



**STATE OF ALABAMA**  
**SURFACE MINING COMMISSION**

P.O. BOX 2390 - JASPER, ALABAMA 35502-2390  
(205) 221-4130 • FAX: (205) 221-5077

MEMORANDUM

TO: Sherry Wilson  
Office of Surface Mining

Mr. Jeff Kitchens  
Department of Environmental Management

Mr. Frank White  
Alabama Historic Preservation Officer

The District Engineer  
U.S. Corps of Engineers

Alabama Department of Industrial Relations  
Division of Safety & Inspection

BLM - District Office

State of Alabama  
Abandoned Mine Land Reclamation

Jefferson County Commission

U.S. Fish & Wildlife Service

Mr. Keith Guyse, Fish & Game Division

Mr. Mitch Reid - Alabama Rivers Alliance

FROM: JOHNATHAN E. HALL, DIRECTOR

RE: **PERMANENT PROGRAM PERMIT FOR:**

**Permit P-3934-01-21-S**

Pursuant to the Alabama Surface Mining Commission Regulation 880-X-8K-.12(2), we are hereby notifying you of the issuance of the above permit.

You may also view a copy of this permit at our web address of:

<http://surface-mining.alabama.gov/PermitDecisions.html>

Enclosed for your information and file is a copy of the permit which shows the legal description of the mine site.

JEH/ml



**STATE OF ALABAMA**  
**SURFACE MINING COMMISSION**

P.O. BOX 2390 - JASPER, ALABAMA 35502-2390  
(205) 221-4130 • FAX: (205) 221-5077

Permit Number: P-3934-01-21-S

REVISED PERMIT CONDITIONS AND FINDINGS

Pursuant to the Alabama Surface Mining Control and Reclamation Act, Act No. 81-435, and duly promulgated rules of the Commission:

Issued to: P-3934-01-21-S  
Kennedy Brothers Construction, LLC  
17160 Lock 17 Road  
Brookwood, AL 35444  
(Skelton Creek Operation)

License No.: L-817

All terms and conditions of the permit remain in effect.

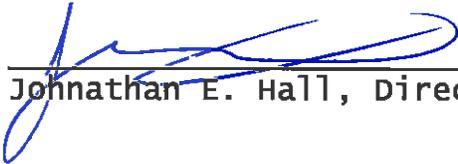
~~Condition 11: No disturbance is to occur on any area of the Permit that has not been disturbed by current mining operations until an updated Threatened and Endangered Species/Critical Habitat Survey has been completed and a U.S. Fish and Wildlife Service concurrence has been obtained. (REQUIREMENTS MET)~~

Condition 12: The permittee shall only conduct tree removal activities within increments 3, 4, 5 and 6 between October 15 and March 31.

Finding 20: Dan Spaulding Environmental Consultant conducted a Threatened and Endangered Species/Critical Habitat survey for +/- 50 acres in Jefferson County on April 24, 2016. Over half of the 50 acres surveyed was previously disturbed from mining activities. The rest of the area was an upland mixed pine-hardwood forest. There was no habitat for any listed Threatened and Endangered Species with the exception of possible summer roosting habitat for the Indiana Bat and the Northern Long-eared Bat. By a letter dated April 24, 2016, Mr. Spaulding recommends tree removal activity be limited to October 15- March 31 to avoid adverse effects to the possible summer roosting habitat for the Indiana and Northern Long-eared Bats. By a letter dated April 17, 2016. The Alabama Department of Conservation and Natural Resources (ADCNR) indicated that the closest sensitive species recorded in their database as occurring 3.5 miles from the subject site. The ADCNR recommended a biological survey be conducted by trained professionals to ensure that no sensitive species are jeopardized by the developmental activities. By

letter dated May 31, 2016. The U.S. Fish and Wildlife Service (FWS) stated that the project site contains suitable spring/summer roosting habitat for the endangered Indiana Bat and/or threatened northern long-eared bat. Since tree removal will only occur between October 15 and March 31 FWS concurs that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. No other federally listed species/critical habitat are known to occur in the project area. Wilbanks Engineering and Environmental solutions, LLC submitted a letter to FWS dated May 4, 2016 on behalf of Southern Mineral Resources, LLC indicating that tree removal will only be limited to October 15- March 31.

EFFECTIVE DATE: June 28, 2016

  
\_\_\_\_\_  
Johnathan E. Hall, Director

/ml

cc: I & E, Permit File  
Dept. of Industrial Relations  
Alabama Historical Commission  
Jefferson County Commission



**STATE OF ALABAMA**  
**SURFACE MINING COMMISSION**

P.O. BOX 2390 - JASPER, ALABAMA 35502-2390  
(205) 221-4130 • FAX: (205) 221-5077

June 28, 2016

Mr. Zachary Wilbanks, P.E.  
Wilbanks Engineering & Environmental Solutions, LLC  
297 Lotawata Drive  
Jasper, AL 35504

RE: Southern Minerals Resources, LLC  
Skelton Creek Operations, P-3934-01-21-S  
Permit Renewal Condition 11

Dear Mr. Wilbanks:

Your letter dated June 24, 2016, notifying the ASMC that Southern Minerals Resources, LLC has met Condition 11 of P-3934-01-21-S has been reviewed by the Alabama Surface Mining Commission (ASMC). The ASMC reviewed the letter from Wilbanks Engineering & Environmental Solutions, LLC to the U.S. Fish and Wildlife Service requesting concurrence with Section 7 of the Endangered Species Act for continuation of the Skelton Creek Operations and the ASMC notes that concurrence was received on May 31, 2016.

Based on the information provided in your letter dated June 24, 2016, the requirements for Condition 11 have been met and the ASMC approves removal of Condition 11.

If you have any questions concerning this matter, please feel free to contact us.

Sincerely,



Johnathan E. Hall  
Director

cc Permit Manager  
I & E Division  
Permit File



# WILBANKS ENGINEERING & ENVIRONMENTAL SOLUTIONS, LLC

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June 24, 2016

Mr. Jonathan Hall, Director  
Alabama Surface Mining Commission  
P.O. Box 2390  
Jasper, AL 35502-2390



RE: Kennedy Brothers Construction, LLC  
2016 Renewal – Skelton Creek Operations, P-3934-01-21-S

Dear Mr. Hall:

This letter is to inform you that “Condition 11” of the above referenced permit renewal with effective date May 1, 2016 has been satisfied. An updated Threatened and Endangered Species/Critical Habitat Survey has been completed for the entire project area and a U.S. Fish and Wildlife Service (USFWS) concurrence letter has been obtained for the project. The permit was transferred on May 25, 2016 to Southern Mineral Resources, LLC.

Copies of the study and USFWS concurrence letter have been provided to the ASMC office and are with Mr. Robert Armes. With this information in mind, you would concur that Condition 11 has been adequately met and this condition can now be removed from the permit.

If you should have any questions or need additional information, please contact our office at (205) 412-3373 or via email at [zach@wilbankseng.com](mailto:zach@wilbankseng.com).

Sincerely,

Zachary Wilbanks, PE  
Principal Owner



# WILBANKS ENGINEERING & ENVIRONMENTAL SOLUTIONS, LLC

event KM  
R009-TA-0353

MAY 11 2016  
WJ

May 4, 2016

William J. Pearson  
Field Survey  
U.S. Department of Interior  
Fish & Wildlife Service  
Daphne ES Field Office  
1208-B Main Street  
Daphne, Alabama 36526



RE: Southern Mineral Resources, LLC – Skelton Creek Operations, P-3934  
U.S. Fish and Wildlife Service Concurrence

Dear Mr. Pearson:

This letter is to request the review of the enclosed information in order to provide concurrence with the Skelton Creek Operations, P-3934 which is an existing surface coal mining operation approximately 50.0 acres in size located in Section 36, Township 16 South, Range 6 West and Section 1 and 2, Township 17 South, Range 6 West in Jefferson County, Alabama. Areas of Special Concern and Sensitive Species information was obtained from the Alabama Department of Conservation and Natural Resources (ADCNR) and a threatened & endangered species habitat survey of the project site was conducted by a qualified professional. Please see these two (2) items enclosed herewith.

The study found potential summer bat habitat in undisturbed areas for the Indiana Bat and the Northern Long-eared Bat. Southern Mineral Resources, LLC proposes that tree removal activities be limited to October 15<sup>th</sup> – March 31<sup>st</sup> out of the year. With this information in mind, would your office concur with the continuation of this project to be in compliance with Section 7 of the Endangered Species Act? This concurrence is being requested to support the decision by the Alabama Surface Mining Commission (ASMC) to renew the mining permit P-3934.

I would like to thank you for your co-operation concerning this matter and would appreciate the assessment at your earliest convenience. If you have any questions or want to reach me please contact me at (205) 412-3373.



U.S. Fish and Wildlife Service  
1208-B - Daphne, Alabama 36526  
Phone: 251-441-5181 Fax: 251-441-6222

Sincerely,

Zachary Wilbanks, PE  
Principal Owner

Your project site contains suitable spring summer habitat for the endangered Indiana bat and or threatened northern long-eared bat. However, you have stated that tree removal will occur between October 15 and March 31; therefore, we believe that your proposed project is not likely to adversely affect the Indiana bat and or northern long-eared bat. No other federally listed species critical habitat are known to occur in the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT NEW PLANS FOR REVIEW. SITE MAY CONTAIN WETLANDS. Contact U.S. Army Corps of Engineers for a jurisdictional wetlands determination. We recommend the use of best management practices specific to your project (See <http://www.fws.gov/daphne/section7/bmp.html>)

William J. Pearson, Field Supervisor

5/31/16

Date

10



# WILBANKS ENGINEERING & ENVIRONMENTAL SOLUTIONS, LLC

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April 15, 2016

**Alabama Department of Conservation and Natural Resources**  
Attention: Ms. Ashley Peters  
64 North Union Street  
Montgomery, Alabama 36130

RE: Southern Mineral Resources, LLC  
Skelton Creek Operations, P-3934  
Sensitive Species Information Request

Dear Ms. Peters:

I would like to request an identification of the Areas of Special Concern and Sensitive Species information located in the boundaries for the Skelton Creek Operation which is an existing surface coal mining operation approximately 50.0 acres in size located in Section 36, Township 16 South, Range 6 West and Section 1 and 2, Township 17 South, Range 6 West in Jefferson County, Alabama. We are in the process of requesting a renewal of the Alabama Surface Mining Commission (ASMC) permit in which an updated Threatened and Endangered Species survey and U.S. Fish & Wildlife Service (USFWS) concurrence is required. Therefore, please find the enclosed "Request for Identification of Areas of Special Concern" for the above referenced proposed permit area for the project.

I would like to thank you for your co-operation concerning this matter and would appreciate the assessment at your earliest convenience. If you have any questions or want to reach me please contact me at (205) 412-3373 or via email at [zach@wilbankseng.com](mailto:zach@wilbankseng.com).

Sincerely,

Zachary Wilbanks, PE  
Principal Owner



**REQUEST FOR IDENTIFICATION OF THE AREAS OF SPECIAL CONCERN &  
SENSITIVE SPECIES INFORMATION  
FOR A SURFACE COAL MINE PROJECT**

Date: April 15, 2016

Company Name: Wilbanks Engineering & Environmental Solutions, LLC

Return Address: 297 Lotawata Dr., Jasper, AL 35504

Contact Person: Zachary Wilbanks

Contact email: [zach@wilbankseng.com](mailto:zach@wilbankseng.com)

Project Name: Skelton Creek Operations, P-3934

Number of Acres: 50.0 acres

USGS Quad Sheet(s) on which the project occurs: Gilmore & Sylvan Springs U.S.G.S Quad

Counties: Jefferson

See Attached Map(s)

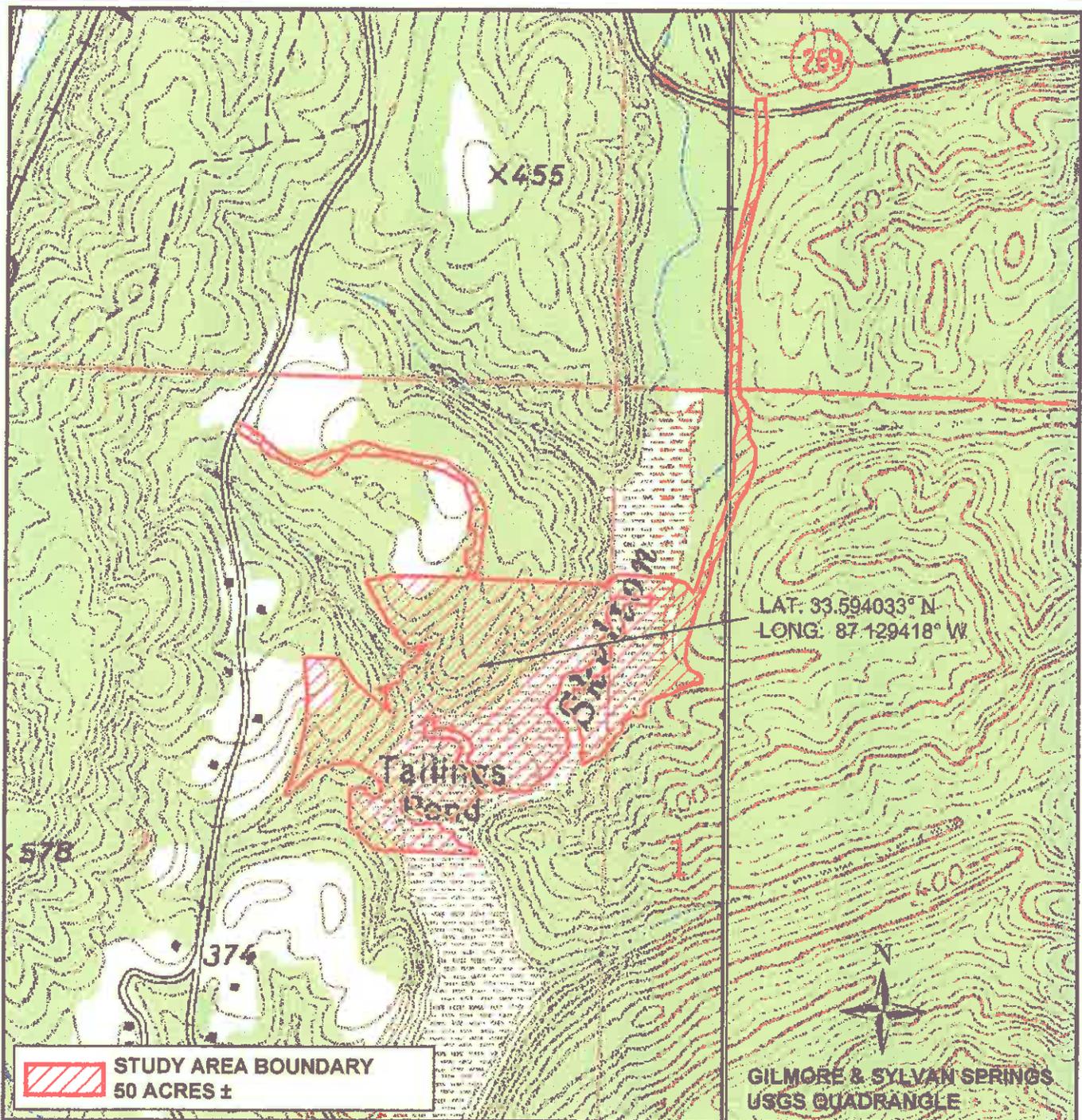
Current Land use of Permit and Adjacent Areas:

Mostly active surface coal mining operation. Some areas are nature/undeveloped.

Dominate Vegetation Communities of Permit and Adjacent Areas:

Bare ground in a majority of the site from the mining project. Undeveloped areas consists of loblolly pine, Chinese privet, sweetgum, oaks, poplar, various grasses, weeds & briars. Few areas with wetland vegetation.





**STUDY AREA MAP**

**SOUTHERN MINERAL RESOURCES, LLC  
SKELTON CREEK OPERATION, P-3934**

**DRAWN BY:**  
Z.B.W.

**DATE:**  
04/15/2016

**SCALE:**  
1" = 800'

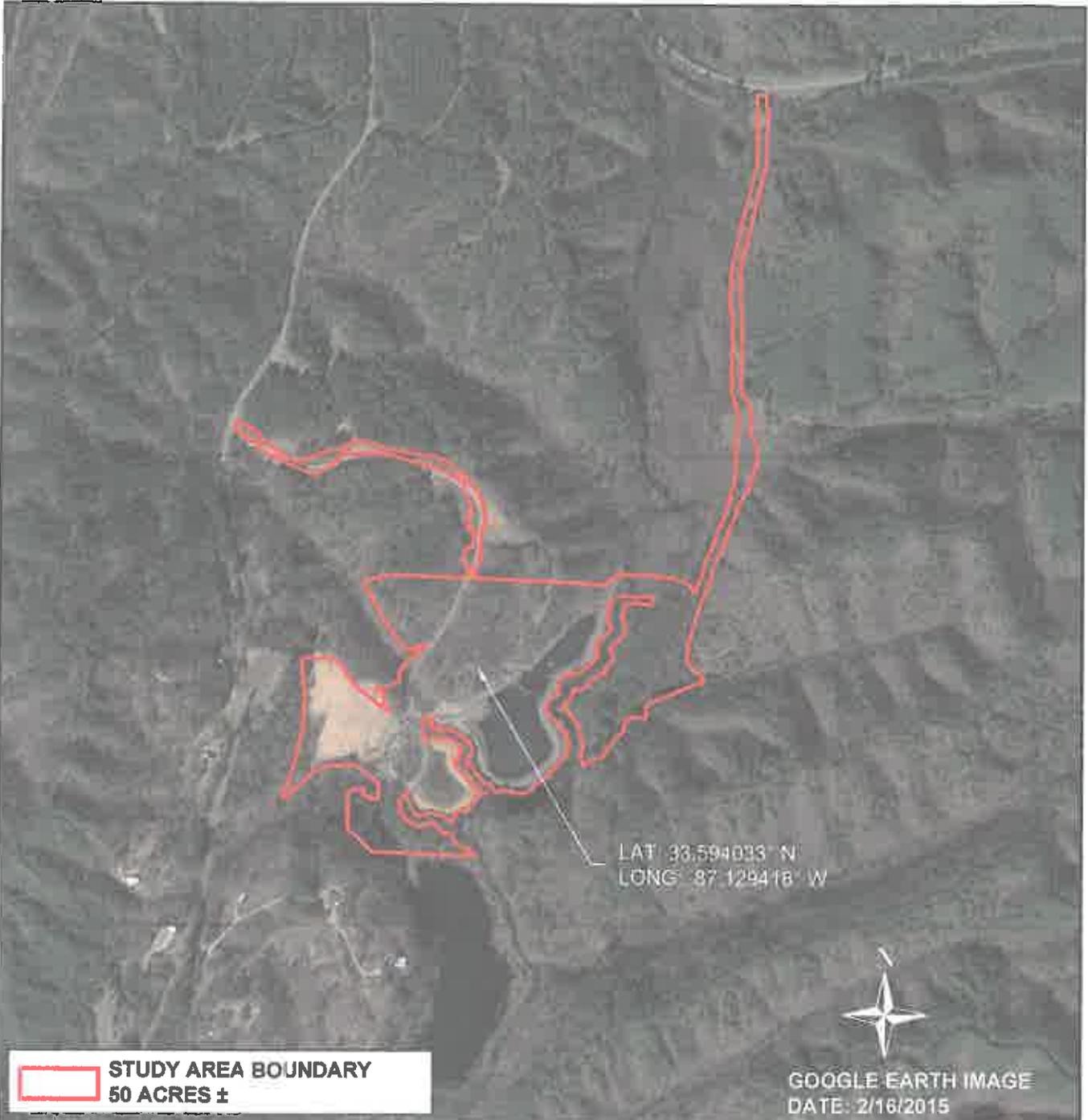
**MAP 1 OF 1**



**WILBANKS ENGINEERING  
& ENVIRONMENTAL SOLUTIONS, LLC**

297 LOTAWATA DR., JASPER, AL 35504 (205) 412-3373





 **STUDY AREA BOUNDARY**  
50 ACRES ±

GOOGLE EARTH IMAGE  
DATE: 2/16/2015

**STUDY AREA MAP**

**SOUTHERN MINERAL RESOURCES, LLC**  
**SKELTON CREEK OPERATION, P-3934**

<b>DRAWN BY:</b> Z.B.W.	<b>DATE:</b> 04/15/2016
<b>SCALE:</b> 1" = 800'	<b>MAP 1 OF 1</b>



**WILBANKS ENGINEERING**  
**& ENVIRONMENTAL SOLUTIONS, LLC**

297 LOTAWATA DR., JASPER, AL 35504 (205) 412-3373





STATE OF ALABAMA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
64 NORTH UNION STREET, SUITE 464  
MONTGOMERY, ALABAMA 36130

ROBERT BENTLEY  
GOVERNOR

N. GUNTER GUY, JR.  
COMMISSIONER

CURTIS JONES  
DEPUTY COMMISSIONER

PATRICIA J. POWELL  
DIRECTOR

WILLIAM H. BRANTLEY, JR.  
ASSISTANT DIRECTOR

STATE LANDS DIVISION  
TELEPHONE (334) 242-3484  
FAX (334) 242-0999

April 17, 2016

Mr. Zach Wilbanks  
Wilbanks Engineering & Environmental Solutions, LLC  
297 Lotawata Drive  
Jasper, AL 35504



RE: Sensitive Species Information request  
Southern Mineral Resources, LLC - Skelton Creek Operations

Dear Mr. Wilbanks:

The Natural Heritage Section office received your e-mail dated 4/15/2016 addressed to Ashley Peters on 4/15/2016 and has since developed the following information pertaining to sensitive species (state protected, and federally listed candidate, threatened, and endangered species). I have enclosed a list of sensitive species which the Natural Heritage Section Database or the U.S. Fish and Wildlife Service have indicated occur or have occurred in Jefferson County. Additionally, I have listed some potentially helpful and informative web sites at the end of this letter.

The Natural Heritage Section database contains numerous records of sensitive species in Jefferson County. Our database indicates the area of interest has had no biological survey performed at the delineated location, by our staff or any individuals referenced in our database. Therefore we can make no accurate assessment to the past or current inhabitancy of any federal or state protected species at that location. A biological survey conducted by trained professionals is the most accurate way to ensure that no sensitive species are jeopardized by the development activities.

The closest sensitive species is recorded in our database as occurring approximately 3.5 miles from the subject site. This federally listed threatened species (Flattened Musk Turtle) feeds on invertebrates such as snails and mussels in undammed small to medium sized clear shallow streams in a small range in the Black Warrior River system. It can also be found upstream and downstream of impoundments. Threats include overcollecting,



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4/17/2016

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disease, and habitat degradation from sedimentation and water pollution (in part related to coal mining); habitat fragmentation and related increased vulnerability to human-caused catastrophes and demographic accidents also appear to be problems.\*

I hope this information will be useful to you. The provided information is to help you in fulfilling your necessary legal obligations. This does not constitute any form of Section 7 consultation. The Natural Heritage Section recommends that the U. S. Fish and Wildlife Service field office in Daphne be contacted for Section 7 consultations.

The information does not suggest that protected species are not at this location. The specific location of a sensitive species is considered confidential information by a State Lands Division Regulation and can be released only to individuals who enter into a confidentiality and indemnity contract with the State Lands Division.

The Natural Heritage Section provides this information as a service to the people of Alabama. The NHS acts as a clearing house for species distribution data. We happily accept any information environmental researchers are willing to donate. Sensitive species exact locations are kept confidential. If you would be willing to donate any information to this database, we will be better able to assist all individuals interested in environmental compliance.

Sincerely,



Ashley Peters  
Database Manager  
Natural Heritage Section

Enclosures



\*Paraphrased Information from NatureServe.2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: March 17, 2014).

Potentially helpful web sites

Information about federally listed species  
<http://daphne.fws.gov/es/specieslst.htm>

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<http://www.pfmt.org/wildlife/endangered/>  
<http://www.natureserve.org/explorer/>

State Protected Species Regulations:  
<http://www.outdooralabama.com/hunting/regulations/regs.cfm>



## ALABAMA'S FEDERALLY LISTED AND STATE PROTECTED SPECIES (BY COUNTY)

This is a list of protected species that are believed to occur in the designated county and the legal protection status of each species. This list is a combination of the U.S. Fish and Wildlife Service (Daphne field office) federally listed species county and state lists and the Alabama State Lands Division's Natural Heritage Section (SLD-NHS) Database of species occurrence data. This list is continually being updated, and, therefore, it may be incomplete or inaccurate and is provided strictly for informational purposes. Site specific information can be provided by the Alabama SLD-NHS and/or the U.S. Fish and Wildlife Service (Daphne field office) prior to project activities. To be certain of occurrence, surveys should be conducted by qualified biologists to determine if a sensitive species occurs within a project area. Species not listed for a given county does not imply that they do not occur there, only that their occurrence there is as yet unrecorded by these two agencies. This list is currently under review and reflects only our current understanding of species distributions. It also does not constitute any form of Section 7 consultation. The Alabama SLD-NHS recommends that the U.S. Fish and Wildlife Service field office in Daphne be contacted for Section 7 consultations.

### Jefferson

Protection Status	Common Name	Scientific Name	Applicable State Regulation
State Protected	Alabama Map Turtle	<i>Graptemys pulchra</i>	220-2-.92 (1) (c)
Threatened/State Protected	Alabama Moccasinshell	<i>Medionidus acutissimus</i>	220-2-.98 (1) (a)
Candidate/State Protected	Black Mudalia	<i>Elimia melanoides</i>	220-2-.98 (1) (b)
Candidate/State Protected	Black Warrior Waterdog	<i>Necturus alabamensis</i>	220-2-.92 (1) (b)
State Protected	Black-knobbed Map Turtle	<i>Graptemys nigrinoda</i>	220-2-.92 (1) (c)
Threatened/State Protected	Blue Shiner	<i>Cyprinella caerulea</i>	220-2-.92 (1) (a)
Endangered/State Protected	Cahaba Shiner	<i>Notropis cahabae</i>	220-2-.92 (1) (a)
State Protected	Coachwhip	<i>Coluber flagellum</i>	220-2-.92 (1) (c)
Endangered/State Protected	Coosa Moccasinshell	<i>Medionidus parvulus</i>	220-2-.98 (1) (a)
Endangered/State Protected	Cylindrical Lioplax	<i>Lioplax cyclostomaformis</i>	220-2-.98 (1) (a)
Endangered/State Protected	Dark Pigtoe	<i>Pleurobema rubellum</i>	220-2-.98 (1) (a)
Threatened/State Protected	Finlined Pocketbook	<i>Hamiota altilis</i>	220-2-.98 (1) (a)
Threatened/State Protected	Flattened Musk Turtle	<i>Sternotherus depressus</i>	220-2-.92 (1) (c)
Endangered	Gentian Pinkroot	<i>Spigelia gentianoides</i>	
Threatened	Georgia Rockcress	<i>Arabis georgiana</i>	
Threatened/State Protected	Goldline Darter	<i>Percina aurolineata</i>	220-2-.92 (1) (a)
Endangered/State Protected	Gray Bat	<i>Myotis grisescens</i>	220-2-.92 (1) (e)
State Protected	Green Salamander	<i>Aneides acneus</i>	220-2-.92 (1) (b)
Endangered/State Protected	Indiana Bat	<i>Myotis sodalis</i>	220-2-.92 (1) (e)
Threatened	Mohr's Barbara's Buttons	<i>Marsipallia mohrii</i>	
Threatened/State Protected	Northern Long-Faced Bat	<i>Myotis septentrionalis</i>	220-2-.92 (1) (e)
Threatened/State Protected	Orangenacre Mucket	<i>Hamiota perovalis</i>	220-2-.98 (1) (a)
Endangered/State Protected	Ovate Clubshell	<i>Pleurobema perovatum</i>	220-2-.98 (1) (a)
Endangered/State Protected	Plicate Rocksnail	<i>Leptoxis plicata</i>	220-2-.98 (1) (a)
Threatened/State Protected	Round Rocksnail	<i>Leptoxis ampla</i>	220-2-.98 (1) (a)
Endangered/State Protected	Rush Darter	<i>Etheostoma phytophilum</i>	220-2-.92 (1) (a)
State Protected	Southeastern Five-lined Skink	<i>Plestiodon inexpectatus</i>	220-2-.92 (1) (c)



Endangered/State Protected	Southern Acorashell	Epioblasma othealoogensis	220-2-.98 (1) (a)
Endangered/State Protected	Southern Clubshell	Pleurobema decisum	220-2-.98 (1) (a)
Endangered/State Protected	Southern Pigtoe	Pleurobema georgianum	220-2-.98 (1) (a)
Endangered	Tennessee Yellow-Eyed Grass	Xyris tennesseensis	
Endangered/State Protected	Triangular Kidneyshell	Ptychobranchus greenii	220-2-.98 (1) (a)
Endangered/State Protected	Upland Combshell	Epioblasma metastriata	220-2-.98 (1) (a)
Endangered/State Protected	Vermilion Darter	Etheostoma chermocki	220-2-.92 (1) (a)
Endangered/State Protected	Watercress Darter	Etheostoma nuchale	220-2-.92 (1) (a)

**Key to codes on list:**

**Endangered - Federally listed as an endangered species by the U. S. Fish and Wildlife Service**

**Threatened - Federally listed as a threatened species by the U. S. Fish and Wildlife Service**

**Candidate - Federally listed as a candidate species by the U. S. Fish and Wildlife Service**

**Experimental - Species is protected throughout its range, except for the nonessential experimental population, by the U. S. Fish and Wildlife Service**

**State Protected - It is unlawful to take, capture or kill; possess, sell or trade for anything of monetary value, or offer to sell or trade these species. Alabama Regulations relating to game, fish and furbearing animals. 2015-2016. Alabama Department of Conservation and Natural Resources. See <http://www.outdooralabama.com/nongame-vertebrates-protected-alabama-regulations> for more**

**Notes:**

- Birds: The Nongame Species Regulation 220-2-.92 (1)(d) states: All nongame birds are protected under the provisions of this regulation except crows, starlings, blackbirds, English sparrows, Eurasian collared doves, pigeons and other non-native species.
- The Bald Eagle (*Haliaeetus leucocephalus*) has been delisted. This species is still protected by the Nongame Species Regulation and the Migratory Bird Act. This species is distributed statewide, but it is most likely to be observed near large rivers and reservoirs.
- Black Bear (*Ursus americanus* ssp.) may occur statewide.



**DAN SPAULDING** Environment Consultant

965 A.P. HOLLINGSWORTH ROAD, WELLINGTON, ALABAMA 36279  
CELL: 256-458-0422 OFFICE: 256-237-6766 FAX: 256-237-6776

24 April 2016

Zach Wilbanks  
Wilbanks Engineering & Environmental Solutions, LLC  
297 Lotawata Dr.  
Jasper, AL 35504



Dear Mr. Wilbanks:

This letter is my report of findings from a study to determine if any endangered/threatened species habitats occur in +/- 50 acres in Jefferson County, Alabama for renewal of a surface coal mining permit at Skelton Creek Operations, P-3934 in Jefferson County, Alabama. The site is located just southwest of Praco between McCarty Town Road and State Highway 269. Skelton mine is in a rural setting and it occurs in the Warrior Basin district of the Cumberland Plateau.

As requested, I conducted a habitat survey April 24, 2016 for following federally listed species that are known from Jefferson County: **Plants-** Georgia Rockcress (*Arabis georgiana*); Mohr's Barbara Button (*Marshallia mohrii*); Gentian Pinkroot (*Spigelia gentianoides*). **Fishes-** Blue Shiner (*Cyprinella caerulea*); Cahaba Shiner (*Notropis cahabae*); Goldline Darter (*Percina aurolineata*); Rush Darter (*Etheostoma phytophilum*). **Mussels-** Orangenacre Mucket (*Lampsilis perovalis*); Southern Acornshell (*Epioblasma othcaloogensis*); Finelined Pocketbook (*Lampsilis altilis*); Ovate Clubshell (*Pleurobema perovatum*); Southern Clubshell (*Pleurobema decisum*); Alabama Moccasinshell (*Medionidus acutissimus*); Dark Pigtoe (*Pleurobema furvum*). **Snails-** Cylindrical Lioplax (*Lioplax cyclostomaformis*); Plicate Rocksnail (*Leptoxis*

*plicata*); Round Rocksnail (*Leptoxis ampla*). **Amphibians:** Black Warrior Waterdog (*Necturus alabamensis*), **Reptiles:** Flattened Musk Turtle (*Sternotherus depressus*). **Mammals-** Indiana Bat (*Myotis sodalis*) Northern Long-Ear Bat (*Myotis septentrionalis*), and Gray Bat (*Myotis grisescens*).

### Habitat Description



Over half of the 50 acres surveyed was previously disturbed from mining activities and consisted of waste ground and old fields of mostly weeds, grasses and young woody vegetation. The rest of the adjacent area (about 20 acres) was an upland mixed pine-hardwood forest. The canopy trees, occurring in various combinations, include loblolly pine (*Pinus taeda*), Virginia pine (*Pinus virginiana*), sweetgum (*Liquidambar styraciflua*), black oak (*Quercus velutina*), scarlet oak (*Quercus coccinea*), post oak (*Quercus stellata*), white ash (*Fraxinus americana*), white oak (*Quercus alba*), southern red oak (*Quercus falcata*), black jack oak (*Quercus marilandica*), water oak (*Quercus nigra*), white ash (*Fraxinus americana*), mockernut hickory (*Carya tomentosa*), sand hickory (*Carya pallida*), pignut hickory (*Carya glabra*), and sweetgum (*Liquidambar styraciflua*).

Associated subcanopy trees were black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), sourwood (*Oxydendrum arboreum*), persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), red bud (*Cercis canadensis*), sassafras (*Sassafras albidum*), winged elm (*Ulmus alata*), flowering dogwood (*Cornus florida*), mimosa (*Albizia julibrissin*), winged sumac (*Rhus copallinum*), smooth sumac (*Rhus glabra*), an red cedar (*Juniperus virginiana*).

Shrubs and vines that were often encountered include oak-leaf hydrangea (*Hydrangea quercifolia*), Piedmont Azalea (*Rhododendron canescens*), sparkleberry (*Vaccinium arboreum*), low bush blueberry (*Vaccinium pallidum*), dwarf pawpaw (*Asimina parviflora*), privet (*Ligustrum sinense*), groundsel-tree (*Baccharis halimifolia*), Deerberry (*Vaccinium stamineum*), Chinese privet (*Ligustrum sinense*), beautyberry (*Callicarpa americana*), highbush blackberry (*Rubus arguta*), southern dewberry (*Rubus trivialis*), yellow jessamine (*Gelsemium sempervirens*), muscadine grape (*Vitis rotundifolia*), crossvine (*Bignonia capreolata*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), rattan vine (*Berchemia scandens*), greenbriers (*Smilax* spp.), and Japanese honeysuckle (*Lonicera japonica*).

### **Threatened and Endangered Species**

Georgia Rockcress (*Arabis georgiana*) is mostly found in rocky soils of bluffs and slopes in thin calcareous soils of open woods or barrens. In Alabama, it inhabits in the chalk region of the coastal plain (Blackbelt District) and also occurs in dolomitic rock outcrops in Bibb County (Ketona Formation). There was no habitat of either type available for this rockcress at the site surveyed.

Mohr's Barbara's-Buttons is an erect herbaceous perennial usually less than three feet tall with leaves that have distinctive parallel veins. The flower clusters are showy and are light violet to white. Each plant usually has between 2 and 6 heads. The habitat for this Barbara's-buttons is usually moist, prairie-like openings in woodlands or along streams. The plant typically prefers sandy, clay soils that are alkaline, high in organic matter and are seasonally moist. These combined conditions were not present along the area surveyed.



Gentian Pinkroot is known to occur only on dolomitic rock glades (Ketona Formation) where exposed to full sun, often in extreme heat and drought, as well as to the partial shade of glade-forest ecotones. This geological formation does not occur in the study area. No habitat was suitable at the site.

All the listed mussels, snails, fishes, and turtle require moving water of creeks, streams or rivers. Since there weren't any water features of this type in the area surveyed, there is no habitat present for any of the aquatic species of animals.

The bats species listed above all require caves or rock shelters for their hibernacula during the winter season. No caves or rock shelters were observed, so there is no potential winter habitat. In the summer, the Gray Bat roosts in warm caves usually scattered along rivers and since there were no caves, potential summer habitat for this species was not present. The Indiana and Long-Ear Bat hibernate in caves during the fall and winter and migrate to foraging areas from their hibernacula in the summer. Their summer roosting habitat is typically trees with exfoliating bark and crevices or old dead to dying trees. USFWS guidelines it states:

“Suitable summer habitat for Indiana bats (and northern long-eared bat) consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags  $\geq 5$  inches dbh (12.7 centimeters) for the Indiana bat and  $\geq 3$  inches (7.62 centimeters) dbh for the northern long-eared bat) that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat.”

<http://www.fws.gov/midwest/endangered/mammals/nlba/pdf/NLEBinterimGuidance6Jan2014.pdf>  
<http://www.fws.gov/Daphne/es/Bats/Procedures%20for%20Working%20with%20the%20Indiana%20Bat%20in%20Alabama.pdf>



The forest habitat on site does meet spring/summer requirements for these species, many of the trees were much greater than 7 DBH and there were also some with exfoliating bark as well as some snags. If tree cutting is limited to the fall/winter months there should be no adverse effects to either bat species.

### **Additional Studies and Recommendations**

Based on literature review and a field survey of the project site, no additional studies are required to be in compliance with state and federal endangered species laws associated with project impacts to Threatened & Endangered species. However, to avoid adverse effects to possible potential summer habitat of the Indiana and Long-ear bats, it is recommended tree removal activities are limited to October 15–March 31. <<http://www.fws.gov/arkansas-es/docs/FinalRevised2013IndianaBatSummerSurveyGuidelines5May2013.pdf>> It is also recommended that appropriate Best Management Practices (BMPs) be applied to minimize siltation and in-stream disturbance to sediments, which can help to mitigate impacts to water quality in the project area. <[http://swcc.alabama.gov/pages/erosion\\_handbook.aspx](http://swcc.alabama.gov/pages/erosion_handbook.aspx)>

Sincerely,



Daniel D. Spaulding

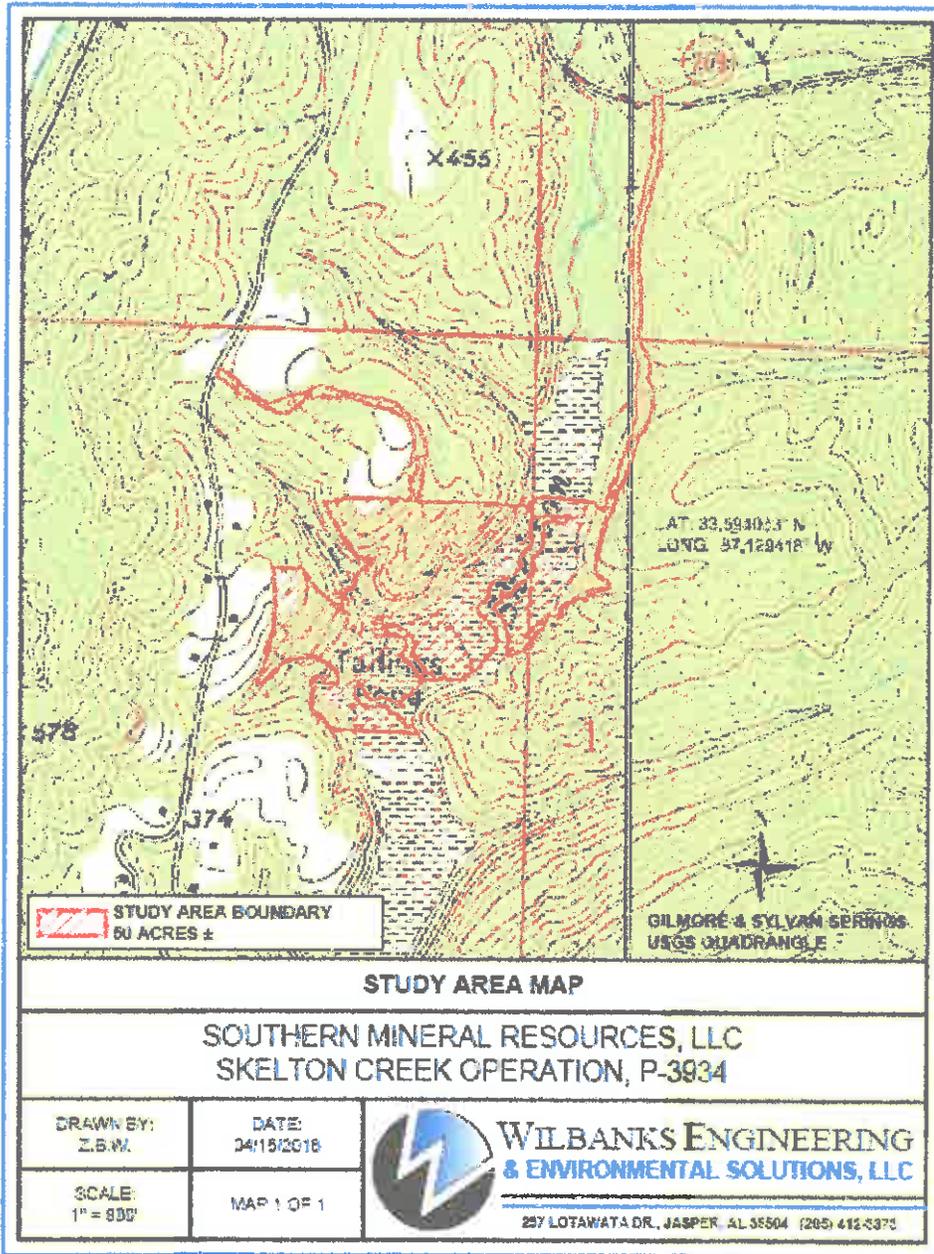
Environmental Consultant

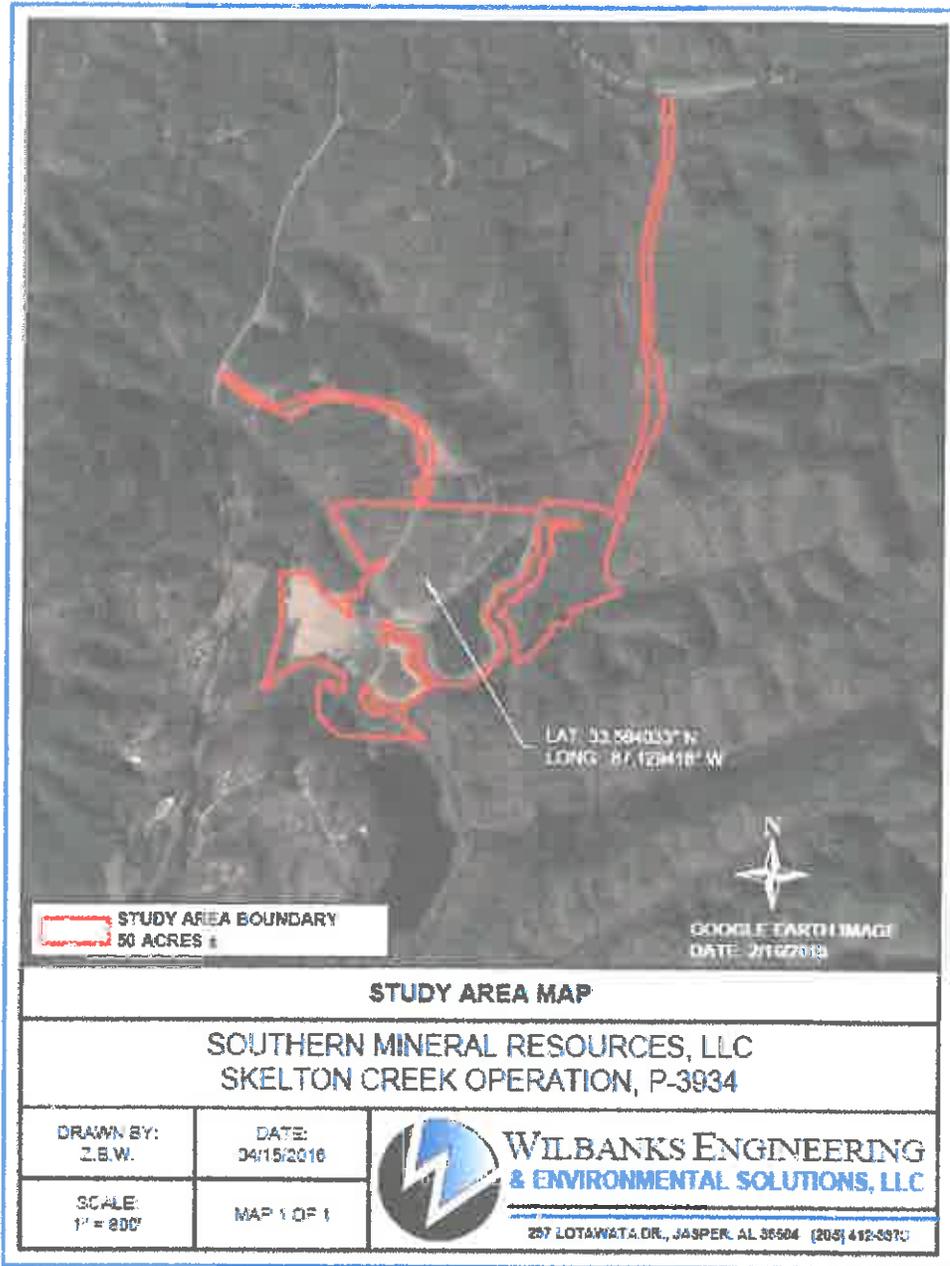
[dspaulding@annistonmuseum.org](mailto:dspaulding@annistonmuseum.org)

Attachments



# Maps of Study Area





# AERIAL IMAGES OF AREA



## Site Photos



Photo 1. Old Field





Photo 2. Waste ground





Photo 3. Shallow “containment” pond at mine





Photo 4. Mixed woods bordering mine





Photo 5. Upland woods





Photo 6. Sloped forest

