

Finding of No Significant Impact and Decision Record

North Carracas Natural Gas Plan of Development

**U.S. Department of Interior
Bureau of Land Management
Tres Rios Field Office**

and

**Bureau of Indian Affairs
Southwest Regional Office
in cooperation with the
Southern Ute Indian Tribe**



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Date: August 21, 2013



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1. INTRODUCTION

The proposed action is the Bureau of Land Management (BLM) and the Bureau of Indian Affairs (BIA) approval of the terms and conditions for development of the North Carracas Area of Mutual Interest as outlined in the North Carracas Natural Gas Plan of Development (POD). The POD contemplates the drilling of 48 Fruitland CBM wells located on 18 well pads utilizing horizontal and non-horizontal drilling and completion techniques, one salt-water disposal well, associated roads and pipelines, and a compressor facility located on Tribal Trust and private (fee) lands in Archuleta County, Colorado. The POD would allow for development of Southern Ute Indian Tribe (SUIT) leases within the North Carracas Area of Mutual Interest consistent with the lease terms and conditions.

The intent of using a POD was to consider and analyze the broader impacts of development and to disclose to the public those impacts; recognizing that future actual impacts associated with the proposed development would be subject to further analysis. The BLM and BIA conducted an environmental analysis of the proposed POD. The North Carracas POD Environmental Assessment (EA) was programmatic. Programmatic environmental analyses are designed to predict impacts over a large scale before the exact location of specific development sites are known. As such, their focus is broader and they present a scale at which cumulative impacts are most apparent and provide the opportunity to establish an overarching management framework that guides future site-specific decisions.

The North Carracas POD EA, available at the Tres Rios Field Office and the Southern Ute Agency, is incorporated by reference for this Finding of No Significant Impact. A no action alternative and one action alternative were analyzed in the EA.

This Decision Record does not approve any surface-disturbing activities. Subsequent federal actions would be the approvals to be issued by the BLM and BIA in order to implement the POD. Specifically, those approvals would be:

1. The BLM issuing Applications for Permit to Drill (APDs) for all wells in the affected area whose laterals would penetrate Tribal Trust minerals.
2. The United States Environmental Protection Agency (USEPA) approving the drilling and operation of the salt-water disposal well.
3. The BIA approving the communitization agreements that pool natural gas resources from Tribal Trust and fee mineral lands within designated spacing units.
4. The possible approval by the BIA for a unit agreement that pools natural gas resources and governs operations on a POD-wide basis.
5. The BIA issuing rights-of-way (ROWs) for roads or pipelines needed to implement the POD.
6. The BIA approving any surface lease agreements associated with any other POD facilities located on Tribal Trust land.

The North Carracas Area of Mutual Interest is an 18,123-acre parcel located in Archuleta County, Colorado within the exterior boundaries of the Southern Ute Indian Reservation. The area consists of Tribal Trust, Indian-owned fee, United States Bureau of Reclamation, and non-Indian owned fee lands. The legal description of the Area of Mutual Interest evaluated in the POD is:

W/2 of Section 3; all of Sections 4, 9, 10, 11, 12, 13, 14, 15, 24; E/2 and E/2 of the W/2 of Section 23,
Township 32 North, Range 5 West, New Mexico Principal Meridian (NMPM);
All of Sections 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24; and the S/2 of Section 8,
Township 32 North, Range 4 West, NMPM; and
All of Sections 17, 18, 19, and 20, Township 32 North, Range 3 West, NMPM

2. FINDING OF NO SIGNIFICANT IMPACT

Based upon review of the EA and the supporting documents, it is our determination that the project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively, with other actions in the general area. With design features (Chapter 2 of the EA), no environmental effects of the proposed action meet the definition of significance in context or intensity as defined in 40 CFR 1508.27; therefore, an environmental impact statement is not needed.

This finding is based on the context and intensity of the POD as described:

Context: The action is a POD involving the disturbance of approximately 142.77 acres of land, of which approximately 134.53 acres is privately owned and 8.24 acres is Tribal Trust.

Intensity: The following is the rationale for reaching a finding of no significant impact determination considering the 10 factors required for significance determinations under 40 CFR 1508.27:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Effects on study area resources were considered and a summary of estimated impacts is provided in the Table 1. None of the environmental effects listed in Table 1, or discussed in the EA in detail, are considered significant.

Table 1. Summary of Affected Resources, Estimated Impacts, and the Rational for Significance

Resource	Estimated Impacts	Reason This Is Not Significant
Air Quality	<p>The air dispersion model, AERMOD, was implemented to evaluate National Ambient Air Quality Standards (NAAQS) impacts. A level-1 screening analysis was conducted using VISCREEN to provide a conservative upper-bound estimate of plume visual impacts in Weminuche Wilderness Area (Class I Area). There would be no long-term significant impacts to air quality from carbon monoxide, ozone, nitrogen dioxide, particulate matter, sulfur dioxides, visibility, or acid deposition in Class I Areas.</p>	<p>No exceedances are predicted for any of the NAAQS because of the proposed action. Hazardous Air Pollutant concentrations would be below risk criteria established by the U.S. Environmental Protection Agency. No exceedances of the ozone NAAQS are expected to result due to the proposed action. For Class I Area visibility, the development would not result in predicted visibility impacts > 0.5 deciviews. Predicted changes in Class I Area deposition as a result of development would be less than U.S. Forest Service established thresholds.</p>
Geology and Minerals	<p>There would be irretrievable impacts to mineral resources. The natural gas production from the proposed action is estimated to average 5 billion cubic feet annually, assuming 30 years of production. The purpose of the POD is to avoid long-term natural gas reserve drainage from wells located and completed on adjoining privately owned lands, which could potentially drain Tribal reserves and result in permanent loss of the Tribal resources and associated revenue.</p>	<p>Mineral resources in the basin from past activities have been irretrievably impacted. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for future use. The POD is designed to develop the resources in an economical manner while optimizing resource extraction, minimizing surface disturbance to Tribal Trust lands, minimizing impacts to cultural and biological resources, and consolidating disturbance in order to reduce surface impacts.</p>
Soils	<p>Approximately 61 acres of prime farmland could be impacted. No areas of highly erodible soils would be impacted by the proposed action.</p>	<p>These impacts would affect 2.9% of prime farmland in the study area. Approximately 26 acres of prime farmland could be impacted in the short term from pipeline construction. These areas would be reclaimed within 12 months of disturbance. Approximately 35 acres of prime farmland could be impacted by well pads. These impacts would be long term (greater than 5 years), but would not be irretrievable.</p>
Water – Surface and Groundwater	<p>Potential impacts could include:</p> <ol style="list-style-type: none"> 1. Chemical contamination of surface water and shallow groundwater from accidental spills of chemicals, produced water, or flowback fluids. 2. Chemical contamination of groundwater associated with development of the wells to be drilled as part of the proposed activities. 3. Depletion of surface water or groundwater from proposed activities. 4. Increased erosion and sedimentation of surface water due to disturbance from roads, well pads, pipelines, and other 	<p>While accidental spills/leaks are inevitable, corrective actions would be promptly taken to mitigate against site degradation. Impacts to surface and groundwater quality would be minimized with design features, by complying with site-specific Stormwater Pollution Prevention Plans (SWPPP), project-specific Drilling Plans, and on-site monitoring. Proper well construction and monitoring should prevent any impacts due to cross-flow between geologic formations minimizing the potential for chemical contamination of groundwater. A total of approximately 92,575 barrels of fresh water would be needed to implement the proposed POD. The fresh water needed to drill and complete the wells would be acquired from a legal supply of water from private or commercial sources. Natural gas well production associated with the</p>

Resource	Estimated Impacts	Reason This Is Not Significant
Vegetation	<p>facility construction.</p> <p>Approximately 143 acres of vegetation would be affected; 66 acres in the short term following interim reclamation and 77 acres during operation and maintenance.</p>	<p>POD would have no measurable surface water depletions, as the entire study area is located within non-tributary areas</p> <p>The percentage of long-term loss would be less than 1% of the vegetation communities in the study area. It is expected that impacts to wetlands would be avoided or minimized during the siting of project components.</p>
Wildlife and Fisheries	<p>The POD would result in the long-term loss of approximately 77 acres of wildlife habitat that would be converted to an industrial use.</p>	<p>Less than 1% of the study area would be impacted. Wildlife populations are currently considered stable and healthy in the area. Impacts would be minimized by utilizing existing disturbance, drilling multiple wells from single well pads, and restricting construction and drilling to December 1 through April 30 more than 1/3-mile from CR 500. Most of the new development proposed by the action would be located within 1/3-mile of CR 500.</p>
Threatened and Endangered Species	<p>The proposed action may affect, is not likely to adversely affect the southwestern willow flycatcher; The proposed action may affect, is not likely to jeopardize the continued existence of the New Mexico meadow jumping mouse and the yellow-billed cuckoo. There would be no effects to any other federally listed species.</p>	<p>Pre-development siting criteria would avoid effects to potential habitats, such as riparian corridors and wetlands. Site-specific analysis would be conducted once final siting of project components is completed and would identify any potential impacts to threatened and endangered species.</p>
Cultural Resources	<p>Without having exact site locations, it is impossible to accurately predict the probability of encountering a cultural site during planning of any single well project, but it is anticipated to be very low.</p>	<p>All significant and potentially significant cultural resources would be avoided by the proposed action in consultation with SUIT and BIA Southwest Regional Office cultural resource managers. In addition, per SUIT guidelines, all prehistoric sites considered non-eligible to the National Register of Historic Places would also be avoided.</p>
Socioeconomics	<p>Production from the POD would generate a total of about \$6 million per year to the SUIT through royalties and severance taxes. A portion of the profits recovered by Red Willow would be distributed by the SUIT to fund pensions for elder members of the Tribe and as dividend distributions to other tribal members. Payments in Lieu of Taxes (PILT) to Archuleta County would increase by about \$150,000 annually.</p>	<p>Socioeconomic impacts to the SUIT and the local economy would be beneficial</p>
Environmental Justice	<p>There would be no measurable or disproportionate impacts to minority or low-income populations associated with activities included with the POD. Increased revenue to Archuleta County through PILT could increase county services for non-tribal members.</p>	<p>No impacts to minority or low-income populations would result from the POD. Implementation of the POD would potentially result in increased revenues and services to Archuleta County residents.</p>

Resource	Estimated Impacts	Reason This Is Not Significant
Land Use and Ownership	It is estimated that the proposed POD access roads and pipelines would impact 5.2 acres of undeveloped Tribal lands. On private lands, about 137.5 acres would be impacted by the construction of a compressor station, well pads, a saltwater disposal well, pipelines, and roads resulting in a change in land use from undeveloped, primarily wooded lands, to industrial use for the long term.	No change to land ownership would result from the POD. Approximately 143 acres would be affected; 66 acres in the short term and 77 acres during operation and maintenance.
Recreation	On SUIT and private land, habitat for game and viewable wildlife species would be removed. Noise from construction and operations of facilities, human presence, increased truck traffic, and visual changes could affect the presence of game and viewable wildlife species near the proposed facilities. There could also be effects to the quality of the recreation experience for users of the study area and on adjacent USBR and state- and U.S. Forest Service-managed lands.	Recreational opportunities would remain largely unchanged by the proposed POD. Most of the affected lands are privately owned, thus the landowner controls access to recreational opportunities.
Transportation and Traffic	Impacts to traffic would result in an estimated 5% increase in average daily traffic on CR 500 over an approximate 5-year period. Approximately 4.5 miles of access roads would be constructed. These new roads would spur off CR 500.	This increase would not exceed the road design capacity of 400 vehicles per day. Therefore, the level of service associated with CR 500 would not change. New access roads would not be open to the public.
Noise	The proposed compressor station would result in long-term impacts to noise levels in the area. During construction, well drilling, and completion activities, there would be increased short-term noise levels localized around the activity.	The compressor station would be enclosed in a building, which would reduce sound levels between 20 dBA and 30 dBA.
Public Health and Safety	Worker health and safety is a concern. Potential risks to public health and safety include increased traffic, contamination of drinking water supplies, and risks from accidental spills or dumping. There is also the low potential for well fire or explosions to occur.	The proposed North Carracas POD activities would be completed in a manner consistent with all applicable Occupational Safety and Health Administration regulations and appropriate industry standards to minimize the risk of accidents. Impacts to the public would be minimized by controlling access to all work and operation areas. All roadway speed limits would be observed by project vehicles to reduce potential for traffic accidents. Additionally, hauling of materials or equipment would follow Colorado Department of Transportation regulations. The potential for contamination of drinking water aquifers would be minimal due to the confining geologic layers above and below the Fruitland Formation and with the implementation of the following design features: <ol style="list-style-type: none"> 1. Installation of containment structures

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Resource	Estimated Impacts	Reason This Is Not Significant
		<ol style="list-style-type: none"> 2. Monitoring of water quality 3. Conducting bradenhead testing 4. Cementing all surface and production casings string to the surface by circulation methods 5. Closed-loop systems for drilling and completion

Notes: BIA = Bureau of Indian Affairs, CR = County Road, dBA = hourly A-weighted sound level in decibels, NAAQS = National Ambient Air Quality Standards, PILT = Payments in Lieu of Taxes, POD = Plan of Development, SUIT = Southern Ute Indian Tribe, SWPPP = Stormwater Pollution Prevention Plans, USBR = U. S. Bureau of Reclamation

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

Construction, drilling, completion, and operation of the components of the POD would cause an increase in health and safety risks and potential impacts at levels that are proportionally greater than those of the existing condition. In addition to worker safety risks, public health and safety concerns include increased traffic, contamination of drinking water supplies, accidental spills or dumping, and well fire or explosions. However, implementation of the POD is not expected to significantly affect public health and safety. Design features implemented under the POD would decrease the likelihood of adverse effects to public health and safety.

3. 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.

Although there are unique characteristics such as cultural resources, the San Juan River, wetlands, and prime farmlands within the study area, the POD would not cause a significant loss or destruction to these characteristics. Design features would minimize impacts to Navajo Lake State Park (refer to Table 1). There would be no impacts to wild and scenic rivers or ecologically critical areas.

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

The effects of implementing the POD on the quality of the human environment are not likely to be highly controversial. Extensive modeling and analysis was conducted to evaluate the effects from the POD. Effects from implementing the POD are not considered highly controversial among the scientific community. The region has been subject to oil and gas extraction activities since the 1950s and therefore, the types of effects from resource extraction are well known. Design features as described in Chapter 2 of the EA and incorporated into site-specific development would reduce anticipated effects.

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

The effects of implementing the POD on the human environment are not highly uncertain, nor do they involve unique or unknown risks. Natural gas development has been occurring in the general area since the 1950s and its effects on the human environment are well known. The applicant operates hundreds of wells in La Plata County, Colorado.

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

The POD is not precedent setting. Natural gas development has been occurring in the general area since the 1950s and its effects are well understood. The POD is typical of past and reasonably foreseeable actions that are not known to have significant effects. Significant cumulative effects are not anticipated. A complete analysis of the direct, indirect, and cumulative effects of implementing the POD are described in Chapters 4 and 5 of the EA. This decision does not represent a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a

cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small components.

The interdisciplinary team evaluated the possible actions in context of past, present, and reasonable foreseeable actions. No detrimental or significant cumulative effects were identified. Cumulative effects are analyzed in detail in Chapter 5 of the EA.

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 historical resources.

All significant and potentially significant cultural resources would be avoided by the proposed action in consultation with SUIT and BIA Southwest Regional Office cultural resource managers. In addition, per SUIT guidelines, all prehistoric sites considered non-eligible to the National Register of Historic Places would also be avoided.

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.

The Biological Assessment for the POD is provided as Appendix H of the EA. The U.S. Fish and Wildlife Service concurred with the project Biological Assessment findings. The consultation was programmatic; therefore, site-specific consultation will be conducted at the project development phase for any actions that may affect listed species. Pre-development siting criteria would avoid effects to potential habitats, such as riparian corridors and wetlands. Site-specific analysis would be conducted once final siting of project components is completed and would identify any potential impacts to threatened and endangered species.

With the implementation of design criteria, the proposed POD may affect, but is not likely to adversely affect New Mexico meadow jumping mouse (candidate), southwestern willow flycatcher (endangered), and yellow-billed cuckoo (candidate).

10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

The POD complies with all other relevant federal, state, and local laws and requirements imposed for the protection of the environment. Actions proposed in the POD that could affect the environment are not unique or unusual. State, local, and tribal interests were given the opportunity to participate in the environmental analysis process, as outlined in the EA Section 1.6.