U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Energy Office
2425 S. Grand Avenue, Suite 101
Glenwood Springs, CO 81601

ENVIRONMENTAL ASSESSMENT

NUMBER: CO140-2008-034

CASEFILE NUMBER: Federal Lease COC27874

PROJECT NAME: Proposal to Construct an Alternate Access Road and Reconstruct the Existing GV8-14 Pad.

LEGAL DESCRIPTION: SE¼SE¼, Section 11 and NE¼NE¼, Section 14, Township 7 South, Range 96 West, Sixth Principal Meridian.

APPLICANT: Williams Production RMT Company ("Williams")

DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVE

Proposed Action: A surface use agreement by which a private landowner allowed Williams to access the GV8-14 pad, located on BLM land, has expired, and negotiations with the landowner for renewing that agreement have not been productive. A single Federal well is currently located on the pad. Operations, maintenance, and support work has not been possible at this location due to the lack of access and the well has been shut in since January 2007. In order to gain access to the pad, Williams has submitted a Sundry Notice requesting that the BLM consider the approval of new access road across public lands (Figure 1). In addition, a reconfiguration of the existing GV8-14 pad is proposed to support the potential future development of additional wells.

As proposed, the road alignment would begin near the existing GV 44-11 pad and traverse both private (507 feet) and BLM-administered land (1,339 feet) terminating at the northern edge of GV8-14 pad. The total length would be 1,846 feet. The disturbance width of the BLM segment of the road would average 100 feet, with a maximum width of 155 feet. The maximum cut would be 36.7 feet and the maximum fill would be 25.5 feet. An extended fill segment would feature an average fillslope length of 100 feet with maximum length approaching 140 feet.

The existing 6- and 12-inch diameter steel surface pipelines would be cut and re-welded to intersect the planned road grade at a saddle with the remaining surface pipeline segments allowed to remain in their present location. The pipelines are presently buried underneath the GV8-14 pad. They would be removed and buried around the north and east side of the pad prior to pad reconstruction. Figure 2 illustrates proposed drainage structures to be implemented during the pad reconstruction.

During engineering design, the decision was made to propose building the extended fill section of road at a 2:1 slope gradient which would involve rerouting an ephemeral stream with a man-made ditch. Special compaction and benching details would also be used during the road construction to ensure stability of the road surface. Once the proposed road becomes operational, the existing BLM portion of the access road to the pad would be ripped, reclaimed and seeded.

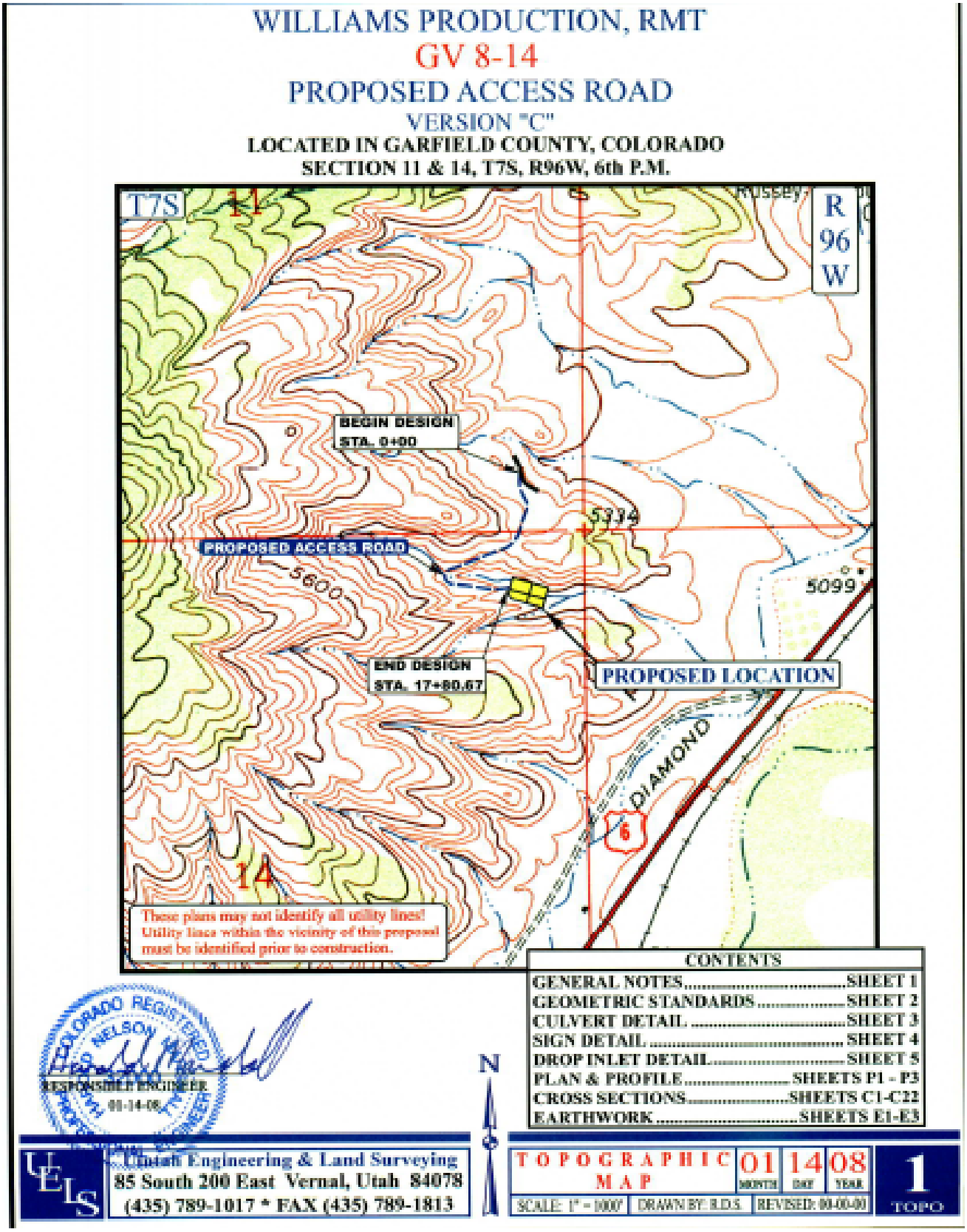

Figure 1. Project Map.

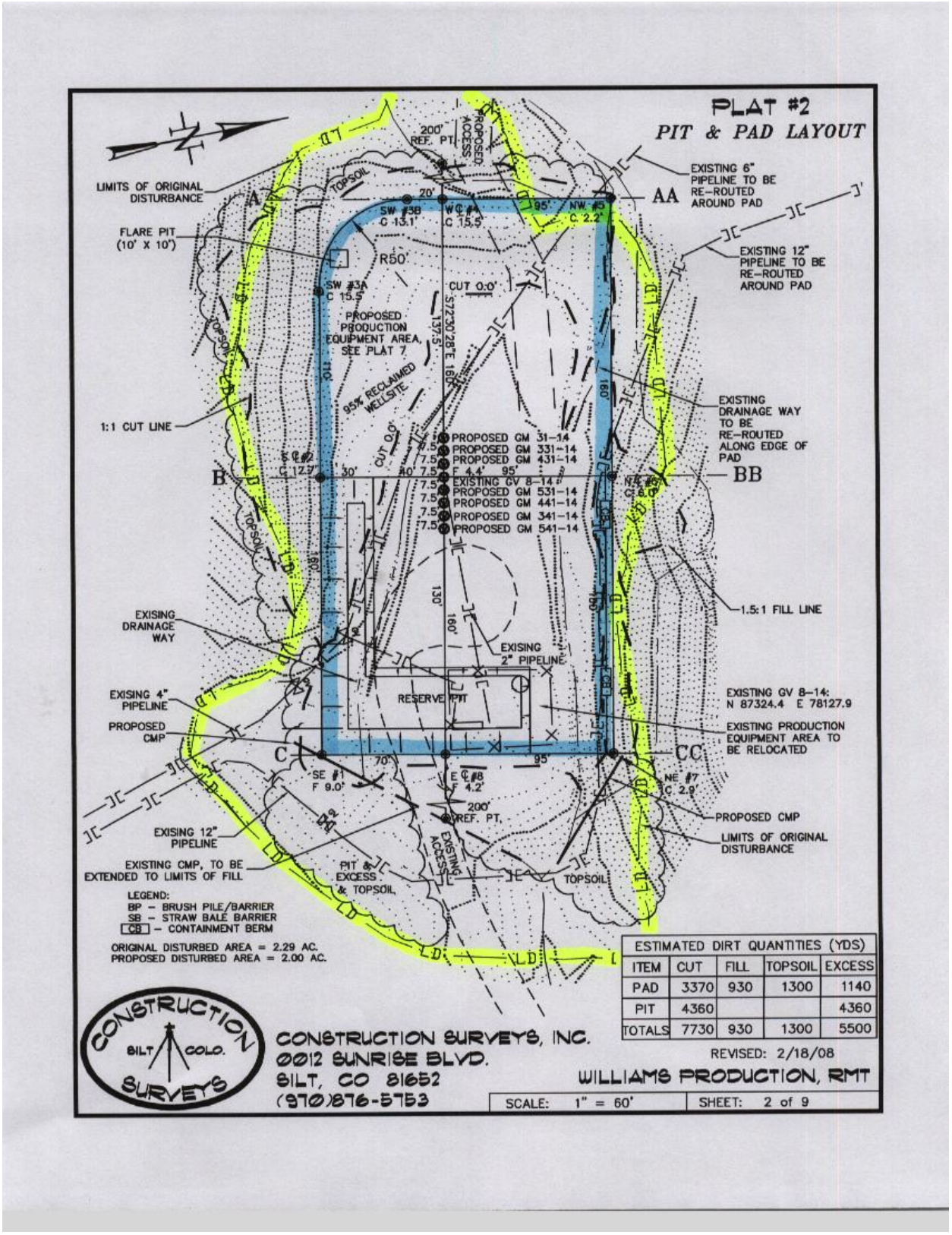

Figure 2. Proposed Plat for GV8-14 Pad Reconstruction

Construction of the road would result in approximately 4.2 acres of new surface disturbance, which would be reduced to approximately 0.9 acres after interim reclamation. The pad reconstruction would not exceed 2.5 acres, with 2.3 acres being the area that was originally disturbed during construction for the GV8-14 pad. The long-term disturbance would not exceed 1.2 acres. Total long-term disturbance would be about 2.1 acres.

No Action Alternative: The proposed action involves Federal subsurface minerals that are encumbered with a Federal oil and gas lease, which grants the lessee a right to explore and develop the lease. Although BLM cannot deny the right to drill and develop the leasehold, individual APDs or Sundry Notices can be denied to prevent unnecessary and undue degradation. The no action alternative constitutes denial of the Sundry Notice requesting the alternate road access. Since no other access route is feasible, this alternative would likely result in the shutting-in of the GV8-14 well on a permanent basis.

Under this alternative, Williams would not have the option of developing addition wells on the GV8-14 pad. In order to develop additional wells, Williams would be compelled to construct a new pad in the area, a prospect which would be difficult to implement given the local topography.

PURPOSE AND NEED FOR THE ACTION: The purpose of the action is to provide an alternate route so that Williams may access their shut-in well on the existing GV8-14 pad and potentially further develop their leasehold. The action is needed because a road use agreement with a private party has expired and will not be renewed. This situation has prevented Williams from accessing the pad and has precluded potential further development at the location.

SUMMARY OF LEASE STIPULATIONS:

Table 1. Summary of Lease Stipulations within the Project Area.

Lease Number	*Description of Lands within Lease Area*	*Lease Stipulations*
COC27874 (1979)	T7S, R 96W Sec 11: SE¼NE¼,W½E½ SW¼ Sec 14: NE¼, W½, NW¼SE¼ Sec 15: Lots 1-7, W½NE¼, N½SW¼, NW¼SW¼ Sec 19: SW¼SE¼, E½SE¼ Sec 20: Lot 1, SW¼, W½SE¼, NE¼SE¼ Sec 21: Lots 1-7, W½NE¼, NW¼, N½SW¼,NW¼SE¼ Sec 22: Lots 1, 2 2357.77 acres	**Timing Limitation:** No exploration, drilling or development activity from 1/1 – 5/31 in order to protect wildlife habitat. TL does not apply to maintenance and operations of producing wells. Exceptions to TL in any year may be specifically authorized in writing. **Surface Disturbance:** The plan of operation must assure adequate protection of drainages, waterbodies, springs, or fish and wildlife habitat, steep slopes or fragile soil. The lessee agrees that during periods of adverse conditions due to the climactic factors such as thawing, heavy rains, or flooding, all activities creating irreparable or extensive damage, as determined by the surface managing agency, will be suspended or the plan of operation modified and agreed upon. **Protection of Cultural Resources:** Requires thorough and complete intensive surveys of areas to be disturbed for evidence of archeological or historic sites. BLM given sufficient time to review results of survey and require mitigation measures to protect known sites.

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: Glenwood Springs Resource Management Plan (BLM 1984).

Date Approved: Amended in November 1991 – Oil and Gas Leasing and Development – Final Supplemental Environmental Impact Statement; amended in March 1999 – Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement.

Decision Number/Page: Record of Decision, Glenwood Springs Resource Management Plan Amendment, November 1991, page 3 (BLM 1991).

Decision Language: "697,720 acres of BLM-administrated mineral estate within the Glenwood Springs Resource Area are open to oil and gas leasing and development, subject to lease terms and (as applicable) lease stipulations." This decision was carried forward unchanged in the 1999 RMP amendment (BLM 1999a).

Discussion: The proposed action is in conformance with the 1991 and 1999 Oil and Gas RMP amendments because the Federal mineral estate proposed for development is open for oil and gas leasing and development.

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado BLM approved the Standards for Public Land Health. The five 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. The environmental analysis must address whether the proposed action or alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions relative to these resources.

These analyses are conducted in relation to baseline conditions described in land health assessments (LHAs) completed by the BLM. The proposed action would be located in an area that was included in the Rifle West LHA (BLM 2005).

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 2). Only those mandatory critical elements that are present and affected are described in the following narrative.

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources.**

Table 2. Critical Elements of the Human Environment									
Critical Element	*Present*		*Affected*		*Critical Element*	*Present*		*Affected*	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources		X		X	Wastes, Hazardous or Solid	X		X	
Environmental Justice		X		X	Water Quality, Surface and Ground*	X			X
Floodplains		X		X	Wetlands and Riparian Zones*		X		X
Invasive, Non-native Species	X		X		Wild and Scenic Rivers		X		X
Migratory Birds	X		X		Wilderness and Wilderness Study Areas		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

Critical Elements

Air Quality

Affected Environment: The proposed action area (Garfield County) has been described as an attainment area under CAAQS (Colorado Ambient Air Quality Standards) and NAAQS (National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards.

Proposed Action:

Environmental Consequences: The Roan Plateau RMPA and EIS describe potential effects from oil and gas development (BLM 2006:4-26 to 4-37). Analysis was completed with regard to greenhouse gas emissions, a near-field and far-field analysis for carbon monoxide, particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide, hazardous air pollutants including: benzene, ethylbenzene, formaldehyde, hydrogen sulfide, toluene, and xylenes. Sulfur and nitrogen deposition analysis, acid neutralizing capacity, and visibility screening-level analysis were also completed in the Roan Plateau RMPA and EIS. Findings indicate that no adverse long-term effects would result under that plan. Since the proposed action is within the scope of the reasonable foreseeable development (RFD) scenario analyzed in that document, it is anticipated that the proposed action would be unlikely to have adverse effects on air quality.

Activities described in the proposed action would result in localized short-term increases in vehicle and equipment emissions. Concentrations of emissions would be below applicable ambient air quality standards as analyzed in the Roan Plateau RMPA & EIS. However, it is anticipated that construction activities would likely produce high levels of dust in dry conditions without dust abatement. To mitigate dust generated by these activities, the operator would be required to implement dust abatement strategies as needed by watering the access road and/or by applying a surfactant approved by the Authorized Officer (Appendix A, Number 2).

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on air quality.

Cultural Resources

Affected Environment: Two Class III cultural resource inventories (GSFO # 1107, and 1107-25) were conducted during the evaluation of the proposed action. No properties were identified that were considered eligible for listing on the National Register of Historic Places. Therefore, no formal consultation with the Colorado State Historic Preservation Officer (SHPO) was needed and a determination of "**No Historic Properties Affected"** was made in accordance with the National Historic Preservation Act (NRHP), as amended (16 USC 470f), National BLM/SHPO Programmatic Agreement (1997), and Colorado Protocol (1998).

Proposed Action:

Environmental Consequences: There would be no direct impacts to cultural resources from the implementation of the proposed action. However, indirect long-term cumulative impacts from increased access and the presence of project personnel could result in a range of impacts to known and undiscovered cultural resources in the vicinity of the location. These impacts could range from illegal collection and excavation to vandalism.

A standard Education/Discovery Condition of Approval (COA) for cultural resource protection would be attached to the APD(s) (Appendix A, Number 3). The importance of this COA should be stressed to operator and its contractors, informing them of their responsibilities to protect and report any cultural resources encountered during drilling and development operations. The proponent and subcontractors should also be aware of requirements under the Colorado Statutes for Human Burials (CRS 24-80-1301, CRS 24-80-1302, and CRS 24-80-405).

No Action Alternative:

Environmental Consequences: There would be no impacts under this alternative because access would not be increased and project personnel would not be present.

Invasive, Non-native Species

Affected Environment: The vegetation in the project area varies with aspect. The south-facing slope contains very little vegetative cover. Salt-desert shrubs like shadscale (*Atriplex confertifolia*), Wyoming sagebrush (*Artemisia tridentata ssp. wyomingensis*), siltbush (*Zuckia brandegeei*), and Mormon-tea (*Ephedra viridis*) are predominant. The north-facing aspect is more densely vegetated with juniper (*Juniperus osteosperma*), shrubs such as mountain mahogany (*Cercocarpus montanus*) and yucca (*Yucca glauca*), bunchgrasses like bluebunch wheatgrass (*Elymus spicatus*) and galleta grass (*Hilaria jamesii*), and forbs like yellow milkvetch (*Astragalus flavus*).

Few weeds were noted in the proposed project area weed. However, cheatgrass *(Anisantha tectorum)*, a List C noxious weed, is found in low densities. The existing pad contains redstem filaree (*Erodium cicutarium*), a List B noxious weed, and the undesirable non-native species, kochia (*Bassia sieversiana*) and Russian-thistle (*Salsola tragus*). Non-native grasses such as crested wheatgrass (*Agropyron desertorum*) and smooth brome (*Bromus inermis*) are found on the reclaimed pad edges.

Proposed Action:

Environmental Consequences: Surface-disturbing activities provide a niche for the invasion and establishment of invasive non-native species, particularly when these species are already present in the

surrounding area. Because invasive, non-native species are only present in low densities on the proposed alignment, the potential for invasion following construction activities is moderate. Mitigation measures designed to minimize the spread of these species would be attached to the Sundry Notice as conditions of approval (Appendix A, Number 4).

No Action Alternative

Environmental Consequences: Under the no action alternative, no new construction would take place; therefore, no new infestations of invasive non-native species should occur. However, existing infestations are likely to spread if not treated.

Migratory Birds

Affected Environment: Habitat for most migratory birds is limited by the sparseness of vegetation in the affected area. South-facing slopes contain little vegetative cover. North-facing aspects contain juniper (*Juniperus osteosperma*) and shrubs such as mountain mahogany (*Cercocarpus montanus*) and yucca (*Yucca glauca)*. Vegetation near the existing pad consists of greasewood (*Sarcobatus vermiculatus*), rubber rabbitbrush (*Chrysothamnus nauseosus*), and snakeweed (*Gutierrezia sarothrae*).

Given the habitat conditions, a low diversity and density of migratory species are expected to occur in the area. Two species on the U. S. Fish and Wildlife Service's Birds of Conservation Concern (BCC) list for this region may use pinyon-juniper woodlands found nearby. These include the pinyon jay (*Gymnorhinus cyanocephalus*) and black-throated gray warblers (*Dendroica nigrescens*), both of which could be expected to nest in the denser, more mature juniper habitat west of the project area (WestWater 2007). One pinyon jay was observed west of the GV 8-14 pad. A nest inventory was conducted in the area, but no nests were found. The survey was conducted during the pinyon jay nesting season but prior to typical black-throated gray warbler nesting.

Suitable raptor nesting habitat is scattered throughout the area in juniper woodlands and cliffs. Large portions of the area are composed of sparse grasslands and shrublands that are not suitable for raptor nesting but do provide foraging habitat. Common raptor species typically known to occur in juniper woodlands and cliffs similar include the golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), American kestrel, (*Falco sparverius*) and great horned owl (*Bubo virginianus*). The golden eagle and prairie falcon are included on the BCC list for this region.

No active raptor nests were found during a survey conducted in April 2007. One inactive nest was observed approximately 0.08 mile from the proposed road. Its attributes suggest that it was constructed by red-tailed hawks (WestWater 2007).

Proposed Action:

Environmental Consequences: Construction of the new road and buried pipeline would result in approximately 6.7 acres of new surface disturbance, which would be reduced to approximately 2.1 acres after interim reclamation. Migratory bird habitat directly affected by surface disturbance is approximately 2.1 acres, given the lack of vegetation along much of the route. If surface disturbance occurs during the nesting period of April 15 to August 1, direct take or destruction of active nests could occur. Interim reclamation would restore herbaceous vegetation on most of the disturbed area within 2 to 3 years under favorable conditions, thereby reducing long-term habitat loss to 2.1 acres. The establishment of mature shrubs could take from 5 to 25 years, and the establishment of mature trees could take one hundred years or more.

Habitat effectiveness adjacent to the road would be reduced during construction activities as a result of equipment noise and human activity. The effect of noise varies among bird species, but is measurable in areas exposed to relatively moderate levels of noise (LaGory 2001). Noise can mask vocalizations important for mate attraction, social cohesion, predator avoidance, prey detection, navigation, and other basic behaviors. The acoustic interference can potentially result in the reduced ability of individuals to acquire mates, reproduce, raise young, and avoid predation (West 2006). Impacts from disturbance during construction would be greater than those following construction, when individual birds may avoid areas disturbed by vehicles servicing wells. Because these visits are generally infrequent, temporary, and produce significantly less noise, impacts would likely be negligible.

Due to the presence of a raptor nest within 0.125 mile of the road and pipeline and 0.25 mile of the well pad, a Condition of Approval (COA) is included which stipulates a Timing Limitation prohibiting construction activity between March 15 and May 15 (Appendix A, Number 5). An exception to this TL would be made if a survey conducted within 72 hours of the start of construction indicates the nest is inactive.

Pursuant to BLM Instruction Memorandum 2008-050, a Timing Limitation COA is included which prohibits surface-disturbing activities between May 1 and June 30. An exception to this COA may be made if nesting surveys conducted within one week of surface disturbing activity indicate the absence of nesting BCC species within or immediately adjacent to the area of disturbance. (Appendix A, Number 6).

The development of reserve or frac pits in the project area may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of water. The extent and nature of the problem is not well-defined, but management measures should emphasize the prevention of contact with produced water and drilling and completion fluids that may pose a problem (e.g., acute or chronic toxicity, compromised insulation). Mitigation measures designed to limit access to reserve pits are presented Appendix A (Number 7).

No Action Alternative:

Environmental Consequences: Under the no action alternative, no new construction would take place; therefore, no impacts to migratory birds would occur.

Native American Religious Concerns

Affected Environment: The Ute tribes claim this area as part of their ancestral homeland. At present, no Native American concerns are known within the project area and none were identified during the inventories. The Ute Tribe of the Uintah and Ouray Bands, the primary Native American tribe in this area of the GSFO, have indicated that they do not wish to be consulted for small projects or projects where no Native American areas of concern have been identified either through survey or past consultations. Therefore, formal consultation was not undertaken. If new data are disclosed, new terms and conditions may have to be negotiated to accommodate their concerns.

Proposed Action:

Environmental Consequences: Although there would be no direct impacts from the proposed action, indirect impacts from increased access and personnel in the vicinity of the proposed project could result in impacts to unknown Native American resources ranging from illegal collection to vandalism.

A standard Education/Discovery Condition of Approval Native (COA) for the protection of Native American values would be attached to the APDs (Appendix A, Number 3). The importance of these COAs should be stressed to the operator and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered. The proponent and subcontractors should also be aware of requirements under the American Graves Protection and Repatriation Act (NAGPRA, Appendix A, Number 8) and the Colorado Statutes for Human Burials (CRS 24-80-1301, CRS 24-80-1302, and CRS 24-80-405).

No Action Alternative:

Environmental Consequences: There would be no impacts under this alternative because access would not be increased and project personnel would not be present.

Special Status Species (includes an analysis of Public Land Health Standard 4)

Affected Environment:

Federally Listed, Proposed, or Candidate Plant and Animal Species

According to the current species list available online from the U. S. Fish and Wildlife Service (USFWS) (http://www.fws.gov/mountain-prairie/endspp/CountyLists/Colorado.pdf), the following Federally listed, proposed, or candidate plant and animal species may occur within or be impacted by actions occurring in Garfield County: Uinta Basin hookless cactus (*Sclerocactus glaucus*), Parachute beardtongue (*Penstemon debilis*), DeBeque phacelia (*Phacelia submutica*), Canada lynx (*Lynx canadensis*), Mexican spotted owl (*Strix occidentalis lucida*), yellow-billed cuckoo (*Coccyzus americanus*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), and humpback chub (*Gila cypha*). The bald eagle (*Haliaeetus leucocephalus*) was removed from the listed of threatened or endangered species in August 2007. The BLM now considers the bald eagle a sensitive species.

Of the federally listed, proposed, or candidate wildlife species listed above, habitat is present near the project area for two of the endangered fishes, the Colorado pikeminnow and razorback sucker.

BLM Sensitive Plant and Animal Species

BLM sensitive plant and animal species with habitat and/or occurrence records in the area include adobe thistle (*Cirsium perplexans),* DeBeque milkvetch (*Astragalus debequaeus),* Naturita milkvetch (*Astragalus naturitensis),* Roan Cliffs blazing star (*Mentzelia rhizomata*), Piceance bladderpod (*Lesquerella parviflora*), Harrington's penstemon (*Penstemon harringtonii*), bald eagle (*Haliaeetus leucocephalus*), midget faded rattlesnake (*Crotalus viridis concolor*), and Great Basin spadefoot (*Spea intermontana*). In addition, four BLM sensitive fish species—the flannelmouth sucker (*Catostomus latipinnis*), bluehead sucker (*Catostomus discobolus*), roundtail chub (*Gila robusta*), and Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*)—are known to inhabit the Colorado River. The midget faded rattlesnake is potentially present in rocky uplands and the Great Basin spadefoot is potentially present within or near seasonal surface waters. Winter habitat and potential nesting habitat for the bald eagle is present in the Parachute Creek and Colorado River corridors within 0.5 mile of the project area.

Proposed Action:

Environmental Consequences:

Federally Listed, Proposed, or Candidate Plant Species

The results of an April 2007 plant survey indicate that there are no federally listed, proposed, or candidate plant species or suitable habitat for these species in the project area. Therefore, the proposed action would have "**No Effect**" on these species.

Federally Listed, Proposed, or Candidate Animal Species

All of the endangered fish species associated with the Colorado River are adapted to naturally high sediment loads. Under the proposed action, new access road construction and the reconfiguration of the existing pad would increase the amount of exposed soils available for erosion and transport to nearby drainages. Although some minor, temporary increase in sediment transport to the Colorado River may occur from the proposed action, it is not likely that the increase would be detectable above current background levels. Therefore, the proposed action would have "**No Effect"** on the Colorado pikeminnow or razorback sucker.

BLM Sensitive Plant Species

The results of an April 2007 inventory indicate the BLM sensitive plant, adobe thistle (*Cirsium perplexans*), occurs in the project area. The proposed road alignment originally bisected a population of 69 adobe thistle plants. Since that time, the road alignment was rerouted lower on the slope and will now result in a loss of an estimated 20 adobe thistle plants. There are three additional populations of adobe thistle (with an estimated total of 641 plants) found in the general vicinity, but they are located more than 1,400 feet away from the proposed road alignment. Although 20 adobe thistle plants may be lost, the proposed action is "**not likely to result in a loss of viability to the population or cause a trend toward Federal listing."**

A number of indirect effects could also result from the proposed action. Dust could potentially be an issue. Implementation of best management practices for dust reduction would further decrease dust impacts to the adobe thistle.

Another potential indirect effect of the proposed action is an increase in invasive weeds from ground-disturbing activities. These activities provide a niche for the invasion and establishment of invasive non-native species, particularly when these species are already present in the surrounding area. The role of roads as dispersal agents for exotic plants is well documented (i.e., Parendes and Jones 2000, Harrison et al. 2002, Gelbard and Belnap 2003). As road density increases, the risk of invasion by exotic species also increases. Mitigation measures designed to minimize the spread of invasive species are presented in Appendix A (Number 4).

BLM Sensitive Animal Species

The proposed action would occur in habitats of the midget faded rattlesnake and the Great Basin spadefoot (toad). Direct effects on these species could include injury or mortality as a result of construction, production, and maintenance activities. These effects would be most likely during the active season for these species, which are March to October for the midget faded rattlesnake and May through September for the Great Basin spadefoot.

Since the flannelmouth sucker, bluehead sucker, and roundtail chub have similar habitat requirements and are similarly adapted to high sediment loads as the endangered fish species, the proposed action would also not be expected to adversely affect these special status species. Mitigation measures presented in Appendix A (Numbers 9-13) would be implemented to minimize sedimentation.

No Action Alternative

Environmental Consequences: Under the no action alternative, the developments described in the proposed action would not occur. Therefore, no impacts to special status species are anticipated.

Analysis on the Public Land Health Standard for Special Status Species: According to a recent land health assessment, habitat conditions within this area appear suitable for special status animal species known or likely to occur (BLM 2005). However, large portions of the landscape are being fragmented due to extensive natural gas development. Continued habitat fragmentation is of concern as large blocks of contiguous intact habitat are required by many species. Sustained development and the proliferation of roads, well pads, pipelines, compressor stations, tank farms and other surface facilities will continue to reduce habitat patch size and affect both habitat quality and quantity. The potential to impact some species would increase as development continues. The proposed action in conjunction with similar activities throughout this watershed would increase fragmentation and could increase sediment loads. Although the contribution of the proposed action is in itself small, it may further trend the area away from meeting Standard 4 for special status wildlife.

No potential habitat for federally listed plant species is present in the project area; however, habitat for the sensitive plant, adobe thistle, is present in the project area. Ground-disturbing activities connected to the proposed action will likely contribute to degradation of the sensitive plant habitat, resulting in trending the area away from meeting Standard 4 for special status plants.

The no action alternative would not result in a failure of the area to achieve Standard 4 because the proposed developments would not occur.

Wastes, Hazardous or Solid

Affected Environment: Hazardous and solid wastes would not be a part of the natural environment. However, they could be introduced through implementation of the proposed action. BLM Instruction Memoranda numbers WO-93-344 and CO-97-023 require that all National Environmental Policy Act documents list and describe any hazardous and/or extremely hazardous materials that would be produced, used, stored, transported, or disposed of as a result of a proposed project. The Glenwood Springs Resource Area, Oil & Gas Leasing and Development, Draft Supplemental Environmental Impact Statement (June 1998), Appendix L, Hazardous Substance Management Plan, contains a comprehensive list of materials that are commonly used for projects of this nature in this region. It also includes a description of the common industry practices for use of these materials and disposal of the waste products. These practices are dictated by various Federal and State laws and regulations, and the BLM standard lease terms and stipulations which would accompany any authorization resulting from this analysis. The document referenced above is hereby incorporated into and made a part of this Environmental Assessment Record.

The most pertinent of the Federal laws dealing with hazardous materials contamination are as follows:

The Oil Pollution Act (Public Law 101-380, August 18, 1990) prohibits discharge of pollutants into waters of the US, which by definition would include any tributary, including any dry wash that eventually connects with the Colorado River.

The Comprehensive Environmental Response, Compensation, and Liability Act (Public Law 96-510 of 1980) provides for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment. It also provides national, regional, and local contingency plans. Applicable emergency operations plans in place include the National Contingency Plan (40 CFR 300, required by section 105 of CERCLA), the Region VIII Regional Contingency Plan, the Colorado River Sub-Area Contingency Plan (these three are Environmental Protection Agency produced plans), the Mesa County Emergency Operations Plan (developed by the Mesa County Office of Emergency Management), and the BLM Grand Junction Field Office Hazardous Materials Contingency Plan.

The Resource Conservation and Recovery Act (RCRA) (Public Laws 94-580, October 21, 1976) regulates the use of hazardous substances and disposal of hazardous wastes. Note: While oil and gas lessees are exempt from RCRA, right-of-way holders are not exempt from this legislation. RCRA strictly regulates the management and disposal of hazardous wastes.

Emergency response to hazardous materials or petroleum products on BLM lands are handled through the BLM Grand Junction Field Office contingency plan (referenced above). BLM would have access to regional resources if justified by the nature of an incident.

Proposed Action:

Environmental Consequences: Possible pollutants that could be released during the construction phase of this project would include: diesel fuel, hydraulic fluid and lubricants. These materials would be used during construction of the road and pipeline and for refueling and maintaining equipment and vehicles. Potentially harmful substances used in the construction and operation would be kept onsite in limited quantities and trucked to and from the site as required. No hazardous substance, as defined by 40 CFR 355 would be used, produced, stored, transported, or disposed in amounts above the threshold quantities.

Surface water or groundwater could be impacted under the proposed action. Pollutants that might be released during the operational phase of the project would include condensate, produced water (if the wells in the area produce water) and glycol (carried to the site and used as antifreeze.) While uncommon, an accident could occur which could result in a release of any of these materials. A release could result in contamination of surface water or soil. Improper casing and cementing procedures could result in the contamination of groundwater resources. In the case of any release, emergency or otherwise, the responsible party would be liable for cleanup and any damages. Depending on the scope of the accident, any of the above referenced contingency plans would be activated to provide emergency response. At a minimum, the BLM/Glenwood Springs Field Office contingency plan would apply.

These laws, regulations, standard lease stipulations, and contingency plans/emergency response resources are expected to adequately mitigate any hazardous or solid waste issues with the proposed action.

No Action Alternative:

Environmental Consequences: This alternative would result in no new surface disturbance and no additional drilling, completion, or production activities for oil and gas development.

Water Quality, Surface (includes an analysis of Public Land Health Standard 5)

Surface Water

Affected Environment: The existing GV 8-14 well pad is located southwest of the Town of Parachute within the 17,893 acre Colorado River below Rifle 6th field watershed. The existing pad is located adjacent to an unnamed ephemeral drainage that is tributary to the Diamond Ditch located approximately 1,900 feet downstream and to the southeast. The proposed new access road would cross this steep, incised ephemeral drainage just west of the existing well pad.

At this time, the unnamed ephemeral drainage mentioned above is not listed on the *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, the *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93), or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94). No water quality data is available for this unnamed ephemeral drainage.

Proposed Action:

Environmental Consequences: Proposed activities would require the excavation of substantial cuts and fills. These activities would result in an increase in erosion potential and offsite sedimentation. With measures to control runoff water in place, reestablishment of vegetation, and proper engineering of the road, the potential for sediment transport to the unnamed ephemeral drainage would be minimized. The mitigation measures presented in Appendix A (Numbers 9-13) would be implemented to protect surface water.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on surface water.

Waters of the US

Affected Environment: Section 404 of the Clean Water Act requires a Department of the Army permit from the US Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States as defined by 33 CFR Part 328. A Corps permit is required for both permanent and temporary discharges into waters of the United States. Due to the flashy nature of area drainages and anticipated culvert maintenance, the Corps of Engineers recommends designing drainage crossings for the 100-year event. Drainage crossings within the project area would be required to pass a 25-year or greater storm event in accordance with BLM Gold Book standards. The 25-year, 6-hour precipitation event for the proposed action area is approximately 1.6 inches and the 25-year, 24-hour precipitation event is approximately 2.2 inches.

The unnamed ephemeral drainage within the project area may not fall under Corps of Engineer's jurisdiction due to its lack of connectivity with a major waterbody. As mentioned in the *Surface Water* section, this drainage is intercepted by the Diamond Ditch. If determined to be under Corps jurisdiction, the proposed crossing would be permitted under Nationwide Permit 14 which covers linear transportation projects.

Proposed Action:

Environmental Consequences*:* Drainage crossings would require the use of fill material to span drainages which could result in additional sediment available for transport to the drainage if not properly stabilized. Rip rap and revegetation practices should be used to stabilize road and pad fills at crossings. Improperly designed drainage crossings, in particular undersized culverts and poorly aligned culverts, could result in channel degradation that may include: excessive bank erosion at culvert outlets, ponding of flows and excess sedimentation at culvert inlets, and channel scour both at inlets and outlets. The mitigation measures presented in Appendix A (Numbers 9-14) would be implemented to ensure that unnecessary degradation of waters of the U.S. does not occur.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on waters of the U.S.

Analysis on the Public Land Health Standard for Water Quality: The proposed action with associated mitigation and the no action alternative would not likely prevent land health Standard 5 for water quality from being met.

Other Affected Resources

In addition to the critical elements, the resources presented in Table 3 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 3. Other Resources Considered in the Analysis.

Resource	*NA or Not Present*	*Present and Not Affected*	*Present and Affected*
Access and Transportation			x
Cadastral Survey	x		
Fire/Fuels Management	x		
Forest Management	x		
Geology and Minerals			x
Law Enforcement	x		
Paleontology			x
Noise			x
Realty Authorizations	x		
Recreation		x	
Socio-Economics			x
Soils			x
Vegetation			x
Visual Resources			x
Wildlife, Aquatic			x
Wildlife, Terrestrial			x

Access and Transportation

Affected Environment: The existing road access to the GV8-14 well pad (from 1990 to 2006) crosses private land in NW¼NW¼ of Section 13, T7S R96W. With the expiration of the road use agreement to cross the property, the alternate access would cross from the proposed road in SE¼SE¼, Section 11 onto

BLM land. The project area lies approximately two miles west of Parachute off of the I-70 frontage road. The public has no legal access to the project area.

Proposed Action:

Environmental Consequences: The proposed action would result in a modest, long-term increase in truck traffic serving the operation and maintenance work planned for the existing GV8-14 well. The largest increase in traffic would be during workover activities. During the operations phase, traffic would be limited to weekly visits to the well pad for inspection and maintenance. Degradation of field development roads may occur due to heavy equipment travel and fugitive dust and noise would be created. Mitigation measures (Appendix A, Numbers 2, 9-13) would be required as conditions of approval to ensure adequate dust abatement, road construction, and road maintenance.

No Action Alternative:

Environmental Consequences: This alternative would not affect access or transportation, because no new road development activities would occur. Williams' ability to put the existing shut-in GV8-14 well into production would be denied unless Williams renegotiated a road use agreement with adjacent landowner controlling existing road use in NW¼NW¼ Section 13, T7S R96W, 6th P.M.

Noise

Affected Environment: The proposed construction activities would occur southwest of the Town of Parachute and north of I-70 in a somewhat rural setting with nearby landowners. This area is characterized by oil and gas activity and highway traffic.

Proposed Action:

Environmental Consequences: Implementation of the proposed action would initially result in increased noise levels during construction of the access road and pipeline burial. Based on an average construction equipment noise level of 59 decibels (dB(A)) at 1,000 feet, construction noise at 0.5 mile would be approximately 47 dB(A) (Table 4). At this distance, noise levels would approximate those associated with a quiet suburban setting (EPA 1974). Noise levels would drop at a constant rate at greater distances (Harris 1991). At 1.0 mile, noise levels would be approximately 41 dB(A) and about 38 dB(A) at 1.5 miles. This noise level would likely persist during daytime hours during the entire construction period (1 to 2 weeks).

These increased noise levels are not expected to have a substantial impact on residences of Parachute because the majority of the noise would be generated at a distance of approximately 1 mile. However, there are numerous residences located within 0.25 to 0.5 mile east of the proposed road. At this distance, construction activities, including the associated traffic supporting these activities, could be greater than background noise levels.

Noise impacts would decrease during the production phase of the existing GV8-14 well. Pumping units and compressor noise levels would be approximately 50 dB(A) at 325 to 375 feet and continued small truck traffic would generate somewhat less. These levels would be less than the construction phase, but greater than background noise levels. During maintenance and workovers, noise would increase above noise levels associated with routine well production.

Table 4. Noise Levels Associated with Typical Construction Equipment			
Equipment	Noise Level (dB(A))		
	50 feet	500 feet	1,000 feet
Tractor	80	60	54
Bulldozer	89	69	63
Backhoe	85	65	59
Crane	88	68	62
Air Compressor	82	62	56
Dump Truck	88	68	62
Average (nearest whole db(A))	**85**	**65**	**59**
Source: BLM 1999b			

No Action Alternative:

Environmental Consequences: The no action alternative would not result in an increase in current noise levels.

Paleontology

Affected Environment: The surface formation present at the proposed road site is Wasatch Formation (including the Ft. Union equivalent at its base) and Ohio Creek Formation. The Wasatch Formation is a BLM Condition 1 formation, defined as an area that is known to contain vertebrate fossils or noteworthy occurrences of invertebrate fossils. The Wasatch Formation is divided into the early Eocene Shire, and the Paleocene age Molina and Atwell Gulch Members. All members of the Wasatch Formation contain vertebrate fossils in varying abundances (Murphy and Daitch 2007). Rocks of the Wasatch Formation are lithologically very similar to one another throughout the Piceance Creek Basin as heterogeneous continental fluvial deposits with interfingering channel sandstone beds and overbank deposits consisting of variegated claystone, mudstone, and siltstone beds (Franczyk et al. 1990).

Fossils historically identified in the Wasatch are archaic mammals—including marsupials, representatives of two extinct orders of early mammals (pantodonts and creodonts), artiodactyls (deer-like, even-toed ungulates), ancestral horses and other perissodactyls (odd-toed ungulates), carnivores, and primates—as well as birds, lizards, turtles, crocodilians, gars and other fishes, freshwater clams, gastropods (snails), and other invertebrates (BLM 1999a) . If present, these would be vulnerable to surface-disturbing activities.

Proposed Action:

Environmental Consequences: Construction activities have the potential to adversely affect scientifically important fossils. The greatest potential for impacts is associated with excavation of surficial materials and shallow bedrock. Intact native sediments are more likely to contain well-preserved plant and animal remains than are sediments of alluvial or colluvial origins.

An examination of the BLM paleontology database indicate that there are known fossil deposits located near the proposed road cut. Four sites are located in Section 14, T7S R96W, and four sites are found in Section 11. All of the identified sites are located at least 2,300 feet away or greater from the proposed road. An on-site inspection should be conducted for proposed disturbance that is located on or within 200

feet of Wasatch Formation bedrock surface exposures. A standard paleontological condition of approval would be attached to the APDs. (Appendix A, Number 15).

No Action Alternative

Environmental Consequences: Because of no new ground-disturbing activities would occur, there would be no impacts to paleontological resources.

Soils (includes an analysis of Public Land Health Standard 1)

Affected Environment: According to the Soil Survey of Rifle Area, Colorado (USDA 1985), the proposed activities would be located on the soil map unit Torriorthents-Camborthids-Rock outcrop complex. This soil map unit consists of sandstone and shale bedrock and soils of variable depth occurring on slopes of 15 to 70 percent. About 45 percent of this complex is Torriorthents, 20 percent is Camborthids, and 15 percent is Rock outcrop. The Camborthids occur on the lower toe slopes on foothills and mountainsides while the Torriorthents are found on the foothills and mountainsides below the Rock outcrop. The Torriorthents are shallow to moderately deep, and clayey to loamy with gravel, cobbles, and stones. The Camborthids are shallow to deep and clayey to loamy. Rock outcrop primarily consists of Mesa Verde sandstones and Wasatch shales with occasional basaltic boulders and stones. This complex is characterized by moderate to severe erosion hazard. Primary uses for this complex include grazing, wildlife habitat, and recreation.

Proposed Action:

Environmental Consequences: The proposed activities would result in some soil loss, loss of soil productivity, and increase in sediment available for transport. These activities would occur on relatively steep slopes with very little vegetative cover. The amount of exposed soil prior to reclamation would be very susceptible to erosional processes. Due to the proximity of these activities to the unnamed ephemeral drainage, mitigation measures would be implemented to minimize potential impacts associated with soil loss and transport (Appendix A, Numbers 9-13).

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on soil resources.

Analysis on the Public Land Health Standard for Upland Soils: The proposed activities would occur within the Callahan Mountain allotment, 1,631 acres of which are on BLM managed lands. In 2005, the BLM Glenwood Springs Field Office completed the Rifle-West Watershed Land Health Assessment in which personnel determined that all 1,631 acres of the Callahan Mountain allotment were achieving or moving towards achieving Standard 1 for Upland Soils. The proposed action with mitigation measures and the no action alternative would not likely prevent Standard 1 for Upland Soils from being met.

Vegetation (includes an analysis of Public Land Health Standard 3)

Affected Environment: The vegetation in the project area varies with aspect. The south-facing slope contains very little vegetative cover. Salt-desert shrubs like shadscale, Wyoming sagebrush, siltbush, and Mormon tea are predominant, with grasses and forbs such as galleta grass and double bladderpod (*Physaria rollinsii*). The north-facing aspect is more densely vegetated with juniper, shrubs such as mountain mahogany and yucca, bunchgrasses like bluebunch wheatgrass, Indian ricegrass (*Achnatherum hymenoides*) and galleta grass, and forbs like yellow milkvetch. Vegetation in the drainage where the

existing pad is located consists of greasewood (*Sarcobatus vermiculatus*), rubber rabbitbrush (*Chrysothamnus nauseosus*), and snakeweed (*Gutierrezia sarothrae*).

Proposed Action:

Environmental Consequences: Total short-term surface disturbance for the new access road and reconstructed pad would be 6.7 acres of BLM land. With implementation of reclamation practices identified in Appendix A (Number 9), establishment of desirable herbaceous vegetation on the cut and fill slopes of the road could be restored within 2 to 3 years. The establishment of mature shrubs could take from 5 to 25 years, and the establishment of trees would take even longer. Interim reclamation would result in about a 75-percent reduction in surface disturbance that would remain over the long-term life of the project. Assuming the road and pad are reclaimed to the extent possible, total long-term surface disturbance associated with the proposed action would be approximately 2.1 acres.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no construction or development activities would take place. Therefore, additional vegetation would not be affected.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also **Wildlife, Aquatic and Wildlife, Terrestrial**): The Rifle West Land Health Assessment determined that this portion of the landscape was not meeting Standard 3 (BLM 2005). Problems noted were the widespread invasion of cheatgrass with a corresponding loss of other functional groups such as perennial native grasses and forbs. Also, sagebrush communities were dominated by old, decadent sagebrush with poor recruitment. The surface disturbance associated with the proposed action has the potential to encourage expansion and dominance of the site by cheatgrass and other weeds. Provisions to revegetate the disturbed areas with native vegetation and to control noxious weeds are presented in Appendix A. If the area is successfully revegetated and weeds are controlled, the proposed action would not have a negative impact on existing vegetative communities. The density, frequency and composition of native plant species could be maintained at present levels.

The no action alternative would have no bearing on the ability of the area to meet the public land health standard for plant and animal communities because no new development would occur.

Visual Resources

Affected Environment: The entire length of the proposed road would be located on land designated as Visual Resource Management (VRM) Class II (BLM 1984). The management objective in VRM Class II areas is to retain the existing character of the landscape. The level of change to the landscape should be low and should not be apparent to the casual observer. Changes to the landscape in Class II areas should repeat the existing form, line, color and texture of the surrounding existing natural environment.

The existing landscape is characterized by a strong plateau form to the north with steep slopes and diagonal drainages and ridgelines leading the eye down to the flat Colorado River valley floor. Characteristic landform colors include light tans, subtle reds, and oranges with patches of white. Dark green, dark brown, and grey forms of pinyon-juniper vegetation create a patchy texture over the steep slopes of the plateau. Green and golden grasses cover flatter portions of the valley floor and areas of previous disturbance. The rounded, green forms of upright deciduous vegetation are also scattered on the valley floor. Geometric manmade structures in a variety colors are found on the valley floor and begin to creep up the valley walls.

Two key observation points (KOPs) were chosen to represent the views of the project from the south on Battlement Mesa and from the southeast at the eastbound I-70 off-ramp for the Parachute/Battlement Mesa area.

KOP 1 faces directly into the drainage where the proposed road drops down from a saddle and travels along the northeast side of the drainage (Figures 3 and 4). This KOP was chosen to represent the view from the homes, businesses and schools directly south of the drainage where the proposed access road would be located.

Figure 3. KOP 1 – Battlement Mesa (red arrow indicates drainage where proposed access road would be located)

Figure 4. KOP 1 – High School (red area represents visible sections of hillside that would be disturbed by construction).

KOP 2 faces a saddle to the southeast which would be cut to accommodate the proposed road. This KOP was chosen to represent the views of the homes, business and west bound traffic on I-70 (Figures 5 and 6).

Figure 5. KOP 2 – Battlement Mesa (red arrow indicates the saddle that would be disturbed to construct the proposed access road)

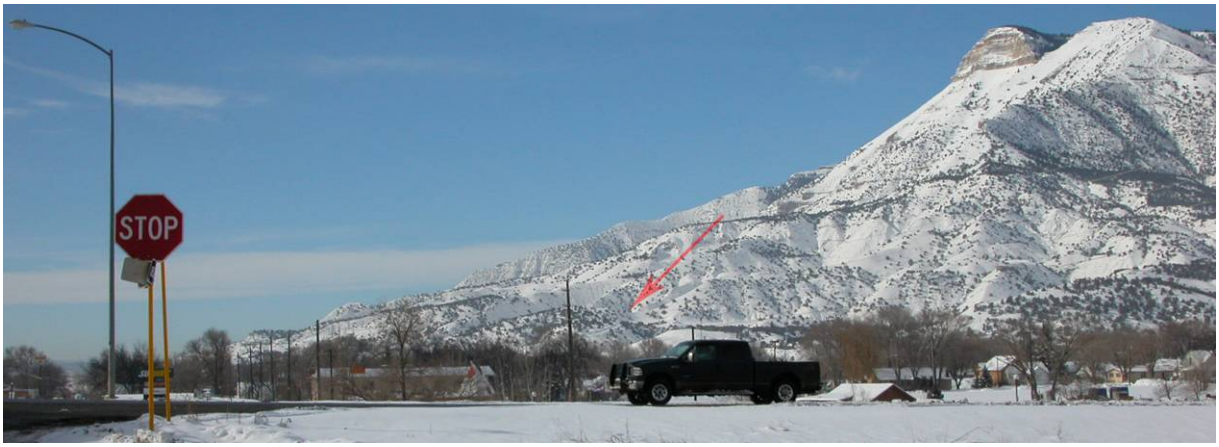

Figure 6. KOP 2 – I-70 eastbound off-ramp (red arrow indicates the saddle that would be disturbed to construct the proposed access road)

Proposed Action:

Environmental Consequences: The construction of the access road to pad GV8-14 would create contrast within the landscape. The cut-and-fill earthwork required to construct the road would create visible contrast in color, line, and texture. In addition, the existing saddle landform visible from KOP 2 would be cut approximately 35 feet to construct the road. While there is not a significant amount of vegetation in

the project area, the removal of vegetation for construction would create a noticeable contrast, primarily with the texture of the slope as well as with color. The existing steep slopes and soil types provide low potential for visual mitigation using vegetation.

However, VRM Class II objectives would be met by the following mitigation measures:

- To the extent practicable, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. Large rock material and vegetation removed during construction shall be salvaged and redistributed over the exposed cut-and-fill slopes or along linear features to provide variation in color and texture.

- Efforts shall be made to undulate the top edge of the cut slopes in order to create a varied and more natural appearance to the disturbed surfaces.

- Contrast in the landscape shall be reduced by sculpting the saddle cut to fit with the natural terrain and to repeat the form and line of the surrounding environment. Cuts with uniform, unvarying slopes should be avoided (see attached sketch).

- Any new or modified surface facilities associated with the existing well shall be painted a natural color selected to minimize contrast with adjacent vegetation or rock outcrops. The color shall be specified by the BLM and attached as a COA to individual APDs (Appendix A, Number 16).

No Action Alternative:

Environmental Consequences: Under the No Action alternative, no road would be constructed. The currently exposed pipelines would remain on the surface and the existing hillsides and ridgeline would remain intact; therefore, additional contrast in the form, line, color and texture would not occur and the VRM Class II objective would be maintained.

Wildlife, Aquatic (includes an analysis of Public Land Health Standard 3)

Affected Environment: There are two small drainages affected by road construction and pad redevelopment, both less than a mile in length. The Colorado River is the only aquatic system that is expected to contain aquatic wildlife near the project area.

Proposed Action:

Environmental Consequences: Although little habitat loss would occur as a result of the proposed action, soils would be exposed to increased erosion potential thereby increasing the risk of transporting sediment to the Colorado River. Erosion and sedimentation has the potential to impact trout species by silting in important spawning substrates and limited pool habitat, and by covering gravels and cobbles needed by aquatic insect larvae important as a food supply for the introduced trout species and some native fishes. Sediment can reduce water quality and limit fish productivity. To minimize impacts to downstream fishes and aquatic insects, the mitigation measures presented in Appendix A are recommended (Numbers 9-13).

No Action Alternative:

Environmental Consequences: With the implementation of mitigation measures, impacts from the no action alternative would be similar to the proposed action.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also **Vegetation and Wildlife, Terrestrial):** A land health assessment for this watershed was completed in 2004 (BLM 2005). At that time, the majority of the streams were meeting Standard 3 for aquatic wildlife, although portions of nearby Cottonwood Gulch and Riley Gulch were not meeting the standard due to excessive sediment from intensive oil & gas development and nearby roads. The proposed action in conjunction with similar activity occurring in the larger watershed is trending the area away from meeting Standard 3 for aquatic wildlife sensitive to sediment.

The no action alternative would result in increased erosion and sedimentation potential in ways comparable to the proposed action, and would probably contribute to the trend away from meeting Standard 3 for sediment-sensitive aquatic wildlife species.

Wildlife, Terrestrial (includes an analysis of Public Land Health Standard 3)

Affected Environment: The pad and road are located near valley bottoms within a sparsely vegetated salt desert scrub community. Juniper also occurs in the area at low densities. The area around the pads provide cover, forage, and nesting habitat for a variety of big game and small game, as well as non-game mammals, birds, and reptiles. The project area is located within winter range for elk and within winter range and severe winter range for mule deer.

Proposed Action:

Environmental Consequences: Direct impacts to terrestrial wildlife from the proposed action may include mortality, disturbance, nest abandonment/nesting attempt failure, or site avoidance/displacement from otherwise suitable habitats. These effects may be the result of approximately 6.7 acres of habitat loss or modification, increased noise from vehicles and operation of equipment, increased human presence, and collisions between wildlife and vehicles. Impacts would be more substantial during critical seasons, such as winter or during reproduction. Deer and elk are often restricted to smaller areas during the winter months and may expend high amounts of energy to move through snow, locate food and maintain body temperature. Disturbances during the winter can displace wildlife, depleting much-needed energy reserves and may lead to decreased over winter survival.

Additional, indirect habitat loss may occur if increased human activity (e.g., traffic, noise) associated with infrastructure cause deer and elk to be displaced or alter their habitat use patterns. Indirect habitat loss generally includes habitat within an eighth of a mile of a road or well pad (e.g., BLM 2007a). To limit the impacts of the new road serving the pad, a steel frame traffic control gate would be installed at the boundary between BLM and private lands (Appendix A, Number 19). This would help reduce indirect habitat loss associated with the development by prohibiting public motorized access and restricting use to authorized personnel.

A timing limitation (TL) stipulation included on the lease prohibits exploration, drilling or development activity from January 1 to March 31 in order to protect wildlife habitat. The TL does not apply to maintenance and operations of producing wells.

A decision has been made that this TL would not apply to the road construction portion of this project because it is an activity associated with restoring to production a well that has been shut-in due to inaccessibility. Other activities at the pad that are required to return the existing well to production would also be exempt from the TL.

No Action Alternative:

Environmental Consequences: There would be no impacts from the no action alternative because the Williams would not have access to the existing pad, and the existing well would be permanently shut-in.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also **Vegetation and Wildlife, Aquatic**)**:** The Rifle West land health assessment found that 38,373 acres of land within this watershed are not meeting Standard 3 for some wildlife species, most notably mule deer (BLM 2005). Of this acreage, 12,549 acres are located on BLM land. The primary problem is large-scale habitat fragmentation due to natural gas exploration and development that has resulted in increased road, well pad, and pipeline densities. This physical loss of habitat is exacerbated when combined with increasing human use.

Other factors contributing to the failure to achieve Standard 3 for wildlife include: the encroachment of juniper into sagebrush habitats, a lack of forb production, poor condition of sagebrush, and poor understory conditions. Some individual sagebrush stands are hedged and some stands are decadent with poor age class diversity and limited regeneration or recruitment.

The proposed action would result in direct and indirect losses of habitat and result in increased human use in the area. Given the level of activity in the greater area, the proposed action may further trend the watershed away from meeting Standard 3 for some terrestrial wildlife species.

The no action alternative would contribute to direct and indirect habitat losses in ways comparable to the proposed action and would contribute to the trend away from meeting Standard 3 for some terrestrial wildlife species.

SUMMARY OF CUMULATIVE IMPACTS

The *Glenwood Springs Oil and Gas Leasing and Development Final Supplemental EIS* (FSEIS) (BLM 1999b) analyzed three alternatives for oil and gas development in the Glenwood Springs Resource Area (GSRA). The assessment included an analysis of impacts of past, present, and reasonable foreseeable future actions, including predicted future oil and gas development, on both public and private lands. Since the FSEIS presents the most current analysis of cumulative impacts in the project area, it is incorporated by reference.

Until relatively recently, modifications of the region have been characteristic of agricultural and ranching lands, with localized industrial impacts associated with the railroad and I-70 highway corridors. More recently, these changes are cumulative to the growth of residential and commercial uses, utility corridors, oil and gas developments, and other rural industrial uses. These increasing activity levels have accelerated the accumulation of impacts in the area. These impacts have included: (1) direct habitat losses; (2) habitat fragmentation and losses in habitat effectiveness; (3) elevated potential for runoff, erosion, and sedimentation; (4) expansion of noxious weeds and other invasive species; and (5) increased noise and traffic and reductions in the scenic quality of the area (BLM 1999: 4-1 to 4-68).

Although none of the cumulative impacts described in the FSEIS were characterized as significant, and while new technologies and regulatory requirements have reduced the impacts of some land uses, it is nonetheless clear that past, present, and reasonably foreseeable future actions has had and would continue to have adverse affects on various elements of the human environment. The anticipated impact levels for existing and future actions range from negligible to locally major, and primarily negative, for specific resources. The primary reasons for this assessment are twofold: (1) the rate of development, particularly oil and gas development, is increasing in the area, resulting in an accelerated accumulation of individually

nominal effects; and (2) the majority of residential and commercial expansion, as well as oil and gas development, have occurred, and is likely to continue to occur, on private holdings where mitigation measures designed to protect and conserve resources are not in effect.

It is clear that the proposed action would contribute to the collective adverse impact for some resources. Although the contribution would be minor, additional ground disturbance would occur and additional habitat would be lost. Thus, the proposed action would contribute incrementally to the collective impact to vegetation, migratory birds, terrestrial wildlife, and other resources. However, the contribution to the accumulated effects would be minor because the scale of the proposed project is relatively small and mitigation measures represented by the conditions of approval for resource protection are mandated for implementation (Appendix A).

PERSONS AND AGENCIES CONSULTED:

Rob Bleil, Williams Production RMT Company
Kent Rider, Williams Production RMT Company
April Mestas, Williams Production RMT Company
Dan Collette, Williams Production RMT Company
Dave Fox, Fox Engineering Solutions (Drainage Plan)
Chuck Smith, MB Construction (Excavation Contractor)
Van Graham, WestWater Engineering (Sensitive Plants Inventory)
Harold Marshall, Uintah Engineering & Land Surveying (Professional Engineer)
Mike Mitrision, BLM Civil Engineer (Road Design Review and Approval)
Sue Nall, Army Corps of Engineers

INTERDISCIPLINARY REVIEW:

Name	***Title***	***Responsibility***
Jim Byers	Natural Resource Specialist	Team Leader, Access and Transportation, Solid and Hazardous Wastes
Mark Ennes	Planning and Environmental Coordinator	NEPA compliance
Beth Brenneman	Ecologist	Plants, Special Status Species, Invasive Non-native Species
John Brogan	Archaeologist	Cultural Resources, Native American Religious Concerns
Karen Conrath	Geologist	Groundwater, Paleontology
Jeff Cook	Wildlife Biologist	Terrestrial and Aquatic Wildlife, Special Status Species, Migratory Birds
Jeff O'Connell	Hydrologist	Soil, Air, Surface Water, Waters of the U.S., Noise
Kate Schwarzler	Landscape Architect (OTAK)	Visual Resources

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FONSI
CO140-2008-034 EA

The environmental assessment analyzing the environmental effects of the proposed action has been reviewed. The approved mitigation measures 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 RECORD

DECISION: It is my decision to approve the Sundry Notice (SN) for the construction of an alternate road and the reconstruction of the existing GV8-14 well pad. This decision will provide for the orderly, economical, and environmentally sound exploration and development of oil and gas resources on valid oil and gas leases.

RATIONALE:

1. Approval of the proposed action is validating the rights granted with the Federal oil and gas leases to develop the leasehold to provide commercial commodities of oil and gas.

2. The environmental impacts have been mitigated with measures included in the attached Conditions of Approval.

MITIGATION MEASURES: Mitigation measures presented in Appendix A will be incorporated as Conditions of Approval for both surface and drilling operations.

NAME OF PREPARER: Jim Byers, Natural Resource Specialist

SIGNATURE OF PLANNING AND ENVIRONMENTAL COORDINATOR:

Planning and Environmental Coordinator

3/20/08
Date

SIGNATURE OF AUTHORIZED OFFICIAL:

Authorized Officer

3-20-08
Date

APPENDIX A

SURFACE USE CONDITIONS OF APPROVAL

SURFACE USE CONDITIONS OF APPROVAL
CO140-2008-034

1. Administrative Notification. At least 48 hours prior to construction of access road, pipeline and/or well pad, the operator shall notify BLM representative of construction startup plans. The proposed pad, road shall be staked and flagged prior to start of construction.

2. Dust Abatement. The operator shall implement dust abatement measures as needed or directed by the BLM authorized officer. The level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) may be changed in intensity and must be approved by the BLM authorized officer.

3. Cultural Resource Education/Discovery. All persons in the area who are associated with this project must be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons will be subject to prosecution.

   Pursuant to 43 CFR 10.4(g), the BLM authorized officer must be notified, 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), activities must stop in the vicinity of the discovery and the discovery must be protected for 30 days or until notified to proceed by the authorized officer.

   If in connection with operations under this contract the project proponent, his contractors, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural or paleontological value or scientific interest such as historic or prehistoric ruins, graves or grave markers, fossils, or artifacts, the proponent shall immediately suspend all operations in the vicinity of the cultural or paleontological resource and shall notify the BLM authorized officer of the findings (16 U.S.C. 470h-3, 36 CFR 800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the authorized officer from a Federal agency insofar as practicable. When not practicable, the holder shall bear the cost of the services of a non-Federal professional.

   Within five working days, the authorized officer will inform the holder as to:

   - whether the materials appear eligible for the National Register of Historic Places
   - the mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
   - a timeframe for the authorized officer to complete an expedited review under 36 CFR 800.11, or any agreements in lieu thereof, to confirm through the State Historic Preservation Officer that the findings of the authorized officer are correct and the mitigation is appropriate

   The proponent may relocate activities to avoid the expense of mitigation and/or the delays associated with this process, as long as the new area has been appropriately cleared of resources and the exposed materials are recorded and stabilized. Otherwise, the proponent shall be responsible for mitigation costs. The authorized officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized officer that the required mitigation has been completed, the proponent will then be allowed to resume construction.

Antiquities, historic, prehistoric ruins, or objects of scientific interest that are outside the authorization boundaries but directly associated with the impacted resource will also be included in this evaluation and/or mitigation.

Antiquities, historic, prehistoric ruins, or objects of scientific interest, identified or unidentified, that are outside the authorization and not associated with the resource within the authorization will also be protected. Impacts that occur to such resources, which are related to the authorizations activities, shall be mitigated at the proponent's cost including Native American consultation cost.

4. Weed Control. The operator shall regularly monitor and promptly control noxious weeds or other undesirable plants species as set forth in the Glenwood Springs Energy Office *Noxious and Invasive Weed Management Plan for Oil and Gas operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by BLM prior to the use of herbicides. Contact Beth Brenneman, Glenwood Springs Energy Office Ecologist, at 970-947-5232 or beth_brenneman@blm.gov.

5. Raptor Nesting. Raptor nest surveys in the project vicinity resulted in the location of one or more raptor nest structures within 0.25 mile of a well pad and 0.125 mile of an access road. To protect nesting raptors, a 60-day Timing Limitation (TL) shall be applied to the initiation of construction [or drilling] activities within the buffer width[s] specified above. This TL shall apply during the period March 15 to May 15. An exception to this TL would be made if a survey conducted within 72 hours of the start of construction indicates that the nest is inactive. Contact Jeff Cook, Glenwood Springs Energy Office Wildlife Biologist, at 970-947-5231 or jeffrey_cook@blm.gov).

6. Birds of Conservation Concern: Pursuant to BLM Instruction Memorandum 2008-050, all surface-disturbing activities are prohibited from May 1 to June 30 to reduce impacts to Birds of Conservation Concern (BCC). An exception to this COA will be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate that no BCC species are nesting or otherwise present within 10 meters of the area to be disturbed. Nesting surveys shall include an audial survey for diagnostic vocalizations in conjunction with a visual survey for adults and nests. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 AM under favorable conditions for detecting and identifying a BCC species. Contact Jeff Cook, Glenwood Springs Energy Office Wildlife Biologist, at 970-947-5231 or jeffrey_cook@blm.gov).

7. Migratory Birds. It shall be the responsibility of the operator to comply with the Migratory Bird Treaty Act with respect to “take” of migratory bird species. “Take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The operator shall prevent use by migratory birds of reserve pits, produced water pits, and evaporation pits, that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds, and raptors) during completion and after completion activities have ceased. Several established methods to prevent bird access are known to work. Methods may include but are not limited to netting, the use of bird-balls, or other alternative methods that effectively prevent bird access/use. Regardless of the method used, it should be applied within 24 hours after completion activities have begun. All mortality or injury to species protected by the Migratory Bird Treaty Act shall be reported immediately to the BLM project lead.

8. Native American Religious Concerns. The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM authorized officer, as well as the appropriate

Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)).

9. Reclamation. Reclamation goals, objectives, timelines, measures, and monitoring methods for final reclamation of oil and gas disturbances are described in Appendix I (Surface Reclamation) of the 1998 Draft Supplemental EIS (DSEIS). The specific measures described below shall be followed during interim reclamation of disturbed surfaces associated with well pads, access roads, and pipelines. These measures, except seedbed preparation, shall also apply to temporary reclamation of topsoil storage piles and surfaces that are subject to interim reclamation but not scheduled to undergo interim reclamation until more than 1 year has elapsed following the surface disturbance.

   a. Seedbed Preparation. For interim reclamation, all slopes shall be reshaped prior to seedbed preparation. Initial seedbed preparation shall consist of backfilling, leveling, and ripping all areas to be seeded. Ripping shall be to a minimum depth of 18 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping shall be conducted in two passes at perpendicular directions. The ripped surfaces shall be smoothed to the final contour and covered evenly with topsoil. Final seedbed preparation shall consist of scarifying (raking or harrowing) the spread topsoil prior to seeding. If more than one season has elapsed between final seedbed preparation and seeding, and if the area is to be broadcast-seeded or hydroseeded, this step shall be repeated no more than one day before seeding to break up any crust that has formed.

      Final seedbed preparation in areas for which no topsoil is available shall include discing of the ripped surfaces to smooth the coarse clods, furrows, and windrows. Discing shall be to a depth of 4 to 6 inches and shall be conducted in two passes in perpendicular directions, with the final pass along the contour (across the slope). If more than one season has elapsed between discing and seeding, and if the area is to be broadcast-seeded or hydroseeded, the area shall be scarified (raked or harrowed) no more than one day prior to seeding to break up any crust that has formed.

      Seedbed preparation is not required for topsoil storage piles or other areas of temporary reclamation. Requests for use of soil amendments, including basic product information, shall be submitted to the BLM for approval.

   b. Seed Mixes. Selection of seed to be used in temporary or interim reclamation shall comply with the menu-based seed mixes in the letter provided to oil and gas operators dated April 16, 2007. For private surfaces, the menu-based seed mixes are recommended, but the landowner would have ultimate authority over the seed mix to be used in reclamation. The seed shall be certified free of noxious weeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation shall be supplied to the BLM Glenwood Springs Energy Office Ecologist (Beth Brenneman, 970-947-5232 or beth_brenneman@blm.gov) at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.

      Note that temporary reclamation allows use of a seed mix containing sterile hybrid non-native annual species in addition to native perennial species. Note also that for both temporary and interim reclamation, the BLM seed mixes no longer include forbs (broadleaf herbaceous species) or shrubs.

   c. Seeding Procedures. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation. A seed mix consistent with BLM standards in terms of species and

seeding rate for the specific habitat type shall be used on all BLM lands affected by the project (see Attachments 1 and 2 of the letter provided to operators dated April 16, 2007).

Where practicable, seed shall be installed by drill-seeding to a depth of 0.25 to 0.5 inch. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover. Hydroseeding and hydromulching may be used in temporary reclamation or in areas where drill-seeding or broadcast-seeding/raking are impracticable. Hydroseeding and hydromulching must be conducted in two separate applications to ensure adequate contact of seeds with the soil.

If interim revegetation is unsuccessful, the operator shall implement subsequent reseedings until interim reclamation standards are met. Requirements for reseeding of unsuccessful temporary reclamation will be considered on a case-by-case basis.

d. Mulch. Mulch shall be applied within 24 hours following completion of seeding. In areas of interim reclamation that used drill-seeding or broadcast-seeding/raking, mulch shall consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil. Hydromulching may be used in areas of interim reclamation where crimping is impracticable, in areas of interim reclamation that were hydroseeded, and in areas of temporary reclamation regardless of seeding method.

   NOTE: As an exception to this provision, mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

e. Erosion Control. Cut-and-fill slopes shall be protected against erosion with the use of water bars, lateral furrows, or other measures approved by the authorized officer. Biodegradable straw matting, bales or wattles of weed-free straw or weed-free native grass hay, or well-anchored fabric silt fence shall be used on cut-and-fill slopes and along drainages to protect against soil erosion. Additional BMPs shall be employed as necessary to reduce erosion and offsite transport of sediment.

f. Site Protection. The pad shall be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species are firmly established, whichever comes later. The seeded species will be considered firmly established when at least 50 percent of the new plants are producing seed. The authorized officer will approve the type of fencing.

g. Monitoring. The operator shall conduct annual monitoring surveys of reclaimed areas and shall submit an annual monitoring report to the authorized officer by December 31 of each year. The monitoring program shall use the four Reclamation Categories defined in Appendix I of the 1998 DSEIS to assess progress toward reclamation objectives. The annual report shall document whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing the corrective actions or other measures specified by the authorized officer.

h. Deadline for Temporary and Interim Reclamation. The operator will be allowed to construct well pad to the maximum expected pad size necessary to drill and complete the number of wells proposed for this location. After 1 year from spudding the initial well, or 1 year after spudding any successive well(s), the operator shall implement and complete the standard interim reclamation practices identified above OR submit proposed best management practices to be

approved by the authorized officer that would be implemented on the "open" pad to control stormwater runoff, weed control, wildlife protection, dust abatement, and/or visual resource management.

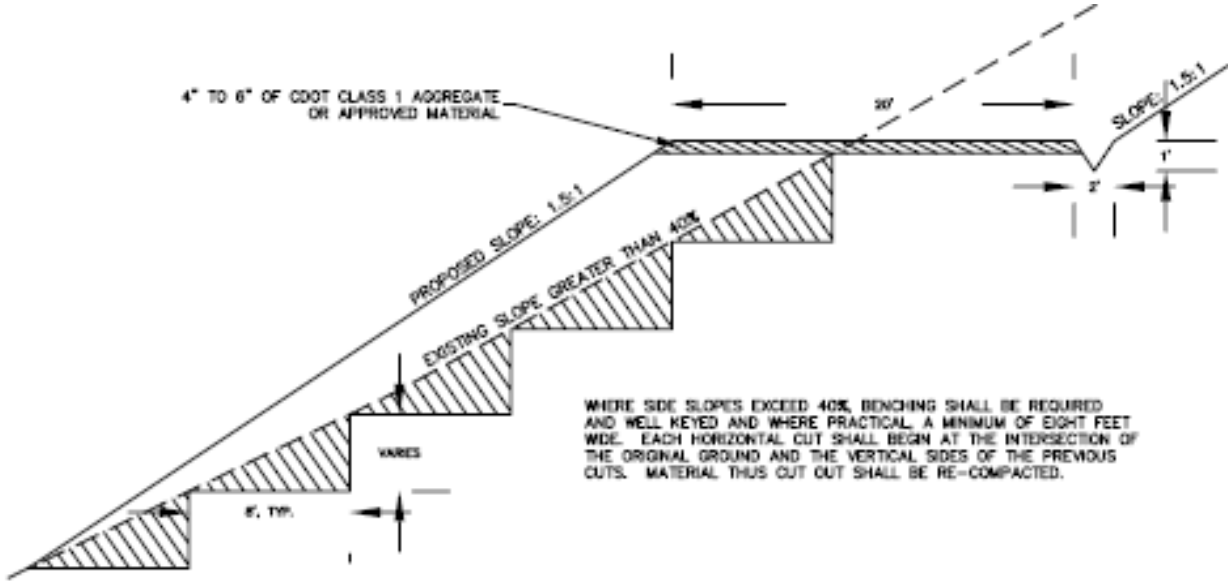
Areas subject to interim reclamation but scheduled to remain in a disturbed condition for more than 1 year shall undergo temporary reclamation, as described above.

Contact Beth Brenneman, Glenwood Springs Energy Office Ecologist, at 970-947-5232 or beth_brenneman@blm.gov.

10. a. BLM Road Construction Standards and Surfacing. Roads shall be crowned, ditched, surfaced, and constructed to BLM Gold Book standards. Roads should be periodically re-graveled when ruts exceed 6 inches in depth or as directed by the authorized officer. Initial gravel application shall be a minimum lift of 6 inches.

The operator shall construct the access road per the Road Design Package titled "GV8-14 Proposed Access Road – Version C" (dated 1/14/08) prepared by Uintah Engineering & Land Surveying ("Uintah") and stamped by Harold Marshall. The exterior limits of the proposed road and pipeline realignment shall be flagged and staked on the ground as necessary to prevent disturbance outside of the right-of-way.

Furthermore, all submitted road design plans, profiles, and cross-sections included within the APD survey package shall be referenced and followed during road and pipeline construction. Culverts will be installed at locations shown on submitted Access Road Plats included in Uintah's Road Design package. The inlet and outlet sides of culverts will generally be armored with riprap consisting of a well-graded mixture of rock sizes to prevent erosion or headcutting. The drop inlet shown on Road Design at Station 17+06 shall be replaced with open diversion ditch lined with rock or properly-sized culvert pending a revised plan to be submitted by the operator.



TYPICAL ROAD CROSS SECTION

b. General Construction Practices (Operator-submitted) – When road embankment is to be placed and compacted on hillsides, or when new embankment is to be compacted against existing embankments the slopes that are steeper than 40% when measured longitudinally or at right angles to the roadway shall be continuously benched over those area where it is required as the work is brought up in layers. Benching shall be well keyed and where practical, a minimum of eight feet wide. Each horizontal cut shall begin at the intersection of the original ground and the vertical sides of the previous cuts. Material thus cut out shall be re-compacted.

Roadway embankment of earthen material shall be placed in horizontal layers not exceeding eight inches (loose measurement) and shall be compacted as specified before the next layer is placed. Effective spreading equipment shall be used on each lift to obtain uniform thickness prior to compacting. As the compaction of each layer progresses, continuous leveling and manipulating will be required to ensure uniform density.

When the excavated material consists predominately of rock to large to be placed in eight inch layers, the Owner may permit the material to be placed in thicknesses up to the average rock dimension, but not to exceed three feet. Placing of occasional boulders of sizes larger than the maximum layer thickness may be authorized by the Engineer. Each layer shall be leveled and smoothed with suitable leveling equipment and by distribution of spalls and finer fragments or earth. If a situation exists wherein the above method of construction is not practicable the Owner may permit rock fill material to be cast or end dumped.

Frozen materials shall not be used in construction of road embankments.

c. Compaction of Road Embankments (Operator-submitted) – Perform all compaction with approved equipment well suited to location and material being compacted. Use heavy vibratory rollers for fill work and where heavy equipment is appropriate. In areas where a small amount of fill is necessary, a hand-operated compactor (whacker) will be required. Density testing will not be required provided adequate equipment and wheel compaction are maintained. Earth embankment materials shall be deposited in layers not exceeding eight inches in thickness before compaction. Each layer of embankment material shall be compacted by routing construction equipment, compactors, or both, uniformly over the entire surface of each layer before the next layer is placed

d. Compaction Proof Rolling (Operator-submitted) – Proof rolling with a heavy rubber tired roller will be required or when ordered. Proof rolling shall be done after field compaction has been obtained. Areas found to be weak and those areas which failed shall be ripped, scarified, wetted if necessary, and recompacted to the requirements for density and moisture at the Contractor's expense.

The heavy rubber tired proof roller shall have a minimum capacity of 40 tons. The operating weight of the roller shall be not less than 10 tons per wheel. The roller shall be equipped with pneumatic tires of equal size and type spaced evenly across the entire width of the roller. Tires shall be inflated to a minimum pressure of 70 pounds per square inch and a maximum pressure of maintained within a tolerance of five pounds per square inch. The axle arrangement on the roller shall be such that oscillation of each individual tire or oscillation of each sit of two tires will be obtained. The total axle load shall be transmitted to the ground uniformly on the tires. The rolling width of the unit shall not be less than seven feet exclusive of the power unit.

Comparable heavy rubber tired rolling equipment that does not conform to the above requirements may be used only after approval has been obtained from the Owner.

e. Culverts and Storm Water Controls – These shall be installed per Williams Production RMT "Storm Water and 404 Handbook of Best Management Practices (BMPs)", dated January 2006 as well as be in accordance with COA Number 11 identified below.

f. Closure and Reclamation of Existing Pad Access Road – Operator shall physically close the existing pad access road from BLM/Lindauer property line west to the limits of disturbance for the GV8-14 pad expansion. Such work shall include the removal of salvageable gravel prior to ripping and reshaping of the road and incorporation of Reclamation COAs (see Number 9).

11. Culverts. Culverts at drainage crossings shall be installed during no-flow or low-flow conditions and shall be designed and installed to pass a 25-year or greater storm event. The minimum culvert diameter in any installation for a drainage crossing or road drainage shall be 18 inches. Contact Jeff O'Connell, Glenwood Springs Energy Office Hydrologist at 970-947-5215 or jeffrey_o'connell@blm.gov. Crossings of drainages deemed to be jurisdictional waters of the U.S. pursuant to Section 404 of the Clean Water Act may require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the U.S. Army Corps of Engineers recommends designing drainage crossings for the 100-year event. Contact Sue Nall at 970-243-1199 x16 or susan.nall@usace.army.mil.

12. Pipeline Installation. The existing 6-inch and 12-inch surface pipelines shall be buried within the proposed road approximately from Station 5+00 to 7+00 where the lines parallel the road alignment and allowed to remain surface pipelines along their existing alignments down the steep slope to the GV8-14 pad. The buried pipeline segments underneath the existing GV8-14 pad shall be rerouted and buried along northern edge of pad per Pad Drainage Plan (dated 2/20/08) prior to pad reconstruction.

13. Road Maintenance. The operator shall be responsible for providing timely year-round road maintenance and cleanup on the access road. A regular schedule for maintenance shall include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement, and dust abatement. The road shall be crowned, ditched, and drained with culverts and/or water dips. When rutting within the traveled way becomes greater then 6 inches, blading and/or gravelling shall be conducted as approved by the authorized officer.

14. Jurisdictional Waters of the U.S. The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers prior to discharging fill material into waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. are defined in 33 CFR Section 328.3 and may include wetlands as well as perennial, intermittent, and ephemeral streams. Permanent impacts to waters of the U.S. may require mitigation. Contact Sue Nall, Regulatory Specialist, Colorado/Gunnison Basin Regulatory Office, U.S. Army Corps of Engineers, at 970-243-1199 x16 or susan.nall@usace.army.mil.

15. Paleontological Resources. All persons associated with operations under this authorization shall be informed that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered the operator shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified to proceed by the BLM authorized officer.

As feasible, the operator shall suspend ground-disturbing activities at the discovery site and immediately notify the BLM authorized officer of any finds. The BLM authorized officer will, as soon as feasible, have a BLM-permitted paleontologist check out the find and record and collect it if warranted. If ground-disturbing activities cannot be immediately suspended, the operator shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.

16. Visual Resources. To the extent practicable, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. Large rock material and vegetation removed during construction shall be salvaged and redistributed over the exposed cut-and-fill slopes or along linear features to provide variation in color and texture.

    Efforts shall be made to undulate the top edge of the cut slopes in order to create a varied and more natural appearance to the disturbed surfaces.

    Contrast in the landscape shall be reduced by sculpting the saddle cut to fit with the natural terrain and to repeat the form and line of the surrounding environment. Cuts with uniform, unvarying slopes should be avoided (see attached sketch).

    Above-ground facilities shall be painted a natural color selected to minimize contrast with adjacent vegetation or rock outcrops. The color shall be specified by the BLM and attached as a COA to individual APDs.

17. Range Management. Range improvements (fences, gates, reservoirs, pipelines, etc) shall be avoided during development of natural gas resources to the maximum extent possible. If range improvements are damaged during exploration and development, the operator will be responsible for repairing or replacing the damaged range improvements. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.

18. Fire Prevention. The operator shall take measures for prevention and suppression of fire in the project area and adjacent lands use or traversed in connection with operations. The operator is responsible for ensuring that prevention, detection, pre-suppression, and suppression activities are conducted in accordance with Federal, State, and County laws, regulations, and ordinances pertaining to fire. The operator shall provide all necessary firefighting tools and equipment at the project site and shall maintain the tools and equipment in a serviceable condition and readily accessible for use in fire suppression. The operator shall take such additional fire prevention and suppression measures as may be required by the authorized officer based on weather or other conditions affecting fire incidence and control.

19. Installation of Traffic Control Gate. To limit the impacts of the new road serving the pad, a steel frame traffic control gate shall be installed at or near the boundary between private and BLM to restrict road use to the oil and gas operator, the grazing permittee, BLM personnel, and other administrative users. Such gate shall be installed within 14 days after the road work is completed, unless otherwise authorized by the BLM. Any additional means necessary to prevent public motorized access such as boulders or fencing shall be installed and maintained by the operator.

Sketch as referenced in Visual Resources COA (Number 16)

Existing View

GV 8-14

Proposed Grade
Existing Grade

Cut slopes should fit with naturally adjacent terrain and mimic surrounding hillside slopes.

Cut slopes should NOT be sharp and angular with obviously man-made grades