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
Logos Operating, LLC
Brannon Federal #292 & Brannon Federal #304
NEPA No. DOI-BLM-NM-FO10-2015-0070

FINDING OF NO SIGNIFICANT IMPACT

I have determined that the proposed action, as described in Environmental Assessment (EA) **NM-FO10-2015-0070** 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 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.

- How would dust and equipment emissions associated with the project impact air resources?

- How would vegetation-clearing, project activities, and final reclamation impact soils?
- Would drilling the proposed well impact groundwater?
- How would vegetation-clearing, project activities, and final reclamation associated with the project impact upland vegetation?
- How would vegetation-clearing, project activities, and final reclamation impact wildlife, including migratory birds?
- How would vegetation-clearing, project activities, and final reclamation impact the following BLM Special Status Species: American peregrine falcon (Falco peregrinus anatum), Aztec gilia (Aliciella formosa), Bendire's thrasher (Toxostoma bendirei), Brack's fishhook cactus (Sclerocactus cloveriae var. brackii), ferruginous hawk (Buteo regalis), golden eagle (Aquila chrysaetos), pinyon jay (Gymnorhinus cyanocephalus), Townsend' big-eared bat (Corinorhinus townsendii), and spotted bat (Euderma maculatum)?
- How would vegetation-clearing, project activities, and final reclamation impact the following Federally-listed threatened and endangered species: Bracks cactus (Sclerocactus cloverae ssp. brackii)?
- How would surface-disturbing activities associated with the proposed project impact cultural resources?
- How would the project affect human health and safety?
- Would the project have disproportionate effects on minority or low income populations?

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 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: The project area is within a sparsely populated, rural area. Blanco Trading Post (12341 Hwy 550) and a nearby residence are within 1 mile of well 304H; otherwise, there are no buildings or residences within a 1 miles radius of the wells. The nearest town is Nageezi with a population of 286 according to the 2010 census (Census Bureau, 2010), approximately 6 miles south of the project area. Nageezi does not offer visitor amenities. Temporary workers during the construction, drilling or reclamation phases of the project would likely stay in Broomfield, 33 miles north of the project site (population 6,146).

During the years 1998 to 2008, total crime in San Juan County increased from 1,800 to 3,400 (Recordspedia, 2009), representing an increase of 47 percent. Over that same time frame, violent crime increased by 34 percent. The crime rate per thousand people for Bloomfield is relatively high compared to other similar cities in New Mexico (3rd highest out of 10 similar cities) (Recordspedia, 2009). However, the crime rate for Bloomfield is down overall. Between the years of 2001 to 2008 crime data were available in Bloomfield, New Mexico. During that time frame, reported crime in Bloomfield has decreased by 40 percent. During the same interval, violent crime decreased by 45 percent. On the whole, the crime figures reflect a slight reduction in crime over the last 7 years in Bloomfield (Recordspedia, 2009).

Traffic statistics obtained from San Juan County (San Juan County, 2015) indicate that the accident rate along US 550 has been fairly stable over the past five years, although five fatalities did occur in 2014.

Table 1. San Juan County Sheriff's Office, Traffic Crashes on US 550 South of Broomfield.

Reported Crashes on US 550 South of Broomfield	2010	2011	2012	2013	2014	Five Year TOTALS
Total Number of Crashes	34	31	32	24	29	150
Fatal Crashes	0	2	2	3	2	9
Fatalities	0	3	2	3	5	13
Injury Accidents	7	10	10	11	7	45

Source: San Juan County Sheriff's Office 2015.

Air quality may effect health and safety. Air quality for San Juan County and for the State of New Mexico is described earlier in **Air Resources section 3.1. of the EA (page(s) 24 thru 30.**

Traffic along US 550 would be most heavy during the construction phase (a duration of 7 to 15 days), as well as during interim reclamation approximately 120 days after the start of the project (for a duration of 7 to 15 days). Approximately 5 to 40 vehicle trips would be needed during the project duration (about 4 to 5 months total). Construction crews are required to comply with all traffic laws; however, additional traffic could increase the risk of traffic accidents. Additional personnel residing in the project area could contribute to crime. About 10 to 40 construction personnel would be onsite during the project, depending on the stage of project completion. Personnel likely would find lodging and other requirements (fuel, food, etc.) in Bloomfield, New Mexico, about 33 miles north of the project area. The potential for increased crime, particularly given trends in the Bloomfield crime statistics, are speculative.

Changes to air quality from the proposed action are expected to be relatively minor, as discussed in Section 3.1. of the EA. It is unclear whether these air pollutants would affect the health of nearby residents or workers closest to the well. Workers in closest proximity to the drilling activity use engineering controls and protective gear to minimize risk of effects.

Cumulative impacts: None would be expected due to the relatively small scale and short duration of the project, as well as local traffic and crime trends.

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 2 discloses the distance of the proposed activities to wetlands delineated by the Army Corps of Engineers. Table 3 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 2. Distance of the Proposed Activities from Wetlands

Delineated Wetlands	Distance from Proposed Activities
Bancos	56 – 57 miles
Blanco	28 – 29 miles
Bloomfield	31 – 32 miles
Cutter Canyon	26 – 27 miles
Carrizo Oxbow	24 – 25 miles
Desert Hills	32 – 33 miles
Valdez	29 – 30 miles

Table 3. 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	15 – 16 miles
Aztec Ruins National Monument	34 - 35 miles
Bisti De-Na-Zin Wilderness Area	10 – 11 miles
Chaco Culture National Historical Park	24 – 25 miles
Fossil Forest Research Natural Area	20 – 21 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). Cultural resource surveys were completed (BLM Report Numbers 2015 (II) 017 F). Cultural resources were identified near along the pipeline project areas. The identified sites will be avoided in all cases and monitoring and installing site protection fencing along the edges of the access will be required during construction, drilling and reclamation. **As discussed in the Cultural Resources section 3.6.2 (Page 41 and 42 of EA.)**

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)).

The proposed action area provides potential foraging habitat for American peregrine falcon, prairie falcon, golden eagle, and to a lesser degree ferruginous hawk. The proposed project and action area were

visually scanned for raptors, raptor nests, and whitewash. One unknown stick nest was observed near, but outside the proposed project areas. Ravens, but no other raptors or their sign were observed during the on-site field survey.

The project area does not contain suitable habitat for mountain plover, yellow-billed cuckoo, burrowing owl, or bald eagle.

The proposed action area is within the BLM/FFO designated potential habitat area for Brack's hardwall cactus (*Sclerocactus cloveriae* var. *brackii*) and Aztec gilia *(Aliciella formosa*).

No Aztec gilia or Brack's hardwall cacti were detected during surveys. Surveys for the species were conducted simultaneously and in coordination and compliance with BLM FFO guidance. Potential habitat for the two species is poor to marginal in nature and limited to one north-facing slope located approximately 50 meters south of the proposed Brannon 304 H well pad boundary. Because no gilia or cacti were detected during the surveys, there would be no direct or indirect effects to either plant species.

The proposed action would have a negligible impact on Special Status Species. There were no observations of Special Status Species, and very limited potential foraging habitat of several raptor species. Cumulative impacts would be negligible. **As discussed in section 3.5 Special Status Species page(s) 37 thru 40**

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:

/s/Mark Kelly — 4/10/15

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BLM Farmington Field Office

Date