

MCELMO DOME (LEADVILLE) UNIT
HE-5
736' FSL & 1573' FWL
Section 36, T38N, R19W
MONTEZUMA COUNTY, CO

ATTACHMENT E

SURFACE USE PROGRAM

1. Existing Roads

- A. The access route to the location is illustrated on Attachment F.
- B. Existing access will be maintained in as good or better condition than presently exists. The maintenance program will include, but not be limited to, upgrading, ditching, blading, culvert maintenance, installing additional drainage turnouts (if needed), and graveling of roadbed.
- C. Any existing two-track roads will be closed as they go beyond the well pad. A dirt/rock berm and brush will be placed behind the road closure.

2. Access Road To BE constructed

- A. A gravel-surfaced access road will be constructed and will be limited to a traveled-road width of 18'.
- B. Suitable topsoil material will be conserved in stockpiles in the most convenient locations along the access route. Topsoil will be stripped to an average depth of 6 inches. Any stockpile not used within one year will be seeded to insure topsoil integrity and prevent erosion.
- C. The access road will be surfaced with 12" of gravel. Depending on weather conditions, roads may be required to be wetted down as a dust control measure.
- D. Culvert installation will be left to the discretion of the dirt contractor (as needed for the specific benefit of Kinder Morgan CO2 Company, L.P.).
- E. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Should additional area be needed, approval will be requested in advance.
- F. The road will be maintained reasonably smooth, and free of ruts, soft spots, chuckholes, rocks, slides and washboard. The BLM, San Juan Resource Area road specifications and "Gold" book will be followed for specifications on road design and culvert installation. All weather surfacing may be required if well becomes a producer. A regular maintenance program will include blading, ditching, sign replacement, surfacing and culvert maintenance. Maintenance deficiencies will be corrected when documented and directed by the Authorized Officer.

3. Existing Wells

There are three existing wells within the HE Cluster.

4. Existing and/or Proposed Production Facilities

A. On well pad – None.

B. Off well pad – This well will be produced into the Hovenweep “HE” Cluster Facility. A flow line will be constructed and will route from the wellhead along the access road right-of-way. All production equipment will 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 had become a nuisance, adequate muffling techniques will be applied.

5. Location of Water Supply

Water will be hauled from a private, off lease source during construction and drilling operations.

6. Construction Materials

Construction materials (sand & gravel) not available on-site will be hauled from local pits.

7. Methods of Handling Waste Material

A. Produced water will be hauled to the Class I non-hazardous disposal well.

B. Any produced water containing significant quantities of produced oil will be treated and the oil sold, recycled, or disposed of in a state-licensed treatment facility.

C. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation and appearance. All wastes other than sewage and drilling fluids will be contained in a skid-mounted refuse container/trailer. Solid waste and garbage resulting from drilling operations will be hauled to the Montezuma County landfill or any other landfill permitted for this waste type.

D. Sewage from onsite sanitary facilities will be treated in an onsite, Montezuma County-approved septic system, or hauled to a municipal treatment plant.

E. Drilling fluids will be recycled whenever practical. Spent fluids and cuttings will be dewatered and dried for burial in the reserve pit (see 10.c.).

8. Ancillary Facilities - None required.

9. Well Site Layout

- A. Attached is the drill pad layout illustrating the orientation of the drill pad & reserve pit. A cross-section diagram of drill pad is also illustrated.
- B. The reserve pit will be constructed with at least one-half of the capacity in cut, and will be sealed in such a manner as to prevent leakage of the fluids. To insure containment of drilling fluids in the reserve pit, the inside of the pits will be lined with at least 12 mil plastic. The bottom of the pit will be smooth and free of any sharp rocks. If the pit has a rocky bottom, it will be bedded with material so as to avoid the possibility of puncturing the liner. 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.
- C. Three sides of the reserve pit will be with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed.
- D. 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 prevent storm water runoff and contain spills. Alternatively, a lined sump pit may be utilized to contain such fluids. The well pad will be designed in such a manner as to prevent storm water runoff and contain spills. The need for the berm will be reassessed upon the completion of the well and production is established.
- E. Topsoil will be stockpiled and will be segregated from areas where subsoil materials are stored.

10. Plans for Surface Reclamation

- A. Immediately upon completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in a mesh wire cage, and hauled to an approved sanitary landfill.
- B. Kinder Morgan CO2 Company, L.P. (or contractor) will contact the BLM's San Juan Resource Area office in Durango, CO (970) 247-4082, at least 48 hours prior to starting reclamation work and upon completion of restoration measures.
- C. Before any dirt work to restore the location takes place, the reserve pit will be completely dry. Any water remaining in the reserve pit will be disposed in an approved disposal facility (see Surface Use program Item 7). The reserve pit will be reclaimed within 12 months from the date the well is spudded. Before reclamation of the reserve pit proceeds, it will be dry and solid. This can be accomplished naturally or by artificial solidification. The reserve pit solids will not be squeezed out of the pit. We will attempt to fold the pit liner over the top of the pit material and backfill. If the liner becomes ripped at the surface, it will be cut off at the mud level and removed to an approved disposal site. There will be a minimum of 2 feet of overburden on the pit prior to replacing the topsoil and seeding.
- D. If production is established, unused portions of the well pad will be recon toured, topsoil spread, and reseeded per BLM requirement.

- E. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts except as provided in 9.d. above. All compacted portions of the pad will be ripped to a depth of 12 inches unless in solid rock.
- F. Stockpiled topsoil will be spread evenly over the areas designated for restoration. Enough topsoil will be kept to reclaim at a later date the portion of the location and access road needed for production operations. This remaining topsoil stockpile will be seeded in place using the prescribed seed mixture below.
- G. Seed will be broadcast between September 1 and December 1 (prior to ground frost) utilizing the following prescription. Seed may be drilled at half the rate of broadcast seeding. Seed depth = $\frac{1}{2}$ inch. All seeding rates in pounds of pure live (adapted varieties) seed:

Species	Common Name – Variety	Rate lbs/acre
<i>Oryzopsis hymenoides</i>	Indian ricegrass – Poloma	1.0
<i>Agropyron cristatum</i>	Fairway crested wheatgrass	1.5
<i>Agropyron desertorum</i>	Standard crested wheatgrass – Nordan	1.5
<i>Agropyron trichophorum</i>	Pubescent wheatgrass – Luma	1.0
<i>Sporobolus cryptandrus</i>	Sand dropseed	0.05
<i>Sporobolus airoides</i>	Alkali sacaton	0.1
<i>Hilaria jamesii</i>	Galleta – vivia	1.0
<i>Melilotus officinalis</i>	Yellow sweetcover	1.0
<i>Sanguisorba minor</i>	Small burnet	1.0
<i>Penstemon strictus</i>	Rocky Mountain penstemon – Bandera	0.1
<i>Atriplex canescens</i>	Fourwing saltbush	1.0
<i>Ephedra viridis</i>	Green ephedra	1.0
<i>Cercocarpus moutanus</i>	Mountain mahogany	0.5
<i>Cowania Mexicana</i>	Cliff rose	
	Or	2
<i>Purshia glandulosa</i>	Desert bitterbrush	<u>1.0</u>
		11.75

- H. Water bars will be built as follows to control erosion:

Grade	Spacing
2%	Every 200 feet
2 – 4%	Every 100 feet
4 – 5%	Every 75 feet
5+%	Every 50 feet

Reclamation will be considered successful when the desired vegetative species are established, erosion is controlled, weeds are considered a minimum threat, and it is likely that ground cover will return to its pre-disturbance condition. We will continue revegetation efforts until this standard is met.

- I. Reclamation operations will start immediately after drilling or completion operations cease and will be completed as soon as practical under prevailing weather conditions.
- J. Precautionary measures will be taken to control noxious weeds adjacent to disturbed areas throughout the course of operations (including production phase). 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, Kinder Morgan CO2 Company will submit a Use Proposal to the Authorized Officer 60 days prior to the planned application date.

11. Surface Ownership

All areas of proposed surface disturbance are located on public lands under BLM supervision.

12. Other Information


- A. A cultural resource survey of the proposed well pad is included at Attachment "C".
- B. The BLM will be notified of any and all antiquities or other values of cultural, paleontological and/or scientific interest discovered as a result of operations under this permit. All such discoveries will be left intact until the significance is determined and authorization to continue operations is given by the BLM. - - A permitted archaeologist will be onsite during initial surface disturbing operations to monitor for sub-surface cultural resources.
- C. If subsurface material is exposed during construction, work in that spot will stop immediately and the San Juan Resource Area office will be contacted. All employees working in the area will be informed by the operator that they are subject to prosecution for disturbing archeological sites or picking up artifacts. Salvage or excavation of identified archaeological sites will only be done if damage occurs.
- D. Kinder Morgan CO2 Company will be responsible for informing all persons associated with this project that they will be subject to prosecution for knowingly disturbing Native American Indian shrines, historic and prehistoric archaeology sites, or for collecting artifacts of any kind, including arrowheads and pottery sherds, from all federal lands; they may also be subject to prosecution for similar activity on private lands without the permission of the private surface owner.
- E. Kinder Morgan CO2 Company will furnish the dirt contractor a copy of the approved Surface Use Program and any addition BLM stipulations prior to commencing any work. A copy will be made available on site during construction.
- F. Any accidental spill will be cleaned up immediately, and contaminated soils will either be land farmed or land filled. Proper reporting procedures will be followed.

13. Lessee's or Operator's Representative and Certification

D.A. Frederick
Kinder Morgan CO2 Company
500 Dallas - Suite 1000
Houston, TX 77002

Ken Havens
Kinder Morgan CO2 Company
500 Dallas - Suite 1000
Houston, TX 77002


I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Kinder Morgan CO2 Company and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C 1001 for the filing of a false statement.



Ken Havens
Director Source & Transportation
Kinder Morgan CO2 Company, L.P.

2/22/02

Date



Doug Frederick
Drilling and Production Manager
Kinder Morgan CO2 Company, L.P.

2/22/02

Date



COMPLETE ARCHAEOLOGICAL SERVICE ASSOCIATES

~~12400 Highway 666~~ • Cortez, Colorado 81321 • (970) 565-9229
Box 777

Laura Kochanski, Supervisory Archaeologist
Bureau of Land Management
Canyons of the Ancients National Monument
Anasazi Heritage Center
27501 Highway 184
Dolores, CO 81323

December 2, 2001

Dear Laura,

Enclosed are four copies of a Class III inventory report for Kinder-Morgan's proposed HB 4 and HE 5 well pads. Two sites were recorded during the inventory of the ten-acre blocks for the well pads. The report includes recommendations for avoidance and fencing. Four copies each of the site forms (one with original photographs and three with color xeroxes) are also included.

We will be submitting reports for three additional well pads when the snow melts enough for final inventory and site recordation. Please give either Larry or me a call if you have any questions concerning this report, or if you want us to do anything different with the next reports.

Sincerely,

Nancy S. Hammack
CASA

cc: Bob Clayton, Kinder-Morgan CO₂