

**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
73544 Hwy 64  
Meeker, CO 81641**

## **ENVIRONMENTAL ASSESSMENT**

**NUMBER:** CO-110-2005-204-EA

**CASEFILE/PROJECT NUMBER** (optional): COD 052561, COD 032703A

**PROJECT NAME:** Replace and install water and CO2 injection lines

**LEGAL DESCRIPTION:** T. 2N, R. 102 W, sec. 19, 26

**APPLICANT:** Chevron Production Company

**ISSUES AND CONCERNS** (optional): None

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**Proposed Action:** Applicant is proposing to replace and install some new water and CO2 injection lines.

For the Levison 22X well the applicant is proposing to install a water injection line and CO2 injection line from the well to a tie in points on the main lines. The CO2 line will go from the well location south approximately 200' (.18 acres) to the tie in point. The water injection line will go from the well southeast for approximately 1250' (1.15 acres) to the tie in point. A typical 40' ROW is requested and the lines will be buried at a depth of 42". Total disturbance will be approximately 1.33 acres.

For the Gary A-16 well the applicant is proposing to install a water injection line and CO2 injection line from the well to a tie in points on the main lines. The CO2 line will go from the well location south approximately 152' (.14 acres) to the tie in point. The water injection line will go from the well east for approximately 4200' (3.86 acres) to the tie in point. A typical 40' ROW is requested and the lines will be buried at a depth of 42". Total disturbance will be approximately 4.0 acres.

For the Levison 9 well the applicant is proposing to replace a water injection line that ties into a main line. Approximately 539' (.50 acres) from the well west to a tie in point will be re-disturbed. This line was originally installed in 1984. A typical 40' ROW is requested and the lines will be buried at a depth of 42". Total disturbance will be approximately .50 acres.

The total project acres anticipated to be disturbed is 5.83 acres.

**No Action Alternative:** In the no-action alternative the water and CO2 injection lines would not be permitted; therefore there would not be any new disturbance.

**ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:** None

**NEED FOR THE ACTION:** To respond to the request by applicant to exercise lease rights and develop hydrocarbon reserves.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Pages 2-5

Decision Language: “Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values.”

**AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:**

**STANDARDS FOR PUBLIC LAND HEALTH:** In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

**CRITICAL ELEMENTS**

**AIR QUALITY**

*Affected Environment:* The proposed actions are located approximately 6.4 miles southeast of Dinosaur Natl. Monument Visitor Center which is a Class II airshed with special designations regarding visibility. The proposed action alone should not greatly compromise National Ambient Air Quality Standards (NAAQS) on an hourly or daily basis.

*Environmental Consequences of the Proposed Action:* Reductions in vegetal cover resulting from construction activities will leave soils temporarily exposed to eolian processes.

During dry and windy periods, air quality may be compromised due to increased levels of fugitive dust originating from the exposed construction area. Exhaust produced from heavy equipment associated with the proposed actions combined with the increasing number of fluid mining activities north of Rangely, CO may have cumulative impacts detrimental to local air quality.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so. All disturbed areas will be immediately covered with woody debris and revegetation efforts using Standard Seed Mix #1 will follow as outlined in the vegetation section of this document.

Soils stockpiled during injection line construction must be wetted to mitigate fugitive dust production.

## **CULTURAL RESOURCES**

*Affected Environment:* The proposed action is covered by an inventory (Larralde 1981) and an agreement with the Colorado SHPO. There are no known cultural resources in the project area.

*Environmental Consequences of the Proposed Action:* The proposed pipelines will not impact any known cultural resources.

*Environmental Consequences of the No Action Alternative:* There would be no new impacts to cultural resources under the No Action Alternative.

*Mitigation:* For the proposed action: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or

the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with 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), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

## **INVASIVE, NON-NATIVE SPECIES**

*Affected Environment:* The proposed action is located within Alkaline Slope and Clayey Saltdesert ecological sites, which are dominated by salt tolerant vegetation. The dominate plant community for these sites consist of greasewood, and various saltbrushes such as shadscale, Gardner saltbrush, mat saltbush, and fourwing saltbrush. The understory of these shrubs is dominated by western wheatgrass, Salina wildrye, and squirreltail. Cheatgrass and halogeton are both annual plant species that are undesirable, invasive, and non-native plants which are present within the locality of the proposed action. Both of these species are highly adapted to disturbed soils.

The soils within the project area are principally a Billings Silty Clay Loam (Alkaline Slope ecological site) and Chipeta Silty Clay Loam (Clayey Saltdesert ecological site). These soil types have a high clay content that is moderate to highly erosive and receives low precipitation with rapid runoff, thus limiting forage production and hampering re-vegetation efforts leading to the potential establishment of invasive species.

Drought conditions, outside of this current year, have been very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton, cheatgrass) have become dominate in portions of previously disturbed areas which provide little resource value and hinder efforts to meet Public Land Health Standards.

*Environmental Consequences of the Proposed Action:* Weed species found in the area are effectively controlled by establishment of seeded species within disturbed areas. The proposed seed mix, which includes non-native species, is recommended because its associated plant species are highly adapted to this site (heavy clay soils) and offer the greatest opportunity to establish vegetation cover that will result in soil stabilization; thereby, providing a competitive interaction between seeded species and noxious and/or invasive weed species such as cheatgrass and halogeton.

There is always the opportunity for other noxious weed species to be transported onto the proposed action locations by construction and/or support equipment.

The mitigated seed mix from the White River ROD/RMP (Standard Seed Mix #1) includes non-native plant species due to the harsh and restrictive conditions associated with the proposed area (see the Vegetation, Mitigation section). Limiting factors for successful reclamation of the site includes soils with a high clay content, low annual precipitation, drought prone, and cheatgrass establishment on the adjacent rangelands. These mitigated non-native species have demonstrated themselves to have the greatest ability to establish, provide soil protection, and offer a competitive interaction against invasive, non-native species such as cheatgrass.

Prompt reclamation with successful establishment would help prevent cheatgrass and halogeton from establishing on disturbed sites. If other noxious weeds were to invade the site, prompt control would prevent movement to the adjacent plant communities.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The applicant shall monitor the disturbed and reclaimed areas for the presence of invasive, non-native, and/or noxious plant species that have become established as a result of the proposed action. The applicant will be responsible for eradicating cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action.

Upon detection of noxious, non-native, and/or invasive plant species, the applicant will control their presence before seed production using materials and methods as outlined in the White River ROD/RMP and/or authorized in advance by the White River Field Office Manager. Application of herbicides must be under field supervision of an Environmental Protection Agency (EPA) certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

## **MIGRATORY BIRDS**

*Affected Environment:* The project area is encompassed by arid salt desert shrublands consisting principally of mat and Gardner saltbush, rabbitbrush, snakeweed and big sagebrush. Herbaceous groundcover is dominated by annual grasses with low densities of native grasses interspersed throughout. These salt desert communities typically support several migratory bird species which fulfill nesting functions between late-May through mid-July including vesper and sage sparrow, western meadowlark, sage thrasher and horned lark. Although any involvement with suitable nest habitat would be minor (these community types comprise about 10,000 acres in Coal Oil Basin), construction of this project is expected to be completed in advance of the nesting season (beginning about May 15).

*Environmental Consequences of the Proposed Action:* It is unlikely that this project will have any conceivable influence on breeding activities of migratory birds. Earthwork associated with this project is expected to be completed in advance of the nesting season and would have no potential to interfere materially with nests.

*Environmental Consequences of the No Action Alternative: None*

*Mitigation: None*

**THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES** (includes a finding on Standard 4)

*Affected Environment:* Much of the area surrounding the proposed injection lines is encompassed by white-tailed prairie dog habitat. Subsurface disturbance along the proposed flowlines would affect approximately 15-20 single-entrance burrows. To avoid intersecting large numbers of prairie dog burrows associated with existing flowline trenches, Chevron, at the former request of BLM, offsets parallel flowlines by 15 or more feet.

Prairie dogs and their burrow systems are important components of burrowing owl habitat, as well as potential habitat for reintroduced populations of black-footed ferret. Burrowing owls, a State threatened species are uncommon in this Resource Area. These birds return to occupy a maintained burrow system in early April and begin nesting soon after. Most birds have left the area by September. While burrowing owls have been documented in Chevron Field, no burrowing owl nesting activity has been recorded in the immediate vicinity of the proposed injection lines.

Under the auspices of a non-essential, experimental population rule, black-footed ferrets have been released annually in Coyote Basin (eight miles southwest) and Wolf Creek (13 miles northeast) of Chevron Field since 1999 and 2001, respectively. This rule applies to any ferrets that may occupy or eventually be released in northwest Colorado and northeast Utah. Although there is no direct continuity between Coyote Basin or Wolf Creek and the project site, there is a strong likelihood that ferrets have colonized and successfully breed in Chevron Field. Ferrets are wholly reliant on prairie dogs for food and shelter. Ferret breeding activities begin in early March, with birthing beginning in early May. Young ferrets generally begin to emerge by mid-July. There have been no verified sightings of ferrets, nor any known reproduction occurring in Chevron Field.

*Environmental Consequences of the Proposed Action:* With regards to burrowing owl, prairie dog and ferret breeding issues – all earthwork should be completed outside the period between 1 April and 15 July. Avoiding this timeframe would provide sufficient time for the rearing, emergence, and dispersal of young from natal burrows and effectively eliminate the likelihood of adversely affecting these animals' reproductive efforts. Chevron has agreed to trench the injection line and clear the injection line right-of-way prior to 1 April. Until burrowing owls arrive on these breeding ranges in April, there is no credible means of assessing impacts to nest activity. In the event earthwork associated with this project cannot be completed prior to early April, BLM would conduct nest surveys on affected injection line segments and conditions of approval would be applied to defer activities that may interfere with successful nest outcomes (under provisions of the Migratory Bird Treaty Act). The construction of these injection lines would have no direct affect on the reproductive success of black-footed ferrets as

the probability of any subsurface disturbance intersecting a prairie dog burrow system occupied by a ferret would be extremely remote.

*Environmental Consequences of the No Action Alternative:* There would be no potential influence on prairie dogs as habitat for burrowing owl and black-footed ferret in the case of a no action alternative.

*Mitigation:* Earthwork involving prairie dog burrow systems would be conducted outside the period of April 1 to July 15 to avoid the remote chance of disrupting the reproductive activities of ferrets, burrowing owl, and prairie dogs. Any surface disturbance associated with these injection lines should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

For those new flowlines that parallel existing flowlines, BLM requests the new flowlines be offset by 15 feet or more.

In the event earthwork associated with this project cannot be completed prior to early April, BLM would conduct nest surveys on affected injection line segments and conditions of approval would be applied to defer activities that may interfere with successful nest outcomes (under provisions of the Migratory Bird Treaty Act).

*Finding on the Public Land Health Standard for Threatened & Endangered species:* Public Land Health Standards for those special status species associated with white-tailed prairie dogs, including black-footed ferret and burrowing owl, in Chevron Field are currently met. As conditioned, this project would have no adverse influence on populations, available extent of suitable habitat, or the reproductive activities of these three species. Thus, there would be no influence on meeting the land health standard. Small incremental gains in perennial grass cover associated with successful reclamation associated with injection line installation may be expected to bolster local populations of prairie dogs and potentially benefit individual burrowing owl and black-footed ferret—effects consistent with continued meeting of the Land Health Standards.

## **WASTES, HAZARDOUS OR SOLID**

*Affected Environment:* There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

*Environmental Consequences of the Proposed Action:* No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

*Environmental Consequences of the No Action Alternative:* No hazardous or other solid wastes would be generated under the no-action alternative.

*Mitigation:* The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

## **WATER QUALITY, SURFACE AND GROUND** (includes a finding on Standard 5)

*Affected Environment:* Surface Water: The proposed action is located within the Stinking Water Creek and White River catchment areas. Stinking Water Creek is a tributary to the White River and is situated in stream segment 22 of the White River Basin. The affected portion of the White River catchment area is situated in stream segment 21 which consists of the main stem of the White River from Douglas Creek to the state line.

A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list, the White River ROD/RMP, and the Unified Watershed Assessment was done to see if any water quality concerns have been identified. It should be noted that the White River from Douglas Creek to the state line (segment 21) is listed on the states monitoring and evaluation list (M&E list) as being sediment impaired. In addition, the White River ROD/RMP has identified this portion of the White River as NOT meeting state water quality standards for suspended sediment, salinity, and nutrients. Stinking Water Creek has been listed in the White River ROD/RMP as a proposed fragile watershed.

The State has classified stream segment 22 as "Use Protected". Stream segment 22 has been further designated by the state as being beneficial for the following uses: Warm Aquatic Life 2, Recreation 1b, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. For stream segment 22, minimum standards for four parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 325/100 ml, and 205/100 ml E. coli.

Stream segment 21 has not been classified as use protected thus, the Antidegradation review requirements in the Antidegradation Rule are applicable to this stream segment. Segment 21 has been further designated by the state as being beneficial for the following uses: Warm Aquatic Life 1, Recreation 1a, and Agriculture. For stream segment 21, minimum standards for four parameters have been listed. These parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 200/100 ml, and 126/100 ml E. coli.

Ground Water: Local ground water may be affected if contaminants (e.g. diesel fuel) are allowed to infiltrate soils. Deeper ground water will not be impacted.

*Environmental Consequences of the Proposed Action:* Pipeline construction will result in temporary exposure of soils to erosional processes. Heavy equipment used during construction combined with the removal of ground cover will increase erosive potential due to runoff (overland flows) and raindrop impact during storm events.

Increased compaction will reduce infiltration and permeability rates accelerating erosion. Accelerated erosion rates will increase sediment and salt concentrations to Stinking Water Creek and ultimately to the White River.

Local ground water may be contaminated if leaks or spills of environmentally unfriendly substances (e.g. diesel fuel) are allowed to infiltrate soils. Adverse impacts on deeper ground water are not anticipated.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities involving more than 5 acre of surface disturbance require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

All pipeline construction must comply with “Gold Book” surface operating standards for Oil and Gas development. Copies of the “Gold Book” can be obtained at the WRFO.

Vegetation removed for installation of the surface line will be immediately spread back over the disturbed area following construction. Revegetation efforts using Standard Seed Mix #1 will follow as outlined in the vegetation section of this document.

*Finding on the Public Land Health Standard for water quality:* Stream segment 21 is currently on the states M&E list for sediment impairment. However, with suggested mitigation, water quality in the affected stream segments will remain unchanged.

## **WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)**

*Affected Environment:* There are no wetlands or riparian habitats conceivably affected by this action. The White River, representing the nearest aquatic habitat, is separated from the project area by about eight miles of ephemeral channel.

*Environmental Consequences of the Proposed Action:* None

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* None

*Finding on the Public Land Health Standard for riparian systems:* This project would have no conceivable influence on wetland or riparian conditions addressed in the Standards.

**CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No ACEC’s, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

**NON-CRITICAL ELEMENTS**

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

**SOILS** (includes a finding on Standard 1)

*Affected Environment:* The following data is a product of an order III soil survey conducted by the Natural Resource Conservation Service (NRCS). The accompanying table highlights important soil characteristics. A complete summary of this information can be found at the White River Field Office.

Soil Number	Soil Name	Slope	Ecological site	Salinity	Run Off	Erosion Potential	Bedrock
16	Chipeta silty clay loam	3-25%	Clayey Salt-desert	4-16	Rapid	High	10-20
17	Chipeta silty clay loam eroded	3-25%	Clayey Salt-desert	4-16	Rapid	Very high	10-20

*16-Chipeta silty clay loam* (3 to 25 percent slopes) is a shallow, well drained soil found on low, rolling hills and on toe slopes. It formed in residuum derived from calcareous, gypsiferous shale. The native vegetation is mainly salt-tolerant shrubs and grasses. Typically, the surface layer is light brownish gray silty clay loam about 3 inches thick. The next layer is light olive gray silty clay about 6 inches thick. The underlying material is light olive gray silty clay that has fine shale chips and seams of crystalline gypsum and is about 9 inches thick. Shale is at a depth of 18 inches. Depth to shale ranges from 10 to 20 inches. Permeability of this Chipeta soil is slow. Available water capacity is low. Effective rooting depth is 10 to 20 inches. Runoff is rapid, and the hazard of water erosion is high.

*17-Chipeta silty clay loam* (3 to 25 percent slopes) is a shallow, well drained soil located on low, rolling hills and on toe slopes. It formed in residuum derived from calcareous, gypsiferous shale.

The native vegetation is mainly sparse stands of salt-tolerant desert shrubs and grasses. Typically, the surface layer is light brownish gray silty clay loam 2 inches thick. The underlying material is light brownish gray silty clay that has fine chips of shale and seams of crystalline gypsum and is about 10 inches thick. Shale is at a depth of 12 inches. Depth to shale ranges from 10 to 20 inches. Permeability of this eroded Chipeta soil is slow. Available water capacity is very low. Effective rooting depth is 7 to 20 inches. Runoff is rapid, and the hazard of water erosion is very high.

*Environmental Consequences of the Proposed Action:* Clearing of vegetation for construction of the surface injection line will leave soils exposed to erosional processes. Soils will exhibit lower infiltration and permeability rates after construction which will elevate erosive potential. Given the soil composition, improper drainage from the existing ROW could lead to large salt deposits which will hinder revegetation efforts.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* All construction must comply with “Gold Book” surface operating standards for Oil and Gas development. Copies are available at the WRFO. Surface disturbing activities will be allowed in these areas only after an engineered construction/reclamation plan is submitted by the operator and approved by the Area Manager.

Vegetation removed for installation of the surface line will be immediately spread back over the disturbed area following construction. Revegetation efforts using Standard Seed Mix #1 will follow as outlined in the vegetation section of this document.

Given the salt concentration of the impacted soils, the operator will be responsible for monitoring salts leaching from soils. If large salt deposits begin to appear, the operator will notify BLM, together they will coordinate the application of best management practices to help mitigate the problem.

*Finding on the Public Land Health Standard for upland soils:* Infiltration and permeability rates will be reduced with increased soil compaction. Following proper mitigation techniques and reclamation procedures, soil health will remain unchanged from current conditions.

## **VEGETATION** (includes a finding on Standard 3)

*Affected Environment:* The proposed action is located within Alkaline Slope and Clayey Saltdesert ecological sites, which are dominated by salt tolerant vegetation. The dominate plant community for these sites consist of greasewood (*Sarcobatus vermiculatus*) and various saltbrushes such as shadscale (*Atriplex confertifolia*), Gardner saltbrush (*Atriplex gardneri*), mat saltbush (*Atriplex corrugate*), and fourwing saltbrush (*Atriplex canescens*). Other brushes intermixed in the area are various rabbitbrushes (*Chrysothamnus spp.*) and Wyoming big sagebrush (*Artemisia tridentata*). The understory of these shrubs is dominated by western wheatgrass (*Agropyron smithii*), Salina wildrye (*Elymus salinus*), Sandberg bluegrass (*Poa*

*secunda*), and bottlebrush squirreltail (*Sitanion hystrix*). Cheatgrass (*Bromus tectorum*) is an undesirable, invasive, and alien plant species that is present within the locality of the proposed action.

The soils within the project area are principally a Billings Silty Clay Loam (Alkaline Slope ecological site) and Chipeta Silty Clay Loam (Clayey Saltdesert ecological site). These soil types have a high clay content that is moderate to highly erosive and receives low precipitation with rapid runoff, thus limiting vegetative production and hampering re-vegetation efforts.

Drought conditions, outside of this current year, have been very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton (*Halogeton glomeratus*), cheatgrass) have become dominant in portions of previously disturbed areas which provide little resource value and hinder efforts to meet Public Land Health Standards.

*Environmental Consequences of the Proposed Action:* The proposed action would disturb a mid to low seral class of saltdesert shrub community for a total of 6.32 acres. This level of vegetation disturbances (23.27 acres) would be offset in the long-term by successfully reclaiming the disturbed area with a seed mix that is suited for this ecological site. As this area has a component of cheatgrass and halogeton within the plant community, successful re-vegetation efforts would slightly increase desirable plant species within the rangelands.

The mitigated seed mix from the White River ROD/RMP (Standard Seed Mix #1) includes non-native plant species due to the harsh and restrictive conditions associated with the proposed area (see Mitigation section). Limiting factors for successful reclamation of the site includes soils with a high clay content, low annual precipitation, drought prone, and cheatgrass establishment on the adjacent rangelands. These mitigated non-native species have demonstrated themselves to have the greatest ability to establish, provide soil protection, and offer a competitive interaction against invasive, non-native species such as cheatgrass.

Previously this area has entailed considerable impacts from oil and gas activities from a network of well pads, pipeline corridors, and access roads, which have resulted in a fragmentation and reduction of available/productive ecological sites.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* Promptly re-vegetate all disturbed areas associated with the proposed action, including all cut and fill slopes and topsoil stockpiles, with Standard Seed Mix #1 from the White River ROD/RMP, B-19, Appendix B (see table below). Seeding rates in the White River ROD/RMP are shown as pounds of Pure Live Seed (PLS) per acre and apply to drill seeding. Applied seed must be certified and free of noxious weeds and seed certification tags must be submitted to the Area Manager within 30 days of seeding. The applicant will be responsible for eradicating cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. To control undesirable plant species, the applicant

will use materials and methods as outlined in the White River ROD/RMP or authorized in advance by the White River Field Office Manager.

Standard Seed Mix #	Species (Variety)	Lbs PLS/Acre
1	Siberian wheatgrass (P27)	3
	Russian wildrye (Bozoisky)	2
	Crested wheatgrass (Hycrest)	3

The applicant shall be required to achieve a reclamation success rate of sufficient vegetative ground cover from reclamation plant species within three growing seasons that is comparable of that of the nearby undisturbed plant communities within a climax state as deemed appropriate by the BLM.

*Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial):* The proposed action would disturb a segment of the Alkaline Slope and Clayey Salt-desert ecological sites. Therefore, the action would further fragment these areas to a minimal degree.

Early seral ecological sites associated with the proposed action lacks desirable plant species at an appreciable density and frequency level, thus are not meeting standards. This is largely due to the prevalence of cheatgrass and halogeton within the vegetative understory. A slight positive benefit would be received through a successful re-vegetation effort, thus increasing preferred plant species within this low producing rangeland. Mid seral ecological sites at the proposed action locality have acceptable components within the plant community and are meeting standards.

**WILDLIFE, AQUATIC** (includes a finding on Standard 3)

*Affected Environment:* There are no aquatic habitats conceivably affected by this action. The White River, representing the nearest aquatic habitat, is separated from the project area by about eight miles of ephemeral channel.

*Environmental Consequences of the Proposed Action:* None

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* None

*Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial):* This project would have no conceivable influence on aquatic wildlife or habitat conditions addressed in the Standards.

**WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

*Affected Environment:* This heavily developed portion of Coal Oil Basin is inhabited year-round by a small resident herd of pronghorn. These animals are acclimated to routine oil and gas production activities. A number of raptors forage opportunistically during the winter in Coal Oil Basin, the most common being rough-legged hawks, red-tailed hawks, and golden eagle. The project area and the surrounding area provide no special or unique habitat features for nesting raptors.

*Environmental Consequences of the Proposed Action:* This project, as mitigated, would have no conceivable adverse consequences on big game distribution or habitat quality. Flowline reclamation normally provides herbaceous forage opportunity in excess of that previously existing and in many cases will replace cheatgrass and halogeton-dominated understories almost immediately after construction is complete. Standard reclamation procedures would provide the opportunity to increase the perennial grass component on these corridors in the longer term, increasing ground cover and seed production and prolonging the availability of green herbaceous forage for resident big and non-game animals.

*Environmental Consequences of the No Action Alternative:* Post-construction reclamation normally provides herbaceous forage opportunity in excess of that previously existing, and in many cases will replace halogeton-dominated understories. There would be no opportunity under the no-action alternative to improve herbaceous ground cover and composition along the existing right-of-way as cover and/or forage for resident wildlife in the long term.

*Mitigation:* Any surface disturbance associated with these injection lines should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Aquatic): Much of the ground cover within Chevron Field is dominated by annual weeds. Although these sites in and of themselves cannot be considered meeting the definition of the land health standard, the majority of the shrubland communities comprising this landscape likely retain sufficient character to support viable populations of resident wildlife, although likely at populations reduced from potential. Subsequent reclamation offers an opportunity to reestablish herbaceous forage and cover conditions (i.e., redevelopment of a perennial bunchgrass component) more consistent with the proper functioning of these arid salt desert communities as wildlife habitat, thus better opportunity to meet the land health standard.

**OTHER NON-CRITICAL ELEMENTS:** For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		
Fire Management	X		

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Forest Management	X		
Geology and Minerals	X		
Hydrology/Water Rights		X	
Law Enforcement		X	
Noise		X	
Paleontology			X
Rangeland Management			X
Realty Authorizations	X		
Recreation		X	
Socio-Economics		X	
Visual Resources			X
Wild Horses	X		

## PALEONTOLOGY

*Affected Environment:* The proposed actions are located in an area generally mapped as Mancos Shale which the BLM has classified as a Condition II formation meaning it is known to produce marine invertebrate fossils for the most part though vertebrate fossils do rarely show up.

*Environmental Consequences of the Proposed Action:* There is an extremely small chance that scientifically important fossil resources could be impacted during excavations into the underlying shale formation.

*Environmental Consequences of the No Action Alternative:* There would be no new impacts to fossil resources under the No Action Alternative.

*Mitigation:* For the proposed action: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines

for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

## **RANGELAND MANAGEMENT**

*Affected Environment:* The proposed action is located in the Artesia (06308) and Raven Park (06314), allotments which are authorized for sheep use by Morapos Sheep Company. Grazing use by sheep can be authorized from December 1<sup>st</sup> through April 20<sup>th</sup> in the Artesia allotment and from November 20<sup>th</sup> through April 6<sup>th</sup> in the Raven park allotment.

Soils within the project area are principally a Billings Silty Clay Loam (Alkaline Slope ecological site) and Chipeta Silty Clay Loam (Clayey Saltdesert ecological site), which are dominated by salt tolerant desert shrub and grass communities. These brush/grass communities are utilized by sheep for meeting forage requirements, particularly during winter months. These soil types have a high clay content that are moderate to highly erosive and receives low precipitation with rapid runoff, thus limiting forage production and hampering re-vegetation efforts.

Drought conditions, outside of this current year, have been very prevalent within the Coal Oil Basin area, which has hampered the successful establishment of reclaimed plant species of other projects in this area. Therefore, undesirable and invasive annual plant species (i.e. halogeton, cheatgrass) have become dominate in a portion of these disturbed areas which provide little forage value for livestock.

*Environmental Consequences of the Proposed Action:* The individual proposed action would have minimal impacts on the authorized grazing use because the amount of new surface disturbance (5.83 acres) is nominal in regards to the scale of the allotments (43,347 total acres-Artesia, 17,896 total acres-Raven Park).

If the proposed pipelines are successfully reclaimed, no long-term forage loss would occur. However, without successful reclamation of desired vegetation, an estimated 1 Animal Unit Months (AUMs) would be lost in forage for livestock.

Previously these allotments have entailed considerable impacts from oil and gas activities, which have resulted in a reduction and fragmentation of available rangelands and in a long-term loss of forage for grazing use.

If the proposed action was authorized during the grazing period, it would have some limited impacts while sheep are grazing. This is in part due to the increased activity associated with the development of the proposed action and decrease in rangelands available for grazing. Also, BLM grazing permit holders have experienced injury and losses of livestock due to heavy truck travel and inadequate fencing of disposal pits at the pads. Other impacts to livestock grazing may include such influences as a modification in sheep distribution, reduction in available forage, injury/loss to livestock, and impediments to livestock grazing and movement.

Overall, this individual proposed action would have no significant direct impact on the authorized AUMs in the allotments. A slight positive benefit would be received through successful re-vegetation efforts on pipelines, thus increasing preferred forage plants within this mid to low producing rangeland. However, the cumulative impacts from past, present, and possible future oil and gas activities may have a long-term effect on the native range's carrying capacity, thus influencing the authorized AUMs. This possible affect would be determined during the grazing permit renewal process which includes an evaluation of forage capacity available for livestock. It is foreseeable that the grazing permit holder could loose a portion of permitted active AUMs due to a loss of forage associated with oil and gas development within the authorized BLM grazing allotments.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* Any livestock control facilities and/or rangeland improvements impacted during this operation will be replaced or repaired to their prior condition.

## **VISUAL RESOURCES**

*Affected Environment:* The proposed actions would be located in an area with a VRM IV classification. The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

*Environmental Consequences of the Proposed Action:* The proposed action would not dominate the view nor require major modification of the existing character of the landscape. Any above ground facilities should be painted Desert Brown or similar earth tone color to blend with the surrounding colors and character of the landscape. The level of change to the characteristic landscape would be low and the objectives of the VRM IV classification would be retained.

*Environmental Consequences of the No Action Alternative:* There would be no impact.

*Mitigation:* Any above ground facilities that would be required for 6 months or longer shall be painted Desert Brown (Munsell Soil Color Chart 10YR 6/3) or equivalent within 6 months of installation.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts from oil and gas development were analyzed in the White River Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) completed in June 1996. Current development,

including the proposed action, has not exceeded the cumulative impacts from the foreseeable development analyzed in the PRMP/FEIS.

**REFERENCES CITED:**

Larralde, Signa L.

1981 Cultural Resource Inventory of a Sample of BLM Lands in the Rangely Oil Field, Rio Blanco County, Northwestern Colorado. Nickens and Associates, Montrose, Colorado.

Tweto, Ogden

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

**PERSONS / AGENCIES CONSULTED:** None

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources Paleontological Resources
Jed Carling	Rangeland Specialist	Invasive, Non-Native Species
Lisa Belmonte	Wildlife Biologist	Migratory Birds
Lisa Belmonte	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Carol Hollowed	Hazmat Collateral	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Lisa Belmonte	Wildlife Biologist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Nate Dieterich	Hydrologist	Soils
Jed Carling	Rangeland Specialist	Vegetation
Lisa Belmonte	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Jed Carling	Rangeland Specialist	Rangeland Management
Linda Jones	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Keith Whitaker	Natural Resource Specialist	Visual Resources
Valerie Dobrich	Natural Resource Specialist	Wild Horses

# **Finding of No Significant Impact/Decision Record (FONSI/DR)**

## **CO-110-2005-204-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION/RATIONALE:** It is my decision to approve development of the water and CO<sub>2</sub> injection lines as described in the proposed action, with the addition of the mitigation measures listed below. This development, with mitigation, is consistent with the decisions in the White River ROD/RMP, and environmental impacts will be minimal.

### **MITIGATION MEASURES:**

1. The operator will be responsible for complying with all local, state, and federal air quality regulations as well as providing documentation to the BLM that they have done so.
2. Soils stockpiled during injection line construction must be wetted to mitigate fugitive dust production.
3. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
  - whether the materials appear eligible for the National Register of Historic Places
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
  - a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.
4. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has

been completed, the operator will then be allowed to resume construction.

5. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with 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), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

6. The applicant shall monitor the disturbed and reclaimed areas for the presence of invasive, non-native, and/or noxious plant species that have become established as a result of the proposed action. The applicant will be responsible for eradicating cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action.

7. Upon detection of noxious, non-native, and/or invasive plant species, the applicant will control their presence before seed production using materials and methods as outlined in the White River ROD/RMP and/or authorized in advance by the White River Field Office Manager. Application of herbicides must be under field supervision of an Environmental Protection Agency (EPA) certified pesticide applicator. Herbicides must be registered by the EPA and application proposals must be approved by the BLM.

8. Earthwork involving prairie dog burrow systems would be conducted outside the period of April 1 to July 15 to avoid the remote chance of disrupting the reproductive activities of ferrets, burrowing owl, and prairie dogs. Any surface disturbance associated with these injection lines should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

9. For those new flowlines that parallel existing flowlines, BLM requests the new flowlines be offset by 15 feet or more.

10. In the event earthwork associated with this project cannot be completed prior to early April, BLM would conduct nest surveys on affected injection line segments and conditions of approval would be applied to defer activities that may interfere with successful nest outcomes (under provisions of the Migratory Bird Treaty Act).

11. The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

12. The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so. Construction activities involving more than 5 acre of surface disturbance require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP available for review by the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

13. All pipeline construction must comply with “Gold Book” surface operating standards for Oil and Gas development. Copies of the “Gold Book” can be obtained at the WRFO.

14. Given the salt concentration of the impacted soils, the operator will be responsible for monitoring salts leaching from soils. If large salt deposits begin to appear, the operator will notify BLM, together they will coordinate the application of best management practices to help mitigate the problem.

15. Promptly re-vegetate all disturbed areas associated with the proposed action, including all cut and fill slopes and topsoil stockpiles, with Standard Seed Mix #1 of the White River ROD/RMP, B-19, Appendix B (see table below). Seeding rates in the White River ROD/RMP are shown as pounds of Pure Live Seed (PLS) per acre and apply to drill seeding. Applied seed must be certified and free of noxious weeds and seed certification tags must be submitted to the Area Manager within 30 days of seeding. The applicant will be responsible for eradicating cheatgrass, noxious weeds, and/or problem weeds should they occur and/or increase in density as a result of the proposed action. To control undesirable plant species, the applicant will use materials and methods as outlined in the White River ROD/RMP or authorized in advance by the White River Field Office Manager.

<b>Standard Seed Mix #</b>	<b>Species (Variety)</b>	<b>Lbs PLS/Acre</b>
1	Siberian wheatgrass (P27)	3
	Russian wildrye (Bozoisky)	2
	Crested wheatgrass (Hycrest)	3

16. The applicant shall be required to achieve a reclamation success rate of sufficient vegetative ground cover from reclamation plant species within three growing seasons that is comparable of that of the nearby undisturbed plant communities within a climax state as deemed appropriate by the BLM.

17. Any surface disturbance associated with these injection lines should be revegetated and rehabilitated with the appropriated seed mixture and reclamation technique(s) as is required by the Authorized Officer.

18. Any livestock control facilities and/or rangeland improvements impacted during this operation will be replaced or repaired to their prior condition. Any above ground facilities that would be required for 6 months or longer shall be painted Desert Brown (Munsell Soil Color Chart 10YR 6/3) or equivalent within 6 months of installation.

**NAME OF PREPARER:** Tamara Meagley 10-26-05

**NAME OF ENVIRONMENTAL COORDINATOR:** Caroline Hollowed

**SIGNATURE OF AUTHORIZED OFFICIAL:**  \_\_\_\_\_  
Field Manager

**DATE SIGNED:** 10/31/05

**ATTACHMENTS:** Location map of the proposed action.



# Location of Proposed Action CO-110-2005-204-EA

