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

February 2026

Mesa Mountain 3 Well Pad

Environmental Assessment **DOI-BLM-CO-S010-2026-0004-EA**

I have considered the factors mandated by the National Environmental Policy Act (NEPA). This environmental assessment represents the Bureau of Land Management's (BLM's) good-faith effort to fulfill NEPA's requirements by prioritizing documentation of the most important relevant considerations within the statutorily mandated page limits and timeline. This prioritization reflects the BLM's expert judgment; and any considerations addressed briefly or left unaddressed are, in the BLM's judgment, comparatively non-substantive and would not meaningfully inform the BLM's consideration of environmental effects and the decision to be made. The EA is substantially complete, considers the factors mandated by NEPA, and, in my judgment, contains analysis adequate to inform the BLM's decision regarding the proposed action.

Responsible Official: _____ Date: _____

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TABLE OF CONTENTS

TABLE OF FIGURES

LIST OF ACRONYMS

2012 SUIT NRMP	Southern Ute Indian Tribe Natural Resources Management Plan, Planning Period 2012 to 2032 (SUIT 2012)
APD	Application for Permit to Drill
AST	Aboveground Storage Tank
BA	Biological Assessment
bgs	below ground surface
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
CBL	Cement Bond Log
CPW	Colorado Parks and Wildlife
EA	Environmental Assessment
ECMC	Colorado Energy and Carbon Management Commission
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
MLVT	Modular Large Volume Tank
N	North
NEPA	National Environmental Policy Act
NMPM	New Mexico Principal Meridian
NSJB	Northern San Juan Basin
POD	Point of Diversion
ppm	parts per million
Proposed Action	Mesa Mountain Pad 3 Project
R	Range
Simcoe	Simcoe LLC
SUIR	Southern Ute Indian Reservation
SUIT	Southern Ute Indian Tribe
SUIT HF Regulations	SUIT Amended and Restated Hydraulic Fracturing and Chemical Disclosure Regulations (SUIT 2016)
T	Township
TDS	Total Dissolved Solids
TRFO	Tres Rios Field Office
USFWS	U.S. Fish and Wildlife Service
W	West
WRMD	Wildlife Resource Management Division

CHAPTER 1. INTRODUCTION

Background

Simcoe LLC (Simcoe) is proposing the Mesa Mountain Pad 3 Project, which includes constructing a well pad and two access roads, drilling up to twelve gas wells, installing a well-connect pipeline, and installing a temporary layflat pipeline. The proposed gas wells would be the Mesa Mountain 3 001H through 3 012H (APIs: pending). The well pad would be located approximately 7.5 miles south of Ignacio, Colorado in Section 7, Township (T) 32 North (N) Range (R) 7 West (W), and Section 12 T32N R8W, New Mexico Principal Meridian (NMPM), in La Plata County, Colorado on Southern Ute Indian Tribe (SUIT) land (Figures 1 and 2). The proposed wells would be drilled directionally to produce SUIT Trust minerals from lease 14-20-151-52. Simcoe intends to begin project construction in spring 2026.

Project maps and figures are included in Appendix A.

Purpose and Need

Purpose: The Bureau of Land Management (BLM) is considering approval of Simcoe's applications for permit to drill (APDs) to allow for development of an existing Tribal lease. The Secretary of the Interior is authorized on behalf of the federal government to administer leasing of oil and gas mineral resources on Indian land, including SUIT Trust lands, through the 1909 Mineral Leasing Act for Allotted Lands, the Indian Mineral Leasing Act of 1938, and the Indian Mineral Development Act of 1982. The BLM is responsible for permitting and administering operations within approved lease and mineral agreement boundaries (USDI 2009). The approval and administration of leases and mineral agreements are the responsibility of the Bureau of Indian Affairs (BIA) acting as the surface-management agency.

Need: Simcoe has filed three (3) APDs for the development of the proposed wells. The BLM and BIA's underlying need is to respond to Simcoe's proposal to exercise its valid existing rights by developing the SUIT Trust minerals associated with its minerals leases, consistent with the lease terms, conditions, and stipulations, through drilling and producing the proposed wells.

Decision to be Made

Based on the information in this Environmental Assessment (EA), the BLM Tres Rios Field Office (TRFO) and the BIA will decide whether to approve the Proposed Action, and, if so, under which terms and conditions. Per the National Environmental Policy Act, the BLM TRFO and BIA must determine if there are any environmental impacts associated with the Proposed Action and connected actions warranting further analysis in an Environmental Impact Statement.

Relationship to Statutes and Regulations

Tribes are viewed under federal law as sovereign nations, and federal agencies coordinate with the Tribes on a "government-to-government" basis. Given the SUIT's sovereign status, state and local jurisdiction over the SUIT and its lands is limited. However, federal agencies have a trust responsibility to Tribes, which must be considered when federal actions potentially affect Tribal resources. As a result of the trust responsibility, the BLM's decision-making process is different

on Indian land from its process on public land. On Indian land, the BLM has the added responsibility of assigning considerable weight to Indian goals and interests, whereas on public land, the BLM's actions are guided by the Federal Land Policy and Management Act and the public's best interest. Additionally, with regard to Indian lands, land use conflicts and ambiguities in federal regulations and policies are generally resolved in favor of the Indian Tribe's best interests. This is consistent with the federal government's responsibility to protect Indian land and take such action as best serves the interests of Indian Tribes and Tribal members.

As discussed in Section 1.5 of the 2002 *Oil and Gas Development on the Southern Ute Indian Reservation Final Environmental Impact Statement* (USDI 2002; Pages 1-7), the Secretary of the Interior is authorized on behalf of the federal government to administer oil and gas resources leasing on Indian land through the 1909 Mineral Leasing Act for Allotted Lands, the Indian Mineral Leasing Act of 1938, and the Indian Mineral Development act of 1982. Lease issuance and administration are the responsibility of the BIA, which acts as the surface management agency. Once the lease is issued, the BLM is responsible for permitting and administering operations, which includes approval of well operations, underground activities production verification, and production or environmental compliance. The SUIT is integrally involved in the decision-making process about leases and permits involving Tribal lands, which may be issued only with SUIT consent, in compliance with the Indian Reorganization Act of 1934.

There are also multiple Memorandums of Understanding and Interagency Agreements between the BLM, BIA, SUIT, and Colorado Energy and Carbon Management Commission (ECMC) regarding oil and gas development and regulation within the exterior boundaries of the Southern Ute Indian Reservation (SUIR).

This EA is a site-specific analysis in accordance with the National Environmental Policy Act. Implementation of the Proposed Action would also be consistent with the following statutes:

- Federal Land Policy and Management Act of 1976 (43 USC 1701 et seq.);
- Endangered Species Act (1973), as amended;
- Migratory Bird Treaty Act (MBTA; 1918);
- Bald and Golden Eagle Protection Act (1962);
- National Historic Preservation Act (1966), as amended;
- Archaeological Resources Protection Act (1979);
- Archaeological and Historical Conservation Act (1974);
- Clean Water Act (1972);
- Safe Drinking Water Act (1974);
- Federal Water Pollution Control Act (1948);
- Clean Air Act (1963), as amended;
- Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (1994); and

- BLM Onshore Orders and Notice to Lessees (43 CFR Part 3160).

Conformance with the Land Use Plan

Plan: Tres Rios Field Office Resource Management Plan

Date: February 2015, Amended January 2020

Conformance Review: As stated in the Minerals and Energy: Fluid Leasable Minerals section, "This program emphasizes the orderly and environmentally responsible development of oil and gas (natural gas and CO2) deposits" (Page II-111).

Exploration and development of federal fluid mineral leases by private industry is an integral part of the BLM's fluid mineral leasing program under the authority of the Mineral Leasing Act of 1920, as amended, the Mining and Minerals Policy Act of 1970 (30 USC 21), the Federal Land Policy and Management Act of 1976, the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (30 USC 195 et seq.), and applicable BLM Onshore Oil and Gas Orders (43 CFR 3160).

The TRFO Resource Management Plan specifically addresses oil and gas development within the overall context of mineral and energy development (pages II-110-II-121). The proposed project is in conformance with the TRFO Resource Management Plan (BLM 2015).

Plan: Southern Ute Indian Tribe Natural Resources Management Plan, Planning Period 2012 to 2032

Date: 2012

Conformance Review: The proposed project follows the goals and objectives of the SUIT as set forth in the *Southern Ute Indian Tribe Natural Resources Management Plan, Planning Period 2012 to 2032* (2012 SUIT NRMP; SUIT 2012) as well as other SUIT guiding documents. The guiding goal of the 2012 SUIT NRMP is to identify and implement processes and procedures to provide integrated management of renewable and non-renewable resources in an environmentally, culturally, and socially responsible manner to benefit current and future generations of the Southern Ute Tribal Membership and support the Permanent Fund Mission Statement and guiding principles (SUIT 2012). In addition, the proposed project helps meet the SUIT Growth Fund Energy Department's mission of ensuring that the members of the SUIT receive maximum benefit from the energy and mineral resources located on the reservation while at the same time minimizing the impact of extraction of the resources on the natural and cultural environment, as outlined in the *Exploration & Production Operator's Compliance Manual for Energy Development Projects on the Southern Ute Indian Reservation* (SUIT 2018).

Scoping and Issues

1..1. Scoping

The BLM TRFO and SUIT conducted internal scoping identify reasonable alternatives and identify which potentially affected resources and land uses would require detailed issue-based analysis in Section 3 of this EA. An onsite inspection was also held on December 19, 2024 that was attended by individuals from BLM TRFO, SUIT, Simcoe, and environmental consultants.

1..2. Issues Identified for Analysis

Table 1.1 provides a list of resources issues identified for analysis in this EA.

Table 1.1. Resource Issues Identified for Analysis

Issue Number	Issue Statement
Issue 1	What are the potential impacts of the Proposed Action on air quality and cumulative greenhouse gas emissions levels?
Issue 2	What are the potential impacts of the Proposed Action on geology and minerals?
Issue 3	Would groundwater quantity or quality be impacted by drilling and completion of the proposed wells?

1..3. Issues Identified but Eliminated from Further Analysis

Table 1.2 provides a list of other issues that were identified during the scoping process but which will not be analyzed further in this EA. For each issue eliminated from detailed analysis, the supporting rationale is provided.

Table 1.2. Issues Identified but Eliminated from Detailed Analysis

Issue Statement	Rationale for Not Further Discussing in Detail in this EA
What is the potential impact(s) of the Proposed Action on Cultural Resources?	A cultural resource survey of the project area was conducted on DATE by CONTRACTOR and the results were documented in a survey report. The BIA cultural clearance letter included as Appendix B.
What is the potential impact(s) of the Proposed Action on Hunting, Fishing, and Gathering?	The Proposed Action would not impact fishing; however, project activities may disrupt animal movement patterns and hunting activities near the project area. Temporary traffic disruptions during project activities may limit access to the project area for hunting and gathering.
What is the potential impact(S) of the Proposed Action on Economics?	Oil and gas production would result in an increase in royalties and severance taxes to the SUIT. Overall employment opportunities related to the oil and gas industry and service support industries would be higher in the region.
What is the potential impact(s) of the Proposed Action on Noise and Light?	The project area is located within a relatively remote setting that is surrounded by existing oil and gas development. Nearby receptors of noise and light generated by the Proposed Action include private residences and wildlife. Significant topography separates named county roads and the two private residences within one mile of the well pad from the project area.
What is the potential impact(s) of the Proposed Action on Quality of Life for the American People?	The Proposed Action would result in localized changes to the natural and physical environment, which could influence certain socioeconomic values relevant to the quality of life of the American people. These values include access to products, employment opportunities, public services, way of life and culture, and passive use of ecosystems. Temporary increases in traffic, noise, and dust could affect visitor and viewer enjoyment and diminish the passive use of nearby ecosystems, because these environmental changes may reduce recreational opportunities and aesthetic values in the short term. However, the project would also generate short-term employment and income for workers and associated service providers. The scale of these effects is limited geographically to the project area and temporally to the drilling and completion phases. In the long term, the wells would contribute to domestic energy production, supporting energy access for American households and businesses, which can improve overall quality of life by maintaining affordable and reliable energy supplies. Design features and best management practices (BMPs) would help to mitigate impacts to the quality of life of the American people.

Issue Statement	Rationale for Not Further Discussing in Detail in this EA
What is the potential impact(s) of the Proposed Action on Rangelands?	Surface disturbance would cause some temporary and permanent loss of forage for livestock but not to a level that would impact authorized grazing.
What is the potential impact(s) of the Proposed Action on Soils?	There are no fragile soils located within the project area. Surface disturbance would be limited to the permitted area.
What is the potential impact(s) of the Proposed Action on Threatened & Endangered Species?	Based on the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (USFWS 2025), there are four (4) endangered species, two (2) threatened species, one (1) proposed endangered species, one (1) proposed threatened species, and one (1) experimental population, non-essential that could potentially occur within the project area. These species include gray wolf (*Canis lupus*), New Mexico meadow jumping mouse (*Zapus hudsonius luteus*), Mexican spotted owl (*Strix occidentalis lucida*), Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), monarch butterfly (*Danaus plexippus*), silverspot (*Speyeria nokomis nokomis*), Suckley's cuckoo bumble bee (*Bombus suckleyi*), and Knowlton's cactus (*Pediocactus knowltonii*). A Biological Assessment (BA; Cottonwood 2025)) completed for the Proposed Action determined that the Proposed Action would have no effect on the gray wolf, New Mexico meadow jumping mouse, Mexican spotted owl, monarch butterfly, silverspot, Suckley's cuckoo bumble bee, and Knowlton's cactus. There project area does not overlap any designated Critical Habitats. The Proposed Action would contribute to water depletions in the San Juan River Basin, and therefore may affect, is likely to adversely affect the Colorado pikeminnow and razorback sucker. Per the Biological Opinion regarding water depletions in the San Juan River Basin (ES/GJ-6-CO-08-F-002), no additional consultation is necessary and the BLM will record the individual project water depletion in their log and include it in the annual BLM reporting to the USFWS.
What is the potential impact(s) of the Proposed Action on Vegetation (Excluding USFWS Designated Species)?	The project area is located within Colorado Plateau Pinyon-Juniper woodland (Lowry et al. 2005). Dominant vegetation in undisturbed areas includes pinyon pine (*Pinus edulis*), Utah juniper (*Juniperus osteosperma*), Gambel oak (*Quercus gambelii*), with a sparse understory of both native and non-native grasses and forbs. Vegetation removal would be limited to the permitted area and BMPs would mitigate impacts to vegetation.
What is the potential impact(s) of the Proposed Action on Invasive Species and Noxious Weeds?	Design features associated with the surface reclamation plan would help to mitigate potential introduction and spread of noxious and invasive weed species.
What is the potential impact(s) of the Proposed Action on Forestry Resources	Simcoe would obtain a Forest Product/ Firewood permit from the SUIT Forestry Office before cutting begins. All material 4 inches in diameter and greater (Utah juniper, rocky mountain juniper, pinyon pine, and Gambel oak) would be hauled to the Forestry Fuels Yard in lengths of 6 to 12 feet. All of the material less than 4 inches in diameter would be chipped onsite or otherwise removed and disposed of.
What is the potential impact(s) of the Proposed Action on Visual Resources?	The project area is surrounded by a relatively high density of oil and gas infrastructure. Oil and gas infrastructure located on the well pad would be painted juniper green to reduce impacts to visual resources.
Water resources (surface water)	The Proposed Action would result in surface water depletions of up to 1,553.4 acre-feet to be sourced from the Los Piños River. No wetlands are mapped within the project area (NWI 2025). Design features and BMPs would mitigate impacts to surface water quantity and quality.
What is the potential impact(s) of the Proposed Action on Wildlife Resources (Elk and Mule Deer)?	According to the Colorado Parks and Wildlife (CPW) Species Activity Mapping, the project area is located within elk winter range and mule deer summer range and winter range (CPW 2025). Neither of these are considered CPW-designated High Priority Habitats. The project area is surrounded by a relatively high density of existing oil and gas infrastructure. Elk and mule deer have been exposed to impacts from oil and gas in and around the area for decades, and impacts to elk and mule deer resulting from the

Issue Statement	Rationale for Not Further Discussing in Detail in this EA
	Proposed Action are expected to be minimal. There are no timing restrictions associated with the Proposed Action.
What is the potential impact(s) of the Proposed Action on Migratory Birds?	Noise and activity associated with project construction could result in nest abandonment from migratory birds and eagles. If project activities occur between May 1 and July 31, a pre-construction nesting bird survey would be conducted in accordance with USFWS guidance for compliance with the MBTA (16 U.S.C. §§703–712), CPW recommendations, and SUIT Wildlife Resource Management Division (WRMD) policy. If active nests are found, Simcoe would consult with SUIT WRMD to determine the appropriate action before construction activities begin.

CHAPTER 2. ALTERNATIVES

This chapter describes the alternatives that will be analyzed in Chapter 3, as well as alternatives that were considered and why they were eliminated from detailed analysis.

Proposed Action

Simcoe is proposing the Mesa Mountain Pad 3 Project, which would include the construction of a well pad and two access roads, the drilling of up to twelve new natural gas wells, the construction of a well-connect pipeline, and installation of a temporary layflat. The proposed well pad would be located approximately 7.5 miles south of Ignacio, Colorado in Section 7 T32N R7W and Section 12 T32N R8W, NMPM, in La Plata County, Colorado on SUIT land. The elevation of the project area is 7,094 feet above mean sea level. The proposed wells would be drilled directionally to produce SUIT Trust minerals from the Mancos Shale under an existing lease (Lease No. BIA 14-20-151-52). Simcoe intends to begin project construction in spring 2026.

Total new surface disturbance associated with the Proposed Action would be 12.439 acres. Table 2.1 lists the components and acreages of surface disturbance associated with the Proposed Action. Project maps and figures are included in Appendix A.

Table 2.1. Proposed Action Surface Disturbance

Project Feature	Surface Disturbance		
	Total	New	Existing
Well Pad + Construction Zone + Well-Connect Pipeline (Permitted Area)	11.750	11.750	-
Access Roads (outside Permitted Area)	0.689	0.689	-
TOTAL PROPOSED ACTION	**12.439**	**12.439**	**-**

Notes: All values are in acres. Access road acreages were calculated in ArcGIS.

2..1. Construction

Well Pad

The permitted area for the Mesa Mountain Pad 3 would measure approximately 550 feet by 930 feet, including a 60-foot to 80-foot construction buffer, and would total 11.750 acres. The total area of disturbance would be limited to 9.075 acres, and the final leveled pad size would be 7.344 acres. Topsoil storage would surround the leveled pad and would store approximately 4,706 cubic yards of topsoil.

The proposed well pad would be built with 3:1 slopes, and would require a maximum cut of approximately 5.4 feet on corner 2 and a fill or 2.2 feet on corner 3 and 13.9 feet on corner 4. The entire area would be utilized during construction, setting of production equipment, and drilling and completion. After completion, 4.571 acres of the leveled well pad would be reclaimed, leaving a final pad size of 4.504 acres.

Access Roads

Simcoe is proposing the construction of one 538-foot-long primary access road that would access the proposed well pad from the north. The primary access road would be located at the base of the fill slope of the nearby Southern Ute 32-7; #7-4 (API 05-067-08291) well pad, but would not impact the nearby well pad. Simcoe is also proposing the construction of a 591-foot-long secondary access road that would access the southern portion of the well pad. The proposed access roads would be constructed within a 40-foot right-of-way. Final travel width for the access roads would be 20 feet. Total access road disturbance outside of the permitted area would be 0.689 acres.

Well-Connect Pipeline

A well-connect pipeline would be located within the permitted area of the proposed well pad and would be used for the transport of gas into nearby pipeline infrastructure.

Temporary Layflat

A temporary surface layflat water line would be installed on the ground surface to transport freshwater used for drilling and completion from an approved point of diversion (POD) at the Los Piños River to a modular large volume tank (MLVT) on the proposed well pad. The layflat would not require BLM or BIA approval, but only Tribal Council and Southern Ute Department of Energy approvals.

2..2. Drilling and Completion

Simcoe proposes to begin drilling the proposed wells in spring 2026. All equipment associated with the drilling rig would remain on location until the work is complete. Drilling would occur in a manner that complies with 43 CFR part 3160 and applicable BLM Onshore Orders (BLM 1988). Drilling would begin after the drilling rig has been assembled on the well pad. Once drilling begins, operations would continue 24 hours per day until the bottom hole location is reached. A drilling rig with associated equipment, temporary trailers equipped with sleeping quarters necessary for company personnel, toilet facilities, trash containers, and other equipment may be located onsite. Any existing Simcoe pad may be used for the staging or storage of equipment during the drilling and completion process; no new disturbance would be created for this purpose.

Drilling would consist of advancing the wellbore to a depth below freshwater bearing zones and setting a surface casing. The surface casing would be cemented to the surface to protect the shallow aquifers in the vicinity of the wells. The cement program would be designed to meet the BLM Onshore Order #2 requirements. Following cementing of the surface casing, the wellbore would be advanced to the Mancos Shale, a production casing would be set and cemented to the surface, and horizontal laterals would be drilled through the shale. Simcoe would use directional drilling and hydraulic fracturing to target Tribal trust minerals from the Mancos Shale.

Hydraulic fracturing is a process used to enhance production by creating or enlarging fractures in the reservoir rocks through the injection of fluids under high pressure. Creating or enlarging fractures within the reservoir rock allows for increased communication within the reservoir and enhances the flow of oil and gas towards the wellbore. Hydraulic fracturing also bypasses any near-wellbore damage within the geologic formation. The fluids used in hydraulic fracturing are

primarily composed of water, with chemicals added for a variety of purposes, including limiting the growth of bacteria and preventing corrosion of the well casing. A proppant, such as sand, is injected with the fluids in order to keep the fractures open after the stimulation process is complete. The vast majority of the hydraulic fracturing fluids would "flowback" to the wellbore for subsequent disposal at an approved facility. Hydraulic fracturing would be conducted in compliance with the SUIT Amended and Restated Hydraulic Fracturing and Chemical Disclosure Regulations (SUIT HF Regulations; SUIT 2016).

If economically viable, the wells would enter the production/operation phase following completion activities. The wells would produce natural gas for subsequent transportation, treatment, and sales. The wells would most likely also produce water in conjunction with gas; however, the majority of the produced water would be associated with flowback as the Mancos Shale does not typically contain significant water in the formation. Production equipment for each well would be placed on the proposed well pad. All above ground facilities would be painted juniper green to match surrounding vegetation, and would be located, to the extent practical, so as to reasonably minimize visual and noise impacts.

2..3. Methods for Handling Waste

Completion and stimulation flowback waste is expected to be approximately 150,650 bbls total during completion operations. The water-based solution that flows back to the surface during and after completion operations would be placed in above ground storage tanks (ASTs) on location and transported to an approved disposal facility: Basin Disposal Inc., Envirotech Inc., or Agua Moss, LLC. ASTs would be located within a lined and appropriately sized secondary containment structure. Flowback solids would be stored and dried on pad then disposed of at an approved exploration and production disposal site: Bondad Landfill or Envirotech, Inc.

Drill cuttings would be collected and placed in a steel storage bin. Upon completion of drilling, drill cuttings would be hauled to an approved waste disposal facility. A reserve pit would not be utilized at the site. Frac tanks would be stored on location in mobile flowback tanks during well completion.

Produced water would flow directly to separators onsite, then, once separated, routed to ASTs located on the well pad. Produced water would be trucked from the location to the Salvador Water Transfer Station then disposed of in existing disposal wells. Berms would be installed as secondary containment around all storage tanks.

Self-contained, chemical toilets would be provided for human waste disposal. The toilet holding tanks would be pumped as needed and the contents thereof disposed of in an approved sewage disposal facility. The toilets would be onsite during construction, drilling, and completion operations. No toilets would be onsite during production.

Garbage, trash, and other waste materials would be collected in a portable, self-contained, and fully enclosed container during drilling and completion operations. The accumulated trash would be removed and disposed of at an approved landfill. No trash would be buried or burned on location.

Immediately after removal of the drilling and service rigs, all debris and other waste materials not contained in trash containers would be removed from the location.

2..4. Water Usage

The proposed wells would be horizontally drilled and completed via well stimulation (hydraulic fracturing). Sources of water for drilling and completion would primarily consist of freshwater from an approved POD at the Los Piños River northeast of the project area. Estimated water usage to drill and complete all twelve wells is approximately 1,553.4 acre-feet.

Freshwater use for drilling and completion would be delivered via temporary surface layflat water line. The layflat water line would transport water from the Los Piños River POD to a MLVT located onsite and fitted with leak detection. The layflat water line would not require BLM or BIA approval, but only Tribal Council and Southern Ute Department of Energy approvals.

2..5. Surface Reclamation

Following well completions and pipeline installation, portions of the well pad would be reclaimed and seeded in accordance with SUIT guidelines and BLM rules. As general guideline, the proposed well pad reclamation would meet the standards established in the BLM Gold Book: Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, and SUIT Standards.

A driving surface and facilities area (4.504 acres) would remain un-reclaimed for the life of the project. The remainder of the well pad and construction zone (4.571 acres) would be recontoured and reseeded using a BLM and SUIT approved seed mix. The interim reclamation area and the final well pad layout would be determined following well completion and would be submitted to the BLM and SUIT via a Notice of Intent.

Interim reclamation within the permitted area would be re-disturbed during final reclamation. Remaining disturbance areas, including the well pad and access roads, would be reclaimed during final reclamation. Table 3, below, shows the interim reclamation acreages.

Project Feature	Surface Disturbance	Interim Reclamation	Long-term Disturbance
Well Pad + Well-Connect Pipeline	9.075	4.571	4.504
Construction Zone + Topsoil Storage	2.675	2.675	-
Access Roads (outside Permitted Area)	0.689	-	0.689
Total	**12.439**	**7.246**	**5.193**

Notes: All values are in acres; Access road acreages were calculated in ArcGIS.

2..6. Road Maintenance

Vehicle traffic to the site during the production phase would include a “pumper” visiting on a regular basis to check on the overall production and condition of the wells and associated equipment. Occasional maintenance vehicles would visit the site to conduct tasks necessary for continued production of the wells.

Access for construction, drilling, and completions efforts shall be conducted in a way that maintains access for other operators and SUIT Tribal Membership who use the nearby resource road/Rim Road. Simcoe shall promptly notify SUIT Department of Energy of any planned road closures.

Existing roadways would be maintained to the same or better condition as existed prior to the commencement of operations. Roadways would be maintained to accommodate anticipated traffic volumes with all-weather access. Maintenance would continue until the proposed wells have been plugged and abandoned and a Final Abandonment Notice has been approved. BMPs for dust abatement would be utilized along existing roads to reduce fugitive dust during construction, drilling, completion, and other heavy traffic activities during the life of the project.

For existing county roads or roads that are considered collector roads, Simcoe would defer to La Plata County for maintenance determinations.

2..7. Plugging and Abandonment

When the economics no longer justify continued production of the wells, the wells would be plugged and abandoned. The plugging and abandonment would be conducted in compliance with BLM and SUIT regulations to ensure that formations, particularly freshwater aquifers, are isolated and to prevent the migration of hydrocarbons and other fluids through or along the wellbore. Typically, a series of cement plugs are set in the wellbore to achieve this isolation and prevent migration of fluids. Following downhole plugging operations, the production equipment on the well pad would be removed, the site would be contoured to match pre-disturbance conditions, the remaining topsoil would be spread on the ground surface, and the site would be seeded with a BLM and SUIT-approved seed mix and mulched. The area would be monitored until revegetation success has reached at least 70% basal cover of desirable perennial species, when compared to vegetation on adjacent or nearby undisturbed areas.

When economics no longer justify continued production of gas into the well-connect pipeline, the pipeline would be abandoned in place using industry standards. The pipeline would be purged and filled with inert gas to eliminate the presence of flammable gas within the system. The ends of the pipeline would be capped to prevent the introduction or discharge of gas or other fluids to and from the pipeline. All surface equipment associated with the pipeline would be removed.

2..8. Design Features

Design Features and Conditions of Approval are included in Appendix C.

No Action Alternative

The No Action alternative would be the denial of the APDs by the BLM. In this case, the drilling and completion of the proposed wells and the construction of the associated well pad and access roads would not occur. Oil and natural gas production in the area would continue at its current rate, and other current land use in the area would continue. The No Action Alternative is presented as the baseline for impacts analysis in Section 3.

Alternatives Considered but Eliminated from Detailed Analysis

Alternatives to the Proposed Action are developed to explore different ways to accomplish the purpose and need while minimizing environmental impacts and resource conflicts. Consistent with DOI 516 DM 1, the agency need only consider "a reasonable range of alternatives that are technically and economically feasible, meet the purpose and need for the proposed action, are within the jurisdiction of the bureau, and, where applicable, meet the goals of the applicant" (DOI 2025:25). Alternatives which did not meet those criteria were not brought forward for detailed analysis in this EA.

No feasible alternatives were identified for the proposed project that would result in reduced environmental impacts.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter defines the scope of analysis contained in this EA, describes the existing conditions relevant to the issues presented in Table 1.1, and discloses the potential impacts of the proposed action and alternatives.

Issue 1: What are the potential impacts of the Proposed Action on air quality and cumulative greenhouse gas emissions levels?

3..1. Methodology and Assumptions

For this assessment, impacts to ambient air quality conditions and cumulative GHG emissions levels are evaluated by developing a project-specific emissions inventory based on operator provided input and comparing the estimated air pollutant emissions levels for the proposed action and other foreseeable emissions generating activities to levels that have been modeled for determining air quality concentration contributions and cumulative levels, and foreseeable GHG emissions are further put into context for determining significance.

It is assumed that the information provided by the operator accurately depicts the development and operations (equipment, etc.) that will occur for the proposed action, and for the cumulative analysis, foreseeable oil and gas wells in the Colorado – Mancos Shale would generate emissions at levels similar to the levels estimated for the proposed action wells.

Potential impacts for the proposed action are compared to foreseeable conditions under the no-action scenario to describe potential differences in ambient conditions associated with the proposed action.

3..2. Affected Environment

Affected environment-related data and information describing historical trends and current conditions for air quality in the land use planning areas can be found in BLM Colorado's latest Air Resources Annual Report (www.blm.gov/programs/air-resources/colorado). The following outlines and summarizes existing conditions and recent air quality related trends for the project areas as described in the BLM Colorado Air Annual Report. See the online Annual Report for more data and information about existing air quality and related value conditions in Colorado.

- Section 4.2, Table 8 of the Air Annual Report presents year 2020 National Emissions Inventory (NEI) oil and gas emissions levels for each BLM Colorado Field Office that can be compared to Colorado statewide (for all sectors) annual air pollutant emissions levels shown in Table 6 of the Report.
- Section 4.4 of the BLM Colorado Air Annual Report discusses the air quality index (AQI). The AQI is designed to help individuals and communities understand the potential health effects associated with different pollution levels, providing guidance on protective measures, especially for vulnerable populations, during periods of poor air quality. For La Plata County years 2022 to 2024, the AQI was "good" (well below ambient air quality standards) 68 percent of the time, "moderate" (below but near ambient standards) 31 percent of the time, unhealthy for sensitive groups one percent of the time, and unhealthy for all groups zero percent of the time.

- Section 4.5 of the Air Annual Report presents tables with 2022 to 2024 design values for criteria air pollutants.
    - No particulate matter (PM10 and PM2.5) values for La Plata County (or adjacent counties) are shown for this period (or other 3-year periods within the last eight years) but all design values shown for Colorado are below the current applicable ambient air quality standards for PM10 and PM2.5.
    - Table 14 shows the design value history for the NO2 annual average NAAQS for Colorado counties. As shown, the 2022-2024 design value for La Plata County is well below the applicable ambient air quality standard. Similarly, recent design values are well below the NO2 1-hour NAAQS for La Plata County.
    - Table 15 of the Air Annual Report shows county-level ozone 8-hour design values; the La Plata County 3-year average value was 65 parts per billion (ppb) for 2022 to 2024, which is below the current 8-hour ozone ambient standard of 70 ppb.
- Section 4.6 of the Air Annual Report discusses air quality related values (AQRVs), including visibility and nitrogen deposition.
    - Table 17 of the Air Annual Report shows significant visibility improvements for "clearest days" and "most impaired days" at Mesa Verde National Park over the historical monitoring periods. Table 18 of the Air Annual Report shows annual nitrogen deposition for years 2023 and 2024 at locations around Colorado; the annual nitrogen deposition at locations in southwest Colorado has been below the threshold determined to protect natural plant communities and ecosystem services.

The project and surrounding areas are currently in attainment with all ambient air quality standards. The current cumulative cancer risk for the project area is well below EPA's 1 in 10,000 critical level and is representative of toxic contributions from many active oil and gas wells and associated operations in the San Juan Basin (and other cumulative emissions sources).

3..3. Environmental Effects

3..3.1. *Effects of Alternative A – No Action Alternative*

As described below for the proposed action, new foreseeable federal oil and gas activity in the planning area is expected to have minimal contributions to overall air quality conditions and therefore, the cumulative concentrations for the project area / sub-region under the no-action alternative would likely be very similar to those under the proposed action scenario.

Overall total oil and gas production levels for the Rocky Mountain Region are expected to remain static or even increase in the short-term and therefore, non-federal oil and gas supply could increase if new federal /tribal projects are not allowed. The most recent U.S. Energy Information Administration (EIA) short-term energy outlook (https://www.eia.gov/outlooks/steo/) describes that the world's oil and gas supply and consumption will increase in the foreseeable future, and the latest EIA long-term projections describe that there will be no decrease in U.S. domestic oil and gas consumption over the next couple decades. For the no-action alternative, the cumulative GHG emissions levels are not expected to be any different than those for the proposed action scenario.

3..3.2. *Impacts of Alternative B – Proposed Action*

A detailed air pollutant emissions inventory using operator provided input was developed for the proposed action utilizing BLM's online emissions inventory tool (EMIT). The project-specific emissions inventory development and potential impacts analysis was based on the following operator input and design features for the proposed action:

- Application of dust suppressant (water) to the well pad and local access road spur (non-public) during construction and development phases of the project to effectively minimize local dust impacts.
- Drill rig and frac pump engines will meet Tier 4 non-road diesel emissions standards significantly reducing NOx emissions.
- Green completion equipment will be used effectively eliminating 98% of air pollutant emissions during new well completions.
- An intermediate "bleed" / emitting (methane and VOCs (including hazardous air pollutants [HAPs]) pneumatic device will be employed at the well site with minimal operation.
- One 4 – stroke lean burn natural gas-powered production phase engine (approximately 50hp) will be employed.
- One production phase glycol dehydrator will be employed with no emissions control measures.
- Components (flanges, valves, connectors, etc.) will be monitored and maintained via Leak Detection and Repair (LDAR) reducing unnecessary VOC (including HAPs / air toxics) and methane emissions.
- No emissions controls on water tanks; water will be piped out from the well pad.
- No emissions controls for maintenance well blowdowns; emissions will be controlled for well workovers.

The following table presents total emissions (in tons per year) for both phases (construction / development and production) of the proposed action (all three wells). As shown, over 99 percent of the estimated project-specific annual NOx emissions and 80 percent of the VOC emissions would occur during the construction / development phase.

Table. Project-Specific Annual Air Pollutant Emissions Levels (tons per year)

Project Phase	PM2.5*	VOC	NOx	HAPs
Construction / Development	2.46	10.80	187.86	4.01
Production	0.06	0.13	0.92	0.03

*PM2.5 emissions are combustion only; do not include dust.

In 2023, a Rocky Mountain regional energy-focused air quality modeling study was completed for the BLM that predicted future year 2032 concentrations based on the U.S. Environmental Protection Agency (EPA) 2016 v2 year 2032 future projections for non-oil, gas and coal related upstream and midstream operations, other anthropogenic (mobile, etc.) activities and natural

(vegetation, etc.) emissions sources while U.S. Energy Information Administration (EIA) Annual Energy Outlook (AEO) oil and gas projections were used with BLM fluid minerals specialists input to allocate new oil and gas development and production levels for each Rocky Mountain Region Basin. A copy of the reports with details and information for the 2032 Regional Modeling Study can be found online at: https://www.blm.gov/programs/air-resources/colorado

Air pollutant emissions and impacts were modeled at a 12-kilometer grid resolution for the Study and for a 12 grid cell (1,728 square kilometers) area containing the project pad and associated facilities and other nearby foreseeable oil and gas related activities not associated with the proposed action, total air pollutant emissions levels much higher than those for the proposed action were modeled for the Study essentially leaving "room" for other foreseeable new oil and gas development / operations. Specifically, for new oil and gas development years 2020-2032, there were approximately 4,806 tons of NOx and 4,685 tons of VOC modeled for year 2032 for the Study and of these totals, approximately 1,832 tons of NOx and 1,065 tons of VOC emissions were associated with new (developed post 2019) Tribal oil and gas within the 12-grid cell analysis area. Since 2019 (baseline year for "new" oil and gas for the Study), there have been approximately 66 oil and gas wells developed within the 1,728 square kilometers project analysis area; the following figure shows the 12-grid cell analysis area and locations of recent new well completions. Over the past few years, BLM Colorado has completed assessments for six other oil and gas projects within the analysis area (4 – Mancos Shale and 2 – CBM), and these nearby projects are also shown in the plot below. For this project area emissions budget analysis, it is assumed that full development along with operations of these nearby projects would occur in the accounting year 2032 although it does appear that some of the recent completions are associated with the nearby projects. Assuming that 12 new oil and gas wells (annual average over 2020 – 2025 period) are developed each year for the remaining 2026 through year 2032, the non-project related new (not yet developed) and existing (developed since 2019 through 2025) emissions plus the total annual development and production phase emissions for the six nearby projects would be approximately 1,008 tons of NOx and 425 tons of VOC for year 2032. The 2032 modeled emissions levels for the Study (as described above) are much higher than the foreseeable (upper bounds) emissions levels for the analysis area accounting for the proposed action and other oil and gas development and operations through year 2032. In addition, the Tribal (Federal) only 2032 emissions levels for the Study are much higher than the projected 2032 emissions levels for all foreseeable oil and gas. Since the Study modeled more cumulative (and Tribal only) emissions than all of the foreseeable oil and gas emissions levels for the analysis area, it is reasonable to use the BLM 2032 Modeling Study to describe potential air quality conditions and impacts for new oil and gas emissions sources. It is assumed for this conclusion that any new oil and gas related centralized point source (not on-site or connected to a specific well-pad level project) or a modification to any existing centralized facility would result in field-level emissions increases that would also fit within the modeled "budget" (not exceed the total modeled levels described above when added to all other foreseeable emissions). Note that it is assumed that full development (drilling and completion) for

the nearby six projects would all occur in the same year, likely over-estimating the field-level annual emissions for these projects.

According to modeling completed for the Study, cumulative air pollutant (including ozone) concentrations should remain below the National Ambient Air Quality Standards (NAAQS) while allowing for new Tribal oil and gas development and operations through 2032. The following figure shows BLM Regional Modeling Study predicted maximum 4th high 8-hour average cumulative ozone concentrations for year 2032. As shown in the plot, cumulative ozone concentrations would range 60-65 ppb (NAAQS: 70 ppb) for the project area. These modeled cumulative ozone concentrations levels may not accurately represent the ozone concentration levels that will occur in year 2032 but the Study suggests there would likely be an improvement when compared to the recent ozone design value levels for the local airshed.

The following figure shows modeled ozone contributions for new Tribal oil and gas through year 2032. As shown, the maximum contribution in the modeling domain occurs in the project area but is minimal at approximately 1.3 ppb (NAAQS: 70 ppb).

For the analysis areas, the Regional Modeling Study predicted circa 2032 cumulative PM2.5 annual concentrations well below the current ambient standard. Similarly, the predicted cumulative NO2 and ozone (see plot above) concentrations are well below ambient standards for the analysis area. Meaning that future AQI values would be "good" (no public health impacts) for all air pollutants for the local areas. These cumulative concentration predictions are due to emissions associated with new oil and gas development and operations as well as other anthropogenic and natural emissions sources. Cumulative modeled annual nitrogen deposition values for year 2032 are projected not to exceed the applicable federal land managers' nitrogen deposition critical loads for all Class I areas in Colorado. Modeled cumulative visibility design values in Colorado for the most impaired days are projected to be below the uniform rate of progress (acceptable) toward achieving the CAA 2064 visibility goals.

The 2032 Regional Modeling Study includes an ozone sensitivity analysis for five (5) sub-regions within the Rocky Mountain Region. An ozone sensitivity analysis using the Study's ozone source apportionment modeling was conducted for five (5) ozone monitors in the San Juan Basin (project is in the San Juan Basin). The following bar chart shows the sensitivity of ozone formation with respect to NOx (orange) and VOC (blue) emissions and concentration associated with new projected (2020 – 2032) oil and gas sources within the San Juan Basin for the top 10 modeled ozone days at a nearby ozone monitor for the Study. As shown, ozone formation at the Ignacio ozone monitor representative of the project area is typically much more sensitive to NOx emissions and concentrations than VOCs.

As shown in the table above, approximately 99 percent of the potential hazardous air pollutant and toxics emissions would be temporary and occur during the development phase. In addition to criteria pollutants, BLM modeled HAPs for the 2032 Regional Modeling Study. For the modeling grid cell (12 km resolution) containing the proposed action elements (pad, etc.), the predicted lifetime cancer risk due to cumulative (new and existing federal, non-federal and tribal) oil and gas emissions sources is expected to be less than 10 in 1,000,000 with formaldehyde having the

largest contribution of the modeled HAPs (HAPs modeling results for the 2032 Regional Modeling Study can be found here: https://www.blm.gov/content/iart/).

GHG Emissions Analysis

Activities and equipment operation under the proposed action would cause emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), the three most common greenhouse gases associated with oil and gas development. These GHG emissions would be emitted during well development and operations, and from the end-use consumption of any fluid minerals that may be produced.

The wells are estimated to remain in production for at least 30 years. Upstream emissions are estimated using operator provided data for the proposed action. The oil and gas production rates used to estimate midstream (the transport, refining, processing, storage, transmission, and distribution of produced oil and gas) and downstream (end-use) emissions are based on operator provided data specific to the proposed action and production decline profiles based on nearby wells completed within the same formations tracked over varying periods of time. Midstream emissions are assumed to be similar to the national level emissions identified by the Department of Energy's National Energy Technology Laboratory. The greenhouse gas (GHG) estimates assume that all the oil and gas production is eventually combusted in one form or another (the exact nature and/or configuration and location of that combustion apparatus is unknown and not reasonably foreseeable). See chapter 6 in the online GHG Report for details regarding midstream and downstream emissions factors (BLM 2024). The following table summarizes the estimated total life of project (approximately 30 years) GHG emissions attributable to development, operations, and production associated with the proposed 10 new wells. The "end-use" emissions assume that all produced oil and gas is eventually combusted.

Table. Estimated Life of Project GHG Emissions (metric tons)

Activity	CO_2	CH_4	N_2O	CO_2e (100-yr)	CO_2e (20-yr)
Well Development	39,235	99.21	0.963	42,454	47,683
Production Operations	33,248	531.41	0.057	49,100	77,105
Mid-Stream	462,884	6,974.02	6.360	672,446	1,039,977
End-Use	2,516,931	47.44	4.744	2,519,639	2,522,139
Total	**3,052,298**	**7,652.08**	**12.123**	**3,283,639**	**3,686,904**

* CO_2e values shown in table are calculated using IPCC AR6 GWPs.

Total GHG (as carbon dioxide equivalent: CO2e) emissions including those associated with downstream combustion (indirect) of natural gas produced for the proposed action would be very small when compared to levels that have been determined (modeled) to significantly contribute to

cumulative GHG levels. The annual average CO2e emissions for the subject project are estimated to be approximately 0.2 percent of Colorado federal oil and gas annual CO2e emissions, and the life of the project emissions (shown above) are estimated to be approximately 1.4 percent of the reasonably foreseeable (from existing federal wells, approved wells not yet developed and wells that could be developed as a result of federal leasing actions) 30-year Colorado federal oil and gas related annual CO2e emissions.

Total GHG (Carbon dioxide equivalent: CO2e) emissions including those associated with downstream combustion (indirect) of natural gas produced for the proposed action would be very small when compared to levels that have been determined (modeled) to result in significant climate change impacts. To put the annual average total direct and indirect CO2e emissions for the proposed action (approximately 109 thousand tons per year) into context, EPA's Greenhouse Gas Equivalencies Calculator (https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator) was used to describe the types and activities for the end-use emissions sources that could ultimately generate these annual emissions (approximately 77 percent of total emissions would be associated with downstream or end-use activities). The estimated project-level average annual CO2e emissions are representative approximately 14,692 homes' annual energy use, approximately 0.3 natural gas-fired power plants annual fuel use or approximately 5 million propane cylinders used for home barbeques.

As shown in the BLM Annual GHG Report (BLM 2024), according to the International Energy Outlook (IEO) reference case projections, global energy-related CO_2 emissions are projected to increase by 15 percent for the 2022 to 2050 period from about 35.7 billion metric tons CO_2 in year 2022 to about 41 billion metric tons by year 2050 (see Section 5.2). Section 5.4 of the online BLM Annual GHG Report provides total long-term foreseeable US federal fossil fuel mineral GHG emissions projections based on 2023 EIA AEO scenarios. As described in Section 5.4 in the online BLM Annual GHG Report, there are no major anticipated shifts in domestic U.S. oil and gas consumption through about 2040, but high international demand leads to continued growth in domestic production and allows the U.S. to remain a net exporter of petroleum products and natural gas through 2050 in all AEO 2023 cases.

Discussions of projected future climate scenarios are provided in Chapters 8 and 9 of the BLM Annual GHG Report with a Climate Explorer Tool embedded in Section 8.4. These chapters describe currently observed climate impacts globally, nationally, and in each state, and present a range of projected impact scenarios depending on future GHG emission levels (BLM 2024). Global climate impact modeling was completed for the annual BLM GHG Report (see Section 9.3), and it was predicted that without all projected US federal oil- and gas-related production (i.e. emissions) through year 2050 under the most aggressive 2023 AEO scenario ("High Oil Price"), the global average temperature would be approximately 0.01 degrees C cooler following the SSP119 scenario (net zero by 2050 scenario). Table 9-1 in the Annual GHG Report provides an estimate of the potential emissions associated with Federal fossil fuel authorizations in relation to global carbon budgets. Total Federal fossil fuel authorizations including coal, natural gas and oil represent approximately 1.95% of the remaining global carbon budget of 275 GtCO2 needed to limit global warming to 1.5 C.

3..3.3. *Proposed Mitigation*

Based on the information presented in this assessment, no additional air quality or GHG emissions related analysis is warranted. Likewise, no additional mitigation for air resources is necessary to support a Finding of No Significant Impacts (FONSI). The operator should comply with Tribal air pollutant emissions source reporting requirements, any applicable federal regulations and implement best management practices (reduce vehicle speeds on unpaved surfaces, reduce equipment idling, etc.) to further prevent undue and unnecessary degradation of natural resources. As described above for the proposed action, the operator plans to use utility provided electricity during the production phase for powering on-site operations. As described above, the project proponent plans to use drill rig and frac pump engines meeting non-road diesel Tier 4 emissions standards; meeting Tier 4 standards for these engines that constitute approximately 95 percent of the total project emissions would significantly reduce NOx emissions for the project and minimize local NO2 impact concerns and ozone formation contributions.

Issue 2: What are the potential impacts of the Proposed Action on geology and minerals?

3..1. Methodology and Assumptions

The project area is located within the Northern San Juan Basin (NSJB), an asymmetrical structural basin covering approximately 7,500 square miles within southwestern Colorado and northwestern New Mexico (EPA 2004). The proposed horizontal wellbores would target the Mancos Shale, which underlies the entire SUIR (Engler et al. 2014; DOE 2007). The analysis area for this EA is the Mancos Shale underlying the SUIR.

Impacts to geology and minerals are evaluated by the quantity of gas reservoir depletion and the method of well stimulation.

3..2. Affected Environment

The surficial geology within the project area consists of the San Jose Formation, which is described as brown, gray, and grayish-yellow, lenticular, medium to thick bedded, crossbedded, locally arkosic, conglomeratic to fine-grained sandstone. Red, gray, and brown sandy shale and gray to white tuff beds are also found in the San Jose Formation, which is fluvial and lacustrine in origin (Condon 1992).

The proposed horizontal wellbores would target the Mancos Shale. The Mancos Shale was deposited in a marine environment approximately 80 to 95 million years ago when the Western Interior Seaway inundated much of the continent. The Mancos Shale and its time equivalent formations are geographically widespread and found in portions of Colorado, New Mexico, Arizona, Utah, and Wyoming. The Mancos Shale underlies the entire SUIR and outcrops in the northeastern portion as well as north of the SUIR in a nearly continuous band from Pagosa Springs, Colorado to Mancos, Colorado (Engler et al. 2014; DOE 2007).

In general, the Mancos Shale consists of a thick sequence (up to 2,400 feet) of offshore marine shale interbedded with fine-grained sandstone and limestone (Condon 1992). Within the SUIR, the Mancos Shale conformably overlies and intertongues with the Dakota Sandstone. The Point Lookout Sandstone of the Mesaverde Group conformably overlies and is transitional to the Mancos Shale at its top (Ridgley et al. 2013). The Mancos Shale is located at depths ranging from 5,000 to 7,000 feet below ground surface (bgs) within the SUIR. In the project vicinity, the Mancos Shale is located at a depth of approximately 6,283 feet bgs, based on completion data from the nearby Southern Ute 32-7 #7-1 (API: 05-067-05120), a conventional well located approximately 0.3 miles south of the project area that was plugged and abandoned in 2018 (ECMC 2025).

Figure 3 depicts the surficial geology and locations of nearby oil and gas wells.

3..2.1. *Reasonably Foreseeable Future Actions*

Reasonably foreseeable actions include the continued depletion in subsurface mineral resources as ongoing oil and gas development drains the existing gas reservoirs in the NSJB.

Urban, agricultural, and industrial (e.g., oil and gas) development are planned for the region. Oil and gas production is likely to continue well into the future within the NSJB, adding to the depletion of the subsurface mineral resource, until the production of subsurface mineral resources is no longer economically feasible.

3..3. Environmental Effects

3..3.1. *Effects of the Proposed Action*

Potential impacts of the Proposed Action on geology and mineral resources include the depletion of a non-renewable source of natural gas and induced seismicity (earthquakes) resulting from hydraulic fracturing.

The Proposed Action includes the drilling of up to twelve new natural gas wells, each including one horizontal lateral. These laterals would allow the proposed wells to drain a larger gas reservoir from a single well pad than from vertical extraction methods alone. The production of gas from the Mancos Shale would represent the irretrievable commitment of the natural gas resource.

Simcoe would utilize hydraulic fracturing techniques to target Tribal trust minerals from the Mancos Shale. Hydraulic fracturing is a process used to enhance production by creating or enlarging fractures in the reservoir rocks through the injection of fluids under high pressure. Creating or enlarging fractures within the reservoir rock allows for increased communication within the reservoir and enhances the flow of oil and gas towards the wellbore. Hydraulic fracturing also bypasses any near-wellbore damage within the geologic formation. The fluids used in hydraulic fracturing are primarily composed of water, with chemicals added for a variety of purposes, including limiting the growth of bacteria and preventing corrosion of the well casing. A proppant, such as sand, is injected with the fluids in order to keep the fractures open after the stimulation process is complete.

Under normal circumstances, well stimulation by hydraulic fracturing is accompanied by small-scale, or microseismic, fracture events; however, hydraulic fracturing has the potential to induce

unwanted seismic activity (Schultz et al. 2020). Variations in geologic conditions may preclude or promote seismicity, which occurs when hydraulic fracturing increases stress and pore pressure on pre-existing faults, causing them to slip and resulting in seismicity (Verdon and Rodríguez-Pradilla 2023).

The Proposed Action activities are unlikely to result in "felt" seismic activity on the SUIR based on geologic conditions and historic observations. Geologic factors that must be present for well stimulation to result in significant earthquakes include: the presence of faults and stresses large enough to produce "felt" earthquakes; fluid migration pathways that connect the injection point to faults; and fluid pressure changes large enough to produce "felt" earthquakes (Rubinstein et al. 2015). Colorado is considered a tectonically active state and the SUIR is located in an area of moderate to low seismic hazard based on the USGS Seismic Hazard Map (USGS 2018). Faults exist in certain portions of the SUIR; however, the Colorado Earthquake and Fault Map created by the Colorado Geological Survey does not indicate the presence of any significant faults on the SUIR with displacement during the Quaternary period (Morgan and Fitzgerald 2019).

Simcoe would adhere to design features and guidelines presented in the SUIT HF Regulations to prevent induced seismicity resulting from the Proposed Action.

3..3.2. *Impacts of the Alternative B – No Action Alternative*

Under the No Action Alternative, there would be no impact to geology and minerals resulting from the Proposed Action. Reasonably foreseeable future actions would continue to impact geology and minerals as described in Section 3.2.2.1; however, the need to ensure that SUIT realizes maximum benefit from the development of non-renewable resources in an environmentally sound manner would still exist, as would Simcoe's ability to exercise its valid existing rights by developing the SUIT Trust minerals associated with its minerals lease, consistent with the lease's terms, conditions, and stipulations, through drilling and producing oil and gas wells.

3..3.3. *Proposed Mitigation*

Simcoe would adhere to design features in their drilling plan to mitigate impacts to geology and mineral resources, such as:

- The Proposed Action includes directional drilling for each proposed gas well, which would mitigate surface impacts by allowing the proposed wells to drain a larger gas reservoir from a single well pad than by vertical extraction methods.
- The implementation of appropriate design features, adherence to SUIT HF Regulations, and proper operation of the wells would mitigate impacts to subsurface geology and mineral resources, including reducing the potential for induced seismicity.

Issue 3: Would groundwater quantity or quality be impacted by drilling and completion of the proposed wells?

3..1. Methodology and Assumptions

Groundwater occurs in many of the geologic formations within the SUIR, but the principal aquifers are found in alluvial deposits, Tertiary formations, and shallow Cretaceous formations. The deep Cretaceous and pre-Cretaceous formations usually have poor quality, low yields, and

uneconomic drilling depths, precluding them from being viable water supply sources (USDI 2002). The analysis area for this EA is the groundwater in the vicinity of the project area.

Impacts to groundwater resources are evaluated by the potential impacts to quantity and quality of groundwater resources in the project area.

3..2. Affected Environment

Groundwater quantity and quality is variable and influenced by geology, recharge conditions, and anthropogenic factors (Brogden et al. 1979). The principal recharge sources within the SUIR are precipitation and irrigation. Continued population growth has increased constraints on groundwater resources, and a shift from agricultural to residential land use has resulted in a higher demand for groundwater while reducing the amount of recharge available from irrigation sources (USDI 2002; Robson and Wright 1995). Periods of limited precipitation have also reduced recharge to groundwater aquifers.

Groundwater produced from alluvial and shallow bedrock aquifers is primarily used for domestic purposes within the SUIR. Other uses include commercial, stock, irrigation, and industrial purposes; however, water quality and quantity limit these uses within the SUIR. Confining units of low permeability shale within Tertiary and Cretaceous formations commonly separate these aquifers from the underlying oil and gas producing zones, which are generally located at depths of 3,000 feet bgs or greater (USDI 2009; 2002). Aquifers are recharged at their respective outcrops and/or from vertical percolation through overlying formations where significant confining units are not present. The overall direction of groundwater flow on the SUIR is to the south, parallel to the direction of surface streams.

“Usable water,” as defined in CFR 3160-5, generally includes water containing up to 10,000 parts per million (ppm) of total dissolved solids (TDS), and is found in alluvial deposits, Tertiary formations, and shallow Cretaceous formations within the SUIR. The presence of hydrocarbons can exclude certain zones from being considered usable water. Groundwater in the project area is generally produced from alluvial and shallow bedrock aquifers. Confining units of low permeability shale within Tertiary and Cretaceous formations commonly separate shallow groundwater aquifers from the underlying oil and gas producing zones (USDI 2002).

Limited groundwater is found in the fractured rock and interbedded sandstones of the Mancos Shale, although the depth, quantity, and quality of this water often make the formation unsuitable for water wells. Shale aquifers are generally low permeability formations and are used only when accessible sandstone units are not present. In areas where shallow water wells are completed in the Mancos Shale near the outcrop, the formation typically produces a sodium-bicarbonate water type. TDS concentrations within the Mancos Shale range from 100 to 7,600 ppm (Apodaca 1998). Like other Cretaceous formations, the Mancos Shale is not used for domestic purposes where it is located at depth and contains hydrocarbons. Groundwater produced from the Mancos Shale in shallow areas can exceed recommended drinking water standards for chloride, iron, nitrate, selenium, sulfate, and TDS (USDI 2002).

Rainfall and snowmelt are the principal sources of natural recharge to aquifers in the SUIR. However, these sources generally supply only small volumes of water to the aquifers because annual precipitation is minimal, and runoff, evaporation, and transpiration divert much of the water before it can percolate to sufficient depth to recharge an aquifer. In areas where irrigated

lands are present, a significant source of recharge occurs seasonally from irrigated fields and leakage from unlined canals and ditches (Stonestrom et al. 2004; Robson and Wright 1995).

Based on a review of the Colorado Division of Water Resources database, there are two water well permits within one mile of the proposed wells (DWR 2025). Of those, both water wells have been constructed and are permitted for domestic use. Their depths range from 220 feet to 350 feet bgs, indicating the depth of groundwater in the project area. A water resources map is included as Figure 4.

3..2.1. *Reasonably Foreseeable Future Actions*

Reasonably foreseeable environmental trends include reduced recharge to groundwater aquifers due to drought, climate change, and conversion of agricultural to residential land, and impacts to groundwater quality and quantity as a result of continued human development.

Urban, agricultural, and industrial (e.g., oil and gas) development are planned for the region. Demands for groundwater are expected to increase as a result of continued development and human population growth. The drilling of additional water wells for residential and industrial use may increase demands to groundwater aquifers, while the conversion of agricultural into residential lands simultaneously limits aquifer recharge from irrigation. Other resource management practices, such as surface water management, may also impact groundwater quality and quantity in the project vicinity.

3..3. Environmental Effects

3..3.1. *Effects of the Proposed Action*

Potential groundwater quality impacts are generally related to accidental spills and releases and unintentional fluid migration and communication between groundwater and zones containing oil, gas, or water of lesser quality. Potential groundwater quantity impacts are related to aquifer depletions resulting from pumping of groundwater for production purposes or subsequent use during drilling and completion activities.

Spills and Releases

Migration of fluids from surface spills into shallow aquifers could cause moderate to high, short-term impacts to groundwater resources in the project area. Spills may result from the release of construction, drilling, completion, or production fluids on the well pad or from gas or produced water released from pipeline leaks.

Drilling

Impacts to groundwater quality could occur if drilling fluids or other hazardous substances migrate into groundwater. Drilling fluid, or “mud,” is used to cool and lubricate the bit, return drill cuttings to the ground surface, seal and stabilize the walls of the wellbore, and keep underground pressures stable. Drilling fluids can be freshwater-based, oil-based, or air. The fluid-based muds can contain clays, friction reducers, fluid loss control materials, weighting agents, or other substances that enhance the drilling process.

Well Construction – Casing and Cementing

Groundwater quality impacts could occur if adequate wellbore integrity is not achieved through the casing and cementing program. Fluid migration along the wellbore could result in communication between two formations and/or water bearing zones, resulting in moderate to high, short- to long-term effects, depending on the geologic characteristics of the aquifer impacted. This communication could degrade groundwater quality due to the introduction of drilling, completion, or production fluids to shallow groundwater aquifers that may be used for domestic water well supply.

Hydraulic Fracturing

The proposed Mancos Shale wells would be stimulated using hydraulic fracturing as described in Chapter 2. Concern exists that hydraulic fracturing could create groundwater impacts through a variety of mechanisms, including spills at the ground surface (analyzed above), depletion of groundwater aquifers and surface streams caused by production of groundwater for subsequent use in hydraulic fracturing, or the introduction of fluids (hydraulic fracturing fluids or produced water) into groundwater resources through wellbore failure and other subsurface pathways. Subsurface pathways that could act as conduits for fluid migration into groundwater resources include the following:

- Improperly constructed production wells located near the hydraulic fracturing treatment;
- Improperly plugged and abandoned wells located near the hydraulic fracturing treatment;
- Fractures induced by the hydraulic fracturing process; and
- Natural faults and fractures.

Water Usage During Hydraulic Fracturing – Approximately 1,553.4 acre-feet of freshwater would be used to complete hydraulic fracturing of all twelve wells. Water would be sourced from an approved POD northeast of the project area along the Los Piños River.

Wellbore Failure – Hydraulic fracturing could result in groundwater impacts if wellbore failure occurred during the hydraulic fracturing process and allowed for communication between the wellbore and groundwater aquifers. Factors that can cause wellbore failure include improper well design, construction flaws, damage during drilling or completion, worn out well components, and unexpected geologic conditions. Wellbore failure during the hydraulic fracturing process is unlikely based on present-day construction standards and compliance with the SUIT HF Regulations.

Frac Hits/Wellbore Collision – Groundwater resources could be impacted if hydraulic fracturing creates communication between the target shale formation and nearby improperly constructed production wells or plugged and abandoned wells. These well communication scenarios are known as “frac hits” and can occur when the hydraulic fracturing treatment is in close proximity to an existing well that penetrates the same formation, or a deeper formation, and has a geological connection to the well undergoing stimulation. If the existing well is unable to withstand the stress resulting from the nearby hydraulic fracturing operation, certain well components may fail and this could result in the migration of hydraulic fracturing fluids and/or production fluids into shallow groundwater aquifers or to the ground surface near the existing well.

On the SUIR, frac hits have the greatest potential to occur if improperly constructed conventional wells (producing or plugged and abandoned) are near the hydraulic fracturing treatment and penetrate zones deeper than the target shale formation. Fruitland Formation oil and gas wells are less likely to be involved in a frac hit because they are typically shallower than the target shale formations. For the proposed Mancos Shale wells, the existing wells of concern that pose the greatest risk of a frac hit would be wells completed in the Mancos Shale, the Dakota Sandstone, or other deeper formations. Figure 3 depicts the locations and completion formation of nearby oil and gas wells.

The presence of other oil and gas wells near hydraulic fracturing operations can increase the potential for hydraulic fracturing fluids to move to groundwater resources. This fluid movement is most common when multiple wells are drilled from the same surface location and when wells are spaced less than 1,100 feet apart. Plugged and abandoned wells near a well undergoing hydraulic fracturing can also provide a pathway for fluid movement to groundwater resources if those wells were not properly plugged or if the plugs and cement have degraded over time (EPA 2016).

Fracture Growth During Hydraulic Fracturing – Groundwater resources could be impacted if fractures created during the hydraulic fracturing process extend into shallow groundwater aquifers; however, the potential for this scenario is minimal based on proper design of hydraulic fracturing treatments and geologic conditions. Hydraulic fracturing treatments are designed to control fracture propagation and ensure that the fractures remain within the target formation without extending into adjacent formations (DOE 2011; 2009). Limiting fracture growth to the target formation is beneficial to oil and gas operators from an environmental and economic standpoint. Fracturing beyond the target formation would require additional time and materials, resulting in extra costs to the operator at no additional production benefit (DOE 2011). Fracturing into a water-bearing zone could also introduce additional water to the production zone, resulting in extra costs associated with separation and disposal operations (DOE 2009).

The Shale Gas Production Subcommittee of the U.S. Department of Energy's Secretary of Energy Advisory Board issued a report in 2011 that summarized environmental impacts associated with hydraulic fracturing and one finding of the report states that "Regulators and geophysical experts agree that the likelihood of properly injected fracturing fluid reaching drinking water through fractures is remote where there is a large depth separation between drinking water sources and the producing zone" (DOE 2011). On the SUIR, several thick, low permeability formations are located between the target shale formations and shallow drinking water aquifers. These formations act as confining layers or barriers that minimize fluid migration.

Natural Faults and Fractures – Natural faults and fractures can act as preferential pathways for subsurface fluid migration or geologic barriers that prohibit such migration. With respect to shale development, concern exists that natural faults and fractures could connect the target shale formations to shallow geologic formations, thereby contaminating drinking water aquifers. However, the potential for this scenario is low based on the mechanisms associated with fluid flow through fractures and proper geologic review prior to hydraulic fracturing.

Chemicals Used During Hydraulic Fracturing – The composition of hydraulic fracturing fluids is well-specific and the exact formulation is sometimes not determined until the stimulation occurs.

Hydraulic fracturing fluids are predominately composed of water with sand and other additives that enhance the hydraulic fracturing process. Other additives used in hydraulic fracturing fluids include but are not limited to friction reducers to allow for pumping at a higher rate and reduced pressure, biocides to prevent bacterial growth, oxygen scavengers and stabilizers to prevent corrosion of the steel pipes, and acids that remove drilling mud damage around the wellbore (DOE 2009).

Fluid Management During Hydraulic Fracturing – Proper management of flowback fluids is critical to the protection of groundwater resources during shale development. Spills or improper storage and disposal of flowback fluids have the potential to impact groundwater resources under certain geologic conditions.

Wastewater Disposal

Produced water would be transported via pipeline from the location to the Salvador Water Transfer Station then disposed of in existing disposal wells. Water could be trucked to the Salvador Water Transfer Station as a secondary option, if needed. Disposal wells are drilled into formations that lack a usable water supply, as their drilling depths make extraction infeasible for domestic purposes. The effects of produced water injection include increased pressures in the formation and the potential for unintended communication between the target formation and other formations, which may affect groundwater resources.

Abandonment

Groundwater impacts resulting from the plugging and abandonment of the proposed shale wells could occur if production zones or other zones containing oil, gas, or water of lesser quality, are not adequately sealed to prevent the migration of fluids after abandonment.

3..3.2. *Effects of the No Action Alternative*

Under the No Action Alternative, there would be no impact to groundwater resources resulting from the Proposed Action. Reasonably foreseeable future actions would continue to impact groundwater quality and quantity as described in Section 3.3.2.1.

3..3.3. *Proposed Mitigation*

Simcoe would adhere to design features in their drilling plan to mitigate impacts to ground water resources, such as:

Spills and Releases

Proper storage of fluids, including the use of steel tanks, berms, secondary containment, liners, and leak detection, would minimize the potential for spills and releases on the well pad to impact groundwater resources. If spills do occur, notification should be made to the appropriate entities in accordance with the *Exploration & Production Operator's Compliance Manual for Energy Development Projects on the Southern Ute Indian Reservation*. Notification to the National Response Center, Environmental Protection Agency, and/or BLM may also be necessary depending on the nature of the spill. Reporting of spills would comply with the BLM *Notice to Lessees NTL – 3A; Reporting of Undesirable Events*. The BLM Gold Book also provides guidelines for pollution control and spill prevention. Soil and/or water sampling might be

necessary in order to characterize spills and implement the appropriate approach to monitoring and/or remediation.

Drilling

Wellbore conditions usually limit drilling fluids to the immediate vicinity of the wellbore (within a few feet) and impacts to groundwater are not substantial based on the relatively small area affected (USDI 2002). Freshwater-based drilling fluid or compressed air is typically used to drill the upper portion of the well that penetrates shallow drinking water aquifers. When drilling through high permeability zones, fluid loss control materials are used to seal the wellbore by creating a thin mud cake that prevents fluid loss into groundwater (USDI 2002). A review of site-specific geology during the APD stage also minimizes the potential for groundwater impacts by identifying usable water zones and/or zones of increased fracturing and faulting.

Well Construction – Casing and Cementing

No impact to usable groundwater bearing formations is anticipated with the implementation of BLM mandated cementing practices designed to safeguard shallow usable aquifers. The surface casing shoe is set below known aquifers yielding usable water and then the casing annulus is cemented to the ground surface. Subsequent production casings are also cemented from the producing horizon to the surface casing shoe. Additionally, due to the casings and the over and underlying confining formations, impacts are unlikely from vertical movement of groundwater.

The potential for impacts to groundwater resources would be minimized through appropriate design and implementation of the casing and cementing program to ensure wellbore integrity. The casing and cementing program is designed to meet the BLM Onshore Order #2 requirements. Surface casing would be cemented to surface and a cement bond log (CBL) or temperature log would be run to determine the top of casing if cement is not returned to surface. Remedial cementing would be conducted as needed to circulate cement to the surface. The production casing would also be cemented to surface and a CBL would be run in the production casing string prior to completion activities. The steel casing and adequate cement bonding would minimize the potential for unintentional communication between aquifers and the migration of fluids along the wellbore.

Wellbore integrity has generally improved due to advancements in construction techniques, and new wells are less likely to pose a threat to groundwater than old wells (Kiran et al. 2017; Bachu et al. 2014). On the SUIR, wells are constructed in compliance with BLM Onshore Order #2 (43 CFR 3160) and SUIT HF Regulations (SUIT 2016). These regulations outline minimum performance standards with respect to casing and cementing programs.

Both sets of regulations require that operators achieve zonal isolation by setting steel casing and cement that act as barriers to fluid migration. Surface and intermediate casings must be cemented from the bottom of the casing to the ground surface to create a continuous column of cement that maximizes groundwater protection. Centralizers are used to center the casing in the middle of the wellbore so that cement can be placed in a continuous 360-degree annulus between the casing and the wellbore. The regulations also include restrictions with respect to “waiting on cement” drying times and compressive strength (SUIT 2018).

An oil and gas well with insufficient mechanical integrity can allow unintended fluid movement, either from the inside to the outside of the well or vertically along the outside of the well. These pathways can result in groundwater impacts if hydraulic fracturing fluids reach groundwater.

Impacts on groundwater resources can also occur if gases or liquids released from the targeted rock formation or other formations during hydraulic fracturing travel along these pathways to groundwater. These pathways can exist because of inadequate well design or construction or can develop over the well's lifetime. The potential for hydraulic fracturing fluids to reach groundwater resources is also related to the fracture network created during hydraulic fracturing. Because fluids travel through the newly created fractures, the location of these fractures relative to groundwater resources can affect the frequency and severity of potential impacts on groundwater resources (EPA 2016).

Hydraulic Fracturing

Wellbore Failure – The SUIT HF Regulations require pressure testing of the production and intermediate casings prior to hydraulic fracturing to evaluate the casing performance under conditions anticipated to be encountered during well stimulation (i.e., increased pressures). Bradenhead annulus pressures must be monitored during the hydraulic fracturing process to ensure isolation and identify any potential communication between the production casing and surface casing as soon as possible. If an intermediate casing is installed, the annulus between the intermediate casing and the production casing must also be monitored. These practices, in combination with the strict regulatory guidelines associated with well construction, minimize the potential for wellbore failure during the hydraulic fracturing process (SUIT 2016).

Frac Hits/Wellbore Collision – The potential for frac hits is minimized through review of offset wellbores prior to drilling and completion operations. The SUIT HF Regulations require that operators perform an "anti-collision" evaluation of all nearby wellbores within 150 feet and notice must be given to the relevant offset operators prior to drilling. The HF Regulations also include fracture stimulation setbacks that prohibit any portion of the hydraulic fracturing treatment interval to be within 150 feet of another operator's existing wellbore without the operator's written consent (SUIT 2016). BLM Onshore Order #1 (43 CFR 3160) requires that operators identify all existing wells (producing or plugged and abandoned) within a 1-mile radius of the proposed well and submit the information with the APD.

Fracture Growth During Hydraulic Fracturing – Geologic barriers minimize the potential for hydraulic fracturing to create fractures that would extend into groundwater resources. The proposed wells would be drilled into the Mancos Shale, which, based on the drilling logs from the nearby Southern Ute 32-7 #7-1 (API: 05-067-05120), is approximately 6,283 feet bgs in the project vicinity. The exact depth to groundwater in the project area is unknown, but groundwater in the project area is likely found at 220 feet bgs, leaving over 6,000 feet of separation between groundwater resources and the Mancos Shale (DWR 2025). Additionally, two thick, Cretaceous, impermeable shale layers, the Kirtland Shale and the Lewis Shale, are located between the Mancos Shale and groundwater resources. The Kirtland Shale is approximately 730-1,130 feet thick and the Lewis Shale varies from 500-2,400 feet thick in the project area (Condon 1992). Tertiary sediment overlaying the shale formations also contains some shale.

Natural Faults and Fractures – Simcoe would conduct a thorough geologic review of the targeted portion of the Mancos Shale prior to hydraulic fracturing to limit the potential for natural faults and fractures that can act as preferential pathways.

Water Usage During Hydraulic Fracturing – The use of produced water during drilling and completion activities would not create additional impacts to groundwater quality or quantity. Additional water would not be produced specifically for use in shale development. Instead,

produced water already extracted for oil and gas development purposes would simply be put to subsequent use during shale development. Additional surface water depletions would not occur as a result of this subsequent use.

Chemicals Used During Hydraulic Fracturing – The SUIT HF Regulations require that operators disclose information regarding chemicals used in the hydraulic fracturing treatment within 120 days of the hydraulic fracturing treatment. This information can be used by regulators and medical professionals during emergency and environmental response situations.

Fluid Management During Hydraulic Fracturing – The SUIT HF Regulations require the use of tanks for all fluids recovered between the commencement of hydraulic fracturing operations and approval of a produced water disposal plan. Tanks must be rigid, enclosed, or netted and screened above-ground tanks. Lined pits are allowed only upon approval in special circumstances (SUIT 2016). Additionally, operators must manifest all transfers of fluids to and from the hydraulic fracturing location for record keeping purposes and emergency response situations.

Wastewater Disposal

The U.S. Environmental Protection Agency regulates the manner in which produced water is disposed into injection wells by limiting injection pressures and volumes in an effort to avoid groundwater impacts and induced seismicity.

Abandonment

The potential for groundwater impacts resulting from the plugging and abandonment of the proposed shale wells is minimal considering present-day methods for abandoning wellbores. Plugging and abandonment associated with the proposed shale development would be conducted in compliance with BLM Onshore Order #2 which requires the isolation and protection of zones containing usable water. Cement plugs, or bridge plugs, are placed in the wellbore to cover all open perforations. An additional cement plug is placed at the shoe of the surface casing and a surface plug of at least 50 feet is placed across all annuluses with the top of the plug placed as near to the casing cutoff point as possible. Each of the intervals between plugs is filled with mud to exert sufficient hydrostatic pressure considering the formation pressures encountered while drilling. These techniques would minimize the potential for any fluid migration from an oil and gas-bearing zone, or zone containing water of lesser quality, into shallow groundwater resources.

CHAPTER 4. PUBLIC INVOLVEMENT, CONSULTATION AND COORDINATION

Public Involvement

The BLM TRFO posted a notice of the Proposed Action on BLM's ePlanning website on January 26, 2026 to notify the public of the Proposed Action. No comments were received.

Consultation and Coordination

Table 4.1 identifies the persons, agencies, and organizations that were consulted for the purposes of completing this EA.

Table 4.1. List of all Persons, Agencies, and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Aran Johnson, SUIT WRMD	Cooperating Agency/Entity with jurisdiction by law over, and special expertise in, subject matter of the EA (40 CFR 1501.6 and 1508.5; 43 CFR 46.225 and 46.230).	Reviewed Biological Assessment
SUIT Department of Natural Resources: Lands Division, Range, Environmental Programs Division, and Forestry Division	Cooperating Agency/Entity with jurisdiction by law over, and special expertise in, subject matter of the EA (40 CFR 1501.6 and 1508.5; 43 CFR 46.225 and 46.230).	SUIT representatives from various departments were involved with the process including BA review, identification of issues, and impact analysis review. Comments on the entire draft EA were solicited from the Tribe DATE to DATE. Tribal representatives provided comments to the BLM and those comments were addressed within the EA.
Priscilla Bancroft, Superintendent, United States Department of Interior Bureau of Indian Affairs Southwest Region	Cooperating Agency/Entity with jurisdiction by law over, and special expertise in, subject matter of the EA (40 CFR 1501.6 and 1508.5; 43 CFR 46.225 and 46.230).	The BIA Southwest Region (Albuquerque, New Mexico) Division of Environmental, Safety, and Cultural Resources Management reviewed and evaluated the Proposed Action.

CHAPTER 5. LIST OF PREPARERS

The following individuals aided in the preparation of this document (Table 5.1).

Table 5.1. List of Preparers

Name	Organization and Title	Area of Responsibility
Jaime DeMarco	BLM TRFO Natural Resource Specialist/Project Lead	Technical Coordination & Quality Control of Document
Randi Lupardus	BLM TRFO Planning and Environmental Specialist	NEPA Review
Jeffrey Seebach	BLM TRFO Hydrologist	Groundwater Resources Review
Forrest Cook	BLM Colorado State Office Air Quality Specialist	Air Quality and GHGs
Kyle Siesser	Cottonwood Consulting LLC Principal/Geologist	All
Hannah Ertl	Contractor	All

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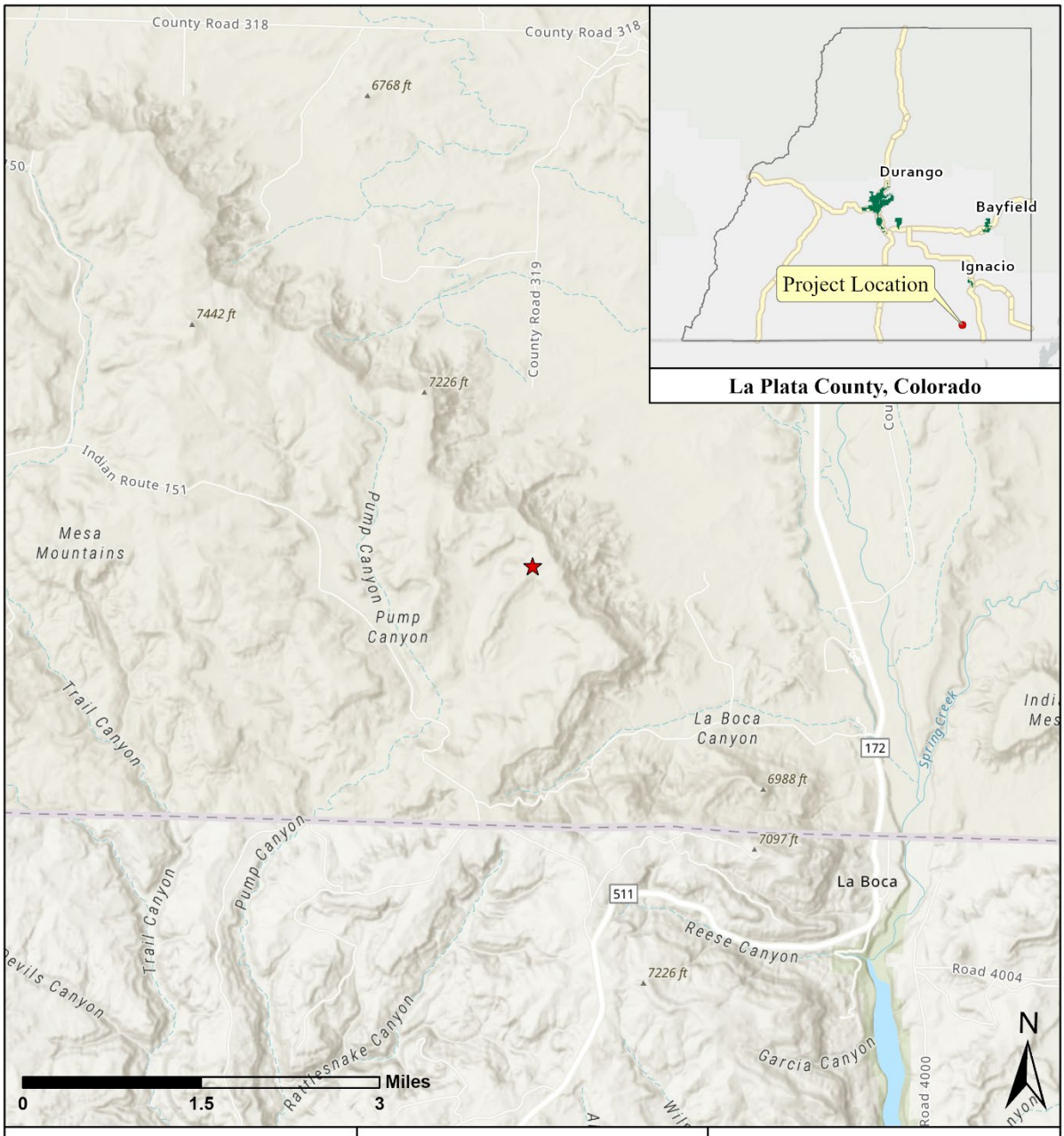
APPENDIX A: MAPS AND FIGURES


County Road 318
County Road 318
6768 ft
7442 ft
County Road 319
7226 ft
Indian Route 151
Mesa Mountains
Pump Canyon
Pump Canyon
Trail Canyon
La Boca Canyon
172
Spring Creek
6988 ft
7097 ft
Pump Canyon
Trail Canyon
511
La Boca
Reese Canyon
7226 ft
Road 4004
Garcia Canyon
Road 4000
Rattlesnake Canyon
N
Miles
0
1.5
3
Durango
Bayfield
Ignacio
Project Location
La Plata County, Colorado
Legend
Project Location
Cottonwood CONSULTING
Mapping by: H. Ertl, 12/18/2025
Coordinate System:
NAD 1983 UTM Zone 13 N
Section 7 T32N R7W and
Section 8 T32N R8W, NMPM
Figure 1
Project Vicinity Map
Mesa Mountain Pad 3
Simcoe LLC

Legend

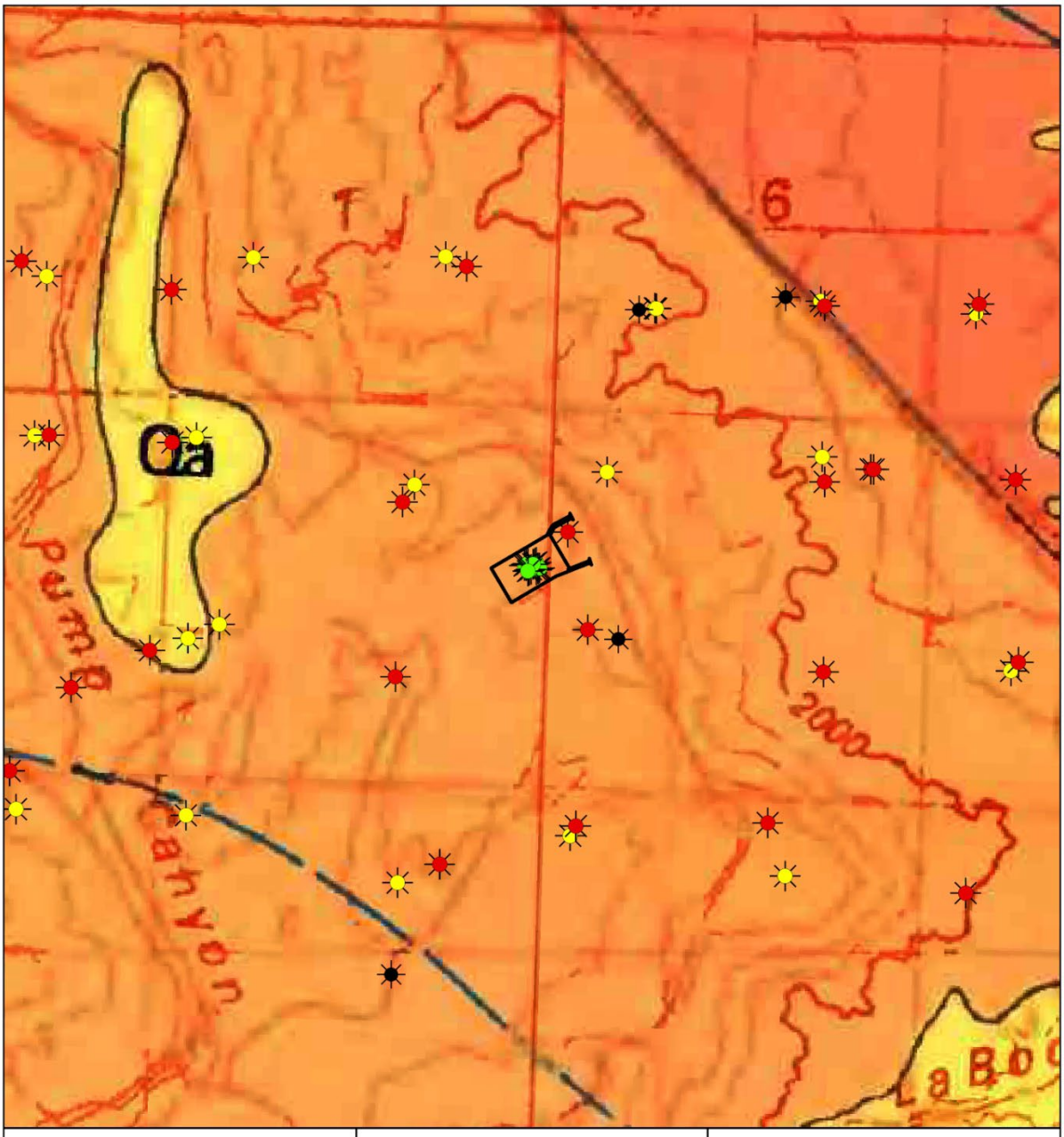
- Proposed Wells
- Well Pad
- Construction Zone
- Topsoil Storage
- Access Roads
- Oil & Gas Well

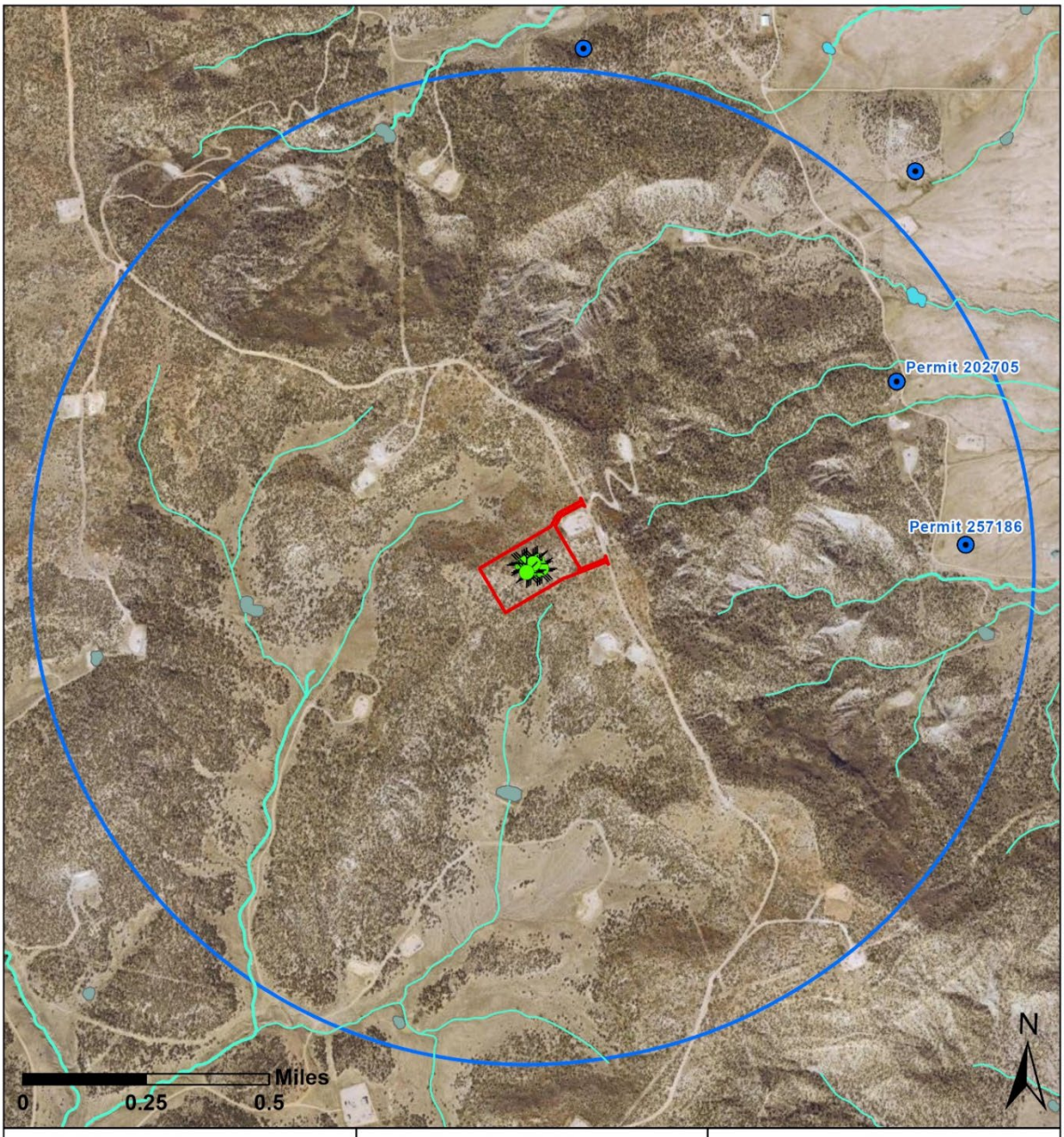
Cottonwood CONSULTING

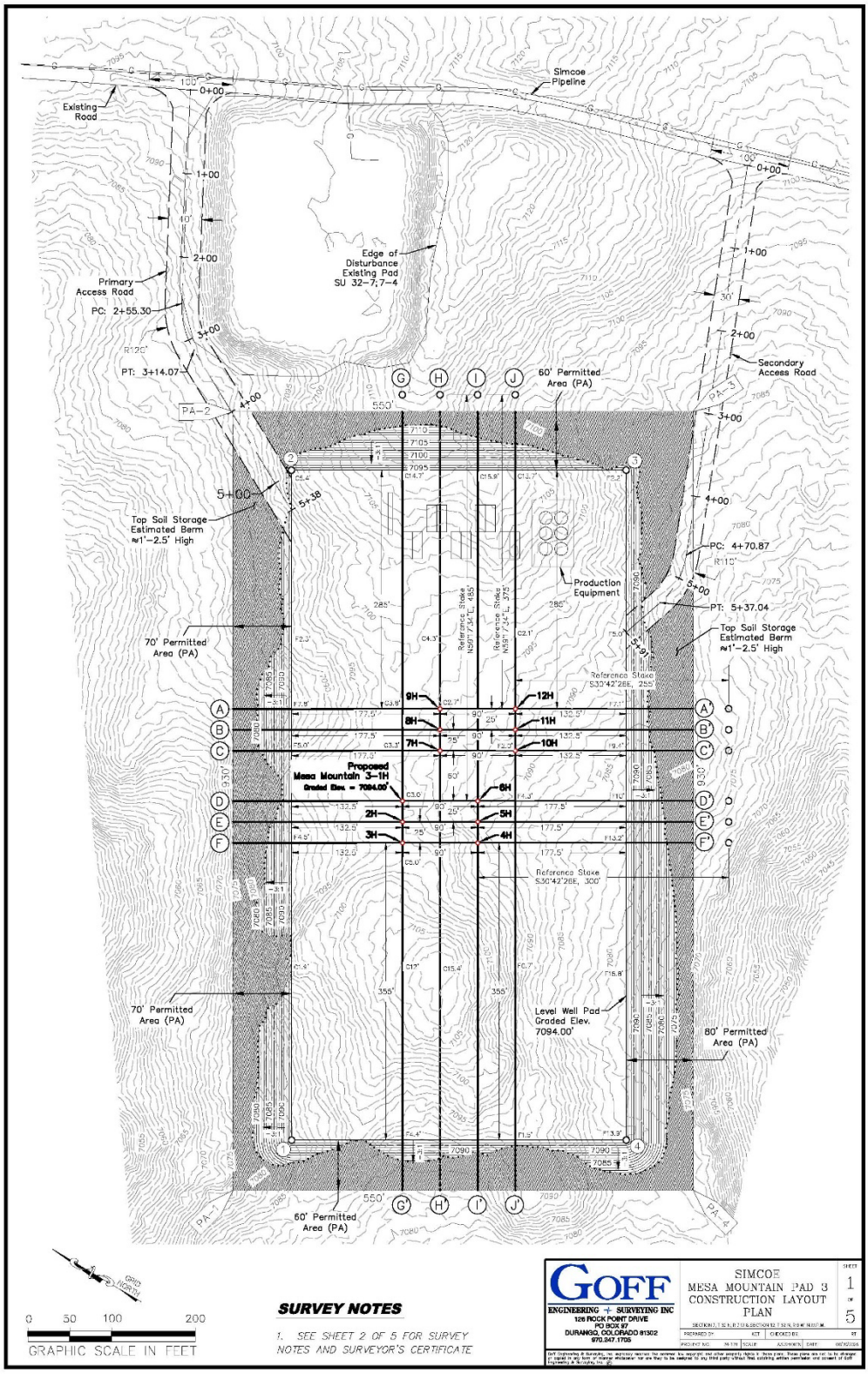
Mapping by: H. Ertl, 12/18/2025
Coordinate System:
NAD 1983 UTM Zone 13 N

Section 7 T32N R7W and
Section 8 T32N R8W, NMPM

Figure 2
Project Area Map
Mesa Mountain Pad 3
Simcoe LLC


T
6
Qa
Pump
Canyon
2000
Legend
Project Area
Proposed Well
Conventional Well
CBM Well
P&A Well
Surficial Geology
Qa; Alluvium
Tsa; San Jose and Animas Formation, undivided
Tsj; San Jose Formation
Cottonwood
CONSULTING
Mapping by: H. Ertl, 12/28/2025
Coordinate System:
NAD 1983 UTM Zone 13 N
Section 7 T32N R7W and
Section 8 T32N R8W, NMPM
Figure 3
Geology Map
Mesa Mountain Pad 3
Simcoe LLC


Permit 202705
Permit 257186
Miles
0
0.25
0.5
N
Legend
Proposed Wells
Project Area
1 Mile Buffer
Water Well
NWI Wetlands
Freshwater Emergent Wetland
Freshwater Pond
Riverine
Cottonwood CONSULTING
Mapping by: H. Ertl, 12/28/2025
Coordinate System:
NAD 1983 UTM Zone 13 N
Section 7 T32N R7W and
Section 8 T32N R8W, NMPM
Figure 4
Water Resources Map
Mesa Mountain Pad 3
Simcoe LLC


Simcoe Pipeline
Existing Road
Edge of Disturbance Existing Pad SU 32-7;7-4
Primary Access Road
PC: 2+55.30
PT: 3+14.07
Secondary Access Road
60' Permitted Area (PA)
Top Soil Storage Estimated Berm ≈1'-2.5' High
PC: 4+70.87
PT: 5+37.04
Production Equipment
70' Permitted Area (PA)
Proposed Mesa Mountain 3-1H Graded Elev. = 7094.00'
9H
8H
7H
12H
11H
10H
6H
5H
4H
3H
2H
Reference Stake S30°42'26E, 300'
Level Well Pad Graded Elev. 7094.00'
80' Permitted Area (PA)
PA-1
PA-2
PA-3
PA-4
GRAPHIC SCALE IN FEET
SURVEY NOTES
1. SEE SHEET 2 OF 5 FOR SURVEY NOTES AND SURVEYOR'S CERTIFICATE
GOFF
ENGINEERING + SURVEYING INC
126 ROCK POINT DRIVE
PO BOX 87
DURANGO, COLORADO 81302
970.247.1705
SIMCOE
MESA MOUNTAIN PAD 3
CONSTRUCTION LAYOUT PLAN
SHEET 1 OF 5

EARTHWORKS
CUT: 43,206 CUBIC YARDS
FILL: 38,413 CUBIC YARDS
NET CUT: 4793 CUBIC YARDS
TOPSOIL (4" REMOVED): APPROXIMATELY 4706 CUBIC YARDS CUBIC YARDS
NET IMPORT: 0.00 CUBIC YARDS

EXISTING PAD SIZE: 0.000 ACRES
PROPOSED EXPANSION SIZE: 0.000 ACRES
LEVEL PAD SIZE: 7.344 ACRES
TOTAL DISTURBED AREA: 9.075 ACRES
PERMITTED AREA: 11.750 ACRES

3–1H (Proposed)
Lat – N37.031827572
Long – W107.658821253

3–2H (Proposed)
Lat – N37.031791157
Long – W107.658893854

3–3H (Proposed)
Lat – N37.031754741
Long – W107.658966455

3–4H (Proposed)
Lat – N37.031545198
Long – W107.658802938

3–5H (Proposed)
Lat – N37.031581613
Long – W107.658730337

3–6H (Proposed)
Lat – N37.031618029
Long – W107.658657736

3–7H (Proposed)
Lat – N37.031810198
Long – W107.658565252

3–8H (Proposed)
Lat – N37.031846614
Long – W107.658492651

3–9H (Proposed)
Lat – N37.031883030
Long – W107.658420049

3–10H (Proposed)
Lat – N37.031600655
Long – W107.658401736

3–11H (Proposed)
Lat – N37.031637069
Long – W107.658329135

3–12H (Proposed)
Lat – N37.031673485
Long – W107.658256533

SURVEY NOTES

1. BEARING BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN DATUM OF 1983, COLORADO STATE PLANE COORDINATE SYSTEM, SOUTH COLORADO, ZONE 0503.
2. ELEVATION BASIS FOR THIS SURVEY IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID18).
3. CONSTRUCTION CUT/FILL, AREA, AND VOLUME CALCULATIONS ARE BASED ON LIDAR DATASET PROVIDED BY GOFF ENGINEERING & SURVEYING. DATA WAS COLLECTED NOVEMBER 2024.
4. CONSTRUCTED SLOPES SHALL BE BUILT 3:1.
5. CONSTRUCTION SHALL ADHERE TO ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
6. DETAILED CONSTRUCTION SPECIFICATIONS PROVIDED IN SCOPE OF WORK.
7. ACTUAL SLOPE AND DIRECTION OF DRAINAGE WILL BE FIELD FIT.

SURVEYOR'S CERTIFICATE

I, ROBERT L. TRUDEAUX, BEING A PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAT WAS MADE UNDER MY DIRECT SUPERVISION AND THAT THIS PLAT ACCURATELY REPRESENTS THIS SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

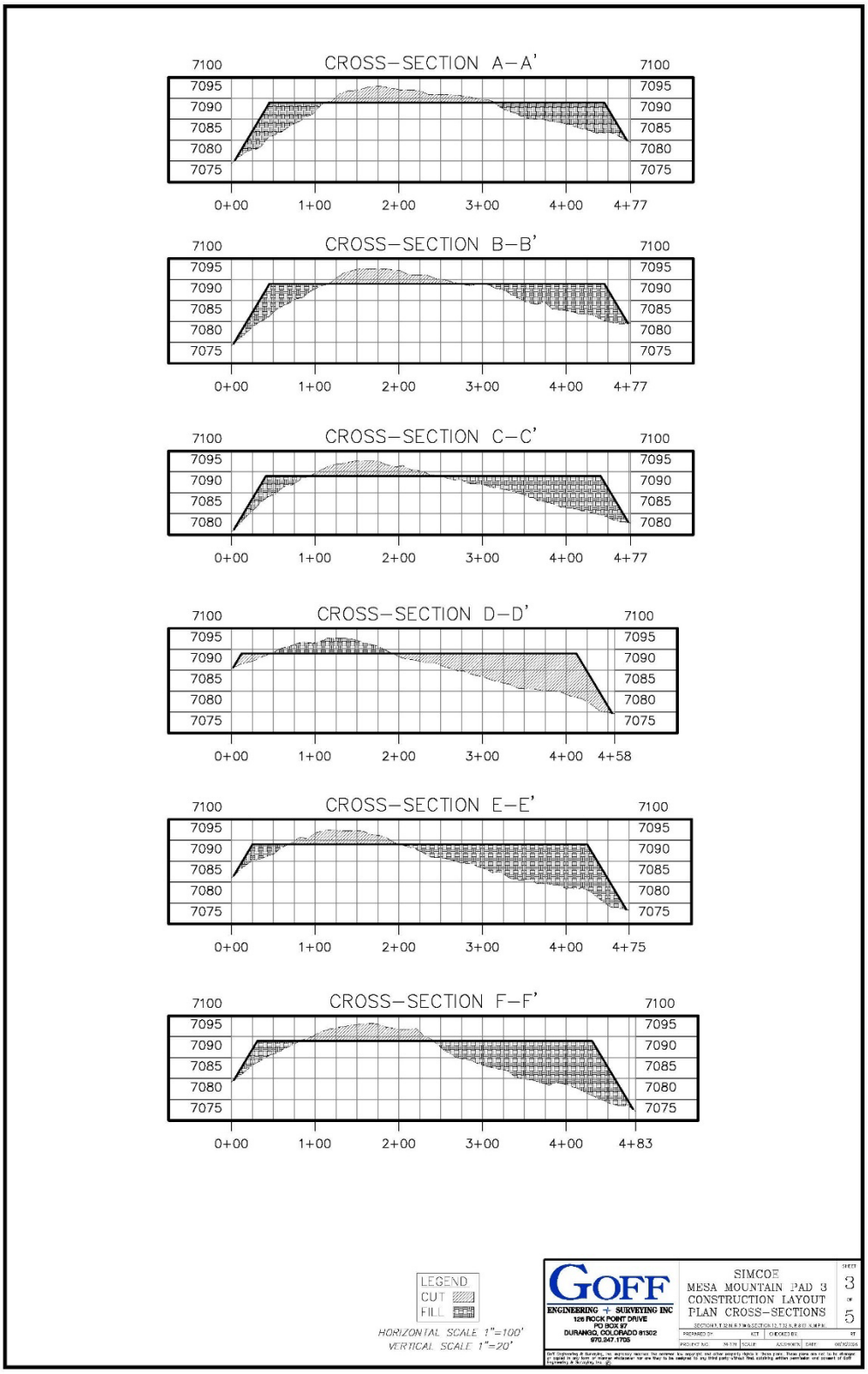
COLORADO LICENSED
ROBERT L. TRUDEAUX
38001
PROFESSIONAL LAND SURVEYOR

PRELIMINARY

GOFF
ENGINEERING + SURVEYING INC
126 ROCK POINT DRIVE
PO BOX 87
DURANGO, COLORADO 81302
970.247.1705

SIMCOE
MESA MOUNTAIN PAD 3
CONSTRUCTION LAYOUT PLAN

SHEET 2 OF 5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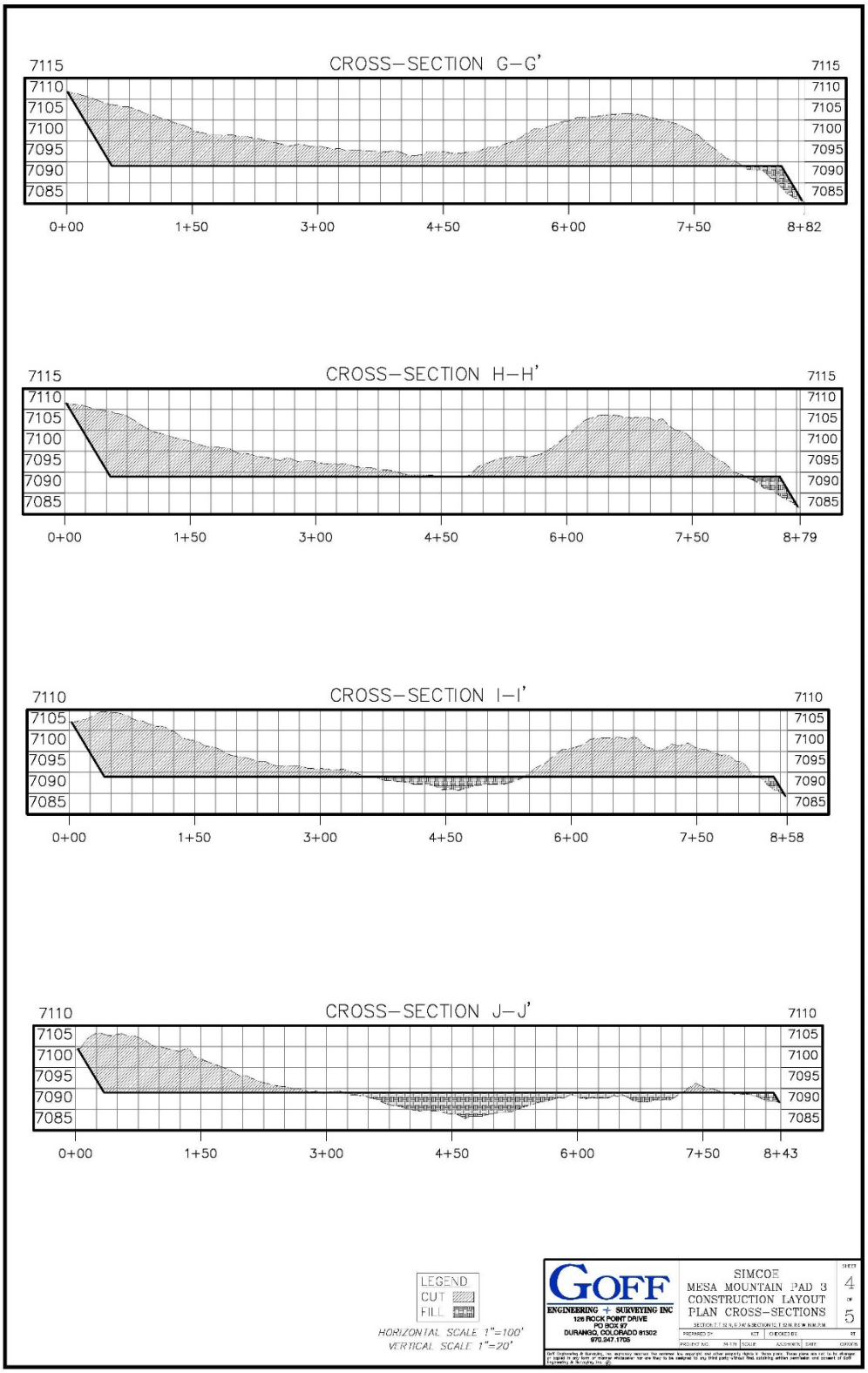
CROSS–SECTION B–B'
CROSS–SECTION C–C'
CROSS–SECTION D–D'
CROSS–SECTION E–E'
CROSS–SECTION F–F'
7100
7095
7090
7085
7080
7075
0+00
1+00
2+00
3+00
4+00
4+77
4+58
4+75
4+83
LEGEND
CUT
FILL
HORIZONTAL SCALE 1"=100'
VERTICAL SCALE 1"=20'
GOFF
ENGINEERING + SURVEYING INC
126 ROCK POINT DRIVE
PO BOX 87
DURANGO, COLORADO 81302
970.247.1705
SIMCOE
MESA MOUNTAIN PAD 3
CONSTRUCTION LAYOUT
PLAN CROSS–SECTIONS
SHEET
3
OF
5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7105
7100
7095
7090
7085
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1+50
3+00
4+50
6+00
7+50
8+82
CROSS–SECTION H–H'
8+79
CROSS–SECTION I–I'
8+58
CROSS–SECTION J–J'
8+43
LEGEND
CUT
FILL
HORIZONTAL SCALE 1"=100'
VERTICAL SCALE 1"=20'
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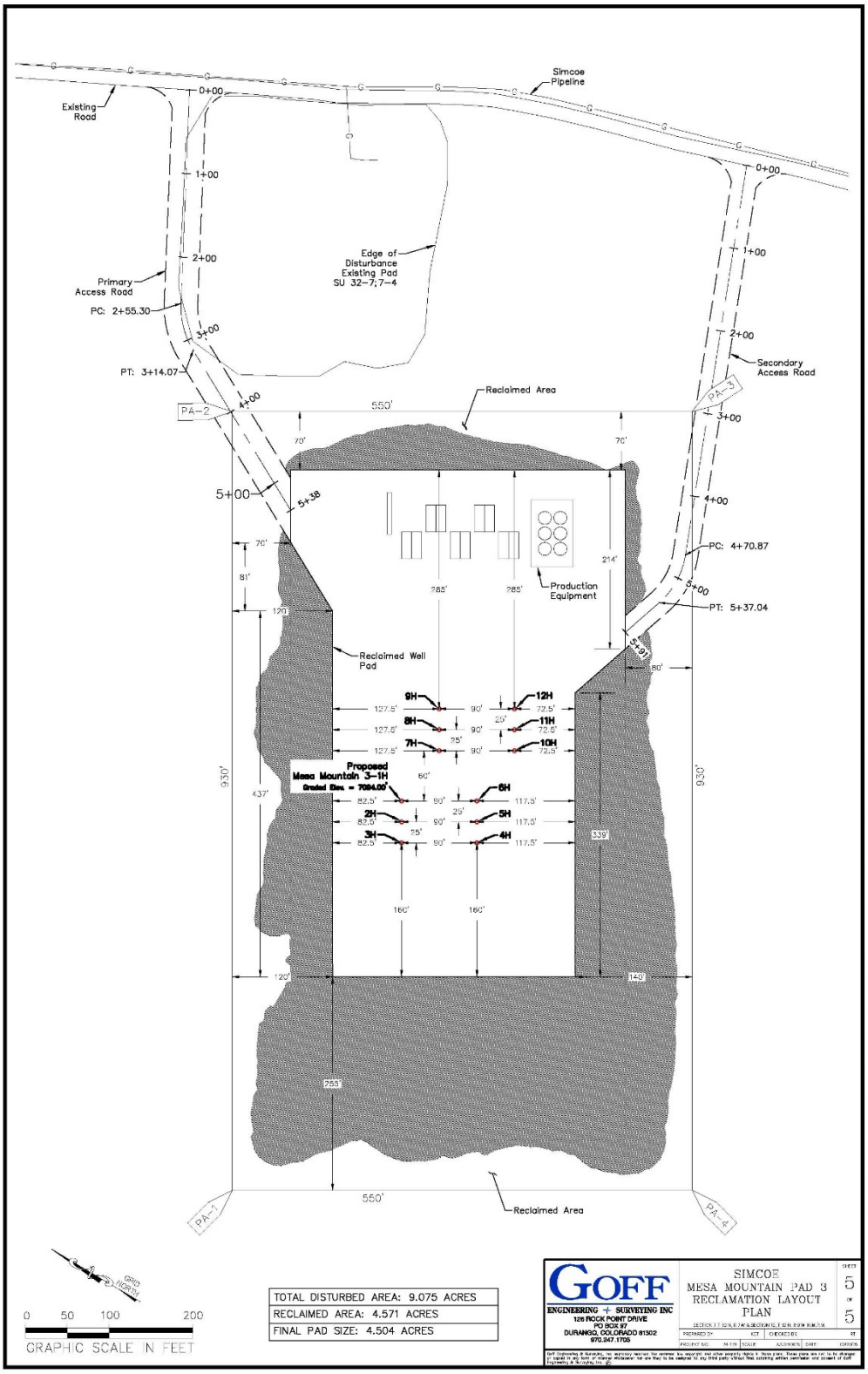
970.247.1705
SIMCOE
MESA MOUNTAIN PAD 3
CONSTRUCTION LAYOUT
PLAN CROSS–SECTIONS
4
5


Simcoe Pipeline
Existing Road
0+00
1+00
2+00
3+00
4+00
5+00
5+38
Primary Access Road
PC: 2+55.30
PT: 3+14.07
Edge of Disturbance Existing Pad SU 32-7;7-4
Reclaimed Area
550'
70'
PA-2
PA-3
PA-1
PA-4
Secondary Access Road
PC: 4+70.87
PT: 5+37.04
Production Equipment
285'
214'
81'
120'
Reclaimed Well Pad
9H
8H
7H
12H
11H
10H
6H
5H
4H
2H
3H
127.5'
72.5'
82.5'
117.5'
90'
25'
60'
Proposed Mesa Mountain 3-1H
Graded Elev. = 7084.00'
437'
930'
339'
160'
255'
140'
50'
GRAPHIC SCALE IN FEET
TOTAL DISTURBED AREA: 9.075 ACRES
RECLAIMED AREA: 4.571 ACRES
FINAL PAD SIZE: 4.504 ACRES
GOFF
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PO BOX 87
DURANGO, COLORADO 81302
970.247.1705
SIMCOE
MESA MOUNTAIN PAD 3
RECLAMATION LAYOUT
PLAN
SHEET 5 OF 5

APPENDIX B: CULTURAL CLEARANCE LETTER

APPENDIX C: DESIGN FEATURES AND CONDITIONS OF APPROVAL

Conditions of Approval - Surface

Well Name:	Mesa Mountain 3 01H, 02H, & 03H
Lease Number:	14-20-151-52
Location:	T32N, R7W, Section 7, La Plata County, Colorado
Operator:	SIMCOE LLC.
Application:	Application for Permit to Drill (APD)

The following mitigation measures will be attached to the Applications for Permit to Drill as Conditions of Approval. These conditions apply to the Federal action.

Site Specific Requirements

1. AST Tank: Operator will ensure that the AST has leak detection and liner system according to SUIT DOE requirements.
2. A secondary containment berm for the AST shall be constructed and capable of containing 110% of the AST's volume.
3. Wildlife protection measures for the AST shall be installed, routinely monitored, and adequately maintained until the AST is deconstructed and removed from the site.
4. Once flowback operations commence, Operator shall provide the SUIT DOE and BLM with water quality data from the flowback fluids being stored on site. Samples shall be run for general API water quality suite and include BTEX and TPH. At least one sample shall be collected per well completed.
5. Operator shall notify SUIT DOE and BLM prior to the removal of the AST so that the footprint of the tank can be inspected for soil contamination. Operator will be responsible for remediating all soil contamination. Soil samples may be requested to verify remediation success.

General Requirements

6. Southern Ute Indian Tribe COAs: The attached Southern Ute Indian Tribe Conditions of Approval are incorporated into BLM's Conditions of Approval and shall be adhered to. If a similar requirement is found in BLM and Tribal Conditions of Approval, the operator must adhere to the more stringent requirement.

   The operator must acquire Southern Ute Department of Energy approval prior to construction.

7. Construction Notification: The operator must provide notification to the BLM Tres Rios Field Office Minerals Division Natural Resources Specialist [(970) 385-1353] five (5) days prior to any earth-disturbing activities.

8. No surface disturbance shall begin until the Edge of Disturbance Corners and Midline markers of the permitted area have been re-established and are clearly marked.
9. Changes to Surface Use Plan of Operations: If the operator wishes to change any aspect of the Surface Use Plan of Operations, the operator must submit a Notice of Intent - Sundry Notice, Form 3160-5, to acquire approval.
10. Hydraulic Fracturing: Wells drilled using hydraulic fracture are subject to the Tribal Amended and Restated Hydraulic Fracturing and Chemical Disclosure Regulations. Any planned hydraulic fracture must be conducted in accordance with those regulations which can be found at http://www.suitdoe.com/.
11. Drilling Notification: The operator must provide notification to the BLM Tres Rios Field Office Minerals Division Natural Resources Specialist [(970) 385-1353] five (5) days prior to drilling activities.
12. Reclamation Notification: The operator must provide notification to the BLM Tres Rios Field Office Minerals Division Natural Resources Specialist [(970) 385-1353] at least 48 hours prior to commencement of interim and/or final surface reclamation activities.
13. Air Quality Report: An Oil and Gas Facility Air Quality Monitoring Annual Report must be submitted to the SUIT Air Quality Program by April 1st of each year. The reporting form can be found on the SUIT DOE's website at the following link: http://www.suitdoe.com/Documents/Appendix_D_Air%20Quality%20Report%20Format.pdf
14. Migratory Bird Season Surveys: If construction or drilling/completions is to occur between May 1 and July 31 of any given year, a migratory bird survey must be conducted by a qualified biologist prior to construction. The survey report must be submitted to the BLM and Southern Ute Indian Reservation Wildlife Division Head. If active nests are discovered, operations must be postponed until after the nesting season.
15. Construction Conditions: Construction/reclamation operations will not take place during periods of time when the soil is frozen or too wet to adequately support equipment. Operations will stop when equipment creates ruts greater than 3-4 inches deep.
16. Spark Arrestors: The operator must use spark arrestors on chainsaws and mufflers on vehicles to prevent wildland fires.
17. Topsoil Salvaging: At the time of construction, (well pads, pipelines, roads, or other surface facilities) topsoil shall be stripped following vegetation removal in those areas needing leveling/grading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots (typically 6 inches). Topsoil will be stockpiled and segregated adequately from subsoils or fill material by at least 12 inches, will be piled neatly on a layer of straw mulch, shall not be greater than 3 feet in height, and will be marked with

"topsoil" signage. The stockpiles will be protected from vehicular traffic and from erosion, they will be seeded/mulched with the SUIT approved seed mix and wattles will be installed around the perimeter to prevent erosion. All stockpiled topsoil shall be redistributed over recontoured areas during interim reclamation of the well pad and access road.

18. Access Road Construction/Maintenance: All permanent access roads shall be crowned or sloped, ditched, drained with culverts and/or water dips, and constructed and maintained to BLM Gold Book standards.

    a. The operator shall provide timely maintenance and cleanup of access roads. A regular schedule for maintenance shall include, but not be limited to dust abatement; reconstruction of the crown, slope, or water bars; resurfacing; cleaning out of ditches, culverts, and catchments. When rutting of the travelway becomes greater than 6 inches, maintenance such as blading, and/or gravelling shall be conducted.

    b. The operator shall ensure roadside ditches on sloping terrain have appropriately-spaced lead-off ditches or water velocity dissipaters (e.g., cobble check-dams, etc.) to reduce erosion within ditches.

    c. All new or existing cattle guards or gates must be maintained in good condition.

19. Dust Abatement: The operator shall prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. Roads and pads must be surfaced or dust inhibitors must be used (e.g., surfacing materials, non-saline dust suppressants, water, etc.) as appropriate. During construction activities or heavy vehicle traffic during drilling and completion operations, the operator shall apply freshwater to travel paths/roads at least twice daily, unless soil conditions do not warrant water application or written approval is acquired for application of surfactants. The BLM may direct the operator to change the level and type of treatment if dust abatement is insufficient.

    Vehicle speed shall not exceed 20 miles per hour on the access roads. No matter the speed of the vehicle, when travel on roads results in dust plumes that exceed the height of the vehicle, travel speeds shall be reduced.

20. Erosion Control: The operator will utilize storm water management actions to ensure disturbed areas are quickly stabilized to control surface water flow and to protect both the disturbed and adjacent areas from erosion and siltation. This may involve construction and maintenance of wattles, berms, ditches, mulching, rock rundowns, etc. Cut-and-fill slopes shall be protected against erosion with the use of contouring, swales, water bars, lateral furrows, pocking/pitting of the soil surface, or other measures approved by the authorized officer. Erosion shall be monitored by the operator and corrected when

features such as gullying, head-cutting, slumping, and deep or excessive rills (greater than 3 inches) are observed. Diversion ditches must incorporate appropriate energy dissipation treatments (e.g., wattles, cobble check-dams, etc.).

21. Cultural Resources:

    i) All land-altering activities shall be confined to the area surveyed for cultural resources, and the project sponsor shall control the action of its agents at the job site to ensure that no archaeological sites are disturbed or damaged. Site disturbance or damage to sites on tribal land is a violation of the Archaeological Resources Protection Act (16 U.S.C. § 470ee) which prohibits the excavation, removal, damage, alteration, or defacement, or attempt to excavate, remove, damage, alter, or deface any archaeological resources [cultural resources] located on Indian lands. Both criminal and civil penalties may be assessed (16 U.S.C. §§ 470ee and 470ff) for violations.

    ii) In the event of the inadvertent discovery of human remains, activities in the area of the inadvertent discovery must cease; a reasonable effort must be made to protect the human remains and associated funerary objects. Protocols under the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.) for the inadvertent discovery of remains on Tribal lands must be followed (43 CFR 10.4(e)).

    iii) In the event of the inadvertent discovery of cultural resources, the project sponsor shall follow the protocols outlined in the Post-Review Discoveries, Discoveries on Tribal Lands (36 CFR 800.13(d)) section of the National Historic Preservation Act, Section 106 regulations.

22. Paleontological Resources: If paleontological resources (fossils) are found during construction, the operator must cease operations in the immediate area and contact the BLM and Southern Ute Indian Tribe. The operator cannot disturb paleontological resources, unless authorized by the BLM or Tribe in writing. The operator must follow any reasonable site-specific mitigation measures that may be developed to protect the discovered paleontological resources.

23. Wood Cutting Permit: All oil and gas operators must obtain a permit from the SUIT Forestry Division prior to removal of wood materials greater than 4 inches in diameter.

24. Highly Saline Mud Usage: To prevent soil degradation and surface/groundwater contamination from potential leaks or spills while utilizing highly saline mud systems, the operator must employ the following spill prevention and contaminant best management practices when using or storing any fluids over 25,000 ppm Total Dissolved Solids (TDS) during drilling, completion, and testing operations:

    - Develop and implement a spill prevention, control, and countermeasure plan, and

have the plan available upon request on site during drilling, completing, and testing.

- Install a lined (no less than a 24 mil-thick liner) secondary containment structure below all equipment associated with handling, processing, or storage of highly saline muds (i.e., >25,000 ppm TDS) including, but not limited to, the closed loop system, mud pumps and processing system, drill cuttings collection and handling areas, storage equipment containing spent mud or flow-back fluids, etc. Liner must be maintained in good condition, free of tears, and protected from damage resulting from vehicle traffic.
- All soil contaminated from saline mud, cuttings, etc. on or off the pad must be tested and/or remediated/removed appropriately.

25. Storage of Non-Freshwater Fluids During Drilling/Completions: All non-freshwater fluid storage containers/tanks (i.e., produced water storage tanks, chemical tanks, hazardous fluid containers, fuel tanks, etc.) must be located within an impermeable, lined (or equivalent) secondary containment structure capable of containing at least 110% of the storage capacity of the largest tank/container during all drilling, completion, and testing operations. If a liner is used, it can be no less than 24 mil-thick so the integrity of the liner will be maintained.
26. Weed Control: The operator must control the introduction of noxious/invasive species to the well site/road/pipeline by ensuring that construction vehicles arriving to the site are clean and free of imported soil or visible seeds.

    The operator shall be responsible to control noxious weeds or other undesirable plant species on disturbed areas including the roads, pad, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall monitor for noxious weeds that might move onto the location. Monitoring shall be done at least three times throughout the growing season (spring, summer and fall). Herbicide application must only be performed by a licensed pesticide applicator approved by the Southern Ute Indian Tribe. Ensure that application, storage, and disposal procedures meet state and federal requirements.
27. SPCC Plan: The operator will conform to the approved Spill Prevention, Control and Countermeasure Plan (SPCCP) for all phases of the proposed project.
28. Spill Clean-up: Clean up and remediate spills of petroleum products or produced water in an appropriate manner as soon as possible to minimize damage to resources. Report all applicable spills to the BLM and SUIT.
29. Water Well Degradation: In the event that domestic groundwater well degradation is caused by a gas well, the gas well must be remediated or other action taken as determined

by the appropriate agency.

30. Open-Vent Exhaust Stack Exclosures: The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.)
31. Exclosure Fencing on Cellars: The operator will install and maintain exclosure fencing for all open well cellars and pits to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the cellar is backfilled or covered properly with a screen.
32. Secondary Containment: The operator shall install storage tanks within an impervious secondary containment structure of sufficient capacity to contain at least 110% of the storage capacity of the largest storage tank. The operator shall prevent livestock or wildlife from entering the secondary containment area by installing an exclosure fence.

    Chemical containers shall be clearly labeled, maintained in good condition, and placed within an impervious secondary containment structure. Small secondary containment basins must be screened to prevent livestock or wildlife entry.
33. Open-topped Tanks: The operator must install and maintain a rigid metal screen over open-topped tanks to prevent livestock, wildlife or avian entry. The screen cannot have an opening wider than 1-1/2 inches. If the open-topped tank is installed below grade within a pit or open catchment, the space between the tank and pit/catchment edge must be screened with a rigid metal screen, unless the operator can demonstrate appropriate use of escape ramps.
34. Additional Livestock and Wildlife Safeguards:
    a. Any bell holes or open trenches left overnight shall be barricaded with safety fence and shall be equipped with ramps.
    b. Drilling, completions, or production equipment that could pose a danger to livestock or wildlife must be properly paneled off, secured, screened, or barricaded.
    c. Operator is responsible for all damage to livestock from unprotected equipment and any damage to facilities caused by livestock.
35. Painting Facilities: All permanent (lasting longer than 6 months), above-ground structures including building doors, roofs, and any visible equipment will be painted a non-reflective **Juniper Green** color selected from the latest BLM color chart that best allows the facility to blend into the background. The color shall be maintained throughout the life of the well/facilities. Areas required to be painted a different color to comply with the Occupational Safety and Health Act (OSHA) are excluded.

36. Wildfire Prevention: Maintain appropriate vegetation-free buffer zones around production operation ignition sources to help reduce wildland fires.

37. Well Monitoring: Minimize the number of well monitoring trips by coordinating well visits to limit traffic or by installing automated monitoring systems.

38. Sanitary Facilities: Companies with oil and gas facilities on the Reservation will provide sanitary facilities at locations such that a person would not have to travel by vehicle any longer than 10 minutes from a given location to reach a sanitary facility.

    In the event that personnel are not able to reach a sanitary facility and must relieve themselves onsite, they are expected to have access to a shovel and bury any toilet paper and human waste sufficiently beneath the surface of the ground.

39. Unused Equipment: All unused equipment, trash, and/or debris on the well site, road, or pipeline corridor must be removed, unless written approval is provided by the BLM or SUIT.

40. Interim Reclamation Performance Standards/Procedures: Earthwork for interim reclamation must be completed within 6 months of well completion or within 8 months of well pad construction, whichever is earlier, unless a delay is approved in writing by the BLM authorized officer. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

    a. Interim reclamation will be judged successful when the BLM authorized officer determines that all disturbed areas not needed for active, long-term production operations or vehicle travel have been recontoured to match the surrounding landscape, re-distributed with stockpiled topsoil, protected from erosion, and revegetated with a self-sustaining, vigorous, diverse, native (or as otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious, invasive, and non-native weeds.

    b. All disturbed areas not needed for active, long-term production operations shall be prepared for seeding. After recontouring and prior to seeding, all areas not needed for production operations (including cut/fill slopes) will be scarified (pitting, raking, or harrowing) and the surface left rough enough to trap seed and snow, control erosion, and increase water infiltration.

    c. Seeding shall take place on all reclaimed areas and cut/fill slopes with a certified weed-free seed mix approved by the Southern Ute Indian Tribe. Crimping of straw must occur within 24 hours of seeding.

d. The interim reclamation must be separated from the production pad with a berm, ditch, fence, or other discernable barrier. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated.

41. Final Reclamation Performance Standards/Procedures: The long-term objective of final reclamation is to return the land to a condition approximating that which existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity. Earthwork for final reclamation must be completed within 6 months of well plugging unless a delay is approved in writing by the BLM authorized officer.

    a. Final Reclamation will be judged successful when the BLM authorized officer determines that:

        i. The approximate original landform has been restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.

        ii. General: A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community is established on the site, with a density sufficient to control erosion and invasion by non-native plants and to reestablish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.

        iii. Specific: No single species will account for more than 30% total vegetative composition unless it is evident at higher levels in the adjacent landscape. Permanent vegetative cover will be determined successful when the basal cover of desirable perennial species is at least 70% of the basal and foliar cover on adjacent or nearby undisturbed areas where vegetation is in a healthy condition. Plants must be resilient as evidenced by well-developed root systems and flowers. Shrubs will be well established and in a "young" age class at a minimum (therefore, not comprised mainly of seedlings that may not survive until the following year).

        iv. Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and

gullying, head-cutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.

v. The site is free of noxious weeds, oil field debris, equipment, and contaminated soil. Invasive and non-native weeds are controlled.

vi. All trash, dead-man anchors, cables, piping above 30 inches deep, structures, and equipment must be removed from the well site, access road, and disturbed areas.

b. Seeding, straw crimping, and seedbed preparation will match interim reclamation standards.

c. Prior to earthwork being completed, the operator must contact the BLM, BIA, and Southern Ute Indian Tribe (SUIT). The field visit must be scheduled well in advance of the 6-month deadline. The purpose of the field visit is to discuss and agree on reclamation procedures.

d. Soil samples must be taken below each piece of equipment or pit that processed or contained produced fluids (tanks, separators, production pits, etc.). A background sample is recommended from an undisturbed area. The results will be compared to the Colorado Energy & Carbon Management Commission (ECMC) Table 915-1 or current tribal standards. Sample results will be furnished to the BLM and SUIT prior to commencing reclamation procedures.

e. The BLM and SUIT shall be notified at least 48 hours prior to commencement of surface reclamation.

SOUTHERN UTE INDIAN TRIBE ***SIM-5***

GENERAL SURFACE USE AGREEMENT STIPULATIONS

COMPANY: SIMCOE LLC DATE: 11/25/25

LINE NAME: MESA MOUNTAIN PAD 3 WELL PAD

LOCATION: Section(s) 12 , T 32 N, R 8 W, and 7, T32N, R7W, N.M.P.M.

****

Boldface and/or underlined text denotes site specific stipulations.

****

General Stipulations

These Stipulations shall govern the development of the above named project. In instances, where definite procedures are not outlined in these Site Specific Stipulations, the General Stipulations shall apply. If SIMCOE LLC has questions regarding these or any stipulations they should contact SUIT DOE at ajabeyta@sudoe.us; BIA Realty Priscilla.Bancroft@bia.gov; or Southern Ute Range Division at bgwinn@southernute-nsn.gov .

1. A preliminary onsite review of the Surface Use Agreement by Tribal, BIA and archaeological representatives is required.

2. Construction will conform to the requirements as described on the Surface Use Agreement Application. A copy of these stipulations shall be kept on location at all times.

3. A preliminary survey plat shall be submitted to the Energy Office at P.O. Box 1500, Ignacio, Colorado 81137 at least five (5) days prior to the onsite inspection, once onsite inspection is complete a "final" stamped survey plat shall be submitted to the Energy Office for processing. If any changes are made to the final stamped survey plat during or after construction an “as-built” plat will be required.

4. The company shall notify Southern Ute Energy Land Manager, Adrian Abeyta at 970-563-5554 (office) or by email ajabeyta@sudoe.us and Range Technician at 970-563-2918 (office) or 970-749-8840 (cell) or by email at bgwinn@southernute-nsn.gov 5 business days prior to construction of project.

5. The company and any subcontractors shall be in compliance with all current Southern Ute Indian tribal laws and particularly the Tribe’s Employment Rights Code (TERO), as amended and as approved by the Secretary of the Interior on February 13, 2019.

6. If culturally significant vegetation/trees are to be cleared along the ROW during construction the company shall notify SUIT Cultural Preservation Department staff: Director, Crystal Rizzo (970-563-2306; crrizzo@southernute-nsn.gov), Deputy THPO, Izabella Cloud (970-563-2984; icloud@southernute-nsn.gov)10 business days prior to construction of project to allow for harvesting.

7. Proper Crossing Permits shall be obtained from the Southern Ute Indian Tribe prior to entering Tribal Lands.

8. Surface damage compensation and/or grant of permission assessment will be paid to the Southern Ute Indian Tribe at a rate determined by the Southern Ute Department of Energy as stated in the Tribal Council Policy regarding right-of-way and surface damage compensation for oil and gas facilities. All assessments shall be paid prior to construction.

9. If applicable all surface disturbance shall be confined to the 13 point surface use plan submitted with the Application for Permit to Drill. All land-altering activity outside the surface use plan will require permission by

the Department of Energy Office. A copy of the APD and these conditions of approval shall be kept on location at all times during any construction activities.

10. Special stipulations will be issued whenever conditions warrant requirements outside the General Surface Use Agreement Stipulations.

11. All activity shall be confined to the areas surveyed for cultural resources. If subterranean cultural resources are encountered, all land-altering activities shall be halted, and the following shall be notified immediately:

Southern Ute Department of Energy - (970) 563-5550 BIA Area Archaeologist - (505) 563-3407 BIA Southern Ute Agency - (970) 563-4511

All people who are in the area will be informed by SIMCOE LLC that they are subject to prosecution for disturbing archaeological sites or picking up artifacts.

12. Metal T posts shall be driven at the corners and midline of the outer most edge of the Well Pad/facility pad. The top 8" of the post top shall be painted yellow for easy identification. These posts shall be placed before construction begins and shall remain through the life of the well.

13. Spill kits shall be present on-site during construction activity and be readily accessible by crews. Verbal and written notification is requested by the Southern Ute Indian Tribe (SUIT) and should be made no later than 24 hours after the discovery of a spill. Notification should be given to the SUIT Department of Energy (DOE) at (970) 563-5550 and BIA at (970) 563-4511 with a spill report and map submitted to spill@sudoe.us. Spill guidance and a reporting form is provided in the Exploration & Production Operator's Compliance Manual for Energy Development Projects on the Southern Ute Indian Reservation located at https://www.suitdoe.com/exploration-production/.

14. If applicable the gas well pad shall be properly identified with a permanent readable sign per 43 CFR 3162.6 well sign.

15. All over length and overweight loads including but not limited to drilling and completion rigs shall be escorted by pilot cars and prudent safety operations shall be followed when traveling on all roads within the Southern Ute Indian Reservation.

16. The Surface Use Agreement boundary area shall be re-staked prior to construction.

17. Ample notification shall be given to the Southern Ute Department of Energy at (970) 563-5550 when construction will hamper ingress and egress to Tribal lands.

18. The company shall use Best Management Practices (BMP's) which eliminate or minimize adverse impacts to the environment, public health and the Tribes natural resources.

19. Restroom facilities shall be provided on the jobsite during construction or other long term (3 or more days) activity.

20. Warning signs and reflectors indicating construction underway will be erected where applicable.

21. Construction of the Surface Use Agreement shall come to a halt during inclement weather to prevent soil damage or destruction.

22. All personnel, vehicles, and construction equipment will be confined to the Surface Use Agreement area.

23. **A BUREAU OF INDIAN AFFAIRS TIMBER CUTTING PERMIT, FORM 5-5331 MUST BE OBTAINED PRIOR TO CUTTING TREES. THIS PERMIT CAN BE OBTAINED FROM THE BUREAU OF INDIAN AFFAIRS (970) 563-4780.**

    a. The cleared area is to be kept to the minimum necessary for construction and maintenance.

    b. Chainsaws shall be used to cut trees. Bulldozers or other heavy equipment shall not be used to clear areas.

    c. All sound woody material, from piñon pine, juniper, ponderosa pine, Douglas-fir, and Gambel oak, which is at least three (4) inches in diameter and two (2) feet in length will be salvaged during clearing activities. Unless otherwise stated in the Site Specific Stipulations, all wood material will be cut into 6 to 8 foot lengths, limbed, and hauled to the Tribal fuels yard located north of the Custom Farm Shop, Monday through Friday, between the hours of 8:30 A.M. and 4:00 P.M., except on holidays. All wood shall be hauled prior to completion of construction. Load tickets must accompany every load hauled to the fuels yard.

    d. Debris (slash) from forest products, which includes limbs, brush, and wood products which do not meet the minimum size, will be chipped with a woodchipper, and scattered around the location at a depth not to exceed 3 inches and shall be scattered within seven (7) days after completion of construction or completely removed from the project site and disposed of at the contractor's expense.

    e. Stumps shall be cut as low as practical to avoid waste. The mean height of any stump shall not exceed six (6) inches on the uphill side. Stumps which are grubbed during construction shall be hauled from the project area and properly disposed of off tribal land at the contractor's expense.

    f. The wood volume has been determined to be **~5** cords and 0 posts.

24. If applicable, the operator shall develop a stormwater plan detailing the temporary and permanent sediment/erosion controls to be utilized at the site during construction, drilling of the well (if applicable), and for the interim reclamation once the well is drilled or facility constructed. Stormwater management efforts shall be sufficient to adequately protect topsoil stockpiled during construction/drilling, and to prevent off-site sedimentation and accelerated erosion at the site during all phases of the project (construction, drilling, and interim reclamation). The stormwater plan shall include a map detailing the location and type of stormwater controls to be implemented during each phase of the project. The Stormwater Plan will need to be provided to SUIT DOE and Range prior to the onset of construction. The Stormwater Plan will need to be provided to SUIT DOE and Range for review prior to submittal to EPD Water Quality (if applicable) and the onset of construction.

25. At the time of construction, (well pads or other surface facilities) topsoil shall be stripped following vegetation removal in those areas needing leveling/grading. Topsoil depth is defined as the top layer of soil that contains

80% of the roots (typically 6 inches). Unless otherwise stated in the Site Specific Stipulations or determined at the onsite, six inches of topsoil shall be salvaged.

26. All topsoil will be stockpiled neatly for reclamation purposes on top of a layer of straw mulch. Topsoil stockpiles shall not be greater than 3ft in height and not be piled against trees or deposited in natural drainage ways.

27. Topsoil that is stockpiled during the growing season shall be seeded with a perennial grass seed mix and mulched. Topsoil stockpiles shall be marked with "topsoil" signage at well pads or other surface facilities. All stockpiled topsoil shall be redistributed over recontoured areas during interim reclamation of the well pad and access road.

28. Fill material from existing well sites/facilities may not be hauled in and utilized for the construction of this facility unless previously approved by the Department of Energy.

29. Water, mud, and drilling fluids will not be transferred to other gas well locations without prior approval. Compliance checks will be made by the BLM, Southern Ute Department of Energy Office and/or BIA Realty personnel.

30. All fences and gates that are torn down or removed will be repaired or rebuilt within seven (7) days after the drilling rig leaves the location.

31. Culverts will be installed in areas where needed or required.

32. Culverts or cattle guards will not be removed unless authorized by the Tribe.

33. If TUA's are approved for this project:
    - Use in the Temporary Use Area (TUA) shall not harvest trees or cause ground disturbance beyond turning, parking, or storing equipment;
    - This area will be reclaimed including reseeding when construction is final;
    - The perimeter of the TUA's shall be marked as surveyed; and
    - Work in the TUA's shall cease during inclement weather that causes equipment to rut the surface.

34. Excavated material shall be stored within the permitted area.

35. If applicable, interim reclamation shall be conducted upon the completion of all wells and/or installation of facilities at the site. Interim reclamation consists of minimizing the working surface of the site by reclaiming the areas not needed for routine operations. The minimum size of the working surface shall be determined by the company but shall be limited to only the area that is required for safe operation of the facility, generally just outside the rig anchors for well sites. The area to be reclaimed shall be roughened and re-contoured to blend with the adjacent terrain as much as possible. An "All-weather" access or turnaround shall be maintained at the site.

36. Cuts and fills should be made only where necessary. Reclaimed cut and fill slopes should normally be no steeper than 3:1 and should be graded to blend with the adjacent terrain. Where cut and fill operations are necessary a 2:1 slope will be permitted during construction as long as the slope is stabilized. Slopes must be pulled back to 3:1 post-construction.

37. Rock which is brought to the surface during construction will normally be buried on site. The amount of surface rock will not be greater than the pre-disturbance condition of the site.

38. The Southern Ute Tribal seeding mixture recommendation is as follows:

SEED MIXES:

AG FIELD MIX	
Manchar Smooth Brome	8 lbs/per acre PLS
Orchardgrass	2 lbs/acre PLS
Timothy	3 lbs/acre PLS
Annual Sterile Ryegrass or Sterile Triticale	4-8 lbs/acre PLS

MIX # 1, The Pine River valley to Highway 550;

Western Wheatgrass	7 LBS/PLS per acre
Antelope Bitter Brush	1 LBS/PLS per acre
Smooth Brome	4 LBS/PLS per acre
Intermediate Wheatgrass	3 LBS/PLS per acre
Annual Sterile Ryegrass or Sterile Triticale	12 LBS/PLS per acre

MIX # 2, West of Hwy 550 to Hwy 140;

Crested Wheatgrass	2 LBS/PLS per acre
Indian Rice Grass	2 LBS/PLS per acre
Blue Grama Grass	2 LBS/PLS per acre
Galleta Grass	2 LBS/PLS per acre
Sand Drop Seed	1 LBS/PLS per acre
Four wing Saltbush	1 LBS/PLS per acre
Western Wheatgrass	4 LBS/PLS per acre
Pubescent Wheatgrass	2 LBS/PLS per acre
Annual Ryegrass Or Annual Barley	12 LBS/PLA per acre

For Broadcast rates double the above rates.

39. First seeding (interim rec) shall be completed within six (6) months of completion of construction and installation of the facility or first production of a well per BLM OSO #1 Section XII Abandonment. B. Reclamation. The Department of Energy shall be notified upon completion of the construction/installation of the facility and upon completion of first seeding and mulching efforts. Operator shall conduct routine checks of the seeded areas. If, within one year, no visible strands are observed, reseeding will be required.

40. All existing fences removed for construction purposes will be repaired or rebuilt, unless otherwise stipulated.

41. Any crossing/construction affecting BIA Irrigation Canals will be approved through the BIA irrigation ditch crossing permits, plus any irrigation canal/ditch fees.

42. All trash or litter in the permitted area be disposed of at an approved landfill when construction operations have been completed.

43. If precipitation accumulated in the trench/project area is to be discharged, the operator shall at a minimum, conduct and visual/olfactory inspection of accumulated stormwater/sediment for contamination prior to discharge. The operator shall not discharge contaminated stormwater/sediment from the site. Dewatering the trench/project area shall be done utilizing appropriate BMP's and in a manner that does not cause erosion or sedimentation.

44. No fluids (i.e., diesel, motor oil, crankcase oil, etc.) will be disposed of on the Southern Ute Indian Reservation. Discharge permits (e.g., NPDES) shall be obtained for hydrostatic water disposal.

45. All non-freshwater fluid storage containers/tanks (i.e., produced water storage tanks, chemical tanks, hazardous fluid containers, fuel tanks, etc.) must be located within an impermeable, lined (or equivalent) secondary containment structure capable of containing at least 110% of the storage capacity of the largest tank/container during all drilling, completion, and testing operations. If a liner is used, it can be no less than 24 mil-thick and must be maintained.

46. Any launcher/receiver hatches shall be fitted with drip catchments below the hatch. Any open topped drip catchments or open topped tanks shall have avian/wildlife protection with holes no greater than 1.5 inches. Drip catchments/tanks shall be routinely maintained to prevent spills.

47. To prevent soil degradation and surface/groundwater contamination from potential leaks or spills while utilizing oil based or highly saline mud systems (i.e. mud systems greater than 25,000 ppm TDS), the operator must employ the following spill prevention and contaminant best management practices when using or storing oils and any fluids over 25,000 ppm Total Dissolved Solids (TDS) during drilling, completion, and testing operations:
    a. Develop and implement a spill prevention, control, and countermeasure plan, and have the plan available upon request on site during drilling, completing, and testing.
    b. Install a lined (no less than a 24 mil-thick liner) secondary containment structure below all equipment associated with handling, processing, or storage of oil based or highly saline muds (i.e. >25,000 ppm TDS) including, but not limited to, the closed loop system, mud pumps and processing system, drill cuttings collection and handling areas, storage equipment containing spent mud or flow-back fluids, etc. The liner shall be maintained throughout the project.
    c. All soil contaminated from oil based or saline mud, cuttings, etc. on or off the pad must be tested and/or remediated/removed appropriately.

48. Access roads and well pads will be maintained in accordance with generally accepted standards for repair, orderliness, neatness, sanitation, and safety.

49. Construction, drilling, and production of the proposed gas well will be monitored by BLM, Tribal and/or BIA representatives.

50. Upon drilling and completion of well(s), production equipment will be set on location. Operator shall abide by COGCC's "Aesthetic and Noise Control Regulations" i.e. Rule 400 series. Any noise complaints by homeowners to the company or to the SUIT shall be immediately investigated by the company. If it is determined that the company is not in compliance with this provision, the company shall immediately undertake all measures to ensure compliance herewith.

51. All internal combustion production equipment will be muffled.

52. The company must notify the Tribe's Department of Energy before permanently removing any equipment from the facility or adding or upsizing equipment.

53. All proposed compression equipment to be utilized during initial production, as well as any units to be installed following drilling and completion activities, require prior authorization from the SUIT Department of Energy and the SUIT Air Quality Division (AQD). For any anticipated use of field compression, please consult the DOE and AQD in advance.

54. The company shall comply with requirements set forth in COGCC Rule 614 & 615. The company shall provide all applicable information to the SUIT DOE Exploration and Regulatory Manager, 720-946-0244 gstahnke@sudoe.us. This stipulation only applies to water wells/sources, P&A, and conventional wells on tribal land. Prior to attempting to collect water well or water source samples on tribal land the company shall contact the SUIT DOE Land Manager Adrian Abeyta at 970-563-5554.

55. If applicable, the Operator shall comply with the Southern Ute Indian Tribe's Amended and Restated Hydraulic Fracturing and Chemical Disclosure Regulations.

56. Special stipulations will be issued whenever conditions warrant requirements outside the General/Site Specific Surface Use Agreement stipulations.

57. All equipment shall be painted an environmental green color within seven (7) days of completion of construction/installation of the facility.

58. Weeds shall be controlled by the company for the life of the facility. Prior to any herbicide treatment on Tribal Lands the commercial applicator must receive an approval letter from the SUIT Water Resources Division. Please contact (970) 563-2933 to obtain the approval letter. The operator must also obtain all appropriate permits in order to work on tribal land from the SUIT Lands Division (970) 563-0126.

59. The company shall be responsible for upkeep and maintenance of the access road and well pad/facility on an "as needed" basis.

60. The operator will comply with all applicable laws and regulations (e.g., 40 CFR Part 60, Subpart OOOOa), the requirements of the applicable environmental assessment, and the Tribe's Department of Energy's Exploration & Production Operator's Compliance Manual for Energy Development Projects on the Southern Ute Indian Reservation located at http://suitdoe.com/devProjects.aspx.

61. If applicable no construction or drilling activity is permitted at this location during the Tribe's Winter Wildlife Closure Period (December 1st - April 30th). Routine maintenance of wells by the operator is allowed during this time frame to ensure the wells are operating and producing in a safe manner. The operator shall notify DOE of all applicable maintenance activities that take place during the Tribe's Winter Wildlife Closure Period.

62. Periodic inspections of the Surface Use Agreement by representatives of the Southern Ute Indian Tribe and the Bureau of Indian Affairs will be done once construction has been completed.

63. Operator shall be responsible for upkeep and maintenance of the Surface Use Agreement on an "as needed" basis.

64. Within 30 days of any approved mortgage, the company must send a copy of any BIA-approved mortgage and supporting documents to the Tribe, and to BIA for recording in the LTRO.

TRIBAL SITE SPECIFIC STIPULATIONS/MITIGATIONS:

1. **SIMCOE LLC (SIMCOE) will access the location using the adjacent arterial access road/Rim Road. If the road will be improved for the project, SIMCOE shall provide the Southern Ute Indian Tribe Dept. of Energy (DOE) with a Proposed Maintenance Project (PMP) form detailing the proposed work. All road improvement activities shall be confined to the permitted & predisturbed road area.**

2. **Access for construction, drilling, and completions efforts shall be conducted in a way that maintains access for other operators & the Tribal Membership who use the nearby arterial access road/Rim Road. SIMCOE shall promptly notify DOE of any planned road closures.**

3. **If the adjacent SIMCOE "SOUTHERN UTE 32-7; 7-4" well site will be used for temporary equipment or materials staging/storage for this project, best management practices (BMPs) such as temporary barricades, shall be used to protect the production equipment/above ground piping at the site to prevent any spills/releases.**

4. **All sensitive archeological/cultural areas identified during the onsite will remain undisturbed and shall be protected with BMPs as recommended by the archeological contractor, SUIT Dept. of Natural Resources (DNR) Lands Division, and the SUIT Cultural Preservation Department**

5. **SIMCOE shall coordinate with Red Cedar Gathering Company (RCGC) - who will be installing the gas pipeline(s) for the well site - on the timing of pad construction, as this project area currently overlaps with RCGC's proposed ROW along the N pad access route and at PA-2.**

6. **Due to the number of wells proposed at the site, the pad will potentially remain in the "active construction/drilling/completions" phase for several years prior to reducing the pad footprint and establishing the interim reclamation. All cut-fill slopes for the pad shall be no steeper than 3:1 for both the active construction/drilling/completions & the interim reclamation phases.**

7. **Perimeter stormwater controls shall be installed along the base of all fill slopes prior to the onset of ground disturbing activities.**

8. **The *SUIT General Surface Use Agreement Stipulations* shall be followed for vegetation clearing/chipping, tree removal, topsoil salvage, topsoil storage, and topsoil identification.**

9. **SIMCOE plans to strip 4-6 in of topsoil from the site. Topsoil shall be redistributed along all cut & fill slopes of the pad once constructed for the drilling/completions phase. Additionally, as soon as practicable, all disturbed areas outside of the pad's drilling/completions working surface and**

graveled access road surfaces shall be stabilized, seeded, and mulched using the seed mix and rates as stipulated in *Item #31* below. SIMCOE shall notify DOE when this work is completed. SIMCOE will be responsible for reseeding and treating weeds in the reclaimed areas, as necessary.

10. **During the drilling/completions phase of pad construction, structural BMPs will be established, including diversion berms (tentatively planned to be constructed of road-base material)/ditches along the top of the fill slopes and along the bottom of the cut slopes. Stormwater diverted by the berms/ditches will be routed to rock run down structures located at the cut-fill transitions, or other areas where SIMCOE believes it is appropriate to discharge stormwater from the graveled pad surface.**

11. **Topsoil may be used for diversion berm construction if there is an excess amount of topsoil needing to be stored at the site. If topsoil is utilized, it will need to be adequately protected from erosion/sedimentation from pad materials/subsoils and be managed as applicable with above *Items #8 & #9*.**

12. **The north and south access routes to the pad will accumulate stormwater from the adjacent up-gradient areas. Adequate stormwater controls, such as borrow ditches, culverts, etc., shall be installed to control/convey diverted stormwater and to mitigate accelerated erosion & off-site sedimentation along the access routes.**

13. **All culverts installed at the site shall be equipped with armoring at both the inlet & outlet ends.**

14. **SIMCOE shall provide the DOE with a stormwater plan that demonstrates the installation of appropriate stormwater and sediment control BMP's during the active construction, drilling/completions, and interim reclamation phases of the project. This information must be provided to DOE prior to the onset of construction.**

15. **SIMCOE shall comply with all standards, timelines, and submit all deliverables identified in the Southern Ute Indian Tribe's Amended and Restated Hydraulic Fracturing and Chemical Disclosure Regulations (HF Regulations). The HF regulations may be found on DOE's web site: https://www.suitdoe.com/exploration-production/.**

16. **Sand/proppant for completions activities is tentatively planned to be stored on site via silo and trucked in as needed. BMPs shall be utilized for sand stored at the site to prevent sand from migrating off-site.**

17. **All non-freshwater fluid storage tanks shall be installed within impermeable lined (no less than 24 mil-thick) and appropriately sized secondary containment structures per the *SUIT General Surface Use Agreement Stipulations*, which will also apply to all equipment/containers that store or handle flowback fluids.**

18. **SIMCOE shall work with the DOE Land team on the proposed placement locations of any off-site lake tank(s) or other completions tanks needed for completion activities, as well as the routing & operation of layflat pipeline(s).**

19. **Completions fluids (fresh water) are tentatively planned to be stored in a fabricated above-ground storage tank (AST) "lake tank". Flowback fluids are tentatively planned to be routed to a temporary tank battery installed within a lined secondary containment. SIMCOE shall provide DOE with detailed plans for how completions and flowback fluids will be stored and transported.**
    - **All flowback fluids recovered shall be stored in rigid enclosed above-ground tanks.**
    - **The tanks may be vented unless applicable regulations require vapor recovery or closed-loop systems.**
    - **Tanks must not exceed a 500-barrel (BBL) capacity, unless approved in advance by the DOE Manager.**

20. **SIMCOE shall provide DOE with an inspection schedule related to administrative best management practices that will be implemented to inspect all above ground storage tanks, lay flat, and any additional equipment that handles completions fluids, produced water, or flowback fluids.**

21. **SIMCOE shall provide DOE with water quality data during flowback operations for each well completed. Samples shall be run for the General American Petroleum Institute (API) water quality suite and include both BTEX and TPH.**

22. **An 80,000 BBL lake tank is tentatively planned to be utilized at the site for completions fluid storage and will hold freshwater only. SIMCOE shall promptly notify DOE if the tank is to handle any non-freshwater fluids prior to commencing in such operations; in this instance, DOE may apply additional stipulations and protective measures for the use & operation of the tank.**

23. **The lake tank(s) shall be fitted with leak detection. Administrative best management practices shall be utilized to ensure the tank's integrity is maintained while installed at the site and shall be included in the above-mentioned inspection schedule for completions and flowback operations (*Item #20*).**

24. **SIMCOE shall provide DOE with the planned mitigation measures that will be implemented to exclude the entry of wildlife from any open top fluid storage tanks, including the fabricated AST/lake tank.**

25. **If any equipment is to be removed from the adjacent producing SIMCOE "SOUTHERN UTE 32-7; 7-4" for this project, SIMCOE shall provide DOE with analytical sample results from underneath the production equipment that will be relocated prior to any backfilling operations. Sample results shall be run in accordance with the attached DOE Table 1 - Final Reclamation Sampling Guidance document (attached and found in the E&P Operator's Manual on DOE's webpage: https://www.suitdoe.com/exploration-production/). All organic compounds and metals may be**

compared to the ECMC Table 915-1 Residential Soil Screening Standards. It would be prudent to collect a background sample if any samples will be run for the 915-1 Metals in Soil.

26. If any flowlines are to be removed from or abandoned in place at the adjacent producing SIMCOE "SOUTHERN UTE 32-7; 7-4" well site for this project, SIMCOE shall provide DOE with the following information:

- ***Scope of Work* – describe the methods and processes that will be utilized for removing or abandoning lines to include: what lines are to be removed and what lines are to be abandoned in place, the processes for draining/purging the lines; verifying lines to be abandoned in place are greater than 36in below ground surface; and cutting/sealing flowlines to be abandoned in place.**
- ***For flowlines removed from the site* - upon completion of the work, provide an email notification to DOE asserting that flowlines have been completely removed.**
- ***For flowlines abandoned in place* - provide:**

A. A separate stand-alone document signed by an authorized company employee/representative (not a vendor/consultant/contractor), who observed that the flowline abandonment work was done in accordance with the approved scope of work, verifying that all water, oil, and gas pipelines: have been fully drained, have been purged with air or inert gas as necessary to prevent a hazardous atmosphere, have been depleted to atmospheric pressure, have been abandoned in place greater than 36" below final grade, and have been properly cut and capped at all locations as indicated in the approved scope of work.

B. Location data for all flowlines abandoned in place and flowline cut points recorded with a global positioning system (GPS). A GIS shapefile for all flowlines abandoned in place and flowline cut points is to be provided to DOE.

27. Earthwork for the interim reclamation (post active construction/drilling/completions phase) must be completed within the timelines associated with BLM *43 CFR 3171.25(b)(2)*. SIMCOE shall provide DOE and the BLM with notification of completion of the work. Upon completion of interim reclamation SIMCOE shall seed and mulch the interim reclaimed areas using the seed mix and rates specified in *Item #31* below.

28. As this site is located within an active grazing unit, and the site is not planned to be equipped with a perimeter fence structure or cattleguards:

- **Any bell holes left open overnight shall be barricaded with safety fence. Bell holes and open trenches shall be equipped with ramps or other means of egress if wildlife or livestock access the excavation.**
- **Drilling, completions, or production equipment (including those with moving parts) that could pose danger to livestock must be properly paneled off, secured, screened, or barricaded.**
- **Drilling, completions, or production equipment must also be protected from livestock rubbing if the rubbing action could result in an undesirable release of gas, produced water, hydrocarbons, or other non-freshwater fluids.**

- **Considerations shall also be made for any risks posed to/by livestock for layflat operations/associated equipment.**
- **All catchment basins for non-freshwater vessels must be screened from wildlife and/or livestock entry.**
- **Permanent secondary containment structures surrounding large storage tanks and below-grade, open-topped tanks must be fenced/paneled off to exclude livestock.**
- **SIMCOE is responsible for any and all damage to livestock from unprotected equipment, and the SIMCOE is responsible for any damage to facilities caused by livestock.**

29. **If applicable SIMCOE shall develop a Spill Prevention, Control, and Countermeasure (SPCC) plan for the drilling, completions, and/or operations at the site.**

30. **Permanent production tanks for the facility shall be installed within an appropriately sized and adequately constructed secondary containment structure.**

31. **If a custom seed mix will be used at the site, the mix shall be approved by SUIT prior to seeding taking place. If a custom seed mix is not proposed, SIMCOE shall use Seed Mix #1/applicable rates as detailed in the *SUIT General Surface Use Agreement Stipulations*. All seeded areas shall be mulched at a minimum rate of two (2) tons per acre.**

AGREE TO COMPLY WITH TERMS AND CONDITIONS:
The undersigned warrants s/he is authorized to bind the company and, by his/her signature below agrees on behalf of the company that the company will comply with the foregoing stipulations.

SIMCOE LLC

BY: _____ **DATE:** 12/4/2025

NAME: Ryan Tracy

TITLE: Sr. Landman

SIGNED: Adrian Abeyta **DATE:** 12/18/2025
SUIT DOE LAND MANAGER