Record of Decision Castle Peak and Eightmile Flat Oil and Gas Expansion Project Prepared by the Vernal, Utah Field Office August 2005

This document records the decision made by the Bureau of Land Management (BLM) for managing the public land surface and federal mineral estate in the Castle Peak and Eightmile Flat Oil and Gas Expansion Area in Uintah and Duchesne Counties, Utah (**Figure 1**). Approximately 90 percent of this area is under federal ownership, and the remainder is owned by the State of Utah. Newfield Rocky Mountains, Inc. is proposing to expand oil and gas operations within this geographic area by drilling additional oil and gas wells, and interconnecting these wells with existing and new infrastructure (gas gathering pipelines, water supply pipelines, tanks, and electrical distribution lines). Newfield Rocky Mountains, Inc. (Newfield) acquired the operating interests of Inland Resources, Inc. in 2004. Newfield's proposed operation of the well field, and applicant-committed environmental protection measures are the same as those proposed by Inland Resources.

The Record of Decision and the Final EIS have been published together. To meet the requirements of the National Policy Act, surface or sub-surface development activities authorized by the ROD may not proceed until 30 days after the publication date of this Final EIS/ROD.

1.0 DECISION

The BLM has decided to approve the Agency-preferred Alternative (Alternative A) oil and gas wells and associated ancillary facilities located on BLM-administered public lands that are located outside the Pariette Wetlands Area of Critical Environmental Concern (ACEC). The BLM has decided to defer approval of new wells and ancillary facilities located on BLM-administered public lands within the Pariette Wetlands ACEC until a comprehensive population inventory has been completed for the Uinta Basin hookless cactus (*Sclerocactus glaucus*) within suitable habitat on BLM lands within the Pariette Wash watershed. The locations of the approved and deferred wells and associated roads are illustrated on **Figure 2**.

Future authorization of all or a portion of the wells on BLM-administered public lands within the Pariette Wetlands ACEC will depend upon the location and size of cactus populations within the ACEC, and the results of site-specific NEPA analysis on oil and gas development proposals within the ACEC boundary.

This decision to approve the Agency-preferred Alternative (Alternative A, with modifications), recognizes that oil and gas development has been ongoing within this area for over 50 years, and that nearly the entire area proposed for development has been leased. These leases represent valid existing rights. The decision also acknowledges that there are important natural and cultural resources within the area, including listed threatened species, and existing BLM Areas of Critical Environmental Concern (Pariette Wetlands, Lower Green River). This decision balances the rights to develop oil and gas while protecting surface resources over the long term. It also acknowledges an unresolved conflict between oil and gas development, and





protection and recovery of the Uinta Basin hookless cactus, a listed threatened species. By acquiring additional information about the location and condition of populations of this species within the ACEC and adjacent areas, the BLM will make better-informed decisions about where and how to place future oil and gas facilities. Further explanation of the rationale for this decision is contained in Section 4.0, Management Considerations.

Approvals of the individual project components are subject to the administrative requirements and conditions of approval listed in Section 2.0, Administrative Requirements and Conditions of Approval. This ROD authorizes the BLM, Vernal Field Office Manager to process Applications for Permit to Drill (APDs), Sundry Notices (SNs), Rights-of-way (ROWs), and Temporary Use Permits (TUPs) on public lands administered by the BLM for the Castle Peak and Eightmile Flat Project Operator (Newfield) and for companies contracted by Newfield. Approval of individual applications authorize the construction and operation of various project components (e.g., well pads, access roads, and pipelines).

Based on the ongoing operations for recovering oil using waterflooding methods, the authorizations contained herein are based on a development pattern of one well per 40 acres. If Newfield requests a spacing density that is less than 40 acres per well (e.g., one well per 20 acres), then additional environmental analysis will be required.

1.1 Approved Project Components

This ROD provides the BLM Vernal Field Office Manager approval to permit the following project components on BLM-administered lands within the Castle Peak and Eightmile Flat Expansion Area:

- 778 oil and gas well locations.
- 261 miles of new and existing access roads, with adjacent parallel utility corridors for buried water pipelines, and aboveground natural gas gathering pipelines.
- 2 water filtration/injection plants and associated 6.9-mile 12-kV electrical powerline.
- 3 to 5 new water wells installed in the Green River alluvium, connected to a centralized pump station.
- A 7.5-mile buried water pipeline connecting the Green River water supply pump station with the water filtration/injection plants.

2.0 ADMINISTRATIVE REQUIREMENTS AND CONDITIONS OF APPROVAL

Implementation of the Castle Peak and Eight Mile Flat Expansion Project is subject to the following implementation requirements and conditions of approval.

2.1 Development Plans

Newfield will comply with BLM Onshore Orders, Utah Division of Oil, Gas and Mining Rules, and EPA underground injection rules as listed on Table 2.1-1 in the Final EIS. Newfield will drill and operate wells and conduct reclamation in accordance with the Newfield Standard Operating Procedures outlined in Final EIS Appendix A, and will apply the BLM revegetation mixtures included in Appendix A. Before authorization of

individual actions on public lands (e.g., APD, SN, ROW, TUP), the final location for each well site, access road, gathering pipeline segment, or other facility will be determined following preparation of a site-specific environmental document in accordance with the BLM National Environmental Policy Handbook (H-1790-1).

2.2 Interagency Coordination

In its responsibilities as the lead federal agency, the BLM consulted with the U.S. Fish and Wildlife Service (USFWS) about potential effects on listed threatened and endangered species from project construction and operation. The USFWS reviewed the Draft EIS for the project, and provided comments (see Chapter 6.0 of the Final EIS). In March 2005, the BLM submitted a Biological Assessment to the USFWS. The BLM concluded that the Project may adversely affect the Uinta Basin hookless cactus; may adversely affect the Colorado pikeminnow, humpback chub, bonytail, razorback sucker; and may adversely modify designated critical habitat for the four fish species through depletions from the Upper Colorado River System. In its Biological Opinion (Final EIS Appendix B), the USFWS concurred with the BLM's conclusions for these species.

The Biological Opinion contains recommended conservation measures to protect and recover the Uinta Basin hookless cactus, and the four Colorado River native fish. The BLM has adopted nearly all these conservation measures (with minor modifications), and has included these measures in the conditions of approval. One exception is the recommendation that no further surface occupancy by oil and gas facilities (outside existing ROWs) be approved in the Pariette Wetlands ACEC. Because of valid existing lease rights, and current management prescriptions included in the Diamond Mountain Resource Management Plan, the BLM cannot stipulate a blanket "no surface occupancy" requirement for oil and gas development within this ACEC. As a practical alternative, the BLM has decided to defer authorization of new wells and access roads within the ACEC boundaries until the locations of cactus sub-populations are better defined, and site-specific planning can be conducted within areas proposed for the placement of new wells and roads.

2.3 Authorizing Actions and Conditions of Approval

Newfield is responsible for obtaining all necessary federal, state, and county permits. A list of expected permits and authorizations is presented in Final EIS Table 1.5-1. Attachment 1 provides a comprehensive list of applicant commitments, RMP stipulations, EIS mitigation measures, and Biological Opinion conservation measures. These commitments and conditions are organized by resource.

2.4 Monitoring

Monitoring plans were developed by the BLM to address surface management issues within the wellfield development area based on applicant commitments, mitigation measures contained in the Agency-preferred Alternative in the EIS, and to address monitoring requirements contained in the USFWS Biological Opinion. These plans are included in Attachment 2.

3.0 SUMMARY OF THE CASTLE PEAK AND EIGHTMILE FLAT PROPOSED ACTION AND ALTERNATIVES

3.1 Range of Alternatives

Three alternatives were evaluated in the EIS: No Action, Proposed Action, and Alternative A. The range of reasonable action alternatives (Proposed Action, Alternative A) included in the Final EIS was shaped by the following factors:

- 1. Oil extraction within the overall Monument Butte wellfield requires a very specific well spacing grid. A 40-acre well spacing (i.e., one well per 40 acres) is required to economically extract heavy crude oil using waterflooding methods. Because of this spacing requirement, the flexibility to move well locations is very limited because increasing the distance between injection and production wells decreases oil production below economic levels. Eliminating wells within the 40-acre grid spacing also affects the productivity of adjacent wells. The BLM considered the option of increasing the spacing to 80 acres between wells. BLM examined the economics of a greater spacing, and concluded that the project purpose and need could not be met with a wider well spacing (see Final EIS Section 2.6.3, Greater than 40-acre Drill Pad Spacing). BLM also considered the option of directional drilling multiple wells from a single pad. BLM reviewed the results of a directional well test in the Monument Butte/Myton Bench field conducted by Inland Resources. After reviewing the results, BLM concurred with Inland that directional drilling methods would not be economic, based on higher drilling and completion costs, higher well maintenance costs, and relative product recovery rates (see Final EIS Section 2.6.2, Directional Drilling of Multiple Wells from One Drill Pad Location).
- 2. Because of prior oil and gas leasing, the options for reasonable large scale "no surface occupancy" alternatives are limited. Nearly the entire Proposed Action development area is currently leased for oil and gas development. These leases are valid existing rights. Very few leases were granted after publication of the Diamond Mountain RMP (see Final EIS Figure 1.5-2). The BLM considered the alternative of not allowing further oil and gas drilling in the proposed development. Because of prior leasing, BLM cannot deny operators the right to drill on those leased lands. The Pariette Wetlands ACEC is partially encompassed by both the No Action and Proposed Action development areas. The Diamond Mountain RMP, which established this ACEC, did not specify a blanket "no surface occupancy" restriction on surface developments. The BLM cannot dictate resource protection measures on Utah State lands.

3.2 No Action Alternative

The No Action consists of not approving new oil and gas wells within the proposed Castle Peak and Eightmile Flat Expansion area, which represents a portion of the overall Monument Butte/Myton Bench oil and gas field. However, existing wells could continue production, and remaining undrilled well locations that were approved under previous Environmental Assessments could be drilled and produced. The estimated total No Action development is 671 wells, of which half are production and half are water injection wells to enhance production. Both crude oil and natural gas are produced from the same well. Overall surface

disturbance is estimated to be 2,714 acres. A total of 210 miles of existing and new access are needed to support this level of development. Water for enhanced oil recovery is being provided by the Johnson Water and Upper County Water Districts. Water consumption is estimated to be 938 acre-feet per year. Crude oil production is placed in tanks, and collected and trucked to Salt Lake City. Natural gas is transmitted by pipeline to existing processing plants, which are connected to the existing interstate natural gas pipeline system. Applicant-committed environmental protection measures are being applied throughout the development area, and the Diamond Mountain RMP stipulations apply to those leases granted after the RMP publication date.

Analysis of the No Action Alternative provides a benchmark of existing environmental impact against which the decision maker can compare environmental effects from the Proposed Action and Alternative A. Because the leases within the proposed development area are in conformance with existing planning guidance, and potentially adverse surface impacts can be mitigated, denial of development would not be a reasonable decision.

3.3 Proposed Action

The Proposed Action consists of the development of all well locations on a 40-acre spacing grid within the development area. Under a complete development scenario, a total of 973 wells would be drilled, of which half would be production wells and half would be water injection wells to enhance production. An estimated 272 miles of existing and new access roads would be required to support this development proposal. Water required for enhanced oil recovery would be provided from existing sources (Johnson Water and Upper County Water Districts) and from new water supply wells drilled in the Green River alluvium. Water would be pumped from the wells to two new filtration/injection stations in the central part of the well through a 7.5-mile buried pipeline. Power for the filtration/injection stations would be provided by a 12-kV electrical powerline that would originate at an existing transmission line. Estimated annual water requirements would be 2,194 acre-feet per year, the majority of which could come from the Green River. Distribution of crude oil and natural gas production would be the same as the No Action Alternative. Applicant commited-environmental protection measures would be applied throughout the development area, and the Diamond Mountain RMP stipulations would be applied only to those leases granted after the RMP publication date.

Analysis of the Proposed Action development plan in relation to natural and human resources indicated that stipulations attached to existing leases and applicant-committed measures were inadequate to provide acceptable protection of the following resources: 1) riparian resources and water quality within the Pariette Wash Drainage; 2) migratory birds protected under the Migratory Bird Treaty Act; 3) wildlife as the result of pump jack noise; 4) surrounding habitat for raptor nests and artificial nest structures; 5) sage grouse and blacktailed prairie dog populations and habitat maintenance; and 6) Uinta Basin cactus populations and habitat, and 7) soils and sensitive plant habitat affected by unauthorized off-highway vehicle traffic. BLM developed an alternative well location configuration, and developed mitigation measures. These changes resulted in a new alternative (Alternative A).

3.4 Alternative A

Alternative A consists of the same development plan as the Proposed Action except that the riparian setback criteria and other surface occupancy and environmental protection measures contained in the Diamond Mountain RMP would be applied to all wells and ancillary facilities, regardless of lease dates. Under this alternative a total of 922 wells would be drilled (51 fewer than the Proposed Action). An estimated 261 miles of existing and new roads would be required to support this development. Water requirements for field injection would be obtained from the same sources as the Proposed Action, but volumes would be slightly less (1,942 acre-feet per year). Distribution of crude oil and natural gas production would be the same as the No Action Alternative.

Alternative A is the Final EIS Agency-preferred Alternative. The BLM integrated the existing resource management stipulations attached to prior Monument Butte oil and gas field EAs with new mitigation measures that were identified to address potential impacts identified for the Proposed Action. Riparian setbacks for both perennial and intermittent channels within the Pariette Wash were included in this alternative. Application of these setbacks eliminate site-specific well pad siting concerns, such as locations of wells within flood control impoundments and active flood plains, and potential interference with water management structures within the Pariette Wetlands.

The economic consequences of implementing this alternative would be the elimination of 51 well locations that could not be drilled at the locations proposed by Newfield. The BLM believes that the elimination of these well locations is "reasonable" and would not result in an absolute denial of valid lease rights because access to the underlying resources at these locations could become economically feasible in the future with improvements in oil recovery technology, and other well location options using current technology may be available in the future within these leases (e.g., infill wells at higher densities than 40 acres).

3.5 Record of Decision Authorization

The well locations and conditions of approval included in the ROD represent the most reasonable preferred alternative. This ROD authorizes the Alternative A well development pattern, the Final EIS mitigation measures associated with this alternative, and nearly all the Biological Opinion conservation measures. However, authorization of the wells and ancillary facilities proposed within the Pariette Wetlands ACEC would be deferred until a comprehensive survey of the Uinta Basin hookless cactus population distribution is completed within this area. Further development could proceed within this area, based on avoidance and protection of cactus population. The total number of wells that may be authorized could be less than the number included under Alternative A, and the locations of some wells may not be optimally spaced within the waterflooding grid. The basis of this decision is the recognition that additional information is needed on cactus sub-populations to better define potential future effects on the entire population (including the variant brevispinus), and to insure that adequate baseline data are available for development planning, and monitoring effects so that BLM can meet its responsibilities under the Endangered Species Act.

Based on the selection of the Agency-preferred Alternative, 778 well locations are now authorized on BLMadministered public lands outside the Pariette Wetlands ACEC; 93 well locations on BLM-administered public lands within the Pariette Wetlands ACEC are deferred for future authorization; 51 well locations on state lands both inside and outside the ACEC would be authorized by the State of Utah. No proposed well locations on state lands were eliminated by application of Diamond Mountain RMP setback criteria.

The well field development consequences of this decision would be to defer well drilling and production within the Pariette Wetlands ACEC for a minimum of 2 years while surveys are completed. Effects on natural resources from surface disturbance within this area also would be deferred for this same time period. This ACEC drilling deferral would not affect the development of 778 BLM-administered public land locations, or the 51 well locations on state lands, which would require at least 5 years to drill and produce. As discussed previously, the number of wells ultimately authorized in the ACEC may be less than those that would be authorized under Alternative A. However, for the same reasons described for Alternative A, the potential reduction in wells at requested locations may be offset by authorizations at different locations within the same lease, or use of an alternative technology.

4.0 MANAGEMENT CONSIDERATIONS

The decisions to authorize the 778 well locations and ancillary facilities on BLM-administered lands; to defer authorization of 93 wells and ancillary facilities on BLM-administered lands within the Pariette Wetlands ACEC; to implement the Diamond Mountain RMP stipulations throughout the proposed development area; and to implement Final EIS mitigation measures and USFWS conservation measures represent a reasonable management approach that allows oil and gas development on existing leases within a recognized sensitive natural resource area. The existing natural resources will be maintained by careful management of future surface development through implementation of environmental protection measures. The effectiveness of these measures will be continuously verified by monitoring throughout the project life.

The decision to approve components of the Castle Peak and Eightmile Flat Expansion Project includes consideration of the following factors:

- 1. <u>Consistency with land use and resource management plans</u>. The proposed development, as modified by the decisions contained in the ROD, is consistent with the oil and gas leasing and surface management guidance contained in the Diamond Mountain Resource Management Plan.
- 2. <u>Public involvement, scoping issues, and Draft EIS comments</u>. The public and agency involvement process for this project met the NEPA requirements for public involvement. These opportunities included: a) the Notice of Intent to prepare and EIS, which opened the scoping process; b) an agency stakeholder meeting that provided reviewing agencies an opportunity to describe project issues and potential mitigation; c) two public scoping meetings (Vernal and Roosevelt, Utah) prior to preparing the Draft EIS; d) a public meeting held in Vernal during the public comment period on the Draft EIS; and e) responses to written comments received on the Draft EIS. The comments received were grouped, and responses are presented in Chapter 6.0, Consultation and Coordination, in the Final EIS.
- 3. <u>Management considerations based upon public comments received</u>. The following issues resulted in the development of additional mitigation measures, and additional criteria for locating wells and ancillary facilities in the proposed wellfield expansion area:

- The potential effects on the Uinta Basin hookless cactus and its habitat from wellfield surface disturbance represent the primary issue addressed by this EIS. The BLM has carefully considered the comments received from conservation groups concerning this species, as well as input from the U.S. Fish and Wildlife Service during the Section 7 consultation. The BLM has agreed to implement the USFWS conservation measure recommendations within the limits of BLM's land management responsibilities. The BLM also has decided to defer further well site development within the Pariette Wetlands until the overall Uinta Basin hookless cactus population size and distribution are better understood.
- The long-term health of the riparian systems and water quality within the Pariette Wash watershed, which drains to the Green River was a primary issue. Measures to address this issue include riparian and intermittent channel setbacks for well pads, measures to reduce the risk of spills from gathering pipelines conveying natural gas condensates, and measures to control the spread of weeds and improve the rate and quality of vegetation recovery on disturbed surfaces.
- The protection, maintenance and recovery of wildlife habitat and sensitive species was a primary issue. BLM reponses to this issue are reflected in additional mitigation measures to reduce pump jack noise, protect raptor nests, reduce the potential loss of nesting migratory birds, maintain sage grouse breeding and brooding sites, and manage development within black tailed prairie dog colonies.
- 4. <u>Agency Statutory Requirements</u>. The BLM is consistent with federal, state, and county authorizing actions based on consultation with agency representatives. Newfield will be responsible for obtaining additional federal, state, and local approvals as outlined in Final EIS Table 1.5-1.
- 5. <u>National Policy</u>. Private exploration and development of federal oil and gas leases is an integral part of the BLM oil and gas leasing program under the authority of the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976. Authorization for the lessees to exercise their rights in developing oil and gas leases is necessary to encourage development of domestic oil and gas reserves to reduce the United States' dependence on foreign energy sources. The consideration of valid existing rights was a key factor in determining the range of reasonable alternatives, explained in Sections 3.1 and 3.2.
- 6. <u>Measures to avoid or minimize environmental harm</u>. The BLM has developed mitigation measures in the Final EIS (and included as conditions of approval in ROD) to address environmental issues to avoid or minimize identified sources of potential environmental harm. These measures were based on the input of BLM's technical specialists, as well as input from other agencies and the public. BLM has developed a monitoring program, outlined in Section 2.4 of the ROD, that will be implemented to provide a continuous update of the progress of field development, and compliance with the conditions of approval.

Signature Page For Castle Peak and Eightmile Flat Oil and Gas Expansion Project Record of Decision

Signature and Title of Responsible Official:

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Vernal Field Office Manager Title

August 24, 2005

Date

ATTACHMENT 1

Table 1
Project Implementation and Conditions of Approval
for the Castle Peak and Eightmile Flat Oil and Gas Expansion $\ensuremath{Project}$

Applicant Committed Measures	Applicable DM-RMP	Stipulations	USFWS Conservation	Measures	EIS Mitigation	Measures	
							SOIL AND WATER RESOURCES
	X						SW01/PW30 – Allow new surface-disturbing activities on critical soils on about 75,000 acres within level 3 lands only if watershed values are maintained. (Pariette Wetlands ACEC has been designated as level 3 for critical watershed and soils.)
	X						SW06 – Upgrade maintenance of existing BLM roads, close and rehabilitate roads no longer necessary, maintain or increase vegetation cover or construction of erosion control structures where possible to reduce critical erosion conditions.
							Construct new roads to standards that will maintain or improve watershed conditions.
	X						SW10 – Produced water from oil and gas wells will continue to be disposed of by authorized methods that could include injection, removal to non-federal disposal pits, or on-lease disposal pits.
					x		SWM-1 – Roads parallel to the stream channel and well pads will be set back 200 feet or more from active stream channels (average 3 feet wide or greater without an associated riparian zone) in the watersheds of all tributaries to Pariette Draw. The same setback will apply to each active channel (average 3 feet wide or greater) in all watersheds within the wellfield boundary south of the Pariette Draw that drain the wellfield directly to the Green River (Sheep Wash, other unnamed washes). This setback distance may be lessened if site specific analysis demonstrates that: 1) the proposed well could be placed on higher terrain above the 100-year floodplain but not less than 100 feet from a stream channel, 2) the 100-year floodplain can be demonstrated to be narrower than 200 feet in the area proposed for well location; 3) the well pad can be increased in height to avoid a predicted over-topping 50-year flood, but would not be placed closer than 100 feet from a stream channel astream channel after redesign.
					Х		SWM-2 – If well pads are to be located on steep slopes (8 to 40 percent) with a slope length of 200 feet or more downslope of the pad, the pad will be bermed, and the pad surface will drain away from slopes.
					Х		SWM-3 – No well pads will be located on slopes 40 percent or greater.
					X		SWM-4 – Newfield will apply topsoil and revegetation seed over 90 percent of a production well site when the production well is converted to an injection well. Topsoil and revegetation seed will be applied to the remaining 10 percent of the well site area upon injection well closure.

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					Х		SWM–5 – Newfield will control employees and contractors from driving OHVs off established roads and trails within the area proposed for development.
							PALEONTOLOGICAL RESOURCES
	Х						CR06 – DMRA will adhere to the following significance criteria for paleontological resources: Should significant resources be found during inventory, impacts to them will be mitigated, generally through avoidance. Should it be determined that the paleontological resources cannot be avoided, a program of mitigation will be developed through consultation between BLM and the Utah State Paleontologist.1
	Х						PW03 – Paleontological clearances will be required on a case-by-case basis in the Pariette Wetlands ACEC.
X							Surveys for paleontological resources would be conducted on those areas where bedrock excavation into sensitive formations is necessary. Areas with sandstone outcrops would be surveyed for paleontological resources by a qualified paleontologist funded by Newfield. The survey would determine fossil localities and the sensitivity of the area for fossil resources. These actions would determine the necessity of having a qualified paleontologist on-site during construction. If paleontological resources were uncovered during ground disturbing activities, Newfield would suspend all operation that would further disturb such materials and immediately would contact BLM's AO, who would arrange for a determination of significance and, if necessary, recommend a recovery or avoidance plan.
							AIR QUALITY
	Х						AQ-01 – DMRA will design projects and permitted uses that comply with UAC Regulation R446-1. The best air quality control technology, provided by the Utah Bureau of Air Quality, will be applied as needed to meet air quality standards.
	X						AQ02 – DMRA will comply with UAC Regulation R446-1-4.5.3, which prohibits the use, maintenance or construction of roadways without taking appropriate dust abatement measures. Compliance will be obtained through special stipulations as a requirement on new projects and through the use of dust abatement control techniques in problem areas.
							FLOODPLAINS AND RIPARIAN AREAS
	X						PW31/SW03 – Areas of critical soils and floodplains are closed to off-highway vehicle (OHV) use and surface-disturbing activities during periods of saturated soils.
	Х						RI01 – Avoid or mitigate the impact of surface-disturbing activities on riparian-wetland areas. Riparian habitat will be protected by limiting surface-disturbing activities to established ROW corridors and crossings and by restricting grazing.

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	Х			RI04/PW27 – Allow new surface-disturbing activities within 330 feet of riparian zones only when it can be
				shown that there are no practical alternatives, that long-term impacts are fully mitigated, or that the
-				construction is an enhancement to the riparian area.
	X			RI06 – Keep construction of all new stream crossings to a minimum. Culverted stream crossings will be
				designed and constructed to allow fish passage. All stream crossing will be designed and constructed to
	V			Reep impacts to riparian and aqualic habitat to a minimum.
	^			FW34 – Manage the vegetation [in the Panelle Wellands ACEC] to attain the ecological state that would most benefit riperion and waterched values, and manage vegetation in the remaining cross in a way which
				results in the highest vegetation species diversity to meet the special status plant species, wildlife, and
				restion values
				NOXIOUS WEEDS
Х				Newfield would develop and implement a BLM-approved noxious weed monitoring and control program for
				the project disturbance areas. Newfield, in coordination with the BLM, would develop and implement
				reclamation monitoring procedures to maximize the success of the reclamation program. If successful
				reclamation is not occurring for both herbaceous and woody species, Newfield would coordinate with the
				BLM on appropriate remedial measures.
				VEGETATION
			Х	NWM-1 – To prevent the introduction of new weed species into the project area, construction equipment
				arriving from off-lease locations will be power-washed prior to arrival and use in order to remove noxious
				weed seeds, roots, or rhizomes.
				FISH AND WILDLIFE
	Х			FW19 – Roads, except county and State ROWs, may be permanently or seasonally closed where
	N N			human/wildlife conflicts exist or are expected, or when roads are no longer necessary.
	X			PW06/PW15 – Do not allow activities that would result in adverse impacts to nesting waterfowl from March
	V			T through May 25 in the Parlette Wetlands ACEC.
	X			PWU1 – Do not allow surface-disturbing activities, within 0.125 mile of active goose nest sites year-round in

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures	
	Х			FW35 – Do not allow surface-disturbing activities within 0.5 mile of an active nest site within the specified active reproductive periods for special status or sensitive bird species. This recommendation would not be considered for maintenance and operation of existing facilities, or if impacts can be mitigated through other management actions. A site-specific analysis will be completed to determine if terrain features adequately protect an active nest site from a proposed surface-disturbing activity.
	X			FW26 – No construction or surface-disturbing activities will be allowed year-round within 0.5 mile of known golden eagle nest sites active within the past 2 years, which would adversely affect current use or limit or preclude potential future use of the nest, unless a permit to take is obtained from the USFWS. This restriction does not apply to maintenance and operation of existing programs and facilities, or if impacts can be mitigated through other management actions. A site-specific analysis will be completed to determine if terrain features adequately protect the nest site from a proposed surface-disturbing activity. It would not apply if impacts could be mitigated through other management actions or site-specific analysis of terrain features.
	Х			FW14 – Construct or modify all power lines to prevent electrocution of raptors.
	Х			PW09 – In the Pariette Wetlands ACEC, no construction or surface-disturbing activities (does not apply to casual use) are allowed year-round within 0.5 mile of known golden eagle or ferruginous hawk nests which would adversely affect current use or limit or preclude potential future use of the nest, or unless a permit to take is obtained from the USFWS.
	Х			FW06 – Protect and enhance 6 miles of riparian habitat in Pariette Draw to ensure stabilization of the peregrine falcon's avian prev base, and improve habitat conditions.
	Х			FW06 – Improve or maintain greater sage grouse strutting, nesting, and brooding-rearing habitat throughout the Habitat Management Plan (HMP) area. Maintain or improve sage grouse wintering habitat.
	Х			FW24 – Do not allow surface-disturbing activities within 1,000 feet of greater sage grouse strutting grounds. OHV use will be limited to designated roads and trails yearlong within this area. This restriction does not apply if impacts could be mitigated through other management actions.
	Х			FW25 – Do not allow surface-disturbing activities within greater sage grouse nesting area (a 2-mile radius of sage grouse strutting grounds within the sagebrush vegetation type) from March 1 through June 30. OHV use will be limited to designated roads and trails during this period. This restriction does not apply if greater sage grouse are not present or impacts could be mitigated through other management actions, nor does it apply to maintenance and operation of existing facilities.

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures	
	Х			FW09 – Wildlife habitat for Management Indicator Species (MIS) will continue to be enhanced throughout the resource area by taking opportunities to create water facilities, maintain or create raptor nesting sites, and to design vegetation treatments outlined in the DMRA RMP and specified in the activity plans with these species in mind.
			Х	WFM-1 – On level or gently sloping ground (5 percent slope or less) Newfield will elevate surface pipelines (4 inches or greater in diameter) a minimum of 6 inches above the ground to allow passage of small animals beneath the pipe. This ground clearance will be achieved by placing the pipeline on blocks at intervals of 150 to 200 feet.
			X	WFM-2 – Newfield will contract a qualified biologist to conduct a breeding bird survey within 660 feet (100 meters) from proposed surface disturbance activities associated with wellfield development (e.g., well pads, roads, pipelines, power lines, and ancillary facilities) that would occur during the breeding season from April 1 through July 31. The biologist will provide documentation of active nests, bird species, and other evidence of nesting (e.g., mated pairs, territorial defense, birds carrying nesting material, transporting of food) to the BLM following each survey and prior to surface disturbance activities. If an active nest for Important Migratory Bird Species) is documented during the survey, Newfield will coordinate with the BLM to determine if any additional protection measures will be required. If applicable, appropriate protection measures, including establishment of buffer areas and constraint periods, will be implemented on a case-by-case and species-specific basis. Alternatively, prior to surface disturbance activities outside of the breeding season (April 1 through July 31).
			X	WFM-3 – A 400-foot well and road construction buffer from slopes greater than 40 percent located within 0.5-mile of an active, inactive, or newly discovered golden eagle/ferruginous hawk nest (since both species may share the same nest site in different years) will be implemented, in coordination with the BLM.
			Х	WFM-4 – Newfield will install noise reduction devices on all pump jacks to reduce intermittent noise to 45 dBA at 660 feet from the source
			X	WFM-5 – No surface pipeline containing natural gas liquids condensates will be installed across the Pariette Draw stream channel downstream of the desiltation dam (Figure 2.5-1). Pipelines could be elevated or buried in this zone in accordance with criteria in WFM-8.
			X	WFM–6 – Natural gas pipelines that cross the FEMA-mapped 100-year floodplain or mapped riparian areas upstream of the lower Pariette Draw will be routinely pigged to ensure that the pipeline contains no more

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures	
				than 125 gallons of natural gas liquids per 0.5 mile of pipe. Lower Pariette Draw is defined as the portion of Pariette Draw located between the foot of the Pariette Draw desiltation dam and the confluence of Pariette Draw and the Green River.
			X	WFM-7 – Natural gas pipelines will be located at least 0.1 mile away from stream channels and washes that directly lead into lower Pariette Draw. Where crossings of these tributaries to lower Pariette Draw are necessary to minimize pipeline length, these pipelines will be pigged as described in WFM-6.
			X	WFM–8 – Natural gas pipelines that cross perennial, intermittent, and ephemeral stream channels will either be elevated above the predicted 100-year flood event on a pipe bridge, or buried below the predicted scour depth for an equivalent flood event. The construction requirements for each type of crossing will be determined on a site-specific basis, and will consider the technical guidance of the paper entitled Hydraulic Considerations for Pipeline Crossings of Stream Crossings (BLM 2003).
			-	SPECIAL STATUS SPECIES
	Х			FW33 – Authorize no action in suitable habitat for threatened and endangered species if it would jeopardize the continued existence of the species or result in severe modification of the habitat. However, it may be possible to permit activities within the mapped area if a site-specific inventory shows that suitable habitat for threatened and endangered species would not be adversely affected.
				UINTA BASIN HOOKLESS CACTUS
	X			VE10/PW35 – Do not allow surface-disturbing activities on 48,000 acres of special status plant habitat. A site-specific analysis will be completed to determine if site characteristics exclude potential habitat from a proposed surface-disturbing activity. [Portions of the project area have been identified as lying in special status plant habitat for the Uinta Basin hookless cactus.]
X				Newfield would restrict new construction or surface-disturbing activities in areas previously identified by BLM as containing potential habitat for this species until notice and approval by BLM's AO. Site-specific surveys within potential cactus habitat would be conducted by a biologist approved by the BLM prior to new construction or surface-disturbing activities to avoid impacts to high quality habitat and individual plants. Surveyors would conduct their work on foot in high cactus population density areas.
		X		At this time no new wells and/or access routes will be located on BLM-administered public lands within the Pariette ACEC. Future placement of new wells and/or access routes within the ACEC will be considered after on additional information is gathered and analyzed relative to the following: a) identification of Sclerocactus glaucus and S. brevispinus populations and habitat within the project area, and b) evaluation of the effectiveness of current conservation measures implemented within the project area. An Exception:

	Table 1 (Continued)								
Applicant Committed Measures Applicable	DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures						
				Specific actions involving non-federal lands within the ACEC – do not expand road access to non-federal lands beyond what currently exists, and utilize these existing road rights-of-way as possible pipeline corridors.					
		X		 The BLM will ensure that the Lessee/Operator will implement the following avoidance and minimization measures: Site inventories (a cost borne to the operator):					

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures	
				 The use and perpetuation of native species will be emphasized in interim revegetation and final abandonment revegetation actions. However, when restoring or rehabilitating disturbed or degraded rangelands non-intrusive, non-native plant species may be appropriate for use where native species (a) are not available, (b) are not economically feasible, (c) can not achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species. The FWS will be consulted on a revegetation plan within endangered plant species habitat prior to implementation. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat.
		Х		BLM will initiate a long-term monitoring plan incorporating the following objectives: Measure demographic, life history, and ecological characteristics of <i>Sclerocactus brevispinus</i> ; evaluate the effectiveness of current conservation measures; complete at least an annual assessment of the implementation and efficacy of these decisions coupled with other conservation measures. The cost for such monitoring will be shared equally between BLM and the operator.
		X		Within 2 years from the date of this ROD, the BLM, in coordination with the FWS, will develop and implement a site specific species and habitat management plan for <i>Sclerocactus brevispinus</i> and its habitat within the project area. Factors to incorporate into the plan include: Conservation goals and objectives consistent with an updated recovery plan for <i>Sclerocactus glaucus</i> , long-term monitoring protocol, establish assessment strategy to monitor efficacy of conservation measures, status of update on implementation of conservation measures outlined here.
		Х		BLM, in coordination with the FWS, will continue to implement a training program for all operator and support personnel that will ensure: familiarity with identification of <i>Sclerocactus brevispinus</i> and suitable habitat; appropriate avoidance and minimization measures.
		X		The BLM, in coordination with the USFWS, will develop and execute a regular (no less frequently than once a year) assessment of the implementation and efficacy of the conservation measures for <i>Sclerocactus brevispinus</i> . The assessment shall include, at a minimum, a status update of implementation of the aforementioned measures and a field review.

Applicant Committed	Measures Applicable	Stipulations	USFWS Conservation	Measures	EIS Mitigation Measures	
						BLACK-FOOTED FERRET. WHITE-TAILED PRAIRIE DOG
					Х	WFM-9. Newfield will coordinate with the USFWS and BLM to determine whether black-footed ferret surveys would be warranted prior to project activities within prairie dog colonies, in accordance with the USFWS' 1989 guidelines for the black-footed ferret. This decision will be based on relative size and density of the affected prairie dog colonies, activity status (active or inactive), colony location relative to disturbance areas, and current agency policy. If black-footed ferrets were documented, additional measures would be developed to protect individual ferrets and their habitat, in coordination with the USFWS.
		x				FW32/PW11 – Allow an experimental, non-essential black-footed ferret reintroduction on one site within the DMRA as described in the 1994 DMRA RMP. Maintain the 16,600 acres of potentially suitable habitat in Eightmile Flat (one of five potential reintroduction areas) (inclusive of the portion in the Pariette Wetlands ACEC) by avoiding any activities that will render potential black-footed ferret habitat unsuitable for future reintroduction until habitat studies at all five sites are completed. (Note: based on the 2001 mapping of the Eightmile Flat area, this complex or colony has been severely reduced. The current size of the complex or colony is approximately 7,759 acres in size.) However, should Eightmile Flat area be selected, the pre-release guidelines, as identified in the DMRA RMP would be continued. Should the Eightmile Flat are not be selected, the protective actions imposed will be withdrawn. Following actual reintroduction, the site will be managed in accordance within the site-specific plan developed for the reintroduction. <u>Habitat Stipulations</u>
						 reintroduction site are listed below. Surface disturbance activities will be limited to a maximum of a cumulative total of 10 percent within the Eightmile Flat potential ferret habitat area. Surface disturbing activities will avoid potential ferret habitat. If activities cannot, they will cross in areas of low prairie dog density (<10 burrows/acre), cross at the shortest distance through the prairie dog habitat, or disturb sites not currently being used by prairie dogs. This guideline will not apply to maintenance and operation of existing facilities. Potential ferret habitat will remain open to mineral entry with appropriate mitigation.

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation Measures	EIS Mitigation Measures	
				 Power lines will avoid potential ferret habitat. If they cannot, they will be buried or designed to preclude raptors from using them as hunting perches. Non surface-disturbing geophysical exploration will be allowed year-round. If ferrets leave a reintroduction area (i.e., Coyote Basin and other future reintroduction sites within the DMRA), all protective stipulations that applied to the reintroduction area will not apply. It would be the USFWS' responsibility to trap and return the ferrets to the reintroduction area. Any ferret accidentally taken must be reported to the USFWS immediately.
				RAPTORS
	X			FW28 – No construction or surface-disturbing activities will be allowed year-round within 0.5 mile of known ferruginous hawk nests, which would adversely affect current use or limit or preclude potential future use, unless a permit to take is obtained from the USFWS. This restriction does not apply to maintenance and operation of existing programs and facilities, or if impacts can be mitigated through other management actions. A site-specific analysis will be completed to determine if terrain features adequately protect the nest site from a proposed surface-disturbing activity. It would not apply if impacts could be mitigated through other management actions or site-specific analysis of terrain features. (Also see PW09 under Fish and Wildlife.)
X				No new construction or surface-disturbing activities would be conducted within a 0.5-mile buffer of known active and inactive raptor nests from courtship through fledging (February 1 through August 15). Activity surveys of known nest locations would be conducted between May 15 and May 30 each year, or as determined in coordination with the BLM to account for annual climate fluctuations. These surveys would be conducted by a qualified biologist approved by the BLM, and nest activity would be reported to the BLM's AO. Active nests are those that are currently occupied and those that have been occupied for nesting activities within the previous two nesting seasons; inactive nests are those that have not been occupied for nesting activities within the previous two nesting seasons. If active nests are documented during the activity survey, new construction or surface-disturbing activities within 0.5 mile of those nests would be avoided during the nesting period identified by BLM's AO.

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Applicant Committed Measures	Applicable DM-RMP Stinulations	USFWS	Measures	EIS Mitigation Measures	
					 Ferruginous hawk and golden eagle nest sites within the project area have been identified as sensitive resources requiring special protection. For active and inactive ferruginous hawk and golden eagle nests within the Pariette Wetlands ACEC, no construction or surface disturbing activities would occur within 0.5 mile of the nest sites prior to obtaining a take permit from the USFWS. For active and inactive ferruginous hawk nests within the project area, but outside of the Pariette Wetlands ACEC, and for active and inactive golden eagle nests outside of the Pariette Wetlands ACEC that have been active within the past 2 years, the following applicant-committed protection measures would be implemented in order to promote continued nest-site selection and nesting activities within the project area: <u>Active Nests</u> No new construction or surface-disturbing activities would be conducted within a 0.5-mile buffer of active nests during the courtship, nest building, egg laying, incubation, hatching, or fledging periods (February 1 through July 31 for ferruginous hawks and golden eagles). Between August 1 and January 31, new construction or drilling activities would be conducted within a 0.5-mile buffer of active nests subject to the following restrictions: No well pad would be constructed within 0.5 mile of an active nest where any portion of its permanent facilities would be visible from the nest, and in no circumstances would construction or surface-disturbing activities take place within 0.25 mile of an active nest when enter practical; Injection-designated wells proposed between 0.25 and 0.5 mile would be converted as soon as practicable after drilling and would produce no audible noise from a distance of 100 feet. All proposed producing wells between 0.25 and 1 mile from active nests would be equipped with multi-cylinder engines or muffled to reduce noise levels; and Road access from the main road would be limited to a single-lane-improved road for each well. Dur

Applicant Committed Measures	Applicable DM-RMP	Supulations	Conservation	Measures	EIS	Mitigation Measures	
							equipped with multi-cylinder engines or muffled to reduce noise levels; and
							 Road access from the main road would be limited to a single-lane-improved road for each well. During normal operations, human access to producing wells would be limited to 1 trip per day by single lease operator driving a full-size pickup. In addition, Newfield employees would be trained to identify ferruginous hawks and golden eagles, instructed to avoid disturbance of active nests, and to stay within or near vehicles to prevent flushing when birds are present.
X							Standard raptor proofing designs as outlined in Mitigating Bird Collision with Powerlines (Avian Powerline Interaction Committee [APLIC] 1994) would be incorporated into the design of the proposed powerline to prevent collision to foraging and migrating raptors. Standard, safe designs as outlined in Suggested Practice for Raptor Protection on Powerlines (APLIC 1996) would be incorporated into the design of the proposed powerline in areas of identified avian concern to prevent electrocution of raptor species attempting to perch on the power poles and lines. These measures would include, but would not be limited to, a 60-inch separation between conductors and/or grounded hardware and recommended use of insulating materials and other applicable measures depending on line configuration.
X							No construction or surface-disturbing activities would occur within 0.5 mile of known bald eagle winter concentration areas and winter night roost sites from November 1 through March 31. Daily activities that must occur within the recommended spatial buffers at winter night roosts sites would be scheduled between 9:00 a.m. and 1 hour prior to the official sunset. These measures would be implemented on a site-by-site basis in coordination with BLM.
	1						MOUNTAIN PLOVER
X							Mountain plover breeding habitat has been identified within the project area by the BLM. In areas containing suitable mountain plover breeding habitat (as identified by the BLM AO during the on-site inspection) presence/absence surveys would be conducted according to the USFWS plover survey protocol prior to beginning new construction or surface-disturbing activities. No new construction or surface-disturbing activities would be conducted during the mountain plover breeding season (March 15 to August 15) in areas known to contain mountain plover or active mountain plover nest sites. Motorized travel in plover breeding habitat areas would take place only on designated routes with no cross-country travel permitted. Road maintenance would be avoided between May 1 and June 15 to avoid hazards to early developing chicks.

Applicant committed Measures	\pplicable DM-RMP tipulations	USFWS	Measures	LIS Mitigation Measures	
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					GREATER SAGE GROUSE
				Х	WFM-10 – Newfield will incorporate appropriate management guidelines to promote suitable sage grouse habitat as outlined in Guidelines to Manage Sage Grouse Populations and Their Habitats (Connelly et al. 2000).
X					New construction and surface-disturbing activities would be avoided year-round within 1,000 feet of greater sage grouse strutting grounds previously identified by BLM as being historically located in the area. No new construction or surface-disturbing activities would be conducted between March 1 and June 30 each year within greater sage grouse nesting areas (a 2-mile radius of strutting grounds in areas of sagebrush vegetation) until an activity survey is completed. Newfield, in conjunction with the jurisdictional agencies, would have the surveys conducted by a qualified biologist to determine the presence or absence of nesting greater sage grouse. The activity survey would be conducted each year between April 1 and April 15, or as determined in coordination with the BLM, to account for annual climate fluctuations, and the results would be reported to BLM's AO. If active nesting areas are documented during the annual survey, new construction and surface-disturbing activities within 0.5 mile of those nesting areas would be avoided during the nesting period identified by the BLM's AO.
					GREEN RIVER FISH
		Х			Ensure diligent application and maintenance of the DMRMP stipulations defined by the BLM in the Draft EIS and BA for storm waters and off-site sedimentation.
		Х			BLM, in coordination with the FWS, will implement a training program for all personnel relative to their responsibilities to the endangered fish and their habitat
					RANGE RESOURCES
X					Newfield would adjust final placement of well locations to avoid stock ponds, guzzlers, or wells currently established for watering livestock, or provide an alternate water source if existing sources are diminished by well drilling and surface disturbance activities. Existing range study plots and rain gages also would be avoided.
			-		AESTHETICS
X					The pump station for the Green River water supply wells would be concealed from view from the Green River by finishing the building in an earth tone and planting, irrigating, and maintaining trees and shrubs around the perimeter of the building.

Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS Conservation	Measures	EIS Mitigation Measures	
					LAND USE
	Х				LR03 – Land use authorizations will not be approved in exclusion areas. Land use authorizations in avoidance areas may be authorized provided they are considered consistent with the current management objectives; those which are not will either be rejected or will necessitate a plan amendment prior to approval.
	X				MN02 – Level 4 lands are open to leasing with standard conditions (category 1); level 3 lands are open to leasing with special conditions; level 2 lands are open to leasing with NSO stipulation. Restrictions placed on the lease or subsequent conditions of approval (COA) do not apply to maintenance and production of existing facilities. Restrictions from other resource decisions will be applied to new leases, or at the time of lease renewal for existing leases. [The majority of the project area is located in category 2 and 3 lands (stipulations or NSO, respectively). The Pariette Wetlands ACEC is designated category 3 (NSO or highly restricted).]
	Х				PW13 – Establish a ROW avoidance area within level 2 lands. Make level 3 lands available for placement of ROWs with special restrictions designed to protect the stated values of the ACEC.
					VISUAL RESOURCES
	X				VR02 – Existing roads or trails may be improved if impassable by vehicles or equipment. No widening or realignment will be allowed outside the existing ROW without prior approval. Existing roads or trails may have to be reclaimed or brought back to their original conditions. New roads or trails associated with private proposals or applications may be constructed only when vehicle and equipment passage is otherwise impossible. Such new trails will be temporary in nature and, to the reasonable extent, will follow existing contours or will take a zig-zag path; no straight line-of-sight bulldozing will be allowed. Upon project completion, the area and access routes not needed for BLM or BLM-authorized purposes will be reclaimed to as near the original condition as possible. All disturbed areas will be removed and all cuts (including roads) filled. Construction areas and access roads will be kept litter-free.

Applicant Committed Measures	Applicable DM-RMP	Stipulations	USFWS	Measures	EIS	Mitigation Measures	
							RECREATION
	Х						PW25 – Developed recreation sites within the ACEC will be closed to grazing and surface-disturbing activities not directly related to recreation development. [There is a NSO stipulation that says NSO is allowed unless waivers, exceptions, or modifications to these limitations are specifically approved in writing by an authorized officer of the BLM if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.]
							CULTURAL RESOURCES
	X						CR04 – DMRA will adhere to the following significance criteria for cultural resources: Should significant, in terms of National Register eligibility, cultural resources be found during inventory, impacts to them will be mitigated, generally through avoidance. Should it be determined that the cultural resources cannot be avoided, consultation with the SHPO will be initiated. If the cultural resources are National Register eligible, a program of mitigation will be developed through consultation between DMRA, the SHPO, and the ACHP. All disturbed areas will be recontoured to blend as near as possible with the natural topography. All unnecessary berms will be removed and all cuts (including roads) filled. [There is a NSO stipulation attached with this decision that says "No surface occupancy or use is allowed on National Historic Landmark Areas, Register Properties, and Potential Register Properties. Waivers, exceptions, or modifications to these limitations may be specifically approved in writing by the authorized officer of the BLM if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated."]
	Х						PW01 – Consult with the Ute Tribe for the protection of areas and items of traditional lifeways and religious significance.
X							A Class III cultural resources survey, conducted by a qualified archaeologist, would be conducted over all areas proposed for surface disturbance that have not been previously surveyed. If these surveys identify areas with a high probability of encountering potentially significant sub-surface archaeological sites, a qualified archaeologist would monitor surface disturbance during construction. Newfield and their contractors would inform their employees about relevant federal regulations intended to protect cultural resources. Equipment operators would be informed that if a site is uncovered during construction, activities in the vicinity immediately would cease, and the BLM's Authorized Officer (AO) would be notified. Historic properties considered eligible for the National Register of Historic Places (NRHP) would be avoided or mitigated through an approved data recovery plan.

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Applicant Committed Measures	Applicable DM-RMP Stipulations	USFWS	Measures	EIS Mitigation Measures	
					HAZARDOUS MATERIALS AND WASTES
	X				HZ04 – All proposed actions on public lands will be analyzed for their potential to release hazardous materials into the environment. Appropriate stipulations will be incorporated into the permitting document to ensure prevention of hazardous incidents.
X					Newfield Production Company maintains a file containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during construction, drilling, completion, production and gas gathering operations in Monument Butte Area. Newfield has reviewed the USEPA's Consolidated List of Chemicals Subject to Reporting Under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (as amended) to identify any hazardous substances proposed for use in this project, as well as the USEPA's List of Extremely Hazardous Substances as defined in 40 CFR 355, as amended. Substances that would be used for activities associated with this project are listed in Appendix A.
					Newfield and its contractors would comply with all applicable federal laws and regulations existing or hereafter enacted or promulgated. Newfield and its contractors would locate, handle, and store hazardous substances in an appropriate manner that would prevent them from contaminating soil and water resources or otherwise sensitive environments. Any release (e.g., leaks, spills, etc.) of hazardous substances in excess of the reportable quantity as established by 40 CFR, Part 117, would be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. If the release of a hazardous substance in a reportable quantity would occur, a copy of a report would be furnished to the BLM's AO and all other appropriate federal and state agencies. Newfield has evaluated their overall wellfield operations within the Monument Butte Area and has prepared and implemented Spill Prevention, Control, and Countermeasure (SPCC) plans; copies are kept at Newfield's Roosevelt, Utah, field office. The plan includes accidental discharge reporting procedures, spill response and cleanup measures, and maintenance of dikes. A Hazardous Communication Program also is kept at Newfield has a written Confined Space Entry Procedure that is kept in the Utah field office. A waste minimization plan is not required since Newfield is not a generator of hazardous waste; however, Newfield does employ measures to minimize the amount of wastes generated. Newfield is bonded for facility closure upon termination of public land use authorization, and a copy of the bonding is kept in Newfield's Utah field office.

ATTACHMENT 2

MONITORING PLANS FOR THE CASTLE PEAK AND EIGHTMILE FLAT EXPANSION PROJECT

Monitoring plans were developed by the BLM to address surface management issues within the wellfield development area based on applicant commitments, mitigation measures contained in the Agency Preferred Alternative in the EIS, and to address monitoring requirements contained in the USFWS Biological Opinion.

The documentation sources for these plans are wellfield development and resource maps stored in a Geographic Information System (GIS). The overall process for monitoring is annual updating of the surface disturbance pattern resulting from field development, and verifying that protection measures contained in APDs and the ROD are implemented. The focus of the monitoring plans is to insure ongoing compliance with conditions contained in the ROD, and to insure response to issues as they arise over time.

Newfield will be responsible for maintaining the GIS database; updating the development pattern; demonstrating environmental compliance (e.g., monitoring surveys, weed control, revegetation efforts); reporting results at the end of each calendar year to the BLM; and implementing remedial actions in the event that non-compliance occurs.

BLM will be responsible for periodically verifying compliance with APD and ROD environmental conditions in the field; insuring that any remedial actions are undertaken; and reviewing and commenting on monitoring reports when they are submitted by Newfield.

Monitoring Framework- Data Management and Existing Information

Numerous maps and figures were developed from the GIS database during the preparation of the EIS. This GIS database will be turned over to Newfield for purposes of monitoring. The following are project and resource data layers that can be used in the monitoring programs:

- Existing and proposed well locations and supporting access roads and pipelines based on a 40-acre spacing for the entire proposed development area.
- Pariette Wetlands ACEC boundaries.
- Estimated floodplain boundaries for larger drainage channels.
- Soils
- General Vegetation Types
- Active and inactive raptor nests, artificial nest sites.
- Mountain Plover nesting and activity areas
- Eightmile Flat prairie dog colony boundary
- Uinta Basin hookless cactus, and Pariette Bench hookless cactus historic occurrences (point data), and suitable habitat based on soils.

Other information that will be compiled to assist in the monitoring program are approved and pending APDs, and proposed surface facility clearance survey results.

Surface Reclamation Monitoring

- A. Basis for Monitoring Requirement:
- Applicant-committed Environmental Protection Measures; Final EIS Sections 2.4.4.3 Noxious Weeds and Reclamation.
- DMRMP Stipulations SW06, SW04, R101, R104/PW27; R106, PW34, VR02.
- Final EIS Agency Preferred Alternative: Mitigation Measures -SWM-1, SWM-2, SWM-3, SWM-4, SWM-5, NWM-1.
- B. Goals
- To assess the effectiveness of revegetation, erosion control, and weed treatments;
- To verify riparian zone and channel setbacks;
- To periodically evaluate the condition of disturbed areas where revegetation treatments have been applied;
- To identify remedial measures needed to address problems, and improve reclamation success.
- C. Scope

An annual monitoring program will be undertaken that provides an ongoing record of surface disturbance and reclamation, and identification of reclamation problems that require action. Newfield's effort to reclaim areas disturbed during construction will be evaluated over the life of the project (estimated to be about 20 years, and potentially longer).

Program results will be documented in annual reports that provide a qualitative summary of the condition of revegetated areas and erosion control. The monitoring program also will identify remedial measures that will be considered by Newfield to mitigate environmental degradation if the initial treatments were not effective in achieving the objectives of the reclamation program.

D. Methods and Monitoring Frequency

<u>Surface Disturbance/Revegetation</u>. Newfield will update its development map to show: 1) areas of prior disturbance (by year); 2) areas of new surface disturbance by vegetation type during the most recent growing season; 2) areas that have been reseeded during the most recent growing season; 3) the revegetation mixtures on each reseeded area; 4) any areas that have been reseeded because of revegetation failure; 5) any areas where weeds were controlled using herbicides or other means; and 6) any surface disturbance areas within Uinta Basin hookless cactus habitat. Newfield also will furnish annual high altitude aerial photos or high quality satellite images of the well field at a scale no smaller than 1:12,000 that clearly show the well pads, access roads, and buried pipeline ROWs.

Newfield and BLM will jointly conduct a reconnaissance every year during the peak of the growing season throughout the area approved for development by this EIS to document areas where revegetation is proceeding well, and areas where revegetation is proceeding poorly. This qualitative review will be supported by photographs, the locations of which are accurately documented.

• Monitoring Frequency: annually.

<u>Revegetation Monitoring</u>. Newfield will periodically monitor selected reseeded surface disturbances over the project life. Monitoring documentation will consist of a series of photo-plots, and an inventory of plant species contained in permanent 4-square-meter plots. The program will consist of 48 individual sampling plots located within the primary vegetation communities within the project area (**Table 1**). Plot locations will be selected jointly by Newfield and BLM, and are intended to be generally representative of surface disturbance throughout the well field. Plot locations will be determined after the first year of construction within the new area approved for well drilling.

Plots will be paired. One plot will be located on a revegetated surface; the paired plot will be located on an adjacent undisturbed control site with similar soils, slope and aspect to the reseeded area. The photo plot will be established and staked at a specific point, with a specified compass orientation, and camera angle in relation to the ground surface. A 4-meter square plot will be staked within the foreground of the photo-plot. All sampling locations will be documented with an accurate GPS unit (accuracy to 1 meter). An inventory of all plant species, and estimates of general abundance (density classes, i.e. Class 1 = 1-10 plants; Class 2 = 10 - 100 plants; Class 3 = 100 - 1000 plants; Class 4 = 100-10,000 plants; Class 5 = more than 10,000 plants) will be completed. All data will be recorded on a standard data sheet.

• Monitoring Frequency: Monitoring will occur in May (or peak of the growing season) at the following intervals after site reseeding: years 2, 5, 10, 15, and 20 (and longer if deemed necessary by BLM).

	Desert	Shrub	Black sagebrush		Wyoming Sagebrush		Greasewood		
Vegetation Type	Reveg. (# of plots)	Control	Total						
Well pads	6	6	3	3	2	2	1	1	24
Roads and Buried Pipeline ROW	6	6	3	3	2	2	1	1	24
Total	12	12	6	6	4	4	2	2	48

Table 1Revegetation Photo-plot Sampling Locations

<u>Weed Monitoring</u>. In accordance with its weed management plan, Newfield will identify and control target weed populations within and immediately adjacent to well pads, access roads, and buried pipeline ROWs.

Newfield will document the locations where weed control activities occurred during each growing season, and the control results via photographs of treated areas.

• Monitoring Frequency: Annually.

<u>Erosion and Runoff Control, Waterbody Crossings, Riparian Setbacks</u>. Newfield will verify that erosion control structures are in place and functioning across the wellfield. Ground inspection will concentrate on steep slopes, erodible soils, surface drainage management structures (well pad berms, road culverts, sediment detention structures) and sensitive areas (Uinta Basin hookless cactus habitat), and setbacks from riparian areas. Newfield will visually assess the condition of bed and bank stabilization measures installed during restoration at major channel road and buried pipeline crossings. The current channel stability conditions upstream and downstream of a road or pipeline crossing (based on the appearance of the channel bed and banks) will be documented with photographs at a minimum of 5 locations. These documentation locations will be jointly determined by BLM and Newfield. Newfield will document any repairs that were made to roads and pipeline ROWs resulting from unusual erosion events caused by local flooding or high intensity rainfall events.

- Monitoring Frequency: Annually.
- E. Monitoring Reports

Newfield will prepare an annual Reclamation Monitoring Report and submit this report to the BLM on or before December 31 of the inspection year. These reports will include:

Revegetation Monitoring

- Revised wellfield development maps showing existing and new disturbance areas and reseeded areas;
- Revegetation mixtures applied by location, and any deviations from standard mixtures;
- Areas (shown on maps) where revegetation is proceeding well, and poorly;
- Revegetation comparison plots (photographs and plot measurements) only in years 2, 5, 10, 15, and 20;
- Identification of any areas that require remedial action;
- Recommendations and schedule for remedial action(s); and,
- Monitoring forms.

Weed Monitoring

- Locations (on maps) where weeds were controlled;
- Weed control results (photographs);
- Remedial actions (plans for the next year).

Erosion and Runoff Control, Waterbody Crossings, Channel and Steep Slope Setbacks

- Summary description of the condition of runoff controls and waterbody crossings, supported by photographs;
- Documentation of riparian zone and steep slope setbacks;
- Identification and description of problem areas (on maps);
- Recommendations and schedule for remedial action (s).

Uinta Basin Hookless Cactus Monitoring

- A. Basis for Monitoring Requirement:
- Applicant-committed Environmental Protection Measures; Final EIS Sections 2.4.4.4 Uinta Basin Hookless Cactus.
- DMRMP Stipulations VE10/PW35,FW 33.
- Final EIS Agency Preferred Alternative: Mitigation Measures –SSS-1.
- USFWS Biological Opinion (July 6, 2005). Conservation Recommendations, pages 42-44.

B. Goals

- To comply with conservation measures contained in the USFWS Biological Opinion, and to meet BLM's obligations under the Endangered Species Act.
- C. Scope

Additional inventories will be conducted over the next several years to better determine the distribution of Uinta Basin hookless cactus subpopulations within the proposed wellfield area, and other areas within the Pariette Wash drainage. Prior to authorization of new surface disturbance, Newfield will be required to conduct pre-construction clearance surveys to verify the locations of any cactus individuals, and then apply distance buffers and other protective buffers to prevent cactus take. Cactus data will be entered onto well field maps as new information is collected to assist in planning new wells and roads, and to protect known cactus subpopulations.

RECORD OF DECISION

An annual monitoring program will be undertaken that provides an ongoing record of compliance with the Biological Opinion conservation measures as well as new information compiled for this species as the result of clearance surveys within suitable habitat. Monitoring will continue over the life of the project (estimated to be about 20 years, and potentially longer).

Program results will be documented in annual reports that provide a summary of the condition of cactus populations in relation to nearby project surface disturbance. The monitoring program also will identify remedial measures that may be required if cactus individuals are accidentally or intentionally taken by project activities, or losses caused indirect actions (OHV damage, illegal plant collection).

Because of potential cactus losses from illegal collection, records from this monitoring program will not be released to the public.

D. Methods and Monitoring Frequency

Newfield will compile all approved APDs and supporting cactus clearance surveys for wells, and pipeline ROWS authorized for a calendar year. Newfield will provide documentation that biological monitors were present during construction of surface facilities within cactus habitat, and will provide the daily reports prepared by the monitors. Newfield will describe the seed mixtures applied to disturbed areas in known cactus habitat. The locations of all surface disturbance activities where cactus distance buffers or other protection measures were applied will be indicated on maps at scales large enough to allow site-specific field inspection.

Newfield and BLM will conduct a joint inspection of all new work areas within cactus habitat to verify that distance buffers and other conservation measures were followed, and that cactus were not taken. This inspection will include review of areas of prior disturbance near known cactus populations to verify continued compliance, and potential indirect effects from OHV use and illegal plant collections.

- Monitoring Frequency: Annually
- E. Monitoring Reports

Newfield will prepare an annual Uinta Basin Hookless Cactus Monitoring Report and submit this report to the BLM on or before December 31 of the inspection year. This report will include:

- Maps illustrating new and existing work locations within known and suitable cactus habitat, and the revegetation mixtures applied.
- Documentation that pre-construction surveys and construction monitoring were completed. Documentation will consist of copies survey reports and construction monitoring records.
- Documentation of the joint post-construction inspection completed by Newfield and BLM, including any locations of non-compliance in relation to conservation measures, and any evidence of indirect impacts to cactus populations resulting from non-project actions.

• Remedial actions that may be required in the event of non-compliance.

Wildlife Monitoring

- A. Basis for Monitoring Requirements:
- Applicant-committed Environmental Protection Measures: Final EIS Sections 2.4.4.5, Raptor Nest Sites; 2.4.14.7, Greater Sage Grouse Leks and Nesting Areas; 2.4.4.8, Bald Eagle Wintering Areas; 2.4.9, Mountain Plover Breeding Habitat.
- DMRMP Stipulations –FW35, FW26, PW09, FW06, FW24, FW25, FW09, FW33, FW32/ PW11, FW28 (see Final EIS Table 2.5-1).
- Final EIS Agency Preferred Alternative: Mitigation Measures –WFM-2, WFM-3, WFM-4, WFM-9, SSS-2 (see Final EIS Table 2.5-2).
- B. Goals
- To comply with applicant commitments, Diamond Mountain RMP stipulations, and EIS environmental protection measures.
- C. Scope

Certain pre-construction wildlife surveys will be required for the authorization to construct wells and ancillary facilities during the APD process. An overall objective of the wildlife monitoring program is to integrate site-specific clearance survey data into a common database so that trends in wildlife occurrence and habitat use can be updated annually to assist in estimating trends in wildlife use and habitat availability. As described under the Monitoring Framework above, raptor nest data, mountain plover occurrence data, and the Eight Mile Flat prairie dog colony boundaries are GIS layers that provide a current baseline for monitoring efforts.

Newfield will conduct annual pre-construction wildlife surveys and overall wellfield surveys (raptors only) to establish acceptable facility construction locations, and appropriate construction time frames. Monitoring will continue over the life of the project (estimated to be about 20 years, and potentially longer).

D. Methods and Frequency

<u>Raptor nests and Artificial Nest Structures</u>. Newfield will continue its existing program of identifying active and inactive raptor nests during the raptor nesting season. This program will consist of ground reconnaissance by a qualified biologist of the entire Monument Butte/Myton Bench well field. All active and inactive nests will be reported by the species using the nest, and coordinates of the nest locations will be taken with a GPS unit. All artificial nest structures will be inspected, and any raptor nesting recorded. • Monitoring Frequency. Annually.

<u>Migratory Bird Treat Act Surveys</u>. Newfield will conduct surveys to verify whether selected breeding birds are nesting within areas proposed for surface disturbance (Measure WFM-2) if construction is proposed within the breeding bird nesting season (April 1 through July 31). Nest by species, and location coordinates will be recorded.

• Monitoring Frequency. Annually.

<u>Mountain Plover Breeding Habitat Surveys</u>. Newfield will conduct surveys to verify the occurrence of Mountain Plover nesting and foraging in accordance with Final EIS Section 2.4.4.9, Mountain Plover Breeding Habitat, if new wells and ancillary facilities are proposed within mountain plover activity areas.

• Monitoring Frequency: Annually.

<u>Greater Sage Grouse Leks and Nesting Area Surveys</u>. Newfield will conduct surveys to verify the use of greater sage grouse strutting grounds (leks), and nesting in the vicinity of lek sites in accordance with Final EIS Section 2.4.4.7, Greater Sage Grouse Leks and Nesting Areas, if new wells and ancillary facilities are proposed within sage grouse activity areas.

• Monitoring Frequency: Annually.

Pump Jack Noise. Newfield will install noise reduction devices on all existing and new pump jacks in the Monument Butte/Myton Bench well field, and provide documentation to BLM that the pump jack operations will not generate noise at levels that exceed 45 dBA at 660 feet from the source. It is expected that retrofitting pump jacks will require several years. Newfield will provide a noise reduction plan to BLM, with a compliance noise monitoring schedule for the overall field. This program will begin upon authorization of the wells and ancillary facilities included in the Castle Peak and Eight Mile Flat EIS development area.

• Monitoring Frequency: Annually.

<u>Eightmile Flat Prairie Dog Colony</u>. Newfield will map new wells and roads located within the currently defined Eight Mile Flat prairie dog colony. Newfield will verify the current prairie dog colony boundary, and relative level of activity (based on active burrow density surveys).

- Monitoring Frequency: New wells and roads within the prairie dog colony annually; Colony activity and colony boundaries 3 year interval.
- E. Monitoring Reports

Newfield will prepare an annual Wildlife Monitoring Report and submit this report to the BLM on or before December 31 of the inspection year. This report will include:

- Updated maps showing new occurrence information for all species surveyed during the monitoring year.
- Compilation or summarization of survey reports completed during the year for APD approvals, or broader surveys.
- Documentation of any instances where the location of facilities did not meet distance buffers, or did not meet seasonal constraint periods.