H2S – 043

H2S Contingency Plan Addendum

2017

Chavez, Carl J, EMNRD

From: Henry, Rachael M <RMHenry@dcpmidstream.com>
Sent: Monday, October 16, 2017 11:20 AM
To: Chavez, Carl J, EMNRD
Cc: jwg@geolex.com
Subject: H2S Contingency Plan - submittal for Approval
Attachments: Cotton Draw Project H2S Contingency Plan Rev 3b.pdf; Attachment 2.xls; Attachment 1.pdf

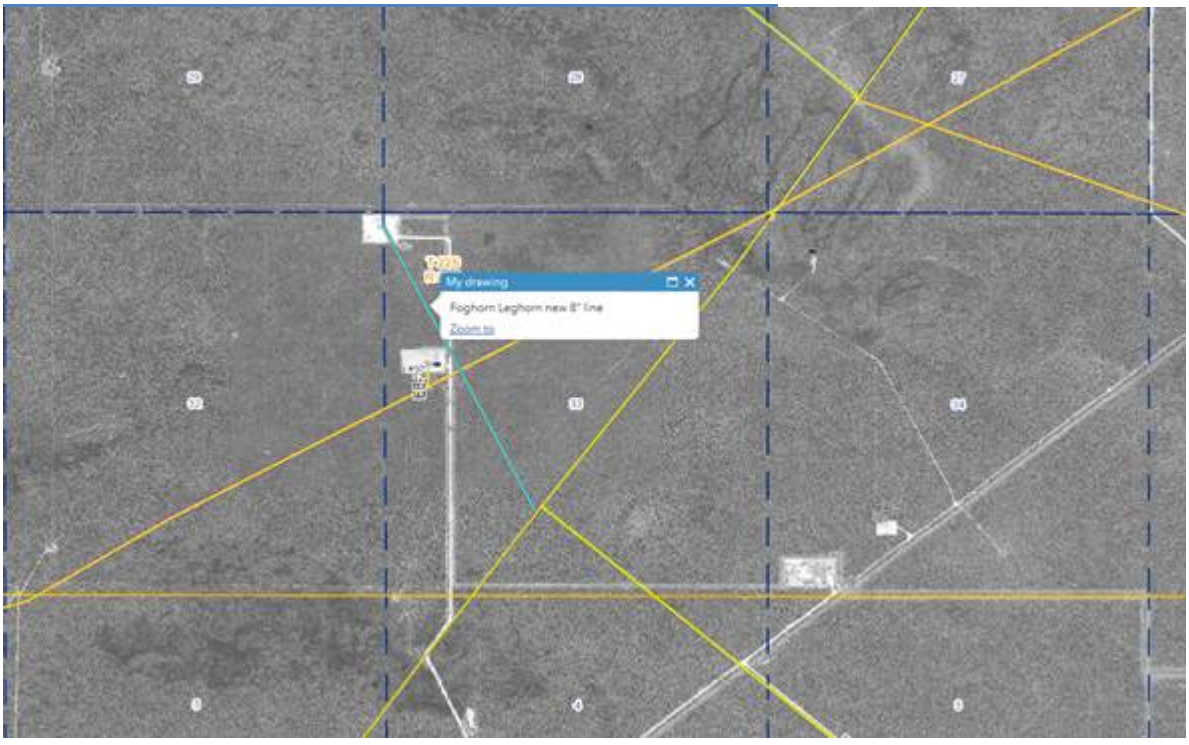
Mr. Chavez,

EOG is currently treating gas before it delivers it into the EE line; however, DCP has installed a new line, the Foghorn Leghorn gathering line, from EOG's delivery point to the existing DCP 10200 line so that EOG can deliver the gas and not have to treat it anymore. The 10200 line has been a sour gas line previously, so it has the capability to take the additional sour gas from EOG. The line collectively has 5000 ppm H2S and has a MCF/Day of 4000. The 100 ROE calculates to 657' and the 500 ROE is 300'. According to the definition of a potentially hazardous volume (the volume of hydrogen sulfide gas of such concentration that: (1) the 100-ppm radius of exposure includes a public area (2) the 500-ppm radius of exposure includes a public road or (3) the 100-ppm radius of exposure exceeds 3000 feet), there are no public areas or roads in the ROE's for the new installation of the Foghorn Leghorn line nor is the 100-ppm ROE in excess of 3000 feet.

Explanation for Change to Existing H2S Contingency Plan:
The primary reason for this change is to alleviate the need for EOG to treat the gas anymore.

Scope of addition to the existing in-service 10200 line:

1. The Foghorn Leghorn line is a gathering line feeding the existing 10200 pipeline.
2. The Foghorn Leghorn gathering line is a 8" steel line 250 wall X52 with three foot of cover.
3. The line was tested to 2120 psig for a MAOP of 1413 psig.



Note: Attachment 3 is too large to send via e-mail but will be included in the hard copy mailed to you once you have approved.

Please let me know if you have any questions concerning the plan and I will work with Julie Gutiérrez at Geolex, Incorporated to address.

Thank you.

Rachael Henry, CSP
Health & Safety Manager, Permian Region
432-488-6262 (mobile)
DCP Midstream

H_2S Contingency Plan

Cotton Draw Pipeline Project
- Revision 3 -

South Eastern New Mexico Asset

OCTOBER 2017

H_2S Contingency Plan
DCP Midstream – Cotton Draw Project

TABLE OF CONTENTS

Record of Revisions

Number	Date	Description	Author
Original	July 2009	Original Submittal for Cotton Draw Project	Tony Canfield – Engineering, & Charlie Powell - Safety
1	April 2010	Revision 1: Re-routing the Cotton Draw pipeline to flow into sour system that is processed at the Linam Ranch Gas Plant. Installing a tie-over directly from the north side of the Cotton Draw pipeline (10200) to the sour system Shell 12" (NN) pipeline. This change will allow for the high CO_2 gas to be processed at the Linam Ranch Gas Plant now that the AGI well is in service vs. sending it to the Eunice SRU. It also creates LP capacity at the Eunice Gas Plant.	Jonas Figueroa – Engineering, & Charlie Powell - Safety
2	December 2010	Revision 2: Converting Cotton Draw pipeline in raptor system to gathering line. The Cotton Draw Pipeline (10200) will now extend and connect to the Eddy and Eddy loop pipeline that will deliver gas to be processed at Linam Ranch Gas Plant. This change will allow to alleviate high pressures at the far end of the pipeline.	Jonas Figueroa – Engineering, & Charlie Powell - Safety
3	September 2017	Revision 3: Updated contact information for DCP personnel and contractors; added Foghorn Leghorn gathering line description to the plan (feeds the existing 10200 line); corrected grammatical errors in previous versions; updated verbiage explaining the DCP Public Awareness Program; updated Black River Booster residence information	Ronn Madrid – Engineering, & Rachael Henry - Safety

I. INTRODUCTION

DCP Midstream, L.P. conducts its business responsibly by providing employees and any other person working or visiting, a safe work place. DCP Midstream is a midstream gas gathering and processing company which handles and/or generates hydrogen sulfide and/or sulfur dioxide; therefore, this Hydrogen Sulfide Contingency Plan has been developed to:

1. Satisfy the New Mexico Oil Conservation Division (NMOCD) Title 19 – Chapter 15 – Part 11 Hydrogen Sulfide Gas regulations,
2. Conform with the API "Recommended Practices for Oil and Gas Producing and Gas Processing Plant Operations Involving Hydrogen Sulfide," RP 55, and
3. Create a site-specific hydrogen sulfide contingency plan that outlines the emergency response procedures that will be implemented to ensure a coordinated, efficient and immediate action plan for alerting and protecting operating personnel and the public as well as to prevent or minimize environmental hazards and damage to property.

SCOPE

The **Cotton Draw Project** Hydrogen Sulfide Contingency Plan was developed to satisfy the requirements of each of the regulatory guides.

This plan provides guidelines to assist in responding to and managing an emergency in the event of an H_2S release from a pipeline or facility. The goals of this plan are to provide tools to enable an efficient, coordinated and effective response to emergencies.

This plan contains written guidelines to:

1 Evaluate and Respond to an Incident
2 Activate the Immediate Action Plan
3 Alert and Protect Operation Personnel and the Public to Prevent or Minimize Personal Injury or Loss
4 Avoid Environmental Hazards, and
5 Reduce Damage to Personal Property, and
6 Make all Notifications Required

RESPONSIBILITY FOR CONFORMANCE

Responsibility for Conformance with the Plan is the responsibility of all personnel operating the system. Said personnel are to follow the safety and emergency procedures outlined in the Hydrogen Sulfide Contingency Plan as well as comply fully with the following:

- DCP Midstream Safety Policies & Procedures
- DCP Midstream SENM Asset Emergency Response, Groundwater Discharge and Oil Spill Contingency Plans, and
- DCP Midstream Environmental Policies and Programs.

REVISIONS TO THE PLAN

The Hydrogen Sulfide Contingency Plan will be reviewed annually. The plan will be revised at that time as necessary to address changes to the facilities, operations or training requirements, contact information, changes in public areas including roads, businesses and/or residents within the radius of exposure which could be affected by the operations.

AVAILABILITY OF THE PLAN

The Hydrogen Sulfide Contingency Plan shall be available to all personnel responsible for implementation, regardless of their normal location assignment. A copy of the Plan will be maintained at each of the locations identified in the Plan Distribution List (Section XIV).

PROJECT DESCRIPTION

The Cotton Draw Project is a pipeline gathering system designed to safely move gas from the newly develop Avalon Shell production site located in southern Eddy County, New Mexico to the processing site at Linam Ranch Gas Plant, located in Lea County, New Mexico.

A complete description of the location of the lines and associated equipment are located in the Section XVIII of this plan.

Safety shutdown equipment for the system is identified in Section XVI.

Protection programs for the system are identified in Section XVII.

The plan was previously submitted and approved as presented. Since that time additional measures have been instituted which would allow additional safeguards to be in place to handle the gas which will be a part of the project.

Updated information on the gas stream and equipment designed to handle it will reduce previously identified potential exposures should an incident occur creating a release.

Revised Submitted Plan.

COTTON DRAW PROJECT – REVISION 2

Description of Change:
Convert service of the 10200 (cotton draw) pipeline from the raptor system (residue service) to gathering system.

Explanation for Change:
The primary reason for this change is to alleviate pipeline pressure at far end of gathering line. This change will loop the line into two main pipelines that deliver gas to the Linam Ranch Gas Plant where we are better equipped to treat the high CO_2 sour gas.

Construction Scope of Work on 10200:
1. The existing 10200 pipeline in the residue service will be converted and tie-into the 10200 gathering system pipeline.
2. A Pig launcher will be installed near the tie-in with the gathering system pipeline. (GPS coordinates: N 32.44945, W 103.48419)
3. Two (2) inline block valves will be installed (BV11 and BV12)
4. A Pig receiver will be installed close to the tie in to the Eddy and Eddy loop pipelines (GPS coordinates: N 32.70537, W 103.31064)

Update and Revisions to the Revised Submitted Plan.

COTTON DRAW PROJECT – REVISION 3

Description of Change:

EOG is currently treating gas before it delivers it into the EE line; however, DCP has installed a new line, the Foghorn Leghorn gathering line, from EOG's delivery point to the existing DCP 10200 line so that EOG can deliver the gas and not have to treat it anymore. The 10200 line has been a sour gas line previously, so it has the capability to take the additional sour gas from EOG. The line collectively has 5000 ppm H2S and has a MCF/Day of 4000. The 100 ROE calculates to 657' and the 500 ROE is 300'. According to the definition of a potentially hazardous volume (the volume of hydrogen sulfide gas of such concentration that: (1) the 100-ppm radius of exposure includes a public area (2) the 500-ppm radius of exposure includes a public road or (3) the 100-ppm radius of exposure exceeds 3000 feet), there are no public areas or roads in the ROE's for the new installation of the Foghorn Leghorn line nor is the 100-ppm ROE in excess of 3000 feet.

H2S before the Foghorn on 10200	0.000%
At site blended with existing	0.210%
Combined at 10200	0.031%
North 10200 (Raptor line)	0.029%
NN-22 to shell 12	0.029%
Blend at Shell 12	0.006%
North Shell 12 to Plant	0.005%

Explanation for Change:

The primary reason for this change is to alleviate the need for EOG to treat the gas anymore.

Construction Scope of Work on 10200:

1. The Foghorn Leghorn line is a gathering line feeding the existing 10200 pipeline.
2. The Foghorn Leghorn gathering line is a 8" steel line 250 wall X52 with three foot of cover.
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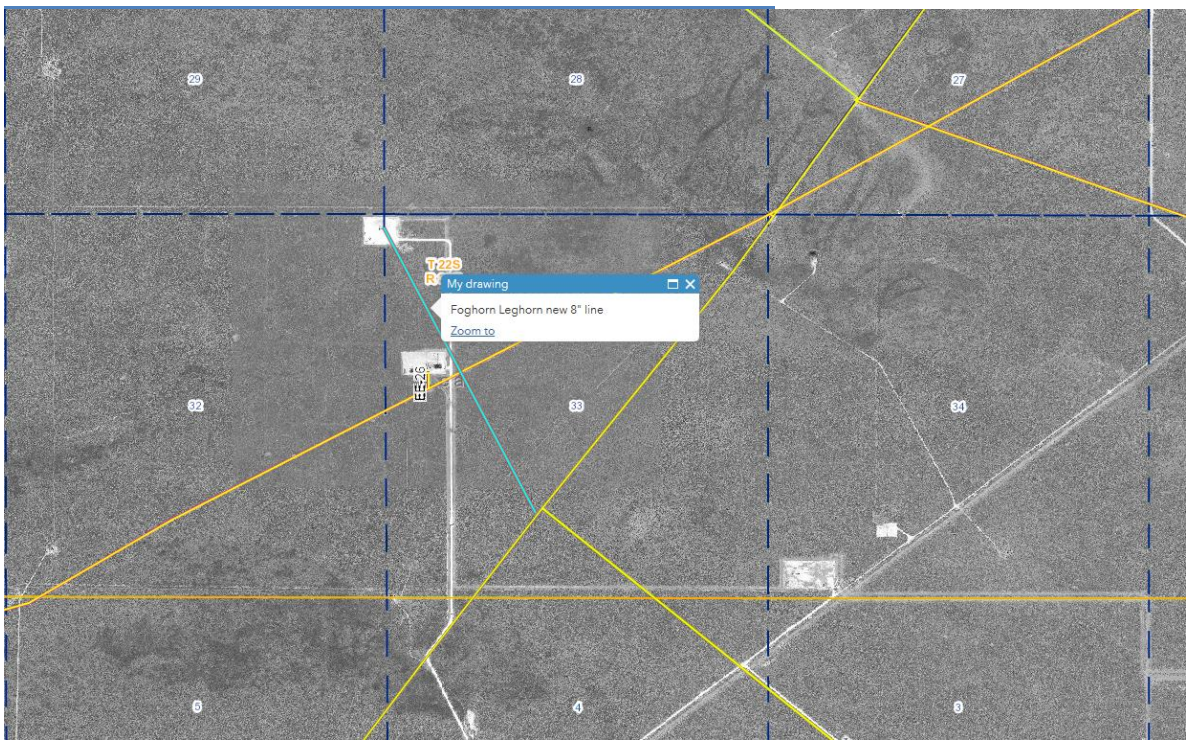


II. DEFINITIONS USED IN THIS PLAN

ANSI The acronym "ANSI" means the American National Standards Institute.

API The acronym "API" means the American Petroleum Institute.

Area of Exposure (AOE) The phrase "area of exposure" means the area within a circle constructed with a point of escape at its center and the radius of exposure as its radius.

ASTM The acronym "ASTM" means the American Society for Testing and Materials.

Dispersion Technique A "dispersion technique" is a mathematical representation of the physical and chemical transportation characteristics, dilution characteristics and transformation characteristics of hydrogen sulfide gas in the atmosphere.

Escape Rate The "escape rate" is the maximum volume (Q) that is used to designate the possible rate of escape of a gaseous mixture containing hydrogen sulfide, as set forth herein.

(a) For existing gas facilities or operations, the escape rate shall be calculated using the maximum daily rate of the gaseous mixture produced or handled or the best estimate thereof. For an existing gas well, the escape rate shall be calculated using the current daily absolute open flow rate against atmospheric pressure or the best estimate of that rate.

(b) For new gas operations or facilities, the escape rate shall be calculated as the maximum anticipated flow rate through the system. For a new gas well, the escape rate shall be calculated using the maximum open flow rate of offset wells in the pool or reservoir, or the pool or reservoir average of maximum open flow rates.

(c) For facilities or operations not mentioned, the escape rate shall be calculated using the actual flow of the gaseous mixture through the system or the best estimate thereof.

GPA The acronym "GPA" means the Gas Processors Association.

LEPC The acronym "LEPC" means the Local Emergency Planning Committee established pursuant to the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Section 11001.

NACE The acronym “NACE” means the National Association of Corrosion Engineers.

PPM The acronym "ppm" means "parts per million" by volume.

PHV Potentially Hazardous Volume means the volume of hydrogen sulfide gas of such concentration that:

(a) the 100-ppm radius of exposure includes any public area;

(b) the 500-ppm radius of exposure includes any public road; or

(c) the 100-ppm radius of exposure exceeds 3,000 feet.

Public Area A "public area" is any building or structure that is not associated with the well, facility or operation for which the radius of exposure is being calculated and that is used as a dwelling, office, place of business, church, school, hospital, or government building, or any portion of a park, city, town, village or designated school bus stop or other similar area where members of the public may reasonably be expected to be present.

Public Road A "public road" is any federal, state, municipal or county road or highway.

Radius of Exposure (ROE) The radius of exposure (ROE) is that radius constructed with the point of escape as its starting point and its length calculated using the following Pasquill-Gifford derived equation, or by such other method as may be approved by the division:

(a) For determining the 100-ppm radius of exposure: $X = [(1.589)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture, and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psia and 60 degrees F).

Definitions Used in This Plan – Continued:

Radius of Exposure – Continued:

(b) For determining the 500-ppm radius of exposure: $X=[(0.4546)(\text{hydrogen sulfide concentration})(Q)]^{(0.6258)}$, where "X" is the radius of exposure in feet, the "hydrogen sulfide concentration" is the decimal equivalent of the mole or volume fraction of hydrogen sulfide in the gaseous mixture, and "Q" is the escape rate expressed in cubic feet per day (corrected for standard conditions of 14.73 psia and 60 degrees F).

Regulatory Threshold

(1) Determination of Hydrogen Sulfide Concentration.

(a) Each person, operator or facility shall determine the hydrogen sulfide concentration in the gaseous mixture within each of its wells, facilities or operations either by testing (using a sample from each well, facility or operation), testing a representative sample, or using process knowledge in lieu of testing. If a representative sample or process knowledge is used, the concentration derived from the representative sample or process knowledge must be reasonably representative of the hydrogen sulfide concentration within the well, facility or operation.

(b) The tests used to make the determination referred to in the previous subparagraph shall be conducted in accordance with applicable ASTM or GPA standards or by another method approved by the division.

(c) If a test was conducted prior to the effective date of this section that otherwise meets the requirements of the previous subparagraphs, new testing shall not be required.

(d) If any change or alteration may materially increase the concentration of hydrogen sulfide in a well, facility or operation, a new determination shall be required in accordance with this section.

(2) Concentrations Determined to be Below 100 ppm. If the concentration of hydrogen sulfide in a given well, facility or operation is less than 100 ppm, no further actions shall be required pursuant to the NM Rule 118 Guidelines.

(3) Concentrations Determined to be Above 100 ppm.

(a) If the concentration of hydrogen sulfide in a given well, facility or operation is determined to be 100 ppm or greater, then the person, operator or facility must calculate the radius of exposure and comply with applicable requirements of this section.

(b) If calculation of the radius of exposure reveals that a potentially hazardous volume is present, the results of the determination of the hydrogen sulfide concentration and the calculation of the radius of exposure shall be provided to the division. For a well, facility or operation existing on the effective date of this section, the determination, calculation and submission required herein shall be accomplished within 180 days of the effective date of this section; for any well, facility or operation that commences operations after the effective date of this section, the determination, calculation and submission required herein shall be accomplished before operations begin.

(4) Recalculation. The person, operator or facility shall calculate the radius of exposure if the hydrogen sulfide concentration in a well, facility or operation increases to 100 ppm or greater. The person, operator or facility shall also recalculate the radius of exposure if the actual volume fraction of hydrogen sulfide increases by a factor of twenty-five percent in a well, facility or operation that previously had a hydrogen sulfide concentration of 100 ppm or greater. If calculation or recalculation of the radius of exposure reveals that a potentially hazardous volume is present, the results shall be provided to the division within sixty (60) days.

III. CHARACTERISTICS OF HYDROGEN SULFIDE (H_2S) AND SULFUR DIOXIDE (SO_2)

Hazards of Hydrogen Sulfide

At normal atmospheric conditions, hydrogen sulfide (H_2S) is a colorless gas. It is commonly referred to by other names such as Rotten Egg Gas, Acid Gas, Sour Gas, Sewer Gas, Poison Gas and Sulfur Gas. It has a characteristic "rotten egg" smell at low concentrations. At higher concentrations, it has a sweet odor. At still higher concentrations, an odor cannot be detected at all due to olfactory nerve anesthesia. Odor must *not* be used as means of determining the concentration of H_2S gas! Hydrogen sulfide can form explosive mixtures at concentrations between 4.3% and 46%, by volume. Its auto-ignition temperature is 500 degrees F (260 degrees C). When burning, its flame is practically invisible. It is denser than air (1.19 times heavier than air) and may accumulate in low places. Hydrogen sulfide gas tends to interact with high carbon steel, causing embitterment and fine fractures in metal components and piping.

H_2S acts as a chemical asphyxiate, preventing the body from utilizing oxygen in the tissue. Breathing may stop after a few seconds of exposure to H_2S gas in concentrations of 600-700 ppm. This produces symptoms such as panting, pallor, cramps, dilation of eye pupils and loss of speech. This is generally followed by immediate loss of consciousness. Death may occur quickly from respiratory paralysis and cardiac arrest. The table below illustrates the physical effects of hydrogen sulfide on a healthy adult.

Table 1 Effects of Exposure to Hydrogen Sulfide Gas on a Healthy Adult

Concentration			Physical Effects
percent (%)	ppm	grains per ft^3	
0.001	10	0.65	Obvious and unpleasant odor. Safe for 8 hours exposure.
0.01	100	6.48	Kills smell in 3 to 15 minutes; may sting eyes and throat. **(IDLH)**
0.02	200	12.96	Kills smell shortly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; artificial respiration / oxygen must be given promptly.
0.07	**700**	45.36	**Unconscious quickly; death will result if not rescued promptly.**
0.10	**1000**	64.80	**Unconscious at once; followed by death within minutes.**

Properties of H_2S

COLOR	Colorless.
ODOR	Very offensive, commonly referred to as the odor of rotten eggs.
VAPOR DENSITY	1.189 (Air=1.0) H_2S is heavier than air.
BOILING POINT	-76 degrees F (-24 degrees C)
EXPLOSIVE LIMITS	4.3 to 46% by volume in air
IGNITION TEMPERATURE	500 degrees F (260 degrees C)
WATER SOLUBLE	Yes (4 volumes gas in 1 volume water at 32 degrees F (0 degrees C)
FLAMMABILITY CORROSIVE	Forms explosive mixtures with air or oxygen.

Toxicity Table – H_2S

1 ppm = .0001% (1/10,000 of 1%)	Can smell (rotten egg odor).
10 ppm = .001% (1/1000 OF 1%)	Allowable for 8 hours exposure. (PEL & TLV)
100 ppm = .01% (1/100 of 1%)	Kills smell in 3-15 minutes. May burn eyes and throat. Considered to be **IDLH** atmosphere (Immediately Dangerous to Life and Health).
200 ppm = .03% (2/100 of 1%)	Kills smell rapidly. Burns eyes and throat.
500 ppm = .05% (5/100 of 1%)	Loses sense of reasoning and balance. Respiratory disturbances in 2-15 minutes. Needs prompt artificial resuscitation.
700 ppm = .07% (7/100 of 1%)	Will become unconscious quickly. Breathing will stop and death will result if not rescued promptly. Immediate artificial resuscitation is required.
1000 ppm = .1% (1/10 OF 1%)	Unconscious at once. *PERMANENT BRAIN DAMAGE MAY RESULT UNLESS RESCUED PROMPTLY.*

ppm = parts of gas per million parts of air by volume.
1% = 10,000 ppm

Properties of Sulfur Dioxide SO_2

Sulfur Dioxide - SO_2 - Physical and Chemical Properties	
Chemical Formula	SO_2
Molecular Weight	64
Boiling Point	14 degrees Fahrenheit
Non-Combustible	Produced by burning of H_2S Gas
Vapor Pressure	>1 atm @ 68 degrees Fahrenheit
Melting Point	-104 degrees Fahrenheit
Specific Gravity	Heavier than air, 2.26 degrees gravity
Colorless gas	SO_2 is colorless gas, very irritating to the eyes and lungs
Odor	Pungent odor and can cause injury or death to persons exposed to it
Reactions	Reacts with water or steam to produce toxic and corrosive gases
Hazards of Sulfur Dioxide	
Toxicity	The physiological effects on humans when inhalation of SO_2 occurs, varies at different levels of concentration and may be as follows
Concentrations SO_2	Physiological Effects SO_2
0.3-1 ppm	Detection level – pungent odor
2 ppm	Threshold Limit Value (TLV) Time Weighted Average (TWA)
5 ppm	15 minute Short Term Exposure Limit (STEL) permitted by OSHA
6 – 12 ppm	Irritation of the throat and nose
20 ppm	Eye irritation
100 ppm	Immediately Dangerous to Life or Health (**IDLH**) set by NIOSH
ppm = parts of gas per million parts of air by volume. 1% = 10,000 ppm	

Properties of Carbon Dioxide

Carbon dioxide gas is colorless, odorless, and non-flammable. Carbon dioxide is heavier than air.

Carbon Dioxide Properties and Characteristics	
CAS No.	124-38-9
Molecular Formula	CO_2
Molecular Weight	44.010
TWA	5,000 ppm
STEL	30,000 ppm
IDLH	40,000 ppm
Specific Gravity (air = 1.0)	1.5197
Boiling Point	-109.12°F
Freezing Point	-69.81°F
Vapor Pressure	830 psia
Auto ignition Temperature	N/A
Lower Flammability Limit	N/A
Upper Flammability Limit	N/A
Stability	Stable
pH in saturated solution	3.7
Corrosivity	Dry gas is relatively inert & not corrosive; can be corrosive to mild steels in aqueous solutions

Physical Effects of Carbon Dioxide	
Concentration	**Effect**
1.0%	Breathing rate increases slightly
2.0%	Breathing rate increases to 50% above normal level; Prolonged exposure can cause headache, tiredness
3.0%	Breathing rate increases to twice normal rate and becomes labored. Weak narcotic effect; impaired hearing, headache, increased blood pressure and pulse rate
4 – 5 %	Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt
5 – 10 %	Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness
10 – 100%	Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation

IV. EMERGENCY RESPONSE POLICY AND AUTHORITY

It is the policy of DCP Midstream to take the necessary actions required to safeguard DCP Midstream personnel and the public from emergency incidents. Such emergency incidents may include fires, hazardous materials releases, and incidents resulting from natural hazards such as tornadoes.

In the event of an emergency incident, DCP Midstream personnel will take prompt action within their immediate work area to ensure that all appropriate DCP Midstream personnel, corporate personnel, and the public are alerted or notified that an emergency incident exists.

Whenever possible, DCP Midstream personnel will take immediate action to limit the effects of the emergency. Four objectives will be considered when developing an appropriate emergency response. These objectives are:

- Life safety.
- Environmental protection.
- Protection of company and public property.
- Preventing interruption of business and public services such as highway access, water, and utilities.

While all four of the above objectives are important, life safety will always remain the first and highest priority.

RESPONSIBILITIES OF PERSONNEL

DCP Midstream utilizes the Incident Command System (ICS) for emergency response. The ICS structure used is based on the National Interagency Incident Management System (NIIMS), and is consistent with the National Contingency Plan (NCP).

In the event of an accidental release that results in the activation the H_2S Contingency Plan and all personnel have been evacuated out of the affected area, the Supervisor for the affected area, or his designee, will be the On-Scene Incident Commander. The Incident Commander (IC) will be the Asset Manager, or his designee. The (IC) will contact and coordinate with DCP Midstream's management.

The person acting as IC will continue in this position until the New Mexico State Police arrive. Once the New Mexico State Police arrive, the ranking State Police officer will assume the duties of the IC.

The DCP Midstream Supervisor, or his designee, shall determine:

1. Shut Down's required to control the situation.
2. Isolation of pipeline segments
3. Repairs, testing or restarts as required.

All DCP Midstream personnel have the responsibility, if necessary, to immediately alert other DCP Midstream personnel that an emergency condition exists and to take appropriate action to protect life, property, and the environment. All emergency response actions by DCP Midstream personnel are voluntary. Emergency response actions taken by individuals should be within the limitations of

their training, experience, and physical abilities. At no time will DCP Midstream personnel assume an unreasonable risk during an emergency response.

An unreasonable risk exists when:

- The task exceeds the physical abilities of the individual.
- The individual is not properly trained to complete the task.
- The individual does not have adequate experience to complete the task.

If an emergency occurs the following steps are to take place:

1. The Supervisor for the affected area, or his designee, shall be notified first.

2. Said Supervisor shall notify the SENM Asset Director who will notify the Regional Operations Vice President.

3. The Regional Operations Vice President shall contact the Crisis Management Team to activate the DCP Midstream Crisis Management Plan.

NOTE 1:	**NOTE 2**:
If any person in this chain of command is unavailable, the DCP Midstream employee shall elevate the communication to the next level.	The intent of this process is to allow the IC to make one phone call and then be able to focus on the incident.

VISITORS AND OTHER NON-ESSENTIAL PERSONNEL

All visitors and other non-essential personnel shall be prohibited from remaining in or entering an area contaminated by hydrogen sulfide exceeding an atmospheric concentration of 10 ppm or a concentration of sulfur dioxide exceeding 2 ppm in the atmosphere.

V. EMERGENCY INCIDENT MANAGEMENT

Emergency Incident Management will follow the Incident Command System (ICS) as described by the Federal Emergency Management Act (FEMA). The intent of using ICS for all emergency incidents provides automatic continuity with outside agencies and assists in establishing a "unified command" of the incident. DCP Midstream provides instruction and training on the ICS to it's personnel, as well as a written Emergency Response Plan which is reviewed at least annually. However, a brief overview of the system is provided below.

The Incident Command System (ICS) utilizes a flexible, modular approach to organizing resources to effectively respond to emergency events. FEMA suggests that the basic Incident Command System has five functional areas:

- Command;
- Operations;
- Planning;
- Logistics; and,
- Finance.

However, for incidents such as those described in this plan, it seems more likely that the basic Incident Command System would be comprised of: 1) Command; 2) Operations Chief; and, 3) Safety Officer. Larger incidents may require additional positions such as Public Information Officer, Logistics Chief, Planning Chief, Finance Chief, Staging Manager, Medical Group Supervisor and Environmental Group Supervisor. The exact number and combination of positions will vary depending upon the type, size and duration of the incident.

In every incident, command must first be established. The first person to discover the problem is, by default, the Incident Commander (IC) until this responsibility is transferred to someone else. This responsibility should be formally transferred to the Facility/Field Supervisor as soon as practical. Who is acting as the IC should be clear and apparent at all times.

The **Incident Commander** (IC) is responsible for the overall management of the incident. Where the IC does not delegate or assign a position, the IC retains that responsibility. The IC should be careful to have no more than five to eight people reporting directly to him. The IC establishes the strategy and goals for the incident and is ultimately responsible for the safety and success of the response activities.

An **Operations Chief** (OPS) is responsible for implementing the strategy to accomplish the goals defined by the IC. OPS directs all tactical operations, oversees response personnel and may assist the IC in the development of the action plan.

The **Safety Officer** is assigned by and reports directly to the IC. This position is responsible for identifying hazardous or unsafe situations, and developing measures necessary to assure the safety of response personnel and any victims of the incident. He/she should ensure that any personnel responding to the incident are using the proper PPE and have adequate training. The Safety Officer has the authority and responsibility to terminate or suspend operations that he believes are unsafe or will place people in imminent danger.

VI. PLAN ACTIVATION

The Hydrogen Sulfide Contingency Plan shall be activated when a release creates a concentration of hydrogen sulfide that exceeds or is likely to exceed the following activation levels:

- 100 ppm in any defined public area;
- 500 ppm at any public road; or
- 100 ppm at a distance greater than 3000 feet from the site of the release.

The Immediate Action Plan located in Section VII is to be followed upon plan activation.

VII. RESPONSE PROCEDURES FOR UNINTENTIONAL (ACCIDENTAL) RELEASES

If an H_2S leak is detected as a result of an accidental release, the following emergency/immediate action plan should be put into effect to adequately ensure the safety of DCP Midstream employees, contractors and the public. These response sequences should be altered to fit the prevailing situation and event/site-specific requirements.

This plan is to be followed by designated personnel any time they receive notice of a potentially hazardous hydrogen sulfide or sulfur dioxide discharge.

IMMEDIATE ACTION PLAN

1. Upon detecting a leak, immediately move away from the source and attempt to get out of the affected area by moving upwind, or cross wind if travel upwind is not possible.

2. Don proper personal breathing equipment.

3. Alert other personnel in the area.

4. Assist personnel in distress if this can be done without endangering yourself.

5. Proceed to the designated emergency assembly area.

6. Account for on-site personnel

7. If injury or death has occurred, immediately call emergency services (911).

8. If possible, take immediate measures to control present or potential discharge and to eliminate possible ignition sources. Emergency shutdown procedures should be initiated as deemed necessary to correct or control the specific situation.

9. Notify the supervisory foreman.

10. Upon arriving at the scene, the supervisor should formally assume the role of the Incident Commander (IC). Until relieved by the supervisor, the senior employee having initially discovered the leak should fill the role of IC.

11. The IC will assess the situation and direct further actions to be taken. If assistance is required from law enforcement, safety or medical agencies, consult the emergency services telephone listing under Section XIII. The Division Operations Vice-President or his designee should also be notified.

12. If the IC deems it necessary, ensure that steps are taken to stop traffic through the area, most importantly, highway traffic. Roadblocks must be set up at the 10-ppm H_2S boundary. The H_2S boundary shall be delineated by using a calibrated multi-gas detector/monitor. Call emergency services (911) for assistance in quarantining the area, if needed. Refer to maps in Section XVII for highway and pipeline locations.

13. Initiate evacuation of nearby residents or the public, if they should be subjected to an atmosphere exposure exceeding 10 ppm of hydrogen sulfide or 2 ppm of sulfur dioxide. Coordinate with emergency services. See Section VIII for the Evacuation Procedure.

NOTE: *Per the Emergency Response Planning Guide Level 2 (ERPG-2) – these levels are defined as the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.*

14. Personnel equipped with either self-contained breathing apparatus (SCBA) or Supplied Air Units, and portable H_2S monitoring equipment will determine the cause and extent of the leak. Personnel should enter the area from upwind of the site. If a reading of 10 ppm or higher of H_2S is obtained, then backup personnel equipped with SCBA will also be required.

15. No one will be intentionally exposed to H_2S concentrations in excess of 10 ppm without proper Personal Protection Equipment (PPE), IC authorization and backup personnel.

16. If possible, de-energize all sources of ignition, using lockout/tagout procedures.

17. If possible, perform shutdown on appropriate equipment and systems.

18. Trained personnel will continuously monitor H_2S and SO_2 concentrations, wind direction and area of exposure and will advise public safety and emergency personnel on current conditions.

19. Protective measures shall be maintained until the threat of injury from H_2S and SO_2 poisoning have been eliminated. The area must be checked with monitoring equipment and cleared below 10 ppm before allowing entry without proper PPE.

20. Notify the Safety Manager of incident. Assistance will be provided to ensure all proper notifications and reporting is made to local, state and federal agencies.

21. As soon as possible, **but no more than four hours after plan activation,** notify the appropriate New Mexico Oil Conservation Division office for the area in which the incident has occurred (see Section XIII). At a minimum, the following information will be needed:

    - The company name.
    - Facility name.
    - Your name and telephone number for them to contact you.
    - The location and source of the discharge.
    - A description of the area affected by the discharge, the probable concentration of H_2S in the region and the wind direction/velocity.
    - If necessary, request additional assistance from the agency.

VIII. EVACUATION PROCEDURE

Evacuation may become necessary to protect personnel and the public from hazards associated with an incident. Orderly evacuation is essential to protect the general public as well as DCP Midstream personnel and property.

DCP Midstream personnel have reviewed the affected area for this plan and have determined the safe evacuation routes and assembly areas to reduce confusion if evacuation becomes necessary. The DCP Midstream Facility/Field Operator may assign runners to direct evacuation and account for personnel during emergencies.

A log should be kept to account for all on site in the event of an emergency. The log should note the person's name, company, time of arrival, assignments and time of departure, to ensure all persons are accounted for at all times.

The Incident Commander, or his designee, shall be responsible to assure that all personnel sign-in upon arrival and sign-out upon departure from the incident site.

Designated Assembly Areas shall be at a safe distance from the incident in an appropriate direction (upwind, upstream, and upgrade). If the Assembly Areas do not provide adequate shelter, transportation to a central shelter should be arranged after all personnel are accounted for. As the incident progresses, the IC must continuously evaluate the adequacy of the assembly area and necessity of the shelter.

At the discretion of the IC, a security coordinator and/or a security team may be established, and the access to the site restricted.

DCP Midstream personnel evacuating their work areas should shut down all operating equipment, secure all sensitive materials, shut off water and electrical power and proceed to the Designated Assembly Area. Facility personnel will account for all personnel, ensure the evacuated area is secured and report the status of the evacuation to the IC. Evacuated personnel shall remain at the assembly area or shelter until directed otherwise by the IC.

- Local law enforcement and/or emergency management authority must be notified in conjunction with any community evacuation or public protective measures initiated.
- Medical Emergency/Personnel Injury Plan.
- Assess the scene; protect yourself.
- Summon EMS to the scene; provide information on the nature and number of injuries.
- If trained, provide First Aid/CPR as necessary, until EMS arrives at the scene; injured personnel should not be moved unless the situation is life threatening.
- Evacuate unnecessary personnel from the area.
- Establish a secure perimeter around the area to prevent unauthorized entry.
- Initiate the site security plan.
- Notify Facility/Field Supervisor and make appropriate notifications to local Fire and EMS.
- Make other internal management contact as appropriate.

In case of a fatality:

- Do not move the victim.
- Do not release name of victim(s).
- Contact local law enforcement.
- Contact local medical examiner.
- Preserve the accident site.
- Restrict all radio communications concerning the incident.

Make appropriate government agency notification and conduct post-incident activities.

IX. FIELD PERSONNEL VEHICLES AND EQUIPMENT

Each Field Mechanic or Operator's truck is equipped with a fire extinguisher, basic personal protective equipment, a first aid kit.

Self contained breathing apparatus (SCBA's) and supplied air trailers with work line units are available for use as needed.

DCP Midstream Field personnel are equipped with personal H_2S monitors and have access to portable gas detection devices.

Communications to DCP Midstream Field personnel is via mobile cellular telephones.

No personnel will be allowed in the area of a release without proper protection to include but not be limited to breathing equipment.

The priority responsibility of all personnel will be to ensure that no one is in the area of a release or where a potential for exposure to a hazardous atmosphere could occur.

Conditions are to be monitored continuously for changes which could impact the surrounding area and population.

X. COORDINATION WITH STATE EMERGENCY PLANS

The Hydrogen Sulfide Contingency Plan, as described, will be coordinated with the New Mexico Oil Conservation Division (NMOCD) and with the New Mexico State Police, consistent with the New Mexico Hazardous Materials Emergency Response Plan (HMER).

A copy of this plan will be submitted to the New Mexico State Police and the Local Emergency Planning Committee for Eddy and Lea Counties.

AGENCY	PHONE NUMBER
Oil Conservation Division – District 1 - Lea County District 2 – Chavez & Eddy Counties	 575-393-6161 575-748-1283
LEPC – Eddy County Lea County	 575-887-9511 575-606-6561
New Mexico State Police – Carlsbad Hobbs	 575-887-7511 575-392-5588
Sheriff's Office – Eddy County Lea County	 575-887-7511 575-396-3611
State Emergency Response Commission –	575-393-6161
New Mexico Office of Emergency Management –	575-476-9600

XI. NOTIFICATION OF THE OIL CONSERVATION DIVISION

The person, operator or facility personnel, shall notify the New Mexico Oil Conservation Division (NMOCD) upon a release of hydrogen sulfide requiring activation of the Hydrogen Sulfide Contingency Plan as soon as possible, but no more than four hours after plan activation, recognizing that a prompt response should supercede notification.

The person, operator or facility personnel, shall submit a full report of the incident to the NMOCD no later than fifteen (15) days following the release.

AGENCY	PHONE NUMBER
Oil Conservation Division –	
District 1 - Lea County	575-393-6161
District 2 – Chavez & Eddy Counties	575-748-1283

XII. TRAINING AND DRILLS

Training for all affected DCP Midstream personnel will be conducted prior to completion of the project and introduction of product. Training will then be given as needed for any personnel who may later be affected by this project.

This training will include:

- Training on the H_2S Contingency Plan for this pipeline.
- Training on the responsibilities and duties of essential DCP Midstream personnel.
- On-site or classroom tabletop drills which simulate a release or other situation
- Annual H_2S Hazard Training.
- Annual Emergency Response Plan Training.

Initial training is to take place upon employment with the company and refresher training is to be conducted annually – or sooner if there is a change in the plan or the need for training is determined.

All training will be documented and training records will be maintained on file at the respective SENM Asset Office for the personnel responsible for the areas covered by this project.

Drills will be conducted to simulate an emergency in which personnel perform or demonstrate their duties in the event of a potential release in a gas gathering/processing system. At a minimum the affected workgroups will conduct a table top drill annually. Multiple drills during the year may be scheduled at the discretion of the Supervisor.

The drill will include execution of this Plan and include, at a minimum contacting the following:

- the Local Emergency Response Agencies
- the entities that are identified as being within the 500 ppm and 100 ppm Radius of Exposure to ensure contact information is current and accurate.

The drills will also include briefing of public officials on issues such as evacuation or shelter-in-place plans. All drills will be evaluated and documented in EHSS database including any recommendations resulting from findings. Recommendations will be assigned to DCP Midstream personnel for completion by an established date. The action plan will be documented and records will be filed at the respective offices.

Only trained and certified personnel from responding agencies will participate in any rescue exercise.

The Cotton Draw Pipeline Project Hydrogen Sulfide Contingency Plan will also provide for training of noted residents in this plan as appropriate on the proper protective measures to be taken in the event of a release, and shall provide for briefing of public officials on issues such as evacuation or shelter-in-place plans. Literature will be passed out to the noted residents with emergency numbers to be utilized in the event of an incident associated with this or any DCP Midstream equipment and/or piping.

XIII. EMERGENCY DCP MIDSTREAM CONTACT PHONE NUMBERS

Use the following phone number in the event of a catastrophic release and/or emergency situation on the pipeline.

Telephone Number of DCP MIDSTREAM Personnel

24 HOUR TELEPHONE NUMBER 800-435-1679

Then Call:

Work Group Supervisor	Cell #	
East Carlsbad Gas Plant (Inactive)		
Carlsbad Field William Cupp	(903) 263-4814	
Eunice Field Dylan Payne	(979) 250-1467	
Eunice Gas Plant Wayde Lynch	(979) 242-6912	
Antelope Ridge Gas Plant (Inactive)		
Linam Ranch Gas Plant		
Jacob Strickland	(575) 973-7317	
Construction & Maintenance Department Haskell Condor	(432) 557-1127	

Then Call:

Asset Director Michael Todd Allison	(361) 318-3275	
Asset Safety Coordinators Tom Thomlinson	(575) 441-6343	
Asset Engineers Greg Schmidt - Carlsbad Charles Massingale - Eunice	(575) 973-8619 (575) 263-3472	

***Remember – Our 4 Objectives in an Emergency Are*:**

1. **Life Safety.**
2. **Environmental Protection.**
3. **Protection of Company and Public Property.**
4. **Preventing interruption of business and public services such as Highway Access, Water & Utilities.**

Life Safety Will Always Remain the First and Highest Priority!

In case of an emergency in the SENM Asset requiring assistance for fire, ambulance, medical authorities or HazMat issues – immediately call 911.

In the event of a catastrophic release and/or emergency situation at the facility, to inform emergency response authorities, such as the fire departments and emergency medical services, the universal emergency number "911" is to be used. ECGP is a part of the Local Emergency Planning Committee (LEPC) for Eddy County, and will keep all participants informed concerning any emergency response issues. Copies of the SARA Tier II, Title III report and a plot plan of the facility will be sent to responding organizations annually. In the event of any major change the plot plan will be updated and sent to these groups.

Facility	Carlsbad	Artesia	Eunice	Hobbs
Fire Department	**575-885-2111**	**575-746-5050**	**575-394-3258**	**575-397-9308**
Medical Facility	**575-887-4100**	**575-748-3333**	**575-492-5000 - Hobbs**	
State Police	**575-885-3137**	**575-748-9718**	**575-392-5588**	
City Police Department	**575-885-2111**	**575-746-5000**	**575-394-2112**	**575-397-2651**
Sheriff Department	**575-887-7551**	**575-746-9888**	**575-394-2020**	**575-393-2515**
LEPC	**575-887-9511 - Eddy County**		**575-397-9231 – Lea County**	

Telephone Numbers of Public Agencies

Oil Conservation Division – District 1 – Hobbs & DeBaca	**575-393-6161**
Oil Conservation Division – District 2 – Chaves and Eddy County	**575-748-1283**
NM Oil Conservation Division – Emergency Number	***575-370-7545***
State Emergency Response Commission (SERC)	**505-476-9681**
NM State Homeland Security & Emergency Management Dept.	**505-476-9600**
Bureau of Land Management - Carlsbad	**575-234-5972**
Bureau of Land Management – Hobbs	**575-393-3612**

Outside Contacts for Assistance

Type	Company Name	Contact Number
Vacuum Trucks/Transports	**Key Energy**	**575-393-9171**
	McNabb Services	**575-631-7749**
	Smith and Sons	**575-397-1862**
	Neighbors	**575-706-5896**
	Basic	**575-234-1778**
Crane Operations	**Sullivan's Crane - Hobbs**	**575-393-7141**
General Contractor/Roustabouts, backhoe operators, welders, dirt contractors	**Smith and Sons - Hobbs**	**575-397-1862**
	B-H Construction - Eunice	**575-394-2588**
	Diversified Services	**575-964-8394**
Southwestern Public Service		**800-895-1999**
Safety Supply Companies		
	Legacy	**(432) 689-0788**
	DXP Safety Services	**(432) 638-9898**
Spill Clean-up Contractors	**Smith and Sons - Hobbs**	**575-397-1862**
	Diversified Services	**575-964-8394**

XIV. DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS

AREA ONE: Black River Booster
Cemrex/DCP Tie-in Point
GPS: T 245 R 26E S 36
Lat & Long: N 32° 10.2893° W 104° 14.5560°

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

No. 1. Road Crossing
County Road #720
Black River Village Road
Lat & Long: N 32° 12.483' W 104° 14.749'

There are no Public Receptors at this location

AREA TWO: 6" to 10200 Tie Over - Block Valve Setting
GPS: T 24S R 26E S 13
Lat & Long: N 32° 13.3930° W 104° 14.7971°

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

No. 1. 10200 – 12" Line
Highway Crossing – CR #720
Black River Village Road
GPS: T 24S R 27E S 18
Lat & Long: N 32° 13.1445' W 104° 13.9296'

There are no Public Receptors at this location.

No. 2. 10200 – 12" Line
River Crossing
Old Cavern Highway
GPS: T 24S R 27E S 18
Lat & Long: N 32° 13.0351' W 104° 13.6009'

There are no Public Receptors at this location

No. 3. 10200 – 12" Line
County Road Crossing - CR #748
Old Cavern Highway
GPS: T 24S R 27E S 18
Lat & Long: N 32° 12.9579' W 104° 13.3647'

There are no Public Receptors at this location

No. 4. 10200 – 12" Line
Fence Line Road
Lat & Long: N 32° 12.8375' W 104° 12.9603'

There are no Public Receptors at this location

No. 5. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 17
Lat & Long: N 32° 12.6856' W 104° 12.4505'

There are no Public Receptors at this location

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS - Continued

No. 6. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 22
Lat & Long: N 32° 12.5282' W 104° 11.9227'

There are no Public Receptors at this location

No. 7. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 22
Lat & Long: N 32° 12.3189' W 104° 11.2224'

There are no Public Receptors at this location

No. 8. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 23
Lat & Long: N 32° 11.877' W 104° 9.741'

There are no Public Receptors at this location

No. 9. 10200 – 12" Line
Road Crossing – CR # 774
GPS: T 24S R 27E S 25
Lat & Long: N 32° 11.4631' W 104° 8.3460'

There are no Public Receptors at this location

No. 10. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 22
Lat & Long: N 32° 12.5282' W 104° 11.9227'

There are no Public Receptors at this location

No. 11. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 24S R 27E S 28
Lat & Long: N 32° 11.0061' W 104° 6.9107'

There are no Public Receptors at this location

NOTE: Horse Shoe Lake (dry bed lake)
GPS: T 24S R 28E S 32

No. 12. 10200 – 12" Line
County Road Crossing – CR #285
Pecos Highway
GPS: T 24S R 27E S 34
Lat & Long: N 32° 9.9878' W 104° 4.2945'

There are no Public Receptors at this location

NOTE: Malaga, NM is the closest town at this point in the pipeline.
Malaga is located 5.61 miles north of the line.
NOTE: Old Railroad Track – Removed
GPS: T25S R 28E S 2
Lat & Long: N 32° 9.8139' W 104° 2.9339'

No. 13. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 28E S 1
Lat & Long: N 32° 9.5644' W 104° 2.1066'

There are no Public Receptors at this location

No. 14. 10200 – 12" Line
River Crossing
Pecos River Crossing
GPS: T 25S R 28E S 6
Lat & Long: N 32° 9.3372' W 104° 1.3477'

There are no Public Receptors at this location

No. 15. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 29E S 9
Lat & Long: N 32° 8.8525' W 103° 59.7418'

There are no Public Receptors at this location

No. 16. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 29E S 10
Lat & Long: N 32° 8.4691' W 103° 58.4737'

There are no Public Receptors at this location

No. 17. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 30E S 8
Lat & Long: N 32° 9.285' W 104° 54.728'

There are no Public Receptors at this location

No. 18. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 30E S 17
Lat & Long: N 32° 8.2837' W 103° 54.0180'

There are no Public Receptors at this location

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS - Continued

No. 19. 10200 – 12" Line
Two Track – Dirt Road
GPS: T 25S R 28E S 1
Lat & Long: N 32° 9.5644' W 104° 2.1066'

There are no Public Receptors at this location

No. 20. 10200 – 12" Line
Road Crossing
Buck Jackson Road
GPS: T 25S R 30E S 12
Lat & Long: N 32° 8.2853 W 103° 50.5583'

There are no Public Receptors at this location

No. 21. 10200 – 12" Line
Road Crossing
Buckhorn Road
GPS: T 25S R 31E S 15
Lat & Long: N 32° 8.285' W 103° 46.066'

There are no Public Receptors at this location

No. 22. 10200 – 12" Line
Rural Road Crossing
GPS: T 25S R 31E S 15
Lat & Long: N 32° 8.283' W 103° 45.978'

There are no Public Receptors at this location

NOTE: 10200 – 12" Line
County Line Crossing
GPS: T 25S R 31E S 15
Lat & Long: N 32° 8.283' W 103° 45.978'

Cotton Draw Booster
GPS: T 25S R 32E S 7
Lat & Long: N 32° 8.2506' W 103° 42.8795'

AREA THREE: Eunice Field

No. 1 County Road Crossing
CR #128
NE ¼ Sec 16 Twn 24S – R 32E
Lat & Long: N 32° 12' 56.82" W 103° 40' 15.45"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 2 County Road Crossing
CR#30
NE ¼ Sec 34 Twn 21S – R34E
Lat & Long: N 32° 26' 30.30" W 103° 27' 0.50"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences with-in the Radius of Exposure for the pipeline in the area.
Closest residence is 1.81 miles south of pipeline
Ranch house of Clabe Pearson

RESIDENTS LOCATED NEAR RADIUS OF EXPOSURE (ROE):

RESIDENT'S NAME	EMERGENCY TELEPHONE NUMBER	RESIDENT'S ADDRESS	NUMBER OF RESIDENTS
Clabe Pearson	575-370-8597 (home) / 575-370-1623 (cell)		1

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS - Continued

AREA FOUR: Eunice Field – North (Raptor)

No. 1 Road Crossing
Barrio Road
NW ¼ Sec 29 Twn 21S – R 34E
Lat & Long: N 32° 26' 59.996" W 103° 29' 1.912"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 2 County Road Crossing
Delaware Basin & County Road 30
NW ¼ Sec 22 Twn 21S – R 34E
Delaware Basin Lat & Long: N 32° 28' 14.234" W 103° 27' 55.044"
County Road 30 Lat & Long: N 32° 28' 15.298" W 103° 27' 54.194"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 3 State Highway Crossing
State Hwy 176
SW ¼ Sec 11 Twn 21S – R 34E
Lat & Long: N 32° 29' 33.468" W 103° 26' 44.399"

BV 11 located on south side of road crossing

Evacuation & Road Blocks:

In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS – Continued

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 4 County Road Crossing
County Road 35
SE ¼ Sec 02 Twn 21S – R 34E
Lat & Long: N 32° 30' 22.743" W 103° 26' 0.526"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 5 Caliche Pit
1400 feet from 10200 pipeline
N 1/2 Sec 25 Twn 20S – R 35E
Lat & Long: N 32° 33' 3.35" W 103° 24' 41.80"

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 6 Ranch House
1,350 feet from 10200 pipeline (original); new part of line is 3800' from the ranch house
SW ¼ Sec 32 Twn 19S – R 36E
Lat & Long: N 32° 36' 52.29" W 103° 22' 36.27"

The Ranch house is not occupied at the moment and it is owned by Kyle Johnston and his phone number is (575) 631-7084.

RESIDENT'S NAME	EMERGENCY TELEPHONE NUMBER	RESIDENT'S ADDRESS	NUMBER OF RESIDENTS
Kyle Johnston	(575) 631-7084		0

No. 7 County Road Crossing

County Road 46
SE ¼ Sec 32 Twn 19S – R 36E
Lat & Long: N 32° 36' 51.310" W 103° 22' 22.110"

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS – Continued

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

No. 8 County Road Crossing
County Road 47
NW ¼ Sec 22 Twn 19S – R 36E
Lat & Long: N 32° 38' 54.657" W 103° 21' 2.348"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

No. 9 County Road Crossing
County Road 43
NW ¼ Sec 22 Twn 19S – R 36E
Lat & Long: N 32° 39' 8.842" W 103° 20' 53.174"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.

There are no residences within-in the Radius of Exposure for the pipeline in the area.

DETAIL INFORMATION - POTENTIALLY HAZARDOUS AREAS – Continued

No. 10 US Highway Crossing
US Hwy 62
SW ¼ Sec 36 Twn 18S – R 36E
Lat & Long: N 32° 41' 49.015" W 103° 18' 57.480"

Evacuation & Road Blocks:
In the event of a major release, traffic will be stopped at the safest location from the release site. DCP will assist as instructed, until law enforcement personnel assume command of the location(s).

Incident Command Post will be established - The Incident Commander has the responsibility to assess the situation and determine the severity of a release. However, the IC may determine that the Contingency Plan as written cannot be effectively activated and that a Reaction Plan may be activated depending on his evaluation of the situation.

NOTE: There are no railroad crossings, no river crossings, etc. in this area.
There are no residences within-in the Radius of Exposure for the pipeline in the area.

XV. DCP MIDSTREAM PUBLIC AWARENESS PROGRAM

Residents living within the H2S Radius of Exposure of DCP Operating Company, LP pipelines receive a Public Awareness brochure that explains DCP Public Awareness and Damage Prevention program. This brochure is printed in both English and Spanish. It contains visual documentation of pipeline markers, aerial markers and casing vent markers. Residents are encouraged to report any damage or vandalism to these markers in their neighborhood. This brochure also educates the public on how to respond to a pipeline emergency and includes a 24 hour/7 day week emergency telephone number. This brochure is mailed out by the DCP Public Awareness Manager in Denver.

DCP OPERATING COMPANY, LP PUBLIC AWARENESS BROCHURES WILL BE PRESENTED TO EACH RESIDENT LIVING WITHIN THE RADIUS OF EXPOSURE.

XVI. PIPELINE EMERGENCY SHUTDOWN EQUIPMENT

The following equipment is installed to ensure safe operations of the pipeline. This equipment is in place to allow personnel to isolate and/or shut in various parts of the line in the event of any incident which might create a potential hazard.

BLOCK VALVES

Block Valves and blow down vents have been installed at each valve location.
The block valves are ANSI 600 Series and are rated at 1485 psig.

LOCATIONS OF BLOCK VALVES

BV1	T24 R 26E S13 N 32° 13.3930' W104°14.7971'
BV2	T24 R 27E S23 N 32° 12' 0.1" W104°10'9.8"
BV3	T24 R 28E S35 N 32° 9.989' W 104° 3.603'
BV4	T25 R 29E S9 N 32° 8.852' W 103° 59.744'
BV5	T25 R 30E S27 N 32° 8', 17.13" W 103° 50' 34.57"
BV6	T25 R 32E S18 N 32° 8' 14.993" W 103° 42' 52.868"
BV7	T24 R 32E S16 N 32° 13' 0.102" W 103° 40' 29.422"
BV8	T22 R 33E S33 N 32° 21' 15.8" W 103° 34' 10.0"
BV9	T22 R 33E S27 N 32° 21' 34.826" W 103° 33' 53.761"
BV10	T21 R 34E S29 N 32° 26' 56.7" W 103° 29' 4.2"
BV11	T21S R34E S11 N 32° 29' 33.012" W 103° 26' 44.837"
BV12	T19S R36E S32 N 32° 36' 50.991" W 103° 22' 22.316"

XVII. PIPELINE PROTECTION PROGRAM

Pigging, Chemical and Cathodic Protection

There will be two sets of pigging facilities on the Cotton Draw Pipeline (10200)

1st set of pigging facilities is designed for pigging of the line from the following locations.

Pigs will travel from the launcher located at:

T 24 R 26E S 13
Lat & Long: N 32° 13' 24.1" W 104° 14' 27.7"

to the receiver located at:

T 21 R 34E S 36
Lat & Long: N 32° 26' 22.8" W 103° 24' 51.3"

2nd set of pigging facilities is designed for pigging of the line from the following locations

Pigs will travel from the launcher located at:

T 21S R 34E S29
Lat & Long: N 32° 26' 58.280" W 103° 9' 3.689"

to the receiver located at:

T 18S R 36E S 36
Lat & Long: N 32° 42' 18.795" W 103° 18' 38.575"

Launcher and receivers are ANSI 600 series and are rated at 1485 psig. No provisions are being made at this time to pig in the opposite direction.

The line is covered by a Corrosion Program. The internal piping is monitored by a chemical corrosion program and the external of the pipe has a ground bed for cathodic protection.

XVIII. MAP, CALCULATIONS OF ROE's, and AERIAL PHOTOS

Attached is the following information:

1. Map of Pipeline Showing H_2S Concentrations and ROE's for 100ppm and 500ppm
2. Calculations for ROE's
3. Aerial Photos of Cotton Draw Project Line

Attachment 1 - Map of Pipeline with ROE's for 100ppm and 500ppm

Attachment 2 - Calculations for ROE's

Attachment 3 - Aerial Photos of Line

APPENDIX A - NEW MEXICO TITLE 19 – CHAPTER 15 – PART 11 HYDROGEN SULFIDE GAS DOCUMENTATION

The attached document is the New Mexico Title 19 – Chapter 15 – Part 11 Standard regulating the development of Hydrogen Sulfide Contingency Plans. This standard was utilized to develop this plan for compliance with the established NMOCD program.

APPENDIX B – EMERGENCY CALL LIST

Agencies

AGENCY	PHONE NUMBER
Oil Conservation Division –	
District 1 - Lea County	575-393-6161
District 2 – Chavez & Eddy Counties	575-748-1283
LEPC –	
Eddy County	575-887-9511
Lea County	575-606-6561
New Mexico State Police –	
Carlsbad	575-887-7511
Hobbs	575-392-5588
Sheriff's Office –	
Eddy County	575-887-7511
Lea County	575-396-3611
State Emergency Response Commission –	575-393-6161
New Mexico Office of Emergency Management –	575-476-9600

Telephone Number of DCP MIDSTREAM Personnel

24 HOUR TELEPHONE NUMBER 800-435-1679

Then Call:

Work Group Supervisor	Cell #	
East Carlsbad Gas Plant (Inactive)		
Carlsbad Field William Cupp	(903) 263-4814	
Eunice Field Dylan Payne	(979) 250-1467	
Eunice Gas Plant Wayde Lynch	(979) 242-6912	
Antelope Ridge Gas Plant (Inactive)		
Linam Ranch Gas Plant		
Jacob Strickland	(575) 973-7317	
Construction & Maintenance Department Haskell Condor	(432) 557-1127	

Then Call:

Asset Director Michael Todd Allison	(361) 318-3275	
Asset Director David Pudim	*(979) 505-0127*	
Asset Safety Coordinators Tom Thomlinson Carey Smith	(575) 441-6343 (432) 257-9336	
Asset Engineers Greg Schmidt - Carlsbad Charles Massingale - Eunice	(575) 973-8619 (575) 263-3472	

In case of an emergency in the SENM Asset requiring assistance for fire, ambulance, medical authorities or HazMat issues – immediately call 911.

Outside Contacts for Assistance

Type	Company Name	Contact Number
Vacuum Trucks/Transports	Key Energy	575-393-9171
	McNabb Services	575-631-7749
	Smith and Sons	575-397-1862
	Neighbors	575-706-5896
	Basic	575-234-1778
Crane Operations	Sullivan's Crane - Hobbs	575-393-7141
General Contractor/Roustabouts, backhoe operators, welders, dirt contractors	Smith and Sons - Hobbs	575-397-1862
	B-H Construction - Eunice	575-394-2588
	Diversified Services	575-964-8394
Southwestern Public Service		800-895-1999
Safety Supply Companies		
	Legacy	(432) 689-0788
	DXP Safety Services	(432) 638-9898
Spill Clean-up Contractors	Smith and Sons - Hobbs	575-397-1862
	Diversified Services	575-964-8394

RESIDENTS

RESIDENT'S NAME	EMERGENCY TELEPHONE NUMBER	RESIDENT'S ADDRESS	NUMBER OF RESIDENTS
James Bounds	575-785-2363 (Father's #)	Black River Village Rd.	1
Roy Dearing	575-785-2314	1112 Black River Village Rd.	2

RESIDENT'S NAME	EMERGENCY TELEPHONE NUMBER	RESIDENT'S ADDRESS	NUMBER OF RESIDENTS
Clabe Pearson	575-370-8597 (home) / 575-370-1623 (cell)		1

RESIDENT'S NAME	EMERGENCY TELEPHONE NUMBER	RESIDENT'S ADDRESS	NUMBER OF RESIDENTS
Kyle Johnston	(575) 631-7084		0

APPENDIX C - DISTRIBUTION LIST

NEW MEXICO OIL & GAS CONSERVATION DIVISION – EDDY COUNTY **1 COPY**
1301 W Grand Ave, Artesia, NM 88210 -- 575-748-1283

NEW MEXICO OIL & GAS CONSERVATION DIVISION – LEA COUNTY **1 COPY**
1625 N French Dr., Hobbs, NM 88240 -- 575-393-6161

NEW MEXICO DEPARTMENT OF PUBLIC SAFETY – STATE POLICE
- For CARLSBAD: 4203 W 2nd, Roswell -- Non-Emergency: 575-622-7200 **1 COPY**
- For HOBBS: 5302 W Jack Gomez Blvd -- Non-Emergency: 575-392-5588 **1 COPY**

EUNICE FIRE DEPARTMENT **1 COPY**
-- Non-Emergency: 575-394-3258

CARLSBAD FIRE DEPARTMENT **1 COPY**
409 S Halaqueno, Carlsbad, NM -- Non-Emergency: 575-885-2111

HOBBS FIRE DEPARTMENT **1 COPY**
301 E White, Hobbs, NM -- Non-Emergency: 575-397-9308

MEDICAL FACILITY (HOBBS) **1 COPY**
Lea Regional Medical Center – 5419 Lovington Hwy, Hobbs -- 575-492-5107

MEDICAL FACILITY (CARLSBAD) **1 COPY**
Carlsbad Medical Center – 2430 W Pierce, Carlsbad -- 575-887-4100

LEA COUNTY SHERIFF DEPARTMENT
1923 N Dal Paso, Hobbs, NM -- Non-Emergency: 575-393-2515 **1 COPY**
805 N Linam, Eunice, NM -- Non-Emergency: 575-395-2121 **1 COPY**

EDDY COUNTY SHERIFF DEPARTMENT (CARLSBAD) **1 COPY**
102 N Canal, Carlsbad -- Non-Emergency: 575-887-7551

LOCAL EMERGENCY MANAGEMENT COMMISSIONER **1 COPY Each**
CARLSBAD – 101 W Greene St., Carlsbad, NM
HOBBS - Emergency Management/Safety – 300 N Turner, Hobbs, NM

DCP MIDSTREAM, EUNICE FIELD OFFICE **1 COPY**

DCP MIDSTREAM, EUNICE PLANT OFFICE **1 COPY**

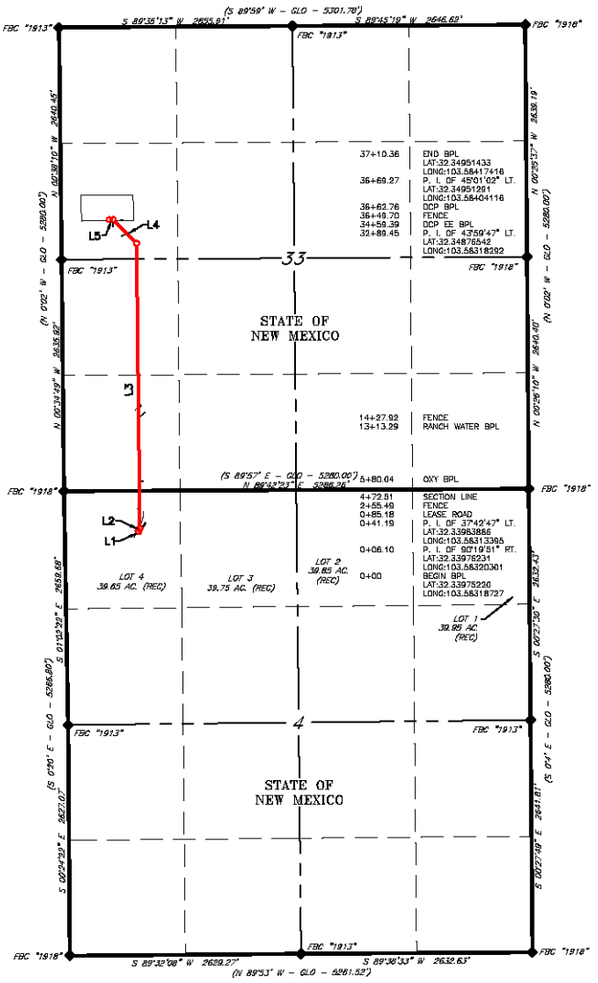
DCP MIDSTREAM, CARLSBAD FIELD OFFICE **1 COPY**

DCP MIDSTREAM, SAFETY DEPARTMENT - MIDLAND OFFICE **1 COPY**

DCP MIDSTREAM

LEA 4998-3 FOGHORN/LEGHORN TO DCP 10200 LINE

SECTION 33, T22S, R33E, & SECTION 4, T23S, R33E,
N. M. P. M., LEA COUNTY, NEW MEXICO



LINE TABLE		
LINE	BEARING	LENGTH
L1	N 53·17'10" W	6.10'
L2	N 3T02'41 " E	35.09'
LJ	N 00"40'06" W	3,248.26'
L4	N 44·39'53" W	379.82'
L5	N 89'40'55" W	41.09'

SCALE: 1" = 2000'

0 1000' 2000'

BEARINGS ARE GRID NAO 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

LEGEND

( ) RECORD DAIf1 - GLO

FOUND MONUMENT AS NOTED

PROPOSED BURIED PIPELINE

NO.	REVISION	DATE

JOB NO.: LS1612425
DWG. NO.: 1-1612425

RRC

308 W. BROADWAY ST., HOBBS, N 88240 (575) 964-8200

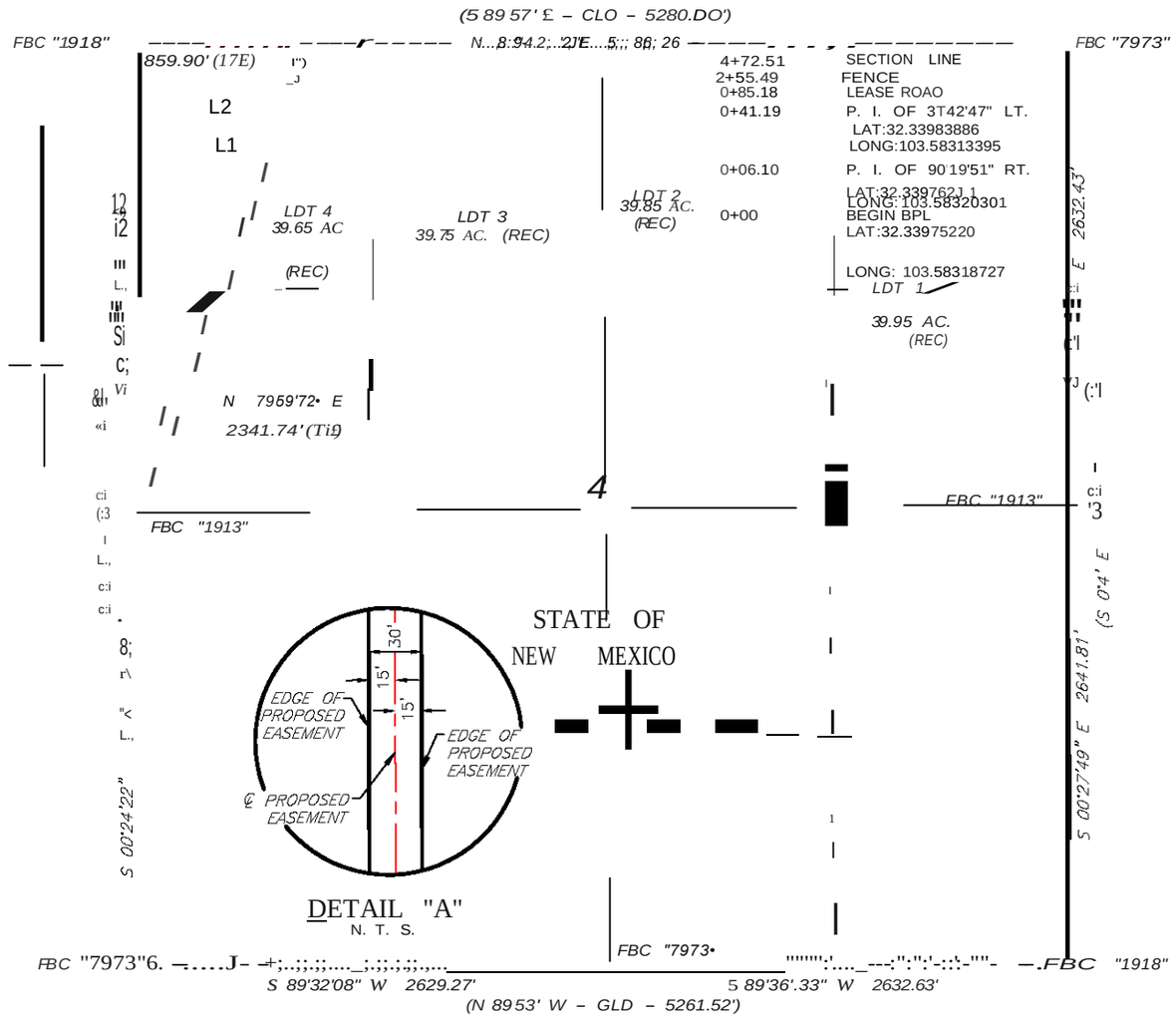
SCALE: 1" = 1000'
DATE: 1-4-2017
SURVEYED BY: JM/JF
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 1 OF 5

DCP MIDSTREAM

LEA 4998-3 FOGHORN/LEGHORN TO DCP 10200 LINE

SECTION 4, T23S, R33E,

N. M. P. M., LEA COUNTY, NEW MEXICO



LINE TABLE		
LINE	BEARING	LENGTH
L1	N 53° 17'10" W	6.10'
L2	N 37°02'41" E	35.09'
L3	N 00°40'06" W	431.32'

SCALE: 1" = 1000'

0 500' 1000'

BEARINGS ARE GRID NAD 83 NM EAST
DISTANCES ARE HORIZ. GROUND.

(● RECORD DATA - CLO AS NOTED
FOUND MONUMENT

PROPOSED BURIED PIPELINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Dot - bert M. Howett NM PS 19680

ROBERT M. HOWETT NEW MEXICO 19680 1/11/17 PROFESSIONAL SURVEYOR

Firm No.: TX 10193838 NM 4655451

NO.	REVISION	DATE

JOB NO.: LS1612425
DWG. NO.: 2-1612425

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 1-4-2017
SURVEYED BY: JM/JF
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 2 OF 5

DCP MIDSTREAM

LEA 4998-3 FOGHORN/LEGHORN TO DCP 10200 LINE

SECTION 4, T23S, R33E,

N. M. P. M., LEA COUNTY, NEW MEXICO

DESCRIPTION

A strip of land 30 feet wide, being 472.51 feet or 28.637 rods in length, lying in Section 4, Township 23 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 0+00, a point in Lot 4 of Section 4, which bears, N 19"59'12" E, 2,341.74 feet from a brass cap, stamped "1913", found for the West quarter corner of Section 4;

Thence N 53"17'10" W, 6.10 feet, to Engr. Sta. 0+06.10, a P. I. of 90'19'51" right;

Thence N 37"02'41" E, 35.09 feet, to Engr. Sta. 0+41.19, a P. I. of 37"42'47" left;

Thence N 00"40'06" W, 431.32 feet, to Engr. Sta. 4+72.51, a point on the North line of Section 4, which bears, N 89'42'23" E, 859.90 feet from a brass cap, stamped "1918", found for the Northwest corner of Section 4.

Said strip of land contains 0.325 acres, more or less, and is allocated by forties as follows:

LOT 4	28.637 Rods	0.325 Acres

NO.	REVISION	DATE

JOB NO.: LS1612425

DWG. N0.:3-1612425

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'

DATE: 1-4-2017

SURVEYED BY: JM/JF

DRAWN BY: CMJ

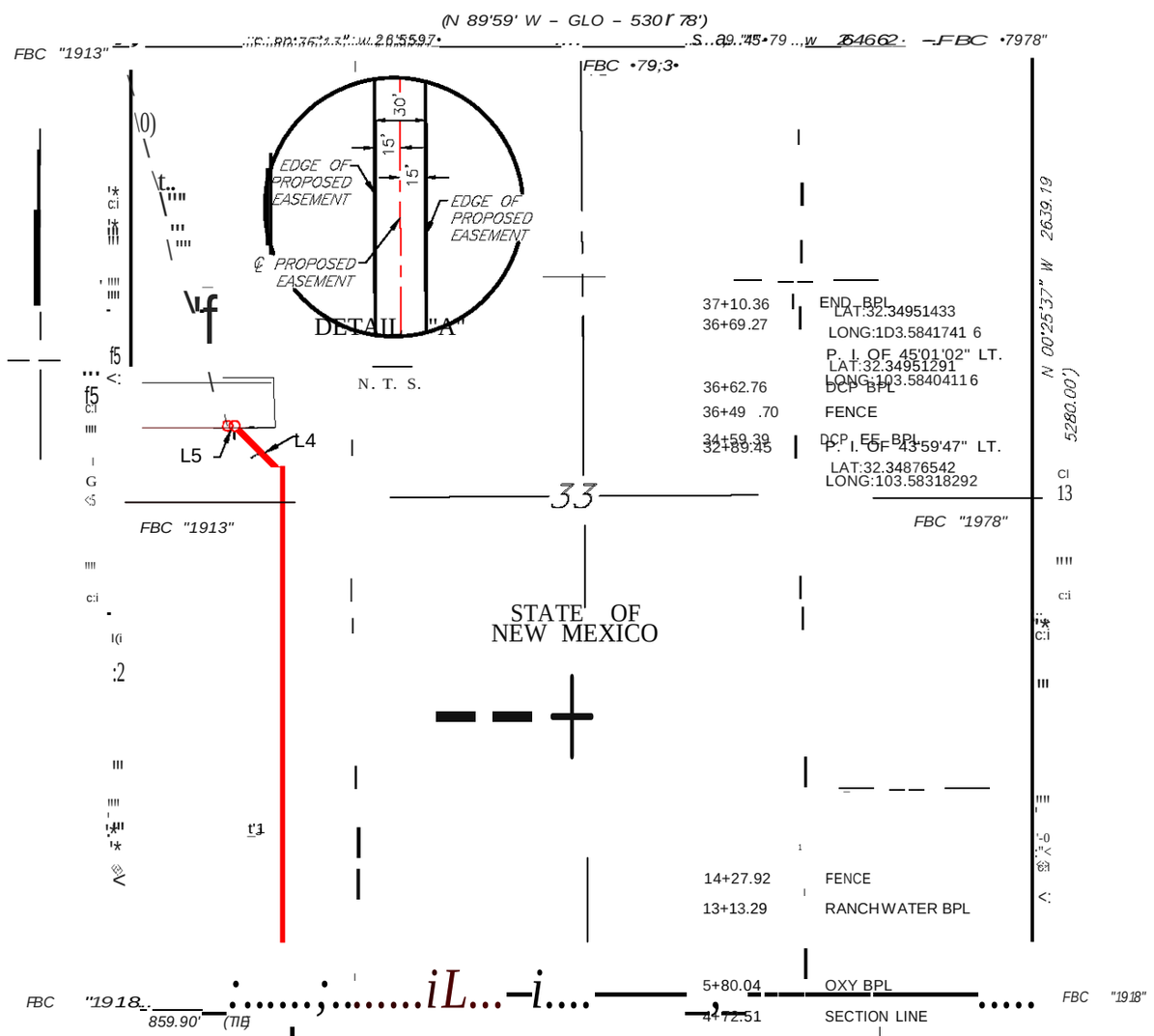
APPROVED BY: RMH

DCP MIDSTREAM

LEA 4998-3 FOGHORN/LEGHORN TO DCP 10200 LINE

SECTION 33, T22S, R33E,

N. M. P. M., LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	LENGTH
L3	N 00'40'06" W	2,816.94'
L4	N 44'39'53" W	379.82'
L5	N 89'40'55" W	41.09'

0 500' 1000'

BEARINGS ARE GRID NAO 83 NM EAST
DISTANCES ARE HORIZ GROUND.

( ) RECORD DATA - GLD AS NOTED
FOUND MONUMENT

PROPOSED BURIED PIPELINE

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this plat from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

)v\. -fib

bert M. Howett NM PS 19680

ROBERT M. HOWETT NEW MEXICO 19680 1/11/17 PROFESSIONAL SURVEYOR

Firm No.: TX 10193838 NM 4655451

NO.	REVISION	DATE

JOB NO.: LS1612425
DWG. NO.: 4-1612425

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 1-4-2017
SURVEYED BY: JM/JF
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 4 OF 5

DCP MIDSTREAM

LEA 4998-3 FOGHORN/LEGHORN TO DCP 10200 LINE
SECTION 33, T22S, R33E,
N. M. P. M., LEA COUNTY, NEW MEXICO

DESCRIPTION

A strip of land 30 feet wide, being 3,237.85 feet or 196.233 rods in length, lying in Section 33, Township 22 South, Range 33 East, N. M. P. M., Lea County, New Mexico, being 15 feet left and 15 feet right of the following described survey of a centerline across State of New Mexico land:

BEGINNING at Engr. Sta. 4+72.51 a point on the South line of Section 33, which bears, N 89"42'23" E, 859.90 feet from a brass cap, stamped "1918", found for the Southwest corner of Section 33;

Thence N 0040'05" W, 2,636.68 feet, to Engr. Sta. 32+89.45, a P. I. of 43"59'47" left;

Thence N 4439•53" W, 379.82 feet, to Engr. Sta. 36+69.27, a P. I. of 45"01'02" left;

Thence N 89"40'55" W, 41.09 feet, to Engr. Sta. 37+10.36, the End of Survey, a point in the Northwest quarter of Section 33, which bears, S 144•44" E, 2,258.96 feet from a brass cap, stamped "1913", found for the Northwest corner of Section 33.

Said strip of land contains 2.230 acres, more or less, and is allocated by forties as follows:

SW 1/4 SW 1/4	79.899 Rods	0.908 Acres
NW 1/4 SW 1/4	79.899 Rods	0.908 Acres
SW 1/4 NW 1/4	36.435 Rods	0.414 Acres

NO.	REVISION	DATE

JOB NO.: LS1612425
DWG. NO.: 5-1612425

RRC
308 W. BROADWAY ST., HOBBS, N 88240 (575) 964-8200

SCALE: 1" = 1000'
DATE: 1-4-2017
SURVEYED BY: JM/JF
DRAWN BY: CMJ
APPROVED BY: RMH
SHEET: 5 OF 5

ROE - Radius of Exposure - Calculations REV 1

Meter No.	Well / Meter Name	volume	H2S PPM	Cumm Vol	Well H2S	Cumm H2S PPM	100 PPM ROE	500 PPM ROE
721502-00	Black River CDP - Cimarex Sweet		6799.9	0	0			
721549-00	Cimarex CDP - Cimarex Sour		1660.9	5000	8304500			
	CDP - Leg 1		8460.8	8461	8304500	982	379	173
	Cedar Canyon - Leg 2		16352	0	24813	8304500	335	379	173
	Cotton Draw Booster to P-Line Intersect - Leg 3		222.1	0	25035	8304500	332	379	173
	P-Line Intersect to Shell 12" Tie-over (NN)- Leg 4		263.3	0	25298	8304500	328	379	173
	Shell 12" to Eddy and Eddy loop line connection - Leg 5		263.3	0	25562	8304500	325	379	173

The above analysis assumes no flow from Pure Gold/CalMon into Cotton Draw

Data	Description
5000	H2S Concentration - PPM (Block 13)
4000	Maximum Escape Volume - MCF/Day (Block 13)
657	100 PPM Radius of Exposure (Block 15) Formula = 1.589 * (B6/1000000)*(B7*1000) *.6258
300	500 PPM Radius of Exposure (Block 16) Formula = .4546 *(B6/1000000)*(B7*1000)*.6258

Given	Conversion to equal decimel equivalent
mole%	% multiplied by 10,000 = ppm, then take ppm divided by 1,000,000 = DE
ppm	ppm divided by 1,000,000 =DE

		H2S	MCF/Day	100ppm ROE	500ppm ROE
9/20/2017	Foghorn Leghorn	5000	4000	657	300

Meter No.	Well / Meter Name	ROE - Radius of Exposure - (volume	H2S PPM
721549-00	Cimarex CDP - Cimarex Sour	1660.9	5000
	CDP - Leg 1	10294.1	
	Cedar Canyon - Leg 2	26877	0
	Cotton Draw Booster to P-Line Intersect - Leg 3	9740	0
	P-Line Intersect to Shell 12" Tie-over (NN)- Leg 4	263.3	0
	Shell 12" to Eddy and Eddy loop line connection - Leg 5	0	0

The above analysis assumes no flow from Pure Gold/CalMon into Cotton Draw

Calculations REV 2

Cumm Vol	Well H2S	Cumm H2S PPM	100 PPM ROE	500 PPM ROE
	0			
	8304500			
10294	8304500	807	379	173
37171	8304500	223	379	173
46911	8304500	177	379	173
47174	8304500	176	379	173
47174	8304500	176	379	173

Meter Descriptions per Leg on Cotton Draw Pipeline

Revision 1

Meter Number	Meter Name	Meter Pressure	H2S ppm	Meter Volume
CDP Leg				
721502-00	Black River CDP	551.4	0	6799.9
721549-00	CIMAREX CDP	644.7	5000	1660.9
CEDAR CANYON LEG				
13135186	West Loving 11 Fed No1	573.2	0	633
13135015	Smith 10 No1	568.9	0	0
13135062	Harkey 35 No1	568.2	0	0
13135345	Dakota 30 Federal #1	562.5	0	227.9
13135336	Willow State Starter Gas Fuel	540.6	0	0
13135327	Mosaic Federal #1	532.9	0	76.2
13135011	Fed A I Com No1	533.6	0	182.2
13135226	Marbob Willow St No 1	533.3	0	896.5
718741-00	Mosaic 34 Federal #2 & 4 CDP	535.3	0	206.2
13135054	Salt Draw 2 No1	528.9	0	72.6
13135368	St Mary Siete HP Delivery	534.4	0	49
13135347	Diamond 31 Federal #2H	746	0	0.2
13135359	Amethyst Area HP CDP	535.5	0	76.2
13135322	Rustler Bluff 1	534.4	0	8.9
725041-00	Showstopper 7 Fed Com #1-H	527.9	0	887.6
13135088	Chimayo No1	517.8	0	0
13135311	BAR #4	524.8	0	69.5
13135314	Willow Lake Sec 21 CDP	536.1	0	6853.5
723368-00	Corral Draw 9 Fed #1H	17.3	0	0
718724-00	NASH DRAW TO CEDAR CANYON	35.2	0	1673
718730-00	Cedar Canyon Inlet	36.9	0	1783.5
13135243	Delaware Production CDP	601	0	0
13135019	Fortson No 1	570.5	0	73.2
13135372	Craft #1	559.1	0	0
13135020	Lightfoot No2	559.6	0	0.6
13135192	V-492 No 2	564.5	0	161.2
13135058	State V-492 No1	563.8	0	119.9
13135263	KARLSBAD CORRAL ST 2#1-H	522.5	0	537.2
13135321	Ohkay BHH State #1	517.3	0	1035.1
13135378	Doc BHU State #1	515.8	0	728.8
COTTON DRAW BOOSTER TO P-LINE INTERSECT				16352
13135117	Cotton Draw No87	507.2	0	222.1
13112025	Cotton Draw Comp Discharge	498.8	0	0
P-LINE INTERSECT TO SHELL 12" TIE-OVER (NN)				
13135260	GURNEY STATE 3 # 1	470.8	0	134.1
13135191	PURE RECS GERRONIMO	519.7	0	117.9
13135046	Federal 15 B Com #1	134.3	0	0
13135187	ICA Getty 15 A	505.2	0	11.3

CDP Leg			
725050-00	HUNTER 1A CDP	673	0
721549-00	CIMAREX CDP	678	
CEDAR CANYON LEG			
13135186	West Loving 11 Fed No1	525	0
13135015	Smith 10 No1	505	0
725054-00	AGAVE ROADRUNNER CDP	657	0
13135381	MUNNY N THA BANK #1H	675	0
13135062	Harkey 35 No1	675	0
13135345	DAKOTA 30 FEDERAL #1	655	0
13135327	MOSAIC FEDERAL #1	653	0
13135011	Fed A I Com No1	654	0
13135226	Marbob Willow St	655	0
718741-00	MOSAIC 34 FEDERAL #2 & 4 CDP	657	0
13135054	SALT DRAW 2 NO 1	655	0
725064-00	MALAGA C-3	711	0
13135019	Fortson No 1	694	0
718730-00	POGO CDP TO NASH DRAW	56	0
13135243	DELAWARE PRODUCTION CDP	733	0
718724-00	CEDAR CANYON SUCTION	55	0
13135372	CRAFT #1	324	0
13135020	Lightfoot No2	682	0
13135058	State V-492 No1	693	0
13135192	V-492 No 2	693	0
13135024	Fort 18 No1	14	0
13135366	QUEEN LAKE 20 FEDERAL #2-H	688	0
13135359	AMETHYST AREA HP CDP	658	0
13135368	ST MARY SIETE HP DELIVERY	657	0
13135347	DIAMOND 31 FEDERAL #2H	665	0
13135322	RUSTLER BLUFF #1	646	0
725041-00	SHOWSTOPPER 7 FED COM #1-H	649	0
13135088	Chimayo No1	14	0
723368-00	CORRAL DRAW 9 FED #1H	17	0
13135369	SAVE DA 21 Fed #1	86	0
13135314	WILLOW LAKE SEC 21 CDP	654	0
725058-00	COOTER 16 STATE CDP	653	0
13135311	BAR #4	646	0
13135263	KARLSBAD CORRAL STATE 2 #1-H	640	0
13135321	OHKAY BHH STATE #1	529	0
725062-00	MUY WAYNO STATE #1	627	0

13135378	DOC BHU STATE #1	629	0
COTTON DRAW BOOSTER TO P-LINE INTERSECT			
13135117	Cotton Draw No87	597	0
725051-00	FARBER BOB FED 1H	569	0
725060-00	ELK WALLOW 11 STATE CDP	638	0
13135367	SHOCKER 20 FEDERAL #1H	57	0
725039-00	MYOX 21 ST COM 8H	0	0
725065-00	MESCAL 22 FEDERAL #2H	652	0
725048-00	WHITE FED 1H	125	0
725053-00	SHOWSTOPPER 19 FEDERAL #4H	67	0
13135289	PARDUE FARMS 26 #1	0	0
13135301	SALT DRAW 10 STATE COM 1H (Disc)	0	0
711265-00	GRAMMA RIDGE EAST 34 (Disc)	0	0
P-LINE INTERSECT TO SHELL 12" TIE-OVER (NN)			
13135260	GURNEY STATE 3 # 1	471	0
13135191	PURE RECS GERRONIMO	520	0
13135046	Federal 15 B Com #1	134	0
13135187	ICA Getty 15 A	505	0

8454
3501 Note: added sweet gas to CDP - 1660 Mscfd at 0.5%H2S

670
15
11040
134
5
156
50
136
1040

218
241
147
52
30
1805
0
0
0
36
150
0
175
46
49
49
28

1077
0
0
12
2686
3554
77

416
0
1115

1668

506
1242
4021

793
0
1040
955

1183
0

0

0

134.1
117.9
0
11.3

H2S before the Foghorn on 10200	0.000%
At site blended with existing	0.210%
Combined at 10200	0.031%
North 10200 (Raptor line)	0.029%
NN-22 to shell 12	0.029%
Blend at Shell 12	0.006%
North Shell 12 to Plant	0.005%