

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**APPLICATION FOR PERMIT TO DRILL O**

5. Lease Serial No.  
COC-012462 (S & BHL)  
6. If Indian, Allottee or Tribe Name  
N/A

1a. Type of work:  DRILL  REENTER

7. If Unit or CA Agreement, Name and No.  
COC-47653X

1b. Type of Well:  Oil Well  Gas Well  Other CO<sub>2</sub>  Single Zone  Multiple Zone

8. Lease Name and Well No.  
Mc Elmo Dome Unit - GP-20

2. Name of Operator Kinder Morgan CO2 Co.

9. API Well No.  
Applied for

3a. Address 17801 Hwy. 491  
Cortez, CO. 81321

3b. Phone No. (include area code)  
970-882-5507 / 907-799-1103

10. Field and Pool, or Exploratory  
Leadville

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)  
At surface SWSE / 853 FSL 1542 FEL, Sec. 34, T37N, R18W NMPM  
At proposed prod. zone TOP-NWSE 1427 FSL - 1538 FEL / BHL - SWNE 1514 FNL - 1534 FEL

11. Sec., T. R. M. or Blk. and Survey or Area  
Sec. 34, T37N, R18W NMPM

14. Distance in miles and direction from nearest town or post office\*  
14 miles NW of Cortez

12. County or Parish  
Montezuma

13. State  
CO

15. Distance from proposed\* 853' lease line  
location to nearest  
property or lease line, ft.  
(Also to nearest drig. unit line, if any)

16. No. of acres in lease  
1093.7

17. Spacing Unit dedicated to this well  
N/A

18. Distance from proposed location\* 5000' existing well SC-6  
to nearest well, drilling, completed, 120' shared on location  
applied for, on this lease, ft.

19. Proposed Depth  
10,334'

20. BLM/BIA Bond No. on file  
COB-000223

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
6640 GL

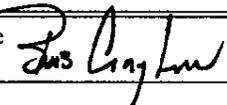
22. Approximate date work will start\*  
06/01/2011

23. Estimated duration  
2 months

24. Attachments

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

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>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).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification</li> <li>6. Such other site specific information and/or plans as may be required by the BLM.</li> </ul> |
|---|---|

25. Signature 	Name (Printed/Typed) Bob Clayton	Date 07/20/2010
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Title  
Superintendent

Approved by (Signature)	Name (Printed/Typed)	Date
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Title	Office
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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.

## SECTION 4 – Drilling Equipment, Casing, and Cementing Programs

### PROSPECT INFORMATION

The GP #20 will be one of multiple wells to be drilled during the 2010 drilling program at McElmo Dome. The wellplan calls for the 13-3/8" X 9-5/8" casing program and a 7", 13-chrome tubing production string.

### WELL OBJECTIVE

The main objectives for the drilling operation on the GP #20 are:

1. Maintain a focused effort by everyone on location to eliminate all accidents.
2. Drill, evaluate, case and complete (horizontal leg of 2000') the well in less than the approved AFE cost estimate.
3. Run a full string of 9-5/8" casing to 25' below the top of the Leadville formation.
4. Isolate the 9-5/8" casing to surface with high quality cement.
5. Drill the 6.0" pilot hole for formation evaluation and run open hole logs. Plug back the pilot hole up into the 9-5/8" casing with cement. Then dress off the cement to the KOP for the horizontal.
6. Drill the 4-3/4" horizontal production hole with minimal fluid loss / damage to the formation. The lateral is planned to be drilled using managed pressure drilling techniques if circulation is lost. Underbalanced drilling is a contingency to this plan.  
**\*\*\* IF the target formation depth allows a larger radius of curvature then the lateral hole will be upsized to 6.0" when drilled.**
7. Install 7" 13-chrome tubing and packer assembly as the production string.

### GENERAL INFORMATION

1. A fresh water mud system utilizing 8.33 #/gal fresh water will be used while drilling the Pilot Hole drilling.
2. No oil based drilling fluids will be used during the drilling of this well.
3. Any mud disposal on-site will be an evaporative tank system.
4. Pit liner used is 30 mm thickness. The reserve pit fluids will be drained with a vacuum truck and taken to a Kinder Morgan disposal well for proper disposal. The pit liners will then be pulled and disposed of at a proper disposal site.

### LATERAL PROCEDURE

1. The pilot hole will be drilled from 8154' – 8529' logged, and then be plugged back with cement up inside the 9-5/8" casing shoe. The cement will be drilled out down to hard cement at the planned KOP.
2. The cement plug will be used as a kick off plug for the lateral.
3. Planned lateral KOP is estimated at 8159' TVD/8266' MD'.
4. The 4-3/4" lateral hole will be directionally drilled from the KOP to TD. The estimated target interval is from 8129' to 8455' TVD. A string of 2-7/8" drill pipe will be picked up and the 4-3/4" hole will be drilled to a horizontal section target length of 500' to 2000'. A directional drilling well plan is attached to this prognosis.
  - **The lateral may be upsized to a 6.0" hole if the target formation depth allows for a larger radius of curve.**
5. The lateral section will not contain a production string in the wellbore from TD to the KOP. The lateral is an open hole completion stimulated only with HCL.

### POTENTIAL PROBLEMS

The main problems for the GP #20 are the typical problems expected while drilling in the area:

1. **Lost Circulation in the 17-1/2" Surface Hole:** Lost circulation can be expected at any depth while drilling the surface hole. Maintain a clean fresh water system, circulating the reserve pit, while drilling this hole section. Pump LCM pills as required to control the losses. No losses in surface hole were encountered on offsets.
2. **Gas Kick from the Desert Creek @ 6215':** Gas kicks have been encountered while drilling the Desert Creek formation. A planned mud weight schedule will be utilized to help minimize the chance of kicks in this section.
3. **Gas and H2S from the Killer Shales:** Geo-pressured shales from the P4 on down will contain varying amounts of gas and associated H2S. Circulate the salt water portion of the reserve pit to remove excess gas. Pre-treat the mud using Baroid H2S scavenger for H2S contamination.
4. **Stuck Pipe in the Killer Shales:** The Killer Shale is a high pressure, low volume shale which "flows" into the well causing stuck pipe. An attached list of recommendations for drilling the Killer Shale, titled "Paradox Salt Drilling Procedure", is located in the mud section of this program. The recommendations have proven to be very successful in recent drilling programs and are strongly recommended they be followed. Educate the drillers prior to drilling the killer shale and discuss in detail the procedure for drilling the shale.
5. **Lost Circulation in the Lower Hermosa:** Lost circulation problems have been encountered during the production casing cement job in the Lower Hermosa. The fracture gradient is estimated at 12 ppg. The problem has been successfully eliminated with single stage foam cementing.

6. **Pilot Hole Cementing Pipe:** The pilot hole cement plug should not be over 100 sks. If the first plug does not fill into the casing, spot a second plug which does not exceed 50 sks. Over-displacement is reservoir-dependent.

**GENERAL DRILLING PROCEDURE**

A 24" hole will be drilled and a 20" conductor pipe will be set at ~80' prior to moving in the drilling rig. It is necessary to rig up a 21-1/4" 3M annular preventer with diverter to drill the surface hole.

A 17-1/2" hole will be drilled from surface to 3375', located approximately 100' to 150' below the top of the Cutler. Drop a Gyro at TD of the surface hole on trip out of hole to use for the intermediate hole directional tie in. A full string of 13-3/8" surface casing will be run to 3375' with cement circulated to surface. The 13-3/8" surface casing will protect the groundwater in the area and isolate the Shinarump formation. After the casing is run and cemented, screw on the 13-3/8" X 13-5/8" 3M casing head housing and nipple-up the 13-5/8" 3M BOP. Wait on cement 12 hours and pressure test the casing to 1500 psi and the BOP's to their rating prior to drilling out.

A 12-1/4" hole will be drilled out directionally from the surface casing point of ~3440' to a maximum angle of 12.5 degrees. The attached directional plan specifies an azimuth of zero (0) degrees North from the surface location. The casing point will be picked by the mud-logger. No wireline logs will be run at casing point. A mixed string of 9-5/8" P10 and 300' of 13-Chrome casing on bottom will be run and set 25' into the Leadville. The 9-5/8" casing will be cemented back to surface in one stage with foam cement. The well integrity is dependent on the casing being handled and run correctly. The 300' of the 9-5/8" 13-Chrome will require special handling and is to be handled according to the procedures specified on site.

A 6.0" pilot hole will be drilled out from the 9-5/8" casing to 400' below the Leadville top. Drop a Gyro at TD of the pilot hole on trip out of hole. The pilot hole will then be logged from TD to 500' inside the 9-5/8" casing shoe. The pilot hole will be cemented and KOP dressed off 5' below the casing shoe.

A 4-3/4" horizontal hole will be drilled out from the KOP to TD. The build rate and target elevation of the lateral will be determined from pilot log analysis, usually ~100 to 150 ft below the top of the Leadville.

- ***\*\*IF the target formation depth allows for a larger radius of curve then the lateral hole will be upsized to 6.0".***

A mixed string of 2-7/8" and 3-1/2" DP will be picked up and a 4-3/4" hole will be drilled to a horizontal section operational target of 500' to 2000'. A directional drilling plan is attached to this prognosis.

**SURVEY DETAIL**

Normal well deviation is not a concern.

**Inclination surveys :**

- 500' intervals from spud to the 13-3/8" casing point and
- Drop a gyro survey at TD of the surface hole to use for the tie in for the directional plan for the intermediate hole.
- MWD or EM surveys will be taken in the 12-1/4" hole to the 9-5/8" casing point TD.
- Drop a gyro survey at TD of the pilot hole section- used to build the final directional plan for lateral
  - o Directional company will use the Gyro to orient for kick off and assume KOP 5' below 9-5/8" csg point
  - o Leadville target depth will be picked from Triple Combo & Saturation Curve logs run in 6.0" pilot hole
- A gyro survey will be run at KOP and MWD surveys will be taken while drilling the horizontal section.

**CASING DETAIL**

<u>Size / Interval</u>	<u>Description</u>
13-3/8" 0' - 1100'	54.5# K-55 STC
13-3/8" 1100' - 3375'	61.0# K-55 STC

**CASING RATING / DESIGN FACTORS**

	<u>Collapse</u>	<u>Burst</u>	<u>Tension</u>
13-3/8" 0' - 1100'	1100 / 2.20	2730 / 1.00	547 / 3.19
13-3/8" 1100' - 3375'	1950 / 1.24	3450 / 1.08	718 / 4.19
9-5/8" 0' - 6298'	4430 / 1.3	8770 / 3.1	1106 / 3.61
9-5/8" 6298' - 7725'	5310 / 1.3	9440 / 3.2	1213 / 3.96
9-5/8" 7725' - 8154'	4880 / 1.15	7290 / 2.49	1213 / 3.77

All of the 47# CR13 casing will be coated with Rytwrap (ICO in Odessa) prior to arriving on location.

**DESIGN ASSUMPTIONS:**

13-3/8" Surface	Tension:	Buoyed weight in 8.4 ppg fresh water, DF = 1.6
	Collapse:	Full evacuation w/ 9.0 ppg on outside, DF = 1.0
	Burst:	2000 psi shut in pressure at the surface, DF = 1.33
9-5/8" Production	Tension:	Buoyed weight in 10.0 ppg brine
	Collapse:	Full evacuation in 10.0 ppg brine for 47#
	Burst:	2500 psi shut in pressure at the surface with 10.0 ppg inside and 9.0 ppg outside

## CEMENTING PROCEDURE

### 13-3/8" SURFACE CASING => 1-stage

Use API 13-3/8" drift on location

Shoe Type: Regular Guide Shoe  
Collar Type: Regular Float collar, 40' above shoe  
Centralizers: 21 required => Place centralizers on shoe joint, and every 4th joint to surface  
Flag Joints: None Required  
Other Equipment: Stop clamp, thread lock the bottom 2 joints of casing + all float equipment, top and bottom plugs

Reciprocate: Not required, limit of 171,400 lbs based on 61# K-55 STC w/ a 1.6 SF

Preflush: 40 bbls => Fresh water @ 10 bbls / min

**Lead CMT Slurry:** 2295 sks => Light Premium => 5 lbm/sk Gilsonite (LC) + 0.125 lbm/sk Poly E Flake (LC)  
**Specifications:** 12.4 ppg / 1.868 ft<sup>3</sup> / sk / 9.378 gal / sk  
**100% Excess**

**Tail CMT Slurry:** 375 sks => Standard Cement Class G => 94 lbm/sk Standard Cement + 0.125 lbm/sk Polyflake (LC)+ 0.1% Halad R-9 (Fluid Loss)  
**Specifications:** 15.6 ppg / 1.18 ft<sup>3</sup> / sk / 5.19 gal / sk  
**100% Excess**

**Displacement:** ~499 bbls => Fresh Water @ 8 - 10 bbls / min

**Volume Based:** All volumes listed are estimates only, for calculations use 17-1/2" X 13-3/8" annulus + 100% excess + shoe joints + ~100 sks circulated @ surface, attempt to circulate cement to surface, excess volume is based on experience.

**Pressure Limits:** 2000 psi while pumping or bumping plug due to collapse rating of the 13 3/8" 61# K-55 STC w/ a 1.0 SF

**Test Required:** Lab test w/ field water, want a 2 hr minimum @ 105° BHST

**Temperature Survey:** Required if cement does not circulate at surface, call Todd Gentles @ (713) 369-8487 or 713-249-2805 for details

**Wellhead:** Install section "A" assembly

**Special Note:**

1. Report the volume of cement circulated to the surface.
2. WOC for a minimum of 12 hours prior to drilling out.
3. NU 3M - 13-5/8 - BOP and test to rating.
4. Test the casing to 500 psi.
5. Cement Co. => Send copy of pressure charts, job log and summary to:  
Kinder Morgan, Attn: Todd Gentles, 500 Dallas, Suite 1000, Houston, TX 77002.

## CEMENTING PROCEDURE

### 9-5/8" PRODUCTION CASING => Single stage foam

Shoe Type:	Differential Fill Float Shoe
Collar Type:	Differential Fill Float Collar, 80' above shoe
Centralizers:	69 required => 10' above shoe and every other joint
Flag Joints:	Cross overs from 43.5# to 47# will serve as flag joints
Other Equipment:	Thread lock the bottom 3 joints of casing + all float equipment.
Reciprocate:	If required, limit @ 100,000 lbs
Preflush:	40 bbls => Fresh water @ 10 bbls / min 10 bbls => Water Spacer 20 bbls => Mud flush 10 bbls => Fresh water
Lead Slurry:	2195 sks => 50/50Poz Standard (0.2% Versaset + 0.1% FDP-D766-05 + 2% Zoneseal 4000
Specifications:	13.0 ppg / 1.4 ft <sup>3</sup> / sk / 6.7 gal / sk
50% Excess	
Tail Slurry:	300 sks => Premium Cement 94 lbm/sk + 0.1% HR-5
Specifications:	15.6 ppg / 1.28 ft <sup>3</sup> / sk / 5.7 gal / sk
50% Excess	
Cement Cap Slurry:	100 sks => Standard Cement 94lbm/sk + 2% CaCO <sub>3</sub> + 5% Cal-Seal
Specifications:	15.0 ppg / 1.37 ft <sup>3</sup> / sk / 6.32 gal / sk
Displacement:	~604 bbls freshwater @ 8 - 10 bbls / min
Volume Based:	Use 13" hole diameter to calculate cement volume
Test Required:	Lab test w/ field water, 3.25 hr minimum @ 200° BHST Lab test w/ field water, 3.50 hr minimum @ 170° BHST
Temperature Survey:	Possible survey if severe lost circulation occurs
Wellhead:	Install section "B" assembly
Special Note:	1. Circulate 3 annular volumes prior to cementing @ maximum rate possible. 2. Displace cement at the maximum rate possible. 3. Report volumes of cement circulated. 4. Report any circulation problems on the morning report. 5. Cement Co. => Send copy of pressure charts, job log and summary to: Kinder Morgan, Attn: Todd Gentles, 500 Dallas, Suite 1000, Houston, TX 77002.

### 6.0" PILOT HOLE 8154' – 8529' TVD CEMENTING PROCEDURE

- The pilot hole section will be plugged back using 150 sacks of cement.
- The cement will be placed across the open hole section through 2-7/8" fiberglass pipe with a Tubing Release Tool (TRT) suspended in the open hole section from the drill string.
  - If the first plug does not fill up into the 7" casing, the cement will be dressed off and a second plug will be spotted in the same manner and which does not exceed 50 sacks.
- The cement plug will then be dressed off with a bit down to hard cement to the planned KOP for the lateral.

## **SECTION 5 – Mud Program**

The “standard” mud program and procedures used during the previous drilling programs at McElmo Dome will be employed during the drilling operation of the well.

### **Surface - 3375' (13-3/8" Casing Point):**

Hole Size: 17-1/2"  
Mud Type: Fresh water

Spud the 17-1/2" surface hole with fresh water and circulate the fresh water section of the reserve pit. Maintain the fluid as clean as possible to help prevent lost circulation. Use paper to control any seepage and pump LCM sweeps if lost circulation becomes a problem. Pump viscous sweeps if tight connections are encountered and prior to running the 9-5/8" casing.

### **3375' - 6115' (100' above the Desert Creek):**

Hole Size: 12-1/4"  
Mud Type: Fresh water  
Problems: Seepage, hole cleaning

Directionally drill out of the 13-3/8" casing with clean fresh water. Circulate the reserve pit to keep solids to a minimum. Sweep the hole as required for hole cleaning and / or lost circulation problems. Use paper to control any seepage problems.

### **6115' – 8154' (25' into the Leadville / 9-5/8" Casing Point)**

Hole Size: 12-1/4"  
Mud Type: Salt saturated brine  
pH: 11+, as required to control H2S  
Problems: H2S, killer Shale gas influx, hole cleaning

Displace the fresh water system with salt saturated brine 100' above the Desert Creek formation. Circulate through the salt water section of the reserve pit to maintain a clean fluid and to assist in breaking out any entrained gas. Pre-treat the mud for H2S prior to drilling the P4 Shale.

Follow the attached guidelines for drilling the Killer Shale, titled “Paradox Salt Drilling Procedure”, enclosed as Attachment 1. The recommendations have proven to be very successful in recent drilling programs.

- No oil based muds will be used on this well
- Any mud disposal onsite is an evaporative tank system.
- In the event of an encounter with H2S then the H2S plan will be implemented immediately. (see attached H2S plan)
  - Onsite monitors, alarms, respirator packs, safety personnel, windsocks, and designated safe areas will be on the location as part of the contingency plan.

### **Pilot Hole (8154' – 8529')**

Hole Size: 6"  
Mud Type: Fresh water / Baradril-N Sweeps  
pH: 9-9.5 with caustic soda  
Problems: LC, Hole cleaning

A 8.33 #/gal freshwater system will be utilized.

### **Lateral (8154' –10,334') with maximum Lateral Length 2000':**

Hole Size: 4-3/4" or 6.0"  
Mud Type: Fresh water / Baradril-N Sweeps  
pH: 9-9.5 with caustic soda  
Problems: LC, Hole cleaning, Lubricity

Build 400-500 bbls Freshwater/Bardril-N for sweeps. Expect complete losses while drilling the lateral. Drill blind with freshwater at normal pump rates. Circulate 20-30 Bardril-N sweeps each stand drilled to keep cuttings moving up the hole. Add Enviro-Torque with each sweep for lubricity. Circulate 10 bbls 15% BDF-408 while drilling to prevent cuttings bed build-up.

If circulation is lost and unable to be regained, nitrogen will be added to the mud system to help lift the fluid for circulation and cuttings movement. A specific description of this process is discussed in Section 8 of this prognosis.

## **SECTION 6 – EVALUATION PROGRAM**

A measure while drilling (MWD) tool with gamma ray (GR) capability will be run from the surface casing shoe at 3375' to the 7.0" chrome casing point. GR response, mud logs, and penetration rate will be used to determine the top of the Leadville formation and final casing point.

Mud logging services will be used from 5500' to TD. Samples of the cuttings from the open hole section will be collected while drilling the pilot hole and will be examined and logged for formation characteristics.

- Mud logger samples will be taken in the pilot hole from the 9-5/8" casing shoe to TD at an interval of every 10' to determine the formation type.

The 6" pilot hole will be logged with three runs as follows:

- 1st run induction – data 9' from bottom
- 2nd run density – data 4' from bottom
- 3rd run neutron and GR, data 3' and 13' from bottom

No cores or formation testing will be done.

## **SECTION 7 – EXPECTED PRESSURES AND IDENTIFIED HAZARDS**

### **BOTTOM HOLE PRESSURE**

The Leadville formation bottom hole pressure is 2,000 psi in the Goodman Point area, and 2,400 psi in the Doe Canyon area. Given the well depths of approximately 8000', a fresh water column provides approximately 3,500 psi for well control.

### **H2S POTENTIAL**

H2S is expected to be circulated to the surface during the drilling of the Killer Shales located within the Paradox Salt interval located at 6398' - 7625'. The H2S contingency plan that was used in the previous programs has been updated and revised and will be in force. All the necessary precautions, drills, and training will be done to protect personnel on location. H2S monitors and safety equipment will be on location and operational prior to drilling the section and remain until rig release.

## **SECTION 8 COMPLETION PROGRAM**

- The completion for the lateral will be an open hole completion stimulated with 28% hydrochloric foamed acid to clean up the formation.
- No casing will be run in the lateral section from TD up to the KOP.
- Zone for the completion is the Leadville interval targeting the CO2 reserves for production.

## **SECTION 9 – Other Items**

### **LOST CIRCULATION CONTINGENCY PLAN**

Circulation may be lost in the 4-3/4" horizontal production hole. In this situation, managed pressure drilling techniques will be implemented. A normal fresh water fluid column of water is approximately 3,500 psi downhole pressure, and the reservoir pressure is 2,000 psi - therefore an overbalanced condition exists. The fracture gradient of the formation is estimated at 0.6 to 0.7 psi/ft, which equates to approximately 4,800 to 5,600 psi downhole pressure, which indicates fractures are not being induced; however, when a high porosity zone is encountered in the Leadville, and the pore volume exists to take the fluid. At this point, there is a high probability of sticking drill pipe as the cuttings flowing up the annulus immediately fallback.

A nitrogen managed pressure/underbalanced drilling package will be on standby on location while drilling the curve and lateral should this situation occur. The nitrogen will be added into the mud system to lighten and regain circulation in a managed pressure scenario. Managed pressure/underbalanced drilling equipment will be used to handle the return flow of nitrogen and any influx of CO2 gas through a separator and vent stack. Well control is maintained by reducing or stopping the flow of nitrogen, which will kill the well. A dedicated rig pump and kill line are also hooked up and ready to boost the water flow if needed. Well control is also a critical part of the managed pressure drilling process; the electromagnetic (EM) tool has a pressure while drilling (PWD) sensor which feeds into the managed pressure drilling control system. The bottom hole pressure is constantly monitored to ensure the fluid column is sufficient to control the well and is used to adjust the water and nitrogen mix to maintain circulation while drilling.

In the event that the managed pressure/underbalanced system does not help regain circulation and carry cuttings out of the hole, the lateral will be stopped short of the maximum target length of 2000'.

The reason for attempting to extend the lateral length (past the point where circulation is lost) is to decrease well decline, improve success rate, and improve well productivity, which will ultimately decrease the number of infill wells in the future.

**WELL PROGNOSIS OVERVIEW**

This well prognosis is organized to follow the Bureau of Land Management (BLM) Eight Point Drilling Plan referenced in the Onshore Order #1. The Eight Points correspond to the following Eight Sections of the Prognosis.

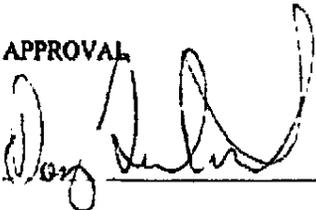
1. Estimated Tops of Important Geologic Markers and Formations
2. Estimated depths at which top and bottom of anticipated water (particularly fresh water), oil, gas or other mineral-bearing formations are expected to be encountered and the lessee's or operator's plans for protecting such resources.
3. Lessee's or operator's minimum specifications for pressure control equipment to be used and a schematic diagram thereof showing sizes, pressure ratings (or API series), and the testing procedures and testing frequency.
4. Any supplementary information more completely describing the drilling equipment and casing program.
5. Type and characteristics of the proposed circulating medium to be employed in drilling, the quantities and types of mud and weighting material to be maintained, and the monitoring equipment to be used on the mud system.
6. The anticipated type and amount of testing, logging and coring.
7. The expected bottom hole pressure and any anticipated abnormal pressures or temperatures or potential hazards, such as hydrogen sulfide, expected to be encountered, along with contingency plans for mitigating such identified hazards.
8. Any other facets of the proposed operation which the lessee or operator wishes to point out for BLM's consideration of the application.

Two attachments are referenced in sections of the document.

1. H2S Contingency Plan
2. Directional Well Plan.

<u>CONTACT INFORMATION</u>	<u>OFFICE</u>	<u>CELL</u>	<u>HOME</u>
Operations Manager - Todd Gentles	713-369-8487	713-249-2805	713-249-2805
Drilling Director - Doug Frederick	713-369-9208	281-421-2333	
Geologist - Jerry Greer	71-369-8995	832-515-4325	281-353-3704

APPROVAL



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Douglas A. Frederick  
Drilling Director  
Kinder Morgan CO2 Company, L.P.