



Investigator:	Tim Rader	Date:	2/18/2020
Site Location:	37° 20' 5.7", -82° 23' 37.8"	Quad:	Hellier
LB #:	15505	County:	Pike

Preliminary Site Rankings (place 'X' in box in column on right if applicable):

Potential Eligibility:		
Likely/Highly Likely	Sites with clear evidence to support a link (positive drainage sample, mining-related materials or other physical connections, photographic or image-related evidence). With little to no evidence to refute a link (no signs of substantial disturbance unrelated to mining).	
Unknown	Sites with mixed indications, such as a marginal water sample or signs of unknown disturbances. Note – some issues may be project-related and could require design or construction input. Subsidence may require geo-tech analysis	
Unlikely/Highly Unlikely	Sites with clear evidence that the problem is not mining-related. Documentation may include: Negative water samples, little to no mining evidence (observed/documentated), weather records, photographic or image-related evidence of "other" disturbances.	X
Investigation Complexity:		
Complex	Investigation will likely require multiple water sampling locations, covers a large area, covers multiple mined seams, involves multiple complainants, requires extensive climbing/hiking.	X
Simple	Investigation limited to general house seat area, limited mining, smaller scale with respect to size of problem area.	
Not Warranted	Problem is low-priority with little evidence to support mining-related link. Response draft prepared. A HP site may not require an investigation if sufficient convincing documentation indicates problem is highly unlikely to be linked to mining (or is highly likely associated with another cause).	

Summary of Findings:

- No documented mining was found above the level of the railroad tracks.
- No surface disturbances were observed above the tracks when reviewing aerial imagery.
- The only documented mining in the immediate area is an underground mine in the Elswick coal seam which lies beneath the level of the slide and railroad tracks. This mine was in operation in the 1990's.

Permit Chart:

(Include all applicable information for relevant mining operations. For permits which have transferred, begin with oldest permit first and note that it has transferred to the next permit number by using an "*" symbol next to the permit number. Add or delete rows as needed).

Permit Number	SFN	Company Name	LDM	Type of Mining	Coal Bed Name	Acres Issued	Acres Dist.	Bond Status
898-5007 ↓		Federal Mining Co Inc	5/13/1993	UG	Elswick	1194	11	RC 5/19/1993
898-5683 ↓	00326.2	Lamplighter Mining Co. Inc.	3/11/1996	UG	Elswick, Elk #3 1/2	1194	11	RC 6/28/1996
898-5899	00326.2	Cougar Processing Corp.	7/7/1999	UG/ Prep Plant	Elswick, Elk #3 1/2	1194	11	RC 8/15/2005

AML Complaint History

Any previous visits to this site? (Include nature of visit and resulting determination)

None







Nearby AML Complaint History: <i>(If nearby Projects are found, include relevant Eligibility Memos, Maps, Old Mine Histories, and OSM Briefing Papers in Appendix II)</i>		
PU Number:	526- Russel Fork	
Is this complaint within an existing PAD: <i>(Identify the PA Number)</i>	No	
If so, are the individual problems already in the geodatabase? <i>(Identify by the AML Problem ID)</i>	None	
Nearby AML complaints:	LB # and Name	AML Complaints database 'Remarks' field <i>(Copy and insert text below, add rows as needed)</i>
		No Nearby Complaints

LiDAR, Topography, Geology, Miscellaneous:	
USGS 24k Topo: <i>(Include Quad. number, name, any relevant features and elevations)</i> No mining features are shown on the 1954 (Revised 1978) USGS topo map.	
LiDAR Imagery: <i>(Describe any relevant features, such as drainage paths, potential portal locations, benches, etc.)</i> LiDAR imagery shows that the slide occurred in a steep, narrow natural drain.	
USGS GQ Map Summary: <i>(Include Quad. number, name, GQ number, any relevant features, geologic dip, coal seams and coal seam elevations)</i> No mining features are shown on the 1971 gq map. The regional geologic dip is to the northwest.	
USGS GQ Map Economic Geology: <i>(Include screen capture of applicable portion of economic geology narrative from GQ)</i>	See attached economic geology sheet.

Mine History:		
Mined-Out Areas Layer: <i>(Add as many rows as needed)</i>		
KRC Coal seam number	Coal seam name	SFN # and type of mining
290	Elswick	00326-2: UG
<input type="checkbox"/> Permitted Mine Boundaries Released <input type="checkbox"/> Active Permitted Mine Boundaries		
DMP Permit Boundaries Layers: <i>(List permit number and status—include details in permit chart if relevant)</i> 898-5899: UG Cougar Processing: Complete Release (See Permit Chart for Details)		
AML Overlays/ArcMap Series: <i>(Include description if overlays differ from eAMLIS AML complaint layers)</i>		
Project:	Nothing Close	
Problem:	Nothing Close	
Inventory:	Nothing Close	
Deep Mine Overlays: Revenue overlay shows that seam 290 (Elswick) has been mined.		
DMP Overlays Series:		



1-Nothing Close	4-N 898-5007
2-Nothing Close	5-Nothing Close
3-Nothing Close	6-Nothing Close
 KOMSL UG Mine Maps: <i>(Include description of any relevant map features below for each map (seam elevations, geologic dip, map notes, etc.). Mine information for relevant operations to be included in Permit Chart above).</i>	
Sfn 00326-2 Map Date: 1/5/1994 (See Permit Chart for Details)	
 Mine Reclamation Plans (MRPs): <i>(Check if relevant, and provide explanation of findings below)</i>	
No relevant info.	

Aerial Imagery Review: <i>(Provide date, details, and add as many rows as needed for resources checked)</i>	
 KY Trans. 1970's Aerial: <i>(9x9's in file room)</i>	No surface disturbances were observed in the problem area on the 1976 aerial image.
 KY Trans. 1980's Aerial: <i>(9x9's in file room)</i>	No changes from 1976 on 1984 aerial.
DOQQ B&W Mosaic 1992-1999:	No disturbances on the 1995 aerial.
DOQQ B&W Mosaic 2001-2002:	No observed change.
FSA Color Imagery 2004:	No observed change.
FSA Color Imagery 2006:	No observed change.
FSA Color Imagery 2008:	No observed change.
FSA Color Imagery 2010:	No observed change.
FSA Color Imagery 2012:	No observed change.
FSA Color Imagery 2014:	No observed change.
FSA Color Imagery 2016:	No observed change.
ESRI World Imagery:	No observed change.
FSA Color Imagery 2018:	No observed change.

Miscellaneous:	
FEMA 100-year Floodplain: <i>(Indicate whether site is located within the floodplain)</i>	The creek bank below the tracks is on the edge of the floodplain.
Weather Data: <i>(Visit http://water.weather.gov/precip/ and create relevant maps for the area of influence i.e. daily, weekly, monthly precipitation, % normal, etc., summarize findings here)</i>	The week leading up to the slide event the immediate area received anywhere between 4.5 – 6.0 inches of observed precipitation.



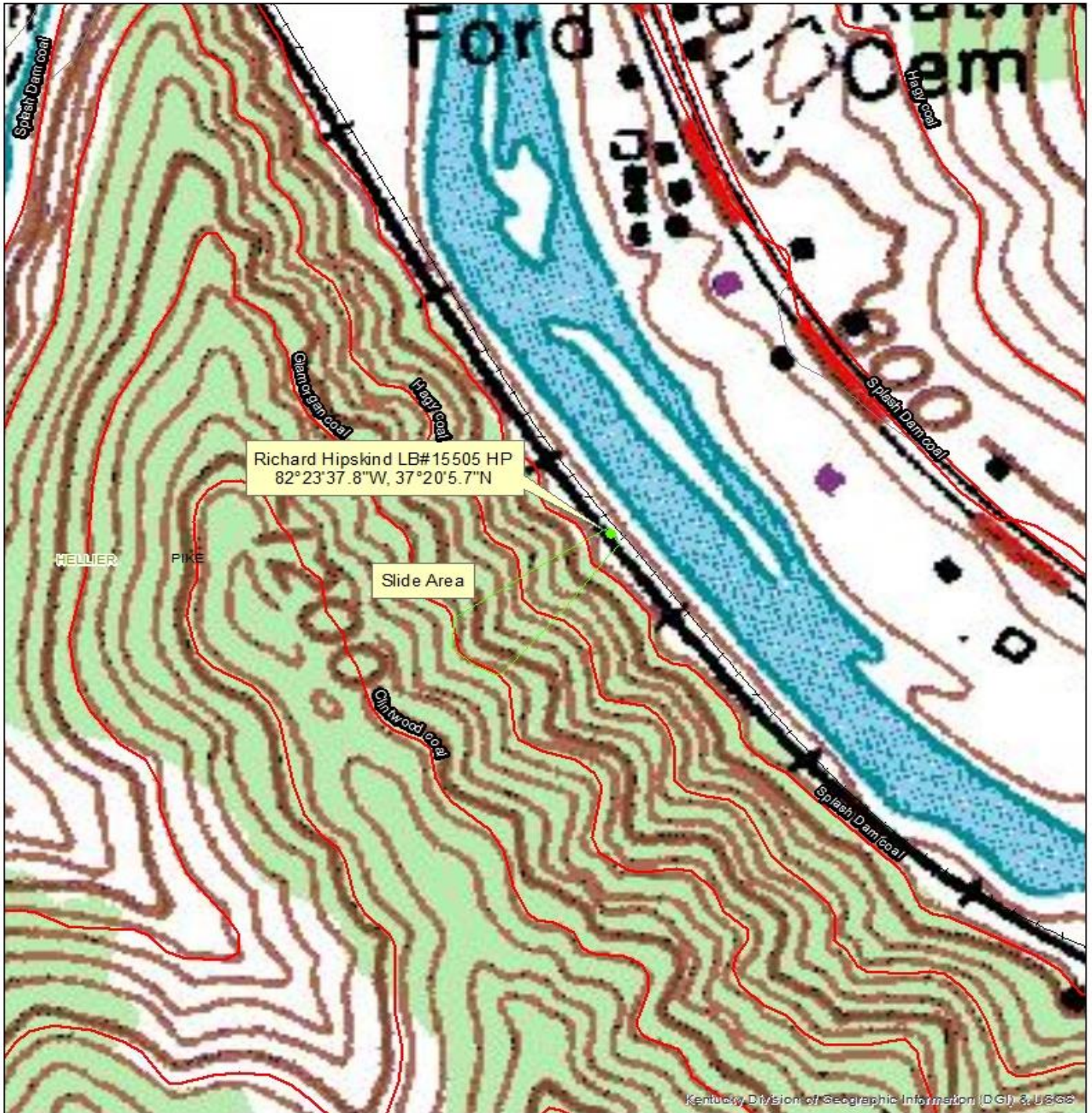
Richard Hipskind HP LB#15505
CSX Derailment
Pike County/ Hellier Quad.



AML Nearby Complaints and Probkey Layers



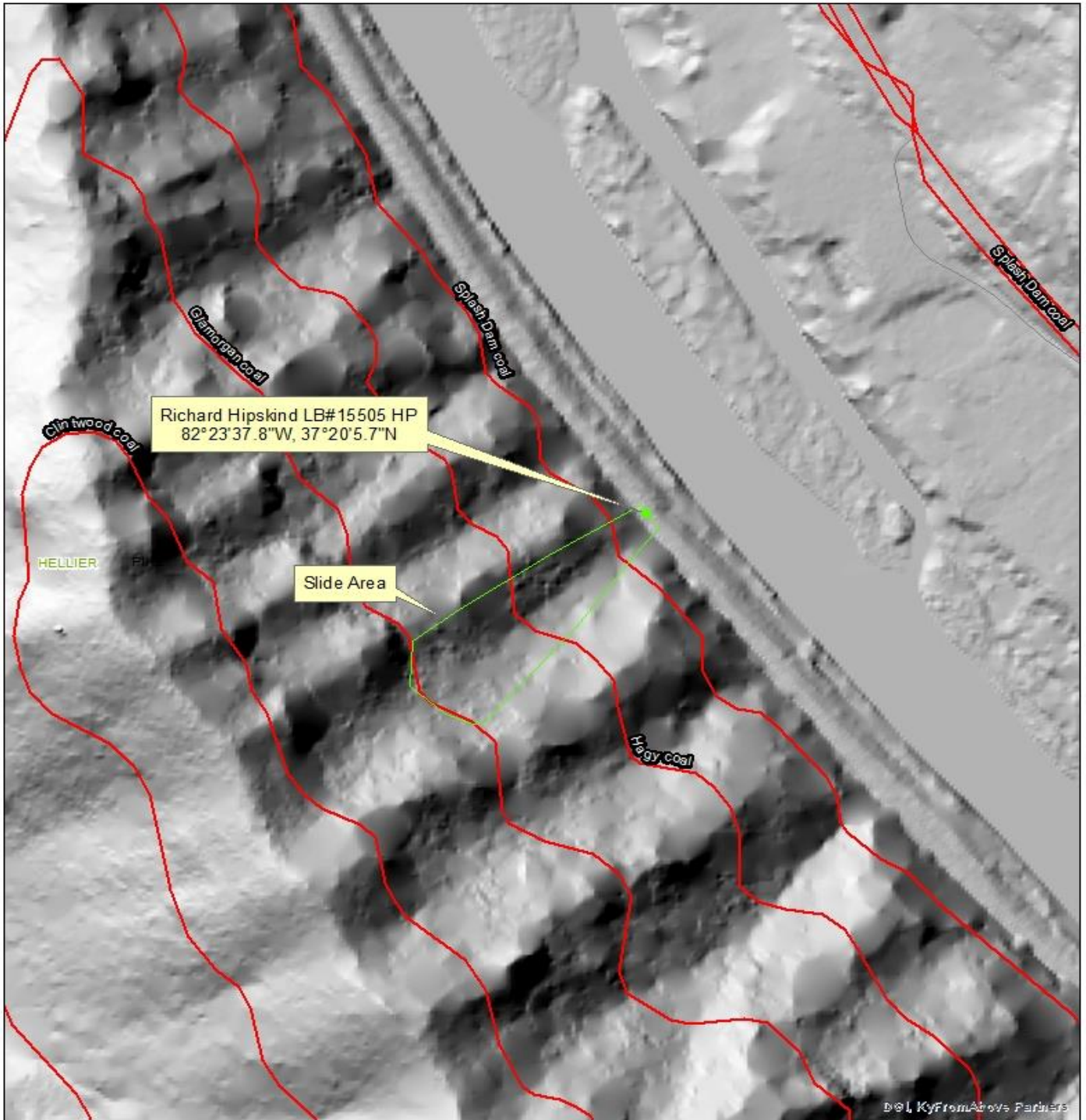
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1954 (Revised 1978) USGS Topo Map



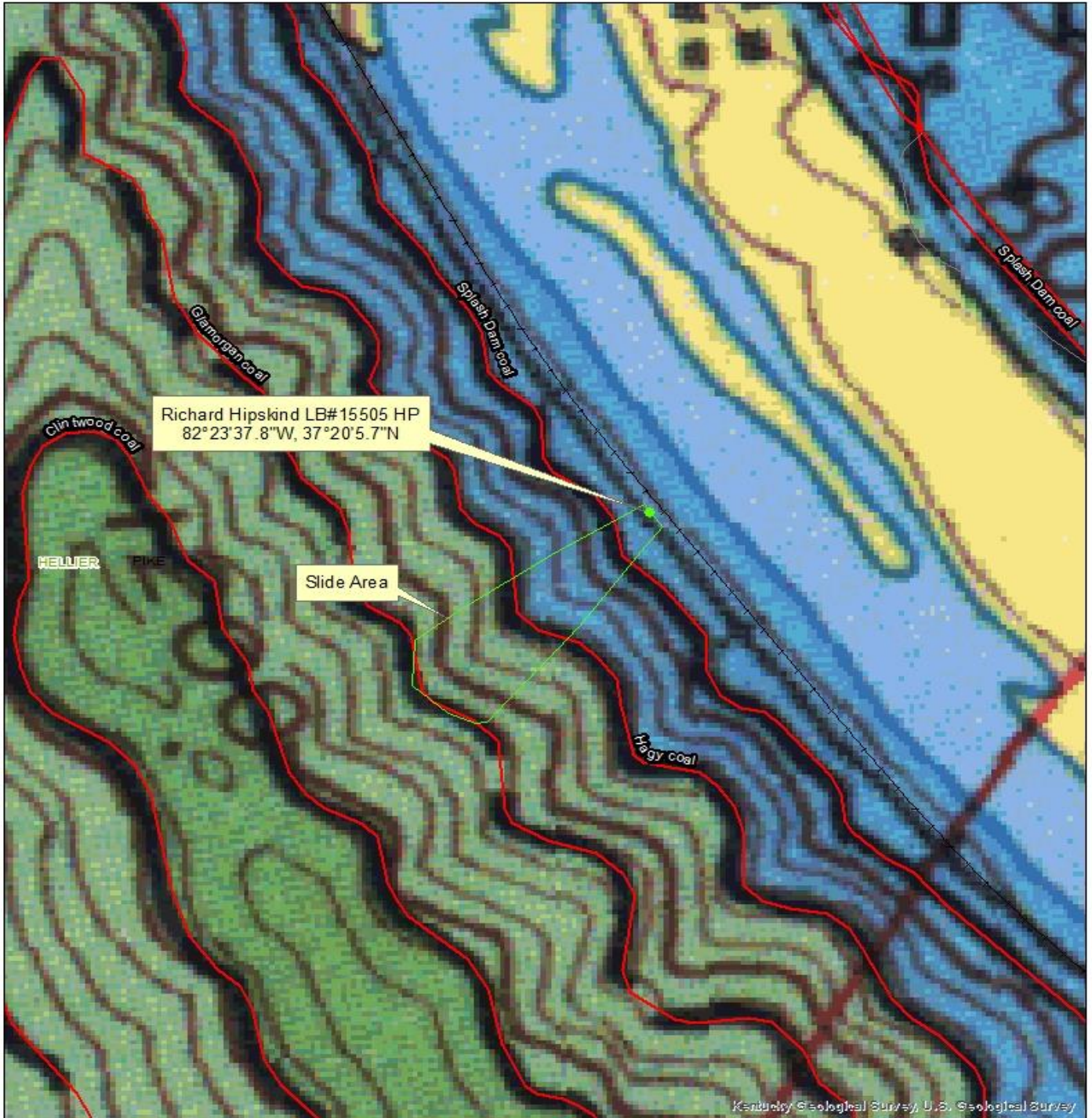
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Coal Beds on LiDAR Imagery



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1971 USGS GQ Map



stone
PIKE
MISSISSIPPIAN

including partings, is generally of little commercial interest.

The Upper Elkhorn No. 3 1/2 coal seam has been mined in the vicinity of Ashcamp, Lick, and Seng Branches, and between the head of Pond Creek and Elkhorn Creek where it was a single bed of clean coal as much as 44 inches thick; it has shown little promise elsewhere. The principal Upper Elkhorn No. 3 seam is mined on Pond Creek and in the vicinity of Laurel Fork and Adams Branch where it is two beds, each 24 to 30 inches thick separated by 1/2 to 8 inches of soft clay; elsewhere the coal beds of this seam generally contain rock partings of unpredictable thickness which limit their exploitation. The Upper Elkhorn No. 1 seam was mined for a short time near the mouth of Jackson Branch where it is 84 inches thick including two beds of coal, each typically 36 inches thick. Coal of the Upper Elkhorn No. 1 has been mined with coal of the Upper Elkhorn No. 2 seam at several localities where these seams are merged, but generally the Upper Elkhorn No. 1 seam is not minable by itself. The Clintwood seam has been little more than test mined at a few places; including partings, it is as much as 53 inches thick at Rockhouse, 32 inches thick on the Left Fork of Wolfpit Branch, and 42 inches thick on Jessie Branch, but reserves of clean coal 26 inches or more thick are unlikely in this seam.

Although it evidently contains more partings than average, the Glamorgan coal zone may have more minable coal remaining than any other in the area occurring above drainage. Small mines have operated in the Glamorgan coal beds at several places on Marrowbone and Jimmie Creeks and it has been a moderately popular coal for private banks; operating thicknesses of from 30 to 60 inches are reported, and 26 inches or more clean coal within the principal seam is common locally on Harless Creek, Plymale and Johnson Branches, and at Rockhouse and Ratliff.

The Hagy seam, including partings, is 40 to 60 inches thick locally along the eastern margin of the mapped area; a bed of clean coal 26 to 28 inches thick occurs near the top of the seam on Harless Creek and 45 inches of coal occurring above 9 inches of interbedded clay and coal is reported on John Moore Branch (subsurface). Clean coal as much as 28 inches thick was reported locally in the Splash Dam seam but generally it is too thin or split to be of commercial interest.

Unpublished logs of core holes and exposures along Russell Fork and Marrowbone and Elkhorn Creeks indicate that the Eagle, Glamorgan, Hagy, and Splash Dam seams thin westward across the mapped area.

During the study coal was being produced from the Elswick seam in the vicinity of Jessie Branch via entries located at the mouth of John Moore Branch in the Elkhorn City quadrangle (Alvord and Miller, in preparation).

Publications which list coal assays or which are otherwise relevant to the coal resources of the area include Stone (1908), Giles (1921), Hunt and others (1937), Dowd and others (1951), Greutz and Miller (1952), Gray and Boley (1958), and Harris (1963).

In 1967 there were at least 114 gas wells in the quadrangle; 100 of them were in the northern half of the quadrangle and 7 were plugged.

Relevant Portion of Economic Geology



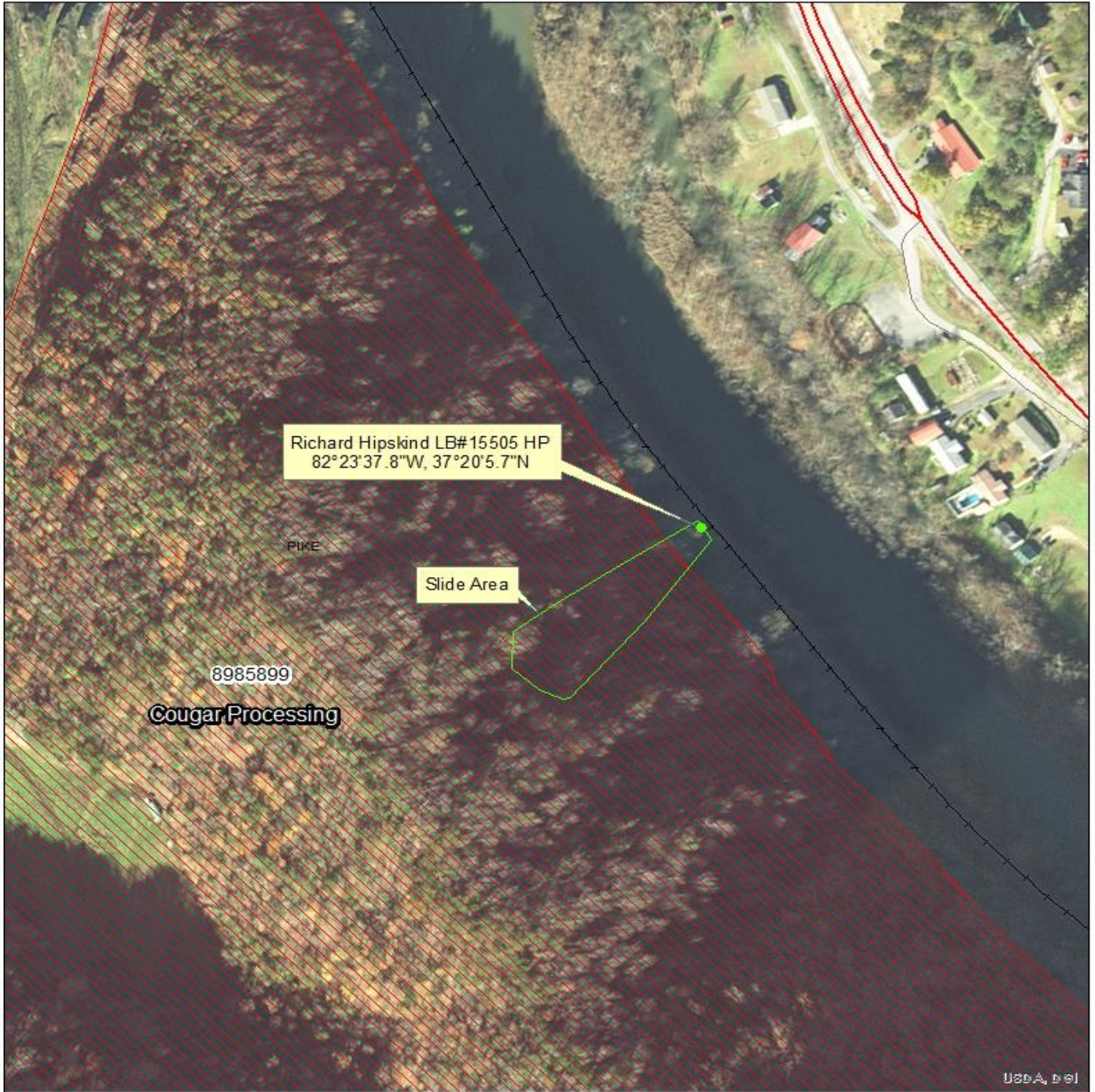
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Mined Out Seams on
1971 USGS GQ Map



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CSX Derailment
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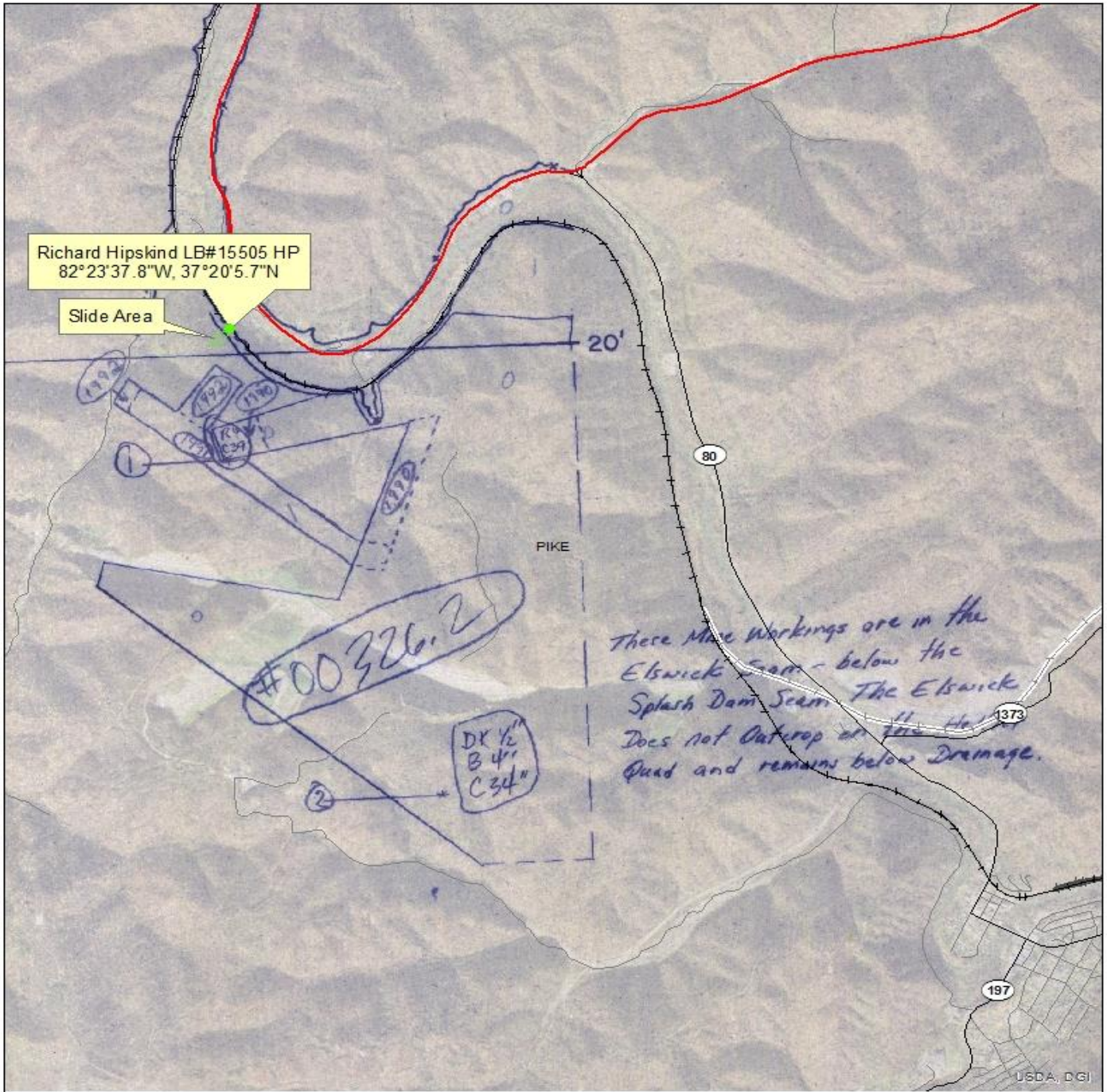


Permitted Mine Boundaries on
2018 Imagery





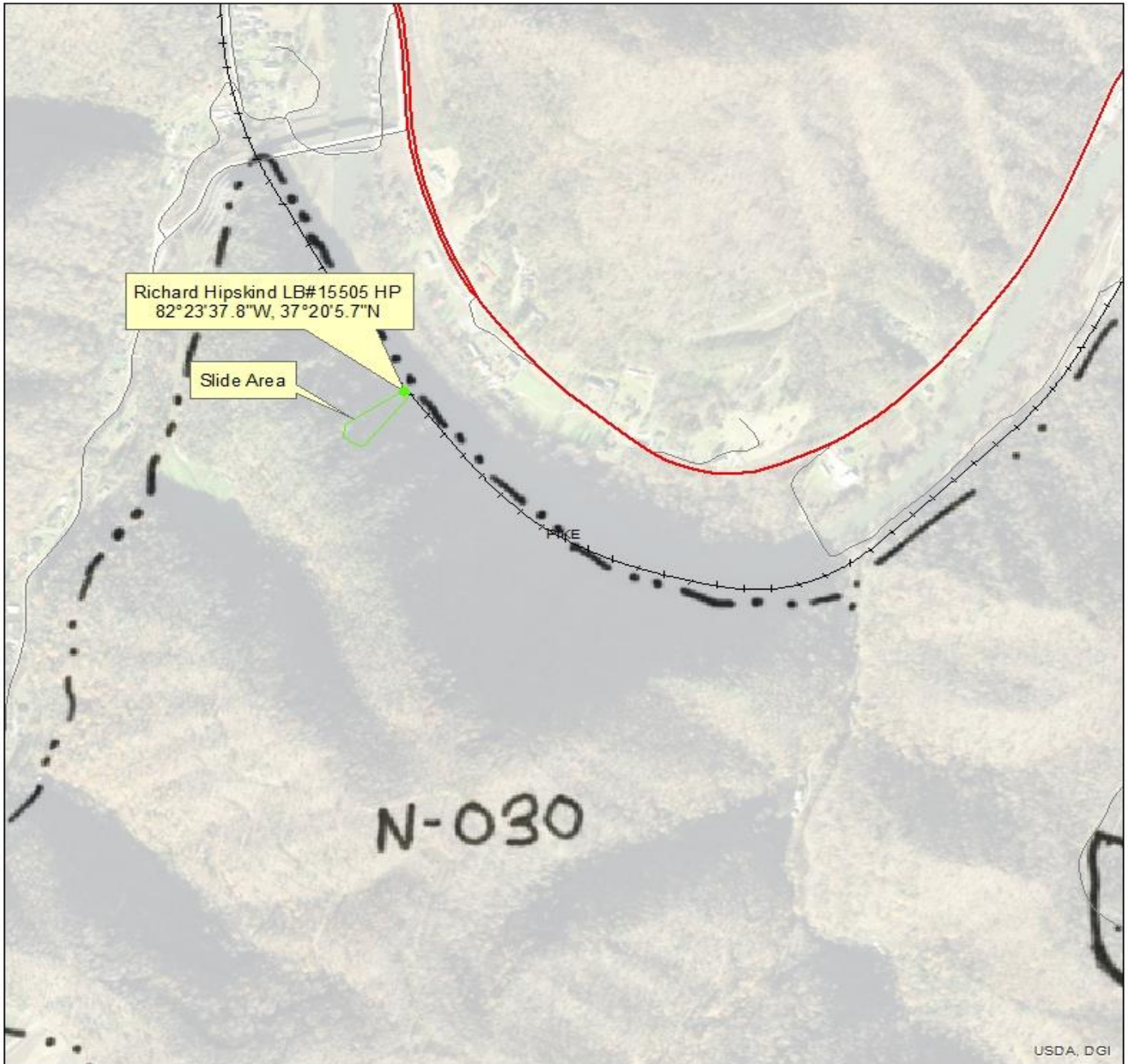
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CSX Derailment
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Revenue Overlay
Seam 290: Elswick



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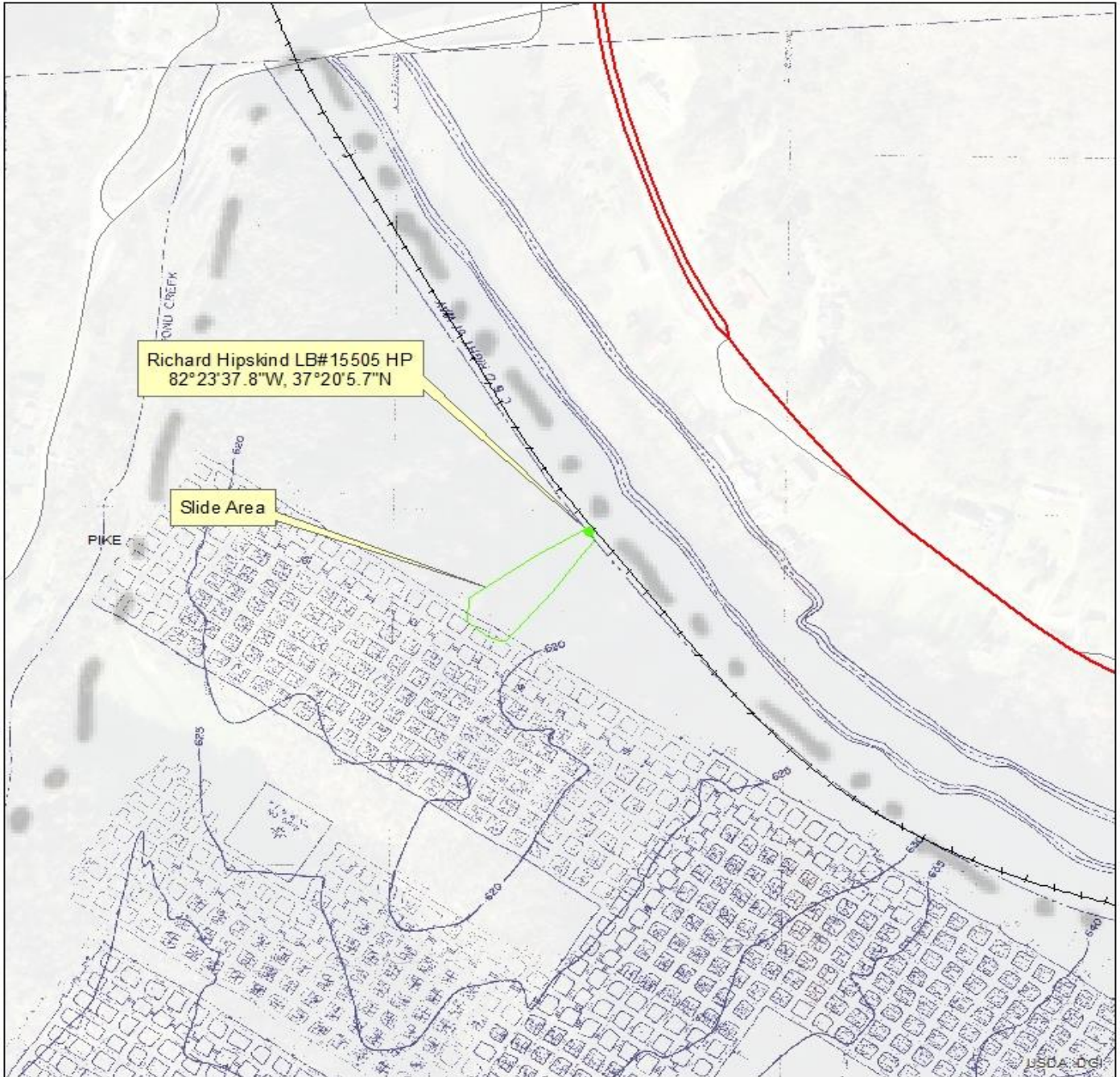


Series 4 Overlay
N 898-5007
UG: Elswick Seam
(Below Site)





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Pike County/ Hellier Quad.



sfn 00326-2
Map Date: 1/5/1994
UG: Elswick
(Below Site)





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 CSX Derailment
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sfn 00326-2 (Legend)
 Map Date: 1/5/1994
 UG: Elswick
 (Below Site)





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1976 Aerial





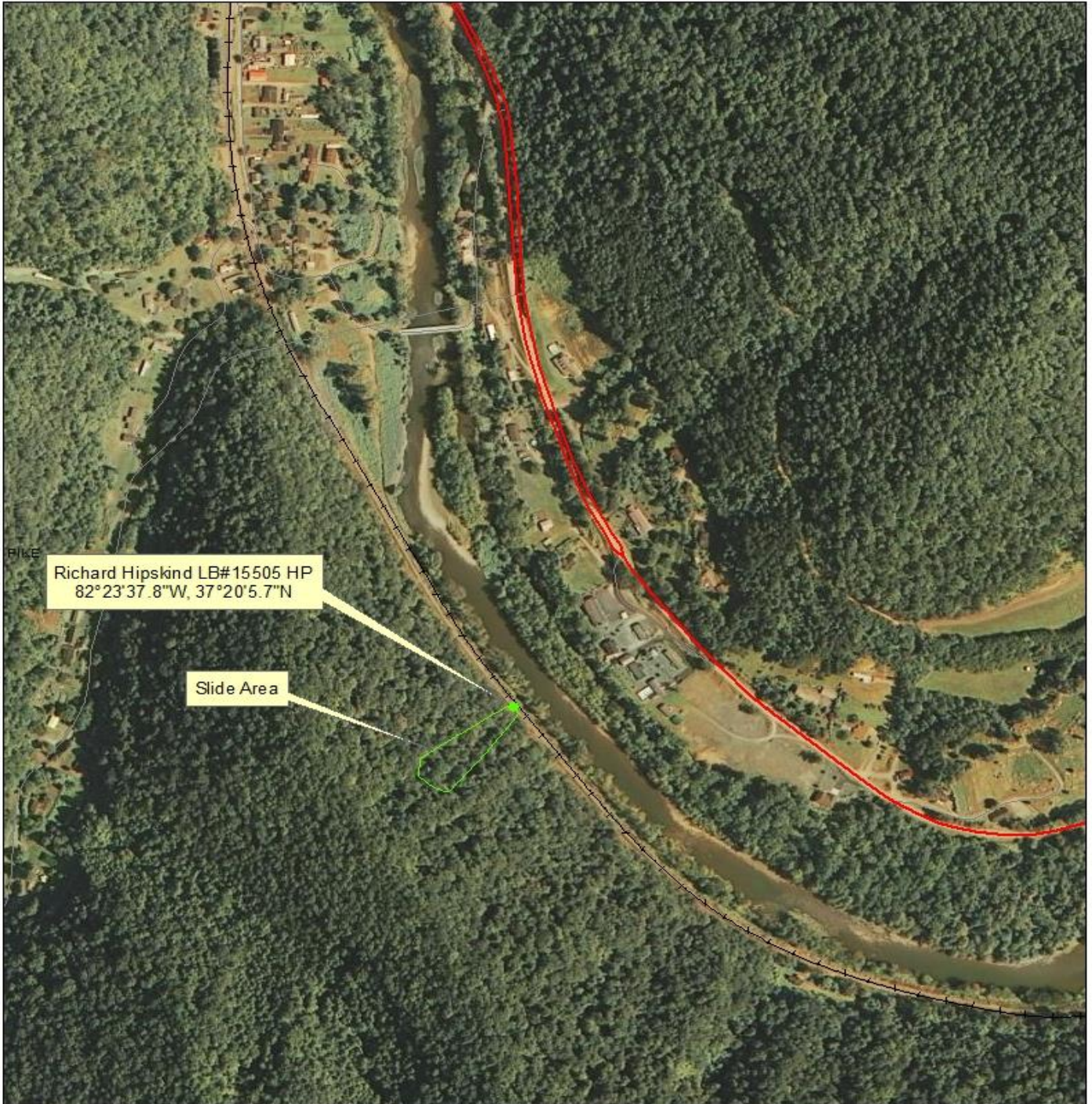
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1984 Aerial



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2006 Aerial



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2016 Aerial



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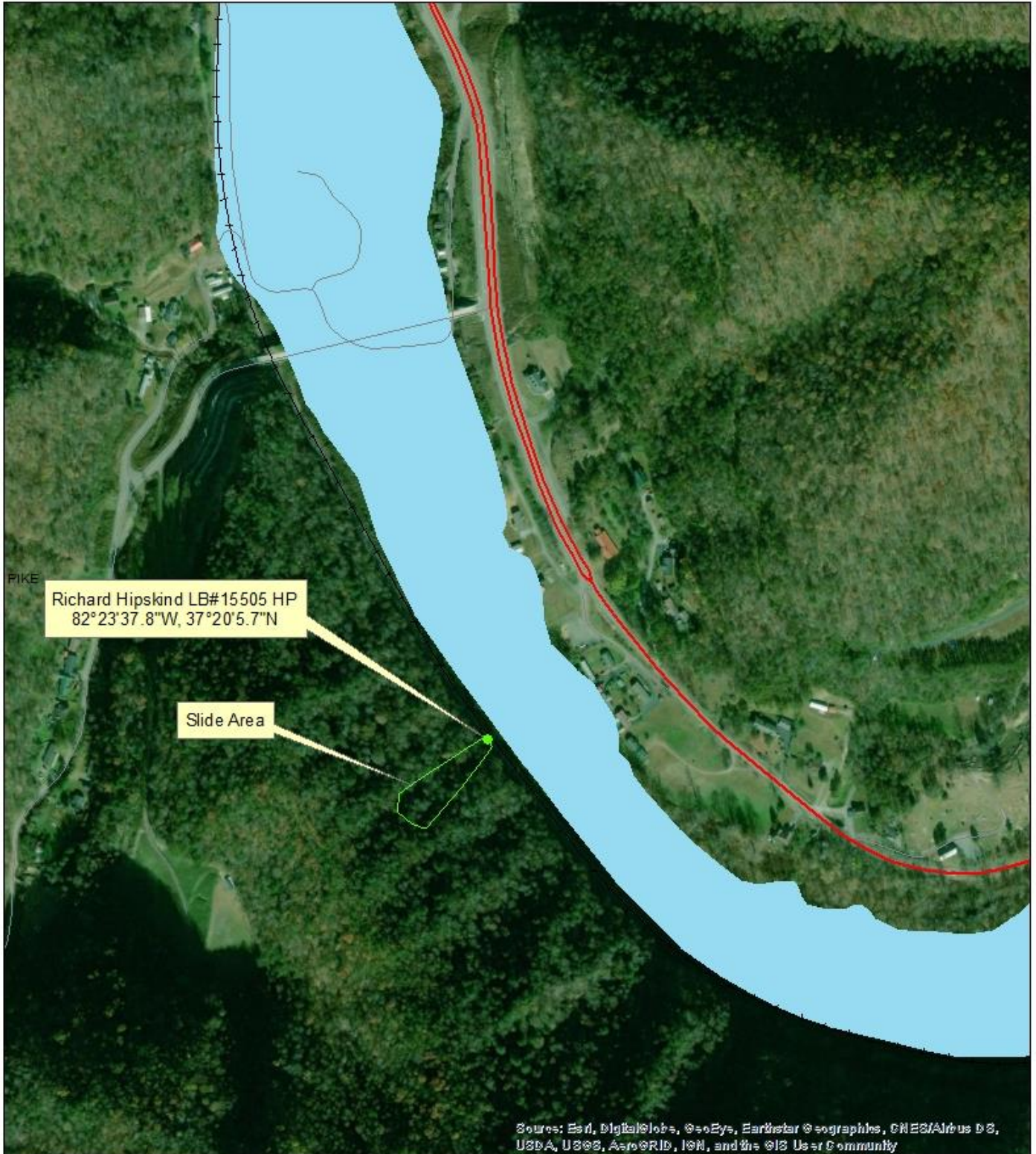


ESRI World Imagery





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FEMA Floodplain