



U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 RAWLINS FIELD OFFICE

TIERED EA, FONSI, AND DR FORM

Tiered to and Referencing the Atlantic Rim Natural Gas Development Project Environmental Impact Statement

ENVIRONMENTAL ASSESSMENT

EA NUMBER: WY-030-08-EA-049

Lease Numbers: WYW-116179, WYW-155531, WYW-133658, WYW-136728, and wells on private surface with private minerals.

Proposed Action:

Doty Mountain Unit B Plan of Development (POD) which includes 11 Coal Bed Natural Gas Wells, 3 Water Re-injection Wells with Access Roads, Pipeline/Utility Corridors, Water Transfer Stations, and associated Infrastructure

Applicant/Proponent: Anadarko E & P Company

BLM Rawlins Field Office (RFO) Interdisciplinary (Review) Team (IDT)

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7/1/08
 Date

Location of Wells and Proposed Action:

Lease Number	Well Name	Location
WYW-116179	AR Federal 1791 1-26	NENE 26-17N-91W
	AR Federal 1791 3-26	NENE 26-17N-91W
	AR Federal 1791 7-26	SWNE 26-17N-91W
	AR Federal 1791 7-26i	SWNE 26-17N-91W
WYW-155531	AR Federal 1791 5-26	SWNW 26-17N-91W
WYW-133658	AR Federal 1791 1-27	NENE 27-17N-91W
WYW-136728	AR Federal 1791 1-28	NENE 28-17N-91W
	AR Federal 1791 3-28	NENE 28-17N-91W
	AR Federal 1791 5-28	SWNE 28-17N-91W
	AR Federal 1791 7-28	SWNE 28-17N-91W
	AR Federal 1791 7-28i	SWNE 28-17N-91W
FEE	AR Fee 1791 1-29	NENE 29-17N-91W
	AR Fee 1791 7-29	SWNE 29-17N-91W
	AR Fee 1791 7-29i	SWNE 29-17N-91W

"i" indicates an injection well, co-located with the preceding well listed in the table

"Fee" indicates a well with private mineral ownership located on private surface. BLM has no jurisdiction over these wells or the private surface involved, and are therefore not being approved or denied herein. They are simply included here for reference, as they are within the Doty (CBNG) Federal Unit, and are also subject to the overall Atlantic Rim disturbance cap, described in the "Remarks" section below.

Also see POD Master Surface Use Plan and project maps.

Conformance with Land Use Plan

This proposed action is in conformance with the Great Divide Resource Management Plan (RMP) that was approved on November 8, 1990. The RMP has been reviewed to determine if the proposed action conforms to the land use plan terms and conditions as required by 43 CFR 1610.5. Development of oil and gas reserves is in conformance with the RMP. On page 30, the RMP states "The entire planning area [Great Divide Resource Area] is open to oil and gas leasing".

The development of this project will not affect the achievement of the Wyoming Standards for Healthy Rangelands (August 1997).

Remarks:

The NOS or APD for the proposed actions were posted for 30 days (beginning 04/06/2007) in the Rawlins Field Office Information Access Center (Public Room) for review. Notification of preparation of this EA was provided on the Wyoming BLM internet NEPA register (<http://www.wy.blm.gov/nepa/search>).

The Atlantic Rim Area Natural Gas Field Development Project Environmental Impact Statement (AREIS) was written to assess the potential foreseeable and cumulative effects of drilling operations and associated activities in the Project area. The Record of Decision (ROD) for this project was approved on March 23, 2007. The proposed action is in conformance with the AREIS.

The AREIS ROD provides for the drilling of natural gas wells and associated infrastructure, limiting total surface disturbance to 7,600 acres at any one time (not including surface disturbance that occurred prior to implementation of the Interim Drilling Policy). The ROD establishes a goal for per-well surface disturbance of 6.5 acres of short-term disturbance (less in "Category A" areas).

The surface disturbance cap is allocated to operators "...on a prorated mineral leasehold basis." (AR ROD, Page

2), and development is limited to no more than 8 well sites per 640-acre section. If in the event an Operator reaches the surface disturbance cap allocation, then "...further disturbance on federal minerals will not be permitted." (AR ROD, Page 3). The RFO will monitor and track disturbance areas for future proposals, in order to ascertain whether the disturbance cap would be exceeded by any future authorizations.

Note: Three fee minerals/fee surface wells in located in Doty POD B are subject to the overall project disturbance cap, and are therefore included in the disturbance table within this document. However, as BLM has no jurisdiction over development of non-federal actions, these fee APDs are neither being approved or denied herein. Where applicable, associated access to fee wells across BLM administered surface is included within the analysis, and is included in the Decision Record for the project.

The APD's, Master Drilling Plan and Master Surface Use Plan with Water Management Plan and Conditions of Approval, contain a complete description of the proposed action. The Master Drilling and Surface Use Plans with associated documents and the Conditions of Approval are considered an integral part of this Environmental Assessment and are incorporated by reference.

Modifications, or alternatives, to the original proposal received from the operator were identified as the result of the pre-approval onsite inspections. At the on-sites, all areas of proposed surface disturbance were inspected to ensure that potential impacts to resources would be reduced. In some cases, access roads were re-routed, and well locations, pipelines, and other water management control structures were moved, modified, or dropped from further consideration to alleviate or reduce environmental impacts. In addition, site specific mitigation and/or Conditions of Approval have been applied to alleviate or reduce environmental effects of the operator's proposal. Onsite changes, implementation of committed mitigation measures contained in the Master Surface Use Plan, Drilling Program and Water Management Plan, and site specific and Standard COAs are incorporated and analyzed in the Proposed Action Alternative.

All POD B wells are located entirely within a Federal Oil and Gas Unit, the Doty Mountain Unit, and as a result, no additional rights-of-way are required. However, Anadarko has requested an additional access route to the Doty Mountain Unit, and this route will require an additional Right-of-Way Grant or an amendment to an existing Grant. The grant will be made under the authority of Title V of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1761), and be subject to the terms and conditions in 43 CFR 2801 and rental payments as determined by 43 CFR 2803.1-2. The grant would be subject to the mitigation set forth in the application/plan of development as found in the Surface Use Plan and APDs for these wells.

Purpose and Need for Proposed Action

Domestic natural gas production is an integral part of U.S. energy development and conservation plans due to its availability and the presence of existing market delivery infrastructure. Domestic production reduces immediate dependence upon foreign sources of energy, and maintains an adequate and stable supply of fuel to maintain economic well-being, industrial production, and national security. The environmental advantages of burning natural gas are emphasized in the Clean Air Act amendments of 1990.

In addition, the proposed action would allow Anadarko, as leaseholder, to exercise lease rights to explore and develop oil and gas resources within the project lease areas.

For these particular wells, the production is primarily natural gas and produced water from coal seams.

Development of Alternatives

In reviewing the proponent's submitted proposal (APDs, Master Surface Use Plan, Master Drilling Plan, Water Management Plan, etc.), the BLM conducted onsite reviews and considered known and potentially-occurring resources and conditions in the project area. As a result of this review, project components were moved, added, or eliminated in order to reduce potential environmental impacts, and in accordance with BLM policy and accepted Best Management Practices (BMPs). This resulted in the alteration of the proponent's submitted proposal to yield the Proposed Action, which incorporates the changes from the onsite inspections, BLM review, and mandated BLM mitigations (Conditions of Approval). The Proposed Action, then, differs from the original proposal submitted by the proponent. Since the proponent has agreed, by re-submission of the applications and POD plans, to the changes agreed upon as a result of the onsite inspections and BLM review, the Proposed Action represents a *de facto* alternative to the original submittal.

The AREIS considered several alternatives to development of the oil & gas resources in the project area (see

DEIS, Pages S2-S3 and FEIS Page 1-20).

The site-specific NEPA contained herein is issue-driven and encompasses information found during on-site inspections and supporting documentation submitted by the operator in their Master Surface Use Plan, the Water Management Plan (WMP), and Master Drilling Plan and by BLM specialists. If particular resources did not exist in the project area, or in the area identified as the cumulative impact analysis area, they are not analyzed or discussed in this EA (40 CFR 1500.1(b), 1502.20 & 1508.28).

The BLM interdisciplinary team, in review of this Proposed Action (as modified during onsite inspections and subsequent review), identified no unresolved resource conflicts that would necessitate development of additional alternatives.

Description of Proposed Action Alternative

The proposed action includes the construction and/or reconstruction of access roads and the construction of well pads for the purpose of drilling 11 CBNG wells and 3 produced water re-injection wells. In addition, the proposed action also includes the construction, operation and reclamation of associated underground gas gathering/sales pipelines, produced water-gathering pipelines and power-lines and utility corridors. The maps and illustrations attached to the APDs and Master Surface Use Plan display the locations of the proposed wells, access roads, gas and water-gathering pipelines, power-line (electrical) and other utility (gas and water) corridors. To minimize surface disturbance, the pipeline/utility corridors are located adjacent and parallel to the proposed or existing access roads and existing pipeline disturbances, except where not feasible or applicable.

The Central Delivery Point (CDP) for the Doty Mountain unit is already constructed and in use.

Any additional facilities later determined to be necessary would be proposed and applied for via a Sundry Notice.

Water for drilling each well would be obtained from existing wells completed in the coal seams of the Mesa Verde Group within the Doty Mountain Unit. Water would be hauled by truck to each drill site over existing and proposed roads within the POD. Any changes in the water source or method of transportation would first require written approval by the BLM. To protect any shallow, fresh water aquifers or sources, drilling of surface casing for each well would use either air drilling techniques, or use non-produced (fresh) water from a State permitted local source.

Onsite inspections of the POD wells, well pads, access roads and pipeline/utility corridors were initiated on June 13, 2007. Potential impacts to resources from the location of the well pads, access roads and corridors were reviewed and assessed. As a result, several pads, roads and corridors were relocated to reduce potential impacts to soils, vegetation, water, wildlife (including fisheries), cultural and recreational resources.

The location of the proposed development is approximately 26 miles north of Baggs, Wyoming, east of Highway 789. Access to the area will be from existing County Road 608 to the east off of Highway 789. Some existing roads will be reconstructed and new roads will be constructed to access well locations.

A discussion of the actions generally associated with drilling a well, including (1) a plan of operations, (2) construction of the access road and drilling pad, and (3) pipeline installation, can be located in the following portions of the AREIS or ROD:

- Chapter 2, Proposed Action and Alternatives (AREIS)
- Chapter 4, Analysis of Environmental Consequences (AREIS)
- Appendix A, Project Reclamation Plan (ROD)
- Appendix C, Operator-Committed Practices (ROD)

Mitigation and reclamation measures are described in Chapter 4 and Appendix B of the ROD (Project Performance-Based Monitoring and Best Management Practices). The following narratives summarize elements specific to the proposed action for this EA.

Construction

Well access roads, drill pads and pipeline/utility corridors must be constructed and or re-constructed in order to drill and complete operating and producing coal bed natural gas wells. This is considered a short-term disturbance. Upon completion of a well as a producer and placing into production (gas sales), portions of the well (drill) pad not needed for production operations will be reclaimed to a production pad. Upon the completion of installation of the pipelines/utilities, the pipeline/utility corridors will be fully reclaimed. Upon successful interim reclamation of the

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areas of the well pad and access/utility corridors not needed for production operations, the remaining surface disturbance is considered as long-term. The entire well pad, access road and pipeline/utility corridor will be totally reclaimed subsequent to well plugging and abandonment under final reclamation.

Overall short-term surface disturbance estimates for Doty Mountain POD B including the well pads and access road/utility/pipeline corridors are presented in the Table below (includes 3 fee wells and access):

Short Term Disturbance Areas					
Well #	Well Pad-Acres*	Road-L. Feet	Corridor-Acres**	Road-Acres***	SUM- Acres
1-26	1.9	787	0.54	0.90	3.35
3-26	1.9	550	0.38	0.63	2.91
5-26	1.9	1,665	1.15	1.91	4.96
7-26	1.9	235	0.16	0.27	2.33
1-27	1.9	935	0.64	1.07	3.62
1-28	1.9	317	0.22	0.36	2.48
3-28	1.9	1,966	1.35	2.26	5.51
5-28	1.9	227	0.16	0.26	2.32
7-28	1.9	343	0.24	1.58	2.53
1-29	1.9	1,364	0.94	0.99	4.41
7-29	1.9	2,890	1.99	3.32	7.21
7-26i	1	0	0.00	0.00	0.00
7-28i	1	0	0.00	0.00	0.00
7-29i	1	0	0.00	0.00	0.00
Total	23.9	11,279	7.77	12.95	44.63

* Well pad surface disturbance areas are approximately 1.9 acres, including spoil piles and cut/fill slopes. Injection wells (i) are co-located on same pad with production wells representing no additional surface disturbance.

** This assumes a corridor surface disturbance with widths equal to 30 feet.

***.This assumes new road surface disturbance with widths equal to 50 feet.

The proposed action will result in approximately 45 acres of short-term disturbance, comprised of new or reconstructed access roads and adjacent and parallel pipelines and utilities, as detailed above.

The average short-term per-location disturbance for POD B is 4.1 acres. The proposed action is located outside of "Category A" area, and thus is subject to a "disturbance goal" of 6.5 acres per well location. This POD, then, meets the disturbance goal provided in the AREIS ROD.

Access

The operator proposes to construct new or re-construct existing access roads to the proposed well locations. The new constructed or reconstructed roads will be constructed to meet BLM specifications for a "Resource Road", as specified in BLM Manual Section 9113. Proper drainage structures will be constructed/installed along the access roads. The width of the access road travel-way (travel surface) will be a minimum of 14 feet within an average right-of-way width of 40 to 50 feet. Unless prohibited by terrain and or excessive surface disturbance or other such circumstances, the access road right-of-way will be combined with the pipeline/utility right-of-way into a road/utility corridor that will be a total of 80 feet in width. Some local connector or collector roads between multiple well locations may be constructed to a minimum 16-20 feet wide travel width within the 80 feet wide corridor.

The access roads, including utility corridors, would be reclaimed during production operations to the maintenance width of approximately 30 to 40 feet. Utility corridors upon completion of pipeline/power-line installation along with any unneeded access road would be recontoured, ripped, seeded, and revegetated.

As provided for in the fourth edition of the BLM Gold Book (containing BLM guidance for consideration of oil & gas activities on BLM-administered public lands), "The appropriateness of primitive roads or routes is both site-specific

and use specific and is typically based on many factors....” Non-constructed (primitive) roads were not mandated for this POD due to a lack of unresolved resource conflicts, scope of construction/drilling equipment needed, the necessity of year round access, and equipment operator safety. Should the BLM determine that alternate road designs are appropriate or necessary, the BLM could mandate the use of a reviewed and approved alternate design. In this instance, such a design was not determined to be necessary.

Well Sites

In order to drill and complete the wells, a drill pad will be constructed for each well location. The average size of the 11 well pads is 1.9 acres, or 338 feet X 242 feet. Some well locations will also include an additional produced water injection well, identified by an "i" at the end of the well number. In the event the wells become producers, cut and fill portions of the well site will be brought back to grade and reclaimed along with any other unneeded portions of the well site. Soil stockpiles will be re-spread or stabilized, and reseeded with native vegetation. The well pad will be reduced to less than one-half acre for the duration of production operations (The SUP estimates the size of the production pad at 32 acres). Unless otherwise authorized and in conjunction with interim pad reclamation, the reserve pits will have been dried and backfilled within 180 days (six months) of well completion or plugging and abandonment. The entire well pad will be recontoured, ripped, seeded, and revegetated during final reclamation upon final plugging and abandonment.

Pipeline/Utility Corridors

The produced water and gas sales and gathering pipelines and power-lines would be buried upon completion of construction and installation, and the surface disturbed areas reclaimed soon thereafter. Upon well plugging and abandonment and or pipeline/power-line abandonment, the pipelines/power-lines would be properly abandoned in accordance with BLM procedures for abandonment and the right-of-ways and corridors adequately reclaimed. Major crossings of drainages have been engineered to insure design/construction adequacy and erosion protection. All channel crossings will comply with current BLM policies and mitigation measures appropriate to the crossings (see "Hydraulic Considerations for Pipelines Crossing Stream Channels," BLM Technical Note 423, April 2007).

Produced Water Disposal

Produced water from the proposed wells would be gathered and transported via buried water pipelines to water re-injection wells within the POD and the Doty Mountain Unit. Produced water collection, transport and disposal, is addressed in detail in the MSUP and appended Doty Mountain Unit Water Management Plan (WMP).

The only method of produced water disposal considered and analyzed under the "proposed action" and this EA is subsurface re-injection using underground injection disposal wells permitted by the State of Wyoming and approved by BLM.

At new injection facilities, it is anticipated that subsurface water sumps will be constructed in lieu of above ground storage tanks. Any modifications to this proposal will be submitted via a Sundry Notice for review prior to approval.

Produced water collection, transport and disposal, is addressed in further detail in the MSUP and Water Management Plan (WMP).

No Action Alternative

NEPA regulations require that alternative analyses in NEPA documents "include the alternative of no action" (40 CFR 1502.14(d)). For this analysis, "no action" means that the BLM would reject the proponent's proposal and "the proposed activity would not take place."

Potential Environmental Impacts of the "Proposed Action" Alternative

Critical Element	Affected		Critical Element	Affected	
	Yes	No		Yes	No
Air Quality	X		T/E Species		X
ACEC's		X	Wastes, Hazardous/Solid	X	
Cultural Resources	X		Water Quality		X
Prime/Unique Farmlands		X	Wetlands/Riparian Zones	X	
Floodplains		X	Wild and Scenic Rivers		X

Native Amer. Rel. Concerns	X	Wilderness	X
Environmental Justice	X	Invasive, Nonnative Species	X

In addition to the critical elements referenced above, reviews of potential effects upon paleontological, visual and recreational, soil, vegetation, and wildlife resources were conducted.

The affected environment and analysis of environmental impacts are discussed in the AREIS to which this EA is tiered. Air quality impacts are also disclosed and analyzed in the AREIS; potential air quality impacts from the Proposed Action discussed herein are not expected to cause exceedences of air quality standards.

A map showing the known wildlife resources in the project vicinity is attached.

Halogeton, Russian thistle and other invasive weeds are a significant concern for this project area. They presently are infrequent to not present in un-disturbed areas. These species have increased dramatically following soil disturbance within this project area. COAs have been added to control the spread, establishment, and plant community changes associated with weed infestation.

Additionally, the BLM is not currently aware of any methane seeps within the Doty Mountain B POD. However, methane seeps (including the potential for their increase and associated impacts) are disclosed and addressed in the AR FEIS and Record of Decision (ROD), including: FEIS, Chapter 4, at Page 4-32, 4-33, 4-49, 4-52; and in the Record of Decision, Appendix B at Page B-10 and B-11. Relative to methane seeps, BLM, via collaborative monitoring efforts, can determine whether adaptations in CBNG development and production management is needed; currently, there are no national or state standards or thresholds for greenhouse gas emissions or concentrations that have been established through law or regulation.

To evaluate groundwater impacts in the area (including methane seep considerations), monitoring wells were required as part of the Interim Drilling Policy during preparation of the AR EIS (see ROD, Appendix A). Additional monitoring wells were then required as part of the AR ROD (Appendix B at Page B-10) as a Condition of Approval of the adjacent Sun Dog PODs (approved in 2007). The BLM is evaluating information from these wells, along with other cooperative studies in the area, in order to appropriately respond to issues that may arise.

Cultural Resources:

A discussion of the affected environment for cultural resources, including the historic trails, can be found in the final AREIS at Section 3.11 Cultural and Historical Resources, page 3-122. A Class III cultural resource inventory was conducted for each component of the proposed project so that appropriate mitigation measures could be developed to reduce or eliminate adverse impacts to historic properties. Portions of the proposed project are located within two miles of the historic Rawlins to Baggs Stage Road (48CR3648) and will be visible from contributing segments of the historic road.

The proposed project has the potential to impact cultural resources as described in the final AREIS at Section 4.11 Cultural Resources, page 4-116. Impacts to archaeological resources identified during the Class III cultural resource inventory will be avoided where possible or mitigated as described in the final AREIS at Appendix I Cultural Resources Management, page I-8. Site-specific COA (e.g. archaeological monitoring, construction barrier fencing, etc.) are applied for specific areas, as necessary.

The eastern-most portion of the project is located within two miles of the historic Rawlins to Baggs Stage Road (48CR3648) and will be visible from contributing segments of the historic road. Because adverse effects to the historic trails and roads were identified in the AREIS, a programmatic agreement was executed between the BLM, SHPO, ACHP, proponents, and other interested parties to develop the necessary mitigation to minimize impacts to the setting of the historic trails. As a result, restrictions or stipulations in the form of COA were added to the MSUP APD authorizations as appropriate. Those stipulations are summarized below:

For all wells and associated infrastructure in POD B:

- 1) *Standard cultural stipulation regarding the discovery of cultural resources (under general permitting requirements).*
- 2) *All surface facilities will be painted a color compatible with the local environment.*
- 3) *The access road will be surfaced with material compatible with the local environment.*

4) *The Operator shall select and use a seed mix most applicable to each disturbed location, with the goal of restoring individual sites to closely resemble the pre-disturbance native plant communities, as provided in Appendix A of the ROD, "Project Reclamation Plan."*

Additional mitigation measures are stipulated for individual wells and/or infrastructure within two-miles of the Rawlins-Baggs Road to reduce visual impacts to the setting. These wells include:

POD B wells: 1-26, 3-26, 5-26, 7-26, and 7-26i

These additional mitigation measures include:

- 1) *Unless otherwise authorized, the pipelines/utilities will be plowed or ripped into the un-bladed surface (using technology that does not require trenching). If such techniques are infeasible due to safety, terrain or geology, the surface will be brush hogged and the utilities will be placed no farther than the outside edge of the ditch slope unless otherwise authorized.*
- 2) *No blading will be allowed outside the staked well location for placement or removal of the topsoil stockpile.*

POD B wells: 1-28, 5-28

An archaeologist with a current BLM permit will monitor construction of the well location due to culturally sensitive soils in accordance the approved Discovery Plan.

Wildlife:

Portions of the proposed actions (wells, pads, access roads and pipeline/power-line right-of ways/corridors) are located within two miles (protective buffer) of sage grouse leks, within one mile (protective buffer) of nesting raptors (ferruginous hawks) and within migration routes for mule deer. Numerous well locations, roads, and corridors were relocated outside these areas or buffer zones where practical, and several were relocated on the outside or edge of "Controlled Surface Use" (CSU) areas or zones for these wildlife resources. The CSU is a one-quarter mile radius from the lek perimeter for sage-grouse and is variable depending on the raptor species. Mountain plover habitat was not identified with-in the subject POD. As a result of the above, seasonal restrictions or stipulations in the form of COAs were added to the MSUP APD authorizations as appropriate. Those stipulations are summarized below and illustrated in the Conditions of Approval:

Well Name	Raptor Stips (1)	Grouse Stip (2)
1-26		√
Access road		√
3-26		√
Access road		√
5-26		√
Access road		√
7-26		√
Access road		√
7-26i		√
Access road		√
1-27		√
Access road	√	√
1-28	√	√
Access road	√	√
3-28		√
Access road		√
Road origin	√ (in part, see map at NW1/4ofSE1/4 Section 28 near Doty Mtn. Road)	√
5-28		√
Access road		√
Road origin	√ (in part, see map at NW1/4ofSE1/4	√

	Section 28 near Doty Mtn. Road)	
7-28	√	√
Access road	√	√
7-28i	√	√
Access road	√	√
1-29	√	√
Access road	√ (in part)	√
7-29 and 7-29i		√
Access road		√

1 Raptor Stipulations: Construction, drilling and other activities potentially disruptive to nesting raptors are prohibited during the period of February 1 to July 31 for the protection of raptor nesting areas.

2 Greater Sage-Grouse Stipulations: Construction, drilling, reclamation and other potentially disruptive activities are prohibited during the period of March 1 to July 15 for the protection of sage grouse.

Exceptions to Stipulations: In some instances, the operator may request consideration of a temporary exception to wildlife seasonal restrictions or stipulations. Such exceptions may be granted on a limited individual case by case basis if a determination is made by a BLM wildlife biologist that the wildlife resource will not be adversely impacted.

The fisheries biologist attended onsite inspections and considered potential impacts to Muddy Creek's 6840 BLM Sensitive fish species and determined that no additional mitigation or monitoring requirements for the proposed action were necessary.

Similarly, BLM also considered recently obtained data (including, *Sawyer, 2006. Progress Report for the Atlantic Rim Mule Deer Study*) regarding mule deer migration routes in the project area, which was incorporated into the wildlife review of the project. Anadarko is committed to working with BLM and other cooperators through the Review Team to identify and reclaim approximately 1.5 miles of existing disturbed road corridors, seismic survey lines and/or user created tracks in the Doty B POD. All restored lands once revegetated will be credited to APC and an equal amount of lands will be available under the disturbance cap.

Please note, the BLM wildlife biologist has recommended that the 7-28/7-28i location as proposed be moved and/or eliminated from consideration due to concerns that the location presents a potential negative impact to area sage grouse resources. However, in consideration of all interdisciplinary input provided, the originally proposed/analyzed location remains included in the proposed action contained herein (see Decision Record.)

Recreation

Direct impacts to recreation from the proposed project will be an alteration of recreational settings from a physical middle country and social back country to rural and industrial settings. The recreational settings are the foundation for most recreational activities, experiences, and benefits. The alteration of the settings will displace recreationists to alternative areas with the desired settings. A thorough description of the impacts to recreation can be found in the AREIS, Section 4.9 Recreation Resources, pages 4-98.

Visual Resources

The proposed project will introduce new elements of form, line, color, and texture which will contrast with the surrounding existing elements. Impacts to visual resources can be found in the AREIS, Section 4.10 Visual Resources, pages 4-105. Mitigation to address the impacts will follow the best management practices listed in Appendix H: Required Best Management Practices page H-6, Visual Resources. Every attempt has been made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Above ground facilities not requiring safety coloration should be painted with non-reflective Shale Green (5Y 4/2). Additional mitigation to be applied can be found in the following table:

Well	Additional Mitigation
AR Federal 1791 03-26	Recontour the cuts and fills so as to retain a very rugged contour

AR Federal 1791 07-26	Well Color: Beetle (19-0312 TPX) Mix dark surface gravel with gravel used for access road to dampen the color of the access route.
AR Federal 1791 01-26	Well Color: Beetle (19-0312 TPX) Recontour the easter side of the pad so as to retain a very rugged contour The access road to this project site will be closed to motorized public access.
AR Federal 1791 01-27	The access road to this project site will be closed to motorized public access.
AR Federal 1791 01-28	The access road to this project site will be closed to motorized public access.
AR Federal 1791 07-28	The access road to this project site will be closed to motorized public access. Recontour the cuts and fills so as to retain a very rugged contour
AR Federal 1791 05-28	The access road to this project site will be closed to motorized public access. Recontour the cuts and fills so as to retain a very rugged contour

Other site-specific findings by the interdisciplinary review team are provided in the review documents that accompany the POD MSUP and well APD and this EA in the BLM RFO lease/well and POD/Unit files.

The BLMs analysis of the proposed action included site-specific review of potential impacts to sensitive species, using the experience and expertise of the BLM biologists as well as data and knowledge collected by the BLM, Wyoming Department of Game and Fish, U.S. Fish & Wildlife Service, and other organizations.

Other, site-specific Conditions of Approval (such as archaeological monitor, barrier fencing, etc.), are also applied, where applicable.

Description of Impacts:

A discussion of the actions generally associated with drilling projects and their associated impacts may be found in the Atlantic Rim Environmental Impact Statement and Record of Decision.

Hazardous Materials

Anadarko has indicated that some hazardous materials could be used during drilling, completion, and production of their proposed wells. The term "hazardous material" as used here means: 1) any substance, pollutant, or contaminant (regardless of quantity) listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA, 2) any hazardous waste as defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, and 3) any nuclear or nuclear byproduct as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

It is possible that wastes created or transported during implementation of the proposed action (i.e., waste motor oils, drilling/completion additives) could be accidentally released to the environment. The operator will be required to comply with the Hazardous Materials Management Plan provided in Appendix C of the AREIS. Numerous State and Federal rules and regulations also apply that govern the handling, storage, and disposal of hazardous substances.

Anadarko or any contracted company working for Anadarko will have Material Data Safety Sheets available for all chemicals, compounds, or substances which are used during the course of construction, drilling, completion, and production operations for this project. Additionally, all chemicals will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

Impacts to soils, surface and groundwater resources, wildlife, vegetation, and human health could result from the accidental exposure of hazardous materials. However, since the project operations will strictly comply with all applicable federal and state laws concerning hazardous materials, the Hazardous Materials Management Plan for

this project, and the operator's Spill Prevention Control and Countermeasure Plan, no significant impacts are anticipated.

Reclamation

Interim reclamation is typically initiated and completed within 6 months of drilling completion. The drill pads will be reduced to a less than one-half acre production well site at each location. Total reclamation of all new disturbances will take place as the wells and facilities are no longer productive or needed and are plugged and abandoned. Appendix A of the ROD contains the reclamation success criteria by which the reclamation status will be judged. The approved Master Surface Use Plan and Conditions of Approval also contain reclamation measures pertaining to reclamation standards.

Description of Mitigation Measures and Residual Impacts:

Mitigation of potential effects is part of the proposed action, and specific mitigation details can be found in the Master Plan Elements including the Conditions of Approval. Residual impacts resulting from the proposed action would include permanent loss of oil and/or gas reserves should the wells become productive. In addition, the well pads, production equipment, and the access roads could remain in place for 30 years or more (until plugging and abandonment, final reclamation).

Potential Environmental Impacts- No Action Alternative

Under the No-Action Alternative, the proposed action would not be authorized. The 14 wells would not be constructed or drilled, and gas production from the proponent's lease would not occur. Existing development would continue to occupy the project area, along with impacts associated from the existing development and development on nearby private (fee) and or state leases.

Residual Impacts/Cumulative Impacts:

The potential residual and cumulative impacts are discussed in the AREIS, Chapter 5, and Cumulative Impacts Analysis. The proposed action entails the addition of 11 CBNG wells, 3 produced water re-injection well, and appurtenant facilities.

Standard mitigation guidelines are addressed in the ROD's Appendix A, Project Reclamation Plan. Additional mitigation measures are also provided in Appendix B, Performance-Based Monitoring and Best Management Practices, and Appendix C, Operator-Committed Practices. All needed mitigation, for that portion of the proposed action on public land, is part of the proposed action.

The access roads and well/production pads may remain visible for a period of approximately 20 to 30 years after they are abandoned and reclaimed. The oil and gas resource will be permanently lost. All needed mitigation is part of the proposed action.

Additional mitigation measures are addressed in the AREIS, under; Appendix A: Reclamation Plan; Appendix C Hazardous Materials, and; Appendix D Wildlife Protection Plan. All recommended mitigation for that portion of the proposed action on public land, is part of the proposed action and plan of operation found in the well POD MSUP with COA and APD.

Other Persons/Agencies Contacted and or Consulted:

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