

**DECISION RECORD**  
**Categorical Exclusion 3 (CX3), WY-070-390CX3-14-132 to WY-070-390CX3-14-137**  
**Section 390, Energy Policy Act of 2005**  
**Anadarko E&P Onshore LLC, Del Gulch Plan of Development (POD)**  
**Bureau of Land Management, Buffalo Field Office, Wyoming**

**DECISION.** The BLM approves the applications for permit to drill (APDs) from Anadarko E&P Onshore LLC (APC) to drill 6 coal bed natural gas (CBNG) wells and construct their associated infrastructure as described in the CX3 analysis, WY-070-390CX3-14-132 to -137 all of which the BLM incorporates here by reference.

**Compliance.** This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (16 USC 470).
- Endangered Species Act of 1974 (16 USC 1531).
- Buffalo and Powder River Basin Final Environmental Impact Statements (FEISs), 1985, 2003, (2011).
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.

**A summary of the details of the approval follows.** The CX3 analysis, WY-070-390CX3-14-132 to -137, includes the project description, including site-specific mitigation measures which are incorporated by reference into this CX3 from earlier analysis. The proposed wells are 50 miles southwest of Gillette, Wyoming. The Del Gulch POD proposal had 6 APDs to develop and produce natural gas from the Fort Union coal formations of the PRB. All wells are vertical bores proposed on an 80 acre spacing pattern with 1 well per location.

**Approvals.** BLM approves the following 6 CBNG APDs and associated infrastructure:

#	Well Name & #	Sec	Twp	Rng	Lease #	CX3 #: WY-070-
1	Del Gulch Christensen Fed 4476-31-12	31	44N	76W	WYW134912	390CX3-14-132
2	Del Gulch Christensen Fed 4476-31-14					390CX3-14-133
3	Del Gulch Christensen Fed 4476-31-21					390CX3-14-134
4	Del Gulch Christensen Fed 4476-31-23					390CX3-14-135
5	Del Gulch Christensen Fed 4476-32-23	32				390CX3-14-136
6	Del Gulch Christensen Fed 4476-32-24					390CX3-14-137

**THE FINDING OF NO SIGNIFICANT IMPACT (FONSI).** Congress, the Department of Interior and BLM affirmed there was no significant impact of a like-structured project when they created this CX3 and its limiting parameters. Thus a FONSI and an EIS is not required.

**COMMENT OR NEW INFORMATION SUMMARY.** After the receipt of the APDs BLM also received policy clarifications on bond review via Wyoming BLM IM-2014-009, and on tiering / incorporating by reference via 184 IBLA 307.

**DECISION RATIONALE.** The approval of this project is because:

1. Mitigation measures and COAs, analyzed in the CX3, in environmental impact statements or environmental analysis to which the CX3 tiers or incorporates by reference, will reduce environmental impacts while meeting the BLM's need.
2. The approved project conditioned by its design features and COAs, will not result in any undue or unnecessary environmental degradation. The impact of this development cumulatively contributes to

the potential for local Greater Sage-Grouse (GSG) extirpation yet its effect is acceptable because it is outside priority habitats and is within the parameters of the Powder River Basin (PRB) FEIS/ROD and current BLM and Wyoming GSG conservation strategies. There are no conflicts anticipated or demonstrated with current uses in the area. This decision approving the Del Gulch POD complies with the Energy Policy Act of 2005, Section 390, 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215.

3. Approval of this project conforms to the terms and the conditions of the 1985 Buffalo RMP (BLM 1985) and subsequent update (BLM 2001) and amendments (BLM 2003, 2011). This project complies with the breadth and constraints of CX3, Energy Policy Act of 2005, and subsequent policy.
4. The selected alternative will help meet the nation's energy need, revenues, and stimulate local economies by maintaining workforces.
5. The operator, in their POD, shall:
  - Comply with all applicable federal, state, and local laws and regulations.
  - Offer water well agreements to the owners of record for permitted water wells within 0.5 mile of a federal producing well in the POD (PRB FEIS ROD, p. 7).
  - Provide water analysis from a designated reference well in each coal zone.
6. The project is clearly lacking in wilderness characteristics as it lacks federal surface.
7. This decision does not foreclose the lessee or operator to propose a new or supplementary plan for developing the federal oil and gas leases in this project area, including submission of additional APDs to drain minerals in accord with lease rights and law. This decision does not foreclose the lessee or operator to propose using external pumping units via a sundry application process.
8. APC certified there is a surface use access agreement with the landowners it posted a bond.
9. This approval is subject to adherence with all of the operating plans, design features, and mitigation measures contained in the master surface use plan of operations, drilling plan, water management plan, and information in individual APDs.

**ADMINISTRATIVE APPEAL:** This decision is subject to administrative appeal in accord with 43 CFR 3165. Request for administrative appeal must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received. Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Field Manager:  Date: 3/21/14

**Categorical Exclusion 3 (CX3), WY-070-390CX3-14-132 to WY-070-390CX3-14-137**  
**Section 390, Energy Policy Act of 2005**  
**Anadarko E&P Onshore LLC, Del Gulch Plan of Development (POD)**  
**Bureau of Land Management, Buffalo Field Office, Wyoming**

**Description of the Proposed Action.**

Anadarko E&P Onshore LLC (APC) proposes to drill 6 coal bed natural gas (CBNG) wells and construct their associated infrastructure. The proposed wells are 50 miles southeast of Gillette, Wyoming (see Table 1.1). The well locations are in Johnson County. Del Gulch Plan of Development (POD) area is 948 acres. The topography is relatively rugged terrain, with more moderate to level topography located between numerous ridges. Elevations range from 4,853 to 5,028 feet above sea level. The proposal is to explore by drilling for, and possibly develop, natural gas reserves in Fort Union Coal at depths ranging from approximately 1,619 to 1,749 feet depth.

The project area has dissected uplands with steep down-cut channels, created predominately by summer thunderstorms and spring runoff in ephemeral drainages with steep gradients and fine sediment substrate, which lead to the Powder River. The Willow Creek, Dry Fork and numerous intermittent tributaries of the Powder River drain the area to the east. Tree and shrub species which consist mainly of sparse cottonwood trees with scattered juniper and dense sage brush dominate the riparian areas. Rangeland is the predominant management with livestock grazing and recreational hunting as the main uses. The area experienced historic conventional oil and gas exploration and production, and recent CBNG development, documented with environmental assessments (EAs). The area is in a 10-14 inch precipitation zone, with most precipitation falling during late winter and spring. Surface owners: John O. Christensen.

APC submitted the Del Gulch POD as notices of staking (NOSs) on December 27, 2012. After onsites on July 15, 2013 and August 12, 2013 the NOSs were converted to applications for permit to drill (APDs) on October 18, 2013. Onsites evaluated the proposal and modified it as necessary to mitigate environmental impacts. The BLM sent a post-onsite deficiency letter to APC on November 6, 2013. APC responded to deficiencies on December 23, 2013. The BLM considered the APDs complete on January 15, 2014. All wells are vertical bores proposed on an 80 acre spacing pattern with 1 well per location, see Table 1.1. Proposed well house dimensions are 8.0 feet wide x 8.0 feet length x 8.0 feet height.

**Table 1.1. Proposed Wells**

#	Well Name & #	Sec	Twp	Rng	Lease #	CX3 #: WY-070-
1	Del Gulch Christensen Fed 4476-31-12	31	44N	76W	WYW134912	390CX3-14-132
2	Del Gulch Christensen Fed 4476-31-14					390CX3-14-133
3	Del Gulch Christensen Fed 4476-31-21					390CX3-14-134
4	Del Gulch Christensen Fed 4476-31-23					390CX3-14-135
5	Del Gulch Christensen Fed 4476-32-23	32				390CX3-14-136
6	Del Gulch Christensen Fed 4476-32-24					390CX3-14-137

**Water Management Proposal.**

The Del Gulch POD will use existing water management infrastructure to dispose of the produced water generated from Del Gulch POD wells listed in Table 1.1, above. Multiple sources of water disposal have been proposed for The Del Gulch POD including; reinjection, land application, treatment, and reservoir containment. See the Water Management Plan (WMP) included in the APD package for a list and methods of disposal. The preferred and most likely scenario proposed is to transport produced water to an area near Midwest, WY where water will be injected into the Madison aquifer. Conveyance of water to this facility will use the Dry Willow and Salt Creek Pipelines.

**Table 1.2. Proposed Water Management Facilities WYPDES Permit (Injection Wells)**

#	Facility Name #	Qtr/Qtr	Section	TWP	RNG	Permit Number
1	10MADSW13	NESW	13	40N	79W	UIC 05-231
2	15MADNW13	NENW				
3	20MADSW12	SWSW	12			
4	29MADNW12	SWNW				
5	6MADNW12	NWNW				

**Drilling, Construction & Production design features include:****Access and Utilities**

- Primary access for the proposed wells is by the Black and Yellow Road via WY HWY 50.
- A road network will consist of existing improved all-weather access and newly constructed improved crown and ditch template roads which will be built to the wells; see Table 1.3 for disturbances.
- Access to the 4476-31-23 slot and 4476-31-14 pad will be shared with an operator. The existing two-track road will be reclaimed.
- A buried gas and water line network.
- A below ground power line network to be constructed by APC or a contractor hired by APC. If the power line network is not completed before the wells are in production, then temporary diesel generators may be placed at the 3 power drops.

**Well Locations**

- Drilling of 2 locations will not use constructed pads; 4 well locations will use constructed pads or slots. Disturbances are listed in Table 1.3.
- Locations without pads or slots will have a 75 foot radius mowed around the surface hole location.
- Well metering shall be accomplished by a combination of telemetry and well visitation. Metering would entail 2-3 visits per week in the summer and up to 4 visits per week in the winter to each well.
- Two staging areas are proposed in the project area. Staging areas are depicted on Map D in the SUP.

APC will install a buried gas and water line network along existing or proposed disturbances. For a detailed description of design features, construction practices and water management strategies associated with the proposed action, refer to the master surface use plan (MSUP), drilling plan, and WMP in the POD and individual APDs. Also see the POD for maps showing the proposed wells and the associated facilities described above. More information on CBNG well drilling, production, and practices is available in the Powder River Basin Final Environmental Impact Statement (PRB FEIS), pp. 2-9 to 2-40. To develop the Del Gulch POD, APC will use 11.92 miles of previously approved access roads and utility corridors. Newly proposed disturbances are listed in table 1.3 and the MSUP SUDS form.

**Table 1.3. Construction Disturbance Associated with Del Gulch POD**

Facility	Operator Proposed After Onsites in miles (acres)
Number of CBNG Wells	6 (4.3)
Engineered Pads	4
Slots or No Pad No Slot	2
Engineered or Template Roads (including utilities)	3.01 miles (16.4)
Stand-alone Utilities (gas, water, electric)	3.16 miles (6.6)
Power Drops	3
Staging Areas	2 (0.8)
<b>Total Acre Disturbance</b>	<b>28.1</b>

**Plan Conformance, Compliance, and Justification with the Energy Policy Act of 2005.**

The Energy Policy Act of 2005, Section 390(a) subjects oil or gas exploration or development to a rebuttable presumption that the use of a categorical exclusion under the National Environmental Policy Act (NEPA) applies. Thus BLM must use an Energy Policy Act, Section 390(b), CX unless BLM rebuts the presumption. This CX analysis is NEPA compliance categorically excluded from an EA or EIS or their analysis; it is not an exclusion from all analysis. (40 CFR 1508.4 and BLM H-1790, p. 17.) The proposal conforms with the terms and conditions of the approved resource management plan (RMP) for the public lands administered by the BLM, Buffalo Field Office (BFO), 1985, the PRB FEIS, January 2003 (2011), and the Record of Decision (ROD) and Resource Management Amendments for the Powder River Oil and Gas Project, Amendments of 2001, 2011 as required by 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215. The Del Gulch POD area is clearly lacking in wilderness characteristics as it lacks federal surface. BLM finds that the conditions and environmental effects found in the senior EAs and PRB FEIS remain valid.

The applicable categorical exclusion from the Energy Policy Act of 2005, Section 390, is exclusion number (b)(3) which is *drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well.*

BLM has 3 requirements to use a Section 390 CX3, (BLM H-1790, Appendix 2, #3, p. 143):

- 1) Each proposed APD is in a developed oil or gas field (any field with a completed confirmation well).

Table 1.4 is a list of NEPA analyses that are within or adjacent to the Del Gulch POD. This information shows that BLM conducted analysis and is incorporated here by reference.

**Table 1.4. Adjacent or Overlapping NEPA Analyses.**

#	POD Name	NEPA Analysis #	#/Type of Wells/# Drilled	Decision Mo/Yr/Update
1	YPC Congaree	WY-070-EA10-195	28 (2) / CBNG (Water) 15/(1)	7/2010 & 9/2011
2	Samson N. Tree Phase 1	WY-070-EA13-77	18 / Oil / 12	3/2013
3	WPX Ridgeline et al.	WY-070-EA09-150	19 / CBNG / 19	9/2009 & 9/2011
4	YPC Lancer 1	WY-070-EA10-248	10 / CBNG / 1	9/2010 & 5&11/2012
5	APC Dry Willow Phase 5	WY-070-EA10-186	27 / CBNG / 16	8/2010 & 4/2011
6	LOG Sahara	WY-070-EA13-072	21 / Oil / 4	3/2013

See also: SDR WY-2013-005, particularly noting pp. 2-3, incorporating the entirety here by reference.

- 2) There are NEPA documents (and the RMP) containing reasonably foreseeable activity (development) scenario for these proposals. There are several existing NEPA documents that reasonably foresaw activity to spud additional wells to fill in 80 acre well-spacing. BLM also notes from Table 1.4, above, that of the 55 analyzed CBNG APDs in the Congaree and the Dry Willow Phase 5 PODs, only 31 are drilled; thus 26 undrilled, analyzed APDs contribute to the available reasonably foreseeable activity. BLM reviewed these documents and determined they considered the potential environmental effects associated with the proposed activity at a site specific level. In addition, all approved EAs tier into the PRB FEIS 2003 (2011). The PRB EIS analyzed foreseeable development in the PRB. The PRB foreseeable development included 3,200 oil wells and drilling CBNG wells on 80 acre-spacing resulting in about 51,000 CBNG wells and 3,200 oil wells. The Del Gulch POD wells are in the foreseeable development activity of 80 acre well-spacing that was analyzed in EAs in Table 1.3, its footnote, and in the PRB FEIS’s Appendix A reasonably foreseeable development.

- 3) The tiered NEPA document was finalized or supplemented within 5 years of spudding (drilling) the proposed wells. The Del Gulch POD CX3 tiers to the EAs listed above in Table 1.4.

In summary the EAs in Table 1.4 analyzed in detail the anticipated direct, indirect, residual, and cumulative effects that would result from the approval of these APDs and associated support structure in Del Gulch POD. The Del Gulch POD is similar to both the qualitative and quantitative analysis in the above EAs. The BFO reviewed these EAs and found that the EAs considered potential environmental effects associated with the proposed activity at a site specific level.

**Plan of Operations.**

The proposal conforms to all BLM standards and incorporates appropriate best management practices, required and designed mitigation measures determined to reduce the effects on the environment. BLM reviewed and approved a surface use plan of operations describing all proposed surface-disturbing activities pursuant to Section 17 of the Mineral Leasing Act, as amended. This CX3 analysis also incorporates and analyzes the implementation of committed mitigation measures contained in the MSUP, drilling plan, and WMP, in addition to the Standard COAs found in the PRB FEIS ROD, Appendix A.

**Locatable Minerals**

There are a total of 18 individual mining claims located in the same sections as these 6 proposed wells. Although mining claimants are not required to list the minerals subject to the claim, given the number of uranium projects in this area, these mining claims were likely for uranium. Direct and indirect effects, cumulative effects, mitigation measures, and residual effects are found in the Iberlin 1-9H and Iberlin 1-9TH EA, WY-070-EA13-224, pp. 28-29, incorporated here by reference.

**Vegetation and Ecological Sites.**

BLM obtained detailed soils identification and data for the project area from the South Johnson County Survey Area, Wyoming Soil Survey Geographic (SSURGO) Database (WY619). NRCS performed the soil survey according to National Cooperative Soil Survey standards. The BLM uses county soil survey information to predict soil behavior, limitations, or suitability for a given activity or action. The agency’s long term goal for soil resource management is to maintain, improve, or restore soil health and productivity, and to prevent or minimize soil erosion and compaction. Soil management objectives are to ensure that adequate soil protection is consistent with the resource capabilities. Many of the soils and landforms of this area present distinct challenges for development, and /or eventual site reclamation. A tabulated summary of the dominant and important soil map units follows, along with their individual acreage and percentage of the area in the POD, Table 1.5.

**Table 1.5. Dominant or Important Soils by Map Unit Symbol (MUS)**

MUS	Map Unit Name	Ecological Site	Acres	Percent
145	Forkwood-Cambria Loams	Loamy	27.3	2.9
147	Forkwood-Cushman Loams	Loamy	43.5	4.6
210	Shingle-Taluce complex	Shallow Loamy	6.2	0.6
233	Ustic Torriorthents	-	26.6	2.8
CV	Cushman-Briggsdale association	Loamy	99.8	10.8
MG	Maysdorf-Garrett association	Loamy	4.0	0.4
MP	Maysdorf-Pugsley association	Loamy	118.9	12.5
MR	Maysdorf-Schooner association	Loamy	233.5	24.6
SDE	Samsil-Shale outcrop complex	-	6.9	0.7
SNb	Shingle-Cushman association	Shallow Loamy	22.9	2.4
SNc	Shingle-Kim association	Loamy	34.3	3.6
SNe	Shingle-Tassel association	Shallow Loamy	228.6	24.1

MUS	Map Unit Name	Ecological Site	Acres	Percent
SNf	Shingle-Worf association	Shallow Loamy	16.5	1.7
STd	Stoneham-Cushman association	Loamy	78.9	8.3

Ecological site descriptions provide site and vegetation information needed for resource identification, management and reclamation recommendations. BLM specialists used NRCS soil survey information, verified through onsite field reconnaissance, to determine the appropriate ecological sites for this POD area. Table 1.5 summarizes the area’s ecological sites. Impacts anticipated occurring and mitigation considered with the implementation of the proposal will be similar to those analyzed in the following EAs which are adjacent or overlapping to the Del Gulch POD and are incorporated here by reference: Congaree EA, WY-070-EA10-195, direct, indirect cumulative, and residual effects, pp. 30-32.

### Wildlife

BLM reviewed the proposals and determined that the proposed APDs, combined with the COAs (and design features), are: (1) consistent with the FEIS and its supplements, the RMP and the above tiered EAs; and (2) consistent with the programmatic biological opinion (ES-6-WY-02-F006), from the PRB FEIS, Appendix K. A formal wildlife survey and habitat assessment was performed by Bighorn Environmental Consultants (BEC, 2013) in the proposal area. The affected environment and environmental effects for wildlife are discussed in, and anticipated to be similar to, the EA listed in Table 1.4 above. Rationale for species not discussed here is found in the administrative record (AR).

#### Greater Sage-Grouse (GSG)

BLM analyzed impacts to GSG from surface disturbing and disruptive activities associated with development of conventional oil and gas wells in the Congaree EA, WY-070-EA10-19, and are incorporated here by reference. Activities associated with development of the proposed wells listed in Table 1.1 are anticipated to be similar in nature, with the following additional site-specific information. The majority of the proposal is within 2 miles of 2 occupied GSG leks (Christensen Ranch 1 and 2) and suitable habitats are present. The area is note within any designated Wyoming GSG Core areas. Site-specific analyses for wells and infrastructure that will impact GSG are discussed below.

Del Gulch Christensen Fed 4476-31-23- The proposed location is within 1.8 miles of the occupied Christensen Ranch 1 Lek. Suitable habitat would be directly and indirectly impacted by the proposal’s implementation. A condition of approval (COA) for no surface disturbance starting March 15 - June 30 would be applied to lessen impacts from construction and drilling during the breeding and nesting season.

Del Gulch Christensen Fed 4476-31-21- The proposed location is within 1.3 miles of the occupied Christensen Ranch 1 Lek, and 1.9 miles from Christensen Ranch 2 Lek. Suitable habitat would be directly and indirectly impacted by the proposal’s implementation. A COA for no surface disturbance starting March 15 - June 30 would be applied to lessen impacts from construction and drilling during the breeding and nesting season.

Del Gulch Christensen Fed 4476-31-12- The proposed location is within 1.5 miles of the occupied Christensen Ranch 1 Lek, and suitable habitat would be both directly and indirectly impacted by the proposal’s implementation. A COA for no surface disturbance starting March 15 - June 30 will be applied to lessen impacts from construction and drilling during the breeding and nesting season.

#### Raptors

BLM analyzed impacts to raptors from surface disturbing and disruptive activities associated with development of conventional oil wells in the Congaree EA, WY-070-EA10-19, and is incorporated here by reference. Activities associated with development of the 6 proposed wells are anticipated to be similar

in nature, with the following additional site-specific information. Most raptor species nest in a variety of habitats including (but not limited to): native and non-native grasslands, agricultural lands, live and dead trees, cliff faces, rock outcrops, and tree cavities. Suitable nesting habitat is present in the project area. Raptor species known or suspected to occur in the area include golden eagle, northern harrier, Swainson's hawk, American kestrel, short-eared owl, great horned owl, red-tailed hawk, western burrowing owl (SSS), ferruginous hawk (SSS), and rough-legged hawk (winter resident). According to the BLM raptor database, and ICF surveys, there are 11 documented raptor nests of importance within 0.5 miles of the POD boundary, 4 of which were active in the last 3 years. These nests are in Table 1.6 below, some of which are also a BLM special status (sensitive) species (SSS).

The proposal area is currently experiencing elevated levels of anthropogenic activity due to the presence of existing oil and gas developments. In addition to this, the implementation of the proposal would have additive impacts to raptors, especially where no biological buffering is present and/or where multiple proposed wells and their associated infrastructure would be within 0.5 miles of documented nesting habitats. The presence of existing activities and future developments in the area may act synergistically and compound the negative impacts to raptors. This is interdependent on the species, nest histories, timing of activities and location of existing and future oil and gas infrastructures. Site-specific analyses for wells and infrastructure that will impact Nesting raptors are discussed below.

**Table 1.6. Raptor Nests within 0.5 miles of the Proposed Wells.**

BLM Nest ID #	Species	Active last 3 Years Yes/No	2013 Nest Status
10830	Unknown Raptor	No	Inactive
13466	Unknown Raptor	No	Inactive
5509	Red-Tailed Hawk	No	Inactive
5530	Unknown Raptor	No	Inactive
5510	Great-Horned Owl	Yes	Inactive
5526	Red-Tailed Hawk	No	Inactive
5527	Red-Tailed Hawk	Yes	Inactive
13487	Unknown Raptor	No	Inactive
13483	Red-Tailed Hawk	Yes	Active
5411	Great-Horned Owl	No	Inactive
10982	Red-Tailed Hawk	Yes	Active

Del Gulch Christensen Fed 4476-32-24- The proposed location is within 0.5 miles of nest 5509 (0.44mi.) and is out of line of sight the nest. A COA for nesting raptors would not be applied due to lack of nesting activity for 3 consecutive years of surveys and the presence of adequate biological buffering.

Del Gulch Christensen Fed 4476-32-23- The proposed location is within 0.5 miles of nest 5509 (0.45 mi.) and is out of line of sight the nest. A COA for nesting raptors would not be applied due to lack of nesting activity for 3 consecutive years of surveys and the presence of adequate biological buffering.

Del Gulch Christensen Fed 4476-31-23- The proposed location resides within 0.5 miles of nests 5530 (0.48 mi.), 13487 (0.48 mi.), and nest 5527 (0.44 mi.) and is out of line of sight of the associated nests. A COA prohibiting surface disturbance (construction and drilling) February 1-July 31 would be applied. The biological buffer is sufficient for operations and maintenance.

Del Gulch Christensen Fed 4476-31-21- The proposed location is within 0.5 miles of nest 13483 (0.44 mi.), 13487 (0.41 mi.), 5411 (0.47 mi.), and nest 10982 (0.49 mi.) and is out of line of sight of the associated nests. A COA prohibiting surface disturbance (construction and drilling) February 1-July 31 would be applied. The biological buffer is sufficient for operations and maintenance.

Del Gulch Christensen Fed 4476-31-14- The proposed location is within 0.5 miles of 13466 (0.49 mi.), 10830 (0.42 mi.), 5527 (0.25 mi.), 5526 (0.30 mi.) and nest 5510 (0.37 mi.), and is out of line of sight of the associated nests. A COA prohibiting surface disturbance (construction and drilling) February 1-July 31 would be applied. The biological buffer is sufficient for operations and maintenance.

Del Gulch Christensen Fed 4476-31-12- The proposed location resides within 0.5 miles of nests 13487 (0.17 mi.), 5411 (0.47 mi.), and nest 10982 (0.48 mi.) and is out of line of sight of the associated nests. A COA prohibiting surface disturbance (construction and drilling) February 1-July 31 would be applied. The biological buffer is sufficient for operations and maintenance.

### **Migratory Birds**

BLM analyzed impacts to migratory birds from surface disturbing and disruptive activities associated with development of oil and gas wells in the Sahara EA, WY-070-EA13-072, incorporated here by reference. Activities associated with development of the 6 proposed wells are anticipated to be similar in nature, with the following additional site-specific information. Site-specific analyses for wells and infrastructure that will directly impact migratory birds via habitat removal is discussed below.

Del Gulch Christensen Fed 4476-32-23- Suitable habitat for migratory birds (sagebrush obligates) is present at the proposed well and would be directly impacted by vegetation removal. Mitigation will be applied to prevent direct mortalities of nesting passerines that may be result during pad construction if habitat removal occurs during the nesting period.

### **Water Resources**

APC submitted a comprehensive WMP for this project. It is incorporated-by-reference into this CX3. The WMP uses sound water management practices, monitoring of downstream impacts within the Upper Powder River watershed and a commitment to comply with Wyoming State water laws/regulations. It also addresses potential impacts to the environment and landowner concerns. Qualified hydrologists, in consultation with the BLM, developed the water management plan. Adherence with the plan, in addition to BLM applied mitigation (in the form of COAs), would reduce project area and downstream impacts from proposed water management strategies. The water extracted in the production of CBNG is water of the state, per Wyoming Law (W.S. 41-3-101). BLM policy 1982 directs the BLM's cooperation and full compliance with State water laws. The Wyoming Department of Environmental Quality (WDEQ) permits and regulates the disposal of produced water. The BLM is responsible for analyzing the proposed action with available data provided in the WMP for the POD and disclose potential impacts of the proposed action. A water well agreement was reached with the landowners of all water wells within 1 mile of the 6 proposed wells.

APC predicted total water production for all wells to be 120 gpm or (0.27 cubic feet per second (cfs) or 193.5 acre-feet per year) for this POD. The PRB FEIS projected the total amount of water that anticipated from CBNG development per year, (Table 2-8, Projected Amount of Water Produced from CBM[NG] Wells under Alternatives 1, 2A, and 2B p. 2-26). For the Upper Powder River drainage, the projected volume produced in the watershed area was 5,672 acre-feet in 2014 (maximum production is estimated in 2006 at 171,423 acre-feet). As such, the volume of water resulting from the production of these wells is 3.4% of the total volume projected for 2014. This volume of produced water is within the predicted parameters of the PRB FEIS.

### **Groundwater**

The groundwater in this project area is historically used for stock or domestic water. A search of the Wyoming State Engineer Office (WSEO) Ground Water Rights Database for this area showed 7 registered stock and domestic water wells within ½ mile of a federal CBNG producing well in the POD

with depths ranging from 24 to 829 feet. For more information, refer to the PRB FEIS, pp. 3-1 - 3-36. WDEQ water quality parameters for groundwater classifications (Chapter 8 – Quality Standards for Wyoming Groundwater) define the following general limits for Total Dissolved Solids (TDS): 500 mg/l TDS for Drinking Water (Class I), 2000 mg/l for Agricultural Use (Class II) and 5000 mg/l for Livestock Use (Class III). Expected TDS for this project is 1200 mg/L. For additional water quality limits for groundwater, please refer to the WDEQ web site.

This project will add an additional 120 gpm to existing infrastructure. The capacity of the existing infrastructure is expected to be able to handle the increase water flow. Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the Congaree EA, WY-070-EA10-195, pp. 47-48, which is adjacent or overlapping to the Del Gulch POD and is incorporated here by reference:

### **Surface Water**

The project area is in the Willow Creek and Dry Fork drainages, which are tributaries to the Powder River. Most of the area drainages are ephemeral (flowing only in response to a precipitation event or snow melt) to intermittent (flowing only at certain times of the year when it receives water from alluvial groundwater, springs, or other surface source). The channels range from incised to well vegetated grassy swales, without defined bed and bank.

The PRB FEIS presents the historic mean electrical conductivity (EC, in  $\mu\text{mhos/cm}$ ) and sodium adsorption ratio (SAR) by watershed at selected United States Geological Survey (USGS) Gauging Stations in Table 3-11 (PRB FEIS, p. 3-49). In comparison the projected water quality for these wells is as follows; EC value is 1970  $\mu\text{mhos/cm}$  and SAR is 50.9. These water quality parameters “illustrate the variability in ambient EC and SAR in streams in the project area. The representative stream water quality is used in the impact analysis presented in Chapter 4 as the baseline for evaluating potential impacts to water quality and existing uses from future discharges of CBM produced water of varying chemical composition to surface drainages within the Project Area” (PRB FEIS, p. 3-48). For the Upper Powder River, the EC ranges 1,797 at maximum monthly flow, to 3,400 at Low monthly flow and the SAR ranges from 4.76 at Maximum monthly flow to 7.83 at low monthly flow. These values were determined at the USGS station located at Arvada, WY (PRB FEIS, p. 3-49). For more information on surface water, refer to the PRB FEIS, pp. 3-36 - 3-56 and the APDs’ WMP.

The operator has not identified any natural springs in this POD area.

The water quality for the water produced from the Fort Union target coal zone from these wells is predicted to be similar to the sample water quality collected. For complete analysis and results see the Energy Laboratories analytical report in the WMP Attachment I. In order to determine the actual water quality of the producing formations in this POD and to verify the water analysis submitted for the pre-approval evaluation, the operator committed to designate a reference well to each coal zone in the POD boundary. BLM will consider having sample the reference well at the wellhead for analysis in 60 days of initial production and submit a copy of the water analysis to the BLM Authorized Officer. Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the Congaree EA, EA WY-070-EA10-195, pp. 48-50, which is adjacent or overlapping to the Del Gulch POD and that analysis is incorporated here by reference:

### **Cultural**

Per Section 106 of the National Historic Preservation Act, BLM must consider impacts to historic properties (sites that are eligible for or listed on the National Register of Historic Places (NRHP)). For an overview of cultural resources found in the area refer to the *Draft Cultural Class I Regional Overview, Buffalo Field Office* (BLM, 2010). A Class III (intensive) cultural resource inventory (BFO project no.

70130026) was performed to locate specific historic properties which may be impacted by the proposals. The following resources are in or near the proposals' area.

**Resources Near the Project Area & National Register of Historic Places (NRHP) Eligibility**

Site #	Site Type	NRHP Eligible	Site #	Site Type	NRHP Eligible
48JO702	Prehistoric Lithic Scatter	Not Eligible	48JO4096	Historic Stockherding Camp	Not Eligible
48JO703	Prehistoric Lithic Scatter	Not Eligible	48JO4097	Prehistoric Lithic Scatter and Historic Debris Scatter	Not Eligible
48JO704	Prehistoric Lithic Scatter	Not Eligible	48JO4098	Prehistoric Lithic Scatter	Not Eligible
48JO705	Prehistoric Lithic Scatter	Not Eligible	48JO4339	Prehistoric Lithic Scatter	Not Eligible
48JO706	Prehistoric Lithic Scatter	Not Eligible			

No historic properties will be impacted by the proposals. Following the *State Protocol Between the Wyoming Bureau of Land Management State Director and The Wyoming State Historic Preservation Officer*, Section VI(A)(1), the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on February 28, 2014, that no historic properties exist in the area of potential effect (APE). If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted the procedures described in Appendix L of the PRB FEIS and ROD must be followed. Further discovery procedures are in Standard COA (General)(A)(1).

**List of Preparers: Persons and Agencies Consulted (BFO unless otherwise noted)**

Position/Organization	Name	Position/Organization	Name
NRS/Team Lead	Dustin Hill	Archaeologist	Clint Crago
Supr NRS	Casey Freise	Wildlife Biologist	Chris Sheets
Petroleum Engineer	Matt Warren	Geologist	Kerry Aggen
LIE	Kristine Phillips	Supr NRS	Kathy Brus
Assistant Field Manager	Chris Durham	Assistant Field Manager	Clark Bennett
NEPA Coordinator	John Kelley		

**Decision and Rationale on Action**

The COAs provide mitigation and further the justification for this decision and may not be segregated from project implementation without further NEPA review. I reviewed the plan conformance statement and determined that the proposed Del Gulch POD CX3 APDs and infrastructure conform to the applicable land use plans. I reviewed the proposal to ensure the appropriate exclusion category as described in Section 390 of the Energy Policy Act of 2005 is correct. It is my determination that there is no requirement for further environmental analysis.

  
 \_\_\_\_\_  
 Field Manager

3/21/14  
 \_\_\_\_\_  
 Signature Date

Contact Person: Dustin Hill, Natural Resource Specialist, Buffalo Field Office, 1425 Fort Street, Buffalo WY 82834, 307-684-1100.