400 Penn Center Blvd., Suite 200
Pittsburgh, PA 15235-5613
Tel: (412) 829-3600 | Fax: (412) 829-3620

Project No. 212C-SW-00043
Origination: July 29, 2015

MODIFICATION TO THE SUBSIDENCE CONTROL PLAN

[version approved June 3, 2014]

TO ADD LONGWALL PANELS 19 EAST LW46 AND 20 EAST LW47

OAK GROVE MINE

ASMC PERMIT NO. P-3232

OAK GROVE RESOURCES, LLC
JEFFERSON COUNTY, ALABAMA

PREPARED FOR

OAK GROVE RESOURCES, LLC
8360 TAYLORS FERRY ROAD
BESSEMER, ALABAMA 35023

***Sealed*: July 29, 2015**

TETRA TECH

400 Penn Center Blvd., Suite 200
Pittsburgh, PA 15235-5613
Tel: (412) 829-3600 | Fax: (412) 829-3620

Project No. 212C-SW-00043
Origination: July 29, 2015

MODIFICATION TO THE SUBSIDENCE CONTROL PLAN

[version approved June 3, 2014]

TO ADD LONGWALL PANELS 19 EAST LW46 AND 20 EAST LW47

OAK GROVE MINE

ASMC PERMIT NO. P-3232

OAK GROVE RESOURCES, LLC
JEFFERSON COUNTY, ALABAMA

PREPARED FOR

OAK GROVE RESOURCES, LLC
8360 TAYLORS FERRY ROAD
BESSEMER, ALABAMA 35023

ALABAMA REGISTERED NO. 20825 PROFESSIONAL ENGINEER CHRISTOPHER J. LEWIS

Sealed: 7/29/2015

MODIFICATION TO

THE SUBSIDENCE CONTROL PLAN

[version approved June 3, 2014]

OF OAK GROVE RESOURCES, LLC

P-3232

TO ADD LONGWALL PANELS 19 EAST LW46 AND 20 EAST LW47

(Submission: July 29, 2015)

SUBSIDENCE CONTROL PLAN OF
OAK GROVE RESOURCES, LLC
OAK GROVE MINE – JEFFERSON COUNTY, ALABAMA
ASMC PERMIT NO. P-3232

MODIFICATION FOR LONGWALL PANELS 19 EAST LW46 AND 20 EAST LW47

TABLE OF CONTENTS

1.0 INTRODUCTION

2.0 OGR'S COURSE OF ACTION

3.0 DESCRIPTION OF SERVICE

3.1 Topography and Land Use
3.2 Surface Ownership

4.0 GEOLOGY

5.0 PLANNED MINING

5.1 Mining Plan
5.2 Anticipated Schedule

6.0 SUBSIDENCE

6.1 Monitored Ground Response
6.1.1 Static Deformation and Dynamic Ground Response
6.1.2 Timing of Subsidence and Related Impacts
6.1.3 Affected Surface Area
6.2 Subsidence Prediction Parameters
6.3 Panel-Specific Subsidence Predictions

7.0 ASSESSMENT OF POTENTIAL SUBSIDENCE IMPACTS

7.1 General Assessment
7.2 Non-Commercial Buildings, Occupied Residential Dwellings, Related Structures, Public Buildings and Facilities, Churches, Schools and Hospitals
7.3 Other Structures/Features
7.3.1 Public Roadways and Related Facilities
7.3.2 Surface Water Bodies
7.3.3 Utilities/Pipelines

8.0 SUBSIDENCE MITIGATON PROGRAM

8.1 Description of Program
8.2 Implementation of Subsidence Mitigation Program
8.2.1 Monitoring, Determination of Subsidence Impacts and Resolution of Damage
8.2.2 Procedures to Address Utilities/Pipelines
8.2.3 Public Roadways and Related Facilities

9.0 SUMMARY

TABLES

Tables

1	Approximate Panel Dimensions, Depths and Coal Thickness
2	Panel-Specific Subsidence Prediction Parameters
3	Geometric Conditions and Predicted Maximum Subsidence

ATTACHMENTS

Attachments

A	Definitions
B	List of Surface Owners & Estimated Maximum Structure Subsidence
C	JCS Surveyed Subsidence Profiles over Longwall Panel LW-17
D	Critical Deformation Indices
E	Rebuttable Presumption for Water Replacement Responsibility (*omitted*)
F	Representative Existing Agreements Between OGR and Utility Operators
G	OGR's Current Subsidence Program
H	Subsidence Monitoring Data Over 11 East/LW38 (Rock Creek Bridge, and Survey Lines "L3" and "T1B")

EXHIBITS

Exhibits

1	Longwall Mining Plan 2015-2020 (16 East LW43 through 20 East LW47)
1A	Ground Surface Topography
1B	Blue Creek Coal Seam Contours
2	Generalized Stratigraphic Column, Geologic Cross-Sections A-A and B-B, Location Plans and Boring Logs
3	Plans of Individual Longwall Panels (Exhibits 3-43 through 3-47) (16 East LW43 through 20 East LW47)
4-1	SONAT Subsidence Profile Over LW-17
4-2	JCS Transverse Subsidence Profiles Over LW-17
5-1	Predicted Ground Response LW-16/LW-20
5-2	Generalized Ground Response LW39/LW41
5-3	Predicted Ground Response 16 East LW43 – 18 East LW45

SUBSIDENCE CONTROL PLAN
OAK GROVE RESOURCES, LLC
OAK GROVE MINE
JEFFERSON COUNTY, ALABAMA
PERMIT NO. P-3232

MODIFICATION FOR LONGWALL PANELS 19 EAST LW46 AND 20 EAST LW47

1.0 INTRODUCTION

D'Appolonia Engineering Division of Ground Technology, Inc. (D'Appolonia) prepared the Subsidence Control Plan ("Plan") for Oak Grove Resources, LLC (OGR)'s Oak Grove Mine, which is currently operating under Alabama Surface Mining Commission (ASMC) Permit No. P-3232. The Plan has been amended and updated at various times to reflect changes in OGR's 5-year mining projections and the expansion of underground mining limits. The currently approved subsidence control plan for the Oak Grove Mine was approved on June 3, 2014. Except as revised and attached, all Tables, Attachments and Exhibits to the June 3, 2014, Subsidence Control Plan remain in effect. Since 1987, OGR has completed multiple longwall panels of various dimensions and depths on the property. Current operations are in Longwall Panel 16 East LW43. This Plan is based on the following:

- Available data on subsidence and surface impacts over Longwall Panels LW-16 and 17.
- Data on subsidence and surface impacts over Longwall Panels 11 East/LW38 and 12 East/LW39 and vicinity.
- Review of case history information concerning mine subsidence-related response of strain-sensitive structures in the Southern Appalachian coalfields. (S.S. Peng, C.T., Y. Luo, Department of Mining Engineering, West Virginia University, Morgantown, WV, February 1993, "A New Method for Designing Support Area to Protect Surface Structures over Underground Coal Mining Area," presentation at the SME-AIME Annual Meeting.)
- The definitions contained in Attachment A (Definitions), which are taken from the Office of Surface Mining (OSM) and ASMC regulations.

2.0 OGR'S COURSE OF ACTION

Under this Plan, as indicated on Exhibit 1, OGR assumes a 35-degree angle of draw to define which property owners may incur subsidence damage and therefore are sent pre-mining notices. OGR also recognizes the requirements that it must either repair subsidence-induced material damage to non-commercial buildings and occupied residential dwellings and related structures to approximate pre-subsidence conditions; or compensate the owner for the diminution in the value resulting from subsidence. OGR will also, in accordance with regulations, provide replacement (i.e., temporary, and/or permanent) water supplies as required to substitute/replace existing drinking, domestic and residential water supplies if they are contaminated, diminished or interrupted by OGR's underground coal mining operations. These requirements apply to all such structures with material damage caused by subsidence.

In addition to the requirements stated above, OGR has adopted a course of action by which it will repair or offer compensation for material damage which it finds was caused by subsidence and will, at its discretion, with the agreement of the property owner, offer compensation in lieu of repairs, offer to purchase the property at current fair market value in pre-subsidence condition, or offer to compensate for diminution in value of the property caused by subsidence. A description of OGR's current subsidence program is attached as Attachment G.

In accordance with the course of action stated above, OGR has established a Subsidence Mitigation Program for implementation under this Plan, which includes:

- Advance notification of the planned mining to the owners of property overlying or adjacent to areas of planned mining;
- Pre-mining reconnaissance of the surface;
- Pre- and post-subsidence inspections for subsidence impact, and interim inspections as OGR deems necessary;
- Taking necessary and prudent measures, consistent with the mining method employed, to minimize material damage to non-commercial buildings and occupied residential dwellings and related structures to the extent technologically and economically feasible;
- Repairing material damage to surface lands to the extent technologically and economically feasible by restoring the land to a condition capable of maintaining the reasonably foreseeable uses it was capable of supporting prior to subsidence damage;
- Repairing all material subsidence damage to non-commercial buildings and occupied residential dwellings and related structures existing at the time of mining or compensating the owners for damage resulting from subsidence;
- At OGR's discretion, in lieu of repair, offering to (1) pay to the owners the cost of repair, (2) pay to the owners the diminution in value of the property resulting from subsidence, or (3) purchase the property at its current fair market value in its pre-subsidence condition;
- Temporary subsistence in instances when relocation of inhabitants of a dwelling is judged necessary;
- Receiving and logging comments and complaints from potentially affected surface owners and responding promptly;
- Discretionary compensation.

These aspects of OGR's Subsidence Mitigation Program are discussed more thoroughly in subsequent sections pertaining to anticipated subsidence impacts and OGR's policy for response.

3.0 DESCRIPTION OF SURFACE

3.1 Topography and Land Use

Exhibit 1 presents a map of the area overlying the existing and planned workings in the OGR Oak Grove Mine and delineates the non-OGR surface property within the influence of OGR's current 5-year mining projections. The area is bisected by Taylor's Ferry Road, bordered to the southeast by Rock Creek and to the southwest by Valley Creek, and to the north by a City of Bessemer water treatment plant, and dissected by several small creeks, streams and tributaries, which wind through the relatively hilly terrain. The steepness of the valley slopes is highly variable, typically ranging from 10 to 40 percent. Topographic relief above the creek and tributary valley bottoms generally ranges between 100 and 150 feet, approaching 200 feet in isolated areas.

The surface overlying Longwall Panels 19 East LW46 and 20 East LW47 is predominantly unmanaged forest/woodlands, surface-mined lands and small parcels of pastureland. A few small ponds and sizable grassed clearings are dispersed throughout the area. Residential and commercial developments over longwall panels 19 East LW46 and 20 East LW47 are concentrated proximate to William Howton Road.

The main waterlines are routed adjacent to Taylors Ferry Road and William Howton Road as shown on Exhibit 1, with branch lines extending up developed, intersecting roadways. There are no impoundments with a storage capacity of 20 acre-feet or more, or bodies of water with a volume of 20 acre-feet or more within this area. Natural gas production and transmission companies are currently operating on OGR property in the area encompassed by LW46 through LW47. OGR also operates a network of natural gas pipelines, wells, compressor stations and related facilities within this area. As shown on Exhibit 1, there is an

Alabama Power electrical transmission line (Gorgas/Magella), a PGP natural gas pipeline, a PGP gas processing/dehydration facility, a PGP compressor station, an ARP natural gas pipeline, a City of Bessemer water treatment plant and a higher pressure SNG (Kinder Morgan) interstate natural gas pipeline in the area of anticipated mining influence of LW46 and LW47. There are no major water tanks or highway bridges in the area of anticipated mining influence.

3.2 Surface Ownership

Exhibit 1 delineates the approximate boundaries of all surface property ownership overlying Panels LW40 through LW47. Each property is designated with a number keyed to an ownership listing in Attachment B (List of Surface Property Owners). Most of the listed properties are residential, and many are developed with houses, garages, and related structures. There are no churches within the planned longwall panels.

4.0 GEOLOGY

The Oak Grove Mine is situated in the Warrior Basin of The Cumberland Plateau Section of the Appalachian Plateau Physiographic Province. A generalized stratigraphic column of the regional lithology and Geologic Cross-Sections are presented in Exhibit 2 (Generalized Stratigraphic Column and Geologic Cross-Sections). The mine extracts the Blue Creek Seam of the Mary Lee Coal Group, a part of the Pennsylvanian-age Pottsville Group. The Blue Creek Seam lies entirely below drainage within the OGR property, with depths of cover ranging from about 600 to 1,000 feet over LW46 through LW47. Strata over the Blue Creek Seam is predominated by thick horizons of shales, with intervening, alternating sequences of siltstones, shales, claystones, coals, and massive sandstones.

Principal structural features of the area include the Sequatchie Anticline located northwest of the mine and the Coalburg Syncline located southeast of the mine. Both structural features are located outside the proposed mine Boundary. The base of the Blue Creek Seam dips gently overall at 2 percent to the southeast but exhibits local rolling. Faults proximate to the mine include the Starveacre Ford Fault near the east periphery, Section 31 Fault to the southeast, and the West Boundary Fault to the southwest. All known faults are located outside the proposed mine boundary. These faults are not anticipated to significantly influence the mineability of LW46 through LW47, or the impacts of subsidence over these panels.

5.0 PLANNED MINING

5.1 Mining Plan

Exhibit 1 (Longwall Mining Plan: 2015-2020) presents an overview map of the completed, active, and proposed mining in relation to major surface features and structures. Planned subsidence will be implemented using the longwall method. Panel locations and configuration may change as conditions dictate. The regulatory authority will be notified on any major deviation from this plan. Annual mining progress maps shall be submitted to ASMC through the first quarter of each year. Detailed maps for LW43 through LW47 are presented in Exhibits 3-43 through 3-47, respectively. Pertinent details of these individual longwall panels are summarized in Table 1 (Approximate Panel Dimensions, Depths and Coal Thicknesses), along with details of panel LW38 from which more recent subsidence monitoring data was obtained.

As indicated in Table 1, the longwall panels are rectangular in plan, and vary in width and length. The overburden thickness ranges from about 600 to 1,000 feet over the panels encompassed by this Plan. All coal within the limits of the longwall panels will be extracted. The extraction thickness will generally range around 6.5 feet; although, extraction may be greater in isolated small thick pockets of coal. No secondary recovery of coal within gate roads or setup and termination entries is planned.

Coal blocks and barrier pillars will be left at the ends of each longwall panel (at setup and termination entries), and chain pillars will be left in place at gate roads between successive longwall panels (headgates and tailgates). A barrier pillar was left between longwall panels LW40 and LW41. The coal blocks and barrier pillars lie outside the individual panel boundaries as shown on Exhibits 1, and 3-43 through 3-47.

5.2 Anticipated Schedule

The longwall panels encompassed by this Plan are color-coded in Exhibit 1 to indicate the period during which each panel is planned to be mined. Actual mining dates of the longwall panels will vary due to a variety of physical and operational factors. Because of this, only the estimated timing through this permit period is identified.

6.0 SUBSIDENCE

6.1 Monitored Ground Response

6.1.1 Static Deformation and Dynamic Ground Response

OGR monitored the ground response over Longwall Panel LW-17 along a transverse ("T"), longitudinal ("L") and skewed ("P") survey line staked over the panel, as shown on the old Exhibit 1 of the original plan. Attachment C (JCS Surveyed Subsidence Profiles over Longwall Panel LW-17) presents the surveyed subsidence profiles along each line over LW-17. Based on the observed ground response profiles along the "T" line, the dynamic ground behavior (i.e., transient ground surface strains associated with the traveling ground surface deformation wave resulting from the advance of the working face) appears to pose less severe deformation magnitudes (strain, slope/tilt and curvature) across most of the panel than the final ground response. In contrast, monitoring data from the "L" and "P" line indicate instances of more severe dynamic ground response compared to the final/static deformation of the surface. Additionally, the subsidence profiles along the "L" survey line reflect some minor lack of uniformity or waviness due to influences from changes in overburden thicknesses over short distances and from three-dimensional effects in proximity to the end of the panel. These observations are characteristic of the ground response over most longwall mines.

To obtain subsidence data in areas more representative of longwall panels LW46 and LW47, OGR monitored the ground response over and adjacent to the 11 East/LW38 longwall panel primarily at the Rock Creek Bridge and along service roads near the western end of the panel as shown in Attachment H.

The significance of the static response and dynamic ground behavior is apparent when assessing the potential for damage to surface structures. The static or final ground response is generally of primary importance where structures are oriented with their minor (long) axis perpendicular to the panel longitudinal axis. When the minor axis of the structure deviates considerably from this orientation, dynamic response can have a controlling influence on the resulting impacts to the structure.

6.1.2 Timing of Subsidence and Related Impacts

The subsidence monitoring data presented in Attachment C (JCS Surveyed Subsidence Profiles over Longwall Panel LW-17) indicates that initial observation of surface movement occurs when the longwall face encroaches within approximately 250 to 350 of the observation point. The more recent survey monitoring of subsidence over LW38 panel and observations of surface movement over LW38 and LW39 indicate that detectable (by precise survey) subsidence can arise when the longwall face encroaches within approximately 350 feet of an observation point near the panel centerline, and that the primary surface

subsidence will develop while the longwall face is between 300 and 1,200 feet past the observation point. Generally, the greatest proportion of total surface subsidence is anticipated when the panel face is between 150 and 700 feet past the observation point. A map of the location of the primary survey points over LW38 is contained in Attachment H. Attachment H includes plots of the measured subsidence at Rock Creek Bridge and across the western section of LW38, and also presents a generalized prediction of transverse subsidence across LW38 and similar panels based on a synthesis of the survey data. Although the subsidence monitoring generally indicates a relatively short time frame for the development of nearly complete ground response, factors such as gate behavior, soil-structure interaction nearer the surface and structure stiffness can prolong the period during which impacts to structures will materialize. This phenomenon is especially pronounced in clayey soils. The duration to realize the full impact of subsidence on a structure can also be influenced by environmental conditions such as weather, particularly if the geographic region typically experiences considerable variations in precipitation from season to season with an accompanying affect on soil behavior. Typically, the significant impacts of longwall subsidence on a structure arise within three months of mining beneath it, although some minor cosmetic damage may continue as late as nine months after mining under the structure. These time frames are supported by OGR's observations of the development of impacts to structures over Longwall Panel LW-16 and other previously mined panels. Structures within the influence of more than one longwall panel may have a more prolonged period of exposure to subsidence.

6.1.3 Affected Surface Area

Exhibit 1 indicates the approximate overall area encompassed by a 30-degree angle of draw for Longwall Panels LW46 and LW47. Exhibit 1 also includes a 35-degree angle of draw to define which property owners are included in pre-mining subsidence assessments for panels LW46 and LW47. Detailed plans for LW46 through LW47 with the surface encompassed by a 30 degree angle of draw and the 35-degree angle of draw used to determine which property owners are included within pre-mining assessments are presented in Exhibits 3-46 through 3-47. The exhibits are based on recent aerial photographs, field reconnaissance, and county tax records and are subject to change as mining progresses. Mine progress within the approved plan will be documented in mine progress maps.

It was observed over LW-17 that the horizontal extent of subsidence detectable by optical surveys (i.e., 0.033 feet vertical drop) may extend 500 to 700 feet beyond the ribs of a longwall panel. Based on documented surface impacts over Longwall Panel LW-16, the regions of critical deformation (i.e., the areas within which surface damage occurs) are confined within panel boundaries. Isolated reports of damage outside the panel limits indicate possible impacts corresponding to a 13 degree angle from the panel ribs ("critical" angle of 13 degrees). Observations on Longwall Panels LW-17 through LW-34 have shown no critical angle to 30 degrees. These observations applied to surface impacts, and do not necessarily apply at and over gates between successively mined panels where the extent and nature of surface impacts is more dependent on the response of the intervening gate.

6.2 Subsidence Prediction Parameters

The Comprehensive & Integrated Subsidence Prediction Model (CISPM) developed by S. S. Peng and Y. Luo was used to evaluate available transverse subsidence data over LW-17, and to derive site-specific subsidence prediction parameters for subsequent use in predictions over selected panels. Southern Natural Gas Company (SONAT) and JCS Company (JCS) have each surveyed subsidence profiles across LW-17, at the locations shown on the old Exhibit 1 of the original plan. The SUBDED module of the CISPM program was applied to determine optimized subsidence prediction parameters from the survey data. The observed and predicted subsidence profiles based on the SONAT and JCS data are presented on Exhibits 4-1 (SONAT Subsidence Profile over LW-17) and 4-2 (JCS Transverse Subsidence Profiles over LW-17), respectively.

The predicted subsidence profiles indicate the following optimized subsidence parameters for an extraction thickness of 6.5 feet and horizontal displacement factor of 0.30.

Parameter	**SONAT**	**JCS**	**Average**
Subsidence Factor (dim)	0.55	0.85	0.70
Inflection Point Offset (feet)	--	--	297.4
Tailgate	296.9	349.3	--
Headgate	231.0	312.5	--
Major Influence Angle (degrees)	76.6	71.8	74.2
Major Influence Radius (feet)	261.6	350.6	306.1

The average subsidence parameters were then adjusted for the individual longwall panels based on overburden thickness to obtain panel-specific parameters.

6.3 Panel-Specific Subsidence Predictions

Longwall Panel LW-20 was selected for panel-specific subsidence predictions because it underlies and is subjacent to a relatively high concentration of structures. Exhibit 5-1 (Predicted Ground Response LW-16/LW-20) presents predicted ground response (subsidence, strain, slope and curvature) for the LW-16/LW-20 area, applying the aforementioned subsidence parameters and geometric conditions representative of LW-16 and LW-20. Critical magnitudes of deformation indices associated with damage are discussed in Attachment D (Critical Deformation Indices). The regions over the individual panels of the study, where critical deformations are predicted, lie within the panel boundaries. Therefore, the predicted “critical” angle of draw is less than or equal to zero degrees.

It is important to note that not all areas inside the angle of draw shown on Exhibit 1 or the observed angle of draw based on “zero” subsidence Exhibits 4-1 (SONAT Subsidence Profile over LW-17) and 4-2 (JCS Transverse Subsidence Profiles over LW-17) will be subject to damage by subsidence. The basis for determination of areas that could potentially be affected by subsidence is discussed in Attachment D (Critical Deformation Indices). The surface region subject to potential subsidence impacts is more accurately represented by the “critical” draw angle, rather than by the angle of draw based on “zero” subsidence. The “critical” draw angle based on these predictions is less than or equal to zero degrees; whereas, reports of surface impacts over LW-16 indicate isolated instances where a “critical” draw angle of up to 13 degrees might be deduced.

The panels encompassed by the Plan approved in June 2014, with the exception of panel LW41, are typically wider and their gates are configured differently for enhanced stability. The Subsidence Deformation Prediction System (SDPS) developed at Virginia Tech and distributed by Carlson Software of Maysville, KY was used to evaluate a range of subsidence prediction parameters and resulting transverse subsidence profiles to assist in formulating a generalized subsidence profile over more representative panels. The subsidence parameters listed above were considered in conjunction with the more recent empirical data over and adjacent to LW38 to synthesize a generalized ground response orthogonal/transverse to the mining direction over representative longwall panels LW39 to LW41. Exhibit 5-2 reflects a generalized ground response over longwall panels LW39 through LW41.

The current longwall panels (16 East/LW43 through 20 East/LW47) are somewhat wider and their gates are configured to enable recovery of the inby row of headgate chain pillars at OGR's option. For these panels, one possible set of subsidence prediction parameters were inferred from the subsidence monitoring data over the west end of Longwall Panel LW38, where the width of total extraction was about 900 feet and the average overburden thickness above the mine is about 890 feet. The SDPS software (v6.2A [Dec 2014]) was used to predict a generalized transverse (i.e., orthogonal to mining direction) subsidence profile over panels 16 East/LW43 through 18 East/LW45. The following assumed subsidence parameters for the influence function methodology were applied, based in part on the empirical data over and adjacent to LW38:

- Panel Width = 1,060 feet (rounded from 1,063 feet)
- Width of Total Extraction = 1,100 feet (rounded from 1,108 feet)
  (The headgate chain pillars are mined out where a four (4) gate-road configuration is planned.)
- Total Extraction Height = 6.5 feet
- Tangent of Influence Angle = 1.98
- Influence Angle = 63.2 degrees
  (The influence angle is a function of the distance between the inflection point and limit of subsidence.)
- Percent Hard Rock = 35%
- Critical/Supercritical Subsidence Factor = 54.5 percent (0.545)
- Horizontal Displacement/Strain Coefficient = 0.30 dim
- Overburden Thickness = 850 feet
- Rigid Gates, with automatic edge effect adjustments

Exhibit 5-3 reflects a generalized ground response over longwall panels 16 East/LW43 through 18 East/LW45, and is one bases for the estimated maximum subsidence reported in Attachment B for those surface structures that lie within influence of 16 East/LW43 through 20 East/LW47.

Table 2 (Panel-Specific Subsidence Prediction Parameters) reflects one set of possible subsidence prediction parameters for each panel.

7.0 ASSESSMENT OF POTENTIAL SUBSIDENCE IMPACTS

7.1 General Assessment

As shown on Exhibit 1, the area above LW46 through LW47 encompasses additional structures, in addition to those concentrated over longwall panels LW40 through LW45. Attachment D (Critical Deformation Indices) provides guidelines in the form of critical deformation magnitudes for generally assessing the potential impacts of subsidence on the types of structures overlying and adjacent to Longwall Panels LW46 and LW47. Observations over recently mined panels LW38 and LW39 and experiences relating to LW-17 and LW-16 provide additional data on which to base an assessment of surface subsidence impact for future longwall panels. The pertinent observations from the available information are summarized below:

-Within the boundaries of the individual longwall panels ("critical" draw angle of zero degrees) a higher potential for some damage to masonry and concrete structures exists. This region encompasses the longwall panel, but excludes the headgate, tailgate, setup entries and termination coal block of an individual panel. The significance and frequency of subsidence-related impacts in this region will be varied. Subsidence impacts will be influenced considerably by structure type and size, construction materials, construction quality, and topographic variations, as well as by the specific location and orientation of the structure over the longwall panel.

- Visible ground distress, such as an open crack, occurs occasionally and typically is sparse and isolated.
- Reduction of pressures and/or exposing the Bessemer-Calera natural gas pipelines overlying LW-17 during the predominant period of subsidence, successfully precluded damage to the pipelines. Those pipelines were subsequently relocated outside the then existing mine area by the operator of those lines.

Anticipated effects of planned subsidence could and in some cases is expected to include material damage to certain dwellings, structures, and pipelines, including the settling of foundations; cracking of concrete slabs or drives; cracking of brick, block, and plaster walls; sticking of windows and doors, etc. Based upon analyses conducted, OGR does not expect the mining to present imminent danger to the health or safety of the occupants of the structures within the area.

7.2 Non-Commercial Buildings, Occupied Residential Dwellings, Related Structures, Public Buildings and Facilities, Churches, Schools, and Hospitals

OGR employs mining technology that provides for planned subsidence in a predictable and controlled manner. As required by law, OGR will take necessary and prudent measures, consistent with the mining method employed, to minimize material damage to the extent technologically and economically feasible to non-commercial buildings and occupied residential dwellings and structures related thereto except that measures required to minimize material damage to such structures are not required if:

1. The owner consents in writing that protective/mitigative measures not be taken; or
2. The owner denies access to the property to provide, monitor or adjust such protective/mitigative measures; or
3. OGR demonstrates that the costs to protect/mitigate damage to such structures would exceed the anticipated cost of repair.

Letters of consent from landowners allowing that mitigative measures not be taken and written proof that access has been denied for the purpose of taking protective/mitigative measures will be included in the subsidence control plan (pre-subsidence survey). Any demonstration that the cost to mitigate would exceed the cost to repair will be included in the subsidence control plan (pre-subsidence survey) and be approved by the State Regulatory Authority. Justification and documentation required to show why mitigative/protective measures will not be taken on a particular structure will be included in the subsidence control plan (pre-subsidence survey).

OGR will assume a 35 degree angle of draw to define which property owners are included in surveys, and protective and mitigative measures. Material damage will not be allowed to occur when mining underneath Public Buildings and Facilities, Churches, Schools, and Hospitals. Additional protective/mitigative measures are discussed in Section 8.1(6).

7.3 Other Structures/Features

7.3.1 Public Roadways and Related Facilities

Potential damage to public roadways and minor appurtenant facilities is anticipated to be limited to cracking, opening of existing joints, and cracks in pavement, bridge decks and concrete sides. No major transportation structures, such as long-span bridges or culverts, or tunnels, exist within the area of LW46 through LW47. If mine subsidence damage occurs to public roadways or related facilities, qualified personnel will perform repairs at OGR's expense.

7.3.2 Surface Water Bodies

Based on the estimated magnitudes of subsidence and changes in surface slope and the naturally occurring topography in the permit area, excessive pooling of the major creeks and streams (Valley Creek, Rock Creek, Mud Creek and their primary tributaries) is not anticipated. Some pooling may arise along limited, flatter reaches during periods of seasonal shallow flow depth (i.e., during periods of dry weather). However, sufficient flow exists within these water bodies to fill depressed reaches and overcome losses, such that continuous flow will be sustained.

Due to the significant overburden thickness, which is dominated by thick shale horizons and massive sandstones, no permanent interruption or irrecoverable loss of flow is expected along the major creeks and streams in the mining area. These conclusions are supported by observations over previously mined areas. Valley Creek, Rock Creek and Mud Creek have been longwalled under multiple times. The significant overburden thickness in relation to the anticipated extraction thicknesses at mine level also indicate a low probability of significant impact to the other surface water bodies (i.e., ponds) and their relatively small, impounding earthen embankments. Therefore, no specific measures will be taken for protection of surface water bodies. OGR will observe the surface water bodies over the longwall panel being mined to determine if there is material damage. If material damage is caused by subsidence, the area will be repaired.

7.3.3 Utilities/Pipelines

Known major pipelines and related facilities, water mains, water wells, electrical transmission lines and substations, and a natural gas compressor station are identified on Exhibit 1. Major pipelines (higher pressure, moderate to larger diameter pipelines) traversing one or more longwall panels will be susceptible to a breach from longwall mining subsidence along at least a limited reach if not relocated, protected or without other mitigative measures. Reduction of pressures and/or exposing the Bessemer-Calera natural gas pipelines overlying LW-17 during the predominant period of subsidence, successfully precluded damage to the pipelines. Appurtenant equipment sensitive to differential movement and/or that is integrated with a network of partially buried piping is also at risk of damage if located or oriented adversely over the longwall panels. Numerous easements and right-of-way agreements apply to the various utility/pipeline owners. Examples of pertinent provisions for the existing agreements (most readable copies that were available) between OGR and its predecessors and the natural gas operators and their predecessors for the current mine area are included in Attachment F. Portions of certain pipelines are covered by waivers of subjacent support and releases of damage from coal mining. OGR will offer to assist these owners to determine whether such lines are capable of withstanding the planned subsidence or whether additional measures such as exposing or unearthing the lines, decreasing pressure, suspending service during mining, monitoring or relocation should be taken to minimize subsidence damage by providing access to available information pertaining to subsidence and subsidence impacts over previous panels. Some of the protective measures that have been implemented previously include unearthing pipelines and reducing pressures. No subsidence-related material damage to active pipelines was noted over any of the previously mined panels. The ownership of the natural gas pipelines, water mains or related facilities in the mine area are shown on Exhibit 1 and include Warrior River Water Authority (water), Bessemer Utilities Company (water), a City of Bessemer water treatment plant, Alabama Gas Corporation (gas), PGP (natural gas pipelines, processing facility and compressor site), ARP (natural gas), SNG/Kinder Morgan (natural gas pipelines) and Alabama Power (electrical transmission lines).

8.0 SUBSIDENCE MITIGATION PROGRAM

8.1 Description of Program

OGR has adopted a proactive program to address subsidence issues and surface impacts, and to repair non-commercial buildings and occupied residential dwellings and related structures or compensate the owners thereof, as prescribed by federal and state mining regulations. A description of OGR's current subsidence program is attached as Attachment G. OGR also has implemented a Subsidence Mitigation Program comprised of the following primary aspects:

1. Advance Notification-Property owners over areas of planned mining will be informed of OGR's intent to mine coal beneath or adjacent to their properties, and will be informed of the potential for subsidence damage. Notifications will be issued at least six months in advance of the longwall mining beneath the property.
2. Pre-Mining Reconnaissance-OGR or its agents will perform a pre-mining reconnaissance (visual survey) of surface properties over and adjacent to areas of future planned mining to catalogue the types and obvious unique or abnormal features of the structures that occupy the properties. The Pre-Mining Reconnaissance is intended to identify structures within the 35-degree angle of draw of the future mining and, through a qualitative assessment, to preliminarily determine whether any properties may be at risk of material damage.
3. Groundwater Use-OGR or its agents will perform a pre-mining survey to determine the status of the local groundwater users within the proposed mine area. The survey will consist of collecting information from the local water authorities and from direct interviews of potential local groundwater users within the mine area. The pre-mining survey intended to identify local groundwater users within the 35-degree angle of draw of the future mining and to preliminarily determine whether any properties may be at risk of material damage.
4. Pre- and Post-Subsidence Inspections-OGR or its agents will perform pre- and post-subsidence inspections (and interim inspections if OGR deems necessary), if permitted by the property owner, to document the visible, pre- and post-subsidence condition of each property. The property owner will be requested to participate in these inspections to facilitate accurate identification of significant conditions and features.
5. Protective/Mitigative Surface Measures-OGR, with the agreement of the property owners, will undertake protective measures for non-commercial buildings and occupied residential dwellings which lie within the 35-degree angle of draw. Such measures may include:
   -Trenching around structures which have basements;
   -Severing structures at locations sensitive to differential settlement such as retaining walls joined to structures, breezeways or rigid members such as slabs or major additions;
   -Exposing utility pipelines which penetrate structures;
   -Temporarily relocating the occupants of structures by agreement with the property owner or should it be determined that imminent danger could result from the proposed mining.

   OGR employs mining technology that provides for planned subsidence in a predictable and controlled manner. To the extent required by law, OGR will take necessary and prudent measures, consistent with the mining method employed, to minimize material damage to the extent technologically and economically feasible to non-commercial buildings and occupied residential swellings and structures related thereto except that measures required to minimize material damage to such structures are not required if:

1. The owner consents in writing that protective/mitigative measures not be taken; or
2. The owner denies access to the property to provide, monitor or adjust such protective/mitigative measures; or
3. OGR demonstrates that the costs to protect/mitigate damage to such structures would exceed the anticipated cost of repair.

Letters of consent from landowners allowing that mitigative measures not be taken and written proof that access has been denied for the purpose of taking protective/mitigative measures will be included in the subsidence control plan (pre-subsidence survey). Any demonstration that the cost to mitigate would exceed the cost to repair will be included in the subsidence control plan (pre-subsidence survey) and be approved by the State Regulatory Authority. Justification and documentation required to show why mitigative/protective measures will not be taken on a particular structure will be included in the subsidence control plan (pre-subsidence survey).

6. Protective/Mitigative Surface Measures-OGR will undertake protective measures to prevent material damage caused by subsidence to "Public Buildings and Facilities, Churches, Schools, and Hospitals and Impoundments with a storage capacity of 20 acre-feet or more or bodies or water with a volume of 20 acre-feet or more. Each structure will be evaluated individually and appropriate protective measures taken to prevent material damage. Such measures may include:
   -Trenching around structures which have basements;
   -Floating of the structure; -Structure fortification;
   -There are no impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more within this area;
   -Severing structures at locations sensitive to differential settlement such as retaining walls joined to structures, breezeways or rigid members such as slabs or major additions;
   -Exposing utility pipelines which penetrate structures;
   -Temporarily relocating the occupants of structures by agreement with the property owner or should it be determined that imminent danger could result from the proposed mining.
7. Temporary Subsistence-In instances when OGR anticipates that subsidence impact could pose a hazard to the inhabitants of an occupied residential dwelling, OGR will provide subsistence for the temporary relocation of such persons.
8. Communications with Surface Owners-OGR will also maintain procedures for receiving and logging verbal reports of subsidence-related impact to property and making follow-up site visits.
9. Repair of Damage or Compensation for Diminution of Value-On a case-by-case basis, OGR will decide to either repair subsidence-induced material damage to non-commercial buildings and occupied residential dwellings and related structures to approximate pre-subsidence conditions, or will compensate the owner for diminution in the value of the property due to the subsidence damage. OGR will also provide replacement (i.e., emergency, temporary, and/or permanent) water supplies which become contaminated, diminished or interrupted due to mining, with water of equivalent quantity and quality as required to substitute/replace existing drinking, domestic and residential water supplies if they are significantly affected by OGR's underground coal mining operations.
10. Discretionary Compensation-In addition to repairing material damage or compensating surface owners for diminution of property value, OGR will offer property owners additional compensation consistent with OGR's current subsidence program attached as Attachment G, and will, at its discretion, with the agreement of the property owner, offer compensation in lieu of repairs, offer to purchase the property at current market value in pre-subsidence condition, or offer to compensate for any diminution in value of the property caused by subsidence.

Under this Plan, OGR will apply its Subsidence Mitigation Program to properties within a 35-degree angle of draw of the ribs of the planned, additional longwall panels (LW46 and LW47).

8.2 Implementation of Subsidence Mitigation Program

8.2.1 Monitoring, Determination of Subsidence Impacts and Resolution of Damage

OGR will determine the degree to which non-commercial buildings and occupied residential dwellings and related structures and property are affected by subsidence and define a basis for resolution of subsidence damage with property owners as follows;

1. When OGR notifies the owners and occupants of surface property and structures of future mining beneath their properties, OGR will request permission to access the property and structures to conduct a pre-subsidence inspection of structures and surface features within the assumed 35-degree angle of draw.
2. If the property owner does not permit OGR to perform a complete pre-subsidence inspection, OGR will notify the owner in writing that it will be their obligation to demonstrate that damage is cause by mine subsidence.
3. In order to determine the commencement and degree of movement from subsidence, the pre-subsidence inspection will include an elevation survey of one or more structure corners or ground elevations, and a written, audio, video, or photographic record of the existing condition of structures and features, typically by a structural engineer. A pre-subsidence appraisal will also be performed by a qualified appraiser.
4. When subsidence activity is determined to be substantially complete, a post-subsidence survey will be conducted similar to the pre-subsidence survey in "3" above to document and characterize any subsidence damage.
5. After the post-subsidence survey is conducted, OGR or its agents will list features that quality for repair, and will prepare a construction cost estimate for repair options or will determine the diminished value of the property attributable to the subsidence damage. OGR may at its discretion offer to purchase affected structures at their current market value in their pre-subsidence condition.
6. OGR will maintain working relationships with construction contractors to facilitate the commencement of repairs, after execution of agreements with property owners.
7. Residents of inhabited structures will be temporarily relocated at OGR's expense, if it is determined that a hazard to occupants of residential dwellings exists from subsidence.

OGR will conduct a pre-subsidence survey of the quantity and quality of all drinking, domestic, and residential water supplies within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence. OGR will pay for this pre-subsidence survey. If OGR is refused access to conduct the pre-subsidence survey of the water system, it will be the land owner's obligation to demonstrate that contamination, diminution or interruption of the water supply is caused by mine subsidence. OGR will notify the owner in writing of the effect that a denial of access to conduct a pre-subsidence survey will have as described in the OSM and ASMC regulations. OGR will also provide replacement (i.e., emergency, temporary, and/or permanent) water supplies as required to substitute/replace existing drinking, domestic and residential water supplies if they are significantly affected by OGR's-underground coal mining operations. Upon notification that a user's water supply was adversely impacted by mining, OGR will reasonably provide drinking water to the user of the protected water supply within 48 hours after receiving notice that contamination, diminution or interruption of the water supply is caused by mine subsidence. Within two weeks of notification, OGR will have the user hooked up to a temporary water supply. The temporary water supply will be connected to the existing plumbing, if any, and allow the user to conduct all normal domestic usage such as drinking, cooking, bathing, and washing. Within two years of notification, OGR will connect the user to a satisfactory permanent water supply.

Based on past experience over the Oak Grove Mine, the planned longwall mining is not expected to diminish the current or reasonably foreseeable uses of renewable resource lands or other surface lands. Due to the significant overburden thickness, which is dominated by thick shall horizons and massive sandstones, no permanent interruption or irrecoverable loss of flow is expected along the major creeks and streams in the mining area. These conclusions are supported by observations over previously mined areas. Valley Creek, Rock Creek and Mud Creek have been longwalled under multiple times. OGR will observe the surface water bodies and lands over the longwall panel being mined to determine if there is material damage. If material damage is caused by subsidence, the area will be repaired.

8.2.2 Procedures to Address Utilities/Pipelines

As shown on Exhibit 1, in the area of anticipated mining influence, the main waterlines are routed adjacent to Taylors Ferry Road and William Howton Road with branch lines extending up developed, intersecting roadways. Lower pressure natural gas production companies are currently operating on OGR property in the area encompassed by LW46 through LW47. OGR also operates a network of natural gas pipelines, wells, compressor stations and related facilities within this area. There also is an Alabama Power electrical transmission line (Gorgas/Magella), a PGP natural gas pipeline, a PGP gas processing/dehydration facility, a PGP compressor station, a City of Bessemer water treatment plant, an ARP natural gas pipeline, and a higher pressure SNG (Kinder Morgan) interstate natural gas pipeline in the area of anticipated mining influence.

OGR will notify the owners of utilities/pipelines of OGR's intent to mine under the pipelines, utility lines and related structures, and public roads that cross planned longwall panels approximately six (6) months in advance of mining. OGR will offer the owners access to available information concerning past experiences over completed longwall panels and the protective measures that were selectively implemented (if any), such that the owners can determine and implement the precautions and prudent actions they deem necessary to protect their interests and the public. OGR will also periodically apprise the utility/pipeline owners of the status on the mining, such that the owners can better manage the potential for subsidence impact to their facilities.

Past experience has shown very little subsidence impact to pipelines, utility lines and related structures. For higher pressure and sensitive pipelines and public roads, if there should be an increased risk of subsidence impact, measures such as exposing the pipelines in open trenches or reducing line pressures as much as practical could be undertaken to minimize damage to or disruption of services provided by such lines during mining. The owners of potentially affected facilities will be apprised of these measures sometimes used to protect such structures from subsidence damage for their consideration when evaluating risks and making decisions concerning the use of protective measures. OGR also recognizes owners of those facilities may have particular expertise appropriate to minimize and address subsidence damage including whether to decrease pressure, suspend service during mining, or relocate those facilities.

8.2.3 Public Roadways and Related Facilities

Potential damage to public roadways and minor appurtenant facilities is anticipated to be limited to cracking and opening of existing joints and cracks in pavements. No major transportation structures, such as long-span bridges or culverts, or tunnels, exist within the Plan area. If mine subsidence damage occurs to public roadways or related facilities, qualified personnel will perform repairs at OGR's expense.

9.0 SUMMARY

The preceding Subsidence Control Plan presents background on OGR's planned mining of Longwall Panels LW46 and LW47 in its Oak Grove Mine, and summarizes pertinent surface and subsurface conditions, past experiences and available subsidence monitoring data for the Plan area. Predictions of the ground response over the planned longwall panels are also presented, and potential subsidence impacts are discussed relative to the primary surface features within the presumed zone of influence of the subject panels. OGR's course of action and Subsidence Mitigation Program are described generally and in more specific terms as they will be applied to identify subsidence impacts, assess damage and pursue resolutions of damage with affected property owners. Various tables, exhibits and attachments are included to supplement the discussions, and to support the conclusions of the Plan and OGR's course of action to address subsidence issues

The Subsidence Mitigation Program will be applied to properties within the assumed 35-degree angle of draw from the ribs of Longwall Panels LW46 and LW47, and to other properties for comparative purposes at OGR's discretion. The primary components of the Subsidence Mitigation Program provide the mechanisms to protect and compensate the owners of affected non-commercial buildings and occupied residential dwellings and related structures, and to protect drinking, domestic and residential water supplies and the current and reasonable foreseeable uses of surface lands. This Plan thereby fulfills and exceeds the intent of OSM and ASMC regulations as they apply to subsidence control and surface protection issues.

1/2500717.9

TABLES

TABLE 1

Approximate Panel Dimensions, Depths and Coal Thickness

TABLE 1

APPROXIMATE PANEL DIMENSIONS, DEPTHS AND COAL THICKNESS

Longwall Panel	Panel Width Rib-to-Rib (feet)	Panel Length (feet)	Average Coal Seam Thickness (inch)	Maximum Explored Thickness (inch)	Range of Depth Below Surface (feet)
LW-38	780 to 900	11,110	53.7	60	750 – 1,010
16East/LW-43	**1063**	**12,620**	**54**	**54**	**680 – 1,030**
17East/LW-44	**1063**	**12,620**	**54**	**54**	**620 – 1,010**
18East/LW-45	**1063**	**10,120**	**54**	**54**	**710 - 980**
19East/LW-46	**1063**	**10,120**	**54**	**54**	**680 - 970**
20East/LW-47	**1063**	**10,120**	**54**	**54**	**590 - 1,000**

TABLE 2

Panel-Specific Subsidence Prediction Parameters

TABLE 2
PANEL-SPECIFIC SUBSIDENCE PREDICTION PARAMETERS

Longwall Panel	Panel Width Rib-to-Rib (ft)	Overburden Thickness (ft)	Extraction Thickness (ft)	Inflection Point Offset (ft)
LW-38 (west section)	900	890	6.5	225 (tailgate) 200 (headgate)
16East/LW-43	**1060**	**850**	**6.5**	**212**
17East/LW-44	**1060**	**850**	**6.5**	**212**
18East/LW-45	**1060**	**850**	**6.5**	**212**
19East/LW-46	**1060**	**850**	**6.5**	**212**
20East/LW-47	**1060**	**850**	**6.5**	**212**

Critical/Supercritical Subsidence Factor (dim) = **0.545**
Average Influence Angle (degrees) = 63.2 (function of distance between inflection point & limit of subsidence)
Horizontal Displacement Factor = 0.30

TABLE 3

Geometric Conditions and Predicted Maximum Subsidence

TABLE 3

GEOMETRIC CONDITIONS AND PREDICTED MAXIMUM SUBSIDENCE

Longwall Panel	Panel Width Rib-to-Rib (feet)	Panel Length (feet)	Effective Extraction Thickness (feet)	Estimated Maximum Subsidence (feet)
LW-38	750 (780 to 900)	11,110	6.5	3.5
16East/LW-43	**1063**	**12,620**	**6.5**	**3.6**
17East/LW-44	**1063**	**12,620**	**6.5**	**3.6**
18East/LW-45	**1063**	**10,120**	**6.5**	**3.6**
19East/LW-46	**1063**	**10,120**	**6.5**	**3.6**
20East/LW-47	**1063**	**10,120**	**6.5**	**3.6**

ATTACHMENTS

ATTACHMENT A

Definitions

ATTACHMENT A
DEFINITIONS

Material Damage means the following-

(a) Any functional impairment of surface lands, features, structures or facilities;
(b) Any physical change that has a significant adverse impact on the affected land's capability to support any current or reasonable foreseeable uses or causes significant loss in production or income; or
(c) Any significant change in the condition, appearance or utility of any structure or facility from its pre-subsidence condition.

Occupied Residential Dwelling and Structures Related means any building or other structure that, at the time the subsidence occurs, is used either temporarily, occasionally, seasonally, or permanently for human habitation. This term also includes any building, structure or facility installed on, above or below, or a combination thereof, the land surface if that building, structure or facility is adjunct to or used in connection with an occupies residential dwelling. Examples of such structures include, but are not limited to, garages; storage sheds and barns; greenhouses and related buildings; utilities and cables; fences and other enclosures; retaining walls; paved or improved patios, walks and driveways; septic sewage treatment facilities; and lot drainage and lawn and garden irrigation systems. Any structure used only for commercial agricultural, industrial, retail or other commercial purposes is excluded.

Drinking, Domestic or Residential Water Supply means water received from a well or spring and any appurtenant delivery system that provided water for direct human consumption or household use. Wells and springs that serve only agricultural, commercial or industrial enterprises are not included except to the extent the water supply is for direct human consumption or human sanitation, or domestic use.

Non-Commercial Building means any building, other than an occupies residential dwelling, that, at the time the subsidence occurs, is used on a regular or temporary basis as a public building or community or institutional building as those terms are defined in ASMC or OSM regulations. Any building used only for commercial agricultural, industrial, retail or other commercial enterprise is excluded.

Replacement of Water Supply means, with respect to protected water supplies contaminated, diminished, or interrupted by coal mining operations provision of water supply on both a temporary and permanent basis equivalent to premining quantity and quality. Replacement includes provision of an equivalent water delivery system and payment of operation and maintenance costs in excess of customary and reasonable delivery costs for premining water supplies.

(a) Upon agreement by the permittee and the water supply owner, the obligation to pay such operation and maintenance costs may be satisfied by a one-time payment in an amount which covers the present worth of the increased annual operation and mainte4nance costs for a period agreed to by the permittee and the water supply owner.
(b) If the affected water supply was not needed for the land use in existence at the time of loss, contamination, or diminution, and if the supply is not needed to achieve the postmining land use, replacement requirements may be satisfied by demonstrating that a suitable alternative water source is available and could feasibly be developed. If the latter approach is selected, written concurrence must be obtained from the water supply owner.

ATTACHMENT B

(July 29, 2015)

List of Surface Owners & Estimated Maximum Structure Subsidence

Attachment B - Subsidence Control Plan
List of Surface Owners & Estimated Maximum Structure Subsidence
Oak Grove Mine - Jefferson County, Alabama
[July 2015 Modification: Year 2013 - 2020, Longwall Panels 13 East/LW40 - 20 East/LW47]

NOTES:

1 **NS*** means no primary structures were identified within the presumed 30-degree angle-of-draw of the applicable longwall panels.

2 The "Estimated Maximum Structure Subsidence" reported in Attachment B represents the estimated subsidence attributable to one or more longwall panels among the subject panels identified above. Where structures are within influence of multiple applicable panels (i.e., those panels encompassed by the 5-Year Mining Projection), the cumulative subsidence from multiple-panel effects is reported.

3 The actual subsidence experienced at any location might vary from the estimated magnitudes reported due to abnormalities of geology (e.g., faults), topography (e.g., steep and/or varied terrain), mine conditions, mining rate, and gate behavior, among other factors.

File No.	Owner Name/ Occupant	Address	Longwall Panel	Estimated Max Structure Subsidence (Feet)
152	United States Steel Corp	Tax Division Room 1381, 600 Grant Street, Pittsburgh, PA 15219	29,31,33,35 36,37,38,39 40,41,42,43 44,45,46,47	NS* 3.6 3.6
152-2	Valley Creek Land & Timber LLC	1300 Meadowbrook Road, Ste. 202, Jackson, MS 39211 (abandoned model airfield - William Howton Road)	45,46	3.6
152-3	Valley Creek Land & Timber LLC	1300 Meadowbrook Road, Ste. 202, Jackson, MS 39211 (PGP (Energen) No. 7 Compressor Site)	44,45	2.0
152-4	Valley Creek Land & Timber LLC	1300 Meadowbrook Road, Ste. 202, Jackson, MS 39211 8851 Lock 17 Road, Adger, AL 35023 8831 Lock 17 Road, Adger, AL 35023 1546 Toadvine Road, Adger, AL 35006 9415 Lock 17 Road, Adger, AL 35006 525 Toadvine Cemetery Road, Bessemer, AL 35023 1150 Toadvine Road, Bessemer, AL 35023 8350 Talors Ferry Road, Bessemer, AL 35023 701 Toadvine Cemetery Road, Bessemer, AL 35023	43,44,45,46,47	3.6
202	Warrior River Water Authority	Manager, P.O. Box 672, McCalla, AL 35111 Adjacent to Taylor's Ferry Road	36,38,39 40,41,42 43,44,45,46,47	< 0.25 to 3.6
202-1	Bessemer Utilities Company	Terry Hinton, 1600 1st Avenue North, Bessemer, AL 35020 Adjacent to Taylor's Ferry Road	36,38,39 40,41,42 43,44,45,46,47	3.6
205	Atlas Resources Partners, L.P. (ARP) (formerly El Paso E & P Company, L.P./EP Energy)	3165 Dublin Lane, Bessemer, AL 35022	36,38,39,40 46, 47	< 0.25 to 3.6
206	Southern Natural Gas Company, LLC (SNG) (Kinder Morgan)	569 Brookwood Village, Homewood, AL 35209	36,38,39 40,41,42 43,44,45,46,47	< 0.25 to 3.6
207	PGP Operating, LLC (PGP) (formerly Energen Resources Corporation)	104 TownPark Drive Kennesaw, GA 30144	29,31,33,35 37,38,39,40 41,42,43,44 45,46,47	< 0.25 to 3.6
208	Alagasco	410 South 10th Street, Birmingham, AL 35233, Debbie Barber Adjacent to Taylor's Ferry Road	36,38,39 40,41,42 43,44,45,46,47	< 0.25 to 3.6
211	Ralph C. & Delores Doles	535 Hillsboro Rd., Hueytown, AL 35023 7941 William Howton Rd., Bessemer, AL 35023	44,45	3.6
212	Curtis ONeil Doles, Jr.	7931 William Howton Rd., Bessemer, AL 35023	44,45,46	3.6
212-1	Jody Doles	108 County Road 21 N., Fayette, AL 35555 7919 William Howton Road, Bessemer, AL 35023	44,45	0.6
214-11	Thomas & Jamie Boggs	7836 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-12	Jeffrey G. & Melissa C. Wilson	7840 Rock Creek Circle, Hueytown, AL 35023	39,40	Mining Completed, < 0.25
214-13	Jeff Wilson	7840 Rock Creek Circle, Hueytown, AL 35023 7844 Rock Creek Circle, Bessemer, AL 35023	39,40	NS*
214-14	Barry L. Odom	7852 Rock Creek Circle, Bessemer, AL 35023-7092 7848 Rock Creek Circle, Bessemer, AL 35023	39,40	NS*
214-15	Barry L. & Angela D. Odom	7852 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-16	Barry L. & Angela D. Odom	7852 Rock Creek Circle, Bessemer, AL 35023	39,40	NS*
214-17	Adam & Emily Harris	7843 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-18	Eric D. & Amy W. Palmer	7835 Rock Creek Circle, Bessemer, AL 35023-7092	39,40	Mining Completed, < 0.25
214-19	Donnie & Kim Hicks	7831 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-20	Wesley & Dawn Passmore	7827 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-21	Steven & Kristi Shearer	7823 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-22	David B. & Amy M. Swindle	7819 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed, < 0.25
214-24	Stephen B. & Wendy R. Johnson	7815 Rock Creek Circle, Bessemer, AL 35023 7809 Rock Creek Circle, Bessemer, AL 35023	39,40	Mining Completed
216	Brian & Kristina S. Davis	8201 Taylors Ferry Rd., Bessember, AL, 35023	42,43	NS*
217	Charles D. & Sharon M. Sellers	8482 Taylors Ferry Rd., Bessemer, AL 35023 8428 Taylors Ferry Rd., Bessember, AL, 35023	45,46,47	NS* 3.6
217-1	Floyd C & Bobbie J. Sellers Karen S. Norris, POA	1561 Fairway View Drive, Hoover, AL 35244 8442 Taylors Ferry Rd., Bessemer, AL 35023	46,47	1.7
217-2	Floyd C. Sellers	102 Lindberg Rd., Hueytown, AL 35023 110 Leah Lane, Bessemer, AL 35023	46,47	NS*
217-3	Floyd C. Sellers	102 Lindberg Rd., Hueytown, AL 35023 114 Leah Lane, Bessemer, AL 35023	46,47	NS*
218	John W. & Sharon T. Kelly	8430 Taylors Ferry Rd., Bessemer, AL 35023 8418 Taylors Ferry Rd., Bessember, AL, 35023	Also see File No. 1,001 45,46,47	for Structures 2.4
219	Larry E. & Patricia Ann Hicks	8375 Taylors Ferry Rd., Bessemer, AL 35023 8371 Taylors Ferry Rd., Bessemer, AL 35023	45,46	0.5
220	Sharon McCarty	8350 William Howton Rd., Bessemer, AL 35023	46,47	2.5
221	Michael C. & Ira C. Chaney	555 Garrison Drive, Adger, AL 35006 8339 William Howton Rd., Bessemer, AL 35023	46,47	3.0

Attachment B - Subsidence Control Plan
List of Surface Owners & Estimated Maximum Structure Subsidence
Oak Grove Mine - Jefferson County, Alabama
[July 2015 Modification: Year 2013 - 2020, Longwall Panels 13 East/LW40 - 20 East/LW47]

NOTES:

1 **NS*** means no primary structures were identified within the presumed 30-degree angle-of-draw of the applicable longwall panels.

2 The "Estimated Maximum Structure Subsidence" reported in Attachment B represents the estimated subsidence attributable to one or more longwall panels among the subject panels identified above. Where structures are within influence of multiple applicable panels (i.e., those panels encompassed by the 5-Year Mining Projection), the cumulative subsidence from multiple-panel effects is reported.

3 The actual subsidence experienced at any location might vary from the estimated magnitudes reported due to abnormalities of geology (e.g., faults), topography (e.g., steep and/or varied terrain), mine conditions, mining rate, and gate behavior, among other factors.

File No.	Owner Name/ Occupant	Address	Longwall Panel	Estimated Max Structure Subsidence (Feet)
222	Billy W. Wesson	1408 Hueytown Rd., Hueytown, AL 35023 8660 Taylors Ferry Rd., Bessemer, AL 35023	43,44	NS*
222-1	Billy W. Wesson	1408 Hueytown Rd., Hueytown, AL 35023 8700 Taylors Ferry Rd., Bessemer, AL 35023	42,43,44,45	3.6
223	Curtis W. & Summer D. Poe	9346 Mud Creek Church Rd., Adger, AL 35006 8210 Taylors Ferry Rd., Bessemer, AL 35023	42,43	NS*
224	Dale T. Reid	8680 Taylors Ferry Rd., Bessemer, AL 35023	43,44	0.9
231	John R. & Sandra H. South	8139 Taylors Ferry Rd., Bessemer, AL 35023	40,41,42	1.0
231-1	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8533 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-2	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8529 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-3	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8525 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-4	Gregory M. & Tracey L. Nolan	8521 Cross Creek Way, Bessemer, AL 35023	41,42	2.4
231-5	Donald & Patricia Hammonds	8517 Cross Creek Way, Bessemer, AL 35023	41,42	2.4
231-6	James D. & Rebecca W. Holmes	8513 Cross Creek Way, Bessemer, AL 35023	41,42	2.4
231-7	Joseph Andy & Candi C. Schober	8509 Cross Creek Way, Bessemer, AL 35023	41,42	2.4
231-8	Benjamin A. & Anjanette A. Widener	8505 Cross Creek Way, Hueytown, AL 35023	41,42	2.4
231-9	Howard Stacy & Eugena Ann Wood	8501 Cross Creek Way, Bessemer, AL 35023	41,42	3.0
231-10	Christopher M. & Tracie Thomas	500 Cross Walk, Bessemer, AL 35023	41,42	0.5
231-11	Greg & Nicole Glass	504 Cross Walk, Bessemer, AL 35023	41,42	0.25
231-12	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 508 Cross Walk, Bessemer, AL 35023	41,42	NS*
231-13	Warren L. & Patricia Stanberry	512 Cross Walk, Hueytown, AL 35023	41,42	1.1
231-14	William T. Sr. & Jeanne Porter Vice	516 Cross Walk, Bessemer, AL 35023	41,42	2.3
231-15	Rayme & Jennifer Bryson	520 Cross Walk, Hueytown, AL 35023	41,42	2.3
231-16	Ricky A. & Joann S. Ray	524 Cross Walk, Hueytown, AL 35023	40,41	0.7
231-17	Jon & Jessica Stephens	528 Cross Walk, Bessemer, AL 35023	40,41	0.35
231-18	Cricket L. & Robert J. Downey	523 Cross Walk, Bessemer, AL 35023	40,41	0.45
231-19	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 515 Cross Walk, Bessemer, AL 35023	41,42	NS*
231-20	Leslie & Michael Sims	511 Cross Walk, Bessemer, AL 35023	41,42	0.85
231-21	Christopher & Jennifer Pappas	507 Cross Walk, Bessemer, AL 35023	41,42	0.25
231-22	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8512 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-23	Brian & Kristina S. Davis	8516 Cross Creek Way, Bessemer, AL 35023	41,42	0.45
231-24	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8520 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-25	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8524 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-26	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8528 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-27	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8532 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-28	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8613 Creek Run, Bessemer, AL, 35023	41,42	NS*
231-29	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8609 Creek Run, Bessemer, AL, 35023	41,42	NS*
231-30	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8605 Creek Run, Bessemer, AL, 35023	41,42	NS*
231-31	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8601 Creek Run, Bessemer, AL, 35023	41,42	NS*
231-32	Mays Construction LLC	742 Mays Rd., Bessemer, AL 35023 8504 Cross Creek Way, Bessemer, AL 35023	41,42	NS*
231-33	Charles E. & Doris J Mays	742 Mays Rd., Bessemer, AL 35023 8450 Cross Creek Way, Bessemer, AL 35023	40,41,42	NS*
232	Jeremy & Brandi Engle	8150 Taylors Ferry Rd., Bessemer, AL 35023	41	2.0
233	Cheryl Vines Molde Smith	8239 Vines Place, Bessemer, AL 35023 8233 Vines Place, Bessemer, AL 35023	41,42	3.7
233-1	J. W. & Cheryl W. Smith	8213 Vines Place, Bessemer, AL 35023	41,42	1.0
234	Thomas F. & Bessie O. Rockett	8146 Taylors Ferry Rd., Bessemer, AL 35023 8142 Taylors Ferry Rd., Bessemer, AL 35023	40,41,42	2.2
234-1	Bryan T. Rockett	8144 Taylors Ferry Rd., Bessemer, AL 35023 8155 Taylors Ferry Rd., Bessemer, AL 35023	41	0.7
235	Charles D. & Bobbie J. Walden	1575 White Dr., Bessemer, AL 35023 8186 Taylors Ferry Rd., Bessemer, AL 35023	41,42	1.2
236	Jeremy W. & Rebecca S. Cannon	642 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
237	Charles E. Mays	742 Mays Rd., Bessemer, AL 35023	41,42	NS*
237-1	Charles E. & Doris J Mays	742 Mays Rd., Bessemer, AL 35023	41,42	NS*
238	Kenneth Craig & Misty Brown	8160 Taylors Ferry Rd., Bessemer, AL 35023	41,42	0.35
239	Mark F. & Kimberly Ann Crawford	8174 Taylors Ferry Rd., Bessemer, AL 35023	41,42	< 0.25
240	Canada Limited Family Partnership	901 19th Street North, Bessemer, AL 35020 8170 Taylors Ferry Rd., Bessemer, AL 35023	41,42	0.25
241	Emily Gallant, a minor C/O Ms. Tina Grisson	Mailing Address: 494 Fieldstone Drive, Helena, AL 35080 8138 Taylors Ferry Rd., Bessemer, AL 35023	39,40,41	< 0.25

Attachment B - Subsidence Control Plan
List of Surface Owners & Estimated Maximum Structure Subsidence
Oak Grove Mine - Jefferson County, Alabama
[July 2015 Modification: Year 2013 - 2020, Longwall Panels 13 East/LW40 - 20 East/LW47]

NOTES:

1 **NS*** means no primary structures were identified within the presumed 30-degree angle-of-draw of the applicable longwall panels.

2 The "Estimated Maximum Structure Subsidence" reported in Attachment B represents the estimated subsidence attributable to one or more longwall panels among the subject panels identified above. Where structures are within influence of multiple applicable panels (i.e., those panels encompassed by the 5-Year Mining Projection), the cumulative subsidence from multiple-panel effects is reported.

3 The actual subsidence experienced at any location might vary from the estimated magnitudes reported due to abnormalities of geology (e.g., faults), topography (e.g., steep and/or varied terrain), mine conditions, mining rate, and gate behavior, among other factors.

File No.	Owner Name/ Occupant	Address	Longwall Panel	Estimated Max Structure Subsidence (Feet)
242	Wanda Shipman	8131 Taylors Ferry Rd., Bessemer, AL 35023	40,41	< 0.25
243	Kay F. Elliott	8123 Taylors Ferry Rd., Bessemer, AL 35023	40,41	< 0.25
244	Charles E. & Doris V. Mays	742 Mays Rd., Bessemer, AL 35023 8091 Taylors Ferry Rd., Bessemer, AL 35023	39,40	NS*
245	Micheal K. and Barbara Anne Snow	8107 Taylors Ferry Road, Hueytown, AL 35023	40,41	2.7
245-1	Paul Jeffery & Debra Jamison	8107 Taylors Ferry Rd., Bessemer, AL 35023	40,41	1.0
245-2	Darryl Y. Allen	8111 Taylors Ferry Road, Hueytown, AL 35023	40,41	0.35
246	Susan W. Latham	8101 Taylors Ferry Rd., Bessemer, AL 35023	40	4.0
247	Stephen Sadler	8095 Taylors Ferry Rd., Bessemer, AL 35023	39,40	3.8
248	Clifford A. & Susan Diane Miller	8087 Taylors Ferry Rd., Bessemer, AL 35023 8083 Taylors Ferry Rd., Bessemer, AL 35023	39,40	0.8
249	Charles E. & Doris Jean Vines Mays	742 Mays Rd., Bessemer, AL 35023	39,40	3.9
250	Charles E. & Doris J. Mays	742 Mays Rd., Bessemer, AL 35023 8087 Taylors Ferry Rd., Bessemer, AL 35023	40,41	NS*
250-1	Stefan & Amy Barnette	739 Mays Rd., Bessemer, AL 35023 743 Mays Rd., Bessemer, AL 35023	39,40,41	3.6
251	Michael Terry & Deborah Turner	730 Mays Rd., Bessemer, AL 35023	40,41	3.9
252	Kelly Rena Haynes	706 Mays Rd., Bessemer, AL 35023	40,41	0.6
253	Joe Bradley Jr. & Debra Knight	675 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
254	Ricky J. & Regina L. Hegler	643 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
255	Franklin D. & Betty L. Rickles	676 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
256	Charles E. & Doris J. Mays Tenant: Melissa Epperson	742 Mays Rd., Bessemer, AL 35023 721 Mays Rd., Bessemer, AL 35023	40,41	1.9
256-1	Charles E. & Doris J. Mays	742 Mays Rd., Bessemer, AL 35023 711 Mays Rd., Bessemer, AL 35023	40,41	NS*
257	Barbara G. & Giles G. Miller	801 Handley Drive, Bessemer, AL 35023	39,40	1.2
258	Donald J. & Jeraldine G. Mays	3284 Morgan Road, Bessemer, AL 35022 724 Handley Drive, Bessemer, AL 35023	40,41	NS*
259	Larry J. & Katherine E. Evans	654 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
260	William E. & Windy Wallace Ray	739 Mays Rd., Bessemer, AL 35023	40	4.0
261	Charles E. Mays	701 Mays Rd., Bessemer, AL 35023	40,41	0.45
262	Shirley Vines	650 Mays Rd., Bessemer, AL 35023	40,41	< 0.25
262-1	Larry W. Nelson & Shirley Vines	646 Mays Rd., Bessemer, AL 35023	40,41	NS*
263	Robert Lee Love Jr. &	792 Handley Drive, Bessemer, AL 35023	39,40	3.7
264	Emmitt Albert Reynolds	700 Handley Drive, Bessemer, AL 35023	39,40,41	2.3
265	Robert Lee Jr. & Andrea L. Love	792 Handley Drive, Bessemer, AL 35023 800 Handley Drive, Bessemer, AL 35023	39,40	2.4
266	Nancy H. Baker	22970 Lake South Drive, Foley, AL 36535 810 Handley Drive, Bessemer, AL 35023	39,40	NS*
267	Robert Lee & Rosaland J. Love	818 Handley Drive, Bessemer, AL 35023	39,40	0.3
268	Stephen H. & Tracie P. Lawrence	808 Handley Drive, Bessemer, AL 35023	38,39,40	Mining Completed, < 0.25
269	Kenneth R. & Julie P. Wiley	811 Brandon Rd., Bessemer, AL 35023	38,39	Mining Completed
270	Burl & Sammie J. Vines	8050 Taylors Ferry Rd., Bessemer, AL 35023 832 Glaze Drive, Bessemer, AL 35023	38,39,40	Mining Completed
270-1	James (Tad) Vines, occupant	832 Glaze Drive, Bessemer, AL 35023	38,39,40	Mining Completed
271	Charles E. & Dana V. Yates	8052 Taylors Ferry Rd., Bessemer, AL 35023	39,40	Mining Completed, < 0.25
272	William E. & Betty J. Salter	813 Handley Drive, Bessemer, AL 35023	39,40	0.35
273	Mike & Tammie Simpson	8071 Taylors Ferry Rd., Bessemer, AL 35023	39,40	< 0.25
274	Howard D. & Barbara G. Sprayberry	3372 Warrior River Rd., Hueytown, AL 35023 8074 Taylors Ferry Rd., Bessemer, AL 35023	39,40	NS*
332-1	Jefferson County-Taylors Ferry Rd	Wayne Sullivan, A200 Courthouse, 716 Richard Arrington Jr. Blvd. North, Birmingham, AL 35203	36,38,39 40,41,42 43,44,45,46,47	< 0.04 to 3.6
332-3	Jefferson County-Glaze Drive	Same as Above	36,38,39,40	Mining Completed, < 0.25
332-4	Jefferson County-Handley Drive	Same as Above	39,40,41	< 0.25 to 4.0
332-5	Jefferson County-Mays Road	Same as Above	40,41	< 0.25 to 4.0
332-6	Jefferson County-Creek Run	Same as Above	41,42	1.5
332-7	Jefferson County-Cross Walk	Same as Above	41,42	0.3 to 2.4
332-8	Jefferson County-Cross Creek Way	Same as Above	41,42	1.4
332-9	Jefferson County-Vines Place	Same as Above	42	3.6
332-10	Jefferson County-William Howton Rd.	Same as Above	44,45,46, 47	< 0.04 to 3.6
332-36	Jefferson County-Reid Wesson Road	Same as Above	42,43,44	3.6
332-38	Jefferson County-Rock Creek Circle	Same as Above	38,39,40	Mining Completed, < 0.25
333	Oak Grove Land Company, LLC	Pointe Plaza Suite 300, Technology Dr., Canonsburg, PA 15317	North-South Panels,29,31, 33,36,37,38,39,40,41,42	0.4, NS* < 0.25 to 3.6
341	Carol Handley	1402 Old Rock Creek Rd., Bessemer, AL 35023 372 David Glaze Rd., Bessemer, AL 35023	44	NS*
345	Robert M. & Khristie K. Short	415 David Glaze Road, Bessemer, AL 35023 352 David Glaze Rd, Bessemer, AL 35023	44	NS*
346	Robert M. & Khristie K. Short	415 David Glaze Road, Bessemer, AL 35023 382 David Glaze Rd, Bessemer, AL 35023	44	NS*

Attachment B - Subsidence Control Plan
List of Surface Owners & Estimated Maximum Structure Subsidence
Oak Grove Mine - Jefferson County, Alabama
[July 2015 Modification: Year 2013 - 2020, Longwall Panels 13 East/LW40 - 20 East/LW47]

NOTES:

1 **NS*** means no primary structures were identified within the presumed 30-degree angle-of-draw of the applicable longwall panels.

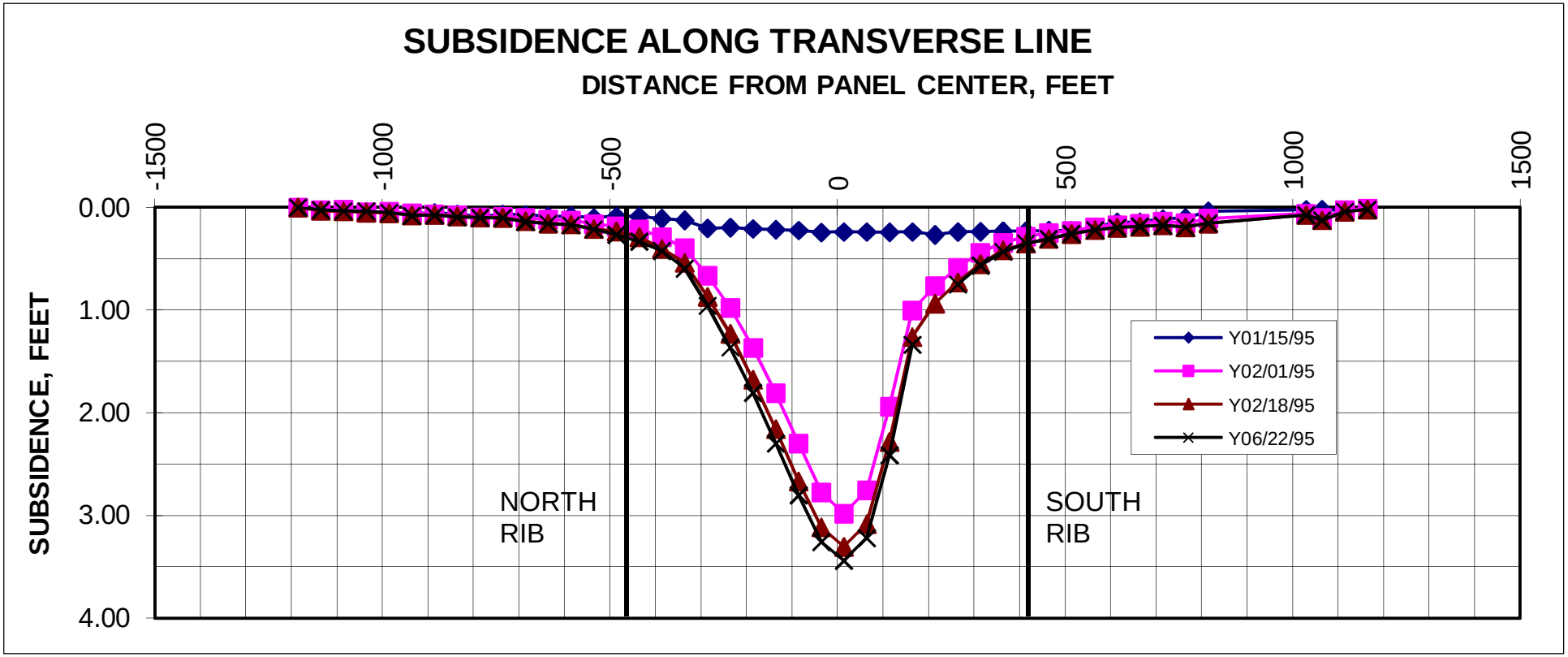
2 The "Estimated Maximum Structure Subsidence" reported in Attachment B represents the estimated subsidence attributable to one or more longwall panels among the subject panels identified above. Where structures are within influence of multiple applicable panels (i.e., those panels encompassed by the 5-Year Mining Projection), the cumulative subsidence from multiple-panel effects is reported.

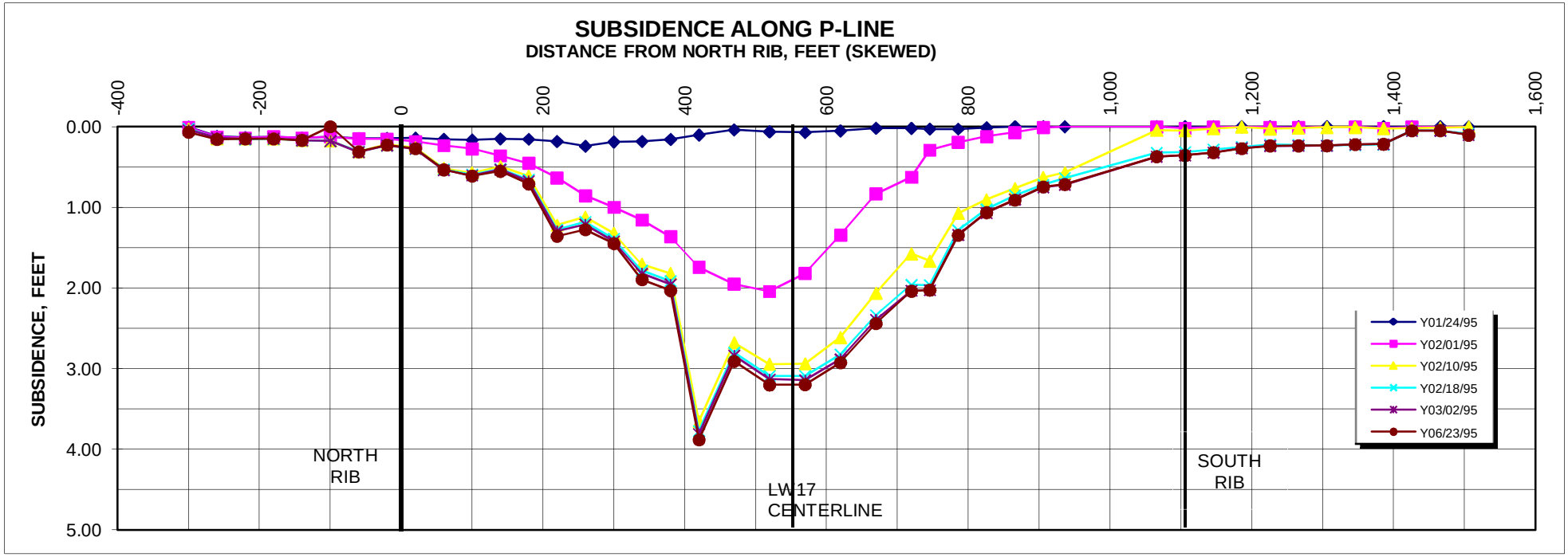
3 The actual subsidence experienced at any location might vary from the estimated magnitudes reported due to abnormalities of geology (e.g., faults), topography (e.g., steep and/or varied terrain), mine conditions, mining rate, and gate behavior, among other factors.

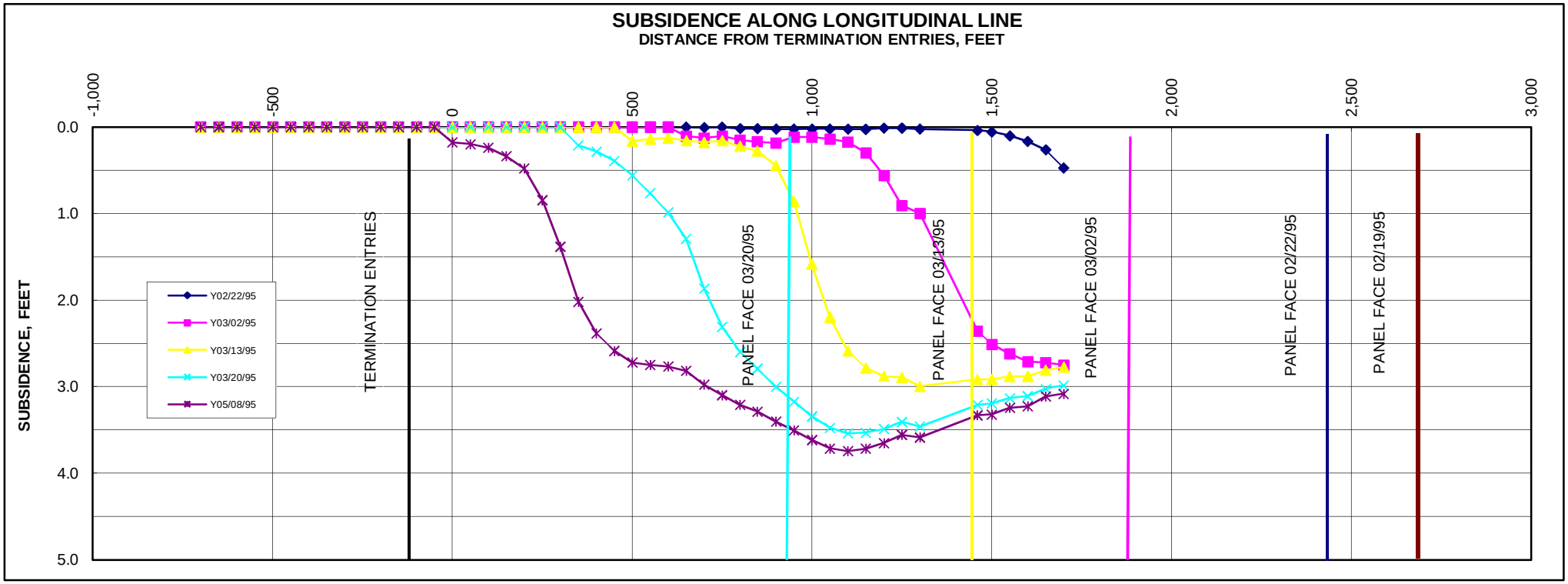
File No.	Owner Name/ Occupant	Address	Longwall Panel	Estimated Max Structure Subsidence (Feet)
347	Joe David & Barry Johnson	238 David Glaze Rd., Bessemer, AL 35023 392 David Glaze Rd., Bessemer, AL 35023	43,44,45	NS*
348	Patricia Jean Wilhelm & Johnny Glaze Price	703 Foxgate Rd., Louisville, KY 40223-5502 480 David Glaze Rd., Bessemer, AL 35023	43,44	NS*
349	Joe David & Patsy Ruth Johnson	238 David Glaze Rd., Bessemer, AL 35023 275 David Glaze Rd., Bessemer, AL 35023	42,43,44	NS*
358	Anniece H. Parsons	2758 Mud Creek Rd., Adger, Al 35006 996 Toadvine Rd., Bessemer, Al 35023	40,41	NS*
359	Marie K. Parsons, Estate of	2784 Mud Creek Rd., Adger, Al 35006 1000 Toadvine Cemetery Rd., Bessemer, Al 35023	40	NS*
360	Anneice H. Parsons	2758 Mud Creek Rd., Adger, Al 35006 1004 Toadvine Rd., Bessemer, Al 35023	40	NS*
366	Timothy Reed Cain	21926 Lakeview Dr., Panama City Beach, FL 32413 651 Toadvine Cemetery Rd., Bessemer, AL 35023	40	NS*
900	Commercial Land Co Inc	P. O. Box 1549 Jasper, AL 35002 William Howton Road, Bessemer, AL 35020	46, 47	3.6
913	Commercial Land Co Inc	P. O. Box 1549 Jasper, AL 35002 William Howton Road, Bessemer, AL 35020	46, 47	3.6
915	James H. Turner and Ruth E. Turner	7707 William Howton Road, Mulga, AL 35118 7708 Turner Lane, Bessemer, AL 35118	47	NS*
916	Kenneth D. Smith and Wendy L. Smith	7687 William Howton Road, Mulga, AL 35118	47	< 0.04
917	James H. Turner	7707 William Howton Road, Mulga, AL 35118	47	0.1
918	James H. Turner	7675 William Howton Road, Mulga, AL 35118	47	NS*
919	William Turner	7701 William Howton Road, Mulga, AL 35118 7695 William Howton Road, Mulga, AL 35118	47	0.2
920	William E. Turner	7701 William Howton Road, Mulga, AL 35118 7699 William Howton Road, Mulga, AL 35118	47	0.3
921	Jessie Leland White and Lillian W. White	7662 William Howton Road, Sylvan Springs, AL 35118 7656 William Howton Road, Mulga, AL 35118	47	0.2
923	Bradley Alan Abney and Emily F. Abney	7714 William Howton Road, Mulga, AL 35118	47	0.5
924	Martin David Burchfield and Janet M. Burchfield	7715 William Howton Road, Mulga, AL 35118	47	0.6
925	James H. Turner	7675 William Howton Road, Mulga, AL 35118 7717 William Howton Road, Mulga, AL 35118	47	0.4
926	Grover Tubbs and Betty Tubbs	7751 William Howton Road, Mulga, AL 35118 7745 William Howton Road, Mulga, AL 35118	46,47	3.2
927	Paul Tubbs	7757 William Howton Road, Mulga, AL 35118	46,47	2.9
928	Neil McCarty and Dorothy McCarty	7760 William Howton Road, Mulga, AL 35118	46,47	0.6
929	Sam Harkins and Martha Harkins	7763 William Howton Road, Mulga, AL 35118 7759 William Howton Road, Bessemer, AL 35118	46,47	NS*
930	John Fredric Kiker and Karan S. Kiker	96 Washington Fish Camp Ct., Quinton, AL 35130 7773 William Howton Road, Bessemer, AL 35118	46,47	NS*
931	Stan Carlisle and Janet Carlisle	7719 William Howton Road, Mulga, AL 35118	47	2.0
932	William B. and Sharon D. Dates	7722 William Howton Road, Mulga, AL 35118	47	0.4
933	Chris Robinson and Tanya Robinson	7790 William Howton Road, Mulga, AL 35118 7734 William Howton Road, Mulga, AL 35118	46,47	0.5
934	Matthew Harkins	7795 William Howton Road, Mulga, AL 35118	46,47	NS*
935	Karan S. and John Fredric Kiker	96 Washington Fish Camp Ct., Quinton, AL 35130 7783 William Howton Road, Bessemer, AL 35118	46,47	NS*
936	Martha G. Harkins and Sammy J. Harkins	7771 William Howton Road, Mulga, AL 35118	46,47	0.4
937	Martha G. Harkins and Sammy J. Harkins	7771 William Howton Road, Mulga, AL 35118 7763 William Howton Road, Mulga, AL 35118	46,47	NS*
961	Betty Bullard Thrasher	136 Canyon Trail, Pelham, AL 35124 143 Salter Lane, Bessemer, AL 35023	47	NS*
999	Commercial Land Co Inc	P. O. Box 1549 Jasper, AL 35002 231 Link Road, Bessemer, AL 35023 251 Link Road, Bessemer, AL 35023	46,47	3.6
1,000	Michael C. Chaney & Ira C. Chaney	1004 Normandale Circle,Bessemer, AL 35023 254 Link Road, Bessemer, AL 35023	46,47	3.6
1,001	John W. & Sharon T. Kelly	8430 Taylors Ferry Road, Bessemer, AL 35023	46,47	2.4
1,002	Charles Dale & Sharon M. Sellers	8482 Taylors Ferry Road, Bessemer, AL 35023	46,47	3.1
1,003	Hicks Living Trust	8481 Taylors Ferry Road, Bessemer, AL 35023	47	3.1
1,004	Governmental Utility Services of the City of Bessemer	P. O. Box 670, Bessemer, AL 35021 250 Link Road, Bessemer, AL 35023	47	NS* < 0.04
1006	Heather Nicole Johnston	8486 Taylors Ferry Road, Bessemer, AL 35023	47	3.6

ATTACHMENT C

JCS Surveyed Subsidence Profiles over Longwall Panel LW-17


SUBSIDENCE ALONG TRANSVERSE LINE
DISTANCE FROM PANEL CENTER, FEET
-1500
-1000
-500
0
500
1000
1500
0.00
1.00
2.00
3.00
4.00
SUBSIDENCE, FEET
NORTH RIB
SOUTH RIB
Y01/15/95
Y02/01/95
Y02/18/95
Y06/22/95


SUBSIDENCE ALONG P-LINE
DISTANCE FROM NORTH RIB, FEET (SKEWED)
SUBSIDENCE, FEET
-400
-200
0
200
400
600
800
1,000
1,200
1,400
1,600
0.00
1.00
2.00
3.00
4.00
5.00
NORTH RIB
LW 17 CENTERLINE
SOUTH RIB
Y01/24/95
Y02/01/95
Y02/10/95
Y02/18/95
Y03/02/95
Y06/23/95


SUBSIDENCE ALONG LONGITUDINAL LINE
DISTANCE FROM TERMINATION ENTRIES, FEET
SUBSIDENCE, FEET
0.0
1.0
2.0
3.0
4.0
5.0
-1,000
-500
0
500
1,000
1,500
2,000
2,500
3,000
Y02/22/95
Y03/02/95
Y03/13/95
Y03/20/95
Y05/08/95
TERMINATION ENTRIES
PANEL FACE 03/20/95
PANEL FACE 03/13/95
PANEL FACE 03/02/95
PANEL FACE 02/22/95
PANEL FACE 02/19/95

ATTACHMENT D

Critical Deformation Indices

ATTACHMENT D
CRITICAL DEFORMATION INDICES

Our evaluation of the potential impact of the planned subsidence is based on criteria reported in the literature and past experience of D'Appolonia and PERC in predicting subsidence impacts on sensitive surface structures. Critical magnitudes of the deformation indices of tensile and compressive strain, slope/tilt and radius of curvature were developed based on a review of structural damage criteria reported in various publications of the National Coal Board (London, England), U.S. Bureau of Mines and academians at the University of Kentucky, Virginia Tech, West Virginia Institute of Technology and West Virginia University, and other notable sources. The specific criteria adopted for our estimation of the critical draw angle are presented below.

For residential structures, the inception of obvious cracking corresponds to a tensile strain of approximately 2x10 to the –3 ft/ft (0.2 percent) for concrete-block or brick masonry walls and 3x10 to the –3 ft/ft (0.3 percent) for stone masonry walls. A compressive strain of approximately 3x10 to the –3 ft/ft (0.3 percent) often initiates cosmetic cracking and/or localized crushing of masonry materials. A floor slope or tilt of one percent (1 percent) or greater is noticeable, and generally uncomfortable in a residence. A slope tilt between 0.5 and 1.0 percent is judged to be a transitional range from perceptible to imperceptible. A critical curvature of 6x10 to the –5 1/ft is an accepted threshold for residential structures when assessing the potential for damage.

ATTACHMENT E

Rebuttable Presumption for Water Replacement Responsibility

(omitted)

ATTACHMENT F

Representative Existing Agreements

Between OGR and Utility Operators

This contract entered into this 27th day of July, 1948 between Tennessee Coal, Iron and Railroad Company, an Alabama corporation, hereinafter sometimes referred to as the "Tennessee Company" and Southern Natural Gas Company, a Delaware corporation, formerly known as Southern Natural Gas Corporation and hereinafter sometimes referred to as the "Gas Company";

WITNESSETH:

WHEREAS, the Tennessee Land Company and the Tennessee Coal, Iron and Railroad Company granted the Gas Company the right to construct, operate and maintain gas pipe lines upon certain lands of the two companies by contracts dated November 25, 1930, December 18, 1930 and December 19, 1930; and

WHEREAS, the Tennessee Land Company has been merged into the Tennessee Company; and

WHEREAS, the Gas Company desires to construct, operate and maintain an additional pipe line generally parallel to and twenty (20) feet south of the presently installed pipe line; and

WHEREAS, the Gas Company desires a grant from the Tennessee Company of such rights as may be necessary for the construction, operation, maintenance and removal of said pipe line; and

WHEREAS, the Tennessee Company is willing to grant the Gas Company such rights upon the terms and conditions hereinafter expressed;

THEREFORE:

(1) The Tennessee Company in consideration of the premises and of the covenants of the Gas Company as hereinafter expressed to be kept and performed and in further consideration of sums of money to be paid the Tennessee Company by said Gas Company to be arrived at as hereinafter provided and to the extent of the ownership of the Tennessee Coal, Iron and Railroad Company in the hereinafter described lands, hereby grants and conveys to the Gas Company the right to construct, operate, maintain and remove a pipe line not to exceed twenty-four inches (24") in diameter, or its equivalent in smaller contiguous lines should the condition of the terrain or other physical conditions render it more advantageous, for the transmission of gas across land of the Tennessee Company (wherever the expression "pipe line" is used in this instrument it shall include either a single line, or two or more contiguous lines,

4160/117 (Birmingham)

as provided in this section (1)) in the following lands located partly in Jefferson and partly in Tuscaloosa Counties, Alabama in the approximate location shown by red line on map hereto attached and made a part hereof:

TOWNSHIP 18 SOUTH, RANGE 8 WEST

North-East quarter of South-East quarter of Section 33; North-West quarter of South-West quarter, and South half of North half of Section 34; South half of North half of Section 35; South-West quarter of North-West quarter, North half of South-West quarter, North-West quarter of South-East quarter, South half of North-East quarter and North-East quarter of North-East quarter of Section 36;

TOWNSHIP 18 SOUTH, RANGE 7 WEST

North half of North-West quarter, South-West quarter of North-West quarter, and North-West quarter of North-East quarter of Section 31; North-East quarter of South-East quarter of Section 30; North-West quarter of South-West quarter and North-West quarter of North-West quarter of Section 29; North half of South-East quarter of Section 20; North half of South-West quarter, South-East quarter of South-West quarter, and South-East quarter of Section 21; North-West quarter of South-West quarter, South-West quarter of North-West quarter, East half of North-West quarter and North-West quarter of North-East quarter of Section 22; South half of South-East quarter of Section 15; South-West quarter of South-West quarter, North half of South-West quarter, North-West quarter of South-East quarter and South half of North-East quarter of Section 14; West half of North-West quarter and North-East quarter of North-East quarter of Section 13;

TOWNSHIP 18 SOUTH, RANGE 6 WEST

North-West quarter of North-West quarter of Section 18; South half of South-East quarter of Section 7; West half of South-West quarter and North-West quarter of South-East quarter of Section 9; North-East quarter of South-West quarter, South-West quarter of North-East quarter and North half of North-East quarter of Section 10; South-East quarter of South-East quarter of Section 3; South half of North-West quarter, North-East quarter of North-West quarter and North-West quarter of North-East quarter of Section 1;

TOWNSHIP 17 SOUTH, RANGE 6 WEST

South-East quarter of South-East quarter of Section 36;

TOWNSHIP 17 SOUTH, RANGE 5 WEST

North-East quarter of South-West quarter and East half of North-East quarter of Section 31; South-East quarter of South-West quarter, West half of South-East quarter, North-East quarter of South-East quarter and South-East quarter of North-East quarter of Section 29; West half of North-West quarter, North-East quarter of North-West quarter and North-West quarter of North-East quarter of Section 28; South-East quarter of North-West quarter and North-East quarter of North-East quarter of Section 22; North-West quarter of North-West quarter of Section 23; South half of South-West quarter of Section 14;

TOWNSHIP 17 SOUTH, RANGE 4 WEST

North half of North-East quarter of Section 7; North half of North-West quarter, South-East quarter of North-West quarter and South half of North-East quarter of Section 8; South half of North-West quarter and West half of North-East quarter of Section 9; North half of North-West quarter of Section 11;

TOWNSHIP 17 SOUTH, RANGE 3 WEST

North-West quarter of North-East quarter of Section 7; North-East quarter of North-West quarter, and North half of North-East quarter of Section 8; North half of North-West quarter of Section 9; South-East quarter of South-West quarter and South half of South-East quarter of Section 5; South half of South-West quarter and South-West quarter of South-East quarter of Section 4.

After the construction of said pipe line on the forty-foot strip hereinafter referred to a survey shall be made to definitely locate said pipe line and forty-foot strip and the Tennessee Company will prepare maps showing the location of said pipe line and forty-foot strip with reference to the boundaries of its land and the Gas Company will pay the Tennessee Company at the rate of One Hundred Dollars ($100.00) per acre for a right of way over a strip forty feet wide across land owned by the Tennessee Company in the sections listed in sub-paragraph (a) below, and the Gas Company will pay the Tennessee Company at the rate of Two Hundred Dollars ($200.00) per acre for a right of way over a strip forty feet wide across land owned by the Tennessee Company in the sections listed in sub-paragraph (b) below, the north boundary line of said forty-foot strip shall be fifteen feet south and the south boundary line fifty-five feet south of the center line of the presently installed pipe line wherever practical, and shall be generally five feet on the northerly side and thirty-five feet on the southerly side of the center line of the pipe line to be installed hereunder wherever the new pipe line and the presently installed pipe line depart from a parallel position to the extent that it is impractical for the right of way of the presently installed pipe line and the forty-foot strip herein referred to to adjoin:

(a) Sections 33, 34, 35, 36, Township 18 South, Range 8 West;
Sections 31, 30, 29, 20, 21, 22, 15, 14 and 13 Township 18 South, Range 7 West;
Sections 18, 7, 9, 10, 3 and 1, Township 18 South, Range 6 West;
Section 36, Township 17 South, Range 6 West;
Sections 31, 29, 28, 22, 23 and 14, Township 17 South, Range 5 West;

(b) Sections 7, 8, 9 and 11, Township 17 South, Range 4 West;
Sections 7, 8, 9, 5 and 4, Township 17 South, Range 3 West;

and should surveys to the satisfaction of the Tennessee Company be furnished it by the Gas Company the Gas Company will, in addition to other sums to be paid as herein provided, pay to the Tennessee Company the sum of One Thousand Dollars ($1,000.00) for necessary check surveys, inspections and preparation of maps but should the Tennessee Company elect to make all surveys then the Gas Company will pay to the Tennessee Company, in addition to other sums to be paid as herein provided, the sum of Two Thousand Dollars ($2,000.00) for such surveys, inspections and preparation of maps. After such survey and maps have been completed by the Tennessee Company, the parties hereto shall execute a substitute for this contract which shall contain all of the provisions

herein, except that it will give an accurate description of the right of way for said pipe lines and will have maps attached thereto indicating the location of said lines as determined by said survey and will express the consideration to be determined, as above provided, as having been paid in cash for the rights herein granted. The Gas Company shall pay unto the Tennessee Company upon the completion and delivery of this contract for its account the sum of Eleven Thousand Dollars ($11,000.00) which amount shall apply as part payment on the total consideration to be determined as hereinabove provided, and the remainder of said consideration shall be paid upon the completion and delivery of said substitute contract.

(2) The Tennessee Company for the aforesaid considerations and to the extent of its ownership in said land hereby further grants and conveys to the Gas Company the right to construct, operate, maintain and remove an additional pipe line or lines upon said land not to exceed the capacity of the pipe lines referred to in Section (1) hereof upon condition, however, that said additional pipe line or lines shall be constructed along, adjacent to and at a distance not to exceed thirty (30) feet from the center line and on the southerly side of said pipe lines referred to in Section (1) hereof.

(3) The Tennessee Company for the aforesaid considerations and to the extent of its ownership in said land hereby further grants and conveys to the Gas Company the right to construct, operate, maintain and remove telephone and/or telegraph lines upon said land along and adjacent to said pipe lines, it being understood, however, that said telephone and/or telegraph lines shall not exceed thirty (30) feet on the southerly side of the center line of said pipe lines referred to in Section (1) hereof.

(4) The Tennessee Company for the aforesaid considerations hereby further grants and conveys unto the Gas Company such rights of ingress and egress over said land as long as it is owned by the Tennessee Company as may be necessary for the construction, operation, maintenance and removal of said pipe lines and/or telephone or telegraph lines upon said land; the Tennessee Company may at any time in the future define the routes of such ingress and egress, provided such routes shall provide reasonable access to said pipe lines, telephone and/or telegraph lines.

(5) The rights herein granted shall not be construed to be superior to currently existing: (1) Right of ways for railroad tracks; (2) right of ways for electric power transmission lines; (3) right of ways for telephone and telegraph lines; (4) right of ways for pipe lines; (5) right of ways for public roads; (6) private roads.

(6) The Tennessee Company shall not be held liable for any claims for damage which may accrue on account of the construction, operation or maintenance of said pipe lines and/or telephone or telegraph lines on the land of the Tennessee Company; the Tennessee Company shall not be liable on account of damage to said pipe lines and/or telephone or telegraph lines accruing from past or future mining or removal of coal, iron ore or other minerals contained in the aforesaid land or from failure to leave adequate support for the surface of said land, but hereafter will give reasonable notice to the Gas Company of any unusual operation likely to endanger its lines; and the Gas Company shall indemnify, protect and save harmless the Tennessee Company from all loss, damage, cost or expense which the Tennessee Company may sustain on account of the construction, operation, maintenance or removal of said pipe lines and/or telephone or telegraph lines upon said land and on account of claims for damage by others by reason of the construction, operation, maintenance or removal by the Gas Company of said pipe line and/or telephone or telegraph lines upon said land.

(7) If, in the judgment of the Tennessee Company, it should ever be necessary or desirable to lower or raise said pipe lines and/or telephone or telegraph lines on account of the construction of railroad tracks, erection of structures or installation of improvements of any character whatsoever by the Tennessee Company or under its authority, the Gas Company shall at its expense make such changes in elevation of said pipe lines and/or telephone or telegraph lines as may be desired by the Tennessee Company within thirty (30) days after receipt by the Gas Company of written notice from the Tennessee Company of the desire for such changes in elevation.

(8) The Gas Company shall have the right to trim and/or to cut such trees as may interfere with the installation or endanger the safety or proper maintenance of said pipe, telephone or telegraph lines; the Gas Company shall, however, pay the Tennessee Company for the reasonable timber market value of all trees cut, injured or destroyed in the construction and maintenance of any of the lines which the Gas Company

is given the right to construct hereunder and which are located more than thirty-five (35) feet on the southerly side and five (5) feet on the northerly side from the center line of said pipe lines referred to in Section (1) hereof.

(9) The Tennessee Company shall have the right at any and all times to use in its mining, quarrying or manufacturing operations the land over which said pipe lines and/or telephone or telegraph lines are located and the Tennessee Company shall also have the right to install, maintain and use tracks, roads, pipe lines, haulage systems and wires or cables of any description across said pipe lines and/or telephone or telegraph lines; the Tennessee Company shall have the right to grant to others the right to install, maintain and use tracks, roads, pipe lines, haulage systems and wires or cables of any description across said pipe lines and/or telephone or telegraph lines; upon condition, however, (1) that the exercise of any of said rights by the Tennessee Company shall cause no unreasonable interference with said pipe lines and/or telephone or telegraph lines of the Gas Company and the rights granted to others shall not be superior to the rights granted to the Gas Company and (2) that the character of installation of the above mentioned crossings shall be in accordance with the reasonable requirements of the Gas Company.

(10) The Gas Company shall at its expense upon completion of installation of its pipe lines and/or telephone or telegraph lines and thereafter in the maintenance, operation and removal thereof cause the destruction or removal from the land of the Tennessee Company of all debris, including timber refuse, resulting from such installation, operation, maintenance or removal; and the surface of the land occupied by said pipe lines shall at all times be maintained by the Gas Company in a condition satisfactory to the Tennessee Company, or in default thereof for a period of sixty (60) days after written notice has been served by the Tennessee Company upon the Gas Company so to do, the Tennessee Company may itself remove or destroy said debris and restore the surface of said land but at the expense of the Gas Company.

(11) Should the pipe lines and/or telephone or telegraph lines or any portion thereof constructed, operated and maintained by the Gas Company in the location herein described hereafter interfere with the mining, quarrying or manufacturing operations of the Tennessee Company or future subdivisions laid out by the Tennessee Company or any of its present or future subsidiary or associated companies, then upon

written request by the Tennessee Company so to do the Gas Company shall within ninety (90) days remove its pipe lines and/or telephone or telegraph lines from said location to other locations; provided (1) that the Tennessee Company shall first convey to the Gas Company the equivalent rights in such other locations as are conveyed to the Gas Company hereunder; and (2) that the Gas Company shall not be required to remove and relocate its said pipe lines and/or telephone or telegraph lines more than one time at its expense and when such other location or locations are furnished, the terms of such grant or grants shall not require the Gas Company again to remove its pipe lines and/or telephone or telegraph lines except at the expense of the Tennessee Company; any new location so furnished shall not be at a greater distance than one thousand (1,000) feet from either side of the center line of said pipe lines and/or telephone or telegraph lines as herein described and shall be so located as to permit the construction, operation and maintenance of said pipe lines and/or telephone or telegraph lines in accordance with good engineering and operating practice and in the event any portion of the new location for said pipe lines and/or telephone or telegraph lines is not on lands now owned by the Tennessee Company, then before such pipe lines and/or telephone or telegraph lines shall be moved the Tennessee Company shall cause to be conveyed to the Gas Company substantially the same rights as are conveyed hereunder for the new location of such pipe lines and/or telephone or telegraph lines.

(12) In the event the construction or maintenance of any of the lines which the Gas Company is given the right to construct hereunder or the clearing which it may do shall cause the destruction of or injury to any growing crops, the Gas Company shall pay to the owner of such crops the reasonable value thereof if destroyed or the reasonable amount of damage thereto if injured.

(13) In the event the Gas Company violates any of the covenants herein contained and fails for sixty (60) days after notice in writing served upon it by the Tennessee Company to comply with such covenant or covenants, the Tennessee Company shall have the right to terminate this contract by giving the Gas Company six (6) months notice in writing of its intention so to do whereupon at the expiration of said six (6) months this contract shall be deemed terminated and at an end; and the Tennessee Company may thereafter remove said pipe lines and/or telephone or telegraph lines from said land should they remain thereon without right for exceeding ninety (90) days, but such removal

BOOK 160 PAGE 124

shall be at the expense of the Gas Company.

(14) The rights herein granted shall revert to the Tennessee Company, its successors and assigns, in the event of abandonment of the use of said pipe lines during a continuous period of twelve (12) months time.

(15) This contract shall inure to the benefit of and be binding upon the respective successors or assigns of the parties hereto as well as the parties themselves; and the Tennessee Company as used herein shall apply to and include its subsidiary and associated companies and the rights, privileges and easements herein shall be subject to conveyance and/or assignment.

IN WITNESS WHEREOF, the parties hereto have executed this instrument in duplicate the day and year first above written.

TENNESSEE COAL, IRON AND RAILROAD COMPANY,

By _____, President,

ATTEST:

_____, Secretary.

SOUTHERN NATURAL GAS COMPANY,

By _____, Vice President.

ATTEST:

_____, Secretary.

APPROVED:

_____, Division Counsel, TCI&RRCo.

_____, Manager Land Department.

DOCUMENTARY INTERNAL REVENUE 10 DOLLARS 10
DOCUMENTARY INTERNAL REVENUE 2 DOLLARS 2
DOCUMENTARY INTERNAL REVENUE 10 DOLLARS 10

FILED IN OFFICE FOR RECORD THIS THE AUG 19 1948 AND DULY RECORDED IN BOOK 160 PAGE 117

TOM C. GARNER, Judge of Probate

Tax map 30 Map 30 page 92

130|479
Bess

ELLA PRICE TO SOUTHERN NATURAL GAS CORPORATION.

STATE OF ALABAMA,

COUNTY OF WALKER SOUTHERN NATURAL GAS CORPORATION.

KNOW ALL MEN BY THESE PRESENTS: That I, (we), Mrs. Ella Price, hereinafter referred to as seller, for and in consideration of the sum of five & no/100 dollars, ($5.00) and other good and valuable considerations, the receipt whereof being hereby acknowledged, do hereby grant unto the Southern Natural Gas Corporation, hereinafter referred to as purchaser, a right of way to lay, construct, maintain and operate a pipe line or lines, consisting of one or more pipes, and appurtenances thereto, including telephone or telegraph lines in connection therewith, and the free right of ingress and egress to and from said right of way for the purpose of laying, constructing, maintaining, repairing, replacing, operating or removing at will said pipe line and said appurtenances thereto, across the following described lands situated in Jefferson County, Alabama:

South one half (S½) of northeast quarter (NE¼) of southwest quarter (SW¼) Section two (2) township eighteen (18), south, range six (6) west.

TO HAVE AND TO HOLD the same, together with all the rights and privileges necessary or convenient for the full enjoyment or use thereof, including all rights of ingress and egress as above set forth, and the right to cut and keep clear all trees that may injure or endanger said lines unto the said purchaser, its successors and assigns, forever; provided, that if the purchaser, its successors or assigns, should permanently abandon the use of said right of way for all of the purposes herein stated, then the easements herein granted and all rights incident thereto shall terminate. Provided further, that the seller especially reserves the use and enjoyment of the premises herein described, subject only to the exercise of the rights and privileges herein granted to the purchaser.

It is understood and agreed that purchaser shall lay said pipe line below plow depth wherever it crosses any land that may be cleared and in cultivation, and shall also lay said pipe line below plow depth across any land that may in the future be cleared and put in cultivation.

The location of said right of way on the above described land shall be determined by the purchaser, but said pipe line shall not be laid nearer than -- feet to any barn, residence or tenant house on said lands without written consent of the seller.

The purchaser shall pay all damages caused by its operations on said lands.

IN TESTIMONY WHEREOF, we have hereunto signed our names at Good Springs, in the County of Walker, Alabama, on this the April 8, day of -- 1929.

Thomas Price

ATTEST: E. Phil Harris Ella Price

The undersigned purchaser of the above right of way does hereby accept the same upon the terms and conditions therein set forth.

IN TESTIMONY WHEREOF, we have caused these presents to be executed by our duly authorized officer or agent, this 12th day of April, 1929.

Southern Natural Gas Corporation,

By: H. R. Swift.

STATE OF ALABAMA,

WALKER COUNTY.

I, the undersigned authority, in and for said County, in said State, hereby certify that Thomas Price and wife, Ella Price, whose names are signed to the foregoing instrument, and

who are known to me, acknowledged before me on this day that, being informed of the contents of the instrument, they executed the same voluntarily on the day the same bears date.

Given under my hand and official seal, this April 8th, 1929.

J. A. Bryan, Justice of the Peace.

STATE OF ALABAMA, (SEAL)

WALKER COUNTY.

I, the undersigned authority, in and for said County, in said State, hereby certify that on this day came before me the within named Ella Price, known to me to be the wife of the within named Thomas Price, who, being examined separate and apart from the husband touching her signature to the within instrument, acknowledged that she signed the same of her own free will and accord, without fear, constraints or threats on the part of the husband.

In Witness Whereof, I have hereunto set my hand and official seal, this April 8th, 1929.

J. A. Bryan, Justice of the Peace.

I hereby certify that the Deed Tax to the amount of $.50 has been paid on this instrument.

J. P. Stiles, JUDGE OF PROBATE.

BESSEMER DIVISION, PROBATE OFFICE,

STATE OF ALABAMA, JEFFERSON COUNTY.

I hereby certify that the within was filed in this office on the 12th day of Sept. 1929, and duly recorded in Vol. 130, of Deeds, page 479, on this the 18th day of Sept. 1929.

J. P. Stiles, JUDGE OF PROBATE.

L. L. GILBERT TO SOUTHERN NATURAL GAS CORPORATION.

STATE OF ALABAMA,

COUNTY OF JEFFERSON. SOUTHERN NATURAL GAS CORPORATION.

KNOW ALL MEN BY THESE PRESENTS: That I, (we) L. L. Gilbert and wife, Delphia Gilbert, hereinafter referred to as seller, for and in consideration of the sum of forty one & 25/100 dollars, ($41.25) and other good and valuable considerations, the receipt whereof being hereby acknowledged, do hereby grant unto the Southern Natural Gas Corporation, hereinafter referred to as purchaser, a right of way to lay, construct, maintain and operate a pipe line or lines, consisting of one or more pipes, and appurtenances thereto, including telephone or telegraph lines in connection therewith, and the free right of ingress and egress to and from said right of way for the purpose of laying, constructing, maintaining, repairing, replacing, operating or removing at will said pipe line and said appurtenances thereto, across the following described lands situated in Jefferson County, Alabama:

Southeast quarter (SE¼) of southwest quarter (SW¼) and southwest quarter (SW¼) of south east quarter (SE¼) Section eight (8), township eighteen (18) South (S) Range six (6) West (W).

TO HAVE AND TO HOLD the same, together with all the rights and privileges necessary or convenient for the full enjoyment or use thereof, including all rights of ingress and egress as above set forth, and the right to cut and keep clear all trees that may injure or endanger said lines unto the said purchaser, its successors and assigns, forever; provided, that if the purchaser, its successors or assigns, should permanently abandon the use of said right of way for all of the purposes herein stated, then the easements herein granted and all rights incident thereto shall terminate. Provided further, that the seller especially reserves the use and enjoyment of the premises herein described, subject only to the exercise of the rights and privileges herein granted to the purchaser.

It is understood and agreed that purchaser shall lay said pipe line below plow depth

STATE OF ALABAMA

COUNTY OF JEFFERSON

KNOW ALL MEN BY THESE PRESENTS that, in consideration of the conveyance simultaneously herewith by the United States Steel Corporation, a New Jersey corporation, to the Woodward Iron Company, an Alabama corporation, of certain minerals and mining rights in land located in Sections 4, 7, 9, 10, 14, 15, 18, 22, 23, 27, 28, 29, 31, 32, 33, and 34, Township 17 South, Range 5 West; and Sections 12, 13, 15, 23, 24, 25, 26, 27, 30, and 36, Township 17 South, Range 6 West; and Sections 2, 3, 4, 5, 9, 10, and 11, Township 18 South, Range 5 West, of the Huntsville Principal Meridian, Jefferson County, Alabama, receipt of which is hereby acknowledged, the said WOODWARD IRON COMPANY does hereby grant, bargain, sell, and convey unto the said UNITED STATES STEEL CORPORATION the following described five (5) groups of real estate located West of the Huntsville Principal Meridian, Jefferson County, Alabama:

GROUP NO. 1:

All coal, iron ore, and other minerals, in, under, and upon the following described land:

TOWNSHIP 17 SOUTH, RANGE 6 WEST:

Section 32: The North-West quarter; and the North-West quarter of North-East quarter;

Section 36: The South-West quarter; and the South-East quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 5 WEST:

Section 8: The East half of East half; the North-West quarter of North-East quarter; and the West half of South-East quarter;

Section 10: The North-East quarter of South-West quarter; and the South half of South-West quarter;

Section 17: The North half of North half of Section; the South-East quarter of North-East quarter; the South-West quarter of North-West quarter; the North half of South-East quarter; and the South-West quarter of South-East quarter;

680/563
9-29-1955

TOWNSHIP 18 SOUTH, RANGE 5 WEST (CONTINUED):

Section 18: The South-East quarter of North-East quarter; the North-East quarter of North-West quarter; the South-West quarter of South-East quarter; the East half of South-East quarter; that part of the North half of South-West quarter lying east of the center line of Rock Creek; and that part of the South-East quarter of South-West quarter lying east of the center line of Rock Creek;

Section 19: The North half of North-East quarter; the South-West quarter of North-East quarter; the North-West quarter of North-West quarter; and that part of the South-East quarter of North-East quarter lying west of a line parallel with and 67.0 feet east of the west boundary of said South-East quarter of North-East quarter;

Section 20: The West half of North-East quarter; the West half of North-West quarter; that part of the North-West quarter of South-West quarter lying north and east of the center line of Valley Creek; and that part of the South-West quarter of South-West quarter lying east of the center line of Valley Creek;

TOWNSHIP 18 SOUTH, RANGE 6 WEST:

Section 2: The North-West quarter; and the South half of Section;

Section 3: The South-West quarter of North-East quarter; the South half of North-West quarter; the North-East quarter of South-West quarter; the South-West quarter of South-West quarter; and the North half of South-East quarter;

Section 4: The North half of North-East quarter; the South-West quarter of North-East quarter; the North-West quarter; that part of the North-West quarter of South-West quarter lying north of the center line of Valley Creek; the North-East quarter of South-East quarter; the South-West quarter of South-East quarter; and the South-East quarter of South-East quarter, EXCEPT the South 528.0 feet of the East 488.1 feet of said South-East quarter of South-East quarter;

Section 5: The North-East quarter of South-West quarter; and the South-East quarter;

Section 8: The North half of North-East quarter; the South-East quarter of North-West quarter; the East half of South-West quarter; the South-West quarter of South-East quarter; the South half of North half of North-East quarter of North-West quarter; and the South half of North-East quarter of North-West quarter;

Section 9: The North-East quarter of South-East quarter;

Section 10: The North-East quarter of North-East quarter; the North half of North-West quarter; and the North-West quarter of South-West quarter;

Section 11: The South-West quarter of North-East quarter; and the South-East quarter of North-West quarter;

Section 12: The South half of North-West quarter; and the South-East quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 6 WEST (CONTINUED):

Section 13: The North-East quarter of North-West quarter;

Section 14: The North-East quarter of North-East quarter; the South half of North-East quarter; the North-East quarter of South-East quarter; and that part of the East half of South-East quarter of South-East quarter lying north and east of the southwest bank of Valley Creek;

Section 16: The North-West quarter; and the South-East quarter;

Section 17: That part of the North-West quarter of North-East quarter which lies south of a line parallel with and 610.5 feet south of the north boundary of said North-West quarter of North-East quarter; the North-West quarter; and the East half of South-East quarter;

Section 18: The South half of North-West quarter; and the West half of South-West quarter;

Section 20: The South-East quarter of North-West quarter; the East half of South-West quarter; and the South-West quarter of South-East quarter;

Section 21: The South half of North-East quarter;

Section 22: The North-West quarter; and the West half of South-West quarter;

Section 23: The North-East quarter of North-West quarter; that part of the East half of North-East quarter lying east of the center line of Valley Creek; and the North-West quarter of North-East quarter EXCEPT 2 acres for a Mill Site described in deed from James K. P. Laird to M. M. Guin, dated June 4, 1887, recorded in the Birmingham Division of the office of the Judge of Probate of Jefferson County, Alabama, in Deed Book 84, Page 459;

Section 24: The East half of North-East quarter; the South-West quarter of North-East quarter; the North-West quarter; the North-East quarter of South-East quarter; and that part of the North-West quarter of South-East quarter lying east of the center line of Valley Creek and north of the center line of Rock Creek;

Section 26: The North half of North-East quarter; the South-West quarter of North-East quarter; the South half of North-West quarter; the South-West quarter; and the North-West quarter of South-East quarter;

Section 27: The South-East quarter of North-East quarter; and the East half of South-East quarter;

Section 28: The East half of South-East quarter;

Section 29: That part of the South-East quarter of North-West quarter lying north and east of the center line of Mud Creek; and that part of the North-East quarter of South-West quarter lying north and east of the center line of Mud Creek;

Section 30: The South-West quarter of North-East quarter; the East half of North-West quarter; the South-West quarter of North-West quarter; the North-East quarter of South-West quarter; and the North-West quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 5 WEST (CONTINUED):

Section 34: The North-East quarter of North-East quarter; and the South-West quarter of South-West quarter;

Section 36: The North-East quarter of South-West quarter; the North half of South-East quarter; and the South-West quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 7 WEST:

Section 1: The South-West quarter of North-East quarter; the West half of North-West quarter; the North-East quarter of South-West quarter; and the West half of South-East quarter;

Section 12: The South half of South-East quarter;

TOWNSHIP 19 SOUTH, RANGE 6 WEST:

Section 4: The North-East quarter of South-West quarter; the North-West quarter of South-East quarter; and the East half of South-East quarter;

Section 8: The North half of North-East quarter; and the North-East quarter of North-West quarter;

GROUP NO. 2:

An undivided one-ninth (1/9th) interest in all coal, iron ore, and other minerals in, under, and upon the following described land:

TOWNSHIP 18 SOUTH, RANGE 6 WEST:

Section 28: The South-West quarter of South-East quarter; and the South-West quarter;

Section 29: The West half of North-East quarter; and the East half of South-East quarter;

Section 33: The North-West quarter of North-East quarter; and the North-West quarter;

GROUP NO. 3:

An undivided forty-three forty-fifths (43/45ths) interest in all coal, iron ore, and other minerals in, under, and upon the following described land:

TOWNSHIP 18 SOUTH, RANGE 6 WEST:

Section 25: The North half of South-West quarter; and the South-West quarter of South-West quarter;

Section 26: The South-East quarter of North-East quarter; and the East half of South-East quarter;

GROUP NO. 4:

All coal, iron ore, and other minerals in, under, and upon the following described land, together with the right to mine and remove said coal, iron ore, and other minerals, including the right to underground haulageways under said land to and from any lands which said United States Steel Corporation may at any time own or from which it may have the right to remove the minerals:

TOWNSHIP 17 SOUTH, RANGE 6 WEST:

Section 31: The East half of Section; the South half of North-West quarter; the North-East quarter of South-West quarter; and the South half of South-West quarter;

Section 32: The East half of North-East quarter; the South-West quarter of North-East quarter; and the South half of Section;

Section 36: The South-West quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 5 WEST:

Section 6: The North-West quarter of North-West quarter; the South-West quarter; and the West half of South-East quarter;

Section 7: The East half of South-West quarter;

Section 8: The South-West quarter of North-East quarter;

Section 18: The North half of North-East quarter; the South-West quarter of North-East quarter; the West half of North-West quarter; the North-West quarter of South-East quarter; that part of the North half of South-West quarter lying west of the center line of Rock Creek; and that part of the South-East quarter of South-West quarter lying west of the center line of Rock Creek;

Section 19: That part of the South-East quarter of North-East quarter lying east of a line parallel with and 67.0 feet east of the west boundary of said quarter-quarter section;

Section 28: The North half of North-West quarter;

Section 30: The South-East quarter of South-West quarter; and the South half of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 6 WEST:

Section 2: The North-East quarter;

Section 4: The South-East quarter of North-East quarter; the North-East quarter of South-West quarter; and the North-West quarter of South-East quarter;

Section 6: The North half of North-East quarter;

Section 12: The North half of North-West quarter;

Section 13: The South half of North-East quarter; the South-East quarter of North-West quarter; the North half of South-East quarter; and the South-West quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 6 WEST (CONTINUED):

Section 24: The North-West quarter of North-East quarter;

Section 30: The East half of North-East quarter;

Section 32: The West half of North-West quarter; and the South-East quarter of North-West quarter;

TOWNSHIP 18 SOUTH, RANGE 7 WEST:

Section 11: The South-West quarter of South-East quarter;

Section 13: The East half of North-West quarter;

Section 14: The North-West quarter of North-East quarter; and the East half of North-West quarter;

The conveyance of the minerals and mining rights in the land described in Group No. 4 above is made on the following further conditions: (a) that said United States Steel Corporation shall not have the right, without the written consent of said Woodward Iron Company, to construct on said lands any buildings, transmission lines, pipe lines, roads, railroads, or improvements of any kind; and (b) that in no event shall said United States Steel Corporation, its successors or assigns, have the right to use in its mining operations, or for any other purpose, any timber on the surface of said land described in said Group No. 4.

GROUP NO. 5:

The following described lands, MINERALS AND MINING RIGHTS EXCEPTED:

TOWNSHIP 17 SOUTH, RANGE 5 WEST:

Section 14: The South-West quarter of South-West quarter of North-East quarter; the North half of North-West quarter; that part of the South half of North-West quarter and that part of the South-West quarter lying east and northeast of a straight line extending from the southeast corner of said South-West quarter to the northwest corner of said South half of North-West quarter;

Section 15: That part of the North-East quarter of North-East quarter lying east and northeast of a straight line extending from the southeast corner of said North-East quarter of North-East quarter to the northwest corner of South-East quarter of Section 10, Township 17 South, Range 5 West;

TO HAVE AND TO HOLD unto the said United States Steel Corporation, its successors and assigns forever; SUBJECT, however, to: (a) taxes for the tax year beginning October 1, 1954; and (b) existing easements and other rights in the surface of the land described in Groups No. 1, 2, 3, and 4 above, the minerals and mining rights in which are conveyed by this deed, and in the land, minerals and mining rights excepted, described in Group No. 5 above, which is conveyed by this deed.

And the said Woodward Iron Company does for itself and for its successors and assigns covenant with the said United States Steel Corporation, its successors and assigns, that it is lawfully seized in fee simple of the real estate conveyed hereby; that it is free from all encumbrances except as herein mentioned; that it has a good right to sell and convey the same as aforesaid; and that it will, and its successors and assigns shall, warrant and defend the same to the said United States Steel Corporation, its successors and assigns, forever, against the lawful claims of all persons.

IN ADDITION and for aforesaid consideration, the said Woodward Iron Company does hereby remise, release, quitclaim, and convey unto the said United States Steel Corporation all mining rights and privileges, including releases from damages to the surface, which said Woodward Iron Company may own in the land described in Groups No. 1, 2, and 3 above.

TO HAVE AND TO HOLD unto the said United States Steel Corporation, its successors and assigns, forever.

IN WITNESS WHEREOF, the said Woodward Iron Company has caused these presents to be executed in its name and behalf and its corporate seal to be hereunto affixed and attested by its officers thereunto duly authorized this, the 29th day of September, 1955.

WOODWARD IRON COMPANY

By John E. Urquhart
President

ATTEST:
Secretary

DEED 680 PAGE 570

STATE OF ALABAMA

COUNTY OF JEFFERSON

I, H. Louise McEniry, a Notary Public in and for said County in said State, hereby certify that John S. Vizulat, whose name as President of Woodward Iron Company, a corporation, is signed to the foregoing conveyance, and who is known to me, acknowledged before me on this day that, being informed of the contents of the conveyance, he, as such officer and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 29th day of September, 1955.

STATE OF ALA. JEFFERSON CO.
I CERTIFY THIS
INSTRUMENT WAS FILED ON
DEED 680 PAGE 563
OCT 4 9 40 AM '55
MTG. TAX
TOTAL $ 100.00 HAS BEEN
PAID ON THIS INSTRUMENT.
Judge of Probate

H. Louise McEniry
Notary Public.

Notary Public, Jefferson County, Alabama
My commission expires Mar. 18, 1958
Bonded by American Surety Co. of N. Y.

STATE OF ALABAMA

COUNTY OF JEFFERSON

KNOW ALL MEN BY THESE PRESENTS that, in consideration of One Dollar ($1.00) and other valuable considerations to the undersigned WOODWARD IRON COMPANY, an Alabama corporation, hereinafter called "Grantor", in hand paid by the UNITED STATES STEEL CORPORATION, a New Jersey corporation, hereinafter called "Grantee", receipt of which is acknowledged, the Grantor does hereby release the Grantee, its agents or employees, from any and all claims for damages which may have heretofore accrued or which may hereafter accrue to the Grantor as a result of any injuries to the following described land or the surface thereof or to the structures and all improvements which may now or hereafter be located upon said land, including wells, springs, or other sources of water supply, caused directly or indirectly by the Grantee either heretofore or hereafter by reason of dewatering or the mining or removal of any coal or other minerals which may be contained in said land or any other land, whether said damage or injury is caused by the failure to leave supports for the surface of said land or by any other reason or by any other operations of the Grantee, its successors or assigns, the Grantor being the owner of said land, minerals and mineral interests excepted, and the Grantee owning the minerals and mining rights therein, said land being located West of the Huntsville Principal Meridian, in Jefferson County, Alabama:

TOWNSHIP 17 SOUTH, RANGE 6 WEST:

Section 36: The South-West quarter of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 5 WEST:

Section 6: The North-West quarter of North-West quarter; the South-West quarter; and the West half of South-East quarter;

Section 7: The East half of South-West quarter;

Section 8: The South-West quarter of North-East quarter;

Section 18: The North half of North-East quarter; the South-West quarter of North-East quarter; the West half of North-West quarter; the North-West quarter of South-East quarter; that part of the North half of South-West quarter lying west of the center line of Rock Creek; and that part of South-East quarter of South-West quarter lying west of the center line of Rock Creek;

TOWNSHIP 18 SOUTH, RANGE 5 WEST (CONTINUED):

Section 19: That part of the South-East quarter of North-East quarter lying east of a line parallel with and 67.0 feet east of the west boundary of said quarter-quarter section;

Section 28: The North half of North-West quarter;

Section 30: The South-East quarter of South-West quarter; and the South half of South-East quarter;

TOWNSHIP 18 SOUTH, RANGE 6 WEST:

Section 2: The North-East quarter;

Section 4: The South-East quarter of North-East quarter; the North-East quarter of South-West quarter; and the North-West quarter of South-East quarter;

Section 6: The North half of North-East quarter;

Section 12: The North half of North-West quarter; and the North-West quarter of South-West quarter;

Section 13: The South half of North-East quarter; the South-East quarter of North-West quarter; the North half of South-East quarter; and the South-West quarter of South-East quarter;

Section 24: The North-West quarter of North-East quarter;

Section 30: The East half of North-East quarter;

Section 32: The West half of North-West quarter; and the South-East quarter of North-West quarter;

TOWNSHIP 18 SOUTH, RANGE 7 WEST:

Section 11: The South-West quarter of South-East quarter;

Section 13: The West half of North-East quarter; and the East half of North-West quarter;

Section 14: The North-West quarter of North-East quarter; and the East half of North-West quarter;

This instrument shall constitute a covenant running with said land and all improvements and sources of water supply now or hereafter located thereupon and shall be binding upon the future as well as the present owner thereof, and, in addition to releasing the Grantee, its agents and employees, as aforesaid, the Grantor, for aforesaid considerations, does hereby grant unto the Grantee, its successors or assigns, the easement and right to mine and recover all coal and other minerals in said land in the future without any obligation to leave or provide any supports for the surface of said land or for the improvements thereon and also without any liability for damages as the result of robbing or removing the pillars or failure to leave supports for the surface, and also the right to maintain and operate underground haulageways as well as drainage

systems and mining operations under and through said land to and from other lands. And the Grantor, for the considerations hereinbefore expressed, does hereby grant unto the Grantee the right to enter upon said land from time to time to fill cracks, fissures or other openings in the surface of the land in order to prevent influx of water into mines of the Grantee or to prevent damage to said mines in any manner whatsoever.

IN ADDITION, and for aforesaid consideration, Grantor, to the extent of its interest, does hereby remise, release, quitclaim, convey, assign, and transfer unto the Grantee, the right, title, and interest of Grantor in the lands described in the following deeds, together with the releases reserved by the Grantor in said deeds:

(a) Warranty deed, dated April 28, 1950, by which the Woodward Iron Company conveyed to Jack Howton the North half of South-West quarter of Section 36, Township 17 South, Range 6 West, Jefferson County, Alabama, minerals and mining rights excepted, said deed being recorded in Volume 440, Page 180, in the Office of Judge of Probate, Jefferson County, Alabama, Bessemer Division;

(b) Warranty deed, dated March 22, 1943, by which the Woodward Iron Company conveyed to A. R. Patton the West half of North-East quarter of Section 20, Township 18 South, Range 5 West, Jefferson County, Alabama, minerals and mining rights excepted, said deed being recorded in Volume 281, Page 404, in the Office of Judge of Probate, Jefferson County, Alabama, Bessemer Division.

TO HAVE AND TO HOLD unto the said Grantee, its successors and assigns, forever.

The term "Grantee" as used herein includes the Grantee and its successors and assigns.

IN WITNESS WHEREOF, the Woodward Iron Company has caused these presents to be executed in its name and behalf and its corporate seal to be hereunto affixed and attested by its officers thereunto duly authorized this, the 29th day of September, 1955.

WOODWARD IRON COMPANY

By John E Urquhart
President.

ATTEST:
Secretary

MTG 659 PAGE 379

STATE OF ALABAMA

COUNTY OF JEFFERSON

I, H. Louise McEnery, a Notary Public in and for said County in said State, hereby certify that John E. Urquhart, whose name as President of the Woodward Iron Company, a corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 29th day of September, 1955.

H. Louise McEnery
Notary Public

Notary Public, Jefferson County, Alabama
My commission expires Mar. 18, 1958
Bonded by American Surety Co. of N. Y.

STATE OF ALABAMA JEFFERSON CO.
I HEREBY CERTIFY THIS INSTRUMENT WAS FILED ON
MTG 659 PAGE 376
OCT 4 9 39 AM '55

MTG. TAX
DEED TAX HAS BEEN PAID ON THIS INSTRUMENT.

Judge of Probate

ENG. FILE

U.S. Steel Mining Co., Inc.
8800 Oak Grove Mine Road
Adger, AL 35006

Southern Division

October 5, 1994

Mr. Michael W. Yarbrough
Staff Land & Title Agent
Southern Natural Gas Company
P. O. Box 2563
Birmingham, Alabama 35202-2563

Re: Right of Entry Agreement for Temporary Work Space

Dear Mr. Yarbrough:

In response to your request, U. S. Steel Mining Co., Inc. (hereinafter referred to as "USM") hereby grants Southern Natural Gas Company (hereinafter referred to as "Licensee") the right and license to enter USM property located in the Southeast 1/4 of the Southwest 1/4 of Section 20, and the Northeast 1/4 of the Northwest 1/4 of Section 29, all in Township 18 South, Range 5 West of the Huntsville Principal Meridian, Jefferson County, Alabama.

This Agreement is made for the purpose of performing certain activities more specifically described as follows:

Licensee shall be engaged in the excavation of its Bessemer-Calera Branch natural gas pipeline between station 60+10 and 70+80 in Jefferson County, Alabama, as shown on the attached drawing marked **"EXHIBIT A"**, attached hereto and made a part hereof. The areas shown in green on Exhibit A define the "Premises" as referred to in this Agreement. The boundary of the Premises shall extend fifteen (15) feet on the south side of Licensee's existing right-of-way between said stations as shown on Page 2 of Exhibit A. The activities will be performed at no cost or expense to USM, and said entry and activities on the Premises by Licensee is permitted hereunder on the following terms and conditions:

1) All persons entering upon the Premises pursuant to this Agreement do so at their own risk, and USM and USX Corporation (hereinafter referred to as "USX") shall not be liable for any injury to persons (including death) or for damages to property in any way arising out of or resulting from Licensee's activities hereunder.

2) The rights herein granted are subject to existing easements (recorded and unrecorded) for railroads, transmission lines, telephone lines, pipelines, and leases now in effect.

3) Licensee shall, to the extent allowed by law, defend, indemnify, and hold USM and USX harmless against all damages, losses, claims, suits, demands, judgments, decrees, costs, and expenses, including attorneys' fees and other legal costs, including but not limited to, damages paid under any Worker's Compensation Act or similar Act or law incurred by or imposed upon USX or USM, or the Premises, arising from any entry upon or activity conducted on the Premises by Licensee or its employees, agents, contractors, or subcontractors.

4) Without limiting the foregoing, Licensee shall not suffer or permit any mechanics' or materialmen's liens to be filed against the Premises by reason of any work, labor, services, materials, or equipment supplied or claimed to have been supplied to Licensee or any contractor or subcontractor of Licensee. If any mechanics' or materialmen's lien is filed against the Premises, then Licensee shall promptly, after notice of filing, either (i) cause the same to be discharged of record by deposit in court or by the issuance of a bond; or (ii) furnish USX and USM with indemnification or other security against loss or damage arising from the lien in form and substance satisfactory to USX and USM. If Licensee learns of any claim or action pertaining to such mechanics' or materialmen's liens with respect to the Premises, Licensee shall give prompt notice of the same to USX and USM.

5) Licensee shall at all times during the term of this Agreement maintain in full force and effect Worker's Compensation Insurance coverage. In addition, Licensee and/or its contractors and subcontractors shall maintain in full force and effect Comprehensive General Liability Insurance coverage for bodily injury, including death, and property damage in an amount not less than One Million Dollars ($1,000,000.00) per occurrence. This policy shall cover, among other risks, the contractual liability of Licensee assumed under the indemnification provision of this Agreement. Furthermore, Licensee shall have Automobile Liability Insurance coverage, with limits of liability not less than One Million Dollars ($1,000,000.00) combined single limit for bodily injury and property damage claims. In addition, Licensee and/or its contractors and subcontractors shall maintain in full force and effect excess General Liability Insurance coverage in an amount not less than Two Million Dollars ($2,000,000.00) in excess of the policy limits set forth above. USX and USM shall be named as additional insureds under such policies.

Licensee and/or its contractors and subcontractors shall furnish USX and USM with appropriate Certificates of Insurance upon the execution of this Agreement and upon any future date on which said insurance policies are renewed or amended. The requirement of insurance in this Paragraph does not in any way release Licensee of its further responsibility and liability of indemnification of USX and USM under this Agreement.

6) The requirement of insurance provided in Paragraph 5 shall, at USX's and USM's discretion, be waived upon USX's and USM's receipt of written verification from Licensee that it is self-insured.

7) The rights granted under this Agreement may not be transferred or assigned to others by Licensee without the prior written consent of USM.

8) USX and USM shall have the right to enter the Premises at any time for any purpose whatsoever and shall have the right to grant such rights to others.

9) Licensee shall strictly comply with all applicable laws, rules, regulations, and ordinances of all local, state, and federal governmental agencies. All permits required for Licensee's activities hereunder shall be the responsibility of Licensee. Licensee shall be responsible for any erosion control measures that may be reasonably required on the Premises by USM or required pursuant to the order of any governmental agency having jurisdiction over Licensee's activities.

10) This Agreement shall expire at midnight on November 30, 1994. USM reserves the right to cancel this Agreement at any time upon written notice to Licensee.

11) Licensee shall leave the Premises in a condition satisfactory to USM and shall be required to perform any clean up or other remedial work that may be reasonably required by USM as a result of Licensee's activities hereunder.

Enclosed herewith are duplicate originals of this Agreement. Please have all Agreements executed in the spaces provided below and returning one original of this Agreement to this office.

Sincerely,

R. E. Osborne

R. E. Osborne
General Manager-Southern Coal Division,
U. S. Steel Mining Co., Inc.

APPROVED:
AS TO FORM
LAW DEPT.

AGREED TO AND ACCEPTED by Southern Natural Gas Company this 13TH day of OCTOBER, 1994.

ATTEST:

By: Michael W. Yarbrough

Print Name: MICHAEL W. YARBROUGH

Title: STAFF LAND & TITLE AGENT

By: R David Hendrickson

Print Name: R David Hendrickson

Title: Secretary

Mailing Address:

Southern Natural Gas Company
P.O. Box 2563
Birmingham, Alabama 35202-2563

U.S. MINING CORPORATION

MIM

SECTIONS 20 & 29 T18S R5W

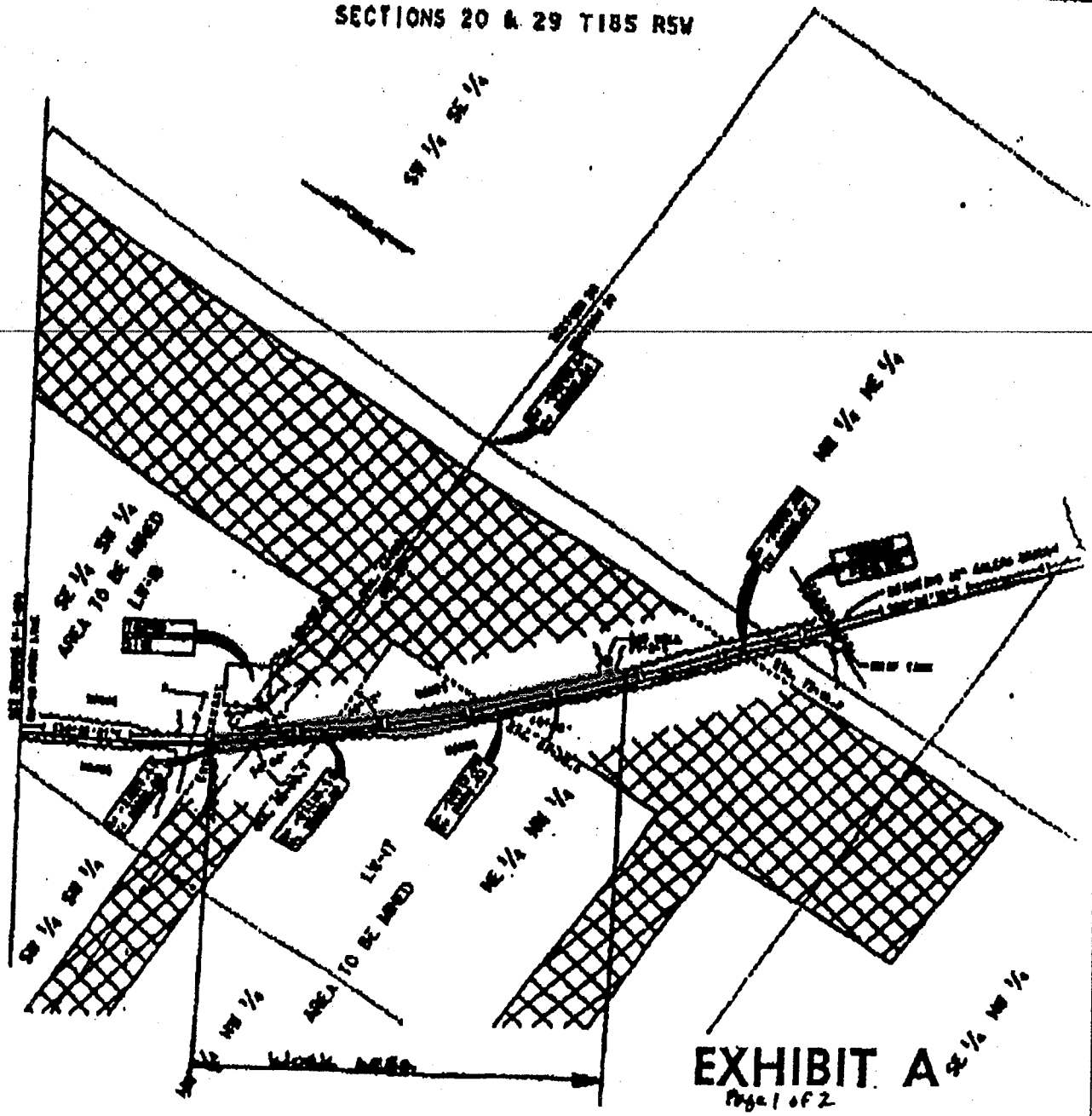


EXHIBIT A

Page 1 of 2

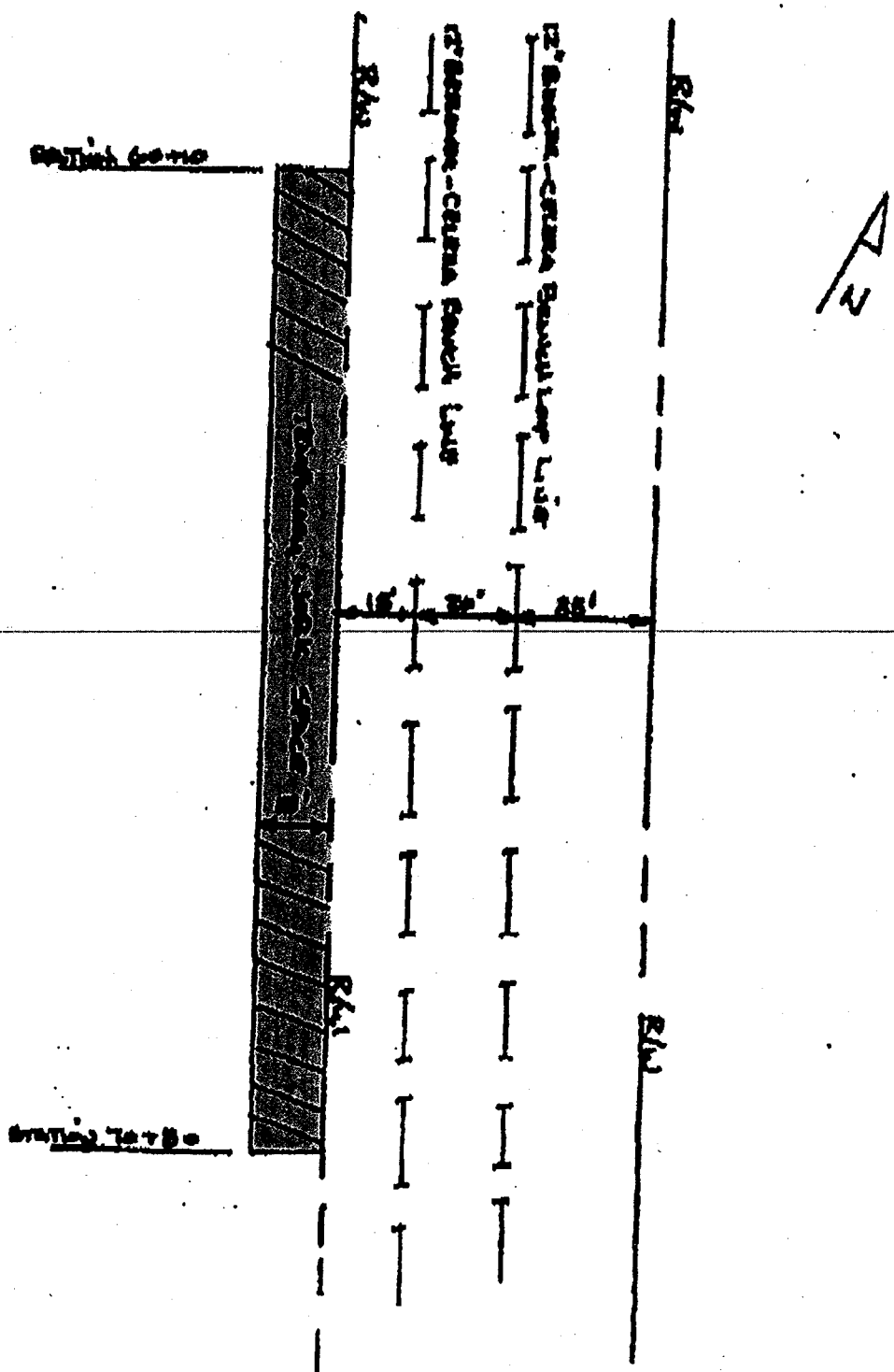


EXHIBIT A
Page 2 of 2

OA-3123-B.

(also indexed as OA-4085-B)

CONTRACT

UNITED STATES STEEL CORPORATION

and

SOUTHERN NATURAL GAS COMPANY

Agreement whereby United States Steel Corporation agrees to relinquish right to mine and remove coal in certain pillars in Short Creek Mine under Southern Natural Gas Company's pipe lines in Secs. 14, 15, 22, and 23, Tp. 17 S., R. 5 W., Jefferson County, Ala.

DATED: April 23, 1959

FILES: 5380 and 7013

Tennessee Coal & Iron

Division

United States Steel Corporation

General Offices Fairfield, Ala.

April 23, 1959

Southern Natural Gas Company
Watts Building
Birmingham, Alabama

Gentlemen:

I am advised that you are interested in making arrangements for us to leave certain coal pillars, in our Short Creek Mine and under your gas pipe lines, in place as a protective measure.

The location of your pipe lines with reference to the pillars which would be left in place are as indicated on the attached map.

We place a value of $18,900 on such pillars and would be aggreable to relinquishing our right to mine same for that price.

It would be our intention to execute an instrument in a mutually agreeable form relinquishing our right to mine and remove coal in the area containing these pillars, as indicated on the attached map, which would be described by metes and bounds.

It should be clearly understood that the leaving of coal pillars under the pipe lines as you are requesting is not a guarantee on our part in any way that this action would prevent damage to your pipe lines. You should recognize that settlement as a result of mining already done in the vicinity of your lines could still occur. Also, experience has shown that skipping over certain pillars along the line of mining progress and picking up mining again at what good engineering judgment dictates as a normally safe distance, does on occasions result in what are known as squeezes in the area where the pillars are left. Such eventualities are beyond our control and you will be accepting such risks in acquiring the coal pillars in question.

This letter is written in duplicate and if the foregoing suggested procedure meets with your approval, please so indicate by

Tennessee Coal & Iron
Division
United States Steel Corporation

signature in the space provided below and return one copy of this letter to me which shall then constitute an agreement between us as to leaving the coal in place.

Mining operations in the area in question were suspended on the afternoon of the day on which you advised us of your desire to purchase the coal and we would therefore appreciate a prompt reply in the matter.

Yours very truly,

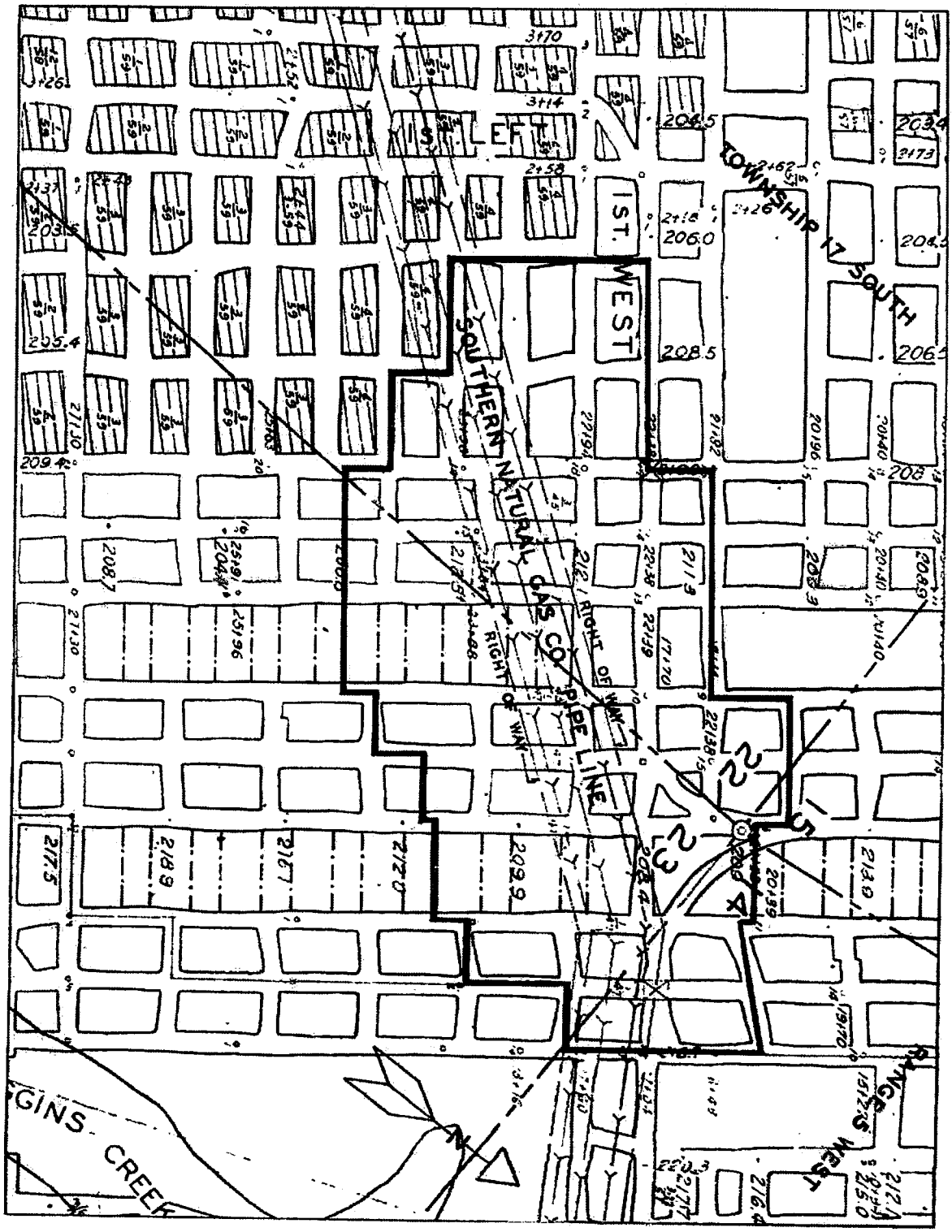
UNITED STATES STEEL CORPORATION

By _____
President,
Tennessee Coal & Iron Division.

ACCEPTED:

SOUTHERN NATURAL GAS COMPANY

By _____
Pres



Reserved Area for Protection of Pipe Line

Scale: 1" = 100'

April, 1959

This instrument was prepared by
and upon recording should be returned to:

Charles A. J. Beavers, Jr., Esq.
Bradley Arant Boult Cummings LLP
One Federal Place
1819 Fifth Avenue North
Birmingham, AL 35203-2119

20130910000994020 1/5
Bk: LR201318 Pg:416
Jefferson County,Alabama
I certify this instrument filed on:
09/10/2013 03:26:37 PM AS
Judge of Probate- Alan L. King

STATE OF ALABAMA)
COUNTY OF JEFFERSON)

ASSIGNMENT AND CONSOLIDATION OF RESERVED SUBSIDENCE INTERESTS, INDEMNITY AND WAIVER OF DAMAGES

THIS ASSIGNMENT AND CONSOLIDATION OF RESERVED SUBSIDENCE INTERESTS, INDEMNITY AND WAIVER OF DAMAGES ("Assignment") is entered into this the 5th day of September, 2013, by **UNITED STATES STEEL CORPORATION**, a Delaware corporation, including all of its affiliates, subsidiaries, parent companies, predecessors, successors, and assigns, including but not limited to Tennessee Land Company, Tennessee Coal, Iron and Railroad Company, Woodward Iron Company, USX Corporation, United States Steel, LLC, U.S. Steel Mining Co., Inc, and U.S. Steel Mining Company, LLC (collectively "USS"), for the benefit of **OAK GROVE LAND COMPANY, LLC**, a Delaware limited liability company, including all of its affiliates, subsidiaries, parent companies, predecessors, successors, and assigns, and **OAK GROVE RESOURCES, LLC**, a Delaware limited liability company, including all of its affiliates, subsidiaries, parent companies, predecessors, successors and assigns, or each of them (collectively "Oak Grove").

RECITALS

Beginning in approximately 1929, including by way of example only, the agreement between the Tennessee Coal, Iron and Railroad Company, the Tennessee Land Company and Southern Natural Gas Corporation (unrecorded), dated August 1, 1929, USS and its predecessors executed several instruments that granted to Southern Natural Gas Corporation and its successors and assigns the right to construct, operate, and maintain one or more pipelines ("Pipeline Instruments") on property owned by USS located in several Sections of Township 18 South, Range 6 West of the Huntsville Meridian, Township 17 South, Range 6 West of the Huntsville Meridian, and Township 17 South, Range 5 West, of the Huntsville Meridian, all in Jefferson County, Alabama, and as described in detail in one or more of the Pipeline Instruments. Additional examples of the Pipeline Instruments are identified on **EXHIBIT A** attached hereto and made a part hereof.

In exchange for permitting the pipelines to be constructed, operated, and maintained, USS reserved in the Pipeline Instruments certain rights and interests with respect to the pipelines, including but not limited to the right of future coal mining operations by the successors and assigns of USS to mine and remove all coal without leaving support for the surface.

Southern Natural Gas Corporation and its successors and assigns further covenanted, promised, and agreed in the Pipeline Instruments to, among other things, waive and release USS from any damage to the pipelines and further to indemnify, protect, and hold harmless USS from any cost it might sustain as a result of coal mining, including any failure to leave support for the surface ("Reserved Subsidence

Interests"). An example in the Pipeline Instruments of the Reserved Subsidence Interests includes, but is not limited, to:

> "The Tennessee Company shall not be held liable for any claims for damage which may accrue on account of the construction, operation or maintenance of said pipe lines and/or telephone or telegraph lines on the land of the Tennessee Company; the Tennessee Company shall not be liable on account of damage to said pipe lines and/or said telephone or telegraph lines accruing from past or future mining or removal coal, iron ore or other minerals contained in the aforesaid land or from failure to leave adequate support for the surface of said land, but hereafter will give reasonable notice to the Gas Corporation of any unusual operation likely to endanger its lines; and the Gas Corporation shall indemnify, protect and save harmless the Tennessee Company from all loss, damage, cost or expense which the Tennessee Company may sustain on account of the construction, operation, maintenance or removal of said pipe lines and/or telephone or telegraph lines upon said land and on account of claims for damage by others by reason of the construction, operation, maintenance or removal by the Gas Corporation of said pipe lines and/or telephone or telegraph lines upon said land."
>
> ....
>
> "In the event the Gas Corporation violates any of the covenants herein contained and fails for sixty (60) days after notice in writing served upon it by the Tennessee Company to comply with such covenant or covenants, the Tennessee Company shall have the right to terminate this agreement by giving the Gas Corporation six (6) months' notice in writing of its intention so to do whereupon at the expiration of said six (6) months this agreement shall be deemed terminated and at an end; and the Tennessee Company may thereafter remove said pipe lines and/or telephone or telegraph lines from said land should they remain thereon without right for exceeding ninety (90) days, but such removal shall be at the expense of the Gas Corporation."

By various conveyances, including certain deeds and leases, Oak Grove is the successor in interest to USS with respect to all of the coal, the right to mine the coal, and the Reserved Subsidence Interests as owned or retained by USS with respect to the property described in the Pipeline Instruments.

In order to consolidate and affirm of record the rights of Oak Grove to the Reserved Subsidence Interests, USS has determined to grant, convey, assign, and transfer unto Oak Grove the Reserved Subsidence Interests in those certain portions of the Sections of Township 18 South, Range 6 West of the Huntsville Meridian, Township 17 South, Range 6 West of the Huntsville Meridian, and Township 17 South, Range 5 West of the Huntsville Meridian, all in Jefferson County, Alabama, through which one or more of the pipelines was constructed, operated, or maintained by Southern Natural Gas Corporation and its successors and assigns pursuant to one or more of the Pipeline Instruments.

NOW, THEREFORE, in consideration of the foregoing recitals, Ten Dollars ($10), and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the undersigned, USS, does hereby grant, convey, assign, and transfer unto Oak Grove a non-exclusive right to all of the Reserved Subsidence Interests in those certain portions of the Sections of Township 18 South, Range 6 West of the Huntsville Meridian, Township 17 South, Range 6 West of the Huntsville Meridian, and Township 17 South, Range 5 West of the Huntsville Meridian, all in Jefferson County, Alabama, through which one or more of the pipelines was constructed, operated, or maintained by Southern Natural Gas Corporation and its successors and assigns pursuant to one or more of the Pipeline Instruments.

USS does hereby further grant, convey, assign, and transfer unto Oak Grove the non-exclusive right to the benefit of all of USS's rights to the waiver of and release from subsidence liability and indemnity rights agreed to by Southern Natural Gas Corporation and its successors and assigns pursuant to one or more of the Pipeline Instruments under any and all conveyances, representations, and instruments or agreements of any kind and nature applicable to Oak Grove's coal mining activities and interests.

Oak Grove shall have the right to assign the Reserved Subsidence Interests to any party to whom Oak Grove might lease, transfer, convey, or otherwise assign its coal interests or the right to mine said coal.

Notwithstanding anything to the contrary contained in this Assignment, the terms of this Assignment shall in no way be construed to grant, convey, assign, and transfer unto Oak Grove USS's right to relocate the pipelines as set forth in the Pipeline Instruments.

Notwithstanding anything to the contrary contained in this Assignment, the terms of this Assignment shall in no way be construed to limit, restrict, terminate, merge, invalidate, or otherwise diminish any rights or benefits that USS or Oak Grove (or any of their affiliated or related entities or their successors and assigns) have or may have under, arising out of, or as a result of, any written agreements between USS and Oak Grove (or any of their affiliated or related entities, or their successors or assigns) that relate to the interests that are the subject of this Assignment or Oak Grove's rights with respect thereto.

TO HAVE AND TO HOLD unto Oak Grove, its successor and assigns, forever.

(Remainder of page intentionally left blank. See following page for signatures.)

IN WITNESS WHEREOF, USS has caused this Assignment to be executed in its name and behalf and its seal to be hereunto affixed and attested by its officers or representatives thereunto duly authorized, this the 5th day of September, 2013.

ATTEST:

By: _____

Title: Assistant Secretary

UNITED STATES STEEL CORPORATION

By: _____

Title: PRESIDENT

USS Real Estate, a division of
United States Steel Corporation

APPROVED AS TO FORM LAW DEPT.

Commonwealth ~~STATE~~ OF Pennsylvania)

COUNTY OF Allegheny)

I, Carolyn Grace Potanko a Notary Public in and for said County, in said State, hereby certify that George A. Manos, whose name as President of USS Real Estate, a division of **United States Steel Corporation**, a Delaware corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, in such capacity and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 5th day of September, 2013.

Carolyn Grace Potanko
Notary Public

[SEAL]

NOTARIAL SEAL
CAROLYN GRACE POTANKO, Notary Public
Pittsburgh, Allegheny County
My Commission Expires March 2, 2017

My Commission Expires: March 2, 2017

EXHIBIT A

The Pipeline Instruments include, but may not necessarily be limited to, the following:

Agreement between Tennessee Coal, Iron and Railroad Company and Tennessee Land Company, (collectively the "Tennessee Company") and Southern Natural Gas Corporation (unrecorded) dated August 1, 1929.

Agreement between Tennessee Coal, Iron and Railroad Company and Southern Natural Gas Corporation, recorded in Volume 2368, Page 102 (Birmingham Division) dated December 19, 1930.

Agreement between Woodward Iron Company and Southern Natural Gas Corporation, recorded in Volume 2368, Page 72 (Birmingham Division) dated May 2, 1931.

Supplemental Agreement between Woodward Iron Company and Southern Natural Gas Company, recorded in Deed Volume 4157, Page 279 (Birmingham Division) dated July 20, 1948.

Contract between Tennessee Coal, Iron and Railroad Company and Southern Natural Gas Company, recorded in Deed Volume 372, Page 66 (Bessemer Division) dated July 27, 1948.

Contract between United States Steel Company and Southern Natural Gas Company, recorded in Deed Volume 4971, Page 348 (Birmingham Division) dated October 17, 1952.

Supplemental Agreement between Woodward Iron Company and Southern Natural Gas Company, recorded in Deed Volume 4990, Page 285 (Birmingham, Division) dated January 14, 1953.

Contract between United States Steel Corporation and Southern Natural Gas Company, recorded in Real 361, Page 28 (Bessemer Division) dated September 12, 1977.

20130910000994020 5/5
Bk: LR201318 Pg:416
Jefferson County, Alabama
09/10/2013 03:26:37 PM AS
Fee - $28.00

Total of Fees and Taxes-$28.00
HATCHERK

(42)
121.00

Upon recording this instrument should be returned to:

Warrior River Water Autho
22805 Bucksville Road
McCalla, Alabama 35111
Attention: Greylan Glaze

20120323000294160 1/42
Bk: LR201261 Pg:125
Jefferson County,Alabama
I certify this instrument filed on
03/23/2012 11:42:54 AM D
Judge of Probate- Alan L. King

This instrument was prepared by:

Michael M. Partain, Esq., General Attorney
United States Steel Corporation
Law Department - Hoover Office
610 Preserve Parkway, Suite 200
Hoover, Alabama 35226

STATE OF ALABAMA)
COUNTY OF JEFFERSON)

WATER PIPELINE EASEMENT AGREEMENT

THIS AGREEMENT, entered into this 21st day of March, 2012, by and between **UNITED STATES STEEL CORPORATION**, a Delaware corporation, hereinafter referred to as "USS", and **WARRIOR RIVER WATER AUTHORITY**, an Alabama corporation hereinafter referred to as "Grantee", and for the benefit of Oak Grove Land Company, LLC, a Delaware limited liability company (hereinafter referred to as "OGLC") and the Owner Parties, as hereinafter defined and identified.

WITNESSETH:

WHEREAS, USS is the owner of a portion of the surface of the lands described herein; and

WHEREAS, OGLC has certain rights and interests in the surface of the lands described herein, which are appurtent to and serve OGLC's interest in the surface of other lands owned by OGLC in the immediate area of the lands described herein, and which are also appurtenant to the mining of the coal under the surface of said lands; and

WHEREAS, RGGS Land & Minerals, Ltd., L.P., a Delaware limited partnership, hereinafter referred to as "RGGS", is the owner of the minerals and mining rights in and to a portion of said lands owned by USS, including certain rights to use the surface of said lands owned by USS; and

WHEREAS, WPP LLC, a Delaware limited liability company, hereinafter referred to as "WPP", is the owner of the minerals and mining rights in and to a portion of said lands, including certain rights with regard to the surface of said lands; and

WHEREAS, Oak Grove Resources, LLC, a Delaware limited liability company, hereinafter referred to as "OGR", is the lessee of the minerals and mining rights owned by WPP in and to a portion of said lands, and OGLC is the lessee of the minerals and mining rights owned by RGGS in and to a portion of said lands, together with certain rights in and to the surface of the lands described herein; and

WHEREAS, SWF Birmingham, LLC, a Delaware limited liability company, hereinafter referred to as "SWF" is the owner of the timber rights in and to the Premises; and

WHEREAS, Energen Resources Corporation, an Alabama corporation, hereinafter referred to as "ERC", is the lessee of certain coal seam gas rights owned by RGGS; and

WHEREAS, Grantee is willing to release and indemnify USS, OGLC, RGGS, WPP, OGR, ERC, and SWF, hereinafter referred to collectively as the "Owner Parties" for the purpose of protecting their

23

respective mineral and mining rights, including said surface and timber rights, as a condition to the grant of the easement and a bargained for exchange for the grant of the easement; and

WHEREAS, USS is willing to convey the following described easement as requested by Grantee, subject to the rights and interests of the Owner Parties and the conditions set forth in this Agreement.

(1) GRANT OF EASEMENT / PREMISES / USE

(a) USS in consideration of the covenants of Grantee as hereinafter expressed to be kept and performed, grants to Grantee a non-exclusive easement for a right-of-way of varying widths on, over, under, and across the surface of certain lands owned by USS for a twenty four (24) inch diameter water pipeline and a six (6) inch diameter water pipeline (collectively referred to herein as the "pipeline") with appurtenant facilities thereto, which right-of-way shall be used by Grantee for the construction, installation, maintenance, use, operation, and removal of said pipeline for the purpose of transporting water, and for no other uses or purposes whatsoever without the prior written consent of USS and OGLC, which consent may be withheld at the sole discretion of USS and OGLC, the lands of USS being depicted in crosshatch on the overall map marked **EXHIBIT A** and being depicted in greater detail in crosshatch on the cumulative drawings marked **EXHIBITS A-1** through **A-18** attached hereto and made a part hereof (the "Premises"). Grantee acknowledges and agrees that the Premises do not include any lands of USS except those lands which are within the limited area of the path of the pipeline and the width thereof, which are to be shown in the as-built survey referenced in Section 1 (c) below and which are subject to approval by USS, Oak Grove, and SWF.

(b) Notwithstanding Section (1) (a), USS agrees that it shall not grant to any third parties the right to install and operate a water pipeline on the Premises.

(c) Grantee agrees to provide, at its expense, a centerline "as-built" survey drawing and a metes and bounds legal description of the pipeline installed on the Premises hereunder, which shall be tied to a Section corner or a permanent land tie. Said centerline survey and legal description shall be prepared by a licensed engineer and shall be in a form acceptable to USS, OGLC, and SWF and shall be provided within thirty (30) days after the pipeline has been installed. The parties agree to execute and deliver an amendment of this Agreement for the purpose of adding the final survey and metes and bounds legal description of the Premises to this Agreement.

(d) Grantee agrees to pay USS and SWF for the taking of their respective interests, and, notwithstanding Section 24 of this Agreement, such payment shall be made as specifically provided for in the document entitled "Memorialization of Settlement Negotiations as of 12/13/11" by and between Grantee, USS, and SWF, and dated December 13, 2011.

(2) ABANDONMENT

This Agreement shall terminate in the event that Grantee abandons the use of the Premises for the purposes stated herein during a continuous period of twelve (12) months, after which all rights granted shall revert automatically to USS and its successors and assigns.

(3) CONDITION OF PREMISES

(a) As a condition of this Agreement, Grantee acknowledges that the physical and environmental condition of the Premises has been inspected by Grantee or its duly authorized agent and that the Premises are accepted by Grantee as a result of such inspection and not upon any agreement, representation, or warranty made by USS and OGLC. Grantee accepts the physical condition of the Premises **"AS IS, WHERE IS, WITH ALL FAULTS"** and hereby releases USS, OGLC, and the Owner Parties, its/their successors and assigns, from any liability of any nature arising from or in connection with the

physical or environmental condition of the Premises. This Section shall survive the expiration or termination of this Agreement, and is specifically intended to apply to discovery of any events or circumstances that occurred during the term or any extension of this Agreement whenever discovered.

(b) Grantee acknowledges and agrees that the conveyance of this easement is made upon the covenant and condition that no right of action for damages on account of injuries to the pipeline, or to any occupants or other persons in or upon the Premises or other lands, resulting from the present, past, or future mining subsidence and/or gas or oil producing operations of the Owner Parties, or their successors, assigns, lessees, licensees, contractors, and agents, or resulting from the present, past, or future blasting, dewatering, or the present, past, or future removal of coal, iron ore, gas, oil, methane, hydrocarbons, occluded natural gas, coal bed methane gas, gob gas, limestone and all other minerals and non-mineral substances, including water associated with the production of coal bed methane gas, or coal seam or other roof supports by the Owner Parties, or their successors, assigns, lessees, licensees, contractors, and agents, whether the present, past, or future mining subsidence and/or gas or oil producing operations be in the Premises or other lands, shall ever accrue to or be asserted by Grantee or by Grantee's successors and assigns, this conveyance being made expressly subject to all such injuries, either past or future, and this condition shall constitute a covenant running with the land as against Grantee and its successors and assigns.

(4) **ACCESS**

USS further grants and conveys to Grantee such rights of ingress and egress over other land of USS as may be reasonably necessary on a temporary basis for the installation, maintenance, use, and removal of said pipeline on the Premises. USS and OGLC reserve the right, if they so desire, to designate or change from time to time the route or routes of such ingress and egress.

(5) **ENCUMBRANCES**

The rights granted herein to Grantee shall not be construed to be superior to but are subject to and subordinate to all contracts, leases, rights-of-way, and easements that exist over and on the Premises on the day and year first above written, and to the rights and interests of the Owner Parties.

(6) **INTERFERENCE / CROSSING RIGHTS**

Grantee, in the exercise of the rights herein granted, shall cause no unreasonable interference with the operations of the Owner Parties and their successors and assigns. USS, OGLC and the Owner Parties reserve the right to install, maintain, use, and remove on, under, over, and across the Premises such driveways, pathways, trails, bridges, roads, railroads, pipelines, wires, or cables and other improvements of any description needed by USS, OGLC and the Owner Parties including the right to grant such rights to others, upon condition, however, that (i) the exercise of any of said rights by USS, OGLC and the Owner Parties or other parties shall cause no unreasonable interference with Grantee's use of the Premises, except as provided in Section 14 of this Agreement, and (ii) any rights granted to others after the date hereof shall be subject to the rights granted to Grantee hereunder.

(7) **ENVIRONMENTAL**

(a) If, during Grantee's occupancy of the Premises, Grantee discharges, spills, or otherwise causes any other form of environmental contamination to occur on the Premises or on any other USS and OGLC lands, Grantee shall immediately notify USS, OGLC, and SWF of the incident and in a timely way that is consistent with governmental response to the discharge or spill, take all appropriate actions to remediate the environmental contamination in compliance with all applicable laws, ordinances, rules, and regulations.

(b) Grantee shall provide USS, OGLC, and SWF with copies of all notices of any environmental violation and inspection reports issued by any government agency within five (5) days of receipt of same by Grantee. Grantee shall, at its expense, correct all violations immediately to comply with the demands of the government agency issuing the notice of violation or inspection report.

(c) Grantee shall ensure that all necessary measures are taken to prevent water produced from said water pipeline operations from being released or discharged onto the Premises.

(d) Grantee warrants that it understands potential hazards associated with the handling, transportation, storage, treatment, processing, and disposal of said water associated with its operations; that it has the requisite expertise for conducting such activities; and that it has obtained or will obtain in a timely fashion all permits, licenses, certificates, or approvals required to comply with applicable statutes, ordinances, orders, rules, and regulations of federal, state, and local governments, including, without limitation:

(i) the Federal Toxic Substances Control Act of 1976;
(ii) the Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Superfund Amendments and Reauthorization Act of 1986;
(iii) the Federal Water Pollution Control Act, as amended 1987;
(iv) the Federal Clean Air Act, as amended 1990;
(v) the Federal Resource Conservation and Recovery Act of 1976;
(vi) the Hazardous Materials Transportation Act; and
(vii) the Best Management Practices of the Alabama Department of Environmental Management.

(8) INDEMNIFICATION / INSURANCE

(a) In consideration for the grant of the easement, Grantee agrees to indemnify, defend, and hold harmless the Owner Parties and their respective successors, assigns, lessees, licensees, contractors, directors, officers, partners, agents, servants, and employees (the "Indemnified Parties") from and against all claims, actions, proceedings, judgments, awards, liability, cost, or expense (including attorneys fees, consultants fees, and other legal costs), for deaths, injuries, losses, or damages to any person or property, or other alleged damage or harm brought by any person, firm, corporation, or governmental entity, in connection with Grantee's or its agents', employees', or contractors' use of the Premises or other lands or in the land, water, air, structures, fixtures, or personal property comprising the Premises or other lands from and after the effective date hereof. In addition to claims supported by other theories of liability, the foregoing indemnification applies to claims for deaths, injuries, damages penalties, cleanup, and restoration costs resulting from contamination of any property, its surface, subsurface or groundwater, soil or air, arising from environmental laws, regulations, or common law of the United States or state or local authorities, including provisions of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. Section 9601, *et seq.*, as amended. However, this indemnification shall not extend to the negligence or willful misconduct of the Indemnified Parties in connection with their respective activities involving the Premises as provided herein. This Section shall survive the expiration or termination of this Agreement, and is specifically intended to apply to discovery of any of the above-described events or circumstances that occurred during the term or any extension of this Agreement whenever discovered.

(b) Grantee further agrees that before it or any of its contractors enter upon the Premises for the purpose of conducting any construction or maintenance activities related to the pipeline, it will cause its contractors to obtain and maintain in full force and effect, under an occurrence policy form in an insurance company or companies satisfactory to USS and OGLC, and possessing an A.M. Best Company rating of A-, Class VII or better, Commercial General Liability insurance for bodily injury, including death, and property damage in a minimum amount of One Million and 00/100 Dollars ($1,000,000.00) per occurrence and Two

Million and 00/100 Dollars ($2,000,000.00) in the aggregate. Grantee agrees to procure and maintain insurance policies in accordance with the terms and provisions outlined in **Attachment "I"** attached hereto and incorporated herein, including without limitation, adding each of the Owner Parties as an Additional Insured; obtaining waiver of subrogation; agreeing to give USS and OGLC sixty (60) days' prior written notice upon policy cancellation or change; and providing subcontractor coverage (if applicable). Grantee further agrees to immediately provide a copy of **Attachment "I"** to its insurance company and/or insurance agent.

(c) In connection with any demands, claims, or any other legal proceedings (whether at law or in equity) covered by this Agreement, the Indemnified Parties retain the right to be represented, at their sole option, by attorneys of their own selection, at their own expense. The exercise of this right to select their own attorneys will in no way detract from or release the Grantee from its obligation to defend, indemnify, and hold harmless the Indemnified Parties. The extent of the Grantee's indemnity obligation shall be limited to the amounts of the insurance coverage provided for in this Agreement.

(9) LIENS

Grantee shall not suffer or permit any tax liens or any mechanics' or materialmen's liens to be filed against the Premises or other USS and OGLC property used by Grantee in connection with this Agreement by reason of any work, labor, services, materials, or equipment supplied or claimed to have been supplied to Grantee or any contractor or subcontractor of Grantee. If any tax liens or any mechanics' or materialmen's lien is filed against the Premises or other USS and OGLC property used by Grantee in connection with this Agreement, then Grantee shall promptly, after notice of filing, either (i) cause the same to be discharged of record by deposit in court or by the issuance of a bond; or (ii) furnish USS and OGLC with indemnification or other security against loss or damage arising from the lien in form and substance satisfactory to USS and OGLC. If Grantee learns of any claim or action pertaining to any tax liens or mechanics' or materialmen's liens with respect to the Premises or other USS and OGLC property used by Grantee in connection with this Agreement, Grantee shall give prompt notice of the same to USS and OGLC.

(10) TAXES

USS shall pay any and all real property ad valorem taxes on the Premises. Grantee shall pay any and all personal property taxes on the pipeline(s) and/or the right-of-way and all structures, improvements, and equipment of every kind that it installs or places on the Premises. Should either party be required by taxing authorities to pay any taxes or charges in the nature of taxes which the other party hereto is obligated to pay, the party owing such taxes shall promptly upon demand reimburse the other party for such taxes and charges, together with any interest and penalties thereon paid by such party.

(11) INSTALLATION / MAINTAINENCE / RESTORATION

Grantee agrees that the pipeline shall be installed at a minimum depth of thirty-six (36) inches below the surface of the Premises, unless USS, OGLC, and SWF require a greater depth pursuant to Section 14 below. The surface of the Premises shall be maintained at all times by Grantee in a condition satisfactory to USS, OGLC, and SWF and in compliance with the Best Management Practices of the Alabama Department of Environmental Management. Upon termination of this Agreement from any cause whatsoever, Grantee may be required, at its expense, to remove any portions of the pipeline and any structures or facilities appurtenant thereto from the Premises that may unreasonably interfere with the respective operations of USS, OGLC, and SWF and to restore the surface of such portions of the Premises affected thereby to a condition reasonably satisfactory to USS, OGLC, and SWF and in compliance with the Best Management Practices of the Alabama Department of Environmental Management. If, upon termination of this Agreement, the Grantee has not removed the pipeline as required hereunder, USS, OGLC, and SWF may, upon written notice to Grantee, declare the pipeline and any structures or facilities appurtenant thereto to be abandoned in

place for all intents and purposes. Furthermore, upon the expiration or termination of this Agreement, and in addition to closing and/or removing said pipeline and related facilities pursuant to appropriate requirements and standards and to the reasonable satisfaction of USS, OGLC, and SWF, including, without limitation, the requirement that said pipeline shall be purged by Grantee, at its expense, prior to abandonment, Grantee shall execute a written declaration, which shall be in recordable form and approved by USS, OGLC, and SWF, acknowledging the abandonment of the pipeline and related facilities.

(12) TERMINATION

Grantee shall have the right to terminate this Agreement at any time upon thirty (30) days written notice to USS and OGLC, whereupon such notice Grantee shall have the right to remove said pipeline and any structures and facilities at its expense and shall restore the surface of said land to a condition reasonably acceptable to USS and OGLC upon the completion of the removal of said pipeline and facilities within one hundred eighty (180) days after said notice (the "Removal Period"). In the event that Grantee shall fail to remove said pipeline and facilities within the Removal Period, then USS and OGLC may declare the pipeline and any structures or facilities appurtenant thereto to be abandoned in place for all intents and purposes.

(13) DEFAULT / FORCE MAJEURE

(a) Subject to the force majeure provisions set forth in Section 13(b) below, in the event that Grantee violates any term, condition, or covenant of this Agreement, and fail for thirty (30) days after receipt from USS and OGLC of written notice thereof to remedy or begin to remedy such violation, USS and OGLC may thereafter terminate this Agreement on written notice delivered to Grantee not less than thirty (30) days prior to the effective date of termination.

(b) This Agreement shall not be terminated or subject to cancellation in whole or in part, nor shall Grantee be held liable in damages for failure of Grantee to carry out its obligations under this Agreement, if such compliance is prevented by, or such failure is the direct result of any act of God, fire, storm, insurrections, rebellion, acts of public enemy, riot, rule, or order of any governmental authority having jurisdiction of the Premises or other causes that Grantee and USS and OGLC agree are beyond the control of Grantee or USS and OGLC (a "Force Majeure Condition"). In the event that a Force Majeure Condition arises, Grantee shall promptly give USS and OGLC written notice of the Force Majeure Condition, which notice shall set forth the full particulars of the cause relied upon. In the event that the parties cannot agree as to whether a Force Majeure Condition exists, the parties agree to submit the issue to adjudication via binding arbitration under the rules of the American Arbitration Association. While Grantee is prevented from complying with its obligations hereunder as the result of such Force Majeure Condition, or pending the arbitration of whether there exists a Force Majeure Condition, the obligations affected by such Force Majeure Condition shall be suspended but such Force Majeure Condition shall, so far as possible, be remedied by due diligence on the part of Grantee.

(c) Grantee shall be liable to USS and OGLC for the reasonable attorney's fees and legal costs incurred by USS and OGLC as a result of a default by Grantee hereunder.

(14) RELOCATION

(a) Notwithstanding the provisions of Section 6 of this Agreement, should the pipeline and related facilities in the location herein described hereinafter unreasonably interfere with the real estate development, mining, quarrying, oil and gas, manufacturing, timber harvesting, or any other operations of USS, OGLC, the Owner Parties, their lessees, licensees, contractors, successors, or assigns, or any of its present or future subsidiary or associate companies, then upon written notice to Grantee, the Owner Parties, or any one or more of them, shall have the right, but not the obligation, at the requesting Owner Party's expense, to modify the pipeline and related facilities and/or remove and relocate (vertically and/or

horizontally) the pipeline and related facilities from said location to other location(s) and/or depth(s), provided: (i) that the requesting Owner Party shall provide to Grantee a copy of the engineering designs and plans for the proposed modification and/or relocation of the pipeline; (ii) that Grantee shall have the right to review and approve the engineering designs and plans and the right to inspect and approve the construction work in connection with such modification and/or relocation of the pipeline, which approval shall not be unreasonably withheld ; (iii) that USS shall first grant to Grantee the same rights in such other locations on USS land as are granted to Grantee hereunder, and (iv) that the other Owner Parties shall have the right to approve the new location of the pipeline in writing, which approval shall not be unreasonably withheld. Grantee agrees that the depth of any vertical relocations of the pipeline and related facilities shall not be limited and shall be in compliance with applicable engineering standards. The interference with such real estate development, mining, quarrying, oil and gas, manufacturing, or any other USS, OGLC or Owner Parties operations by such pipeline and related facilities and the necessity for moving the same, as well as the new location to which they shall be moved, shall be determined in the sole and absolute discretion of USS, OGLC and the Owner Parties reasonably exercised after consultation with Grantee as to reasonable alternative solutions. USS, OGLC, and the Owner Parties each agree to consult with the other parties prior to the event that any party wishes to invoke the relocation provisions contemplated by this paragraph.

(b) Furthermore, notwithstanding the provisions of Section 6 of this Agreement, or any other provisions of this Agreement, the installation and maintenance by Grantee of its water line shall not in any manner interrupt or interfere with the access road or the use thereof, which is owned and maintained by OGLC and located as shown in double cross-hatching on the map marked **EXHIBIT B** attached hereto and made a part hereof. Grantee acknowledges that said access road is crucial to the mining operations of OGLC and agrees that neither Grantee nor any successor, assignee, contractor, employee, or agent of Grantee, shall in any manner disturb, inhibit or restrict the access provided by said access road between lands owned by OGLC and Taylor's Ferry Road.

(15) TIMBER

(a) Subject to Section 15 (b) below, Grantee shall have the right to trim and/or cut such trees located on the Premises as may interfere with the installation or endanger the safety or property maintenance and operation of said pipeline and related facilities.

(b) Grantee acknowledges and agrees that SWF is the owner of the timber rights on the Premises owned and agrees to pay SWF for such timber as specifically provided for in the document entitled "Memorialization of Settlement Negotiations as of 12/13/11" by and between Grantee, USS, and SWF and dated December 13, 2011.

(c) Grantee further acknowledges and agrees that SWF and its contractors, agents, successors, and assigns, shall have the right to cross the Premises with roads and timber harvesting equipment, provided that SWF and Grantee agree upon reasonable locations for such crossings and agree upon reasonable and appropriate protective measures that may be needed to prevent damage to the pipeline caused by such activities. Such protective measures shall be implemented by SWF at its expense.

(16) AGREEMENT NONASSIGNABLE

This Agreement shall not be assigned by Grantee without the prior written consent of USS and OGLC, which consent shall not be unreasonably withheld. Consent to assign shall not be required if such assignment is made to a wholly owned subsidiary of Grantee. Any unauthorized assignment of this Agreement or of any interest in this Agreement shall be considered an event of default by Grantee hereunder and shall be void and of no effect.

(17) COSTS OF ENFORCEMENT

All reasonable costs incurred by USS and OGLC and/or the Indemnified Parties in enforcing the terms of this Agreement against Grantee, including, without limitation, costs of suit and attorneys' fees, and any costs of restoration necessitated by Grantee's violation of the terms of this Agreement shall be borne by Grantee.

(18) BINDING EFFECT

This Agreement shall inure and be binding upon the respective successors and assigns of the parties hereto as well as the parties themselves.

(19) SURVIVAL

All representations, covenants, warranties, and agreements of the parties hereto set forth in this Agreement shall survive the expiration or termination hereof.

(20) AMENDMENT

This Agreement, may be amended, renewed, extended, or terminated only by a written instrument executed on behalf of USS, OGLC, the Owner Parties and Grantee, by an authorized representative of each party, and no party shall at any time in any way assert or contend that any amendment, extension, or termination of this Agreement (or of any part or parts hereof, including this paragraph) has been made other than by written instrument so executed.

(21) COVENANTS

All the provisions of this Agreement, insofar as they are applicable to the parties hereto, shall be taken and construed as the covenants of such party or parties respectively to do or perform the thing or act specified or not to do the act or thing prohibited.

(22) NO WAIVER

No waiver by either party of any breach by the other of any provision of this Agreement shall be deemed or construed to be a waiver of any subsequent or continuing breach of the same or any other provision of this Agreement nor shall any forbearance by either party from the exercise of a remedy for such breach be deemed or construed to be a waiver by such party of any of its rights or remedies with respect to such breach.

(23) PERFORMANCE

Time is of the essence with respect to the performance of all the terms, conditions, and covenants of this Agreement.

(24) ENTIRE AGREEMENT

This Agreement constitutes and contains the entire and only agreement between the parties and supersedes and cancels any and all pre-existing agreements and understandings between the parties or any of them relating to the subject matter hereof. Any and all prior and contemporaneous negotiations and preliminary drafts and prior versions of this Agreement, whether signed or unsigned, between the parties or any of them leading up to its execution shall not be used by either party to construe the terms or affect the

validity of this Agreement. No representation, inducement, promise, understanding, condition, or warranty not set forth herein has been made or relied on by either party.

(25) **THIRD PARTIES**

The parties do not intend to nor do they create any rights in any third party or person not a signatory to this Agreement, other than OGLC and the other Owner Parties.

(26) **COMPLIANCE**

The parties shall at all times with respect to performance of this Agreement comply with all statutes, laws, ordinances, rules, regulations, and orders of all federal, state, and municipal governmental, judicial, and administrative agencies or entities.

(27) **GOVERNING LAW**

This Agreement shall be governed and performed in accordance with the law of the State of Alabama.

(28) **NOTICES**

All notices that may at any time be required to be given hereunder shall be deemed to have been properly given if sent by registered or certified mail, postage prepaid, addressed as follows:

if sent to USS, as follows:

General Manager - Southeast
USS Real Estate
United States Steel Corporation
610 Preserve Parkway, Suite 200
Hoover, Alabama 35226

with copies to:

General Attorney
United States Steel Corporation
Law Department - Hoover Office
610 Preserve Parkway, Suite 200
Hoover, Alabama 35226

If sent to RGGS, as follows:

RGGS Land & Minerals, Ltd., L.P.
2000 Highway 33
Pelham, Alabama 35124
Attention: William F. Lawrence

with copies to:

RGGS Land & Minerals, Ltd., L.P.
100 Waugh Drive, Suite 400
Houston, Texas 77007
Attention: Dan Clark

or if sent to OGLC, as follows:

Oak Grove Land Company, LLC
8800 Oak Grove Mine Road

Adger, Alabama 35006
Attention: Scott Crafton

with copies to:

Cliffs Natural Resources, Inc.
1100 Superior Avenue
Suite 1500
Cleveland, Ohio 44114-2518
Attention: Michele Smolin, Esq.

or if sent to OGR, as follows:

Oak Grove Resources, LLC
8800 Oak Grove Mine Road
Adger, Alabama 35006
Attention: Scott Crafton

with copies to:

Cliffs Natural Resources, Inc.
1100 Superior Avenue
Suite 1500
Cleveland, Ohio 44114-2518
Attention: Traci Forrester, Esq.

If sent to SWF, as follows:

Ken Sewell
SWF Birmingham, LLC
178 Bonhomie Road
Hattiesburg, Mississippi 39401

if sent to Grantee, as follows:

Warrior River Water Authority
22805 Bucksville Road
McCalla, Alabama 35111
Attention: Greylan Glaze

or to such other address as shall be furnished in writing by either party to the other.

(29) EFFECTIVE DATE

The "execution" or the "effective date" of this Agreement shall mean the last date upon which the last party to this Agreement executes and dates this Agreement.

(30) CONSTRUCTION

This Agreement is intended to be performed in accordance with, and only to the extent permitted by all applicable laws, ordinances, rules, and regulations. If any provision of this Agreement or the application thereof to any person, entity, or circumstance, shall, for any reason and to any extent, be held to be invalid or unenforceable, the remainder of this Agreement and the application of such provision to the other person or circumstance shall not be affected thereby, but rather shall be enforced to the greatest extent permitted by law.

(31) RECORDING

This Agreement or a Memorandum of this Agreement shall be recorded by Grantee at its expense in the Probate Offices of the Counties in which the lands are located.

(32) COUNTERPARTS

This Agreement may be executed by the parties hereto individually or in combination, in one or more counterparts, each of which shall be an original and all of which will constitute one and the same agreement.

(Remainder of page intentionally left blank. See following page for signatures.)

UNOFFICIAL

IN WITNESS WHEREOF, each of the parties hereto have caused these presents to be executed in triplicate in its name and behalf and its corporate seal to be hereunto affixed and attested by its officers or representatives thereunto duly authorized this, the day and year first above written.

USS:

ATTEST:

UNITED STATES STEEL CORPORATION

By: _____

Title: Assistant Secretary

By: _____

Title: General Manager-Southeast
USS Real Estate, a division of
United States Steel Corporation

APPROVED
AS TO FORM
BY DEP

STATE OF ALABAMA)

COUNTY OF JEFFERSON)

I, Beverly L. Irwin, a Notary Public in and for said County, in said State, hereby certify that Thomas G. Howard, whose name as General Manager-Southeast, USS Real Estate, a division of **United States Steel Corporation**, a Delaware corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, in such capacity and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 19 day of MARCH, 2012.

Beverly L. Irwin
Notary Public

[SEAL]

My Commission expires: _____

NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: July 30, 2015
BONDED THRU NOTARY PUBLIC UNDERWRITERS

UNOFFICIAL COPY

OGLC:

OAK GROVE LAND COMPANY, LLC

By: Gary Dangerfield

Its: Vice President

STATE OF Ohio)

COUNTY OF Cuyahoga)

I, Jason S. Veloso, a Notary Public in and for said County, in said State, hereby certify that Gary Dangerfield whose name as Vice President of Oak Grove Land Company, LLC, a Delaware limited liability company, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said limited liability company.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 21st day of March, 2012.

Jason Veloso

Notary Public

[SEAL]

My Commission expires: N/A

NOTARIAL SEAL · STATE OF OHIO

JASON S. VELOSO
Attorney At Law
NOTARY PUBLIC
STATE OF OHIO
My Commission Has
No Expiration Date
Section 147.03 O.R.C.

GRANTEE:

ATTEST:

WARRIOR RIVER WATER AUTHORITY

By: Angie Bryan

Its: Office Clerk

By: Greylan K. Glaze

Its: General Manager

STATE OF ALABAMA)

COUNTY OF JEFFERSON)

I, Kathy Humphryes, a Notary Public in and for said County, in said State, hereby certify that Greylan K. Glaze, whose name as General Manager of Warrior River Water Authority, an Alabama corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, in such capacity and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 16th day of March, 2012.

Kathy Humphryes

Notary Public

[SEAL]

My Commission expires: 4/1/2014

UNOFFICIAL

STATE OF ALABAMA

JEFFERSON COUNTY

HOLD HARMLESS AND WAIVER AGREEMENT

WHEREAS, the Governmental Utility Services Corporation of the City of Bessemer ("GUSC"), in order to supply potable water, will install a cast iron water supply pipeline from its treatment plant to the City of Bessemer; and,

WHEREAS, the GUSC, its contractor, Ogden Yorkshire Water Company of Bessemer, Inc., and their engineers, have chosen a pipeline route along the right-of-way of Taylor's Ferry Road; and

WHEREAS, U.S. Steel Mining Company, L.L.C. ("USM") has now current plans, and has had for some time preceding the routing decision, plans to conduct underground coal mining beneath Taylor's Ferry Road using longwall mining techniques which will result in planned subsidence of various portions of the right-of-way of Taylor's Ferry Road at various times in the future; and

WHEREAS, USM has expressed its opposition to the route of the water pipeline along Taylor's Ferry Road and has proposed alternate routes to GUSC which entail significantly less likelihood of subsidence due to mining activities; and

WHEREAS, USX Corporation ("USX"), parent of USM, conveyed by donation the right-of-way of Taylor's Ferry Road to Jefferson County, Alabama by deeds which retain in USX and its subsidiaries the right to mine beneath Taylor's Ferry Road without leaving subjacent support

and with a complete waiver of any damages that may result from mining beneath Taylor's Ferry Road; and

WHEREAS, GUSC, being aware of USM's mining plans and said waivers of subjacent support and damages, will take certain preventative measures in the pipeline installation, *i.e.*, flexible joints, to minimize material damage to the water pipeline from planned subsidence associated with USM's longwall mining; and,

WHEREAS, GUSC is willing to assume any and all risk of material damage to its pipeline and property damages, personal injuries, deaths, or claims of loss of water service suffered or incurred by third parties after the pipeline is installed along the right-of-way of Taylors Ferry Road, if any only if it is determined that such property damages, personal injuries, deaths, or claims of loss of water service suffered or incurred by third parties are as a result of a release of water from such pipeline; and,

WHEREAS, GUSC is desirous of certain easements for other areas of the pipeline from USX; and,

WHEREAS, the parties hereto desire to agree in advance regarding their respective rights and liabilities that may arise due to installation of the pipeline along the right-of-way of Taylor's Ferry Road and the subsequent mining beneath the said right-of-way;

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, GUSC, USM and USX covenant and agree as follows:

1. USM will have no liability whatsoever to GUSC or to any third parties (such third party liability having been assumed by GUSC) should the water pipeline to be installed along

the right-of-way of Taylor's Ferry Road break or be damaged in any way due to mining-related subsidence.

2. If the preventative measures designed to minimize material damage to the pipeline to be taken by GUSC, *i.e.*, flexible joints, prove inadequate to prevent material damage to the pipeline, GUSC acknowledges that state or federal regulatory authorities may request additional protective and mitigative measures be taken as a precondition to initiate or continue longwall mining beneath the pipeline on the right-of-way of Taylor's Ferry Road. Should such state or federal regulatory authorities require any such additional measures in order to allow longwall mining to proceed under the right-of-way of Taylor's Ferry Road, GUSC agrees it will promptly, at its sole cost and expense, take all such additional measures in a timely manner so as to allow longwall mining to proceed beneath the pipeline without interruption.

3. GUSC shall indemnify and defend USM and USX and save them harmless from and against any and all claims, actions, damages, liability, and expense that arise in connection with or as a result of any release of water from said water pipeline beneath or in the right of way of Taylor's Ferry Road, including instances where the release of water causes damages to third parties outside the right-of-way of Taylor's Ferry Road.. In case USM or USX shall be made a party to any litigation commenced by or against GUSC, or commenced against USM and/or USX, arising out of any such claim, demand, or damage as set forth in the preceding sentence, GUSC shall protect, defend and hold USM and USX harmless therefrom and shall pay all costs, expenses, and reasonable attorneys' and consultants' fees incurred or paid by USM and/or USX in connection with such litigation.

4. USX agrees it will grant GUSC easements as requested in the letter from counsel for Ogden Yorkshire Water Company of Bessemer, Inc. dated May 5, 1999.

5. This Agreement may be executed in one or more identical counterparts, each of which shall for all purposes be deemed to be an original and all of which shall constitute the same instrument, but only one of which need be produced to prove the contents thereof..

Agreed to this 29 day of July, 1999.

Governmental Utility Services Corporation
Of the City of Bessemer

By: Don Walker
Its: Chairman

U.S. Steel Mining Company, L.L.C.

By: [illegible]
Its: President

APPROVED:
AS TO FORM
LAW DEPT.
MP

USX Corporation
USX Realty Development
A Division of U. S. Steel Group

By: [illegible]
Its: Peter Moller, President

APPROVED:
AS TO FORM
LAW DEPT.
MP

00505625.1

Resource Management
6200 E.J. Oliver Boulevard, Suite 126
P.O. Box 599
Fairfield, Alabama 35064
205 783-2118
Fax 783-2529

G. L. Sides, Manager
Southern Lands & Minerals

70179156

August 17, 2006

20061129001653390 1/16
Bk: LR200619 Pg:8786
Jefferson County,Alabama
I certify this instrument filed on:
11/29/2006 12:01:50 PM AGREE
Judge of Probate- Mark Gaines

Mr. John Gilmer - Real Estate Specialist
Alabama Power Company
Corporate Real Estate Department
P. O. Box 2641
Birmingham, Alabama 35291

Re: License for Electrical Distribution Lines to serve Energen Resources Corporation. Methane Gas Wells

Dear Mr. Gilmer:

In accordance with your request, this letter will be Alabama Power Company's ("APCO") license, when accepted as herein provided, to install poles, guys, wires, and other appliances necessary therefor (hereinafter collectively referred to as the "power line") on United States Steel Corporation ("USS") land(s) in the following locations:

1) the NE 1/4 of the SW 1/4 and the S 1/2 of the SW 1/4 of Section 1, Township 18 South, Range 6 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0163-600 (9627);
2) the N 1/2 of the SE 1/4 and the SE 1/4 of the SE 1/4 of Section 1, Township 18 South, Range 6 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0191-600 (9629);
3) the N 1/2 of the NE 1/4 and the SW 1/4 of the NE 1/4 of Section 1, Township 18 South, Range 6 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0194-600 (9630);
4) the SW 1/4 of the NE 1/4 of Section 6, Township 18 South, Range 5 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0208-600 (9633);
5) the SE 1/4 of the SE 1/4 of Section 1, Township 18 South, Range 6 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0210-600 (9634);
6) the NW 1/4 of the SW 1/4 of Section 20, Township 18 South, Range 6 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0175-601 (9525);
7) the SE 1/4 of the NW 1/4 of Section 6, Township 18 South, Range 5 West, Jefferson County, Alabama, as shown on Alabama Power Company Drawing No. 61200-00-0208-600 (9635); all attached hereto and made a part hereof.

This license is granted for the purpose of allowing APCO to provide electrical power service to certain methane gas wells operated by Energen Resources Corporation ("Energen") pursuant to an agreement between USS and Energen. This license is granted upon the following conditions:

19

(1) The rights herein granted are subject to the provisions of USS's occluded gas agreement with Energen (Formerly Taurus Exploration Inc.) Dated January 1 1986.

(2) Either party may cancel this license on thirty (30) days' written notice to the other party, provided that electrical power service is no longer required from the line. Upon discontinuance of the service or upon termination of this license as provided above, APCO shall, if requested, to do so by USS and within thirty (30) days after such request, remove said power line as may be installed thereon, from USS lands.

(3) All persons entering USS lands pursuant to or in connection with this license do so at their own risk, and USS shall not be liable for any injury to persons (including death), or for damages to property in any way arising out of or resulting from APCO's operations hereunder.

(4) APCO shall defend, indemnify, and hold USS, its successors, assigns, officers, directors, and employees (the "Indemnified Parties") harmless from and against all damages, losses, claims, suits, demands, judgments, decrees, costs and expenses, including attorney's fees, consultants' fees, and other legal costs, including but not limited to, damages paid under any Worker's Compensation Act or similar Act or law incurred by or imposed upon the Indemnified Parties arising from or in connection with any personal injuries (including deaths) and/or property damages, including injuries or damages to the Indemnified Parties, arising from or in connection with any activities of APCO, its employees, agents, contractors, and assigns under this Agreement, unless such injury (including death) or damage is proximately caused by the intentional misconduct of the Indemnified Parties and/or the sole negligence of the Indemnified Parties.

(5) APCO represents and warrants that it is a "self-insured" entity and agrees to provide written certification thereof to USS and to notify USS in the event that said self-insurance is no longer in effect. Certification shall be made to: General Manager-Southeast, USS Real Estate-Suite, United States Steel Corporation, P. O. Box 599 – Suite 183-C, Fairfield, Alabama 35064.

(6) It is understood that if necessitated by interference with any future use by USS of the USS lands crossed by said power line, upon written request by USS, APCO shall, within thirty (30) days, and at APCO's expense, remove said power line, from said licensed locations to other locations to be agreed upon by both parties hereto. APCO shall not be required to relocate said power line more than one time at APCO's expense.

(7) The rights herein granted shall not in any way be construed to be superior to and are subject to any existing agreements for the use of the surface and/or subsurface of said land, any existing timber purchase and cutting agreements between USS and third parties, and

any existing leases, agreements, and easements on, over, and across said land for roads, railroads, electric power transmission lines, telephone lines, telegraph lines, or pipelines.

(8) APCO shall have the right to trim and/or cut such trees located on land of USS as may interfere with the installation or endanger the safety or proper maintenance and operation of said power line. However, APCO shall promptly pay USS, its successors and assigns for the appraised value of all pre-merchantable and merchantable timber cut, trimmed, or damage by APCO in the exercise of its rights granted hereunder, which appraisal may be governed by one or more timber purchase and cutting agreements entered into between USS and a third party. No trees, limbs, or timber lying outside FIFTEEN (15) FEET from the centerline of said power line therefor may be cut or trimmed without USS's consent unless such tree, limb, or timber poses a material risk to persons or property. Any contacts regarding timber shall be directed to USS's Chief Forester, Bob Canavera at, (205) 783-2250.

This letter is written in duplicate, and upon acceptance on behalf of APCO by signature on the line indicated below and return of one executed counterpart to this office, shall constitute a license for APCO to install, operate, maintain, and remove said power line to serve said methane gas wells.

Sincerely,

Garry L. Sides
USS Real Estate

AGREED AND ACCEPTED THIS 21 DAY OF August, 2006.

ALABAMA POWER COMPANY

By: _____

Its: Sr Real Estate Specialist

WITNESS:

By: _____

Prepared by George J. Champagne, P. O. Box 335, Northport, AL 35476

4

12.00
2.00
14.00

RIGHT-OF-WAY AGREEMENT

STATE OF ALABAMA §

2 0 0 6 6 0 / 0 0 9 3

COUNTY OF JEFFERSON §

$2000.00

KNOW ALL MEN BY THESE PRESENTS: For and in consideration of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, receipt of which is hereby acknowledged, **UNITED STATES STEEL CORPORATION**, whose address is 6200 E. J. Oliver Boulevard, Suite 126, Fairfield, Alabama 35406 (hereinafter referred to as "GRANTOR"), does hereby, release, remise, and quit claim unto **EL PASO PRODUCTION COMPANY,** whose mailing address is 1001 Louisiana Street, Houston, Texas 77002, Attn: CBM Land Director (hereinafter referred to as "GRANTEE"), the rights hereinafter described on the below lands lying and being situated in Jefferson County, Alabama, to wit:

Township 17 South – Range 5 West

Section 31: The South Half of the Southeast Quarter (S/2 SE/4)

Township 18 South – Range 5 West

Section 5: The West Half of the Northeast Quarter (W/2 NE/4);
The East Half of the Northwest Quarter (E/2 NW/4); and,
The Northwest Quarter of the Northwest quarter (NW/4 NW/4

Section 6: The North Half of the Northeast Quarter (N/2 NE/4)

hereinafter referred to as the "Premises". See Exhibit "A" attached hereto and made a part hereof by reference.

(1) Rights-of-way and access easements not to exceed two hundred feet (200.00') by two hundred feet (200.00') for each of the following Wells:
The CLC 31-16-160 located in the Southeast Quarter of the Southeast Quarter (SE/4 SE/4) of Section 31-T17S-R5W, Jefferson County, Alabama;
The CLC 05-02-215 located in the Northwest Quarter of the Northeast Quarter (NW/4 NE/4) of Section 5-T18S-R5W, Jefferson County, Alabama; and,
The CLC 05-07-216 located in the Southweat Quarter of the Northeast Quarter (SW/4 NE/4) of Section 5-T18S-R5W, Jefferson County, Alabama.
The above rights-of-way and access easements are delineated on the plat attached hereto as Exhibit "A" and are to be utilized for drillsite pads for the purpose of conducting coalbed methane gas drilling and production operations, including, but not limited to pits, pumps, compressors, tanks, separators, treaters, etc. Grantee is also granted the right to lay, construct, and install electrical and other utility lines within, over and under the drillsite pads; and,

(2) Rights-of-way and access easements all being fifty-five feet (55') in width and covering an aggregate distance of approximately eight thousand one hundred and twenty three feet (8,123.00'), following the routes as shown on Exhibit "A" attached, for the purpose of constructing, maintaining, operating, repairing, altering, replacing and removing roads, for ingress and egress, and pipelines for transferring water and/or gas in connection with coalbed methane exploration, development and production, with appurtenances thereto, including, but not limited to, valves, metering equipment, and cathodic equipment. All pipelines are to be buried below plow depth (three feet minimum) and constructed, installed, and maintained in conformity with all applicable governmental laws, rules, regulations, and ordinances now or hereafter in effect. Grantee is also granted the right to construct and install electrical and other utility lines within these rights-of-way. Said rights-of-way and access easements traverse various portions of the Premises as delineated on the plat attached hereto as Exhibit "A".

The rights herein granted shall include the right and the responsibility for the Grantee to remove all obstructions that may injure, endanger, or interfere with the use of said rights-of-way, subject to the conditions below. Said rights-of-way not to exceed the above stated widths or lengths unless Grantor's written permission is first obtained and damages reasonably satisfactory to the Grantor have been paid.

The wellsites, pipelines, road, electric power lines, and any other facilities of Grantee located on the rights-of-way herein granted shall be constructed, maintained and operated in such a manner as to prevent the ponding of water and any material interference with the natural drainage and flow of surface waters. Within ninety (90) days of permanent abandonment of the wellsites and/or rights-of-way granted herein, Grantee will level all ruts, backfill and compact all pits, remove all surface equipment installed on said land and insofar as is reasonably practicable, restore the surface of said land (excluding the roads) to its former condition, insofar as reasonably practicable, which existed before Grantee commenced operations on said land and to otherwise comply with applicable governmental laws, rules, regulations and ordinances now or hereafter in effect with respect to surface restoration or reclamation.

18

Grantor reserves for itself and its heirs, successors and assigns, the right to cross the rights-of-way granted herein with utilities (water lines, electric power, gas, etc.) and roads (driveways, entrances/exits, etc.) and further the right to use the subject land except for such use which may unreasonably interfere with the enjoyment of the rights and easements herein granted. It shall be the responsibility of the Grantee to either bury its pipeline deeper or to haul in any additional "pad material" it may want to place over the pipelines or to encase the pipelines in steel pipe to ensure that damage will not occur as a result of normal traffic passing over the pipelines. Grantor agrees to contact Grantee a minimum of 48 hours prior to any excavating or boring for utilities or construction of roads, so that Grantee may have a representative on site during such activities and/or so that Grantee may lower pipelines, add additional "pad material" or encase the pipelines in steel pipe.

For the consideration stated above, Grantor does hereby agree that every claim or cause of action that Grantor has now or may have in the future which is attributable to the above described operations is hereby fully satisfied, released and discharged. Grantor hereby further agrees that this release shall run with the land and be binding upon the heirs, assigns, successors and legal representatives of Grantor.

Grantor covenants and warrants that Grantor has ownership of the land and property located thereon and has the authority to settle any claims associated therewith, and that Grantor has the authority to execute this Right-Of-Way Agreement. However, Grantor does not own the oil and gas rights to the premises and all rights herein granted are on the express condition and covenant that Grantee shall, at its own expense, obtain from the owner or owners of the oil and gas rights, such rights to the oil and gas as may be required to permit the drilling and production operations herein contemplated. Additionally, Grantee shall obtain whatever consents are necessary from any other third party including, but not limited to Energen Resources Corporation, in order for Grantee to utilize any portion of the rights-of-way and easments delineated on the plat attached hereto as Exhibit "A" that may have been previously constructed by any such third party pursuant to previously existing surface lease or surface use agreements.

The rights hereunder granted to Grantee by Grantor for the road rights-of-way on the subject land are non-exclusive in nature and Grantor retains the right to use said roads for his own use, enjoyment and necessity, whether commercial or otherwise. However, in the event proposed activities for road use by Grantor or his assigns could damage or deteriorate the road while this agreement is in effect, Grantor's agents or contractors agree to enter into a separate road use consent agreement with Grantee at least 72 hours prior to commencement to such road use which shall be for the purpose of insuring proper maintenance and restoration of the roads as is reasonably necessary. An example of such proposed activity would be use of the subject road for timber logging purposes.

Grantee has the right to assign and convey any or all of its rights in this Right-Of-Way Agreement, and thereby be relieved of all future obligations herein as to the extent of the rights so assigned and conveyed.

Grantee agrees to defend, protect, indemnify, and hold harmless Grantor from any and all liability, claims, damages and losses, including attorneys' fees and cost of court, resulting from or arising out of any operations, activities or omissions of Grantee, its agents and employees in the construction, exercise or use of the rights–of-way and easements herein granted.

It is expressly understood and agreed by and between Grantor and Grantee that a portion of the Premises is subject to that certain Surface Operations Agreement dated November 2, 2002 by and between United States Steel LLC and El Paso Production Company. Notwithstanding anything to the contrary contained herein, it is further understood and agreed by and between Grantor and Grantee that none of the terms and provisions of this Right-Of-Way Agreement shall alter, supercede or abrogate any of the terms and provisions of said prior Surface Operations Agreement.

To have and to hold the above described rights-of-way, easements and rights appurtenant thereto, unto Grantee, its successors and assigns, until all operations of Grantee on the Premises shall have permanently ceased or are permanently abandoned, in which event, said rights-of-way, easements and rights appurtenant thereto, shall cease, terminate and revert to Grantor and Grantor's heirs, executors, administrators, successors and assigns.

EXECUTED AND DELIVERED this 30th day of November, 2005 but effective as of August 1, 2002.

GRANTOR:
UNITED STATES STEEL CORPORATION

BY: [signature]
NAME: GARRY L. SIDES
TITLE: Regional Manager, USS Real Estate, United States Steel Corporation

GRANTOR:
EL PASO PRODUCTION COMPANY

BY: Chad R. Shaw
NAME: CHAD R. SHAW
TITLE: Agent and Attorney-In-Fact

Prepared by George J. Champagne, P. O. Box 335, Northport, AL 35476

ACKNOWLEDGMENTS

STATE OF ALABAMA §
§
COUNTY OF JEFFERSON §

I, the undersigned authority, a Notary Public in and for said County in said State, do hereby certify that GARRY L SIDES, whose name as REGIONAL MANAGER of USS REAL ESTATE, UNITED STATES STEEL CORPORATION, is signed to the foregoing instrument and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, (s)he, as such officer and with full authority, executed the same voluntarily as the act of said corporation on the day the same bears date.

GIVEN UNDER my hand and official seal, this the 30th day of December, 2005.

My Commission Expires: March 22 2008 Mary Lynn Lassiter Notary Public

SEAL

STATE OF TEXAS §
§
COUNTY OF HARRIS §

I, the undersigned authority, a Notary Public in and for said County in said State, hereby certify that Chad R. Shaw, whose name as AGENT AND ATTORNEY-IN-FACT for EL PASO PRODUCTION COMPANY, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said EL PASO PRODUCTION COMPANY.

GIVEN UNDER my hand and official seal, this the 15th day of December, 2005

My Commission Expires: DEBBIE J RYAN Notary Public, State of Texas My Commission Expires September 28, 2008 Debbie J Ryan Notary Public

SEAL

5

20110613000576230 1/5
Bk: LR201161 Pg: 19862
Jefferson County, Alabama
I certify this instrument filed on
06/13/2011 10:28:19 AM AGREE
Judge of Probate- Alan L. King

This instrument was prepared by and upon recording should be returned to:

Michael M. Partain, Esq., General Attorney
United States Steel Corporation
Law Department - Fairfield Office
P.O. Box 599, Suite 192
Fairfield, Alabama 35064

STATE OF ALABAMA)
COUNTY OF JEFFERSON)

MEMORANDUM OF AGREEMENT FOR WATER PIPELINE EASEMENT

17.00

KNOW ALL MEN BY THESE PRESENTS that **UNITED STATES STEEL CORPORATION,** a Delaware corporation, hereinafter referred to as "USS", and **EL PASO E&P COMPANY, L.P.**, a Delaware limited partnership, hereinafter referred to as "Grantee", are parties to that certain "Agreement for Water Pipeline Easement" dated effective as of January 9, 2002 (the "Agreement"), by which USS granted a nonexclusive easement to Grantee twenty (20) feet in width on, over, and across two (2) strips of land strips of land located in the Northwest ¼ of the Southwest ¼ and in the Southwest ¼ of the Southwest ¼ of Section 7, Township 18 South, Range 5 West, Jefferson County, Alabama, as depicted in the survey dated December 30, 2010, prepared by Faulkner Surveying marked **EXHIBIT A** attached hereto and made a part hereof.

The Agreement is in effect until terminated by USS or upon abandonment by Grantee as set forth in the Agreement.

This Memorandum is to be placed of record to serve as notice of the execution and existence of the Agreement , and is in no way to supersede, abrogate, change, or modify any of the terms, conditions, rights or obligations of any of the parties, all of which are set forth in detail in the Agreement.

IN WITNESS WHEREOF, each of the parties hereto have caused these presents to be executed in duplicate by its officers or representatives thereunto duly authorized as of the 17th day of MAY, 2011.

USS:

ATTEST:

By: Michael Partain

Title: Assistant Secretary

UNITED STATES STEEL CORPORATION

By: [signature]

Title: General Manager-Southeast
USS Real Estate, a division of
United States Steel Corporation

APPROVED
AS TO FORM

20

GRANTEE:

EL PASO E&P COMPANY, L.P.

By: _____
Ricky E. Barton

Its: Agent and Attorney in Fact

STATE OF ALABAMA)
COUNTY OF JEFFERSON)

I, Beverly L. Swain, a Notary Public in and for said County, in said State, hereby certify that Thomas G. Howard, whose name as General Manager-Southeast of USS Real Estate, a division of **United States Steel Corporation**, a Delaware corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, in such capacity and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 17th day of MAY, 2011.

Beverly L. Swain
Notary Public

NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: July 30, 2011
BONDED THRU NOTARY PUBLIC UNDERWRITERS

[SEAL]

My Commission Expires: _____

STATE OF TEXAS)
COUNTY OF HARRIS)

I, DEANNA J. LUCAS, a Notary Public in and for said County, in said State, hereby certify that Ricky E. Barton, whose name as Agent and Attorney in Fact of **EL PASO E&P COMPANY, L.P.**, a Delaware limited partnership, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that being informed of the contents of said instrument, he, in such capacity and with full authority, executed the same voluntarily for and as the act of said limited liability company.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 17th day of MAY, ~~2010~~ 2011.

Deanna J. Lucas
Notary Public

[SEAL]

My Commission Expires: 10.17.2012

DEANNA J. LUCAS
Notary Public, State of Texas
My Commission Expires
October 17, 2012

2 0 0 3 6 0 / 5 3 1 6

14.12

MEMORANDUM OF
CONTRACT FOR PIPELINE EASEMENT

STATE OF ALABAMA §
§
COUNTY OF JEFFERSON §

THIS MEMORANDUM OF CONTRACT FOR PIPELINE EASEMENT, hereinafter referred to as "Pipeline Easement", dated effective the 9th day of January, 2002, is by and between **U.S. Steel Mining Company, LLC**, a Delaware limited liability company, whose address is 8800 Oak Grove Mine Road, Adger, Alabama 35006, hereinafter referred to as "Grantor", and **El Paso Production Company**, a Delaware corporation, whose address is Nine Greenway Plaza, Houston, Texas 77046, hereinafter referred to as "Grantee".

KNOW ALL MEN BY THESE PRESENTS, that notice is hereby given that Grantor has executed and delivered to Grantee a Contract for Pipeline Easement dated of same date herein, under which Grantor has granted a right of use and a right-of-way over, under and across certain lands of Grantor for a ten (10") inch diameter pipeline situated in Jefferson County, Alabama, more particularly described on Exhibit "A" attached hereto, hereinafter referred to as the "Premises", for the purpose of transportation of waste water, and for the maintenance, use and removal of said pipeline.

Grantee shall have the right to use so much of the surface of the Premises owned by Grantor as is reasonably necessary in the exercise of its rights hereunder, including Grantee's right to ingress and egress the Premises.

Said Pipeline Easement shall continue in effect until the earlier of January 9, 2027 or until Grantee abandons use of Premises during a continuous period of twelve (12) months, after which all rights granted shall revert automatically to Grantor, its successors and assigns.

This Memorandum shall serve as notice of the execution and existence of said Pipeline Easement, and is in no way to supersede, abrogate, change or modify any of the terms, conditions, rights or obligations of the parties. All the terms, conditions and covenants of the Pipeline Easement shall be binding upon and shall inure to the benefit of the successors and assigns, of each respective party hereto.

17

GRANTOR

U.S. STEEL MINING COMPANY, LLC

By: General Manager
Title:

GRANTEE

EL PASO PRODUCTION COMPANY

Jon R. Nelsen
Attorney-In-Fact

Approved as to Form
Legal Dept

STATE OF ALABAMA)
) **ACKNOWLEDGMENT**
COUNTY OF WALKER)

I, the undersigned authority, a Notary Public, in and for said County in said State, hereby certify that J. H. Medrick, whose name is signed as General Manager of **U.S. STEEL MINING COMPANY, LLC**, to the foregoing conveyance, he, as such officer and with full authority, executed the same voluntarily for and as the act of said limited liability company.

Given under my hand and seal this the 3rd day of February, 2003.

Lorene J. Pleasant
NOTARY PUBLIC

My Commission Expires 8-10-2003

STATE OF TEXAS)
.)
COUNTY OF HARRIS)

ACKNOWLEDGMENT

I, the undersigned authority, a Notary Public in and for said State and County, hereby certify that **Jon R. Nelsen** whose name as **Attorney-In-Fact** of **EL PASO PRODUCTION COMPANY**, a Delaware corporation, is signed to the foregoing conveyance, and who is known to me, acknowledged before me on this day that, being informed of the contents of the conveyance, he, with full authority, executed the same voluntarily on the day the same bears date on behalf of said corporation.

Given under my hand and official seal, this the 10 day of January, 2003.

Betsy O'Banion

NOTARY PUBLIC

BETSY O'BANION
MY COMMISSION EXPIRES
September 13, 2006

This document was prepared by:

El Paso Production Company
Nine Greenway Plaza
Houston, TX 77046

EXHIBIT "A"

State of Alabama)
Jefferson County)

March 27, 2002
El Paso Production
Right-of-Way

A parcel of land for the purpose of a Right-of-Way located in the Northeast Quarter, the Southeast quarter of the Northwest quarter and the Southwest quarter of section 6 Township 17 South, Range 5 West, and the West half of the West half of Section 7, the West half of the Northwest Quarter of Section 18, all in Township 18 South, Range 5 West and Section 13, Township 18 South, Range 6 West all in Jefferson County, Alabama and being more particularly described with reference to a survey line and being described as follows:

Commence at the Northeast corner of Section 6, Township 18 South, Range 5 West; thence with a grid bearing northwesterly 89°30'59" for a distance of 1226.35 feet to the POINT-OF-BEGINNING of said survey line; thence with a grid bearing southwesterly 03°30'38" for a distance of 269.59 feet to a point; thence with a grid bearing southwesterly 39°43'55" for a distance of 245.76 feet to a point; thence with a grid bearing southwesterly 14°17'15" for a distance of 936.80 feet to a point; thence with a grid bearing southeasterly 50°20'34" for a distance of 394.76 feet to a point; thence with a grid bearing southwesterly 22°59'03" for a distance of 946.17 feet to a point; thence with a grid bearing southwesterly 85°11'25" for a distance of 1010.89 feet to a point; thence with a grid bearing southwesterly 70°31'25" for a distance of 367.76 feet to a point; thence with a grid bearing southwesterly 85°13'46" for a distance of 382.25 feet to a point; thence with a grid bearing southwesterly 32°52'13" for a distance of 217.15 feet to a point; thence with a grid bearing southwesterly 64°39'29" for a distance of 261.87 feet to a point; thence with a grid bearing southwesterly 15°58'19" for a distance of 1063.00 feet to a point; thence with a grid bearing southwesterly 13°29'26" for a distance of 821.91 feet to a point; thence with a grid bearing southeasterly 28°36'38" for a distance of 356.17 feet to a point; thence with a grid bearing southeasterly 54°36'39" for a distance of 156.24 feet to a point; thence with a grid bearing southeasterly 00°12'59" for a distance of 121.29 feet to a point; thence with a grid bearing southwesterly 56°57'12" for a distance of 372.88 feet to a point; thence with a grid bearing southwesterly 79°37'55" for a distance of 516.20 feet to a point; thence with a grid bearing southwesterly 37°24'34" for a distance of 319.04 feet to a point; thence with a grid bearing southeasterly 04°34'22" for a distance of 223.01 feet to a point; thence with a grid bearing southeasterly 27°29'26" for a distance of 147.83 feet to a point; thence with a grid bearing southeasterly 35°54'06" for a distance of 87.11 feet to a point; thence with a grid bearing southeasterly 02°44'25" for a distance of 192.23 feet to a point; thence with a grid bearing southeasterly 20°07'58" for a distance of 397.76 feet to a point; thence with a grid bearing southwesterly 12°05'10" for a distance of 755.19 feet to a point; thence with a grid bearing southeasterly 01°59'37" for a distance of 273.03 feet to a point; thence with a grid bearing southeasterly 26°54'26" for a distance of 169.69 feet to a point; thence with a grid bearing southeasterly 14°58'41" for a distance

of 302.66 feet to a point; southwesterly 29°24'21" for a distance of 335.50 feet to a point; thence with a grid bearing southwesterly 57°18'26" for a distance of 168.02 feet to a point; thence with a grid bearing southwesterly 78°32'02" for a distance of 53.74 feet to a point; thence with a grid bearing southwesterly 62°41'44" for a distance of 51.55 feet to a point; thence with a grid bearing southwesterly 36°01'58" for a distance of 83.82 feet to a point; thence with a grid bearing southwesterly 16°15'35" for a distance of 148.42 feet to a point; thence with a grid bearing southeasterly 27°20'05" for a distance of 133.96 feet to a point; thence with a grid bearing southeasterly 57°44'26" for a distance of 165.08 feet to a point; thence with a grid bearing southeasterly 17°55'12" for a distance of 240.82 feet to a point; thence with a grid bearing southeasterly 07°51'08" for a distance of 264.50 feet to a point; thence with a grid bearing southwesterly 154.55 feet to a point; thence with a grid bearing southeasterly 05°05'51" for a distance of 820.20 feet to a point; thence with a grid bearing southeasterly 10°00'17" for a distance of 348.73 feet to a point; thence with a grid bearing southwesterly 29°21'17" for a distance of 1115.63 feet to a point; thence with a grid bearing southwesterly 46°55'10" for a distance of 104.01 feet to a point; thence with a grid bearing northwesterly 88°08'41" for a distance of 279.70 feet to a point; thence with a grid bearing southwesterly 85°04'49" for a distance of 246.47 feet to a point; thence with a grid bearing southwesterly 75°45'48" for a distance of 1501.65 feet to a point; thence with a grid bearing southwesterly 89°47'16" for a distance of 279.52 feet to a point; thence with a grid bearing southwesterly 61°02'22" for a distance of 1681.11 feet to a point; thence with a grid bearing southwesterly 39°13'14" for a distance of 693.54 feet to the end of said survey line and containing twenty three and sixteen hundredths (23.16) acres, more or less.

Said parcel of land being 25 feet on each side of and adjacent to the above described survey line.

State of Alabama - Jefferson County
I certify this instrument filed on:
2003 FEB 13 A.M. 11:21
Recorded and $ Mtg. Tax
and $ Deed Tax and Fee Amt.
$ 14.50 Total $ 14.50
MICHAEL F. BOLIN, Judge of Probate
200360/5316 BESS

OCCLUDED GAS LEASE

This Occluded Gas Lease ("Lease") is made and entered into as of the 1st day of January, 1986, by and between UNITED STATES STEEL CORPORATION, a Delaware corporation ("Lessor"), and TAURUS EXPLORATION, INC., a Delaware corporation, ("Lessee").

WITNESSETH:

ARTICLE 1

DEFINITIONS

As used in this Lease, the following terms shall have the meanings ascribed thereto:

1.1 Btu: one British Thermal Unit.

1.2 MMBtu: one million British Thermal Units

1.3 Developed Acreage: those portions of the Leased Premises that have been identified from time to time pursuant to Article 12.8.

1.4 Development Commitment Price: with respect to any year, the amount of the Wellhead Price that would be in effect on July 1 of said year if calculated pursuant to Article 1.22(a), substituting "July 1" for "January 1" in said Article each time it appears. For purposes of this calculation, the OCD-2 Rate in effect as of the date of the adjustment shall be the OCD-2 Rate in effect on such date without regard to any retroactive adjustments.

specifically identified on Exhibit D attached hereto and incorporated herein. The Leased Premises are contained within the area generally described on the map attached as Exhibit B-1.

1.9 Net Profits: with respect to each Payout Unit, an amount equal to the Average Wellhead Price multiplied by the quantity of Occluded Gas produced less applicable Operating Costs, royalties and those severance taxes paid by Lessee with respect to which no deduction is made against Lessor's royalties pursuant to Article 8.

1.10 Oak Grove Mine Area: that portion of the Leased Premises designated "Oak Grove Mine Area" on Exhibit B-1, attached hereto and incorporated herein.

1.11 Occluded Gas: "occluded natural gas produced from coal seams" as referred to in Section 107(c)(3) of the Natural Gas Policy Act of 1978 and the Regulations promulgated by the Federal Energy Regulatory Commission (FERC) pursuant thereto as such Regulations may be amended from time to time, provided however, that gob gas shall not be deemed to be Occluded Gas for purposes of this Lease.

1.12 OCD-2 Rate: the total commodity rate from time to time in effect for gas delivered under rate schedule "OCD-2" or its successor rate schedule, as published in the FERC Gas Tariff of the Southern Natural Gas Company. Except as expressly provided herein to the contrary, all payments, accounts or determinations based upon the OCD-2 Rate as of a specific date shall, in the case of a retroactive adjustment to the OCD-2 Rate, be likewise adjusted to account for such retroactive adjustment. Should Southern Natural Gas Company

1.24 Restricted Areas: that portion of the Leased Premises from time to time designated by Lessor as Restricted Areas pursuant to Article 12.11.

ARTICLE 2

GRANTING CLAUSE

2.1 Subject to the further terms hereof and subject to the limitations herein contained, and in consideration of the royalties herein provided and the agreements of Lessee herein contained, Lessor hereby grants, leases and lets unto Lessee the Leased Premises for the sole purpose of investigating, exploring, prospecting, drilling for, and producing Occluded Gas, together with the right to make surveys on said land, establish and utilize facilities for the disposal of water in accordance with applicable laws and regulations, to install, build, operate and maintain roads, pipelines, power lines, telephone lines, compressor facilities and other structures thereon as may be necessary to produce, take care of, treat, transport, and own said Occluded Gas.

(a) Unless expressly stated to the contrary, the rights granted by this Lease shall extend only as necessary for the production and marketing of Occluded Gas occurring within the Leased Premises, and only to the extent of Lessor's right to grant said rights.

(b) As to any tracts within the Leased Premises on which Lessor does not own the surface, Lessee shall be responsible for making any arrangements with the owners of the surface rights at Lessee's sole expense. Lessee shall hold

Lessor harmless against losses of any nature arising out of suits or claims by owners or alleged owners of surface rights which suits or claims are based on Lessee's actions under said arrangements or this Lease.

2.2 Lessor excludes from this Lease all oil, gas (the word "gas", as used herein, shall mean and include any gaseous substance except Occluded Gas, whether combustible or noncombustible, including by way of illustration but not by way of limitation, hydrogen sulfide) gob gas, condensate, distillate and sulfur found above, below, or within coal seams occurring within the Leased Premises.

2.3 Except for the rights granted to Lessee hereunder to commercially develop and produce Occluded Gas, which rights are exclusive except as to:

(a) gas produced from wells that are subject to the gas sales agreement between Southern Natural Gas Company and Lessor dated July 6, 1981, as amended;

(b) rights granted under, and operations and activities conducted pursuant to, that certain agreement between the Gas Research Institute ("GRI") and Lessor dated March 1, 1984, as amended, the land subject to which is shown as Restricted Area on Exhibit B-2; and

(c) gas produced pursuant to the Coal Seam Gas Drainage Agreement between Methane Drainage Ventures and Lessor dated February 25, 1985, as amended;

Lessor expressly reserves all rights with respect to the surface and subsurface of the Leased Premises for any and all purposes, including without limitation: ingress and egress; mining coal, whether or not said coal has been developed for the production of Occluded Gas; venting Occluded Gas from coal, whether by drilling or otherwise, for purposes other than the commercial production of same; conducting geological and other surveys; selling, leasing, or otherwise transferring interests in the Leased Premises; harvesting, storing, transporting and replanting timber; and exploring for, drilling, mining, producing, treating, storing and transporting any and all minerals, coal, oil and gas and surface materials other than those Leased hereunder, whether or not said activities involve the disturbance or destruction of coal seams.

2.4 The rights of Lessee hereunder shall be subject to all other rights, uses and easements affecting the Leased Premises, whether now existing or hereafter granted, and Lessee's use of the Leased Premises shall not unreasonably interfere with such other rights, uses and easements.

2.5 If Lessee discovers gas other than Occluded Gas in the Leased Premises as a result of its bona fide operations under this Lease to develop and produce Occluded Gas, the parties shall enter into good faith negotiations to grant Lessee a lease that would provide Lessee the right to develop, operate and produce the reserve of gas so discovered.

16.3 Either party on prior written notice to the other may terminate this Agreement if an event of force majeure lasts longer than 360 consecutive days.

ARTICLE 17

INDEMNIFICATION, INSURANCE

17.1 (a) Lessee is an independent contractor under this Lease and this Lease shall not be construed to create any other relationship between Lessee and Lessor, including but not limited to, agency, partnership or joint venture, except as expressly provided.

(b) Except as otherwise specifically provided in the Lease, Lessee assumes all risk of bodily injury, death, and property damage from any cause whatsoever. Lessee shall indemnify, hold harmless and defend Lessor from and against any and all suits, actions, legal proceedings, claims, demands, court costs, litigation and reasonable attorneys' fees in any manner caused by, arising from, incident to, connected with or growing out of Lessee's obligations, activities and operations hereunder, except to the extent that such claims, demands, actions, damages, liabilities or expenses are occasioned by the neglect, acts or omissions of Lessor. This covenant and obligation shall survive the termination of this Lease as to occurrences arising during the term of this Lease or any extension thereof.

17.2 Lessee shall at all times during the term of this Lease and any extension thereof, maintain in effect comprehensive general liability insurance for bodily injury,

including death, and property damage in the amount of $500,000 per occurrence. This policy shall cover, among other risks, the contractual liability of Lessee assumed under the indemnification provision of this Lease. Furthermore, Lessee shall have automobile liability insurance including owned, non-owned and hired vehicle coverage with limits of liability not less than $500,000 combined single limit for bodily injury and property damage claims. In addition, Lessee shall maintain excess (umbrella) liability insurance over the comprehensive general liability and automobile liability insurance coverage afforded by the primary policies described above, with minimum limits of $5,000,000 excess of the specific limits. If Lessee self-insures comprehensive general liability and/or automobile liability through the use of deductibles or self-insured retentions and does not maintain primary liability policies, Lessee shall maintain $5,000,000 of umbrella liability coverage in excess of its self-insured retentions for comprehensive general and automobile liability. Lessee shall furnish Lessor with an appropriate certificate of insurance within thirty (30) days of the execution hereof. The requirement for insurance hereunder does not in any way release Lessee of its indemnification obligations under this Lease and does not diminish or limit said obligations.

ARTICLE 18

DEFAULT

18.1 In the event of failure of Lessee to pay any sum of money due Lessor under this Lease when the same becomes due,

23.7 The parties hereto agree to execute such additional instruments, agreements, or documents as may be necessary to effectuate the intentions of this Lease.

23.8 This Lease may be executed in multiple counterparts, each of which shall constitute an original hereof for all purposes, and all of which when taken together shall constitute a single agreement.

IN WITNESS WHEREOF, this Lease is executed and sealed by Lessor and Lessee in duplicate originals as of the day and year first above written.

ATTEST:

M. S. Cassidy
Assistant Secretary

UNITED STATES STEEL CORPORATION

By: G. Colombari
G. Colombari
Senior Vice President-
Steel Related Resources

ATTEST:

Rodney C. Reynolds
Asst. Secretary

TAURUS EXPLORATION, INC.

By: E. Duncan Hamilton
E. Duncan Hamilton
President

COPY

This instrument was prepared by
Peggy A. Werdehoff, General Attorney
USX Corporation
Fairfield, Alabama 35064

THIS CONTRACT, entered into this 15th day of June, 1990, by and between USX CORPORATION, formerly known as United States Steel Corporation, a Delaware corporation, hereinafter referred to as "USX" and TAURUS EXPLORATION, INC., a Delaware corporation, hereinafter referred to as "Taurus";

W I T N E S S E T H :

(1) USX, in consideration of One Dollar ($1.00) paid to it by Taurus, receipt of which is acknowledged, and in further consideration of the covenants of Taurus as hereinafter expressed to be kept and performed, hereby grants to Taurus, to the extent of the ownership of USX, the right to construct, operate, maintain, and remove a high pressure gas line and gas metering station on a tract of land located in the South-East quarter of the North-East quarter and in the East half of the South-East quarter all in Section 31, Township 17 South, Range 5 West, Jefferson County, Alabama, being shown on map marked "81-822 LD" attached hereto and made a part hereof, together with the right to enclose said metering station or any part thereof with a fence.

(2) For said consideration, USX further grants to Taurus such rights of ingress and egress over land of USX as may be necessary for the exercise by Taurus of its rights hereunder, but USX reserves the right, if it so desires, to designate from time to time the route or routes of such ingress and egress.

(3) The rights granted herein shall not be construed to be superior to but are subject to such contracts, leases and easements as may exist over and on said land on the day and year first above written.

(4) Taurus, in the exercise of the rights herein granted, shall cause no interference with operations of USX; and USX reserves the right to install, maintain, and use across said tract of land pipelines and wires or cables of any description and the right to grant such rights to others, upon condition, however, (1) that the exercise of any of said rights by USX shall cause no unreasonable interference with said high pressure gas line and metering station

and any rights granted to others shall not be superior to the rights granted hereunder, and (2) that the character or installation of such pipelines, wires, or cables shall be in accordance with the reasonable requirements of Taurus.

(5) USX shall not be liable to Taurus for any claims for damage which may accrue on account of the construction, operation, or maintenance of said high pressure gas line and metering station on said tract of land; and Taurus shall indemnify, protect, and hold USX harmless from all loss, claims, damage, cost, or expense USX may sustain on account of the construction, operation, and maintenance of said high pressure gas line and metering station upon said tract of land and on account of claims by others by reason of the construction, operation, and maintenance by Taurus of said high pressure gas line and metering station.

(6) USX shall assess for taxation and pay ad valorem taxes on said land and its interest therein. Taurus shall assess and pay taxes on all structures, improvements and equipment of every kind which it installs or places on said tract. Should USX be required by taxing authorities to pay any taxes or charges in the nature of taxes which Taurus is obligated to pay, Taurus shall promptly upon demand reimburse USX for such taxes and charges, together with any interest and penalties thereon paid by USX.

(7) The surface of said tract of land shall be maintained at all times by Taurus in a condition satisfactory to USX. Upon termination of this contract from any cause whatsoever, Taurus shall remove the gas metering station and any existing fence on the land and shall restore the surface of said tract to a condition satisfactory to USX, in default of which, USX may itself remove said gas metering station and fence and restore the surface of said tract, but at the expense of Taurus. In addition Taurus shall declare the gas line to be abandoned and shall disconnect said gas line from its source of gas and cap said gas line pursuant to appropriate standards and to the satisfaction of USX.

(8) This contract shall be considered as having become effective on the day of its date and shall continue until Taurus abandons the use of said tract of land for a high pressure gas line and metering

station during a continuous period of twelve (12) months, after which all rights granted shall revert to USX, its successors and assigns.

(9) Other provisions of this contract notwithstanding, should Taurus violate any covenant of this contract and fail for thirty (30) days after receipt from USX of written notice thereof to remedy such violation, USX may thereafter terminate this contract on written notice delivered to Taurus not less than thirty (30) days prior to the effective day of termination.

(10) This contract shall inure and be binding upon the respective successors and assigns of the parties hereto as well as the parties themselves.

(11) Should the high pressure gas line and metering station constructed, operated and maintained by Taurus in the location herein described hereinafter interfere with the mining, quarrying, oil and gas, or manufacturing operations of USX, its lessees, contractors or assigns or future subdivisions laid out by USX or any of its present or future subsidiary or associate companies, then upon written request by USX so to do Taurus shall within one hundred eighty (180) days remove the high pressure gas line and metering station from said location to other locations, provided: (1) that USX shall first grant to Taurus the same rights in such other location as are granted to Taurus hereunder; and (2) that Taurus shall not be required to remove and relocate its high pressure gas line and metering station more than one time at its expense, and when such other location or locations are furnished, the terms of such grant or grants shall not require Taurus to remove its gas line and metering station except at the expense of USX. Any new location so furnished shall not be at a greater distance than seven hundred fifty (750) feet from the site described herein. In the event any new location for said high pressure gas line and metering station is not on land then owned by USX, then before such high pressure gas line and metering station shall be moved, USX shall caused to be granted to Taurus an area equal in size to that granted by this contract, free of conditions, for the location of the new high pressure gas line and metering station. The interference with such mining, quarrying, oil and gas, or manufacturing operations or future subdivisions by such high pressure gas line and metering station and

the necessity for moving the same, as well as the new location to which they shall be moved, shall be agreed upon between the parties; and in the event they are unable to agree upon any of such matters, their differences shall be settled by arbitration. Each of the parties hereto shall select a disinterested person and the two thus selected shall select a third disinterested person, and the three thus chosen, or a majority of them shall determine the matter at issue, and each of the parties hereto agrees to abide by the result of such arbitration. Each arbitrator shall be paid by the party selecting him and the expenses of arbitration and the third disinterested party shall be paid by the parties equally.

IN WITNESS WHEREOF each of the parties hereto have caused these presents to be executed in duplicate in its name and behalf and its corporate seal to be hereunto affixed and attested by its officers thereunto duly authorized this, the day and year first above written.

ATTEST:

Assistant Secretary

USX CORPORATION

By: Manager, Southern Lands & Minerals
U. S. Diversified Group

APPROVED AS TO FORM LAW DEPT.

ATTEST:

Secretary

TAURUS EXPLORATION, INC.

By: Its Pres.

STATE OF ALABAMA)
COUNTY OF JEFFERSON)

I, the undersigned, a Notary Public in and for said County in said State, hereby certify that Gaddy L. Sides, whose name as Manager, Southern Lands & Minerals, U. S. Diversified Group, a division of USX Corporation is signed to the foregoing instrument and who is known to me acknowledged before me on this day that being informed of the contents of said instrument, he, as such officer and with full authority executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this, the 15th day of June, 1990.

Bettie S. Vernon
Notary Public

My Commission Expires 3-16-92

THIS CONTRACT, entered into this 24th day of September, 1958, by and between the UNITED STATES STEEL CORPORATION, a New Jersey corporation, hereinafter referred to as the "Steel Corporation" and the ALABAMA POWER COMPANY, a corporation, hereinafter referred to as the "Power Company",

WITNESSETH:

(1) The Steel Corporation, in consideration of Sixty-Eight Thousand Dollars ($68,000.00) paid to it by the Power Company, receipt of which is acknowledged, and in further consideration of the covenants of the Power Company as hereinafter expressed to be kept and performed, hereby grants to the Power Company, to the extent of the ownership of the Steel Corporation, the right to construct, operate, and maintain a line of electric power transmission wires, together with one line of poles and other supports and appliances necessary therefor, and the right to construct, operate, and maintain additional electric power wires thereon from time to time, upon and across the following described land and right of ways owned by the Steel Corporation, the location of said line of wires and poles being shown by red line on maps marked Exhibit A, Exhibit B, Exhibit C, Exhibit D, Exhibit E, Exhibit F, Exhibit G, Exhibit H, Exhibit I, and Exhibit J, attached hereto and made a part hereof, said land and right of way being located West of the Huntsville Principal Meridian in Jefferson County, Alabama:

SECTION 27, TOWNSHIP 17 SOUTH, RANGE 6 WEST
Shown on Map Exhibit A
North-East quarter of North-East quarter.

SECTION 26, TOWNSHIP 17 SOUTH, RANGE 6 WEST
Shown on Map Exhibit A
North-East quarter of South-East quarter.

SECTION 25, TOWNSHIP 17 SOUTH, RANGE 6 WEST
Shown on Map Exhibit A
North-West quarter of South-East quarter;
South half of South-East quarter.

SECTION 31, TOWNSHIP 17 SOUTH, RANGE 5 WEST
Shown on Map Exhibit B
West half of South-West quarter; South-East quarter of North-West quarter.

SECTION 6, TOWNSHIP 18 SOUTH, RANGE 5 WEST
Shown on Map Exhibit B
South half of North-East quarter.

SECTION 5, TOWNSHIP 18 SOUTH, RANGE 5 WEST
Shown on Map Exhibit B
West half of North-West quarter; South-East quarter of North-West quarter; North-East quarter of South-West quarter; South-East quarter of South-East quarter.

8dbp
9-3-58

SECTION 32, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
North half of North-West quarter.

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
South-East quarter of North-East quarter; North half of South-East quarter; South half of South-West quarter.

SECTION 28, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
North half of North-West quarter; South-West quarter of North-East quarter.

SECTION 21, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
East half of North-East quarter; North half of South-East quarter; South-West quarter of South-East quarter; South East quarter of South-West quarter.

SECTION 22, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
North-West quarter of North-East quarter.

SECTION 15, TOWNSHIP 18 SOUTH, RANGE 3 WEST
Shown on Map Exhibit J
West half of South-West quarter.

(2) The Steel Corporation, for said considerations, hereby further grants and conveys unto the Power Company such rights of ingress and egress over said land and right of way as may be necessary for the construction, operation, and maintenance of said line of wires and the supports and appliances necessary therefor; the Steel Corporation, however, reserves the right, at any time and from time to time, to specify the routes of such ingress and egress, provided such routes shall provide reasonable access to said line of wires and the supports and appliances therefor.

(3) The rights herein granted shall not in any way be construed to be superior to and are subject to: (a) rights granted by Tennessee Coal, Iron and Railroad Company to Plantation Pipe Line Company by contract dated September 30, 1942, as amended, to construct, operate, maintain, and remove pipe lines in the North-West quarter of South-East quarter of Section 29, Township 18 South, Range 3 West, Jefferson County, Alabama; (b) right granted by Tennessee Coal, Iron and Railroad Company to Southern Bell Telephone and Telegraph Company by contract dated March 14, 1945, as amended, to construct, operate, and maintain a line of communications wires in the North-West quarter of North-East quarter of Section 14, Township 18 South, Range 3 West, Jefferson County, Alabama; (c) right granted by the Steel Corporation to Southern Bell Telephone and Telegraph Company by contract dated October 24, 1955, to construct, operate, and maintain a telephone trunk line

October 17, 1952, to construct, operate, maintain, and remove a pipe line in the North-East quarter of South-West quarter of Section 31, Township 17 South, Range 5 West, Jefferson County, Alabama; and (m) such other easements as may exist over, upon, or across said land for roads, railroads, pipe lines, electric power transmission lines, telephone lines and telegraph lines and leases now in effect.

(4) Rights herein granted shall revert to the Steel Corporation, its successors or assigns, in the event of abandonment of the use of said line of wires for a continuous period of time of twelve (12) months.

(5) The Steel Corporation shall not be held liable (except as provided in Paragraph (8) hereof) for any claims for damage which may accrue on account of the construction, operation, or maintenance of said line of wires, poles, and other supports and appliances connected therewith on land or across right of way of the Steel Corporation, and the Steel Corporation shall not be liable on account of damage to said wires, poles, and other supports and appliances accruing from the past or future mining or removal of coal, iron ore, or other minerals contained in the aforesaid land, or from failure to leave adequate support for the surface of said land; and the Power Company shall indemnify, protect, and save the Steel Corporation harmless from all loss, damage, cost, or expense which the Steel Corporation may sustain on account of the improper construction, operation, or maintenance of said line of wires and the supports and appliances therefor upon said land and right of way and on account of claims for damage by others by reason of the construction, operation, or maintenance upon said land and right of way by the Power Company of said line of wires or the supports or other appliances connected therewith.

(6) The Power Company shall construct, operate, and maintain said line of wires and the supports and appliances therefor in accordance with the current specifications of the National Electrical Safety Code, Fifth Edition, National Bureau of Standards, and amendments thereto and revisions thereof from time to time in effect.

(7) The Power Company shall have the right to trim and/or cut such trees located on land of the Steel Corporation as may interfere with the installation or endanger the safety or proper maintenance and operation of said line of wires and the supports and appliances therefor; the Power Company shall, however, pay the Steel Corporation for the reasonable timber market value of all trees cut by the Power Company which are located more than fifty (50) feet from the center line of said wires.

(8) The Steel Corporation shall have the right at any and all times to use in its mining, quarrying, or manufacturing operations the land over which said line of wires is located; and the Steel Corporation shall also have the right to install, maintain, and use tracks, roads, pipe lines, haulage systems, and wires or cables of any description over, under, across, or along said line of wires; and the Steel Corporation shall also have the right to grant such rights to others, upon condition, however, that: (a) that the exercise of any of said rights by the Steel Corporation shall cause no unreasonable interference with the line of wires and operations of the Power Company, and the rights granted to others shall not be superior to the rights hereby granted to the Power Company; (b) that the character of installation of the above-mentioned crossings shall be reasonably satisfactory to the Power Company; and (c) that the Power Company shall be relieved of and held harmless from any damage arising by reason of said crossings made by other parties.

(9) The Power Company shall, at its expense, upon the completion of installation of its line of wires and thereafter in the maintenance and operation thereof, cause the destruction or removal from the land of the Steel Corporation of all debris, including timber refuse, resulting from such installation, operation, and maintenance.

(10) Should said line of wires, poles, supports, and appliances or any portion thereof constructed, operated, and maintained by the Power Company in any location herein described hereafter interfere with the mining, quarrying, or manufacturing operations of the Steel Corporation or by any of its present or future subsidiary or associate companies, then, upon written request by the Steel Corporation so to do, the Power Company shall within thirty (30) days remove its said line of wires, poles and other supports and appliances from said location to other locations, provided: (a) that the Steel Corporation shall first grant to the Power Company the same rights in such other locations as are granted hereunder; and (b) that the Power Company shall not be required to remove and relocate its said line of wires, poles, and other supports and appliances more than one time at its expense, and when such other location or locations are furnished, the terms of such grant or grants shall not require the Power Company again to remove its line of wires, poles, and appliances except at the expense of the Steel Corporation. Any new location so furnished shall not be at a greater distance than seven hundred and fifty (750) feet from either side of the center line of said line of electric power transmission wires as herein described and shall be so located as to permit

the construction, operation, and maintenance of said line of wires, poles, and other supports and appliances in accordance with good engineering and operating practice. In the event that any portion of the new location for said line of wires, poles, and other supports and appliances is not on land then owned by the Steel Corporation, then, before said line of wires, poles, and other supports and appliances shall be moved, the Steel Corporation shall cause to be granted to the Power Company a right of way one hundred (100) feet in width, free of conditions, for the new location of said line of wires, poles, and other supports and appliances. The interference with such mining, quarrying, or manufacturing operations by such line of wires, poles, and other supports and appliances and the necessity for moving same, as well as the new location to which it shall be removed, shall be agreed upon between the parties hereto; and in the event the parties are unable to agree upon any of such matters, their differences shall be settled by arbitration. Each of the parties hereto shall select one disinterested person, and the two thus selected shall select a third disinterested person, and the three thus chosen, or a majority of them, shall determine the matters at issue, and each of the parties hereto agrees to abide by the result of such arbitration.

(11) The Power Company shall pay all taxes assessed upon property installed or place on such land by the Power Company. If the Steel Corporation is required by the taxing authorities to pay such taxes and any interest or penalties, the Power Company shall reimburse the Steel Corporation for payment of such taxes and any interest or penalties paid.

(12) In the event the Power Company violates any of the covenants herein contained and fails for ten (10) days after notice in writing served upon it by the Steel Corporation to comply with such covenant or covenants, or in the event the determination of any question, by arbitration or otherwise, requires the Power Company to do or perform any act or acts and it fails to do or perform such act or acts within ten (10) days after such determination, the Steel Corporation shall have the right to terminate this contract by giving the Power Company thirty (30) days notice in writing of its intention so to do, whereupon at the expiration of said thirty (30) days this contract shall be deemed terminated and at an end; and the Steel Corporation may thereafter at the expense of the Power Company remove said wires and the supports and appliances therefor from said land should they remain thereon without right for exceeding thirty (30) days.

(13) This contract shall inure to and be binding upon the respective successors and assigns of the parties hereto as well as the parties themselves; and the Steel Corporation, as used herein, shall apply to and include its subsidiary and associate companies so far as the reservation of future rights to it hereunder is concerned.

IN WITNESS WHEREOF, each of the parties hereto has caused this instrument to be executed in duplicate in its name and behalf and its corporate seal to be affixed hereto and attested by its officers thereunto duly authorized, the day and year first above written.

UNITED STATES STEEL CORPORATION

By A. V. Wiebel
President
Tennessee Coal & Iron Division

S E A L

ATTEST:

A. H. Knight
Assistant Secretary
United States Steel Corporation

ALABAMA POWER COMPANY

By Edwin I. Hatch
Executive Vice-President

S E A L

ATTEST:

Charles P. Jackson
Secretary

Approved As to Form RCC (Martin & Blakey
(
(By S. Eason Balch

Approved As to terms and description
(
(By S. C. Wood
(Asst. Mgr. Land Dept.

THIS CONTRACT, entered into this 10th day of September, 1956, between UNITED STATES STEEL CORPORATION, a New Jersey corporation, party of the first part, and ALABAMA POWER COMPANY, party of the second part;

WITNESSETH:

(1) Party of the first part, in consideration of the premises and in further consideration of the sum of Five Hundred Twenty-five and No/100 Dollars ($525.00) paid to it by party of the second part, receipt of which is acknowledged, hereby grants and conveys to party of the second part, to the extent of the ownership of party of the first part, the right to construct, operate and maintain a line of electric power transmission wires, together with one line of poles and other supports and appliances necessary therefor and the right to construct, operate and maintain additional electric power transmission wires thereon from time to time upon and across that portion of the following described land owned by party of the first part, the location of said line of wires and poles being shown on map marked Exhibit B attached hereto and made a part hereof:

> The North-West quarter of North-East quarter and the East half of North-West quarter of Section 6, Township 18 South, Range 3 West, and the East half of North-East quarter, the North-West quarter of North-East quarter, and the North-East quarter of North-West quarter of Section 1, Township 18 South, Range 4 West, all in Jefferson County, Alabama.

(2) Party of the first part, for said consideration, hereby further grants and conveys unto party of the second part such rights of ingress and egress over said land as may be necessary for the construction, operation and maintenance of said line of wires and the supports and appliances therefor upon said land.

(3) The rights herein granted shall not in any way be construed to be superior to and are subject to: (a) Right granted to Southern Natural Gas Corporation under contract dated December 19, 1930, and right granted to Southern Natural Gas Company under contract dated October 17, 1952, to construct, operate and maintain natural gas pipe lines in the North-West quarter of North-East quarter of said Section 1; (b) Rights of way for public or private roads, other pipe lines, electric power transmission lines, telephone or telegraph lines; and (c) Such leases as are now in effect.

(4) The rights herein granted shall revert to party of the first part, its successors and assigns, in the event of abandonment of the use of said line of wires during a continuous period of twelve (12) months' time.

(5) The terms and conditions shown in Exhibit A attached hereto and made a part hereof shall constitute a part of this contract.

(6) This contract shall inure to and be binding upon the respective successors and assigns of the parties hereto as well as the parties themselves; and "party of the first part," as used herein, shall apply to and include its subsidiary and associate companies so far as the reservation of future rights to it hereunder is concerned.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in duplicate in their name and behalf and their corporate seals to be hereunto affixed and attested by their duly authorized officers the day and year first above written.

S E A L

UNITED STATES STEEL CORPORATION

ATTEST:

By A. V. Wishal
President,
Tennessee Coal & Iron Division

A. H. Knight
Assistant Secretary
United States Steel Corporation

S E A L

ALABAMA POWER COMPANY

ATTEST:

By Edwin L. Hatch
Vice President,

Charles P. Jackson
Secretary

Approved as to form (Martin & Blakey
(
(By S. Eason Balch

Approved as to terms and Description (
(By S. E. Wood
(Asst.Mgr.Land Dept.

EXHIBIT A

(a) Party of the first part shall not be held liable (except as provided in Paragraph (d) hereof) for any claims for damage which may accrue on account of the construction, operation or maintenance of said line of wires, poles and other supports and appliances connected therewith on the land of party of the first part, and party of the first part shall not be liable on account of damage to said wires, poles and other supports and appliances accruing from past or future mining or removal of coal, iron ore or other minerals contained in the aforesaid land, or from failure to leave adequate support for the surface of said land; and party of the second part shall indemnify, protect and save harmless party of the first part from all loss, damage, cost or expense which party of the first part may sustain on account of the improper construction, operation or maintenance of said line of wires and the supports and appliances therefor upon said land and on account of claims for damage by others by reason of the construction, operation or maintenance upon said land by party of the second part of said line of wires or supports or other appliances connected therewith.

(b) Party of the second part shall construct, operate and maintain said wires and the supports and appliances therefor upon said land over which the aforesaid rights are herein conveyed in accordance with the following specifications: (1) The minimum overhead clearance of all wires or cables shall be thirty (30) feet over the tops of rails in railroad tracks of any character now existing or hereafter constructed; twenty-five (25) feet over the tops of existing wagon roads and ten (10) feet over existing buildings and other structures and also over signal, power, light, telephone or other wires upon said land; the minimum side clearance between supports and nearest rails in main tracks upon said land shall be not less than twelve (12) feet, and between supports and nearest rails in side tracks shall be not less than six (6) feet; (2) Crossing spans over roads, tracks, buildings or other structures and electric lines of any character shall be free from splices and shall be constructed and thereafter maintained in accordance with specifications of the National Electrical Safety Code, Fourth Edition, contained in the Hand Book Series of the United States Bureau of Standards No. 3 and amendments thereto and revisions thereof from time to time in effect.

(c) Party of the second part shall have the right to trim and/or to cut such trees located on land of party of the first part as may interfere with the installation or endanger the safety or proper maintenance and operation of said line of wires and the supports and appliances therefor; party of the second part shall, however, pay party of the first part for the reasonable timber market value of all trees cut by party of the second part which are located more than [redacted] feet from the center line of said line of electric power transmission wires.

(d) Party of the first part shall have the right at any and all times to use in its mining quarrying or manufacturing operations the land over which said line of wires is located, and party of the first part shall also have the right to install, maintain and use tracks, roads, pipe lines, haulage systems and wires or cables of any description across said line of wires; and party of the first part shall have the right to grant to others the right to install, maintain and use tracks, roads, pipe lines, haulage systems and wires or cables of any description across said line of wires; upon condition, however: (1) That the exercise of any of said rights by party of the first part shall cause no unreasonable interference with the line of wires and operations of party of the second part, and the rights granted to others shall not be superior to the rights granted to party of the second part; (2) That the character of installation of the above mentioned crossings shall be reasonably satisfactory to party of the second part; and (3) That party of the second part shall be relieved of and held harmless from any damage arising by reason of said crossings made by other parties.

(e) Party of the second part shall at its expense, upon the completion of installation of its line of wires and thereafter in the maintenance and operation thereof, cause the destruction or removal from the land of party of the first part of all debris, including timber refuse, resulting from such installation, operation and maintenance.

(f) Should the wires, poles and appliances or any portion thereof constructed, operated and maintained by party of the second part in the location herein described hereafter interfere with the mining, quarrying or manufacturing operations of party of the first part or future subdivisions laid out by party of the first part or any of its present or future subsidiary or associate companies, then upon written request by party of the first part so to do party of the second part shall within thirty (30) days remove its wires, poles and other supports and appliances from said location to other locations, provided: (1) That party of the first part shall first convey to party of the second part the same rights in such other locations as are conveyed to party of the second part hereunder; and (2) That party of the second part shall not be required to remove and relocate its said wires, poles and other supports and appliances more than one time at its expense, and when such other location or locations are furnished, the terms of such grant or grants shall not require party of the second part again to remove its wires, poles and appliances except at the expense of party of the first part. Any new location so furnished shall not be at a greater distance than seven hundred and fifty (750) feet from either side of the center line of said line of electric power transmission wires as herein described and shall be so located as to permit the construction, operation and maintenance of said wires, poles and other supports and appliances in accordance with good engineering and operation practice, and in the event any portion of the new location for said wires, poles and other supports and appliances is not on land then owned by party of the first part, then before such wires, poles and other supports and appliances shall be moved, party of the first part shall cause to be conveyed to party of the second part a right of way twenty-five (25) feet in width, free of conditions, for the new location of such wires, poles and other supports and appliances. The interference with such mining, quarrying or manufacturing operations or future subdivisions by such wires, poles and other supports and appliances and the necessity for moving the same, as well as the new location to which they shall be removed, shall be agreed upon between the parties; and in the event they are unable to agree upon any of such matters, their differences shall be settled by arbitration. Each of the parties hereto shall select one disinterested person, and the two thus selected shall select a third disinterested person, and the three thus chosen, or a majority of them shall determine the matters at issue, and each of the parties hereto agrees to abide by the result of such arbitration.

(g) In the event party of the second part violates any of the covenants herein contained and fails for ten (10) days after notice in writing served upon it by party of the first part, or within ten (10) days after the determination by arbitration or otherwise of any question, the result of which requires party of the second part to do or perform any act or acts, as the case may be, to comply with such covenant or covenants, party of the first part shall have the right to terminate this contract by giving party of the second part thirty (30) days' notice in writing of its intention so to do, whereupon at the expiration of said thirty (30) days this contract shall be deemed terminated and at an end; and party of the first part may thereafter at the expense of party of the second part remove said wires and the supports and appliances therefor from said land should they remain thereon without right for exceeding thirty (30) days.

(h) Party of the second part will pay all taxes assessed upon property installed or placed on such land by party of the second part. If party of the first part is required by the taxing authorities to pay such taxes and any interest or penalties, party of the second part will reimburse party of the first part for payment of such taxes and any interest or penalties paid.

FORM 859C—3-19-48

STATE OF ALABAMA
COUNTY OF JEFFERSON

I, Joe C. Bailey, Jr., a Notary Public in and for said County in said State,

hereby certify that A. V. Wiebel, whose name as ——— President of Tennessee Coal & Iron Division, United States Steel Corporation, a corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this, the 17th day of September, 19 56.

Joe C. Bailey, Jr.
Notary Public

SEAL

JOE C. BAILEY, Jr.
Notary Public, State at Large, Alabama
My commission expires May 19, 1958

STATE OF ALABAMA
COUNTY OF JEFFERSON

I, Mary J. Cochran, a Notary Public in and for said County in said State,

hereby certify that Edwin I. Hatch, whose name as Vice President of Alabama Power Company, a corporation, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, as such officer and with full authority, executed the same voluntarily for and as the act of said corporation.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this, the 10th day of September, 19 56.

Mary J. Cochran
Notary Public

SEAL

Notary Public, Jefferson County, Alabama
My Commission Expires February 24, 1957

This instrument was prepared by
W. H. Woolverton, Jr., Attorney,
United States Steel Corporation,
Fairfield, Alabama

THIS CONTRACT, entered into this 24th day of June, 1969, between the UNITED STATES STEEL CORPORATION, a Delaware corporation, hereinafter called the "Steel Corporation," the ALABAMA POWER COMPANY, a corporation, hereinafter called the "Power Company," and the SOUTH CENTRAL BELL TELEPHONE COMPANY, a corporation, hereinafter called the "Telephone Company";

WITNESSETH:

WHEREAS, by contract dated September 10, 1956, the United States Steel Company, a New Jersey corporation, granted to the Power Company the right to construct, operate and maintain a line of electric power transmission wires, together with one line of poles and other supports and appliances necessary therefor, and the right to construct, operate, and maintain additional electric power transmission wires thereon, upon and across part of the following described land:

> The North-West quarter of North-East quarter and the East half of North-West quarter of Section 6, Township 18 South, Range 5 West, and the East half of North-East quarter, the North-West quarter of North-East quarter, and the North-East quarter of North-West quarter of Section 1, Township 18 South, Range 6 West, all in Jefferson County, Alabama; and

WHEREAS, the Steel Corporation has, by mergers, succeeded to the rights of said United States Steel Company; and

WHEREAS, the Telephone Company desires to use jointly with the Power Company certain of the poles of the Power Company located on land of the Steel Corporation pursuant to said contract set forth above.

NOW THEREFORE:

(1) In consideration of Two Hundred Sixty and 00/100 Dollars ($260.00) paid to the Steel Corporation by the Telephone Company, receipt whereof is acknowledged, the Steel Corporation, to the extent of its ownership, hereby agrees that the Power Company may permit the Telephone Company to use jointly with the Power Company, upon the terms and conditions hereinafter prescribed, the poles of the Power Company installed under the terms of said contract dated September 10, 1956.

(2) In consideration of the benefits which will accrue to the Telephone Company by virtue of being permitted by the Power Company to use jointly such poles, the Telephone Company hereby agrees to and accepts the following terms

and conditions:

(a) As between the Steel Corporation and the Power Company, as long as the wires, poles, and appliances of the Power Company shall remain in place on land of the Steel Corporation pursuant to said contract set forth above, the Power Company shall be liable to the Steel Corporation for full compliance with all of the terms and conditions contained in said contract in the same manner as though the wires and appliances of the Telephone Company on said poles were the property of the Power Company. As between the Power Company and the Telephone Company, their rights and obligations between themselves shall be governed by the applicable provisions of joint use contracts dated January 1, 1951, and December 31, 1965, as heretofore or hereafter amended, between the Power Company and the Telephone Company.

(b) In the event the Power Company should abandon its wires, poles, and appliances located on any poles on the land of the Steel Corporation pursuant to said contract set forth above and used jointly by the Power Company and the Telephone Company, and the Telephone Company should in such event arrange with the Power Company to take over said poles and continue to maintain them and the wires, cables, and appliances of the Telephone Company on said poles, the Telephone Company shall have the right to continue the use of said poles under the terms and conditions of the contract set forth above covering use of said poles by the Power Company, and the Power Company shall thereafter be relieved of all liability or responsibility under the provisions of said contract for that portion of said land and poles so abandoned by the Power Company; provided, however, that the Power Company shall have first given written notice to the Steel Corporation of such abandonment and of such taking over of obligations for said line of poles by the Telephone Company.

(3) This contract shall inure to and be binding upon the respective successors and assigns of the parties hereto as well as the parties themselves.

IN WITNESS WHEREOF the parties hereto have caused these presents to

be executed in triplicate in their names and on their behalf and their corporate seals to be hereunto affixed and attested by their duly authorized officers the day and year first above written.

UNITED STATES STEEL CORPORATION

By /s/ J. C. Gray
Administrative Vice President

ATTEST: (SEAL)

/s/ A. F. King
Assistant Secretary

ALABAMA POWER COMPANY

By /s/ Jesse S. Vogtle
~~Executive~~ Vice President

ATTEST: (SEAL)

/s/ R. A. Bowron
Secretary

SOUTH CENTRAL BELL TELEPHONE COMPANY

By /s/ F. T. Smith
Vice President
Operations

ATTEST: (SEAL)

/s/ W. H. Bailey
Secretary

ATTACHMENT G

OGR’s Current Subsidence Program

OAK GROVE MINE
SUBSIDENCE PROGRAM

The remedies for subsidence from underground mining in Alabama are provided in § 9-16-91 of the Code of Alabama. The Oak Grove Mine (the "Mine") currently offers owners of occupied residential dwellings, structures related to such dwellings and other non-commercial buildings ("Covered Dwellings") a pre-mining option that exceeds the remedies provided by law.

Pre-mining Option

The Mine currently has adopted a Subsidence Program by which property owners and the Mine may enter into an agreement to establish the manner and means by which repair or compensation for subsidence damages is to be provided. Nothing contained in any such agreement may negate the requirements of Alabama law to provide repair or compensation for subsidence damages. The Mine may modify or withdraw its Subsidence Program at any time provided the Mine continues to offer remedies for subsidence from underground mining consistent with § 9-16-91 of the Code of Alabama. At this time, for underground mining within the currently permitted area resulting in subsidence, the Subsidence Program offers the following one-time option to owners of Covered Dwellings that existed and were completed before mailing of the pre-mining notice required by Alabama law (or other notice to the owner of the proposed subsidence):

Repair or Compensation + 15%

The Mine will repair material damage to Covered Dwellings caused by surface subsidence resulting from the Mine's underground mining operations as provided by § 9-16-91 of the Code of Alabama. The repairs shall begin in a manner consistent with § 880-X-10D-.58 of the Alabama Surface Mining Commission Administrative Code once all probable subsidence-related material damage is complete. The Mine and the owner must agree to one or more certified and licensed contractors approved by the Mine to make the repairs. If the Mine determines that repairs are not technologically or economically feasible, the Mine will compensate the owner for loss in appraised market value to the Covered Dwellings resulting from subsidence damage. The Mine and the owner must agree to one or more certified and licensed appraisers approved by the Mine. In addition to the repair or compensation remedy, the Mine will pay the owner a one-time consideration or incentive payment in the amount of 15% of the pre-mining, fair-market appraised value of the Covered Dwellings in return for execution by the owner of a release and waiver of all claims against the Mine.

Post-mining

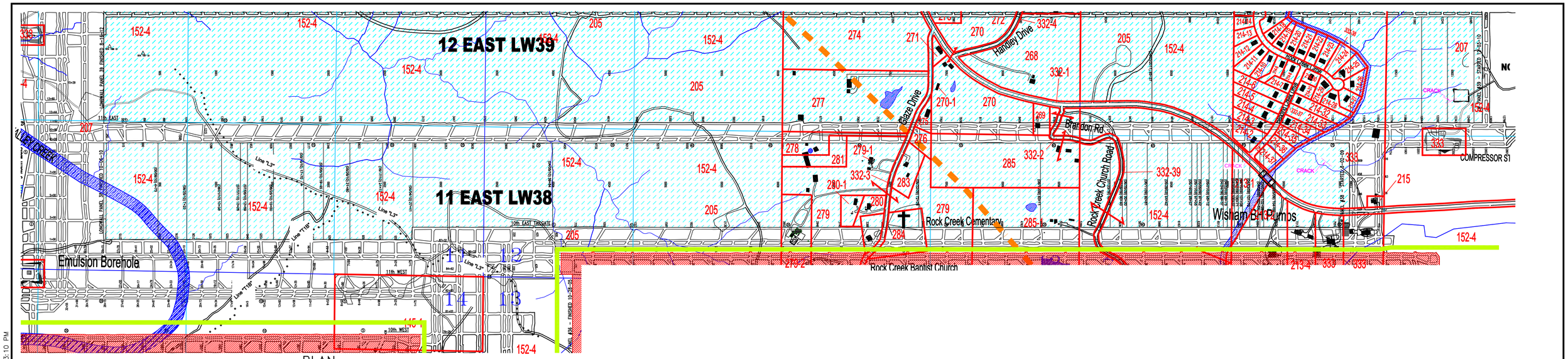
For owners of Covered Dwellings that that did not enter into the pre-mining option before the start of surface subsidence as well as Covered Dwellings that were not completed before mailing of the mining notice required by Alabama law (or other notice to the owner of the proposed subsidence), the Mine will repair material damage or compensate consistent with Alabama law as set forth in option #1. The additional 15% incentive payment will not be available.

Revised 5/1/14

ATTACHMENT H

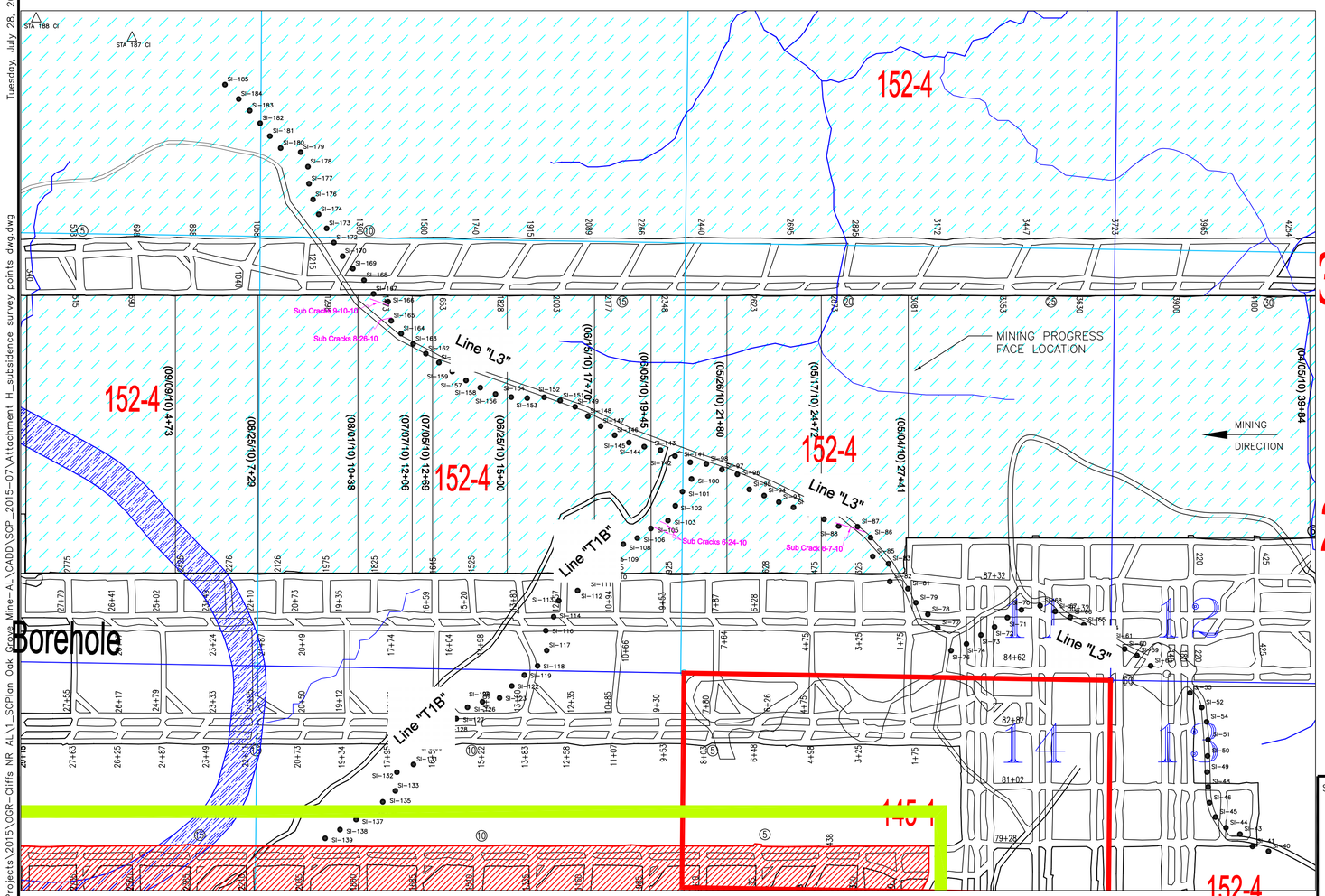
Subsidence Monitoring Data Over 11East/LW38
(Rock Creek Bridge and Survey Lines “L3” and “T1B”)

- Reference Map of Surveyed Points and Ground Cracks; and
- Plots of Measured Vertical Subsidence



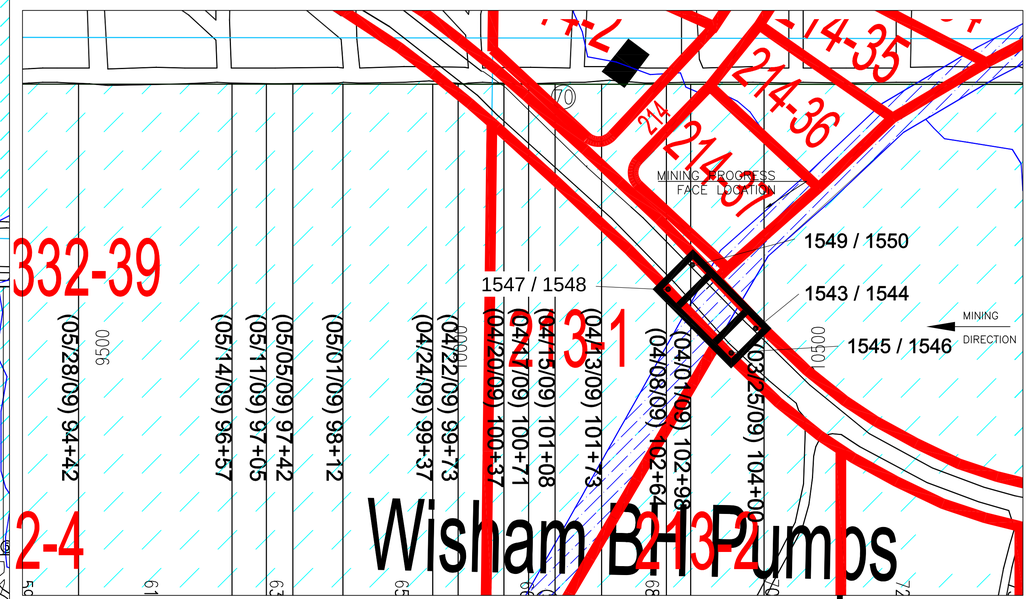
PLAN

SCALE: 1"=400'



SURVEY LINES – L3, T1B

SCALE: 1"=200'



ROCK CREEK BRIDGE

SCALE: 1"=100'

SCALE

400 0 400 800 FEET

SEAL:

TETRA TECH
WWW.TETRATECH.COM
400 PENN CENTER BOULEVARD, SUITE 200
PITTSBURGH, PA 15235
T: (412) 829-3600 | F: (412) 829-3620

PROJECT NUMBER: 212C-SW-00043

FILE NAME: Attachment H_subsidence survey points dwg.dwg

OAK GROVE RESOURCES, LLC

OAK GROVE MINE - JEFFERSON COUNTY, AL

REFERENCE PLAN

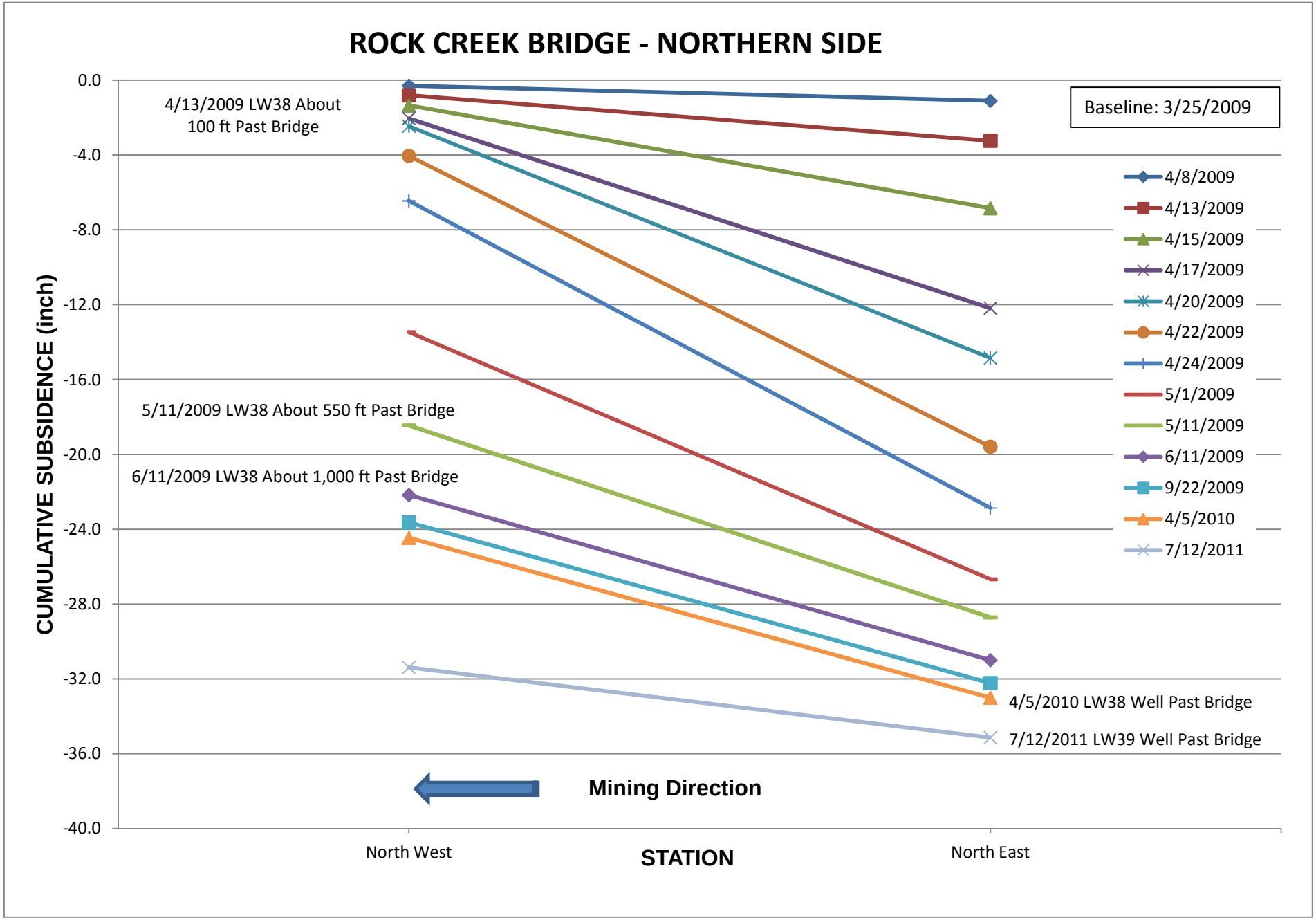
SUBSIDENCE MONITORING SURVEY POINTS

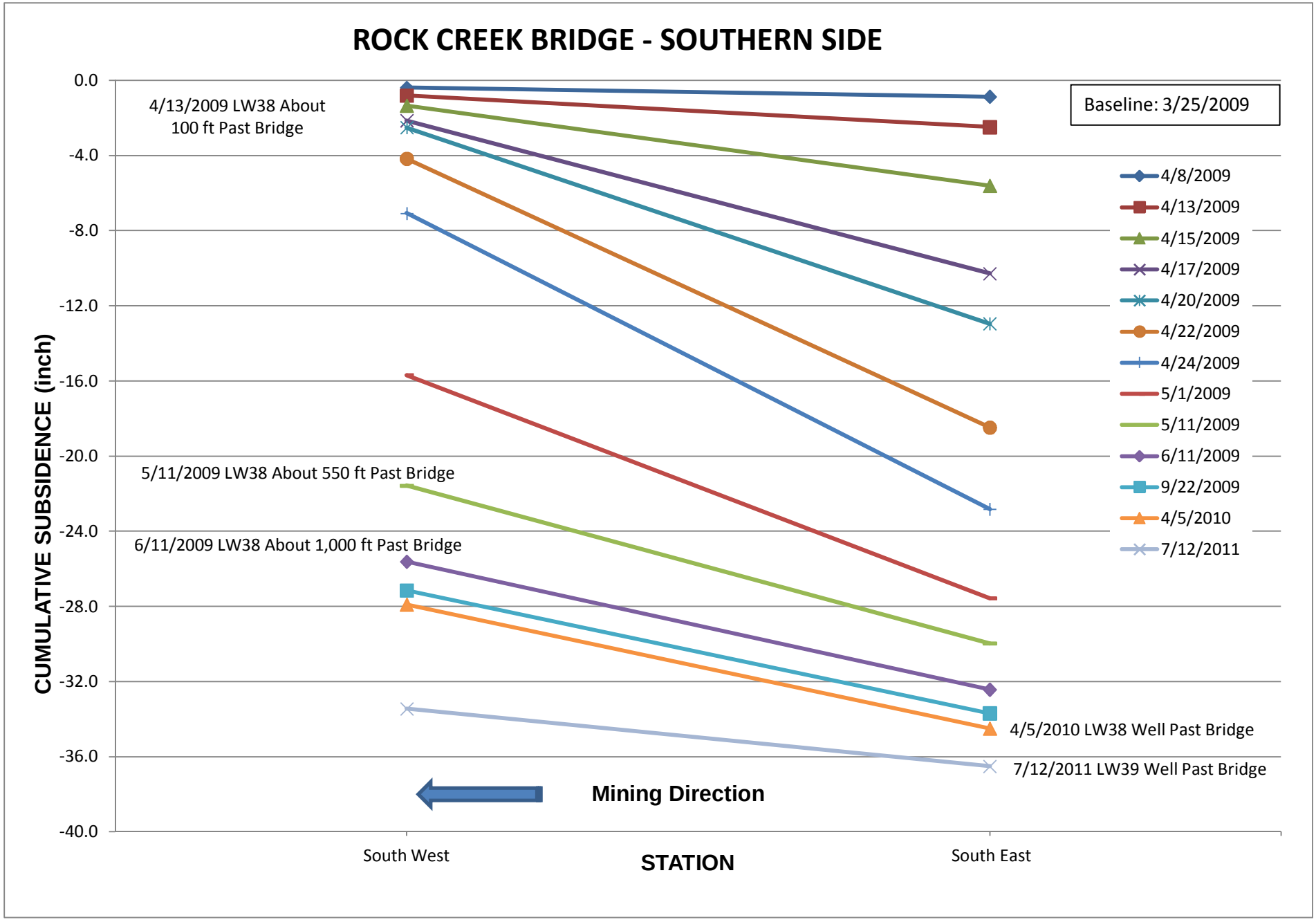
11 EAST LW38 AND 12 EAST LW39

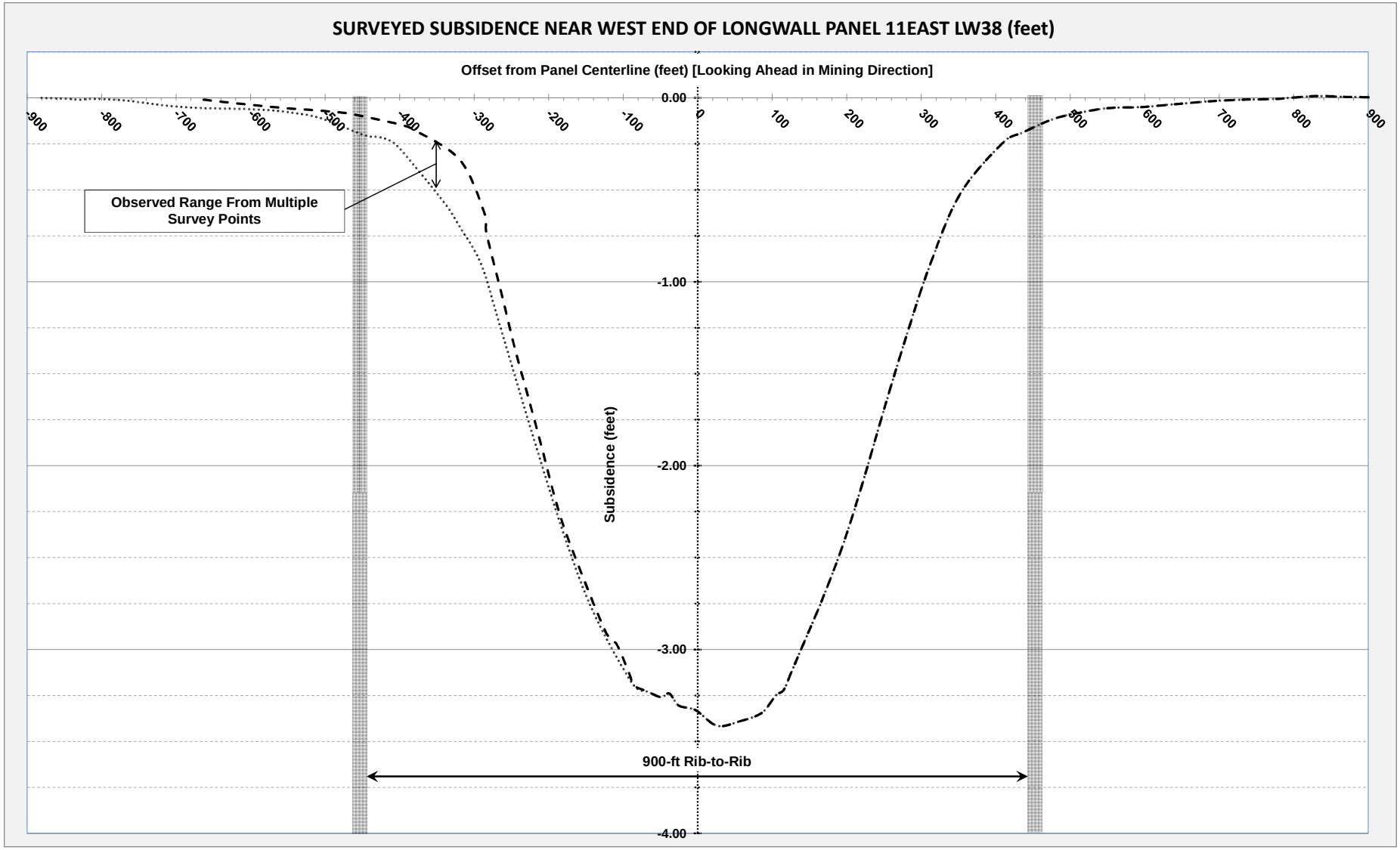
SCALE: AS SHOWN | DRAWING NO. ATTACHMENT H | JULY 2015

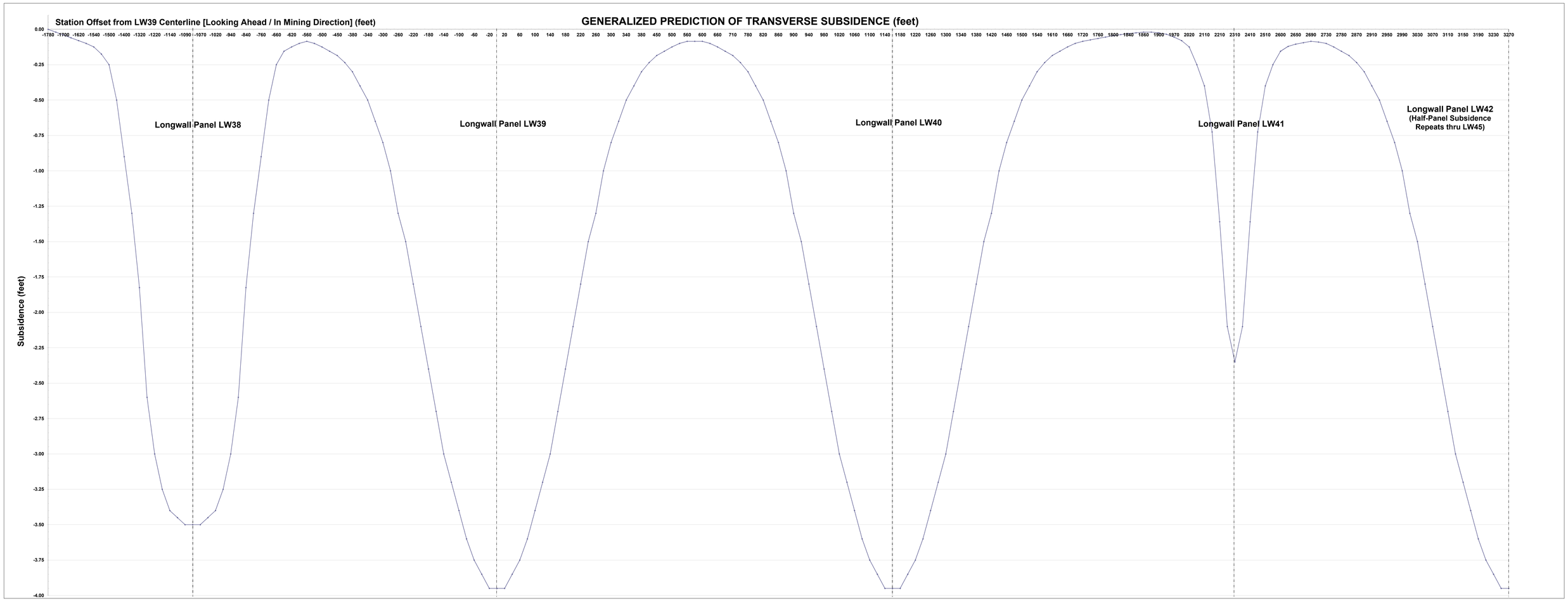
P:\SE Projects\2015\OGR-Cliffs NR AL\1_SCPlan Oak Grove Mine-AL\CADD\SCP_2015-07\Attachment H_subsidence survey points dwg.dwg

Tuesday, July 28, 2015 1:13:10 PM


ROCK CREEK BRIDGE - NORTHERN SIDE
CUMULATIVE SUBSIDENCE (inch)
0.0
-4.0
-8.0
-12.0
-16.0
-20.0
-24.0
-28.0
-32.0
-36.0
-40.0
4/13/2009 LW38 About 100 ft Past Bridge
5/11/2009 LW38 About 550 ft Past Bridge
6/11/2009 LW38 About 1,000 ft Past Bridge
4/5/2010 LW38 Well Past Bridge
7/12/2011 LW39 Well Past Bridge
Baseline: 3/25/2009
4/8/2009
4/13/2009
4/15/2009
4/17/2009
4/20/2009
4/22/2009
4/24/2009
5/1/2009
5/11/2009
6/11/2009
9/22/2009
4/5/2010
7/12/2011
Mining Direction
North West
STATION
North East


ROCK CREEK BRIDGE - SOUTHERN SIDE
CUMULATIVE SUBSIDENCE (inch)
0.0
-4.0
-8.0
-12.0
-16.0
-20.0
-24.0
-28.0
-32.0
-36.0
-40.0
4/13/2009 LW38 About 100 ft Past Bridge
5/11/2009 LW38 About 550 ft Past Bridge
6/11/2009 LW38 About 1,000 ft Past Bridge
4/5/2010 LW38 Well Past Bridge
7/12/2011 LW39 Well Past Bridge
Mining Direction
Baseline: 3/25/2009
4/8/2009
4/13/2009
4/15/2009
4/17/2009
4/20/2009
4/22/2009
4/24/2009
5/1/2009
5/11/2009
6/11/2009
9/22/2009
4/5/2010
7/12/2011
South West
STATION
South East


SURVEYED SUBSIDENCE NEAR WEST END OF LONGWALL PANEL 11EAST LW38 (feet)
Offset from Panel Centerline (feet) [Looking Ahead in Mining Direction]
Observed Range From Multiple Survey Points
Subsidence (feet)
0.00
-1.00
-2.00
-3.00
-4.00
-900
-800
-700
-600
-500
-400
-300
-200
-100
0
100
200
300
400
500
600
700
800
900
900-ft Rib-to-Rib


GENERALIZED PREDICTION OF TRANSVERSE SUBSIDENCE (feet)
Station Offset from LW39 Centerline [Looking Ahead / In Mining Direction] (feet)
Subsidence (feet)
0.00
-0.25
-0.50
-0.75
-1.00
-1.25
-1.50
-1.75
-2.00
-2.25
-2.50
-2.75
-3.00
-3.25
-3.50
-3.75
-4.00
-1780 -1700 -1620 -1540 -1500 -1400 -1320 -1220 -1140 -1090 -1070 -1020 -940 -840 -760 -660 -620 -560 -500 -450 -380 -340 -300 -260 -220 -180 -140 -100 -60 -20 20 60 100 140 180 220 260 300 340 380 450 500 560 600 660 710 780 820 860 900 940 980 1020 1060 1100 1140 1180 1220 1260 1300 1340 1380 1420 1460 1500 1540 1610 1660 1720 1760 1800 1840 1860 1900 1970 2020 2110 2210 2310 2410 2510 2600 2650 2690 2730 2780 2870 2910 2950 2990 3030 3070 3110 3150 3190 3230 3270
Longwall Panel LW38
Longwall Panel LW39
Longwall Panel LW40
Longwall Panel LW41
Longwall Panel LW42
(Half-Panel Subsidence
Repeats thru LW45)

EXHIBITS

EXHIBIT 1

Longwall Mining Plan 2015 – 2020

(16 East LW43 through 20 East LW47)

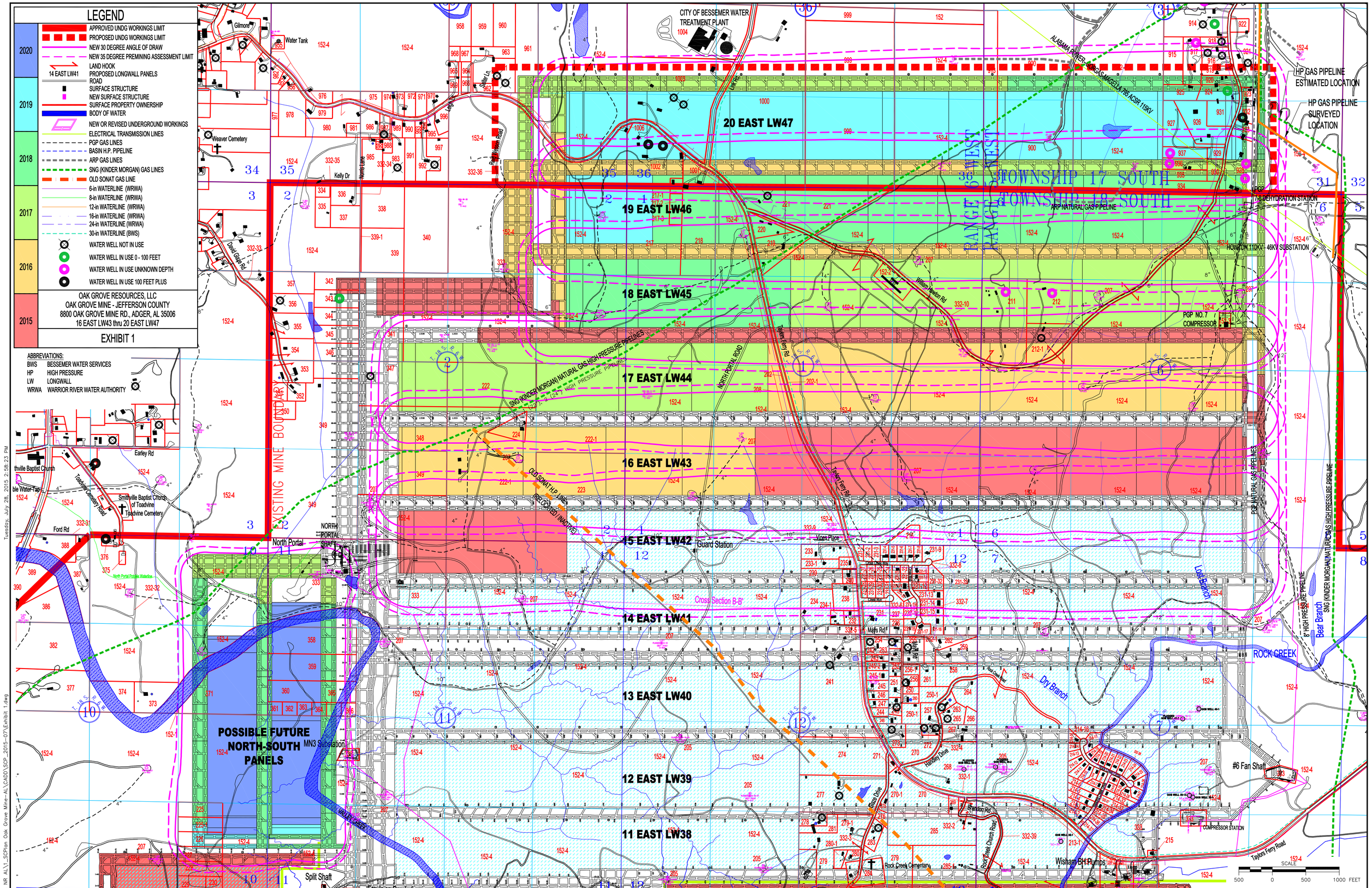
LEGEND

2020	APPROVED UNDG WORKINGS LIMIT
	PROPOSED UNDG WORKINGS LIMIT
	NEW 30 DEGREE ANGLE OF DRAW
	NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
	LAND HOOK
	14 EAST LW41 PROPOSED LONGWALL PANELS
	ROAD
	SURFACE STRUCTURE
	NEW SURFACE STRUCTURE
	SURFACE PROPERTY OWNERSHIP
	BODY OF WATER
2019	NEW OR REVISED UNDERGROUND WORKINGS
	ELECTRICAL TRANSMISSION LINES
2018	PGP GAS LINES
	BASIN H.P. PIPELINE
	ARP GAS LINES
	SNG (KINDER MORGAN) GAS LINES
	OLD SONAT GAS LINE
2017	6-in WATERLINE (WRWA)
	8-in WATERLINE (WRWA)
	12-in WATERLINE (WRWA)
2016	16-in WATERLINE (WRWA)
	24-in WATERLINE (WRWA)
	30-in WATERLINE (BWS)
	WATER WELL NOT IN USE
	WATER WELL IN USE 0 - 100 FEET
	WATER WELL IN USE UNKNOWN DEPTH
	WATER WELL IN USE 100 FEET PLUS
2015	OAK GROVE RESOURCES, LLC OAK GROVE MINE - JEFFERSON COUNTY 8800 OAK GROVE MINE RD., ADGER, AL 35006 16 EAST LW43 thru 20 EAST LW47

EXHIBIT 1

ABBREVIATIONS:

BWS	BESSEMER WATER SERVICES
HP	HIGH PRESSURE
LW	LONGWALL
WRWA	WARRIOR RIVER WATER AUTHORITY



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE

SEAL: ALABAMA REGISTERED PROFESSIONAL ENGINEER NO. 20825 CHRISTOPHER T. LEWIS

JULY 29, 2015

TETRA TECH
WWW.TETRATECH.COM
400 PENN CENTER BOULEVARD, SUITE 200
PITTSBURGH, PA 15235
T: (412) 829-3600 | F: (412) 829-3620

PROJECT NUMBER: 212C-SW-00043

FILE NAME: Exhibit 1.dwg

DRAWN BY: EAD	DATE: 05/18/2015
CHECKED BY: CJL	DATE: 05/20/2015

OAK GROVE RESOURCES, LLC

OAK GROVE MINE - JEFFERSON COUNTY, AL

LONGWALL MINING PLAN 2015 – 2020
5 YEAR MINING PROJECTION – OVERALL PLAN
16 EAST LW43 THRU 20 EAST LW47

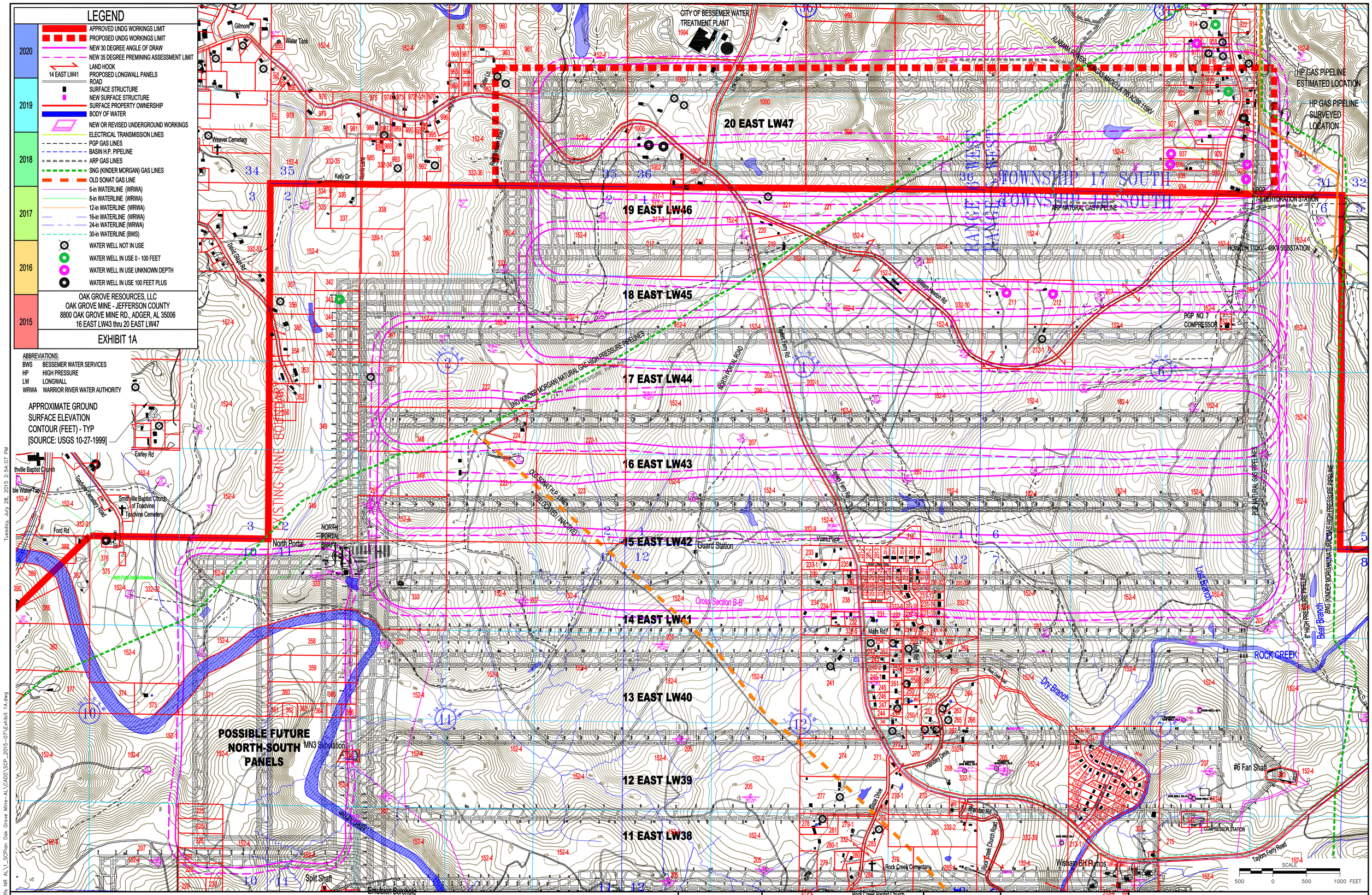
SCALE: AS SHOWN	DRAWING NO. EXHIBIT 1	JULY 2015

P:\SE Projects\2015\OGR-Cliffs NR AL_SCPlan Oak Grove Mine-AL\CADD\SCP_2015-07\Exhibit 1.dwg

Tuesday, July 28, 2015 2:58:23 PM

EXHIBIT 1A

Ground Surface Topography



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL: ALABAMA REGISTERED NO. 20825 PROFESSIONAL ENGINEER CHRISTOPHER J. LEWIS

JULY 29, 2015

TETRA TECH
WWW.TETRATECH.COM
400 PENN CENTER BOULEVARD, SUITE 200
PITTSBURGH, PA. 15235
T: (412) 829-3600 | F: (412) 829-3620

PROJECT NUMBER: 212C-SW-00043

FILE NAME: Exhibit 1A.dwg

DRAWN BY: EAD	DATE: 05/18/2015
CHECKED BY: CJL	DATE: 05/20/2015

OAK GROVE RESOURCES, LLC

OAK GROVE MINE - JEFFERSON COUNTY, AL

GROUND SURFACE TOPOGRAPHY
LONGWALL MINING PLAN 2015 – 2020
16 EAST LW43 THRU 20 EAST LW47

SCALE: AS SHOWN | DRAWING NO. EXHIBIT 1A | JULY 2015

P:\SE Projects\2015\OGR-Cliffs NR AL\1-SCPlan Oak Grove Mine-AL\CADD\SCP-2015-07\Exhibit 1A.dwg

Tuesday, July 28, 2015 2:54:07 PM

EXHIBIT 1B

Blue Creek Coal Seam Contours

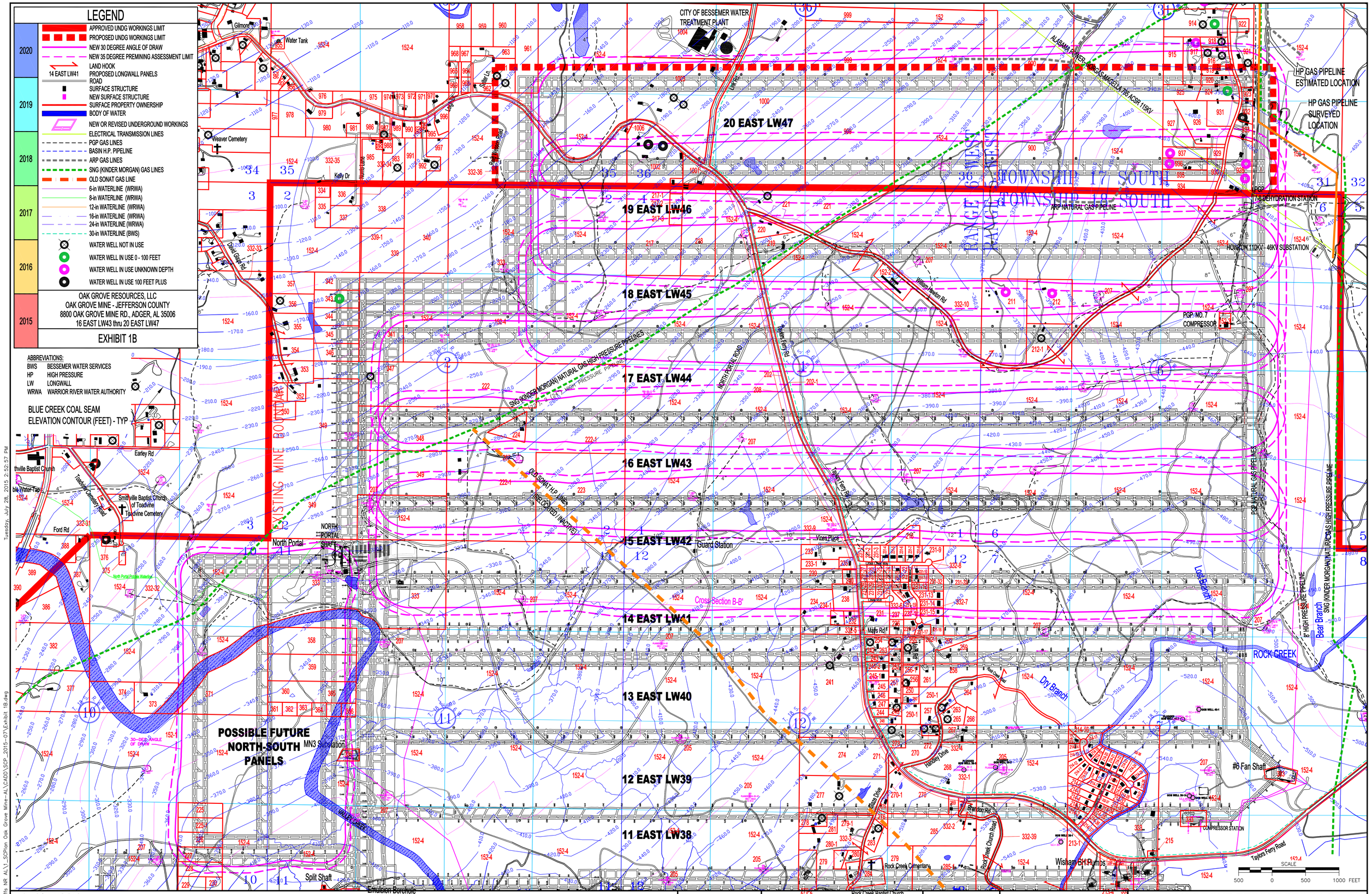
LEGEND

2020	APPROVED UNDG WORKINGS LIMIT
	PROPOSED UNDG WORKINGS LIMIT
	NEW 30 DEGREE ANGLE OF DRAW
	NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
	LAND HOOK
	14 EAST LW41 PROPOSED LONGWALL PANELS
	ROAD
	SURFACE STRUCTURE
	NEW SURFACE STRUCTURE
	SURFACE PROPERTY OWNERSHIP
	BODY OF WATER
2019	NEW OR REVISED UNDERGROUND WORKINGS
	ELECTRICAL TRANSMISSION LINES
	PGP GAS LINES
	BASIN H.P. PIPELINE
2018	ARP GAS LINES
	SNG (KINDER MORGAN) GAS LINES
	OLD SONAT GAS LINE
2017	6-in WATERLINE (WRWA)
	8-in WATERLINE (WRWA)
	12-in WATERLINE (WRWA)
2016	16-in WATERLINE (WRWA)
	24-in WATERLINE (WRWA)
	30-in WATERLINE (BWS)
	WATER WELL NOT IN USE
	WATER WELL IN USE 0 - 100 FEET
	WATER WELL IN USE UNKNOWN DEPTH
	WATER WELL IN USE 100 FEET PLUS
2015	OAK GROVE RESOURCES, LLC OAK GROVE MINE - JEFFERSON COUNTY 8800 OAK GROVE MINE RD., ADGER, AL 35006 16 EAST LW43 thru 20 EAST LW47
	EXHIBIT 1B

ABBREVIATIONS:

BWS	BESSEMER WATER SERVICES
HP	HIGH PRESSURE
LW	LONGWALL
WRWA	WARRIOR RIVER WATER AUTHORITY

BLUE CREEK COAL SEAM
ELEVATION CONTOUR (FEET) - TYP



NOTES / REVISIONS

ISSUED FOR	DATE	REV.	REVISION DESCRIPTION	MADE BY	CHKD BY	DATE
		4				
		3				
		2				
		1				

SEAL: ALABAMA REGISTERED PROFESSIONAL ENGINEER NO. 20825 CHRISTOPHER J. LEWIS
JULY 29, 2015

TETRA TECH
WWW.TETRATECH.COM
400 PENN CENTER BOULEVARD, SUITE 200
PITTSBURGH, PA 15235
T: (412) 829-3600 | F: (412) 829-3620

PROJECT NUMBER: 212C-SW-00043
FILE NAME: Exhibit 1B.dwg

DRAWN BY: EAD DATE: 05/18/2015
CHECKED BY: CJL DATE: 05/20/2015

OAK GROVE RESOURCES, LLC

OAK GROVE MINE - JEFFERSON COUNTY, AL

BLUE CREEK COAL SEAM ELEVATIONS
LONGWALL MINING PLAN 2015 – 2020
16 EAST LW43 THRU 20 EAST LW47

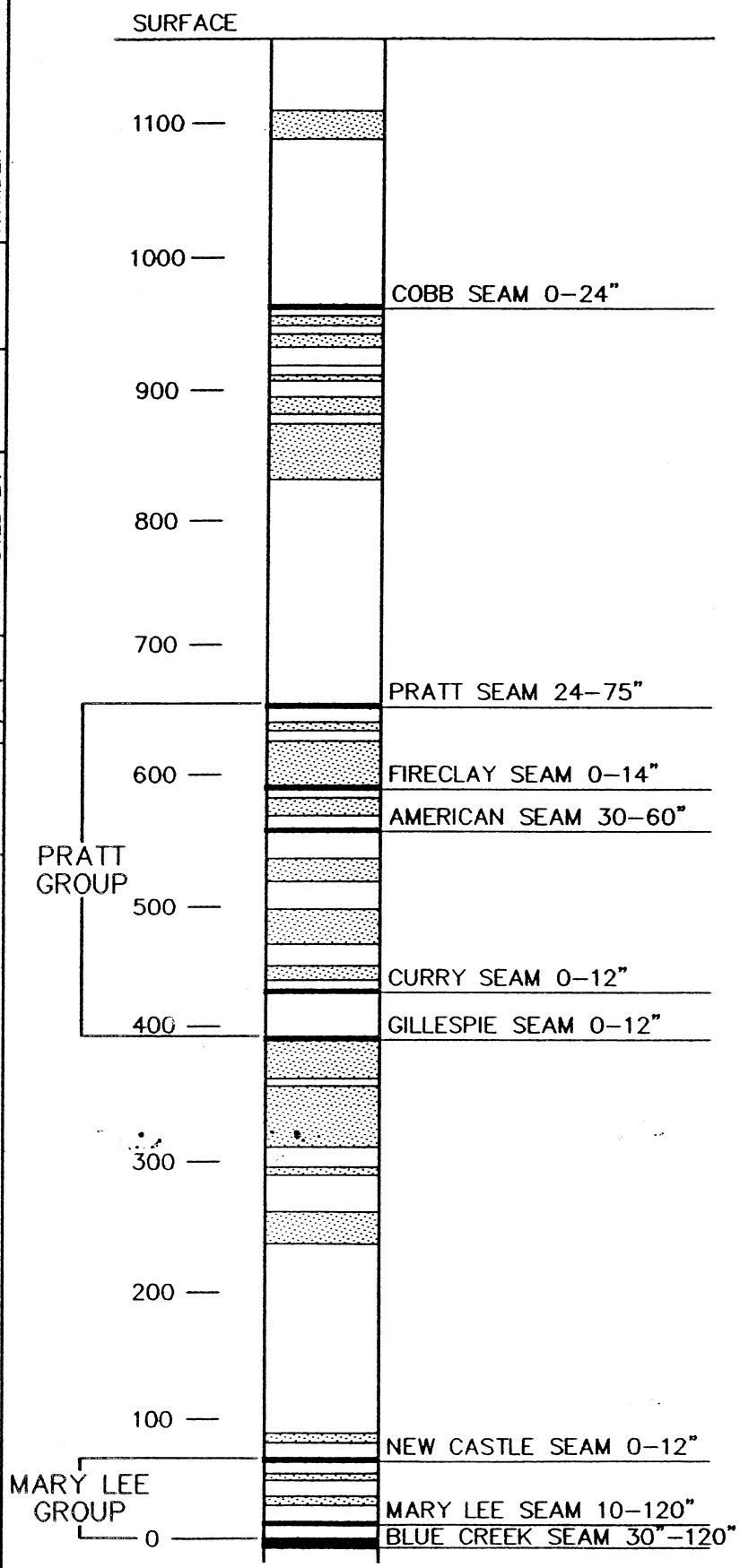
SCALE: AS SHOWN | DRAWING NO. EXHIBIT 1B | JULY 2015

P:\SE Projects\2015\OGR-Cliffs NR AL\1-SCPlan Oak Grove Mine-AL\CADD\SCP_2015-07\Exhibit 1B.dwg
Tuesday, July 28, 2015 2:52:57 PM

EXHIBIT 2

Generalized Stratigraphic Column, Geologic Cross-Sections A-A′ and B-B′, Location Plans, and Boring Logs

DRAWN BY	raw	7/25/95	CHECKED BY	APPROVED BY	DRAWING NUMBER	942648-A02



COAL

SANDSTONE

SHALES

EXHIBIT 2

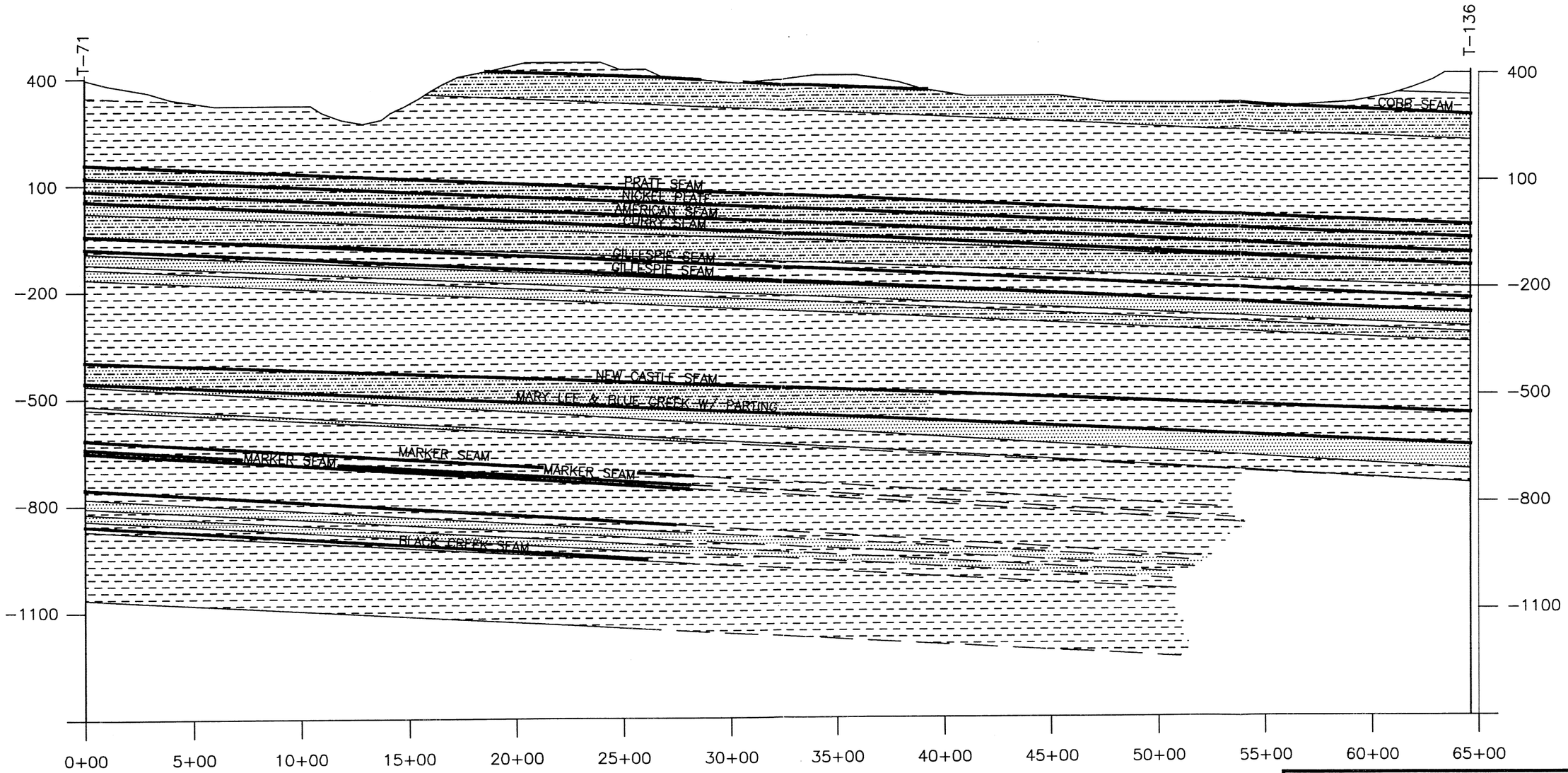
GENERALIZED STRATIGRAPHIC COLUMN

SUBSIDENCE CONTROL PLAN
OAK GROVE MINE
JEFFERSON COUNTY, ALABAMA

PREPARED FOR

U.S. STEEL MINING CO., INC.
ADGER, ALABAMA

DAPPOLONIA



LEGEND

- SHALE
- SANDSTONE
- SANDSTONE & SHALE
- COAL
- UNKNOWN
- T-71 DRILL HOLE

SCALE: 1"= 500' HORIZONTAL
1"= 300' VERTICAL

* NOTE: Due to vertical scale, lithology is generalized.
-Lithology dashed where inferred.
-Coal Seam name is noted on Top of Seam.
-Lithology taken from Taurus Exploration Drill Holes.

PERC ENGINEERING CO., INC.

U.S. STEEL MINING COMPANY LLC
OAK GROVE MINE
P-3232
EXHIBIT NO. 2
RECLAMATION CROSS SECTION A-A'

DRAWN BY: D.D.B. DWG. NAME: USMOGAA	DATE: 3-4-99
APPROVED BY: A.P.H.	SCALE: AS NOTED

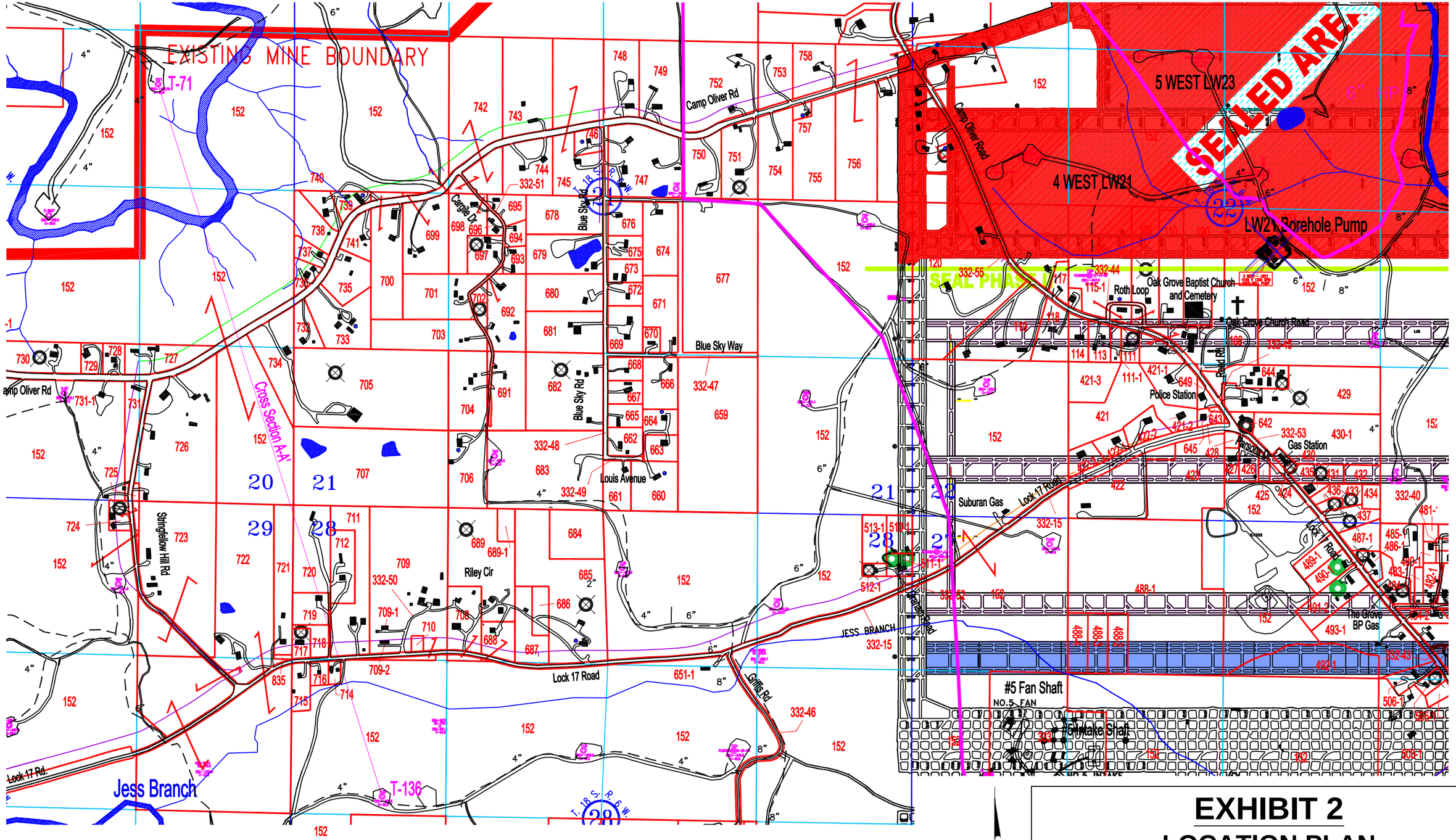


EXHIBIT 2

LOCATION PLAN
SECTION A-A'

SCALE

800 0 800 1600 FEET

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-71 Key 6640

Operator: Taurus Explor
Twp:18S Rng:6W Sec:20 SE NE
Mine Coordinates:
N 19519.47
E -50571.18
Collar Elev: 396.00
Determined By:Survey

Start Date: End Date: 7/18/89
Geologist:
Drilling Co:
Total Depth: 1455.00
Rotary Footage: 1455.00
Core Footage: 0.00
Casing: 50'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
-100.00			USX-Taurus-89-18-6-20-8-71	
0.00	Casing			
50.00	Shale			
221.50	Sandstone			
233.40	Coal	PrattSR	Coal: 1.75'	1.75
235.15	Shale	PrattSF		
249.00	Sandstone			
276.20	Shale			
278.15	Coal	AmerUSR	1.85'	1.85
280.00	Shale	AmerUSF		
291.75	Sandstone			
305.60	Shale			
311.50	Coal	AmerLSR	Coal: 1.2'	1.20
312.70	Shale	AmerLSF		
323.00	Sandstone			
328.80	Shale			
340.00	Bony Coal	CurrySR	Bony Coal: 0.4'	1.00
340.40	Shale			
340.70	Coal		Coal: 0.6'	
341.30	Shale	CurrySF		
346.10	Sandstone			
374.70	Shale			
387.20	Sandstone			
404.10	Shale			
436.90	Bony Coal	GillUSR	Bony Coal: 0.55'	1.15
437.45	Shale			
437.70	Bony Coal		Bony Coal: 0.6'	
438.30	Shale	GillUSF		
461.20	Sandstone			
464.10	Shale			
475.20	Coal	GillLSR	Coal: 0.8'	.80
476.00	Shale	GillLSF		
486.70	Sandstone			
515.50	Shale			
527.20	Sandstone			
557.20	Shale			
608.00	Sandstone			
611.80	Shale			
725.00	Sandstone			
727.50	Shale			
790.90	Coal	NewCastSR	Coal: 1.65'	1.65
792.55	Shale	NewCastSF		
798.35	Bony Coal-Bone			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-71 Key 6640

Operator: Taurus Explor
Twp:18S Rng:6W Sec:20 SE NE
Mine Coordinates:
N 19519.47
E -50571.18
Collar Elev: 396.00
Determined By:Survey

Start Date: End Date: 7/18/89
Geologist:
Drilling Co:
Total Depth: 1455.00
Rotary Footage: 1455.00
Core Footage: 0.00
Casing: 50'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
800.15	Shale			
803.30	Interbedded	MLSsSR	Intbdd sst & sltst	27.90
807.90	Sandstone			
817.60	Shale			
819.50	Sandstone			
833.10	Shale	MLSsSF		
842.00	Coal	MaryLeeSR	Coal: 1.4'	1.40
843.40	Bone-Carb Shale	MaryLeeSF		
844.30	Shale			
848.00	Coal	BlueCrkSR	Coal: 5.2'	5.20
853.20	Shale	BlueCrkSF		
859.60	Sandstone	JagSsSR		1.90
861.50	Shale	JagSsSF		
912.40	Sandstone			
922.00	Shale			
1008.30	Coal		Coal: 0.65'	
1008.95	Shale			
1034.55	Coal		Coal: 0.65'	
1035.20	Shale			
1046.35	Coal		Coal: 0.7'	
1047.05	Shale			
1143.40	Sandstone			
1144.80	Shale			
1149.45	Coal		Coal: 1.2'	
1150.65	Shale			
1163.90	Interbedded		Intbdd sst & sltst	
1165.90	Shale			
1177.80	Coal		Coal: 0.7'	
1178.50	Shale			
1181.20	Sandstone-silty			
1202.00	Shale			
1221.50	Sandstone			
1237.90	Shale			
1246.90	Coal	BlackCrkSR	Coal: 1.0'	3.55
1247.90	Shale			
1248.80	Coal		Coal: 2.55'	
1251.35	Shale	BlackCrkSF		
1256.00	Sandstone			
1257.60	Shale			
1259.60	Bone-Carb Shale			
1262.10	Shale			
1279.50	Sandstone			
1284.00	Shale			
1322.00	Sandstone			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-71 Key 6640

Operator: Taurus Explor
Twp:18S Rng:6W Sec:20 SE NE
Mine Coordinates:
N 19519.47
E -50571.18
Collar Elev: 396.00
Determined By:Survey

Start Date: End Date: 7/18/89
Geologist:
Drilling Co:
Total Depth: 1455.00
Rotary Footage: 1455.00
Core Footage: 0.00
Casing: 50'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
1326.00	Shale			
1455.00	TD			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-136 Key 5136

Operator: Taurus Explor
Twp:18S Rng:6W Sec:28 SW NW
Mine Coordinates:
N 13423.73
E -48653.91
Collar Elev: 399.80
Determined By:Survey

Start Date: End Date: 2/07/87
Geologist:
Drilling Co:
Total Depth: 1145.00
Rotary Footage: 1145.00
Core Footage: 0.00
Casing: 66'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
-100.00			USS-8703-28-5-136	
0.00	Casing			
66.00	Shale			
115.30	Coal	CobbSR	Coal: 1.9'	1.90
117.20	Shale	CobbSF		
128.00	Sandstone			
137.50	Shale			
148.50	Sandstone			
151.00	Shale			
161.00	Sandstone			
163.00	Shale			
181.00	Sandstone			
187.00	Shale			
328.00	Sandstone			
330.00	Shale			
427.50	Coal	PrattSR	Coal: 2.5'	2.50
430.00	Shale	PrattSF		
441.00	Bony coal	PrattLSR	Bony Coal: 1.8'	1.80
442.80	Shale	PrattLSF		
449.50	Sandstone			
464.00	Shale			
466.80	Coal	AmerUSR	Coal: 1.9'	1.90
468.70	Shale	AmerUSF		
478.50	Sandstone			
492.50	Shale			
493.50	Sandstone			
495.00	Shale			
502.50	Coal	AmerLSR	Coal: 1.5'	1.50
504.00	Shale	AmerLSF		
508.00	Sandstone			
520.50	Shale			
524.50	Sandstone			
528.00	Shale			
530.00	Bony Coal	CurrySR	Bony Coal: 1.5'	1.50
531.50	Shale	CurrySF		
543.50	Sandstone			
559.00	Shale			
578.00	Sandstone			
590.00	Shale			
593.00	Sandstone			
594.00	Shale			
595.50	Sandstone			
598.00	Shale			
626.80	Bone-Bony Coal	GillUSR	Bone-Bony Coal: 3.2'	3.20

U.S. STEEL MINING - OAK GROVE MINE

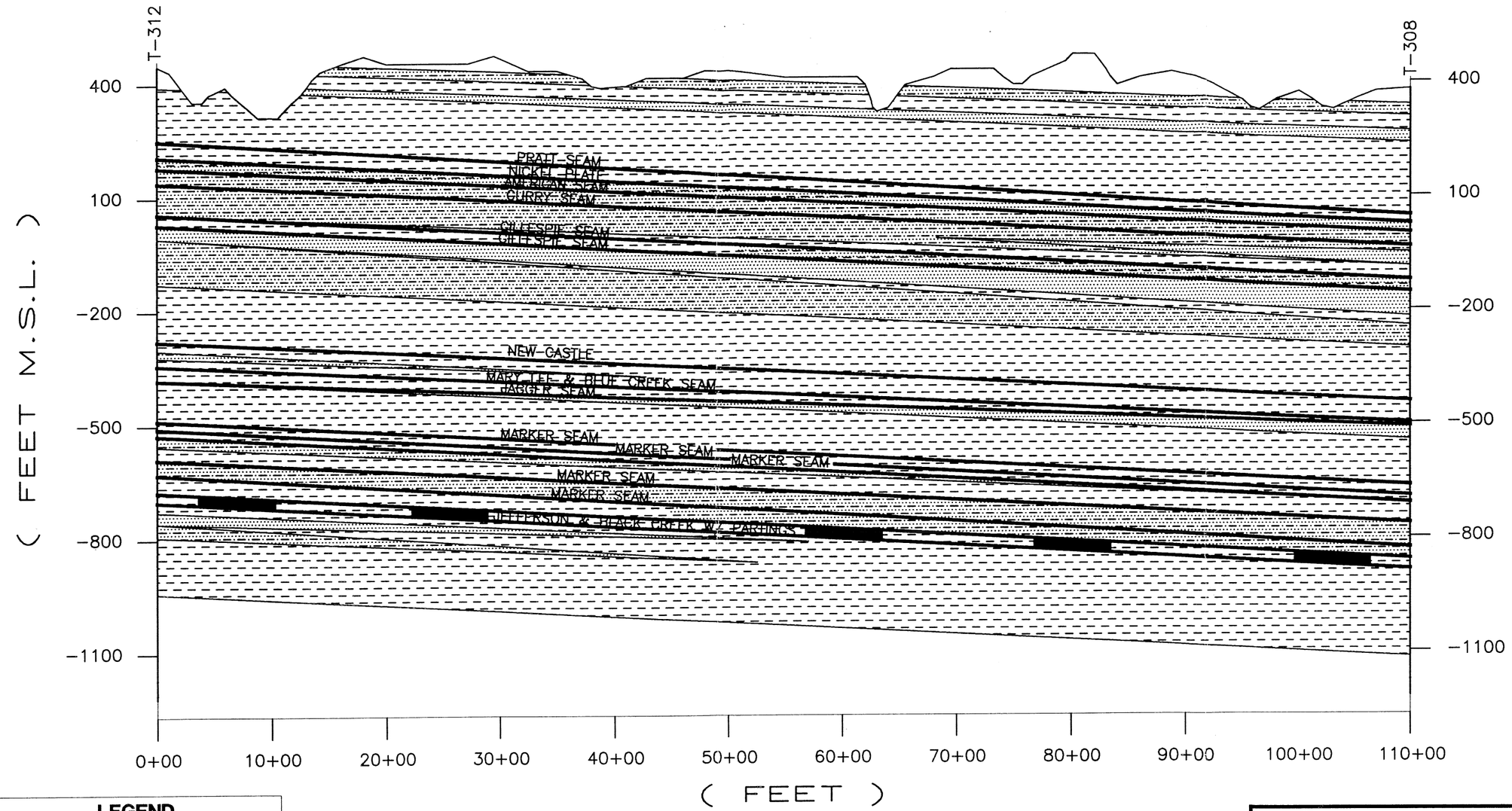
Hole Number T-136 Key 5136

Operator: Taurus Explor
Twp:18S Rng:6W Sec:28 SW NW
Mine Coordinates:
N 13423.73
E -48653.91
Collar Elev: 399.80
Determined By:Survey

Start Date: End Date: 2/07/87
Geologist:
Drilling Co:
Total Depth: 1145.00
Rotary Footage: 1145.00
Core Footage: 0.00
Casing: 66'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
630.00	Shale	GillUSF		
648.00	Sandstone			
649.50	Shale			
670.00	Coal	GillLSR	Coal: 1.8'	1.80
671.80	Sandstone	GillLSF		
704.00	Shale			
717.50	Sandstone			
721.00	Shale			
723.00	Sandstone			
734.50	Shale			
736.00	Sandstone			
750.00	Shale			
771.00	Sandstone			
773.00	Shale			
829.00	Sandstone			
831.00	Shale			
951.70	Coal	NewCastSR	Coal: 2.3'	2.30
954.00	Shale	NewCastSF		
1028.00	Coal	MaryLeeSR	Coal: 1.3'	1.30
1029.30	Bone-Carb Shale	MaryLeeSF		
1029.90	Shale			
1034.25	Bone-Carb Shale			
1034.60	Shale			
1034.80	Bony Coal	BlueCrkSR	Bony Coal: 0.25'	4.80
1035.05	Coal		Coal: 4.55'	
1039.60	Shale	BlueCrkSF		
1049.20	Coal	JaggerSR	Coal: 1.10'	1.75
1050.30	Bony Coal		Bony Coal: 0.65'	
1050.95	Shale	JaggerSF		
1053.70	Sandstone			
1055.00	Shale			
1056.10	Sandstone			
1108.00	Shale			
1145.00	TD			



LEGEND

- SHALE
- SANDSTONE
- SANDSTONE & SHALE
- COAL
- UNKNOWN
- T-312 DRILL HOLE

SCALE: 1"= 1000' HORIZONTAL
1"= 300' VERTICAL

NOTE: Due to vertical scale, lithology is generalized.
-Lithology is dashed where inferred.
-Coal Seam name is noted on Top of Seam.
-Lithology taken from Taurus Exploration Drill Holes.

PERC ENGINEERING CO., INC.
1806 Highway 78 West, Jasper, Alabama 35501
P.O. Box 1712 Jasper, Alabama 35502
(205) 384-5922 Office (205) 384-5481 Fax

U.S. STEEL MINING COMPANY LLC
OAK GROVE MINE
P-3232
EXHIBIT NO. 2
RECLAMATION CROSS SECTION B-B'

DRAWN BY: D.D.B. DWG. NAME: USMOGBB	DATE: 3-4-99
APPROVED BY: A.P.H.	SCALE: AS NOTED

X:\DDB\APH\USMOGBB 03/17/-- 11:46

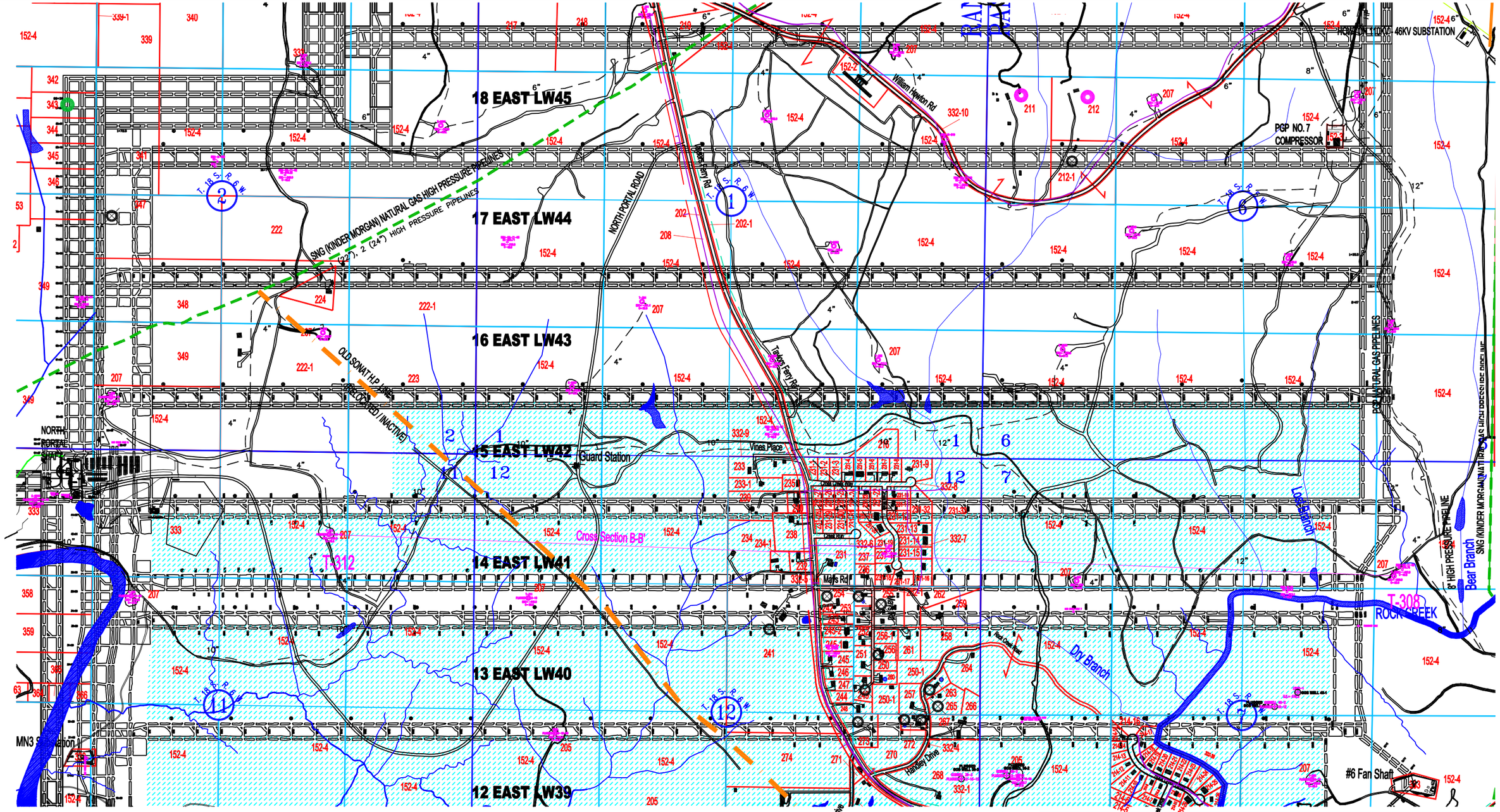


EXHIBIT 2

LOCATION PLAN
SECTION B-B'

SCALE

1000 0 1000 2000 FEET

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-312 Key 5833

Operator: Taurus Explor
Twp:18S Rng:6W Sec:11 NW NE
Mine Coordinates:
N 30773.00
E -34911.00
Collar Elev: 454.20
Determined By:Survey

Start Date: End Date: 9/09/88
Geologist:
Drilling Co:
Total Depth: 1390.00
Rotary Footage: 1390.00
Core Footage: 0.00
Casing: 57'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
-100.00			USX-Taurus-88-18-6-11-2-312	
0.00	Casing			
57.00	Shale			
195.75	Coal	PrattSR	Coal: 1.85'	1.85
197.60	Shale	PrattSF		
226.80	Sandstone			
231.40	Shale			
236.70	Coal	AmerUSR	Coal: 1.7'	1.70
238.40	Shale	AmerUSF		
245.40	Sandstone			
251.70	Shale			
261.70	Coal	AmerLSR	Coal: 1.4'	1.40
263.10	Shale	AmerLSF		
268.70	Sandstone			
305.30	Shale			
307.30	Coal	CurrySR	Coal: 0.8'	2.00
308.10	Shale			
308.70	Coal		Coal: 1.2'	
309.90	Shale	CurrySF		
314.80	Sandstone			
332.30	Shale			
334.40	Sandstone			
353.60	Shale			
371.70	Sandstone			
375.90	Shale			
386.30	Coal	GillUSR	Coal: 0.65'	1.25
386.95	Shale			
387.25	Coal		Coal: 0.6'	
387.85	Shale	GillUSF		
414.60	Coal	GillLSR	Coal: 0.7'	.70
415.30	Shale	GillLSF		
417.30	Sandstone			
455.90	Shale			
483.30	Sandstone			
496.00	Shale			
508.20	Interbedded		Intbdd sst & sltst	
510.00	Shale			
524.90	Sandstone			
528.80	Shale			
554.50	Sandstone			
560.00	Shale			
561.00	Sandstone			
562.50	Shale			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-312 Key 5833

Operator: Taurus Explor
Twp:18S Rng:6W Sec:11 NW NE
Mine Coordinates:
N 30773.00
E -34911.00
Collar Elev: 454.20
Determined By:Survey

Start Date: End Date: 9/09/88
Geologist:
Drilling Co:
Total Depth: 1390.00
Rotary Footage: 1390.00
Core Footage: 0.00
Casing: 57'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
570.60	Sandstone			
576.10	Shale			
620.70	Sandstone			
622.60	Shale			
673.40	Sandstone			
675.80	Shale			
677.50	Sandstone			
682.50	Shale			
723.60	Coal	NewCastSR	Coal: 0.6'	.60
724.20	Shale	NewCastSF		
748.80	Sandstone	MLSsSR		10.10
756.70	Shale			
759.40	Sandstone			
760.50	Shale			
762.90	Sandstone			
764.00	Shale	MLSsSF		
786.15	Coal	MaryLeeSR	Coal: 4.15'	4.15
790.30	Shale	MaryLeeSF		
794.00	Coal	BlueCrkSR	Coal: 6.3'	6.30
800.30	Shale	BlueCrkSF		
831.10	Coal	JaggerSR	Coal: 0.3'	.30
831.40	Shale	JaggerSF		
935.40	Coal		Coal: 0.6'	
936.00	Shale			
950.00	Sandstone			
951.40	Shale			
957.30	Coal		Coal: 0.85'	
958.15	Shale			
970.25	Coal		Coal: 0.55' bony	1.15
970.80	Shale			
971.40	Bony Coal		Bony Coal: 0.6'	
972.00	Shale			
995.00	Sandstone			
997.10	Shale			
999.70	Interbedded		Intbdd sst & sltst	
1001.40	Shale			
1033.75	Coal		Coal: 1.05'	
1034.80	Shale			
1045.95	Carb Shale			
1046.50	Shale			
1048.00	Sandstone			
1050.20	Shale			
1052.80	Sandstone			
1073.80	Shale			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-312 Key 5833

Operator: Taurus Explor
Twp:18S Rng:6W Sec:11 NW NE
Mine Coordinates:
N 30773.00
E -34911.00
Collar Elev: 454.20
Determined By:Survey

Start Date: End Date: 9/09/88
Geologist:
Drilling Co:
Total Depth: 1390.00
Rotary Footage: 1390.00
Core Footage: 0.00
Casing: 57'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
1081.35	Coal		Coal: 0.8'	
1082.15	Shale			
1111.90	Sandstone			
1117.10	Shale			
1120.80	Coal	JeffUSR	Coal: 1.0'	2.55
1121.80	Shale			
1122.45	Coal		Coal: 0.45'	
1122.90	Shale			
1123.70	Coal		Coal: 1.1'	
1124.80	Shale	JeffUSF		
1136.00	Coal	JeffLSR	Coal: 0.75'	1.55
1136.75	Shale			
1139.00	Coal		Coal: 0.8'	
1139.80	Shale	JeffLSF		
1148.45	Coal	BlackCrkSR	Coal: 1.3'	1.30
1149.75	Shale	BlackCrkSF		
1173.00	Sandstone			
1204.00	Shale			
1213.00	Sandstone			
1222.00	Shale			
1231.00	Sandstone			
1236.50	Shale			
1390.00	TD			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-308 Key 6055

Operator: Taurus Explor
Twp:18S Rng:5W Sec:7 NE NE
Mine Coordinates:
N 30342.00
E -23891.00
Collar Elev: 386.20
Determined By:Survey

Start Date: End Date:11/22/88
Geologist:
Drilling Co:
Total Depth: 1500.00
Rotary Footage: 1500.00
Core Footage: 0.00
Casing: 50'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
-100.00			USX-Taurus-88-18-5-7-1-308	
0.00	Casing			
50.00	Sandstone			
52.00	Shale			
62.00	Sandstone			
64.00	Shale			
70.00	Sandstone			
78.00	Shale			
96.50	Sandstone			
100.50	Shale			
106.00	Sandstone			
109.50	Shale			
114.50	Sandstone			
140.00	Shale			
335.50	Coal	PrattLSR	Coal: 1.8'	1.80
337.30	Shale	PrattLSF		
339.60	Sandstone			
342.30	Shale			
344.20	Sandstone			
345.50	Shale			
349.15	Coal	AmerUSR	Coal: 1.55'	1.55
350.70	Shale	AmerUSF		
357.60	Sandstone			
377.40	Coal	AmerLSR	Coal: 1.3'	1.30
378.70	Shale	AmerLSF		
389.00	Sandstone			
414.60	Shale			
421.30	Coal	CurrySR	Coal: 0.45'	1.85
421.75	Shale			
422.65	Coal		Coal: 1.4'	
424.05	Shale	CurrySF		
434.40	Sandstone			
467.70	Shale			
500.00	Coal	GillUSR	Coal: 0.7'	1.35
500.70	Shale			
501.80	Coal		Coal: 0.65'	
502.45	Shale	GillUSF		
523.90	Sandstone			
534.50	Shale			
543.20	Coal	GillLSR	Coal: 1.3'	1.30
544.50	Shale	GillLSF		
547.10	Sandstone			
572.30	Shale			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-308 Key 6055

Operator: Taurus Explor
Twp:18S Rng:5W Sec:7 NE NE
Mine Coordinates:
N 30342.00
E -23891.00
Collar Elev: 386.20
Determined By:Survey

Start Date: End Date:11/22/88
Geologist:
Drilling Co:
Total Depth: 1500.00
Rotary Footage: 1500.00
Core Footage: 0.00
Casing: 50'

LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
573.70	Sandstone			
574.70	Shale			
577.20	Sandstone			
598.00	Shale			
600.00	Sandstone			
605.40	Shale			
623.20	Sandstone			
624.60	Shale			
627.10	Sandstone			
629.60	Shale			
636.70	Sandstone-silty			
641.80	Shale			
656.70	Sandstone			
657.90	Shale			
661.50	Sandstone			
663.80	Shale			
671.00	Sandstone			
682.30	Shale			
826.15	Coal	NewCastSR	Coal: 0.65'	.65
826.80	Shale	NewCastSF		
875.70	Bony Coal		Bony Coal: 0.4'	
876.10	Shale			
876.60	Coal	MaryLeeSR	Coal: 1.8'	1.80
878.40	Shale	MaryLeeSF		
882.05	Coal	BlueCrkSR	Coal: 4.25'	4.25
886.30	Shale	BlueCrkSF		
892.20	Coal	JaggerSR	Coal: 0.75' bony	.75
892.95	Shale	JaggerSF		
895.90	Sandstone			
923.80	Shale			
988.60	Sandstone			
990.20	Shale			
1060.50	Coal		Coal: 0.6'	
1061.10	Shale			
1077.40	Coal		Coal: 0.8'	
1078.20	Shale			
1087.00	Coal		Coal: 0.5'	1.25
1087.50	Shale			
1088.15	Coal		Coal: 0.75'	
1088.90	Shale			
1149.30	Coal		Coal: 0.5'	
1149.80	Shale			
1159.20	Sandstone			
1164.70	Shale			

U.S. STEEL MINING - OAK GROVE MINE

Hole Number T-308 Key 6055

Operator: Taurus Explor
Twp:18S Rng:5W Sec:7 NE NE
Mine Coordinates:
N 30342.00
E -23891.00
Collar Elev: 386.20
Determined By:Survey

Start Date: End Date:11/22/88
Geologist:
Drilling Co:
Total Depth: 1500.00
Rotary Footage: 1500.00
Core Footage: 0.00
Casing: 50'

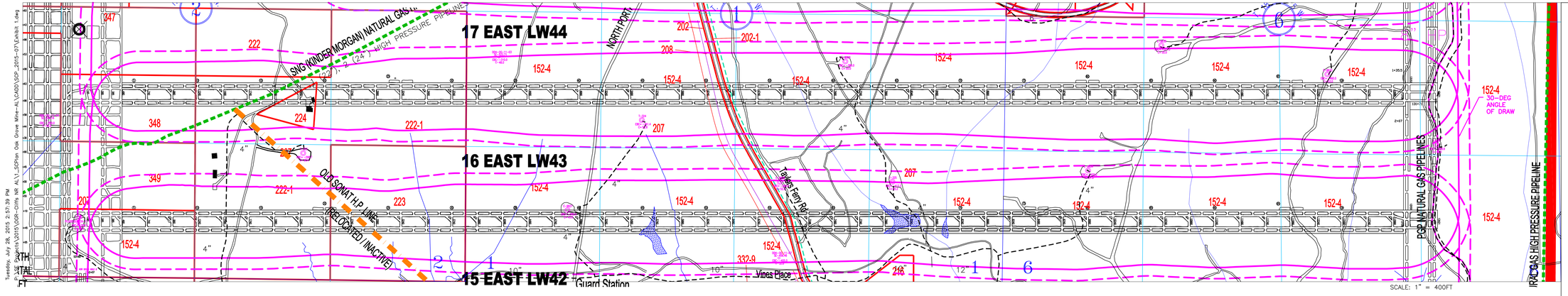
LITHOLOGIC LOG
(Units in Feet)

Depth	Rocktype	STRATA	Geologic Description	Thick
1171.50	Sandstone			
1186.50	Shale			
1189.60	Sandstone			
1201.60	Shale			
1202.05	Coal		Coal: 0.75'	
1202.80	Shale			
1208.00	Sandstone			
1209.00	Shale			
1212.80	Sandstone			
1214.00	Shale			
1237.60	Coal	JeffUSR	Coal: 1.05'	1.85
1238.80	Shale			
1242.90	Coal		Coal: 0.8'	
1243.70	Shale	JeffUSF		
1260.00	Coal	JeffLSR	Coal: 2.0'	2.00
1262.00	Shale	JeffLSF		
1267.10	Coal	BlackCrkSR	Coal: 1.8'	1.80
1268.90	Shale	BlackCrkSF		
1500.00	TD			

EXHIBITS 3-43 through 3-47

Plans of Individual Longwall Panels

(16 East LW43 through 20 East LW47)



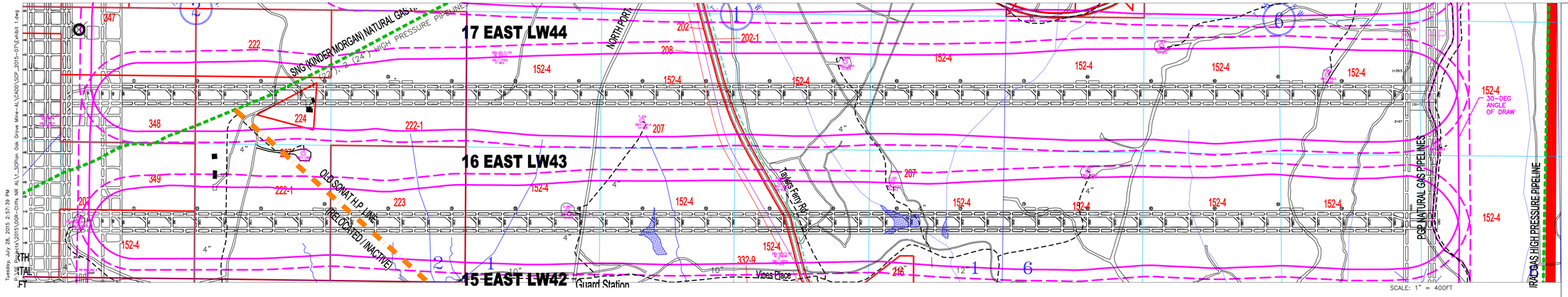
LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-43

ALABAMA REGISTERED NO. 20825 PROFESSIONAL ENGINEER CHRISTOPHER J. LEWIS

JULY 29, 2015



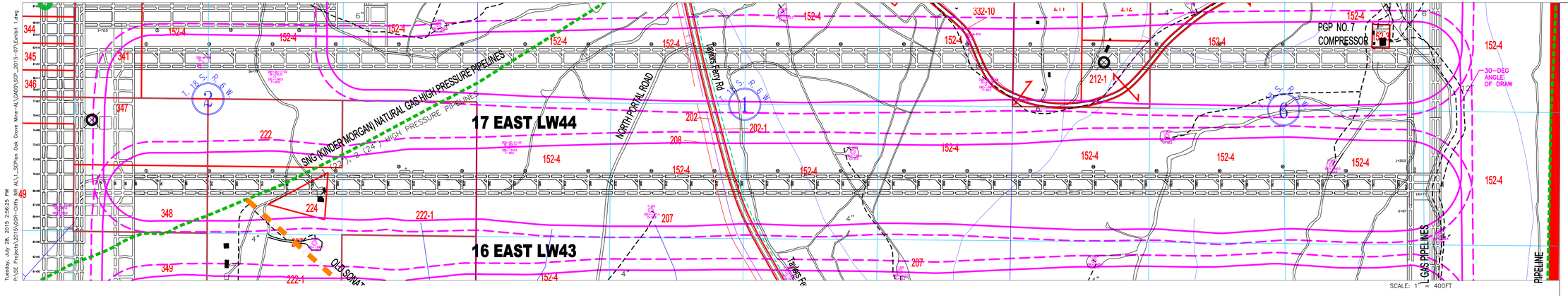
LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-43

ALABAMA REGISTERED NO. 20825 PROFESSIONAL ENGINEER CHRISTOPHER J. LEWIS

JULY 29, 2015

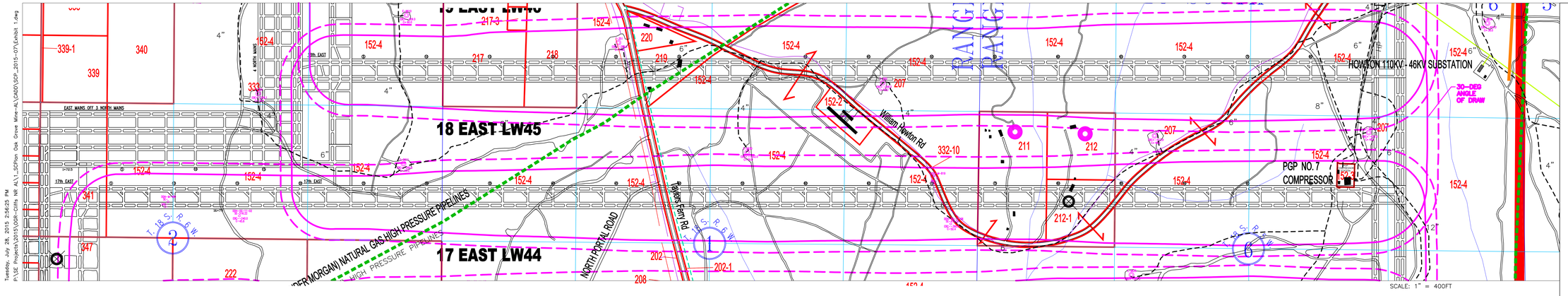


JULY 29, 2015

LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-44

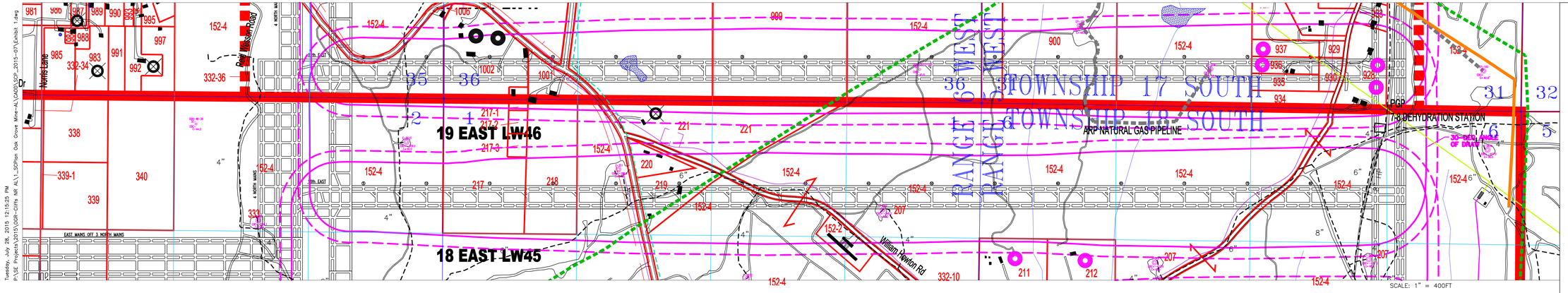


JULY 29, 2015

LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-45

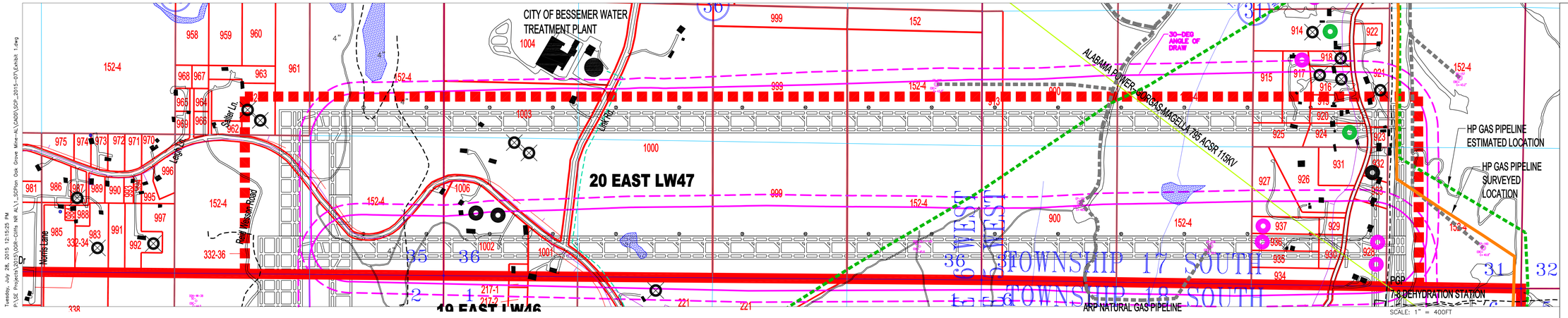


LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-46

JULY 29, 2015



LEGEND

- APPROVED UNDG WORKINGS LIMIT
- PROPOSED UNDG WORKINGS LIMIT
- NEW 30 DEGREE ANGLE OF DRAW
- NEW 35 DEGREE PREMINING ASSESSMENT LIMIT
- LAND HOOK
- 14 EAST LW41 PROPOSED LONGWALL PANELS
- ROAD
- SURFACE STRUCTURE
- NEW SURFACE STRUCTURE
- SURFACE PROPERTY OWNERSHIP
- BODY OF WATER
- NEW OR REVISED UNDERGROUND WORKINGS
- ELECTRICAL TRANSMISSION LINES
- PGP GAS LINES
- BASIN H.P. PIPELINE
- ARP GAS LINES
- SNG (KINDER MORGAN) GAS LINES
- OLD SONAT GAS LINE
- 6-in WATERLINE (WRWA)
- 8-in WATERLINE (WRWA)
- 12-in WATERLINE (WRWA)
- 16-in WATERLINE (WRWA)
- 24-in WATERLINE (WRWA)
- 30-in WATERLINE (BWS)
- WATER WELL NOT IN USE
- WATER WELL IN USE 0 - 100 FEET
- WATER WELL IN USE UNKNOWN DEPTH
- WATER WELL IN USE 100 FEET PLUS

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY
8800 OAK GROVE MINE RD., ADGER, AL 35006
EXHIBIT 3-47

JULY 29, 2015

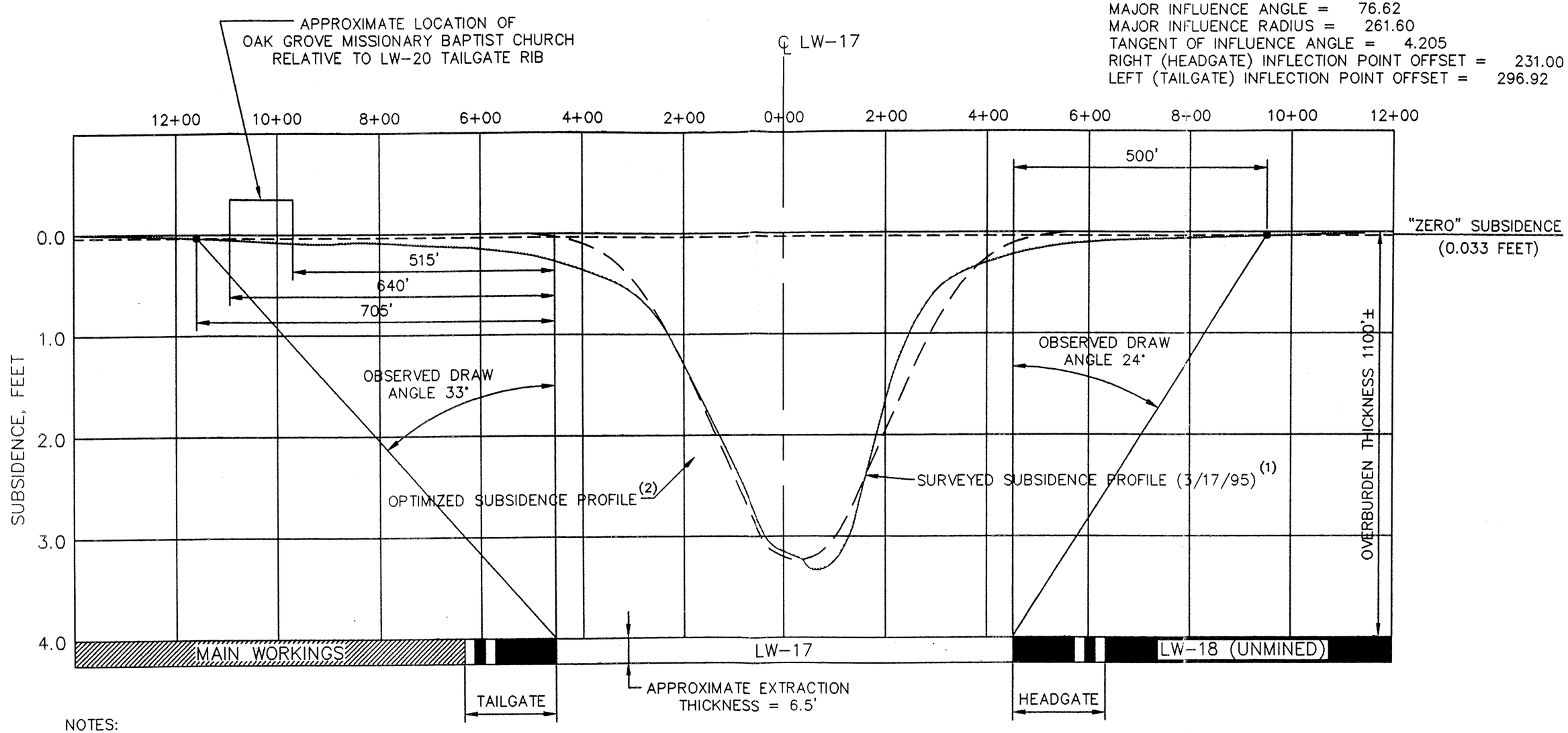
EXHIBIT 4-1

SONAT Subsidence Profile Over LW-17

DRAWN BY	rcw 7/25/95	CHECKED BY APPROVED BY		DRAWING NUMBER 942648-B7

OPTIMIZED SUBSIDENCE PREDICTION PARAMETERS:

SUBSIDENCE FACTOR = 0.554
MAJOR INFLUENCE ANGLE = 76.62
MAJOR INFLUENCE RADIUS = 261.60
TANGENT OF INFLUENCE ANGLE = 4.205
RIGHT (HEADGATE) INFLECTION POINT OFFSET = 231.00
LEFT (TAILGATE) INFLECTION POINT OFFSET = 296.92



NOTES:

(1) TAKEN FROM SURVEY DATA PROVIDED BY SOUTHERN NATURAL GAS COMPANY FOR SURVEYS CONDUCTED BETWEEN 12-9-94 AND 2-17-95 ALONG A SECTION TRANSVERSE TO LW-17, APPROXIMATELY 3600 FEET WEST OF SETUP ENTRIES.

(2) OPTIMIZATION BASED ON LW-17 SURVEYED SUBSIDENCE PROFILE USING SUBDED MODULE OF COMPREHENSIVE & INTEGRATED SUBSIDENCE PREDICTION MODEL, BY PENG, S.S., AND Y. LUO DEPARTMENT OF MINING ENGINEERING, COLLEGE OF MINERAL AND ENERGY RESOURCES, WEST VIRGINIA UNIVERSITY, JUNE 1989.

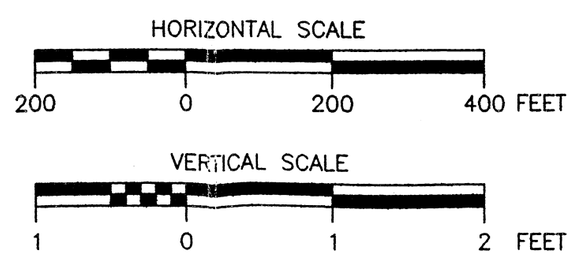


EXHIBIT 4-1

SONAT SUBSIDENCE PROFILE OVER LW-17

SUBSIDENCE CONTROL PLAN
OAK GROVE MINE
JEFFERSON COUNTY, ALABAMA

PREPARED FOR

U.S. STEEL MINING CO., INC.
ADGER, ALABAMA

D'APPOLONIA

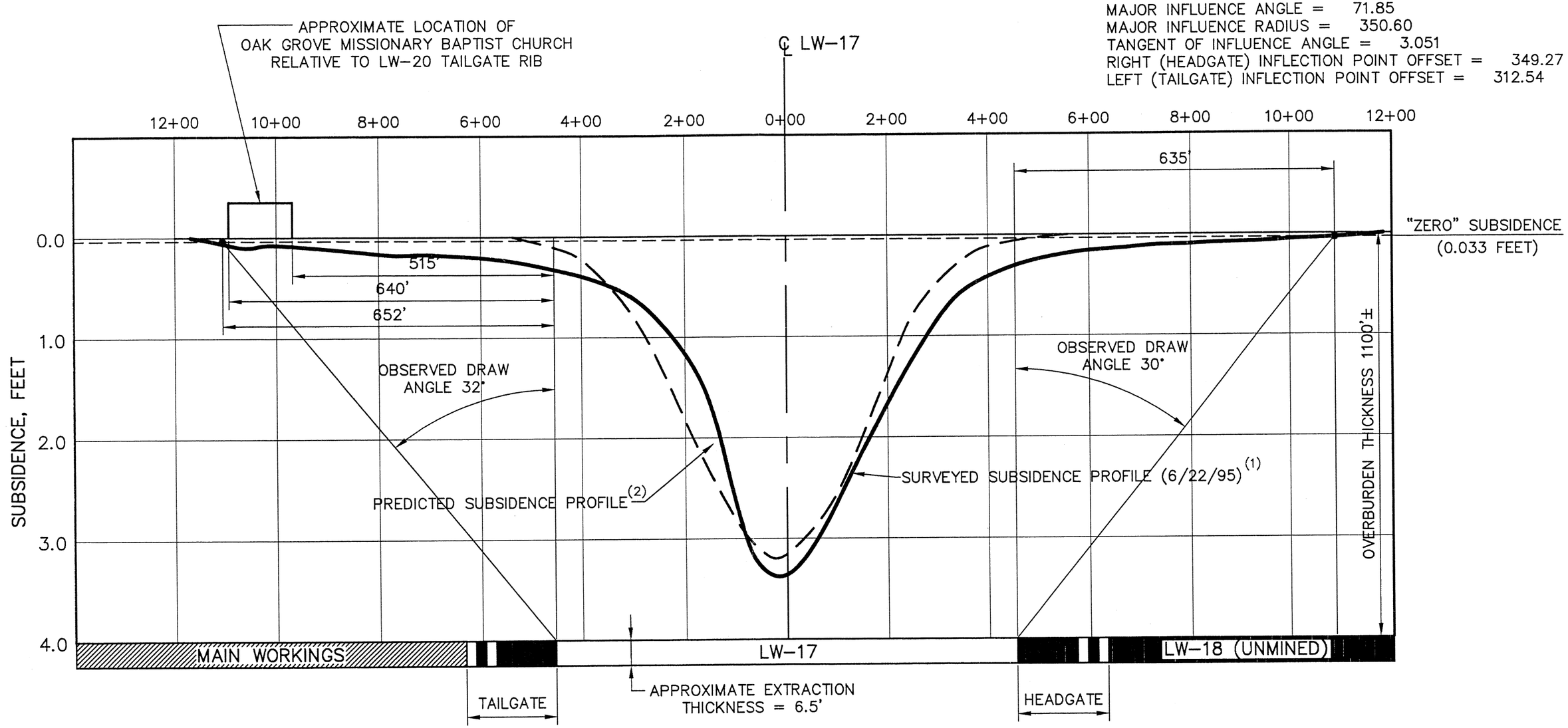
EXHIBIT 4-2

JCS Transverse Subsidence Profiles Over LW-17

DRAWN BY	rgw 7/25/95	CHECKED BY	APPROVED BY	DRAWING NUMBER	942648-B8

OPTIMIZED SUBSIDENCE PREDICTION PARAMETERS:

SUBSIDENCE FACTOR = 0.847
MAJOR INFLUENCE ANGLE = 71.85
MAJOR INFLUENCE RADIUS = 350.60
TANGENT OF INFLUENCE ANGLE = 3.051
RIGHT (HEADGATE) INFLECTION POINT OFFSET = 349.27
LEFT (TAILGATE) INFLECTION POINT OFFSET = 312.54



NOTES:

(1) DEVELOPED FROM SURVEY DATA PROVIDED BY JCS COMPANY FOR SURVEYS CONDUCTED FROM JANUARY TO JUNE 1995 ALONG MONITORING LINE "T" TRANSVERSE TO LW-17, AS SHOWN ON EXHIBIT 1.

(2) OPTIMIZATION BASED ON LW-17 SURVEYED SUBSIDENCE PROFILE USING SUBDED MODULE OF COMPREHENSIVE & INTEGRATED SUBSIDENCE PREDICTION MODEL, BY PENG, S.S., AND Y. LUO DEPARTMENT OF MINING ENGINEERING, COLLEGE OF MINERAL AND ENERGY RESOURCES, WEST VIRGINIA UNIVERSITY, JUNE 1989.

HORIZONTAL SCALE

200 0 200 400 FEET

VERTICAL SCALE

1 0 1 2 FEET

EXHIBIT 4-2

JCS TRANSVERSE SUBSIDENCE PROFILES OVER LW-17

SUBSIDENCE CONTROL PLAN
OAK GROVE MINE
JEFFERSON COUNTY, ALABAMA

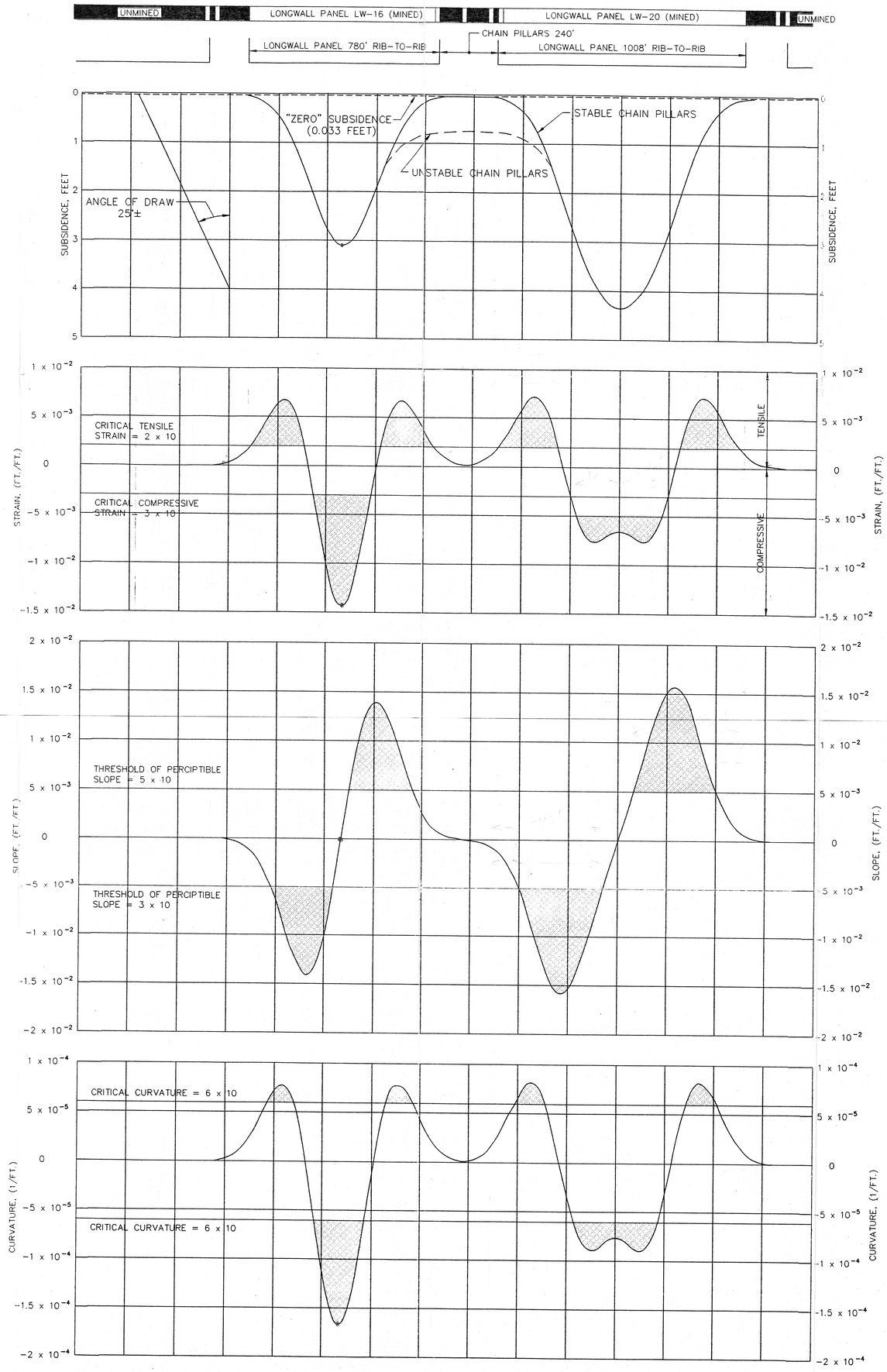
PREPARED FOR

USM U.S. STEEL MINING CO., INC.
ADGER, ALABAMA

D'APPOLONIA

EXHIBIT 5-1

Predicted Ground Response LW-16/LW-20



SUBSIDENCE PREDICTION PARAMETERS

LONGWALL PANEL WIDTH (RIB-TO-RIB) = 780'(LW-16), 1008'(LW-20)
AVERAGE OVERBURDEN DEPTH = 1020'
AVERAGE MINING HEIGHT (EXTRACTION) = 6.5'
SUBSIDENCE FACTOR = 0.70'
MAJOR INFLUENCE ANGLE = 74.24'
INFLECTION POINT OFFSET = 264.98'
HORIZONTAL DISPLACEMENT FACTOR = 0.30'

HORIZONTAL SCALE
200 0 200 400 FEET
VERTICAL SCALE: AS SHOWN

EXHIBIT 5

PREDICTED GROUND RESPONSE

SUBSIDENCE CONTROL PLAN
OAK GROVE MINE
JEFFERSON COUNTY, ALABAMA

PREPARED FOR

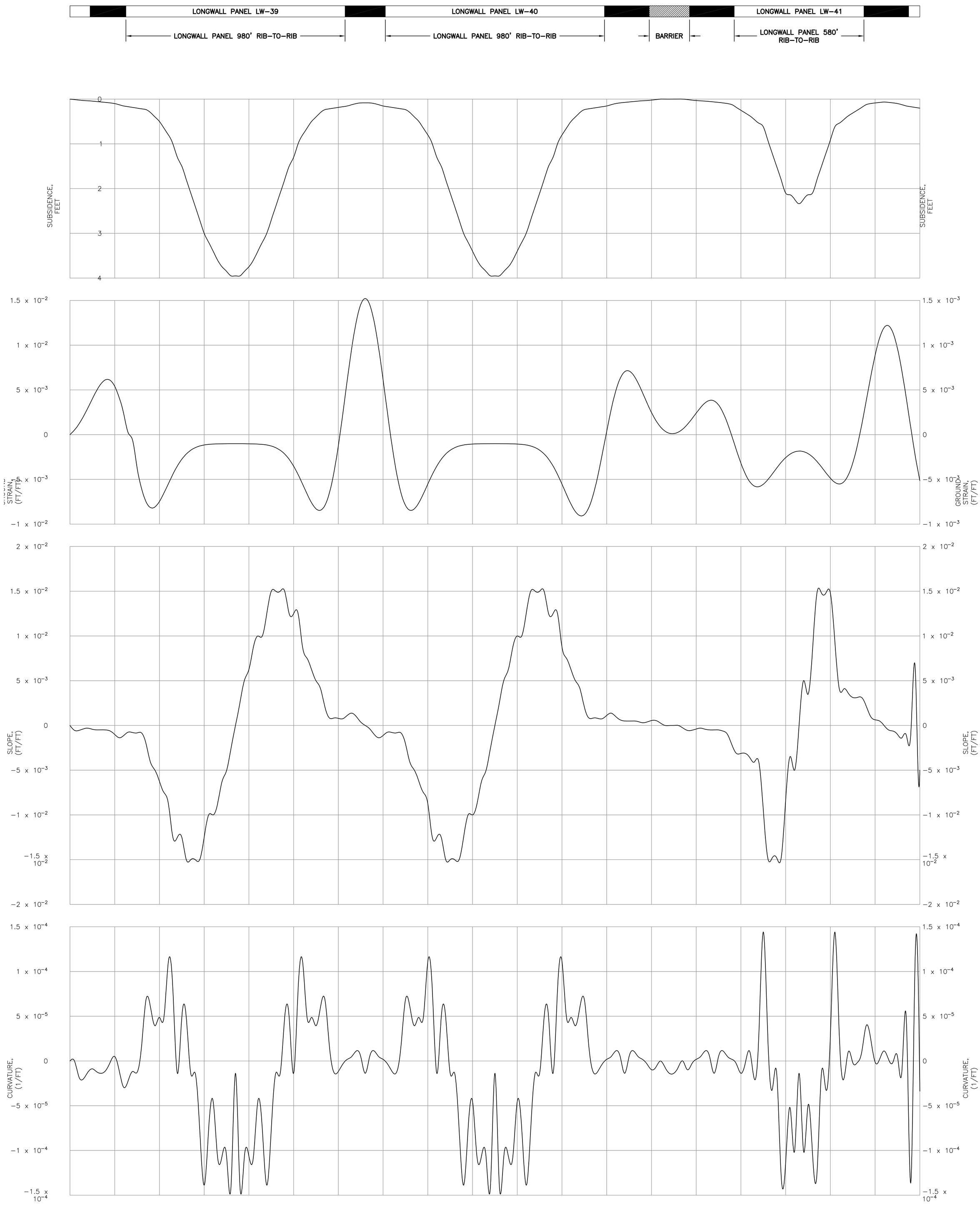
U.S. STEEL MINING CO., INC.
ADGER, ALABAMA

D'APPOLONIA

DRAWN BY	raw 7/25/95	CHECKED BY / APPROVED BY		DRAWING NUMBER 942648-M01

EXHIBIT 5-2

Generalized Ground Response LW39/LW41



SUBSIDENCE PREDICTION PARAMETERS

(TRANSVERSE SECTIONS – RIGID/STABLE GATES)

LONGWALL PANEL WIDTHS (RIB–TO–RIB) = 980' (LW39, LW40), 585' (LW41)
ASSUMED OVERBURDEN DEPTH = 900'
AVERAGE MINING HEIGHT (EXTRACTION) = 6.5'
SUBSIDENCE FACTOR = 0.608 (LW39, LW40), 0.538 (LW41)
MAJOR INFLUENCE ANGLE = 74 DEGREES
INFLECTION POINT OFFSET (VARIES) = 180' TO 265'
HORIZONTAL DISPLACEMENT FACTOR = 0.30

NOTE: THE GENERALIZED GROUND RESPONSE PRESENTED IN EXHIBIT 5 IS NOT INTENDED TO BE A PREDICTOR OF THE ACTUAL GROUND OR STRUCTURE RESPONSE AT ANY SPECIFIC LOCATION OR TIME IN THE AREA OF MINING INFLUENCE. THE MINING, OVERBURDEN, AND TOPOGRAPHIC CONDITIONS VARY THROUGHOUT THE AREA OF MINING. ALSO, THE MINING RATE AND THE BEHAVIOR OF THE GATES BORDERING THE LONGWALL PANELS CAN VARY TO SOME POTENTIALLY SIGNIFICANT DEGREE.

HORIZONTAL SCALE
200 0 200 400 FEET
VERTICAL SCALE: AS SHOWN

SEAL:

TLC GROUP LLC
4000 TRIANGLE LANE, SUITE 160 EXPORT, PA 15632-9306
TEL: (724) 519-2051 FAX: (724) 519-2052

PROJECT NUMBER: TLCG 100301
FILE NAME: Exhibit 5–2.dwg

DRAWN BY: EAD DATE: 06/19/2012
CHECKED BY: CJL DATE: 06/19/2012

OAK GROVE RESOURCES, LLC
OAK GROVE MINE - JEFFERSON COUNTY, AL

EXHIBIT 5–2
GENERALIZED GROUND RESPONSE
LW39 THRU LW41

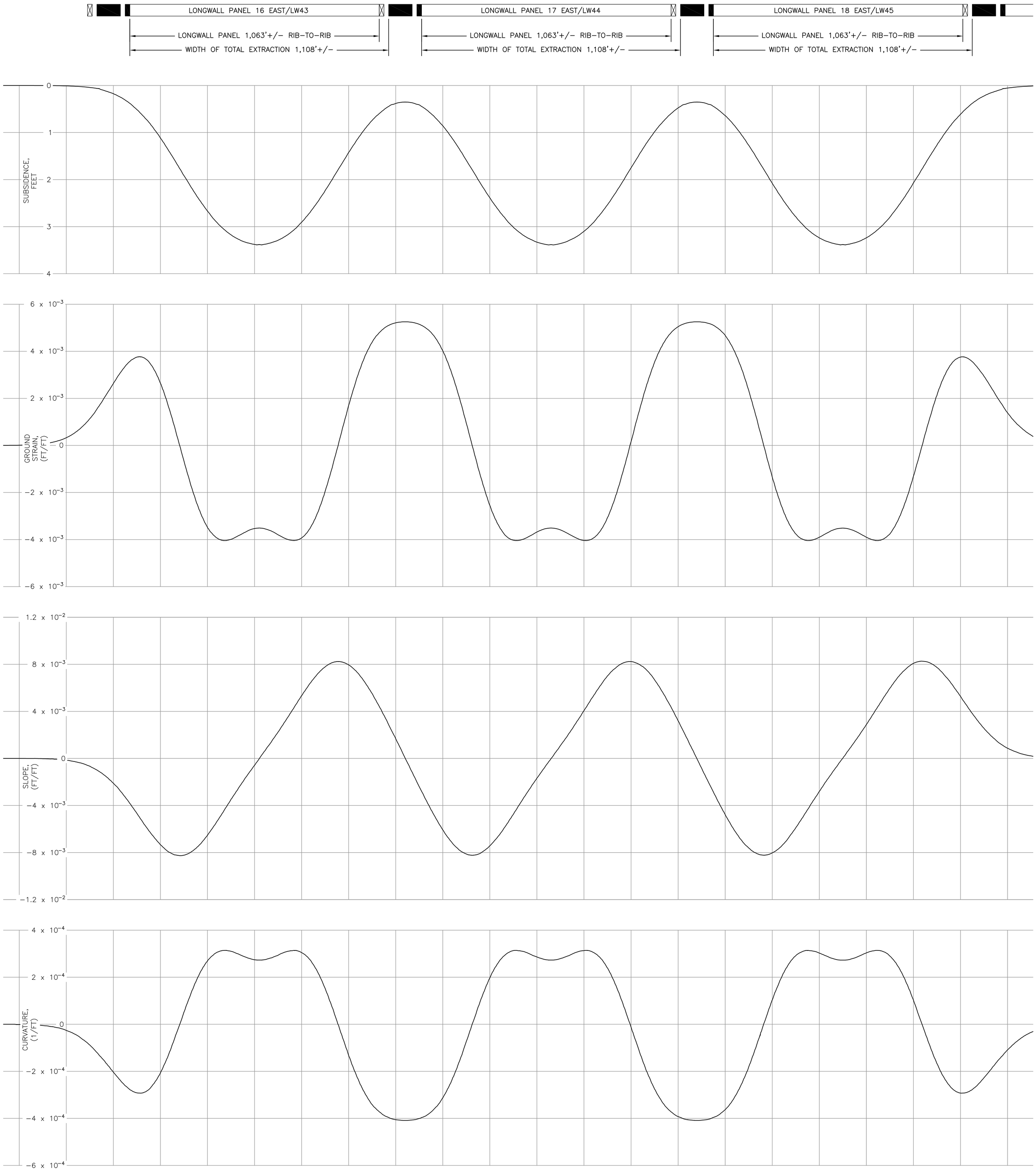
SCALE: AS SHOWN | DRAWING NO. EXHIBIT 5–2 | REV

Friday, December 20, 2013 1:15:53 PM

R:\2010\100301–OGR_Cliffs NR\SCP_Jun2012\Exhibit 5–2.dwg

EXHIBIT 5-3

Predicted Ground Response 16 East LW43 – 18 East LW45



SUBSIDENCE PREDICTION PARAMETERS

(TRANSVERSE SECTIONS – RIGID/STABLE GATES)

LONGWALL PANEL WIDTH (RIB–TO–RIB) = 1,060'
WIDTH OF TOTAL EXTRACTION = 1,100'
ASSUMED OVERBURDEN THICKNESS = 850'
AVERAGE MINING HEIGHT (EXTRACTION) = 6.5'
SUBSIDENCE FACTOR = 0.545
MAJOR INFLUENCE ANGLE = 63.2 DEGREES
INFLECTION POINT OFFSET = 212'
HORIZONTAL DISPLACEMENT COEFFICIENT = 0.30

NOTE:

1. THIS DRAWING WAS PREPARED TO THE MODELED DIMENSIONS OF THE PANELS (1,060 FT VS. 1,063 FT) AND WIDTH OF TOTAL EXTRACTION (1,100 FT VS. 1,108 FT).
2. THE GENERALIZED GROUND RESPONSE PRESENTED IN EXHIBIT 5 IS NOT INTENDED TO BE A PREDICTOR OF THE ACTUAL GROUND OR STRUCTURE RESPONSE AT ANY SPECIFIC LOCATION OR TIME IN THE AREA OF MINING INFLUENCE. THE MINING, OVERBURDEN, AND TOPOGRAPHIC CONDITIONS VARY THROUGHOUT THE AREA OF MINING. ALSO, THE MINING RATE AND THE BEHAVIOR OF THE GATES BORDERING THE LONGWALL PANELS CAN VARY TO SOME POTENTIALLY SIGNIFICANT DEGREE.

HORIZONTAL SCALE
200 0 200 400 FEET
VERTICAL SCALE: AS SHOWN

SEAL:

TETRA TECH
WWW.TETRATECH.COM
400 PENN CENTER BOULEVARD, SUITE 200
PITTSBURGH, PA 15235
T: (412) 829-3600 | F: (412) 829-3620

PROJECT NUMBER: TT 212C-SW-00043
FILE NAME: Exhibit 5-3.dwg

DRAWN BY: LMD DATE: 06/23/2015
CHECKED BY: CJL DATE: 06/23/2015

OAK GROVE RESOURCES, LLC

OAK GROVE MINE - JEFFERSON COUNTY, AL

EXHIBIT 5-3
PREDICTED GROUND RESPONSE
16 EAST/LW43 THRU 18 EAST/LW45

SCALE: AS SHOWN | DRAWING NO. EXHIBIT 5-3 | JULY 2015

P:\SE Projects\2015\OGR-Cliffs NR AL\1_SCPlan Oak Grove Mine-AL\CADD\SCP_2015-07\Exhibit 5-3.dwg
Tuesday, July 21, 2015 9:57:34 AM