UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Farmington District
Farmington Field Office
6251 N College Blvd., Ste. A
Farmington, NM 87402

Finding of No Significant Impact

Cluster 45
Lybrook A03-2208
Lybrook D12-2208
Lybrook E11-2208
Lybrook E12-2208
Lybrook E15-2208

ATS-F010-14-316, ATS-F010-14-317, ATS-F010-14-318, ATS-F010-14-319, ATS-F010-14-320, ATS-F010-14-321 ATS-F010-14-32

NEPA No. DOI-BLM-NM-FO10-2015-0104-EA

FINDING OF NO SIGNIFICANT IMPACT

I have determined that the proposed action, as described in Environmental Assessment (EA) **NM-FO10-2015-0104-EA** will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an Environmental Impact Statement is not required.

In making this determination, I considered the following factors:

Context

The Farmington Field Office (FFO) is located in northwestern New Mexico. The field office boundaries include approximately 7,800,000 acres; 1.4 million surface acres and an additional 1 million acres of mineral estate are managed by the BLM. The distribution of BLM-managed lands is fairly well consolidated in the north and becomes increasingly mingled with Tribal lands to the south. BLM-managed lands abut the Navajo Reservation to the west and south, Jicarilla Apache Nation Reservation to the east, and the Ute Mountain Reservation and Southern Ute Indian Reservation to the north. Aztec Ruins National Monument and Chaco Culture National Historical Park, managed by the National Park Service, lie within the field office boundaries. The BLM manages approximately 18% of lands within a 10 mile radius of Chaco Culture National Historical Park.

The FFO encompasses the New Mexico portion of the San Juan Basin. The San Juan Basin and surrounding areas have been occupied by varied cultures since the Paleo Indian period (circa 10,000 BC). The San Juan Basin and Four Comers area have one of the most extensive prehistoric and protohistoric occupations in the United States. The most commonly known archaeological resources are the Anasazi structures at Chaco Culture National Historical Park, Mesa Verde National Park, and other National Park Service sites. Scattered across BLM-managed lands are similar, but smaller structures, which were probably related to these larger sites. Twenty-three Chacoan outliers are known to exist within the FFO.

Each contains at least one Chacoan structure and most have associated communities, prehistoric roads, and great kivas along with features such as herraduras and special use areas. The FFO contains an extensive system of finely engineered roads radiating out form Chaco Canyon and extending a considerable distance to outlying sites through the San Juan Basin and beyond. These roads are remarkably straight and carefully constructed. The most notable is the Great North Road, which starts at Chaco Canyon and run north to the Aztec Ruins.

Located within the boundary of the FFO is much of Dinétah, the ancestral homeland to the Navajo. Here the Navajo constructed forked-stick hogans, shades, sweat lodges, and other structures over a several hundred year span. During a short period between 1680 and the mid-1700s, pueblitos were constructed, often associated with other structures. Although not firmly dated, extensive Navajo pictograph and petroglyph sites were painted, etched, pecked, or ground onto the sandstone cliffs of the canyons of Dinétah. Most are believed to be ceremonial art which is no longer traditionally executed in a permanent form.

Native American Traditional and Sacred Areas are known to exist across the FFO. Many are associated with narrative accounts of origin or other traditional stories. Most of the identified sacred areas are associated with the Navajo culture. These places are still important in Navajo ceremonies and daily activities.

Historic Hispanic or Spanish and Anglo sites within the San Juan Basin primarily date from the late 1800s to the present. Although there are some early Spanish land grants in the southern portion of the FFO, most historic sites located on public lands are either Hispanic or Anglo homesteads with associated structures from the late 1800s and early 1900s. Associated with many clusters of homesteads were a school house and often a church which was visited every few months by a priest.

Cultural resource inventories have been conducted throughout the FFO for project undertakings, management studies, and scientific inquiries. As of April 2014, approximately 760,000 acres of the 7,800,000 acres in the FFO boundaries have been inventoried. Over 46,000 sites have been identified ranging from small artifacts to the 800-room structures in Chaco Canyon. Many of these sites are listed on the National Register of Historic Places and Chaco Culture National Historical Park along with several of the Chacoan sites which have been placed on the World Heritage List. The FFO manages 79 Areas of Critical Environmental Concern (ACECs) for relevant and important cultural values, including five World Heritage Sites.

The San Juan Basin is an important area for mammalian and reptilian fossils. A variety of paleontological resources exist in the FFO including animal fossils, fossil leaves, palynomorphs, petrified wood, and trace fossils occurring in the Triassic, Jurassic, Cretaceous, and Tertiary rocks. Dinosaur and other fossils have made significant contribution to the scientific record have been found and excavated in the FFO. Paleontolgical resources are present in the Bisti De-Na-Zin Wilderness Area, Ah-Shi-Sle-Pa Wilderness Study Area, Fossil Forrest Research Natural Area, and seven fossil areas identified in the 2003 Farmington Resource Management Plan.

The San Juan Basin is one of the largest natural gas fields in the nation and has been under development for more than 60 years. Oil was discovered by accident in the Seven Lakes area of McKinley County in 1911. Natural gas was discovered near Aztec, New Mexico, in 1920-1921 with oil of commercial quantity discovered near the Hogback in 1922 (Barnes 1951). Several small pipelines were built to carry the oil and gas from these discoveries to Aztec and Farmington, respectively. Development began in earnest in the late 1940s and early 1950s as the demand for natural gas increased. The FFO manages 2,765 active oil and gas leases in the San Juan Basin consisting of 2.1 million acres. Leasing began in the mid-1930s and accelerated in the late 1940s. By 1950, over 1 million acres were under lease.

In 1951, El Paso Natural Gas completed the first interstate pipeline out of the San Juan Basin to California. That same year, oil was discovered in the Mancos Shale in Dogie Canyon (Barnes 1951). Since that time, over 30,000 oil and gas wells have been drilled in the San Juan Basin with approximately 16,000 associated rights-of-way. Approximately 23,000 wells are currently producing. Since Stanolind Oil

introduced hydraulic fracturing in 1949, nearly every well in the San Juan Basin has been fracture stimulated.

Intensity

1. The activities described in the proposed action and alternative do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). Per 40 CFR 1500.1(b), the EA concentrated on issues that are truly significant to the action in question, rather than amassing needless detail. Issues have a cause and effect relationship with the proposed action or alternatives; are within the scope of the analysis; have not been decided by law, regulation, or previous decision; and are amendable to scientific analysis rather than conjecture (BLM 2008, page 40). The following issues were identified related to the proposed action and alternatives:

- How would the proposed action affect air quality in the area?
- How would the proposed action affect soil resources?
- How would the proposed action affect upland vegetation and noxious weeds?
- How would the proposed action affect wildlife, BLM special management species, and migratory birds?
- How would the proposed action affect cultural resources?
- How would the proposed action affect paleontological resources?
- How would the proposed action affect travel and transportation?
- How would the proposed action affect livestock grazing?

The EA includes a description of the expected environmental consequences of the proposed activities for those issues in Chapter 3.

2. The activities included in the proposed action and alternatives would not significantly affect public health or safety (40 CFR 1508.27(b)(2)). The following design features have been included in the proposed action to address any impacts to public health and safety: Area residents or other motorists may experience delays other traffic disruptions during the work week depending on the stage of development of the proposed action. These impacts would be greater for those residents living within 1,000 feet of the proposed location and along the access routes into the locations. Increased traffic may pose collision hazards for workers and public motorists. Fugitive dust may impair worker and motorist visibility. These impacts would be short term, occurring for the duration of construction, drilling, and completion activities. All road crossings would be manned with flaggers and spotters during heavy construction and during mobilization and demobilization. Orange flagging and barriers would be put in place to restrict public access to the work site. Water would be applied to roads, if needed, to minimize fugitive dust. Following reclamation, existing roads would be rehabilitated.

3. The proposed activities would not significantly affect any unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas (40 CFR 1508.27(b)(3)). Unique characteristics are generally limited to those that have been identified through the land use planning process or other legislative, regulatory or planning processes (BLM 2008, page 71). The FFO does not contain any prime and unique farmlands, suitable or designated wild and scenic rivers, or designated caves. Table 1 discloses the distance of the proposed activities to identified wetlands. Table 2 discloses the distance of the proposed activities to National Park Service units and Congressionally designated areas. *The proposed action and alternatives are not located within an Area of Critical Environmental Concern.* Impacts to historic or cultural resources are described in the Cultural Resources section of the EA and discussed further under item 8.

Table 1. Distance of the Proposed Activities from Identified Wetlands

Identified Wetlands	Distance from Proposed Activities
Bancos	56 Miles
Blanco	40 Miles
Bloomfield	42 Miles
Cutter Canyon	37 Miles
Carrizo Oxbow	35 Miles
Desert Hills	43 Miles
Valdez	42 Miles

Table 2. Distance of the Proposed Activities from Park Lands and Ecologically Critical Areas

Park Land or Ecologically Critical Area	Distance from Proposed Activities
Ah-Shi-Sle-Pah Wilderness Study Area	11 Miles
Aztec Ruins National Monument	51 Miles
Bisti De-Na-Zin Wilderness Area	21 Miles
Chaco Culture National Historical Park	11 Miles
Fossil Forest Research Natural Area	22 Miles

4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)). Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among the alternatives (BLM 2008, page 71). Oil and gas development has occurred in the San Juan Basin for more than 60 years. While there may be controversy over the appropriateness of oil and gas development, there is not a high level of controversy or substantial scientific dispute over the impacts of that activity. The impacts of the proposed activities are described in Chapter 3 of the EA.

5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)). As described under Context, oil and gas development has occurred in the San Juan Basin since the late 1940s and early 1950s. The field office has permitted over 30,000 wells and 16,000 rights-of-way. Hydraulic fracturing has occurred on nearly every well in the San Juan Basin since the 1950s. As such, the FFO has decades of experience and is knowledgeable about the impacts and risks associated with the proposed activities.

6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)). Approval of these activities in no way assures approval of any future activities.

7. The effects of the proposed activities would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). Direct, indirect, and cumulative impacts are described in Chapter 3 of the EA.

8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). The proposed activities are not located in an ACEC containing relevant and important cultural values. Cultural resource surveys *were completed(2014(IV)033F, 2015(I)009F, 2014(IV)027F, 2015(I)007F, & 2015(I)014F). Known cultural resources will be avoided by use of site barrier fencing and monitoring. Impacts to cultural resources are discussed on page 42 of the EA.The proposed action and alternatives are not within a Traditional Cultural Property (TCP).*

The BLM fulfills its responsibilities under the National Historic Preservation Act (NHPA) through a number of agreements. The National Programmatic Agreement (NPA; 2012) between the BLM, Advisory Council on Historic Preservation (ACHP), and the National Council of State Historic Preservation Officers (NCSHPO) allows the agency to fulfill its NHPA responsibilities according to the provisions of the NPA in lieu of 36 CFR 800.3 through 800.7 regulations. The NPA, which applies to all BLM activities below specified thresholds, provides among other things, regulatory relief in many instances from the requirement

for case-by-case review by State Historic Preservation Officers (SHPOs) and the ACHP, in exchange for managers' maintenance of appropriate staff capability and observance of internal BLM standards as set out in the 8100 Manual series.

The New Mexico BLM has a two-party protocol with the New Mexico SHPO (2014) specifically encouraged by the NPA. This protocol details how the New Mexico BLM and SHPO will regulate their relationship and consult. Specifically, this document outlines among other things, how and when consultation will be conducted between the BLM, SHPO, Tribes, and the public. The protocol also outlines when case-by-case SHPO consultation is or is not required for specific undertakings and the procedures for evaluating the effects of common types of undertakings and resolving adverse effects to historic properties. These common types of undertakings regularly include the common actions undertaken in the BLM FFO.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)). No federally listed species with the potential to occur in San Juan County or potential habitats for federally listed species were observed within the proposed analysis area. Furthermore, no designated critical habitat for any federally listed species occurs within the proposed analysis area. Water used for well drilling and completions would be sourced from a permitted private water well (Point of Diversion Number SJ 2105). No new water depletions would result from the proposed action. The BLM/FFO reviewed and determined that the proposed action is in compliance with listed species management guidelines outlined in the September 2002 Biological Assessment (Cons. No. 2-22-01-I-389) (USDI/BLM 2002). No further consultation with the U.S. Fish and Wildlife Service (USFWS) is required.

The analysis area provides potential foraging habitat for Townsend's big-eared bat (*Corynorhinus townsendii*). No potential roosting habitat would be removed by the proposed action. Impacts to this bat species would be limited to avoidance of the area during nighttime drilling or completion activities when they may incidentally forage in the area. These impacts would be short term and limited to summer months when the species could be in the analysis area.

The analysis area provides suitable nesting habitat for Bendire's thrasher (*Toxostoma bendirei*). The proposed action would result in modification of approximately 54.2 acres of undisturbed desert scrub and very open canopy wooded habitat. There would be a long-term loss of approximately 14.5 acres of suitable habitat for Bendire's thrasher. Should construction and drilling occur during the breeding season, Bendire's thrasher would likely avoid the area. Pre-construction surveys would be conducted to identify any active nests within the proposed disturbance area if construction should occur between May 15 and July 31. This design feature would avoid adverse impacts to nesting Bendire's thrasher.

The project area provides suitable wintering habitat for chestnut-collared longspur (*Calcarius ornatus).* Impacts to chestnut-collared longspur would include avoidance of the area during construction and drilling if it occurs during the winter months and the long-term loss of approximately 14.5 acres of suitable wintering habitat.

Impacts to piñon jay include the removal of approximately 142 piñon and juniper trees within the project area. It would take decades for trees to re-establish in the project area. Impacts to piñon jay would result from the long-term modification of approximately 14.5 acres of dispersal habitat between habitat patches. There would be a long-term loss of approximately 3 acres of very open canopy wooded habitat. The removal of trees would also result in a long-term loss of food source for piñon jay. Additional impacts could include avoidance of the project area during construction and drilling, due to an increase in human, equipment and vehicle activity and associated noise.

The analysis area contains open desert scrub, providing potential foraging habitat for golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*) American peregrine falcon (*Falco peregrinus anatum*), and prairie falcon (*Falco neomexicanus*). No potential nesting habitat for these species would be removed or modified by the proposed action. No raptor nests were identified within a 1/3-mile radius of the analysis area. Direct impacts would include the modification of approximately 54.2 acres of undisturbed foraging habitat. Approximately 14.5 acres of potential foraging habitat would be converted to industrial use in the

long term. Raptors may avoid the analysis area during construction, drilling, and operation due to disturbance and activity from human and vehicle presence and associated noise.

There is approximately 5.2 acres of potential habitat for Aztec gilia on the proposed Lybrook E11-2208 and Lybrook E12-2308 well pads projects. The remaining proposed action components do not provide potential habitat for this species based on the vegetation community, percent ground cover, and soil characteristics. The proposed action would result in the long-term modification of approximately 5.2 acres unoccupied Aztec gilia habitat. No Aztec gilia were observed in the analysis area.

No potential habitat for Brack's hardwall cactus occurs on the proposed Lybrook A03-2208 or the Lybrook E15-2208 well pads, access roads or pipelines. There is suitable and occupied habitat on the Lybrook E11-2208, Lybrook D12-2208, and Lybrook E12-2208 well pads, access roads, and pipeline ROWs. A total of approximately 27 acres of suitable or occupied habitat occurs in the analysis area. The proposed action would result in the long-term modification of approximately 27 acres of undisturbed potential habitat for the Brack's hardwall cactus, some of which is currently occupied. A total of 16 individual Brack's hardwall cacti were recorded during biological surveys in the proposed Lybrook E11-2208 and Lybrook E12-2208 project areas. The five cacti on the Lybrook E11-2208 well pad are location in the construction zone and may be avoided by erecting temporary fencing during construction and drilling. There are approximately eight cacti located on the edge of the proposed pipeline ROW for the Lybrook E12-2208 which may be avoided by erecting temporary fencing during construction. Two cacti located on the proposed Lybrook E12-2208 would be removed by construction of the proposed access road.

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Sections 1.4 and 1.5 of the EA describe the relationship of the proposed activities to relevant laws, policies, regulations, and plans.

REFERENCES

Barnes, Frank C., 1951. History of development and production of oil and gas in the San Juan Basin. In *The south and west sides of the San Juan Basin, New Mexico and Arizona*, Smith, C.T.; Silver, C. ed(s), New Mexico Geological Society, Guidebook, 2nd Field Conference, pp. 155-160.

BLM. 2008. *National Environmental Policy Handbook. H-1790-1.* Bureau of Land Management. National Environmental Policy Act Program.

APPROVED:

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8-20-15
Date