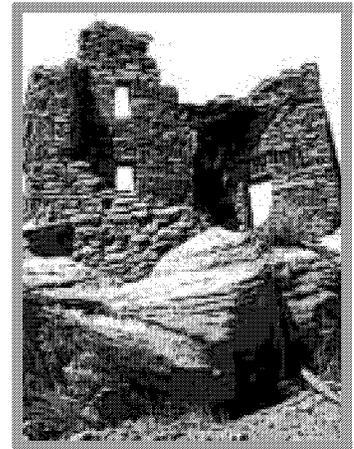
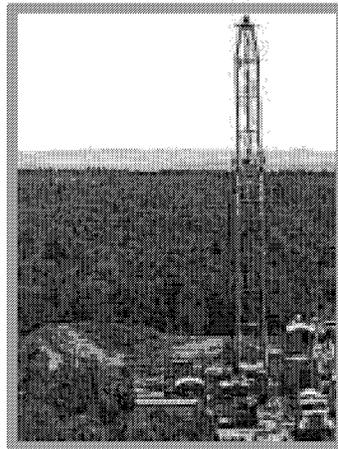
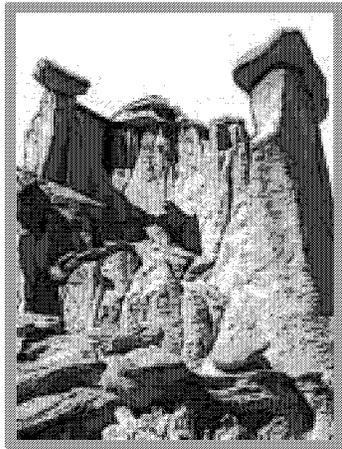


# Farmington Proposed Resource Management Plan and Final Environmental Impact Statement

## Volume II: Appendices



March 2003



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

**Farmington Field Office  
Farmington, New Mexico**



BLM-NM-PL-03-014-1610

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## ACRONYMS AND ABBREVIATIONS

AACL	Acceptable Ambient Concentration Level	MSL	mean sea level
ACEC	Area of Critical Environmental Concern	NAAQS	National Ambient Air Quality Standards
ACHP	Advisory Council on Historic Preservation	NAPI	Navajo Agricultural Products Industry
ACRV	air quality related values	NATICH	National Air Toxics Information Clearinghouse
AFO	BLM Albuquerque Field Office	NEPA	National Environmental Policy Act
APD	Application for Permits to Drill	NF	non-functional
AUM	animal unit month	NHP	National Historical Park
ATV	all-terrain vehicle	NHPA	National Historic Preservation Act
BA	Biological Assessment	NMAAQs	New Mexico Ambient Air Quality Standards
BACT	best available control technology	NMAC	New Mexico Administrative Code
BHP	Broken Hills Proprietary Company, Limited	NMAQB	New Mexico Air Quality Bureau
BIA	Bureau of Indian Affairs	NMDGF	New Mexico Department of Game and Fish
BLM	Bureau of Land Management	NMED	New Mexico Environment Department
BM II	Basketmaker II	NMEIB	New Mexico Environmental Improvement Board
BM III	Basketmaker III	NMOCD	New Mexico Oil Conservation Division
BMP	Best Management Practice	NM Tech	New Mexico Institute of Mining and Technology
BTU	British Thermal Units	NMWQCA	New Mexico Water Quality Control Act
CAA	Clean Air Act	NMWQCC	New Mexico Water Quality Control Commission
CBM	coalbed methane	NO <sub>2</sub>	nitrogen dioxide
CEQ	Council on Environmental Quality	NOI	Notice of Intent
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	NOx	nitrogen oxides
CFR	Code of Federal Regulations	NPS	National Park Service
CNF	Carson National Forest	NRCS	Natural Resources Conservation Service
CO	carbon monoxide	NRHP	National Register of Historic Places
COA	Condition of Approval	NSA	Noise Sensitive Area
CRMP	Cultural Resource Management Plan	NSO	No Surface Occupancy
CSU	Controlled Surface Use	NTL	Notice to Lessee
CWA	Clean Water Act	NWA	National Wilderness Area
DEIS	Draft EIS	O <sub>3</sub>	ozone
EA	Environmental Assessment	OEHHA	Office of Environmental Health Hazard Assessment
EIS	Environmental Impact Statement	OHV	off-highway vehicle
EO	Executive Order	OLM	ozone limiting method
ESA	Endangered Species Act	ORV	off-road vehicle
ETZ	extraterritorial zone	P&A	plugging and abandonment
FAR	functioning at risk	PAC	Protected Activity Center
FFO	BLM Farmington Field Office	PAH	polynuclear aromatic hydrocarbon
FLPMA	Federal Land Policy and Management Act	PFC	Proper Functioning Condition
FY	fiscal year	PI	Pueblo I
GIS	Geographic Information System	PII	Pueblo II
GRTS	Glade Run Trail System	PIII	Pueblo III
HABS	Historic American Buildings Survey	PIV	Pueblo IV
HAP	hazardous air pollutant	PIF	Partners in Flight
HMP	Habitat Management Plan	PILT	Payment in Lieu of Taxes
HUC	hydrologic unit code	PL	Public Law
ISCST <sub>3</sub>	Industrial Source Complex Short Term	PM <sub>2.5</sub>	particulate matter 2.5 microns or less
MEI	maximally-exposed individual	PM <sub>10</sub>	particulate matter 10 microns or less
MLA	Mineral Leasing Act	PNM	Public Service Company of New Mexico
MLE	most-likely exposure		
MOU	Memorandum of Understanding		
MPO	Metropolitan Planning Organization		
MSA	Management Situation Analysis		

PRIA	Public Rangelands Improvement Act
PRLA	Preference Right Lease Application
PSD	Prevention of Significant Deterioration
REL	Reference Exposure Level
RFDS	Reasonable Foreseeable Development Scenario
RMP	Resource Management Plan
RMPA	Resource Management Plan Amendment
RNA	Research Natural Area
ROD	Record of Decision
ROI	Region of Influence
ROS	Recreation Opportunity Spectrum
ROW	right-of-way
R&PP	Recreation and Public Purposes
SDA	Specially Designated Area
SFNF	Santa Fe National Forest
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SJCC	San Juan Coal Company
SMA	Special Management Area
SMCRA	Surface Mining Control and Reclamation Act
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
SRHP	State Register of Historic Places
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
STATSGO	State Soil Geographic Database
STC	Standard Terms and Conditions
SUIT	Southern Ute Indian Tribe
SWAT	Soil-Water Analysis Tool
SWWF	southwestern willow flycatcher
TCP	traditional cultural property
TDS	total dissolved solids
T&E	threatened and endangered
TL	Timing Limitation
TSP	total suspended particulates
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USBR	U.S. Bureau of Reclamation
USC	United States Code

USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compound
VRM	Visual Resource Management
WA	Wilderness Area
WRCS	Western Regional Corridor Study
WSA	Wilderness Study Area
WUG	Western Utility Group

## MEASUREMENTS

° F	degrees Fahrenheit
bbbs	barrels
Bcf	billion cubic feet
Bcfd	billion cubic feet per day
Bscf	billion standard cubic feet
dB	decibels
dBA	A-weighted decibels
gm/HP-hr	gram per horsepower-hour
gpm	gallons per minute
HP	horsepower
km	kilometer
kWh/m <sup>2</sup> /day	kilowatt hours per meter squared per day
L <sub>eq</sub>	equivalent sound level
Mcf	thousand cubic feet
MMcf	million cubic feet
µg/m <sup>3</sup>	micrograms per cubic meter
mg/L	milligrams per liter
mi	miles
mi <sup>2</sup>	square miles
mmt	million metric tons
Mscf	million standard cubic feet
ppm	parts per million
scf	standard cubic feet
TPY	tons per year
Tscf	trillion standard cubic feet

**Appendix A**  
**Summary of Decisions Carried Forward**  
**from Previous Plans**

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**Previous Land Use Planning Decisions  
Brought Forward Without Change**

<b>Number</b>	<b>Name</b>	<b>Implemented</b>	<b>Rationale</b>
1	Process Tree, Post, and Woodcutting Permits	Yes	Continue implementation. Meets public demand and BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 5400.
2	Issue Permits for Research and Collection	Yes	Permits formerly issued by Field Office now are issued by State Office.
3	Implement River Tracts SDA Prescriptions	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 6800, protects T&E species habitat.
4	Complete Reese Canyon RNA Plan	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 6800, protects T&E species habitat.
5	Implement Habitat Management Plans	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 6500.
6	Monitor and Implement Grazing Decisions	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 4120.
7	Review Grazing MOU With BIA and Tribe	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 4120.
8	Develop Watershed Activity Plans	Yes	Continue implementation. Meets BLM multiple use mandates as delineated in FLMPA. Conforms with BLM Manual 7220.
9	Implement Colorado River Salinity Program	Yes	Continue implementation. Required by Colorado River Basin Salinity Control Act.
10	Monitor Air, Water, and Soil Quality	Yes	Continue implementation. Provides data for compliance with Clean Water Act, Clean Air Act, conforms with BLM Manual 7000.
11	Resolve Navajo trespass occupancies within the Resource Area by exchange.	Yes	Continued implementation needed because of new unauthorized trespass.
12	Develop activity plans for existing communication sites on South Bluff, South of Aztec, Lybrook, South of Blanco, and on Huerfano Mountain.	Yes	This is a required lands program element. Huerfano Plan has been written. Others will be prepared as higher priority work permits.

<b>Number</b>	<b>Name</b>	<b>Implemented</b>	<b>Rationale</b>
13	Determine access needs and incorporate these needs into a transportation plan. Identify and rehabilitate all unnecessary roads.	No	Implementation needed due to extensive oil and gas road development throughout FFO. Rehabilitation needed to reduce erosion.
14	Review all lists of parcels submitted for simultaneous drawing, regular competitive and non-competitive offer to lease filings	Yes	BLM regulatory requirement performed prior to each oil and gas lease sale held by the NMSO.
15	Designated sites for material disposal, taking into account spacing between sites to reduce haul costs.	Yes	Continue implementation as part of program to upgrade/maintain oil and gas roads.
16	Conduct an intensive woodlands product inventory.	No	Implementation needed to identify areas with high fuel loads. Conforms to BLM Manual 9200. Implementation pending funding.
17	Provide forage for 23 wild and free roaming horses on the Rosa Community Allotment.	Yes	Continue implementation. Meets requirements of Wild Horse and Burro Act. Conforms to BLM Manual 4700.
18	Restrict surface-disturbing activities on identified fragile watersheds and manage for watershed values.	Yes	Implementation needed due to extensive oil and gas development throughout FFO boundaries.
19	Install water control structures where feasible.	Yes	Continue implementation to improve watersheds.
20	Continue to study rehabilitation measures for oil and gas drilling where past efforts have not been successful.	Yes	Continue implementation due to extensive oil and gas development in FFO boundaries.
21	Maintain existing water control structures.	No	Implementation when federal funds are available to maintain water structures.
22	Monitor the water quality of the larger ephemeral drainages with stream flow stations and peak flow gages.	Yes	Limited implementation. Information needed for the watershed program and assess impacts from oil and gas development.
23	Conduct a water quality survey of all developed ground waters and potential ground water developments such as seeps and artesian flows.	No	Information needed for watershed program and assess impacts from oil and gas development. Implementation pending funding.
24	Ensure that proper disposal of toxic waste from oil and gas wells are accomplished.	Yes	Implementation needed due to extensive oil and gas development throughout the FFO boundaries.

<b>Number</b>	<b>Name</b>	<b>Implemented</b>	<b>Rationale</b>
25	Continue to do mechanical treatments of sagebrush and pinyon-juniper woodlands for wildlife habitat improvement.	Yes	Continue implementation of vegetative treatments where needed. Meets multiple use mandate under FLPMA. Conforms to BLM Manual 6500.
26	Develop a River Management Activity Plan for the San Juan and recreation opportunities.	Yes	Recreation opportunities are available for some tracts. Conforms to BLM Manual 8300.
27	Develop a Cooperative Management Plan with other state and federal agencies for management of public lands around Navajo Lake.	Yes	Continue implementation. BLM manages subsurface while surface is managed by other agencies.
28	Quantify all BLM water use and secure state appropriative water rights.	Yes	This action is court-ordered and FFO must comply with this order (New Mexico v. United States, Civil No. 75-184 (11 Jud. Dist. NM) (San Juan Water Rights Adjudication)).
29	Protect the physical and legal availability of all existing water sources on federal coal leases by appropriate lease stipulation.	Yes	Continue implementation. Required by OSM under SMCRA Regulations 30 CFR 780.18 and 780.21.
30	Reduce sediment and salinity in surface runoff by including best management practices in all activities in areas that contribute more than one AF/mi <sup>2</sup> /yr of sediment.	Yes	Continue implementation due to extensive oil and gas development throughout FFO boundaries. Necessary to comply with Colorado River Basin Salinity Control Act and Clean Water Act.

**Appendix B**  
**Specially Designated Areas (List Only)**

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Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
1870s Wagon Trail	Cultural		✓	✓	✓
Adams Canyon	Cultural	✓	✓	✓	✓
Adolfo Canyon	Cultural	✓	✓	✓	✓
Ah-shi-sle-pah	Wilderness	✓	✓	✓	✓
Ah-shi-sle-pah Road	Cultural	✓	✓	✓	✓
Albert Mesa	Cultural			✓	✓
Alien Run Mountain Bike Trails	Recreation		✓	✓	✓
Andrews Ranch	Cultural	✓	✓	✓	✓
Angel Peak	Geology	✓	✓	✓	✓
Angel Peak	Recreation	✓	✓	✓	✓
Angel Peak	Wildlife			✓	✓
Ashii Na'a' a' (Salt Point)	Cultural		✓	✓	✓
Azabache Station	Recreation	✓	✓	✓	✓
Aztec Gilia	Threatened and Endangered Species	✓			
Badlands	Paleontology	✓			
Bald Eagle	Wildlife	✓	✓	✓	✓
Bee Burrow	Cultural	✓	✓	✓	✓
Beechatuda Tongue	Geology	✓	✓	✓	✓
Bettonie Tsosie	Paleontology	✓	✓	✓	✓
Bi Yaazh	Cultural	✓	✓	✓	✓
Big Star	Cultural	✓	✓		
Bis sa'ani	Cultural	✓	✓	✓	✓
Bisti/De-na-zin	Wilderness	✓	✓	✓	✓
Blanco Mesa	Cultural	✓	✓	✓	✓
Blanco Star Panel	Cultural	✓	✓	✓	✓
Bohanon Canyon	Paleontology	✓	✓	✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
Cabezon	Wilderness	✓	✓	✓	✓
Cabezon Peak	Recreation	✓	✓	✓	✓
Cagle's Site	Cultural	✓	✓	✓	✓
Cañon Jarido	Recreation	✓	✓	✓	✓
Canyon View	Cultural	✓	✓	✓	✓
Carracas Mesa	Recreation	✓	✓	✓	✓
Carrizo Cranes	Cultural	✓	✓		
Carson Fossil Pocket	Paleontology		✓	✓	✓
Casa del Rio	Cultural	✓	✓	✓	✓
Casa Mesa Diablo	Cultural	✓	✓		
Casamero Community	Cultural	✓	✓	✓	✓
Cedar Hill	Cultural			✓	✓
Cereza Canyon	Wildlife			✓	✓
Chacra Mesa	Cultural	✓	✓	✓	✓
Chamisa	Wilderness	✓	✓	✓	✓
Cho'li'i (Gobernador Knob)	Cultural	✓	✓	✓	✓
Christmas Tree Ruin	Cultural	✓	✓	✓	✓
Church Rock Outlier	Cultural	✓	✓	✓	✓
Cibola Canyon	Cultural	✓	✓		
Coal Belt	Minerals	✓			
Compressor Station Ruin	Cultural	✓	✓		
Continental Divide Trail	Recreation		✓	✓	✓
Cottonwood Divide	Cultural			✓	✓
Critical Big Game Habitat	Wildlife	✓	✓		
Cox Canyon	Wildlife			✓	✓
Crow Canyon	Wildlife	✓	✓	✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
Crow Canyon	Cultural			✓	✓
Crownpoint Steps and Herradura	Cultural	✓	✓	✓	✓
Cuba Airport	Lands	✓	✓	✓	✓
Deer House	Cultural	✓	✓	✓	✓
Delgadita-Pueblo Canyons	Cultural	✓	✓	✓	✓
Delgadito Mesa	Wildlife			✓	✓
Delgadito Pueblito	Cultural	✓	✓		
Devil's Spring Mesa	Cultural			✓	✓
Dogie Canyon School	Cultural	✓	✓	✓	✓
Dunes Vehicle Recreation Area	Recreation	✓	✓	✓	✓
Dzil'na'oodlii (Huerfano Mesa)	Cultural		✓	✓	✓
East La Plata	Wildlife			✓	✓
East Side Rincon Site	Cultural	✓	✓	✓	✓
Elk Springs	Wildlife	✓	✓	✓	✓
Empedrado	Wilderness	✓	✓	✓	✓
Empedrado Watershed	Watershed	✓	✓	✓	✓
Encierro Canyon	Cultural	✓	✓	✓	✓
Encinada Mesa-Carrizo Canyon	Cultural			✓	✓
Ensenada Mesa	Wildlife			✓	✓
Ephemeral Wash	Riparian		✓	✓	✓
Farmer's Arroyo Site	Cultural	✓	✓	✓	✓
Farmington Lake Watershed	Watershed	✓			
Foothold and Overlook Ruins District	Cultural	✓	✓		
Fossil Forest	Paleontology	✓	✓	✓	✓
Four Ye'i	Cultural	✓	✓	✓	✓
Frances Canyon	Cultural			✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
Frances Ruin	Cultural	✓	✓		
Glade Run	Recreation	✓	✓	✓	✓
Gobernador and Cereza Canyon	Paleontology	✓	✓	✓	✓
Gomez Canyon Ruin	Cultural	✓	✓		
Gomez Point	Cultural	✓	✓		
Gonzales Canyon-Senon S. Vigil Homestead	Cultural	✓	✓	✓	✓
Gonzales Mesa	Wildlife			✓	✓
Gould Pass Camp	Cultural	✓	✓	✓	✓
Greenlee Ruin	Cultural	✓	✓	✓	✓
Halfway House	Cultural	✓	✓	✓	✓
Haynes Trading Post	Cultural			✓	✓
Head Canyon	Recreation	✓	✓	✓	✓
Headcut Prehistoric Community	Recreation	✓	✓	✓	✓
Hill Road Ruin	Cultural	✓	✓		
Historic Homesteads	Cultural	✓	✓	✓	✓
Hogback, The	Threatened and Endangered Species	✓	✓	✓	✓
Holmes Group	Cultural	✓	✓	✓	✓
Hooded Fireplace and Largo School District	Cultural	✓	✓		
Huerfano Mesa	Cultural	✓			
Hummingbird	Cultural	✓	✓	✓	✓
Hummingbird Canyon	Cultural			✓	✓
Ignacio Chavez	Wilderness	✓	✓	✓	✓
Ignacio Chavez	Recreation	✓	✓	✓	✓
Indian Creek	Cultural	✓	✓	✓	✓
Jacques	Cultural	✓	✓	✓	✓
Jones Canyon	Cultural	✓	✓	✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
Juana Lopez	Geology	✓	✓	✓	✓
Kachina Mask	Cultural	✓	✓	✓	✓
Kin Nizhoni	Cultural	✓	✓	✓	✓
Kin Yazhi (Little House)	Cultural	✓	✓	✓	✓
Kiva	Cultural	✓	✓	✓	✓
Kutz Canyon	Paleontology	✓	✓	✓	✓
La Jara	Cultural			✓	✓
La Lena	Wilderness	✓	✓	✓	✓
Laguna Seca Mesa	Forestry	✓			
Laguna Seca Mesa	Wildlife			✓	✓
Lake Valley	Cultural	✓	✓	✓	✓
Largo Canyon Star Ceiling	Cultural	✓	✓	✓	✓
Log Jam	Paleontology	✓			
Lost Pine	Other	✓			
Lybrook Fossil Area	Paleontology		✓	✓	✓
Manzanares Mesa	Wildlife			✓	✓
Margarita Martinez Homestead	Cultural	✓	✓	✓	✓
Martin Apodaca Homestead	Cultural	✓	✓	✓	✓
Martinez Canyon	Cultural	✓	✓	✓	✓
Mexican Spotted Owl	Threatened and Endangered Species		✓	✓	✓
Middle Mesa	Wildlife			✓	✓
Morris 41	Cultural	✓	✓	✓	✓
Moss Trail	Cultural			✓	✓
Muñoz Canyon	Cultural			✓	✓
Navajo Lake Horse Trails	Recreation		✓	✓	✓
Negro Canyon	Recreation	✓	✓	✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
NM 01-39236	Cultural	✓	✓		
NM 01-39344	Cultural	✓	✓		
North Road	Cultural	✓	✓	✓	✓
Pelon Watershed	Watershed	✓	✓	✓	✓
Pierre's Site	Cultural	✓	✓	✓	✓
Piñon Mesa	Recreation		✓	✓	✓
Piñon Mesa Fossil Area	Paleontology	✓	✓	✓	✓
Pointed Butte	Cultural	✓	✓	✓	✓
Pork Chop Pass	Cultural			✓	✓
Pregnant Basketmaker	Cultural	✓	✓	✓	✓
Pretty Woman	Cultural	✓	✓	✓	✓
Prieta Mesa	Cultural	✓	✓	✓	✓
Rabbit Tracks	Cultural	✓	✓		
Rattlesnake Canyon	Wildlife			✓	✓
Reese Canyon	Threatened and Endangered Species	✓	✓	✓	✓
Right-of-Way Windows	Lands	✓	✓	✓	
Rincon Largo District	Cultural	✓	✓	✓	✓
Rincon Rockshelter	Cultural	✓	✓	✓	✓
River Tracts	Threatened and Endangered Species	✓	✓	✓	✓
Rock Garden	Recreation		✓	✓	✓
Rock House-Nestor Martin Homestead	Cultural	✓	✓	✓	✓
Romine Canyon	Cultural	✓	✓		
Rosa Mesa	Wildlife			✓	✓
Salt Point	Cultural	✓			
San Luis Cliffs Window	Lands	✓	✓	✓	✓
San Luis Mesa Raptor	Wildlife	✓	✓	✓	✓

Specially Designated Area	Resource Designation	Alternative			
		A	B	C	D
San Rafael Canyon	Cultural	✓	✓	✓	✓
Santos Peak	Cultural	✓	✓	✓	✓
Shephard Site	Cultural	✓	✓		
Shield Bearer	Cultural	✓	✓	✓	✓
Simon Canyon	Recreation	✓	✓	✓	✓
Simon Ruin	Cultural	✓	✓	✓	✓
Star Rock	Cultural			✓	✓
Star Spring/Star Spring-Jesus Canyon	Cultural	✓	✓	✓	✓
String House	Cultural			✓	✓
Superior Mesa Community	Cultural	✓	✓	✓	✓
Tapacito and Split Rock	Cultural	✓	✓	✓	✓
Thomas Canyon	Recreation	✓	✓	✓	✓
Toh-la-kai	Cultural	✓	✓	✓	✓
Torrejon Fossil Fauna	Paleontology	✓	✓	✓	✓
Truby's Tower	Cultural			✓	✓
Twin Angels	Cultural	✓	✓	✓	✓
Unreachable Rockshelter	Cultural	✓	✓		
Upper Kin Klizhin	Cultural	✓	✓	✓	✓
Ye'is-in-Row	Cultural	✓	✓		

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**Appendix C**  
**Unsuitability Criteria for Coal Leasing**  
**(43 CFR 3461)**

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43 CFR Ch. II (10–1–00 Edition)

tional Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and Federal lands in incorporated cities, towns, and villages.

(2) *Exceptions.* (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th Meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976 and the Surface Mining Control and Reclamation Act of 1977.

(ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.

(3) *Exemptions.* The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

(b)(1) *Criterion Number 2.* Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, on federally owned surface shall be considered unsuitable.

(2) *Exceptions.* A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that:

(i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or

(ii) The right-of-way or easement was granted for mining purposes; or

(iii) The right-of-way or easement was issued for a purpose for which it is not being used; or

**§3461.5 Criteria for assessing lands unsuitable for all or certain stipulated methods of coal mining.**

(a)(1) *Criterion Number 1.* All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, Na-

(iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or

(v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

(3) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(c)(1) *Criterion Number 3.* The terms used in this criterion have the meaning set out in the Office of Surface Mining Reclamation and Enforcement regulations at Chapter VII of Title 30 of the Code of Federal Regulations. Federal lands affected by section 522(e) (4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling.

(2) *Exceptions.* A lease may be issued for lands:

(i) Used as mine access roads or haulage roads that join the right-of-way for a public road;

(ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;

(iii) If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected.

(iv) For which owners of occupied dwellings have given written permission to mine within 300 feet of their buildings.

(3) *Exemptions.* The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

(d)(1) *Criterion Number 4.* Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

(2) *Exemption.* The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

(e)(1) *Criterion Number 5.* Scenic Federal lands designated by visual resource management analysis as Class I (an areas of outstanding scenic quality or high vessel sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable.

(2) *Exception.* A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator has made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977, or which include operations on which a permit has been issued.

(f)(1) *Criterion Number 6.* Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where

mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

(2) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(g)(1) *Criterion Number 7.* All publicly or privately owned places which are included in the National Register of Historic Places shall be considered unsuitable. This shall include any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, are necessary to protect the inherent values of the property that made it eligible for listing in the National Register.

(2) *Exceptions.* All or certain stipulated methods of coal mining may be allowed if, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, they are approved by the surface management agency, and, where appropriate, the State or local agency with jurisdiction over the historic site.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(h)(1) *Criterion Number 8.* Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

(2) *Exceptions.* A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:

(i) The use of appropriate stipulated mining technology will result in no sig-

nificant adverse impact to the area or site; or

(ii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

(3) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

(i) (1) *Criterion Number 9.* Federally designated critical habitat for listed threatened or endangered plant and animal species, and habitat proposed to be designated as critical for listed threatened or endangered plant and animal species or species proposed for listing, and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

(2) *Exception.* A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(j)(1) *Criterion Number 10.* Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

(2) *Exception.* A lease may be issued and mining operations approved if, after consultation with the state, the

surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(k)(1) *Criterion Number 11.* A bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

(2) *Exceptions.* A lease may be issued if:

(i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or

(ii) The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved.

(iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(l)(1) *Criterion Number 12.* Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

(2) *Exception.* A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(m)(1) *Criterion Number 13.* Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

(2) *Exception.* A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

(3) *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(n)(1) *Criterion Number 14.* Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

(2) *Exception.* A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

(3) *Exemption.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977;

on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(o)(1) *Criterion Number 15.* Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

- (i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;
- (ii) Winter ranges crucial for deer, antelope, and elk;
- (iii) Migration corridor for elk; and
- (iv) Extremes of range for plant species; and

A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

(2) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(p)(1) *Criterion Number 16.* Federal lands in riverine, coastal and special floodplains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

(2) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(q)(1) *Criterion Number 17.* Federal lands which have been committed by

the surface management agency to use as municipal watersheds shall be considered unsuitable.

(2) *Exception.* A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

(3) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(r)(1) *Criterion Number 18.* Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of Federal lands  $\frac{1}{4}$  mile from the outer edge of the far banks of the water, shall be unsuitable.

(2) *Exception.* The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

(3) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

(s)(1) *Criterion Number 19.* Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in §3400.0-5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley

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floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

(2) *Exemptions.* This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977, or which had obtained a permit to conduct surface coal mining operations.

(t)(1) *Criterion Number 20.* Federal lands in a state to which is applicable a criterion (i) proposed by the state or Indian tribe located in the planning area, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

(2) *Exceptions.* A lease may be issued when:

(i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or

(ii) After consultation with the state or affected Indian tribe, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.

(3) *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

[44 FR 42638, July 19, 1979, as amended at 47 FR 33148, July 30, 1982; 48 FR 54820, Dec. 7, 1983. Redesignated and amended at 52 FR 46473, Dec. 8 1987]

**Appendix D**  
**Bylaws of the San Juan Basin**  
**Public Roads Committee**

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## **Bylaws of the San Juan Basin Public Roads Committee**

### ARTICLE I - NAME, LOCATION, AND DEFINITIONS

Section 1. The name of this Committee is the “San Juan Basin Public Roads Committee” (Committee), and membership in the Committee is provided in Article III.

Section 2. The principal office of the Committee shall be located at the Bureau of Land Management (BLM), Farmington Field Office (FFO), Farmington, New Mexico.

Section 3. Definitions

**Authorized User:** A person or entity (current oil and gas lease holder) authorized to use a Bureau road under an oil and gas lease, approved APD, R/W grant or other use agreement, or by law. A governmental entity (including the BLM) may be an authorized user, but for purposes of this policy, a member of the general public is not an authorized user.

**Bureau (BLM):** U.S. Department of Interior, Bureau of Land Management.

**Bureau Road:** A road located on public lands within New Mexico subject to BLM jurisdiction.

**Collector Road:** A Bureau road that normally provides primary access to large blocks of lands and connects with, or is an extension of, a public road system. A collector road accommodates mixed traffic and serves many uses. It generally receives the highest volume of traffic of all the roads in the Bureau road system. User cost, safety, comfort, and travel time are primary road management considerations. A collector road usually requires application of the highest road standards used by the BLM.

**Local Road:** A Bureau road that normally serves a smaller area than a collector road and connects to collector or public road systems. A local road receives lower volumes, carries fewer traffic types, and generally serves fewer uses. User cost, comfort, and travel time are secondary to construction and maintenance cost considerations. A low volume local road in mountainous terrain where operating speed is reduced by effect of terrain may be a single-lane road with turnouts.

**Resource Road:** A Bureau road that normally is a spur road to provide point access and connects to local or collector roads. It carries very low volume and accommodates only one or two types of use. Use restrictions are applied to prevent conflicts between users needing the road and users attracted to the road. A resource road is constructed solely for the authorized user and is considered a primitive road to other users. The location and design of these roads are governed by environmental compatibility and the need to minimize costs, with secondary consideration to user cost, comfort, or travel time.

**New Road:** Any Bureau road that is constructed over undisturbed surface or over an existing primitive road.

**Existing Road:** Any Bureau road other than a new road. The repair/maintenance of an existing road shall not cause reclassification of the Bureau road to a new road.

**Primitive Road:** A non-engineered two-track Bureau road that is created by vehicle traffic.

**Repair/Maintenance:** The upkeep necessary for the appropriate and efficient utilization of the road system by the authorized users. It includes brush and obstruction removal, clean-out and repair or replacement of drainage structures to keep them functional, the upkeep of the roadway prism, which includes the road surface, shoulders, ditches and minor widening as needed for these purposes.

**ARTICLE II - OBJECTIVE**

Section 1. The objective of the Committee shall be to provide repair/maintenance to BLM collector roads in accordance with the definition for Repair/Maintenance as described under ARTICLE I, Section 3. Definitions. To do any and all things lawful, just and necessary to further the interest of the Committee in road repair/maintenance and related matters.

**ARTICLE III- MEMBERSHIP**

Section 1. There shall be no initiation fee or annual dues for membership.

Section 2. Membership in the Committee shall be held only by the Authorized Users on FFO administered BLM lands.

Section 3. There shall be kept a “Membership Allocation” for each Bureau collector road showing the wells held by each member and the associated pipelines as a part of the records of the Committee. Such records shall show: Company, number of wells and percentage; and shall be kept current annually (updates in June of each year). Records shall reflect all updates and changes and shall be provided by FFO to the Committee.

Section 3. Eligibility for membership shall be based on the following requirements:

- a. Oil and gas lease holders of FFO - qualified list provided by BLM.
- b. Each lease holder (company) shall appoint one (1) person to represent that company on the Committee.
- c. The Assistant Field Manager (AFM) FFO, shall be a permanent, voting member of the Committee and shall serve as permanent Chairperson of the Committee.

**ARTICLE IV - OFFICERS**

Section 1. The Officers of the Committee shall consist of a Chairperson, Recorder, and Road Supervisors.

Section 2. Officers shall be as follows:

Chairperson - Federal Officer

Recorder - BLM Staff

Road Supervisor – an elected Industry representative that functions as the Road Supervisor for each individual Bureau collector road designated for repair/maintenance.

It shall be the duty of the AFM, as permanent Chairperson, to preside at all meetings of the Committee.

It shall be the duty of the Recorder to keep all records, meeting notes, etc., and conduct the correspondence of the Committee.

**ARTICLE V - COORDINATION**

Section 1. It shall be the duty of the Road Supervisor to be responsible for selecting a vendor, dispatching work, and approving completed work orders. All participants of this Collector Road Repair/Maintenance Agreement will coordinate all road activities through the Road Supervisors.

**ARTICLE VI - MEETINGS**

Section 1. The annual meeting for each Bureau collector road shall be held prior to May 31<sup>st</sup>. BLM will determine the users for each individual collector road and provide a preliminary list of these users prior to this meeting. During this meeting a Road Supervisor will be elected and the repair/maintenance needs of the Bureau collector road will be discussed.

Section 2. A second meeting will be held prior to June 30<sup>th</sup> to review cost estimates and priorities. A total annual expenditure limit for repair/maintenance will be set, as well as the maximum single expenditure that the Road Supervisor can authorize without securing the permission of a majority of the roads participants. Votes will be allocated to each company in proportion to the number of points they have in each Bureau road area. The BLM will be assigned 5% of the votes. If an activity requires obtaining the permission of a majority, all parties must first receive a written request for approval from the Road Supervisor. A majority will be secured when 50% or more of the available points and at least three (3) companies approve the request.

Section 3. At this meeting there will be additions and deletions to the point totals for each road participant.

Section 4. Special meetings will be held as needed.

**ARTICLE VII - VOTING**

Section 1. A two-thirds (2/3) majority of the percentage of distribution votes must be present to constitute a quorum for the meeting to be held.

Section 2. Each member is entitled to percentage of distribution votes as allocated by the annual June update of permit status as provided by BLM, FFO. The percentage of distribution is shown in Appendix A. A copy of their distribution shall be presented at annual meetings and shall be on file at the FFO.

Section 3. Voting by proxy or substitute representative is allowed. Proxy votes must be submitted in writing to the Recorder.

**ARTICLE VIII - ROAD CONTRACTS**

Section 1. The Committee shall be responsible for preparing and awarding the road repair/maintenance contracts for collector roads (shown on attached maps, Appendix B).

Section 2. The contracts will include but not be limited to the following categories:

- a. Insurance requirements shall meet all companies' requirements.
- b. Sealed bids (minimum of three (3) bids before award can be made).
- c. Performance/termination clause and standards will be governed according to ARTICLE II, Section 1.
- d. Length of contract (to be determined by the Committee) and the regional selection of a contractor for a minimum of two (2) years.
- e. Renewal of contract - September 1<sup>st</sup>.
- f. Billing - The Road Supervisor approves bills. The contractor will bill each company monthly as per their percentage of distribution. Each company shall make payment to the contractor within sixty (60) days.
- g. Audit of the billings by the Committee as needed.

- h. Safety is paramount.
- i. Contractor will act as an independent contractor.
- j. Contractor will be responsible for making New Mexico “One Calls”.

**ARTICLE IX - APPROVAL/DAMAGE LIABILITY**

Section 1. The administration of the repair/maintenance standards and on-the-ground work will be supervised by the Road Supervisor and approved by BLM. The BLM will coordinate with the Road Supervisor on recommendations for corrections and/or any other needs. Standards for repair/maintenance work to be governed as defined in ARTICLE II, Section 1.

Section 2. Any user’s actions that cause abnormal damage to a road segment(s) during, but not limited to, rig moves and pipeline construction will be solely responsible for all costs to return the road segment to its condition prior to the user’s actions.

**ARTICLE X - PAYMENT**

Section 1. The oil and gas industry (operator, gatherers, and interstate gas transporters) provide 95% of the road funds, and the public, through the BLM, provide the remaining 5%. In the event of nonpayment of a company’s share of funding responsibility, the Committee will inform the FFO to call those funds outstanding payable as per that company’s bond or trespass action.

Section 2. The 95% industry share is to be split between the operators, gatherers, and transporters on a point system. One (1) point would be assigned to the operator of each well and CPD site, and one (1) point would be assigned to each gatherer for each active meter. In the case where the operator of a well is also the gatherer, then that company would only be assigned one (1) point for that well. Interstate gas transporters that have facilities accessed by collector roads will be assigned ten (10) points per mile of pipeline. Each company’s share of road repair/maintenance for a particular collector road would be the sum of all of their points divided by the total number of points assigned to the road.

The BLM shall work with industry to determine the users for each individual collector road and the total number of points that are to be distributed among the users. This will determine the oil and gas industry’s 95% participation in the total road costs. The bid process to be implemented will be as follows: After a collector road is selected for repair/maintenance and the approximate cost has been determined, industry representatives will solicit a minimum of three (3) bids. Based on the bid information submitted by the contractors a selection will be made. The selected contractor will be hired for a minimum of two (2) years. The Committee reserves the right to dismiss the selected contractor if the required work performance is not being met.

**ARTICLE XI - AMENDMENTS**

Section 1. Amendments to the Bylaws may be made only at the annual or special meetings by a two-thirds (2/3) majority of the percentage of distribution.

Section 2. Notification of amendment will be given to all members in writing thirty (30) days prior to vote.

**ARTICLE XII - CONCURRENCE**

We, the undersigned members of the San Juan Basin Public Roads Committee, agree to support the Bylaws.

**BYLAWS OF THE  
SAN JUAN BASIN PUBLIC ROADS COMMITTEE  
SIGNATURE PAGE**

We, the undersigned, member of the San Juan Basin Public Roads Committee, agree to support the Bylaws.

We appoint \_\_\_\_\_ as our representative to serve as our voting member on the Committee.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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**Appendix E**  
**Noise Policy and Protocol (2 Versions)**

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# DRAFT

(Alternative C)

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## Notice to Lessees and Operators on Onshore Oil and Gas Leases Within the Jurisdiction of the Farmington Field Office (FFO) (NTL 03-1 FFO)

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### Management of Sound Generated By Oil and Gas Production and Transportation

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**I. Introduction** – Increases in the level of sound (noise) generated from the production and pipeline transportation of oil and gas has occurred in the San Juan Basin over the last four years. This increase is generated primarily from the increased need to use equipment such as compressors and pumping units that operate on a continuous basis. The increase in noise affects natural resource values and management of a number of designated special areas [special management areas (SMAs), areas of critical environmental concern (ACECs), research natural areas (RNAs), etc.].

**II. Purpose** – The Bureau of Land Management (BLM) recognizes solitude (lack of or limited sound) as a part of the natural environment that requires protection and that reduction of noise may be required of federal oil and gas lessees/operators. The following requirements are for reducing noise levels on federal and Indian oil and gas leases under the jurisdiction of the Farmington Field Office (FFO).

**III. Noise Sensitive Areas** – All or a portion of 101 specially designated areas established through the BLM land use planning process are being identified as noise sensitive areas. Also, part or all of seven U.S. Forest Service (USFS) areas (Buzzard Park Campground, Cedar Springs Campground, Gasbuggy, Middle Mesa Raptor Area, Ulibarri Raptor Area, Munoz Canyon Raptor Area, and Carracas Mesa Administrative site), all Bureau of Reclamation (USBR) surface around Navajo Reservoir, and one National Park Service (NPS) area (Aztec Ruins National Monument) are identified as NSAs.

**IV. Noise Standards** – Noise will be measured on the “A” scale, using the attached protocol. The sound level (A scale) must equal 48.6 dB(A) over a continuous 24-hour period (i.e., 48.6 dB[A]Leq). This requirement applies to oil and gas lease operations that operate on a continual (> 8 hours/day), long-term basis (> 1 week in duration). The NTL **will not** apply to transient operations such as construction, drilling, completion or workover activities or temporary non-oil and gas sound sources. These activities will be handled on a case-by-case basis should a conflict be identified during the permitting process. The NTL does not apply to short-term events such as venting a well, compressor start-ups, etc.

For noise sources located inside NSAs, the standard is 48.6 dB(A)Leq, at 300 ft. in all directions from the noise source. For noise sources located outside of designated NSAs, the standard of 48.6 dB(A)Leq must be met at the boundary of the NSAs. Noise sources located within 300 feet of the NSA boundary will be allowed to meet the standard 300 feet from the source. For noise sources involving federal or Indian leases located near occupied dwellings or buildings, the standard of 48.6 dB(A)Leq will be met 100 feet from such structure. For noise sources located within incorporated city or township limits, the standards of that municipal jurisdiction will normally be applied. However, if the municipal standard is less stringent (> 48.6 dB(A)Leq) or there isn't a municipal standard, BLM will enforce this NTL for noise sources associated with federal minerals.

Stricter standards may be applied to NSAs identified by a double asterisk in Table 2-5. In these instances, BLM may need the flexibility to adjust the general noise standard. BLM, USFS, USBR, and NPS staffs will work with the operator on a case-by-case basis to achieve an acceptable level of noise mitigation. Factors considered in this process would be: (1) the particular aspects of the area (i.e., landscape, topography, etc.), (2) resource values and uses, (3) public values and uses and (4) the extent the 48.6 dB(A)Leq impairs values and uses. **The operator must obtain approval prior to setting or operating a noise source affecting these areas.** In addition to areas identified in Table 2-5, new SMAs, camping, picnic or trail areas may be identified and/or developed by land management agencies. This policy would be implemented in and/or near these areas after a 30-day notice to the affected parties.

With the exception of the NSAs identified by a double asterisk in Table 2-5, newly installed noise sources that affect NSAs (inside or adjacent to exterior boundaries) must meet the noise standard 30 days from the date the source is set in the field. All major renovation and/or replaced noise sources must meet the standard 30 days from the date the equipment is renovated and/or replaced. Existing noise sources affecting NSAs will be brought into compliance during a 5-year time frame. A condition of approval will be included with approved Applications for Permit to Drill (APDs) requiring the operator to meet the noise standard for sources at new well locations that are permitted within or adjacent to an NSA. It is the intention of FFO to apply these same standards to rights-of-way grants.

**V. Procedures** – Prior approval is required before setting a noise source that could affect the NSAs indicated by a double asterisk in Table 2-5. A Notice of Intent (NOI) Sundry (Form 3160.5) must be submitted to the BLM for approval by the authorized officer (AO). A copy of the NOI should be sent to the appropriate surface managing agency (SMA). The notice must include: (1) the location for the proposed noise source [township, range, section, footage or quarter/quarter (i.e., NE/4SE/4)], (2) name of the well location or facility type, (3) type of noise source (i.e., compressor, pumping unit, etc.) and (4) any other information required by the AO.

The appropriate surface managing agency will work with the applicant when setting the noise source in the NSAs indicated by a double asterisk in Table 2-5. The operator must provide BLM with noise level measurements within 24 hours of the unit being put into operation or as otherwise agreed to. Measurements must be taken following the attached protocol at points designated by BLM or the land management agency. The standard determined during the approval process must be met when the unit is put into operation.

With the exception of the NSAs identified by a double asterisk, a Subsequent Report Sundry (SR) will be required for the placement of all new noise sources or the exchange of all existing units within, or affecting designated NSAs that do not require an NOI. The SR must be submitted within 30 days of setting the unit. The SR must include the same information as an NOI, plus the date the unit was set in the field. **A notification Sundry is not required for noise sources that fall outside of the requirements of this and the previous paragraph.**

Variations may be granted on a case-by-case basis by the AO. To obtain a variance, a Notice of Intent Sundry (Form 3160.5) or a letter must be submitted to BLM for approval. Copies of the Sundry or letter should be sent to any appropriate surface managing agency. The sundry or letter must include the same information as an NOI.

Failure to comply with the above policy and conditions of approval may result in an assessment for noncompliance being issued pursuant to 43 Code of Federal Regulations (CFR) 3163.1 by BLM staff. Any and all instructions, orders, or decisions issued are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3164 and 43 CFR 4.700.

**APPROVED:** Date: \_\_\_\_\_

\_\_\_\_\_   
 Farmington Field Manager

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# DRAFT

(Alternative D)

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## Notice to Lessees and Operators on Onshore Oil and Gas Leases Within the Jurisdiction of the Farmington Field Office (FFO) (NTL 03-1 FFO)

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### Management of Sound Generated By Oil and Gas Production and Transportation

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**I. Introduction** – Increases in the level of sound (noise) generated from the production and pipeline transportation of oil and gas has occurred in the San Juan Basin over the last four years. This increase is generated primarily from the increased need to use equipment such as compressors and pumping units, which operate on a continuous basis. The increase in noise affects natural resource values and management of a number of agency designated special areas [special management areas (SMAs), areas of critical environmental concern (ACECs), research natural areas (RNAs), etc.]. Noise sensitive areas (NSAs) were determined as visitor use areas, wilderness, semi-primitive recreation areas, habitat for threatened or endangered species, raptor nesting/roosting sites, recreational trails and sites where people live and work.

**II. Purpose** – The Bureau of Land Management (BLM) recognizes solitude (lack of or limited sound) as a part of the natural environment that requires protection and that reduction of noise may be required of federal oil and gas lessees/operators. The following requirements are for reducing noise levels on federal and Indian oil and gas leases under the jurisdiction of the Farmington Field Office (FFO).

**III. Noise Sensitive Areas** – All or a portion of approximately 62 specially designated areas (SDA) established through the BLM land use planning process are being identified as noise sensitive areas (NSA).

**IV. Noise Standards** – Noise will be measured on the “A” scale, using the attached protocol. The sound level (A scale) must equal 48.6 dB(A) over a continuous 24-hour period (i.e., 48.6 dB[A]Leq). This requirement applies to oil and gas lease operations that operate on a continual (> 8 hours/day), long-term basis (> 1 week in duration). The NTL **will not** apply to transient operations such as construction, drilling, completion or workover activities or temporary non-oil and gas sound sources. These activities will be handled on a case-by-case basis should a conflict be identified during the permitting process. The NTL does not apply to short-term events such as venting a well, compressor start-ups, etc.

**V. Application of Standards within NSAs** – Noise control will be receptor- or boundary-focused, as determined by agency management guidelines established for the designated SMAs, ACECs, or other designations. Receptor-focused control will apply to 46 BLM and 4 USFS NSAs. Receptor-focused areas may include campgrounds, picnic areas, shoreline, etc. Boundary-focused control will include all designated acreage within 7 BLM (see Table 2-5), 3 USFS, and 1 NPS NSAs, in addition to all USBR land around Navajo Reservoir.

**Receptor-Focused NSAs**

- Noise standards of 48.6 dB(A)Leq will be achieved at established agency receptor points within the NSAs. Established receptors are generally defined as visitor use areas, camp or picnic areas, habitat for threatened or endangered species, archaeological sites, and recreation trails. Receptors may vary in size from a single point source to several acres based on the features and resource components that are being managed for sound. The agency will work with the operator to establish the applicable receptor points. Buffers of 0 to 100 feet from the defined receptor may be established. The SDAs within which receptors will be designated are as follows (\*\* notes areas where stricter standards may apply):

**BLM Receptor-Focused NSAs**

1. ***Andrews Ranch	16. Halfway House	31. Superior Mesa
2. ***Bee Burrow	17. Haynes Trading Post	32. Tapacito and Split Rock
3. ***Bis sa’ani	18. Holmes Group	33. ***Toh-la-kai
4. Bi Yaazh	19. ***Indian Creek	34. ***Twin Angels
5. Blanco Star Panel	20. ***Jacques	35. ***Upper Kin Klizhen
6. Cagle’s Site	21. ***Kin Nizhoni	36. Alien Run
7. ***Casamero Community	22. Margarita Martinez Homestead	37. ***Angel Peak
8. Christmas Tree Ruin	23. Martin Apodaca Homestead	38. Glade Run
9. Church Rock Outlier	24. ***Morris 41	39. ***Navajo Lake Horse Trail
10. ***Crow Canyon	25. Moss Trail	40. Negro Canyon
11. Delgadita-Pueblo Canyons	26. North Road (Segments 1,2,***6,7)	41. Piñon Mesa
12. Dogie Canyon School	27. ***Pierre’s Site	42. ***Simon Canyon
13. Encinada Mesa-Carrizo Canyon (Gomez Point, Gomez Canyon, Hill Road Ruin)	28. Rockhouse-Nestor Martin Homestead	43. ***Bald Eagle
14. Frances Canyon (Frances Ruin)	29. San Rafael Canyon	44. Reese Canyon
15. Gonzalez Canyon-Senon S. Vigil Homestead	30. Simon Ruin	45. River Tracts
		46. Mexican Spotted Owl

**USFS Receptor-Focused NSAs**

1. ***Buzzard Park Campground	3. ***Gasbuggy
2. ***Cedar Springs Campground	4. Carracas Mesa Administrative Site

**Boundary-Focused NSAs**

- For noise sources located inside NSAs, the standard is 48.6 dB(A)Leq, at 400 feet in all directions from the noise source. For noise sources located outside of designated NSAs, the standard of 48.6 dB(A)Leq must be met at the boundary of the NSAs. Noise sources located within 400 feet of the NSA boundary will generally be allowed to meet the standard 400 feet from the source. The survey protocol described in this appendix will be used as a guide to measure sound sources. The SDAs that will be boundary-focused NSAs are as follows (\*\*\*) notes areas where stricter standards may apply):

**BLM Boundary-Focused NSAs**

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1. \*\*\*Cho’li’i (Gobernador Knob)
2. Dzil’na’oodlii (Huerfano Mesa)
3. Fossil Forest RNA
4. Carracas Mesa
5. Thomas Canyon (original acreage)
6. \*\*\*Ah-shi-sle-pah WSA
7. \*\*\*Bisti/De-Na-Zin Wilderness

**USFS Boundary-Focused NSAs**

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1. Middle Mesa Raptor Area (prior approval required)
2. Ulibarri Raptor Area (prior approval required)
3. Munoz Canyon Raptor Area (prior approval required)

**NPS Boundary- Focused NSA**

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1. \*\*\*Aztec Ruins National Monument

**USBR Boundary- Focused NSA**

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1. All USBR land around Navajo Reservoir

**Dwellings, Residences, and Buildings**

- For noise sources involving federal or Indian leases located near occupied dwellings or buildings, the standard of 48.6 dB(A)Leq will be met 100 feet from such structure. Policy will not apply to unoccupied lands but can be enforced when those lands are developed. For noise sources located within incorporated city or township limits, the standards of that municipal jurisdiction will normally be applied. However, if there isn’t a municipal standard, BLM will enforce this NTL for noise sources associated with federal minerals.

Stricter standards may be applied to NSAs identified by a double asterisk in Table 2-5. In these instances, BLM may need the flexibility to adjust the general noise standard. BLM, USFS, USBR and NPS staffs will work with the operator on a case-by-case basis to achieve an acceptable level of noise mitigation. Factors considered in this process would be: (1) the particular aspects of the area (i.e., landscape, topography, etc.), (2) resource values and uses, (3) public values and uses and (4) the extent the 48.6 dB(A)Leq impairs values and uses. In addition to areas identified in Table 2-5, new SMAs, camping, picnic or trail areas may be identified and/or developed by land management agencies. This policy would be implemented in and/or near these areas after a 30-day notice to the affected parties.

**VI. Implementation of NTL** – Upon implementation of the NTL, affected operators in or adjacent to NSAs will be provided general ownership maps depicting the NSAs. Detailed descriptions of the NSAs will be maintained and available at local administering agency offices. With the exception of the NSAs identified by a double asterisk in Table 2-5, newly installed noise sources that affect NSAs (inside or adjacent to exterior boundaries) must meet the noise standard 60 days from the date the source is set in the field. All major renovation and/or replaced noise sources must meet the standard 60 days from the date the equipment is renovated and/or replaced. A condition of approval will be included with approved Applications for Permit to Drill (APDs) requiring the operator to meet the noise standard for sources at new well locations that are permitted within or adjacent to an NSA. It is the intention of FFO to apply these same standards to rights-of-way grants.

For existing sources of noise within defined NSAs, the operator shall inventory these locations and submit them to the BLM along with a proposed compliance plan for meeting the NTL standard within 90 days of approval of the NTL. The compliance plan submitted by the operator must demonstrate compliance of all applicable noise sources within 5 years, which will incorporate the agency time frames compliance priority goals. All major renovation and/or replaced noise sources must meet the standard 60 days from the date the equipment is renovated and/or replaced. All major renovation and/or replaced noise sources must meet the standard 60 days from the date the equipment is renovated and/or replaced.

**VII. Procedures** – A subsequent report (SR) Sundry (Form 3160.5) must be submitted to the BLM for approval by the authorized officer (AO) within 5 days of setting the equipment, which falls outside the noise standard and must be mitigated. **A notification Sundry is not required for noise sources that fall outside of the requirements of this and the previous paragraph.** A copy of the SR should be sent to the appropriate surface managing agency. Prior approval is required before setting a noise source that could affect the threatened or endangered and raptor NSAs. The notice must include: (1) the location for the proposed noise source [township, range, section, footage or quarter/quarter (i.e., NE/4SE/4)], (2) name of the well location or facility type, (3) type of noise source (i.e., compressor, pumping unit, etc.), (4) serious safety considerations, and (5) any other information required by the AO.

- For existing and new noise sources the surface managing agency will initially work with the applicant to establish the applicable receptor points to which the NTL standard will apply. In addition, it is the intent of BLM to work with applicants and use flexibility for mitigation of sound with boundary-focused areas as well. Once the receptor is permanently defined based upon NSA maps provided by BLM, the operator must provide BLM with noise level measurements within the 60-day period and the standard determined during the approval process must be in conformance after this period. Measurements must be taken following the established protocol at points designated by BLM or other land management agencies.

Variances may be granted on a case-by-case basis by the AO. To obtain a variance, a Notice of Intent Sundry (Form 3160.5) or a letter must be submitted to BLM for approval. Copies of the

Sundry or letter should be sent to any appropriate surface managing agency. The sundry or letter must include the same information as an NOI.

Failure to comply with the above policy and conditions of approval may result in an assessment for noncompliance being issued pursuant to 43 Code of Federal Regulations (CFR) 3163.1 by BLM staff. Any and all instructions, orders, or decisions issued are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3164 and 43 CFR 4.700.

**APPROVED:** Date: \_\_\_\_\_

\_\_\_\_\_  
Farmington Field Manager

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**NOISE SURVEY PROTOCOL  
TO DETERMINE COMPLIANCE WITH  
BLM FFO'S NOTICE TO LESSEE FOR NOISE**

The BLM Noise standard of 48.6 dB(A) is a 24-hour A-weighted equivalent sound level (Leq), 300 feet from the noise source. This means that individual sound levels (SPL) taken at a point in time can exceed the numerical standard but when these individual SPL's are averaged logarithmically over a 24-hour period, they must be below the standard of 48.6 dB(A). This protocol may be used as the approach in determining whether a given facility is in compliance with this BLM FFO Notice To Lessee (NTL); however, other noise measurement methodologies are equally valid and may be used.

**INSTRUMENTATION**

- 1) A general purpose sound level meter (SLM) that meets ANSI Type 2 specifications as established in ANSI Policy S 1.4-1991 (R 1997) entitled "Specifications Sound Level Meters." A precision SLM that meets ANSI Type 1 specifications in the same policy referenced above is also acceptable.
- 2) An acoustical calibrator that meets ANSI Policy 1.25 – 1991 (R 1997).
- 3) A windscreen designed by the SLM manufacturer for shielding the microphone from wind-generated noise.

**SURVEY PROTOCOL**

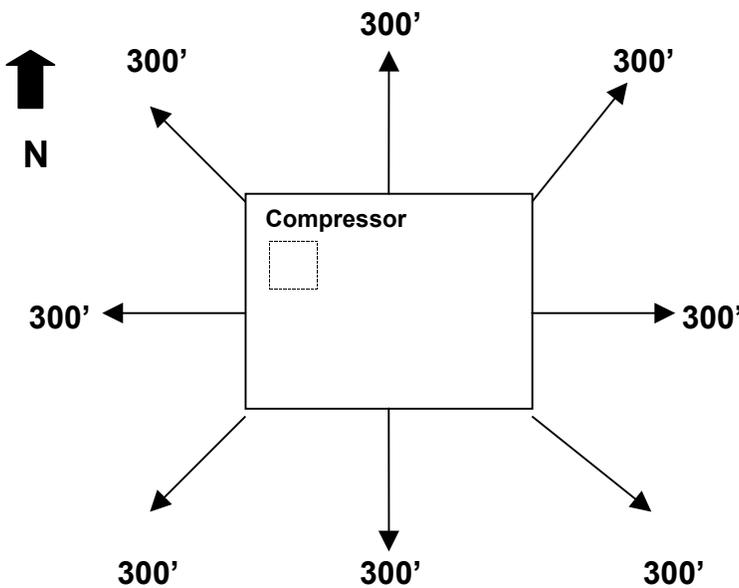
Instrument Setup and Calibration

- 1) The SLM shall be calibrated at the beginning and end of each days use with an acoustical calibrator;
- 2) The SLM shall be set to take noise measurements utilizing the "A-scale" weighting filter and the "Slow Response" exponential-time-averaging setting;
- 3) At the option of the surveyor, a SLM equipped with an octave band filter meeting the ANSI Policy S 1.11 – 1986 (R 1998) entitled "Specifications for Octave-Band and Fractional Octave-Band Analog and Digital Filters" can be used to take noise measurements. In using the octave band measurements, the surveyor must incorporate "A-weighted" adjustments to the measurement at each frequency and then add all individual octave band adjusted readings logarithmically to arrive at an equivalent "A-weighted" noise level (Leq).

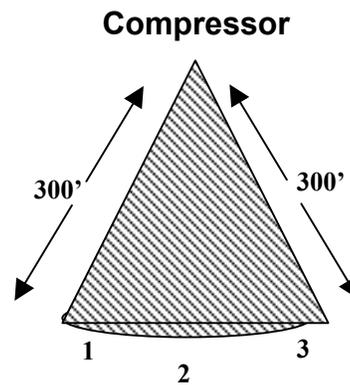
Survey Location

The noise survey shall be conducted at one or more compliance points as specified by the BLM stipulation/NTL. A noise source located inside a NSA requiring an Leq of 48.6 dB(A) time-weighted average at a distance of 300 feet in all directions from the source could be assessed for compliance purposes by taking eight (8) measurements in the manner depicted in example 1 below.

A noise source that requires an Leq of 48.6 dB(A) time-weighted average at a distance of 300 feet SSE and SSW of the compressor (direction of the receptor) could be assessed for compliance purposes by taking three (3) measurements in the manner depicted in example 2 below.



Example 1



Example 2

Measurement Techniques

- 1) All measurements utilizing the SLM should be taken with the windscreen in place.
- 2) The SLM should either be hand-held or placed on a tripod to collect measurements at a position comparable to the position of the human ear (i.e., approximately 1.5 meters above ground [4.9 feet]).
- 3) The SLM should normally be positioned vertically and, if hand-held, held at arms length away from the surveyor’s body.

- 4) The surveyor should position his/her body perpendicular to the noise pathway so as NOT to shield the SLM from the source or reflect sound back towards the meter. In other words, the surveyor should not be in direct line with the noise source and the SLM.
- 5) Avoid taking noise measurements near a wall or other large object that might reflect sound back towards the meter and thereby affect the reading.
- 6) Avoid taking noise measurements when other temporary noise sources (i.e., aircraft, vehicular traffic, lawn equipment, farm equipment, etc.) could be adversely affecting the points being surveyed.
- 7) In order to avoid near-field distortion, avoid taking noise measurements closer than 20-25 feet from the noise source.
- 8) Caution must be exercised when two or more noise sources are impacting the area of concern.
- 9) When taking noise measurement for a noise source requiring 360<sup>0</sup> mitigation it is recommended that measurements be taken at the 8 cardinal and ordinal compass points.

Record keeping

- 1) Noise survey measurements, calibration readings, and other pertinent survey information should be recorded on a noise evaluation worksheet similar to that shown in Figure 1.
- 2) The surveyor should sign and date each survey in the designated space provided.



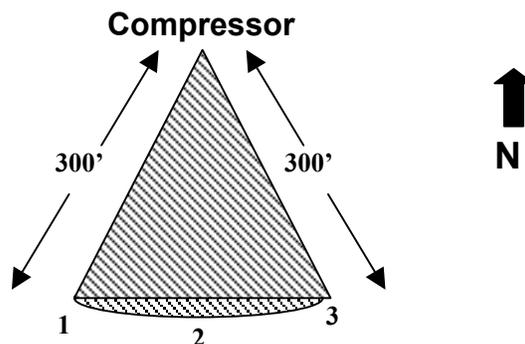
**COMPLIANCE ASSESSMENT**

The 48.6 dB(A) BLM standard is a 24-hour time-weighted average. As such, individual measurements taken throughout a 24-hour period are allowed to exceed this 48.6 dB(A) threshold but when averaged logarithmically over 24 hours, they must be below this Leq. The steps below provide two common sense approaches to determining compliance with this standard. Noise levels are not-to-exceed (NTE) 48 dB(A) during the hours between 9 PM and 6 AM and 58 dB(A) during the remainder of the 24-hour period.

- 1) Determine if random daytime noise level fall below 48.6 dB(A)

Since background sound levels tend to be higher during daylight hours due to human activity (i.e., vehicular traffic, aircraft noise, recreational vehicles, farming equipment, etc.), it can be presumed that if random daylight noise levels are below the 48.6 dB(A) threshold, then the 24-hour time-weighted average (LEQ) would also satisfy the Leq. Hence, the surveyor can take random daylight sound level readings at the compliance points and then apply statistical methods to the data to determine the compliance status of the location. Any reading above the 48.6 dB(A) level is cause for further investigation and evaluation.

The recommended minimum number of random survey points for satisfying a 95% confidence interval for compliance is 29. That means that any combination of random survey readings taken at 3-8 compliance points throughout the daylight hours. Given the previous example of a compressor with a BLM stipulation of a 48.6 dB(A) Leq at a 300 foot distance SSE and SSW of the compressor, the following example illustrates a compliance demonstration.

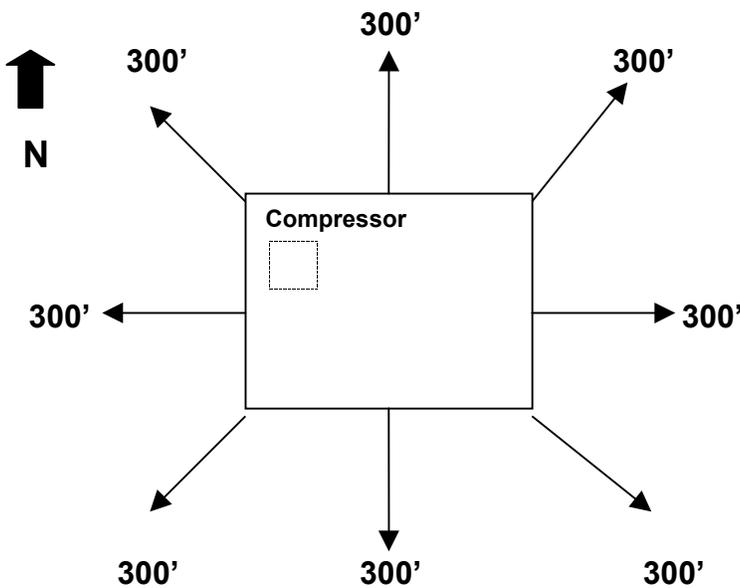


**Individual Sound Level Measurements Taken Randomly  
Over a 2 hour period (dB(A))**

LOCATION	L1	L2	L3
<b>TIME &amp; READING</b>			
<b>T1</b>	<b>8:00 – 48.2</b>	<b>8:04 – 49.1</b>	<b>8:08 – 48.4</b>
<b>T2</b>	<b>8:12 – 48.6</b>	<b>8:16 – 49.4</b>	<b>8:20 – 48.8</b>
<b>T3</b>	<b>8:24 – 47.8</b>	<b>8:28 – 48.3</b>	<b>8:32 – 47.9</b>
<b>T4</b>	<b>8:36 – 48.2</b>	<b>8:40 – 47.8</b>	<b>8:44 – 48.1</b>
<b>T5</b>	<b>8:48 – 49.3</b>	<b>8:52 – 50.1</b>	<b>8:56 – 49.5</b>
<b>T6</b>	<b>9:00 – 50.6</b>	<b>9:04 – 51.3</b>	<b>9:08 – 50.2</b>

LOCATION	L1	L2	L3
<b>TIME &amp; READING</b>			
T7	9:12 – 48.8	9:16 – 48.9	9:20 – 48.6
T8	9:24 - 47.8	9:28 – 48.7	9:32 – 48.2
T9	9:36 – 48.6	9:40 – 49.1	9:44 – 48.4
T10	9:48 – 47.8	9:52 – 48.2	9:56 – 47.9

Given the example of a noise source located inside a NSA requiring an Leq of 48.6 dB(A) time-weighted average at a distance of 300 feet in all directions from the source, the following example illustrates a compliance demonstration.



Individual Sound Level Measurements Taken Randomly Over a 2 hour period (dB(A))

LOCATION	L1	L2	L3	L4	L5	L6	L7	L8
<b>TIME AND READING</b>								
T1	8:00-48.2	8:04-49.1	8:08-48.4	8:12-48.6	8:16-49.4	8:20-48.8	8:24-47.8	8:28-48.3
T2	8:32-47.9	8:36-48.2	8:40-47.8	8:44-48.1	8:48-49.3	8:52-50.1	8:56-49.5	9:00-50.6
T3	9:04-51.3	9:08-50.2	9:12-48.8	9:16-48.9	9:20-48.6	9:24-47.8	9:28-48.7	9:32-48.2
T4	9:36-48.6	9:40-49.1	9:44-48.4	9:48-47.8	9:52-48.2	9:56-47.9	10:00-48.2	10:04-47.9

The mean noise level at the compliance points would be calculated by:

$$\begin{aligned}
 L_{\text{mean}} &= \sum_{i=1}^N L_i / N \\
 &= (48.2+49.1+\dots\dots\dots+48.2+47.9) \\
 &= 48.75 \text{ dB(A)}
 \end{aligned}$$

The policy deviation around the mean noise level would be calculated by:

$$\begin{aligned}
 \sigma &= \sqrt{(\sum_{i=1}^N L_i^2 - (\sum_{i=1}^N L_i)^2/N)/(N-1)} \\
 &= 0.88
 \end{aligned}$$

2) Determine if the 24-hour A-weighted equivalent sound level (L<sub>Leq</sub>) falls below the Leq.

This method involves taking continuous noise measurements at the compliance points throughout a 24-hour period and averaging them logarithmically to determine the overall L<sub>Leq</sub> and comparing it to the Leq of the BLM noise standard. Since it is unrealistic to expect that a surveyor would be on site to measure and record noise levels over a 24-hour period, this method would utilize either an integrating SLM or dosimeters. These instruments arrive at a Leq by measuring noise levels over a discrete time period (e.g, 1 – 5 minutes) and then averaging these discrete measurements utilizing the following equation:

$$\rightarrow \text{Leq} = 10 \log \left[ 1/T \sum_{i=1}^N 10^{L_i/10} t_i \right]$$

Where: T = total time  
 t<sub>i</sub> = interval time  
 L<sub>i</sub> = noise level at t<sub>i</sub>

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**Appendix F**  
**Isolated Parcels Available for Disposal**

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## Lands Remaining From 1988 RMP Disposal List

Legals	Acreage
T. 32 N., R. 10 W. NMPM Sec. 32: Lot 1	40.48
T. 32 N., R. 11 W. NMPM Sec. 10: Lot 1 Sec. 19: SE1/4NW1/4 Sec. 20: NW1/4SW1/4	43.83 40 40
T. 32 N., R. 12 W. NMPM Sec. 13: SE1/4SE1/4 Sec. 28: E1/2NE1/4, NE1/4SE1/4 Sec. 35: S1/2NE1/4	40 120 80
T. 32 N., R. 13 W. NMPM Sec. 35: E1/2SW1/4	80
T. 31 N., R. 11 W. NMPM Sec. 13: NE1/4NE1/4	40
T. 31 N., R. 12 W. NMPM Sec. 1: Lots 6 & 7 Sec. 25: N1/2NW1/4	72.89 80
T. 30 N., R. 12 W. NMPM Sec. 1: Lots 5, 6, 7, 8 Sec. 15: Lots 1 & 2 Sec. 19: Lots 1, 60, SW1/4SW1/4NE1/4 Sec. 20: Lots 12, 14, 15 & 17	153.99 80.45 78.78 39.66
T. 30 N., R. 13 W., NMPM  Sec. 20: NE1/4NW1/4, SW1/4NE1/4 Sec. 26: NW1/4SE1/4SE1/4SW1/4, SW1/4SW1/4SE1/4SW1/4 Sec. 27: NW1/4NW1/4SE1/4 Sec. 29: W1/2NE1/4 Sec. 32: E1/2NE1/4 Sec. 33: N1/2 Sec. 34: NE1/4NW1/4	80 5 10 80 80 320 40
T. 30 N., R. 15 W., NMPM Sec. 1: N1/2N1/2 Sec. 17: SW1/4SW1/4 Sec. 18: SE1/4SE1/4 Sec. 19: NE1/4NE1/4, N1/2SE1/4NE1/4, N1/2S1/2SE1/4NE1/4 Sec. 20: NW1/4NW1/4, N1/2SW1/4SW1/4NW1/4 SE1/4SW1/4NW1/4, N1/2SW1/4NW1/4	160 40 40 70 75

T. 30 N., R. 16 W., NMPM	
Sec. 2: Lots 3 & 4, S1/2NW1/4	157.84
T. 29 N., R. 9 W., NMPM	
Sec. 30: Lot 6	10.47
T. 29 N., R. 11 W., NMPM	
Sec. 13: NE1/4SW1/4	40
Sec. 15: SW1/4NW1/4	40
Sec. 27: W1/2 SE1/4SW1/4SW1/4	5
Sec. 28: SE1/4SW1/4, SW1/4SE1/4	80
Sec. 33: N1/2NW1/4NE1/4NE1/4	5
T. 29 N., R. 12 W., NMPM	
Sec. 5: SE1/4NE1/4SW1/4	10
Sec. 17: NE1/4NE1/4SW1/4	10
Sec. 19: S1/2SE1/4NE1/4SW1/4, SW1/4SE1/4 NE1/4	15
Sec. 20: NE1/4NE1/4SW1/4	10
Sec. 21: Lots 10, 11, & 12	55.47
Sec. 26: Lot 1	19.96
Sec. 27: N1/2N1/2NE1/4, SE1/4NW1/4NE1/4, SW1/4NE1/4NE1/4, E1/2SE1/4NE1/4NE1/4, E1/2SW1/4NW1/4NE1/4	70
Sec. 28: Lot 2	6.2
T. 29 N., R 13 W., NMPM	
Sec. 4: SW1/4NW1/4NE1/4	10
Sec. 5: Lot 6, SE1/4NE1/4SW1/4	19.98
Sec. 6: Lot 9, W1/2SW1/4SE1/4	24.95
Sec. 7: Lot 1, NW1/4NW1/4NE1/4, W1/2SW1/4NW1/4NE1/4	19.64
Total	2639.59

**Appendix G**  
**Examples of Conditions of Approval and  
Standard Terms and Conditions for  
Oil and Gas Leasing Development in the  
Farmington Field Office**

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**BLM CONDITIONS OF APPROVAL**

Operator \_\_\_\_\_ Well Name \_\_\_\_\_  
 \_\_\_\_\_  
 Legal Location \_\_\_\_\_ Sec. \_\_\_\_\_ T. \_\_\_\_\_ R. \_\_\_\_\_  
 Lease Number \_\_\_\_\_ Field Inspection Date \_\_\_\_\_  
 \_\_\_\_\_

The following conditions of approval will apply to this well unless a particular Surface Managing Agency (SMA) or private surface owner has supplied to BLM and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity.

An agreement between the operator and fee land owner will take precedence over BLM surface stipulations unless (In reference to 43 CFR Part 3160) 1) BLM determines that the operator's actions will affect adjacent Federal or Indian surface, or 2) the operator does not maintain well area and lease premises in a workmanlike manner with due regard for safety, conservation and appearance, or 3) no such agreement exists, or 4) in the event of well abandonment, minimal Federal restoration requirements will be required.

1. *The operator or his contractor will contact the BLM Farmington Field Office, Environmental Protection Staff, at (505) 599-8900, (approximately 48 hours prior to construction activities) or (upon site completion prior to moving on drilling rig).*

2. No construction, drilling or completion activities shall be conducted between:
- November 1 and March 31 because of eagle wintering habitat.
  - December 1 and March 31 because of deer/elk wintering habitat.
  - March 1 to June 30 because of active raptor nesting.
  - May 1 to July 15 because of antelope fawning.

3. A \_\_\_ (foot) tree screen will be left on the \_\_\_ sides of the location.

4. The top \_\_\_ inches of soil material will be stripped and stockpiled in the construction zones of the well pad. The stockpiled soil material will be spread on the reclaimed portions of the pad [including the reserve pit, cut and fill slopes] prior to reseeding. Spreading shall not be done when the ground or topsoil is frozen or wet.

5. Pits will be lined with an impervious material at least 8 mils thick. Prior to closing the pit, the liner will be cut off at mud level. The excess liner will be hauled to a licensed disposal area.

6. Pits will be lined with an impervious material at least 8 mils thick. Prior to closing the pit, the liner will be cut off at mud level. The excess liner will be hauled to a licensed disposal area.

7. Earthen berm(s) will be placed on the \_\_\_\_ side(s) of the location between the reserve pit and the wash.

8. The \_\_ corner of the well pad will be rounded off to avoid \_

9. The wash shall be diverted around the \_\_ side of the well pad.

10. Diversion ditch(es) will be constructed on the \_\_ side of location above/below (circle one) the cut slope, draining to the\_\_.

11. A culvert of sufficient size (minimum 18 inches) will be placed where the drainage crosses the access road.

12. The proposed access road shall utilize the upgraded 2-track trail approximately \_\_ (feet or miles) as agreed upon during on-site inspection. Remainder of planned access road will follow flagged route.

13. The access road shall be rerouted around the \_\_ edge of the well pad during construction and drilling activities for safety reasons. Upon completion of drilling and cleanup, the road will be returned to its original alignment.

14. The final cut slope shall not exceed a \_\_ ratio. The final fill slope shall not exceed a \_\_ ratio. To obtain this ratio, pits and slopes shall be backsloped into the pad upon completion of drilling. Construction slopes can be much steeper during drilling, but will be recontoured to the above ratio during reclamation. **Production equipment [including any facilities associated with pipeline construction] shall be placed on location as not to interfere with reclaiming the cut and fill slopes to their proper ratio. If equipment is found to interfere with the proper reclamation of the slope, the company will be required to move the equipment so proper recontouring can occur.**

15. All above ground structures shall be painted to blend with the natural color of the landscape. The paint used shall be:

- a. Federal 595a-34127 (Juniper Green)
- b. Munsell Soil Color 5Y 6/1 (Slate Gray)
- c. Munsell Soil Color 2.5Y 6/2 (Carlsbad Canyon Brown).
- d. Munsell Soil Color 10YR 6/3 (Desert Brown)
- e. The leg-off will not be painted the above color, but instead shall be left unpainted such that the rusty finish on the pipe would blend in with the surroundings.

16. Hand seeding with hydro-mulch, excelsior netting and/or mulch with netting \_\_ required on \_\_ slopes. Mulch should be grass or straw spread at 2,000 to 3,000 pounds per acre (or one to two inches deep).

17. No hardwood tree with a diameter of ten inches or more at the base or any Ponderosa pine, Douglas-fir or aspen tree is to be removed or damaged without approval from the BLM Authorized Officer (AO).

18. If in the conduct of operations, paleontological materials (fossils) are observed, lessee shall immediately contact the BLM. Lessee shall cease any operations that would result in the destruction of such objects. The results of further investigation will dictate site-specific stipulations for avoidance or salvage of any potentially significant paleontological resources.

19. The proximity of residences in the area places this well location under Zone 2 noise mitigation requirements. This requires that the operator file a sundry notice prior to placing a compressor unit on location (should one be needed during the production phase of this well).

The sundry notice will include information on why the compressor is needed, the estimated time the compressor will be in use, and the manufacturer's data (size of unit, horsepower, model type and type of motor). A 1:2400 (7.5 minute series) map will be submitted with the sundry. The map will show the proposed compressor location and all noise sensitive areas (fee surface, residences, schools, churches, farms, known ACECs and SMAs, etc.) within a two-mile radius of the well location. In addition, a 24-hour time weighted average, background noise survey may be required.

\*\*\*Adjust stipulation wording for Zone 1 or Zone 3.

20. No well and/or production equipment within the irrigable fields of the Navajo Indian Irrigation Project will exceed two feet above the natural ground surface elevation, and will be adequately barricaded for safety.

21. All cattleguards shall have grid identification marks welded into them indicating ownership and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASTHO) load rating H-20, although AASTHO U-80 rated grids shall be required where heavy loads, (exceeding H-20 loading) are anticipated. (See BLM standard drawings for cattleguards). Cattleguard grid width shall not be less than eight feet and length of not less than 14 feet. A wire gate with a minimum width of 16 feet will be provided on one side of the cattleguard.

22. Standards for Cattleguards: All cattleguards must have clearly visible identification marks welded into them indicating the ownership, wellname and number associated with the cattleguard.

23. Trees shall be delimbed and trunks stacked on the side of well pad for wood gatherers. Limbs shall be stockpiled on one corner of the location for future rehabilitation of well pad. After reseeded, limbs shall be placed back on the slopes and walked down or chipped for mulch.

24. All trees, 6 inches diameter or less, and brush will be incorporated into fill for erosion control; trees, 6 inches diameter or greater, will be cut and delimbed; trunks will be left whole along access or existing road for wood gathering; and slash will be put back on pad cut and fill slopes after reseeded.

25. Prior to crossing, using or paralleling any improvement on public land, operator shall contact the owner of the improvement to obtain mitigating measures to prevent damage to the improvements.

26. All cut fences are to be tied to H-braces prior to cutting. The opening will be protected as necessary during construction to prevent the escape of livestock. A temporary closure will be installed on all cut fences the same day the fence is cut. A permanent cattle guard will be installed and maintained in any cut fence unless otherwise stipulated in writing. A 16-foot gate will be installed adjacent to all new cattle guards.

27. If surface owner changes any of these conditions of approval, company will contact the AO before implementing surface owner stipulations.

28. **During clearing activities, trees in piñon-juniper type vegetation removed from the well pad and access road shall be made available for wood gathering and slope stabilization.** Trees shall be moved aside prior to any soil disturbing activities. Care will be taken not to mix soil with the trees. Trees left for wood gathering shall be cut [twelve inches or less from the ground], delimited, and the trunks, **6 inches or more in diameter** shall be removed and placed either by the side of the access road [opposite the proposed pipeline], or moved to the end of the road, or to a road junction for easy access for wood gatherers and to reduce vehicle traffic on the well pad. **Trees with a trunk diameter less than 6 inches shall be used to stabilize slopes and control erosion.** These trees may be removed entirely without delimiting and placed within the construction zone of the pad. During reclamation these trees will be placed on the construction slopes, on the reserve pit area, and the parts of the pad not used for production purposes. The trees will be walked down.

29. Reserve pits will be closed and rehabbed 90 days after completion or 120 days after the well is spudded. All reserve pits remaining open after the 90 days will need written authorization from the AO. This requirement is addressed in the General Requirements of Onshore Order # 7.

30. Compressor units on this well location not equipped with a drip pan for containment of fluids shall be lined with an impervious material at least 8 mils thick and a twelve inch berm. The compressor will be painted to match the well facilities. Any variance to this will be approved by the AO. When compressor units are washed, or any other equipment associated with the locations, the fluids (i.e., scrubber cleaners) will be properly disposed of to avoid ground contamination or hazard to livestock or wildlife.

### **Rights-of-Way Special Stipulations for Roads and Pipelines**

1. The proximity of residences in the area places this well location under Zone 2 noise mitigation requirements. This requires that the operator file a sundry notice prior to placing a compressor unit on location (should one be needed during the production phase of this well).

2. The sundry notice will include information on why the compressor is needed, the estimated time the compressor will be in use, and the manufacturer's data (size of unit, horsepower, model type, and type of motor). A 1:24000 (7.5-minute series) map will be submitted with the sundry. The map will show the proposed compressor location and all noise sensitive areas (fee surface, residences, schools, churches, farms, known ACECs and SMAs, etc.). Within a two-mile radius of the well location. In addition, a 24-hour time weighted average, background noise survey may be required.

\*\*\*Can adjust wording to suit your requirements.

This approval is for operational activities only. Surface commingling and/or off-lease sales, storage, usage and measurement require separate approval by the AO.

3. Construction activities and surface disturbance will be prohibited during the period from
  - A. November 1 to March 31 for the protection of eagle winter habitat.
  - B. December 1 to March 31 for the protection of deer and elk winter habitat.
  - C. March 1 to June 30 for the protection of an active raptor nest site.
  - D. May 1 to July 15 for the protection of antelope fawning.

Exceptions must have prior written approval from the AO.

4. Performing construction maintenance activities outside the existing disturbed area of the existing road requires a cultural survey and clearance.

5. The holder shall contact the AO at least three (3) days prior to commencing construction and/or any surface disturbing activities (\_\_\_ may want to be present). The AO may require and schedule a preconstruction conference with holder prior to the holder's commencing construction and/or surface disturbing activities on the right-of-way. The holder and/or their representative shall attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with this right-of-way shall also attend this conference to review the stipulations of the grant including the plan(s) of development, as applicable.

6. Performing construction maintenance activities outside the existing disturbed area of the existing road requires a Threatened or Endangered plant survey and clearance.

7. The AO shall require and schedule a preconstruction conference with the holder prior to commencing construction and/or surface disturbing activities on the right-of-way. The holder and/or his representative shall attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the right-of-way, shall also attend this conference to review the stipulations of the grant including the plan(s) of development, as applicable.

At least five days prior to this conference, the holder shall provide maps or survey plats of this project to operators of all pipelines crossed or paralleled on public/Federal lands, and contact and invite them to attend this meeting. Determining the names and contact points of these operators is the responsibility of the holder. If requested holder shall certify these contacts were made and that the required information was given.

8. The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the plans(s) of development which was (were) approved and made part of the grant on \_\_\_. Any relocation, additional construction, or use that is not in accord with the approved plan(s) of development, shall not be initiated without the prior written approval. A copy of the complete right-of-way grant, including all stipulations and approved plan(s) of development, shall be made available on the right-of-way area during construction,

operation and termination to the AO. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety of the environment.

9. The holder shall not initiate any construction or other surface disturbing activities on the right-of-way without prior written authorization. Such authorization shall be a written Notice to Proceed (Form 2800-15) issued by the AO. Any Notice to Proceed shall authorize construction or use only as therein expressly stated and only for the particular location or use therein described.

10. Boundary adjustments in \_\_\_\_ shall automatically amend this right-of-way to include that portion of the facility no longer contained within the above described \_\_\_\_). In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendments.

11. The pole structure of the powerline shall be constructed as illustrated in the drawings submitted in the application for this right-of-way and included in this grant as Exhibit \_\_. Any deviation from the illustration specifications requires written approval of the AO.

12. Unless otherwise agreed to by the AO in writing, powerlines shall be constructed in accordance to standards outlined in “Suggested Practices for Raptor Protection on Powerlines,” Raptor Research Foundations, Inc., 1981. The Holder shall assume the burden and expense of proving that pole designs not shown in the above publication are “eagle safe.” Such proof shall be provided by a raptor expert approved by the AO. The BLM reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

13. Clearing, grading and other disturbance of soil and vegetation shall be limited to the minimum area required for construction, and shall include:

A. A maximum width of \_\_ feet.

B. Trimming trees in preference to cutting trees and cutting trees in preference to bulldozing them as directed by the AO.

C. Not clearing trees to allow passage of equipment for stringing the line without the prior written approval of the AO.

D. That trees, in piñon-juniper type vegetation, cleared from the right-of-way shall be left for wood gathering activities. The trees shall be moved aside prior to any soil disturbing activities. Do not mix soil with the trees during right-of-way clearing. The trees shall be delimbed and the trunks shall be moved and placed either by the side of the right-of-way, if it parallels a road, or moved to the end of the right-of-way for easy access for wood gatherers and to prevent vehicular travel on the R/W.

After reseeded, the branches shall be placed back on the R/W and “walked down” or chipped. Any rocks removed from the construction area during clearing and/or ditching operations shall be scattered back on the right-of-way in a random arrangement and not in bunches. Redistributing these materials on the right-of-way during reclamation activities shall be accomplished by using rubber-tired equipment.

E. That clearing the right-of-way in vegetative types, other than piñon-juniper types (i.e., sagebrush flats) shall consist of knocking (scalping) off the tops of brush or removal of all plant parts only at pole locations.

14. If “cross-country” access is necessary, clearing vegetation or grading a roadbed will be avoided wherever practicable. All construction and vehicular traffic shall be confined to the right-of-way or designated access routes, roads, or trails unless otherwise authorized in writing by the AO. All temporary roads used for construction shall be rehabilitated after construction is completed. Only one road or access route will be permitted to each site requiring access.

15. If the right-of-way is separate from any permanent access, roads shall not be constructed within the right-of-way where the terrain will allow vehicles to maneuver without the aid of such roads.

16. The holder shall coordinate with the AO on the design and color of the poles and transmission lines to achieve the minimal practicable visual impacts.

17. The holder shall use non-reflecting lines and conductors at the following location(s):

18. Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

19. The holder shall evenly spread the excess soil excavated from pole holes within the right-of-way and in the immediate vicinity of the pole structure.

20. Any roads used exclusively for construction purposes shall be adequately closed to all vehicular travel, and rehabilitated after completion of construction. The manner of closure shall be determined in conjunction with a representative of the AO.

21. No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

22. No surface disturbance or construction activities will be allowed within \_\_\_ feet of \_\_\_ which shall be clearly marked as specified by the AO. Any deviation from this requirement shall have the prior approval of the AO.

23. The holder shall provide for the safety of the public entering the right-of-way. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without intervisible turnouts, and attended gates for blasting operations.

24. A buffer strip of vegetation \_\_ feet wide shall be left between areas of surface disturbance and riparian vegetation as determined necessary by the AO.

25. The holder shall mark the exterior boundaries of the right-of-way with stake and/or lath at 100- to 200-foot intervals. The intervals may be varied at the time of staking at the discretion of the AO. The tops of the stakes and/or laths will be painted and the laths flagged in a distinctive color as determined by the holder. The survey station numbers will be marked on the boundary stakes and/or laths at the entrance to and the exit from public land. The holder shall maintain all boundary stakes and/or laths in place until final cleanup and restoration is completed and approved by the AO. The stakes and/or laths will then be removed at the direction of the AO.

26. The holder shall survey and clearly mark the centerline and/or exterior limits of the right-of-way, as determined by the AO (set reference markers for all angle stations [P.I.] on both sides of the right-of-way prior to construction activities).

27. The holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the AO to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

28. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

29. When construction activity in connection with the right-of-way breaks or destroys a natural barrier used for livestock control, gaps thus opened shall be fenced to prevent drift of livestock. The subject natural barrier shall be identified and fenced by the holder as per instructions of the AO.

30. Holder is responsible to contact the grazing lessee(s) named below, prior to crossing any fence on public land or any fence between public and private land, and to offer the lessee(s) an opportunity to be present when the fence cut(s) is made so the lessee(s) can be satisfied that the fence is adequately braced and secured.

Lessee \_\_\_\_\_ Phone \_\_\_\_\_ Address \_\_\_\_\_  
 \_\_\_\_\_

31. Maintain a minimum of ten (10) feet of undisturbed surface between fence lines and roads that are constructed parallel to fences.

32. Each fence crossed by this right-of-way shall be braced and secured to prevent slacking of the wire, before cutting the wire. The opening thus created shall be temporarily closed as necessary during construction to prevent passage of livestock. Upon completion of construction,

A. Install a cattleguard with an adjacent sixteen (16)-foot gate. The cattleguard shall be constructed to BLM specifications.

B. Install a metal gate constructed to BLM specifications and capable of being locked, but not a cattleguard.

C. Reconstruct the fence to BLM specifications.

33. Those segments of road where grade is in excess of ten percent for more than 300 feet shall be designed by a professional engineer.

34. Cathodic right-of-way clearing shall include:

A. Be limited to knocking off the tops of brush in vegetative types other than piñon/juniper type vegetation. Grading and removal of the grass cover or low growth vegetation is prohibited, except immediately along the ditch line, and in rough or broken ground.

B. Provide that trees, in piñon-juniper type vegetation, cleared from the right-of-way shall be left for wood gathering activities. The trees shall be moved aside prior to any soil disturbing activities. Do not mix soil with the trees during right-of-way clearing.

C. Be limited to a width of \_\_\_ feet.

35. The cathodic cable shall be spanned above ground from Sta. \_\_ to Sta. \_\_.

36. The cathodic cable shall be constructed in the access road or within fifteen (15) feet of the access road.

37. The cathodic cable shall be constructed in the access road or within fifteen (15) feet of the access road from Sta. \_\_ to Sta. \_\_.

38. No blading of the right-of-way is permitted.

39. Suitable topsoil material removed in conjunction with clearing and stripping shall be conserved in stockpiles (within the right-of-way, at the following staked locations:\_\_\_\_). Topsoil shall be stripped to an average depth of \_\_\_ inches (road strips only). Spread the topsoil on ROW during reclamation if the road will not be used longer than (2) years; if it will be used for a longer time, spread the topsoil on slopes of the road and road ditch.

40. Sidehill cuts of more than three (3) feet are not permitted. Areas requiring cuts greater than this shall be terraced so none are greater than three (3) feet.

41. Holder is encouraged to use a “rock trencher” or “rock saw” type of machine (or any other technology that limits environmental disturbance) when any rock is encountered to aid in minimizing environmental disturbance. Use of these types of equipment may be required by BLM on specific locations. Use explosives in any amount or a hydraulic or cable ripper for intermittent distances of more than fifty feet shall be approved on a case-by-case basis by the AO prior to use.

42. This road shall have a minimum driving surface of 14 feet, a maximum bladed width of \_\_\_ feet excluding turnout ditches and turnouts, and a maximum grade of 10 percent (pitches over 10 percent that are less than 300 feet in length may be allowed).

43. Crowning and ditching on both sides of the road are required. The road cross section will conform to the cross section diagrams available from BLM. The crown shall have a grade of approximately two percent (i.e., two-inch crown on a 14-foot-wide road).

44. Drainage control shall be ensured over the entire road through the use of borrow ditches, drainage dips, outsloping, insloping, natural rolling topography, and/or turnout (lead-off) ditches. Every drainage dip shall drain water into an adjacent turnout ditch.

45. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter is 18 inches. A \_\_\_ -inch-diameter culvert shall be placed at locations discussed during the onsite inspection.

46. The pipeline shall be laid above ground from Sta. \_\_\_ to Sta. \_\_\_, and no blading shall be allowed between these stations.

47. Place the pipeline in the existing road or within ten (10) feet of the edge of the traveled surface of the existing road (from Sta. \_\_\_ to Sta. \_\_\_).

48. Bury the pipeline in the existing road or within twenty (20) feet of the edge of the traveled surface of the existing road.

49. The holder shall construct low-water crossings in a manner that will prevent any blockage or restriction of the existing channel. Material removed shall be stockpiled for use in rehabilitation of the crossing.

50. Unless otherwise approved by the AO, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be inter-visible, whichever is less. Turnouts will conform to diagrams that can be obtained from the AO.

51. All cattleguard grid identification marks welded into them indicating ownership and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASTHO) load rating H-20, although AASTHO U-80 rated grids shall be required where heavy loads, (exceeding H-20 loading) are anticipated. (See BLM standard drawings for cattleguards). Cattleguard grid width shall not be less than eight feet and length of not less than 14 feet. A wire gate with a minimum width of 16 feet will be provided on one side of the cattleguard.

52. Construct this “loop line” within twenty (20) feet of the existing pipeline.

53. If a surface pipeline is constructed adjacent to a road, it shall be no closer than twenty (20) feet from traveled surface of the road

54. All surface pipeline(s) shall be buried at least three (3) feet where it crosses any road or areas associated with a road, i.e., bar-ditches, water turn-outs. The pipeline shall be marked with suitable signs on either side of a road crossing(s).

55. All weather access is desired and surface material (\_\_\_) is economically available, therefore the road shall be surfaced. The surfacing material will be compacted to a minimum thickness of \_\_\_ inches. Prior to using any mineral material from an existing or proposed Federal source, authorization must be obtained from the AO.

56. Surfacing may be applied at the Holder’s discretion, but is not required at this time. However, if it becomes evident there is resource damage or it becomes evident the road is receiving excess damage, surfacing will be required.

57. Plastic pipe shall not be used in the construction of a surface pipeline.

58. Compaction of the surfacing material will be done with a sheep’s foot compactor. Upgrading and surfacing of the collector road will be done during the spring and summer of \_\_\_\_\_. Work on the remaining local and resource roads to bring them up to BLM standards will be accomplished by the summer of \_\_\_\_\_. All maintenance and upgrading of existing roads will be done within the existing disturbed area.

59. Holder is responsible for notifying the party(s) listed below for sharing in road maintenance.

<u>Right-of-way</u>	<u>Holder</u>	<u>Address</u>	<u>Telephone</u>
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_____	_____	_____	_____
_____	_____	_____	_____

60. The Holder shall:

A. Recontour disturbed areas, or designated sections of the right-of-way, by grading to restore the site to approximately the original contour of the ground as determined by the AO.

B. Recontour the disturbed area and obliterate all earthwork by removing embankments, backfilling excavations, and grading to re-establish the approximate original contours of the land in the right-of-way.

C. Uniformly spread topsoil over all unoccupied disturbed areas (outside the ditch line, fence line, work area). Spreading shall not be done when the ground or topsoil is frozen or wet.

61. Construct earthen berms that are a minimum of four (4) feet high with a ditch that has a one (1)-foot vertical face away from the right-of-way, i.e., towards the direction of potential traffic, cut at the base of the berm. Construct this type berm at each end of the right-of-way where it is separate from the road.

62. The Holder shall furnish and apply water, chemicals, or use other means satisfactory to the AO for dust

63. If snow removal from the road is undertaken, equipment used for snow removal operations shall be equipped with shoes to keep the blade \_\_\_ inches off the road surface. Holder shall take special precautions where the surface of the ground is uneven and at drainage crossings to ensure that equipment blades do not destroy vegetation.

64. The holder shall construct waterbars on all disturbed areas to the spacing and cross sections specified by the AO. Waterbars are to be constructed to: (1) simulate the imaginary contour lines of the slope (ideally with a grade of one or two percent); (2) drain away from the disturbed area; and (3) begin and end in vegetation or rock whenever possible.

<b>Percent Slope</b>	<b>Spacing Intervals</b>
Less than 1%	400 feet
1 - 5%	300 feet
5 -15%	200 feet
12-25%	100 feet

65. The Holder shall mulch disturbed areas designated by the AO. The type of mulch shall meet the following requirements:

A. Straw or hay used for mulching shall be from oats, wheat, rye, or other approved grain crops, or approved herbaceous mowings, respectively, and free from noxious or other objectionable material as determined by the AO. Straw or hay mulch shall be suitable for placing with mulch blower equipment.

B. Wood cellulose fiber shall be natural or cooked wood cellulose fiber, shall disperse readily in water, and shall be nontoxic. The homogeneous slurry or mixture shall be capable of application with power spray equipment. A colored dye that is noninjurious to plant growth may be used when specified. Wood cellulose fiber shall be packaged in new, labeled containers.

C. Hand seeding with hydro-mulch, excelsior netting and/or mulch with netting \_\_ required on \_\_ slopes. Mulch should be grass or straw spread at 2,000 to 3,000 pounds per acre (or one to two inches deep).

66. All above ground structures not subject to safety requirements shall be painted by the Holder to blend with the natural color of the landscape. A reflective material may be used to reduce hazards that may occur when such structures are near roads. Otherwise, the paint use shall be a non-glare, non-reflective, non-chalking color of:

- A. Federal Juniper Green (595a-34127)
- B. Munsell Soil Color Slate Gray (5Y 6/1)
- C. Munsell Soil Color Carlsbad Canyon Brown (2.5Y 6/2).
- D. Munsell Soil Color Desert Brown (10YR 6/3)
- E. The leg-off will not be painted the above color, but instead shall be left unpainted such that the rusty finish on the pipe would blend in with the surroundings.

67. Seed all the disturbed areas (except the driving surface and road shoulders [entire area if road is to be reclaimed] road only) using the following designated seed mixture and to the specifications given. Disturbed areas shall be reseeded within one year of final construction.

68. This grant is for an existing road(s) under the terms of the New Mexico Policy, Standards, and Procedures for Existing Roads issued effective January 1, 1990. This R/W grant shall be deemed to describe the existing road(s) as it exists on the ground as of April 8, 1991, notwithstanding the descriptions contained herein.

69. Upon completion of construction, the Holder shall post as directed by the AO, the Bureau serial number assigned to this right-of-way grant at the following location(s) \_\_\_\_.

70. A. The Holder shall reconstruct rock rims to near as possible to the original.  
B. There will be bitterbrush plant seedings planted on slopes as identified by the AO. These seedings will be placed with BLM's assistance and direction. It is also advisable to obtain a nursery specialist to assist and advise with this project. These seedings will be in addition to the normal grass and forb mix that will be seeded into the entire right-of-way.

#### I. **LOCATION AND ACCESS ROAD STANDARDS**

1. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation and appearance. All liquid waste, completion fluids and drilling products associated with oil and gas operations will be contained and then buried in place, or removed and deposited in an approved disposal site.

2. Surface disturbance and vehicular traffic will be limited to the approved location and approved access road.

3. Mud and blow pits will be constructed so as not to leak, break or allow discharge of liquids or produced solids. At least half of the capacity of the reserve pit must be in cut. The top of the outside wall of reserve pit should be smoothed-off with a minimum of one blade width. The pit should have adequate capacity to maintain 2 feet of free board. Pits are not to be located in natural drainages. Pit walls are to be "walked down" by a crawler type tractor following construction and prior to usage. Any plastic material used to line pits must be removed to below-ground level before pits are covered. The final grade of reserve pit (after reclamation) shall allow for drainage away from pit area.

4. All unguarded pits (reserve/production/blow) containing liquids will be fenced with woven wire. Drilling pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced. All fencing must be a legal fence in accordance with New Mexico State Law. Liquids in pits will be allowed to evaporate, or be properly disposed of, before pits are filled and recontoured. (This office will be notified 24 hours prior to fluid hauling.) Under no circumstances will pits be cut and drained. Aeration of pit fluids must be confined within pit area. Upon completion of the well the reserve pit will be covered with screening or netting and remained covered until the pit is reclaimed. All production pits 16 feet in diameter or larger will be covered with screening or netting.

5. No gravel or other related minerals from new or existing pits on Federal land will be used in construction of roads, well sites, etc., without prior approval from the Surface Managing Agency.

6. Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks, or the combined capacity of tanks if a rupture could drain more than one tank. Berm walls will be compacted with appropriate equipment to assure proper construction.

7. All roads on public land must be maintained in good passable condition.

8. Use of pesticides and herbicides shall comply with applicable federal/state laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder shall obtain from the AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary. Emergency use of pesticides shall be approved in writing by the AO prior to use.

9. Holder shall be responsible for weed control and selective control of invasive weeds on disturbed and reclaimed areas within the limits of the well pad, associated road and pipeline ROW. Holder is responsible for consultation with the AO and/or local authorities for acceptable weed control methods within limits imposed in the conditions of approval.

## II. CULTURAL RESOURCES (ARCHAEOLOGY)

1. **Discovery of Cultural Resources in the Absence of Monitoring:** If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

2. **Discovery of Cultural Resources During Monitoring:** If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. **Damage to Sites:** If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

**III. RESEEDING AND ABANDONMENT**

***[INSERT SEED MIXTURE HERE]***

Species shall be planted in pounds of pure live seed per acre:  
 Present Pure Live Seed (PLS) = Purity X Germination/100

Two lots of seed can be compared on the basis of PLS as follows:

<u>Source No. One (poor quality)</u>		<u>Source No. two (better quality)</u>	
Purity	50 percent	Purity	80 percent
Germination	40 percent	Germination	63 percent
Percent PLS	20 percent	Percent PLS	50 percent
<i>5 lb. bulk seed required to make 1 lb. PLS.</i>		<i>2 lb. bulk seed required to make 1 lb. PLS.</i>	

The seed mixture used must be *certified*. There shall be NO primary or secondary noxious weeds in the seed mixture. Seed labels from each bag shall be available for inspection while seed is being sown.

Seeding shall be accomplished between July 1 and September 15 (later date may be extended on a case-by-case basis with AO approval).

Compacted areas shall be ripped to a depth of twelve inches and disked to a depth of six inches before seeding. Seed with a disk-type drill with two boxes for various seed sizes. The drill rows shall be eight to ten inches apart. The seed shall be planted at not less than one-half inch deep or more than one inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed, and adequate compaction. Drilling shall be done on the contour where possible, not up and down the slope.

Where slopes are too steep for contour drilling a "cyclone" hand seeder or similar broadcast seeder shall be used. Seed shall then be covered to the depth described above by whatever means is practical, i.e. hand raked. If the seed is not covered, the prescribed seed mixture amount (pounds/acre/PLS) will be doubled.

Seeding shall be repeated if a satisfactory stand is not obtained as determined by the AO upon evaluation after the second growing season.

If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. (Reseeding of affected areas may be required.)

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## United States Department of the Interior

### BUREAU OF LAND MANAGEMENT

Farmington Field Office  
1235 La Plata Highway, Suite A  
Farmington, New Mexico 87401

3162.3-1(07100)

IN REPLY REFER TO:

- x Name of Company
- x Name of Well
- x Lease Number
- x Legal Location
- x Name of County and State

**Above Data Required on Well Sign**

### **GENERAL REQUIREMENTS** **FOR** **OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES**

In addition to those requirements set forth in the laws, regulations and Onshore Orders, these requirements apply generally to all oil and gas operations on Federal and Indian leases. They apply specifically to the above described well. Special requirements that apply and are effective for this well, if any, are check-marked in Section VII of these General Requirements. The failure of the operator to comply with these requirements and the filing of required reports will result in strict enforcement of 43 CFR 3163.1 or 3163.2.

#### **I. GENERAL**

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to Drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- D. For Wildcat wells only, a drilling operations progress report is to be submitted, to the BLM-Field Office, weekly from the spud date until the well is completed and the Well Completion Report (Form 3160-4) is filed. The report should be on 8½ x 11 inch paper, and each page should identify the well by; operator's name, well number, location and lease number.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required

for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at XXX-XXX-XXXX. Emergency program changes after hours should be directed to \_\_\_\_\_ at XXX-XXX-XXXX or \_\_\_\_\_ at XXX-XXX-XXXX.**

- G. The Field Office Manager (Inspection and Enforcement Section, phone number (505-599-8907) is to be notified at least 24 hours in advance of any cementing or plugging operations so that a BLM representative may witness the operations.
- H. Unless drilling operations are commenced within one year, approval of the Application for Permit to Drill well expire. A written request for a six months extension may be granted if submitted prior to expiration.
- I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the toolpusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.
- J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

## **II. REPORTING REQUIREMENTS**

- A. For reporting purposes, all leases, communitization agreements or unit agreements are to be referenced by the numbers and prefixes affixed to the respective contract documents by the issuing agency at the time of issue.
- B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.
  - 1. Original and three copies on Federal and Original and four copies on Indian leases of Sundry Notice (Form 3160-5), giving complete information concerning.
    - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
    - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Show date work was done (a Sundry Notice is not required if a Completion Report is submitted within 30 days of the operation).

- c. Subsequent Report of Abandonment, showing the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
2. Well Completion Report (Form 3160-4) will be submitted within 30 days after well has been completed
    - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
  3. A cement evaluation log if cement is not circulated to surface.

### **III. DRILLER'S LOG**

- A. The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drillstem test.

### **IV. GAS FLARING**

- A. Gas produced from this well may not be vented or flared beyond an initial, authorized test period of   \* Days or 50 MMCF following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted, and you shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

\*30 days, unless a longer test period specifically is approved by the authorized officer. The 30-day period begins when the casing is first perforated for cased holes, and when Total Depth (TD) is reached for open hold completion.

### **V. SAFETY**

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats must be utilized.

### **VI CHANGE OF PLANS OR ABANDONMENT**

- A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F..

- B. If the well is dry it is to be plugged in accord with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F.. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section 11.B.1c..
- C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drillsite without prior approval from the BLM-Authorized Officer.

**VII. SPECIAL STIPLATIONS**

The following special requirements apply and are effective when checked:

- A. A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the Bureau of Land Management, Farmington Field Office, Branch of Reservoir Management, 1235 La Plata Highway, Suite A, Farmington, New Mexico 87401. The effective date of the agreement must be Prior to any sales.
- B. The BLM-Authorized Officer requires testing all components of well control systems at the pressure requirements set forth in Onshore Oil and Gas Order No. 2, Section III. A. 1., plus a 30% safety factor, and does not elect to utilize the discretionary authority for requiring the testing of selected components at the A. P. L. working pressures.
- C. Note Attachments

**VIII. PHONE NUMBERS**

- A. For cementing and plugging operations the phone number is 505-599-8907 and should be called 24 hours in advance in order that a BLM representative may witness the operations.
- B. Emergency program changes after hours contact:

\_\_\_\_\_ at (XXX) XXX-XXXX

or

\_\_\_\_\_ at (XXX) XXX-XXXX

### **ADDITIONAL SITE-SPECIFIC MITIGATION MEASURES**

The following measures apply to primarily site-specific areas and may be attached as Conditions of Approval to APDs or as special stipulations to ROWs. Maps indicating locations of sensitive areas are maintained at the FFO.

1. No surface disturbance shall be permitted in bald eagle essential habitat (core areas).
2. No construction activities shall be conducted between November 1 to March 31 in bald eagle buffer zones, unless approved on a case-by-case basis.
3. Areas of potential suitable habitat for bald eagle will be inventoried prior to approval of any action. This area shall include a one-half mile strip around Navajo Lake. If the presence of a bald eagle is confirmed, restrictions on development will be imposed and actions may be authorized on a case-by-case basis. USFWS and affected agency shall be involved in Section 7 consultation, if necessary.
4. All proposed actions within unsurveyed suitable habitat for any proposed threatened/endangered (State or Federal) species will require surveys according to the responsible agencies protocol. Restrictions will be placed on surface disturbing activities in suitable habitat until these inventories are complete. The absence of any threatened/endangered species must be confirmed prior to approval of any surface-disturbing action that may affect the habitat. If presence of a threatened/endangered species is found, restrictions on new development will be imposed and actions may be authorized on a case-by-case basis.
5. Designated Antelope Habitat – In order to protect important antelope fawning habitat, exploration, drilling and other development activity will be allowed only during the period from May 1 through July 15. Limitation does not apply to maintenance and operation of producing wells. Exception to this limitation may be, specifically authorized in writing by the Authorized Officer of the Federal surface management agency.
6. Elk Calving Habitat – In order to protect important seasonal wildlife habitat (elk calving range), exploration, drilling and other development activity will be allowed only during the period from July 15 through November 30. This limitation does not apply to maintenance and operation of producing wells. Exception to this limitation may be specifically authorized in writing by the Authorized Officer of the Federal surface management agency.
7. No development activity or surface occupancy shall be permitted in wetland areas (as defined in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands). Exceptions may be analyzed in a site-specific environmental assessment. Any wetland acreage destroyed shall be mitigated by the acreage ratio as prescribed by the USFWS. Seasonal closures for waterfowl nesting and bald eagle wintering may apply.

8. No surface occupancy shall be allowed within developed recreation areas without proper NEPA compliance.
9. Prior to approval of a well location within 500 horizontal feet of the high water line of Navajo Reservoir (elevation 6,085 feet), it must be examined by BOR and the potential impacts to water quality determined.
10. Minerals under areas of critical concern along the San Juan River, and under or close to Navajo Lake, shall be developed using no surface occupancy and directional drilling. Exceptions may be granted on a case-by-case basis in consultation with necessary agencies. Any exception to surface occupancy shall have strict additional mitigating measures attached. Seasonal closure(s) for waterfowl and bald eagle wintering may also apply.
11. Restrict drilling within 1,000 horizontal feet of Navajo Dam and appurtenant structures. This includes the foundation of the dam, which extends 1,320 feet upstream and 1,260 feet downstream from the dam axis (T. 30 N., R. 7 W., Sec. 18: S2, Sec. 19: N2, N2SW4, N2N2SE4).
12. Development will be restricted in areas that have special topographical (steep or broken and/or on benches) and soil concerns. Development will be considered on a case-by-case basis and will contain strict mitigation stipulations.
13. Those areas within the unit that are also contained within the Carracas Mesa SMA shall have the following requirements:
  - a. Restrict vehicles to designated routes and seasonal closures.
  - b. Major right-of-ways shall be located outside of the SMA boundary. This does not include individual well ties.
  - c. VRM Class II objectives shall apply to all development. The management objectives of this class are to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.
  - d. Visual, wildlife and recreation clearances will be required for all new development activity.
  - e. No surface disturbance on slopes greater than 20 percent.
14. Those areas within the unit that are within the Reese Canyon Research Natural Area shall have the following requirements:

- a. Restrict vehicles to designated routes and seasonal closures.
  - b. Major right-of-ways shall be located outside the RNA boundary. This does not include individual well ties.
  - c. New wells in the RNA should be twinned off existing well pads except where other constraints (e.g. T/E) exist.
  - d. No surface disturbance on benches or slopes greater than 20 percent.
  - e. No surface occupancy will be allowed in occupied and potential habitat for Federal or State listed threatened and endangered species. These areas should be excluded from any surface disturbing activities unless those activities are completely confined to areas of existing disturbance and the proposed activity is fully evaluated or its potential impacts to recovery of the endangered plant species.
15. Those areas within the unit that are also within the Negro Canyon SMA shall have the following requirements:
- a. Restrict vehicles to designated routes and seasonal closures.
  - b. Major right-of-ways shall be located outside of the SMA boundary. This does not include individual well ties.
  - c. VRM Class II objectives shall apply to all development. The management objectives of this class are to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.
  - d. Visual, wildlife, and recreation clearance will be required for all new development activity.
  - e. No surface disturbance on slopes greater than 20 percent.
16. Those areas within the Simon Canyon Area of Critical Environmental Concern shall have the following requirements:
- a. Restrict vehicles to designated routes.
  - b. Major rights-of-way shall be located outside the ACEC boundary. This does not include individual well ties.

- c. VRM Class II objectives shall apply to all development. The management objectives of this class are to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.
  - d. Visual, wildlife and recreation clearances will be required for all new development activity.
  - e. No development shall be allowed in the canyon bottom.
  - f. No development shall be allowed on the canyon rim that is visible from the canyon bottom.
17. Riparian Habitat - When riparian vegetation cannot be avoided during permitted project, the permittee is responsible to reestablish any riparian vegetation lost during construction. Cottonwoods will be replaced on a 10 to 1 ratio and willows will be replaced on a 3 to 1 ratio. Sedimentation barrier fences will be constructed to BLM specifications in designated riparian area active channels that may be destabilized due to construction activities, or as off site mitigation to protect the integrity of designated riparian areas.
18. *Sclerocactus cloveriae* ssp. *brakii* (Brack=s Cactus), *Aliciella formosa* (Aztec Gilia):
- When individual plants or suitable habitat for these plants as determined by BLM are found during a biological survey for a proposed well pad, pipeline, or other ground disturbing project, the company proposing the project will be given the following options:
1. Relocate the project to miss the plants or habitat and drill conventionally.
  2. Relocate the pad and directionally drill to the target area.
  3. Transplant Brack's cactus, stockpile and respread soil when appropriate as determined by BLM.
- Every effort to relocate the proposed pad must be explored before BLM will approve Option 3.
19. Golden Eagle (*Aquila chrysaetos*), Ferruginous hawk (*Buteo regalis*), and Prairie falcon (*Falco mexicanus*) nest sites:
- No construction, drilling or completion activities shall be conducted between March 1 to June 30 in a radius of 1/3 mi. around active and historic nest sites.

20. All producers will receive a list of sections by legal location that contain established raptor nests. If a producer wishes to install or operate a new compressor between March 1 and June 30 in a designated raptor section, the compressor must not emit more than 48.6 dbA at 300 feet from the compressor **OR** the producer may submit a sundry prior to installing a compressor so the FFO T&E biologist can evaluate the situation and recommend a mitigation solution. The coordinated mitigation solution will not be more stringent than 48.6 dbA at 300 feet.
21. Mitigation for peregrine falcon nest sites will be determined on a site-specific basis using the principle of designating sensitive zones in which disturbance is seasonally restricted as delineated in Johnson 1994. (Reference: Johnson, T.H. 1994. *Peregrine Falcon Habitat Management in National Forests of New Mexico*. U.S. Forest Service, report. 22p.)

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