FINDING OF NO SIGNIFICANT IMPACT
and
DECISION RECORD
for
KINDER MORGAN CO_2 COMPANY'S PROPOSED DEVELOPMENT OF WELL SITES HE-5, AND SC-10 AND ASSOCIATED INFRASTRUCTURE

Canyons of the Ancients National Monument, Colorado
EA# CO-SJFO-02-33EA

Finding of No Significant Impact Based on the analysis of projected environmental impacts contained in Environmental Assessment CO-SJFO-02-033EA (EA) for the Kinder Morgan CO_2 Company's proposed drilling of 4 wells and associated construction of well-tie pipes and access roads and considering comments received during a 30-day public review of the above document, I have determined that the proposed project will not have significant impact on the human environment and that an Environmental Impact Statement (EIS) is not required. My determination relies on and adopts the BLM standard practices applied to surface-disturbing activities, and the additional environmental protection measures identified in the EA in Appendix C. I have also determined that the proposed project conforms with the 1984 San Juan Resource Management Plan (RMP), the 1991 State of Colorado Oil and Gas Leasing Amendment, the June 9, 2000 Canyon of the Ancients National Monument (CANM) Presidential Proclamation, and with the CANM Interim Management Guidance for Oil and Gas Leasing and Development.

Since the review EA was completed, the applicant, Kinder-Morgan has moved two proposed wells to private surface-private minerals. Therefore, two of the four 4 wells analyzed in the environmental assessment are on private land and have been drilled and 2 wells, which are the subject of this decision record, are on public land.

In total, the applicant's four well pads affect 12.36 acres, and associated access roads and well-tie pipelines affect 0.95 acres. Total surface disturbance after drilling four wells would be approximately 13.31 acres. Total disturbance for the two federal wells would be 6.8 acres. The project area is located approximately 15 to 20 miles west and northwest of Cortez, Colorado and within the northern portion of the CANM.

The EA also addresses the No Action alternative to the applicant's proposal. BLM resource specialists considered additional well site locations within the lease areas during field onsites. Proposed locations were either accepted for further analysis in the EA or changed as a result of these onsite investigations. The Proposed Action minimizes the acreage of disturbance associated with drilling the wells due to selecting project locations that are within close proximity to existing CO_2 gathering and access infrastructure. Another action alternative; directional drilling was considered but eliminated from detailed consideration in the EA due to

cost and down hole (geologic) uncertainties that make this methodology high risk for drilling failure. None of the alternatives would significantly alter the physical or human environment.

Decision It is my decision to authorize the Kinder Morgan proposal to drill two wells, the HE-5 and SE-10, on public land. I am also incorporating as a condition of approval, the BLM standard practices applied to surface-disturbing activities and the additional environmental protection measures presented in Appendix C of the EA. Per the provisions of 43 CFR 3151(b), this decision is in full force and effect.

Rationale For Decision In arriving at my decision, I weighed whether the applicant's lease rights could be honored in a manner so as not to create any new impacts that interfere with the proper care and management of the objects protected by the CANM proclamation.

The decision to implement the Proposed Action, with the BLM standard practices applied to surface-disturbing activities and the additional environmental protection measures described in Appendix C of the EA, will not result in unnecessary or undue environmental degradation, is in conformance with the 1984 San Juan RMP and its amendments, and will not create any new impacts that interfere with the proper care and management of the objects protected by the June 2000 CANM proclamation. In reaching this decision and in my determination of the Finding of No Significant Impact, I considered the above referenced EA, the errata sheet of that EA found in Appendix A of this Decision Record/FONSI, and considered public comments received during the 30-day public review period.

One issue presented through public comment and not specifically addressed in the EA is the project's contribution to global warming from releases of CO_2 into the atmosphere. By design, the Proposed Action will contribute insignificant releases of CO_2 to the atmosphere. The Proposed Action is to capture subterranean CO_2 and transport it via existing pipeline infrastructure to the Permian Basin for re-injection into other subterranean reservoirs.

Associated with this global warming issue were comments that the BLM should consider alternative sources of CO_2 as a means of addressing the project's purpose and need. There was a related comment that approval of this Proposed Action would hinder the development of alternative source CO_2 markets. In response to these two comments, there is limited private sector interest in utilization of alternative sources, such as power plants, because the cost of production is prohibitive and unlikely to meet market demand for CO_2. To promote a change in free market supply would require congressional legislation that creates incentives to more fully develop secondary sources on CO2. I do not control the market forces of supply and demand, nor does the BLM. Nor can I second guess or ignore the fact that societal preference was exercised at the time the leases were issued. Absent congressional legislation, and in light of current market conditions and the desire to efficiently develop the resource, industry continues to develop valid existing leases rather than to pursue secondary sources of CO2. My decision is based on whether the applicant can develop their lease consistent with environmental requirements and the CANM proclamation. This issue is further addressed in Appendix B –

Responses to Public Comment. Consideration of potential project impacts to globally emerging markets is beyond a reasonable scope of impact analysis for a project when only moderate potential impacts are expected.

The EA addresses the area of potential effect and analyzes the anticipated impacts of conducting the drilling project. The proposed project would result in approximately 13.31 acres of surface disturbance on public and private land (6.8 acres on public land). The environmental impact would primarily be soil compaction and the removal of vegetation. Some vegetation and small wildlife species mortality is anticipated, but would not reach the level of significant impact. Recovery of the soil, vegetation, and wildlife resources is anticipated within a few years. Additionally, the operator will reseed the pipeline ROWs and the portions of the well pads not needed for production, following drilling, as specified in the COA. The well pads will be reclaimed following the plugging and abandonment of the well when no longer productive. Other environmental impacts involve visual impacts from fugitive dust associated with equipment transportation and operation in the project area. These impacts will be short-term lasting the duration of construction and drilling operations at each location.

Potential impacts to archeological resources are considered insignificant because intensive archeological surveys have already been conducted and facilities have been sited to completely avoid known sites. Additionally, the operator will be required to have archeological monitors on site while the work is in progress, which will allow for the identification of presently undiscovered cultural sites. Consultation with the Colorado State Historic Preservation Office has been completed and the SHPO agrees with the archaeological mitigation approach.

The Proposed Action alternative minimizes environmental impacts relative to drilling at alternative locations, does not result in unnecessary or undue degradation of the environment, nor does it contribute to significant cumulative effects. The Proposed Action provides for the most effective, and cost-efficient method of obtaining leased gas resources while minimizing impacts to the environment.

The No Action Alternative was not selected because it deprives the leaseholder of prior existing rights that are consistent with the Monument Proclamation. Additionally the Federal Government could lose potential oil and gas royalty revenues.

The EA also addressed, but dropped from consideration, an alternative to conduct directional drilling in lieu of drilling from multiple well pad sites. This alternative was determined to be unreasonable to implement due to risks of unsuccessful drilling and costs of 1.5 to 2 times greater.

Mitigation The environmental protection measures are outlined in Appendix C of the EA and

are attached as conditions of approval.

Monitoring The project will be inspected according to BLM monitoring protocols. The inspections will be designed to monitor environmental effects of the project and to insure that the operator complies with the mitigation measures. Compliance actions are to insure that these operations are conducted in accordance with the terms and conditions of the approval and associated stipulations, the elements of the Proposed Action (applicant committed practices), BLM standard practices applied to surface-disturbing activities, and the mitigation measures otherwise listed in the EA. A cultural resource monitor will continuously monitor operations to assure site avoidance and compliance with other protective conditions for cultural resources.

Public Involvement The EA prepared for this proposal was placed on the Colorado BLM CANM web site on May 2, 2002, with a thirty-day public comment period. A news release was published in the Dolores Star on May 17th, 2002 and the Cortez Journal and Durango Herald on May 18th, 2002. The project was posted on the NEPA project update for June 2002. This project notification was mailed to approximately 300 agencies, state and local governments, national and local environmental groups, media, industry and interested individuals.

Six responses where received in the form of hard copy letter, forty were received via electronic format. All electronic messages were printed and are included with the hard copy letters in the administrative record for this project. BLM staff reviewed all comment letters and electronic messages. Issues provided by the public are summarized and addressed in Appendix B.

Administrative Review and Appeal This decision is subject to administrative review in accordance with 43 CFR §3165. Any request for administrative review of this decision must include information required under 43 CFR §3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, 2850 Youngfield Street, Lakewood, Colorado 80215. The request for administrative review must be filed within 20 business days of the date this Decision Record is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR §3165.4.

Field Manager
Canyons of the Ancients National Monument

08.22.02
Date

Appendix A

Errata Sheet

Corrections to EA# CO-SJFO-02-033EA

Entire document – All referenced appendices should be renumbered to reflect the addition of Appendix A – Errata Sheet and Appendix B - Response to Public Comments on EA # CO-SJFO-02-033EA. For example, Final Draft EA Appendix A will be changed to Appendix C in the Final EA.

Entire document – "Conditions of Approval" and/or "COA" are changed to "Draft Conditions of Approval" or "Draft COA" throughout the entire EA.

Entire document - All references regarding the availability of project "individual well site survey plats", "Surface Use Plans" or other documents described as included with the "APDs" and provided as attachments to Appendix C (see above change to appendices) are removed. Only the Draft COA is included as Appendix C. The other paper reference documents removed from the EA, as described above, are available at the BLM.

P.14 - The entire section 1.6.3 Transportation is changed to read as follows:

Typically 25 tractor-trailer loads are required to move the bulk of the drilling equipment onto the surface location and the same numbers of loads are required to move the drilling equipment from the location. Approximately 125 trips (total) per well site are needed to supply water for drilling, 2 trips for fuel, and 4 trips for cement. An additional 10 vehicle trips per day would be needed to transport crews to the site. Approximately 70 trips per well site would be needed to relocate (first three wells) and dispose (last well site) of fresh water and brine water after drilling completion. Solid waste and liquid waste would be disposed of once per week for a total of 8 trips. This is a total of 565 vehicle trips per well. Two wells are located on private land and two are located on public land within the project area.

P.16 - Section 1.7.2 Alternative No. 2: Action Alternatives Eliminated From Detailed Consideration is changed to include a directional drilling alternative. The following directional drilling alternative was considered by Kinder Morgan, but eliminated from detailed consideration in the EA due to cost and technical reasons as described below.

Kinder Morgan considered utilizing directional drilling from an existing well pad. Directional drilling has not been used in this area due to the unique geology of the CO2 formation under the CANM. Directional drilling has a higher incident of down-hole problems during the drilling of the well. The cost of directional drilling from a multiple well pad is 1.5 to 2 times the cost of

drilling a vertical hole. Kinder Morgan CO2 continues to research the possibility of utilizing directional drilling for future development. The new wells were located in the best-expected production zones based on reservoir modeling that also utilized the existing infrastructure capacity to minimize the installation of new facilities and any surface disturbance.

P.16 - The entire section 1.7.3 Alternative No. 3: No Action Alternative is changed to read as follows:

The regulations implementing Section 1502.14(d) of the NEPA require that the alternatives analysis in the EIS "include the alternative of no action" (43 CFR 1502.14(d). For this project, the No Action Alternative is denial of the drilling and development proposal as submitted by the Operators. However, the Department of the Interior's authority to implement a "No Action" alternative which precludes drilling by denying the process is limited. An explanation of this limitation and the discretion the Department has in this regard is as follows:

An oil and gas lease grants the lessee the "exclusive right and privilege to drill for, mine, extract, remove, and dispose of all oil and gas deposits" in the leased lands, subject to the terms and conditions incorporated in the lease (Form 3100_11). Because the Secretary of the Interior has the authority and responsibility to protect the environment within federal oil and gas leases, restrictions are imposed on the lease terms.

The Tenth Circuit Court of Appeals in Sierra Club vs. Peterson (717 F.2d 1409, 1983) found that "on land leased without a No Surface Occupancy stipulation, the Department cannot deny the permit to drill ... once the land is leased the Department no longer has the authority to preclude surface disturbing activity even if the environmental impact of such activity is significant. The Department can only impose mitigation measures upon a lessee who pursues surface disturbing exploration and/or drilling activities." The court goes on to say "notwithstanding the assurance that a later site specific environmental analysis will be made, in issuing leases the Department has made an irrevocable commitment to allow some surface disturbing activities, including drilling and road building."

Leases within the area contain various stipulations concerning surface disturbance, surface occupancy, and limited surface use. In addition, the lease stipulations provide that the Department of the Interior may impose "such reasonable conditions, not inconsistent with the purposes for which (the) lease is issued, as the (BLM) may require to protect the surface of the leased lands and the environment." None of the stipulations, however, would empower the Secretary of the Interior to deny all drilling activity because of environmental concerns.

Provisions in leases that expressly provide Secretarial authority to deny or restrict APD development in whole or in part would depend on an opinion provided by the U.S. Fish and Wildlife Service (FWS) regarding impacts to endangered or threatened species or habitats of plants or animals that are listed or proposed for listing. If the FWS concludes that the proposed action and alternatives would likely jeopardize the continued existence of any endangered or

threatened plant or animal species, then the APD(s) may be denied in whole or in part.

Based on the above explanation, this alternative would deny the proposal as submitted but would allow consideration of these APDs in some modified format in a future environmental analysis.

P.48 - For accuracy and clarity, the description of potential impacts to wintering big game are changed as follows; "Wintering animals, if present, may avoid the area due to noise, increased traffic, and equipment operations during production operations. This potential impact would be low and long-term based on the limited availability and use of potential wintering grounds in the area."

P.52 – Section 3.4 Cumulative Impacts, paragraphs 2 and 3 are changed as follows:

"According to the RMP and the 1991 Oil and Gas Amendment (BLM 1991), for the San Juan/San Miguel Planning Area (SJ/SMPA), approximately 2% (1,430 acres) of the surface area within the management area will be impacted by oil and gas activities by 2009. That considers the potential drilling of 353 wells with an average surface disturbance of 4.1 acres per well (BLM 1991). The average acreage of disturbance per well for the proposed action is approximately 3.4 acres for a total disturbance of 13.3 acres. The estimated reasonable foreseeable development (RFD) scenario includes, 188 "development wells" on BLM lands within the Paradox Basin, the geologic basin encompassing the project analysis area. According to BLM records no more than 125 development wells have been drilled in the Paradox Basin on BLM lands. Therefore, the addition of Kinder Morgan's 4 proposed wells is within the number of wells planned for in the RMP and 1991 amendment.

In order to further consider cumulative impacts within the CANM, an analysis of Colorado Oil and Gas Conservation Commission (COGCC) records within the project area was made to quantify existing oil and gas disturbance within a 1-mile and 5-mile radius of each proposed well site. Provided below are the results of this analysis. Table 3-1 contains a listing of facilities within a 1-mile and 5-mile radius of each of wells in the proposed action. Total disturbance estimated for each project is based on the above estimate of 4.1 acres per well."

Appendix B

Response to Public Comments on EA # CO-SJFO-02-133EA

Issues raised during the 30-day public review of the above EA and the BLM's responses are found below.

1. Consistency with the CANM Proclamation

Comments were received that the proposed Kinder Morgan activity was not consistent with the requirements under which the CANM is to be managed. The Proclamation language as well as the Interim Management Guidance for oil and gas activities in this area was carefully reviewed to ensure consistency with this proposal. The Proclamation recognized oil and gas development as a legitimate use of the lands. As is demonstrated throughout the EA, the proposed drilling of two Kinder Morgan CO2 wells on public lands within the CANM minimizes or avoids potential impacts to the sensitive resources for which the Monument was created. More specific detail concerning consistency with the Proclamation can be found in Section 1.3 of the EA, sections of the FONSI/Decision Record, and in the discussions of the below issues.

2. Protection of Sensitive Monument Resources

Comments were received expressing concern over the protection of sensitive and other less sensitive Monument resources. Many of the comments reiterated the expected impact to particular resources as identified in the EA, while several comments inaccurately stated the magnitude of an impact on a particular resource. These comments are summarized as follows with BLM response added where appropriate.

The protection of archeological sites was the highest priority in the project design and the development of the EA and associated analysis. The entire area of projected disturbance has undergone an intensive ground inventory\and identified all known cultural sites in the project area. Additionally the BLM requires for this project that an archeologist be present on site to monitor surface disturbing activities to ensure that known sites are avoided and, if previously undiscovered sites are found during activities, they are also protected. All consultation required under Section 106 of the National Historic Preservation Act has been completed.

Pertaining to the discovery of cultural resources, the EA states on pages 38 and 40 that, "all activities in the vicinity of the cultural resource would cease and a BLM representative notified immediately." For clarification, if subsurface cultural resources are encountered, any activities that could impact those resources are halted until the BLM archeologist evaluates

the site and necessary consultation with the SHPO is completed. Following this consultation with the SHPO, a determination would be made by the BLM regarding what actions need to be taken in order to mitigate any impacts to the resource. Potential actions include halting further surface disturbance until an alternative site within the subject lease area can be considered.

One commenter inaccurately stated that the EA identifies possible long-term moderate damage to most natural resource values in the four well site areas, including groundwater, wildlife and big game, and a moderate danger of hazardous chemical releases (P. 38).

Long-term potential moderate impacts are identified for soils, topography and vegetation within the footprint of the development area. These are cleared, graded and compacted sites in which it is easy to detect the change but that does not meet the CEQ criteria of significant impact. Additionally, other potential long-term low to moderate impacts exist for wildlife, visual resources and from increases in project area noise. No potential long-term moderate impacts are identified for big game as indicated by the commenter. As with most other natural resources, low to moderate impacts are expected during construction and drilling activities, and, as identified in the EA, these potential impacts would be short-term, for the duration of construction/drilling activities. The low to moderate, short-term potential danger from the potential accidental spill or discharge of hazardous materials was also correctly identified, and to the extent possible mitigated.

A commenter expressed concern about erosion reaching nearby ephemeral streambeds. The BLM acknowledges the potential for increases in soil erosion in the project area, including the potential of displaced soils reaching area drainage courses. However, as stated in the EA, these potential impacts will be mitigated by the implementation of erosion control best management practices (BMPs) during construction/operation activities. These BMPs are included in the Draft COA and within the Stormwater Pollution Prevention Plan (SWPPP) prepared for the project. The U.S. Environmental Protection Agency has been provided a Notice of Intent by Kinder Morgan to implement the SWPPP.

The same commenter stated that the removal of vegetation around the well pads will increase the erosive potential of these soils, and will result in the loss of important topsoil (P. 45). The commenter further stated that cryptogrammic soil crusts would be destroyed thereby causing further serious ecological impacts.

Vegetation removal at well sites will be limited to the size of the pad, 3.09 acres or 12.36 acres for all pads. Vegetation around the pad will not be removed as stated by the commenter. Cryptobiotic soils will be lost within a small area of site HE-5 and HB-4 where they occur in the project area. We do not concur that potential impacts from leveling and grading, in previously disturbed areas (3 of the 4 sites) and along the existing infrastructure easement, will result in serious ecological impacts.

The same commenter expressed concern that vehicle transportation estimates per well are too low. The EA states that, in total as many as 322 vehicle trips per well are anticipated (42 specifically described vehicle trips and 10 trips per day for up to 4 weeks for site workers, 280 trips). The commenter also states that certain types of vehicle trips where not addressed in the EA. Specifically, the transportation of the mobile trailers and the removal of solid and fluid wastes vehicle trips were not discussed. An errata sheet has been added to Appendix A to more accurately characterize expected vehicle traffic to the project area.

A commenter stated that they believe the projected disturbance within the CANM will be much greater than that assessed in the EA. The proposed action acreage of disturbance is 13.31 acres (6.8 acres of which are associated with the 2 wells proposed on public land). No additional disturbance to surface resources is permitted. An additional 16.9 acres of disturbance associated with construction of well-tie pipelines within the existing field infrastructure easement to existing cluster facilities was previously authorized by the BLM in 1978. The original construction of CO2 infrastructure in the CANM was covered under an Environmental Impact Assessment titled "Wasson Field – Denver City Unit CO2 Project" dated July 1978.

A commenter stated that the EA underestimated "impending disturbances" to air quality, groundwater, and to soils from hazardous material spills. Long-term impacts (post construction and drilling) to air quality would be low primarily associated with fugitive dust generated by vehicles during routine site inspection and maintenance activities, and localized. These impacts are comparable to Monument visitors driving unimproved roads for non-industrial purposes (hiking, site-seeing, etc.) The expectation of low potential impacts to groundwater is based on the implementation of Kinder Morgan's Spill Control Plan, and the BLM requirement of a surface casing and wellhead-testing program. These plans and programs are available for review from the BLM. Moderate impacts to project area soils consist of mixing, leveling and compaction during construction activities. These impacts would be limited to the proposed area of disturbance (P. 9) and interrelated to construction along the existing (50-foot wide) infrastructure easement. Additionally, proposed action soil disturbance is both individually (per well) and cumulatively less than that planned by the BLM for wells approved in the RMP and the 1991 Oil and Gas Amendment (BLM, 1991), for the San Juan/San Miguel Planning Area (SJ/SMPA).

A commenter was concerned that insufficient effort has been expended to ensure that additional cultural resources are not present in the soil at the four well sites. Complete project area culture resource surveys were conducted by Complete Archaeological Service Associates (CASA) on November 20 and 21, 2001 and on January 30, 2002. CASA archaeologists are permitted by the BLM to conduct surveys in the CANM. Additionally, a BLM archaeologist field checked and approved the quality of the surveys.

A comment was received stating that BLM mitigation measures do not address the long-term impact to wintering big game who potentially may avoid the area due to noise, increased

traffic, and equipment operations during production operations (EA at 48). An errata has been added to Appendix A clarifying that there is limited use of the project area as big game winter habitat. There are no designated deer or elk winter range or concentration areas within the project area (EA, pg. 36). As such no additional mitigations measures are required or warranted. The same commenter is concerned that removal of vegetation will destroy wildlife habitat, and construction may kill reptiles, including those that are considered to be sensitive species under the Endangered Species Act (P. 21, 23). There are no ESA listed (p. 21) reptiles in the project area.

A commenter noted the potential for permanent degradation of visual resources at two outstanding scenic areas -- Goodman and Mesa Verde, and that vegetation removal will result in the loss of forage and introduction of invasive species. The BLM determined that visual impacts would be low to moderate during construction and drilling activities and low and long-term during production/operation of the wells. The BLM acknowledges the potential visual impacts from vegetation removal in the project area as stated in several locations in the EA.

A commenter stated the EA failed to address, in any meaningful fashion, the long-term impacts generated by noise from production operations, nor does the EA offer any serious mitigation measures, such as limiting the size or type of compressors. No compression is planned for any of the well sites. Gathering system compression is provided at the existing gathering clusters. As such, the highest noise levels occurring during production operations will be during vehicle operations at the well sites.

3. Unavailability of Cited Documents in Electronic Format

Comments were received stating that key documents cited as included in Appendix A of the Final Draft EA were not provided on the BLM website. In particular, the referenced documents included Kinder Morgan's Surface Use Plans, the BLM Draft Surface Use Conditions of Approval, site plats and APDs, and Kinder Morgan's H2S Safety Plan.

With the exception of the Draft Surface Use COA, all of the other cited documents are removed from reference (refer to Appendix A - Errata Sheet) as being "attached" or "provided" in the Final EA. These documents are removed in order to avoid redundancy and production of an unnecessarily lengthy document. For example all information relevant to making impact determinations, that is found in the Surface Use Plans, on plats, in Kinder Morgan's H2S Safety Plan and in the APDs is found in Section 1.6 and in resource subsections of the document. All of the documents cited in the Final EA are available at the BLM – San Juan Public Lands Center.

While the Draft COA was not provided in Appendix A, the COAs are found throughout the EA under the mitigation measures section of each resource potentially impacted.

4. Inadequate Range of Reasonable Alternatives

Several comments were received stating that the EA did not include a range of reasonable alternatives including discussion of the analysis used to consider alternative project locations, and inappropriate consideration of the No Action Alternative.

An objective of this EA was "… to provide BLM decision makers with adequate information upon which to base the decision to approve or deny the Proposed Action or an alternative." (EA, P. 2). The no action alternative was identified and discussed. Failure to identify an acceptable approach to the drilling activities would compel acceptance of the no action alternative. The purpose and need section of the EA drives the development of reasonable alternatives. The purpose of the Proposed Action is to develop CO_2 gas reserves, while protecting the resource values identified in the CANM Proclamation. Reasonable alternatives to the Proposed Action need to address that purpose.

In terms of considering alternative locations, an interdisciplinary team (IDT) of resource specialists from the BLM participated in onsite investigations, site selection, and the development of measures to minimize potential impacts to monument resources. As stated in Section 1.7.1, "Following these onsite surveys it is determined by the BLM that the proposed action represents the least environmental impact relative to the placement of the well sites at alternative locations within each lease boundary."

Regarding the statement, "BLM cannot deny the right to drill and develop the leasehold" (EA at 16), please refer to Errata Sheet, Appendix A for clarifying language on the consideration of the no action alternative.

Directional drilling, an alternative considered but deemed too expensive and eliminated from consideration in the EA, is added as an errata in Appendix A.

5. Validity of Kinder Morgan Leases

According to BLM records, Kinder Morgan has valid existing rights given by Lease Nos. COC-21437, C-1713 (2 wells), and COC-22486.

6. Inadequate Cumulative Impact Assessment

Cumulative Impacts were discussed on p. 52-54 of the EA. While comments were received related to our analysis of cumulative impacts, the BLM feels that the discussion of these impacts is appropriate to reach the finding that this project would not cumulatively create a

significant impact to the environment. Refer to Appendix A – Errata Sheet for supplemental information added to the Final EA that was either "unavailable", as stated in the Draft EA, or has been added for clarity.

Specifically, additional text was added to address comments received regarding the failure to quantify existing oil and gas development within the analysis area, within CANM, and whether the Reasonable Foreseeable Development scenario originally established in 1991 has been exceeded. The RMP identifies the potential for drilling 313 wells on BLM lands within the Paradox Basin, the geologic basin encompassing the project analysis area. Of these wells, 125 are identified as "wildcat wells" and 188 as "development wells". According to BLM records no more than 125 development wells have been drilled in the Paradox Basin on BLM lands. Therefore, the addition of Kinder Morgan's 2 proposed federal wells (and 4 wells in total) is within the number of wells planned for in the RMP and 1991 amendment.

7. Drilling is Inconsistent with U.S. Commitments Under the UNFCCC

A comment was received stating that by granting these applications, the U.S. government would be ignoring its obligations under the United Nations Framework Convention on Climate Change (UNFCCC) to pursue reasonable policies to reduce CO_2 emissions to the atmosphere.

Kinder Morgan's proposed McElmo Dome CO_2 drilling program (production, processing, and transportation) is completed in a closed system much the same as CO_2 extracted from a power plant's emissions. The CO_2 is produced into a pipeline and transported to a processing plant where water is removed. The CO_2 is than compressed into a pipeline and transported to the Permian Basin in West Texas. There the CO_2 is injected into oil fields where it mixes with the oil and pressures up the oil field so more oil is extracted. The oil CO_2 mixture is separated and the CO_2 is stripped of hydrocarbon gases, recompressed and mixed with the new CO_2 and reinjected back into the oil field. Recycling the CO_2 and mixing with new CO_2 is a cost effective alternative to venting CO_2 to the atmosphere.

Kinder Morgan has considered utilizing CO_2 extracted from power plant emissions. However, according to Kinder Morgan, the cost of CO_2 from this source is 3 times the cost of CO_2 produced and transported to the Permian Basin from the CO_2 formation underneath the CANM. Currently 4.2% of the CO_2 utilized in the Permian Basin is supplied from waste CO_2 from natural gas processing plants. Additional CO_2 supplies from this source are not currently available due to the high capital costs and high operating costs of new CO_2 recovery plants. Sixty percent of the CO_2 supply for the Permian Basin comes from the CO_2 formation underneath the CANM.

8. Inadequate NEPA Analysis Necessitating Preparation of an EIS

Comments were received stating that the project requires an Environmental Impact Statement (EIS) because potential impacts were of significance or because other issues not discussed, represent significant impacts. The BLM followed the NEPA requirements of 43 CFR 1500-1508 in the preparation of the EA. The conclusion reached in that analysis, and in consideration of the public comments of that EA, is that there would be no significant impact to the environment.

The commenters requesting an EIS argued the following: a.) an insufficient range of alternatives were considered; b.) potentially significant impacts on archaeological resources and threatened/endangered species exist; c.) the RMP is out dated (does not acknowledge CO2 as a greenhouse gas) and the Reasonable Foreseeable Development Scenario has been exceeded; d.) the RMP does not take into consideration global warming from CO2 emissions because the relationship was not known in 1991; and e.) approving extraction of natural CO_2 will interfere with the development of a market that uses CO_2 extracted from man-made emission sources.

The BLM does not concur that an EIS is warranted. The range of alternatives considered by the BLM is discussed under item 4 above. As a result of project planning, site surveys and implementation of numerous mitigation measures, the BLM has determined that potential impacts to both archaeological and threatened/endangered resources would be low and short-term, with no long-term impacts.

According to BLM records and the cumulative impact discussion in Appendix A – Errata Sheet, and as discussed above under item 6, the RFD scenario has not been exceeded. The assertion that the RMP is outdated due to its failure to acknowledge that CO2 is a recognized greenhouse gas, must recognize that the Proposed Action would develop and transport CO2 in a closed system, minimizing or eliminating potential accidental releases to the atmosphere. The fact that the RMP does not address CO2 is not in and of itself cause for an EIS. It merely suggests that the EA cannot tier to the RMP for the purpose of addressing CO2 impacts if such impacts are relevant.

Consideration of potential project impacts to globally emerging CO2 markets is beyond reasonable scope of the project.

9. Failure to Consider the Effects of Regional Drought Conditions

One commenter described the failure of the EA to address impacts to soils, vegetation and wildlife habitat as a result of regional drought conditions. Our conclusion is that drought conditions do not change the environmental consequence determinations for soils, vegetation and wildlife habitat. Project area soils are already moderate to severely erosive. The compacting of construction sites will reduce erosion potential from the project area.

Vegetation will be removed within the proposed area of disturbance. No disturbance to vegetation or other resources off the proposed proposed well pads, pipelines and access roads is authorized by the BLM's decision. As such, no adjacent vegetation will be stressed or damaged due to vehicle/pedestrian traffic or work. Reclamation activities, such as reseeding portions of the well pad following drilling, will be conducted according to BLM specifications, including documenting reclamation success, as outlined in the Draft COA.

Appendix C

Surface Use Conditions of Approval

YE-5, HB-4, HE-5 and SC-10
Kinder Morgan

NOTE: ALL DRILLING AND COMPLETION OPERATIONS SHALL CONFORM WITH BLM FIRE PREVENTION ORDER #02-02. THE ORDER IS EFFECTIVE JUNE 19, 2002 and SHALL REMAIN IN EFFECT UNTIL RECINDED.

Approval of the APD is subject to all terms and conditions set forth in the APD surface use plan, and the following conditions of approval, which take precedence.

CONSTRUCTION AND DRILLING:

1. The operator or his contractor will contact the authorized officer at the San Juan Public Lands Center in Durango, Colorado (970) 247- 4874, 48 hours before beginning any work; and before beginning any reclamation.

2. Monitor all ground disturbing activities using a BLM approved archaeologist.
3. Cease all activity in the vicinity of cultural resource. If subsurface cultural resources are unearthed during construction, notify a BLM representative immediately. Contractors conducting work on the site will be briefed on procedures to follow if artifacts are uncovered and the potential consequences of knowingly desecrating cultural sites. The operator will conduct tailgate briefings, notifying all site workers that removing cultural artifacts is a crime.
4. Install temporary fence to protect cultural sites. The fences will be removed after site reclamation.
5. Immediately cease operations if cultural sites are unearthed during construction until SHPO consultation is completed and mitigation measures determined. A BLM archaeologist may inspect the construction site during the initial earth-moving phase to ensure that tailgate briefings are being conducted, to inspect the fencing and to ensure that the monitor is present during the construction phase.
6. Conduct a follow-up visit by BLM archaeologist to assess the need for locking access gates or other mitigation measures to prevent degradation of the resource.

7. Confine construction activities to the proposed well pads, access roads and well-tie pipeline right-of ways to avoid potential impacts to TES species possibly occurring outside the area surveyed during the biological survey.

8. Should any TES species be identified during construction or operation of the proposed project, other than occasional incursions by TES raptors, BLM resource specialists shall be contacted immediately. All raptor nests will be immediately reported to BLM resource specialists to determine whether they are active nest sites, and for species identification and mitigation measures, if required.

9. Post signs on the proposed project facility that identify potential hazards associated with its operation including chemical hazards. Material Safety Data Sheets for any treatment chemicals will be maintained on site during the construction phase. Equipment operators will be required to wear appropriate personal protective equipment to minimize exposure to these hazards.

10. Kinder Morgan will provide public notices, signs, detours, and precautions and/or warning necessary to protect health and safety to the public.

11. Construct a 1-foot earth berm around the perimeter of the well location during the drilling and work over phase of the operation to contain any accidental spill of motor fuel. The well pad will be designed in such a manner as not to allow runoff water to enter the pad.

12. After vegetation clearing, remove slash from drainages and burn, if fire ban is lifted, or chip.

13. Re-seed disturbed areas with a BLM approved seed mix to stabilize soils and prevent erosion. Re-vegetation would follow immediately after drilling operations and pipeline construction are complete. Seed reclamation areas with the following seed mix:

Common Name	**Species Name**	**Variety**	**PLS #/acre**	**Seeds/ sq ft./ #**	**Seeds/ sq ft.**
Indian ricegrass	Achnatherum hymenoides	Rimrock	15	3.2	48.6
Galleta	Hilaria jamesii	Viva, florets	2	3.7	7.3
Bottlebrush squirreltail	Elymus elymoides	Bottlebrush	2	4.4	8.8
			19	64.7	

Recommended seeding rates are 120 to 160 seed/sq ft. if broadcast, half that if drilled or raked.

14. Kinder Morgan shall repeat seeding should re-vegetation attempts fail.

15. Build water bars 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

16. Contain releases of hazardous substances or fuels during construction and operation and disposed in accordance with State and Federal regulations. Personnel working at the site should be informed of spill control procedures in accordance with a written plan.

17. Any waste generated at the locations would be removed from the sites for appropriate disposal in accordance with State and Federal regulations. Releases of hazardous substances, chemicals, or fuels will be contained and disposed in accordance with State and Federal regulations.

18. Stockpile stripped topsoil and vegetation for subsequent reclamation of unused areas of the well pads.

19. At all well sites, with the exception of HB-4, stockpile pinyon and juniper trees that are removed from the well pad site for use in the initial reclamation of the well pad site. During rehabilitation, scatter the large woody material across the area to provide shade and wind shelter for the reseeded area. Scatter pinyon and juniper trees along the road right of way (not piled), no more than one tree high, where they occur along the length of the route. If there is excess tree material it will be removed from the area or chipped. If the road is abandoned, scatter the woody material across the route after it is reshaped and seeded.

20. The operator will avoid biological soil crusts wherever possible and reduce the potential for soil compaction by minimizing vehicle passes over the same piece of ground. Kinder Morgan will not spin the tires of the vehicles to avoid loss of cryptogrammic soils.

21. Collect and stockpile in a protected area on site, prior to any other activity on the well pad site, 2 to 3 inches of the soil surface with well developed microbiotic crust. This crust material will be used to re-inoculate the initial reclamation area with microbiotic crust material. After the surface is reshaped and ready for seeding the crust material will be

scattered as the final layer of soil.

22. Clean all machinery with a high-pressure sprayer prior to entering the project area to remove noxious weed seeds. The project area will be inspected for noxious weeds for two years following construction. If any noxious weeds are found they will be treated and the area monitored for at least two years following treatment. Re-treatment of weeds will continue until they no longer exist on the project area.

23. Re-contour disturbed areas to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts. Re-vegetation procedures would assist in minimizing visual disruption. All permanent structures (onsite for six months or longer) constructed or installed will be painted a flat, non-reflective earth tone color, which will be Carlsbad Canyon (refer to the Munsell Soil Color Chart).

24. Retain trees and shrubs that provide a natural visual buffer between the public roads and the wells to the extent feasible.

25. The roads 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 outlined in the oil and gas Gold book to reduce erosion. BLM may require additional culverts, if erosion or road damage is not well controlled by initial construction.

26. 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 10 mil 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 material such as soil, sand, straw or hay 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 or the well.

PRODUCTION:

1. 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.
2. The roads shall be maintained reasonably smooth, and free of ruts, soft spots, chuckholes, rocks, slides and washboards.

The BLM, San Juan Resource Area road specifications and "Gold" book 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.

3. 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, adequate muffling techniques will be applied.
4. 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.
5. 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. Enough topsoil will be kept to reclaim the remainder of the location at a future date. This remaining stockpile of topsoil will be seeded in place using the prescribed seed mixture.
6. 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 percent of the storage capacity of the largest tank within the berm. All load lines and valves shall be placed inside the berm.
7. 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:

1. If production is established, unused portions of the drill pad will be re-contoured, topsoil spread, and reseeding accomplished per BLM requirements. Stockpiled vegetation will be placed over the re-contoured portions of the well pad to aid in re-growth.

2. Immediately on completion of drilling, all trash and debris will be collected from the location and the surrounding area. All trash and debris will be disposed of in a mesh wire trash cage, and removed to an approved sanitary landfill.

3. Before any dirt work to restore the location takes place, the reserve pit must be completely dry. Any water remaining in the reserve pit should be disposed of in an approved disposal facility. All enhanced evaporation of the reserve pit fluids shall have prior approval of the authorized officer. The reserve pit must be reclaimed within 12 months (but no later than the following August 31) 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 pit. The liner shall 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.

4. If the seed is broadcast, 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. In the event grasses and native vegetation is not established after the first seeding application, subsequent applications will be required until grasses and/or native vegetation is established.

5. Reclamation will 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 it a desirable condition. The operator will continue re-vegetation efforts until this standard is met.

6. The re-seeded well pads will be fenced for 2 years to improve site reclamation and to prevent cattle from entering the well pad.