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-060-01-124

WELL NAME & NO.: Rose Federal #14
BLM Serial #: NM-36408

Section 19, T. 5 S., R. 25 E., NMPM,
760' FSL & 660' FWL, Unit Letter M

Chaves County, New Mexico

OPERATOR: EXCO Resources, Inc.

ACTION: Application for Permit to Drill

SURFACE/MINERAL ESTATE: Federal - Minerals/Surface

I. Introduction

A. Need for the Proposed Action:

EXCO Resources, Inc., proposes to drill and complete an oil well at the above described location. The proposed action is needed to develop the mineral lease

B. Conformance with Land Use Plan:

Oil and gas leasing and development is addressed in the Roswell Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement, January 1997, and is in conformance with the Roswell Approved Resource Management Plan and Record of Decision, October.

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

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

II. Proposed Action and Alternatives

A. Proposed Action:

EXCO resources, Inc., submitted Notices of Staking on 5/18, 2001, to drill the Rose Federal #14 gas well. The Application for Permit to Drill was submitted on 6/14, 2001.

The proposed action would include:

1. The construction of approximately 2,052 feet of new access road from the northeast corner of the Rose Federal #6 gas well location to the southeast corner of the proposed well pad. 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 250 feet long by 140 feet wide. The construction of the reserve pit would be about 75 feet by 75 feet and dug 4 feet below ground level. The reserve pit would be located on the north side of the drill pad. 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 rotary drilling rig would be used to drill the well to a depth of 4,150 feet. Associated production facilities (e.g., pipeline, separator, storage tanks, etc.) would be installed during the production phase of this well. Topsoil would be stockpiled for future use over the disturbed areas.

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 in the SW¼NW¼ of Section 24 - T. 5 S. - R. 24 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 spacing regulations imposed by the New Mexico Oil Conservation District II. 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 alternate location would occur. Additionally, economic benefits of the proposed action would not be realized, and the existing environment, including the developments in place, would remain unchanged.

III. Description of the Affected Environment

A. General Setting:

The proposed access road and well pad are located on federal minerals and surface, about 48 miles NE, of Roswell, N.M.. The mean annual precipitation is 13 to 14 inches. Historical and present use of the subject lands have been limited to livestock grazing and energy development.

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 NM-36408 - covers lease actions.
- No federally administered rights-of-way would be affected in the project area.
- No mining claims are recorded within Sec. 19, T. 5 S., R. 25 E., NMPM.

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-**049**-A)
Farmlands, Prime/Unique
Floodplains
Native American Religious Concerns
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 action is considered a Class II air quality area. A Class II area allows a moderate amount air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed substratum soils and exhaust emissions from motorized equipment.

2. Soils:

The proposed action would occur in an area formed in alluvium derived from calcareous material high in content of gypsum. The soils are in depressional areas, smooth side slopes, low knolls, and ridges, referred to as Reeves, moist-Milner-Hollomex, moist association, gently undulating as described in the Soil Survey of Chaves County, New Mexico, Northern Part (Pages 60 & 61, map #12). The soils are deep and well drained. Permeability of the soils is moderate, runoff is medium, and the hazard of water erosion is moderate. The hazard of soil blowing is high. The soils are found on 0 to 3 percent slopes. The soils would be affected by the construction of the access road and well pad when earth moving equipment exposes substratum soils and the topsoil is removed for reclamation purposes.

3. Vegetation:

The native vegetation in the area is composed of mainly tall and mid grasses, shrubs, and forbs, such as, blues grama, tobosa, black grama, and sand dropseed. The vegetation in the areas of the proposed action would be affected when the vegetation is cleared from the access road and well pad.

4. Invasive & Noxious Weeds:

There are no known populations of noxious or invasive weed species on the proposed access road and well pad.

However, noxious weeds affect both crops and native plant species in the same way – by out-competing for light, water, and soil nutrients. Noxious weeds cause estimated crop losses of $2 to $3 billion annually. These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; and (2) decreased quantity of agricultural products due to noxious weed infestations.

Further, noxious weeds can negatively affect livestock and dairy producers by making forage unpalatable to livestock, thus decreasing livestock productivity and potentially increasing producers' feed costs. Increased cost to operators are eventually borne by consumers.

5. Ground Water Quality:

Fresh water sources for livestock and domestic use are found in the alluvium and the San Andres Formation. Fresh water has been reported at 60' in section 33, T. 5 S., R. 25 E., and was flowing 150 barrels per hour at a depth of 660'. A nearby report cites possible saline water flows at around 1000', so a maximum depth to usable water should be around 850'.

6. Wildlife:

Wildlife species utilizing this area for habitat include mule deer, pronghorn antelope, coyote, fox, rabbits, kangaroo rats, pocket gophers, herptile species, 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 access road and well pad.

7. Range: The access road and well pad are not located on a BLM grazing allotment.

8. VRM/Recreation: The proposed actions are located in a designated VRM Class IV area. Recreation in the vicinity includes seasonal hunting.

9. Cave/Karst: No surface cave/karst features were observed in the immediate vicinity of the proposed actions. However, the proposed actions are located in a medium karst potential area.

10. Minority or Low-income Populations or Communities: The proposed actions would not affect the minority or low-income populations or communities.

IV. ENVIRONMENTAL IMPACTS

A. Proposed Action Impacts:

The surface disturbance involved in the construction of the access road, well pad, and reserve pit would total about 2.3 acres of federal surface.

1. Air Quality:

Air quality would temporary be impacted with pollution from exhaust emissions, 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. Dust dissemination would discontinue upon completion of the construction phase of the road and well pad. Air

pollution from the motor[illegible]d equipment would discontinue at the [illegible]mpletion of the drilling phase of the operations. The winds that frequent the southeastern part of New Mexico generally disperse the odors and emissions. The impacts to air quality would be greatly reduced as the construction and drilling phases are completed.

2. Soils:

The construction of the access road and well pad would physically disturb about 2.3 acres of topsoil and would expose the substratum soils. The exposed soils would be susceptible to wind blowing and water erosion. Surfacing the exposed soils on the access road and well pad would minimize these impacts. Construction of the reserve pit 4 feet below ground level would impact deeper soil horizons on the well pad. The impact to the soils would be remedied upon reclamation of the well pad when the stockpiled soil that was specifically conserved to establish a seed bed is spread over the well pad.

Additional soil impacts associated with lease development would occur when heavy precipitation causes water erosion damage. When water saturated segment(s) on the access road become impassable, vehicles may still be driven over the road. Consequently, deep tire ruts would develop. Where impassable segments are created from deep rutting, unauthorized drive-arounds may occur outside the designated travelway of the access road. Road constructions requirements would alleviate potential impacts to the access road from water erosion damage.

3. Vegetation:

Construction activities would remove about 2.3 acres of native vegetation from the access road and well pad. If it is a producing well, reclamation would not commence until the well is a depleted producer and plugged and abandoned. Vegetation recovery on the access road and well pad would depend on the life of the well. Native vegetation would encroach on the well pad over time with only high traffic areas remaining unvegetated. If drilled as a dry hole and plugged, reclamation of the access road and well pad would immediately follow. Vegetation impacts would be short-term when the access road and well pad re-vegetate within a few years, and the reclamation of the access road and well pad are successful.

4. Invasive & Noxious Weeds:

The construction of an access road and/or well pad may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seeds could be carried onto the project areas by construction equipment, the drilling rig, and transport vehicles. The main mechanism for seed dispersion on the roads and well pads is by equipment and vehicles that were previously used and/or driven over noxious weed infested areas. The potential for the dissemination of invasive and noxious weed seeds may be elevated by the use of construction equipment typically contracted out to companies that may be from other geographic areas in the region. Washing and decontaminating the equipment prior to transporting the equipment onto the construction areas would minimize this impact.

Infestations of noxious weeds can have a potentially disastrous impact on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop lands, grazing lands and waterways, herbicidal and other weed control strategies can be implemented at further costs to the operators and government agencies. Such costs would then likely be passed down to consumers, who would pay more for products due to increased costs.

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Infestations of noxious weeds can have a potentially disastrous impact on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop lands, grazing lands and waterways, herbicidal and other weed control strategies can be implemented at further costs to the operators and government agencies. Such costs would then likely be passed down to consumers, who would pay more for products due to increased costs.

5. Ground Water Quality

The use of a plastic-lined reserve pit would reduce or eliminate seepage of drilling fluid into the soil and eventually reaching groundwater. Spills or produced fluids (e.g., saltwater, oil, and/or condensate in the event of a breech, overflow, or spill from storage tanks) could result in contamination of the soils onsite, or offsite, and may potentially impact groundwater resources in the long term. The casing and cementing requirements imposed on the proposed well would reduce or eliminate the potential for groundwater contamination from subsurface sources.

6. Wildlife:

Some small wildlife species may be killed and their dens or nests destroyed during construction of the access road and well pad. The construction of the access road and well pad could cause fragmentation of wildlife habitat. The short term negative impact to wildlife would occur during the construction phase of the operation due to noise and habitat destruction. In general, most wildlife species would become habituated to the new facilities. For other wildlife species with a low tolerance to activities, the operations on the well pad would continue to displace wildlife from the area due to ongoing disturbances such as vehicle traffic and equipment maintenance. The conditions of approval would alleviate most losses of wildlife species, such as; fencing the reserve pits, netting storage tanks, installation or other modifications of cones on separator stacks, and timing stipulations. Upon abandonment of the well, the area would revegetate and wildlife would return to previous levels.

7. Range: There would be some minor disruption of livestock grazing in the pasture, specifically on the well pad, during the construction and drilling phase of the well.

8. VRM/Recreation:

The construction of the access road, well pad, and other ancillary facilities would slightly modify the existing visual resources of the area. After the well is completed the view should return to the form, line, color, and texture of the existing landscape. The access road and well pad would blend in with other oil and gas facilities in the area that were constructed within the VRM Class IV designation.

9. Cave/karst: There would be no impact to known cave entrances, or karst features within the areas of the proposed actions. However, the proposed action is located in a medium karst potential area.

10. Minority or Low-income Populations or Communities: The proposed actions would not impact the minority or low-income populations or communities.

B. Alternatives:

1. Relocation Alternative:

The alternative of changing the location involved in this action was not analyzed further because no other alternative location would have significantly fewer impacts than, or have a clear advantage over, the proposed location.

2. No Action Alternative:

The no action alternative would constitute denial of the application. This alternative would have no consequential results from 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:

While it is likely that there will be no significant cumulative impact from the proposed 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 on 6/11, 2001. In attendance were Gene Shull, Exco Representative, and Richard Hill, Environmental Protection Specialist, BLM, Roswell Field Office. 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.

Coordination and consultation has occurred with Roswell Field Office staff specialist. The comments and suggestions expressed during the review of the proposed action and environmental assessment have been incorporated into this EA.

Reviewed by:

Irene Salas, Realty Specialist

8-14-01
Date

FINDING OF NO SIGNIFICANT IMPACT
AND DECISION RECORD

EA-NM-060-01-124

DECISION: It is my decision to authorize the Application For Permit To Drill Or Deepen (APD), for the Rose Federal #14 gas well, submitted by EXCO Resources, Inc.. The provisions for the approval of the APD will include the attachment of the Roswell Field Office requirements as defined in the following exhibits; **Exhibit A** - Location Map, **Exhibit B** - Well Drilling Requirements, **Exhibit C** - Conditions of Approval, **Exhibit D** - Permanent Resource Road Requirements, and any special mitigating measures developed in the environmental assessment.

In the event the well proves to be a dry hole, or when the well is abandoned, I recommend that reclamation requirements be attached to the well abandonment, including additional requirements imperative for the complete reclamation of the disturbed areas. These actions are subject to 43 CFR 3160 regulations for Onshore Oil and Gas operations on federal lease NM-36408.

Authority for these actions is the Mineral Leasing Act of February 25, 1920, as amended.

These actions will affect public lands described as:

New Mexico Principal Meridian

Section 19; SW¼SW¼, T. 5 S., R. 25 E.
760' FSL & 660' FWL

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.

RATIONALE FOR DECISION: 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.

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

Larry D. Bray

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

08/16/01
Date