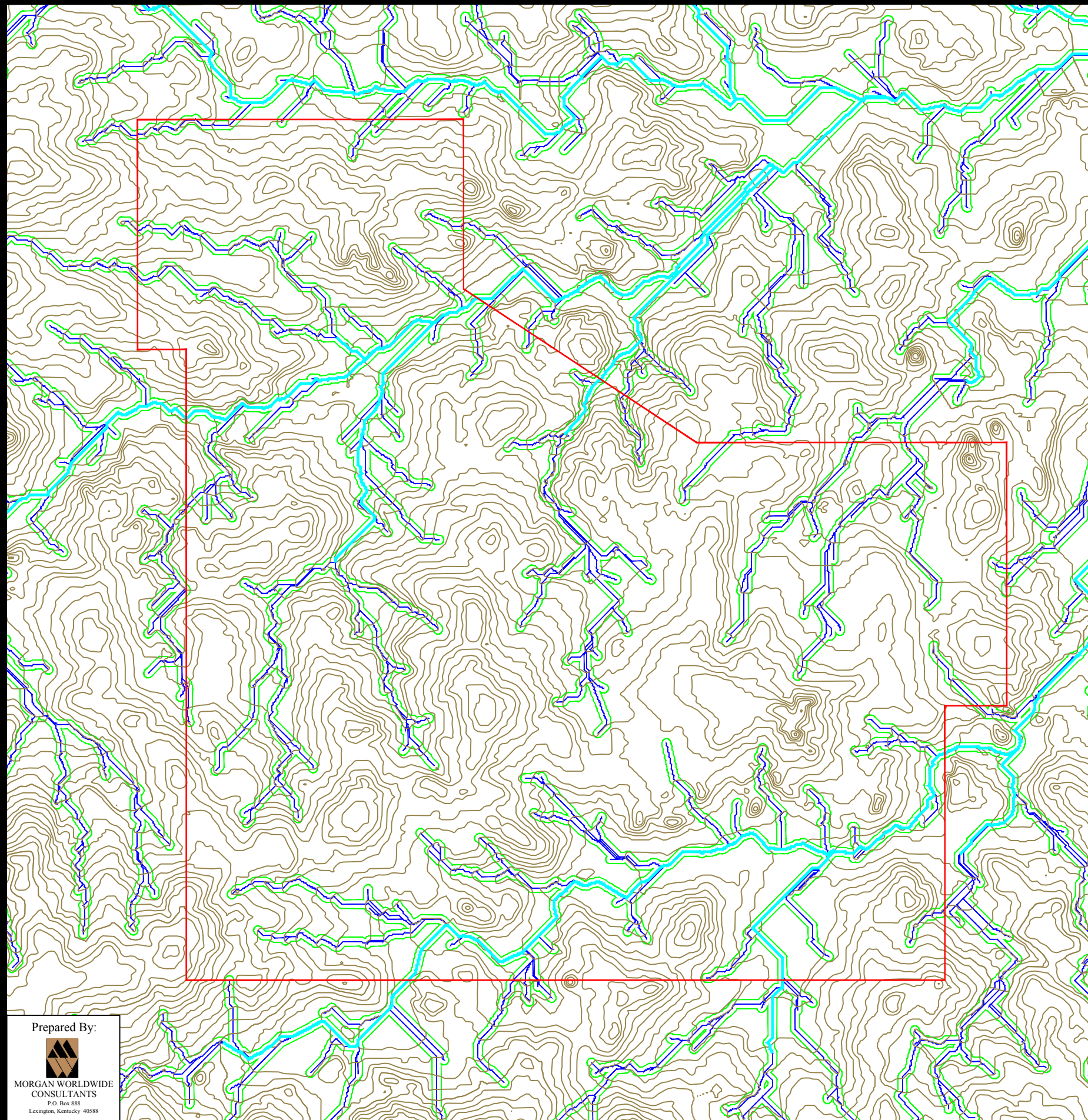
Scale 1"=3000'  
0 3000 feet

Prepared By:



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CONSULTANTS  
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Lexington, Kentucky 40588

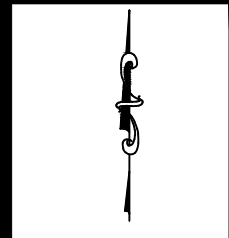










### Pre-Mining

#### Add'l Information

- 10 ft contours taken from USGS Seamless Server
- 13.6 acre ephemeral drainage requirement based on original streams delineated within permit files. Streams were generated based on drainage requirement until stream length was within 1% of the streams sampled from the permit file. This drainage requirement was then applied to the sample mine topography to generate the final streams.
- Google Maps and Virtual Earth were used to delineate intermittent and perennial points where mining would not typically occur.

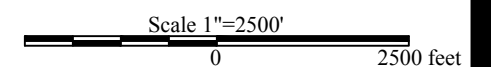


### Legend

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (1 sq mi drainage definition)
-  Generated Streams-Ephemeral (13.6 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Post-Mining Topography

## Northern Rocky Mountain Region

### Surface Area Mine Pre-Mining

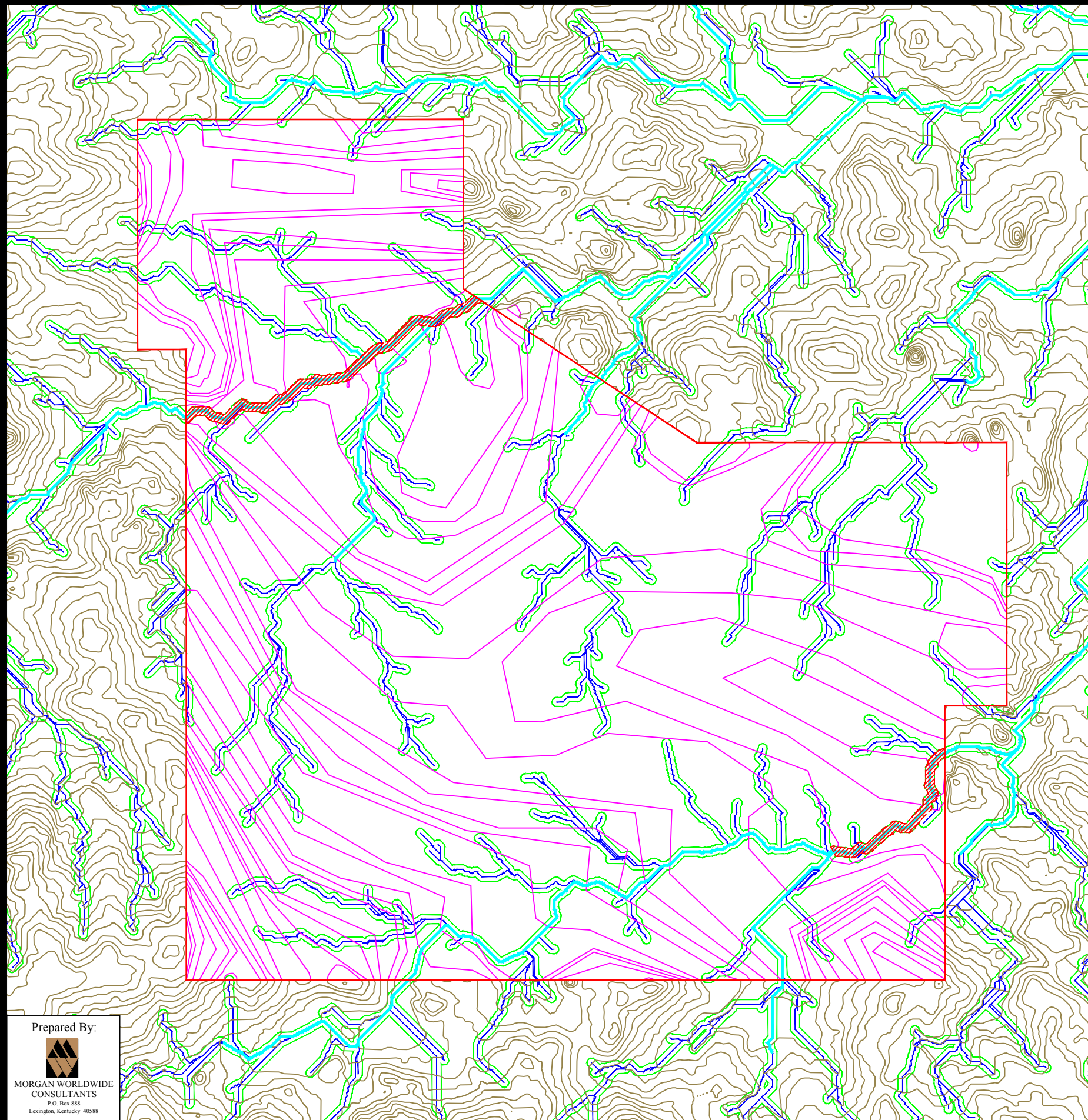


Prepared By:



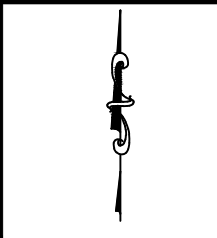
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P.O. Box 888  
Lexington, Kentucky 40588











Alternative 1

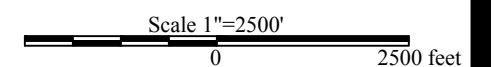
- 27.2 million tpy mined
- 1 billion tons coal resource
- 1.2:1 mining ratio
- 6,049 disturbed acres
- Stream Impacts:
  - 182,756 ft ephemeral stream mined through
  - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
  - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (1 sq mi drainage definition)
-  100 ft stream offset
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 1**

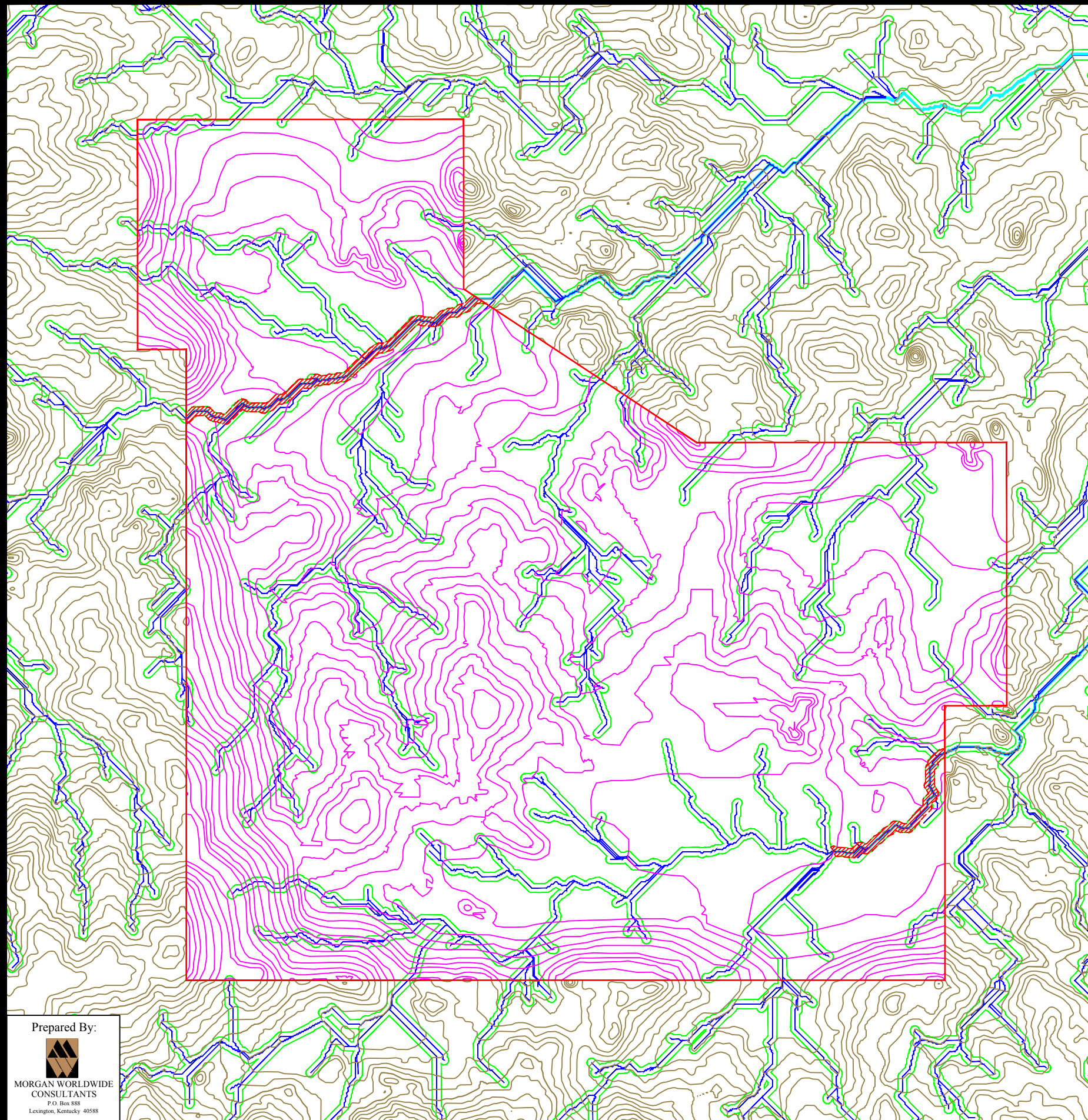


Prepared By:



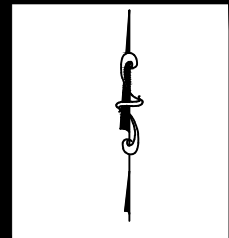
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Alternative 2

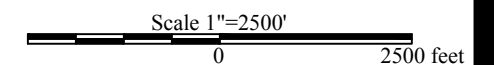
- 27.2 million tpy mined
- 1 billion tons coal resource
- 1.2:1 mining ratio
- 6,049 disturbed acres
- Stream Impacts:
  - 182,756 ft ephemeral stream mined through
  - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
  - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (hydrologically defined)
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 2**

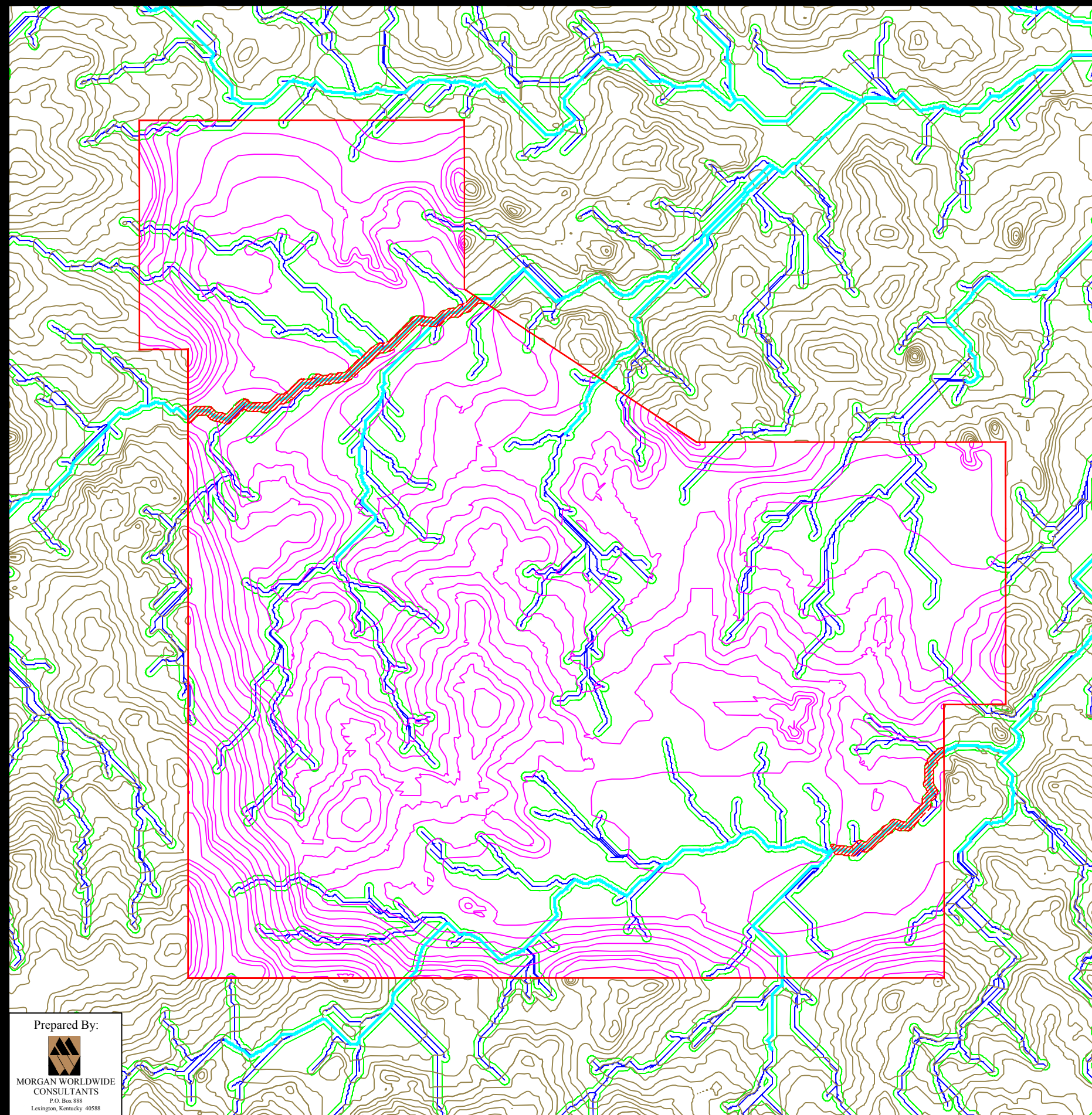


Prepared By:

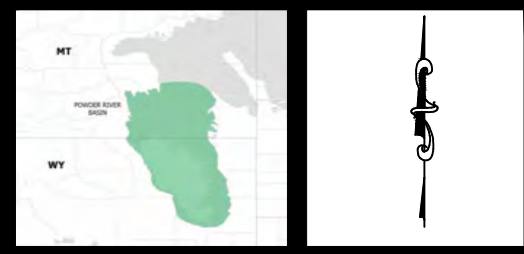


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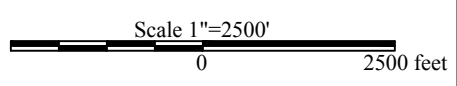
- Alternative 3
- 27.2 million tpy mined
  - 1 billion tons coal resource
  - 1.2:1 mining ratio
  - 6,049 disturbed acres
  - Stream Impacts:
    - 182,756 ft ephemeral stream mined through
    - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
    - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

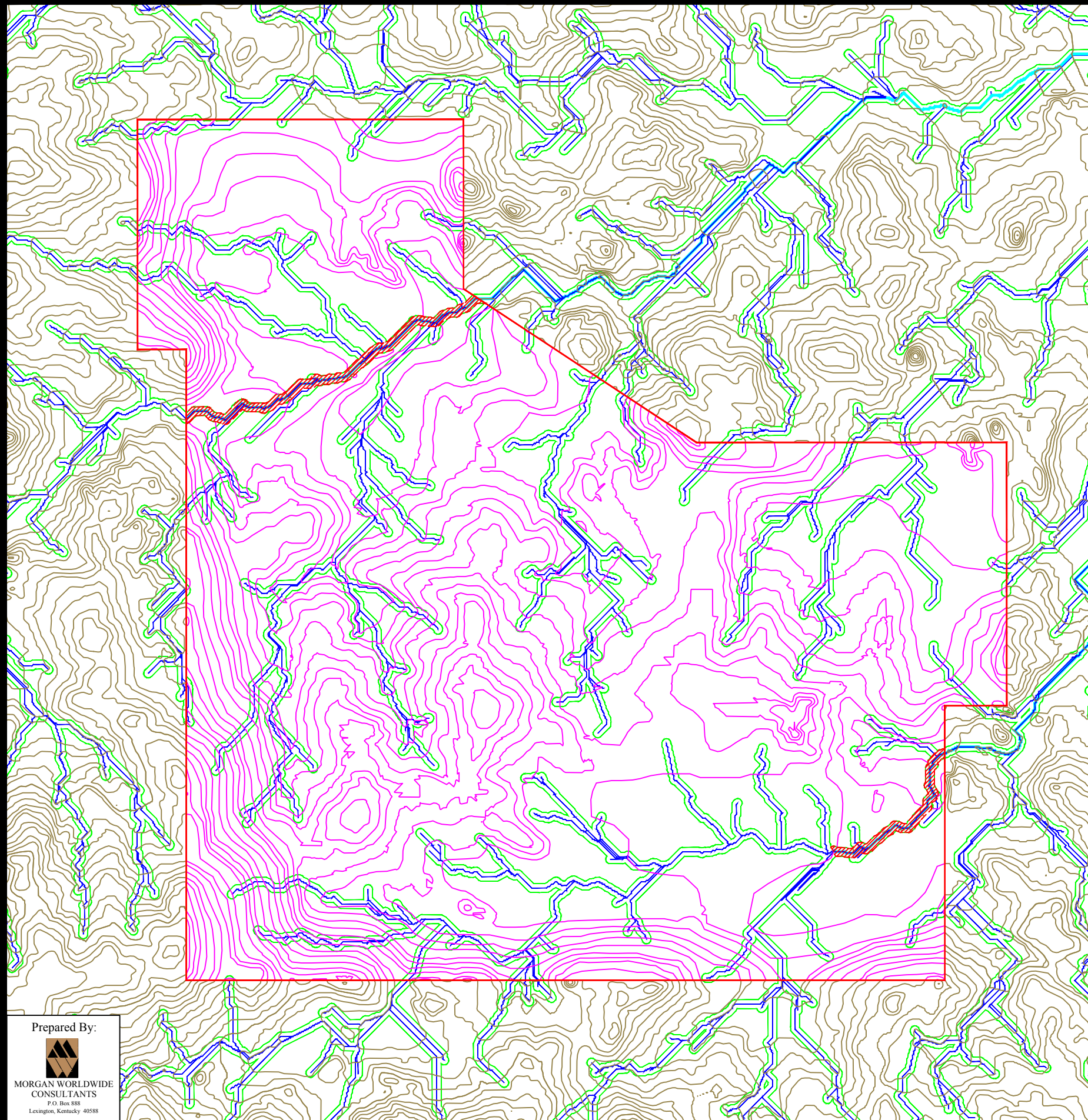
- Original Topography (10 ft Ctrs)
- Generated Streams-Intermittent (1 sq mi drainage definition)
- 100 ft stream offset
- Mineral Removal Area
- Hydrologically Intermittent Streams
- Post-Mining Topography

**Northern Rocky Mountain Region**  
 Surface Area Mine  
 Alternative 3



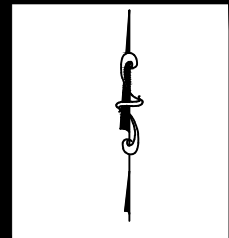
Prepared By:  
  
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Alternative 4

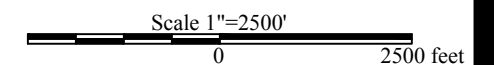
- 27.2 million tons per year mined
- 1 billion tons coal resource
- 1.2:1 mining ratio
- 6,049 disturbed acres
- Stream Impacts:
  - 182,756 ft ephemeral stream mined through
  - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
  - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (hydrologically defined)
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 4**

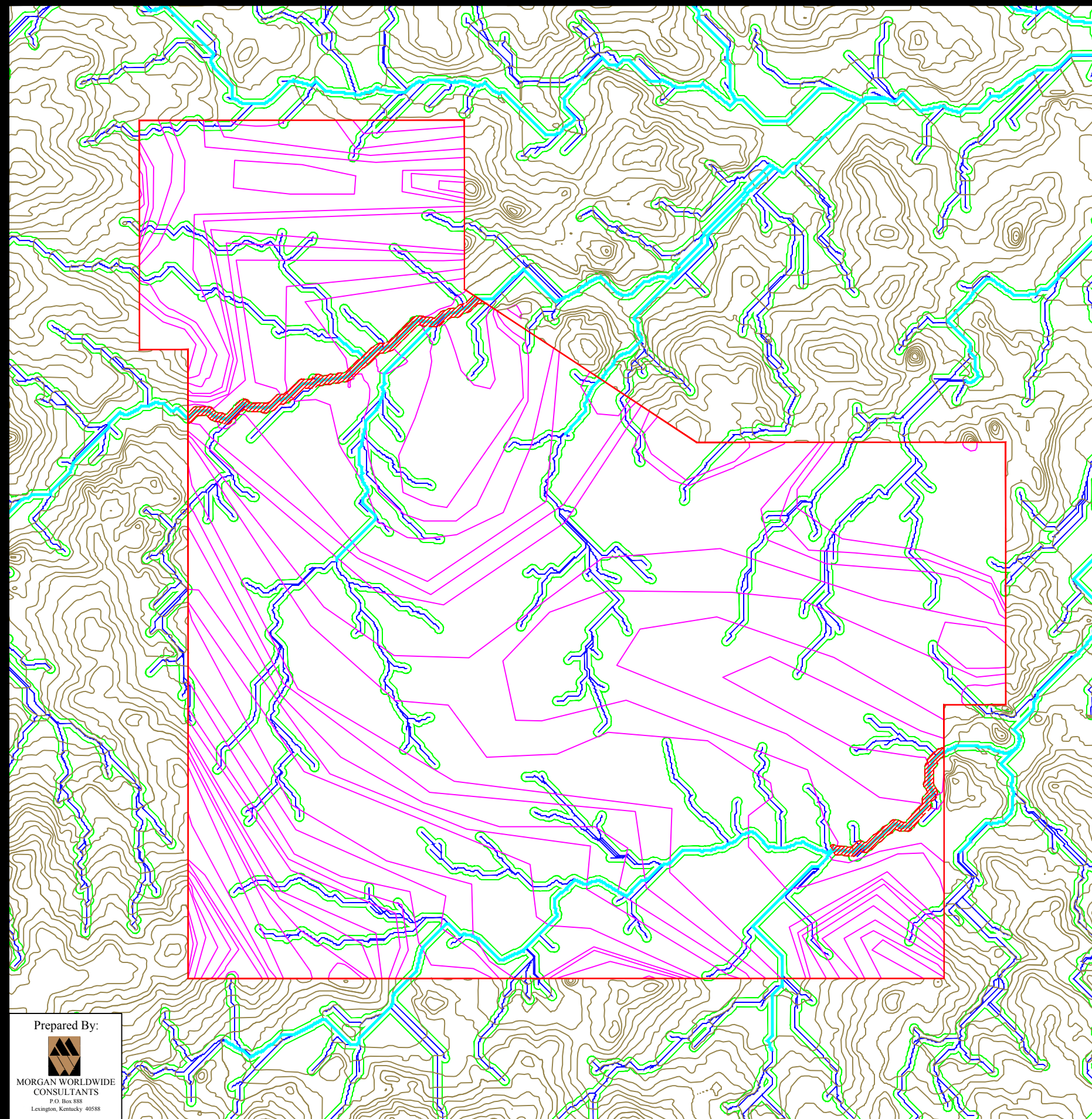


Prepared By:

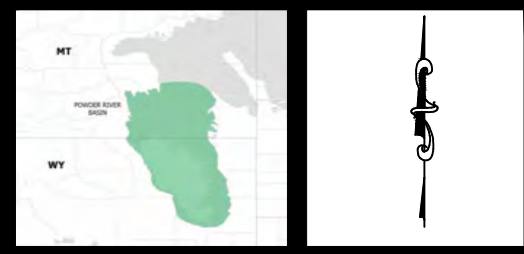


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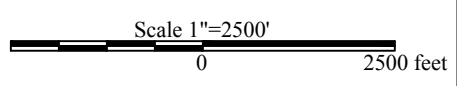
- Alternative 5**
- 27.2 million tpy mined
  - 1 billion tons coal resource
  - 1.2:1 mining ratio
  - 6,049 disturbed acres
  - Stream Impacts:
    - 182,756 ft ephemeral stream mined through
    - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
    - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

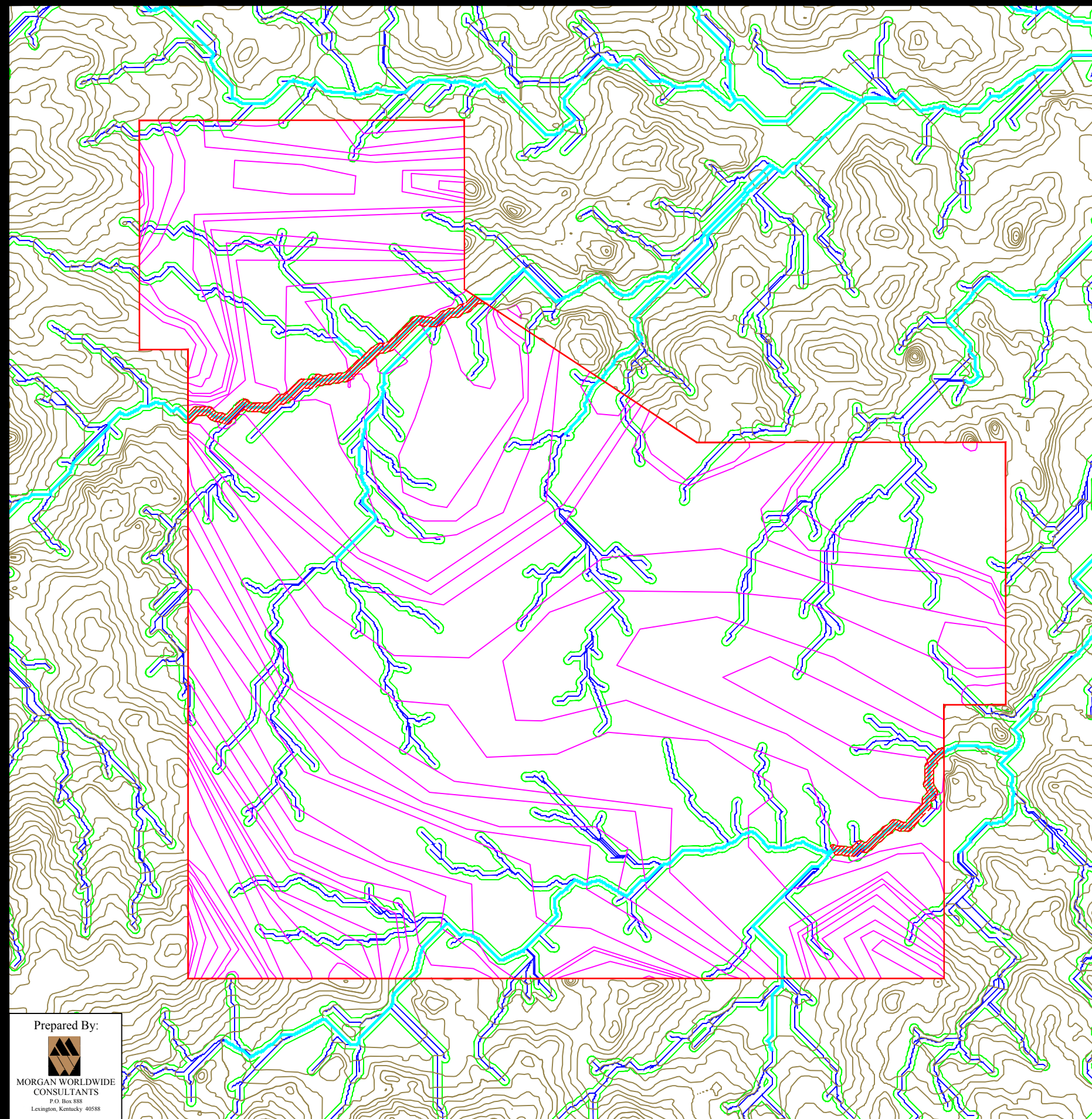
-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (1 sq mi drainage definition)
-  100 ft stream offset
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 5**

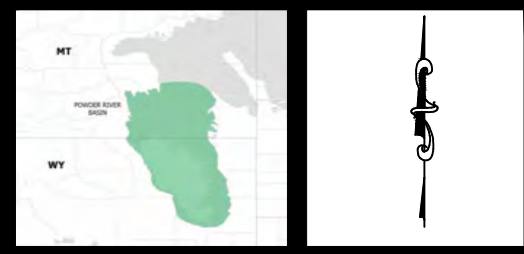


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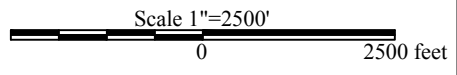


- Alternative 6**
- 27.2 million tpy mined
  - 1 billion tons coal resource
  - 1.2:1 mining ratio
  - 6,049 disturbed acres
  - Stream Impacts:
    - 182,756 ft ephemeral stream mined through
    - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
    - 12,102 ft hydrologically defined intermittent stream mined through



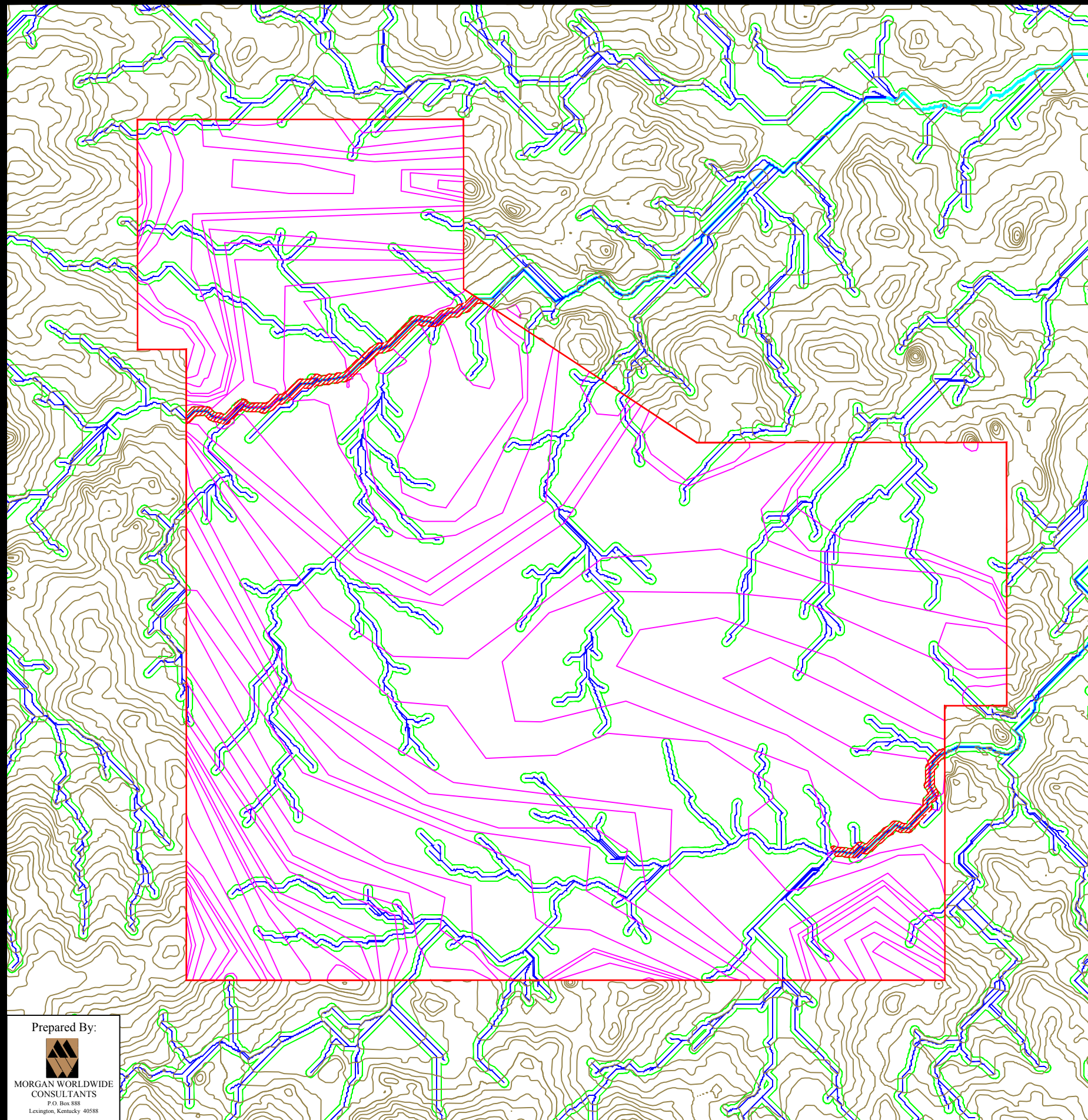
- Legend**
- Original Topography (10 ft Ctrs)
  - Generated Streams-Intermittent (1 sq mi drainage definition)
  - 100 ft stream offset
  - Mineral Removal Area
  - Hydrologically Intermittent Streams
  - Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 6**



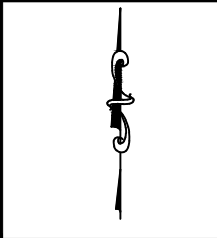
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Alternative 7

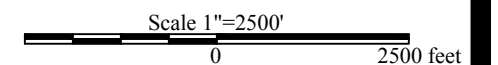
- 27.2 million tpy mined
- 1 billion tons coal resource
- 1.2:1 mining ratio
- 6,049 disturbed acres
- Stream Impacts:
  - 182,756 ft ephemeral stream mined through
  - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
  - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (1 sq mi drainage definition)
-  100 ft stream offset
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 7**

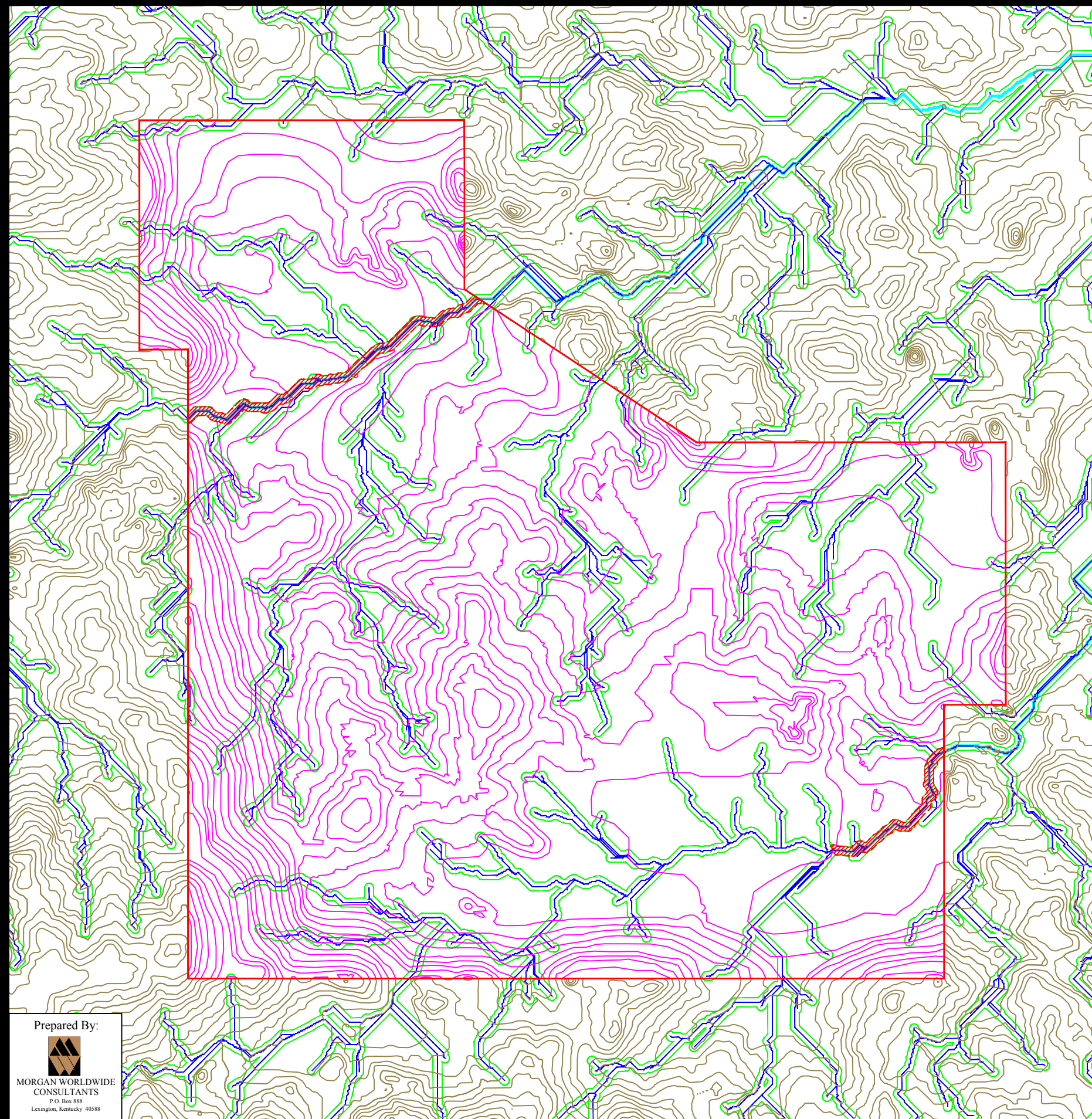


Prepared By:

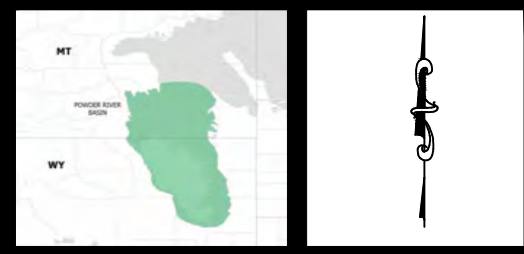


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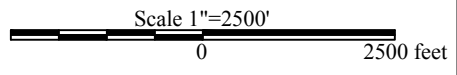
- Alternative 4**
- 27.2 million tons per year mined
  - 1 billion tons coal resource
  - 1.2:1 mining ratio
  - 6,049 disturbed acres
  - Stream Impacts:
    - 182,756 ft ephemeral stream mined through
    - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
    - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

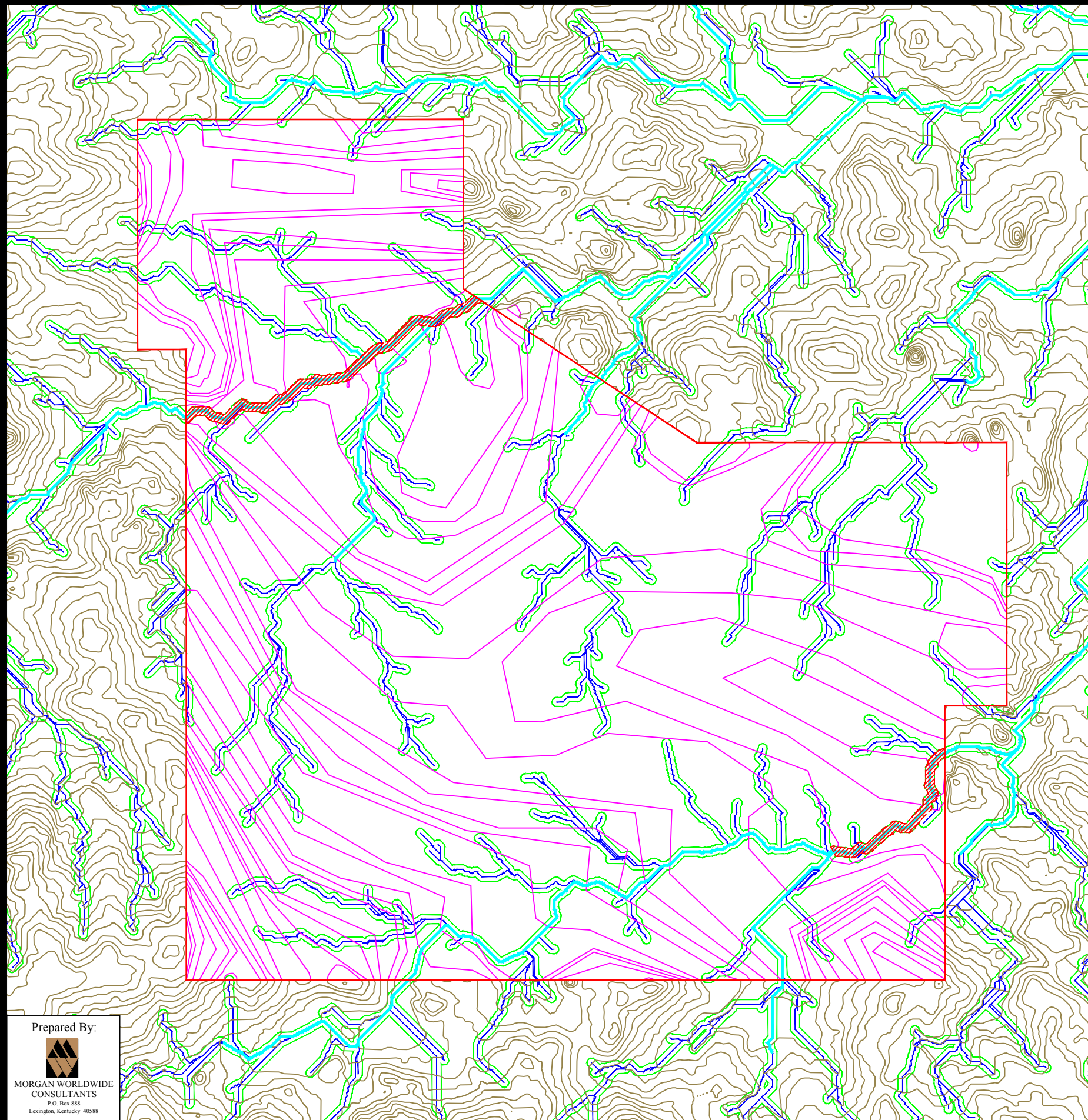
-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (hydrologically defined)
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region**  
**Surface Area Mine**  
**Alternative 8**



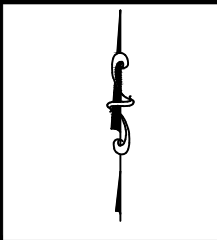
Prepared By:  
  
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Alternative 1

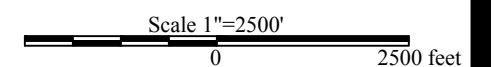
- 27.2 million tpy mined
- 1 billion tons coal resource
- 1.2:1 mining ratio
- 6,049 disturbed acres
- Stream Impacts:
  - 182,756 ft ephemeral stream mined through
  - 26,213 ft intermittent stream mined through (greater than one square mile of drainage)
  - 12,102 ft hydrologically defined intermittent stream mined through



**Legend**

-  Original Topography (10 ft Ctrs)
-  Generated Streams-Intermittent (1 sq mi drainage definition)
-  100 ft stream offset
-  Mineral Removal Area
-  Hydrologically Intermittent Streams
-  Post-Mining Topography

**Northern Rocky Mountain Region  
Surface Area Mine  
Alternative 9**

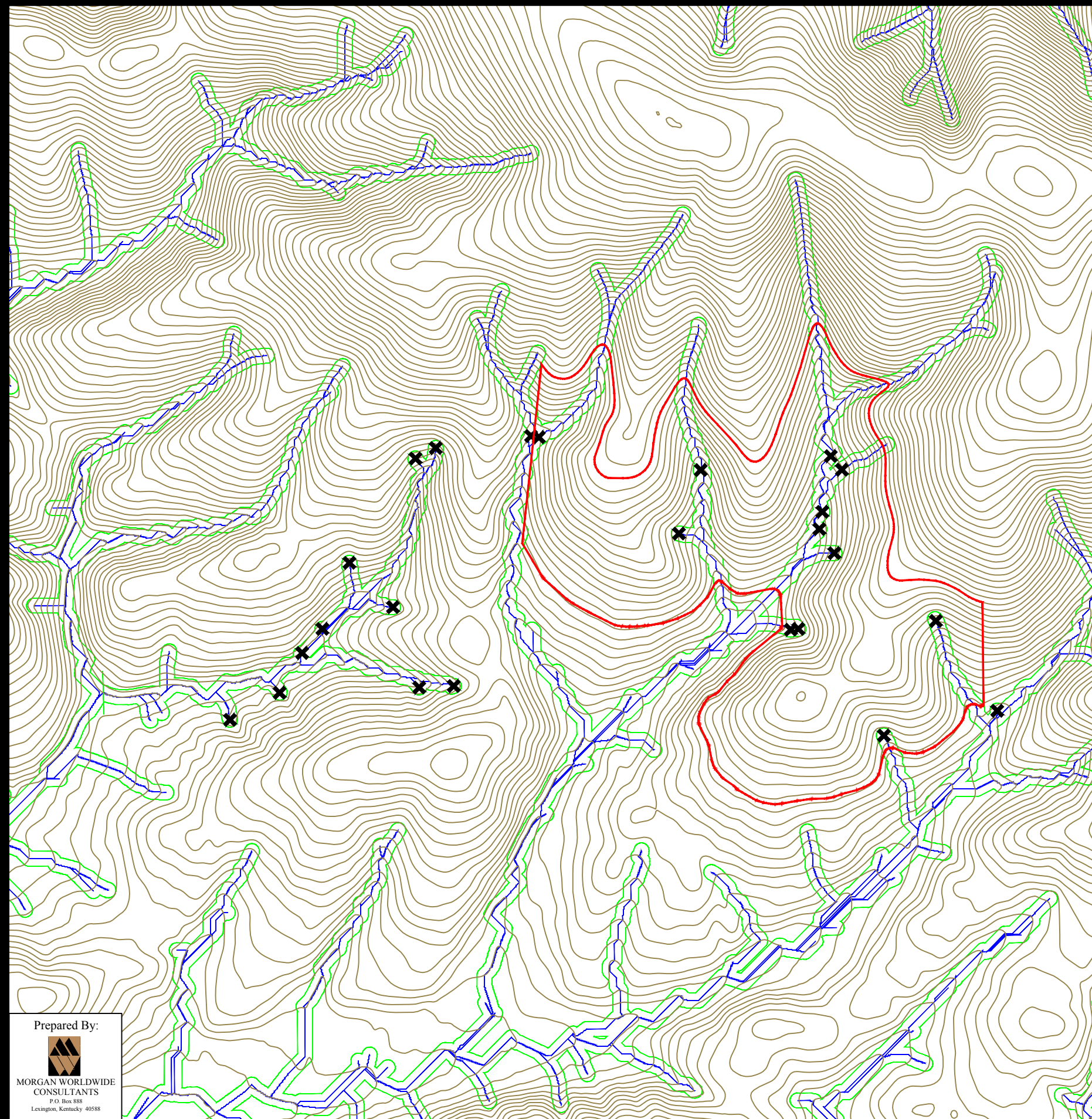


Prepared By:

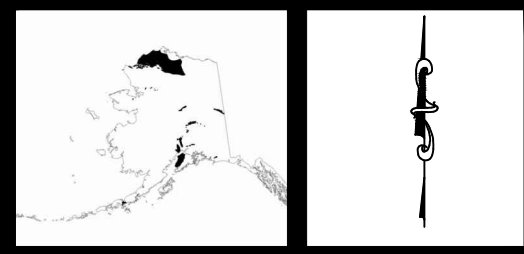


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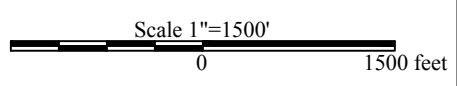
- Pre-Mining**
- 25 ft contours taken from USGS Seamless Server
  - 8.4 acre ephemeral drainage requirement based on original streams delineated within permit files. Streams were generated based on drainage requirement until stream length was within 1% of the streams sampled from the permit file. This drainage requirement was then applied to the sample mine topography to generate the final streams.
  - Ephemeral/Intermittent points based on information found in permit file. Ephemeral/intermittent point defined by highest coal seam mined. Intermittent/perennial point defined by lowest coal seam mined. Fill area stream are all below the coal outcrop, and permit file states that perennial stream begins 1600 ft below toe of fill; therefore, all stream in fill area is defined as intermittent.



**Legend**

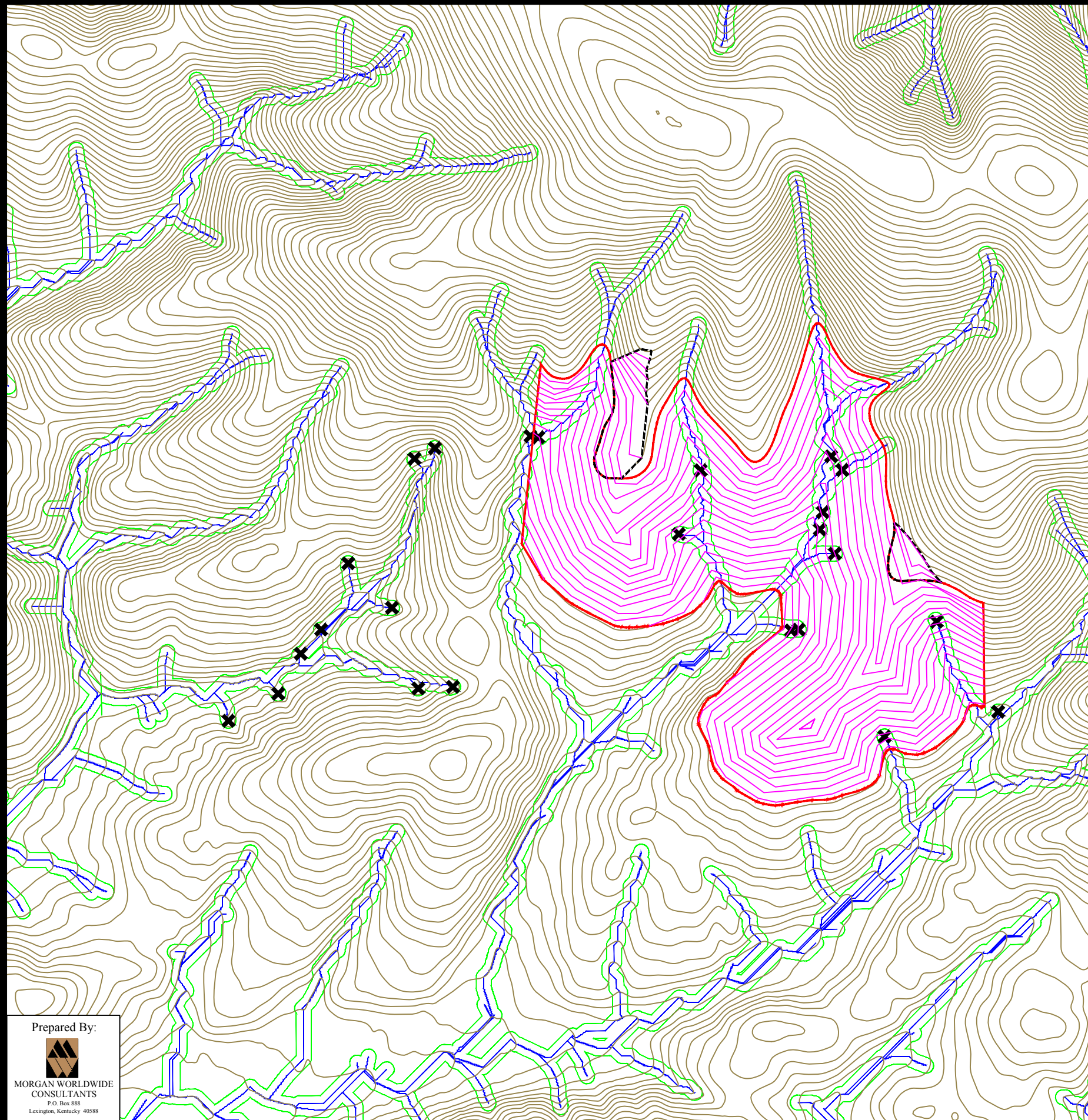
- Original Topography (25 ft Ctrs)
- Generated Streams (8.4 acre drainage)
- 100 ft stream offset
- ▭ Mineral Removal Area

**Northwest  
Region  
Surface Area Mine  
Pre-Mining**



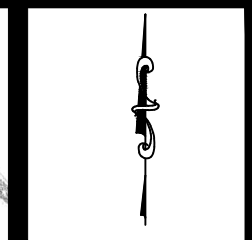
Prepared By:  
  
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Alternative 1

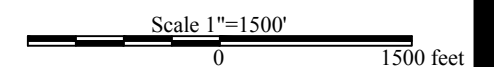
- 2 million tpy
- 37 million tons coal resource
- 3.8:1 mining ratio
- 497 disturbed acres
- Stream Impacts
  - 7,141 ft ephemeral stream mined through
  - 7,903 ft intermittent stream mined through



**Legend**

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region  
Surface Area Mine  
Alternative 9**

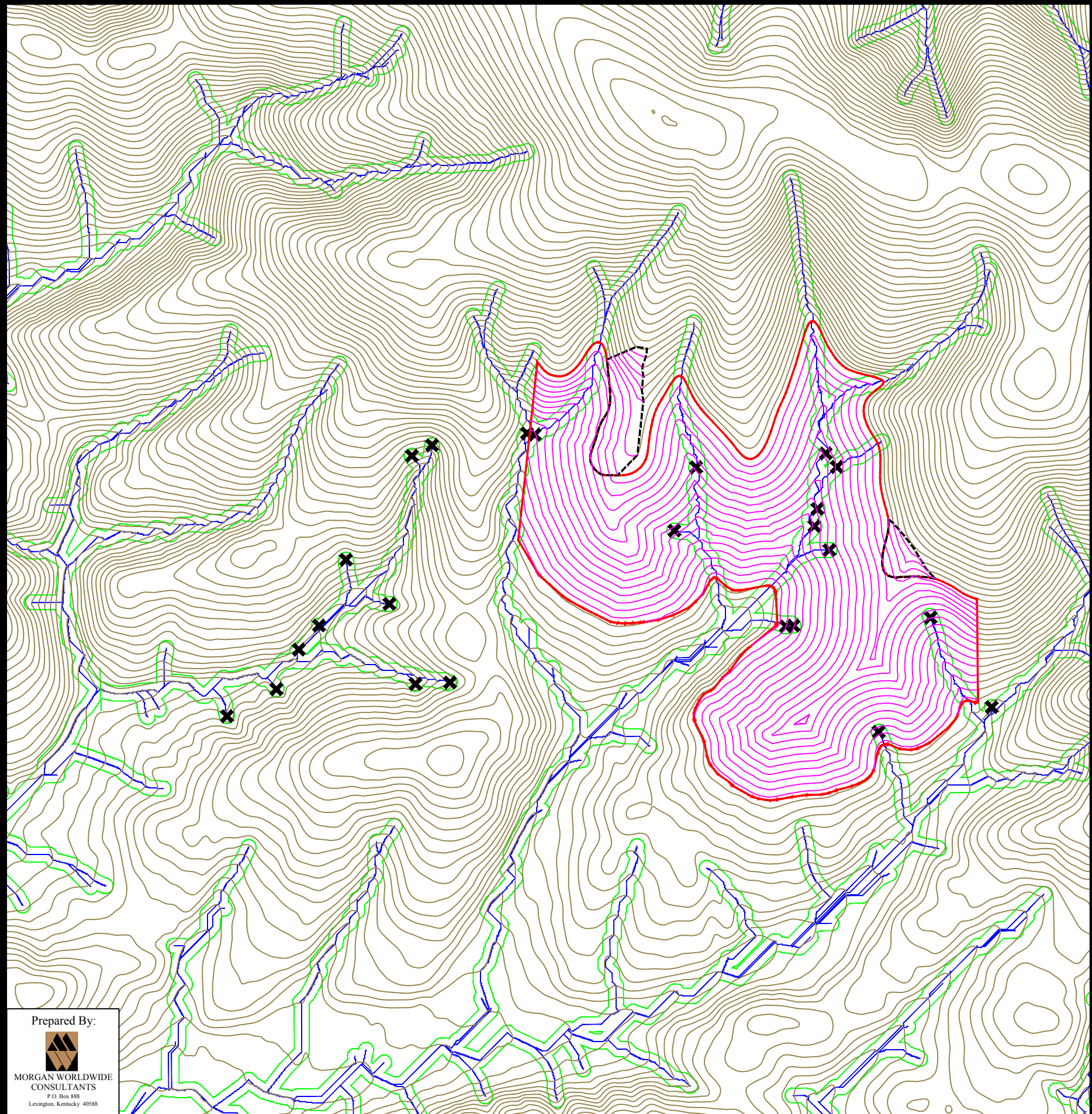


Prepared By:

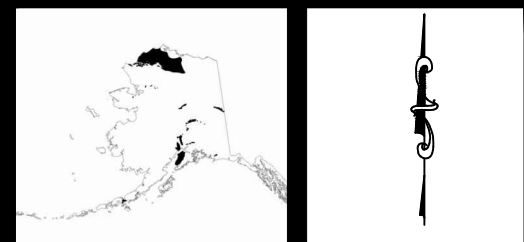


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- Alternative 2
- 2 million tpy
  - 37 million tons coal resource
  - 3.8:1 mining ratio
  - 497 disturbed acres
  - Stream Impacts
    - 7,141 ft ephemeral stream mined through
    - 7,903 ft intermittent stream mined through



### Legend

- Original Topography (25 ft Ctrs)
- Generated Streams (8.4 acre drainage)
- 100 ft stream offset
- Mineral Removal Area
- Excess Spoil Location
- Post-Mining Topography
- E/I Point

## Northwest Region

### Surface Area Mine Alternative 2

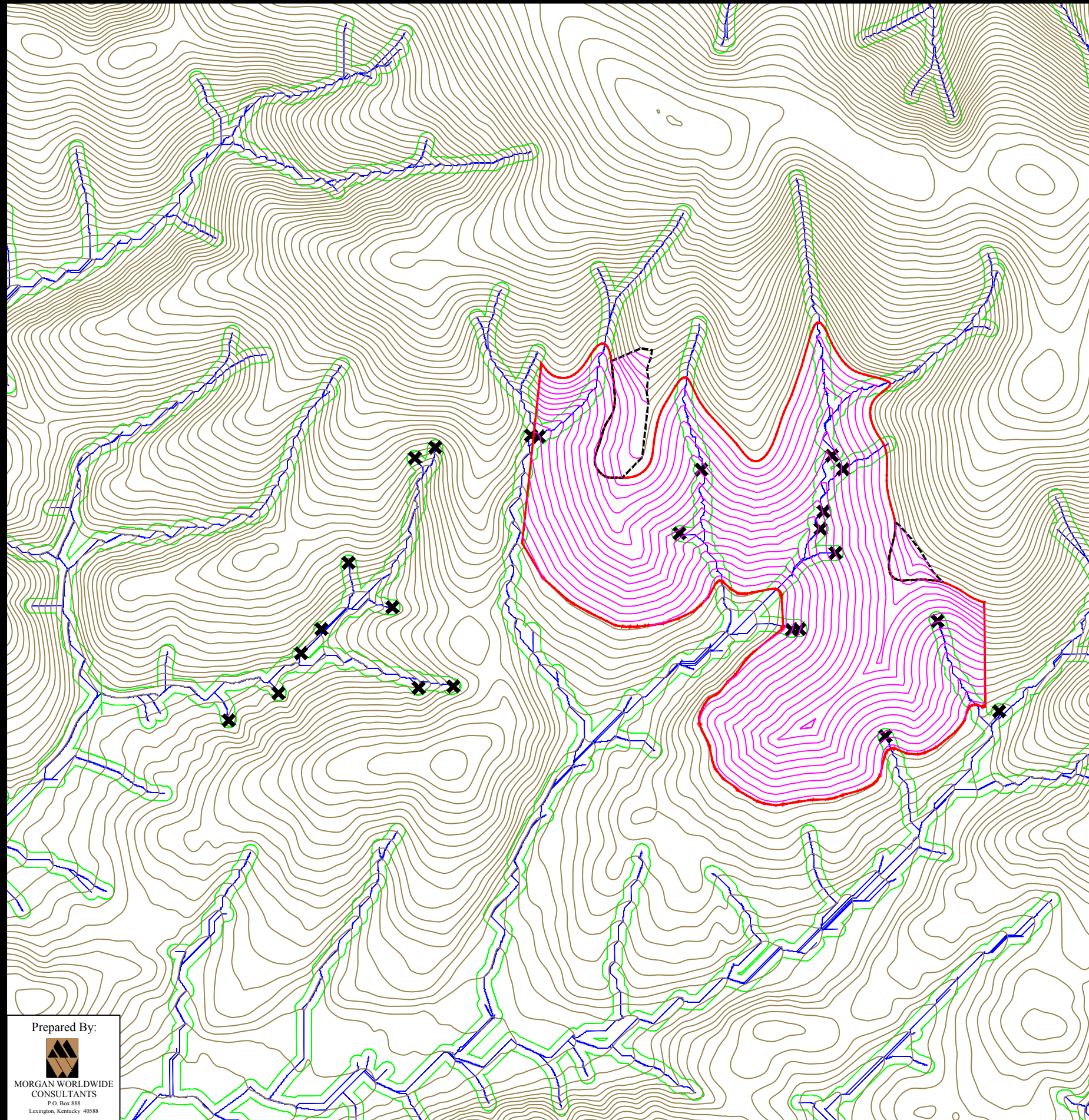
Scale 1"=1500'

A graphic scale bar at the bottom right indicates a scale of 1 inch equals 1500 feet, with markings at 0 and 1500 feet.

Prepared By:

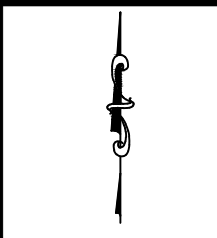
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Alternative 3

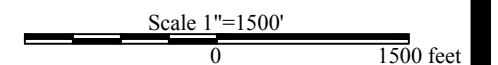
- 2 million tpy
- 37 million tons coal resource
- 3.8:1 mining ratio
- 497 disturbed acres
- Stream Impacts
  - 7,141 ft ephemeral stream mined through
  - 7,903 ft intermittent stream mined through



**Legend**

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region  
Surface Area Mine  
Alternative 3**

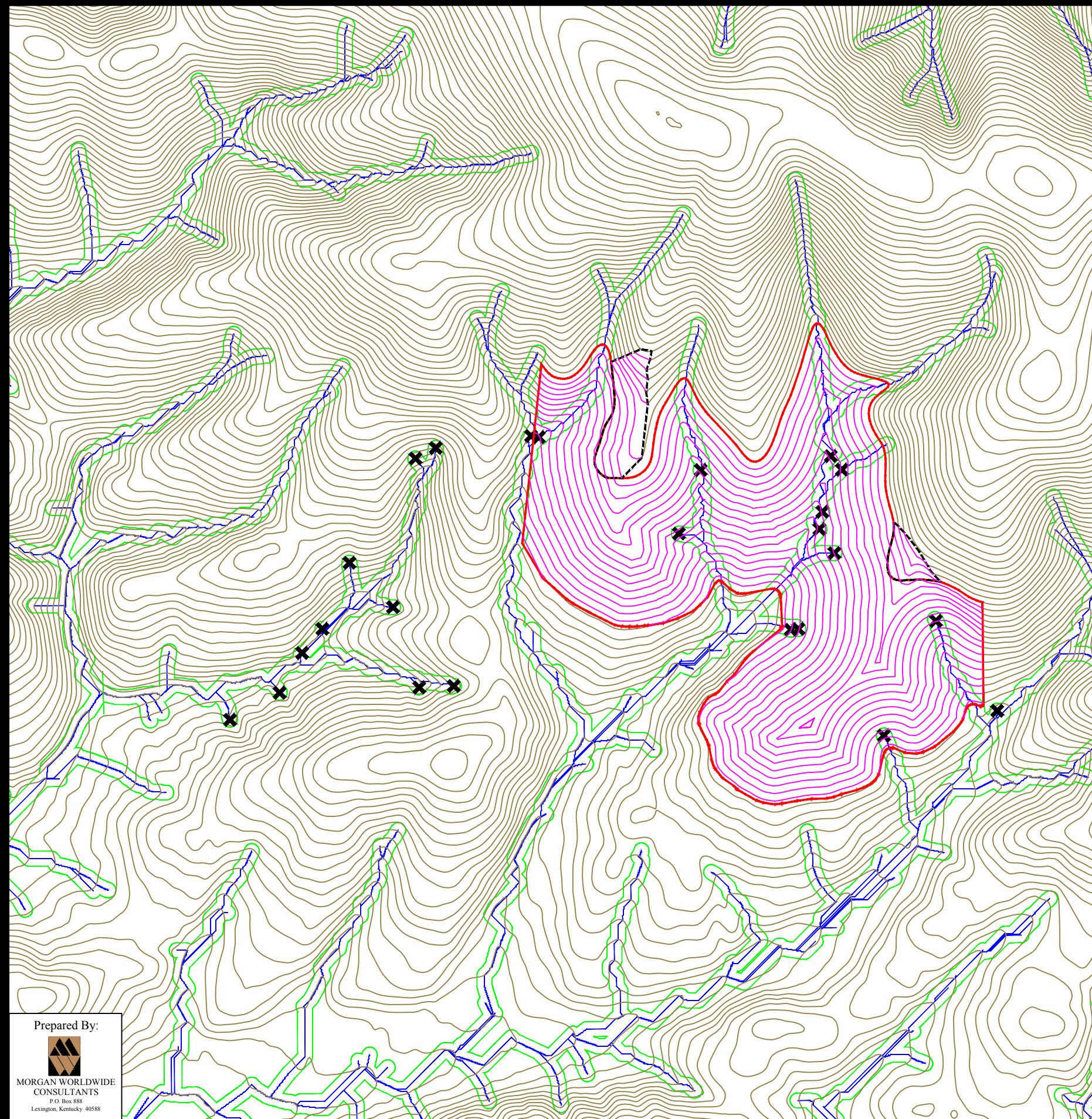


Prepared By:

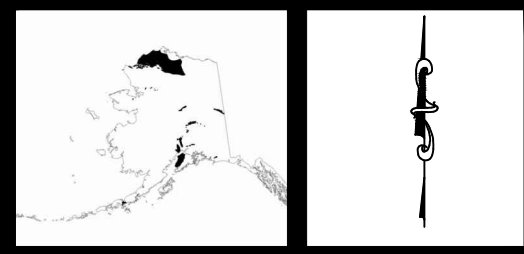


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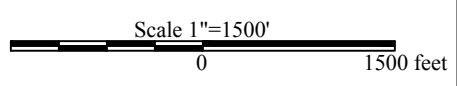
- Alternative 4
- 2 million tpy
  - 37 million tons coal resource
  - 3.8:1 mining ratio
  - 497 disturbed acres
  - Stream Impacts
    - 7,141 ft ephemeral stream mined through
    - 7,903 ft intermittent stream mined through



### Legend

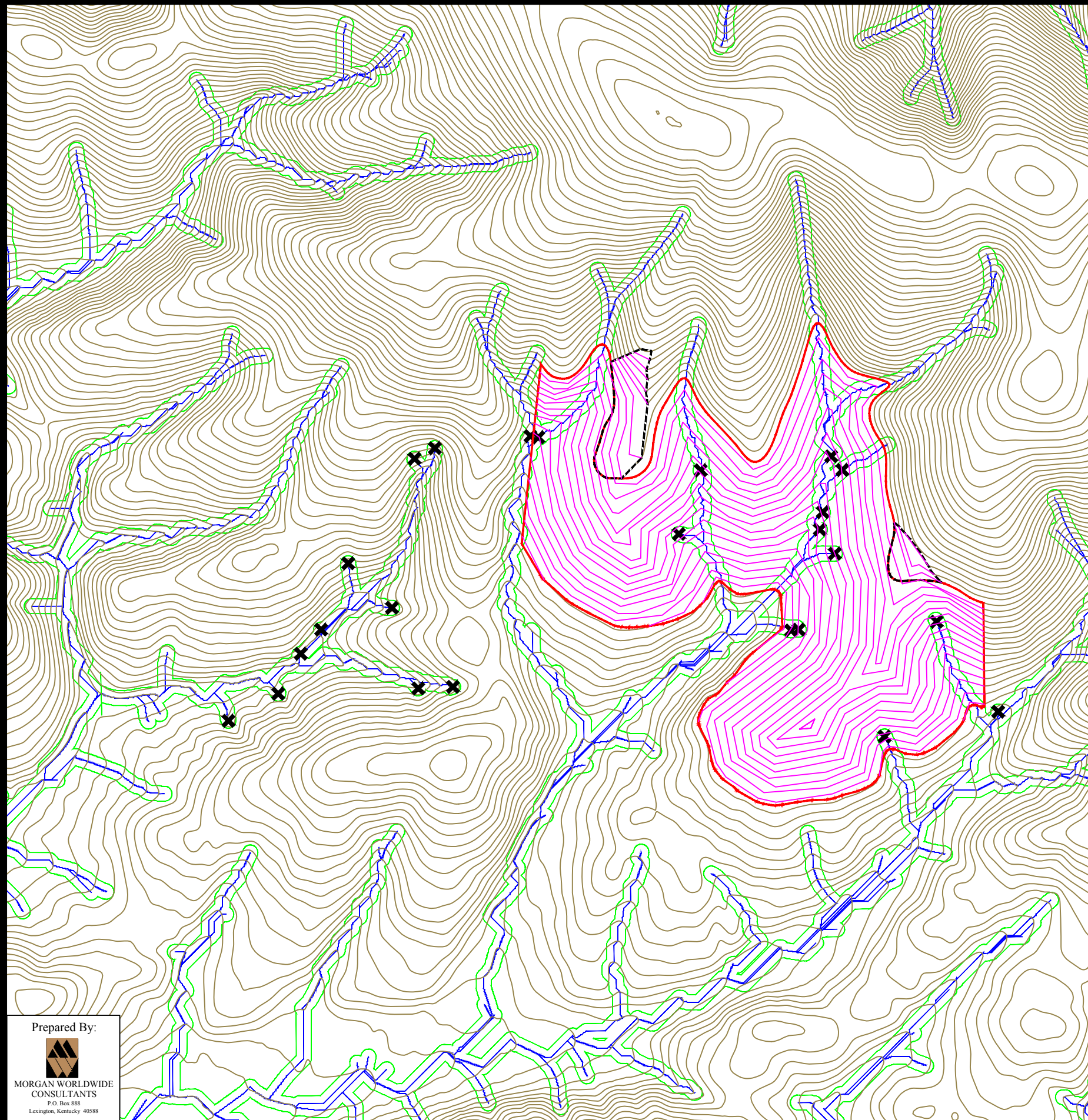
-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region**  
 Surface Area Mine  
 Alternative 4



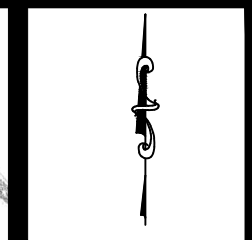
Prepared By:  
  
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Alternative 5

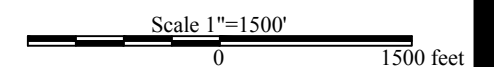
- 2 million tpy
- 37 million tons coal resource
- 3.8:1 mining ratio
- 497 disturbed acres
- Stream Impacts
  - 7,141 ft ephemeral stream mined through
  - 7,903 ft intermittent stream mined through



**Legend**

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region  
Surface Area Mine  
Alternative 5**

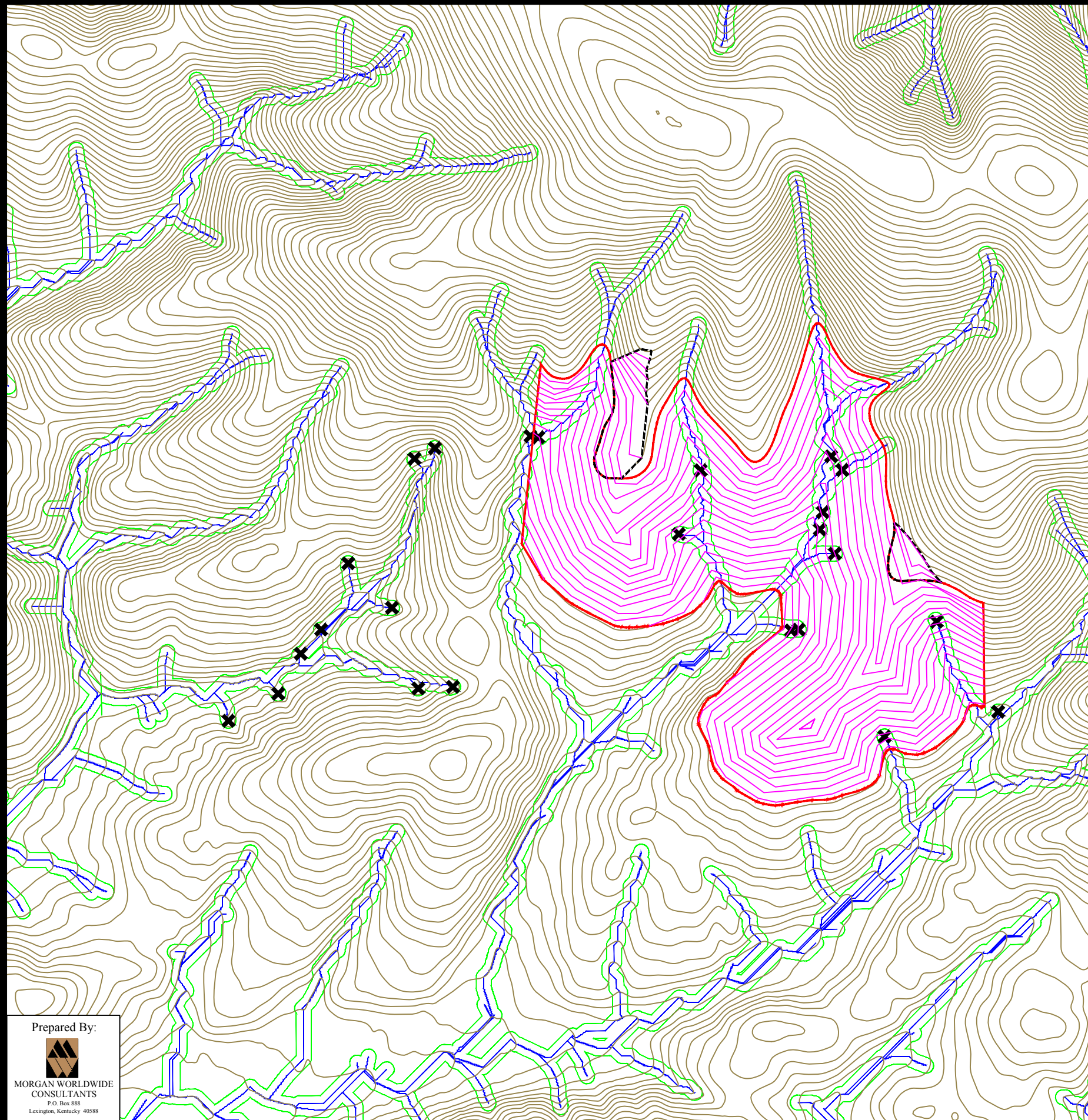


Prepared By:



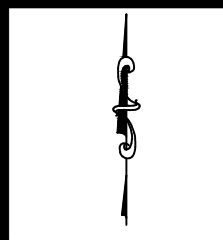
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Lexington, Kentucky 40588












Alternative 6

- 2 million tpy
- 37 million tons coal resource
- 3.8:1 mining ratio
- 497 disturbed acres
- Stream Impacts
  - 7,141 ft ephemeral stream mined through
  - 7,903 ft intermittent stream mined through



**Legend**

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region  
Surface Area Mine  
Alternative 6**

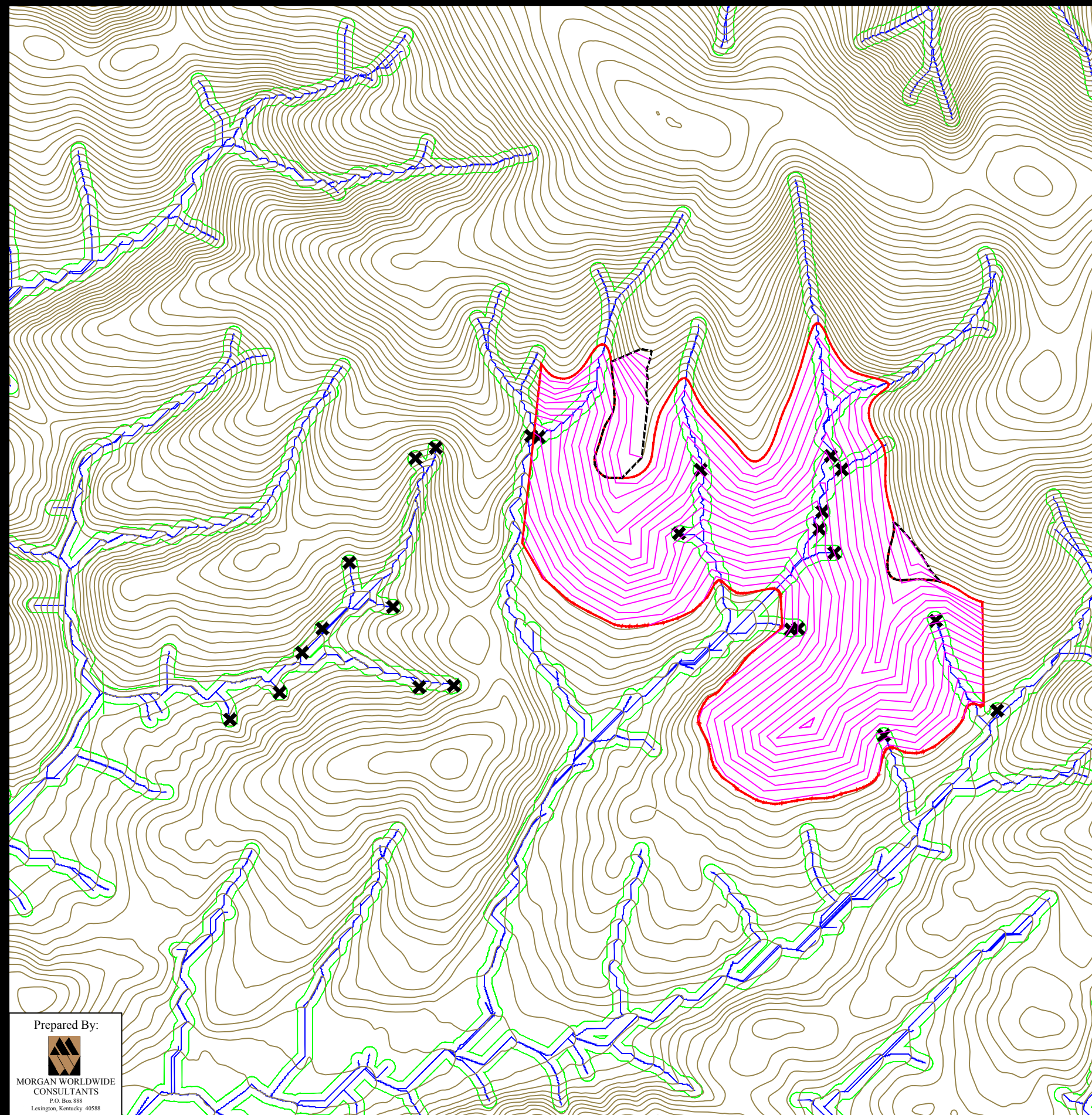
Scale 1"=1500'  
0 1500 feet

Prepared By:

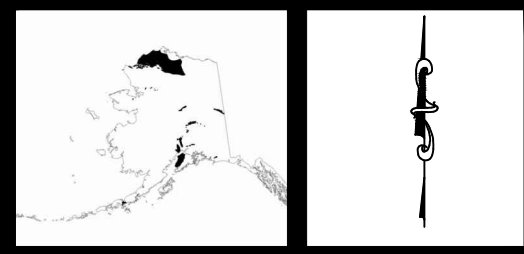


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- Alternative 7
- 2 million tpy
  - 37 million tons coal resource
  - 3.8:1 mining ratio
  - 497 disturbed acres
  - Stream Impacts
    - 7,141 ft ephemeral stream mined through
    - 7,903 ft intermittent stream mined through

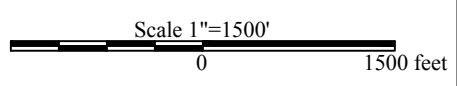


### Legend

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

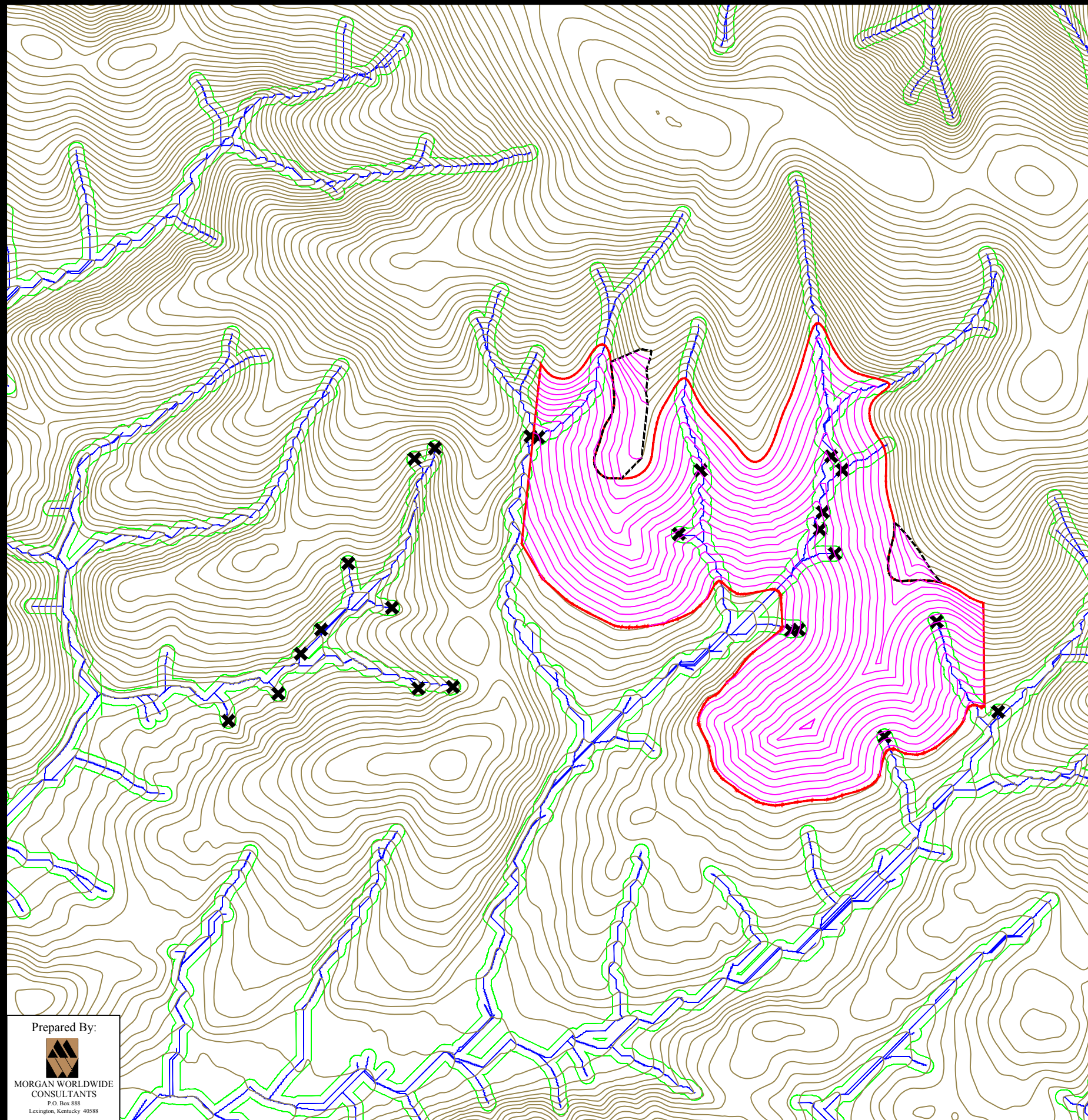
## Northwest Region

### Surface Area Mine Alternative 7



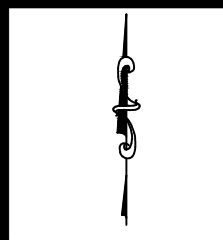
Prepared By:  
  
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Alternative 4

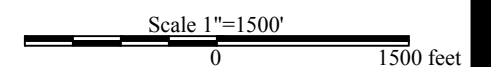
- 2 million tpy
- 37 million tons coal resource
- 3.8:1 mining ratio
- 497 disturbed acres
- Stream Impacts
  - 7,141 ft ephemeral stream mined through
  - 7,903 ft intermittent stream mined through



**Legend**

-  Original Topography (25 ft Ctrs)
-  Generated Streams (8.4 acre drainage)
-  100 ft stream offset
-  Mineral Removal Area
-  Excess Spoil Location
-  Post-Mining Topography
-  E/I Point

**Northwest  
Region  
Surface Area Mine  
Alternative 8**



Prepared By:



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