

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No. COC-9415	
6 If Indian, Allottee or Tribe Name ---	
7 If Unit or CA Agreement, Name and No Doe Canyon	
8 Lease Name and Well No Doe Canyon #3	
9 API Well No 033-06133	
1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	10 Field and Pool, or Exploratory Doe Canyon Unit
1b Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other CO2 <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone	11 Sec., T R. M. or Blk. and Survey or Area Surface Sec 6 T40N, R17W BH Section 6, T40N, R17W NMPM
2 Name of Operator Kinder Morgan CO2 Company, L.P.	12 County or Parish Dolores
3a Address 17801 Hwy 491	13 State CO
3b Phone No. (include area code) 970 882-5517	
4 Location of Well (Report location clearly and in accordance with any State requirements*) At surface 2750' FSL & 2260' FWL At proposed prod. zone 2753' FSL & 267' FWL	
14 Distance in miles and direction from nearest town or post office* Approximately 10 miles East of Cahone	
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) No Structures within 400'	16 No. of acres in lease 54,000
17 Spacing Unit dedicated to this well Venting / Flaring approved for 30 days per NTL-4A	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 3 mile fed 1	19 Proposed Depth 9028'
20 BLM/BIA Bond No. on file CO1349	
21 Elevations (Show whether DF, KDB, RT, GL, etc) 7704	22 Approximate date work will start* June 1, 2007
	23 Estimated duration 3 - 4 Weeks

**SEE ATTACHED  
CONDITIONS OF APPROVAL**

The following completed in accordance with the requirements of the Oil and Gas Order No 1, must be attached to this form

- |  |   |
|--|---|
| 1 Well plat certified by a registered surveyor   | 4 Bond to cover the operations unless covered by an existing bond on file (see item 20 above) |
| 2 A Drilling Plan  | 5 Operator certification  |
| 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6 Such other site specific information and/or plans as may be required by the BLM.            |

25 Signature <i>Jeannie M. Johnston</i>	Name (Printed/Typed) Jeannie M. Johnston	Date 3/14/2007
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Title Business Supervisor	
Approved by (Signature) <i>Robert L. Sieger</i>	Name (Printed/Typed) Robert L. Sieger
Title Acting Ass't Center Manager Physical Resources	Office San Juan Public Lands Center

**APPROVED FOR A PERIOD  
NOT TO EXCEED 2 YEARS**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject lease which are committed hereto...

OPERATOR'S COPY

RECEIVED

APR 18 2007

Bureau of Land Management  
Durango Colorado



### Selected Items Report

Oil and Gas Wells Selected			
Filter Results by Formation <input type="text" value="Include"/> <input type="text" value="HRMS"/> <input type="text" value="Filter"/>			
WELL DESCRIPTION	LOCATION	WELL INFORMATION	
05-033-06015, DOLORES FEDERAL 31 1 SOUTHLAND ROYALTY COMPANY	SESE 31 41N -17W (N)	Sidetrack TD	Formation Status 00 9438 HRMS DA
Facilities Selected			
FACILITY DESCRIPTION	LOCATION	PIT INFORMATION	
		Type	Unlined Status

Kinder Morgan CO2 Company  
Federal Lease COC-9415  
Well Doe Canyon Unit, Doe Canyon #3  
BHLocation 2753' FSL & 267' FWL  
Sec. 6, T. 40 N., R. 17 W.  
Dolores County, Colorado

**Conditions of Approval - Drilling Plan**

**1. Notify this office at least 72 hours prior to:**

- a. spudding the well
- b. running casing strings and cementing
- c BOP tests

**For the COA #1 notifications, Operators must talk to BLM personnel directly. Do not leave messages on answering machines.**

2. All BOP tests will be performed with a test plug in place BOP will be tested to full stack working pressure and annular preventer to 50% maximum stack working pressure All accumulators will be function tested as per Onshore Order #2 All 2M or greater systems require **adjustable** chokes as per Onshore Order #2
3. If a BLM Inspector is not present during the initial BOP test, please provide chart record.

- 4 If cement does not circulate to surface on the 9-5/8" or 7" casing strings, verify top of cement and notify this office immediately
- 5 Submit copies of all logs to this office both paper and in Log ASCII Standard (LAS) format.
- 6 Operators must collect stabilized Bottom Hole Pressure measurements and submit them to the BLM. This data may be confidential and the operator may specify this when submitted
- 7. If any operations are to start over the weekend, notify this office by noon Friday. If any problems arise after hours or on weekends, call BLM personnel using the home phone numbers listed on the following 'INFORMATIONAL NOTICE - APD's'. Do not leave messages on answering machines.**
- 8 An 'As Built' Site Security Diagram must be submitted with the First Delivery/Production Subsequent Report. Within 30 days, a Completion Report must be filed with this office. Include an accurate wellbore diagram.

## INFORMATIONAL NOTICE - APDs

### San Juan Field Office

This notice is an abstract of some major regulations and Onshore Orders and includes notification requirements and information

1 Drilling Operations (Onshore Order No 2)

- a If DSTs are run, all applicable safety precautions outlined in Onshore Order No 2 shall be observed
- b All indications of usable water (10,000 ppm or less TDS) shall be reported to the San Juan Field Office prior to running the next string of casing or before plugging orders are requested, whichever occurs first

2 Well Abandonment (43 CFR 3162 3-4, Onshore Order No 1-Sec V)

Approval for abandonment shall be obtained prior to beginning plugging operations Initial approval for plugging operations may be verbal, but shall be followed-up in writing within 30 days Subsequent and final abandonment notifications are required and shall be submitted on Sundry Notice (Form 3160-5), in triplicate

3 Reports and Notifications (43 CFR 3162 3-2, 3162 4-1, 3162 4-3, 00-6)

- a Within 30 days of completion of the well as a dry hole or producer, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions or data obtained and compiled during the drilling, workover, and/or completion operations shall be filed with a Completion Report (Form 3160-4), in triplicate Submit casing/cementing reports and other subsequent reports via Sundry Notice, Form 3160-5
- b In accordance with 43 CFR 3162 4-3, this well shall be reported on MMS Form 3160, A Monthly Report of Operations, starting with the month in which drilling operations commence, and continuing each month until the well is physically plugged and abandoned
- c Notify this office within 5 business days of production start-up if either of the following two conditions occur
  - (1) The well is placed on production, or
  - (2) The well resumes production after being off production for more than 90 days

Placed on production@ means shipment or sales of hydrocarbons from temporary tanks, production into permanent facilities or measurement through permanent facilities Notification may be written or verbal with written follow-up within 15 days

- d As per Onshore Order No 6, III A 2 b , if hydrogen sulfide is present the Aoperator shall initially test the H<sub>2</sub>S concentration of the gas stream for each well or production facility @ Submit the results of this test within 30 days of filing Form 3160-4, AWell Completion or Recompletion Report and Log@

4 Environmental obligations and disposition of production (00-7, NTL-3A, NTL-4A, 43 CFR 3162 5-1, 3162 7 and 40 CFR 302-4)

- a With BLM approval, water produced from newly completed wells may be temporarily disposed into unlined pits up to 90 days. During this initial period, application for the permanent disposal method shall be made to this office in accordance with 00-7.

If underground injection is proposed, an EPA or State UIC permit shall also be required and submitted to this office.

- b Spills, accidents, fires, injuries, blowout and other undesirable events shall be reported to this office within the time frames in NTL-3A.

- c Gas may be vented or flared during emergencies, well evaluation, or initial production tests for a time period of up to 30 days or the production of 50 MMCF of gas, whichever occurs first. After this period, approval from this office shall be obtained to flare or vent gas in accordance with NTL-4A.

- d Off-lease measurement and commingling of production must be approved by the authorized officer.

5 Well Identification (43 CFR 3162.6)

Each drilling, producing or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (either footages or the quarter-quarter section, the section, township and range). The Indian lessors name may also be required. All markings shall be legible and in a conspicuous place.

6 Bureau of Land Management, San Juan Field Office Address and Contacts

ADDRESS      Public Lands Center      PHONE (970) 247-4874  
                  15 Burnett Court  
                  Durango, Colorado 81301

BUSINESS HOURS      7:45 A.M. to 4:30 P.M. (Mountain Time), Monday-Friday

AFTER HOURS

Marie Lope                      Petroleum Engineering Technician  
  Home (505) 634-0461  
  Cell (970) 799-2956

Gary Retherford                Petroleum Engineering Technician  
  Home (505)  
  Cell (970) 799-2957

## Surface Use Conditions of Approval (COA)

### Kinder Morgan CO<sub>2</sub> Company, LP (Kinder Morgan) Doe Canyon Well Project Dolores County, Colorado

Proposed Well Name (Surface/Mineral Ownership)	Surface Location
DC-2 (private/BLM)	1,083' FNL & 253' FWL T 40N, R 17W, Section 18 7,268' Elevation
DC-3 (BLM/BLM)	2,750' FSL & 2,260' FWL T 40N, R 17W, Section 6 7,704' Elevation
DC-4 (BLM/BLM)	335' FSL & 1,465' FWL T 40N, R 17W, Section 6 7,583' Elevation
DC-6 (BLM/BLM)	1,763' FNL & 1,780' FWL T 40N, R 17W, Section 8 7,672' Elevation
DC-7 (private/BLM)	637' FSL & 3,278' FWL T 40N, R 18W, Section 13 7,148' Elevation
DC-8 (private/BLM)	1,040' FSL & 1,748' FEL T 40N, R 17W, Section 13 7,225' Elevation

The following Conditions of Approval (COA) take precedence over any or all terms and conditions set forth in the APD Surface Use Plan. Kinder Morgan and its contractors should refer to these COA and the Surface Use Plan for specific information associated with construction, drilling, production, and reclamation. For those components of the Proposed Action that are split estate actions i.e., the surface is privately owned and the subsurface minerals are owned by the federal government and administered by the BLM, the BLM is recommending actions related to land use and reclamation in these COA; however, the land owner has final authority as to the condition and use of the surface. Where the Proposed Action occurs on BLM lands, the BLM has authority to mandate mitigation. Further, although some of the flowlines originate on private land, the BLM has jurisdiction over transport of the product produced from the six well pads to the manifold; therefore, all flowlines, regardless of whether they originate on public or private lands, are considered part of the federal action.

The following COA are divided into two groups based upon surface ownership and associated authority: 1) mandatory mitigation where the BLM has authority and 2) recommended mitigation where the surface owner has authority.

- 1. A copy of these COA and the operators Surface Use Plan should be on location at all times.**

**THE FOLLOWING CONSTRUCTION AND DRILLING MEASURES ARE MANDATORY FOR DC-3, DC-4, and DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8:**

The operator or his contractor will contact the authorized officer, at the Dolores Public Lands Office in Dolores, Colorado seven (7) days before beginning any surface-disturbing activities and before beginning any reclamation

- Lucas Vargo (970) 882-6845
  - Steve Beverlin (970) 882-7296
1. The operator will assure that all Project-related vehicle traffic is limited to the bladed/traveled road surface. No pullouts or off-road parking will be allowed unless specifically authorized "Keep vehicles on the road surface" signs must be installed by the operator to assist with compliance as needed. No shortcutting by any motor vehicles operated by employees or contractors, on roads not identified as access routes in the APD. Vehicular access to the pad will be strictly limited to authorized vehicles only; these vehicles are restricted to use on the drill pad only - no off pad or off road parking.
  2. Surface disturbing activities will not be conducted during extended wet periods or when vehicles and/or construction equipment will leave excessive ruts and damage to roads associated with the project. Kinder Morgan and the BLM will not allow any construction or routine activities during periods when the soil is too wet to adequately support construction equipment. If such equipment creates surface ruts in excess of 4 inches in depth, for a length of at least 10 feet, Kinder Morgan and the BLM will deem that soil conditions are too wet to adequately support construction equipment. Construction activities will not be allowed until soil conditions improve.
  3. The roads and well pads shall be wetted down and compacted where needed to avoid dust and loss of soil. If production is achieved, a minimum of 18-inch culverts will be placed in the permanent road as needed according to the BLM Gold Book Standards to reduce erosion. BLM may require additional culverts, if erosion or road damage is not well-controlled by initial construction.
  4. All brush, limbs, crushed stumps and other woody material will be stockpiled separately from the topsoil just outside the well pad perimeter. The stripped vegetation and 6 inches of topsoil shall be stockpiled separately just outside the well pad perimeter. The stripped vegetation shall not be removed from the location (it will be used later for reclamation). If the topsoil stockpile is not used within six months it will be seeded to ensure topsoil integrity and prevent erosion. The northwest corner of DC-3 will be rounded to avoid old growth 3-4 ponderosa pine trees and one snag.
  5. The reserve pit will be sealed in such a manner as to prevent leakage of the fluids. Methods available to insure containment of drilling fluids in the reserve pit include lining the inside of the pit with at least 12 millimeter plastic. If a plastic liner is used, the bottom of the pit shall be smooth and free of any sharp rocks. If the pit has a rocky

bottom, it shall be bedded with a geotextile material to avoid the possibility puncturing the liner. A minimum of not less than a 2-foot freeboard will be maintained in the pit at all times. All oil or floating debris will be removed from the pit immediately after the drilling phase of the well.

6. During the drilling phase of the program, a perimeter fence will be placed around all pits. This shall be fenced on three (3) sides, and built in such a manner as to prohibit entry of wildlife. The fence shall be constructed with "woven wire." Measures should also be taken to prohibit avian species from entering the pit area. The fourth side of the pit area will be fenced immediately upon removal of the drilling rig and the fencing will be maintained until all pits are backfilled. In the event that one pit is closed prior to the other, the perimeter fence will then be placed around the remaining opened pit until such time as it is backfilled. At no given time, shall any open pit be unfenced.
7. Prior to rigging up, a one foot high berm will be constructed around the perimeter of the well pad in such a manner as to contain all storm events/spills from going downstream of the well pad. A partial berm is acceptable, but the down-slope side of the well pad must be protected (above the fill slopes). Drainages from the berm shall be armored and have an apron at the discharge end to disperse the water. A lined sump pit may be utilized to contain such fluids. The well pad will be designed in such a manner as not to allow runoff water to enter the pad. The need for the berm will be reassessed upon the completion of the well and production is established.
8. Heavy equipment will be pressure-washed at an offsite location prior to entering the site. This is a preventive measure for reducing noxious weed infestation at the drilling sites. If equipment is moved directly from site to site while on this Project, then pressure washing between sites is not required. However, if equipment is removed from a site, used elsewhere, then brought back to the Proposed Action area, pressure washing is required before the equipment can be used in the Proposed Action area. This pertains to heavy equipment such as bulldozers, backhoes, etc. Pickup trucks and passenger vehicles do not require pressure washing prior to entering these sites.
9. The integrity of any fence and associated cattle guard must not be compromised during the construction, production, or reclamation phase of the well. All cattle guards, gates, and fence brace panels should be well constructed and regularly maintained. Toxins, such as ethylene glycol, should be kept off the ground where livestock can reach them. The operator is responsible for noting these problems in the field and correcting them before the function of fences/cattleguards/gates is comprised. Once notified by the BLM that a problem exists and that the BLM attributes it to the operator's activities, the operator has 24 hours to correct fence/cattleguard/gate problems resulting from their activities.
10. Water withdrawals from surface waters require prior approval from the State of Colorado regardless of private land ownership along or around the water source. Colorado requests notification two weeks prior to the beginning of surface waters withdrawals to determine if there is a call on or below the withdrawal point. Regardless of when or how fresh

water is used, the State of Colorado will be notified and allowed to respond before water is withdrawn from any surface waters in Colorado. The contact office for South Western Colorado is the Division of Water Resources in Durango, Colorado (970-247-1845), and for the Water Commissioner for the Dolores River is (970) 533-1333. After the drilling operations are completed a final estimate of the volume of water used for all activities should be submitted in writing to the State of Colorado. If required by the state of Colorado, the operator must apply and obtain water rights prior to water withdrawals.

## **PRODUCTION:**

1. All permanent structures (on site for six months or longer) constructed or installed will be painted with a flat, non-reflective, earth-tone color from the list of 10 standard environmental colors or the additional choices provided in the supplemental environmental colors designated by the Rocky Mountain Regional Coordinating Committee (RMRCC), and the PANTONE Architecture and Interiors Color Guide, 2003.
2. All production equipment shall be equipped with hospital type mufflers. Regardless of whether the operation is at the construction, drilling, or production phase, if the BLM determines that noise has become a nuisance, additional muffling techniques will be applied to achieve adequate noise reduction and acceptable noise levels.
3. Noxious weeds which may be introduced due to soil disturbance or reclamation will be treated by methods to be approved by the Authorized Officer. These methods may include biological, mechanical or chemical treatments. Should chemical or biological treatment be requested, the operator must submit a Pesticide Use Proposal to the Authorized Officer 60 days prior to the planned application date (see Reclamation COA #7).
4. The roads shall be maintained reasonably smooth, and free of ruts in excess of 3-4 inches, soft spots, chuckholes, rocks, slides and washboards. The BLM, San Juan Resource Area road specifications and the BLM Gold Book Standards shall be followed for specifications on road design and culvert installation. All weather surfacing will be required if well becomes a producer. A regular maintenance program shall include blading, ditching, sign replacement, surfacing, and culvert maintenance. The operator is required to correct maintenance deficiencies when documented and directed by the Authorized Officer. All vehicles servicing the well are restricted to use of the approved access road and well pad.
5. Accidental spills will be cleaned up immediately, and contaminated soils will be removed to a State Permitted disposal site. BLM reporting procedures will be followed.
6. The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed as described in the reclamation section.
7. Compaction and construction of the berms surrounding the tank or tank batteries will be designed to prevent lateral movement of fluids through the utilized materials, prior to

storage of fluids. The berms must be constructed to contain at a minimum 120% of the storage capacity of the largest tank within the berm. All load lines and valves shall be placed inside the berm.

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

**RECLAMATION:**

For consistency, BLM will require that the seed-mix shown in the table below be used at all ground-disturbed sites

1. Immediately upon completion of the well, all trash and debris will be collected from the location and the surrounding area and removed to an approved sanitary landfill.
2. Portions of the well pad deemed unnecessary for production shall be shaped to conform to the natural terrain. Topsoil stockpiled during construction should be spread back over the re-contoured areas. Portions of the access road deemed unnecessary for production should also be reseeded. The seed mixture shown in the table below shall be used. The seed should be distributed by broadcasting. The woody materials stockpiled during construction are to be spread evenly back over the reclaimed and seeded areas (see COA #6 below)

**Table A-1. BLM Approved Seed Mix.**

Common Name	Species Name	Variety	Seeds/lb	PLS/ft <sup>2</sup>	% of Mix
Indian ricegrass	<i>Achnatherum hymenoides</i>	Rimrock	141,000	32	40
Squirrel tail	<i>Elymus elymoides</i>	Bottlebrush	192,000	8	10
Blue grama	<i>Chondrosom gracile</i>	Alma	825,000	8	10
Mutton grass	<i>Poa fendleriana</i>	VNS	1,045,440	16	20
Needle and Thread	<i>Hesperostipa comata</i>	VNS	115,000	8	10
Galleta	<i>Hilaria jamesii</i>	Viva, florets	159,000	8	10

Key PLS = pure live seed, VNS = variety not stated

If the seed is broadcast, application rates will be twice the drilled rate and some means such as a rake or harrow will be used to incorporate the seed into the soil. Certified weed-free mulch may be required on locations with an inadequate supply of removed vegetation.

The seed mixture used must be *certified* weed free. There shall be NO primary or secondary noxious weeds in the seed mixture. Seed labels from each bag shall be available for inspection while seeding is being accomplished. **The seeding contractor shall keep a record of the dates seeding was accomplished for each site and shall send that information along with the seed labels from each bag to Lucas Vargo at the Dolores Public Lands Office (P.O. Box 210, 29211 Highway 184, Dolores, CO 81323)**

In the event grasses and native vegetation are not established after the first seeding application, subsequent applications will be required until grasses and/or native vegetation are established, as per the standards shown in Reclamation COA #8 below.

3. Notify Surface Managing Agency (Lucas Vargo at 970-882-6845) seven (7) days prior to seeding so that they may be present to witness reseeding activities.
4. Upon final reclamation, all compacted areas and areas devoid of vegetation on location shall be ripped, along the contour, to a minimum of 6 inches in depth before the re-spread of topsoil and subsequent reseeding.
5. Upon final reclamation, all access roads will be shaped to conform to the natural terrain and left as rough as possible to deter vehicle travel. Access will be ripped, along the contour when possible, to a minimum depth of 6 inches, water barred and reseeded. All erosion problems created by the development must be corrected prior to acceptance of release. Water bars should be spaced as shown below along the fall line of the slope

**Table A-2. BLM Approved Water Bar Spacing.**

Slope (%)	Spacing Interval (feet)
Less than 2 %	200
2 to 4 %	100
4 to 5 %	75
5 to 10 %	50
10 to 15 %	30

6. The brush, limbs, crushed stumps and other woody material stockpiled during construction, if any, should be spread back over reclaimed areas and associated pipelines after seeding. This organic debris will provide cover and stabilizing material for the soil, seed mix, and young plants.
7. The Permit Holder (Holder) shall be responsible for control of all State-listed noxious weed species on all disturbed areas. The Holder is responsible for consultation with the Authorized Officer and local authorities for acceptable weed control methods, and shall comply with the following:
  - a) Use of pesticides shall comply with all applicable Federal and State laws. Pesticides shall be used only in accordance with their registered uses within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the Holder shall obtain approval from the Authorized Officer of a Pesticide Use Proposal showing the type and quantity of material to be used, pests to be controlled, method of application, locations of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer.
  - b) All pesticide applicators must hold a valid Colorado Qualified Supervisor license or Certified Operator license, and the license must be valid for the applicable pesticide.

application category. **For all areas treated, Pesticide Application Records (BLM Form 3-3-94) must be submitted to the BLM Dolores Field Office by November 1 of each year** Pesticide Application Records must be completed no later than 14 days following the pesticide application and must be maintained for ten years

- 8 The following standards will be applied to determine the success of reclamation efforts. Reclamation should be considered successful when the desired vegetative species are established, erosion is controlled, weeds are considered a minimal threat, and it is likely that ground cover will return to a desirable condition. The following parameters should be used to determine the success of re-vegetation efforts.
  - a) Successful on-site establishment of species included in the planting mixture or other desirable species.
  - b) Evidence of vegetation reproduction, either spreading by rhizomatous species or seed production

The operator should continue re-vegetation efforts, at the direction of BLM, until these standards are met

- 9 The period of liability under the bond of record will not be terminated until the well is inspected and the surface rehabilitation approved
10. A fence shall be installed around the perimeter of the area undergoing reclamation. The fence shall be maintained in a manner to prevent cattle from entering the area, and shall be constructed as follows: Posts to be no more than 16' apart, fence wire: four wires of at least 12.5 gauge, double strand twisted, two stays between posts; wire stretched taut between brace panels, wire spacing from the ground up 14", 22", 30", 42". The fence shall be maintained in place for a minimum of 3 years, and will be removed by the Operator when so instructed by BLM
- 11 All reserve pit fluids must be removed or evaporated from the pit before starting reclamation procedures. Enhanced evaporation of the reserve pit fluids shall have prior approval of the authorized officer. The liner shall be cut off at the mud level and removed to an approved disposal site. The reserve pit must be reclaimed within 12 months (but no later than the following August 31) from the date the well is spudded. The reserve pit solids will not be squeezed out of pit, however the solids may be mixed with stockpiled materials as the pit is reclaimed. Mixing stockpiled materials and reserve pit solids can facilitate drying the reserve pit solids (by mixing damp solids with dry dirt), aid in compaction of materials in the pit, prevent subsequent settling of the pit, and shorten the time needed for the reserve pit reclamation. There will be a minimum of 2 feet of overburden on the pit prior to replacing the topsoil and seeding.

**THE FOLLOWING MITIGATION MEASURES ARE RECOMMENDED FOR DC-8 TO PROTECT CULTURAL VALUES:**

1. Commercial orange plastic mesh fencing will be erected at the DC-8 well pad around the access road/flowline construction buffer zone (as flagged at the on-site) in order to protect the archaeological site (#5DL2774) that lies west of the access road and flowline. The fence will be installed under the direction of the permitted archaeologist, **prior to the start of clearing and dirtwork. No equipment or construction will be allowed beyond the orange fencing at any time during the construction or subsequent well operation.** While on-site, the permitted archaeologist will also insure that all equipment and activities are contained within the fenced area. The orange plastic fencing will be removed only after the permanent well pad fence is completed.

**THE FOLLOWING MEASURES ARE MANDATORY FOR DC-3, DC-4, DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8 TO PROTECT CULTURAL VALUES:**

1. A permitted archaeologist will be on site during the initial clearing and soil removal operations for well pad, access road, and flow line construction to monitor for subsurface cultural resources. Monitoring results are to be reported in writing to the BLM Archaeologist
2. If previously unidentified cultural resources are discovered during construction, 1) activity in the vicinity of the resource will cease, 2) the resource will be protected, and 3) the BLM Archaeologist, Vince MacMillan (970-882-6832) will be notified immediately. The operator shall take any measures requested by the BLM to protect the resources until they can be evaluated and treated. The discovered resources will be documented and evaluated by a permitted archaeologist. The permitted archaeologist, in consultation with the BLM archaeologist, will make a determination of the nature and significance of the discovery, and will determine the appropriate method of treatment for it. Avoidance is the preferable treatment. However, if the resources cannot be avoided, the appropriate treatment method will be determined, and the permitted archaeologist will prepare any and all necessary treatment plans. These plans will be reviewed and approved by the BLM. Treatment activities will be conducted after all necessary consultations have been completed as required by Section 106 of the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, and the Archaeological Resources Protection Act. The BLM will be responsible for conducting all necessary consultations. Construction within the area of the discovery will be allowed to proceed after the appropriate treatment has been completed
3. Pursuant to 43 CFR 10.4 the holder of this authorization must notify the BLM Archaeologist, Vince MacMillan (970-882-6832), by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, the operator must stop activities in the vicinity of the discovery and protect it until notified to proceed by the authorized officer.
4. It is the responsibility of the operator to ensure that all employees and subcontractors of the operator are informed by the operator before commencement of operations that any disturbance to, defacement of, or collection or removal of archaeological, historic, or sacred

material will not be permitted. Violations of the laws that protect these resources will be treated as law enforcement/administrative issues

5. Disclosure or release of information regarding the nature and location of archaeological, historic, or sacred sites, without written approval by the BLM, is prohibited under provisions of the Archaeological Resources Protection Act. Cultural resource permittees of the BLM are allowed to use this information during course of the project for site protection purposes only. Unauthorized use or distribution of this information (which includes site location information present in cultural resource reports) is considered a violation of Federal statute.

**THE FOLLOWING MEASURES ARE MANDATORY FOR DC-3, DC-4, DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8 TO PROTECT AIR QUALITY:**

1. Nitrogen oxide (NO<sub>x</sub>) emissions are limited to 2 grams per horsepower hour for all new and replacement engines between 40-300 horsepower; for engines over 300 horsepower, NO<sub>x</sub> emissions are limited to 1 gram per horsepower (Lucas Vargo, pers comm )

*All on-site compression for the Doe Canyon project will be completed by electrical engines. Therefore, the above COA does not apply. However, any other diesel or combustibile engines used for this project should adhere to these limits on NOX emissions.*

**THE FOLLOWING MEASURES ARE MANDATORY FOR DC-3, DC-4, DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8 TO PROTECT RAPTORS:**

Construction is scheduled to occur during the migratory bird breeding season, generally described between April and August; therefore, nest searches for raptors prior to any ground disturbance are warranted where nest habitat occurs in the Proposed Action. If any nests are found, a biological monitor would need to be present during construction to avoid nest destruction/disturbance. In the event a raptor nest is identified, the BLM has identified the following (BLM, 1991)

- Raptors, including golden eagle, all accipiters, buteos, owls and falcons except kestrels, (raptors that are listed and protected by the ESA are addressed separately). No Surface Occupancy (NSO) within an eighth-mile radius of nest site. Exception: The NSO area may be altered depending on the active status of the nest site or the geographical relationship of topographic barriers and vegetation screening to the nest site
- Timing restriction from February 1 to August 15 and applies to a ¼-mile buffer around the nest site. Exception: During years when a nest site is unoccupied or unoccupied by or after May 15, the seasonal limitation may be suspended. Nest activity may be verified by inventorying the site at one-week intervals for a period of three weeks (i.e., three visits). Surveys must be done during the year of construction by a qualified biologist and accepted and documented by BLM staff. It may also be suspended once the young have fledged and dispersed from the nest

**THE FOLLOWING MEASURES ARE MANDATORY FOR DC-3, DC-4, DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8 TO PROTECT BALD EAGLE:**

Construction activities would be confined to the proposed well pad, access road and flowline ROWs to avoid potential impacts to listed species possibly occurring outside the area surveyed during the biological survey. Should any bald eagles be identified during construction or operation of the proposed projects, BLM resource specialists would be contacted immediately. In the event a bald eagle roost or nest is observed in the Proposed Action area, the BLM has identified the following (BLM, 1991):

- Bald eagle NSO within a ¼-mile radius of roost or nest site. Exception: The NSO applies to the essential features of the winter roost site complex. The NSO area may be altered depending on the active status of the roost or the geographical relationship of topographic barriers and vegetation screening. There are no exceptions for nest sites.
- Timing restriction from December 15 and June 15 for nesting habitat. Exception: During years when a nest site is unoccupied by or after May 15, the timing limitation may be suspended. It may also be suspended once the young have fledged and dispersed from the nest.
- Timing restriction from November 16 to April 15 for bald eagle winter roost site. Exception: If there is a partial or complete visual screening of the area of activity, the primary zone round the roost site may be reduced to ¼ mile.

Other recommendations and impacts would be considered for bald eagles as a result of an exception request.

**THE FOLLOWING MEASURES ARE MANDATORY TO PROTECT RANGE RESOURCES:**

Permanent range transects located near any of the proposed well sites would need to be avoided in order to continue the trend studies within those specific sites. Flowline construction from the proposed DC-4 and DC-6 well pads may each intersect a permanent range transect.

- The permanent range transects associated with the proposed DC-4 and DC-6 well pads and flowlines would need to be identified on the ground, flagged, and avoided during construction of the well pad and flow line.

In addition, breach of any fence lines must be immediately repaired or secured and replacement and improvement of any cattle guards must be completed simultaneously with removal of the existing cattle guard so that no fence or road is left exposed for cattle to pass.

**THE FOLLOWING MEASURES ARE MANDATORY FOR DC-3, DC-4, DC-6 AND RECOMMENDED FOR DC-2, DC-7, AND DC-8 TO PROTECT SENSITIVE SPECIES:**

Construction activities would be confined to the proposed well pad, access roads, manifold, and flowlines to avoid potential impacts to sensitive species possibly occurring outside the area surveyed during the biological survey. Should any sensitive species or potential nests be

identified during construction or operation of the proposed project, BLM resource specialists would be contacted immediately. In the event Gunnison sage grouse are identified in the Proposed Action area, the following were developed by the BLM (1991):

- NSO within ¼-mile radius of lek site. Exception: the NSO area may be altered depending upon the active status of the lek or the geographical relationship or topographical barriers and vegetation screening to the lek site.
- Timing restrictions for critical winter habitat from December 16 to March 15.
- In order to protect nesting sage grouse, surface disturbing activities proposed during the period between March 1 and June 30 would be relocated, consistent with lease rights granted and section 6 of the standard lease terms, out of sage grouse nesting habitat. Sage grouse nesting habitat is described as sagebrush stands with sagebrush plants between 20 and 100 cm in height and a mean canopy cover between 15 and 40%

Conditions of Approval for raptors (e.g. ferruginous hawk) are described above