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7.0 ACRONYMS, GLOSSARY, AND REFERENCES

7.1 ACRONYMS AND ABBREVIATIONS

°	Degrees
3-D	Three-dimensional
-A-	
AADT	Average Annual Daily Traffic
ACEC	Area of Critical Environmental Concern
ACEPM	Applicant-Committed Environmental Protection Measures
Ac-ft	Acre feet
AHPA	Archaeological and Historic Preservation Act of 1974
amsl	Above Mean Sea Level
ANC	Acid Neutralization Capacity
AO	Authorizing Officer
APD	Application for Permit to Drill
APE	Area of Potential Effect
AQIA	Air Quality Impact Assessment
AQRV	Air Quality Related Values
AQTSD	Air Quality Technical Support Document
ARMS	Air Resource Management Strategy
ARPA	Archaeological Resources Protection Act of 1979
AUM	Animal Unit Month
avg.	Average
-B-	
BACT	Best Available Control Technology
bbls	Barrels
BCC	Birds of Conservation Concern
Bcf	Billion Cubic Feet
BHCA	Bird Habitat Conservation Area
bgs	Below Ground Surface
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practices
BOP	Blow-out Preventer
bpd	Barrels per Day
BSC	Biological Soil Crust
BTEX	Benzene, toluene, ethylbenzene and xylene
BWPD	Barrels of Water per Day
-C-	
CAA	Clean Air Act
CA	Conservation Area

CCC	Civilian Conservation Corps
CDP	Census Designated Place
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	Cubic feet per Second
CH ₄	Methane
CIAA	Cumulative Impact Analysis Area
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COA	Condition of Approval
CS	Species receiving special management under a Conservation Agreement
CSU	Controlled Surface Use
CTB	Centralized Tank Batteries
CWA	Clean Water Act

-D-

DAQ	Division of Air Quality
DAT	Deposition Analysis Thresholds
DEA	Demographic Economic Analysis
DOI	Department of the Interior
dV	deciview
DWS	Utah Department of Workforce Services
DWSPZ	Utah Drinking Water Source Protection Zone

-E-

EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act of 1973
ESD	Ecological Site Description

-F-

F	Fahrenheit
FEIS	Final Environmental Impact Statement
FIP	Federal Implementation Plan
FLM	Federal Land Manager
FLPMA	Federal Land Policy and Management Act
FO	Field Office
FRP	Field Response Plans
ft	Feet
FWKO	Free Water Knock Outs

-G-

GHGs	Greenhouse Gases
GIS	Geographic Information System
GNB	Greater National Buttes
Gold Book	BLM/USFS Surface Operating Standards for Oil and Gas Exploration and Development
GOSP	Gas and Oil Separation Plant

-H-

HAP	Hazardous Air Pollutant
HCA	Habitat Conservation Area
HCP	Hazard Communication Program
hp	Horsepower

-I-

IM	Instructional Memorandum
IOPs	Inventory Observation Points

-K-

kg/ha-yr	kilograms per hectare per year
KCl	Potassium chloride
km	Kilometer
KOSLA	Known Oil Shale Leasing Area
Kw	Soil Water Erosion Potential

-L-

L	Liter
lek	Sage-grouse Strutting Ground
LNG	Liquefied natural gas
LOP	Life of the Project
LUPAs	Land Use Plan Amendments

-M-

m	Meter
MACT	Maximum Achievable Control Technology
Mbbl	Million Barrels
MBPA	Monument Butte Project Area
MBTA	Migratory Bird Treaty Act of 1918
Mcf	Thousand cubic feet
MDP	Master Development Plan
MEI	Maximum Exposed Individual
mg	Milligram
mg/L	Milligram Per Liter
MLA	Mineral Leasing Act of 1920
MLE	Maximum Likely Exposure
Mmbo	Million Barrels of Oil
Mmcf	Million Cubic Feet

MOU	Memorandum of Understanding
MPR	Mineral Potential Report
MSDS	Material Safety Data Sheet

-N-

NAAQS	National Ambient Air Quality Standards
NaCl	Sodium Chloride
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
Newfield	Newfield Exploration Company
NGL	Natural Gas Liquid
n-hexane	Normal Hexane
NHPA	National Historic Preservation Act
NO ₂	Nitrogen Dioxide
N ₂ O	Nitrous Oxide
NOI	Notice of Intent
NOS	Notice of Staking
NO _x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NRS	Natural Resource Specialist
NSO	No Surface Occupancy
NSPS	New Source Performance Standards
NSR	New Source Review
NTL	Notice to Lessees
NWI	National Wetlands Inventory
NWSRS	National Wild and Scenic Rivers System

-O-

OHV	Off Highway Vehicle
ORV	Outstandingly Remarkable Value
OSHA	Occupational Safety and Health Administration

-P-

PDO	Property Damage Only
PFYC	Potential Fossil Yield Classification
PHMSA	Pipeline and Hazardous Material Safety Administration
PHPA	Polyacrylamide Polymer
PLPCO	Public Lands Policy Coordination Office
PLS	Pure Live Seed
PM ₁₀ and PM _{2.5}	Particulate matter less than 10 or 2.5 microns in aerodynamic diameter
ppb	Parts Per Billion

PPH	Preliminary Priority Habitat
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
PUP	Pesticide Use Proposal

-R-

RCRA	Resource Conservation Recovery Act of 1976
RD&D	Research, Development, and Demonstration
REL	Reference Exposure Levels
RfC	Reference Concentrations
RFD	Reasonably Foreseeable Development
RICE	Reciprocating Internal Combustion Engines
RIPRAP	Recovery Implementation Program Recovery Action Plan
RMP	Resource Management Plan
ROD	Record of Decision
RoMANS	Rocky Mountain Atmospheric Nitrogen and Sulfur
ROW	Right-of-Way
RUSLE2	Revised Universal Soil Loss Equation 2
RV	Recreational Vehicle

-S-

SAR	Sodium Adsorption Ratio
SARA	Superfund Amendments and Reauthorization Act of 1986
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SITLA	State Institutional Trust Lands Administration
SMA	Surface Management Agency
SO ₂	Sulfur Dioxide
SPARROW	USGS, Bureau of Reclamation and BLM dissolved-solids water quality model
SPC	Species of Concern (Utah Division of Wildlife Resources)
SPCC	Spill Prevention Control and Countermeasure
SQFI	Scenic Quality Field Inventory (Rating Form)
SQRU	Scenic Quality Rating Units
SR	State Route
SRMA	Special Recreation Management Area
SSA	Sole Source Aquifer
STSA	Special Tar Sands Area
SUA	Surface Use Agreement
SUP	Surface Use Plan
SWD	Salt Water Disposal
SWReGAP	Southwestern Regional Gap Analysis Project

-T-

Tcf	Trillion Cubic Feet
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TDS	Total Dissolved Solids
TL	Timing Limitation
TMDL	Total Maximum Daily Loads
tpy	Tons per Year
TSL	Toxic Screening Level
TSS	Total Suspended Solids

-U-

UBC	Uniform Building Code
UCRB	Upper Colorado River Basin
UDEQ-DAQ	Utah Department of Environmental Quality - Division of Air Quality
UDEQ-DWQ	Utah Department of Environmental Quality - Division of Water Quality
UDMV	Utah Department of Motor Vehicles
UDOGM	Utah Division of Oil, Gas, and Mining
UDOT	Utah Department of Transportation
UDWQ	Utah Division of Water Quality
UDWR	Utah Division of Wildlife Resources
UEO	Utah Energy Office
UGS	Utah Geological Survey
UIC	Underground Injection Control
UNHP	Utah Natural Heritage Program
UNPS	Utah Native Plant Society
UPDES	Utah Pollutant Discharge Elimination System
UPIF	Utah Partners in Flight
USACE	United States Army Corps of Engineers
USC	United States Code
USCA	United States Code Annotated
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

-V-

VCU	Vapor Combustion Unit
VFO	Vernal Field Office
VOC	Volatile Organic Compound
VRI	Visual Resource Inventory
VRM	Visual Resource Management

-W-

WEPP	Water Erosion Prediction Project
WSR	Wild and Scenic River
WYBC	Western Yellow-billed Cuckoo

7.2 GLOSSARY OF TERMS

-A-	
Abatement	Reduction; often used to describe noise mitigation or dust suppression.
Acre-foot	The volume of liquid or solid required to cover one acre to a depth of one foot, or 43,560 cubic feet; measure for volumes of water, reservoir rock, etc.
Active raptor nest	A nest documented as occupied by a raptor within the 3-year period preceding proposed construction.
Adaptive management	A structured iterative process of robust decision making in the face of uncertainty, with an aim of reducing uncertainty over time via system monitoring.
Adverse impacts	An apparent direct or indirect detrimental effect.
Affected environment	The natural, physical, and human-related environment that is sensitive to changes due to proposed actions; the environment under the administration of a land management agency.
Air dispersion modeling	A complex computer model that calculates ambient concentrations of air pollutants.
Airshed	A part of the atmosphere that responds in a coherent way with respect to the dispersion of emissions.
Alluvial	Pertaining to material or processes associated with transportation or deposition of soil and rock by flowing water (e.g., streams and rivers).
Alluvium	Unconsolidated or poorly consolidated gravel sands and clays, deposited by streams and rivers on riverbeds, floodplains, and alluvial fans.
Ambient	The environment as it exists at the point of measurement and against which changes or impacts are measured. Synonymous with background.
Ambient air quality	The mass of a pollutant in a given volume of air. It is typically measured as micrograms of pollutant per cubic meter of air.
Ambient noise level	Cumulative effect from all noise generating sources in the area.
Ancillary facility	Additional support structures required to develop the mineral resource, including gas compressor facilities, disposal wells, roads, collection pipelines, and electric transmission lines.
Animal Unit Month (AUM)	A standardized measurement of the amount of forage necessary for the sustenance of one cow unit or its equivalent for one month. Approximately 800 pounds of forage.
Anthropogenic	Caused by human or man-made activities.
Antiquities	A general term for archaeological or paleontological resources that are at least 100 years of age. Antiquities tangibly represent or have the potential to yield information on historical or prehistoric cultures, or extinct plants and animals.
Aquifer	A body of rock that is sufficiently permeable to conduct groundwater and to yield

	quantities of water to wells and springs. A confined aquifer is bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined groundwater. An unconfined aquifer has a water table. The confining bed is a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers.
Archaeology	The scientific study of material remains (as fossil relics, artifacts, and monuments) of past human life and activities.
Area of critical environmental concern (ACEC)	Areas within the public lands where special management attention is required to: (1) protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes; or (2) protect life and safety from natural hazards.
Association	Organisms living together in any given combination of environmental conditions.
Atlatl	A tool that uses leverage to achieve greater velocity in dart-throwing and includes a bearing surface that allows the user to temporarily store energy during the throw. It consists of a shaft with a cup or a spur that may be integrated into the weapon or made separately and attached to the butt of a projectile called a dart.
Atmospheric dispersion	The process by which pollutants are transported and vertically mixed in the atmosphere.
Atmospheric stability	A measure of turbulence in the atmosphere. Three general classes of stability include neutral, unstable, and stable. Influenced by vertical temperature gradients and wind profiles.
Attainment area	An area in which the federal and state standards for ambient air quality are being met.
Authorizing officer (AO)	Person designated by the Agency as being in the position to speak for the agency and commit the agency to action.
-B-	
Background (Visual)	The viewing area of a distance zone that lies from a minimum of 3 to 5 miles to a maximum of about 15 miles from a travel route, use area, or other observer position. Atmospheric conditions in some areas may limit the maximum to about 8 miles or increase it beyond 15 miles.
Background values	The environment as it exists at the point of measurement and used as a basis to measure changes or impacts. For the purpose of this EIS, background values apply to air quality, noise, and erosion rates.
Barrel	Volume of water equivalent to 42 gallons of water; approximately 7,758 barrels are equivalent to 1 acre-foot of water.
Baseline	Conditions, including trends, existing in the human environment before a proposed action has started; a benchmark state from which the environmental consequences of an action are forecasted.
Berm	Barrier constructed to confine water or other substances.
Best management	A practice or combination of practices determined by the state to be the most

practices (BMPs)	effective and practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution or protecting wildlife and landscapes. These types of environmental protection practices are applied to oil and natural gas drilling and production to help ensure that energy development is conducted in an environmentally responsible manner.
Big game	Large species of wildlife such as elk, deer, bighorn sheep, and pronghorn that are commonly hunted for food or sport.
Biological soil crusts (BSCs)	The community of organisms living at the surface of desert soils. Major components are cyanobacteria, green algae, microfungi, mosses, liverworts, and lichens.
Biotic	Pertaining to life and living organisms.
Blowout preventer (BOP)	A series of valves on the drill rig which can close down the well in the event that the drill bit penetrates extreme pressure zones.
Bond	Financial guarantee to ensure compliance with the Mineral Leasing Act, including complete and timely plugging of wells, reclamation of lands or adversely affected surface waters, payment of royalties, assessments, or penalties.
Borehole	The wellbore itself, including the openhole or uncased portion of the well. Borehole may refer to the inside diameter of the wellbore wall, the rock face that bounds the drilled hole.
Brood	Hatchlings in a given nest or being raised by a given female bird.
Browser	An animal that grazes (feeds) on leaves, twigs, and tender shoots of trees or shrubs.
Buffer	A protective area adjacent to an area of concern requiring special attention or protection. In contrast to riparian zones, which are ecological units, buffers can be designed to meet varying management concerns.
-C-	
Candidate Species	Any species included in the Federal Register notice of review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.
Carbon dioxide (CO ₂)	A non-hydrocarbon, corrosive gas that occurs naturally in the gaseous phase in the natural gas reservoir, or is injected into the reservoir in connection with pressure maintenance, gas cycling, or other secondary or enhanced recovery projects.
Casing	A steel pipe which maintains the opening of a drill hole; the act of installing pipe within a well.
Casing annulus	The space between the wellbore and casing where fluid can flow.
Catalyst	A substance that enables a chemical reaction to proceed at a usually faster rate or under different conditions than otherwise possible.

Cement bond log	A geophysical log which confirms the continuous placement of cement within the annulus of the well, to isolate the formation of interest, and to prevent commingling of different aquifers around the casing.
Central gas processing plant	A centralized site where gas compression occurs prior to transport in gas delivery lines.
Characteristic landscape	The established landscape within an area being viewed. The term does not necessarily mean a naturalistic character but may refer to features of the cultural landscape, such as a farming community, an urban landscape, or other landscape that has an identifiable character.
Cist	A prehistoric tomb, box, or chest made of stone slabs or hollowed out of rock that was used for storage of food and other items.
Clean Air Act	Public Law 84-159, established July 14, 1955, and amended numerous times since. The Clean Air Act establishes Federal standards for air pollutants emitted from stationary and mobile sources; authorizes states, tribes and local agencies to regulate polluting emissions; requires those agencies to improve air quality in areas of the country which do not meet Federal standards; and to prevent significant deterioration in areas where air quality is cleaner than those standards. The Act also requires that all Federal activities (either direct or authorized) comply with applicable local, state, tribal and Federal air quality laws, statutes, regulations, standards and implementation plans. In addition, before these activities can take place in non-attainment or maintenance areas, the Federal agencies must conduct a Conformity Analysis (and possible Determination) demonstrating the proposed activity will comply with all applicable air quality requirements.
Closed	Generally denotes that an area is not available for a particular use or uses; refer to specific definitions found in law, regulations, or policy guidance for application to individual programs.
Closed-loop drilling system	A pitless drilling system where all drilling fluids and cuttings are contained at the surface within piping, separation equipment and tanks.
Code of Federal Regulations (CFR)	The official legal tabulation or regulations directing federal government activities.
Colluvial	Consisting of a mixture of soil and angular fragments of rock that have accumulated at the foot and on slopes of mountainsides under the influence of gravity.
Colluvium	A mixture of soil and angular fragments of rock which have accumulated at the foot and on slopes of mountainsides under the influence of gravity.
Community	An assembly of plants living together, reflecting no particular ecological status.
Community types (vegetation)	A group of plants living in a specific region under relatively similar conditions.
Completion	A generic term used to describe the assembly of downhole tubulars and equipment required to enable safe and efficient production from an oil or gas well.

Compressor (units)	Equipment (electrically or diesel-driven) used to increase the pressure on the produced gas to move it into transmission lines or into storage.
Compressor station	A facility consisting of one or more compressor engines, auxiliary treatment equipment, and pipeline installations to pump natural gas under pressure over long distances.
Condensate	A low-density liquid hydrocarbon phase that generally occurs in association with natural gas. Its presence as a liquid phase depends on temperature and pressure conditions in the reservoir allowing condensation of liquid from vapor.
Conditions of Approval (COAs)	Conditions or provisions (requirements) under which an Application for Permit to Drill or a Sundry Notice is approved.
Conglomerate	A sedimentary rock comprised of an unstratified mixture or stratified layers of cobbles, gravel, and sand.
Coniferous	Referring to a cone-bearing, usually evergreen, tree.
Consumptive water use	Total amount of water used by vegetation, human activities, and evaporation of surface water. This includes water used in manufacturing, agriculture, and food preparation that is not returned to a stream, river, or water treatment plant.
Contrast	Opposition or unlikeness of different forms, lines, colors, or textures in a landscape.
Contrast rating	A method of analyzing the potential visual impacts of proposed management activities.
Cooperating Agency (CA)	An entity that assists the lead federal agency in developing an EIS. These can be any agency with jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any tribe or Federal, State, or local government jurisdiction with such qualifications may become a CA by agreement with the lead agency.
Core conservation area	The habitat area that would be necessary for recovery of a particular species. Some species have existing designated core conservation areas, whereas for other species, core conservation areas may be under development or proposed.
Council on Environmental Quality (CEQ)	An advisory council to the President of the US established by the National Environmental Policy Act of 1969. It reviews federal programs to analyze and interpret environmental trends and information.
Cover	That part of the environment (living or dead) used by animals for resting, feeding, nesting, and protection.
Cover type	The part of the environment or landscape characterized by a predominant plant community.
Criteria pollutants	Air pollutants for which the EPA has established State and National Ambient Air Quality Standards (NAAQS). These include particulate matter (PM ₁₀), nitrogen oxides (NO _x), sulfur dioxide (SO ₂), carbon monoxide (CO), and volatile organic compounds (VOCs).

Critical habitat	Habitat that has been deemed essential for the conservation of a threatened, endangered, or candidate species, and that may require species management and protection under Section 4 of the ESA.
Cross-bedded	Arrangement of laminations of strata transverse to the main planes of stratification.
Crucial habitat	Lands on which wildlife or plant species not federally listed as threatened or endangered depend for survival. No alternative suitable habitat is available because of some site limiting factor(s).
Crucial range (Seasonal habitat)	Any particular seasonal range or habitat component that is documented as the determining factor in a big games species' ability to sustain a viable population. A viable population is defined as the species' capability to maintain and reproduce itself at a certain population level specific to that species. Examples include winter range or year-long substantial.
Cubic foot	The volume of gas contained in one cubic foot of space at a standard pressure base of 14.7 psi and a standard temperature base of 60 degrees Fahrenheit.
Cultural modification	Any man-caused change in the landform, water form, vegetation, or the addition of a structure, which creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape.
Cultural resources	Nonrenewable elements of the physical and human environment including archeological remains (evidence of prehistoric or historic human activities) and sociocultural values traditionally held by ethnic groups (sacred places, traditionally utilized raw materials, etc.).
Cultural site	Any location that includes prehistoric and/or historic evidence of human use or that has important sociocultural value.
Cumulative impacts	As defined by 40 CFR 1508.7, those impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.
-D-	
Decibels (dBA)	The measurement unit commonly used to describe sound levels. The A-weighted decibel (dBA) scale is a logarithmic function that emphasizes the audio frequency response curve audible to the human ear and thus more closely describes how one perceives sound.
Deciview (dV)	A unit of measure for visibility. The deciview index was developed as a linear perceived visual change.
Decommissioning	Generally, the removal of a facility or piece of equipment from service, or a change in status from active to inactive.
Demographic	Pertaining to the study of human population characteristics including size, growth rates, density, distribution, migration, birth rates, and mortality rates.

Development well	A well drilled within the known or proven productive area of an oil field with expectation of producing oil or gas from the producing reservoir.
Direct effects	As defined by 40 CFR 1508.9, these are effects, which are caused by the action and occur at the same time and place as the action; Synonymous with direct impacts.
Directional drilling	The intentional deviation of a wellbore from vertical to reach subsurface areas off to one side from the drilling site.
Discharge	The volume of water flowing past a point per unit time, commonly expressed as cubic feet per second (cfs), gallons per minute (gpm), or million gallons per day (mgd).
Dispersed recreation	A general term referring to recreation use outside the developed recreation sites. This includes activities such as scenic driving, hunting, hiking, OHV use, and biking.
Disposal well	Any well used for the disposal of air, gas, water or other substance into any underground stratum.
Dissolved solids	The portion of solids in water that can pass through a 0.45-micron filter.
Disturbance	An event that changes the local environment by removing organisms or opening up an area, facilitating colonization by new, often different, organisms.
Disturbed area	Area where natural vegetation and soils have been removed or disrupted.
Diversity	The distribution and abundance of different plant and animal communities and species within the area.
Domestic water use	Water for household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens. Also called residential water use. The water may be obtained from a public supply or may be self-supplied.
Drainage	Natural channel through which water flows at some time of the year. Natural and artificial means for effecting discharge of water as by a system of surface and subsurface passages.
Drill bit	The cutting device used to drill a well. It is typically made of hardened steel and may have industrial grade diamond components.
Drill rig	The machine used to drill a wellbore. The rig includes virtually everything except living quarters. Major components of the rig include the mud tanks, the mud pumps, the derrick or mast, the draw works, the rotary table or top drive, the drill string, the power generation equipment, and auxiliary equipment.
Drilling fluids	A mixture of water, guar gel, sand, and pH and bacterial control chemicals used in the development of a well for fluid extraction.
Drilling mud	The circulating fluid used to bring cuttings out of the well bore, cool the drill bit, provide hole stability, and maintain pressure control. Drilling mud includes a number of additives to maintain the mud at desired viscosities and weights. Some additives which may be used are caustic, toxic, or acidic.

-E-	
Earthquake	Sudden movement of the earth's crust resulting from faulting, volcanism, or other mechanisms.
Ecosystem	An interacting system of organisms considered together with their environment for example, marsh, watershed, and stream ecosystems.
Effects	Environmental consequences as a result of a proposed or alternative action. They include: 1) direct effects, which are caused by the action and occur at the same time and place; and 2) indirect effects, which are caused by the action and occur later in time or are further removed in distance but which are still reasonably foreseeable. Also referred to as impacts.
Emission	Air pollution discharge into the atmosphere, usually specified by mass per unit time.
Endangered species	A plant or animal species whose prospects for survival and reproduction are in immediate jeopardy, as designated by the Secretary of the Interior, and as further defined by the Endangered Species Act.
Endemic	Confined naturally to a particular geographic area.
Environment	The aggregate of physical, biological, economic and social factors affecting organisms in an area.
Environmental Impact Statement (EIS)	A detailed written statement required by the National Environmental Policy Act when an agency proposes a major federal action significantly affecting the quality of the human environment.
Environmental justice	Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.
Eocene	A period of geologic time from 55.8 million and 33.9 million years before present. The Eocene epoch followed the Paleocene epoch and preceded the Oligocene epoch.
Ephemeral stream	A drainage area, channel, or stream that has no base flow. Water that flows for a short time each year but only in direct response to a runoff event (for example, rainfall or snowmelt).
Erosion	Detachment or movement of soil or rock fragments by water, wind, ice, or gravity. Accelerated erosion is much more rapid than normal, natural, or geologic erosion, primarily as a result of the influence of activities of man, animals, or natural catastrophes.
Evaporative transpiration	The process of transferring water to the atmosphere through evaporation of water and transpiration from plants.
Exception	A case to which a rule or general principal does not apply; a thing different from or treated differently from others of the same class; omission; exclusion.

Exploration	The search for economic deposits of minerals, ore, and other materials through practices of geology, geochemistry, geophysics, drilling, and/or mapping.
Exploratory well	A well drilled in an area where no oil or gas production exists in an effort to discover oil or gas deposits.
Extensive Recreation Management Areas (ERMA)	These are areas where dispersed recreation is encouraged and where visitors have a freedom of recreational choice with minimal regulatory constraint.
Extirpated	A wildlife species that no longer exists.
-F-	
Fault	A fracture in bedrock along which there has been vertical and/or horizontal movement caused by differential forces in the earth's crust.
Fauna	All animal life associated with a given habitat.
Fawning habitat	An area where big game animals usually give birth during a specific time of year.
Federal Land Policy and Management Act of 1976 (FLPMA)	Federal Land Policy and Management Act of 1976 (FLPMA): Public Law 94-579. October 21, 1976, often referred to as the BLM's "Organic Act," which provides the majority of the BLM's legislated authority, direction, policy, and basic management guidance.
Federal Register	A daily publication that reports Presidential and Federal Agency documents and announcements.
Fisheries	Streams and lakes used for fishing.
Fisheries habitat	Streams, lakes, and reservoirs that support fish.
Flaring	The controlled burning of natural gas at a well head that cannot be processed for sale or use because of technical or economic reasons.
Floodplain	That portion of a river valley, adjacent to the channel, which is built of recently deposited sediments and is covered with water when the river overflows its banks at flood stages.
Floristic	All plant life associated with a given habitat.
Fluid minerals	Oil, gas, coal bed natural gas, and geothermal resources.
Fluvial	Of, relating to, or living in a stream or river; produced by the action of a stream.
Footprint	The actual surface area physically disturbed by oil and gas operations and ancillary facilities.
Forage	Vegetation used for food by wildlife, particularly big game wildlife and domestic livestock.
Forb	A broad-leaved flowering plant.
Fossil	Mineralized or petrified form from a past geologic age, especially from previously living things.

Freeboard	The vertical distance between the normal maximum level of the water surface in a channel, reservoir, tank, canal, etc., and the top of the sides of a levee, dam, etc., which is provided so that waves and other movements of the liquid will not overtop the confining structure.
Fugitive dust	Dust that is not emitted from definable point sources such as industrial smokestacks. This particulate matter can become airborne and escape the general vicinity of an area where activity is occurring. Dust can be generated by construction traffic, surface clearing operations etc., and can then be carried by wind into the air, creating a plume that may be visible from greater distances than the activity directly causing the dust.
-G-	
Gas production facility	All storage, separation, treating, dehydration, power supply, compression, pumping, metering, monitoring, flowline, and other equipment directly associated with gas wells.
Generating station	A facility built to produce electricity for a phased field-wide electrification system.
Geographic information system (GIS)	A computer system capable of storing, analyzing, and displaying data and describing places on the earth's surface.
Geomorphology	The study of landforms.
Gilsonite	A form of natural asphalt found in large amounts only in the Uintah Basin of Utah. Discovered in the 1860s, it was first marketed as a lacquer, electrical insulator, and waterproofing compound about 25 years later by Samuel H. Gilson.
Grade	A slope stated in terms of feet per mile or as feet per feet (percent); the content of precious metals per volume of rock (ounces per ton).
Grazing allotment	A unit of land suitable and available for livestock grazing that is managed as one grazing unit.
Greenhouse gas (GHG)	A gas in an atmosphere that absorbs and emits radiation within the thermal infrared range; naturally occurring GHGs include water vapor, carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (NO ₂), and ozone (O ₃).
Groundwater (Confined and Unconfined)	All subsurface water, especially that as distinct from surface water portion in the zone of saturation. Confined groundwater is under pressure substantially greater than atmospheric throughout, and its upper limit is the bottom of a bed of distinctly lower permeability than that of the material in which the confined water occurs. Unconfined groundwater is water in an aquifer that is under atmospheric pressure and is considered under water table conditions.
Guidelines	Actions or management practices that may be used to achieve desired outcomes, sometimes expressed as BMPs.

-H-	
Habitat	The place or type of site where a plant or animal naturally or normally lives and grows. Includes all biotic, climatic, and soils conditions, or other environmental influences affecting living conditions.
Habitat diversity	The distribution and abundance of different plant and animal communities and species within a specific area.
Habitat fragmentation	The process by which habitats are increasingly subdivided into smaller units, resulting in their increased isolation as well as loss of total habitat area.
Habitat type	A land or aquatic unit consisting of an aggregation of habitats having equivalent structure, function, and responses to disturbance.
Hazardous air pollutants (HAPs)	Pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 189 air pollutants as HAPs.
Herbaceous	Plant strata that have little or no woody tissue and persist usually for a single growing season.
Holocene	An epoch of the Quaternary period from about 10,000 years ago to present; sometimes referred to as “recent.”
Horizontal drilling	The drilling of an oil or natural gas well at a vertical angle, which allows a well to run parallel to a formation containing oil or gas.
Hydraulic fracturing	A method of stimulating well production by increasing the permeability of the producing formation. Fracture fluids which include propping agents such as sand or glass beads are pumped into the formations under extremely high hydraulic pressure. The propping agents facilitate the formation of channels to release water and gas into the well.
Hydrocarbon	An organic compound consisting entirely of hydrogen and carbon that are found in petroleum, natural gas, coal, and asphalt.
Hydrocyclone	A stationary device that uses centrifugal force to separate the heavy and light components of liquids.
Hydrogen sulfide (H ₂ S)	A flammable, poisonous, corrosive gas with an odor suggestive of rotten eggs, which can occur naturally in the gaseous phase in natural gas reservoirs.
Hydrology	A science that deals with the properties, distribution, and circulation of surface and subsurface water.
Hydrostatic testing	Testing of the integrity of a newly placed, but uncovered pipeline for leaks. The pipeline is filled with water, pressurized to operating pressures, and visually inspected.

-I-	
Impact	A modification of the existing environment caused by an action. These environmental consequences are the scientific and analytical basis for comparison of alternatives. They include: 1) direct effects, which are caused by the action and occur at the same time and place; and 2) indirect effects, which are caused by the action and occur later in time or are further removed in distance but which are still reasonably foreseeable or cumulative. A synonym for “effect.”
Impairment	A classification of poor water quality for a surface water body under the Clean Water Act.
Impoundment	The accumulation of any form of water in a reservoir or other storage area.
Indian Country	Any of the many self-governing Native American communities throughout the US. Legally categorized as (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government; (b) all dependent Indian communities within the borders of the United States ; and (c) all Indian allotments.
Indirect effects	Effects, which are caused by the action and occur later in time or are further removed in distance but which are still reasonably foreseeable. Indirect effects may include reduced reproduction, population density or growth rate in wildlife. Other effects may be related to induced changes in the patterns of land use and effects on air, water, and other natural systems, including ecosystems (40 CFR 1508.8). Synonymous with indirect impacts.
Infiltration	The movement of water or some other liquid into the soil or rock through pores or other openings.
Infrastructure	The basic framework or underlying foundation of a community including road networks, electric and gas distribution, water and sanitation services, and facilities.
Injection well	A well in which fluids are injected rather than produced, the primary objective typically being to maintain reservoir pressure. Two main types of injection are gas and water.
Interbedded	Rock beds that lie within rock beds of different material.
Interdisciplinary team (IDT)	A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, that are assembled to solve a problem or perform a task. The members of the team collaborate with frequent interaction to develop a solution so that each discipline may provide insights to any stage of the problem and disciplines may combine to provide new solutions. The number and disciplines of the members vary with circumstances. A member may represent one or more disciplines or BLM program interests.
Intermittent stream	A stream which flows only at certain times of the year when it receives water from alluvial groundwater, springs, or some surface source such as melting snow in mountainous areas.

Inventory Observation Point (IOP)	That portion of the Visual Resource Inventory (VRI) process, which is either an important viewpoint or representative of the scenic quality rating unit being evaluated for scenic quality
Invertebrates	All animals without vertebrae.
Irretrievable	Applies to the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost irretrievably while an area is serving as a winter sports site. The production lost is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production.
Irreversible	Applies primarily to the use of nonrenewable resources, such as minerals or cultural resources, or to those factors that are renewable only over long time spans, such as soil productivity and aspen regeneration. Irreversible also includes loss of future options.
-L-	
Lacustrine	Pertaining to lakes. Lacustrine sediments are deposited in lakes.
Lambing areas	An area where sheep deliver and nurse young during a specific time of year.
Landform	Any physical, recognizable form or feature of the Earth's surface, having a characteristic shape and produced by natural causes. Includes major features such as plains, plateaus, and mountains, and minor features, such as hills, valleys, slopes, canyons, arroyos, and alluvial fans.
Landscape character	The arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality, which distinguishes it from its immediate surroundings.
Landscape features	The land, water, vegetation, and structures that compose the characteristic landscape.
Leasable minerals	Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. They include coal, phosphate, sulphur, potassium, and sodium minerals, and oil, gas, and geothermal.
Lease	A legal document that conveys to an operator the right to drill for oil, gas; the tract of land on which a lease has been obtained.
Lease notice	A document that provides more detailed information concerning limitations that already exist in law, lease terms, regulations, and operational orders. A Lease Notice also addresses special items the lessee would consider when planning operations but does not impose new or additional restrictions.
Lease stipulation	A modification of the terms and conditions on a standard lease form at the time of the lease sale.
Lek	An assembly area where birds, especially sage grouse, carry on display and courtship behavior.
Limestone	A sedimentary rock composed primarily of calcium carbonate.

Line	The path, real or imagined, that the eye follows when perceived abrupt differences in form, color, or texture. Within landscapes, line may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches.
Lithic scatter	A surface scatter of cultural artifacts and debris that consists entirely of lithic (i.e., stone) tools and chipped stone debris. This is a common prehistoric site type that contrasts to a cultural material scatter (which contains other or additional artifact types such as pottery or bone artifacts), to a camp (which contains habitation features, such as hearths, storage features or occupation features), or to other site types that contain different artifacts or features.
Locatable minerals	Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.
Long-term impacts	Effects that persist beyond the construction, drilling, and reclamation phases of an oil and gas project, or continue for the LOP. For the purpose of this EIS analysis, long-term effects generally last five (5) years or more.
-M-	
Mahogany Oil Shale Zone	The Mahogany Zone (Parachute Member) in the Piceance Creek Basin consists of kerogen-rich strata and averages 100 to 200 feet thick. This zone extends to all margins of the basin and is the richest oil shale interval in the stratigraphic section.
Mesic	A habitat characterized by moderate moisture and temperature conditions and by a profusion of plant life.
Methane (CH ₄)	The simplest hydrocarbon; natural gas is nearly pure methane.
Middleground	Area located from 0.25–0.50 to 3–5 miles from the viewer.
Mil	A unit of length equal to one thousandth (10 ⁻³) of an inch (0.0254 mm); typically used to specify the thickness of plastic sheeting.
Mineral estate	The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.
Mineral reserves	Known mineral deposits that are recoverable under present conditions but are as yet undeveloped.
Mineral withdrawal	A formal order that withholds federal lands and minerals from entry under the Mining Law of 1872 and closes the area to mineral location (staking mining claims) and development.
Minimize	To reduce the adverse impact of an operation to the lowest practical level.
Mitigation, Mitigate	Avoiding, minimizing, reducing, eliminating, rectifying, or compensating for impacts to resources from an action (see 40 CFR 1508.8). To lessen the severity.
Mitigation measures	Methods or procedures that reduce or lessen the adverse impacts of an action.
Modification	The making of a limited change in something; the result of such a change.
Monitor	To systematically and repeatedly watch, observe, or measure environmental

	conditions in order to track changes.
Mudstone	A hardened sedimentary rock consisting of clay. It is similar to shale but lacks distinct layers.
-N-	
National Ambient Air Quality Standards (NAAQS)	The allowable concentrations of air pollutants specified by the federal government. The air quality standards are divided into primary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public health) and secondary standards (based on the air quality criteria and allowing an adequate margin of safety and requisite to protect the public welfare from any unknown or expected adverse effects of air pollutants).
National Environmental Policy Act of 1969 (NEPA)	An act that encourages productive and enjoyable harmony between man and his environment and promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding or the ecological systems and natural resources important to the Nation; and establishes the CEQ.
National Register of Historic Places (NRHP)	A list of areas maintained by the National Park Service that have been designated as being of historical significance.
Native species	Plants that originated in the area in which they are found (i.e., they naturally occur in that area).
Natural gas	Those hydrocarbons (other than oil and other than natural gas liquids separated from natural gas), which occur naturally in the gaseous phase in the reservoir and are produced and recovered at the wellhead in gaseous form. Natural gas includes coalbed methane gas.
Night lighting	Lights used to illuminate facilities for work or safety. These lights can be mounted on poles, buildings, other equipment and fences. The lighting can consist of two types: area and accent. Area lighting provides general illumination over a broad zone for safety, while accent lighting provides concentrated illumination for work areas, doorways, pathways, stairs and other areas that require distinction.
No Surface Occupancy (NSO)	A fluid minerals leasing constraint that prohibits occupancy or disturbance on all or part of the lease surface to protect special values or uses. Lessees may exploit the fluid mineral resources under the leases restricted by this constraint through use of directional drilling from sites outside the area.
Noise	Unwanted sound; one that interferes with one's hearing of something; a sound that lacks agreeable musical quality or is noticeably unpleasant.
Nonattainment	The EPA's designation for an air quality control region (or portion thereof) in which ambient air concentrations of one or more criteria pollutants exceed NAAQS.
Non-consumptive use	Water withdrawn for use that is not consumed. This includes water used for hydropower generation, recreation, and in-stream flow.
Noxious weeds	A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage;

	parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States. Also known as “invasive” weeds.
Numic	A branch of the Uto-Aztecan language family which includes seven languages spoken by Native American peoples traditionally living in the Great Basin, Colorado River basin, and southern Great Plains.
-O-	
Occupied habitat	Any area within 300 feet of a listed plant individual.
Off-highway vehicle (OHV)	Any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) any non-amphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used in times of national defense emergencies.
One-hundred (100)-year flood	A hydrologic event with a magnitude that has a recurrence interval of 100 years.
Operator	Any person who has taken formal responsibility for the operations conducted on the leased lands.
Outcrop	Rock strata exposed at the surface.
Outstanding Remarkable Values (ORVs)	A unique, rare, or exemplary feature of a river that is significant at a comparative regional or national level. The value may be scenic, recreational, geological, fish-related, wildlife-related, historic, cultural, botanical, hydrological, paleontological, scientific, or other value.
Ozone	A molecule containing three oxygen atoms (O ₃) produced by passage of an electrical spark through air or oxygen (O ₂).
-P-	
Paleontological resources (fossils)	The physical remains of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.
Parturition areas	Documented birthing areas commonly used by females. These areas may be used as nursery areas by some big game species.
Perennial stream	A stream or reach of a stream that flows throughout the year.
Perennial vegetation	A plant whose life-cycle lasts longer than two years. Although the tops of herbaceous perennials die down at the end of the growing season, buds, roots, and underground portions of the plant persist.
Permeability	The capacity of a soil or groundwater aquifer to transmit water.
Petroglyphs	Images created by removing part of a rock surface by incising, pecking, carving, and abrading.
pH	A measure of the acidity or alkalinity of an aqueous solution and defined as the negative logarithm of the hydrogen-ion concentration. pH values range from 0 to

	14 and are dimensionless. A pH of 7 represents a neutral solution, a pH above 7 indicates an alkaline solution, and a pH below 7 indicates an acidic solution.
Physiographic province	An extensive portion of the landscape normally encompassing many hundreds of square miles that portrays similar qualities of soil, rock, slope, and vegetation of the same geomorphic origin.
Physiography	The study and classification of the surface features of the earth. Pertains to the genesis and evolution of landforms.
Pictograph	A graphic painted character used in picture writing.
Pipe stringing	Linking casing together to form a continuous string to the target formation. Twenty-foot lengths of casing are screwed and/or welded together.
Plant association	The basic unit of vegetation classification representing a plant community containing a defined flora, composition, and uniform habitat conditions.
Plant community	A group of plants that occupy a given locale.
Pleistocene	A period of geologic time from 2.588 million to 12,000 years before present. Of or belonging to the geologic time, rock series, or sedimentary deposits of the earlier of the two epochs of the Quaternary Period, characterized by the alternate appearance and recession of northern glaciation, the appearance and worldwide spread of hominids, and the extinction of numerous land mammals, such as the mammoths, mastodons, and saber-toothed tigers.
Plug and Abandon (P & A)	Plug and abandon is (1) the proper plugging and abandoning of a well in compliance with all applicable regulations, and the cleaning up of the well site to the satisfaction of any governmental body having jurisdiction with respect thereto and to the reasonable satisfaction of the operator; (2) to cease efforts to find or produce from a well or field; and (3) to plug a well completion and salvage material and equipment.
PM ₁₀	Airborne suspended particles with an aerodynamic diameter of 10 microns or less.
PM _{2.5}	Airborne suspended particles with an aerodynamic diameter of 2.5 microns or less.
Porosity	The voids or openings in geological materials.
Potential habitat	An area that satisfies the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.

Prevention of Significant Deterioration (PSD)	A regulatory program under the Clean Air Act (P.L. 84-159, as amended) to limit air quality degradation in areas currently achieving the National Ambient Air Quality Standards. The PSD program established air quality classes in which differing amounts of additional air pollution are allowed above a legally defined baseline level. Almost any additional air pollution would be considered significant in PSD Class I areas (certain large National Parks and Wilderness Areas in existence on August 7, 1977). PSD Class II areas allow that deterioration associated with moderate, well-controlled growth (most of the country). Although Class III areas would generally allow planned individual growth, no Class III areas have been established.
Produced water	Formation water pumped during the development of a gas well.
Producing well	A well drilled in a known field that produces oil or gas.
Productivity	In reference to vegetation, productivity is the measure of live and dead accumulated plant materials.
Project Area	The area of land upon which an operator conducts mining operations, including the area needed for building or maintaining of roads, transmission lines, pipelines, or other means of access.
Protohistoric	The period or stage of human development or of a particular culture immediately prior to the emergence of writing. The transitional period between history and prehistory.
-R-	
Rangeland health	The degree to which the integrity of the soil and ecological processes of rangeland ecosystems are sustained.
Rangelands	Typically non-irrigated lands managed primarily for grazing cattle, sheep, goats, horses, etc.
Raptor	Bird of prey with sharp talons and strongly curved beaks such as hawks, owls, vultures, and eagles.
Reasonably foreseeable development (RFD)	The prediction of the type and amount of oil, gas, and other mineral activity that would occur in a given area and would contribute to significant cumulative effects on the resources of concern. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.
Recharge	Replenishment of the water supply in an aquifer through the outcrop or along fracture lines.
Reclamation	The process of restoring disturbed areas using any of following methods (for example, recontouring, spreading topsoil or growth medium, seeding, and planting).
Recontouring	Restoration of the natural topographic contours by reclamation measures, particularly in reference to roads.
Record of Decision (ROD)	A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement.

Recreation Management Areas	<p>Units within a planning area that guide recreation management on public lands and have similar recreation related issues and concerns. There are two types of recreation management areas.</p> <p>Extensive Recreation Management Areas (ERMA): These are areas where dispersed recreation is encouraged and where visitors have a freedom of recreational choice with minimal regulatory constraint.</p> <p>Special Recreation Management Areas (SRMA): These are areas where congressionally recognized recreation values exist or where significant public recreation issues.</p>
Rehabilitation	A management alternative and/or practice that restores landscapes to a desired scenic quality.
Relief	The vertical difference in elevation between the highest and lowest points of a land surface within a specified horizontal distance or in a limited area.
Reserve pit	A pit prepared on a well pad prior to drilling to use for wastewater retention, evaporation, and disposal. Wastewaters will have a fine solids component. Some evaporation ponds are lined with an impermeable liner to keep water from filtering through and contaminating shallow groundwater.
Reserves	Identified resources of mineral-bearing rock from which the mineral can be extracted profitably with existing technology and under present economic conditions.
Revegetation	The reestablishment and development of self-sustaining plant cover following land disturbance. This may occur through natural processes, or the natural processes may be enhanced by human assistance through seedbed preparation, reseeding, and mulching.
Right-of-way (ROW)	A ROW grant is an authorization to use a specific piece of public land for a specific project, such as roads, pipelines, transmission lines, renewable energy, and communication sites. The grant authorizes rights and privileges for a specific use of the land for a specific period of time.
Riparian area	A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.
Rock art	See petroglyphs or pictographs.
Roost	A place where birds customarily rest or sleep.
Royalty	A share of production that is free of the expense of production. It is generally paid by a lessee to a lessor of a mineral lease as part of the terms of the lease.
Runoff	That part of precipitation that appears in surface streams; precipitation that is not retained on the site where it falls and is not absorbed by the soil.

-S-	
Salable minerals	Materials such as common varieties of sand, stone, building stone, gravel, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.
Salinity	The term refers to solids such as sodium chloride (table salt) and alkali metals that are dissolved in water. Equivalent to TDS in non-saltwater areas.
Sandstone	A sedimentary rock composed of mineral grains from 1/16 to 2 millimeters in diameter, bound together by a cement of silica, carbonate, or other minerals or a matrix of clay minerals.
Scenic quality	The relative worth of a landscape from a visual perception point of view.
Scenic quality evaluation key factors	The seven factors (land form, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications) used to evaluate the scenic quality of a landscape.
Scenic Quality Rating Unit (SQRU)	A portion of the landscape which displays primarily homogenous visual characteristics of the basic landscape features (land and water form, vegetation, and structures).
Scenic quality ratings	The relative scenic quality (A, B, or C) assigned a landscape by applying the scenic quality evaluation key factors; scenic quality A being the highest rating, B a moderate rating, and C the lowest rating.
Scoping	The process of identifying the range of issues, management concerns, preliminary alternatives, and other components of an EIS. It involves both internal and public viewpoints.
Section 106 Consultation	The requirement of Section 106 of the National Historic Preservation Act that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to significant historic properties and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.
Section 404	That section of the Clean Water Act delineating restrictions on dredging and filling of wetlands and disruption of beds and banks of streams.
Section 7 Consultation	The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.
Sediment	Soil or rock particles that have been transported to stream channels or other bodies of water. Sediment input can come from natural soil erosion, rock weathering, agricultural practices, or construction activities.
Sediment load	The amount of sediment (sand, silt, and fine particles) carried by a stream or river.
Sedimentary rock	A rock formed by the accumulation and cementation of mineral grains transported by wind, water, or ice to the site of deposition or chemically precipitated at the depositional site.

Sedimentation	The processes of erosion, transportation, and deposition of sediment by water and air. These occur naturally but may be enhanced by human activities such as road and reservoir construction, logging, mining, and livestock grazing.
Seismic	Seismic waves are shock waves or vibrations usually generated by an earthquake. In oil and gas exploration, seismic waves are generated by creating vibrations at the ground surface. These are reflected by the various layers of rock beneath the ground and measured at the surface. Computer analysis enables a cross-section of the rock layers to be constructed thus revealing potential mineral deposits.
Sensitive species	The designation (normally for species other than federally listed, proposed, or candidate species) given to species that occur on BLM-administered lands and that the BLM could significantly affect the conservation status of through management. Sensitive species may include those that 1) could become endangered in or extirpated from a state, or within a significant portion of their distribution; 2) are under status review by the Fish and Wildlife Service and National Marine Fisheries Service; 3) are undergoing significant current or predicted downward trends in habitat capability or population or density; 4) typically have small and widely dispersed populations; 5) inhabit specialized or unique habitats; or 6) are state listed but may be better conserved through the application of BLM sensitive species status (see BLM Manual 6840, Special Status Species Management).
Shale	A fine-grained sedimentary rock formed by the consolidation (esp. by compression) of clay, silt, or mud. It is characterized by finely laminated structure (approximately parallel to the bedding) along which the rock breaks readily into thin layers.
Short-term impacts	Effects of short duration that occur during construction, drilling, completion, and reclamation of an oil and gas well. For the purpose of this EIS analysis, short-term impacts are generally defined as those that would last fewer than five (5) years.
Shut-in	Refers to a well that is completed, is shown to be capable of production in paying quantities, and is not presently being operated.
Significant impact	A qualitative term used to describe the anticipated importance of impacts to the human and or the environment as a result of a direct or indirect action (or actions).
Siltstone	A rock composed of silt having the texture and composition of shale but lacking the property to split along planes of weakness into thin sheets.
Slope	The degree of deviation of a surface from the horizontal.
Soil survey	The systematic examination, description, classification, and mapping of soils in an area, usually a county.
Special Status Species	Species that have been proposed for listing or officially listed as threatened or endangered, and species designated as candidates for listing as threatened or endangered under the ESA; state-listed species; and BLM state director–designated sensitive species (see BLM Manual 6840, Special Status Species Management).

Species	The basic category of biological classification intended to designate a single kind of animal or plant.
Species of Special Concern	A native species whose population is low and limited in distribution or has suffered reductions because of habitat loss.
Split-estate lands	Surface land and mineral estate of a given area under different ownerships. Frequently, the surface will be privately owned and the minerals federally owned.
Statistically significant	A difference between samples/responses large enough to be attributed to something other than expected sampling error.
Stipulations	Requirements that are part of the terms of a mineral lease. Some stipulations are standard on all Federal leases. Other stipulations may be applied to the lease at the time of issuance at the discretion of the surface management agency to protect valuable surface resources and uses.
Strata	An identifiable layer of bedrock or sediment; does not imply a particular thickness of rock.
Stratigraphic unit	A body of rocks recognized as a unit in the classification of the rocks of Earth's crust with respect to any specific rock character, property, or attribute or for any purpose such as description, mapping, and correlation.
Stratigraphy	The science of the description, correlation, and classification of rock strata, including the interpretation of the depositional environments of those strata.
Stream gauging	A quantitative determination of stream flow using gages, current meters, or other measuring instruments at selected locations.
Strip topsoil	To salvage a specific depth of topsoil with a scraper, dozer, or grader for use in future revegetation of the site.
Sub-basin	A portion of a river basin that contributes to a watershed.
Substrate	Material consisting of silts, sands, gravels, boulder, and woody debris found on the bottom of a stream channel.
Suitable habitat	Areas that exhibit the specific habitat features necessary for a species' persistence, as determined by field inspection and/or surveys, but that may or may not contain the species.
Surface disturbance	Activities that normally result in more than negligible disturbance to public lands and that accelerate the natural erosive process. These activities normally involve use and/or occupancy of the surface, cause disturbance to soils and vegetation, and are usually caused by motorized or mechanical actions. Surface disturbance may result from activities using earth-moving and drilling equipment; off road vehicle travel; vegetation treatments; the use of pyrotechnics and explosives; and construction of facilities like power lines, pipelines, oil and gas wells, recreation sites, livestock facilities, or new roads. Surface disturbance is not normally caused by casual use. Activities that are not typically surface disturbing include, but are not limited to, proper livestock grazing, cross-country hiking, minimum impact filming, and vehicle travel on designated routes.

-T-	
Tar sands	Also referred to as “oil sand” or “bituminous sand,” tar sand is a sedimentary material composed primarily of sand, clay, water (in some deposits) and organic constituents known as bitumen. Processing of tar sands involves separating the bitumen fraction from the inorganic materials and subsequently upgrading the bitumen through a series of reactions to produce a synthetic crude oil feedstock that is suitable for further refining into distillate fuels in conventional refineries.
Target formation	The geological association of rocks which contain the exploitable mineral reserves.
Temperature inversion	An atmospheric condition in which warmer air lies above colder air and is said to have an inverted temperature gradient where temperature increases with altitude.
Territory	An area defended by a male, both members of a pair or an unmated species.
Texture	The visual manifestations of the interplay of light and shadow created by the variations in the surface of an object or landscape.
Threatened species	Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range; listings are published in the Federal Register.
Three-phase separator	A basin that accommodates the separation of different density fluids, in this case gas and produced water.
Timing limitation (seasonal restriction)	A constraint that limits or prohibits surface use during specified time periods to protect identified resource values. The constraint does not apply to the operation and maintenance of production facilities unless analysis demonstrates that such constraints are needed and that less stringent, project-specific constraints would be insufficient.
Total dissolved solids (TDS)	Total amount of dissolved material, organic or inorganic, contained in a sample of water.
Total suspended solids (TSS)	Amount of undissolved particles suspended in liquid.
Transmission lines	A line used to conduct electricity between two points. Without high voltage transmission lines, generation would have to be located at or near where the energy is used.
Turbidity	A fisheries measurement of the total suspended solids in water expressed as nephelometric turbidity units (NTU).
-U-	
Upland game species	Game birds such as chukar, partridge, ring-necked pheasant, California quail, wild turkey, greater sage-grouse, mourning dove, mountain cottontail rabbit, and desert cottontail rabbit that are commonly hunted for food or sport.

-V-	
Valid existing rights	With respect to oil and gas leases, "valid existing rights" vary from case to case, but generally involve rights to explore, develop, and produce within the constraints of the lease terms, laws and regulations.
Vegetation	All of the plants growing in and characterizing a specific area or region; the combination of different plant communities found there.
Vegetation type	A plant community with distinguishable characteristics described by the dominant vegetation present.
Venting	The release of gas into the atmosphere following well development and prior to successful installation of the collection pipeline system.
Viewshed	The landscape that can be directly seen under favorable atmospheric conditions, from a viewpoint or along a transportation corridor.
Visibility	The ability or inability to view scenic vistas. It is usually characterized by two parameters: visual range (VR) and the light-extinction coefficient (b_{ext}). The VR parameter represents the greatest distance that a large dark object can be seen. The b_{ext} parameter represents the attenuation of light per unit distance due to scattering and absorption by gases and particulate matter in the atmosphere.
Visitor day	A standard measure of visitor use equal to one person visiting a site for 12 hours.
Visual impact	Any modification in landform, water bodies, or vegetation, or any introduction of structures, which negatively interrupts the visual character of the landscape and disrupts the harmony of the basic elements (i.e., form, line, color, and texture).
Visual Resource Management (VRM)	The inventory and planning actions taken to identify visual values and to establish objectives for managing those values. The management actions taken to achieve the visual management objectives.
Visual Resource Management (VRM) Class	One of the four visual management classes (Class I, Class II, Class III, and Class IV) the BLM uses in the VRM system to manage visual resources within its jurisdiction. VRM classes (categories) are assigned to public lands based on scenic quality, sensitivity level, and distance zones. Each class has an objective, which prescribes the amount of change allowed in the characteristic landscape.
Visual Resources	The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.
Volatile organic compounds (VOC)	Carbon-based chemical compounds that evaporate quickly (have a high vapor pressure) under atmospheric conditions. Sources include certain solvents, degreasers (benzene), and fuels. VOCs react with other substances (primarily nitrogen oxides) to form ozone. They contribute significantly to photochemical smog production and certain health problems.
-W-	
Waiver	Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.
Water quality	The chemical, physical, and biological characteristics of water with respect to its

	suitability for a particular use.
Water right	The right to use water diverted at a specific location on a water source and putting it to recognized beneficial uses at set locations.
Water table	Surface in an unconfined water aquifer at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the water body just far enough to hold standing water.
Water-flooding	Methods used to inject produced water and freshwater (through formerly producing or new wells) into the oil-producing geologic formation.
Waterfowl	A bird that frequents water, especially a swimming bird such as a duck or swan.
Waters of the U.S.	Includes 1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2) all interstate waters including wetlands; 3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; 4) all impoundments of waters otherwise defined as Waters of the United States under the definition; 5) tributaries of waters identified in paragraphs (a) (1)-(4) of this section; 6) territorial seas; 7) wetlands adjacent to waters (other than waters that are themselves wetlands); 8) Waters of the United States do not include prior converted cropland (33 CFR Part 328).
Watershed	The line of division between two adjacent rivers or lakes with respect to the flow of water by natural channels into them; the natural boundary of a basin.
Well casing	Large-diameter pipe lowered into an openhole and cemented in place. The well designer must design casing to withstand a variety of forces, such as collapse, burst, and tensile failure, as well as chemically aggressive brines. Casing is run to protect fresh-water formations, isolate a zone of lost returns, or isolate formations with significantly different pressure gradients.
Well pad	A temporary drilling site, usually constructed of local materials such as gravel, shell or even wood. After the drilling operation is over, most of the pad is usually removed or contoured.
Wellbore	A synonym for borehole.
Wellhead	The surface termination of a wellbore that incorporates facilities for installing casing hangers during the well construction phase.
Wetlands	Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR Part 328).
Wickiup	A small, temporary dwelling or shelter of grass, brush, etc. over a frame, traditionally used by Indian peoples of the Great Basin and southwestern US.
Wild and Scenic	Primary river conservation law enacted in 1968. The Act was specifically

Rivers (WSR) Act	intended by Congress to balance the existing policy of building dams on rivers for water supply, power, and other benefits, with a new policy of protecting the free-flowing character and outstanding values of other rivers.
Wildland fire	Any nonstructural fire, other than prescribed fire, that occurs in the wild land.
Wildlife	Any wild plant, mammal, bird, reptile, amphibian, or other aquatic or terrestrial organism.
Winter range	The range that large game animals use in substantial numbers only during winter periods.
Withdrawal	An action that restricts the use of public lands by removing them from the operation of some or all of the public land or mining laws.
Woodland	A forest community occupied primarily by noncommercial species such as juniper, mountain mahogany, or quaking aspen groves; all western juniper forestlands are classified as woodlands, since juniper is classified as a noncommercial species.
Workover	Well maintenance activities which require onsite mobilization of a drill rig to repair the well bore equipment (casing, tubing, rods, or pumps) or the wellhead. In some cases, a workover may involve development activities to improve production from the target formation.
-Z-	
Zone	A slab of reservoir rock bounded above and below by impermeable rock.

7.3 REFERENCES

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