



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

ENVIRONMENTAL ASSESSMENT
EA# NM-060-01-058

WELL NAME & NO.: Windmill Federal Com. #1
Serial #: NM-103868
Section 28, T. 15 S., R. 28 E.,
N.M.P.M., Chaves County, New Mexico

OPERATOR: Murchison Oil & Gas, Inc.

ACTION: Application for Permit to Drill

SURFACE/MINERAL ESTATE: Federal Minerals/Surface

I. INTRODUCTION

A. Need for the Proposed Action:

Murchison Oil & Gas, Inc. proposes to drill and complete a **natural gas** well at the above described location. The proposed action is needed to develop the mineral lease.

B. Conformance with Land Use Plan:

The proposed action is addressed in the Roswell Resource Area Resource Management Plan/Final Environmental Impact Statement, January 1997. The proposed action is in conformance with the Roswell Approved Resource Management Plan and Record of Decision, October 1997, which supersedes all previous planning documents. All land, resource uses, and activities conform with the decisions, terms, and conditions of use described in the Resource Management Plan. The proposed action does not cause an irreversible or irretrievable commitment of resources and is consistent with Bureau regulations, policy, and guidance.

C. Relationship to Statutes, Regulations, or other Plans:

1. The proposed action does not conflict with any known State or local planning, ordinance or zoning.

2. Federal Executive Order of 2/3/99; New Mexico Noxious Weed Management Act of 1998.

II. Proposed Action and Alternatives

A. Proposed Action-Background Information

Murchison Oil & Gas, Inc. submitted an Application for Permits to Drill on **Dec. 18, 2000**.
The proposed action would include:

- 1.) The well pad falls on the access road and the access road will be reroute around the pad. Upon well completion the access road will be put back to its' original route. All other existing access roads would be maintained in as good or better condition than were existing at the commencement of operations.
- 2.) The construction of the proposed well pad would be **192** feet long by **185** feet wide exclusive of the reserve pit that would be constructed **90** feet by **150** feet and dug 4 feet below ground level. Standard oilfield construction equipment consisting of; track-type tractors, motor graders, dump trucks, and water trucks would be used to construct the access road and well pad. A drilling rig would be used to drill the well. Associated production facilities would be installed during the production phase of this well.
- 3.) Surfacing material (caliche/gravel) needed for the construction of the access road and well pad could be obtained by the operator from a **FEDERAL** pit, SE¼SE¼, in Section 24 - T. 15 S. - R. 27 E., **Chaves** County, New Mexico.

B. Alternatives:

1.) Relocate the Proposed Action

The well location is determined on the basis of subsurface geologic information and by the New Mexico Oil Conservation District II, imposed spacing regulations. No other alternative location would have significantly fewer impacts than, or have a clear advantage over, the proposed location. Therefore, the alternative of changing the location involved in this action is not analyzed further in this EA.

2.) No Action

Under this alternative, the application would be rejected. None of the environmental impacts associated with the proposed action, or an alternate location, would occur. Additionally, none of the anticipated benefits of the proposed action would be realized and the existing situation would continue.

III. Description of the Affected Environment

A. General Setting:

The proposed access road and well pad are located on federal lands an estimated **15** miles, **NE**, of Artesia, NM. Access to the site is described in the APD. Historical and present use of the subject lands have been limited to livestock grazing and energy development. The proposed action does not conflict with any of the existing uses.

B. Rights of Record:

An inspection of the Master Title Plats and other Bureau records revealed the following title information pertaining to valid existing prior rights on the subject lands:

- Oil and gas lease actions. NM-103868 - covers lease actions.
- No federally administered rights-of-way will be affected in the project area.
- No mining claims are recorded within Sec. 28, T. 15 S., R. 28 E., N.M.P.M.

C. Affected Resources:

The following critical resources have been evaluated and are either not present or are not affected by the proposed action or the alternatives in this EA:

Areas of Critical Environmental Concern (ACEC's)
Cultural Resources (01-R-024-A)
Farmlands, Prime/Unique
Floodplains
Native American Religious Concerns
Minority or Low-income Populations or Communities
Threatened or Endangered Species (Plants & Animals)
Wastes, Hazardous/Solid
Wetlands and Riparian Zones
Wild & Scenic Rivers
Wilderness

1. Air Quality:

The area of the proposed actions is considered Class II air quality area. A Class II area allows a moderate amount of degradation of air quality. Primary sources of air pollution is the wind blowing on disturbed or exposed soils causing dust dispersion and by motorized equipment diffusing exhaust emissions.

2. Soils:

These soil group is described in the Soil Survey of Chaves County, New Mexico - Southern Part (Page 24 & 62 and map #122). The proposed action would occur on uplands paralleling the east side of the Pecos River. HrC - Holloman-Gypsum land complex, 3 to 5 percent slopes.

Holloman loam in Gyp SD-3 range site. Permeability is moderate. Available water capacity is very low. Annual precipitation is 10 to 12 inches.

Runoff is rapid. Holloman soil runoff is medium, and the hazard of water erosion and soil blowing are moderate.

Gypsum land runoff is rapid, and the hazard of water erosion is moderate and the hazard of soil blowing is severe.

3. Vegetation:

A. The native vegetation in the area is composed of mainly grasses, shrubs, and forbs, such as gyp grama, coldenia, gyp dropseed, alkali sacaton, black grama, three-awn, fourwing saltbush, tobosa, winterfat, and Mormon-tea. Deterioration of the native plant community results in a

rapid invasion by other less desirable plant species.

4. Ground Water Quality:

See the geologic review in the well file for ground water information.

5. Wildlife:

Wildlife species utilizing this area for habitat include mule deer, pronghorn antelope, coyote, fox, rabbits, kangaroo rats, pocket gophers, prairie rattlesnakes, as well as a variety of songbirds, dove, quail, and raptors.

No known special status species (plant/animal) or critical habitat are present within the confines of the project area.

6. Range:

A. The well is located on the following grazing allotment:

- Grazing allotment #5075 operated by; Bogle Ltd. Co., P.O. Drawer 460, Dexter, N.M. 88230

B. Non-Native and Invasive Weed Species (Noxious Weeds): are plant species that have a law in certain instances to eradicate the weed species and/or to prevent certain weed species from spreading. The construction of an access road and/or well location may unintentionally contribute to the establishment and spread of noxious weeds. The noxious weed seeds could be carried onto the project areas by construction equipment, the drilling rig, and transport vehicles. The main channel for seed dispersion on roads and well pads is by equipment and vehicles that were previously used and/or driven over noxious weed infested areas.

7. VRM/Recreation:

The proposed action is located in a designated VRM Class IV area. The construction of the access road and well pad will modify the existing visual features of the landscape. Until reclamation of the access road and well pad are accomplished, oil and/or gas field operations may dominate the view of the landscape. Recreation in the vicinity includes seasonal hunting.

8. Cave/Karst:

No surface cave/karst features were observed in the immediate vicinity of the proposed actions.

IV. ENVIRONMENTAL IMPACTS

A. Proposed Action Impacts:

The surface disturbance involved in the construction of the access road, well pad, and reserve pit would accumulate about 1.1 acres of federal surface.

Environmental impacts that can be anticipated include:

- 1.) The construction equipment that is used to construct the access road, well pad, and the drilling rig that is used to drill the well may impact the vegetation by contributing to the dissemination of invasive and noxious weed seeds. Washing and decontaminating the equipment prior to entering federal lands would minimize this impact.
- 2.) The construction of the access road and well pad, would contribute to the mixing of the soil horizons and the exposed soils would be susceptible to wind blowing and water erosion. Surfacing the exposed areas will minimize the impacts.
- 3.) The removal and stockpiling of topsoil for future use over the disturbed areas would temporarily impact the soils. The impact would be remedied upon reclamation, when the soil stockpile would be spread over the disturbed areas to establish a seed bed.
- 4.) The access road would be impacted when heavy precipitation causes water erosion damage. The integrity of the access road would also be impacted during periods of severe weather when water saturated segment(s) on the access road become impassable and vehicles are driven over the run down segment(s) of the road. Consequently, deep tire ruts develop on the weathered road and unauthorized drive-arounds materialize outside the travelway of the access road.
- 5.) Air quality would temporary be impacted with pollution from exhaust omissions, chemical odors, and dust that would be caused by the motorized equipment used to construct the access road, well pad, and by the drilling rig that will be used to drill the well.
- 6.) Some small wildlife species may be killed and their dens or nests destroyed during construction and operation of the well.
- 7.) Livestock, waterfowl, and other wildlife could enter and become trapped in the reserve pit that could eventually cause the annihilation of the animal(s).
- 8.) Birds and bats that nest or seek shelter inside open-vent exhaust stacks and production facilities could become entrapped and killed.
- 9.) Improper disposal of drilling muds and wastes could result in contamination of the soil and water resources and limit the viability of plants and wildlife populations in the area.
- 10.) Produced fluids (e.g.: saltwater, oil, and/or condensate) could cause permanent damage off the well pad in the event of a breach, overflow, or spill from storage tanks associated with production facilities on the well pad.
- 11.) Pipeline construction would temporarily affect the soil and vegetation along the pipeline route. Prudent pipeline construction would minimize soil disturbance and the areas should recover with appropriate revegetation efforts. Pipeline ruptures along the flow-line could cause soil contamination and the eradication of vegetation in the area(s) where the pipeline burst. Pipeline construction equipment could also impact the vegetation if the equipment is not cleansed of invasive and noxious weed seeds prior to entering federal lands.

12.) The impact of the proposed action and alternatives to minority or low-income populations or communities has been considered and no significant impact is anticipated.

B. Alternatives:

No Action Alternative:

The "No Action" alternative would constitute denial of the application. This alternative would result in none of the identified environmental impacts. There would, however, be an adverse economic impact to the applicant through the denial of the lessee's right to develop the mineral reserves or through increased costs of accessing those mineral reserves through other means. There have been no significant or unmitigatable impacts identified as a result of this analysis which would warrant selection of the no action alternative.

C. Mitigation:

The Roswell Field Office; Well Drilling Requirements (Exhibit B), Conditions of Approval (Exhibit C), Permanent Resource Road Requirements (Exhibit D) and the special requirements derived from this EA, would be applied to this proposed action to minimize the surface disturbance and conserve the surrounding landscape.

D. Cumulative Impacts:

The direct effects of the proposed actions would include; disbursement of surface land use, soil displacement, uprooting of vegetation, and further fragmentation of wildlife habitat. Subsequent effects could include the possibility of soil contamination in the event of a leak or spill and groundwater contamination in the event of casing failure. Impacts to wildlife is the temporary elimination of habitat that is viable for their existence. Impacts from reclamation would have long-term effects if improper rehabilitation efforts thwart vegetation growth. In the absence of a serious spill or excessive water runoff, consequential cumulative impacts are not expected from this proposed action.


While it is likely that there will be no significant cumulative effects from this individual action, continued oil and gas development, and other surface-disturbing activities in this area may potentially have negative cumulative impacts on vegetation, soil, water, livestock, and wildlife.

V. Consultation and Coordination

An onsite inspection was conducted on the access road and well pad 1/4/01. In attendance was **Tommy W. Folsom, Production Manager for Murchison Oil & Gas, Inc.** and Richard Hill, Environmental Protection Specialist from BLM.

Coordination and consultation has occurred with the applicant's agent. The comments and suggestions expressed during the onsite consultation have been incorporated into this EA.

Reviewed by:


Irene M. Salas, Realty Specialist

2-5-01
DATE

**DECISION RECORD AND
FINDING OF NO SIGNIFICANT IMPACT
EA-NM-060-01-058**

RECOMMENDATION: I recommend that Murchison Oil & Gas, Inc.'s Application For Permit To Drill Or Deepen, the **Windmill Federal Com. #1** gas well, be approved. I recommend that provisions for the approval of the APD include the attachment of the Roswell Field Office requirements, as defined in the following exhibits; **Exhibit A** - the location map, **Exhibit B** - the Well Drilling Requirements, **Exhibit C** - the Conditions of Approval, **Exhibit D** - the Permanent Resource Road Requirements, as well as, any special mitigating measures that were developed in the environmental assessment for this well. I recommend the approval of the project, which will include; the construction of the access road, well pad, reserve pit, the drilling and completion of the well, and the installation of subsequent production facilities. If the well is a dry hole or when the well is abandoned, I recommend that new substantial reclamation requirements be attached to the well abandonment, if the additional requirements are imperative for the complete restoration of the disturbed areas. These actions are subject to 43 CFR 3160 regulations for Onshore Oil and Gas operations on federal lease **NM-103868**.

These actions will affect public lands described as:

New Mexico Principal Meridian

Section 28; SW 1/16, T. 15 S., R. 28 E.


Authority for this action is the Mineral Leasing Act of February 25, 1920, as amended.

RATIONALE FOR RECOMMENDATION: The proposed actions would not result in any undue or unnecessary environmental degradation. Portions of the subject lands and adjacent lands have been used for similar purposes and all present and potential uses and users have been considered.

DECISION: The recommendation and rationale are adopted as my decision.

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that impacts resulting from the proposed actions are not expected to be significant and an environmental impact statement is not required.

COMPLIANCE AND MONITORING: The construction phase of the proposed actions and subsequent operational phases will be monitored as per regulations.



Larry D. Bray, Assistant Field Manager,
Lands and Minerals

02/05/2001
DATE