

Part IV - Reclamation Plan

A. Post-mining Land Use

1. Describe the proposed post-mining land use(s) for the permit area. If more than one land use is proposed, show on a map and give acreage for each use. Include comments from the legal owner of record concerning the proposed land use. (780.23, 816.133)

Undeveloped lands or no current use, 25 acres. Permanent water impoundment 1 acre.

2. Is the proposed land use different from the current land use? (780.23, 816.133) () Yes (X) No

If yes, complete the following:

- (a) Is the area zoned for the proposed land use?
() Yes () No (X) N/A
- (b) Is the proposed use compatible with adjacent land uses and applicable local and state land use policies?
(X) Yes () No
- (c) Explain the feasibility of the proposed land use as related to land use trends, and explain how the land use will be developed, achieved, and sustained.

The proposed post mining land use is compatible with the land uses of the surrounding area. There will be no public health or safety hazards or no threat of water diminution or pollution caused by the post mining land uses. The proposed post mining land uses, will not cause unreasonable delays in reclamation.

- (d) Include letters of commitment from outside parties ensuring the provision of any necessary public facilities and any state and local governmental agencies which have to initiate, implement, approve or authorize the proposed land use.

Permission for the proposed land use is included in the leases which will be forthcoming and provided in Part I of this permit application.

- (e) Enclose design plans for the proposed post-mining land use, if applicable.

Not applicable.

B. Grading and Contouring

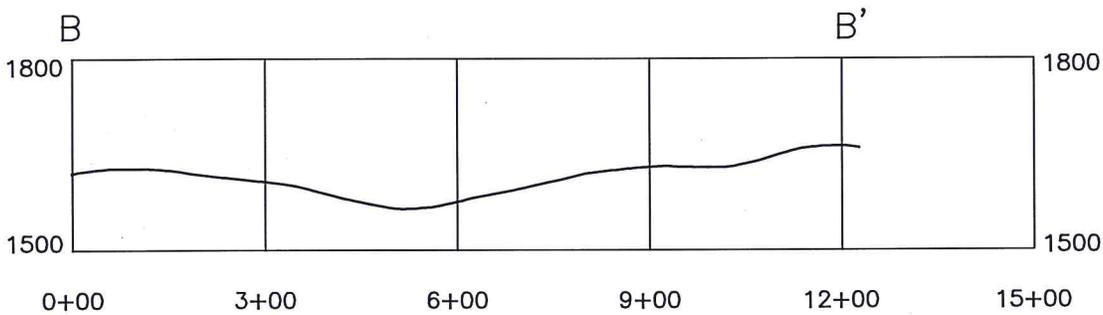
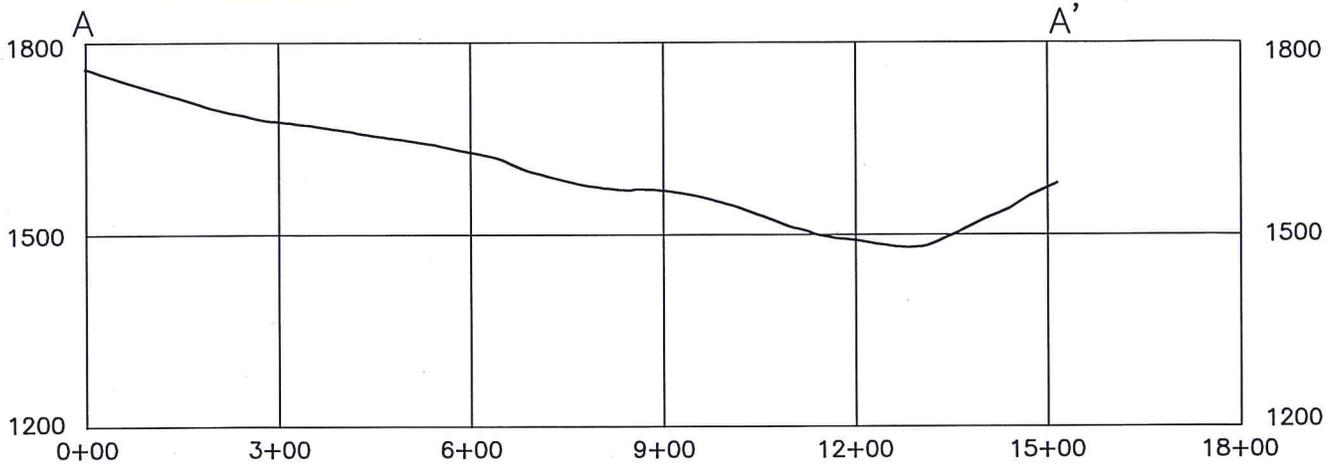
1. Enclose detailed plans with appropriate cross-sections or maps which satisfy the requirements of Section 780.18(b) (3 and 4).

See Attachment IV-B.-1. for the cross-section drawing.

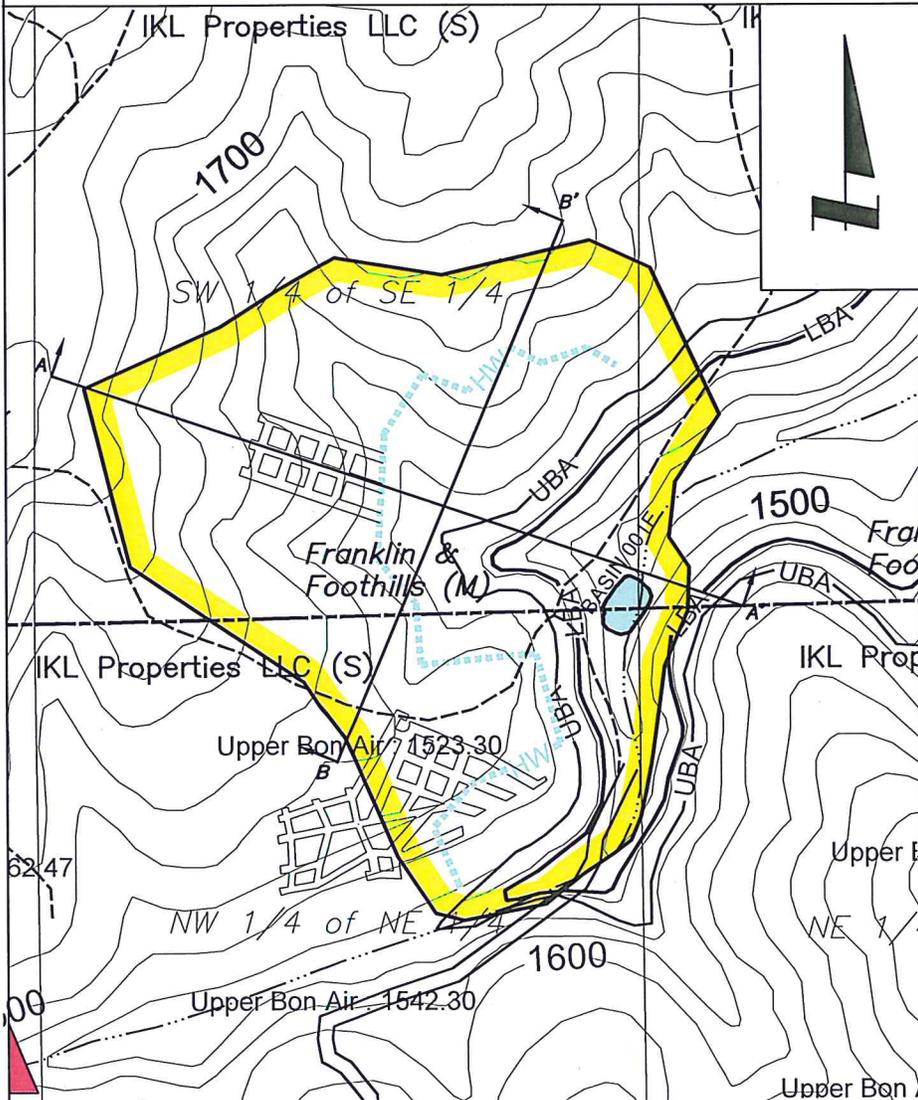
2. Complete the following timetable: [780.18(b) (1)]

Any surface disturbance such as bore holes will be reclaimed promptly. Office area, stockpiles, basins, the mine entrance, and berms will be reclaimed when the mining process is complete. This reclamation will be completed as follows:

Increment:	# Months after operation begins	% of Increment or permit which will be graded and contoured
1 and 2	10 months	0%
	20 months	0%
	30 months	0%
	40 months	0%
	50 months	0%
	60 months	0%
	62 months	33%
	64 months	67%
	66 months	100%



SCALE
 Horizontal: 1" = 300'
 Vertical: 1" = 300'

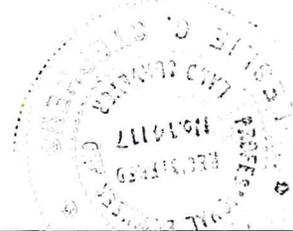


I, Leslie G. Stephens, a Registered Professional Engineer and Land Surveyor, hereby certify this drawing to be true and correct to the best of my knowledge, information and belief.

Leslie G. Stephens

Leslie G. Stephens, P.E./P.L.S.
 AL Reg. #14117-E

04/13/2015
 Date



**Attachment IV-B-1
 Red Mesa Energy, LLC.
 Bledsoe Mine
 Premining X-Sections A-A' & B-B'**

DRAWN BY: S.A.E.	DATE: 03-09-2015
DWG. NAME: RMBledsoeMine	
APPROVED BY: R.E.P.	SCALE: 1" = 400'

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Attachment IV-B-1

TOPSOIL AND OVERBURDEN RESTABILIZATION PLAN

At the Bledsoe Mine site 13 acres of the total of 26 acres to be permitted have been previously disturbed and therefore no topsoil is present, however, overburden restabilization shall be achieved as follows:

Overburden shall be backfilled, compacted, and graded in a timely manner so that the post mining slope shall approximate the pre-permitted slope. Overburden will be rough graded by Caterpillar type dozers. Once overburden has been rough graded, farm-type tractors will be used to disc the overburden to its final contour, decrease compaction, and increase the mechanical breakage of the surface layer. Rocks 24" in diameter, or greater, that remain upon the surface, if any, will be collected and buried. At this time the following criteria will be used to evaluate the textural quality of the graded overburden:

- a) Rocks of a size greater than 10" shall not exceed 1% by weight of the substitute material.
- b) The substitute material shall not contain more than 15% by weight of materials between 10 and 3 inches in size.
- c) The substitute material shall not contain more than 50% by weight of materials between 3 and .75 inches in size.
- d) At least 40% by weight of the substitute material shall be of a size less than 2 millimeters.

The above criteria is based on a post mining land use of undeveloped or no current use. Sampling frequency shall be as discussed in IV.-C.-2. If this criteria is not met, Red Mesa Energy, LLC will redisc the overburden and resample. If increasing the mechanical breakage will not enhance the graded overburden to a satisfactory level, additional soil will be hauled and spread on site or rocks collected and buried until the above criteria is achieved.

Terraces placed 100 feet apart will be used within the watershed of sediment basins to aid in sediment control.

Stabilization of the graded material shall be achieved by the planting of warm or cool season perennials as outlined in Part IV.-C.-5. of the permit application. Success of revegetation shall be achieved as outlined in Part IV.-C.-7.

3. On appropriate map(s), show representative values for the following: [780.18(b)(3), 816.102]

(a) Percent of slope before mining; and

(b) Proposed post-mining slope including final slope of the highwall(s) in percent.

Land slope measurements on the permit map indicate an average premining slope of 27.2%. The final average post-mining slope will not exceed the pre-mining slope. Final highwall slopes, where the highwall is required to be reclaimed, will not exceed the steepest premining slope. Please note that the term pre-mining as used above addresses the state of the land prior to any mining having occurred, whether conducted by Red Mesa Energy, LLC or others.

4. Complete the following:

(a) Is the mining operation to be conducted on a pre-existing (prior to August 3, 1977) highwall?

() Yes (XXX) No

(b) Is the operation of such limited slope as to not generate enough material to completely backfill the re-affected or enlarged highwall?

() Yes (XXX) No

If Yes, provide analysis to show maximum extent of backfilling possible.

C. Revegetation

- (1) Outline procedures for soil testing required to determine type and amount of soil amendments to be applied and to evaluate results of topsoil handling and replacement. (780.18, 816.25)

Once the texture criteria for final graded overburden has been met as outlined on Attachment IV-C-2, the final texture samples taken shall be sent to a qualified soil testing laboratory where the following tests shall be conducted: percent sand, percent silt, and percent clay, textural classification, pH, total sulfur, acid-base account, fertility ratings for phosphorus, potassium, and magnesium, and amendment recommendations for post mining revegetation for limestone, nitrogen, P₂O₅ and K₂O. Results of this analysis will be used to determine the amount of soil amendments, if any, to be applied to the plant medium and will be submitted to the Regulatory Authority for review.

- (2) Are selected overburden materials to be used as a supplement or substitute for topsoil?
(X) Yes () No

If, yes, provide results of analysis, trials, and tests required under Section 816.22(e). (779.21)

A topsoil variance is requested for the acreage that is previously disturbed within the proposed permit area, a total of 13 Acres.

- (3) Are commercial or introduced species to be used?
() Yes (X) No

If yes, give a narrative with supporting references which show that the species meet the requirements of Section 816.112. (780.18, 816.112)

- (4) Is the area to be reclaimed for fish and wildlife habitat?
() Yes (X) No

If yes, list the species of plants to be used with a brief description of how they meet the criteria of Section 816.97 (d)(6). [780.18(b)(5 and 6), 816.97(d)(6)]

Applicant: <u>Red Mesa Energy, LLC</u>
Mine Name: <u>Bledsoe Mine</u>
Permit Number: P- _____

(5) Complete the following schedules for each increment or sub-area of the permit area. [780.18(b)(5)]

VEGETATION SCHEDULE

All Increments

Temporary Vegetation

Planting Species	Planting Rate	Planting Methods	Dates	Areas to be Planted
Rye Grass	10#/acre	Broadcast	Fall	All Disturbance
Browntop Millet	10#/acre	Broadcast	Spring	All Disturbance

Permanent Vegetation

Planting Species	Planting Rate	Planting Methods	Dates	Areas to be Planted
Bermuda	10#/acre	Broadcast	Spring	All Disturbance
Fescue	50#/acre	Broadcast	Both	All Disturbance
Kobe Lespedeza	30#/acre	Broadcast	Spring	All Disturbance
Vetch	30#/acre	Broadcast	Fall	All Disturbance

Note: Planting will take place the 1st planting season after grading occurs.

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6. Describe, in detail, proposed husbandry practices to be used.
[780.18(b)(5), 805.13(b)(3)]

In cases where rills and gullies form that exceed performance standards, these areas will be regraded and reseeded. Areas where adequate vegetative cover is not established will be reseeded accordingly using those planting techniques described earlier in response to question IV-C.-5.

7. Describe, in detail, the measures and sampling methods to be used to determine and demonstrate success of revegetation; or methods to demonstrate the productive capacity of reconstructed prime farmland. (780.18, 816.116)

Productivity and revegetation success will be determined in accordance with the Alabama Surface Mining Commission's Technical Manual No. 1, "Approved Statistical Analysis and Sampling Techniques for Determining Revegetation Success on Surface Mine Lands in Alabama", or by other methods which have approval from the Alabama Surface Mining Commission.