ATTACHMENT 2

CONDITIONS OF APPROVAL AND STIPULATIONS

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Design Features of the Selected Alternative (From Alternatives D and E)	
Resource	**Mitigation Measure**
Special Designations	No surface occupancy (NSO) by new well pads or other facilities on existing Federal leases within the Jack Canyon and Desolation Canyon Wilderness Study Areas (WSA) (also see Applicant-Committed Measures below).
	NSO on existing Federal leases within the Desolation Canyon National Historic Landmark (NHL).
	As feasible (where to do so will not preclude the development of valid and existing lease rights), NSO on existing Federal leases within canyon bottoms.
Transportation	Horse Bench, Jack Canyon, Jack Ridge, and Cedar Ridge roads will be gated within 6 months of signing this Record of Decision (ROD). Use of these roads will be limited to those granted administrative access by the Bureau of Land Management (BLM). Bill Barrett Corporation (BBC) and other operators will be required to maintain and lock gates for the life of the project (LOP). The selection of actual sites and the color and design of the gates will be determined on a site specific basis by the BLM.
	All project-related trailer traffic or vehicles with truck-load capacity of 1-ton or larger will be prohibited from using Prickly Pear Canyon Road (i.e., from Nine Mile Canyon to the top of Prickly Pear Mesa).
	BBC and other operators will minimize transportation of routine drilling and completion supplies on weekends and holidays.
	Immediately after drilling and completion activities are completed, locked gates will be installed on all new roads longer than 2 miles. Gates may be left open during work over operations. BBC and other operators will be required to maintain and lock gates until the final removal of roads after the LOP. The location of gates will be determined on a site-specific basis during the onsite process.
	BBC and other operators will be required to reclaim existing roads that create unnecessary loops, or roads that unnecessarily compromise natural and cultural resources as determined by the BLM. No existing routes will be reclaimed that are the sole access to lands managed the State of Utah without consultation with the State Institutional Trust Land Administration (SITLA).
	Roads will be upgraded to achieve the following objectives: • accommodate future road use needs (increased traffic volumes); • ensure public safety;

Design Features of the Selected Alternative (From Alternatives D and E)	
	• allow year-round access for oil and gas operations; • facilitate drainage and reduce erosion and sedimentation; • alleviate dust; and • prevent stream degradation. These objectives will be met by constructing or upgrading roads on Federal land to standards established in the latest edition of the Gold Book (DOI-USDA); the *BLM Manual 9113* (BLM 1985); and in the *Price Field Office's Hydrological Modification Standards for Roads* (Appendix 19- Draft Price RMP EIS [BLM 2004b]).
	BLM may approve reroute of roads as an alternative to improving existing roads. Road reroutes could include the existing dugways from Cottonwood Canyon to Flat Iron Mesa and Peter's Point. If BBC and other operators select to reroute a road segment, the existing road segment will be closed and reclaimed to BLM standards upon completion of the new road.
	Prior to upgrading or rerouting a road, BBC and other operators will submit appropriate road plans and profiles that demonstrate compliance with BLM road standards associated with each road classification to the BLM for approval.
	Where environmental conditions and/or economic considerations make road upgrades to BLM standards infeasible, BBC and other operators will be required to obtain a waiver to these standards from the AO. A waiver could be granted provided BBC and other operators can demonstrate that roads open to the public will not compromise safety, as well as demonstrate one or more of the following criteria: • Road construction or upgrades will require extensive economic resources. • Road construction or upgrade to BLM standards will cause undue or unnecessary degradation to sensitive environmental resources (e.g., visual and wildlife resources). • Road construction to BLM standards will cause environmental harm through erosion and stream degradation.
	Upon completion of road construction or expiration of available aggregate, quarry areas will be re-contoured and reclaimed. No more than one aggregate borrow area on each of the three mesas (Prickly Pear, Flat Iron, or Peter's Point) will be open at any one time.
	BBC and other operators will be required to maintain roads, which they construct or use, to the standards specified in their use authorization, and in accordance with road standards established in the latest version of the BLM/U.S. Forest Service (USFS) publication *Surface Operating Standards for Oil and Gas Exploration and Development – The Gold Book* (DOI-USDA); *BLM Manual 9113- Roads*; and Appendix 19

Design Features of the Selected Alternative (From Alternatives D and E)	
	of the *Price Field Office's Hydrological Modification Standards for Roads* (BLM 2004a).
	BBC and other operators are encouraged to make use of air travel to reduce employee-related traffic between surrounding municipalities and the West Tavaputs (WTP) Project Area.
	BBC and other operators will be required to transport produced water/condensate via pipeline (i.e., liquids gathering system) with the following exceptions: • Use of water/condensate lines will not be required in areas where development is considered exploratory. • Use of water/condensate lines will not be required in remote locations where the number of proposed wells is limited and construction of water/condensate line will be cost prohibitive. • Use of water/condensate lines will not be required in locations where the topographical variations require construction of additional pumping facilities in addition to those illustrated on **Figure 1**.
Wildlife	The BLM will grant a waiver or exception to the seasonal restrictions for wildlife protection in the WTP Project Area on a lease-by-lease basis as specific applications for development on the existing lease are submitted, under the condition that operators comply with the special protection measures outlined in **Attachment 5** and carryout wildlife mitigation measures included in **Attachment 6**.
	On leases that have no stipulations attached, the special protective measures outlined in **Attachment 5** will be applied to Application for Permits to Drill (APDs) (and other individual applications) as Conditions of Approval (COAs) to ensure that impacts to sensitive resources within the WTP Project Area are mitigated.
	BBC and other operators will be required to realign and reclaim existing roads within sage-grouse core winter use habitat (see ROD **Figure 1**) within 1 year of signing this ROD. Strategic planning will include cooperation with the Utah Division of Wildlife Resources (UDWR) to determine appropriate locations for road realignments and other proposed surface activities.
	No exceptions will be granted to seasonal restrictions in areas that the UDWR and the BLM have identified as the core winter-use sage grouse areas.
	BBC and other operators will be required to mitigate impacts to wildlife as required by the Agency Wildlife Mitigation Plan. For every acre of long-term disturbance, BBC and other operators will be required to enhance 4 acres of habitat (See **Attachment 6**).
Cultural	BBC and other operators will be required to fulfill mitigation commitments included in the WTP PA, which has been included as **Attachment 4**.
	BBC and other operators will be required to provide funding for a Class II cultural resource inventory not to exceed 3,700 acres, which is a approximately 2.5 percent of the project area of potential effect (APE).
	BBC and other operators will be required to provide financial support for a cultural resource monitoring plan.

Design Features of the Selected Alternative (From Alternatives D and E)	
	Within 6 months of signing this ROD, BBC and other operators will be required to fund a research project, which examines whether dust that has settled on rock art is causing physical degradation to the rock art.
	BBC and other operators will be required to ensure that dust suppression efforts are expanded to include portions of Nine Mile and Gate Canyon roads within the APE, which extends beyond the WTP Project Area boundary. BBC, in coordination with the Nine Mile Canyon Road Committee will also be required to identify new dust monitoring methods that will be qualitative, cost effective, and easy to operate.
	All personnel (including contractors; and new, added, or replaced personnel) will be instructed on site avoidance, site etiquette, and statutes protecting cultural resources prior to working in the WTP Project Area. BBC and other operators will be required to maintain records demonstrating that training has been carried out.
	As discussed in the Development Plan Programmatic Agreement (WTP PA), BBC and other operators will be required to fund development of visitor interpretation/enhancement at 9 to11 sites within the WTP Project Area (e.g., parking, walking paths, signage, and/or information kiosks) selected by the BLM.
General	Annual surface disturbance will be limited to approximately 250 acres, and total unreclaimed surface disturbance at any given time will be limited to approximately 1,250 acres. The BLM will not limit the number of drill rigs, well pads, roads, pipelines, or ancillary facilities constructed on Federal lands as long as operations 1) do not exceed surface disturbance limitations; 2) comply with conditions and requirements within this ROD; and 3) comply with State and Federal regulations (e.g., Federal NAAQS).
Pipeline Construction	In accordance with WO IM-2007-021 (Integration of Best Management Practices into Application for Permit to Drill Approvals and Associated Right of Way), the BLM will require the burial of pipelines except in limited circumstances where locally established criteria allow for the consideration of a surface-laid pipeline. Surface-laid pipeline may be allowed: • where very shallow topsoil occurs over bedrock (5-20 inches); • where the pipeline does not follow an access road (cross-country); • over cliffs where there is no other viable route available; and/or • as determined during the onsite process. A determination as to whether one or more of these exceptions apply will be made on a site-specific basis. In the circumstances where the operator proposes to construct a new pipeline adjacent to an existing surface pipeline, the proposed pipeline and existing pipeline will be buried subject to the exception criteria listed above.
	In areas where sufficient soil is present such that blasting will not be required, the following techniques will

Design Features of the Selected Alternative (From Alternatives D and E)	
	be employed to bury pipelines: • Shrubs and small trees will be removed from the right of way (ROW). Topsoil removal will not occur except directly over the trench. • A trench will be excavated and the soil stockpiled to one side, making sure the topsoil and spoil do not mix together. • The trench will be backfilled and the spoil compacted in the trench. • Stockpiled topsoil will be placed over the compacted spoil to facilitate reclamation. • Scalped vegetation will be lopped and scattered on the ROW to reduce erosion potential and reduce visual impacts. • The entire ROW will be reseeded in the first appropriate season after completion of disturbance. In areas where compacted sandstone or bedrock exists, the following techniques will be employed to bury pipelines: • Shrubs and small trees will be removed from the ROW. Topsoil removal will not occur except directly over the trench. • In most areas where pipelines will be buried, chain trenchers and/or rocks saws (also known as wheel or disc trenchers) will be used to excavate trenches. • In areas where blasting is required in order to excavate pipeline trenches, the following safety measures will be adhered to (e.g., on slopes or other areas where use of chain trenchers and/or rock saws are not feasible): o As needed, roads along areas to be blasted may be temporarily closed for safety purposes. o The charges will be detonated in accordance with relevant safety regulations. • Following excavation of the pipeline trenches (whether by chain trencher and/or rock saw or detonation), debris will be removed from the trench. • Spoil will be used to pad the bottom of the trench. As needed, additional soil, sand, or gravel will be brought in from an approved borrow area and used to pad the bottom of the trench.

Design Features of the Selected Alternative (From Alternatives D and E)	
	• The spoil will be compacted in the trench. Stockpiled topsoil will be placed over the compacted spoil to facilitate reclamation. • Scalped vegetation will be lopped and scattered on the ROW to reduce erosion potential and reduce visual impacts. • The entire ROW will be reseeded in the first appropriate season after completion of disturbance.
	Where surface-laid pipelines are approved, stipulations will include painting to match the surrounding environment and bonding considered on a case-by-case basis. Surface pipelines adjacent to roads will be assembled on the roadway or construction ROW, lifted, and placed in the existing vegetation. Pipeline markers will be strategically placed at intervals along all buried and surface pipelines.
Noise	All applicable production equipment, including compressor engines, will have hospital grade mufflers.
General	Closed-loop drilling will be used in sensitive areas such as locations proposed within or near 100-year floodplains or drainages, cultural resources or archaeological sites, and within important wildlife habitats. The designation of a proposed location as a sensitive location requiring closed-loop drilling will be determined on a site-specific basis during the APD process.
	If a well is located in an environmentally sensitive area, protective barriers, as determined appropriate during the onsite process, will be installed around the production facilities (including tanks) or they will be moved off site.
	The following limitations will apply to pump stations proposed in canyon bottoms on Federal lands: • All pump station engines will be fitted with at least hospital grade mufflers for noise abatement. In addition, all pumps and generators will be enclosed in acoustically insulated buildings. • Pump station design and mitigation measures will be reviewed by a BLM landscape architect. • Site-specific visual simulations and a detailed visual contrast rating will be completed by a BLM landscape architect to determine whether the proposed pump station is in conformance with VRM Class Objectives. • A BLM approved landscape architect will be onsite during construction of the pump stations to document that the appropriate visual resource mitigation measures are implemented. A report would be provided to the BLM. • A BLM permitted archaeologist will be located on-site during surface disturbing activities to prevent damage to cultural sites. • No pump stations will be allowed within “line of sight” of Key Observation Points (KOPs) within

Design Features of the Selected Alternative (From Alternatives D and E)	
	Nine Mile Canyon, which includes the sites that will be developed as part of the WTP PA. • Class I and Class III inventories of the proposed pump station location and a ½-mile buffer zone will be completed during the permitting phase to determine whether any eligible National Register of Historic Places (NRHP) properties could be affected. For any pump stations proposed within ½-mile of eligible NRHP properties, appropriate Section 106 consultation will be completed prior to approval of the pump station location. Native American consultation will also be completed prior to approving a pump station location(s). • Pump stations will not be located within 330 feet of riparian zones or within 100-year floodplains unless there are no practical alternatives and long-term impacts can be fully mitigated.

Bill Barrett Corporation Applicant-Committed Environmental Protection Measures (Proposed Action)
Pre-Drilling
Pipeline construction methods and practices will be planned and conducted by BBC with the objective of enhancing reclamation and fostering the re-establishment of the native plant community.
BBC will require their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.
BBC will require that their personnel, contractors, and subcontractors abide by all State and Federal laws and regulations regarding hunting.
Construction
In order to avoid potential noise-related impacts to potential Mexican spotted owl (MSO) habitats, new compressor stations will not be located within approximately 0.5 miles of canyon rims.
BBC will use existing crowned and ditched roads for access where reasonably practical to minimize new surface disturbances.
BBC will construct roads on private surface to essentially the same specifications as those on Federal surface, considering the specifications of landowners, topography, subsurface bedrock, etc.
Where topsoil removal is necessary, it will be windrowed (i.e., stockpiled/accumulated in a low row/profile along the edge and parallel to the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area will also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.
No unnecessary side-casting of material will occur on steep slopes.
Unnecessary topographic alterations will be mitigated by avoiding road construction, when practicably feasible, on steep slopes, rugged topography, and perennial and ephemeral/intermittent drainages.
Pipelines within the channel crossings or in mapped flood hazard areas will be constructed such that the pipeline is buried at least 3 feet below the channel bottom and in conformance with hydrological design practices.
Removal and disturbance of vegetation will be kept to a minimum through construction site management (e.g., using previously disturbed areas and existing easements, limiting equipment/materials storage yard and staging area size, to that required, etc.)
Surface disturbance within significant erosion-prone or high salinity areas will be avoided where practical. Necessary construction in these areas will be completed to minimize erosion.
Final Reclamation and Abandonment
All reclamation will be accomplished as soon as practical after the disturbance occurs with efforts continuing until satisfactory revegetation cover is established. Inter-seeding (i.e., seeding into existing vegetation), secondary seeding, or staggered seeding may be used to accomplish revegetation objectives. During rehabilitation of areas in important wildlife habitat, provisions will be made for the establishment of native browse and forb species. Follow-up seeding or corrective erosion control measures will occur on areas where initial reclamation efforts are unsuccessful,

Bill Barrett Corporation Applicant-Committed Environmental Protection Measures (Proposed Action)
as determined by the BLM or the appropriate Surface Management Agency (SMA).
Any mulch used by the operators will be weed-free and free from mold, fungi, or noxious weed seeds. Mulch may include native hay, small grain straw, wood fiber, live mulch, cotton, jute, synthetic netting, or rock.
BBC will reshape disturbed channel beds to their approximate original configuration.
Reclamation of abandoned roads may include reshaping, recontouring, resurfacing with topsoil, installation of water bars, and seeding on the contours. Road beds, well pads, and other compacted areas will be ripped to a depth of approximately 1.0 foot on 1.5-feet centers to reduce compaction prior to spreading the topsoil across the disturbed area. Stripped vegetation will be spread over the disturbance area for nutrient recycling, where practical. Additional erosion control measures (e.g., fiber matting) and road barriers to discourage travel may be constructed if appropriate. Graveled roads, well pads, and other sites will be stripped of usable gravel prior to ripping as deemed necessary. Culverts, cattle guards, and signs will be removed as roads are abandoned.
Common to All Project Phases
Project personnel and contractors will be educated on and subject to the following requirements: • no dogs within the WTP Project Area; • no firearms within the WTP Project Area; • no littering within the WTP Project Area; • smoking within the WTP Project Area will only be allowed in off-operator active locations or in specifically designated smoking areas; all cigarette butts will be placed in appropriate containers and not thrown on the ground or out windows of vehicles; personnel and contractors will abide by all fire restriction orders; • campfires or uncontained fires of any kind will be prohibited within the WTP Project Area; • portable generators used in the WTP Project Area will have spark arrestors.
BBC will be responsible for necessary preventative and corrective road maintenance for the duration of the project. Maintenance responsibilities may include, but are not limited to, blading, gravel surfacing, cleaning ditches and drainage facilities, dust abatement, noxious weed control, or other measures as deemed appropriate.
Additional Applicant-Committed Environmental Protection Measures (Contracted Plan of Development)
No wells will be drilled within the Wilderness Study Areas (WSAs), from WSA cherry stems, or from roads that constitute a WSA boundary.
On some locations in areas that have wilderness characteristics, the operator will eliminate surface facilities and install subsurface wellheads. In particular, two proposed well pads on Horse Bench (T12S R17E Sections 30 and 32) will be constructed in a way that allows for the wellheads

Bill Barrett Corporation Applicant-Committed Environmental Protection Measures (Proposed Action)
and/or separators to be placed in sub-surface concrete vaults that minimize visual impacts. The vaults will be covered with steel grates to prevent public and wildlife access. Tanks for these two well pads would not be located on the well pad.
Roads leading to the two Horse Bench well sites that will not have surface production equipment (T12S R17E Sections 30 and 32) will be designed and reclaimed in a way that minimizes impacts to the visual character of the landscape.
On new locations within wilderness characteristics areas the operator will use low profile, low visibility production equipment.
In areas that have wilderness characteristics, roads will be designed to minimize changes to the visual character of the landscape.
On locations where the derrick will be visible from the Green River and on pads within ¼ mile of the WSA boundary, wells will only be drilled during the recreational off-season (October-April).
BBC will employ Forward-Looking Infrared (FLIR) methodology for detecting fugitive emissions (volatile organic compound (VOC) and Hazardous Air Pollutant (HAP) reduction).
All diesel fueled drill rigs will meet or exceed Environmental Protection Agency (EPA) Tier II emission standards.
If more than two drill rigs are being used in the WTP Project Area, the additional rigs would be fueled by natural gas engines.
BBC will not use well-site dehydrators.
The well pad density will not exceed approximately one surface pad per 160 acres. In the event that downhole well density exceeds one well per 160 acres, multiple wells from a single well pad would be necessary.
On lands with wilderness characteristics, well pad density will not exceed approximately one surface pad per 320 acres.
BBC will limit the maximum number of drill rigs to five.
BBC will use centralized tank batteries and multi-phase gathering where feasible to reduce trucking.

Oil and Gas Best Management Practices	
PRE-DRILLING	
Source of Mitigation Measure	**Summary of Requirements**
Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. (Gold Book) Chapter 4: Construction and Maintenance	The site layout should be located and staked in the most level area, off narrow ridges, and set back from steep slopes, while taking into consideration the geologic target, technical, economic and operational feasibility, spacing rules, natural resource concerns, and safety considerations.
	Operations should be avoided or properly mitigated in riparian areas, floodplains, wetlands, and areas subject to severe erosion and mass soil movement.
	In visually sensitive areas, locations should be selected that provide for vegetative and topographic screening.
CONSTRUCTION	
Source of Mitigation Measure	**Summary of Requirements**
Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. (Gold Book) Chapter 4: Construction and Maintenance	All surface soil materials (topsoil) are to be removed from the entire cut and fill area and temporarily stockpiled for reuse during interim and final reclamation. Topsoil should be segregated and stored separately from subsurface materials to avoid mixing during construction, storage, and interim reclamation. Subsurface materials should never be placed on top of topsoil material at any point in the operation. Stockpiles should be located and protected so that wind and water erosion are minimized and reclamation potential is maximized.
	Fill slopes should be compacted to minimize the chance of slope failure. If excess cut material exists after fill areas have been brought to grade, the excess material will be stockpiled at approved locations.
	To reduce erosion and soil loss, the operators will be required to divert storm water away from the well location with ditches, berms, or waterbars above the cut slopes and to trap well location runoff and sediments on or near the location through the use of sediment fences or water retention ponds.
	Reserve pits should not be constructed in natural water courses. Water courses include lake beds, gullies, draws, streambeds, washes, arroyos, or channels that are delineated on a 1:24,000 USGS quadrangle map or have a hydrologic connection to streams, rivers, or lakes.
	To prevent contamination of groundwater and soils or to conserve water, it is recommended that operators use a closed-loop drilling system or line reserve pits with an impermeable liner.
	New road construction or reconstruction by the operator must be suitable for the intended use and must comply with the BLM road and safety standards, such as those found in the BLM's 9113-Roads Manual.
	In areas of high environmental sensitivity, special road location, design, and construction and maintenance techniques may be required, as well as seasonal vehicular closures to the general public.

Oil and Gas Best Management Practices	
	Existing roads should be considered for use as access routes and may be used when they meet agency standards, transportation and development needs, and environmental objectives.
	To ensure successful growth of plants and forbs, topsoil must be salvaged where available during road construction and respread to the greatest degree practical on cut slopes, fill slopes, and borrow ditches prior to seeding.
	Construction within saturated or frozen soils should be avoided.
	Drainage control must be ensured through the use of drainage dips, in-sloping, natural rolling topography, ditch turnouts, ditches, or culverts. Ditches and culverts may be required in some situations, depending on grades, soils, and local hydrology. If culverts or drainage crossings are needed, they should be designed for a 25-year or greater storm frequency.
	Steep hillsides and water course should be avoided in the location of pipelines and flowlines.
	Flowline routes should take advantage of road corridors wherever possible to minimize surface disturbance and provide better leak detection and access for installation and repair operations.
	When clearing is necessary, the width disturbed should be kept to a minimum. Topsoil material must be stockpiled to the side of the routes where cuts and fills or other surface disturbances occur during the pipeline construction. Topsoil material must be segregated and not be mixed or covered with subsurface material. Bladed material must be placed back into the cleared route upon completion of construction and returned back to the original contour before reapplying topsoil.
	Pipeline construction should not block, dam, or change the natural course of any drainage.
WO IM 2007-021: Integration of Best Management Practices into Application for Permit to Drill Approvals and Associated Right of Way: Road Construction	All new roads will be designed and constructed to a safe and appropriate standard, “no higher than necessary” to accommodate intended vehicular use. New roads will follow the contour of the land. Existing oil and gas roads that are in eroded condition or contribute to other resource concerns will be brought to the BLM standards within a reasonable period of time.
DRILLING	
Source of Mitigation Measure	**Summary of Requirements**
The BLM/USFS Surface Operating Standards for Oil and Gas Exploration and	Pits, water impoundments, and surface discharges that present a potential hazard to humans, livestock, wildlife, or to the resources should be subject to appropriate mitigation, such as, fencing, netting, caging, or covers as appropriate.

Oil and Gas Best Management Practices	
Development (Gold Book) Chapter 5: Drilling and Production Operations	Noise that has the potential to disturb wildlife, livestock and private surface owners or neighbors should be controlled to reduce sound levels. Suitable mufflers should be installed on all internal combustion engines and certain compressor components.
WO IM 2007-021: Integration of Best Management Practices into Application for Permit to Drill Approvals and Associated Right of Way: Multiple Wells From Single Pad	Multiple wells will be drilled from a single well pad wherever technically feasible.
PRODUCTION AND MAINTENANCE	
Source of Mitigation Measure	**Summary of Requirements**
Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. (Gold Book) Chapter 4: Construction and Maintenance	The operator shall submit a road maintenance plan for all roads that will be constructed or used in conjunction with the drilling program.
Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. (Gold Book) Chapter 5: Drilling and Production Operations	The operator must comply with the visual resource management objectives established in the land use plan for all activities that alter landforms, disturb vegetation, or require structures (BLM 8400 Manual Series). Site-specific mitigation practices may be required by the SMA to minimize visual impacts, while remaining consistent with the lessee's right to conduct operations under the lease.
	All long-term facility structures, including worker housing, will be painted a color that enables the facilities to blend in with the natural background color of the landscape as seen from a viewing distance and location typically used by the public. The selected color should be one or two shades darker than the dominant background color, typically a vegetation color. In VRM Class II areas, the use of properly chosen camouflage techniques may be an appropriate method for matching the texture of the landscape. This strategy should be given strong consideration when proposed facilities are between 0.25 and 1.25 miles from a KOP. Semi-gloss paints may be preferred because of their resistance to staining and weathering. Where necessary, the use of contrasting safety paint can be used to highlight and mitigate a potential hazard, such as a tripping hazard or protruding or mechanical edge that could harm the operator or public. Refer to Draft Standard Environmental Color Chart - 2nd Edition Standard Environmental Color Chart (which replaces the current Standard Environmental Color Chart and the Supplemental Environmental Color Chart) for guidance when selecting colors for treating facilities.

Oil and Gas Best Management Practices	
	Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.
	Operators are expected to initiate their own inspection programs, identify noncompliance, and take appropriate corrective actions, rather than relying on Federal inspections to identify problems.
WO IM 2007-021: Integration of Best Management Practices into Application for Permit to Drill Approvals and Associated Right of Way	All above ground facilities including power boxes, building doors, roofs, and any visible equipment will be painted the darker colors selected from the latest national color charts that best allows the facility to blend into the background. Refer to Draft Standard Environmental Color Chart - 2nd Edition Standard Environmental Color Chart (which replaces the current Standard Environmental Color Chart and the Supplemental Environmental Color Chart) for guidance when selecting colors for treating facilities.
	The placement of production facilities on hilltops and ridgelines will be prohibited where they are highly visible. In all areas, low profile tanks may be used in combination with vegetative and landform screening wherever and whenever possible.
	Noise reduction techniques and designs will be used to reduce noise from compressors or other motorized equipment.
	As determined appropriate during the onsite process, the operators may be required to place wellheads below ground.
RECLAMATION AND ABANDONMENT	
Source of Mitigation Measure	**Summary of Requirements**
Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. (Gold Book) Chapter 6: Reclamation and Abandonment	At producing wells, the operators will reduce slopes to original contours. Areas not used for production purposes will be reclaimed and blended into the surrounding terrain, reseeded, and erosion control measures installed. Erosion control measures may be necessary after slope reduction. Mulching, erosion control measures, and fertilization may be necessary to achieve acceptable stabilization.
	Disturbed areas should be revegetated after the site has been satisfactorily prepared. Site preparation may include respreading topsoil to an adequate depth, and may also include ripping, tilling, disking, on contour and dozer track-imprinting.
	Reclamation measure should begin as soon as possible after the disturbance and continue until successful reclamation is achieved. Reclamation can be judged successful when a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community is established on the site, with a density sufficient to control erosion and non-native plant invasion and to re-establish wildlife habitat or forage production.

Oil and Gas Best Management Practices	
	Earthwork for interim and final reclamation generally must be completed within 6 months of well completion or plugging (weather permitting).
	All pits must be reclaimed to a natural condition that blends with the rest of the reclaimed pad area. In addition, the pit must be restored to a safe and stable condition. Pits must be free of oil and other liquid and solid wastes, allowed to dry, be pumped dry, or solidified in-situ prior to filling.
	Pipeline routes and roads should be co-located as much as possible to reduce reclamation needs and impact to other resources.
	Pipeline trenches are to be compacted during backfilling and must be maintained to correct backfill settling and prevent erosion. Reclamation involves filling the trench, compacting the fill, regarding cut-and-fill slopes to restore the original contour, replacing topsoil, installing temporary water bars only where necessary to control erosion, and revegetation in accordance with a reclamation plan.
WO IM 2007-021: Integration of Best Management Practices into Application for Permit to Drill Approvals and Associated Right of Way:	Final reclamation of all oil and gas disturbance will involve recontouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography and revegetating all disturbed areas. Mulching, soil amendments and other state-of-the-art techniques will be utilized to assure the highest possible re-vegetation success.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Paleontology	A BLM permitted paleontologist will be on site during road, pipeline, well pad, and other excavations that will disturb rocks of the Green River Formation.
Air Quality	Tier II rig standards will be required for all new and re-located rigs.
	All new and replaced pneumatic controllers will be a no bleed or low bleed design.
	Emission controls will be utilized on all condensate storage batteries with emissions greater than 5 tons/year. This will include all tank batteries located at well sites, centralized production facilities and compressor stations. The emission controls may consist of vapor recovery, thermal oxidation or other available technologies. At a minimum, the applied control technology must be capable of reducing emissions by 95 percent.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Best management practices will be employed during completion operations to minimize emissions to the atmosphere as a result of well flowback. The preferential best management practice shall be "Green Completion" where the well flowback is captured, separated, and sold as product. When Green Completions are not technically reasonable, flaring or other control practices shall be employed to minimize venting emissions directly to the atmosphere.
	Emissions from engines will be controlled utilizing Best Available Control Technology (BACT) in accordance with Utah Division of Air Quality (UDAQ) regulations. Emissions controls may consist of lean-burn technology, catalysts, air/fuel ratio controllers or other technologies as they become commercially available. Engines located at facilities outside of UDAQ jurisdiction (EPA jurisdiction) will be controlled in a like manner.
	In accordance with a Utah Department of Environmental Quality/ Division of Air Quality (UDEQ-DAQ) letter dated June 6, 2008 requesting implementation of interim nitrogen oxide control measures and compressor engines; the BLM will require the following as a Lease Stipulation or COA for APDs: • All new and replaced internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NOx per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower. • All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NOx per horsepower-hour.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	To ensure that this project will result in the continued attainment of National Ambient Air Quality Standards (NAAQS) and not contribute to ozone exceedances, within one year of the signing of this ROD, the BLM and BBC with input from appropriate stakeholders (i.e., EPA, Ute Indian Tribe, UDAQ), will refine the NOx and VOC emissions inventory for the Project based upon updated actual and projected levels of development. BBC will update its emissions inventory on an annual basis and provide this inventory to the BLM and other interested stakeholders (i.e., EPA, UDAQ, Ute Indian Tribe). This information will be made publicly available on an annual basis. In the event that the updated emissions inventory shows a significant increase in NOx, VOCs, or other ozone precursors relative to the levels predicted by the EIS, then BBC, in consultation with the BLM and appropriate Federal, Tribal and State stakeholders, will perform a new air quality model analysis utilizing the new inventory and monitored data, or incorporate the updated emissions inventory in a planned regional scale air quality modeling study. The modeling will consider the current operating practices, operator committed mitigation, and BACT requirements in place at the time the model is conducted. BLM, in consultation with appropriate Federal, State, and Tribal stakeholders, will evaluate the modeling results and identify any needed additional reductions in ozone precursors emissions. As soon as possible following evaluation of the modeling results, BLM and appropriate stakeholders will use their respective authorities to implement any needed emission control mitigation measures and/or operating limitations necessary to ensure continued compliance with applicable ambient air quality standards for ozone. Absent an effective technology to implement, reductions in the pace of development may be utilized to ensure ambient air quality standards are met. Potential mitigation measures that the BLM and appropriate stakeholders may employ include: • additional natural gas-fired rig engines; • fuel additives; • gas turbines rather than internal combustion engines for compressors; • secondary controls on drill rig engines; • electric drill rigs; • electric compression; • cleaner technologies on completion activities, and other ancillary sources; • reduction in the pace of development; • further centralization of gathering facilities to reduce truck traffic, including liquids gathering system; and/or • Advancements in drilling technologies.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Soils	NSO on slopes greater than 40 percent.
	If surface disturbing activities are proposed on slopes of 20 to 40 percent, BBC and other operators will develop an erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance.
	The presence of biological crusts will be evaluated during the APD process for each proposed project facility. Consideration will be given to relocating project facilities that will destroy significant amounts of biological crusts.
100-year Floodplains, Springs, and Riparian Areas	Consistent with stipulations contained in the Price Field Office Approved RMP, where no practical alternative exists, surface disturbance could be permitted within 330 feet from centerline of intermittent or perennial streams.
	Where no practical alternative exists, surface disturbance could be permitted within the 100-year floodplains of intermittent or perennial streams in compliance with E.O. 11988.
	No excess material (e.g., soil, overburden, etc.) will be stored within 100-year floodplains; all excess material will be relocated to appropriate locations outside of 100-year floodplains but within the WTP Project Area.
	Design and placement of any structures that may need to be placed in washes or 100-year floodplains of tributaries to the Green River will be coordinated with the USFWS.
	Centralized production facilities will be located at an optimal location away from 100-year floodplains.
	For wells within 100-year floodplains, springs, or riparian areas, closed-loop drilling system will be utilized.
	As feasible, crossings of intermittent or perennial streams to access well pads will be avoided. Where stream crossings are necessary, engineered culverts, low water crossings, or a bridge will be constructed as appropriate; the type and location of crossing structures will be determined by the SMA as part of the APD process.
	BLM will require implementation of the BLM Technical Note Hydraulic Considerations for Pipeline Crossings of Stream Channels.
	For wells within 100-year floodplains, springs, or riparian areas, impervious well pads will be constructed using plastic, bentonite, etc.
	For wells within 100-year floodplains, springs, or riparian areas, an impervious containment structure or a permanent high berm (approximately 18 - 24 inches in height) will be constructed around all storage tanks located within 100-year floodplains.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	For wells within 100-year floodplains, springs, or riparian areas, all cuttings will be solidified on location, or removed and disposed of appropriately.
	Within 100-year floodplains, springs, or riparian areas, remote monitoring of well locations will be used to closely observe the status of each well.
	To the maximum extent possible, construction will be avoided in riparian zones. In riparian areas where road and pipeline crossings are necessary, an erosion, revegetation, and reclamation plan will be required.
	Within 100-year floodplains, springs, or riparian areas, major spill kits will be available on each location during drilling.
Water Resources	Detailed construction plans will be prepared by the operator and will include site-specific drainage components and sediment and erosion controls that will be utilized to address control of sedimentation of surface waters in the WTP Project Area.
	Appropriate erosion control and revegetation measures will be employed. In areas with unstable soils where seeding alone may not adequately control erosion, grading will be used to minimize slopes and water bars will be installed on disturbed slopes. Erosion control efforts will be monitored by the operator and necessary modifications will be made to control erosion.
	Production facilities (e.g., well pads, tanks, pipelines, roads, etc.,) will be located outside of the channel of Nine-Mile Creek. During on-sites, production facility locations will be determined to minimize potential impacts to the environment.
	Regular inspections of well locations, topsoil stockpiles, cut- and fill-slopes, roads, and pipeline corridors will be conducted by the third-party monitor for signs of erosion and runoff problems. Problem locations will be stabilized and seeded as appropriate to prevent additional erosion and potential impacts to receiving waters.
	Regular inspections of erosion control structures, drainage structures, and culverts will be conducted for signs of failure or malfunction and repair of those facilities.
	Any shallow groundwater zones encountered during drilling of the proposed wells will be properly protected and the presence of these zones reported to the appropriate SMA. After the completion of drilling operations, the producing formation(s) will be logged and production casing run and cemented in accordance with the drilling program approved in the APD. This will isolate all groundwater-bearing formations in the borehole and will effectively eliminate communication between hydrocarbon-bearing zones and shallow groundwater aquifers.
	Screened containment troughs will be used around ethylene glycol on locations.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	If oil based drilling muds are using in the drilling of wells, proper environmental controls will be used (i.e., closed-loop systems, placing an impermeable barrier under the rig, etc.)
	Water quality will be monitored as outlined in the Water Quality Monitoring Program (see **Attachment 7)**.
	Prior to surface use, the cuttings would be tested for the parameters described in the 1996 Utah Division of Oil, Gas and Mining (UDOGM) Environmental Handbook (version 1.0, 1-96) (Environmental Regulations for the Oil & Gas Exploration & Production Industry). In addition to the testing required by UDOGM, prior to surface use, drill cuttings would be subject to Toxicity Characteristic Leaching Procedure (TCLP) testing. These data would be used to evaluate potential impacts to surface water and other natural resources, and whether surface use of the cuttings is appropriate.
	All cuttings piles would be located on an impermeable barrier and provided with secondary containment or other BMPs to prevent impacts to stormwater.
	To ensure proper tracking of water depletions from the Upper Colorado River System, BBC will notify the BLM and/or our office as to what water resources will be used for the project as they are designated, and the amounts that will be withdrawn from each one.
Rangeland Management and Wild Horses	Damaged fences, gates, or cattle guards will be fixed by the operators as soon as they are damaged in order to prevent unintentional movements of livestock.
	Roads will be plowed to improve access and movement of livestock and horses during periods of heavy snow, generally 16 inches or greater.
	During a typical deep snow, the operators will open edges of plowed roads to create exit points and crossing areas when snow walls develop.
	Pilots will buzz the existing Peter's Point airstrip and proposed Flat Iron and Prickly Pear Mesa airstrips prior to landing to reduce the potential for plane/livestock collisions.
	The operators will be required to construct watering facilities if during the onsite process it is determined that the project location/facility/activity will adversely affect, or preclude use of, an existing watering source for livestock or wild horses.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Raptor Nests	The operators would comply with the Utah Raptor BMPs, which were adopted by BLM under the Approved RMP and which incorporate the U.S. Fish and Wildlife Service (USFWS), Utah Field Office's "Guidelines for Raptor Protection From Human and Land Use Disturbances. The USFWS Guidelines for Raptor Protection require that prior to any surface-disturbing activities proposed between February 1 and August 31, all steep areas and areas with trees within 0.5 mile of proposed construction sites would be surveyed for the presence of raptor nests. If occupied raptor nests are found, construction, drilling, and completion would not occur within species-specific buffer radii during the species-specific active nesting season (as outlined in the USFWS, Utah Field Office's "Guidelines for Raptor Protection From Human and Land Use Disturbances"), unless topographic or vegetative characteristics obscured visual and auditory impacts from the nest. Raptor nest surveys would be funded by the operator. The Utah Raptor BMPs also require at least a 3-year monitoring period of non-activity before a raptor nest can be considered abandoned or no longer useable.
	Except for authorized biologists trained in survey techniques, avoid operating aircraft within 1,000 feet of occupied raptor nests during the breeding season.
Migratory Birds	On Federal lands, the operators would install netting on reserve pits to prevent contact of birds with harmful fluids. For water management facilities on Federal lands, netting or other bird deterrent techniques such as, the "Birdavert System," would be installed to prevent contact of birds with produced water in water management facilities. If flagging is used, it would be in combination with other bird deterrent techniques. The Birdavert system manufactured by Peregrine Systems, Salt Lake City, UT, is a fully automated system that prevents bird contact with fluids in ponds based on emission of sounds, light, or motion at random intervals that are designed to frighten birds and other wildlife away from ponds. The Birdavert system, which was designed by ornithologists, computer programmers, and radar technologists, specifically uses radar, computer technology, and hazing devices to deter birds from landing on ponds. Use of bird deterrent techniques on State or private lands would be determined by the SMA during the onsite process.
	On Federal lands, surface-disturbing activities may be restricted in high-value migratory breeding habitat for migratory birds during the migratory bird nesting season (i.e., approximately April 15 – August 1). Species-specific spatial and temporal "closures" in high-value breeding habitat will be determined on a site-specific basis during the Federal onsite process. The need to restrict surface disturbing activities to protect migratory bird nesting activities at a site-specific location will be determined by the Authorized Officer (AO) based on the presence of breeding or nesting bird species at the time of surface disturbing activities, climatic and weather conditions, and/or topographical and/or vegetative visual screening. Priority consideration will be given to BLM sensitive migratory bird species.
Big Horn Sheep	To avoid impacts to bighorn sheep lambing activities, construction, drilling and completion activities will be prohibited or limited (based on site-specific review with the BLM and UDWR) within identified bighorn sheep lambing areas from March 15 – June 30.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Vegetation	An Approved Pesticide Use and Weed Control Plan will be prepared and implemented in consultation with the AO. Weed monitoring will be continued on an annual basis (or as frequently as the SMA determines) throughout the LOP. The Pesticide Use and Weed Control Plan will include prescribed application methods that account for the reclamation objective of re-establishing native forbs, shrubs and trees in addition to grasses.
	Site-specific interim reclamation plans will be prepared by the operator and submitted with APD packages.
	Interim and final reclamation activities and evaluation will be consistent with the Green River District (**Attachment 3**) Reclamation Guidelines for Reclamation Plans or other subsequent guidance by the BLM.
	Monitoring of reclamation success and report submission will be consistent with the memorandum of understanding (MOU) for *Mitigation Compliance and Monitoring Plan (***Attachment 8***)* and the Green River District Reclamation Guidelines for Reclamation Plans (**Attachment 3**) (BLM 2009).
	The operators may use materials from well pad or reserve pit construction as aggregate.
	All construction equipment coming into the WTP Project Area will be power-washed prior to entering the WTP Project Area.
Mexican Spotted Owl (MSO)	Where feasible, well pads and facilities will be located away from steep-walled canyons.
	On Federal lands, all noise-producing production facilities (e.g., compressor engines, pump jacks, water pumping units, etc.) within potential MSO habitats* and within 0.5 miles of potential MSO habitat will be tested to determine noise levels of the equipment. If noise from production equipment within potential MSO habitat exceeds 45 dBA, the operators will be required to use reasonable measures (e.g., hospital-grade mufflers, housing of equipment, and/or other measures determined to be reasonable by the BLM and operator) to reduce noise levels of that particular facility to 45 A-weighted decibel (dBA) or lower. Furthermore, if production equipment located more than 0.5 miles from potential MSO habitat is determined to generate exceedances of the 45 dBA within the 0.5-mile buffer of potential MSO habitat, operators will also be required to use reasonable measures to reduce noise levels of that particular facility so that it does not exceed 45 dBA within 0.5 miles of potential MSO habitat. If future modeling or ground-truthing of existing modeling determines that an area currently mapped as potential MSO habitat actually does not support the constituent elements needed for potential MSO habitat, the operators will not be obligated to comply with this mitigation measure.
	Where feasible, well pads and facilities will be located in a manner that will conceal development if development is proposed within mixed-conifer vegetation.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Field surveys for MSO will be conducted according to USFWS protocol in all "fair" and "good" MSO habitats and within 0.5 mile buffer of those habitats. Furthermore, the operators will fund ground-truthing exercises to categorize modeled MSO habitats into "good," "fair," or "poor" MSO habitat.
	If during Mexican spotted owl surveys a Mexican spotted owl sighting/auditory response is documented, the BLM will require a 1/2 mile no surface occupancy around the location until further surveys confirm whether or not a protected activity center (PAC) is needed. If during Mexican spotted owl surveys a breeding pair or nest is documented, the BLM would require a temporary 1-mile no surface occupancy around the location until a PAC is established.
	Road access and fencing will be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above-ground obstacles to birds in flight.
	White (preferable) or red strobe lights will be used at night at airstrips.
	Lighting at all facilities will be downshielded/directed to areas of human activity as much as possible while ensuring human safety. Lighting at compressor stations will be kept to the minimum safely permissible level.
	TDS levels in water management facilities and reserve pits will be regularly monitored to minimize the risk of salt toxicity.
	A noise monitoring study will be initiated if field surveys detect MSO in the WTP Project Area.
Colorado River Fish Species	As appropriate (i.e., if water is pumped directly Nine-Mile Creek or perennial drainages), the following measures will be applied to reduce or eliminate direct impacts to habitat for the Colorado River fish species. a. Where directed by the appropriate surface management agency (SMA), the operator will construct erosion control devices (e.g., riprap, bales, and heavy vegetation) at culvert outlets. All construction activities will be performed to retain natural water flows. b. Closed-loop drilling (see Appendix A) will be used for any wells within the 100-year floodplain for Nine-Mile Creek.
Bald Eagle and Golden Eagles	The operators would conduct field surveys for bald and golden eagle winter roosting sites in all suitable habitats on a site-specific basis as determined necessary by the BLM, prior to beginning surface disturbance activities from November 1 – March 31.
	The operators would protect and preserve communal roosting sites and important foraging areas. The operators would retain mature trees and old growth stands wherever possible, particularly within ½-mile from surface water features.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Where feasible, the operators would locate well pads and facilities in a manner to conceal them from bald and golden eagle winter roosting sites by considering vegetation (e.g., cottonwood trees and other large trees) and topographical features (e.g., rivers).
	The operators would locate water management facilities away from important bald and golden eagle foraging areas.
	The operators would avoid conducting potentially disruptive activities and development in the eagles' direct flight path between roosting and foraging areas.
	During the winter months, and where to do so would not endanger personal safety, the operators would remove carrion from access roads to reduce the potential for vehicle collisions with wintering bald and golden eagles that may forage in the area.
	The operators would not use explosives within ½-mile (or within 1 mile in open areas) of communal roosts when bald or golden eagles are congregating, without prior coordination with USFWS.
	Airstrips would be located at least 1,000 feet from bald or golden eagle winter roosting sites.
Uinta Basin Hookless Cactus	Pre-project habitat assessments will be completed across 100 percent of the project disturbance area within potential* habitat prior to any surface disturbing activities to determine if suitable Uinta Basin hookless cactus habitat is present. **Potential habitat* is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Within suitable** habitat, site inventories will be conducted to determine occupancy. Inventories: a. must be conducted by qualified individual(s) and according to the BLM and USFWS accepted survey protocols; b. will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected, and during appropriate flowering periods: i. *Sclerocactus wetlandicus* surveys can be done any time of the year, provided there is no snow cover, but surveys during the bloom time are preferred (mid March to end of June); c. will occur within 300 feet from the perimeter of the proposed ROW for surface pipelines or roads; and within 300 feet from the perimeter of disturbance for the proposed well pad including the well pad; d. will include, but not be limited to, plant species lists and habitat characteristics; e. will be valid until March 15th the following year for *Sclerocactus brevispinus* and one year from the survey date for *Sclerocactus wetlandicus*; and f. survey methods will follow the survey protocol outlined by the USFWS. ***Suitable habitat* is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Uinta Basin hookless cactus. Habitat descriptions can be found in the USFWS's 1990 Recovery Plan and Federal Register Notices for the Uinta Basin hookless cactus. Surveys during the first year will be conducted at a maximum of 6 feet apart. In ideal suitable habitat surveys will be completed no greater than 3 feet apart.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Design project infrastructure to minimize impacts within suitable habitat: a. reduce well pad size to the minimum needed, without compromising safety; b. limit new access routes created by the project; c. roads and utilities should share common ROWs where possible; d. reduce width of ROWs and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat; e. place signing to limit OHV travel in sensitive areas; f. stay on designated routes and other cleared/approved areas; and g. all disturbed areas will be re-vegetated with native species comprised of species indigenous to the ar ea and non-native species that are not likely to invade other areas.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Within occupied*** habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. follow the recommendations for project design within suitable habitats; b. buffers of 300 feet minimum between the edge of the ROW (roads and surface pipelines) or surface disturbance (well pads) and plants and populations will be incorporated; c. surface pipelines will be laid such that a 300 foot buffer exists between the edge of the ROW and the plants, use stabilizing and anchoring techniques when the pipeline crosses the habitat to ensure the pipelines don't move towards the population; d. before and during construction, areas for avoidance should be visually identifiable in the field (e.g., flagging, temporary fencing, rebar, etc.); e. where technically and economically feasible, use directional drilling or multiple wells from the same pad; f. designs will avoid concentrating water flows or sediments into occupied habitat; g. place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat; and h. minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible. ****Occupied habitat* is defined as areas currently or historically known to support Uinta Basin hookless cactus; synonymous with "known habitat."
	Occupied Uinta Basin hookless cactus habitats within 300 feet of the edge of the surface pipelines' ROWs, 300 feet of the edge of the roads' ROWs, and 300 feet from the edge of the well pad shall be monitored for a period of three years after surface-disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the USFWS. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the USFWS.
	Reinitiation of Section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for the Uinta Basin hookless cactus is anticipated as a result of project activities.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Graham's Beardtongue	Pre-project habitat assessments will be completed across 100 percent of the project disturbance area within potential habitat prior to any surface-disturbing activities to determine if suitable Graham's beardtongue habitat is present (*potential habitat* is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment).
	All surface disturbing activities having potential direct or indirect impacts on proposed critical habitat are prohibited (*proposed critical habitat* is defined as habitat proposed in the Federal Register (71 FR 3158) to be designated as critical habitat under Section 4 of the Endangered Species Act).
	Within suitable habitat (*suitable habitat* is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Graham's beardtongue plants; detailed habitat and plant descriptions can be found in the Federal Register 71 (12): 3158-3196), site inventories will be conducted to determine occupancy. Inventories: a. must be conducted by qualified individual(s) and according to the BLM and USFWS accepted survey protocols; b. will be conducted in suitable and occupied habitat (occupied habitat is defined as areas currently or historically known to support Graham's beardtongue; synonymous with "known habitat") for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15 to May 20 in the Uinta Basin; however, surveyors should verify that the plant is flowering by contacting a BLM or USFWS botanist or demonstrating that the nearest known population is in flower); c. will occur within 300 feet from the centerline of the proposed ROW for surface pipelines or roads; and within 300 feet from the perimeter of disturbance for the proposed well pad including the well pad; d. will include, but not be limited to, plant species lists and habitat characteristics; and e. will be valid until April 15 the following year.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Design project infrastructure to minimize impacts within suitable habitat: a. reduce well pad size to the minimum needed, without compromising safety; b. limit new access routes created by the project; c. roads and utilities should share common ROWs where possible; d. reduce the width of ROWs and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat; e. place signing to limit OHV travel in sensitive areas; and f. Stay on designated routes and other cleared/approved areas.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. follow the recommendations for project design within suitable habitats; b. construction of roads will occur such that the edge of the ROW is at least 300 feet from any plant; c. roads will be graveled within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15 to May 20 (flowering period); dust abatement applications will be comprised of water only; d. the edge of the well pad should be located at least 300 feet away from plants; e. surface pipelines will be laid such that a 300 foot buffer exists between the edge of the ROW and the plants, use stabilizing and anchoring techniques when the pipeline crosses the habitat (exposed raw shale knolls and slopes derived from the Parachute Creek and Evacuation Creek members of the geologic Green River Formation) to ensure pipelines don't move towards the population; f. construction activities will not occur from April 15 through May 30 within occupied habitat; g. before and during construction, areas for avoidance should be visually identifiable in the field(e.g., flagging, temporary fencing, rebar, etc.); h. where technically and economically feasible, use directional drilling or multiple wells from the same pad; i. designs will avoid concentrating water flows or sediments into occupied habitat; j. place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat; and k. minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
	Occupied Graham's beardtongue habitats within 300 feet of the edge of the surface pipelines' ROWs, 300 feet of the edge of the roads' ROWs, and 300 feet from the edge of well pads shall be monitored for a period of three years after surface-disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the USFWS. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the USFWS.
	Reinitiation of Section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for the Graham's beardtongue is anticipated as a result of project activities.
Cultural Resources	If unanticipated cultural sites are discovered during surface-disturbing activities, the steps in the Preconstruction Cultural Resource Identification Plan, included with **Attachment 4** will be followed to ensure proper mitigation and handling.
	To account for direct and indirect impacts, a 160-acre area will be inventoried at the Class III level at each worker housing location within the WTP Project Area prior to surface disturbance / installation of the temporary worker housing facilities.
Tribal Consultation	Per the 2010 WTP PA (see **Attachment 4**), the BLM will continue to consult with appropriate Indian Tribes regarding historic properties of religious and cultural significance, in accordance with the National Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act, Archaeological Resources Protection Act (NAGPRA) of 1979 (ARPA), American Indian Religious Freedom Act of 1978 (AIRFA), Executive Order 13007 Scared Sites, and their implanting regulations. The BLM will provide copies of any report/studies developed pursuant to the WTP PA to those tribes that have expressed a desire for information as it is gathered for the WTP project.
Transportation	BBC and other operators will prepare erosion control plans and install erosion control BMPs prior to constructing or upgrading roads in sensitive areas.
	All well heads will be fitted with remote telemetry equipment to facilitate remote monitoring of the wells and reduce pumper traffic.
	Access route closures will be accompanied by public outreach, including appropriate signage to ameliorate conflicts between the public and operators.
	In canyon bottoms within the WTP APE, dust will be considered controlled when 1) no dust is generated above the cab of the vehicle, or 2) there are no hanging dust plumes (see **Attachment 4**).

Environmental/Resource Protection Measures	
Resource	**Summary of Mitigating Measures**
Health and Safety	Fire suppression equipment (e.g., fire extinguishers, fire water, and hoses) will be available at each construction site.
	Storage facilities may be fenced as determined necessary during the onsite process.
Visual Resources	During the onsite process, the BLM will consider adding visual resource mitigation measures as COAs as necessary to meet VRM Class III objectives on Horse Bench.
	The operators will minimize pumping unit heights.
	Lighting at all drilling locations and facilities will be downshielded/directed to areas of human activity as much as possible to ensure human safety.
	Within Canyon Bottoms in VRM Class II areas, the alignment of facilities with respect to key observation points (roads in particular) will be reviewed during the pre-installation phase of well development and visual contrast ratings will be performed.
	No development will be located within the viewshed of the Green River unless to do so will preclude the development of valid and existing lease rights. If development were to occur within the viewshed, drilling and completion will only be permitted outside of the high use river recreation season (October to April).
	Within VRM Class II areas, the operators will contract with a licensed landscape architect approved by the BLM for construction monitoring, inspection, and supervision of visual mitigation and environmental protection measures such as recontouring of landform to approximate natural conditions and berming, revegetation and introduction of screening vegetation, pipeline texturing and coloring (where appropriate), and other measures mentioned below and elsewhere in this document.
	Edges of disturbed areas will be feathered by creating a vertical transition from taller to shorter vegetation along disturbed edges.
	The width of disturbance will be varied and some plant masses will be preserved to create a more naturally appearing edge, thereby avoiding straight, sweeping, and converging lines in the landscape.
	Where stream crossings are necessary, equipment will be kept away from the edge of escarpments and stream banks as feasible, thereby minimizing impacts to the escarpment edge. These edges will be pre-constructed using vegetative or mechanical methods.
Noise	Operators will be required to reduce noise from drilling and completion operations from within sound of the Green River (approximately 2 miles), through use of mechanisms such as hospital-grade mufflers on drill rigs, compressor stations, and pumping units.

Surface Use Standard Conditions of Approval
A pre-construction field meeting may be conducted prior to beginning any dirt work approved under this APD. The operator shall contact the BLM AO at least 7-days prior to beginning operations so that the meeting can be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent, and for providing all contractors copies of the approved APD(s), project map and BLM COA pertinent to the work that each will be doing.
In areas that contain environmentally sensitive fragile soils and vegetation, the operator may be required to perform special measures such as mulching, erosion fencing, use of erosion fabric, etc. per the direction of the BLM AO to stabilize any disturbed areas and ensure the reestablishment of long-term perennial vegetation.
All equipment and personnel used during drilling and construction activities will be restricted to only approved access roads.
All trees salvaged from the construction of the well pad will be clearly segregated from the spoil material, to prevent burying of trees in the spoil material.
The operator will provide georeferenced spatial data depicting as-built locations of all facilities, wells, roads, pipelines, power lines, and other related facilities to the BLM by November 1 of each year until completion of project construction activities has occurred.
If any dead or injured threatened, endangered, proposed, or candidate plant or animal species is located during construction or operation, the BLM Price Field Office (435-636-3600) shall be notified within 24 hours.
The operator will conduct clearance surveys for threatened, endangered or other special-concern species at the optimum time. This will require coordination with the BLM before November 1, annually, to review the potential for disturbance and to agree on inventory parameters.
Construction
The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impede watershed and drainage flows.
Construct the backslope no steeper than 1½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM AO.
Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM AO.
With the overall objective of minimizing surface disturbance and retaining land stability and productivity, the operator shall utilize equipment that is appropriate to the scope and scale of work being done for roads and well pads (utilize equipment no larger than needed for the job).
Reserve pits will be adequately fenced during and after drilling operations until pit is reclaimed so as to effectively keep out wildlife and livestock. Adequate fencing, in lieu of more stringent requirements by the surface owner, is defined as follows: • Construction materials will consist of steel or wood posts. Three or four strand wire (smooth or barbed) fence or hog panel (16-foot length by 50-inch height) or plastic snow fence must be used with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc. Electric fences will not be allowed. • Construction standards: Posts shall be firmly set in ground. If wire is used, it must be taut and evenly spaced, from ground level to top wire, to effectively keep out animals. Hog panels must be tied securely into posts and one another using fence staples, clamps, etc. Plastic snow fencing must be taut and sturdy. Fence must be at least 2-feet from edge of pit. Three sides must be fenced before beginning drilling, the fourth side must be fenced immediately upon completion of drilling and prior to rig release. Fence must be left up and maintained in adequate condition until pit is closed.

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The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.
The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having permeability less than 10^{-7} cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand will be used prior to installing the liner.
The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
The reserve pit shall have 2 feet of freeboard maintained at all times to prevent overflow of fluids.
Culverts will be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them, and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.
The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be ran parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.
Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization, and reclamation.
During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM AO.
The operator shall submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD.
Drilling/Operations/Maintenance
If in the process of air drilling the wells there is a need to utilize mud, all circulating fluids will be contained either in an approved pit or in an aboveground containment tank. The pit or containment tank will be large enough to safely contain the capacity of all expected fluids without danger of overflow. Fluid and cuttings will not be squeezed out of the pit, and the pit will be reclaimed in an expedient manner.
All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All State and local laws and regulations pertaining to disposal of human and solid waste will be complied with.
Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.
The operator will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the applicable Federal and State laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall obtain from the BLM AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed

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necessary by the AO to such use.
Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of these wells will be in accordance with all applicable existing or hereafter promulgated Federal, State and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.
Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Order #7.
The only fluids/waste materials which are authorized to go into the reserve pit are Resource Conservation and Recovery Act (RCRA) exempt exploration and production wastes. These include: • drilling muds and cuttings; • rigwash; and • excess cement and certain completion & stimulation fluids defined by EPA as exempt. It does not include drilling rig waste, such as: • spent hydraulic fluids; • used engine oil; • used oil filter; • empty cement, drilling mud, or other product sacks; • empty paint, pipe dope, chemical or other product containers; and • excess chemicals or chemical rinsate. Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM AO requiring specific testing and closure requirements.
Reserve pits will be closed as soon as possible, but no later than 90 days from time of drilling/well completion, unless the BLM AO gives an extension. Squeezing of pit fluids and cuttings is prohibited. Pits must be dry of fluids or they must be removed via vac-truck or other environmentally acceptable method prior to backfilling, re-contouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet below re-contoured grade. The operator will be responsible for re-contouring any subsidence areas that develop from closing a pit before it is sufficiently dry.
If this well is drilled during the fire season (June-October), the operator shall institute all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access route(s) and well location(s), keeping firefighting equipment readily available when drilling, etc.

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Dry Hole/Reclamation
All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc., will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific COAs.
Disturbed lands will be re-contoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.
Phased reclamation plans will be submitted to BLM for approval prior to individual POD facility abandonment via a Notice of Intent (NOI) Sundry Notice. Individual facilities, such as well locations, pipelines, discharge points, impoundments, etc., need to be addressed in these plans as they are no longer needed. Individual items that will need to be addressed in reclamation plans include: • pit closure (close ASAP after suitably dry, but no later than 90 days from time of drilling unless an extension is given by BLM AO); BLM may require closure prior to 90 days in some cases due to land use or environmental concerns; • configuration of reshaped topography, drainage systems, and other surface manipulations; • waste disposal; • revegetation methods, including specific seed mix (pounds pure live seed/acre) and soil treatments (seedbed preparation, fertilization, mulching, etc.); On private surface, the landowner should be consulted for the specific seed mix; • other practices that will be used to reclaim and stabilize all disturbed areas, such as water bars, erosion fabric, hydro-mulching, etc.; • an estimate of the timetables for beginning and completing various reclamation operations relative to weather and local land uses; • methods and measures that will be used to control noxious weeds, addressing both ingress and egress to the individual well or POD; and • decommissioning/removal of all surface facilities.
BLM will not release the performance bond until all disturbed areas associated with the APD/POD have been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and SMA.
A NOI to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
Any mulch utilized for reclamation needs to be certified weed free.
Water bars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of water bar to ensure drainage, and extended into established vegetation. All water bars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial water bar should be constructed at the top of the backslope. Subsequent water bars should follow the following general spacing guidelines:

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Slope (percent) / Spacing Interval (feet) ≤ 2 — 200 2 – 4 — 100 4 – 5 — 75 ≥ 5 — 50
Producing Well
Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM AO. Reduce slopes by pulling fill material up from foreslope into the toe-of-cut slopes.
Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by the BLM AO.
Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-3A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.
Distribute stockpiled topsoil evenly over those areas not required for production and reseed as recommended.
Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM AO to prevent soil erosion and accommodate safe, environmentally-sound access.
Prior to construction of production facilities not specifically addressed in the APD, the operator shall submit a Sundry Notice to the BLM AO for approval.
If not already required prior to constructing and drilling the well location, the operator shall immediately upgrade the entire access road to BLM standards (including topsoiling, crowning, ditching, drainage culverts, surfacing, etc.) to ensure safe, environmentally-sound, year-round access. This requirement does not supersede or apply where specific road requirements are addressed in the APD/POD surface use plan (e.g., two track road, spot upgrade, etc.).
Water bars shall be installed on all reclaimed pipeline corridors.