

U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641

## DETERMINATION OF NEPA ADEQUACY (DNA)

### *Chevron 6 Pipeline Replacement* DOI-BLM-CO-N05-2015-0045-DNA

#### Identifying Information

**Project Title:** Chevron 6 Pipeline Replacement

**Legal Description:** T. 2N R. 103W Sections 14, 23 and 25

**Applicant:** Chevron USA, INC

**Casefile/Project Number:** COC- 47675X

#### Conformance with the Land Use Plan

The Proposed Action is subject to and is in conformance (43 CFR 1610.5) with the following land use plan:

**Land Use Plan:** White River Record of Decision and Approved Resource Management Plan (ROD/RMP)

**Date Approved:** July 1997

**Decision Language:** “Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values.” (page 2-5)

## Proposed Action

### Project Components and General Schedule

Chevron USA Inc. is proposing to construct and operate one flowline replacement in T. 2N R. 103W, Section 14, and five replacement water injection laterals on the West Trunk Injection Line in T. 2N, R. 103W, Sections 23 and 25 (Figure A). These connect to the A.C. McLaughlin 14, A.C. McLaughlin 23, L.N. Hagood A 11X, L.N. Hagood A7, L.N. Hagood A 14X, and E.A. Neal 2AX wells. The replacement flowline would be a 4 inch 1000 psi fiberglass pipeline installed 10-15 feet offset from the existing line, at a depth of 4 to 5 feet. The existing production flowline will be disconnected, flushed with fresh water, and cap/plugged on both ends. The replacement water injection laterals would be a 3 inch 2500 psi fiberglass pipeline installed about 15 feet offset from the existing lines, at a depth of 4 to 5 feet.

All pipeline corridors would be approximately 40 feet, and the centerline would be offset from the existing corridor centerline by about 15 feet. Thus, there would be 15 feet of new disturbance and 25 feet of re-disturbance along the existing corridor. The total acreage for these replacements would be about 6.5 acres: 2.5 acres of new disturbance, and 4.0 acres of re-disturbance. All work would be on BLM surface, and all disturbance would be reclaimed after construction.

Construction would be anticipated to begin when permits are approved, although it could take place any time of year. Construction would take about ten weeks.

**Table 1. Anticipated Surface Disturbance for the Proposed Action**

	New Disturbance During the Construction Phase (acres)	Re-disturbance of Existing Corridor During the Construction Phase (acres)	Disturbance After Final Reclamation (acres)
A.C. McLaughlin 14 flowline	0.7	1.3	0
A.C. McLaughlin 23 water injection lateral	0.1	0.1	0
L.N. Hagood A 11X water injection lateral	1.1	1.7	0
L.N. Hagood A7 water injection lateral	0.2	0.4	0
L.N. Hagood A 14X water injection lateral	0.2	0.2	0
E.A. Neal 2AX water injection lateral	0.2	0.3	0
<b>Total</b>	<b>2.5</b>	<b>4.0</b>	<b>0</b>

### Design Features

1. A copy of the Rangely Weber Sand Unit pipeline reclamation plan is attached.

## ***BLM Required Conditions of Approval to Mitigate Impacts to Cultural and Paleontological Resources***

1. The applicant is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. The applicant will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The applicant, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
3. Pursuant to 43 CFR 10.4(g), the applicant must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
4. The applicant is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate or other scientifically-important fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
5. If any paleontological resources are discovered as a result of operations under this authorization, the applicant or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

## **Review of Existing NEPA Documents**

**Name of Document:** White River Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP/FEIS).

**Date Approved:** June 1996

**Name of Document:** [BLM-CO-110-2011-0151EA](#)

**Date Approved:** December 2, 2011

### NEPA Adequacy Criteria

1. Is the new Proposed Action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document? 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? If there are differences, can you explain why they are not substantial?

*The anticipated impacts that would result from replacing the pipeline are similar to the anticipated impacts that were addressed and mitigated in the existing NEPA document (DOI-BLM-CO-110-2011-151-EA). The existing NEPA document analyzed pipeline replacement and removal, and well pad facility construction. Furthermore, the proposed pipeline replacements are in the analysis area that was reviewed in DOI-BLM-CO-110-2011-151-EA.*

2. Is the range of alternatives analyzed in the existing NEPA document appropriate with respect to the new Proposed Action, given current environmental concerns, interests, and resource values?

*Two alternatives (Proposed Action and No Action Alternative) were analyzed in DOI-BLM-CO-110-2011-151-EA. No reasons were identified to analyze additional alternatives and these alternatives are considered to be adequate and valid for the Proposed Action.*

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?

*Review by BLM White River Field Office (WRFO) specialists in document DOI-BLM-CO-110-2011-151-EA did not indicate recent endangered species listings and no updates/changes have been made to BLM's sensitive species list that would be affected by the Proposed Action.*

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?

*It is assumed that all direct, indirect, and cumulative effects associated with the Proposed Action are similar in scope, intensity, duration and spatial extent as the direct, indirect, and cumulative effects that were addressed in DOI-BLM-CO-110-2011-151-EA. All anticipated direct, indirect, and cumulative impacts associated with the Proposed Action were reviewed and mitigated in DOI-BLM-CO-110-2011-151-EA. This project is 6.5 acres out of 1,060 acres. This project is 0.6 percent of the DOI-BLM-CO-110-2011-151-EA disturbance with a cumulative disturbance of 12.3 percent.*

5. Is the public involvement and interagency review associated with existing NEPA documents adequate for the current Proposed Action?

*The public involvement with this project was done by posting it on a list of pending NEPA documents on the BLM WRFO's White River NEPA Register on March 31, 2015. As of May 22, 2015, no comments or inquiries have been received.*

## Interdisciplinary Review

The Proposed Action was presented to, and reviewed by, the White River Field Office interdisciplinary team on March 31, 2015. A complete list of resource specialists who participated in this review is available upon request from the White River Field Office. The table below lists resource specialists who provided additional review or remarks concerning cultural resources and special status species.

Name	Title	Resource	Date
Michael Selle	Archaeologist	Cultural Resources, Native American Religious Concerns	5/20/2015
Ed Hollowed	Wildlife Biologist	Special Status Wildlife Species	5/19/2015
Heather Woodruff	Ecologist	Special Status Plant Species	5/21/2015
Tracy Perfors	Natural Resource Specialist	Project Lead	5/22/2015
Joe David	Planning and Environmental Coordinator	NEPA Compliance	6/02/2015

**Cultural Resources:** The BLM-administered lands in Sections 23 and 25 have been inventoried at the Class III (100 percent pedestrian) level (Kintz and Sauvageau Rockwell 2014, compliance dated 1/8/2014) and there are no known historic properties that would be impacted by the proposed new pipeline. Subsurface remains are unlikely, but cannot be completely ruled out. Impacts to any previously unknown cultural resource could represent a permanent, long term, irreversible and irretrievable loss of scientific data from the regional archaeological database. This loss cannot be quantified at the present time.

**Native American Religious Concerns:** No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.

**Paleontological Resource Concerns:** The proposed pipeline is in an area generally mapped as the Mancos Shale (Tweto 1979), which the BLM has categorized as a Potential Fossil Yield Classification (PFYC) 3 formation, meaning it has an undetermined potential for producing scientifically noteworthy fossil in this area. However, the Mancos Shale in other areas is known to produce a variety of marine vertebrates (c. Armstrong and Wolny 1989). Therefore, there is an unknown potential for discovery of scientifically noteworthy fossils during project construction.

**Threatened and Endangered Wildlife Species:** All parallel pipeline right-of-ways are colonized by BLM-sensitive populations of white-tailed prairie dog, but these narrow linear habitat features are generally disassociated from “normal” patterns of prairie dog populations

(i.e., discrete prairie dog towns) and are represented by single entrance burrows that are confined to the surface immediately above the pipeline trench (i.e., no mounded systems and few, if any, lateral burrows emanating from trench line). The entire project (about 1.3 miles of new line) involves 77 single-entrance burrows that are associated with the existing pipeline trench and skirts 2 adjacent mounded burrow systems. Under these circumstances, pipeline trenching offset from the existing trench would be expected to physically intersect little, if any, of existing subterranean burrow systems.

Based on field surveys conducted in late April 2015, prairie dog pups had emerged and are 1/4 to 1/2 adult size. Pipeline right-of-way preparation, trenching, and installation would represent a short-term source of disturbance, but would not be expected to pose a substantive risk of direct mortality.

In WRFO’s experience and under these circumstances, the density, distribution, and abundance of prairie dog burrow features on the surface of existing pipeline right-of-ways subjected to installation of parallel pipelines changes little, if at all, and suggests that associated populations remain intact. There is no reason to doubt that newly created trenching closely associated with reclaimed right-of-way would not be rapidly colonized by adjacent populations of prairie dog, and therefore represent a localized expansion of suitable and occupied habitat. The increment of habitat expansion would be nominal (about 0.5 acre) and no measurable increment of additional support would be lent to associated species (e.g., ferret or burrowing owl).

One notable exception involves an approximately 640 foot length of proposed right-of-way at the western terminus of injection lines serving the A.C. McLaughlin 23 and L.N. Hagood 11X wells. In this reach, pipeline right-of-way preparation and trenching would involve a considerable number of mounded burrow systems that are occupied by large numbers of prairie dogs. Although the proposed right-of-way has been disturbed in the past, ground cover supports a substantial perennial grass component. WRFO delineated an alternate route that avoids the intersect of any mounded burrow systems and makes use of an existing parallel and recently reclaimed right-of-way that is composed primarily of weedy broadleaves and is sparsely colonized by prairie dogs (11 single entrance burrows along trenchline). The alternative is estimated to add 15 feet of additional length to the original proposal.

The following UTM’s (Zone 12 NAD 83) approximate the endpoints and internal angles describing the realignment:

<b>Easting</b>	<b>Northing</b>	<b>Description of point</b>
676310	4443858	McLaughlin 23 well pad
676229	4443873	North intersect of existing injection line ROW
676127	4443735	South intersect of existing injection line ROW
676122	4443713	South terminus of injection line for Hagood 11X

Chevron proposed a slightly different pipeline re-route to ease the construction process, which still avoids the mounded prairie dog burrow systems (Figure B). The alternative is estimated to add 15 feet of additional length to the original AC McLaughlin line, and 60 feet of additional length to the LN Hagood A11X line, for a total of 0.03 acres of additional disturbance. The following UTM’s (Zone 12 NAD 83) approximate the endpoints and internal angles describing this final realignment:

### AC McLaughlin 23 line

<b>Easting</b>	<b>Northing</b>	<b>Description of point</b>
676310	4443858	McLaughlin 23 well pad
676292	4443844	Inflection to the north at well pad edge
676285	4443884	Merge with LN Hagood A11X ROW

### LN Hagood A11X line

<b>Easting</b>	<b>Northing</b>	<b>Description of point</b>
676301	4443887	Intersect original pipeline replacement proposal
676229	4443873	North intersect of existing injection line ROW
676127	4443735	South intersect of existing injection line ROW
676122	4443713	South terminus of injection line for Hagood 11X

Under a non-essential, experimental population rule, and cooperatively- developed Black-footed Ferret Management Plan, black-footed ferret reintroduction and recovery efforts have been conducted from 2001 to 2009 in WRFO, including Coyote Basin, a minimum 3 miles southwest of the project site. Although no ferrets are known to have dispersed to and occupied the Rangely Oil Field, there is physical potential that ferrets may have reached this portion of Coal Oil Basin. A plague epizootic in 2009/2010 decimated WRFO's ferret population, as well as the prairie dog prey base and, although individuals are known to have survived in neighboring Utah, it is extremely unlikely that ferret populations have acquired the capability to disperse and colonize distant habitat. Considering the narrow linear distribution and low relative abundance of prairie dogs in the project locales, there is no reasonable likelihood that that these populations might attract or sustain occupation by, and much less reproductive activity of, black-footed ferrets that may have dispersed from these Management Areas.

Based on surveys conducted by WRFO biologists in late April 2015, there was no indication of burrowing owl nesting activity in or near the project sites for the 2015 nesting season. Burrowing owl tend to nest in the same general area in the short term and, considering locations accumulated since 2009, the nearest burrowing owl nest activity is more than 0.6 mile from the nearest project work.

Brewer's sparrow, a BLM sensitive species, is relatively common and widely distributed throughout Coal Oil Basin, where appropriate habitat exists (i.e., sagebrush stands). This species typically returns in late-April and May and begins nesting the latter part of May. Young are fledged by mid- to late July. Many of the proposed project sites are located along heavily used well field access routes, producing well pads, and broad existing pipeline corridors that are devoid of, or support low density, shrub growth. These conditions generally suppress the abundance of nesting birds, as discussed in the parent document (DOI-BLM-CO-110-2011-0151-EA). In the current proposal, there is little suitable shrubland nesting substrate directly involved with right-of-way preparation or clearing. Pipeline installation activity that would bisect or closely approach stands of big sagebrush best suited for the support of Brewer's sparrow nesting would be limited to about 4 acres. It is estimated that if pipeline construction and right-of-way preparation were to take place during the nesting season, one to two pairs of Brewer's sparrow nesting attempts might be compromised. In this particular circumstance, this scale of effect is not considered substantial and does not warrant the application of a timing limitation.

Consistent with the Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program and its influence on endangered Colorado River fishes in the Colorado River Basin in Colorado, water-use figures associated with flushing and hydrostatic testing of the pipelines associated with this project would be entered into the White River Field Office fluid minerals water depletion log that will be submitted to the Colorado State Office at the end of the Fiscal Year. Based on figures provided to WRFO by Chevron, it is estimated that hydrostatic testing and flushing of pipelines associated with this project would require 191 barrels of water or about 0.02 acre-feet.

**Threatened and Endangered Plant Species:** There are no special status plant species issues or concerns associated with the Proposed Action.

### References Cited:

Armstrong, Harley J., and David G. Wolny

1989 Paleontological Resources of Northwest Colorado: A Regional Analysis. Museum of Western Colorado, Grand Junction, Colorado.

Kintz, Kimberly, and Nicole Sauvageau Rockwell

2013 Chevron Corporation Block Survey, Phase I: A Class III Cultural Resource Inventory and Historical Analysis for BLM-Managed Land in the Rangely Unit, Rio Blanco County, Colorado. Metcalf Archaeological Consultants, Inc., Grand Junction, Colorado. (13-54-02: OAHP # RB.LM.R1322)

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

### Mitigation

1. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock on BLM administered lands in Township 2 North, Range 102 West, Section 14, on the A.C. McLaughlin 14 flowline.
2. The operator shall employ dust suppression techniques (i.e., freshwater use) whenever there is a visible dust trail behind service vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.
3. Chevron will use the Master Surface Plan submitted with the Proposed Action for achieving interim and final reclamation on existing wells when any new disturbance or infrastructure is planned.
4. If salt is observed on the surface of soils during or after reclamation activities Chevron will notify the Natural Resource Specialist and a plan will be developed with approval of the BLM, that may include the administration of soil amendments, the reapplication of soil preparation, seeding, and stabilization measures to achieve successful reclamation.
5. If surface sources are used for freshwater, water hauling trucks must use backflow preventers to avoid contamination of surface waters.

6. The WRFO recommends for these pipeline replacements to use Seed Mix #8 below. The operator will submit proposed seed mixes to BLM via Sundry Notice for review and approval prior to applying the seed.

<b>SEED MIX #8 FROM THE RECLAMATION PROTOCOL</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Variety</b>	<b>Lbs. PLS/Acre</b>
Galleta Grass	<i>Pleuraphis jamesii</i>	Viva florets	3
Indian Ricegrass	<i>Achnatherum hymenoides</i>	Rimrock	3
Bottlebrush squirreltail	<i>Elymus elymoides</i>	Toe Jam Creek	2.5
Western wheatgrass	<i>Pascopyrum smithii</i>	Rosana	4
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>		0.25
Annual sunflower	<i>Helianthus annuus</i>		2.5
Mat saltbush	<i>Atriplex confertifolia</i>		2

7. All lessees and/or operators and right-of-way holders shall comply with all federal, state and/or local laws, rules, and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.
8. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
9. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
10. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.
11. With the acceptance of this authorization, the commencement of operations under this

authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

12. Any livestock control facilities and/or rangeland improvements impacted during this operation will be replaced or repaired to their prior condition.
13. To avoid impacts to existing realty rights-of-way, Chevron would need to coordinate with right-of-way holders prior to any construction activity.
14. There will be no earthwork or activities allowed from March 1 to May 1 (prairie dog breeding and young-rearing period) on all pipeline segments.
15. Burrowing owl surveys will be required prior to construction initiation if work is planned to take place after the 2015 breeding season (April 15 – August 15). Should an active nest be located, no earthwork or activities will be allowed from April 15 – August 15 (or until young have fledged) within ½ mile of any occupied burrowing owl nest location. There will be no surface occupancy allowed within ¼ mile of known nest locations.
16. The western terminus of injection lines serving the A.C. McLaughlin 23 and L.N. Hagood 11X wells will be re-routed to an alternate route that avoids the intersect of any mounded burrow systems and makes use of an existing parallel and recently reclaimed right-of-way (Figure B). The alternative is estimated to add 15 feet of additional length to the original AC McLaughlin line, and 60 feet of additional length to the LN Hagood A11X line.  
The following UTM's (Zone 12 NAD 83) approximate the endpoints and internal angles describing the realignment:

**AC McLaughlin 23 line**

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**LN Hagood A11X line**

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676122	4443713	South terminus of injection line for Hagood 11X

**Tribes, Individuals, Organizations, or Agencies Consulted**

The Ute Mountain Ute, Ute Indian, Southern Ute and Eastern Shoshone Tribes were consulted in December 2012. SHPO was consulted on January 21, 2014.

**Conclusion**

Based on the review documented above, I conclude that this proposal, with the Conditions of Approval in Appendix A, conforms to 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.

*Ed Mc Coy*  
\_\_\_\_\_  
Field Manager

*6/3/15*  
\_\_\_\_\_  
Date

Note: The signed Conclusion of 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.

# Appendix A. Figures

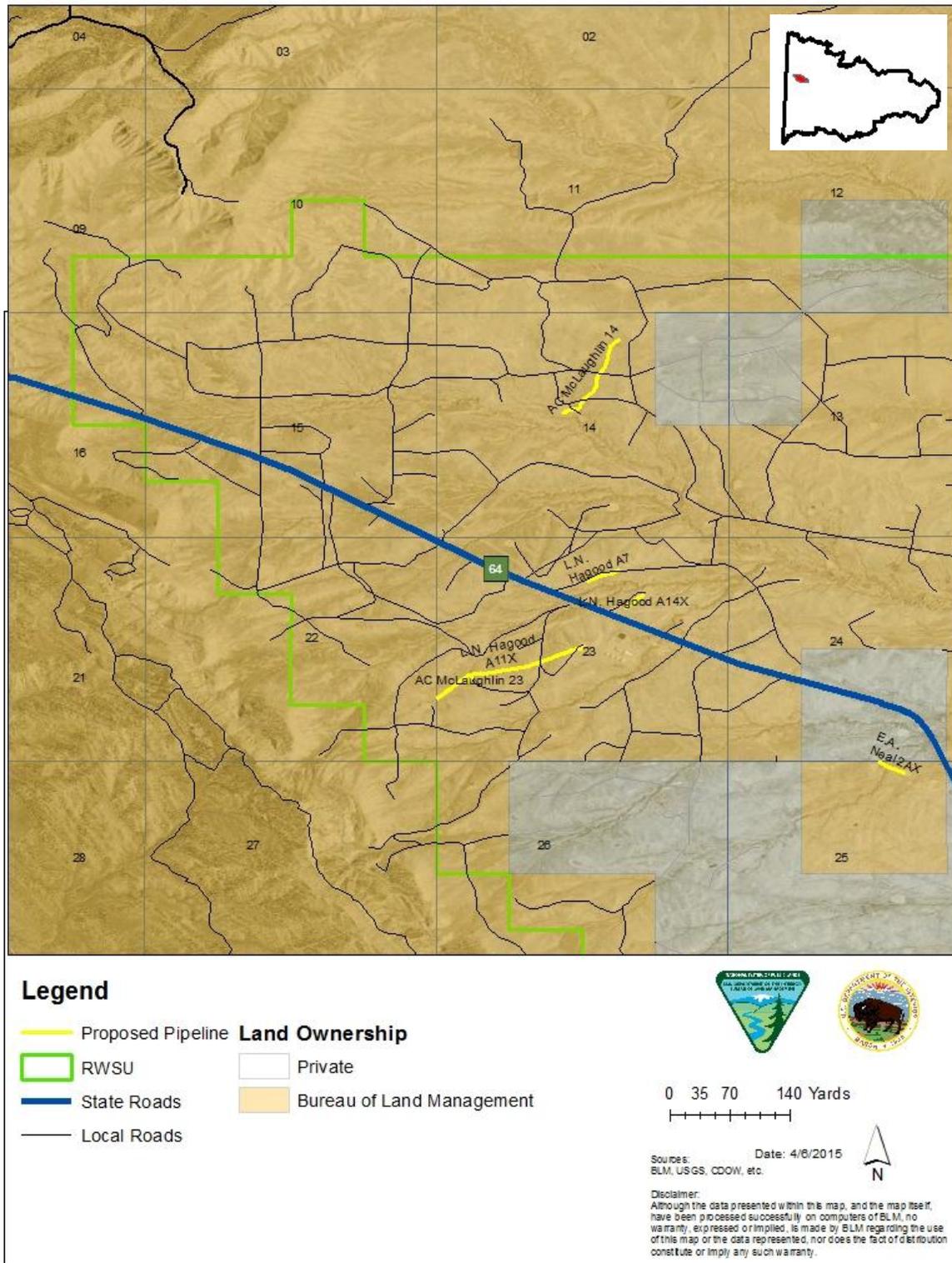


Figure A. Proposed Action

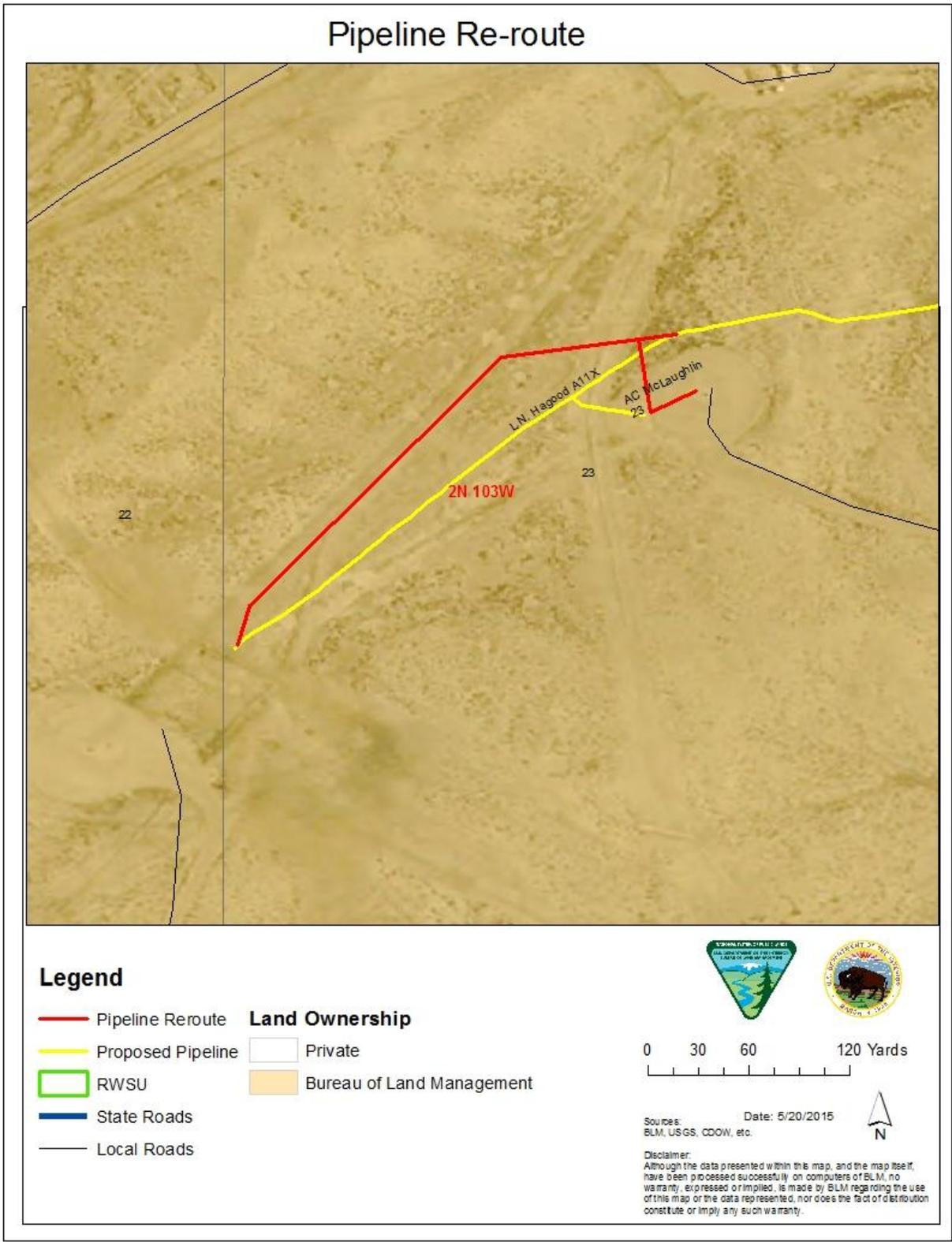


Figure B. Pipeline re-route

## Appendix B. Reclamation Plan

### Surface Use Plan of Operations Plan for Surface Reclamation of

#### PIPELINE RIGHT-OF-WAYS, ACCESS ROADS, AND WELL PADS

##### I. Reclamation Objectives:

The long-term objective of final reclamation is to return the land to a condition approximating that which existed prior to disturbance. This includes restoration of the landform, hydrologic systems, visual resources, wildlife habitats, and establishment of desired vegetative community. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

##### II. Reclamation Performance Standards

The following reclamation performance standards will be met:

Reclamation – Includes disturbed areas where the original landform and a natural vegetative community have been restored and it is anticipated the site will not be redisturbed for future development.

- Reclamation will be judged successful when the BLM Authorized Officer determines that:
  - The original contour, or one which blends with the surrounding landform, has been restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.
  - A self-sustaining, vigorous, diverse, desired plant community is established on the site, with a density sufficient to control erosion and invasion by non-native plants and to reestablish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
  - In agricultural areas, irrigation systems and soil conditions are reestablished in such a way as to ensure successful cultivation and harvesting of crops.
  - Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gullying, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
  - The site is free of State- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive, non-native, and undesirable weeds are controlled.

### III. Reclamation Actions (Minimum)

The following minimum reclamation actions will be taken to ensure that the reclamation objectives and standards are met. It may be necessary to take additional reclamation actions beyond the minimum in order to achieve the Reclamation Standards.

#### Reclamation - General

##### Notification:

- The BLM WRFO *designated Natural Resource Specialist* be notified at least 24 hours prior to commencement of any reclamation operations.

##### Vegetation Clearing:

- Grass, forbs, and small woody vegetation, such as sagebrush will be excavated as the topsoil is removed.
- Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading.

##### Topsoil Management:

- Operations will disturb the minimum amount of surface area necessary to conduct safe and efficient operations.
- Topsoil depth is defined as the top layer of soil that contains 80 percent of the roots. In areas to be heavily disturbed, the top six inches of soil material, will be stripped and stockpiled. Topsoil will be clearly segregated and stored separately from subsoils.
- On sites where there is not at least an average of six inches of topsoil across the site available for stockpiling, soil amendments will be used to augment the available topsoil and improve plant germination and growth. Soil amendments will be determined as part of the reclamation pre-assessment, and agreed to by both the operator and the BLM prior to disturbing the site.
- Earthwork for reclamation will be completed within six months of surface work unless a delay is approved *in writing* by the BLM authorized officer.
- Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment or so dry that dust clouds greater than 30 feet tall are created. If such equipment creates ruts in excess of three inches deep, the soil will be deemed too wet.
- No major depressions will be left that would trap water and cause ponding unless the intended purpose is to trap runoff and sediment.

##### Seeding:

- Seedbed Preparation: Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than four to six inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.

- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM (shown below) to meet reclamation standards will be used on all disturbed surfaces, including pipelines and road cut and fill slopes:

<b>SEED MIX #1 FROM THE RECLAMATION PROTOCOL</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Variety</b>	<b>Lbs PLS/Acre</b>
Western wheatgrass	<i>Pascopyrum smithii</i>	Rosana	4.5
Thickspike wheatgrass	<i>Elymus lanceolatus</i>	Critana	3.5
Bottlebrush squirreltail	<i>Elymus elymoides</i>	Toe Jam Creek	3
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>		0.5
Sulphur flower	<i>Eriogonum umbellatum</i>		1.5
Winterfat	<i>Krascheninnikovia lanata</i>		0.5
<b>SEED MIX #3 FROM THE RECLAMATION PROTOCOL</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Variety</b>	<b>Lbs PLS/Acre</b>
Western wheatgrass	<i>Pascopyrum smithii</i>	Rosana	4
Bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>	Whitmar	3.5
Indian ricegrass	<i>Achnatherum hymenoides</i>	Rimrock	3
Needle and Thread	<i>Hesperostipa comata</i>		2.5
Lewis Flax	<i>Linum Lewisii</i>	Maple grove	1
Scarlet Globemallow	<i>Sphaeralcea coccinea</i>		0.5
<b>SEED MIX #8 FROM THE RECLAMATION PROTOCOL</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Variety</b>	<b>Lbs PLS/Acre</b>
Galleta Grass	<i>Pleuraphis jamesii</i>	Viva florets	3

Indian Ricegrass	Achnatherum hymenoides	Rimrock	3
Bottlebrush squirreltail	Elymus elymoides	Toe Jam Creek	2.5
Western wheatgrass	Pascopyrum smithii	Rosana	4
Scarlet Globemallow	Sphaeralcea coccinea		0.25
Annual sunflower	Helianthus annuus		2.5
Mat saltbush	Atriplex confertifolia		2
<b>SEED MIX #9 FROM THE RECLAMATION PROTOCOL</b>			
<b>Common Name</b>	<b>Scientific Name</b>	<b>Variety</b>	<b>Lbs PLS/Acre</b>
Western wheatgrass	Pascopyrum smithii	Rosana	5
Russian wildrye	Psathyrostachys juncea	Bozoisky	3
Crested wheatgrass	Agropyrum cristatum	Hycrest	3
Annual sunflower	Helianthus annuus		5

- The application rate shown in the table is based on 50 pure live seeds (PLS) per square foot, drill-seeded to no greater a depth than 0.25 inch. {*However, shrub species will be seeded during the winter on the ground surface or preferably on top of snow*}. In areas that will not be drill-seeded, the seed mix will be drop seeded or broadcast-seeded on surface roughened sites at twice the application rate shown in the table. If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.
- No seeding will occur from March 15 to September 1. Fall seeding is preferred and will be conducted after September 1 and prior to ground freezing. Shrub species will be seeded separately and will be seeded during the winter. Spring seeding is less desirable and will be conducted after the frost leaves the ground and no later than March 15.

Erosion Control and Mulching:

- Where applicable, the mitigation techniques such as surface roughening and mulching will be used to keep water on site, thereby enhancing re-vegetation of the site and controlling erosion and runoff.
- All erosion control devices and materials will be installed and maintained to be fully functional until revegetation is determined successful by the BLM.
- Silt fencing, waddles, hay bales, and other erosion control devices will be used where necessary to prevent soil movement from water erosion.
- Mulch will be used if necessary to control wind and water erosion, create vegetation micro-sites, and retain soil moisture on site. Mulches may include native grass hay,

small-grain straw, wood fiber, live mulch, cotton, jute, or synthetic netting. Mulch will be certified free of noxious or invasive weed seeds and free from mold and fungi.

- If loose straw or hay mulch is used, it will be crimped into the soil to prevent blowing.

#### Management of Invasive, Noxious, and Undesirable Species:

- All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species.
- An intensive and documented weed monitoring and control program will be implemented prior to site preparation for planting and will continue until final reclamation is approved by the BLM.
- Each site where the BLM has not approved interim or final reclamation success will be monitored annually to determine the presence of any invasive, noxious, and undesirable species. Invasive, noxious, and undesirable species that have been identified during monitoring will be promptly treated and controlled, prior to the production of seed heads. A Pesticide Use Proposal (PUP) will be submitted to the BLM for approval prior to the use of herbicides.

#### Final Reclamation Procedures - Specific

- All disturbed areas, including roads and pipeline right-of-ways, will be re-contoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Re-salvaged topsoil will be re-spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over re-contoured cut and fill slopes.
- Stormwater management structures and drainage features (i.e., culverts and ditches) will only be installed when absolutely necessary to prevent erosion of fill material. Stormwater management structures and drainage features are not permanent features and will be removed and reseeded when the rest of the site is successfully revegetated and stabilized.
- To ensure timely revegetation, the pad will be fenced to the BLM's standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4<sup>th</sup> Edition, or will be fenced with operational electric fencing.
- Final abandonment of pipelines and flowlines will involve flushing and properly disposing of any fluids in the lines. All surface lines and any lines that are buried close to the surface that may become exposed in the foreseeable future due to water or wind erosion, soil movement, or anticipated subsequent use, must be removed. Deeply buried lines may remain in place unless otherwise directed by the authorized officer.

## Reclamation Monitoring and Final Abandonment Approval

- Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical and are maintained during the life of the permit.
- The designated WRFO Natural Resource Specialist will be notified via email or by phone 24 hours prior to beginning all reclamation activities associated with this project. Reclamation activities may include, but are not limited to, seed bed preparation that requires disturbance of surface soils, seeding, constructing exclosures (e.g., fences) to exclude livestock from reclaimed areas.
- All seed tags will be submitted via Sundry Notice to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended. The sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.
- The operator will meet with the WRFO reclamation staff in March or April of each calendar year and present a comprehensive work plan. The purpose of the plan is to provide information pertaining to reclamation activities that are expected to occur during the current growing season. The operator will also provide a map that shows all reclamation sites where some form of reclamation activity is expected to occur during the current growing season.
- A Reclamation Status Report will be submitted electronically via email and as a hard-copy to WRFO Reclamation Coordinator. The hardcopy will be submitted to:  
BLM, White River Field Office  
220 East Market Street  
Meeker, Colorado 81641  
Attn: Reclamation Coordinator

The Reclamation Status Report will be submitted annually for all actions that require disturbance of surface soils on BLM-administered lands as a result of the Proposed Action. Actions may include, but are not limited to, well pad and road construction, construction of ancillary facilities, or power line and pipeline construction. The Reclamation Status Report will be submitted by September 30<sup>th</sup> of each calendar year, and will include the well number, API number, legal description, UTM coordinates (using the NAD83 datum, Zone 13N coordinate system), project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., Phase I Interim, Phase II Interim, or Final), whether the well pad or pipeline has been re-vegetated and/or re-contoured, percent of the disturbed area that has been reclaimed, method used to estimate percent area reclaimed (e.g., qualitative or quantitative), technique used to estimate percent area reclaimed (e.g.,

ocular, line-intercept, etc.), date seeded, photos of the reclaimed site, estimate of acres seeded, seeding method (e.g., broadcast, drilled, hydro-seeded, etc.), and contact information for the person(s) responsible for developing the report. The report will be accompanied with maps and GIS data showing each discrete point (i.e., well pad), polygon (i.e., area where seed was applied for Phase I and/or Phase II interim reclamation or area reclaimed for final reclamation), or polyline (i.e., pipeline) feature that was included in the report. Geospatial data shall be submitted: for each completed activity electronically to the designated BLM staff person responsible for the initial request and in accordance with WRFO geospatial data submittal standards (available from WRFO GIS Staff, or on the WRFO website). Internal and external review of the WRFO Reclamation Status Report, and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report.

- In an attempt to track final reclamation of federal actions related to the development of federal mineral resources, the operator shall provide the *designated Natural Resource Specialist* with geospatial data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS). These data will be used to accurately locate and identify all geographic as-built (i.e., constructed) features associated with this project and included in the Application for Permit to Drill (APD) or Sundry Notice (SN), as appropriate. These data shall be submitted within 60 days of construction completion. If the operator is unable to submit the required information within the specified time period, the operator shall notify the designated Natural Resource Specialist via email or by phone, and provide justification supporting an extension of the required data submission time period. GIS polygon features may include, but are not limited to, constructed access roads, existing roads that were upgraded, pipeline corridors, and well pad footprints. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or, (3) AutoCAD .dwg or .dxf files. If possible, both (2) and (3) should be submitted for each as-build feature. Geospatial data must be submitted in UTM Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only), or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the *Content Standards for Digital Geospatial Metadata* from the Federal Geographic Data Committee standards. Questions shall be directed to WRFO BLM GIS staff at (970) 878-3800.

If the data is unable to be sent electronically, a compact disk(s) containing the data will be sent to:

BLM, White River Field Office  
Attn: NRS Staff  
220 East Market Street  
Meeker, Colorado 81641

If for any reason the location or orientation of the geographic feature associated with the Proposed Action changes, the operator will submit updated GIS data to designated BLM NRS staff person within 7 calendar days of the change. This information will be submitted via Sundry Notice.

The Authorized Officer will be notified when: 1) reclamation has been completed, 2) appears to be successful, and 3) the site is ready for final inspection.