

**DECISION RECORD**  
**BLM DETERMINATION OF NEPA ADEQUACY (DNA), WY-070-DNA13-170**  
**Campbell County Road & Bridge Department (Campbell County),**  
**Elmore/Gardner Lake Scoria Mine, WYW-168421**  
**Bureau of Land Management, Buffalo Field Office, Wyoming**

**DECISION.** I approve the Free Use Permit (FUP), WYW-168421, submitted by Campbell County Road & Bridge Department (Campbell County) to mine 300,000 cubic yards (CY) of scoria (clinker, or porcellanite) from their existing Elmore/Gardner Lake Scoria Mine over a 5-year period. BLM described and analyzed the sales contract in DNA worksheet, WY-070-DNA13-170, which tiers to environmental assessment (EA), WY-070-EA09-073 (2009). I find that the conditions and environmental effects found in the EA remain valid.

**Compliance.** This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310; 2010.
- The Materials Act of 1947 (30 USC 601, et seq.), as amended; 43 CFR 3600 et seq.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- Buffalo and Powder River Basin (PRB) Oil and Gas Project Final Environmental Impact Statements (FEISs), 1985, 2001, 2003.
- Buffalo Resource Management Plan (RMP) and Record of Decision (ROD) 1985, 2001, 2003, 2011.
- Supplement to Memorandum of Understanding No. WY 19 Between the DOI BLM and the WY DEQ Land Quality Division for Management of Surface Mining and Exploration for Mineral Materials (Saleable [sic] Minerals) on Public Lands; 2003.

**SUMMARY OF THE PROJECT:** The Bureau of Land Management (BLM), Buffalo Field Office (BFO) approves the continued and expanded scoria mining in Campbell County’s Elmore/Gardner Lake Scoria Mine, which is located in the following areas:

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Campbell	Existing Elmore/Gardner Lake Scoria Mine	51	71	34	NWNE	10
	Proposed Expansion Areas for Elmore/Gardner Lake Scoria Mine				NWNE	6.7
					<i>NENE (not BLM-administered)</i>	6.5
				27	SWSE	1.8
<b>TOTAL</b>	<b>25 acres: 18.5 acres federal minerals, and 6.5 acres private minerals (no BLM jurisdiction)</b>					

**THE FINDING OF NO SIGNIFICANT IMPACT (FONSI).** Analysis of Alternative A of EA WY-070-EA09-073 (the same area analyzed in 2009) and its FONSI for the proposed continued mining of scoria from an existing mine, incorporated here by reference, found no significant impact on the human environment beyond those of the Buffalo FEISs, thus an EIS is not required. Further, since the proposal in this DNA (WY-070-DNA13-170) is within the selected alternative in the EA (WY-070-EA09-073) there is no need for another FONSI.

**COMMENT OR NEW INFORMATION SUMMARY.** BLM internally scoped this application. BLM experience in the Powder River Basin (PRB) (outside of the Fortification Creek Planning Area) revealed virtually no public input or discovery of new issues other than those revealed after rigorous public

scoping during development of the Buffalo RMP, its amendments, and PRB Oil and Gas Project. There are insubstantial impacts to sage-grouse or wilderness.

**DECISION RATIONALE.** BLM approves FUP WYW-168421 for the following reasons:

1. This permit will execute at the site of a recently fulfilled FUP for an existing open-pit scoria mine within that pit's boundaries, and to be expanded.
  - a. It is an open-pit surface mine with associated infrastructure and mining operations built and conducted with essentially the same materials and in the same or similar manners as those which BLM approved in 2009, and is using the same terms and conditions (stipulations) and reclamation as those used with the 2009 EA; and,
  - b. There is nothing in the approved FUP that substantively changed the scoria mine or required additional NEPA analysis; and,
  - c. This proposed action complies with 43 CFR 3604, Free Use of Mineral Materials.
2. Monitoring of the mineral materials FUP stipulations and mine area will be conducted by personnel representing the Wyoming Department of Environmental Quality (WDEQ) and the BLM BFO.
3. The mitigation measures described in the standard stipulations attached to the approved FUP will be adequate.
4. The terms and conditions (stipulations) issued under the Decision Record for WY-070-EA09-073 are incorporated here by reference, remain in effect, and apply to Sales Contract, WYW-168421 for the surface disturbances summarized in the above table.
5. The selected alternative will not result in any undue or unnecessary environmental degradation. Reclamation of this mine site will be accordance with the reclamation guidelines in the DNA worksheet's Appendix A.
6. The selected alternative will help meet the nation's mineral needs, and help stimulate local economies by maintaining workforce stability.
7. The Operator committed to comply with all applicable federal, state, and local laws and regulations.
8. The project is clearly lacking in wilderness characteristics as there are no BLM surface acres.

**ADMINISTRATIVE APPEAL.** This decision is subject to administrative review in accordance with 43 CFR 3601.80. Request for administrative review of this decision must include information required under 43 CFR 4 and is appealed to the Interior Board of Land Appeals, as provided in 43 CFR 3601.80 and 43 CFR 4. A party adversely affected by a decision of the authorized officer or State Director made pursuant to subpart 43 CFR 3600, et. al., has the right of appeal to the Interior Board of Land Appeals, Office of Hearings and Appeals, pursuant to 43 CFR 4 and 43 CFR 1840.



Authorized Officer



Date

**BLM DETERMINATION OF NEPA ADEQUACY (DNA), WY-070-DNA13-170  
Campbell County Road & Bridge Department (Campbell County),  
Elmore/Gardner Lake Scoria Mine, WYW-168421  
Bureau of Land Management, Buffalo Field Office, Wyoming**

**OFFICE:** BLM, Buffalo Field Office (BFO), 1425 Fort St., Buffalo, WY 82834.

**TRACKING NUMBERS:** WY-070-DNA13-170.

WY-070-EA09-073, Environmental Assessment (EA), approved May 15, 2009, for Campbell County, Elmore/Gardner Lake Scoria Mine; see BLM Casefile WYW-170011.

\*WY-070-EA10-274, EA approved December 9, 2010, for Caballo Coal (aka Powder River Coal), Caballo Scoria Mine; see BLM Casefile WYW-170196.

\*WY-070-EA10-308, EA approved December 9, 2010, for Alpha Coal West, Belle Ayr Scoria Mine; see BLM Casefile WYW-170201.

\*WY-070-EA10-309, EA approved August 11, 2011, for Magna Energy, Brubaker Sand/Gravel Mine; see BLM Casefile WYW-170202.

\*WY-070-EA10-116, EA approved May 19, 2010, for Alpha Coal West, Eagle Butte Scoria Mine; see BLM Casefile WYW-170067.

\* The BLM incorporates these NEPA documents by reference here because of substantially similar proposed mining operations, geography, and/or other resource issues.

**BLM CASEFILE NO.:** WYW-168421.

**TITLE OF PROPOSED ACTION:** New Free Use Permit (FUP) for existing Elmore/Gardner Lake Scoria Mine.

**PROPOSED ACTION:** Remove 300,000 cubic yards (CY) scoria (clinker, or porcellanite) over 5 years' time from existing approximately 10-acre mine, and expansions totaling approximately 15 acres (approximately 6.5 of these 15 new acres are not BLM-administered, but privately-owned mineral lands).

**LEGAL DESCRIPTION:**

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Campbell	Existing Elmore/Gardner Lake Scoria Mine	51	71	34	NWNE	10
	Proposed Expansion Areas for Elmore/Gardner Lake Scoria Mine				NWNE	6.7
					<i>NENE (not BLM-administered)</i>	6.5
				27	SWSE	1.8
<b>TOTAL</b>	<b>25 acres: 18.5 acres federal minerals, and 6.5 acres private minerals (no BLM jurisdiction)</b>					

**APPLICANT:**

Campbell County Road & Bridge Department (Campbell County), 1704 4-J Road, Gillette, WY, 82718.

**A. Description of the Proposed Action and Any Applicable Mitigation Measures:**

Campbell County Road & Bridge Department (Campbell County), submitted a new Free Use Permit (FUP) for their existing Elmore/Gardner Lake Scoria Mine to remove another 300,000 cubic yards (CY) of scoria (clinker, or porcellanite) over 5 years' time, per 43 CFR 3604 (Free Use of Mineral Materials). The mine can be accessed from an access road heading east off Gardner Lake Road (County Road 33N; see Figure 1). The mine is situated approximately 2.5 miles east of CR 33N, and approximately 6 miles north of Gillette and US Interstate 90 (I-90). This new FUP was assigned the BLM casefile serial number WYW-168421. This FUP is for federally-administered minerals; the surface estate is entirely privately-owned.

This mine currently encompasses approximately 10 acres of disturbance on BLM-administered lands (private surface/federal mineral lands). This new FUP also proposes to expand the mine by approximately 15 acres to encompass a total of approximately 25 acres. Some scoria will be removed from existing stockpiles of prepared materials, and the remainder will be mined from existing and new areas of disturbance (see Figures 2 through 3). These 15 new acres will be administered by two separate parties: 1) approximately 8.5 acres are BLM-administered (private surface/federal mineral lands), and all these acres will be mined; 2) approximately 6.5 acres will be administered by the private surface owner (private surface/mineral lands), and these acres will not be mined but used for staging and/or processing, and to house stockpiles of topsoil and/or prepared scoria.

DNA WY-070-DNA13-170 tiers to BLM's 2009 NEPA analysis and Environmental Assessment (EA) WY-070-EA09-073, which concluded that no significant impacts would result to other resources should that proposed action occur. BLM treats this proposed action as a new FUP, as the terms of the former FUP (WYW-170011) were filled, per 43 CFR 3604. This proposed action is consistent with regulations (43 CFR 3604, the terms of the former approved FUP, and does not involve a substantive change requiring additional NEPA analysis.

A Class III cultural resource inventory was performed for the Campbell County Elmore/Gardner Lake Scoria Mine (BFO project #70130063) prior to on-the-ground project work. A Class III cultural resource inventory following the Archaeology and Historic Preservation, Secretary of the Interior's Standards and Guidelines (48 CFR 190), and the *Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class II and III Reports*, was provided by the BFO. Seth Lambert, BLM Archaeologist, reviewed the report for technical adequacy and compliance with BLM standards, and determined it to be adequate. A previously reviewed and accepted Class III cultural resource inventory (BFO #70090073) adequately covered the remainder of the proposed project area. There are no eligible sites within the area of potential effect (APE) of the proposed project. Following the Wyoming State Protocol Section VI(A)(1), the BLM electronically notified the Wyoming State Historic Preservation Officer (SHPO) on May 31, 2013, that no historic properties exist within the APE.

BLM Biologist Darci Stafford conducted an on-site inspection on May 7, 2013. The affected environment is unchanged and consistent with the habitat assessment conducted during preparation of this mines' previous EA, signed May 15, 2009. The project area is outside of the Core and Connectivity Areas for Greater Sage-Grouse (GSG); these areas were outlined in Wyoming State Executive Order 2011-05, "Greater Sage-Grouse Core Area Protection." No leks occur within 2 miles of the existing mine, and suitable habitat is not present adjacent to the mine. The area along the draw to the west of the mine may be used for late brood-rearing, however. Suitable raptor nesting habitat is present within 0.5 miles

of the proposed disturbance; however, no nests were documented by the BLM Biologist during the site visit on May 7, 2013. Suitable nesting habitat for migratory birds exists in the project area. Flat areas and reservoirs along the draw to the west of the mine, and grassy areas to the east and northeast of the mine, provide suitable habitat for several nesting migratory bird species. Some small patches of sagebrush occur within the expansion area. During the site visit, the BLM Biologist did not observe any BLM Special Status Species in the project area. If migratory bird nesting habitat is removed during the nesting season, migratory birds may have their nests destroyed. The expansion of the mine will not disturb areas in the draw, so nesting birds using that area may be impacted by noise, dust, and human activities, but are not likely to have their nests physically destroyed. Impacts to wildlife from noise, dust, and human activities are anticipated to occur with implementation of the project. No listed or proposed Threatened and Endangered Species, or their critical habitat, occur in or near the project area.

**Mitigation Measures and Monitoring:**

1. The Standard Stipulations attached to the former FUP (WYW-170011) for this Mine approved May 15, 2009, are replaced by those attached to this new FUP (WYW-168421) for this Mine.
2. Reclamation will be accordance with the reclamation guidelines in Appendix A.

**B. Conformance with the Land Use Plan (LUP) and Consistency with Related Subordinate Implementation Plans:**

LUP Name: Buffalo Resource Management Plan (RMP), 1985; amended 2001, 2003, and 2011. Supplement to Memorandum of Understanding No. WY 19 Between the USDI BLM and the Wyoming Department of Land Quality (WDEQ) Land Quality Division (LQD) for Management of Surface Mining and Exploration for Mineral Materials (Saleable [sic] Minerals) on Public Lands; 2003. See also: Interior Department Order 3310; 2010.

The proposed action conforms to the applicable LUPs because it is specifically provided for in the following LUP decisions:

The Buffalo RMP Record of Decision (ROD), 1985, provides for development of salable minerals (mineral materials), such as scoria, p. 16. BLM-administered locatable minerals will remain subject to the provisions of the General Mining Law of 1872, as amended. The 1985 ROD provided for surface protections:

The ROD prohibited surface disturbance or occupancy within a biological buffer zone area around active raptor nests unless the authorized officer waives the prohibition, p. 19.

The 2001 Buffalo RMP Amendment has a management objective of maintaining or enhancing opportunities for mineral exploration and development while maintaining other resource values, p. 8. The RMP specifically addressed scoria in its management decision for salable minerals, p. 13:

The majority of lands in the resource area, including federally administered surface/minerals and split estate, are available for mineral material exploration and development.

In order to explore and/or develop federally-administered salable minerals for commercial use (to sell) or for free-use (for use by other governmental entities and non-profit organizations), BLM must authorize the activity (per 43 CFR 3601.30, 3601.71(a), and 3604.12).

All salable minerals actions are reviewed to ensure compliance with the bonding policy for surface-disturbing activities. The 2001 Amendment also addressed protections from surface disturbances. The Amendment addressed cultural surveys prior to surface disturbances, pp. 4 to 5 and Appendix A. The Amendment re-addressed raptor protections similar to those in the 1985 RMP, p. 38 and Appendix A. The scope of the 2003 Amendment is generally limited to fluid mineral (oil and gas) development, though the analysis concluded that salable minerals in the region were stratified above the oil and gas minerals, pp. 4-129. This Amendment has valuable sections on soil and water conservation and reclamation.

The 2011 Amendment focused on the Fortification Creek Planning Area and has no bearing here.

### **C. Identify Applicable National Environmental Policy Act (NEPA) Documents and Other Related Documents that Cover the Proposed Action:**

List by name and date all applicable NEPA documents that cover the proposed action:

- Final Environmental Impact Statement (FEIS)...for the Powder River Basin (PRB) Oil and Gas Project, BFO, 2003.
- Buffalo FEIS, 2001.
- Buffalo FEIS, 1985.
- WY-070-EA09-073 (2009), for Campbell County's Elmore/Gardner Lake Scoria Mine.
- WY-070-EA10-274 (2010), for Caballo Coal's Caballo Scoria Mine.
- WY-070-EA10-308 (2010), Alpha Coal West's Belle Ayr Scoria Mine.
- WY-070-EA10-309 (2011), Magna Energy's Brubaker Sand/Gravel Mine.
- WY-070-EA10-116 (2010), Alpha Coal West's Eagle Butte Scoria Mine.

List by name and date other documentation relevant to the proposed action (e.g., biological assessment, biological opinion, watershed assessment, allotment evaluation, monitoring report, etc.):

- Final Biological Opinion – or – Reinitiation of Formal Consultation with US Fish & Wildlife Service for the Powder River Oil and Gas Project, Campbell, Converse, Johnson, and Sheridan Counties, Wyoming (Formal Consultation No. ES-6-WY-07-F012). 2007.

### **D. NEPA Adequacy Criteria:**

**1. Is the new proposed activity a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?**

Yes. The proposed action is the continuation of existing operations, and therefore consistent with those actions. The resource conditions are similar to those in existing NEPA documents, with essentially no or insubstantial changes to other resources having occurred in the intervening period. The BLM finds that the conditions and environmental effects found in the EA remain valid. The proposed action is a feature of, and is essentially similar to, the selected alternative in EA# WY-070-EA09-073, New FUP for Campbell County's Elmore/Gardner Lake Scoria Mine, pp. 1 to 5; Buffalo ROD 1985, p. 16; and Buffalo RMP Amendment 2001, p. 4.

**2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?**

Yes. The EA for the former FUP for the Elmore/Gardner Lake Scoria Mine (EA # WY-070-EA09-073, 2009) analyzed 3 alternatives: 1) the continued mining of scoria in that location, 2) the no-action alternative (not approving the continued mining of scoria in that location), and 3) the mining of scoria elsewhere;

see the Finding of No Significant Impact (FONSI), p. 1 and the EA, pp. 1 to 5. This EA also analyzed the proposed action in the light of current environmental concerns and resource values, noting that surface and groundwater will not be affected (p. 2), and that wetlands and riparian areas do not exist in the project area (p. 3). This EA also noted that there were no soil, erosion, or major reclamation concerns (pp. 1 through 3), in addition to no concerns for vegetation and invasive species (p. 3). This EA's range of alternatives also addressed the environmental concerns to wildlife and raptors (pp. 2 and 3). The EA noted that there would be little to no impact on grazing (p. 3). The EA's analysis did not include discussion of the biological buffers for raptors; however no raptors or nests were observed by the BLM Biologist during the site visit on May 7, 2013. During the May 7, 2013, site visits, no GSG, migratory birds, or BLM Special Status Species (SSS), and no suitable GSG or SSS or habitat were identified in the current disturbed area. However patchy sagebrush and migratory bird habitat are present in the mine expansion area. The mine expansion activities may potentially disturb or destroy some migratory bird nests, if any have been constructed in that area. The neglected ("abandoned") non-producing oil well (Emerald Restoration and Production's Springen Ranch #26, API #49-005-21418, T71N R51W Sec. 34 NW) noted in the 2009 EA (p. 2) as being situated in the southwest corner of the "mine area," was properly plugged and abandoned later that year (October 21, 2009), and reclamation of site determined to be adequate (September 27, 2012). Therefore, any issues that might have arisen for Campbell County to mine and reclaim around that well (or potentially include that well) are now moot. Buffalo ROD 1985, p. 19; the 2001 Amendment, p. 38 and Appendix A, are incorporated here by reference.

**3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?**

Yes. The existing analysis remains valid in light of new information or circumstances given the need for the project. The new information provided in an order from the Interior Department concerned land use plans' consideration of wilderness characteristics in those plans. New information concerning Greater Sage-Grouse (GSG) conservation also post-dates EA WY-070-EA09-073. A new Wyoming executive order (Order 2011-5) was issued in June 2011, and a new BLM Instruction Memorandum (WY IM 2012-019) was issued in on February 10, 2012. BLM IMs-2012-043 and -044 also provide GSG policy guidance. These guidelines addressed administrative changes in implementation of projects within GSG core areas. While considered by BFO, neither is relevant in this project proposal as the area has no wilderness characteristics, and habitat conditions for GSGs have not changed (see #2 above).

No new circumstances occur since the 2009 EA. The BFO's experience shows the design features and mitigation in existing NEPA documents is both substantially similar to, and therefore does not substantially change, an analysis of best management practices, design features, and mitigation necessary to provide for the proposed project and to minimize the project's impact on other resources.

There is no new information that would substantially or moderately change the analysis.

**4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document(s)?**

Yes. The direct, indirect, and cumulative effects that would result from implementation of the new proposed FUP for this existing scoria mine are similar quantitatively and qualitatively to those analyzed in the existing NEPA and other documents. BLM anticipates no loss of grazing resources, 2009 EA, p. 3. This DNA (WY-070-DNA13-170) for the new FUP (WYW-168421) does not differ from EA# WY-070-EA09-

073 regarding raptors. Biological buffers for nesting raptors are adequately analyzed in the Buffalo ROD 1985, p. 19; the 2001 Amendment, p. 38 and Appendix A (incorporated here by reference); in open-pit mining EAs, WY-070-EA10-274 (2010), for Caballo Coal's Caballo Scoria Mine, pp. 13 to 14, and 20; WY-070-EA10-116 (2010), Alpha Coal West's Belle Ayr Scoria Mine, pp. 6 and 14; WY-070-EA10-309 (2011), Magna Energy's Brubaker Sand and Gravel Mine, pp. 10, 15, and 21 to 23; WY-070-EA10-308 (2010), Alpha Coal West's Eagle Butte Scoria Mine, pp. 6 and 14 – all incorporated here by reference.

**5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?**

Yes, the public scoping for the Buffalo FEIS 1985, Amendment of 2001, and Amendment of 2003 (PRB FEIS) were extensive as evidenced with the receipt of thousands of comments. These FEISs, LUPs, and their amendments, established the administrative regulatory foundation for the BFO to implement the surface mining proposed in this new Sales Contract. Furthermore, the BFO extensively posts the EAs for projects on its website and continues an active public outreach and information program. The BFO continues involving the public and local governmental officials in the decision making process; BFO will post the decision on its website.

**E. Persons/Agencies/BLM Staff Consulted:**

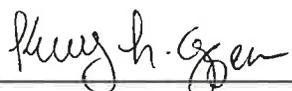
The following individuals and agencies were consulted and/or contributed to this document:

- Kurt King; WDEQ LQD Sr. Environmental Analyst
- Darci Stafford; BLM Biologist
- Seth Lambert; BLM Archaeologist
- John Kelley; BLM NEPA Coordinator
- Kerry Aggen; BLM Geologist, Project Lead, and Document Preparer

Note: Refer to the respective EAs/EISs for a complete list of the team members participating in the preparation of the original environmental analysis or planning documents.

**Conclusion:**

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of the NEPA.

 7/3/2013  
\_\_\_\_\_  
Signature of Project Lead

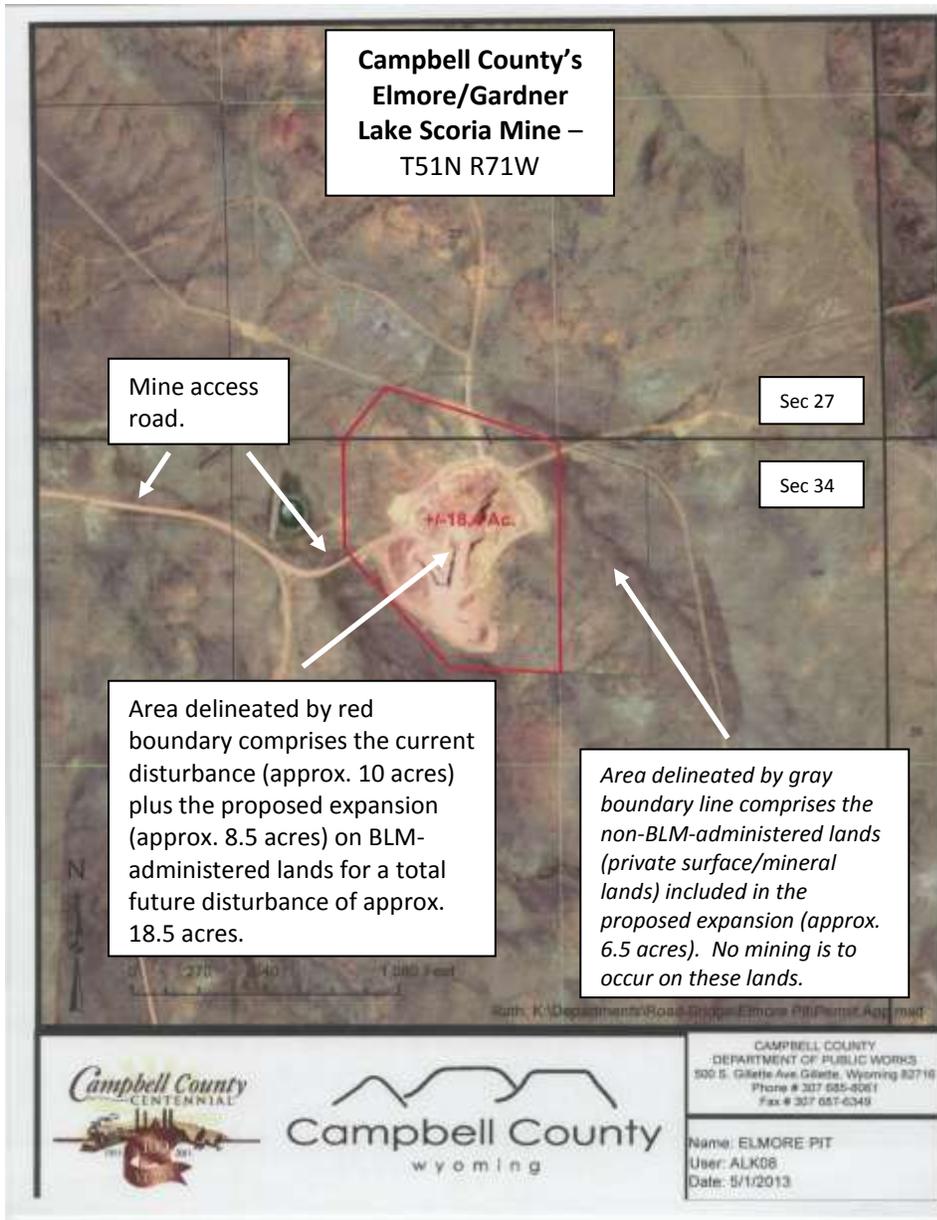
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Signature of the Buffalo Field Manager

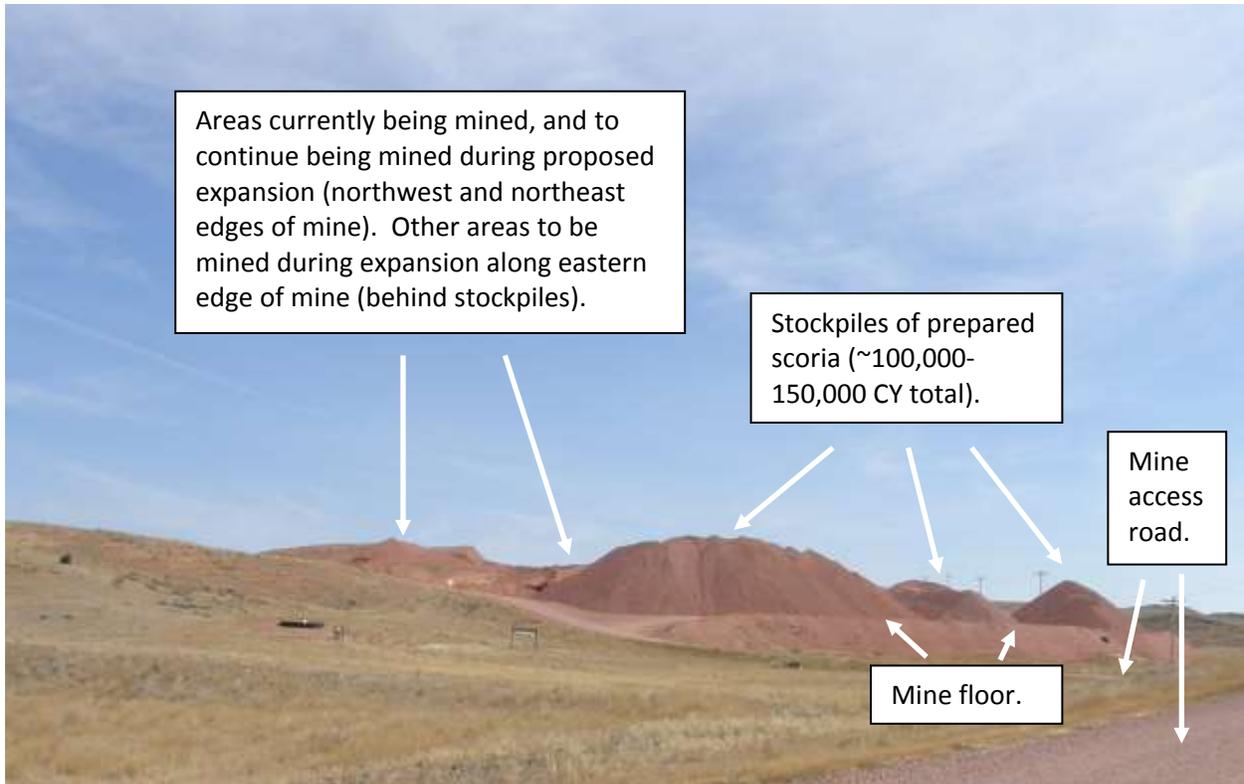
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**Note:** The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal under 43 CFR Part 4 and the program-specific regulations.

**Figure 1. Map showing current and future disturbance areas of Campbell County’s Elmore/Gardner Lake Scoria Mine.** Red boundary line delineates the current and future disturbance areas on BLM-administered lands (private surface/federal minerals). Current disturbance is approximately 10 acres, proposed expansion is approximately 8.5 acres, for a total of approximately 18.5 acres of federally-administered lands. All proposed mining is to occur on BLM-administered lands. Gray boundary line delineates the proposed expansion onto non-BLM-administered lands (private surface/minerals), comprising approximately 6.5 acres; no mining of mineral materials is to occur on these privately-administered lands. Map provided to BLM by Campbell County on May 1, 2013.



**Figure 2. Photograph of Campbell County's Elmore/Gardner Lake Scoria Mine.** Three (3) large stockpiles of previously prepared scoria (~100,000-150,000 CY total) can be seen in center through right middle ground. Highwalls along which mining is currently occurring, and will continue to be during expansion, can be seen in center through left middle ground (northwest and northeast edges of mine). Other areas to be mined during expansion cannot be seen in this photo, as they are along the eastern edge of mine (behind the stockpiles, which are in the southern portion of the mine). Mine access road can be seen in far right foreground, and right through center middle ground (in front of, and leading into, the mine). Taken looking east from the access road by Kerry L. Aggen on September 19, 2012.



**Figure 3. Panorama of Campbell County's Elmore/Gardner Lake Scoria Mine.** Three (3) large stockpiles of previously prepared scoria (~100,000-150,000 CY total) can be seen in far middle ground in southern portion of mine. Highwalls along which mining is currently occurring, and will continue to be during expansion, can be seen in left through right foreground (northeast and northwest edges of mine). Some other areas to be mined during expansion can be seen in left middle ground, along eastern edges of mine. Upper portion of mine access road can be seen in far right and far left foreground. Taken looking southeast (left) through southwest (right) from access road skirting northwestern edge of current disturbance by Kerry L. Aggen on September 19, 2012.



## **Appendix A: RECLAMATION REQUIREMENTS, WYOMING BLM.**

*The following Reclamation Requirements apply to all surface disturbing activities, including BLM initiated activities, and must be addressed in each reclamation plan. These requirements also must be met prior to release of the bond and/or the reclamation liability. Where these Reclamation Requirements differ from other applicable federal, laws, rules, and regulations, those requirements supersede this policy. State and/or local statutes or regulations may also apply.*

### **1. Manage all waste materials:**

- a. Segregate, treat, and/or bio-remediate contaminated soil material.
- b. Bury only authorized waste materials on site. Buried material must be covered with a minimum of three feet of suitable material or meet other program standards.
- c. Ensure all waste materials moved off-site are transported to an authorized disposal facility.

### **2. Ensure subsurface integrity, and eliminate sources of ground and surface water contamination:**

- a. Properly plug all drill holes and other subsurface openings (mine shafts, adits etc.).
- b. Stabilize, properly back fill, cap, and/or restrict from entry all open shafts, underground workings, and other openings.
- c. Control sources of contamination and implement best management practices to protect surface and ground water quality.

### **3. Re-establish slope stability, surface stability, and desired topographic diversity:**

- a. Reconstruct the landscape to the approximate original contour or consistent with the land use plan.
- b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
- c. Eliminate highwalls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
- d. Minimize sheet and rill erosion on/or adjacent to the reclaimed area. There shall be no evidence of mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on/or adjacent to the reclaimed area.

### **4. Reconstruct and stabilize water courses and drainage features:**

- a. Reconstruct drainage basins and reclaim impoundments to maintain the drainage pattern, profile, and dimension to approximate the natural features found in nearby naturally functioning basins.
- b. Reconstruct and stabilize stream channels, drainages, and impoundments to exhibit similar hydrologic characteristics found in stable naturally functioning systems.

### **5. Maintain the biological, chemical, and physical integrity of the topsoil and subsoil (where appropriate):**

- a. Identify, delineate, and segregate all salvaged topsoil and subsoil based on a site specific soil evaluation, including depth, chemical, and physical characteristics.
- b. Protect all stored soil material from erosion, degradation, and contamination.
- c. Incorporate stored soil material into the disturbed landscape.
- d. Seed soils to be stored beyond one growing season, with desired vegetation.
- e. Identify stockpiles with appropriate signage.

### **6. Prepare site for revegetation:**

- a. Redistribute soil materials in a manner similar to the original vertical profile.

- b.Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate desired plant species.
- c.Provide suitable surface and subsurface physical, chemical, and biological properties to support the long term establishment and viability of the desired plant community.
- d.Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc.)

**7. Establish a desired self-perpetuating native plant community:**

- a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community.
- b. Enhance critical resource values (e.g. wildlife, range, recreation, etc.), where appropriate, by augmenting plant community composition, diversity, and/or structure.
- c. Select genetically appropriate and locally adapted native plant materials based on the site characteristics and ecological setting.
- d. Select non-native plants only as an approved short term and non-persistent alternative to native plant materials. Ensure the non-natives will not hybridize, displace, or offer long-term competition to the endemic plants, and are designed to aid in the re-establishment of native plant communities.

**8. Reestablish complementary visual composition:**

- a. Ensure the reclaimed landscape features blend into the adjacent area and conform to the land use plan decisions.
- b. Ensure the reclaimed landscape does not result in a long term change to the scenic quality of the area.

**9. Manage Invasive Plants:**

- a. Assess for invasive plants before initiating surface disturbing activities.
- b. Develop an invasive plant management plan.
- c. Control invasive plants utilizing an integrated pest management approach.
- d. Monitor invasive plant treatments.

**10. Develop and implement a reclamation monitoring and reporting strategy:**

- a. Conduct compliance and effectiveness monitoring in accordance with a BLM (or other surface management agency) approved monitoring protocol.
- b. Evaluate monitoring data for compliance with the reclamation plan.
- c. Document and report monitoring data and recommend revised reclamation strategies.
- d. Implement revised reclamation strategies as needed.
- e. Repeat the process of monitoring, evaluating, documenting/reporting, and implementing, until reclamation goals are achieved.