

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASPER FIELD OFFICE  
FINDING OF NO SIGNIFICANT IMPACT**

**Spearhead Ranch Exploratory Oil and Gas Development  
WY-060-EA12-225**

**BACKGROUND**

The Bureau of Land Management (BLM) prepared three Environmental Assessments (EAs) (WY-060-EA12-225 Spearhead Ranch, WY-060-EA12-226 Highland Loop Road, and WY-060-EA12-227 East Converse) and referred to as the Converse County EAs, which analyzed the effects of exploratory oil and gas development within Converse County and a small portion of Niobrara County, Wyoming for three distinct project areas.

The Spearhead Ranch project area encompasses approximately 240,268 acres of mixed federal, state and fee (private) surface estate (map 1). Of this total, approximately 34,101 acres are public lands administered by the BLM, 20,219 acres are lands owned by the state of Wyoming, and, the remaining 185,942 acres are owned by private individuals, as shown on map 1 and table 1.1.

Surface ownership in the project area includes scattered federal, state, and private lands. Some of the federal parcels are large, but there are many small, isolated parcels of federal land. Most of the scattered parcels are identified for disposal. Several larger parcels along Ross Road are identified for retention because of their size, the potential for public access and recreation use they may provide, and because some are in proximity to the Bozeman Trail.

The far northeastern portion of the area is within the Thunder Basin National Grassland boundary. The Thunder Basin National Grasslands were withdrawn and set aside for management by the U.S. Forest Service under a series of Executive Orders (EO). All of the federal surface estate in that part of the project area has been conveyed out of federal ownership, though some federal mineral rights remain. Some of the federal mineral rights were acquired by the United States creating a complex mixture of mineral ownerships.

**Table 1.1. Surface Ownership within the Project Area**

<b>Project Area Surface Ownership</b>	<b>Acres</b>	<b>Percent of Project Area</b>
Federal - administered by BLM, Casper FO	34,101	14
Federal - administered by Forest Service	6	<1
State of Wyoming (state)	20,219	8
Private (fee)	185,942	77
<b>Total<sup>a</sup></b>	<b>240,268</b>	<b>100</b>
<sup>a</sup> May not add due to rounding.		

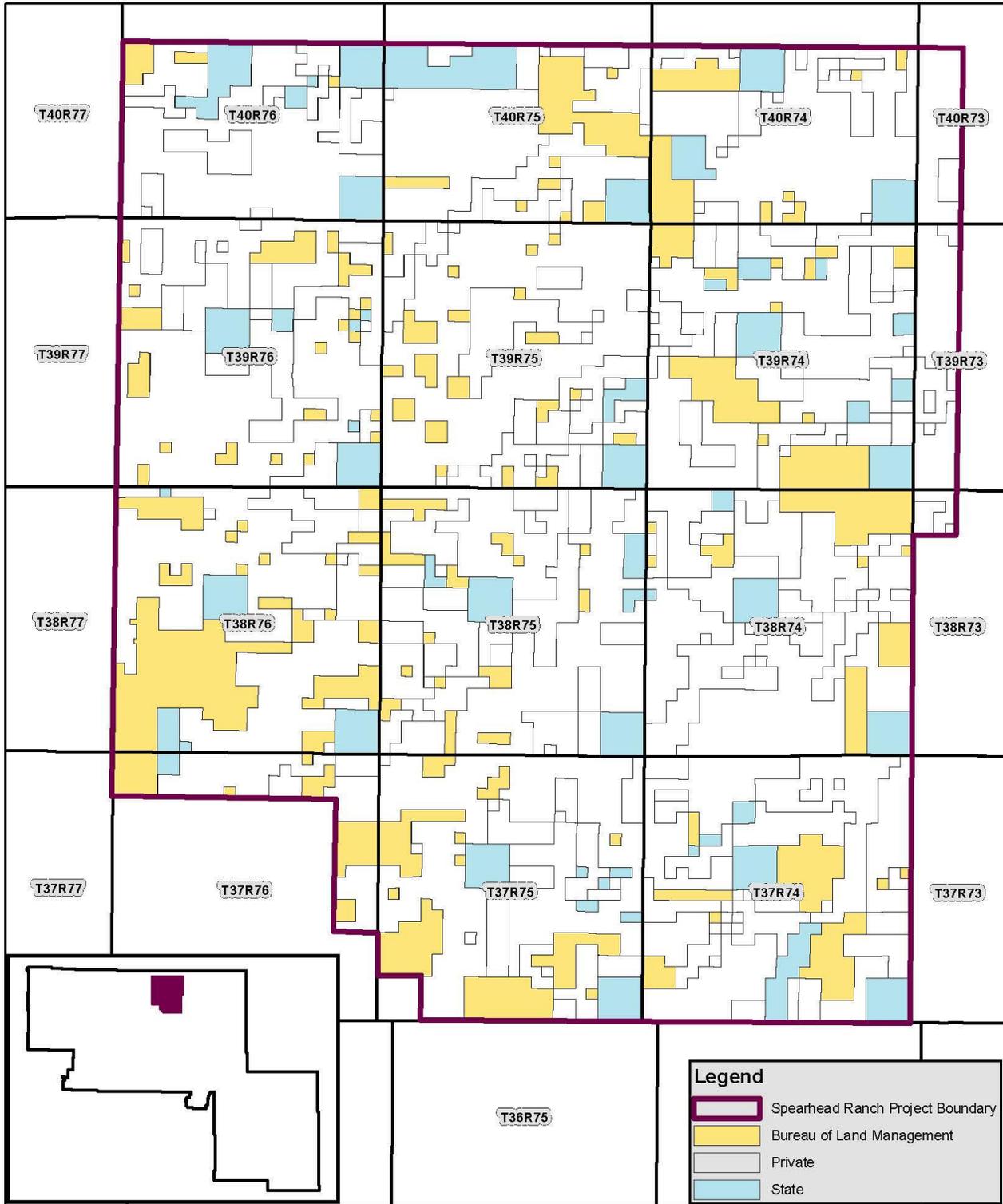
All the federal mineral estate within the project area (190,016 acres) is administered by the BLM, CFO. The federal mineral estate comprises approximately 79% of the mineral estate within the project area and 83% of that has valid, existing lease rights with approximately 357 federal mineral leases. Of those 357 federal leases, 203 (57%) are what is known as “Held By Production,” meaning they are currently producing oil and gas resources and will not expire until that production ceases. The remaining 154 (43%) federal leases are due to expire 10 years from date of issuance if a producing well is not located. Table 1.2 summarizes the mineral ownership.

**Table 1.2 Mineral Ownership within the Project Area**

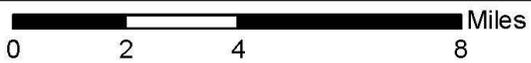
<b>Mineral Ownership</b>	<b>Acres</b>	<b>Percent Of Project Area</b>
Federal	190,016	79
State of Wyoming (state)	18,525	8
Private (Fee)	31,727	13
<b>TOTAL</b>	<b>240,268</b>	<b>100</b>

Pursuant to 40 CFR 1508.28 and 1502.21, Spearhead Ranch EA (WY-060-EA12-225) tiers to and incorporates by reference the information and analysis contained in the *Record of Decision and Approved Casper Resource Management Plan (ROD/RMP)* approved in December 2007.

# Map 1 Spearhead Ranch Project Area and Surface Ownership



Map Created by:  
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Scale: 1:175,000



**PROPOSED ACTION**

The Bureau of Land Management (BLM), Casper Field Office (CFO), is proposing the exploration and development of hydrocarbon resources in northwestern Converse County, in response to notices of staking (NOSs) and applications for permit to drill (APDs) recently received from five oil and gas operators. The project area consists of approximately 375 square miles and 240,268 acres.

The project proposal is for 56 new well pads that will accommodate 79 wells using all known drilling techniques, including but not limited to vertical, directional, and horizontal. The project proposal also includes installing equipment necessary to produce the resource if it proves to be commercially productive.

Under the Agency Alternative, 56 well pads within the project area would be constructed to accommodate drilling and completion operations for one to four wells per pad utilizing multiple drilling techniques, including but not limited to vertical, directional, and horizontal, ultimately resulting in a range of 56 to 224 wells drilled within the project area.

Specific project components are listed in the table below:

**Spearhead Ranch Agency Alternative Project Components**

<b>Components</b>	<b>Agency Alternative<sup>b</sup></b>
<b>Ratio of well pad/locations to wells</b>	56 well pads/ locations with a range of 56 to 224 wells, assuming one to four wells per well pad/location.
<b>Assumptions used for the well pad, well pad/location, and well pad excess disturbance calculations</b>	Under this alternative, the per well average will be used for the per well pad/location baseline, as the average four-well pad (based on actual submitted numbers by industry) equaled the same as the average for the one-well pad (as represented in the No Action Alternative).
<b>Well pad &amp; well pad/location acreage (+)</b>	Average disturbance per well (assuming one to four wells per well pad/location) is a range of 4.21 - 1.05 acres.  If 56 to 224 new wells were approved on 56 well pad/locations the Agency Alternative has the potential to yield 235.76 acres of total disturbance counting only the well pad.
<b>Well pad excess disturbance acreage (+)</b>	Average disturbance per well pad/location for the construction area to build the pad, store top soil and spoil piles, and berm dirt from cut and fill, is 2.11 acres.  Total disturbance per well pad/location for the construction area to build the pad, top soil and stock piles, and berm dirt from cut and fill, would yield 118.16 acres for the Agency Alternative.

Components	Agency Alternative <sup>b</sup>
<b>Assumptions used for the Access roads and Pipelines and utilities calculations</b>	Under this alternative, the per well average will be used for the per well pad/location baseline, as it is assumed a major benefit of co-locating wells and equipment on a multiple well pad is that only one access road, pipeline, and utility line, will be needed for each well pad/location regardless of the number of wells present on each pad.
<b>Access roads acreage (+)</b>	Average disturbance for access roads per well pad/location is 5.76 acres. The per well average is a range of 5.76 - 1.44 acre, respectively (56 to 224).  Total surface disturbance for access roads would yield 322.56 acres for the Agency Alternative.
<b>Pipelines and utilities acreage (+)</b>	Pipeline and utility disturbances are an average of 4.64 acres per well pad/location and a per well average range of 4.64 to 1.16, respectively for the Agency Alternative (56 to 224).  Total surface disturbance for pipelines and utilities would yield 259.84 acres for the Agency Alternative.
<b>Short term combined acreage (=)</b>	Combined surface disturbance for construction, drilling, completion, and production under the Agency Alternative would yield a total of 936.32 acres of short-term disturbance.  The average short-term combined disturbance per well (56 to 224) is a range of 16.72 - 4.18 acres, respectively.
<b>Reclamation Standards Assumptions (-)</b>	Reclamation assumption is 33% of the each well pad/location; 50% of well pad excess; 0% of access roads and 100% of the pipelines and utilities.  The reclaimed acreage would be a total of 396.72 acres and the per well average (56 to 224) is a range of 7.08 - 1.77 acres, respectively for the Agency Alternative.
<b>long term combined acreage (=)</b>	Long term combined surface disturbance (combined short-term surface disturbance minus the reclamation standards assumptions) of the Agency Alternative would yield 539.60 acres of long-term disturbance.  The average long-term combined disturbance per well (56 to 224) is a range of 9.64 - 2.41 acres, respectively.
<sup>b</sup> The values used in this table are assumptions, based on calculated averages. Actual disturbance, well pad size, and number of wells on a pad, may vary based on site-specific topography, distances, and targeted resources. However, the total authorized short and long term disturbances analyzed within this EA would not be exceeded.	

The details of the proposed activities are a compilation of the most commonly used techniques for drilling, completion, and operation of oil and gas wells to date. The details are provided in Chapter 2 under Common to all alternatives, *Project Specifications and Design* and describe multiple ways to achieve the same outcome. This is to allow for the multiple operators' individual plans of operations and applications. It would involve exploration and development of the federal oil and gas mineral resources using one or more of the techniques listed in Chapter 2 of the Spearhead Ranch EA.

## **Mitigation Measures**

In order to minimize the overall impacts that could result from the oil/gas exploration activities associated with the agency alternative, the mitigation measures discussed in Chapter 4 will be required on a case by case basis as resource conditions dictate. Site-specific mitigation measures, applicant committed measures, and conditions of approval (COAs) will all be applied as part of APD processing and will be attached and incorporated into all approval documents.

## **FINDING OF NO SIGNIFICANT IMPACT**

On the basis of the information contained in the EA (WY-060-EA12-225), and all other information available to me, it is my determination that: (1) the implementation of the Agency Action will not have significant environmental impacts beyond those already addressed in *Record of Decision and Approved Casper Resource Management Plan* (Casper RMP), December 2007; (2) the Agency Action is in conformance with the Casper RMP; and (3) the Agency Action does not constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement is not necessary and will not be prepared.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and to the intensity of the impacts described in the Spearhead Ranch EA.

## **Rationale for Finding of No Significant Impact**

The primary purpose for conducting an environmental assessment (EA) is to determine whether or not a proposed action or other action alternatives will have a significant impact on the human environment and therefore will require the preparation of an Environmental Impact Statement (EIS). As defined in 40 CFR 1508.13, the Finding of No Significant Impact (FONSI) is a document that briefly presents the reasons why an action will not have a significant effect on the human environment. The regulations further define the term "significantly" in 40 CFR 1508.27 and require that the context and intensity of impacts be considered in analyzing significance.

I have considered the potential intensity/severity of the impacts anticipated from implementation of the Agency Alternative in my decision relative to each of the ten areas suggested for consideration by the CEQ.

### **1. Impacts that may be both beneficial and adverse.**

Chapter 4 of the Spearhead Ranch EA (WY-060-EA12-225) identifies the impacts that would likely occur. Impacts associated with the proposed oil and gas exploration were considered in the analysis contained in the following RMP: the *Record of Decision and Approved Casper Resource Management Plan* (ROD/RMP) approved in December 2007. The proposed activities and mitigation measures as identified in the EA would occur while not causing

impacts that rise to the level of significance as defined by the Council on Environmental Quality.

**2. The degree to which the proposed action affects public health and safety.**

Public Health and Safety Sections are included in Chapters 3 and 4 in the Spearhead Ranch EA (WY-060-EA12-225). Specifically, public health and safety will be addressed in operator-specific Spill Prevention, Control, and Countermeasure (SPCC) plans and above ground storage tanks (ASTs), as mandated by both federal and state regulations through the U.S. Environmental Protection Agency (EPA) and Wyoming Department of Environmental Quality (WDEQ). As well as, installation of casing to protect groundwater resources, best management practices, mitigation, and site-specific resource protection measures as conditions of approval identified throughout Chapter 4.

In addition, each operator will have an emergency/contingency plan that addresses public health and safety in the event of an accident or unforeseen circumstance warranting immediate response.

**3. Unique characteristics of the geographic area such as proximity of historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

Historic and cultural resources are addressed specifically below in number 8.

There are no known park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas located within the Spearhead Ranch project area. Specifics regarding the affected resources and the general environment of the project area can be found in Chapter 3 of the Spearhead Ranch EA (WY-060-EA12-225).

**4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

The proposed activities, conforms to the *Record of Decision and Approved Casper Resource Management Plan* (ROD/RMP) approved in December 2007. Specifically, the Agency Alternative is in accordance with the following objectives and management decisions outlined in the RMP for managing leasable minerals:

Casper RMP/ROD: According to the Casper RMP/ROD, page 2-15, Goal MR: 2.1 states "Maintain oil and gas leasing, exploration, and development, while minimizing impacts to other resource values;" decision 2002 "Parcels nominated for potential oil and gas leasing will be reviewed. Any stipulations attached to these parcels will be the least restrictive needed to protect other resource values;" and decision 2004 "The Casper Field Office is open to mineral leasing, including solid leasables and geothermal, unless specifically identified as administratively unavailable for the life of the plan for mineral leasing. These open areas will be managed on a case-by-case basis." In addition, Appendix D - Oil and Gas Operations, Applications for Permit to Drill (APD) specified, "If necessary, site-specific mitigation can be

added to the APD as a Condition of Approval (COA) for protection of surface and/or subsurface resource values in the vicinity of the proposed activity.”

No anticipated effects have been identified that are considered “highly controversial”. “The term ‘highly controversial’ refers to instances in which ‘a substantial dispute exists as to the size, nature, or effect of the major federal action rather than the mere existence of opposition to a use.’ *Hells Canyon Preservation Council v. Jacoby*, 9 F.Supp.2d 1216, 1242 (D. Or. 1998).

***5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.***

Oil and gas development has been ongoing throughout Converse County for the past 50 years. The project specification and designs listed in Chapter 2 are a compilation of the most commonly used techniques for drilling, completion and operation of oil and gas wells to date and was provided in-part by a peer reviewed industry prepared technology report included in the Spearhead Ranch EA in its entirety as Appendix A.

The proposed activities in the Spearhead Ranch EA (WY060-EA12-227) are not highly uncertain and do not involve unknown or unique risks.

***6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.***

Oil and gas development has been ongoing throughout Converse County for the past 50 years. The project specification and designs listed in Chapter 2 are a compilation of the most commonly used techniques for drilling, completion and operation of oil and gas wells to date and was provided in-part by a peer reviewed industry prepared technology report included in the Spearhead Ranch EA in its entirety as Appendix A.

The Spearhead Ranch exploratory oil and gas development project does not establish a precedent nor does it represent a decision in principal about future consideration.

***7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.***

Cumulative impacts of each project area have been analyzed as well as a comprehensive three project (Spearhead Ranch, Highland Loop Road, and East Converse) Combined Cumulative Impacts section in Chapter 4 of the Spearhead Ranch EA. The affected resources analyzed are not approaching conditions where additional increments associated with the three projects when added to the combined past, present and reasonably foreseeable future actions have consequential cumulative effects that rise to a level of significance as defined by the Council on Environmental Quality.

**8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.**

In general, there are three best management practices (BMP) which guide all undertakings. Simply stated these are, in order of preference: avoid, minimize, and mitigate. Significant sites will be avoided if possible. If sites cannot be avoided, the undertaking will minimize its physical surface imprint and a variety of design and coloring techniques will be implemented to minimize its impact to a no effect or no adverse effect determination. If the previous steps do not achieve a no effect or no adverse effect finding then a mitigation plan will be developed in conjunction with BLM, SHPO, the Advisory Council on Historic Preservation (ACHP), and interested parties.

In addition to the following, all BLM permitted activities will contain the standard cultural stipulation, as it is in its entirety under the cultural resources sub-section of Heritage Resources in Chapter 4 of the Spearhead Ranch EA.

Decision # 5008, states, "Cultural resource inventories and site evaluations within the planning area are in direct response to specific land-use proposals in accordance with Section 106 of the NHPA. Additional inventory is carried out, when resources permit, to comply with Section 110 of the NHPA. Block inventories will be applied when full field development occurs at a spacing of one well per 80-acres or less."

The management of the Bozeman Trail corridor will continue to adhere to the direction contained in the Casper RMP with particular attention to Decision # 7078, which states, "No surface development will be permitted on selected parcels along the Bozeman Trail in Converse County. Refer to Appendix W for legal locations. Additional parcels or segments will be added as inventory and evaluations disclose suitable trail segments."

Further management direction is also contained in the Washington Office Visual Resource Manual Series (MS8400). Concepts from the new Washington Office National Historic Trail Manual Series (MS6100, MS6250, and MS6260/6270) will also be utilized for all future BLM undertakings.

**9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.**

When project proposals are received in potential endangered, threatened, proposed, or candidate species habitat, the BLM shall coordinate with the FWS at the earliest possible date so that the FWS can advise on project design. This should minimize the need to redesign projects later to include conservation measures, determined as appropriate by the FWS. Currently, project proposals are reviewed by regional federal ESA streamlining "level 1" teams, which include a FWS member.

The BLM requires clearances and/or surveys for authorized activities in areas known or suspected to be essential habitat for animals and plants classified as threatened, endangered, proposed, candidate, or other special status species. These clearances and surveys will be done in accordance with BLM and FWS guidelines, as appropriate, to verify the presence or absence of these species. All clearances shall be performed prior to activity implementation.

In the event that a T&E species is identified during a project clearance or survey, the project or management action will include protection requirements for the species and its habitat. These protective requirements may include project relocation, modification, or postponement, if necessary.

**10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

The Agency Alternative is consistent with all Federal, State, and local laws.



Field Manager  
Casper Field Office

11-20-12

Date