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ENVIRONMENTAL ASSESSMENT
ENERGEN RESOURCES CORPORATION
PROPOSED RUBY 200S NATURAL GAS WELL PROJECT

Division of Environmental, Cultural and Safety Management
Navajo Regional Office, Bureau of Indian Affairs, Gallup, New Mexico
Farmington Field Office, Bureau of Land Management, Farmington, New Mexico

An Application for Permit to Drill on the Navajo Indian Irrigation Project

In Compliance With The
National Environmental Policy Act of 1969, National Historic Preservation Act of 1966
And Endangered Species Act of 1973

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Project Summary.

Energen Resources Corporation contracted Denali Environmental Services to prepare an environmental assessment for the proposed Ruby 200S natural gas well and pipeline project.

The environmental assessment is required by federal regulations to determine potential impacts of a federal decision are of such significant as to require the preparation of an environmental impact statement. This proposed Bureau of Land Management action is an Application for Permit to Drill a natural gas well. The approval of the APD will allow the Energen Resources Corporation to permit a tract of land on which to construct, operate and maintain a natural gas well. This document addresses potential impacts and mitigation for the APD. The approval of the proposed land use permit is a trust responsibility of the Bureau of Indian Affairs, Bureau of Land Management, and the Navajo Nation.

National Historic Preservation Act and Endangered Specie Act (ESA) consultations and field evaluations are required for all Federal actions and would be presented as elements of the NEPA process.

The assessments and determinations of final impacts contained in this EA were developed in accordance with the CEQ regulations 40 Code Federal Regulation Part 1500. The purpose of the EA is to assess reasonable alternatives to the proposed action, identify a preferred alternative, and to prescribe measures to minimize or eliminate any adverse impacts. A final Federal decision will be determined as to the need for an environmental impact statement for this action. Approval of the surface land use and application of a permit to drill, the object of this document, will not result in an irreversible commitment of resources or prejudice the selection of other alternatives for future project related activities. The EA process and FONSI determination would reaffirm that an Environmental Impact Statement would not be required.

Based on this environmental assessment, it is preparer's opinion that the approval of the requested action will not have a significant impact on the quality of the natural and human environment so as to require the preparation of an environmental impact statement. The Bureau of Indian Affairs, Navajo Regional Office, and the Bureau of Land Management, Farmington Field Office, will have the ultimate decision in this APD determination. The Federal action agency, BLM, would determine if Finding of No Significant Impact (FONSI) is appropriate for the project.

1.0 INTRODUCTION.

Energen Resources Corporation (ERC) has selected natural gas well locations on their acquired lease on Navajo Indian Irrigation Project (NIIP) lands. Surface and mineral ownership on NIIP lands is described as "splits estates": the Bureau of Land Management owns the mineral interest; while the Navajo Nation has surface ownership. The proposed federal actions are the approval of an Application for Permit to Drill (APD), and the consent to use Navajo Nation surface trust lands. The approval of the APD will allow the Energen Resources Corporation to permit tracts of land, on which to construct, operate and maintain natural gas wells and pipelines. Energen Resources Corporation proposes to submit APDs to the Bureau of Land Management for approval, in consultation with the Navajo Nation and the Bureau of Indian Affairs, Real Estate Services.

1.1 Description of the Proposed Action.

Energen Resources has acquired a minerals lease with the Bureau of Land Management. The lease area is located south of Farmington, New Mexico, on the NIIP lands. All proposed APDs are within Township 27 North and Range 12 West. ERC has selected well locations with proposed infrastructure support. The Ruby 200S natural gas well location would require approximately 5.57 acres. The proposed well tract would be leveled and totally disturbed to construct the well and required infrastructure structures. Table 1 depicts the total area that may be disturbed at the Ruby 200s well location. A well pad will be constructed, with a 50 feet construction easement around the perimeter. An access road would be required for well head construction, operation, and maintenance. Buried pipelines would be required to transport the natural gas to a gathering system as operated by Enterprise Corporation. A single phase electrical line would be required to support the well head pump. Each well head location would require some cut and fill, although most proposed well locations are generally located on naturally level terrain. Energen may employ the closed loop method at certain wells for controlling drilling fluids.

The ERC new natural gas well construction project is proposed in the spring of 2010. The property will be utilized as long as natural gas is produced. As required in the BMPs of the Petroleum Industry and Conditions of Approval (COAs), upon completion of the project and abandonment, ERC will incase the wellhead, regrade, reclaim and reseed the site with native and introduced vegetation. Topsoil stockpiling will begin on the well site as soon as each APD is approved.

Table 1. Ruby 200S Well Land Area Required to Construct the Well, Access Road, and Enterprise Field Services Pipeline.

Ruby 200S Well Land Area - Acres				
Well Site	Top Soil Storage	Well Access Road	Transport Pipeline	Total
1.16	0.39	0.62	3.57	5.57
TOTAL ACRES				5.57

1.2 Purpose and Need.

Consistent with the Energy Policy Act of 2005, federal and tribal agencies are allowing natural gas production in the San Juan Basin for energy users in the Four Corners States, as well as the Western United States. Energen Resources has acquired a minerals lease with the Bureau of Land Management. The APD approval would allow ERC to develop natural gas wells and extract mineral resources from the acquired lease. Development of the mineral resource would also allow for regional economic growth, job creation, and revenues to the tribal and federal government.

1.3 Location.

The Energen Resource Corporation Ruby 200S tract is located on USGS topographic map entitled *Gallegos Trading Post, New Mexico, 7.5 Minute Quadrangle*, NAd 27. Figure 1 shows the proposed project on the Gallegos Trading Post, New Mexico quadrangle map. The proposed Ruby 200S production well is located at the following waypoint descriptions:

Legal Description: SW ¼ Section 21 Township 27 North Range 12 West, NMPM.

Latitude and Longitude: 36° 33' 30" North, 108° 07' 09" West.

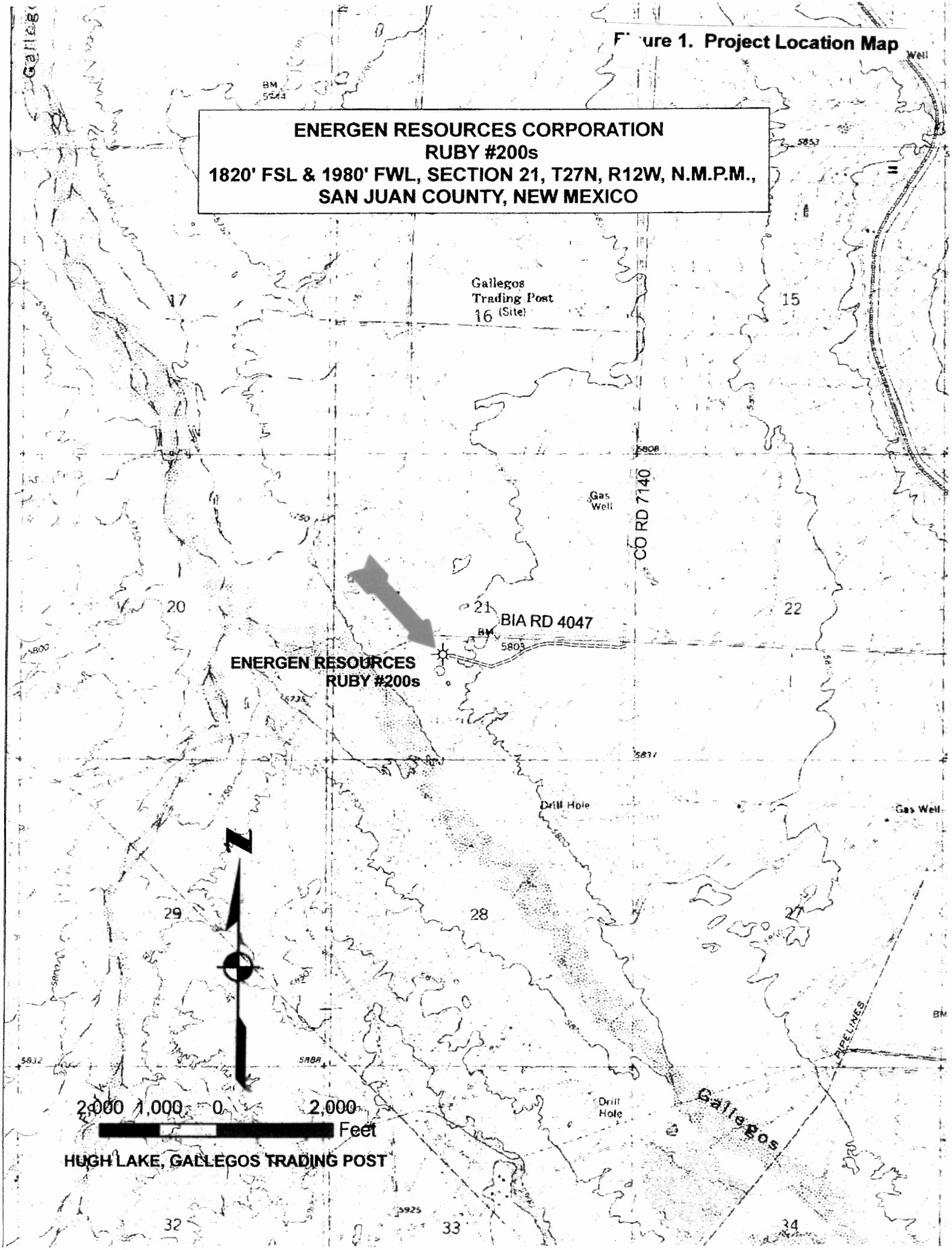
UTM: 757889 Easterly, 4049553 Northerly, Zone 12.

The well location is at an elevation of 5,800 feet above msl, located on Navajo Indian Irrigation Project lands, approximately 10 miles southeast of Farmington, Huerfano Chapter, San Juan County, New Mexico.

1.4 Conformance with the Regulation and Land Use Plan.

Energen will be filing the APD with the Farmington Field Office. The proposed well site is located on Navajo Trust land. NIIP has historically been used for agricultural and livestock production. The United States Department of the Interior and the United States Department of

Figure 1. Project Location Map



Agriculture *The Gold Book, Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development* would be the current oversight document that would apply to BLM mineral leases. The Bureau of Land Management would also manage operations under their Farmington Resource Management Plan (DOI, BLM, 2003). The Bureau of Indian Affairs and the Navajo Nation would operate under their mandate 25 Code of Federal Regulations, and Navajo Nation Code, respectively.

1.5 Relationship to Statutes, Regulations, or Other Plans.

BLM's management policy and program direction are conducted in compliance with direction and associated guidance from laws, regulations, manuals, policies, executive orders, memoranda, and applicable planning documents. A brief list of the key legislation providing guidance to BLM in the management of public lands is included in Table 2.

Table 2. Federal Legislation Providing BLM Guidance for the Proposed Natural Gas Well Project.

Resource or Program	Key Legislation	Purpose
Land Use Planning	Federal Land Policy and Management Act of 1976	Provides a framework for managing public lands and defines BLM's mission as one of multiple use And sustained yield.
	National Environmental Policy Act (NEPA)	Requires a evaluation of environmental effects of a Federal undertaking including its alternatives. BLM's land use planning process analysis incorporate NEPA requirements.
Lands & Reality	Recreation and Public Purposes Act	Provides for the disposal of lands for public or recreation purposes to support community and state objectives.
Water Quality	Clean Water Act of 1977	Establishes nonpoint source pollution program, which emphasizes improving water quality in degraded stream systems. Requires permits for activities that may contribute sedimentation to surface water bodies.
Air Quality	Clean Air Act of 1969, as amended	Establishes federal air quality regulations and the National Ambient Air Quality Standards; delegates the enforcement of these standards to the states.
	20 NMAC 2.72 – Construction Permits	Applies to new or modified stationary sources that (1) have a potential emissions rate greater than 10 pounds per hour or 25 TPY of any air pollutant for which there is a national or state ambient air quality standard or (2) exceed the hourly HAPs emission level.
Invasive Weed Management	Noxious Weed Act of 1974	Provides for the control and management of non-indigenous weed that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health.

	EO 11312 Invasive Species - 1999	Directs all federal agencies to prevent and control introductions of invasive non-native species in a cost-Effective and environmentally sound manner to minimize their economic, ecological and human health impacts.
Special Status Species	Endangered Species Act of 1973, as amended	Requires special protection and management for federally listed threatened and endangered (T&E) species, species proposed to be listed as T&E, and designated and proposed critical habitat.
Cultural Resources	American Antiquities Act of 1906	Protects all historic and prehistoric sites on federal lands and prohibits excavation or destruction of such antiquities unless a permit is obtained.
	National Historic Preservation Act (NHPA) of 1966	Supplements the provisions of the Antiquities Act of 1906, and establishes the federal lead agency role to coordinate the review of historical and archaeological resources under Section 106; the Section 106 process facilities the review of other cultural resource statutes.
	American Indian Religious Freedom Act of 1978	Mandates federal agencies to protect and preserve for the American Indians their inherent rights of freedom to believe, express, and exercise traditional religions.
	Archaeological Resources Protection Act of 1979	Requires federal agencies to provide notice to the Secretary of the Interior of certain construction activities (ground disturbance), and for the recovery or salvage of archaeological resources. Applies to any direct or federally assisted activity that could cause irreparable harm to prehistoric, historic, or archaeological data and establishes penalties for stealing or vandalizing cultural resources.
	Executive Order 11593 Protection and Enhance-ment of the Cultural Environment, 36 FR 8921, May 13, 1971	Requires federal agencies manage their programs so that federally owned sites, structures, and objects are of historical, architectural or archaeological significance are preserved, restored and maintained. And institute procedures to contribute to the preservation and enhancement of non-federal owned sites of same significances.

The application and temporary use of the well site on Indian lands and public mineral would be in conformance with the Navajo Nation surface use code and BIA regulations. BLM would comply with reality statute: the Recreation and Public Purposes Act.

2.0 ALTERNATIVES.

2.1 No Action Alternative. *If the no action is taken, the Application for a Permit to Drill* would not be approved by the Bureau of Land Management, and Ruby 200S Natural Gas Well would not be constructed. The project will not collectively meet the President's Domestic Energy Development Initiative and the Energy Policy Act of 2005, the policy to develop domestic energy resources. The U.S. government would not receive royalties for the natural gas production. The Navajo Nation would not receive compensation for surface use. There

would be no surface impacts to soils, vegetation, and wildlife habitat. Energen would not be able to fully develop its natural gas mineral lease. There would be no environmental assessment document, nor associated environmental, cultural and biological resource studies. Well construction would not go as planned. The existing tract would not be used, and would not be elevated to a higher productive state.

2.2 Approval of the Preferred Alternative. The preferred alternative involves approval of an Application for a Permit to Drill, which would allow Energen to exercise their lease rights to construct, operate and maintain Ruby 200S natural gas well, access road and pipeline right of way. The preferred alternative and scope are described in Section 1.0, Description of the Proposed Action.

2.3 Alternate Site Location. An alternate site, of sufficient size and at a location as convenient as the proposed location, is may be available on the existing mineral lease area. However, the natural gas field below surface has dictated that this site is the best selection based on geology, the risk of archaeological disturbance, impacts to wildlife and wildlife habitat. Open areas in the NIIP are used for farming - agriculture production, and family subsistence on livestock. Alternate locations were reviewed. Numerous archaeological occurrences may render the other sites unfeasible for the proposed use. An alternative site would require a restart of approvals on trust lands; alternate site locations would be subject to the same assessments, approvals and clearance process as the preferred alternative. Existing NIIP grazing permit holders may reverse their decisions and reject the alternate location.

3.0 AFFECTED ENVIRONMENT

3.1 General Setting.

The proposed well site is in San Juan County approximately 10 miles south Farmington, New Mexico. Access to the site is from NM 550, and BIA N 4722. The legal description of the site is SW ¼ Section 21, Township 27 North, Range 12 West, NMPM. Elevation of the proposed well is 5,800 feet. The proposed site is located on a broad slope with drainage toward Gallegos Canyon Wash. The site is vegetated by mixed grasses, both introduced and natural grasses. The proposed Ruby 200S well, access road, and pipeline right of way is on Navajo Indian trust lands. The proposed well site would be located in a previously disturbed area, adjacent to BIA Route N4047. Soils in the immediate vicinity of the proposed tract are totally disturbed and reseeded from previous and existing land uses. The proposed site is currently grazed by

domestic livestock, as marginal vegetation exist offsite. Homesites are located approximately one half mile west of the proposed well, on the west side of Gallegos Wash,

Navajo Indian Irrigation Project (NIIP) farming operations surround the proposed Ruby 200S. NIIP operates and maintains the checker board irrigation system. Center pivot irrigation fields, water storage tanks at ninety feet high, water line distribution systems, roads and electrical powerline, planted fields are all part of the NIIP operations and are within the vicinity of the proposed well.

Enterprise Pipeline has the rights of way on the north side of the proposed tract. The proposed pipeline would transport natural gas from the Ruby 200S well head. Adjacent to the pipeline on the south side of the proposed tract, BIA Route N4047 runs east and west and turns north. The road is well traveled, used by NIIP local traffic and Bisti Oil Field operations.

3.2 Affected Resources.

Resources that could be minimally affected by construction and operation of the hot mix plant include:

- Soils,
- Vegetation,
- Wildlife,
- Visual Resource,
- Air Quality, and
- Water Quality.

Resources that are not reasonably expected to be affected include:

- Areas of Environmental Concern or Special Management Areas,
- Wilderness or Wilderness Study Areas,
- Wild and Scenic Rivers,
- Floodplains,
- Prime or Unique Farmland,
- Noxious Weeds,
- Cultural Resources,
- Native American Religious Concerns,
- Threatened and Endangered Species,
- Socioeconomic Issues, and
- Recreation.

3.2.1 Soils.

Soils of this upland type are located on a broad slope, sloping toward the west and northwest. The watershed, Gallegos Canyon Wash, will eventually drain into the San Juan River approximately 10 miles north. Soils are composed of medium sand and sandy loams of the Shiprock - Sheppard Association. Activities associated with leveling the drill pad site will disturb surface soils. Soils on this upland type are predominately shallow to moderately deep and are forming residually in materials weathered principally from sandstone. Soils on the tract generally lack the distinct A and B horizon profiles, due to previous grading and reclamation, arid climate, and moderate drained sandy loam and clay soils. Removal of topsoil and some of the parent material from the proposed well site will be required and may alter runoff patterns during the rain events. Runoff may possibly concentrate at the site.

3.2.2 Vegetation.

The proposed Ruby 200S well site would be located in the Great Basin Grassland Ecosystem of northwest New Mexico (Brown, D.E., 1994). At an elevation of 5,800 feet above msl, the biome is a shrub grassland vegetation type, with intermittent juniper-pinyon trees occurring on the lease, with an understory of blue gamma and mixed grasses. While activities associated with construction of the well site will greatly disturb existing vegetation on the site, the activity will not affect the vegetation on adjacent lands. Because of the high desert vegetation type exists abundantly in the area, and throughout northwestern New Mexico, local vegetation communities and ecosystems will be minimally affected.

Perennial grasses of this biome are represented by the following species: Ring muhly *Mulenburgia totteyi,* Blue grama *Bouteloua gracilis*, Galleta *Hilaria jamesii,* Indian ricegrass *Oryzopsis hymenoides,* Bottlebrush squirrel tail *Sitanion hystrix, Needle and thread Stipa comata,* Red-three awn *Aristida longiseta*, and Sand dropseed *Sporobolus cryptandrus.* Alkali sacaton *Sporabolus airoides* can be found in the swales and in the low areas along the washes (Turner, R.M. & Brown, 1994).

Forbs, although widely scattered in this sagebrush grassland community, are represented as Baby aster *Aster spp*, Coneflower *Ratibita*, Indian paint brush *Castilleja applegatei,* Thistles *Cirsuimmus spp.* and Groundsel *Senecio.* These forbs will present showy flowers during the wet season (Turner, R.M. & Brown, 1994).

Shurbs such as Four-wing saltbush *Atriplex canescens*, Sagebrush *Atremisa*, winterfat

Ceratoides lanata, Cholla *Opuntia*, Soapweed yucca *Yucca glanca*, rabbit brush *Chrysothamus*, and Snake weed *Gutierrezia* would be scattered throughout the biome. Grazing and natural fires may alter the distribution of snakeweed, rabbit brush, and sagebrush (Turner, R.M. & Brown, 1994).

Annual plants such as cheatgrass *Bromus tectorum*, Russian thistle *Salsolia kali*, tansy mustard *Descurainia obtusa*, sunflower *Helianthur annus*, and kochia weed *Bassia hyssopifolia* occur on the parcel.

3.2.3 Wildlife.

Wildlife habitat on the proposed site has distinct fauna of the Great Basin Grassland Ecosystem of northwest New Mexico (Brown, D.E., 1994). The high desert community at 5,800 feet above msl supports wildlife typical of this habitat type. The proposed site is atypical and is disturbed by a previous activity and roads leading on to the site. The area presently provides suitable foraging and nesting habitat for birds and rodents. However, due to the temporary use of the property, the proposed undertaking will not have a significant impact on the biotic resources of the area.

Distinct fauna of the Great Basin Grassland include the whitetail prairie dog *Cynomys gunnisoni*, pocket mouse *Perognathus parvus,* Ord's kangaroo rat *Dipodomys ordii,* and the montane vole *microtus montanus.* Other mammals include the coyote *Canis latrans* and black-tailed jackrabbit *Lepus califoricus.*(Turner, R.M. & Brown, 1994). Although rare, Pronghorn antelope are occasionally spotted on the grasslands east and south of the Energen lease.

Birds that are indigenous to the ecosystem are the mountain plover *Charadrius montanaca*, lark blunting *Calamospiza milanocorys*, sparrow *Ammodramus*, sage thrasher *Oreoscoptes montanus,* sage sparrow *Amphispisa belli,* and horned lark *Eremophila alpestris.* Other grassland species include the Western meadowlark *Sturnella neglecta*, prairie falcon *Falco mexicanus*, and burrowing owl *Athene cuincularia* (Turner, R.M. & Brown, 1994).

Due to its long cold winters in the Great Basin, reptiles are not well represented. Common species include the sagebrush lizard *Sceloporus gracious,* and the Great Basin spadefoot toad *Scaphiopus intermontanus,* and collared lizard *Crotaphytus collais.* The Northern desert horned lizard *Phrynosoma platyrhinos,* Northern whiptails *Cnemidophorus tigris tigris,* gopher snake *Pituophis melanoleucus deserticola* and Western rattlesnake *Crotalus viridis* are a few of the other common species (Turner, R.M. & Brown, 1994).

As this habitat type is abundant in the area and in the region of northwestern New Mexico, the proposed action alternative would produce no noticeable or measurable impacts to wildlife populations in the area.

3.2.4 Visual Resources.

In reference to the Farmington Management Plan, the proposed project area falls within BLM public lands and has been assigned a Visual Resource Management (VRM) Class IV rating. The VRM class ratings and their corresponding management objectives were assigned through the management plan as developed in 2003. BLM uses the VRM system to identify and manage scenic values on federal lands. The system includes a visual resource inventory, which classifies visual resources into one of four categories: Class I, Class II, Class III, or Class IV. The classes set management objectives through the Resource Management Plan process (FRMP, 2003).

In addition to inventory data, the VRM classes can reflect management considerations. Class I, the most highly valued and visually sensitive to modification, is assigned to those areas in which decisions have been made to maintain a natural appearance. Classes II, III, and IV are assigned based on a combination of scenic quality, sensitivity levels, distance zones, and where necessary, management considerations. Class IV lands are those lands containing the least valued visual resources and greatest degree of visual modification allowable among all the classes because of the scenic quality, sensitivity and distance zone.

3.2.5 Air Quality.

Air quality in the San Juan Basin is affected by nearby industry and by natural terrain. The primary sources of air pollution in the basin are from electrical power generation plants, oil and gas refineries and treating facilities and compressor stations. Additional air quality impairment may result from the cumulative impact of area motor vehicle emissions and dust, and natural gas well pads. Since the San Juan Basin is a natural depression, air masses sometimes stagnate from lack of circulation in diminishing air quality. The New Mexico Air Quality Bureau is responsible for enforcing the state and national ambient air quality standards in New Mexico. Any emission source must comply with the NMAQB regulations.

The New Mexico Air Quality Bureau reports that the Shiprock Substation during the years 2004 through 2006 there has been no excedance of the National Ambient Air Quality Standards

(NAAQS) for sulfur dioxide, nitric, oxide, and ozone. The Farmington monitoring station reports there has been no excedance of the federal Primary 24 Hour Standard of 150 µg/m3 for particulate matter of PM 10. Three years of monitoring indicate a high 24 hour average and a second high 24 hour average as shown in Table 3. These high 24 averages and second high 24 hour averages were based on 178 samples (NM Air Quality Bureau, 2007).

Table 3. Farmington, New Mexico Particulate Matter <10 Microns, Federal Primary Standard 24 Hour at 150 µg/m3.

Three Year High Average			Second High Average		
2004	2005	2006	2004	2005	2006
20.8	22.9	23.6	16.2	17.7	17.4

The air quality of the project vicinity will not be a factor in the proposed land withdrawal project. PM 10 and visibility reduction can be mitigated by wetting of the soil during construction. The practice of watering the dirt would take place concurrent to soil compaction during any site preparation. Damage to materials such as structural metals, paint and fabrics, and damage to vegetation would not be a factor due to the low values of dust, sulfur dioxide, nitric oxide and ozone in the air.

No visibility studies have been conducted in the project area. However, regional visibility in the NIIP area can be considered to be good to marginal, depending on the season. Locally, the primary pollutant in the project area is occasional wind blown dust from loose topsoil common during times of gusting winds during the spring, and dust from vehicular traffic along unimproved roads in the area.

Climate.

NIIP and vicinity has mild to hot weather during the summer months. Mild to cold weather can be expected in the winters. Annual precipitation ranges from an average of 15 inches. Snow storms occur from November through April. Ambient temperatures from June through September are warm to hot, with cool evenings. July and August are considered the "monsoon season". Thunderstorms in the afternoon are common. There are no limits to a project construction activity window. Ideally, construction can occur during the spring and summer months from April to late September, or early November, depending on seasonally warm temperatures.

3.2.6 Water Resources – Surface Water.

The tract drains in toward the west and northwest into Gallegos Canyon Wash. Regional surface water eventually flows north to the San Juan River. The primary discharges of these drainages occur during the spring months, during the spring snow thaw, and during occasional intense summer thundershowers in late summer. As a result, flow is erratic and fluctuates widely both seasonally and annually. Torrential thunderstorms can produce flood-stage flows within minutes (Cooley, M. E., J. W. Harshbarger, J. P. Akers, & W. F. Hardt, 1969).

Wetland and Riparian Habitat.

The Farmington, New Mexico National Wetland Inventory Map was reviewed (USF&WS,1984). The proposed site is located on the east bank of the Gallegos Canyon Wash. The NWI map indicate there are no wetlands or riparian occurrences on or near the proposed well site. The proposed well site was field checked. The site is located in a field south of BIA road N4047, west of operating center pivot irrigation equipment, paved roads, and power lines. There are no wetland or riparian habitat occurrences, as the proposed site does not exhibit wetland hydric soils, nor hydrophilic vegetation, nor does it support a wetland hydrology (EL/US ACOE,1987).

Stormwater.

Consistent with the Energy Policy Act of 2005, EPA published a final rule that exempts storm water discharges form construction activities at oil and gas sites from the requirement to obtain an NPDES permit requirements found in CWA section 402 (*l*) (2), except in very limited instances. The final action encourages operators of oil and gas field activities or operations to implement and maintain "Best Management Practices" to ensure protection of surface water quality during storm events.

Floodplain. The tract is not located on a floodplain; nor located in a flood prone area. The site topography generally dip northwest at approximately 3 - 5 degrees, which is ample drainage. Federal Emergency Management Agency floodplain maps were reviewed for flood risk. The project area is excluded from any floodplain designation by the agency (FEMA, 2009).

4.0 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES.

4.1 Impacts of the Proposed Action and Action Alternatives.

Operation of the proposed natural gas well would have minimal impact to the local ecosystem by removing soil and vegetation from the propose site. The considered alternatives would have

the same impact to the ecosystem if they were constructed. The local economy will likewise be minimally affected. The impact posed by full development of the site will happen over a short period of time and can be expected to be minimal.

4.2 Cumulative Impacts.

The proposed action would have no noticeable cumulative impacts on water quality, watershed, visual resources, or local biological communities and ecosystems. Additionally, the impacts of the proposed action would be minimal in their contribution to the cumulative combination of previous human disturbances in the area.

The natural deposition of soils on the surface will be disturbed. Parent bedrock material will be drilled. No significant cumulative effects to the soil resources would be anticipated as a result of the propose action alternative.

The project area lies within the Four Corners Interstate Air Quality Region. Initial cumulative air quality analysis was conducted in the final EIS for the proposed Farmington Resource Management Plan (USDOI, BLM 2003). At the present time the counties that lie within the jurisdictional boundaries of the Farmington Field Office (FFO) are classified as in attainment of all state and national ambient air quality standards as defined in the Clean Air Act of 1972, as amended (USDOI, BLM 2003). However, during the summer of 2000 through 2002, ozone levels in San Juan County were approaching non-attainment. Additional modeling and monitoring was conducted by Alpine Geophysics, LLC and Environ International Corporation, Inc., in 2003 and 2004. Results of the modeling suggest the episodes recorded in 2000 through 2002 were attributable to regional air transport and high natural biogenic source emissions. The model also predicted that the region will not violate the ozone NAAQS through 2007 and that the trends in the 8-hr ozone values in the region are declining. In March 2008, the EPA revised its Air Quality Index (AQI) for ozone from 0.084 to 0.075 ppm. Recent NMAQB ozone monitoring, conducted at their Navajo Reservoir site, has indicated the area to be in the non-attainment category fir the new federal ozone AQI. EPA has until March 2010 to study the data and determine if the area should be designated as non-attainment for ozone. NMAQB has begun work to develop a plan to bring the area back into compliance.

4.3 Mitigation Measures.

4.3.1 Soils.

Soil disturbing activities will include clearing and grubbing, installing erosion and sediment controls, grading and excavation for operation of the natural gas well, installing other required facilities, backfilling trenches and reclaiming the affected areas with appropriate long term controls and contouring.

Consistent with the Energy Policy Act of 2005, EPA published a final rule that exempts storm water discharges form construction activities at oil and gas sites from the requirement to obtain an NPDES permit requirements found in CWA section 402 (*l*) (2), except in very limited instances. The final action encourages operators of oil and gas field activities or operations to implement and maintain "Best Management Practices" to ensure protection of surface water quality during storm events. The erosion control measures will remain in place until seeding and reclamation is completed. The proposed undertaking will have minimal effect on surface soil erosion in the area.

4.3.2 Vegetation.

Over time, natural vegetation will be restored. At completion of the project, Energen will reclaim and reseed the site with native vegetation in accordance with the operator's BMPs and COA. The grass / forbs seed mixture would allow the reclaimed surface to blend in with the natural vegetation on site. At termination of the well site, in slopes would be reduced to an approximate original contour so that the disturbed site will blend in with the natural terrain. The proposed undertaking will have minimal effect on vegetation in the area.

4.3.2.1 Invasive Weeds. Regulation, Executive Order 11312 and BLM program directives mandates the control and management of non-indigenous weed that could injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, and the public health. Potential invasive weeds at the well site would be controlled via the implementation of the operator's BMPs and COA. The grass / forb / shrub seed mixture would provide disturbed surface to immediately start germination of vegetation cover that would disallow competing weeds to germinate and take hold, while stabilizing barren soils. The proposed seed mixture, when fully grown, would control invasive weeds. The cultivated seed mixture would blend in with natural vegetation on site.

4.3.3 Wildlife.

In this sagebrush grassland type, big sagebrush, four wing saltbush, and rabbit brush are

located on the tract. Under natural conditions, growing amid the shrub canopy understory are smaller shrubs, grasses, forbs and annuals. These plants form the ecological backbone of the grassland ecosystem. They provide food, cover, shelter, and nesting sites for birds, small mammals, insects, and reptiles. Energen's BMPs will be implemented and reseeding of the site would result in equal or better vegetation than presently exists. A mixture of grasses, alkali sacaton, galleta, Indian ricegrass, Western wheatgrass, crested wheatgrass, and a forb, scarlet globe mallow, will be cultivated to provide ground cover, shelter, nestng and forage. The proposed undertaking will have minimal effect on wildlife in the area.

4.3.4 Visual Resources.

Visual resources will not be impacted. Class IV lands are those lands containing the least valued visual resources and greatest degree of visual modification allowable among all the classes; based on the scenic quality, sensitivity and distance zone. Essentially no mitigation is required for the Class IV lands. However, at completion of the project, the operator will reclaim and reseed the site with native vegetation in accordance with the BMPs and COA. The grass / forbs / shrub seed mixture would allow the reclaimed surface to blend in with the natural vegetation on site. Final land form would be graded to a flat topography. The site cut slopes will be reduced to an approximate original contour so that the disturbed site will blend in with the natural terrain. The proposed undertaking will have minimal effect on the visual resource in the area.

4.3.5 Air Resources.

Ambient air quality in the project area may be regarded as good. Primary pollutants in the project area is wind blown dust from loose topsoil common during times of high wind during the spring and dust from farm plowing, disking, and vehicular traffic along unimproved roads in the vicinity.

The BLM's regulatory jurisdiction over field production of natural gas systems and production field operations of petroleum system has resulted in the development of BMPs designed to reduce impact to air quality by reducing all emissions from field production and operations. Specific measures developed at the project stage would be incorporated as conditions of approval in the approved APD, and would be binding on the operator. Typical measures may include: flare hydrocarbon and gases at high temperature in order to reduce emissions of incomplete combustion; water dirt roads during periods of high use in order to reduce fugitive

dust emissions; require that vapor recovery systems be maintained and functional in areas where petroleum liquids are stored; and revegetate areas of the well pad not required for production facilities to reduce the amount of dust from the pads.

Particulate Emissions. All equipment would be installed, operated and maintained in a manner consistent with the manufacturer's intended purpose, specifications and recommended procedures. The NMAQB recommended a limitation on wellhead field compressors NOx emissions in 2005. As COA, the Farmington Field Office requires that compressor engines 300 horsepower or less have emissions limited to two grams per horsepower per hour, effective August, 2005.

Site Fugitive Dust. Under the proposed action, suspended dust from construction – heavy vehicle traffic areas and disturbed areas – could be reduced through the application of fresh water. Disturbed soils during site preparation will be dampened by constant watering for dust suppression and soil compaction. This would help to maintain or improve visibility and minimize public and worker health and safety. Establishment of vegetative cover would minimize impacts to air quality over the long term by reducing blowing dust and erosion.

4.3.6 Surface Water. Energen proposes to implement the "Best Management Practices" and COA to control runoff from the project site. The grass / forb / shrub seed mixture would allow the reclaimed surface to retain runoff and provide for better water quality on site. Final land form would be graded to a sloping topography that would release standing water. Incidental excavations on site will be reduced to an approximate original contour so that the disturbed site will blend in with the natural terrain. The proposed undertaking will have minimal effect on surface water quality in the area. No other activity associated with the proposed action will require mitigation to preserve watershed or biotic resources (including endangered species).

4.3.7 Threaten and Endangered Species.

Suitable habitat and endangered species critical habitat is not found for most species within the tract or adjacent to the tract in the zone of influence. . A Biological Resource Compliance Form was developed by the Navajo Nation Department of Fish and Wildlife for the project. See Appendix C. The BRCF Conditions of Compliance indicate power lines would be constructed in accordance with *Raptor Electrocution Prevention Regulations*. and preconstruction surveys for the Northern Plover would be conducted. Avoidance measures during the season are possible.

The impact posed by full development of the site will happen over a short period of time and can be expected to be minimal. Construction of the proposed site in this rural setting will not have an effect on ESA habitat or other elements necessary for the continued survival of these species, as these species are generally not found in the project area.

4.3.8 Cultural Resources.

Navajo Indian Irrigation Project has granted archaeological and historical clearance for the proposed Energen Ruby 200s Natural Gas Well site and Enterprise Pipeline. NIIP cultural resource survey reports indicate site H-25-207 may be in proximity to the proposed project. Two cultural resource clearance forms for the well and transport pipeline were developed by NIIP Project Manager, as shown in Appendix B. With respect to the findings, project sponsor shall inform contractors and subcontrators with the boundaries for which the clearance is granted. Avoidance measures would be implemented for the H-25=207 site.

Discovery Clause (36 CFR Part 800.7) Should any archaeological or historical resources be discovered during project operations, all work must cease in the immediate area of the exposed resource. The Navajo Tribal Archaeologist and BIA Navajo Area Archaeologist shall be notified to arrange an on-site inspection for the purpose of determining the significance and disposition of the remains. Such discoveries may be subject to the provision and prohibitions of the Archaeological Resource Protection Act (P. L. 93-95, Title 43 CFR Part 7).

4.3.9 Socioeconomics.

The proposed action is considered a positive action with regard to the general socioeconomics of NIIP and the local governments. The project will collectively help meet the President's Domestic Energy Development Initiative and the Energy Policy Act of 2005, the policy to develop domestic energy resources. The U.S. government would receive royalties for the natural gas production. The Navajo Nation would receive compensation for surface use.

4.3.10 Environmental Justice.

The proposed action will benefit all sectors of society as mentioned in Section 4.3.9. The minority and low-income populations would not be impacted.

4.4 Residual Impacts.

Residual impacts of the proposed action will be minimal. The proposed well site would be accessed using existing roads, in a generally atypical (developed) area. Hence, there will be no

residual effects of the proposed construction to develop Ruby 200s natural gas well. Construction hours of operation will be 8:00 am to 7:00 pm during the day light hours. Noise from construction activities will not have a significant adverse effect on the local population and environment.

BMPs and COA will be employed, and the resultant resource disturbance will be minimal as described in the mitigation segment of this document. The preferred alternative is reasonable. The proposed natural gas well and pipeline should not have significant adverse impacts on the human environment. No significant adverse impacts to the human and natural environment have been identified in the development of this environment assessment.

5.0 CONSULTATION AND COORDINATION.

5.1 Persons and Agencies Consulted.

- Scott Hall, Bureau of Land Management, Farmington Field Office
- Bruce M. Jaquez, NIIP Project Manager, Cultural Resource Consultation
- Bill Liess, Bureau of Land Management, Farmington Field Office

5.2 LIST OF PREPARERS.

Leonard Robbins, PES
Denali Environmental Services
P. O. Box 1127
Fort Defiance, Arizona 86504
~~(505)~~ 729-2626
(928)

References.

Brown, D.E., 1994. Biotic Communities Southwest United States and Northwestern Mexico. University of Utah, Salt Lake City, Utah.

Cooley, M.E, J.W. Harshbarger, J.P. Akers, and W.F. Hardt, 1969. *Regional Hydrology of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah.* USGS Paper 521-A, USPO, Washington D C.

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Sibley D.A., 2000. The Sibley Guide to Birds, National Audubon Society, Chanticleer Press Edition, Alfred A. Knopf, New York.

Sebbins, R. C., 1985. A Field Guide to Western Reptiles and Amphibians, 2nd Ed., Houghton Mifflen Co., Boston, Mass.

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United States Department of the Interior, Bureau of Land Management, 2003. *Farmington Resource Management Plan and Final Environmental Impact Statement.* Farmington, New Mexico.

United States Department of the Interior and the United States Department of Agriculture, 2006. *The Gold Book, Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development*, Bureau of Land Management, Denver, Colorado.

U.S. Fish and Wildlife Service, 1984. Farmington, New Mexico National Wetlands Inventory Map, Region 11, U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

APPENDIX A

LAND SURVEY PLAT

District I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Avenue , Artesia. NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe. NM 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	71629	FC

[4] Property Code	[5] Property Name	[6] Well Number
	RUBY	#200s

[7] OGRID No.	[8] Operator Name	[9] Elevation
162928	ENERGEN RESOURCES	5798

[10] Surface Location

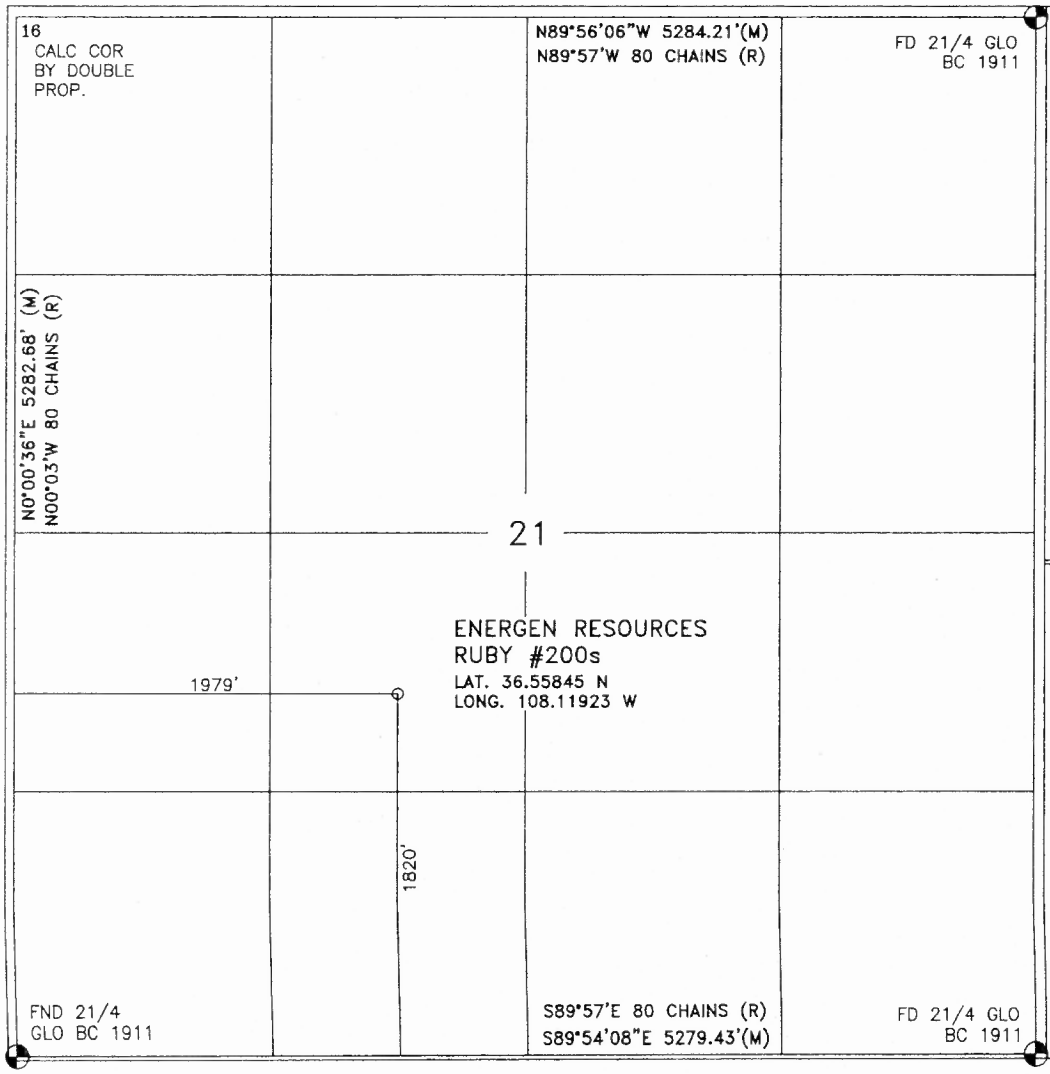
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	21	27-N	12-W		1820'	SOUTH	1979'	WEST	SAN JUAN

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

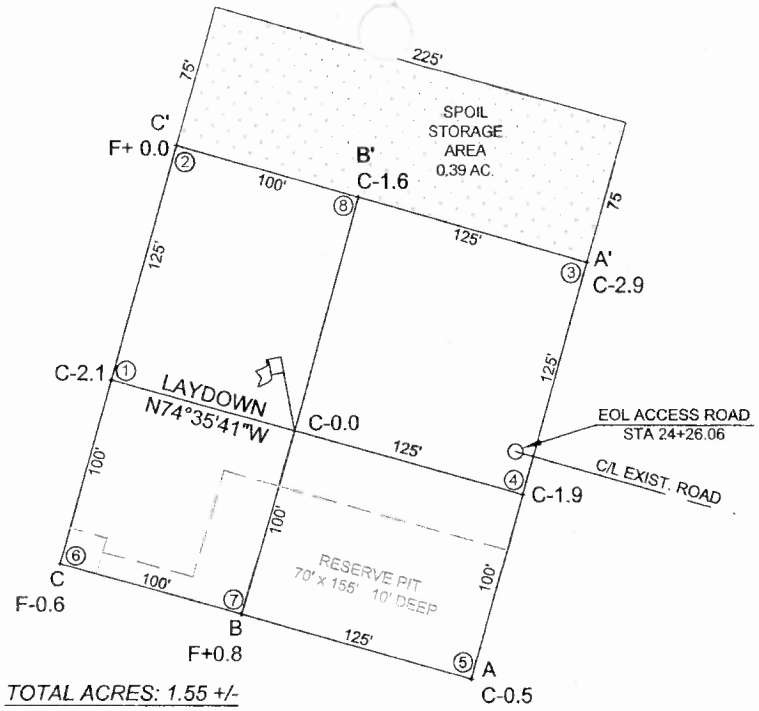
[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

10/16/06
Date of Survey

Signature and Seal of Professional Surveyor:

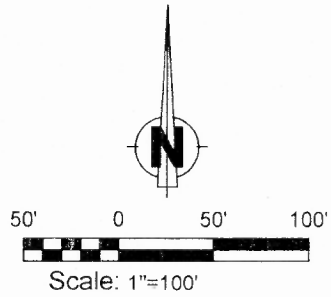
8466
Certificate Number



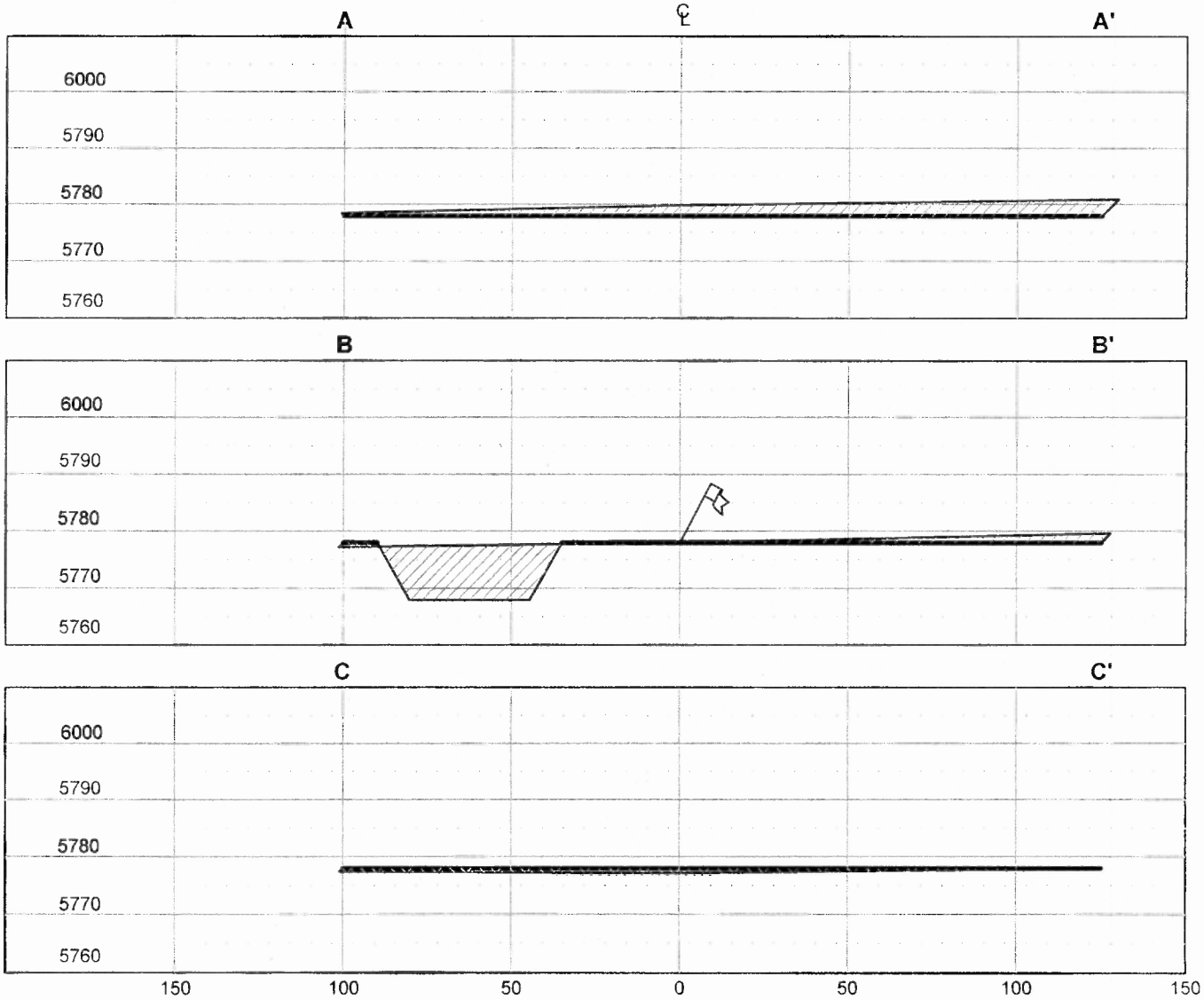
TOTAL ACRES: 1.55 +/-

ENERG RESOURCES CORPORATION

RUBY 200s
1820' FNL & 1980' FWL
LOCATED IN THE NE/4 SW/4 OF SECTION 21,
T27N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
ELEVATION: 5798', NAVD 88



LATITUDE: 36.55845 N
LONGITUDE: 108.11923 W
DATUM: NAD 83



HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=30'

Red Skies Surveying & Mapping, Inc.
A Native American Owned Company
101 Fauver Lane, Bloomfield, New Mexico 87413
Phone/Fax: (505) 632-8906 Cell No: (505) 793-5325

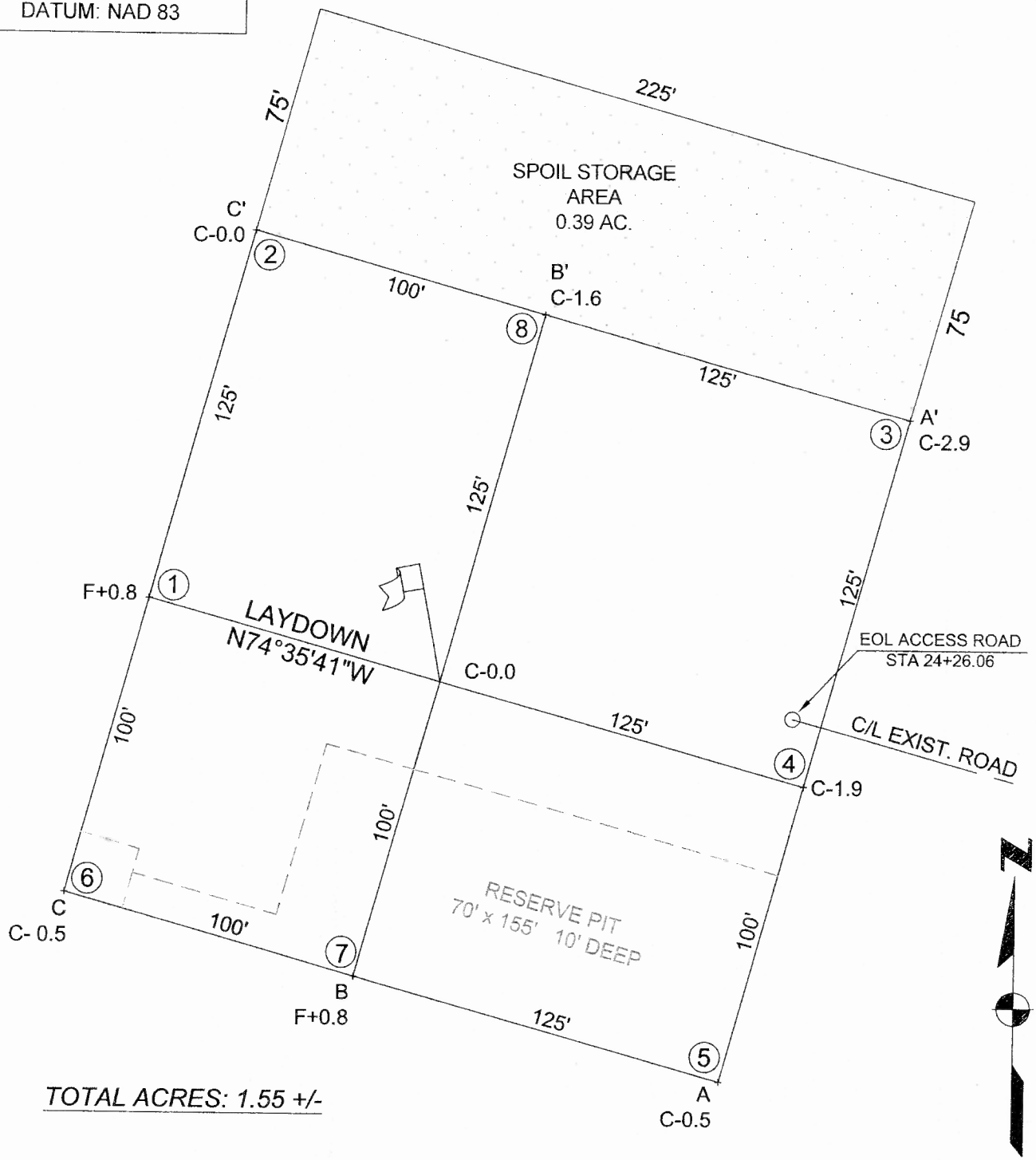
ENERGEN RESOURCES CORPORATION

RUBY 200S

1820' FSL & 1980' FWL

LOCATED IN THE NE/4 SW/4 OF SECTION 21, T27N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

LATITUDE: 36.55845 N
LONGITUDE: 108.11923 W
DATUM: NAD 83



TOTAL ACRES: 1.55 +/-

25' 0 25' 50'

Scale: 1"=50'

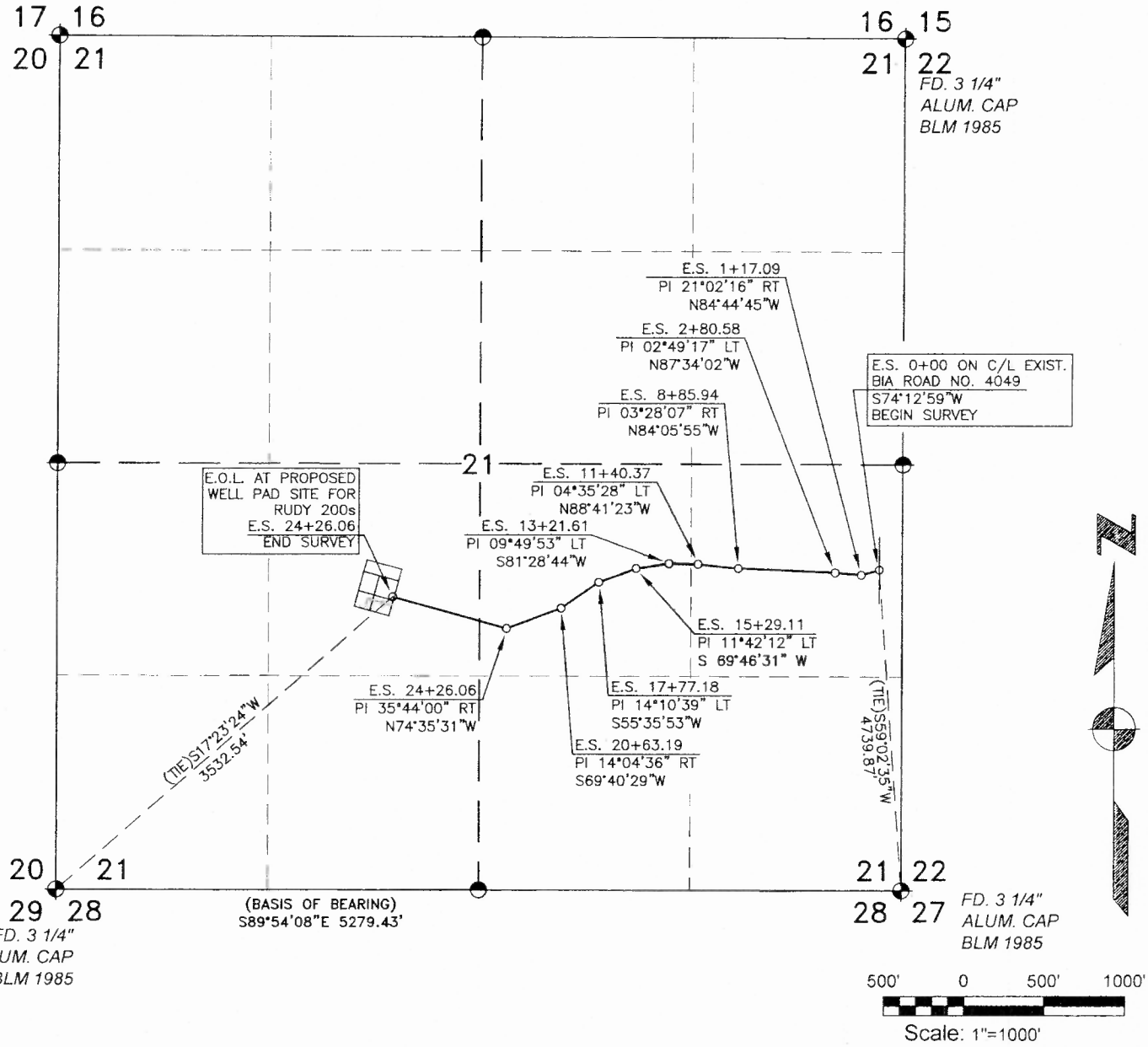
Red Skies Surveying & Mapping, Inc.
A Native American Owned Company
101 Fauver Lane, Bloomfield, New Mexico 87413
Phone/Fax: (505) 632-8906 Cell No: (505) 793-5325

ENERGEN RESOURCES CORPORATION

CENTERLINE SURVEY OF ACCESS ROAD - RIGHT OF WAY 30' IN WIDTH

RUDY 200s

LOCATED IN THE NE/4 SW/4 SEC. 21, T27N, R12W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO



OWNERSHIP	LOCATION	ENGINEERING STATION	OWNER	FEET / RODS / ACRES
	NW/4 SEC. 21	0+00 TO 24+26.06	NAVAJO NATION	2426.06' / 147.03 / 1.671 AC

NOTES

DATE OF SURVEY: 10/23/08

1. C/L ROAD SURVEY IS ALONG AN EXISTING GRADED ROAD.

BASIS OF BEARING:
AS MEASURED BY GPS BETWEEN FOUND MONUMENTS AT THE SOUTHWEST CORNER AND THE SOUTHEAST CORNER OF SECTION 21, T27N, R12W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO. LINE BEARS S89°54'08"E, A DISTANCE OF 5279.43'

I, WILLIAM E. MAHNKE, A PROFESSIONAL SURVEYOR IN THE STATE OF NEW MEXICO HEREBY CERTIFY THAT THIS SURVEY WAS CHECKED BY ME AND THAT IT MEETS THE MINIMUM REQUIREMENTS FOR SURVEYING IN THE STATE OF NEW MEXICO.

6/04/09
DATE

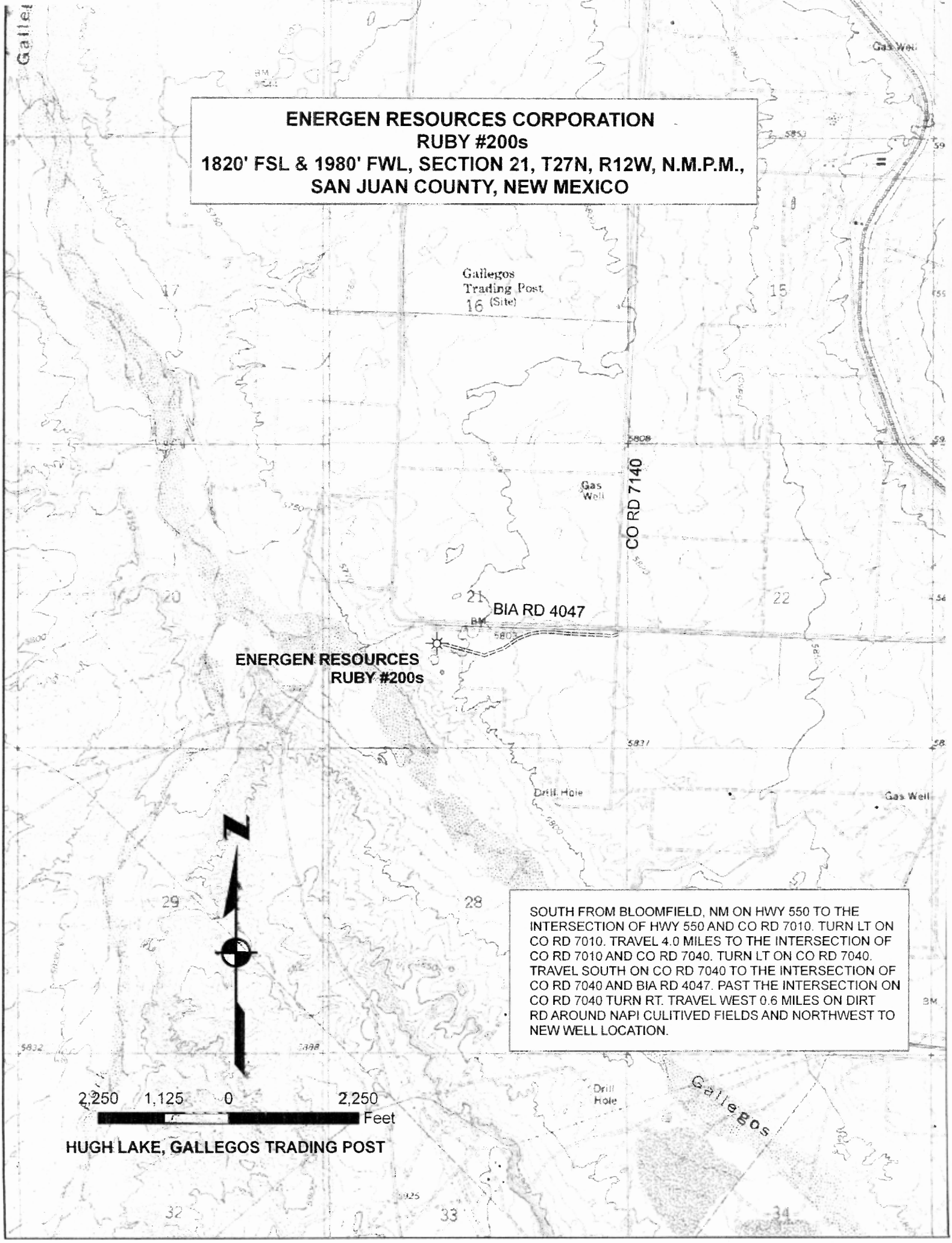
WILLIAM E. MAHNKE, NM PLS 8466
STATE OF NEW MEXICO

SRVYD BY:	KW JR./MW
DWN. BY:	KWSR
CHKD. BY:	BM
JOB #:	ERG095
DATE:	11/1/08
SCALE:	1"=1000'
DWG. NO.	ERG095CF

REVISIONS

NO.	DATE	BY	DESCRIPTION

Red Skies Surveying & Mapping, Inc.
A Native American Owned Company
101 Fauver Lane Bloomfield, NM 87413
Telephone: (505) 632-3863
Fax: (505) 632-6823 Cell: 793-5325


ENERGEN RESOURCES CORPORATION
RUBY #200s
1820' FSL & 1980' FWL, SECTION 21, T27N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
Gallegos
Trading Post
(Site)
Gas
Well
CO RD 7140
BIA RD 4047
ENERGEN RESOURCES
RUBY #200s
Drill Hole
Gas Well
N
SOUTH FROM BLOOMFIELD, NM ON HWY 550 TO THE INTERSECTION OF HWY 550 AND CO RD 7010. TURN LT ON CO RD 7010. TRAVEL 4.0 MILES TO THE INTERSECTION OF CO RD 7010 AND CO RD 7040. TURN LT ON CO RD 7040. TRAVEL SOUTH ON CO RD 7040 TO THE INTERSECTION OF CO RD 7040 AND BIA RD 4047. PAST THE INTERSECTION ON CO RD 7040 TURN RT. TRAVEL WEST 0.6 MILES ON DIRT RD AROUND NAPI CULITIVED FIELDS AND NORTHWEST TO NEW WELL LOCATION.
2,250 1,125 0 2,250
Feet
HUGH LAKE, GALLEGOS TRADING POST
Gallegos

ENTERPRISE FIELD SERVICES LLC

CHACO GATHERING SYSTEM

DWG. NO. 001G737.0-005-01

WO NO.

RW NO.

DATE 01/15/09

SCALE 1" = 1000'

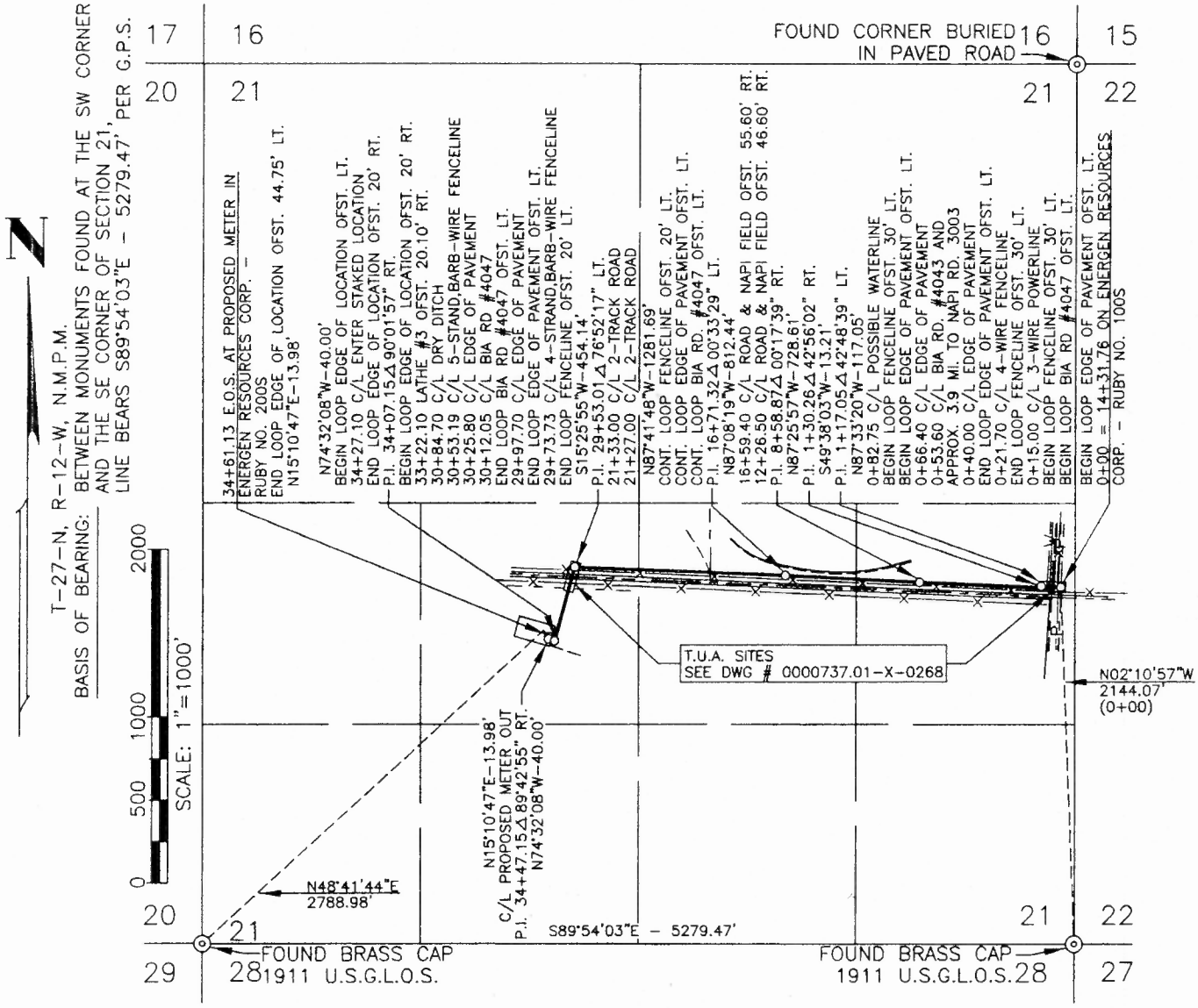
SURVEYED 12/23/08

LINE ENERGEN RESOURCES CORP. - RUBY NO. 200S

FROM 0+00 = 14+31.76 ON ENERGEN RESOURCES CORP. - RUBY NO. 100S

(001G737.0-004-01)

COUNTY SAN JUAN STATE NEW MEXICO SECTION 21 TOWNSHIP 27-N RANGE 12-W, N.M.P.M.



DWN. BY MR CONSTR. COMMENCED APPL. DWG. SLACK CHAIN

CKD. BY MD CONSTR. COMPLETED DATE PIPE SIZE 4.50" O.D.

PRINT RECORD	PIPE DATA	METER STA. NO.	FC
1 PRELIM PROD 01/16/09			
2 CFRM-ROW			

NOTE: WELL FLAG.
C/L SURVEY LOOPS EXISTING FENCELINE AND TWO ROAD CROSSINGS.
TUA NEEDED AT ROAD CROSSING.
LOCATION NOT BUILT.
PROFILES: DWG. No. 737.05-X-0076 & 737.05-X-0077

Preliminary

OWNERSHIP	SUBDIVISION	OWNER	LESSEE	METER(S)	RODS	ACRE(S)
	ALL SEC. 21	NAVAJO INDIAN IRRIGATION PROJECT			209.766	3.576
				FEET: 3461.13	MILE: 0.656	

REV.

FM24 (Rev. 1/99)

001G737.0-005-01

Appendix B

Cultural Resource Compliance Form

BIA CASE FILE #: N 48-2009-11
DATE REVIEWED BY: 2/12/09
REVIEWED BY: Bruce M. Jaquez
(FOR BIA USE ONLY)

NAVAJO INDIAN IRRIGATION PROJECT
304 NORTH AUBURN, SUITE B
FARMINGTON, NM 87401

Date 2/12/09

RE: NIIP ARCHAEOLOGICAL AND HISTORICAL CLEARANCE UPDATE (Project Description):
ENERGEN RESOURCES CORP. and ENTERPRISE FIELD SERVICES LLC, R.O.W. Archaelogical Clearance request for Well Site, & Access Road.

Dear Project Manager:

I hereby request archaeological clearance for a project, which I believe, is located entirely within the boundaries of the Navajo Indian Irrigation Project. This project will consist of (*brief descry*) ***WELL SITE: (225' x 225' plus 75' X 225' for temporary spoil storage area). ACCESS ROAD: (25' X 1076.50')*** and is designated by the following name and/or number in our company files:
RUBY NO.200S as shown on the attached map(s); 5 copies provided and enclosed.

The project is located in Township 27 North, Range 12 West, Section(s) 21 in the SW 1/4 of the ____ ¼ of the ¼ (describing a 10 acre parcel). Access will be obtained as also shown on the attached map. No more than 2.17 acres (___ hectares) will be used or occupied considering all direct and indirect effects of proposed project activities.
I certify that I am the duly authorized agent of the proposed project sponsor and will take responsibility for the accuracy of the information submitted above. When clearance is received, I will assure that the instructions as indicated below and in any future guidance from you for this project will be followed.

Signature

Archaeological clearance for the area described is hereby granted under the terms of the Memorandum of Agreement for Protection of Archaeological and Historical resources in the Navajo Indian Irrigation Project consummated by the Advisory Council for Historic Preservation on July 17, 1977.

The area of the currently proposed project was intensively inventoried for archaeological and historic resources as documented in (Report ***#83-NM-218*** These sites (*listed by number*) were located in the area of this newly proposed project ***H-25-207***.

These sites (*listed by number*) were located within 100 feet (33 meters) on the newly proposed project and special efforts should be taken to avoid inadvertent impacts in these areas: ***H-25-207***

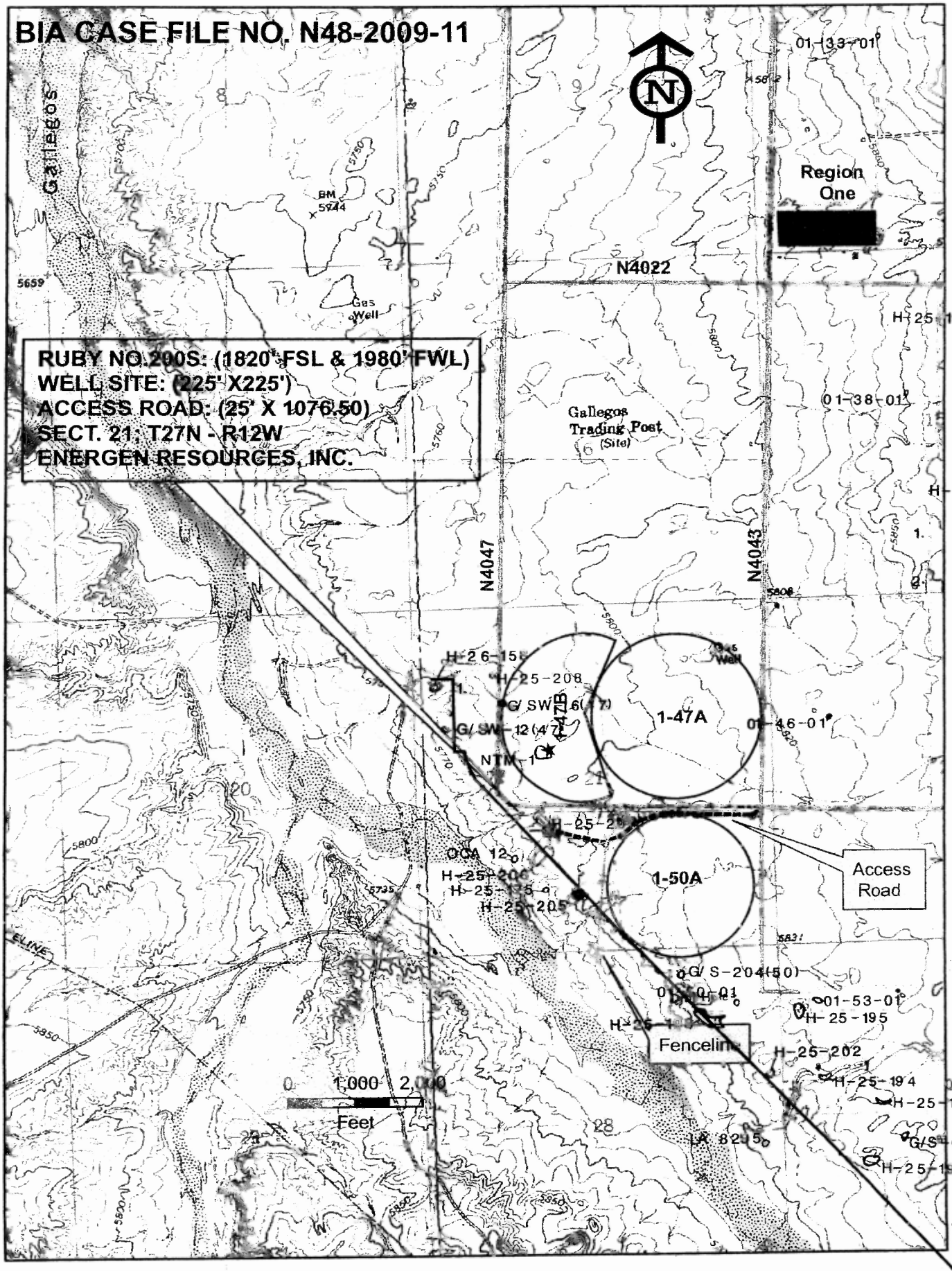
This clearance does not constitute approval of right-of-way, concurrence in the proposed action by the Bureau of Indian Affairs, or approval to proceed with the project. This clearance constitute one of several mandated requirements which must be completed prior to the granting of right-of-way, easement, or approval by BIA for land modifying project proposed within the Navajo Indian Irrigation Project boundaries.

IT IS THE RESPONSIBILTY OF THE PROJECT SPONSOR TO ACQUAINT CONTRACTORS AND SUB-CONTRACTORS WITH THE BOUNDARIES FOR WHICH THIS CLEARANCE IS GRANTED.

Discovery Clause (36 CFR Part 800.7) ***Should any archaeological or historical resources be discovered during project operations, all work must cease in the immediate area of the exposed resource. The Navajo Tribal Archaeologist and the BIA Navajo Area Archaeologist shall be notified to arrange an on-site inspection for the propose of determining the significance and disposition of the remains. Such discoveries may be subject to the provision and prohibitions of the Archaeological Resource Protection Act (P. L. 93-95, Title 43 CFR, Part 7).***

THE PROJECT SPONSOR IS RESPONSIBLE FOR ADVISING CONTRACTORS AND SUB-CONTRACTORS OF THIS REQUIREMENT AND ASSURING HIS COMPLIANCE.

Bruce M. Jaquez 2/12/09
NIIP Project Date


BIA CASE FILE NO. N48-2009-11
RUBY NO.200S: (1820' FSL & 1980' FWL)
WELL SITE: (225' X225')
ACCESS ROAD: (25' X 1076.50)
SECT. 21; T27N - R12W
ENERGEN RESOURCES, INC.
Region One
N4022
N4047
N4043
Gallegos
Gallegos Trading Post (Site)
1-47A
1-50A
Access Road
Fenceline
0 1,000 2,000
Feet
01-33-01
01-38-01
01-41-
01-46-01
01-53-01
01-52-
H-25-196
H-25-197
H-25-195
H-25-202
H-25-194
H-25-191
H-25-192
H-25-208
G/SW-12(47)
NTM-1
OCA 12
H-25-206
H-25-205
G/S-204(50)
G/S-08(52)
LA 8295
Gas Well
BM 5744
5659
5800
5850
5750
5760
5770
5735
5831
5820
5808
ELINE

BIA CASE FILE #: N 48-2009-12
DATE REVIEWED BY: 3/10/09
REVIEWED BY: Bruce M. Jaquez
(FOR BIA USE ONLY)

NAVAJO INDIAN IRRIGATION PROJECT
304 NORTH AUBURN, SUITE B
FARMINGTON, NM 87401

Date 3/10/09

RE: NIIP ARCHAEOLOGICAL AND HISTORICAL CLEARANCE UPDATE (Project Description): ***ENERGEN RESOURCES CORP. and ENTERPRISE FIELD SERVICES LLC, R.O.W. Archaelogical Clearance request for Pipeline.***

Dear Project Manager:

I hereby request archaeological clearance for a project, which I believe, is located entirely within the boundaries of the Navajo Indian Irrigation Project. This project will consist of (*brief descry*) ***PIPELINE: (3416.13' X 45')*** and is designated by the following name and/or number in our company files:
RUBY NO.200S as shown on the attached map(s); 5 copies provided and enclosed.

The project is located in Township ***27*** North, Range ***12*** West, Section(s) ***21*** in the ***SW*** *1/4* of the ____ ¼ of the ¼ (describing a 10 acre parcel). Access will be obtained as also shown on the attached map. No more than ***3.576*** acres (___ hectares) will be used or occupied considering all direct and indirect effects of proposed project activities.
I certify that I am the duly authorized agent of the proposed project sponsor and will take responsibility for the accuracy of the information submitted above. When clearance is received, I will assure that the instructions as indicated below and in any future guidance from you for this project will be followed.

Signature

Archaeological clearance for the area described is hereby granted under the terms of the Memorandum of Agreement for Protection of Archaeological and Historical resources in the Navajo Indian Irrigation Project consummated by the Advisory Council for Historic Preservation on July 17, 1977.

The area of the currently proposed project was intensively inventoried for archaeological and historic resources as documented in (Report ***#83-NM-218*** These sites (*listed by number*) were located in the area of this newly proposed project ***H-25-207***.

These sites (*listed by number*) were located within 100 feet (33 meters) on the newly proposed project and special efforts should be taken to avoid inadvertent impacts in these areas: ***H-25-207***

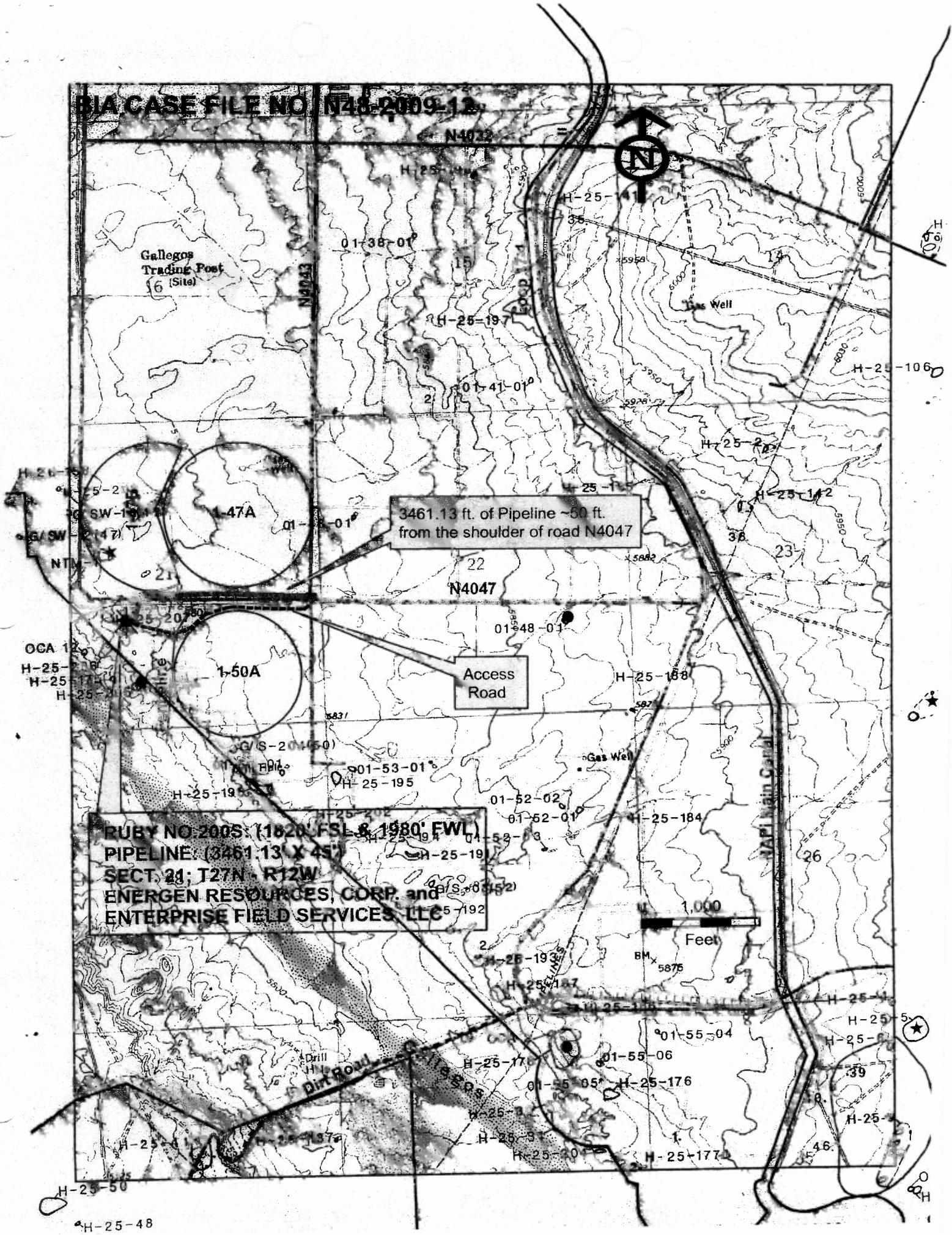
This clearance does not constitute approval of right-of-way, concurrence in the proposed action by the Bureau of Indian Affairs, or approval to proceed with the project. This clearance constitute one of several mandated requirements which must be completed prior to the granting of right-of-way, easement, or approval by BIA for land modifying project proposed within the Navajo Indian Irrigation Project boundaries.

IT IS THE RESPONSIBILTY OF THE PROJECT SPONSOR TO ACQUAINT CONTRACTORS AND SUB-CONTRACTORS WITH THE BOUNDARIES FOR WHICH THIS CLEARANCE IS GRANTED.

Discovery Clause (36 CFR Part 800.7) ***Should any archaeological or historical resources be discovered during project operations, all work must cease in the immediate area of the exposed resource. The Navajo Tribal Archaeologist and the BIA Navajo Area Archaeologist shall be notified to arrange an on-site inspection for the propose of determining the significance and disposition of the remains. Such discoveries may be subject to the provision and prohibitions of the Archaeological Resource Protection Act (P. L. 93-95, Title 43 CFR, Part 7).***

THE PROJECT SPONSOR IS RESPONSIBLE FOR ADVISING CONTRACTORS AND SUB-CONTRACTORS OF THIS REQUIREMENT AND ASSURING HIS COMPLIANCE.

Bruce M. Jaquez — NIIP Project
3/10/09 — Date


BIA CASE FILE NO. N48-2009-12
N
N4022
N4043
N4047
Gallegos Trading Post (Site)
Gas Well
3461.13 ft. of Pipeline ~50 ft. from the shoulder of road N4047
Access Road
1-47A
1-50A
NAPI Main Canal
Dirt Road
RUBY NO.200S: (1820' FSL & 1980' FWL)
PIPELINE: (3461.13' X 45')
SECT. 21; T27N - R12W
ENERGEN RESOURCES, CORP. and
ENTERPRISE FIELD SERVICES, LLC
1,000
Feet

Appendix C

Biological Resource Compliance Form / Consultations

THE
NAVAJO
NATION

JOE SHIRLEY, JR.
PRESIDENT
Ben Shelly
VICE PRESIDENT

Dept of Fish & Wildlife • P.O. Box 1480 • Window Rock, AZ 86515 • (928) 871-6451 • Fax (928) 871-7069

May 18, 2009

Leonard Robbins

Denali Environmental Services

Box 1127

Ft. Defiance, AZ 86504

Dear Mr. Robbins:

The purpose of this letter is to inform you that we have reviewed the Energen 200S Well Biological Evaluation and have recommended the project for Conditional Approval.

The Conditions for approval are that the power line must be constructed in accordance with the Raptor Electrocution Prevention Regulations and that Mountain Plover surveys be conducted prior to construction.

If you have any questions, please give me a call at 928-871-7068. Your assistance with this matter is appreciated.

Jeffrey Cole, Wildlife Manager

Department of Fish and Wildlife

CONCURRENCE

Gloria M. Tom, Director

Department of Fish and Wildlife

NNDF&WL Review No. 05/18/09B

BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH AND WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480

COMPLIANCE	☐
CONDITIONAL COMPLIANCE	☒

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal and Federal laws protecting biological resources including the Navajo Endangered Species and Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection and National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish and Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Energen's Ruby 200S

DESCRIPTION: Well, pipeline and ancillary facilities

LOCATION: NAPI

REPRESENTATIVE: Leonard Robbins

ACTION AGENCY: Energen Resources

B.R. REPORT TITLE / DATE / PREPARER: BE/Leonard Robbins/April 20, 2009

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Mountain Plover and raptors

POTENTIAL IMPACTS

TRIBAL ENDANGERED SPECIES (G2 & G3) TAKEN: Mountain Plover and raptors

FEDERALLY-LISTED SPECIES AFFECTED: Golden Eagle

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES:

CONDITIONS OF COMPLIANCE*: Powerlines will be constructed according to the Rapter Electrocution Prevention Regulations. Mountain Plover will be surveyed for prior to construction.

FORM PREPARED BY / DATE: J. Cole 05/18/09

COPIES TO: (add categories as necessary)

- ☐ Navajo Environmental Protection Agency
- ☐ U.S. Fish and Wildlife Service, NM Field Office
- ☐ U.S. Fish and Wildlife Service, AZ Field Office
- ☐ BIA Navajo Region, Environmental Services
- ☐ U.S. Fish and Wildlife Service, UT Field Office
- ☐ (Other)

2 NTC § 164 Recommendation:	Signature	Date
☐ Approval ☒ Conditional Approval (with memo) ☐ Disapproval (with memo) ☐ None (with memo)	Gloria M. Tom, Director, Navajo Nation Department of Fish and Wildlife	5/18/09

*I understand and accept the conditions of compliance, and acknowledge that lack of signature may be grounds for the Department not recommending the above described project for approval to the Tribal Decision-maker.

Representative's signature Date

THE
NAVAJO
NATION

JOE SHIRLEY, JR.
PRESIDENT
Ben Shelly
VICE PRESIDENT

Dept of Fish & Wildlife • P.O. Box 1480 • Window Rock, AZ 86515 • (928) 871-6451 • Fax (928) 871-7069

received
04-08-09

09 March 2009

File#09DANL01

Leonard Robbins
Denali Environmental Services, PES
P.O. Box 1127
Fort Defiance, AZ 86504

SUBJECT: ENERGEN RESOURCES CORPORATION PROPOSED CONSTRUCTION OF SIXTEEN (16) GAS WELLS LOCATED ON THE NAVAJO INDIAN IRRIGATION PROJECT

RUBY 100	UTM COORDINATES 4050484N 758959E
RUBY 100S	UTM COORDINATES 4049713N, 758966E
RUBY 101	UTM COORDINATES 4049542N, 760433E
RUBY 101S	UTM COORDINATES 4050432N, 759761E
RUBY 200	UTM COORDINATES 4050055N, 757590E
RUBY 200S	UTM COORDINATES 4049553N, 757889E
RUBY 201	UTM COORDINATES 4049731 N, 758745E
RUBY 201S	UTM COORDINATES 4050534N, 758741E
RUBY 300	UTM COORDINATES 4051959N, 756212E
RUBY 301	UTM COORDINATES 4051253N, 756928E
RUBY 400S	UTM COORDINATES 4051009N, 754267E
RUBY 401	UTM COORDINATES 4051008N, 755316E
RUBY 500	UTM COORDINATES 4050293N, 754288E
RUBY 500S	UTM COORDINATES 4049115N, 754505E
RUBY 501	UTM COORDINATES 4049443N, 755464E
RUBY 501S	UTM COORDINATES 4050006N, 755447E

SAN JUAN COUNTY, NM

Mr. Robbins:

The following information on species of concern[1] is provided in response to your 10 February 2009 request concerning the subject project, which consists of the Energen Resources Corporation natural gas well construction project located on the Navajo Indian Irrigation Project lands south of Bloomfield and Farmington, NM. The ERC new natural gas well construction project would be located within the T27N,

[1] "Species of concern" include protected, candidate, and other rare or otherwise sensitive species, including certain native species and species of economic or cultural significance. For each species, the following tribal and federal statuses are indicated: Navajo Endangered Species List (NESL), federal Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Eagle Protection Act (EPA). No legal protection is afforded species with **only** ESA candidate or NESL group 4 status; please be aware of these species during surveys and inform the NFWD of observations. Documentation that these species are more numerous or widespread than currently known, and addressing these species in project planning and management is important for conservation and may contribute to ensuring they will not be uplisted in the future. Species without ESA or NESL legal protection (e.g., NESL group 4 species) are only included in responses on a regular basis and may not be included in this response. Please refer to the NESL for a list of group 4 species; contact me if you need a copy.

R12W, San Juan County, NM. At each well location is approximately 5.0± acres and would be disturbed, pending the length of the infrastructure support structures. An access road would be required for heavy equipment transport and well pad construction, and equipment installation. Buried pipelines would be required to transport the natural gas to a gathering system as operated by Enterprise Corporation (formerly El Pas Natural Gas Company). A single phase electrical line would be required to support the well head pump. Each well head location would require some cut and fill.

Each 7.5-minute quadrangle containing project boundaries is addressed separately below. For potentially occurring species these species lists are quadrangle-specific rather than project-specific. Potential for species has been determined primarily on quadrangle-wide coarse habitat characteristics and species range information. Your project biologist should determine habitat suitability at the project site(s).

A total of ten (10) species both known and/or potential are included in this response. They are:
1. Antilocapra americana (Pronghorn); NESL group 3.
2. Aquila chrysaetos (Golden Eagle); NESL group 3; MBTA; EPA.
3. Buteo regalis (Ferruginous Hawk); NESL group 3; MBTA.
4. Charadrius montanus (Mountain Plover); NESL group 4; ESA proposed threatened; MBTA.
5. Dipodomys spectabilis (banner-tailed kangaroo rat);NESL Group 4.
6. Empidonax traillii extimus (Southwestern Willow Flycatcher); NESL group 2; ESA endangered; MBTA.
7. Mustela nigripes (Black-footed Ferret); NESL group 2; ESA endangered.
8. Vulpes macrotis (Kit Fox); NESL group 4.
9. Asclepias sanjuanensis (San Juan Milkweed); NESL group 4.
10. Sclerocactus cloveriae-brackii (Brack Hardwall Cactus); NESL group 4.

GALLEGOS T.P., NM 7.5-MINUTE QUADRANGLE

Project Location: Ruby 100, Ruby 100S, Ruby 101, Ruby 101S, Ruby 200, Ruby 200S, Ruby 201, Ruby 201S

Species of concern **known** to occur on or near the project site(s) include:

All or parts of this project currently are within areas protected by the Raptor Electrocution Prevention Regulations; consult with the NNDFW zoologist or EA Reviewer for more information and recommendations. Be sure to examine Navajo Nation's "Raptor Electrocution Prevention Regulations" available at: http://nnhp.navajofishandwildlife.org/docs_reps.htm

Known to occur within three miles of the project site:
1. Buteo regalis
2. Rana pipiens
3. Asclepias sanjuanensis
4. Puccinellia parishii

Species of concern with **potential** to occur on the 7.5-minute quadrangle(s) containing the project boundaries include the following:
1. Antilocapra americana
2. Aquila chrysaetos
3. Buteo regalis
4. Charadrius montanus
5. Dipodomys spectabilis
6. Empidonax traillii extimus
7. Mustela nigripes

8. Vulpes macrotis
9. Asclepias sanjuanensis
10. Sclerocactus cloveriae-brackii

AREA 3: LOW SENSITIVITY WILDLIFE RESOURCES

HUGH LAKE, NM 7.5-MINUTE QUADRANGLE

Project Location: Ruby 300, Ruby 301, Ruby 400S, Ruby 401, Ruby 500, Ruby 500S, Ruby 501, Ruby 501S

Species of concern **known** to occur on or near the project site(s) include:

1. Rana pipiens

All or parts of this project currently are within areas protected by the Raptor Electrocution Prevention Regulations; consult with the NNDFW zoologist or EA Reviewer for more information and recommendations. Be sure to examine Navajo Nation's "Raptor Electrocution Prevention Regulations" available at: http://nnhp.navajofishandwildlife.org/docs_reps.htm

Known to occur within three miles of the project site:

1. Athene cunicularia hypugea
2. Buteo regalis
3. Puccinellia parishii

Species of concern with **potential** to occur on the 7.5-minute quadrangle(s) containing the project boundaries include the following:

1. Antilocapra americana
2. Aquila chrysaetos
3. Buteo regalis
4. Charadrius montanus
5. Dipodomys spectabilis
6. Empidonax traillii extimus
7. Mustela nigripes
8. Rana pipiens
9. Vulpes macrotis
10. Asclepias sanjuanensis
11. Sclerocactus cloveriae-brackii

AREA 3: LOW SENSITIVITY WILDLIFE RESOURCES

Potential for the black-footed ferret should be evaluated if prairie-dog towns of sufficient size (per NFWD guidelines) occur in the project area.

Potential for Puccinellia parishii should be evaluated if wetland conditions exists that contain white alkaline crusts.

Biological surveys need to be conducted during the appropriate season to ensure they are complete and accurate please refer to NN Species Accounts.[4] Further questions pertaining to surveys should be referred

[4] Available free of charge on our website at http://nnhp.navajofishandwildlife.org/

to Species Account. Surveyors on the Navajo Nation must be **permitted** by the Director, NFWD. Contact Jeff Cole at (928) 871-7068 for permitting procedures. Questions pertaining to surveys should be directed to the NFWD Zoologist (David Mikesic) for animals at 871-7070, and Botanist (Daniela Roth) for plants at (928)523-8445. Questions regarding biological evaluation should be directed to Jeff Cole (Acting Environmental Reviewer) at 871-7060.

Any settling or evaporation pits that could hold contaminants should be lined and covered. Covering pits, with a net or other material, will deter waterfowl and other migratory bird use. Lining pits will protect ground water quality.

Potential impacts to **wetlands** should also be evaluated. The U.S. Fish & Wildlife Service's National Wetlands Inventory (NWI) maps should be examined to determine whether areas classified as wetlands are located close enough to the project site(s) to be impacted. In cases where the maps are inconclusive (e.g., due to their small scale), field surveys must be completed. For field surveys, wetlands identification and delineation methodology contained in the "Corps of Engineers Wetlands Delineation Manual" (Technical Report Y-87-1) should be used. When wetlands are present, potential impacts must be addressed in an environmental assessment and the Army Corps of Engineers, Phoenix office, must be contacted. NWI maps are available for examination at the NFWD's Natural Heritage Program (NHP) office, or may be purchased through the U.S. Geological Survey (order forms are available through the NHP). The NHP has complete coverage of the Navajo Nation, excluding Utah, at 1:100,000 scale; and coverage at 1:24,000 scale in the southwestern portion of the Navajo Nation.

The information in this report was identified by the NFWD's biologists and computerized database, and is based on data available at the time of this response. If project planning takes more than two (02) years from the date of this response, verification of the information provided herein is strongly recommended. It should not be regarded as the final statement on the occurrence of any species, nor should it substitute for on-site surveys. Also, because the NFWD's information is continually updated, any given information response is only wholly appropriate for its respective request.

For a list of sensitive species on the Navajo Nation in addition to the species listed on the Navajo Endangered Species List (NESL) please refer to our website at www.nndfw.org.

An invoice for this information is attached.

If you have any questions I may be reached at (928) 871-6472.

Sonja Detsoi, Wildlife Tech.
Natural Heritage Program
Department of Fish and Wildlife

CONCURRENCE

Gloria M. Tom, Director
Department of Fish & Wildlife
Division of Natural Resources

xc: file/chrono