

DECISION RECORD
Categorical Exclusion 3 (CX3)
WY-070-390CX3-15-174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184 and 185
Section 390, Energy Policy Act of 2005, Applications for Permit to Drill (APDs)
Anadarko E&P Onshore LLC's
Kinney Divide Unit Gamma Resubmit Plan of Development (POD)
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves 12 applications for permit to drill (APDs), 12 well pads, entrance roads, and infrastructure, and an existing improved access road right-of-way as described in the consolidated Categorical Exclusion 3 (CX3), WY-070-390CX3-15-174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, and 185 incorporated here by reference.

Compliance. This decision complies with or supports:

- 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 Oil and Gas Project Final Environmental Impact Statement (FEISs) (2003).
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.
- Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands (WY-IM-2012-019) and Greater Sage-Grouse Interim Management Policies and Procedures (WO-IM-2012-043).

A summary of the details of the approval follows. The CX3 for the oil and gas wells, above, includes the project description, and site-specific mitigation measures which are incorporated by reference into this CX3 from earlier analysis. The project area is approximately 27 air miles northeast of Buffalo, Johnson County, Wyoming. Anadarko's proposal has 12 APDs with 12 associated pads, access roads and infrastructure, to develop and produce coalbed natural gas from the Smith, Lower Smith, Big George, Werner, and Gates coal zones. The wells are vertical bores proposed on an 80 acre spacing pattern.

Approvals. BLM approves the following 12 APDs, associated infrastructure:

#	Well Name	Well #	Qtr/Lot	Sec	Twp	Rng	Lease	CX Number
1	KDU GAMMA FED	23-17-5177	Lot 4	17	51N	77W	WYW146313	WY070-CX3-15-175
2	KDU GAMMA FED	12-17-5177	SWNW	17	51N	77W	WYW146313	WY070-CX3-15-174
3	KDU GAMMA FED	11-18-5177	NWNW	18	51N	77W	WYW146313	WY070-CX3-15-176
4	KDU GAMMA FED	31-18-5177	NWNE	18	51N	77W	WYW146313	WY070-CX3-15-178
5	KDU GAMMA FED	43-18-5177	NESE	18	51N	77W	WYW146313	WY070-CX3-15-180
6	KDU GAMMA FED	41-18-5177	NENE	18	51N	77W	WYW146313	WY070-CX3-15-179
7	KDU GAMMA FED	21-18-5177	NWNW	18	51N	77W	WYW146313	WY070-CX3-15-177
8	KDU GAMMA FED	44-18-5177	SWSW	18	51N	77W	WYW146313	WY070-CX3-15-181
9	KDU GAMMA FED	41-19-5177	NENE	19	51N	77W	WYW146313	WY070-CX3-15-182
10	KDU GAMMA FED	14-21-5177	Lot 7	21	51N	77W	WYW146312	WY070-CX3-15-183
11	KDU GAMMA FED	32-28-5177	Lot 3	28	51N	77W	WYW146313	WY070-CX3-15-185
12	KDU GAMMA FED	31-28-5177	NWNE	28	51N	77W	WYW146315	WY070-CX3-15-184

Limitations. See conditions of approval (COAs) and lease stipulations.

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 analysis process and its limiting parameters. This consolidated CX3 analysis tiers to NEPA analyses which received a FONSI, thus a new FONSI or EIS are not required.

Summary of New Information. BLM posted the APDs for 30 days and received no public comments. Since BLM received these APDs, it received no new clarifying policies for APD processing.

DECISION RATIONALE. The approval of this project is because:

1. BLM and Anadarko included design features and mitigation measures (conditions of approval (COAs)) to reduce environmental impacts while meeting the BLM's need. For a complete description of all site-specific COAs, see the COAs.
 - a. The impact of this development cumulatively contributes to the potential for local extirpation of the Greater Sage Grouse (GSG) yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS/ROD and current BLM (WO-IM-2012-043) and Wyoming (WY-IM-2012-019) GSG conservation strategies.
 - b. With application of Standard Operating Procedures (SOPs), applied mitigation, Required Design Features, and COAs identified for Greater Sage-Grouse under the proposed action, impacts caused by surface-disturbing and disruptive activities would be minimized.
 - c. There are no conflicts anticipated or demonstrated with current uses in the area.
2. The Resource Management Plan (RMP) for the Buffalo Field Office is currently undergoing revision. The Proposed RMP and Environmental Impact Statement were released in May 2015. The proposed action was screened against the Proposed RMP to ensure that the proposed action would not preclude BLM's ability to select any alternative in a ROD. The proposed action was also determined to not be inconsistent with the direction outlined in the RMP's Proposed Alternative.
3. To reduce the likelihood of a "take" under the Migratory Bird Treaty Act, BLM sensitive species nesting habitat removal will occur outside of the breeding season or be cleared by survey on the federal lease (WYW0313182, 1-14 location) and recommended for the pad over non-federal minerals (2-14 location).
4. 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.
5. The APDs will help meet the nation's energy need, revenues, and stimulate local economies by maintaining workforces.
6. The operator, in their APDs, 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 APD (PRB FEIS ROD, p. 7).
7. The project is clearly lacking in wilderness characteristics as it is on non-federal surface amidst existing developments.
8. 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.
9. Anadarko certified it has an access agreement with the landowners or it posted a bond.
10. This approval is subject to adherence with all of the operating plans, design features, and mitigation measures contained in the surface use plan of operations and drilling plan information in the 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: _____/s/ Duane W. Spencer_____

Date: _____7/1/15_____

**Categorical Exclusion 3 (CX3),
WY-070-390CX3-15-174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184 and 185
Section 390, Energy Policy Act of 2005
Anadarko E&P Onshore LLC's Kinney Divide Unit Gamma Resubmit Plan of Development (POD)
Bureau of Land Management, Buffalo Field Office, Wyoming**

Description of the Proposed Action.

Anadarko E&P Onshore LLC's (Anadarko) proposes to drill 12 coal bed natural gas (CBNG) wells and construct their associated infrastructure. The proposed wells are approximately 27 miles Northeast of Buffalo, Johnson County, Wyoming (see Table 1.1 for legal descriptions). Anadarko's POD area is 1,876 acres. The area topography is relatively rugged terrain, with more moderate to level topography located between numerous ridges. Elevations are from 4,265 to 4,727 feet above sea level. The proposal is to explore by drilling for, and possibly develop, natural gas reserves in Smith, Lower Smith, Big George, Werner, Gates and Wall coal zones with total well depths ranging from 1,900 to 2,100 feet.

These 12 APDs were part of a larger project submitted to BLM in 2009 by Lance Oil and Gas Company Inc., a wholly owned subsidiary of Anadarko. That project, known as Kinney Divide Unit Gamma (KDU Gamma), included a total of 39 APDs and associated infrastructure that were analyzed by BLM in Environmental Assessment WY-070-EA10-271, incorporated here by reference. The 39 APDs were approved by BLM August 26, 2010. The Federal APDs are valid for 2 years. At the end of 2 years the operator may request a 1 year extension and at the end of the 1 year extension, a 1 year final extension may be requested. Anadarko requested both extensions for these 12 APDs but did not drill the wells and allowed the permits to expire. Subsequent to the expiration, Anadarko applied for 12 Notices of Staking (NOSs) September 22, 2014 at the locations in this project. Following onsite inspections November-December, 2014 by BLM and Anadarko, the operator submitted the Kinney Divide Unit Gamma Resubmit (KDUGR) Plan of Development (POD) including these 12 APDs April 20, 2015. Onsites evaluated the proposal and modified it as necessary to mitigate environmental impacts. The BLM sent a post-onsite deficiency letter to Anadarko on May 11, 2015. The APDs were considered complete on June 8, 2015 when BLM received the final plan revision from Anadarko.

Much of 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 project is split by the Powder River. That part of the project located on the east side of the Powder River is drained by Turner Draw and numerous intermittent tributaries of the Powder River where Kinney Draw drains the area west of the Powder River. 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 vegetation type 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 of the precipitation falling during late winter and spring. Surface owners include private and BLM.

The KDUGR POD has 12 APDs to develop and produce natural gas from the coal formations of the Powder River Basin (PRB). All wells are vertical bores proposed on an 80 acre spacing pattern with 1 well per location. Proposed facilities on location include a well house (8 feet wide x 8 feet long x 8 feet high) and a meter house (3 feet by 3 feet by 10.5 feet high) connected by 3 inch diameter pipe 16 feet long. These production facilities are enclosed by metal fence panels 20 feet long by 5 feet high.

A list of proposed wells is in Table 1.1.

Table 1.1. Proposed Wells

#	Well Name	Well #	Qtr/Lot	Sec	Twp	Rng	Lease	CX Number
1	KDU GAMMA FED	23-17-5177	Lot 4	17	51N	77W	WYW146313	WY070-CX3-15-175
2	KDU GAMMA FED	12-17-5177	SWNW	17	51N	77W	WYW146313	WY070-CX3-15-174
3	KDU GAMMA FED	11-18-5177	NWNW	18	51N	77W	WYW146313	WY070-CX3-15-176
4	KDU GAMMA FED	31-18-5177	NWNE	18	51N	77W	WYW146313	WY070-CX3-15-178
5	KDU GAMMA FED	43-18-5177	NESE	18	51N	77W	WYW146313	WY070-CX3-15-180
6	KDU GAMMA FED	41-18-5177	NENE	18	51N	77W	WYW146313	WY070-CX3-15-179
7	KDU GAMMA FED	21-18-5177	NWNW	18	51N	77W	WYW146313	WY070-CX3-15-177
8	KDU GAMMA FED	44-18-5177	SWSW	18	51N	77W	WYW146313	WY070-CX3-15-181
9	KDU GAMMA FED	41-19-5177	NENE	19	51N	77W	WYW146313	WY070-CX3-15-182
10	KDU GAMMA FED	14-21-5177	Lot 7	21	51N	77W	WYW146312	WY070-CX3-15-183
11	KDU GAMMA FED	32-28-5177	Lot 3	28	51N	77W	WYW146313	WY070-CX3-15-185
12	KDU GAMMA FED	31-28-5177	NWNE	28	51N	77W	WYW146315	WY070-CX3-15-184

Water Management Proposal.

KDUGR POD will use existing water management infrastructure to dispose of the produced water generated from the 12 wells listed in Table 1.1, above. The KDUGR POD will use the same water management (WMP) strategies as proposed and approved in KDU Gamma and Kinney Divide Unit Epsilon (KDUE) POD:

Table 1.2. Existing Water Treatment Facilities

Facility Name	NEPA Documents	WYPDES	Lease	Outfall	QTR	Sec	TWN	RNG
River Road CBM Facility	KDU Gamma POD; WY-070-EA10-271	WY0056081	WYW149359	046	SWSW	4	50	77
River Road CBM Facility	KDU Epsilon POD; WY-070-EA12-148	WY0056081	WYW146315	053	NENW	28	51	77

Drilling and Construction.

- Wells would be drilled to the Fort Union coal zones to depths ranging from 1,900 to 2,100 feet. Multiple seams would be produced by co-mingling production (a single well per location capable of producing from multiple coal seams) with the Smith, Lower Smith, Big George, Werner, Gates and Wall coals being the targeted seams.
- Drilling and construction activities are anticipated to be completed within two years, the term of an APD. Drilling and construction occurs year-round in the PRB. Weather may cause delays lasting several days but rarely do delays last multiple weeks. Timing limitations in the form of COAs and/or agreements with surface owners impose longer temporal restrictions on portions of this POD, but rarely do these restrictions affect an entire POD.
- Well metering would be accomplished by individual well telemetry. No central metering facility is proposed. In addition to telemetry, BLM anticipates frequent (1 trip per day) well visits following initial well production dropping off over the first 3 to 6 weeks. Anadarko will limit well visitation as much as is practicable during crucial elk timing periods and anticipates an average of 1 well visit per week utilizing automation. This is to ensure the wells are operating correctly and there are no leaks undetected by telemetry. Maintenance operations will be scheduled outside of Greater Sage-Grouse (GSG) breeding and nesting periods when practical.

- An existing and proposed road network consisting of the following:
 - 4.5 miles of proposed improved roads
 - 101 miles of existing improved roads
- Six (6) power drop locations consisting of a transformer and meter would be associated with this POD. Temporary generators are not anticipated for this project since permanent electrical power is available.
- Utility corridors include buried gas, water, and power line networks; 3.5 miles are adjacent to proposed roads and another 2.3 miles follow existing primitive, roads not used for oil and gas operations.

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.

A comparison of shared roads in the KDUGRPOD revealed 100% of the existing improved oil and gas roads and utilities proposed in KDUGR POD, received analysis in the KDU Gamma EA, WY-070-10-271, as well as the Highland, Highland Delta, Kinney Kinney Divide, Kinney Divide Additions 1 and Kinney Divide Unit Epsilon PODs. Surface Use Data Sheet (SUDS) may overestimate the proposed disturbance for KDUGR POD due to the duplication of disturbance values. See Table 1.3 and MSUP SUDS Form Tab of the name POD.

Table 1.3. Construction Disturbance Associated with KDUGR POD

Facility	Operator Proposed After Onsites in miles (acres)
Number of CBNG Wells	12
Engineered Pads	6 (4.1 acres)
Slots or No Pad No Slot	6 (3.5 acres)
Engineered or Template Roads	4.5 miles (26.1 acres)
Stand-alone Utilities (gas, water, electric)	2.3 miles (9.7 acres)
Stock Tanks	2
Power Drops	6 (0.1 acres)
Overhead Power	0
Impoundments	0
Stock Tanks	2 (0.1 acres)
Total Acre Disturbance	43.6

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, and the Amendments of 2001, 2011 as required by 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215. BLM finds that the conditions and environmental effects found in the senior EA, Kinney Divide Unit Epsilon 2 (WY-070-EA14-264) 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 KDUGR POD. This information shows that BLM conducted analysis and is incorporated here by reference.

Table 1.4. Adjacent or Overlapping CBNG POD NEPA Analyses Sorted by Decision Date

#	POD Name	NEPA Analysis #	#/Type of Wells	Decision Mo/Yr
1	Highland Delta	WY-070-EA10-383	38 CBNG	9/29/2010
2	Coal Gulch/Highland Unit	WY-070-EA04-161	19 CBNG	7/30/2004
3	Kinney Divide	WY-070-EA04-100	9 CBNG	2/24/2004
4	Kinney Divide Additions 1	WY-070-EA06-317	33 CBNG	9/21/2006
5	Kinney Divide Unit Gamma	WY-070-EA10-271	39 CBNG	8/26/2010
6	Michelena	WY-070-EA05-295	9 CBNG	9/29/2006
7	Kinney Divide Unit Epsilon	WY-070-EA12-248	29 CBNG	8/14/2012
8	Kinney Divide Unit Epsilon 2	WY-070-EA14-264	16 CBNG	2/27/2015

2) There is an existing NEPA document (and the RMP) containing reasonably foreseeable development scenario for this action. There are several existing NEPA documents that reasonably foresaw development to spud additional wells to fill in 80 acre well-spacing. 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). 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. The KDUGR POD is in the foreseeable development scenario that was analyzed in the EA in Table 1.5.

Table 1.5. EAs Which Account for Reasonably Foreseeable Development Scenario

#	POD Name	NEPA Analysis #	#/Type of Wells	Decision Mo/Yr
1	Kinney Divide Unit Gamma	WY-070-EA10-271	39 CBNG	8/26/2010

3) The tiered NEPA document was finalized or supplemented within 5 years of spudding (drilling) the proposed wells.

The KDUGR POD CX3s tier to the following approved EAs listed below in Table 1.6.

Table 1.6. NEPA Documents Finalized Within Anticipated Spud Date of KDUGR POD

#	POD Name	NEPA Analysis #	# / Type of Wells	Decision Mo/Yr
1	Kinney Divide Unit Epsilon 2	WY-070-EA14-264	16 CBNG	2/27/2015
2	Kinney Divide Unit Epsilon	WY-070-EA12-248	29 CBNG	8/14/2012

In summary the EAs in Tables 1.4 to 1.6 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 KDUGR POD. KDUGR POD is similar to both the qualitative and quantitative analysis in the above mentioned 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. Additionally, KDUGR POD wells will use Anadarko’s infrastructure in KDU Gamma POD wells approved on August 26, 2010.

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.

Soils.

BLM obtained detailed soils identification and data for the project area from the North Johnson County Survey Area, Wyoming Soil Survey Geographic (SSURGO) Database (WY719). 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 (more than 2% of the project area) follows, along with their individual acreage and percentage of the area within the POD boundary, Table 1.7. The soils of greatest concern due to their limiting chemical and physical properties are Samday-Shingle-Badland complex, 10 to 45 percent slopes and Theedle-Kishona-Shingle loams, 3 to 30% slopes which also make up the dominant soil types in the project area.

Table 1.7. Dominant or Important Soils by Map Unit Symbol (MUS)

MUS	Map Unit Name	Acres	Percent
684	Samday-Shingle-Badland complex, 10 to 45 percent slopes	709.7	37.8
708	Theedle-Kishona-Shingle loams, 3 to 30% slopes	406.9	21.7
709	Theedle-Shingle loams, 3 to 30 percent slopes	263.3	14.0
615	Cambria-Kishona loams, 6 to 15 percent slopes	147.9	7.9
607	Haverdad loam, 0 to 3 percent slopes, rarely flooded	69.3	3.7
638	Forkwood loam, 3 to 6 percent slopes	64.3	3.4
707	Theedle-Kishona loams, 6 to 20 percent slopes	56	3.0
677	Forkwood loam, 6 to 9 percent slopes	48.5	2.3
613	Haverdad, occasionally flooded-Kishona loams, 0 to 3 percent slopes	46	2.5

Ecological site descriptions provide site and vegetation information needed for resource identification, management and reclamation recommendations. BLM specialists used NRCS published soil survey information, verified through onsite field reconnaissance, to determine the appropriate ecological sites for this POD area. Table 1.8 summarizes the project area’s ecological sites. The ecological site of greatest concern due to its limiting chemical and physical properties is Shallow Clayey which also makes up the dominant ecological site in the project area.

Table 1.8. Summary of Ecological Sites

Ecological Site	Acres	Percent
Shallow Clayey 10-14 NP	1,152.4	61.4
Loamy 10-14 NP	667.0	35.6
Lowland 10-14 NP	55.3	2.9

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 KDUGR POD and are incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 50-52); Cumulative Effects (p. 52-53); Residual Effects (p. 53)
2. Kinney Divide Unit Epsilon EA WY-070-EA12-248 Direct and Indirect Effects (pp. 35-36); Cumulative Effects (pp. 36); Residual Effects (pp. 36)
3. Kinney Divide Unit Epsilon 2 EA WY-070-EA14-264 Direct and Indirect Effects (pp. 33-37); Cumulative Effects (pp. 37-38); Residual Effects (pp. 38-40)

Soils Susceptible to Severe Erosion

Soils with severe erosion hazard ratings cover 39.3% of the project area. The project area is dissected and gullied with areas of active erosion and head cuts. Areas of slighter slopes and areas near drainages usually have deeper soils. Deeper soils tend to have a higher probability of supporting shrub- grassland communities. On surfaces with steep topography, vegetation is sparse or even barren. Barren steep slopes experience higher velocity of water movement during heavy storm events. As this storm water moves down slope the velocity is mitigated by thicker vegetation of the sagebrush grasslands. Road and pipeline construction removes vegetation that mitigates and controls water velocity. This loss of vegetative buffer increases water velocity and head cutting. None of the wells are located in soils susceptible to severe erosion; however, approximately 1,400 feet of new access road will cross areas susceptible to severe erosion. These roads have been engineered to integrate stabilization measures into the constructed design to maintain soil stability and minimize erosion.

Limited Reclamation Potential (LRP)

LRP areas were identified using NRCS SSURGO Data and onsite investigation. For preliminary analysis BLM filters the SSURGO data soil mapping units by the “most limiting” aggregation method. Thus any soil mapping unit containing a named component described as a miscellaneous area would be designated as a LRP area as would areas identified as badlands and rock outcrop. BLM used the SSURGO Data to determine that 37.8% of the project area soils contain LRP areas. The area consisting of the miscellaneous component (LRP area) would be substantially less; and then BLM verifies and describes these areas during the onsite investigation. None of the wells are located in LRP; however, approximately 1,400 feet of new access road will cross areas of LRP. These roads have been engineered to integrate stabilization measures into the constructed design to maintain soil stability and minimize erosion to LRP.

Miscellaneous areas: have essentially no soil and support little or no vegetation. They can result from active erosion, washing by water, unfavorable soil conditions, or human activities. Some miscellaneous areas can be made productive, but only after major reclamation efforts (430-VI-NSSH, 1996).

Badlands: A landscape which is intricately dissected and characterized by a very fine drainage network with high drainage densities and short, steep slopes with narrow interflaves. Badlands develop on surfaces with little or no vegetative cover, overlying unconsolidated or poorly cemented materials (clays, silts, or in some cases sandstones) sometimes with soluble minerals such gypsum or halite (430-VI-NSSH, 1996).

Rock outcrop: Consists of exposures of bare bedrock. Most rock outcrops are hard rock, but some are soft (430-VI-NSSH, 1996).

Vegetation and Ecological Sites

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EAs which are adjacent to or overlap the KDUGR POD and are incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 50-52); Cumulative Effects (p. 52-53); Residual Effects (p. 53)
2. Kinney Divide Unit Epsilon EA WY-070-EA12-248 Direct and Indirect Effects (pp. 35-36); Cumulative Effects (pp. 36); Residual Effects (pp. 36)
3. Kinney Divide Unit Epsilon 2 EA WY-070-EA14-264 Direct and Indirect Effects (pp. 40-41); Cumulative Effects (p. 41-42); Residual Effects (pp. 42)

Reclamation Potential

According to the NRCS, reclamation potential in the KDUGR POD is rated 57.4% fair and 42.6% poor. Soils with poor reclamation and re-vegetation potential occur throughout the project area. Currently, soil conditions in the project area are impacted by CBNG development as well as traditional activities, including livestock grazing and wildlife use. Much of the area is covered with clayey soils and steep slopes that are easily damaged by use or disturbance and are difficult to re-vegetate or otherwise reclaim.

Construction of well pads, impoundments, pipelines, and roads involves breaking through the topsoil, the physical and biological crust. Topsoil is the suitable growth medium salvaged and used in reclamation. It is the result of thousands of years of geological and climatic forces, and is the sum accumulation all organic matter available over time. Roads, linear pipeline scars, and artificial wet areas increase potential for soil erosion. This increased erosion potential can result in higher suspended sediment and turbidity levels in the Powder River. Avoiding areas with limited reclamation potential, minimizing surface disturbance and salvaging surface organic matter (in the form of vegetation, litter and biological crust) are critical to maintaining the integrity and viability of the soil.

Efforts were made to avoid areas of poor reclamation potential and where that was not possible, project designs were modified to minimize impacts. None of the wells are located in soils with poor reclamation potential; however, approximately 1,400 feet of new access road will cross areas with poor reclamation potential. These roads have been engineered to integrate stabilization measures into the constructed design to minimize surface disturbance and maintain soil stability.

Wetlands/Riparian

The project areas primarily an upland environment. Upper ephemeral drainages flow into the larger ephemeral creeks namely: Kinney Draw (which will be impacted by 1.6 miles of parallel pipeline corridor) and Turner Draw. The ephemeral swales and side drainages consist of upland and limited wetland vegetation. Based on National Wetland Inventory data available for the project area (FWS 2009) there are 6 freshwater emergent wetlands, 1 freshwater pond and 1 riverine in the project area for a total of 12.0 acres or 0.6% of the project area and none will be impacted by the project.

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EA which overlaps the KDUGR POD and is incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 61-70); Cumulative Effects (p. 71); Residual Effects (p. 71-72)

Invasive Species

BFO found the following state-listed noxious weeds and/or weed species of infestation concern for the

project area in the WERIC database (www.weric.info): hoary cress, Scotch thistle, Canada thistle, common cocklebur, and buffalo bur.

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EA which overlaps the KDUGR POD and is incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 54); Cumulative Effects (p. 54); Residual Effects (p. 54)

Wildlife

BLM reviewed the proposed APDs 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 NEPA analyses; and (2) consistent with the programmatic biological opinion (ES-6-WY-02-F006) from the PRB FEIS, Appendix K. The proposed well locations and infrastructure are a result of attempts by Anadarko and the BLM to reduce impacts to GSG, ferruginous hawks and other migratory birds, and incorporates recommendations provided to the BLM by the U.S. Fish and Wildlife Service (FWS). The affected environment and environmental effects for wildlife are discussed in, and anticipated to be similar to the Mufasa Fed 11-31H Well EA, WY-070-EA12-062 (pp. 7-11 and 16-21), the Sahara POD EA, WY-070-EA13-72, (pp. 16-17 and 31-33), and the Crazy Cat East EA, WY-070-EA13-028, (pp. 29-34 and 49-56), incorporated here by reference.

Big Horn Environmental Consultants (BHEC) completed a habitat assessment and wildlife surveys for Anadarko including raptor nest surveys between April 29 and May 7, 2014. They completed greater sage-grouse (GSG) surveys April 3-10, 2014. Surveys were conducted for wintering bald eagles, prairie dog colonies, mountain plovers, Ute ladies’ trusses orchids and nesting migratory birds. Surveys completed were conducted per the PRB Interagency Working Group’s protocols; see: http://www.blm.gov/wy/st/en/field_offices/Buffalo/wildlife.html. The affected environment within 4 miles of the proposed wells (80.5square miles) has 438 active oil and gas wells and associated access roads and infrastructure to support the production. There are also 12 pending APDs for new wells. Habitat quality in the area is highly impacted by oil and gas development with an average of 5.4 wells per square mile currently on the landscape.

Raptors

Three known raptor nests occur within 0.5 mile of the KDUGR POD. Table 1.9 summarized the nests, ID, and location.

Table 1.9. Active Raptor Nests

#	BLM ID #	UTM	Species	PODs with nests previously analyzed
1	2028	408898/4914929	Red-tailed hawk	KDU Gamma
2	8374	409687/4915825	Unknown Raptor	KDU Gamma
3	6256	408402/4914465	Unknown Raptor	KDU Gamma

*The Buffalo Field Office RMP (1985, 2001 Amendment) defines an active nest as “one that has been used at least once during the previous three years.”

Impacts anticipated to occur toward the nesting raptors and mitigation will be similar to those analyzed in the following EA which overlaps the KDUGR POD, and is incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 63-64); Cumulative Effects (p. 64); Residual Effects (p. 64).

Sharp-tailed Grouse

There are no known plains sharp-tailed grouse leks within the project area. The nearest known lek is located 2.5 miles southeast of the project area. Sharp-tailed grouse would be impacted by the proposed project because the species is known to be in the area and suitable nesting habitat exists throughout the project area. Construction and maintenance activities associated with development of the KDUGR POD would cause direct habitat loss. Associated road networks, pipelines, and powerline transmission corridors would influence vegetation dynamics by fragmenting habitats and creating soil conditions that facilitate the spread of invasive species (Braun 1998, Gelbard and Belnap 2003).

Impacts anticipated to occur toward sharp-tailed grouse and mitigation will be similar to those analyzed in the following EAs which overlap or are adjacent to the KDUGR POD; they are incorporated here by reference:

1. Kinney Divide Unit Epsilon EA WY-070-EA12-248 Direct and Indirect Effects (pp. 62-63); Cumulative Effects (pp. 62); Residual Effects (pp. 62)
2. Kinney Divide Unit Epsilon 2 EA WY-070-EA14-264 Direct and Indirect Effects (pp. 52); Cumulative Effects (p. 52-53); Residual Effects (pp. 53)

Wildlife Threatened, Endangered, Proposed and Candidate Species

Ute Ladies'-Tresses Orchid

There are no known populations of Ute ladies'-tresses orchid or suitable habitat within the project area. Implementation of the proposed project would not affect the Ute ladies'-tresses orchid.

Northern Long-eared Bat

There are no known populations of northern long-eared bat within the project area. Implementation of the proposed project would not affect the northern long-eared bat.

Greater Sage-Grouse (GSG)

General effects from oil and gas development to GSG in the vicinity of the project area were analyzed in the Crazy Cat East Oil and Gas Proposal EA, pp. 54-56 and the Sahara POD EA, WY-070-EA13-72, 2013, Section 4.6.4.1, pp. 34-37., both incorporated here by reference. The BLM typically applies a controlled surface use buffer of 0.25 miles for GSG leks but none of the wells or associated roads fall within 0.25 of a GSG lek. There is 1 unoccupied GSG lek within 2-miles of the project boundary but not any of the proposed wells; the Kinney Draw III Lek is the nearest lek at 1.3 mile from the project boundary and just over 2 miles from the nearest well location. BHEC surveyed known leks as well as for new leks on April 7, 20 and May 1, 2015. No male GSG were observed on the Kinney Draw III lek and no new leks were found. There is sagebrush grassland habitat that is mapped and modeled (using a geospatial habitat model) as suitable GSG nesting and brood rearing habitat found throughout the project area. The onsite inspection confirmed that the sagebrush habitat is of a stand height to meet the habitat needs of the species. GSG dropping found during the onsite field inspections confirm that it is likely that the species is utilizing the available habitat. Construction of the well pads, access roads, and buried utilities will result in the removal of sagebrush. Drilling, completion and well production are also anticipated to negatively impact GSG nesting in suitable habitat within 0.6 mile of the proposed activities because nesting GSG avoid infrastructure by up to 0.6 miles.

In March, 2012, the BLM-contracted population viability analysis for Northeast Wyoming found there remains a viable population of GSG in the PRB (Taylor et al. 2012). Threats from energy development and West Nile Virus (WNV) are impacting future viability (Taylor et al. 2012). The study indicated that effects from energy development, as measured by male lek attendance, are discernible out to a distance of 12.4 miles. There are 36 known GSG leks within 12.4 miles of the 12 proposed wells; 32 occupied, 3 undetermined, and 1 unoccupied leks. Ten of these GSG leks lay inside GSG Priority Habitat. The distribution of existing and proposed wells in relation to those 36 leks that occur within 12.4 miles of the

12 wells proposed is 4.7 wells per square mile. Additional information regarding the population viability analysis, and its influence on cumulative effects from energy development is found in the affected environment and environmental effects sections (Section 3.7.12 and 4.8.2 – Candidate Species – Greater Sage-Grouse of the Mufasa Fed 11-31H Well EA, WY-070-EA12-062, incorporated here by reference.

To reduce the impacts to GSG associated with noise, construction, and human disturbance resulting from implementation of the proposals, BLM will implement a timing limitation (March 15-June 30) on surface disturbing activities within 2 miles of known GSG leks as well as within suitable nesting and brood rearing habitat. The intent of this timing restriction is to decrease the likelihood that GSG will avoid these areas and increase habitat quality by reducing noise and human activities during the nesting season. There are 4 occupied GSG leks within 4 miles of the proposals including Kinney Draw I, II, III and Nurse Draw leks. The Crazy Cat East EA found that, “leks within a 4-mile buffer of the CCE area are extremely impacted by oil and gas development”, p. 55. The application of the timing limitation will minimize the impacts that would reduce connectivity between the 4 GSG leks within 4 miles and the 36 GSG leks within 12.4 miles of the proposals.

A clearance survey for breeding and/or nesting GSG, within 0.5 of planned surface disturbance is required prior to surface disturbance. These conditions apply to surface disturbing activities within the entire project area. The Operator is required to ensure that noise from their facilities at any nearby GSG leks does not exceed 49 decibels (10 dBA above background noise) at the display grounds.

Four known lek occur within 4 miles of the KDUGR POD. A summary of 4 leks is in Table 1.10 below. BLM analyzed and considered mitigation for 4 leks in the following EA which overlaps to the KDUGR POD, incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 58); Cumulative Effects (p. 58-59); Residual Effects (p. 59).

Table 1.10. Greater Sage-Grouse Leks

#	Lek ID	Legal Location	Occupied	Within WGFD Core Area
1	Kinney Draw I	SESE Sec. 4, T51N/R78W	Yes	No
2	Kinney Draw II	SWNW Sec. 10, T51N/R78W	Yes	No
3	Kinney Draw III	NWSW Sec 11, T51N/R78W	Yes	No
4	Nurse Draw	NWSW sec. 3, T51N/R78W	Yes	No

Sensitive Species

BLM will take necessary actions to meet the policies set forth in sensitive species policy (BLM Manual 6840). BLM Manual 6840.22A states that “The BLM should obtain and use the best available information deemed necessary to evaluate the status of special status species in areas affected by land use plans or other proposed actions and to develop sound conservation practices. Implementation-level planning should consider all site-specific methods and procedures which are needed to bring the species and their habitats to the condition under which the provisions of the ESA are not necessary, current listings under special status species categories are no longer necessary, and future listings under special status species categories would not be necessary.”

The PRB FEIS discusses impacts to the sensitive species (Baird’s sparrow, bald eagle, Brewer’s sparrow, ferruginous hawk, loggerhead shrike, long-billed curlew, sage sparrow, sage thrasher, trumpeter swan, western burrowing owl, yellow-billed cuckoo, black-tailed prairie dog, fringed myotis, long-eared myotis,

and Townsend's big-eared bat) that may occur in the project area on pp. 4-257 to 4-273. Appendix A summarizes project effects to sensitive species and their habitat associated with the project. See the administrative record. Impacts to these species effected are discussed below.

Bald Eagles

At the time the PRB FEIS was written, the bald eagle was listed as a threatened species under the ESA. It was removed from the ESA on August 8, 2007. The bald eagle remains under the protection of the Bald and Golden Eagle Protection Act and the MBTA.

Suitable nesting and winter roosting habitat in the vicinity of the proposed project is limited to mature cottonwood trees along Powder River, and scattered mature ponderosa pines in upland areas. Between 2005 and 2011 there have been 51 recorded observations of roosting bald eagle within 1 mile of the 12 proposed wells. There are 2 sites where more than 2 bald eagles have been observed roosting within 0.5 mile of the KDU Fed 14-21-5177 well location.

Human activities, traffic, and construction may displace winter roosting, nesting, or foraging eagles. The closer those activities occur to a roost, the less impacts from those activities can be mitigated by ensuring that they occur out of line-of-sight of roosting eagles. In other words, closer activities may not be mitigated by moving out of line-of-sight. Adequate mitigation is achieved through a relationship between distance and visibility.

The KDUGR POD was included in aerial surveys conducted by BHEC for wintering bald eagles on December 16 and 18, 2013 and January 28, 2014. There were no bald eagles observed. No bald eagle nests have been identified in the area.

BLM will require a bald eagle winter roost survey prior to project related actions occurring within one mile of bald eagle habitat, annually, from 1 November through 1 April, or from 1 February through 15 August, prior to a nesting survey. Surveys will not be required if surface disturbing activities occur outside of these timeframes. If bald eagles are observed during surveys, timing limitations will be applied restricting surface disturbing activities from 1 November through 1 April for roosting bald eagles and 1 February through 15 August for nesting bald eagles.

Impacts anticipated to roosting and nesting bald eagles, and mitigation, will be similar to those analyzed in the following EA which overlaps the KDUGR POD, incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 60); Cumulative Effects (p. 60-61); Residual Effects (p. 61).

Black-tailed Prairie Dog

The road to KDU Fed 31-18-5177 will directly impact a black-tailed prairie dog colony, resulting in approximately 700 feet of linear disturbance through the colony. LOG will locate the road on the edge of the colony in order to minimize impacts to prairie dogs.

Impacts anticipated to black-tailed prairie dogs, and mitigation, will be similar to those analyzed in the following EA which overlaps the KDUGR POD, incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 61); Cumulative Effects (p.61); Residual Effects (p. 61).

Mountain Plover

Disturbed ground, such as buried pipeline corridors and roads, may provide suitable nesting habitat for plovers. On the other hand, increased traffic, construction, and human activities within one-quarter mile may be disruptive to nesting behaviors.

Surveys for mountain plover were conducted May 2, 18 and June 3, 2014. No mountain plover were observed. The majority of the POD is characterized by steep draws and ridgelines, reducing the potential for breeding mountain plover (Knopf 1996). Most vegetation was greater than six inches and there was minimal bare ground encountered. It was determined that there was no suitable habitat for nesting mountain plover. No mountain plover have been observed in the area during surveys dating back to 2004.

Potential mountain plover habitat is present in SW S21 and NE S29 T51N R77W. While the current grass cover is likely to preclude mountain plover from using these areas, disturbances such as intensive grazing, drought, or wildfire would make these areas suitable for mountain plover.

Impacts anticipated to black-tailed prairie dogs and mitigation will be similar to those analyzed in the following EA which overlaps the KDUGR POD, incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 57-58); Cumulative Effects (p.58); Residual Effects (p. 58).

Migratory Birds

The PRB FEIS discussed direct and indirect effects to migratory birds on pp. 4-231 to 4-235. The PRB FEIS states on p. 4-231, “Surface disturbance associated with construction, operation, and abandonment of facilities, including roads, has the potential to result in direct mortality of migratory birds. Most birds would be able to avoid construction equipment; however, nests in locations subject to disturbance would be lost, as would any eggs or nestlings.” Direct mortality of a bird or destruction of an active nest due to construction activities could result in a “take” as defined (and prohibited) by the Migratory Bird Treaty Act (MBTA), a nondiscretionary statute. Additional information on the impacts to migratory birds, and its influence on cumulative effects from energy development can be found in the affected environment and environmental effects of the Sahara POD EA, WY-070-EA13-72, 2013, Sections 3.7.2.2 (p. 16-17) and 4.6.2.2 (p. 31-33) incorporated here by reference.

BLM identified suitable habitat for several BLM sensitive sagebrush obligates including loggerhead shrike, Brewer’s sparrow, and sage thrasher. Sagebrush habitat includes suitable nesting habitat, with shrubs in excess of 2 feet at proposed sites of surface disturbances. Brewer’s sparrows and sage thrashers both nest in sagebrush shrubs and occur in the area. Construction of the well pads, access roads and associated infrastructure will remove sagebrush habitat and could result in a “take” (as described above) of BLM sensitive migratory birds if removal occurs during the nesting season.

In an effort to apply the least restrictive measures to be in compliance with the MBTA, while still conforming to Executive Order (EO) 13186 and the BLM/FWS MOU regarding conservation of species of concern, the BLM prohibits habitat removal for only those habitats where BLM special status (sensitive) species (SSS) migratory birds are likely to occur. The BLM applies a conditional surface use stipulation for all special status species to all oil and gas leases since 2008 (IM WY-2013-005, p. 2). To reduce the likelihood of a “take” under the MBTA, the BLM biologist recommends that well pad, access road, and pipeline construction (vegetation removal) occur outside of the breeding season for the greatest quantity of BLM SSS migratory birds (May 1- July 31) where suitable nesting habitat for sagebrush obligates is present. The restriction would apply to habitat removal, unless a pre-construction clearance survey (within approximately 10 days of construction planned May 1-July 31) is completed. If surveys will be conducted, the Operator will coordinate with BLM biologists to determine a protocol. At a minimum, the surveys will consist of nest searches in areas where vegetation will be removed or destroyed. The BLM will require surveys prior to construction activities supporting the KDUGR well pads, access roads and associated infrastructure. This condition applies to surface disturbing activities within the entire project area except adjacent to existing oil and gas roads . Occupied habitat removal is prohibited during the nesting season for sagebrush obligate passerines (May 1 to July 31). Timing

limitations for active raptor nests (Feb 1 to July 31) which begins prior to timing limitations for sagebrush obligates, may provide additional protection where migratory bird nesting periods and habitats overlap.

The BLM recommends taking measures to ensure that migratory birds are excluded from all facilities that pose a mortality risk, including, but not limited to exhaust stacks, secondary containment, and standing water or chemicals where escape may be difficult or toxic substances are present; see Colorado Oil and Gas Commission, Migratory Bird Policy, accessed February 13, 2012).

If the habitat removal restriction is applied, it is unlikely that active nests (of BLM sensitive species) will be destroyed, as most nestlings will have fledged by the beginning of August. Nests initiated after the first week in July may be destroyed by construction after August 1st. Ground nesting birds using grassland habitats in the proposed disturbance areas, may have nests or young destroyed if construction occurs during the nesting season; BLM sensitive migratory bird species are not anticipated to nest in the disturbance area for the well post construction. Migratory birds nesting adjacent to the well pad or road may be displaced, abandon nests, or suffer reduced reproductive success due to construction and production activities. Suitability of the project area for migratory birds will be negatively affected due to habitat loss and fragmentation, and proximity of human activities from oil and gas development.

Water Resources

The operator submitted a comprehensive WMP for this project. It is incorporated-by-reference into this CX3 pursuant to 40 CFR 1502.21. The WMP incorporates sound water management practices, monitoring of downstream impacts within the Upper Powder River watershed and 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.

A search of the Wyoming State Engineer Office (WSEO) Ground Water Rights Database for this area showed 35 registered stock and domestic water wells within 1 mile of a federal CBNG producing well in the POD with depths ranging from 1 to 240feet. For additional information on water, please refer to the PRB FEIS (January 2003), Chapter 3, Affected Environment pages 3-1 through 3-36 (groundwater).

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. The surface access agreement (SUA) was self-certified.

Anadarko and BLM predicted the maximum water production to be 20.0 gpm per well or 240 gpm (0.53cubic feet per second (cfs) or 387 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 2,242 acre-feet in 2015 (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 17.3 % of the total volume projected for 2015. This volume of produced water is within the predicted parameters of the PRB FEIS.

Groundwater

This project will add an additional 240 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 following EA which is adjacent or overlapping to the KDUGR POD and is incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 67-69); Cumulative Effects (p. 69-71); Residual Effects (71-72).

Surface Water

The water sample reference used in KDUGR POD is from an outfall with untreated water comingled from wells within the Kinney Divide Unit. The outfall is located NENW Section 28 T51N R77W in KDU Gamma POD was sampled and analyzed. The TDS for the sample was 1,940 mg/l. The water quality for the water produced from the co-mingled target coal zones from these wells is predicted to be similar to the sample water quality collected. For complete analysis and results see the Anadarko’s analytical report in the KDUGR POD WMP. 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.

The operator did not find or identify any springs/seeps within the KDUGR POD boundary or within 0.5 mile radius of the POD boundary.

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EA which is adjacent or overlapping to the KDUGR POD and that analysis is incorporated here by reference:

1. KDU Gamma EA WY-070-EA10-271 Direct and Indirect Effects (pp. 58); Cumulative Effects (p. 58-59); Residual Effects (p. 59).

Cultural

In accordance with 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 that are generally found within BFO the reader is referred to the *Draft Cultural Class I Regional Overview, Buffalo Field Office* (BLM, 2010). Previously approved Class III (intensive) cultural resource inventories (BFO project no. 70060615, 70080113 and 70080167) cover the proposed project area. The following resources are located in or near the proposed project area.

Table 1.11. Cultural Resources Located In or Near the Project Area

Site Number	Site Type	NRHP Eligibility
48JO1903	Historic	NE
48JO3695	Prehistoric	Unk

The project will impact non eligible site 48JO1903. The project will not impact historic properties. Following the Wyoming State Protocol Section VI(A)(1) the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on 5/4/2015 that no historic properties exist in the area of potential effects. If operators observe any cultural values [sites, artifacts, human remains (Appendix L PRB FEIS and ROD)] during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. Further discovery procedures are in the Standard COA (General) (A) (1).

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 12 proposed KDUGR 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: _____/s/ Duane W. Spencer_____

Date: _____7/1/15_____

Note: The CX3’s approval requires a separate decision record (DR) and the DR must include appropriate appeal language that comports to the appropriate 43 CFR part authorizing the project. There is decision space in the CX3 and in the DR to apply limitations, mitigation, and conditions of approval – however mitigation and COAs must comply with those published in the 2003 ROD or thoroughly analyzed in an EA this CX3 analysis tiers to or incorporates an analysis here by reference or is supported in this CX3 analysis.

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