U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-UT-G010-2014–0068–EA

Axia Energy's proposed 17 wells from 6 well pads in sect 35 of T7S, R20E and sections 3, 4, and 5 of T8S R20E

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management

BLM

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Prepared by
U.S. Department of the Interior
Bureau of Land Management

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Finding of No Significant Impact

Finding of No Significant Impact:

Based on the analysis of potential environmental impacts DOI-BLM-UT-G010-2014–0068–EA, I have determined that the proposed action will not have any significant impacts on the environment, and an environmental impact statement is not required.

Signature:

Approved by: MAR 1 7 2014

Authorized Officer [Date]
AFM for Minerals

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Decision Record - Memorandum

Selected Action:

It is my decision to approve Axia Energy's proposal to drill 17 oil wells from 6 well pads in Section 35, T. 7 S., R. 20 E., and Sections 3, 4, and 5, T. 8S., R. 20 E., Uintah County, Utah. The project area is located approximately 29 miles south of Vernal, Utah. The proposed wells would be drilled utilizing new locations. Approximately 5,717 feet of road would be built. Additionally 10,444 feet of 12 inch or smaller surface pipeline, and 5,878 feet of overhead power lines would be constructed, as described in the proposed action alternative of DOI-BLM-UT-G010-2014-0068–EA. This decision is subject to the below conditions of approval.

Conditions of Approval:

This decision is contingent on meeting all stipulations and monitoring requirements listed below, which were designed to minimize and/or avoid impacts.

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.
- Project activities are not allowed from March 1 – August 31 to minimize impacts during burrowing owl nesting season. This Condition of Approval only applies to the following well locations:
  - Three Rivers # 5-42-820, 5-43-820, and 4-13-820
  - Three Rivers # 3-13-820, 3-14-820, 3-23-820, and 3-24-820
  - Three Rivers # 35-11-720 and 35-21-720

Rationale:

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

The selected alternative meets the BLM's need to acknowledge and allow development of valid existing leases. The BLM objective to reduce impacts is met by the imposing of mitigation measures to protect other resource values.

Land Use Plan Conformance:

The selected alternative is in conformance with the Vernal Field Office Resource Management Plan and Record of Decision (BLM 2008).

The selected alternative is consistent with *Uintah County General Plan* (published in 2007) that encompasses the location of the proposed wells. In general, the plan indicates support for development proposals such as the selected alternative through the plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization.

There are no comprehensive State of Utah plans for the vicinity of the selected alternative. However, the State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the selected alternative is consistent with the objectives of the State.

Public Involvement:

The proposed project was posted on the Eplanning NEPA Register on 1/16/2014. No comment has been received.

Alternatives Considered:

The EA analyzed the proposed action and no action alternatives. Onsite visits were conducted by Vernal Field Office Personnel. The onsite inspection reports do not indicate that any other locations be proposed for analysis. The no action alternative was not selected because it would not best meet the BLM's need to acknowledge and allow development of valid existing leases.

Appeal or Protest Opportunities:

This decision is effective upon the date it is signed by the authorized officer. The decision is subject to appeal. Under BLM regulation, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision 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, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84145-0155, within 20 business days of the date this Decision is received or considered to have been received.

If you wish to file a petition for stay, the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted; and,
4. Whether the public interest favors granting the stay.

Signature:

Authorizing Official:

MAR 1 7 2014

Authorized Officer Date

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Chapter 1. Introduction

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1.1. Identifying Information:

This Environmental Assessment (EA) has been prepared to analyze the potential impacts of Axia Energy LLC's oil well drilling project in the Pelican Lake area of Uintah County, Utah. The EA is a site-specific analysis of potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. ("Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27.) An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) statement. A FONSI statement is a document that briefly presents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in Vernal Field Office Resource Management Plan (BLM 2008). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the alternative selected.

Axia proposes to drill 17 oil wells from 6 well pads in Section 35, T. 7 S., R. 20 E., and Sections 3 ,4, and 5, T. 8S., R. 20 E., Uintah County, Utah, The proposed project area is located approximately 29 miles south of Vernal, Utah. The proposed wells would be drilled utilizing new locations. Approximately 5,717 feet of road would be built. Additionally 10,444 feet of 12 inch or smaller surface pipeline, and 5,878 feet of overhead power lines would be constructed. Table 2.1, "Surface Disturbance Summary" (p. 5) lists the well and their associated disturbance.

1.1.1. Title, EA number, and type of project:

Title: Axia Energy's proposed 17 wells form 6 well pads in section 35 of T7S, R20E and sections 3, 4, and 5 of T8S R20E

NEPA #: DOI-BLM-UT-G010-2014–0068–EA

Project Type: Environmental Assessment

1.1.2. Location of Proposed Action:

The proposed project area is located in section 35, T. 7 S., R. 20 E., and in sections 3, 4, and 5, T. 8 S., R. 20 E., Uintah County, Utah. The proposed project area is located approximately 29 miles south west of Vernal, Utah.

1.1.3. Name and Location of Preparing Office:

Vernal Field Office

170 South 500 East

Vernal, Ut. 84078

(435) 781–4400

1.1.4. Identify the subject function code, lease, serial, or case file number:

Lease Number: UTU-85592, UTU-85994, UTU-87342, and UTU-88623

1.1.5. Applicant Name:

Axia Energy, LLC

1.2. Purpose and Need for Action:

Private exploration and production from federal oil and gas leases is an integral part of the BLM oil and gas leasing program under authority of the Mineral Leasing Act of 1920, as amended by the Federal Land Policy and Management Act of 1976 and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The operator has a valid existing right to extract mineral resources from Federal Leases UTU-85592, UTU-85994, UTU-87342, and UTU-88623 subject to the lease's terms and conditions. The BLM oil and gas leasing program encourages development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources. The BLM's purpose is to allow beneficial use of the applicant's lease in an environmentally sound manner.

The underlying need for the proposed action is for Axia to develop Federal Leases UTU-85592, UTU-85994, UTU-87342, and UTU-88623 by drilling the proposed wells, and if successful, to produce commercial quantities of gas or oil from the federal oil and gas leases. There are known hydrocarbon-trapping mechanisms within Axia's development program, based on previously drilled wells and reasoned geologic formation and mineral potential.

1.3. Scoping, Public Involvement and Issues:

The proposed project was posted on the Eplanning NEPA Register on 1/16/2014.

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action:

Axia proposes to drill 17 oil wells from 6 well pads in Section 35, T. 7 S., R. 20 E., and Sections 3 ,4, and 5, T. 8S., R. 20 E., Uintah County, Utah, The proposed project area is located approximately 29 miles south of Vernal, Utah. The proposed wells would be drilled utilizing new locations. Approximately 5,717 feet of road would be built. Additionally 10,444 feet of 12 inch or smaller surface pipeline, and 5,878 feet of overhead power lines would be constructed. Table 2.1, "Surface Disturbance Summary" (p. 5) lists the well and their associated disturbance.

Table 2.1. Surface Disturbance Summary

Well Name	New Well Pad Disturbance (acres)	Access Road (feet)	Access Road (acres)	Surface Pipelines (feet)*	Surface Pipe Lines (acres)*	Over Head Power Lines (feet)	Over Head Power Lines Permanent Access (acres)	Total Acres of New Surface Disturbance (acres)
Three Rivers Federal 34-42-720, Three Rivers Federal 34-43-720, Three Rivers Federal 35-12-720	3.5	977	0.7	1015	0.7	939	0.6	5.5
Three Rivers Federal 35-11-720, Three Rivers Federal 35-21-720	3.0	689	0.5	5136	3.5	650	0.4	7.5
Three Rivers Federal 35-43-720, Three Rivers Federal 35-42-720	4.3	2,153	1.5	2219	1.5	2109	1.5	8.8

Three Rivers Federal 3-13-820, Three Rivers Federal 3-14-820, Three Rivers Federal 3-23-820, Three Rivers Federal 3-24-820	3.6	232	0.2	256	0.2	190	0.1	4.1
Three Rivers Federal 3-12-820, Three Rivers Federal 4-41-820, Three Rivers Federal 4-42-820	4.6	157	0.1	270	0.2	521	0.4	5.3
Three Rivers Federal 4-13-820, Three Rivers Federal 5-42-820, Three Rivers Federal 5-43-820	3.6	1509	1.0	1548	1.1	1469	1.0	6.7
TOTAL	**22.6**	**5717**	**3.9**	**10444**	**7.2**	**5878**	**4.0**	**37.8**

2.1.1. Access

Approximately 5,717 feet of new access road would be built. The access road would have a 30 foot disturbance width with an 18-foot wide running surface. The new surface disturbance would be approximately 3.9 acres.

New road construction and improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and

a grader used to smooth the running surface. The road base and/or gravel would come from a permitted private source. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust. The operator would be responsible for all maintenance needs of the new access road.

Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.

The proposed road would be constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.

A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.

Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.

All access roads and surface disturbing activities would conform to the appropriate standard, **no higher than necessary**, to accommodate their intended function adequately as outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition – Revised 2007.

There are no cattle guards, turnouts, culverts or low-water crossings proposed.

The Three Rivers Federal 34-42-720, Three Rivers Federal 34–43–720, Three Rivers Federal 35–12–720, Three Rivers Federal 35–11–720, Three Rivers Federal 35–21–720, Three Rivers Federal 4–13–820, Three Rivers Federal 5–42–820, and Three Rivers Federal 5–43–820 would need a federal right of way for the access roads.

2.1.2. Well Site Layout

The pad and road designs are consistent with industry specifications. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.

The Three Rivers Federal 34-42-720, Three Rivers Federal 34–43–720, Three Rivers Federal 35–12–720, Three Rivers Federal 35–11–720, Three Rivers Federal 35–21–720, Three Rivers Federal 4–13–820, Three Rivers Federal 5–42–820, and Three Rivers Federal 5–43–820 would need a federal right of way for the well pads.

The reserve would be lined with 20-mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay felt if rock is encountered during excavation. The liner(s) would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit. A minimum of two feet of free board would be maintained between the maximum fluid level and the top of the reserve pit at all times. The reserve pit would be constructed so as not to leak, break or allow any discharge.

To deter livestock from entering the pit, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced. Drill cuttings would be contained in the pit and the pit buried on-site after the drilling process following published federal regulations and site-specific conditions of approval. Pit reclamation will be completed within six months of drilling, weather permitting.

Hydrocarbons would be removed from the reserve pit as soon as practical. In the event immediate removal is not practical, the reserve pit would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

A flare pit may be constructed a minimum of 110' from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. Axia would flow back as much fluid and gas as possible into pressurized vessels, separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances Axia proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the reserve pit or placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.

Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by Axia as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity. All cut and fill slopes would be such that stability can be maintained for the life of the activity. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.

Water application may be implemented if necessary to minimize the amount of fugitive dust.

The well would be properly identified in accordance with 43 CFR 3162.6.

All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers. Garbage containers and portable toilets would be located on the well pad.

2.1.3. Pipelines

Approximately 10,444 feet of pipeline corridor containing up to three lines (one gas pipeline up to 12 inches in diameter, one water line up to 8 inches in diameter and one residue line up to 4 inches in diameter) are proposed for this project. The pipelines would be buried in the pipeline corridor. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby Axia wells. The pipelines crosses entirely federal surface. The Three Rivers Federal 34-42-720, Three Rivers Federal 34–43–720, Three Rivers Federal 35–12–720, Three Rivers Federal 35–11–720, Three Rivers Federal 35–21–720, Three Rivers Federal 4–13–820, Three Rivers Federal 5–42–820, and Three Rivers Federal 5–43–820 would need a federal right of way for the pipelines.

The new segment of gas pipeline would be surface laid within a 30-foot wide pipeline corridor adjacent to the proposed access road.

Construction of the ROW would temporarily utilize the 30-foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.

Pipeline construction methods and practices would be planned and conducted by Axia with the objective of enhancing reclamation and fostering the reestablishment of the native plant community.

2.1.4. Power Lines

Power poles would typically be 40-feet tall and located every 175 to 200 feet along the power line corridor. The power lines would be installed approximately 10 feet from a road's edge. To the extent practical, power poles would be located off narrow ridges and set back from steep slopes. Installation and operation of all power lines would be to current industry standards and constructed to prevent raptor electrocution. Existing vegetation along power line routes would not be cleared except at power pole locations or would be hedged to allow for proper line suspension between the poles. Where power lines would cross or involve surface land of other Federal, Tribal, State or county jurisdiction, appropriate authorizations would be obtained, as necessary. The power line would provide 3-phase power ranging from and transport approximately 7,200 volts of electricity installed by Moon Lake Electric Association.

The total length of the installation would be approximately 5,878 feet. It is anticipated that up to 30 poles would need to be placed on land managed by the BLM; poles could have down guys attached. Axia is requesting a 30-feet wide construction width adjacent to the road for access and maintenance.

The Three Rivers Federal 34-42-720, Three Rivers Federal 34–43–720, Three Rivers Federal 35–12–720, Three Rivers Federal 35–11–720, Three Rivers Federal 35–21–720, Three Rivers Federal 4–13–820, Three Rivers Federal 5–42–820, and Three Rivers Federal 5–43–820 would need a federal right of way for the power line.

2.1.5. Invasive Plants and Noxious Weeds

All weed management would be done in accordance with the Vernal BLM Surface Disturbance Weed Policy (April 2010). Noxious weeds would be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern would be completed annually until the project is deemed successfully reclaimed by the surface management agency. Noxious weed infestations would be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it would be done according to an approved Pesticide Use Proposal (PUP), inclusive of the applicable locations. All pesticide application would be recorded using a Pesticide Application Record (PAR) and would be submitted along with a Pesticide Use Report (PUR) annually prior to December 31.

2.1.6. Water Supply and Disposal

Approximately 23 acre-feet of fresh water for drilling and completion operations would be obtained from the following source:

- Permit # 43-10988 Target Trucking Underground water well section 9, T8S, R20E

Water would be hauled to the location over the existing roads. No water wells would be drilled on leases UTU—85592, UTU-85994, UTU-88623, and UTU-87342.

Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

Disposal Facilities

1. RNI Industries, Inc. – Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W
2. Pro Water LLC – Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W
3. RNI Industries, Inc. – Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W
4. Water Disposal, Inc. – Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W
5. Unified Water Pits – Sec. 31, T2S-R4W
6. Iowa Tank Line Pits – 8500 BLM Fence Road, Pleasant Valley

2.1.7. Waste Disposal

All wastes associated with this application would be contained and disposed of utilizing approved facilities.

Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.

Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Uintah County, Utah.

Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal.

Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up daily.

Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.

Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, Axia could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and CO2 gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.

2.1.8. Reclamation

2.1.8.1. Interim Reclamation

Interim reclamation would occur on areas of the well pads that are not required for production activities. Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and weed control in accordance with OSO 1, or if protocol differs, written notification would be provided to the Authorizing Officer for approval.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site where possible, and reestablishing the natural contours where desirable and practical. Fill and stockpiled soil no longer necessary to the operation would be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils shall be used for interim reclamation where practical to maintain soil viability.

2.1.8.2. Final Reclamation

Final reclamation would be performed on unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes would be plugged and abandoned. Site and road reclamation would commence following plugging. In no case would reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Axia. The primary purpose of this inspection would be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM would be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon would be filed for final recommendations regarding surface reclamation. Within 30 days following completion of well plugging, the operator must file a subsequent report of Plugging and Abandonment.

After plugging, all wellhead equipment that is no longer needed would be removed, and the well site would be reclaimed. Final contouring would blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. Final grading would be conducted over the entire surface of the well site and access road. The area would be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material would be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area would be uniformly covered with depressions constructed perpendicular to the natural flow of water. A disk would be used in areas in need of additional soil preparation. This would provide primary soil tillage to a depth no greater than 6 inches.

Reclamation of roads would be performed at the discretion of the BLM. All unnecessary equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation would be removed during final reclamation. Roads would be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with seeding specifications of the BLM. Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice would be submitted to the BLM for approval.

Seeding would occur according to the Green River District Guidelines and would typically use a seed drill with a "picker box" in order to properly distribute heavy and light seeds. Where drill seeding is not the preferred method, seed would be broadcast and then raked into the ground at the double the rate of drill seeding. All seed would be certified and tags would be maintained by Axia. Every effort would be made to obtain "cheat grass free seed".

2.1.8.3. Monitoring

Monitoring of reclaimed project area would be completed annually during the growing season and actions to ensure reclamation success would be taken as needed. During the first two growing seasons an ocular methodology would be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology would be used to obtain base cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring would continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports would be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 1st of the calendar year following the data collection.

2.1.9. Applicant Committed Environmental Protection Measures (ACEPMS)

2.1.9.1. Air Quality

Axia will commit to the following measures to reduce emissions and minimize impacts to Air Quality:

- All internal combustion equipment would be kept in good working order.
- Water or other approved dust suppressants would be used at construction sites and along roads, as determined appropriate by the Authorized Officer. Dust suppressant such as magnesium chloride or fresh water may be used, as needed, during the drilling phase to control fugitive dust from truck traffic.
- Open burning of garbage or refuse would not occur at well sites or other facilities.
- Drill rigs would be equipped with Tier II or better diesel engines, if available.
- Low bleed pneumatics would be installed on separator dump valves and other controllers. The use of low bleed pneumatics would result in a lower emission of VOCs.
- During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible. Production equipment and gathering lines would be installed as soon as possible.
- Telemetry will be installed to remotely monitor and control production. This will reduce truck traffic and decrease associated dust and tailpipe emissions.
- Signs will be installed on the access road reducing speed to 25 MPH, during the drilling phase to decrease fugitive dust form truck traffic.

2.1.9.2. Cultural Resources

Axia would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.

2.1.9.3. Personnel Conduct

Project personnel and contractors would be educated on and subject to the following requirements:

- No dogs or firearms within the Project Area.
- No littering within the Project Area.
- Smoking within the Project Area would only be allowed in off-operator active locations or in specifically designated smoking areas. All cigarette butts would be placed in appropriate

containers and not thrown on the ground or out windows of vehicles; personnel and contractors would abide by all fire restrictions orders.

- Campfires or uncontained fires of any kind would be prohibited.
- Portable generators used in the Project Area would have spark arrestors.

2.1.9.4. Best Management Practices

Axia will commit to the following Best Management Practices (BMP) during the construction, drilling and production of the wells:

- As necessary during construction operations, appropriate BMP sedimentation controls would be utilized at areas susceptible to erosion.
- Energy dissipaters, such as straw bales and silt fences, would be utilized where the possibility of erosional down-cutting exists. Theses structures would be installed prior to construction, and wold be left in place and maintained for the life of the project or until the adjacent disturbed slopes have re-vegetated and stabilized.
- Project vehicles would be restricted to use of the project-related travel routes and surfaces along approved travel routes.
- Re-grading and watering of the access routes would be preformed by Axia following inclement weather conditions.

2.2. No Action Alternative

Under the No Action Alternative, Axia would not drill the 17 oil wells: in section 35, T. 7 S., R. 20 E., sections 3, 4, 5, T. 8S., R. 20 E., Uintah County, Utah. However, other oil and gas development in the area would be expected to continue. Other current resource trends and land use practices would also continue. The BLM's authority to implement the No Action Alternative may be limited because oil and gas leases allow drilling in the lease area subject to the stipulations of the specific lease agreement. The BLM can deny the application for permit to drill (APD) if the proposal would violate lease stipulations and applicable laws and/or regulations. The BLM can also impose conditions of approval to prevent undue or unnecessary environmental degradation. If the BLM were to deny the APD, the applicant could attempt to reverse the BLM's decision through administrative appeals, seek to exchange its lease for leases in other locations, or seek compensation from the federal government. The outcome of these actions is beyond the scope of this EA because they cannot be projected or meaningfully analyzed at this time.

2.3. Alternatives Considered but not Analyzed in Detail

There were no other alternatives identified aside from the Proposed Action and No Action Alternatives that would meet the purpose and need of this project.

2.4. Conformance

The alternatives are in conformance with the Vernal Field Office RMP/ROD (October 31, 2008) and the terms of the lease. The RMP/ROD decision allows leasing of oil and gas while

protecting or mitigating other resource values (RMP/ROD p. 97-99). The Minerals and Energy Resources Management Objectives encourage the drilling of oil and gas wells by private industry (RMP/ROD, p. 97). The RMP/ROD decision also allows for processing applications, permits, operating plans, mineral exchanges, and leases on public lands in accordance with policy and guidance and allows for management of public lands to support goals and objectives of other resources programs, respond to public requests for land use authorizations, and acquire administrative and public access where necessary (RMP/ROD p. 86). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan. .

2.5. Relationships to Statutes, Regulations, or Other Plans

2.5.1. Federal Laws and Statutes

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

2.5.2. State and Local Laws and Statutes

There are no comprehensive State of Utah plans for the vicinity of the Proposed Action.

The proposed project is consistent with the *Uintah County General Plan,* 2011 (Plan) that encompasses the location of the proposed well. In general, the Plan indicates support for development proposals such as the Proposed Action through the Plan's emphasis on multiple-use public land management practices, responsible use and optimum utilization.

The State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the alternatives analyzed, except the No Action Alternative, are consistent with the objectives of the state.

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Chapter 3. Affected Environment:

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3.1. Air Quality

The Project Area is located in the Uinta Basin, a semiarid, mid-continental climate regime typified by dry, windy conditions, limited precipitation and wide seasonal temperature variations subject to abundant sunshine and rapid nighttime cooling. The Uinta Basin is designated as unclassified/attainment by the EPA under the Clean Air Act. This classification indicates that the concentration of criteria pollutants in the ambient air is below National Ambient Air Quality Standards (NAAQS), or that adequate air monitoring is not available to determine attainment.

NAAQS are standards that have been set for the purpose of protecting human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include ground level ozone, (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM_{10}) or 2.5 microns in diameter ($PM_{2.5}$). Airborne particulate matter consists of tiny coarse-mode (PM_{10}) or fine-mode ($PM_{2.5}$) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. $PM_{2.5}$ is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols, whereas PM_{10} is primarily from crushing, grinding, or abrasion of surfaces. Table 3.1, "Air Quality Background Values" (p. 19) lists ambient air quality background values for the Uinta Basin and NAAQS standards.

Table 3.1. Air Quality Background Values

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration (g/m^3)	NAAQS (g/m^3)
SO_2	Annual	0.8[2]	--[1]
	24-hour	3.9[2]	--[1]
	3-hour	10.1[2]	1,300
	1-hour	19.0[2]	197
NO_2	Annual	8.1[3]	100
	1-hour	60.2[3]	188
PM_{10}	Annual	7.0[4]	--[6]
	24-hour	16.0[4]	150
$PM_{2.5}$	Annual	9.4[3]	15
	24-hour	17.8[3]	35
CO	8-hour	3,450[4]	10,000
CO	1-hour	6,325[4]	40,000

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration (g/m^3)	NAAQS (g/m^3)
O_3	8-hour	100.0[3,5]	75

1 – The 24-hour and annual SO_2 NAAQS have been revoked by USEPA

2 – Based on 2009 data from Wamsutter Monitoring Station Data (USEPA AQS Database)

3 – Based on 2010/2011 data from Redwash Monitoring Station (USEPA AQS Database)

4 – Based on 2006 data disclosed in the Greater Natural Buttes FEIS. (BLM, 2012)

5 – Ozone is measured in parts per billion (ppb)

6 – The annual PM_{10} NAAQS has been revoked by USEPA

Existing point and area sources of air pollution within the Uinta Basin include the following:

- Exhaust emissions (primarily CO, NO_x, $PM_{2.5}$, and HAPs) from existing natural gas fired compressor engines used in transportation of natural gas in pipelines;
- Natural gas dehydrator still-vent emissions of CO, NO_x, $PM_{2.5}$, and HAPs;
- Gasoline and diesel-fueled vehicle tailpipe emissions of VOCs, NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$;
- Oxides of sulfur (SO_x), NO_x, fugitive dust emissions from coal-fired power plants, and coal mining/ processing;
- Fugitive dust (in the form of PM_{10} and $PM_{2.5}$) from vehicle traffic on unpaved roads, wind erosion in areas of soil disturbance, and road sanding during winter months; and,
- Long-range transport of pollutants from distant sources.

Two year-round air quality monitoring sites were established in summer 2009 near Red Wash (southeast of Vernal, Utah) and Ouray (southwest of Vernal). These monitors were certified as Federal Reference Monitors in fall of 2011, which means they can be used to make a NAAQS compliance determination. The complete EPA Ouray and Redwash monitoring data can be found at: http://www.epa.gov/airexplorer/index.htm

Both monitoring sites have recorded numerous exceedences of the 8-hour ozone standard during the winter months (January through March 2010, 2011, and 2013). It is thought that high concentrations of ozone are being formed under a "cold pool" process. This process occurs when stagnate air conditions form with very low mixing heights under clear skies, with snow-covered ground, and abundant sunlight. These conditions, combined with area precursor emissions (NO_x and VOCs), can create intense episodes of ozone. The high numbers did not occur in January through March 2012 due to a lack of snow cover. This phenomenon has also been observed in similar locations in Wyoming. Winter ozone formation is a newly recognized issue, and the methods of analyzing and managing this problem are still being developed. Existing photochemical models are currently unable to reliably replicate winter ozone formation. This is due to the very low mixing heights associated with unique meteorology of the ambient conditions.

Further research is needed to definitively identify ozone precursor sources that contribute to observed ozone concentrations.

The UDAQ conducted limited monitoring of $PM_{2.5}$ in Vernal, Utah in December 2006. During the 2006-2007 winter seasons, $PM_{2.5}$ levels were higher than the $PM_{2.5}$ health standards that became effective in December 2006. The $PM_{2.5}$ levels recorded in Vernal were similar to other areas in northern Utah that experience wintertime inversions. The most likely causes of elevated $PM_{2.5}$ at the Vernal monitoring station are those common to other areas of the western U.S. (combustion and dust) plus nitrates and organics from oil and gas activities in the Basin. $PM_{2.5}$ monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin by the Red Wash and Ouray monitors beginning in summer 2009 have not recorded any exceedences of either the 24 hour or annual NAAQS.

HAPs are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health.

3.1.1. Greenhouse Gases

Greenhouse gases keep the planet's surface warmer than it otherwise would be. However, as concentrations of these gases increase the Earth's temperature is climbing above past levels. According to NOAA and NASA data, the Earth's average surface temperature has increased by about 1.2 to 1.4° F in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 1998. However, according to the British Meteorological Office's Hadley Centre (BMO 2009), the United Kingdom's foremost climate change research center, the mean global temperature has been relatively constant for the past nine years after the warming trend from 1950 through 2000. Predictions of the ultimate outcome of global warming remain to be seen.

The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) in 2009 suggests that recent warming in the region (including the project area) was nationally among the most rapid. Past records and future projections predict an overall increase in regional temperatures, largely in the form of warmer nights and effectively higher average daily minimum temperatures. They conclude that this warming is causing a decline in spring snowpack and reduced flows in the Colorado River. The USGCRP projects a region-wide decrease in precipitation, although with substantial variability in interannual conditions. For eastern Utah, the projections range from an approximate 5 percent decrease in annual precipitation to decreases as high as 40 percent of annual precipitation.

3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The invasive species, cheat grass *(Bromus tectorum)*, russian thistle *(Salsola iberica)*, and halogeton *(Halogeton glomeratus)* are present at these locations.

The soils are a sandy clay loam. Soils in the Project Area tend to be shallow and well drained.

The vegetation in the Project Area consists of fairly short shrubs, grasses and some forbs. Species include Indian ricegrass *(Achnatherum hymenoides)*, winterfat *(Ceratoides lanata)*, rubber rabbitbrush (*Chrysothamnus nauseosus*), buckwheat*(Eriogonum sp.)*, broom snakeweed *(Gutierrezia sarothrae)*, needle and thread grass *(Hesperostipa comata)*, prickly pear cactus sp. (*Opuntia sp.*), galleta grass *(Pleuraphis jamesii)*, black greasewood *(Sarcobatus vermiculatus)*, scarlet globemallow (*Sphaeralcea coccinea*) and horsebrush *(Tetradymia sp.)*.

3.3. Wildlife: Migratory Birds (Including Raptors)

All migratory birds and their nests are protected from take or disturbance under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C., 703 et seq.). These protection laws were implemented for the protection of avian species. Unless permitted by regulations, it is unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any species covered under these Acts. In addition, Executive Order 13186 sets forth the responsibilities of federal agencies to further implement the provisions of these Acts by integrating bird conservation principles and practices into agency activities and by ensuring that federal actions evaluate the effects of actions and agency plans on protected avian species.

The BLM has reviewed district files and completed a field visit for raptor nesting and migratory bird habitat within all lands up to ½ mile of the proposed project wells. There are no known raptors nesting located within ½ mile of the proposed project wells and their associated infrastructures; however, there are nine proposed locations within burrowing owl nesting habitat (see *Wildlife: Non-USFWS Designated*). The Burrowing owl is a Utah State and BLM species of concern. In Utah, prairie dog burrows are the most important source of Burrowing owl nest sites. Burrowing owl use of abandoned prairie dog towns is minimal, and active dog towns are the primary habitat for the owls. The following addresses migratory birds that may utilize the project area for nesting or foraging activities, including those species classified as Priority Species by Utah Partners-in-Flight. Utah Partners-in-Flight is a cooperative partnership among federal, state, and local government agencies as well as public organizations and individuals organized to emphasize the conservation of birds not covered by existing conservation initiatives.

Desert/Shrub Areas: American robin, American white pelican, bald eagle, blue-gray gnatcatcher, black-billed magpie, black-capped chickadee, black-chinned hummingbird, black-throated sparrow, bobolink, Brewer's blackbird, Brewer's sparrow, broad-tailed hummingbird, common raven, mountain bluebird, sage sparrow, sage thrasher, short-eared owl, song sparrow, western burrowing owl, and western kingbird.

3.4. Wildlife: Non-USFWS Designated

The BLM has reviewed district files and completed a field visit for wildlife species. In summary, the following project wells are located within white-tailed prairie dog (potential burrowing owl nesting habitat) habitat:

- Three Rivers # 5-42-820, 5-43-820, and 4-13-820;
- Three Rivers # 3-13-820, 3-14-820, 3-23-820, and 3-24-820;
- Three Rivers # 35-11-720 and 35-21-720

3.5. Wildlife:Threatened, Endangered, Proposed, Candidate

The USFWS has identified four federally listed fish species historically associated with the Upper Colorado River Basin as being impacted through water depletions: bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. These fish are federally and state-listed as endangered and have experienced severe population declines due to flow alterations, habitat loss or alteration, and the introduction of non-native fish species.

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Chapter 4. Environmental Effects:

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4.1. Direct and Indirect Impacts

The potential direct, indirect, and cumulative impacts from Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are discussed in the following sections of Chapter 4. Direct impacts to soils and vegetation in the following analyses are described as short-term and long-term impacts. In areas where interim reclamation is implemented, ground cover by herbaceous and woody species could be re-established to approximately 75 percent of initial basal cover within five years following seeding of native plant species and diligent weed control efforts. These reclaimed areas are categorized as short-term disturbance.

4.2. Proposed Action

4.2.1. Air Quality

This Proposed Action is considered to be a minor air pollution source under the Clean Air Act and is not controlled by regulatory agencies. At present, control technology is not required by regulatory agencies since the Uinta Basin is designated as unclassified/attainment. The Proposed Action would result in different emission sources associated with two project phases: well development and well production. Annual estimated emissions from the Proposed Action are summarized in Table 4.1, "Proposed Action Annual Emissions (tons/year) " (p. 27).

Table 4.1. Proposed Action Annual Emissions (tons/year)

Pollutant	Development[1]	Production	Total
NO_x	64.6	2.04	66.64
CO	37.4	1.87	39.27
SO^x	0.085	0.0731	0.1581
PM_{10}	28.9	1.87	30.77
$PM_{2.5}$	6.8	0.425	7.225
VOC	1.7	83.3	85
Benzene	0.0374	0.748	0.7854
Toluene	0.0272	1.751	1.7782
Ethylbenzene	0.00578	0.085	0.09078
Xylene	0.0187	1.292	1.3107
n-Hexane	0.00289	2.465	2.46789
Formaldehyde	0.221	0.00146965	0.22246965

[1] Emissions include 17producing well(s) and associated operations traffic during the year in which the project is developed.

Well development includes NO_x, SO_2, and CO tailpipe emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. Fugitive dust concentrations would occur from vehicle traffic on unpaved roads and from wind erosion where soils are disturbed. Drill rig and fracturing engine operations would result mainly in NO_X and CO emissions, with lesser amounts of SO_2. These emissions would be short-term during the drilling and completion phases.

During well production, continuous NO_x, CO, VOC, and HAP emissions would originate from well pad separators, condensate storage tank vents, and daily tailpipe and fugitive dust emissions from operations traffic. Road dust (PM_{10} and $PM_{2.5}$) would also be produced by vehicles servicing the wells.

Under the proposed action, emissions of NO_x and VOC, ozone precursors, are 66.64 tons/yr for NO_x, and 85 tons/yr of VOC (**Table 4.1, "Proposed Action Annual Emissions (tons/year) " (p. 27)**). Emissions would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions.

The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. These emissions are estimated to be minor and less than 1 ton per year.

4.2.1.1. Greenhouse Gases

The assessment of greenhouse gas emissions and climate change remains in its earliest stages of formulation. Applicable EPA rules do not require any controls and have yet to establish any emission limits related to GHG emissions or impacts. The lack of scientific models that predict climate change on regional or local level prohibits the quantification of potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases into the local air-shed.

4.2.1.1.1. Mitigation

All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

4.2.1.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The Proposed Action would disturb approximately ***37.8 ac***re of soils and vegetation. The portions of the disturbed area that would not be utilized for production and product transportation would be subject to interim reclamation. If interim reclamation is successful, direct long-term impacts to vegetation would not occur. If interim reclamation is not successful, the entire area could remain disturbed for the long term. Long-term impacts to vegetation are expected for the life of the well (an average of 25 years or until reclamation is successful).

Each well in the project would contribute an estimated additional 3.0 tons of soil per acre per year above the current natural erosion rate for the first year of development. After the first year, the soil erosion attributed to the project would reduce to 1.5 tons per acre per year until the access roads and well pads are fully reclaimed. Erosion rates are higher during the first year due to disturbance during construction.

Direct impacts to soils include mixing of soil horizons, soil compaction, short-term loss of topsoil and site productivity, and loss of soil/topsoil through wind and water erosion. Loss of soil/topsoil in disturbed areas would reduce the revegetation success of seeded native species due to increased competition by annual weed species. Annual weed species are adapted to disturbed conditions, and have less stringent moisture and soil nutrient requirements than do perennial native species.

Additional direct impacts to vegetation are primarily associated with clearing of vegetation during construction. Indirect impacts to vegetation resources include the invasion and establishment of

introduced, undesired plant species. The severity of these invasions would depend on the success of reclamation and revegetation, and the degree and success of noxious weed control efforts.

Impacts to soils and vegetation would be partially mitigated by reclamation of disturbed areas with native vegetation and control of noxious and invasive weeds by mechanical and chemical treatment (see 2.1.6). Under the Proposed Action, reclamation would occur on approximately 25 percent of the well pad upon completion of drilling. The remaining 75 percent of the well pad would be revegetated after abandonment of the well (approximately 25 years).

Mitigation

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.

4.2.2. Wildlife: Migratory Birds (including raptors)

As identified in Chapter 3, the project area contains burrowing owl nesting habitat in portions of the project area and the entire project area is located within nesting and foraging habitat for migratory birds. Potential effects of the Proposed Action Alternative on avian species include 1) direct loss or degradation of potential nesting and foraging habitats, 2) indirect disturbance from human activity (including harassment, displacement, and noise), and 3) increased direct impacts (including poaching and collisions with vehicles). By following the mitigation measures outlined below these impacts would be minimized or completely negated.

Project activities are anticipated to disturb approximately 38 acres of migratory bird foraging and nesting habitat. Out of the 38 acres disturbed approximately 19.5 acres is considered burrowing owl nesting habitat. Given the abundance of foraging habitat in the surrounding area, habitat losses are not expected to reduce raptor prey bases to levels where "take" would occur. Impacts to migratory birds within the proposed project area would also be dependent upon the time when project activities would occur. If these activities occur in the late fall, most of the species would have left the area during winter migration. If construction activities were to occur during the spring or summer months it could cause birds to move into other adjacent habitats or into habitats where interspecific and intraspecific competition between species may increase. Surface and noise disturbance associated with project activities would be considered temporary and is anticipated to occur during typical working hours; however, by following the mitigation measures for burrowing owl outlined below impacts to migratory birds would be minimized or completely negated.

Mitigation Measures:

Project activities are not allowed from March 1 – August 31 to minimize impacts during burrowing owl nesting season. This Condition of Approval only applies to the following well locations:

- Three Rivers # 5-42-820, 5-43-820, and 4-13-820;
- Three Rivers # 3-13-820, 3-14-820, 3-23-820, and 3-24-820;
- Three Rivers # 35-11-720 and 35-21-720

4.2.3. Wildlife: Non-USFWS Designated

Under the Proposed Action Alternative surface disturbing activities would result in the loss of approximately 19.5 acres of white-tailed prairie dog habitat. In addition, to habitat loss, accidental mortality of white-tailed prairie dogs is anticipated to increase by increasing vehicle traffic. As project related activities increase, adjacent habitats may be avoided due to human presence. Habitat quality for this species can also be degraded by the introduction of noxious and invasive weeds. Weed invasions may lead to a decrease in the amount of native perennials and bare ground, thereby degrading habitat for prairie dogs by decreasing visibility, forage quality, and burrow development. Overall, the Proposed Action Alternative may affect individuals through displacement or habitat degradation, but would not likely result in a trend towards federal listing of the species.

4.2.4. Wildlife: Threatened, Endangered, Proposed, or Candidate

Implementation of the Proposed Action Alternative would directly impact the Upper Colorado River basin fishes. These impacts would remain until project completion. Water depletions from the Upper Colorado River Basin, along with a number of other factors, have resulted in such drastic reductions in the populations of the bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. Water depletions reduce the ability of the river to create and maintain the primary constituent elements that define critical habitats. Food supply, predation, and competition are important elements of the biological environment. Food supply is a function of nutrient supply and productivity, which could be limited by reduction of high spring flows brought about by water depletions. Predation and competition from nonnative fish species have been identified as factors in the decline of the endangered fishes. Water depletions contribute to alterations in the flow regimes that favor nonnative fishes. Mitigation measures have not been required for this project as water would be obtained from water well and not directly from critical habitat for the species

The Proposed Action Alternative would result in water depletion from removal of water from the Upper Colorado River Basin for project activities. Therefore, the Proposed Action will have a ***"may affect, likely to adversely affect"*** determination for the endangered Colorado River fish species.

4.3. No Action Alternative

4.3.1. Air Quality

Under the No Action Alternative, the proposed gas well(s) would not be drilled and there would be no additional impacts to air quality. Effects on ambient air quality would continue at present levels from existing oil and gas development in the region and other emission producing sources.

4.3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

Under the No Action Alternative, there would be no direct disturbance or indirect effects to soils and vegetation from surface-disturbing activities associated these wells. Current land use trends in the area would continue, including increased industrial development, increased traffic, and increased recreation use for hunting, bird watching, and sightseeing.

4.3.3. Wildlife

Under the No Action Alternative, there would be no direct or indirect effects to fish and wildlife species. Current land use trends in the area would continue of which would mainly include increased oil and gas development activities.

4.4. Reasonably Foreseeable Development and Cumulative Impacts Analysis

4.4.1. Cumulative Impacts

4.4.1.1. Air Quality

The cumulative impact area for air quality is the Uinta Basin. The potential impact of the Proposed Action to Uinta Basin ozone levels cannot be accurately modeled. In lieu of accurate modeling, the Greater Natural Buttes (GNB) air quality study, which is the most recent regional air model available for the Uinta Basin, and the GNB Final EIS section 5.3.1, is incorporated by reference and summarized below. The GNB Final EIS discloses that most of the cumulative emissions in the Uinta Basin are associated with oil and gas exploration and production activities. Consequently, past, present and reasonably foreseeable wells in the Uinta Basin are a part of the cumulative actions considered in this analysis. **Table 4.2, "2006 Uinta Basin Oil and Gas Operations Emissions Summary" (p. 31)** summarizes the 2006 Uinta Basin emissions as well as the incremental impact of this project's alternatives. The Proposed Action comprises a small percentage of the Uinta Basin emissions summary.

Table 4.2. 2006 Uinta Basin Oil and Gas Operations Emissions Summary

County	NO_x (tpy)	CO (tpy)	SO_x (tpy)	PM (tpy)	VOC (tpy)
Uintah	6,096	4,133	247	344	45,646
Carbon	995	814	22	40	2,747
Duchesne	3,053	2,448	96	173	19,019
Grand	337	207	16	22	2,360
Emery	273	199	9	14	453
Uinta Basin Total	10,754	7,800	391	592	70,226
Proposed Action	66.64	39.27	0.1581	37.995	85
No Action	0	0	0	0	0

The GNB model predicted the following impacts to air quality and air quality related values for the GNB proposed action, which encompassed 3,675 new wells:

- Cumulative impacts from criteria pollutants to ambient air quality are well below the NAAQS at Class I airsheds and selected Class II areas;
- The incremental impacts to visibility would be virtually impossible to discern and would not contribute to regional haze at the Class I areas;
- The 2018 projected baseline emissions would result in impacts of 1.0 deciview for at least 201 days per year at the Class II areas;

- Discernible impacts at Flaming Gorge National Recreation Area and Dinosaur National Monument are anticipated under the GNB Final EIS proposed action;
- The GNB Final EIS proposed action would contribute less than 1 percent to the acid deposition in Class I areas, and 4.3 percent at the Flaming Gorge Class II area;
- Project-related acid deposition impacts at sensitive lakes were below the USFS screening threshold; and,
- Ozone levels are below the current ozone standard of 75 ppb for the fourth highest annual level in the Uinta Basin for the 2018 projected baseline, and the proposed action would be approximately 3.2 percent of the cumulative ozone impact within the Uinta Basin.

Based on the GNB model results, it is anticipated that the impact to ambient air quality and air quality related values associated with the Proposed Action would be indistinguishable from, and dwarfed by, the margin of uncertainty associated with the model and Uinta Basin emission inventory. The No Action alternative would not result in an accumulation of impacts.

4.4.1.2. Greenhouse Gases

Inconsistent results based on scientific models used to predict global climate change prohibit the BLM from quantifying cumulative impacts. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases, into the local airshed, resulting in a negligible cumulative impact. The No Action Alternative would not result in an accumulation of impacts.

4.4.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The CIAA for Invasive Plants/Noxious Weeds, Soils, and Vegetation is the 18,515-acre Pelican Lake Subwatershed. Cumulative impacts include soil disruption, dust impacts, plant and pollinator habitat destruction, and weed invasion. Surface disturbance is a good indicator of the extent of these cumulative impacts.

Within the CIAA, 7,228 acres have been converted to agriculture or urban development (39.0% of the CIAA). There is one active approved field development NEPA document within the CIAA, QEP Energy Company's Greater Deadman Bench Oil and Gas Producing Region EIS (265 acres of the 98,785 acre project area is in the CIAA). A total of 4,561 acres of surface disturbance was authorized across the analysis area of the this document. If the disturbance is relatively uniform throughout the project area, then approximately 12 acres will occur within the CIAA. Of these 12 acres, approximately 5 acres is likely to be found in previously undisturbed areas (0.0% of the CIAA).

Within the CIAA there also are oil and natural gas wells that do not tier to this NEPA document and are located within previously undeveloped areas. As of 9/13/2012, there are 3 abandoned oil and gas locations outside of the scope of the field development document. Using the assumption contained within the Greater Uinta Basin Cumulative Impacts Technical Support Document, 16 acres of the CIAA were disturbed some point in the past and are in various stages of reclamation (0.1% of the CIAA). There are currently 10 well pads that serve as platforms for actively producing wells not permitted under this document. Using the above assumption, this has resulted in 47 acres of surface disturbance (0.3% of the CIAA). Finally, 35 wells are currently

proposed that do not tier to this document that will result in 104 acres of surface disturbance (0.6% of the CIAA).

Within the CIAA, there are approximately 74 miles of roads. There are no currently proposed field developments within the CIAA. Thus, in total 172 acres (0.9% of the CIAA) have been or will be disturbed within the CIAA due to energy development activities. The Proposed Action would add 37.8 acres of new surface disturbance. The No Action alternative would not result in an additional accumulation of impacts.

4.4.3. Wildlife: Migratory Birds (Including Raptors)

The cumulative impact analysis area for migratory birds is defined as the Pelican Lake Hydrologic Unit Boundary consisting of approximately 18,515 acres. This hydrologic unit boundary was chosen for cumulative impact analysis as this best represents a soil and vegetation habitat type avian species found within the project area would utilize in whole. Future actions of the Proposed Action could increase human presence in the area continuing to fragment and manipulate the surrounding habitats by increasing the presence of non-native invasive plant species. Further introduction of non-native invasive plant species could have significant adverse impacts on migratory birds that are dependent upon prevalent species for their survival. In general such an environmental shift would probably have negative impacts on wildlife species and would favor non-native and readily adaptive species.

Impacts to migratory birds in the cumulative impact analysis area would be dependent upon the season of project activities. Any activities completed in the late fall would less likely have a direct impact to avian species because many of the species would have left for winter grounds. Though the Condition of Approval associated with the nine project wells (*see Wildlife: Non-USFWS Designated*) will further limit disturbance to avian species within the area. In addition to displacement caused by project activities the Proposed Action Alternative would also result in the temporary removal of up to approximately 38 acres of potential nesting and foraging habitat for migratory birds. However, successful reclamation efforts would return disturbed habitats to pre-disturbance levels and loss of vegetation would be a temporary impact to migratory bird habitat. The No Action Alternative would not result in an accumulation of impacts.

4.4.3.1. Wildlife: Non-USFWS Designated

The cumulative impact analysis area for white-tailed prairie dogs is specific to the active prairie dog complex surrounding the project area. The prairie dog complex is approximately 362 acres. Under the Proposed Action Alternative the project wells are expected to disturb 19.5 acres of the complex (approximately 6% of the known complex). Future actions of the Proposed Action could increase human presence in the area continuing to fragment and manipulate the surrounding habitats by increasing the presence of non-native invasive plant species. Further introduction of non-native invasive plant species could have significant adverse impacts on prairie dogs that are dependent upon prevalent species for their survival. In general such an environmental shift would probably have negative impacts on prairie dogs and would favor non-native and readily adaptive species. Construction and operation of facilities associated with the Proposed Action would increase both traffic and visitation to the proposed project area. In addition to direct human-caused disturbance, prairie dogs could also be affected through exposure to spills or other sources of petroleum products. Implementation of the Proposed Action Alternative could also alter potential prairie dogs habitat, making it less suitable for the establishment of colonies. As

traffic volumes and project-related activities increase, adjacent habitats may be avoided due to human presence, noise, and the potential influx of invasive weeds. However, successful reclamation efforts would minimize the spread of noxious and invasive weeds and would return disturbed habitats to pre-disturbance levels.

Past, present, and future land uses have reduced and will likely continue to reduce the quality and quantity of habitats for wildlife species. Habitat alteration occurring throughout the range of these species would potentially reduce the ability of such species to recover. Cumulative impacts include habitat fragmentation, loss of prey species, increased predation, and loss of breeding habitat.

The No Action Alternative would not result in an accumulation of impacts.

4.4.3.2. Wildlife: Threatened, Endangered, Proposed, or Candidate

Cumulative effects include the effects of the future state, tribal, local, or private actions that are reasonably certain to occur within the upper Colorado River Basin. Declines in the abundance or range of many special status species have been attributed to various human activities on federal, state, and private lands, such as human population expansion and associated infrastructure development; construction and operation of dams along major waterways; water retention, diversion, or dewatering of springs, wetlands, or streams; recreation, including off-road vehicle activity; expansion of agricultural or grazing activities, including alteration or clearing of native habitats for domestic animals or crops; and introductions of nonnative plant, wildlife, or fish, or other aquatic species, which can alter native habitats or out compete or prey upon native species. Many of these activities are expected to continue on state and private lands within the range of the various federally protected wildlife, fish, and plant species, and could contribute to cumulative effects to the species within the project area. Species with small population sizes, endemic locations, or slow reproductive rates, or species that primarily occur on non-federal lands where landholders may not participate in recovery efforts, would be highly susceptible to cumulative effects.

Reasonably foreseeable future activities that may affect river-related resources in the area include oil and gas exploration and development, irrigation, urban development, recreational activities, and activities associated with the Upper Colorado River Endangered Fish Recovery Program. Implementation of all or any of these projects has affected and continues to affect the environment including, but not limited to, water quality, water rights, socioeconomic, and wildlife resources.

Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
USFWS	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531).	Water depletion will occur for the proposed project; however, the proposed project wells have been analyzed under the USFWS's *Conclusion of Reinitiation of Section 7 Consultation for Water Depletion in the Upper Colorado River Basin on Bureau of Land Management land administered by the Vernal Field Office Biological Assessment, 2011* (FWS/R6 ES/UT 06-F-0215-R001).
State Historic Preservation Office (SHPO)	Historic Preservation Act.	BLM recommended a No Effect determination based on Class III surveys and asked for concurrence on all of the wells listed in this EA. Concurrence was received, documentation of this can be found in the individual well/APD files.

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Chapter 6. List of Preparers

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Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
David Gordon	Natural Resource Specialist/ Environmental Scientist	Chapters 1 & 2 Chapters 3 & 4: Soils and vegetation
Brandon McDonald	Wildlife Biologist	Chapters 3 & 4: Wildlife
Maggie Marston	Botanist	SSPS, T&E plants, Vegetation,

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Chapter 7. References Cited

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BLM 1997. Standards for Rangeland Health and Guidelines for Grazing Management on BLM Lands in Utah. U.S. Department of the Interior, Bureau of Land Management. Washington. D.C. May 20.)

BLM. 2008. Final Environmental Impact Statement for the Greater Deadman Bench Oil and Gas Producing Region Project, U.S. Department of the Interior, Bureau of Land Management, Vernal District Office.

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British Meteorological Office (BMO). 2009. British Meteorological Office's Hadley Centre, 2009. Accessed January 2009 at http://www.metoffice.gov.uk/climatechange/science/monitoring/.

Parrish, J.R., F.P. Howe and R.E. Norvell. 2002. Utah Partners in Flight Avian Conservation Strategy Version 2.0. Utah Partners in Flight Program, Utah Division of Wildlife Resources, 1594 West North Temple, Salt Lake City, Utah 84116. UDWR Publication Number 02-27. i – xiv + 302 pp.U.S. Fish & Wildlife Service (USFWS). 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. Final. US Department of the Interior, Fish and Wildlife Service, Denver, Colorado. September 29, 1987.

Uintah County. 2011. Uintah County General Plan. Amended Number 02-27. i – xiv + 302 pp.

U.S. Fish & Wildlife Service (USFWS). 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. Final. US Department of the Interior, Fish and Wildlife Service, Denver, Colorado. September 29, 1987.

U.S. Fish & Wildlife Service (USFWS). 1994. Final Rule: Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback sucker, Colorado squawfish, Humpback chub, and Bonytail chub. Federal Register 59: 13375-13400.

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Appendix A. Interdisciplinary Team Checklist

Project Title: Axia Energy's proposed 17 well from 6 well pads in sect 35 of T7S, R20E and sections 3, 4, and 5 of T8S R20E

NEPA Log Number: DOI-BLM-UT-G010-2014–0068–EA

File/Serial Number: UTU-85592, UTU-85994, UTU-87342, and UTU-88623

Project Leader: David Gordon

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
PI	Air Quality & Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could adversely affect air quality. No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	David Gordon	1/27/2014
NP	BLM Natural Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Cultural: Archaeological Resources	No eligible cultural resources were identified within the APE of the proposed project area.	Jimmie McKenzie	12/2/2013
NP	Cultural: Native American Religious Concerns	No Traditional Cultural Properties (TCPs) are identified within the APE. The proposed project will not hinder access to or use of Native American religious sites.	Jimmie McKenzie	12/2/2013
NP	Designated Areas: Areas of Critical Environmental Concern	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014
NP	Designated Areas: Wild and Scenic Rivers	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014
NP	Designated Areas: Wilderness Study Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014
NI	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives.	David Gordon	1/27/2014
NP	Farmlands (prime/unique)	No prime or unique farmlands, as identified by the NRCS, based on soil survey data for the county are located in the project area; therefore, this resource will not be carried forward for analysis.	David Gordon	1/27/2014
NI	Fuels/Fire Management	No fuel management activities planned for the project area. The proposed project would not conflict with fire management activities following GIS/field office review.	David Gordon	1/27/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Geology/Minerals/ Energy Production	Natural gas, oil, gilsonite, oil shale, and tar sand are the only mineral resources that could be impacted by the project. Production of natural gas or oil would deplete reserves, but the proposed project allows for the recovery of natural gas and oil per 43 CFR 3162.1(a), under the existing Federal lease. Compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations" will assure that the project will not adversely affect gilsonite, oil shale, or tar sand deposits. Due to the state-of-the-art drilling and well completion techniques, the possibility of adverse degradation of tar sand or oil shale deposits by the proposed action will be negligible. Well completion must be accomplished in compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations". These guidelines specify the following: *... proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use.*	Betty Gamber	1/30/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
IP/NW: PI Soils: PI Veg: PI	Invasive Plants/ Noxious Weeds, Soils & Vegetation	IP/NW: Proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species. Operator would control invasive species in all disturbed areas as discussed in Chapter 2. Soils: 37.8 acres of soil disturbance would occur during construction until reclamation is successful.Soils would be recontoured and reseeded during reclamation. The locations would be reclaimed and monitored in accordance with the Questar Exploration and Production Company Uintah Basin Division Reclamation Plan on file with the Vernal Field Office of the BLM. Locations would be seeded with the seed mix approved by the BLM Authorized Officer. Veg: 37.8 acres of initial vegetation disturbance/removal. Upon construction completion, the disturbed area would be reseeded and re-contoured to the approximate natural contours. This would reduce the effects of the disturbance when the seeding becomes established. The locations would be reclaimed and monitored in accordance with the Questar Exploration and Production Company Uintah Basin Division Reclamation Plan on file with the Vernal Field Office of the BLM. Locations would be seeded with the seed mix approved by the BLM Authorized Officer.	David Gordon	1/27/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Lands/Access	The proposed area is located within the Vernal Field Office Resource Management Plan area which allows for oil and gas development with associated road and pipeline right-of-ways. The APDs, roads, pipelines would be authorized under beneficial use of their lease for Three Rivers Federal Wells 3-12-820, 3-13-820, 3-14-820, 3-24-820, 35-43-720, 35-442-720, 4-41-820, and 4-42-820 and would not require a right-of-way. Three Rivers Federal Wells 34-42-720, 34-43-720, 35-12-720, 35-11-720, 35-21-720, 4-13-820, 5-42-820, and 5-43-820 will require a rights-of-way for well pads, access roads, pipelines, and power lines prior to construction. Letters were mailed to all ROW holders adjacent to the project areas on 02/04/2014. A response was received from Chevron Pipeline Company, which requested that Axia contact Chevron prior to construction in order to maintain safe pipeline operations. Chevron also stated that it's pipeline is cathodically protected and Axia would need to account for the electrical charge associated with the ROWs. No existing land uses would be changed or modified by the implementation of the proposed action; therefore there would be no adverse effect.	Katie White Bull	02/25/2014
NP	Lands with Wilderness Characteristics (LWC)	No Wilderness Characteristics were found in the Pelican Lake Area wilderness character unit surveyed on 2/4/2013	David Gordon	1/27/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Livestock Grazing & Rangeland Health Standards	Livestock Grazing: The proposed project is located within the Twelve Mile cattle grazing allotment in some of the isolated tracts that are rarely used. The allotment is seasonally permitted from October 1 to April 30 with up to 2781 AUMs. This area has many existing well sites and the proposed well pads, underground pipeline and road construction will have little effect on the livestock grazing. This area is bisected by numerous roads and other oil and gas projects. The proposed disturbance of 20 acres in the isolated tracts is very minor in the overall size of the entire allotment. The only other impact of the proposed project would be the increased traffic on the already existing roads. The proposal is consistent with multiple use of public lands and other oil & gas activities in the area. It is not anticipated that this proposal would negatively impact grazing operations. There are no known range improvements in this part of the allotment that would be impacted by this proposal. This proposal is not expected to affect Rangeland Health Standards in this allotment.	Craig Newman	02/03/2014
NI	Paleontology	Uinta Paleo (report dated Sept. 11, 2013) conducted surveys for each well. No scientifically important fossils were found. However since bedrock maybe affected by construction at proposed location for 3–14–820, it was suggested that a paleontological monitor be notified if bedrock is impacted and the monitor should spot check further excavation work on the project. The other four locations were cleared for paleo.	Betty Gamber	01/30/2014
NP	Plants: BLM Sensitive	Sterile Yucca *(Yucca sterilis)*,a UT BLM sensitive plant species, *(Yucca sterilis)* could inhabit sandy locations near the proposed action, however on-site spot survey conducted on 8/6/2013 identified no clones in the vicinity of the proposed action. Additional BLM Sensitive species are precluded based on soil, elevation, geography and plant population GIS data. Green River shale derived soils are not present.	Maggie Marston	2/21/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Plants: Threatened, Endangered, Proposed, or Candidate	There are no federally listed, proposed or candidate species known from the proposed action for individuals and/or habitats via VFO BLM GIS review.. The 2012 USFWS-VFO polygon for listed *Sclerocactus* habitats was revised in 2013, which removed the proposed action acres from previously required survey and assessment for both listed species. On-sites conducted by BLM on 8/6/2013 revealed unsuitable habitat for *Sclerocactus* ssp. with Nokoy sandy loam soils typical of nearby irrigated croplands. Nearest known *Sclerocactus wetlandicus* individuals are located greater than one-half mile south, and potential cactus habitats are found greater than 1000 feet south of the proposed 35–43–7–20 and 35–42–7–20 wellpad, therefore the project should have no significant direct or indirect effects on federally listed cactus species. Additional TEPC plant species are precluded based on GIS soil, elevation, known location data, and onsite field review for riparian and Green River shale habitats.	Maggie Marston	2/21/2014
NP	Plants: Wetland/Riparian	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014
NI	Recreation	Proposed project is in a developed area with numerous infrastructures currently in place. Recreation access will not be restricted by the proposed project.	David Gordon	1/27/2014
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the Basin.	David Gordon	1/27/2014
NI	Visual Resources	The identified project area occurs within VRM Class III Lands. The objective of VRM III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. The proposed action would be in conformance with this VRM objective.	Dan Gilfillan	3/7/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Wastes (hazardous/solid)	Hazardous Waste: No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project. Solid Wastes: Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.	David Gordon	1/27/2014
NP	Water: Floodplains	None are present in the project area per the Vernal Field Office RMP and GIS review.	David Gordon	1/27/2014
NI	Water: Groundwater Quality	Compliance with "Onshore Oil and Gas Order No. 1, will assure that the project will not adversely affect groundwater quality. Due to the state-of-the-art drilling and well completion techniques, the possibility of adverse degradation of groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible	Betty Gamber	1/30/2014
NP	Water: Hydrologic Conditions (stormwater)	The proposed construction of the well pads, and roads, would alter the topography of the area to a small degree. It is not expected that surface water or stormwater would be created to the level of concern for Clean Water Act Section 402 (stormwater) review. In addition federal law has exempted energy development from stormwater requirements.	David Gordon	1/27/2014
NI	Water: Surface Water Quality	Surface Waters: The only potential for the proposed project to negatively impact water quality would be increased potential for chemical spills or increased disturbance to surface soils which could cause soil erosion. This would not be expected to occur in a way that would be a relevant impact to surface waters. The site is in an upland area and more than 3 miles from perennial waters.	David Gordon	1/27/2014
NP	Water: Waters of the U.S.	Waters of the U.S. are not present per USGS topographic map and GIS data review. The proposed project would not impact any drainage where a high water mark can be distinguished, drainages which regularly run water, or wetlands/riparian areas, per onsite.	David Gordon	1/27/2014
NP	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	David Gordon	1/27/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
PI	Wildlife: Migratory Birds (including raptors)	The proposed project wells are located within migratory bird, including burrowing owl, foraging and nesting habitat. Mitigation measures are required to protect burrowing owl during nesting season.	Brandon McDonald	02/13/2014
PI	Wildlife: Non-USFWS Designated	Portions of the proposed project are located within white-tailed prairie dog habitat.	Brandon McDonald	02/13/2014
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	Water depletion will occur for the proposed project; however, the proposed project well has been analyzed under the *USFWS's Conclusion of Reinitiation of Section 7 Consultation for Water Depletion in the Upper Colorado River Basin on Bureau of Land Management land administered by the Vernal Field Office Biological Assessment, 2011* (FWS/R6 ES/UT 06-F-0215-R001). In addition, the BLM does not identify greater sage-grouse PPH or PPG areas.	Brandon McDonald	02/13/2014
NP	Woodlands/Forestry	No herd areas or herd management areas are present in the project area per BLM GIS database.	David Gordon	1/27/2014

FINAL REVIEW:			
Reviewer Title	**Signature**	**Date**	**Comments**
Environmental Coordinator	Kelly Bytnar	03-14-2014	
Authorized Officer		3-17-2014	