

**GW - 048**

**H2S CONTINGENCY  
PLAN**

## Chavez, Carl J, EMNRD

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**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, August 09, 2011 2:22 PM  
**To:** 'bstewart@westtexasgas.com'  
**Cc:** Gonzales, Elidio L, EMNRD  
**Subject:** RE: Davis Gas Plant (GW-048) Lea County (H2S Contingency Plan)

Mr. Stewart:

The OCD has completed its review of your H2S Contingency Plan re-submittal dated July 11, 2011 and find that it appears to meet the intent of the OCD "Hydrogen Sulfide" Regulations (§ 19.14.11 NMAC).

Please note that OCD reserves the right to modify and change it in cooperation with Davis Gas Processing Company.

Please contact me if you have questions. Thank you for your cooperation.

*Please be advised that OCD approval of this plan does not relieve Davis Gas Processing Company of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Davis Gas Processing Company of responsibility for compliance with any other federal, state, or local laws and/or regulations.*

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
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"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

<http://www.emnrd.state.nm.us/o cd/environmental.htm#environmental>)

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**From:** Chavez, Carl J, EMNRD  
**Sent:** Friday, May 27, 2011 9:36 AM  
**To:** 'bstewart@westtexasgas.com'  
**Cc:** Hill, Larry, EMNRD  
**Subject:** FW: Davis Gas Plant (GW-048) Lea County (H2S Contingency Plan)

Mr. Stewart:

The OCD is in receipt of the Denton Gas Plant H2S Contingency Plan (Plan) and has conducted a preliminary review of the Plan.

The H2S Contingency Plan that Davis Gas Processing submitted is deficient and OCD requests the following information:

- 1) A map to scale displaying each identified ROE and nearby public areas that could be affected by a major release. Typically a U.S.G.S. 7.5 Minute Quadrangle Topographic Map with Facility Overlay displaying any nearby roadways, population centers, etc. has been acceptable to the OCD.
- 2) A map to scale at each identified ROE area with facility layout, H2S monitor locations, poison gas signs, locations where roadways would be barricaded in the event of an emergency, windsock (lighted to see in dark) locations, escape pathway for workers, etc. Typically a U.S.G.S. 7.5 Minute Quadrangle Topographic Map or larger scale map with facility overlay displaying units at the facility any nearby roadways, population centers, etc. has been acceptable to the OCD.

Please submit the information on or before the August 11, 2011 deadline. Please contact me if you have questions. Thank you.

*Note: Please be advised that OCD approval of this plan does not relieve Davis Gas Processing of responsibility should their operations fail to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Davis Gas Processing of responsibility for compliance with any other federal, state or local laws and/or regulations.*

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**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, February 15, 2011 9:55 AM  
**To:** 'bstewart@westtexasgas.com'  
**Cc:** Hill, Larry, EMNRD  
**Subject:** Davis Gas Plant (GW-048) OCD Inquiry into Gas Gathering Meter Shut-ins in 2010 & Foreseeable Future

Mr. Stewart:

Good morning. The OCD has not heard back from Elena Hofman related to the above subject (see phone log provided below).

Call back Tuesday, 1/18 everyone gone. Left msg. 1/26. Call back after 1:00 p.m. bstewart@westtexasgas.com. On 1/27 contacted Bob and he said Elana Hofman was assigned to the OCD inquiry. Similar to DCP, they can treat sour gas and they also have individual meters. Elena Hofman says she will respond by COB on 2/4. Elan's phone is 832-239-8015. Elena indicated that the GP had one emergency shut-down in 2010 that they are working to send info. on to the OCD. She said the GP does not intend to shut-down in the foreseeable future with exceptions of emergencies, acts of God, etc.

The OCD would appreciate it if you could submit the requested information by COB February 28, 2011. Please respond to this message to let us know if you agree or would like further communication with the OCD on this matter.

Thank you.

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(Pollution Prevention and Waste Minimization Guidance is under "About Us- Environmental Bureau" <http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

RECEIVED OCD

2011 07-08 A 10:14

Davis Gas Processing  
Denton Gas Plant  
625 E. US 82 Hwy  
Lovington, NM 88260

July 11, 2011

Carl J. Chavez, CHMM  
Oil Conservation Division  
1220 S. St. Francis Drive  
Sante Fe, NM 87505

RE: Denton Gas Plant H2S Contingency Plan

The following are the revised Contingency Plan for the Denton Gas Plant, Booster Stations and Gathering Systems, as per your request.

Please look over the plan and if there are any questions or I can be of further assistance, please advise.

Yours truly,



Bobby Roach  
Safety Director

cc: MKD  
JLD  
BStewart

## Hydrogen Sulfide Contingency Plan

### PURPOSE

- I. **Purpose of Plan** - To provide an organized plan of action for alerting and protecting the public following the accidental release of a potentially hazardous volume of hydrogen sulfide.
- II. **Activation of Plan** - This plan shall be activated immediately by plant personnel on duty upon the detection of a potentially hazardous volume of hydrogen sulfide released to the atmosphere.
- III. **Area of Exposure** - A major pipeline failure of any gas pipeline transporting gas containing Hydrogen Sulfide (H<sub>2</sub>S) to or from the Denton Gas Plant will create a hazardous area of exposure in the vicinity of the failure. The plat included in this plan indicates areas of exposure which involve public or private facilities. Pipeline ruptures within these indicated areas of exposure will require immediate action to protect the lives of persons that may be in or may enter into these areas.
- IV. **Notification** - A call list is included in this plan which lists telephone numbers of various public services and home telephone numbers of Davis Gas Processing supervisors that the person on duty may notify for timely assistance in handling the emergency.
- V. **Shut-off Source of Gas and Evacuate Area**- Personnel on duty at the time of an emergency shall take immediate steps to simultaneously block traffic from entering the area and evacuate the area of persons already in the area. Call for assistance from city officials, if necessary. Since there is one resident and no public buildings in the area, all persons in the area will be transient.

Simultaneously with action to evacuate the area of persons, steps shall be taken to close all block valves on the ruptured pipeline to shut off the supply of gas to the ruptured area. Source of gas to the rupture may be from either the plant or the field, therefore, the proper block valves at the plant and in the field must be closed. See enclosed map of Gathering System, valves and exposure areas.

- VI. **Special Considerations** - All H<sub>2</sub>S bearing gas entering or leaving the Denton Gas Plant (except the acid gas flare within the Plant fenced area) is lighter than air and, therefore, will tend to rise at the point it is released to the atmosphere. At the point the gas is released to the atmosphere, it (including the H<sub>2</sub>S component) will begin a dispersion process within the atmosphere, thereby becoming less and less Concentrated both vertically and horizontally away from the point of release.

The rate of dispersion of the gas into the atmosphere varies with the temperature difference between the gas and atmosphere, the volume of gas, and the wind speed. The table below shows the concentration of H<sub>2</sub>S expressed in parts per million by volume in the various gas streams entering the Denton Gas Plant. Also, the table shows estimated H<sub>2</sub>S dispersion expressed as the 100 ppm radius of exposure, and the 500 ppm radius of exposure for each gas stream. These latter figures are calculated distances downwind from point of release at which the air would be expected to have H<sub>2</sub>S concentration of 100 ppm or 500 ppm by volume. The radial of exposures were calculated using the equations set out in New Mexico Statewide Rule 118.

<u>Gas Stream</u>	<u>H<sub>2</sub>S Concentration</u> ppm	<u>Radius of Exposure, ft.</u>	
		<u>100 ppm</u>	<u>500 ppm</u>
North Denton Inlet	7000	427 feet	187 feet
South Denton Inlet	7000	352 feet	155 feet
C&K / Ship Lateral Inlet	0		
High Plains & Austin Lateral Inlet	0		
Mesa Inlet	0		
Denton Plant Acid Gas	350,000	1697 feet	744 feet

**CALL LIST**NEW MEXICO STATEWIDE RULE 118  
CONTINGENCY PLAN**SERVICES**

FIRE DEPARTMENT	LOVINGTON, N.MEXICO	575-396-2359
GENERAL HOSPITAL	LOVINGTON, N.MEXICO	575-396-6611
POLICE DEPARTMENT	LOVINGTON, N.MEXICO	575-396-2811
HELICOPTER (DPS)	HOBBS, NEW MEXICO	575-392-6581
VETERINARIAN	HOBBS, NEW MEXICO	575-392-5563
HIGHWAY PATROL (DPS)	HOBBS, NEW MEXICO	575-392-5588
COUNTY SHERIFF	HOBBS, NEW MEXICO	575-393-2515
ENVIRONMENTAL IMPROVEMENT DIV.	HOBBS, NEW MEXICO	575-397-5250
N.M.O.C.D (N. M. Oil Conservation Division)	HOBBS, NEW MEXICO	575-393-6161

DAVIS GAS SUPERVISORS

DAVID PEPPER Plant Foreman	LOVINGTON, N. MEXICO	575-396-6022 575-369-5945
DAN MEACHAM Oper. Supervisor	BIG LAKE, TEXAS	325-884-2299 432-556-5381
BOBBY ROACH Safety Director	MIDLAND, TEXAS	432-563-1247 432-528-6434
BOB STEWART Environmental Director	MIDLAND, TEXAS	432-682-6311 432-664-0188
MICHAEL DAVIS V.P. OPERATIONS	ABILENE, TEXAS	325-695-2370 325-668-6339

PUBLIC NEAR H2S EXPOSURE RADIUS

FREDDY WHITMAN	NORTH DENTON LATERAL	575-398-6678
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## **VII. General**

Hydrogen sulfide is one of the most potentially lethal hazards found in the oil and gas industry. Davis Gas Processing intends to make every effort to provide adequate safeguards against harm to persons both on location and in the immediate vicinity from the effects of H<sub>2</sub>S released to the atmosphere. In those areas where H<sub>2</sub>S is common, the following safety procedures/policies shall be in effect.

- 1.) This contingency plan shall be read and understood by all Plant personnel. Proper exercise of the Plant's gas leak detection program should assure that no major escape of H<sub>2</sub>S bearing gas will ever occur at the Davis Gas Plant. However it is essential and is required by New Mexico Statewide Rule 118, adopted March 15, 1976, that this contingency plan be understood by all plant personnel and at all times be available for personnel referral and use.
- 2.) During the Plant's regular training sessions regarding use, care, and storage of respiratory equipment, all personnel will be reminded of possible need for the equipment during activation of this contingency plan.
- 3.) Location of all block valves for shutting off sources of gas to a pipe rupture area as shown on the plat accompanying this plan shall be personally visited by all plant personnel to assure each person's knowledge of exact location.
- 4.) Gas released from pipeline ruptures may be ignited by automotive ignition and exhaust systems, as well as by persons smoking, and by lightning. The possibility of ignition by whatever means should always be considered and avoided in all efforts to evacuate persons or to control the escape of gas in an area of H<sub>2</sub>S exposure.

It should always be remembered that the bulk of gas emitted to the atmosphere will flow with the wind as it disperses, therefore, contact with the gas can be prevented by avoiding positions directly downwind from the point of emission. This fact should always be considered in working in the area (closing valves, etc.) and evacuating persons from the area.

## **VIII. Physical Characteristics**

Hydrogen sulfide (H<sub>2</sub>S) is a colorless, flammable gas which may be liquefied under pressure and which occurs in a variety of natural and industrial settings. Typically called "sour gas", hydrogen sulfide is soluble in water, crude oil or petroleum fractions, and is extremely corrosive.

The gas can cause severe stress cracking of steel and other metals. Hydrogen sulfide burns with a blue flame to form sulfur dioxide which is also a toxic gas. Hydrogen sulfide is slightly heavier than air and may accumulate to dangerous concentrations in low lying areas and confined spaces.

The gas can be dispersed by wind movement or air currents.

**IX. Effects From Exposure**

The health effects associated with hydrogen sulfide exposure are primarily determined by the concentration of the gas in the individuals breathing zone, the length of the exposure period(s) and individual susceptibility to the contaminant.

The health effects associated with hydrogen sulfide exposure are most often the result of sudden, excessive exposures experienced over a short time period. For example, a short-term exposure to hydrogen sulfide at a concentration of 500 ppm can result in respiratory arrest, loss of consciousness, and death within minutes.

A most important characteristic of hydrogen sulfide gas is its ability to cause olfactory fatigue or a failure in the sense of smell. At concentrations approaching 100 ppm, exposure to hydrogen sulfide causes a loss of the sense of smell. This effect can result in an individual developing a false sense of security relative to the exposure conditions. High concentrations of hydrogen sulfide, especially those capable of causing death or serious physical injury, cannot be detected by the sense of smell.

**X. Hydrogen Sulfide Work Practices**

The incorporation of the following specific work practices discussed below into routine operation and maintenance activities can help prevent overexposure to hydrogen sulfide. These work practices have proven effective in controlling hydrogen sulfide exposure in various Davis Gas operations.

**1.) Engineering controls****A. Ventilation**

When the potential for hydrogen sulfide exposure occurs during routine operation and maintenance activities, ventilation of the worker's breathing zone is extremely important. Hydrogen sulfide gas is slightly heavier than air and does not readily dissipate. As such the gas may accumulate in low lying areas and confined spaces and may remain for an extended time.

Laboratory operations involving hydrogen sulfide gas or materials containing hydrogen sulfide shall be conducted under a properly functioning laboratory hood or with local exhaust ventilation placed at the source of emission.

For indoor work, such as in buildings containing transfer pumps, gas processing equipment, gas compressors, treaters, LACT, or other equipment the accumulation of hydrogen sulfide gas in these enclosed work areas is prevented through the use of general/dilution ventilation.

## 2.) Work Practices

If possible, workers shall always remain upwind from the source of hydrogen sulfide gas while completing tasks. Wind direction shall be verified by a wind sock, streamer, or vane prior to initiating work. Wind conditions cannot be relied on, however, as a single means of controlling exposure.

## 3.) Monitoring

## A. Personal Alarm Monitors

When routine and maintenance tasks involve potential exposure to hydrogen sulfide above 10 ppm, the use of continuous reading personal monitors with audible and/or visual alarms is required. When a group of employees is working close together, it is not necessary that each employee wear a monitor. Representative employees shall be selected to wear personal monitors when such group tasks are to be performed. A portable monitor can be substituted for the personal type as long as it adequately samples the work area used by all potentially exposed employees.

Monitors shall be utilized for the complete duration of work activity. It is required that monitors be set to alarm at 10 ppm or less. If the alarm sounds, indicating a concentration at/or above this level, workers shall immediately leave the area. Workers shall withdraw upwind to a position which is considered to be a safe distance from the source of the gas. The alarm will continue to sound until the detector-sensor is cleared of hydrogen sulfide. Depending on the type of monitor and the concentration of the gas, this can take several minutes, even though the monitor is removed to a hydrogen sulfide free atmosphere. Allowing workers to re-enter, and work in the area shall be permitted only if they are wearing a full face pressure-demand airline respirator with egress bottle or self-contained breathing apparatus (SCBA). This procedure shall be followed, until it has been established that the area is safe from hydrogen sulfide (less than 10 ppm).

## B. Fixed (Stationary) Monitors

Continuous fixed area monitors shall be permanently installed in locations where the sudden release of hydrogen sulfide is possible. The monitor sensors shall be placed in proximity to potential sources of a hydrogen sulfide release. Several sensors may be needed at points of possible gas emission and shall be connected to a central monitor. The monitor H<sub>2</sub>S warning device, audible and visual, shall be located so that the alarm can be easily recognized throughout the facility. Employees must be instructed to follow established response procedures in the event that an alarm is activated.

Survey measurements shall be made using portable hydrogen sulfide monitors. The following applications are most suitable for survey monitoring with portable devices.

- \* Monitoring of work areas prior to entry
- \* Monitoring of confined spaces
- \* Detection of leak sources
- \* Monitoring when lines, valves, or vessels are opened

#### 4.) Respiratory Protection

Supplied-air (airline or SCBA) respiratory protection against hydrogen sulfide exposure is required in the following situations.

- When routine or maintenance work tasks involve exposure to H<sub>2</sub>S concentrations of 10 ppm or greater.
- When a fixed monitor alarms, and re-entry to the work area is required to complete a job.
- If entry is required into a confined space is necessary and measurable levels of hydrogen sulfide are identified within the confined space.
- During rescue of employees suspected of H<sub>2</sub>S overexposure.
- For specific tasks identified with significant exposure potential and outlined in local program guidelines.

All respiratory protection equipment for hydrogen sulfide must be of the supplied-air type, equipped with pressure-demand regulators and operated in the pressure demand mode only and meet the Standard of Industrial Hygiene Practice for Respiratory Protection. This is the only type of respiratory protection recommended for hydrogen sulfide application. If airline units are used, an egress bottle with at least a 5-minute supply shall also be carried. Gas masks or other air-purifying respirators must never be used for hydrogen sulfide due to the poor warning properties of the gas.

Use of respiratory protection shall be accompanied by a written respiratory protection program referenced to Davis Gas' "Respiratory Protection Program"

### 5.) Confined Space Entry

Work conducted in low lying areas and confined spaces where hydrogen sulfide may accumulate requires specific precautions beyond those described above. These conditions may be encountered during excavation and line repair or tank (vessel) entry or maintenance and inspection. Before starting work, these tasks require that the excavated area or vessel be thoroughly tested with a direct reading hydrogen sulfide instrument, as well as tested for sufficient oxygen and the absence of flammable atmospheres. These measurements are to be included as an integral part of an entry procedure. Furthermore, where entry permits are required these measured levels must be noted on the permit. Combination hydrogen sulfide detectors which also measure combustible gas and oxygen are available. Care must be taken to determine the hydrogen sulfide concentration throughout the complete area.

If hydrogen sulfide levels are determined to be above 10 ppm, entry into a confined space requires respiratory protection. Efforts must be made to ventilate the confined space prior to scheduled entry. When concentrations of hydrogen sulfide remain above 10 ppm, additional forced air venting is required before entry, when time permits. If entry is necessary under the above conditions respiratory protection shall consist of a pressure-demand airline respirator with an egress bottle or an SCBA. A standby person, also equipped with proper respiratory protection, is required to be outside the vessel and in constant audio or visual contact with the worker inside. This precaution is necessary to ensure that rapid rescue of the worker inside can be accomplished.

## XI. Warning Signs

Warning signs for hydrogen sulfide must be posted to remind employees of the potential hazard at each specific location. Additionally, signs must indicate the need for monitors or respiratory protection in areas where such equipment is required. Warning signs shall be posted on all units where the potential for a dangerous release of hydrogen sulfide exists.

## XII. Emergency Procedures

The prompt performance of specific rescue and emergency first aid procedures can very often result in the full recovery of victims overcome by hydrogen sulfide. These victims shall be immediately removed from the contaminated atmosphere by a rescuer wearing full-face pressure-demand supplied air respiratory protection, e.g., SCBA or supplied air with egress unit. Rescue must never be attempted without proper respiratory protection! Many such attempts have resulted in the rescuer also becoming a victim.

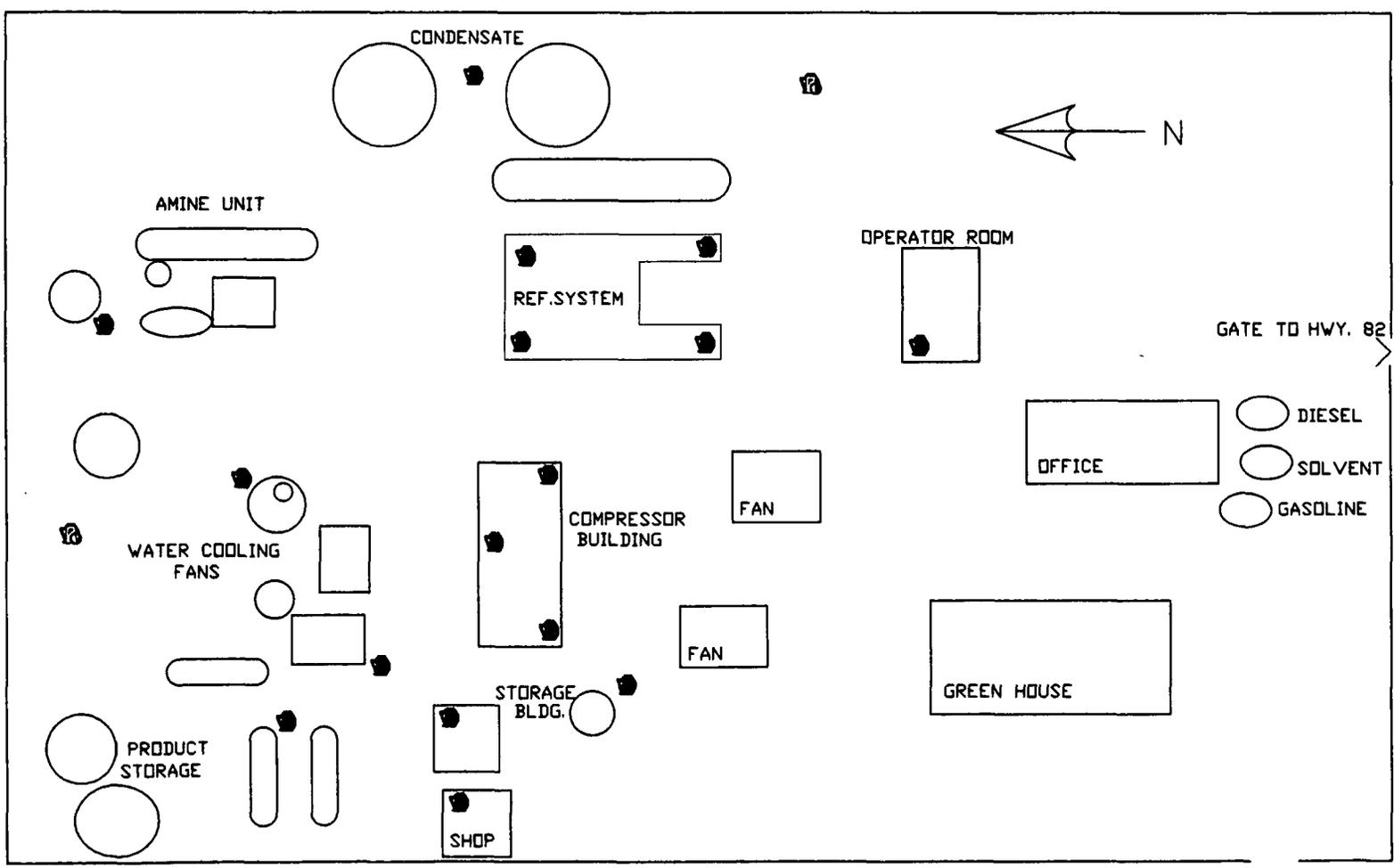
Once the victim is safely removed from the contaminated atmosphere, the rescuer is to begin artificial respiration or administer oxygen if breathing has ceased. Caution must be taken during the application of artificial respiration not to inhale air directly from the victim's lungs, as this could also result in the rescuer being overcome. Depending on the length of exposure and concentration of hydrogen sulfide, heart failure may occur within 4 to 6 minutes. If the victim's heart has stopped, cardiopulmonary resuscitation (CPR) must be started immediately. If the victim does not respond to emergency aid, emergency medical aid must be summoned to the scene, and the individual taken, as soon as possible, to a hospital for further treatment. Regardless of apparent condition, all overexposure victims shall receive appropriate medical attention as soon as possible.



FIRE EXTINGUISHER LOCATIONS AT PLANT

Safety and Loss Prevention Standard

000-10



- ☐ PORT FIRE EXTINGUISHERS
- ☐ WHEEL FIRE EXTINGUISHERS

REVISIONS			DAVIS GAS PROCESSING INC.		DENTON GAS PLANT	
NO.	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DATE: 8/13/05	BY: [Signature]	REV: 0
DWG # 01-002	REV # 0	

**XIII. Training**

- A. All field personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, shall be H<sub>2</sub>S trained and certified. They shall be trained and made familiar with detection equipment, ventilation equipment, prevailing winds, briefing areas, warning systems, and evacuation procedures where appropriate.
- B. All Field personnel shall be trained in basic first-aid procedures applicable to victims of H<sub>2</sub>S exposure. During subsequent on-site training sessions and drills, emphasis shall be placed upon rescue and first aid for H<sub>2</sub>S victims. The training shall consist of the following:
- a. Introduction
    - Definition
    - Dangers of H<sub>2</sub>S
    - Properties of H<sub>2</sub>S
    - Physical Effects
    - Sources of H<sub>2</sub>S
  - b. Hydrogen Sulfide Detection
    - Types of Equipment
    - Detector use in the field
  - c. Protective Breathing Equipment
    - Types of Equipment
    - Practical exercise in the use of company owned equipment
  - d. Safety Precautions To Be Used
  - e. Emergency Procedures
  - f. Written Examination
- C. Safety Precautions to be used when dealing with H<sub>2</sub>S

***While in the field during normal working conditions employees shall abide by the following rules:***

Davis Gas Processing employee will designate an upwind briefing area where any personnel on location can assemble for a "tailgate" safety meeting or to meet in the event of an emergency situation. A designated vehicle with ample fuel, will be facing an exit with nothing blocking the path, in case of an emergency.

1. Stay upwind of any escaping gas. Be alert to any wind direction changes.
2. Use fresh air breathing equipment when a on tank battery where H<sub>2</sub>S gas concentration is KNOWN OR SUSPECTED.

3. OBSERVE AND OBEY all warning signs on location.
4. Use extreme caution when gauging all tanks. Stay on the upwind side of the hatch. Turn your body away from the hatch when opening.
5. Produced water contains H<sub>2</sub>S. Use the same precautions as with crude oil.
6. Smoking, open flames, etc., are prohibited where gas is present or in a NO SMOKING AREA.
7. IF at any time a job is considered to be hazardous, shut down operations and **contact the company supervisor in charge of the job and a Davis Gas Supervisor.**
8. Do not enter any tank or enclosed vessel without using fresh air breathing equipment. A supervisor MUST be on location at all times, when entering Confined Spaces and a Confined Space Permit will be required.
9. If it does become necessary to enter any tank or enclosed vessel the following conditions must be met:
  - a. The individual entering the tank must have in his possession a card stating that he has been trained in Hydrogen Sulfide Procedures and Confined Space Safety.
  - b. The tank can be entered only if the employee is wearing a 'breathing air' work unit. The minimum equipment required is: a self-contained emergency fresh air bottle, a harness, and a non-sparking lifeline. The lifeline must be adequate to remove them from the vessel of Confined Space, in the event of failure of their breathing equipment or any other accident that could incapacitate them.
  - c. An individual entering vessels must obtain a proper facemask seal.
  - d. Breathing equipment must be inspected and face mask seal must be tested by a supervisor before entry.
  - e. Backup personnel with proper equipment must be stationed at the entrance of the tank or enclosed vessel. They will man the safety lifeline, maintain communication and keep the individual inside under observation in case of an accident or emergency.
  - f. A designated supervisor must be on location to monitor conditions of air bottles, manifold, and airline as each bottle in use is depleted. The supervisor will designate the briefing and safe smoking area. He/she is responsible for safety conditions on the job location. He/she will be responsible for the cleaning and disinfecting of the breathing apparatus after and before storage.
10. All Davis Gas Processing owned fresh air breathing equipment will be inspected monthly by the Plant Personnel and quarterly by a designated outside company determined by the Safety Department. A record of the inspections will be maintained. Any equipment found to be unserviceable shall be tagged "OUT OF ORDER" and turned in for repairs.

**D. In the event of escaping gas or a hydrogen sulfide emergency, these procedures should be used:**

1. Immediately go to the upwind briefing area and determine if all crew members and other personnel working on the location are safe and accounted for.
2. Notify the Davis Gas Processing supervisor and the plant supervisor /personnel as soon as possible.
3. Under no circumstances attempt to rescue anyone that has been overcome by gas unless #2 has been completed and wearing fresh air breathing equipment in use while making the rescue.
4. After protective breathing equipment is in use move any victims to a safe location upwind from the H<sub>2</sub>S source.
5. If the victim is unconscious and not breathing, trained personnel shall immediately apply mouth-to-mouth artificial respiration and continue it until normal breathing is restored.
6. After a victim is revived do not leave him alone. H<sub>2</sub>S victims can have irritations or suffer other complications from H<sub>2</sub>S exposure.
7. All H<sub>2</sub>S victims should receive medical attention. Keep victims under observation until examined by a doctor.
8. Keep everyone away from the scene of the H<sub>2</sub>S danger until supervisory personnel can take charge of the location.

**E. Hydrogen Sulfide Work Procedures**

1. Employees working in areas of 10 to 100 ppm shall use H<sub>2</sub>S detection monitors while performing work at these locations. Should the monitor alarm, the employee shall go to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10ppm. Any well, tank, battery, or work area where H<sub>2</sub>S may be in the atmosphere, should be approached from upwind if possible. Windssocks must be clearly visible and should be displayed at a height of at least eight feet.
2. Where the level of H<sub>2</sub>S is 100 to 299 ppm employees shall use H<sub>2</sub>S detection monitors while performing work in these locations. Should the monitor alarm, the employee shall egress to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10 ppm. Notify your supervisor when the potential for H<sub>2</sub>S is above 10 ppm before re-entry with respiratory protection. Respiratory Protection equipment shall be available in adequate numbers and strategically located for quick and easy access. SCBA or airline respirators shall be donned before performing specific tasks such as:
  - a. Where employee exposure exceeds or is expected to exceed, 10 ppm measured in the work-area atmosphere.
  - b. For confined space entry work when the concentration has not yet been determined and entry is required to perform the initial check. Persons shall not enter a tank, vessel, enclosed area or confined space, or any other area suspected to have H<sub>2</sub>S accumulation without addressing confined space entry permitting.
  - c. During emergency rescue where a worker may have been overcome by H<sub>2</sub>S.
  - d. When opening a system or bleeding down a systems vessels, lines or scrubbers and the concentration of H<sub>2</sub>S gas in the work-area atmosphere is at or suspected to be at 10

ppm or greater.

3. Employees who are required to work in areas where the atmosphere contains H<sub>2</sub>S concentrations of **300 ppm or greater** shall use monitors while performing work in these areas. Employees shall approach an open source only while wearing a SCBA or airline respirator and at least one standby person must be present and equipped with a SCBA or airline respirator.
4. Davis Gas Processing requires, back up personnel when H<sub>2</sub>S levels are greater than 100 ppm.

#### F. Electronic Monitors

1. H<sub>2</sub>S monitors are required whenever personnel are working in an area with potential exposure to hydrogen sulfide gas is at or above the Permissible Exposure Limit (PEL) of 10 parts per million (PPM) in the atmosphere. Employees assigned to a sour gas lease must have an electronic H<sub>2</sub>S monitor available for his/her use. All Davis Gas Processing employees, when working in a suspected H<sub>2</sub>S area, MUST utilize an H<sub>2</sub>S monitor, that registers an alert at a H<sub>2</sub>S level greater than 10 ppm. Crews can share a monitor's coverage if all the workers are within 6 feet of a portable H<sub>2</sub>S monitor, when they are on the same level (no worker breathing zones below sensor levels), when there is an unimpeded line of sight between each individual and the sensor, and when the sensor is generally upwind from each individual.
2. H<sub>2</sub>S monitors must be calibrated so that the first alarm reacts to H<sub>2</sub>S levels equal to or less than 10 ppm (permissible exposure limit, PEL), with the second alarm reacting to H<sub>2</sub>S levels equal to or less than 15 ppm (short term exposure limits, STEL). H<sub>2</sub>S monitors must have both an audible and a visual alarm.
3. H<sub>2</sub>S monitors shall be tested daily by the user to assure the monitor is functional, turning the monitor off, then on or pushing a test button will initiate the alarm sequence. If the alarm does not sound, the monitor shall be returned to the issuer for repairs. Monitors must be bump tested or calibrated as to the manufacturer's recommendations. Generally calibrations are required whenever the battery or sensor is replaced and every month or before use, whichever is less frequent. If the manufacturer recommends a calibration interval of less than 30 days, follow the manufacturer's recommendation.
4. Documentation of bump test and calibrations shall be maintained for 5 years.

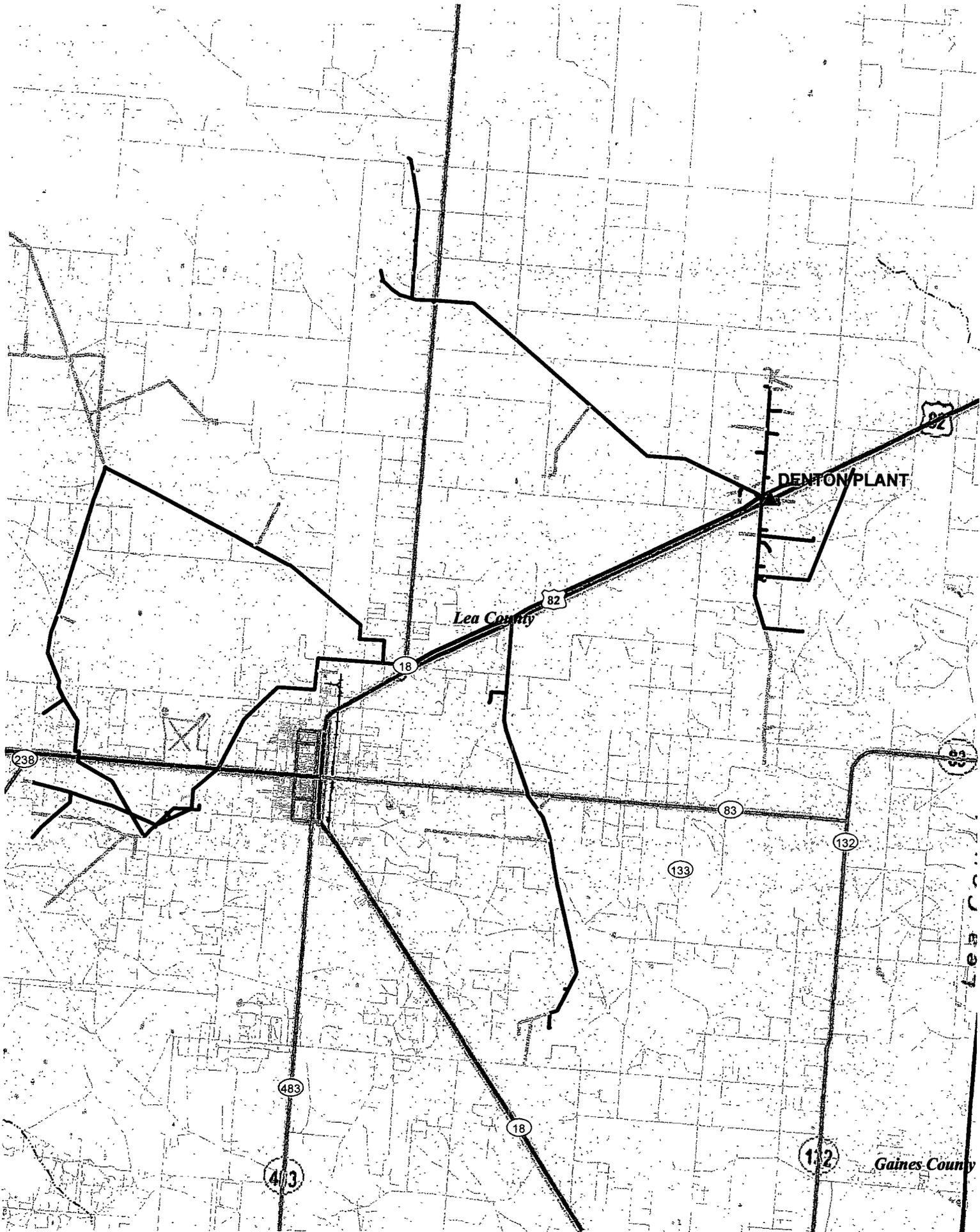
H2S MONITOR AND WINDSOCK LOCATIONS



H<sub>2</sub>S MONITORS

WINDSOCKS

**MAP OF PLANT AND GATHERING LINES**



Lea County

DENTON PLANT

Gaines County

238

483

403

18

82

82

83

133

132

18

132

93



BENTON PLAIN

HOBBS

157

1A

1B

1C

1D

1E

1F

1G

1H

1I

1J

1K

1L

1M

1N

1O

1P

1Q

1R

1S

1T

1U

1V

1W

1X

1Y

1Z

DENTON PLANT GATHERING LINES RADIOUS OF EXPOSURE LIST

**THERE IS NO RESIDENCE IN THE ROE OF  
THE GATHERING SYSTEM OR PLANT**

**DENTON PLANT GATHERING LINES RADIOUS OF EXPOSURE**

STATE HWY 82 DGP DENTON GAS PLANT

1697' ROE

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
1	10001	NORTH DENTON CK METER	1436.57	0.7000	427.15	187.36
	10002	SOUTH DENTON CK METER	1056.10	0.7000	352.34	154.54
	10004	DENTON ACID GAS	260.43	35.0000	1697.01	744.35
	10005	EPNG RESIDUE CK METER	1686.40	0.0000	0.00	0.00
	10007	MESA FIELD INLET	373.37	0.0000	0.00	0.00
	10009	TOTAL PLANT FUEL	446.83	0.0000	0.00	0.00
	10011	HIPLAINS / ENSTAR MM	234.07	0.0000	0.00	0.00
	10012	CODY (C&K) INLET	37.17	0.0000	0.00	0.00
	11013	HORTON ST 1	23.73	0.0000	0.00	0.00
	11108	STATE "T" WOLFCAMP	0.00	0.2800	0.00	0.00
	11109	STATE "T"	41.00	1.0000	57.67	25.30
	11110	STATE T WOLFCAMP	8.37	3.5000	46.72	20.49
	11201	SIMPSON #1	42.57	0.5000	38.26	16.78
	11206	STATE G	124.33	3.5000	252.89	110.92
	11401	NM STATE H-1	13.03	0.2500	11.82	5.19
	11601	PRIEST	44.83	0.6000	44.30	19.43
	11607	STATE A - POLARIS	7.07	3.5000	42.03	18.44
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
1A		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

OIL LEASE ROAD NORTH OF PLANT

187' ROE

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
2	11701	MEXICO "F"	121.40	0.1000	26.93	11.81
	11106	DICKINSON D	104.07	2.6000	187.84	82.39
	11610	T.D. POPE	59.53	0.5000	47.20	20.70
	11611	POPE	340.40	0.4000	122.22	53.61
	11612	POPE 26	239.23	0.8000	151.25	66.34
	11614	BUCKLEY A-1	366.07	0.3500	117.66	51.61
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
3A		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**OIL LEASE ROAD NORTH OF PLANT**

**100' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
3	11501	DENTON WOLFCAMP	58.00	1.7000	99.87	43.81
	11104	WHITMAN	23.33	0.3000	19.08	8.37
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
3A		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**DICKERSON RD & OIL LEASE ROAD (S. OF PLANT)**

**173' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
4	11204	CHAMBERLAIN	33.93	1.7000	71.41	31.32
	11301	DENTON	342.57	0.4000	122.71	53.82
	11403	DENTON A-2	12.43	0.8000	23.77	10.43
	11801	DENTON	339.83	0.7000	173.30	76.01
	11925	DENTON #1	31.63	0.7800	41.97	18.41
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
5A		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**OIL LEASE ROAD SOUTH OF PLANT**

**64' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
5	11405	McCLURE A-1	160.17	0.3000	63.69	27.94
	11407	McCLURE B-2	1.83	4.0000	19.64	8.62
	11830	CRESTONE #1	25.20	0.1000	10.07	4.42
	11831	SONSHINE	105.60	0.0500	15.99	7.01
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
5A		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**C&K COMPRESSOR GATHERING**

**8' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
6	11115	J P DEAN	1.20	0.0100	0.35	0.16
	11118	ARCO STATE 35	2.83	0.0200	0.94	0.41
	11126	SHIPP 34 1& 2	0.00	0.0100	0.00	0.00
	11127	SHIPP 34A 1&2	33.07	0.0000	0.00	0.00
	11135	PENNZOIL MEYERS	10.00	0.1800	8.15	3.58
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
6		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**MESA COMPRESSOR GATHERING**

**7' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
7	11123	N.M. "F" STATE	55.43	0.0000	0.00	0.00
	11456	HILBURN 1 & 2	19.80	0.0000	0.00	0.00
	11459	HILBURN 4	7.00	0.2000	6.97	3.06
	11460	GILMORE & CHAMBERS	31.23	0.0000	0.00	0.00
	11461	CHAMBERS 2	14.03	0.1000	6.98	3.06
	11476	ROCKY 16 #1	255.77	0.0000	0.00	0.00
	11522	HUMBLE TOWNSEND	20.10	0.0000	0.00	0.00
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
7		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

**HWY 18 CROSSING & OIL LEASE ROADS**

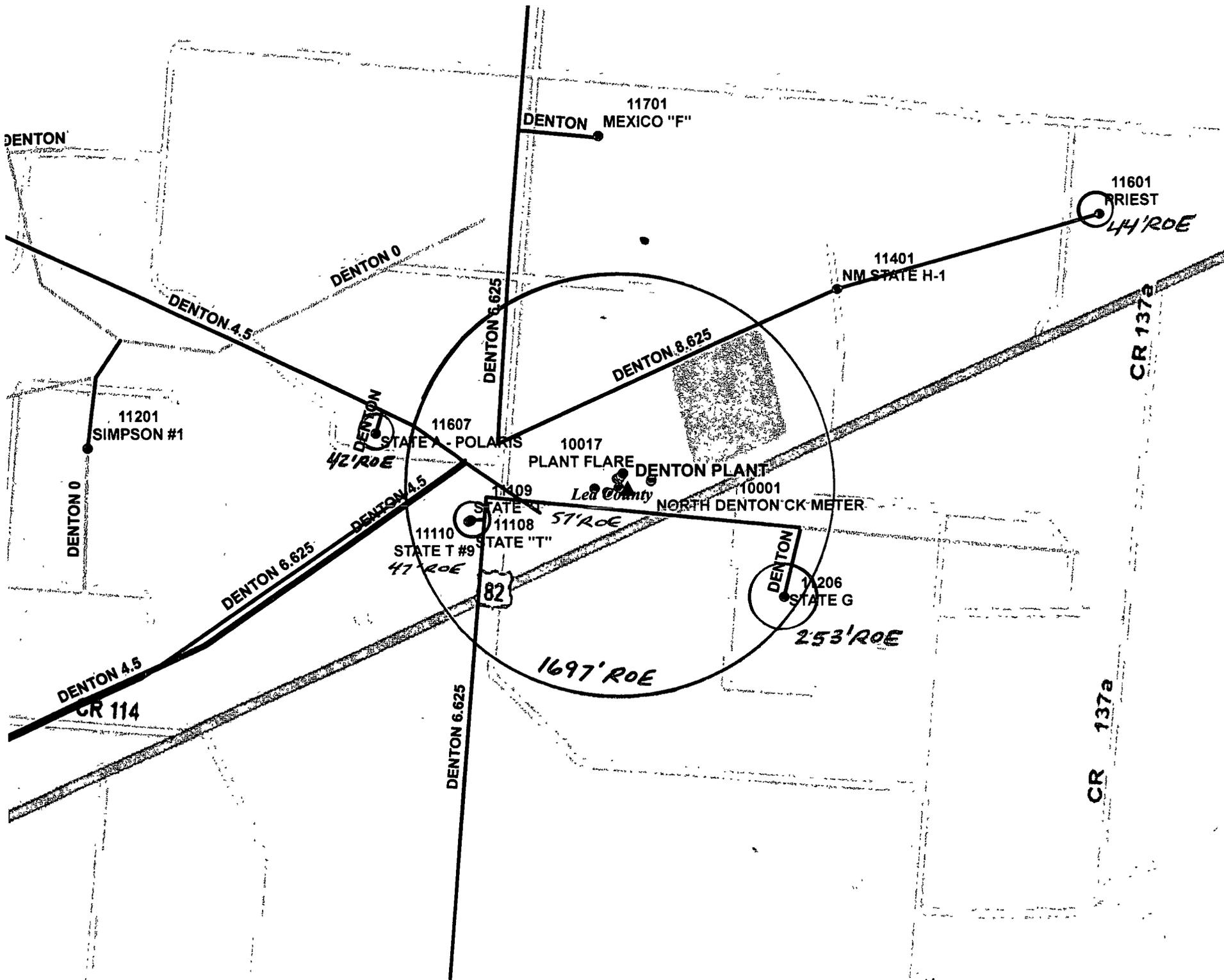
**0' ROE**

MAP #	METER ID	LEASE	MCFD	H2S MOLE %	ROE, 100PPM	ROE, 500PPM
8	11015	RICHARDSON UNIT	82.97	0.0000	0.00	0.00
	11017	RICHARDSON UNIT	49.73	0.0000	0.00	0.00
	11018	RICHARDSON UNIT	0.33	0.0000	0.00	0.00
	11019	BARBEE LL #1	0.00	0.0000	0.00	0.00
	11020	HANNAH	86.43	0.0000	0.00	0.00
MAP #	HOUSE #	NAME	ADDRESS	PHONE NUMBER		
8		<b>NO HOUSES IN THE RADIUS OF EXPOSURE</b>				

MAPS OF RADIUS OF H2S EXPOSURE AREAS



DENTON GATHERING SYSTEM



MAP # 1



MAP # 1A



DENTON 0

DENTON 8.625

11611 122' ROE  
POPE  
11612 151' ROE  
POPE 26 117' ROE  
T.D. POPE 47' ROE

11106  
BICKINSON D  
Lea County  
188' ROE

DENTON 6.625

11701  
DENTON MEXICO "F"

DENTON 0

DENTON 4.5

MAP # 2

11605  
SHELTON VRU - POLARIS DENTON

DENTON 0

DENTON

11104  
WHITMAN

Lea County

DENTON 6.625

11501  
DENTON WOLFCAMP  
DENTON  
100' ROE

MAP # 3

Dovey



11605

POLARIS DENTON

DENTON 0

DENTON

11104  
WHITMAN

DENTON 6.625

501  
WOLFGANG DENTON

DENTON 0

DENTON 8.625

1611  
POPE

1810  
T.O. POPE

1157  
POPE 26

11801  
DENTON  
DENTON 6.625  
173' ROE

DENTON 8.625

DENTON 3.5

DENTON 6.625

123' ROE  
11301  
DENTON  
11925  
DENTON 3.5  
42' ROE  
11306  
DENTON #1  
DENTON #6

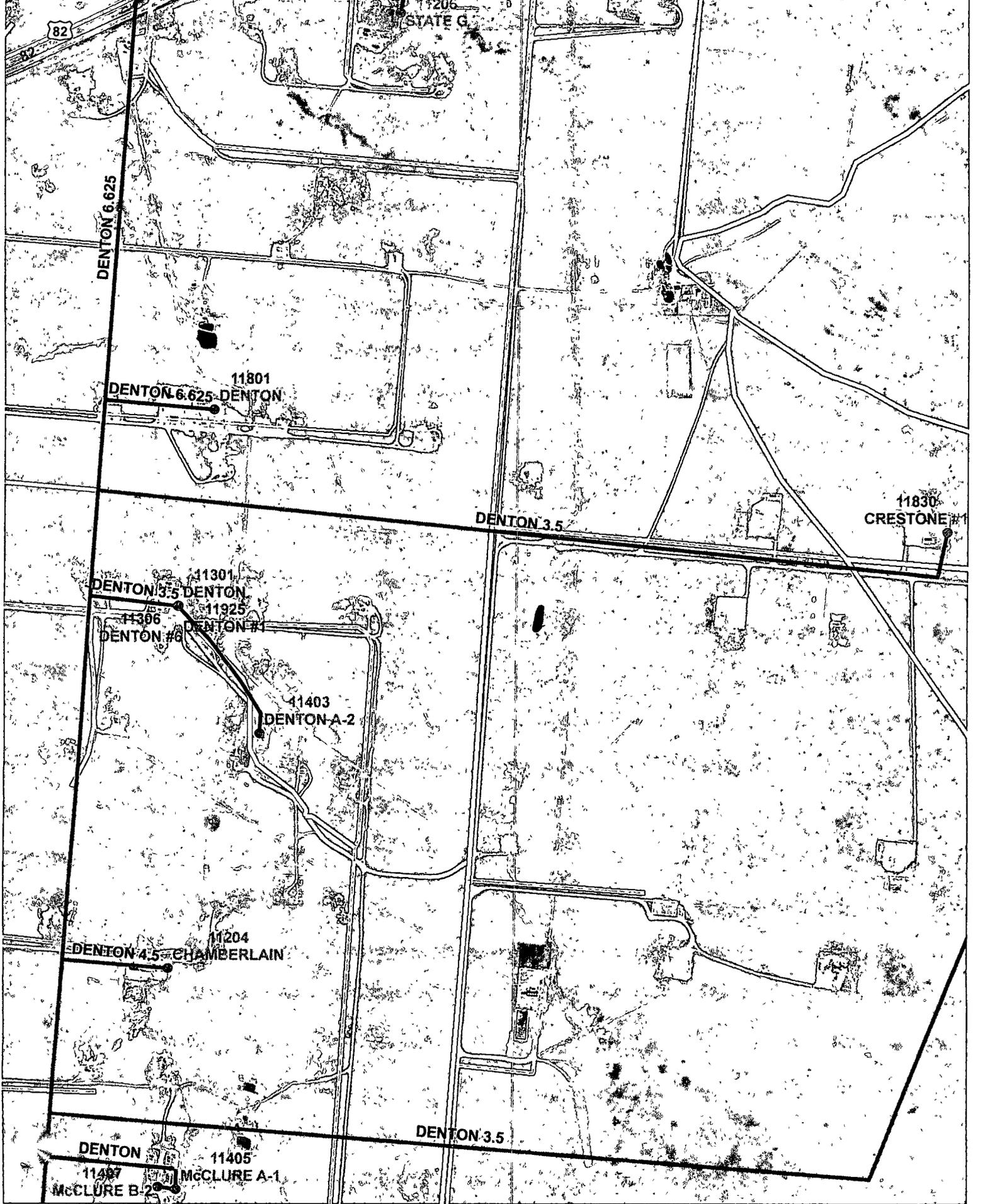
Lea County

11403  
DENTON A-2

CR 137a

11204  
DENTON 4.5  
CHAMBERLAIN  
71' ROE

MAP#4



82

STATE G

DENTON 6.625

11801  
DENTON 6.625 DENTON

DENTON 3.5

11830  
CRESTONE #1

11301  
DENTON 3.5 DENTON

11925  
11306  
DENTON #6 DENTON #1

11403  
DENTON A-2

11204  
DENTON 4.5 CHAMBERLAIN

DENTON 3.5

DENTON 11405  
11497  
McCLURE A-1  
McCLURE B-2

DENTON 3.5

DENTON

11405 64' ROE  
McCLURE A-1  
11407  
McCLURE B-2

Lea County

DENTON 6.625

MAP#5

DENTON

205  
McCLURE A-1

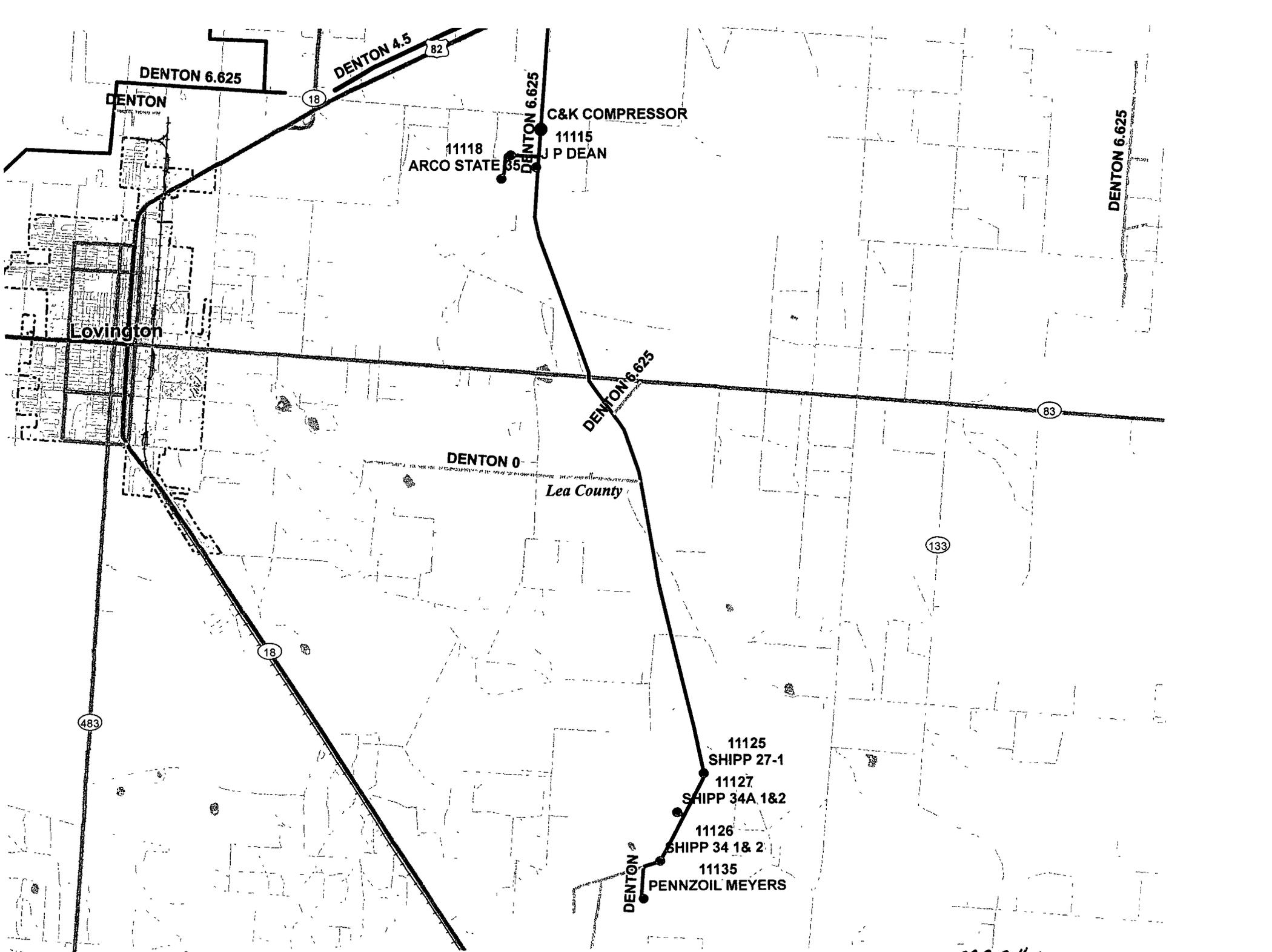
DENTON 3.5

DENTON 8.5

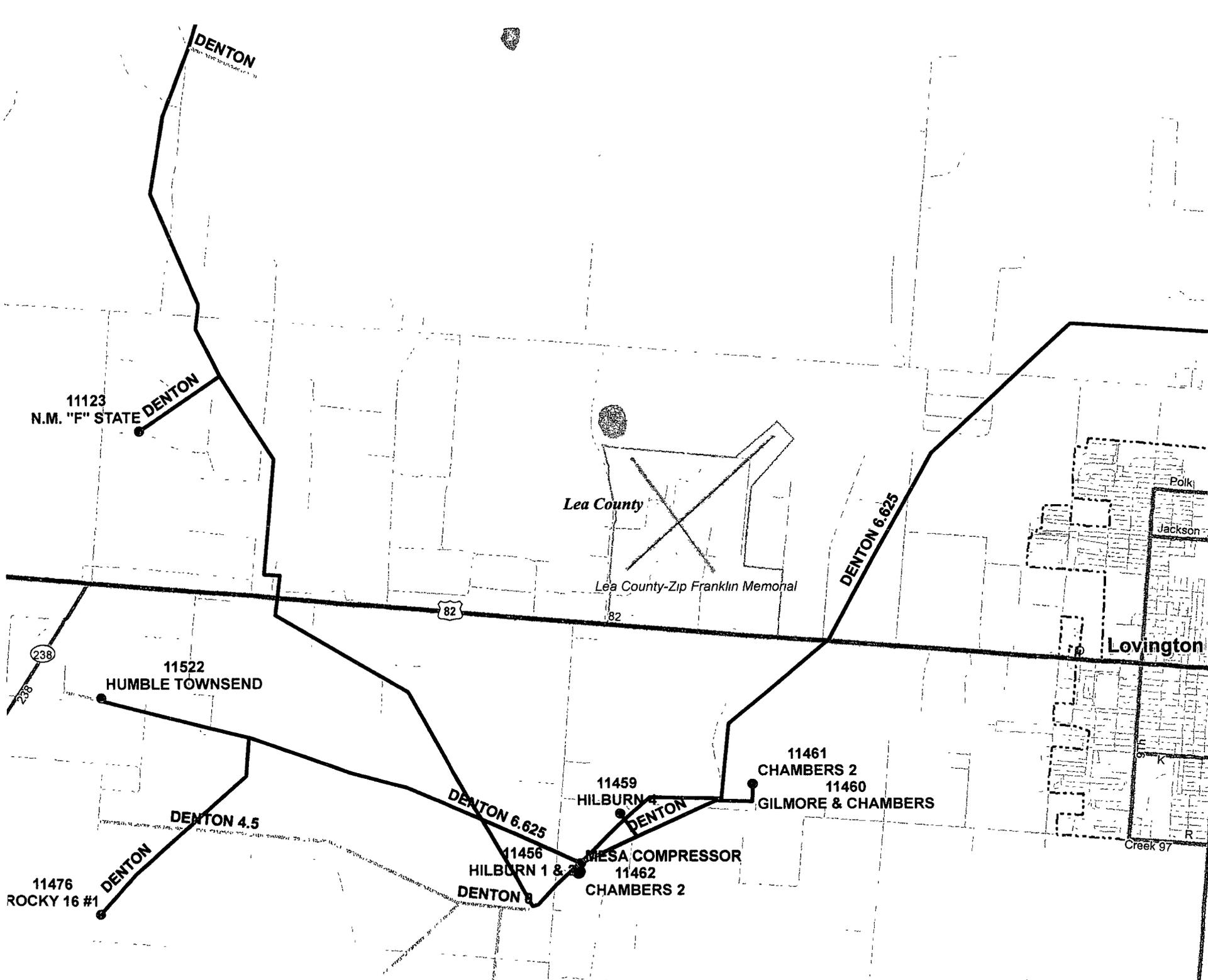
DENTON 8.5







MAP #6



MAP # 7

206

11015  
RICHARDSON UNIT

DENTON

DENTON

11017  
RICHARDSON UNIT

Lea County

18

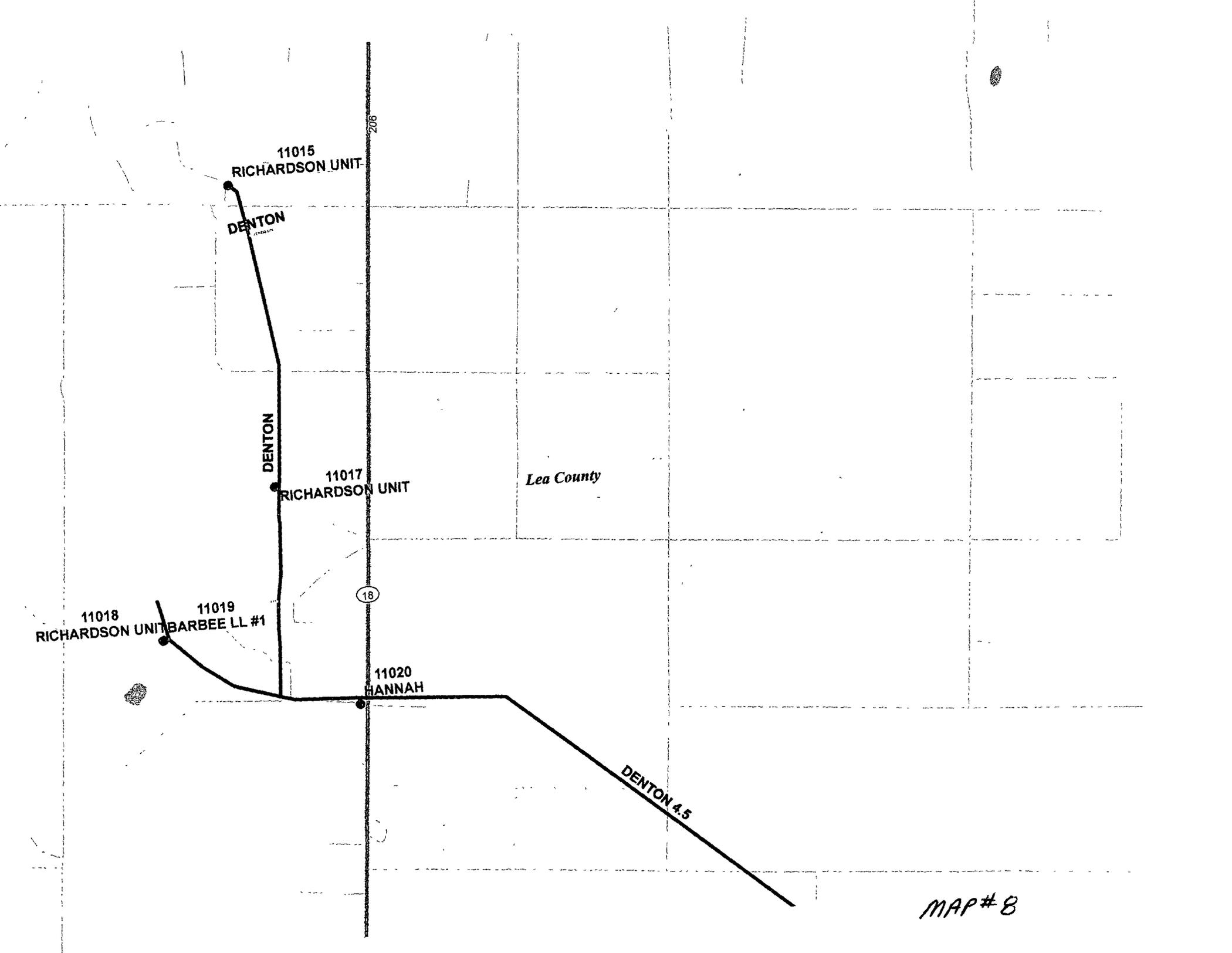
11018  
RICHARDSON UNIT

11019  
BARBEE LL #1

11020  
HANNAH

DENTON 4.5

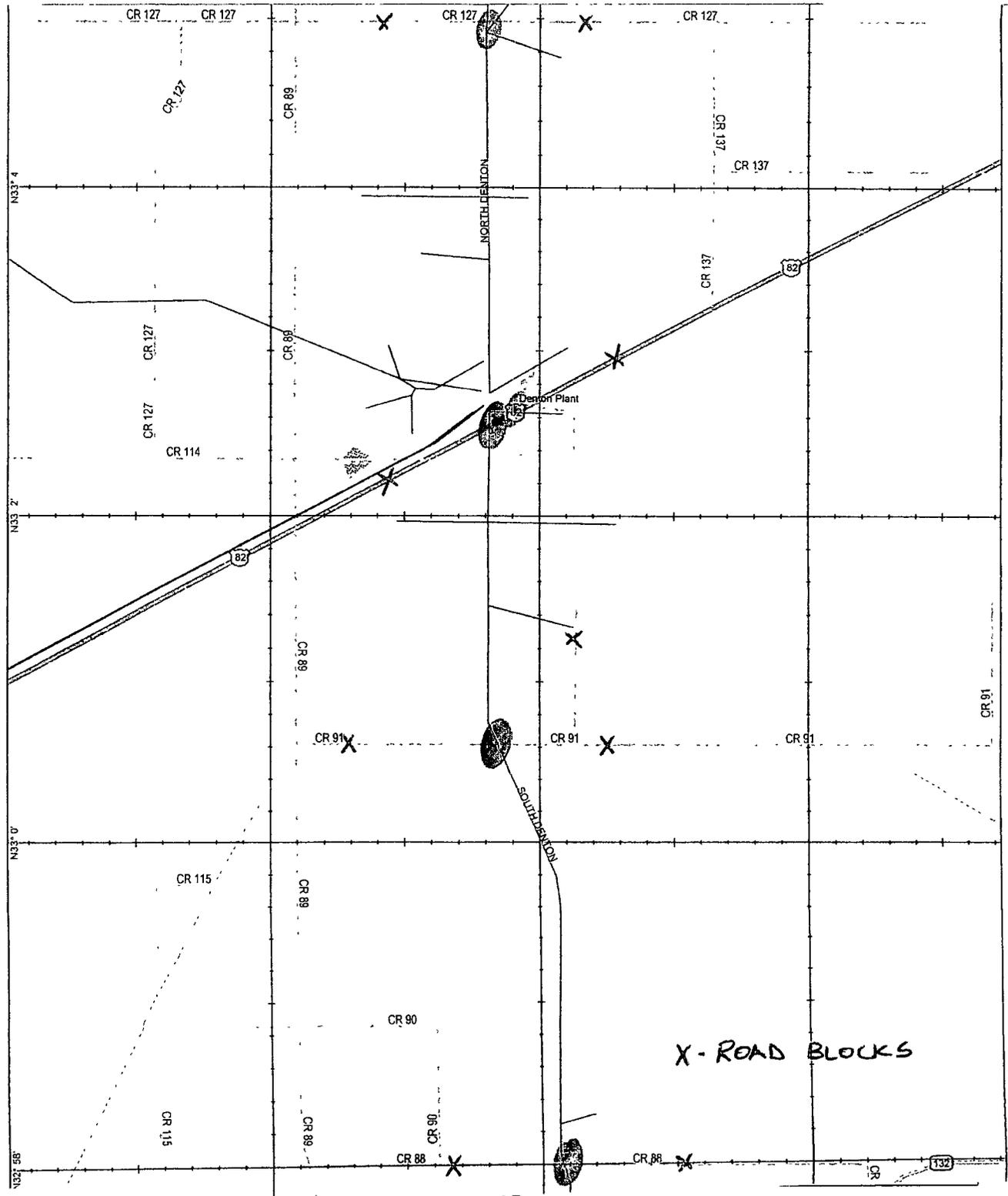
MAP # 8



**ROAD BLOCK MAP**

Safety and Loss Prevention Standard  
 MAP OF RADIUS OF H2S EXPOSURE AREAS

Davis Gas Processing  
 Denton Plant



**METER LISTING WITH H2S CONCENTRATIONS AND ROE'S**

Meter ID	Meter Name	MCFD	H2SMol	ROE 100 PPM	ROE 500 PPM
10001	NORTH DENTON CK METER	1436.57	0.7000	427.15	187.36
10002	SOUTH DENTON CK METER	1056.10	0.7000	352.34	154.54
10004	DENTON ACID GAS	260.43	35.0000	1697.01	744.35
10005	EPNG RESIDUE CK METER	1686.40	0.0000	0.00	0.00
10007	MESA FIELD INLET	373.37	0.0000	0.00	0.00
10009	TOTAL PLANT FUEL	446.83	0.0000	0.00	0.00
10011	HIPLAINS / ENSTAR MM	234.07	0.0000	0.00	0.00
10012	CODY (C&K) INLET	37.17	0.0000	0.00	0.00
11013	HORTON ST 1	23.73	0.0000	0.00	0.00
11015	RICHARDSON UNIT	82.97	0.0000	0.00	0.00
11017	RICHARDSON UNIT	49.73	0.0000	0.00	0.00
11018	RICHARDSON UNIT	0.33	0.0000	0.00	0.00
11019	BARBEE LL #1	0.00	0.0000	0.00	0.00
11020	HANNAH	86.43	0.0000	0.00	0.00
11104	WHITMAN	23.33	0.3000	19.08	8.37
11106	DICKINSON D	104.07	2.6000	187.84	82.39
11108	STATE "T" WOLFCAMP	0.00	0.2800	0.00	0.00
11109	STATE "T"	41.00	1.0000	57.67	25.30
11110	STATE T WOLFCAMP	8.37	3.5000	46.72	20.49
11115	J P DEAN	1.20	0.0100	0.35	0.16
11118	ARCO STATE 35	2.83	0.0200	0.94	0.41
11123	N.M. "F" STATE	55.43	0.0000	0.00	0.00
11126	SHIPP 34 1& 2	0.00	0.0100	0.00	0.00
11127	SHIPP 34A 1&2	33.07	0.0000	0.00	0.00
11135	PENNZOIL MEYERS	10.00	0.1800	8.15	3.58
11201	SIMPSON #1	42.57	0.5000	38.26	16.78
11204	CHAMBERLAIN	33.93	1.7000	71.41	31.32
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11401	NM STATE H-1	13.03	0.2500	11.82	5.19
11403	DENTON A-2	12.43	0.8000	23.77	10.43
11405	McCLURE A-1	160.17	0.3000	63.69	27.94
11407	McCLURE B-2	1.83	4.0000	19.64	8.62
11456	HILBURN 1 & 2	19.80	0.0000	0.00	0.00
11459	HILBURN 4	7.00	0.2000	6.97	3.06
11460	GILMORE & CHAMBERS	31.23	0.0000	0.00	0.00
11461	CHAMBERS 2	14.03	0.1000	6.98	3.06
11476	ROCKY 16 #1	255.77	0.0000	0.00	0.00
11501	DENTON WOLFCAMP	58.00	1.7000	99.87	43.81
11522	HUMBLE TOWNSEND	20.10	0.0000	0.00	0.00
11601	PRIEST	44.83	0.6000	44.30	19.43
11607	STATE A - POLARIS	7.07	3.5000	42.03	18.44
11610	T.D. POPE	59.53	0.5000	47.20	20.70

Meter ID	Meter Name	MCFD	H2SMol	ROE 100 PPM	ROE 500 PPM
11611	POPE	340.40	0.4000	122.22	53.61
11612	POPE 26	239.23	0.8000	151.25	66.34
11614	BUCKLEY A-1	366.07	0.3500	117.66	51.61
11701	MEXICO "F"	121.40	0.1000	26.93	11.81
11801	DENTON	339.83	0.7000	173.30	76.01
11830	CRESTONE #1	25.20	0.1000	10.07	4.42
11831	SONSHINE	105.60	0.0500	15.99	7.01
11925	DENTON #1	31.63	0.7800	41.97	18.41

## Chavez, Carl J, EMNRD

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Friday, May 27, 2011 9:36 AM  
**To:** 'bstewart@westtexasgas.com'  
**Cc:** Hill, Larry, EMNRD  
**Subject:** FW: Davis Gas Plant (GW-048) Lea County (H2S Contingency Plan)

Mr. Stewart:

The OCD is in receipt of the Denton Gas Plant H2S Contingency Plan (Plan) and has conducted a preliminary review of the Plan.

The H2S Contingency Plan that Davis Gas Processing submitted is deficient and OCD requests the following information:

- 1) A map to scale displaying each identified ROE and nearby public areas that could be affected by a major release. Typically a U.S.G.S. 7.5 Minute Quadrangle Topographic Map with Facility Overlay displaying any nearby roadways, population centers, etc. has been acceptable to the OCD.
- 2) A map to scale at each identified ROE area with facility layout, H2S monitor locations, poison gas signs, locations where roadways would be barricaded in the event of an emergency, windsock (lighted to see in dark) locations, escape pathway for workers, etc. Typically a U.S.G.S. 7.5 Minute Quadrangle Topographic Map or larger scale map with facility overlay displaying units at the facility any nearby roadways, population centers, etc. has been acceptable to the OCD.

Please submit the information on or before the August 11, 2011 deadline. Please contact me if you have questions. Thank you.

*Note: Please be advised that OCD approval of this plan does not relieve Davis Gas Processing of responsibility should their operations fail to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Davis Gas Processing of responsibility for compliance with any other federal, state or local laws and/or regulations.*

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462  
E-mail: CarlJ.Chavez@state.nm.us

Website: <http://www.emnrd.state.nm.us/ocd/index.htm>

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:  
<http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental>)

---

**From:** Chavez, Carl J, EMNRD  
**Sent:** Tuesday, February 15, 2011 9:55 AM  
**To:** 'bstewart@westtexasgas.com'  
**Cc:** Hill, Larry, EMNRD  
**Subject:** Davis Gas Plant (GW-048) OCD Inquiry into Gas Gathering Meter Shut-ins in 2010 & Foreseeable Future

Mr. Stewart:

Good morning. The OCD has not heard back from Elena Hofman related to the above subject (see phone log provided below).

Call back Tuesday, 1/18 everyone gone. Left msg. 1/26. Call back after 1:00 p.m. [bstewart@westtexasgas.com](mailto:bstewart@westtexasgas.com). On 1/27 contacted Bob and he said Elana Hofman was assigned to the OCD inquiry. Similar to DCP, they can treat sour gas and

they also have individual meters. Elena Hofman says she will respond by COB on 2/4. Elan's phone is 832-239-8015. Elena indicated that the GP had one emergency shut-down in 2010 that they are working to send info. on to the OCD. She said the GP does not intend to shut-down in the foreseeable future with exceptions of emergencies, acts of God, etc.

The OCD would appreciate it if you could submit the requested information by COB February 28, 2011. Please respond to this message to let us know if you agree or would like further communication with the OCD on this matter.

Thank you.

Carl J. Chavez, CHMM  
New Mexico Energy, Minerals & Natural Resources Dept.  
Oil Conservation Division, Environmental Bureau  
1220 South St. Francis Dr., Santa Fe, New Mexico 87505  
Office: (505) 476-3490  
Fax: (505) 476-3462

E-mail: [CarlJ.Chavez@state.nm.us](mailto:CarlJ.Chavez@state.nm.us)

Website: <http://www.emnrd.state.nm.us/oed/index.htm>

(Pollution Prevention and Waste Minimization Guidance is under "About Us- Environmental Bureau"

<http://www.emnrd.state.nm.us/oed/environmental.htm#environmental>)

Davis Gas Processing  
Denton Gas Plant  
625 E. US 82 Hwy  
Lovington, NM 88260

RECEIVED OCD

2011 MAY 11 A 11: 48

April 29, 2011

Oil Conservation Division  
1220 S. St. Francis Drive  
Sante Fe, NM 87505

RE: Denton Gas Plant H2S Contingency Plan

The following are the revised Contingency Plan for the Denton Gas Plant, Booster Stations and Gathering Systems.

Please look over the plan and if there are any questions or I can be of further assistance, please advise.

Yours truly,



Bobby Roach  
Safety Director

cc: MKD  
JLD  
BStewart

DAVIS GAS PROCESSING, INC.

DENTON GAS PLANT  
GATHERING SYSTEM  
LEA COUNTY, NEW MEXICO

**H2S  
CONTINGENCY PLAN**

November 2010

*Not to be copied or reproduced.*



Safety Director

Prepared by Bobby A. Roach

## Hydrogen Sulfide Contingency Plan

### PURPOSE

- I. **Purpose of Plan** - To provide an organized plan of action for alerting and protecting the public following the accidental release of a potentially hazardous volume of hydrogen sulfide.
- II. **Activation of Plan** - This plan shall be activated immediately by plant personnel on duty upon the detection of a potentially hazardous volume of hydrogen sulfide released to the atmosphere.
- III. **Area of Exposure** - A major pipeline failure of any gas pipeline transporting gas containing Hydrogen Sulfide (H<sub>2</sub>S) to or from the Denton Gas Plant will create a hazardous area of exposure in the vicinity of the failure. The plat included in this plan indicates areas of exposure which involve public or private facilities. Pipeline ruptures within these indicated areas of exposure will require immediate action to protect the lives of persons that may be in or may enter into these areas.
- IV. **Notification** - A call list is included in this plan which lists telephone numbers of various public services and home telephone numbers of Davis Gas Processing supervisors that the person on duty may notify for timely assistance in handling the emergency.
- V. **Shut-off Source of Gas and Evacuate Area**- Personnel on duty at the time of an emergency shall take immediate steps to simultaneously block traffic from entering the area and evacuate the area of persons already in the area. Call for assistance from city officials, if necessary. Since there is one resident and no public buildings in the area, all persons in the area will be transient.

Simultaneously with action to evacuate the area of persons, steps shall be taken to close all block valves on the ruptured pipeline to shut off the supply of gas to the ruptured area. Source of gas to the rupture may be from either the plant or the field, therefore, the proper block valves at the plant and in the field must be closed. See enclosed map of Gathering System, valves and exposure areas.

- VI. **Special Considerations** - All H<sub>2</sub>S bearing gas entering or leaving the Denton Gas Plant (except the acid gas flare within the Plant fenced area) is lighter than air and, therefore, will tend to rise at the point it is released to the atmosphere. At the point the gas is released to the atmosphere, it (including the H<sub>2</sub>S component) will begin a dispersion process within the atmosphere, thereby becoming less and less Concentrated both vertically and horizontally away from the point of release.

The rate of dispersion of the gas into the atmosphere varies with the temperature difference between the gas and atmosphere, the volume of gas, and the wind speed. The table below shows the concentration of H<sub>2</sub>S expressed in parts per million by volume in the various gas streams entering the Denton Gas Plant. Also, the table shows estimated H<sub>2</sub>S dispersion expressed as the 100 ppm radius of exposure, and the 500 ppm radius of exposure for each gas stream. These latter figures are calculated distances downwind from point of release at which the air would be expected to have H<sub>2</sub>S concentration of 100 ppm or 500 ppm by volume. The radial of exposures were calculated using the equations set out in New Mexico Statewide Rule 118.

<u>H<sub>2</sub>S Concentration</u>	<u>Gas Stream</u>	<u>ppm</u>	<u>Radius of Exposure, ft.</u>	
			<u>100 ppm</u>	<u>500 ppm</u>
	North Denton Inlet	20,260	853 feet	390 feet
	South Denton Inlet	25,380	1101 feet	503 feet
	C&K / Ship Lateral Inlet	60		
	High Plains & Austin Lateral Inlet	0		
	Mesa Inlet	8		
	Denton Plant	9,250	935 feet	427 feet

**CALL LIST**NEW MEXICO STATEWIDE RULE 118  
CONTINGENCY PLAN**SERVICES**

FIRE DEPARTMENT	LOVINGTON, N.MEXICO	575-396-2359
GENERAL HOSPITAL	LOVINGTON, N.MEXICO	575-396-6611
POLICE DEPARTMENT	LOVINGTON, N.MEXICO	575-396-2811
HELICOPTER (DPS)	HOBBS, NEW MEXICO	575-392-6581
VETERINARIAN	HOBBS, NEW MEXICO	575-392-5563
HIGHWAY PATROL (DPS)	HOBBS, NEW MEXICO	575-392-5588
COUNTY SHERIFF	HOBBS, NEW MEXICO	575-393-2515
ENVIRONMENTAL IMPROVEMENT DIV.	HOBBS, NEW MEXICO	575-397-5250
N.M.O.C.D (N. M. Oil Conservation Division)	HOBBS, NEW MEXICO	575-393-6161

DAVIS GAS SUPERVISORS

DAVID PEPPER Plant Foreman	LOVINGTON, N. MEXICO	575-396-6022 575-369-5945
DAN MEACHAM Oper. Supervisor	BIG LAKE, TEXAS	325-884-2299 432-556-5381
BOBBY ROACH Safety Director	MIDLAND, TEXAS	432-563-1247 432-528-6434
BOB STEWART Environmental Director	MIDLAND, TEXAS	432-682-6311 432-664-0188
MICHAEL DAVIS V.P. OPERATIONS	ABILENE, TEXAS	325-695-2370 325-668-6339

PUBLIC NEAR H2S EXPOSURE RADIUS

FREDDY WHITMAN	NORTH DENTON LATERAL	575-398-6678
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## VII. General

Hydrogen sulfide is one of the most potentially lethal hazards found in the oil and gas industry. Davis Gas Processing intends to make every effort to provide adequate safeguards against harm to persons both on location and in the immediate vicinity from the effects of H<sub>2</sub>S released to the atmosphere. In those areas where H<sub>2</sub>S is common, the following safety procedures/policies shall be in effect.

- 1.) This contingency plan shall be read and understood by all Plant personnel. Proper exercise of the Plant's gas leak detection program should assure that no major escape of H<sub>2</sub>S bearing gas will ever occur at the Davis Gas Plant. However it is essential and is required by New Mexico Statewide Rule 118, adopted March 15, 1976, that this contingency plan be understood by all plant personnel and at all times be available for personnel referral and use.
- 2.) During the Plant's regular training sessions regarding use, care, and storage of respiratory equipment, all personnel will be reminded of possible need for the equipment during activation of this contingency plan.
- 3.) Location of all block valves for shutting off sources of gas to a pipe rupture area as shown on the plat accompanying this plan shall be personally visited by all plant personnel to assure each person's knowledge of exact location.
- 4.) Gas released from pipeline ruptures may be ignited by automotive ignition and exhaust systems, as well as by persons smoking, and by lightning. The possibility of ignition by whatever means should always be considered and avoided in all efforts to evacuate persons or to control the escape of gas in an area of H<sub>2</sub>S exposure.

It should always be remembered that the bulk of gas emitted to the atmosphere will flow with the wind as it disperses, therefore, contact with the gas can be prevented by avoiding positions directly downwind from the point of emission. This fact should always be considered in working in the area (closing valves, etc.) and evacuating persons from the area.

## VIII. Physical Characteristics

Hydrogen sulfide (H<sub>2</sub>S) is a colorless, flammable gas which may be liquefied under pressure and which occurs in a variety of natural and industrial settings. Typically called "sour gas", hydrogen sulfide is soluble in water, crude oil or petroleum fractions, and is extremely corrosive.

The gas can cause severe stress cracking of steel and other metals. Hydrogen sulfide burns with a blue flame to form sulfur dioxide which is also a toxic gas. Hydrogen sulfide is slightly heavier than air and may accumulate to dangerous concentrations in low lying areas and confined spaces.

The gas can be dispersed by wind movement or air currents.

**IX. Effects From Exposure**

The health effects associated with hydrogen sulfide exposure are primarily determined by the concentration of the gas in the individuals breathing zone, the length of the exposure period(s) and individual susceptibility to the contaminant.

The health effects associated with hydrogen sulfide exposure are most often the result of sudden, excessive exposures experienced over a short time period. For example, a short-term exposure to hydrogen sulfide at a concentration of 500 ppm can result in respiratory arrest, loss of consciousness, and death within minutes.

A most important characteristic of hydrogen sulfide gas is its ability to cause olfactory fatigue or a failure in the sense of smell. At concentrations approaching 100 ppm, exposure to hydrogen sulfide causes a loss of the sense of smell. This effect can result in an individual developing a false sense of security relative to the exposure conditions. High concentrations of hydrogen sulfide, especially those capable of causing death or serious physical injury, cannot be detected by the sense of smell.

**X. Hydrogen Sulfide Work Practices**

The incorporation of the following specific work practices discussed below into routine operation and maintenance activities can help prevent overexposure to hydrogen sulfide. These work practices have proven effective in controlling hydrogen sulfide exposure in various Davis Gas operations.

**1.) Engineering controls****A. Ventilation**

When the potential for hydrogen sulfide exposure occurs during routine operation and maintenance activities, ventilation of the worker's breathing zone is extremely important. Hydrogen sulfide gas is slightly heavier than air and does not readily dissipate. As such the gas may accumulate in low lying areas and confined spaces and may remain for an extended time.

Laboratory operations involving hydrogen sulfide gas or materials containing hydrogen sulfide shall be conducted under a properly functioning laboratory hood or with local exhaust ventilation placed at the source of emission.

For indoor work, such as in buildings containing transfer pumps, gas processing equipment, gas compressors, treaters, LACT, or other equipment the accumulation of hydrogen sulfide gas in these enclosed work areas is prevented through the use of general/dilution ventilation.

## 2.) Work Practices

If possible, workers shall always remain upwind from the source of hydrogen sulfide gas while completing tasks. Wind direction shall be verified by a wind sock, streamer, or vane prior to initiating work. Wind conditions cannot be relied on, however, as a single means of controlling exposure.

## 3.) Monitoring

## A. Personal Alarm Monitors

When routine and maintenance tasks involve potential exposure to hydrogen sulfide above 10 ppm, the use of continuous reading personal monitors with audible and/or visual alarms is required. When a group of employees is working close together, it is not necessary that each employee wear a monitor. Representative employees shall be selected to wear personal monitors when such group tasks are to be performed. A portable monitor can be substituted for the personal type as long as it adequately samples the work area used by all potentially exposed employees.

Monitors shall be utilized for the complete duration of work activity. It is required that monitors be set to alarm at 10 ppm or less. If the alarm sounds, indicating a concentration at/or above this level, workers shall immediately leave the area. Workers shall withdraw upwind to a position which is considered to be a safe distance from the source of the gas. The alarm will continue to sound until the detector-sensor is cleared of hydrogen sulfide. Depending on the type of monitor and the concentration of the gas, this can take several minutes, even though the monitor is removed to a hydrogen sulfide free atmosphere. Allowing workers to re-enter, and work in the area shall be permitted only if they are wearing a full face pressure-demand airline respirator with egress bottle or self-contained breathing apparatus (SCBA). This procedure shall be followed, until it has been established that the area is safe from hydrogen sulfide (less than 10 ppm).

## B. Fixed (Stationary) Monitors

Continuous fixed area monitors shall be permanently installed in locations where the sudden release of hydrogen sulfide is possible. The monitor sensors shall be placed in proximity to potential sources of a hydrogen sulfide release. Several sensors may be needed at points of possible gas emission and shall be connected to a central monitor. The monitor H<sub>2</sub>S warning device, audible and visual, shall be located so that the alarm can be easily recognized throughout the facility. Employees must be instructed to follow established response procedures in the event that an alarm is activated.

Survey measurements shall be made using portable hydrogen sulfide monitors. The following applications are most suitable for survey monitoring with portable devices.

- \* Monitoring of work areas prior to entry
- \* Monitoring of confined spaces
- \* Detection of leak sources
- \* Monitoring when lines, valves, or vessels are opened

#### 4.) Respiratory Protection

Supplied-air (airline or SCBA) respiratory protection against hydrogen sulfide exposure is required in the following situations.

- When routine or maintenance work tasks involve exposure to H<sub>2</sub>S concentrations of 10 ppm or greater.
- When a fixed monitor alarms, and re-entry to the work area is required to complete a job.
- If entry is required into a confined space is necessary and measurable levels of hydrogen sulfide are identified within the confined space.
- During rescue of employees suspected of H<sub>2</sub>S overexposure.
- For specific tasks identified with significant exposure potential and outlined in local program guidelines.

All respiratory protection equipment for hydrogen sulfide must be of the supplied-air type, equipped with pressure-demand regulators and operated in the pressure demand mode only and meet the Standard of Industrial Hygiene Practice for Respiratory Protection. This is the only type of respiratory protection recommended for hydrogen sulfide application. If airline units are used, an egress bottle with at least a 5-minute supply shall also be carried. Gas masks or other air-purifying respirators must never be used for hydrogen sulfide due to the poor warning properties of the gas.

Use of respiratory protection shall be accompanied by a written respiratory protection program referenced to Davis Gas' "Respiratory Protection Program"

## 5.) Confined Space Entry

Work conducted in low lying areas and confined spaces where hydrogen sulfide may accumulate requires specific precautions beyond those described above. These conditions may be encountered during excavation and line repair or tank (vessel) entry or maintenance and inspection. Before starting work, these tasks require that the excavated area or vessel be thoroughly tested with a direct reading hydrogen sulfide instrument, as well as tested for sufficient oxygen and the absence of flammable atmospheres. These measurements are to be included as an integral part of an entry procedure. Furthermore, where entry permits are required these measured levels must be noted on the permit. Combination hydrogen sulfide detectors which also measure combustible gas and oxygen are available. Care must be taken to determine the hydrogen sulfide concentration throughout the complete area.

If hydrogen sulfide levels are determined to be above 10 ppm, entry into a confined space requires respiratory protection. Efforts must be made to ventilate the confined space prior to scheduled entry. When concentrations of hydrogen sulfide remain above 10 ppm, additional forced air venting is required before entry, when time permits. If entry is necessary under the above conditions respiratory protection shall consist of a pressure-demand airline respirator with an egress bottle or an SCBA. A standby person, also equipped with proper respiratory protection, is required to be outside the vessel and in constant audio or visual contact with the worker inside. This precaution is necessary to ensure that rapid rescue of the worker inside can be accomplished.

**XI. Warning Signs**

Warning signs for hydrogen sulfide must be posted to remind employees of the potential hazard at each specific location. Additionally, signs must indicate the need for monitors or respiratory protection in areas where such equipment is required. Warning signs shall be posted on all units where the potential for a dangerous release of hydrogen sulfide exists.

**XII. Emergency Procedures**

The prompt performance of specific rescue and emergency first aid procedures can very often result in the full recovery of victims overcome by hydrogen sulfide. These victims shall be immediately removed from the contaminated atmosphere by a rescuer wearing full-face pressure-demand supplied air respiratory protection, e.g., SCBA or supplied air with egress unit. Rescue must never be attempted without proper respiratory protection! Many such attempts have resulted in the rescuer also becoming a victim.

Once the victim is safely removed from the contaminated atmosphere, the rescuer is to begin artificial respiration or administer oxygen if breathing has ceased. Caution must be taken during the application of artificial respiration not to inhale air directly from the victim's lungs, as this could also result in the rescuer being overcome. Depending on the length of exposure and concentration of hydrogen sulfide, heart failure may occur within 4 to 6 minutes. If the victim's heart has stopped, cardiopulmonary resuscitation (CPR) must be started immediately. If the victim does not respond to emergency aid, emergency medical aid must be summoned to the scene, and the individual taken, as soon as possible, to a hospital for further treatment. Regardless of apparent condition, all overexposure victims shall receive appropriate medical attention as soon as possible.

### **XIII. Training**

- A. All field personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, shall be H<sub>2</sub>S trained and certified. They shall be trained and made familiar with detection equipment, ventilation equipment, prevailing winds, briefing areas, warning systems, and evacuation procedures where appropriate.
- B. All Field personnel shall be trained in basic first-aid procedures applicable to victims of H<sub>2</sub>S exposure. During subsequent on-site training sessions and drills, emphasis shall be placed upon rescue and first aid for H<sub>2</sub>S victims. The training shall consist of the following:
  - a. Introduction
    - Definition
    - Dangers of H<sub>2</sub>S
    - Properties of H<sub>2</sub>S
    - Physical Effects
    - Sources of H<sub>2</sub>S
  - b. Hydrogen Sulfide Detection
    - Types of Equipment
    - Detector use in the field
  - c. Protective Breathing Equipment
    - Types of Equipment
    - Practical exercise in the use of company owned equipment
  - d. Safety Precautions To Be Used
  - e. Emergency Procedures
  - f. Written Examination
- C. Safety Precautions to be used when dealing with H<sub>2</sub>S

***While in the field during normal working conditions employees shall abide by the following rules:***

Davis Gas Processing employee will designate an upwind briefing area where any personnel on location can assemble for a "tailgate" safety meeting or to meet in the event of an emergency situation. A designated vehicle with ample fuel, will be facing an exit with nothing blocking the path, in case of an emergency.

1. Stay upwind of any escaping gas. Be alert to any wind direction changes.
2. Use fresh air breathing equipment when a on tank battery where H<sub>2</sub>S gas concentration is KNOWN OR SUSPECTED.
3. OBSERVE AND OBEY all warning signs on location.
4. Use extreme caution when gauging all tanks. Stay on the upwind side of the hatch. Turn your body away from the hatch when opening.
5. Produced water contains H<sub>2</sub>S. Use the same precautions as with crude oil.
6. Smoking, open flames, etc., are prohibited where gas is present or in a NO SMOKING AREA.
7. IF at any time a job is considered to be hazardous, shut down operations and **contact the company supervisor in charge of the job and a Davis Gas Supervisor.**
8. Do not enter any tank or enclosed vessel without using fresh air breathing equipment. A supervisor MUST be on location at all times, when entering Confined Spaces and a Confined Space Permit will be required.
9. If it does become necessary to enter any tank or enclosed vessel the following conditions must be met:
  - a. The individual entering the tank must have in his possession a card stating that he has been trained in Hydrogen Sulfide Procedures and Confined Space Safety.
  - b. The tank can be entered only if the employee is wearing a 'breathing air' work unit. The minimum equipment required is: a self-contained emergency fresh air bottle, a harness, and a non-sparking lifeline. The lifeline must be adequate to remove them from the vessel of Confined Space, in the event of failure of their breathing equipment or any other accident that could incapacitate them.
  - c. An individual entering vessels must obtain a proper facemask seal.
  - d. Breathing equipment must be inspected and face mask seal must be tested by a supervisor before entry.
  - e. Backup personnel with proper equipment must be stationed at the entrance of the tank or enclosed vessel. They will man the safety lifeline, maintain communication and keep the individual inside under observation in case of an accident or emergency.

- f. A designated supervisor must be on location to monitor conditions of air bottles, manifold, and airline as each bottle in use is depleted. The supervisor will designate the briefing and safe smoking area. He/she is responsible for safety conditions on the job location. He/she will be responsible for the cleaning and disinfecting of the breathing apparatus after and before storage.
10. All Davis Gas Processing owned fresh air breathing equipment will be inspected monthly by the Plant Personnel and quarterly by a designated outside company determined by the Safety Department. A record of the inspections will be maintained. Any equipment found to be unserviceable shall be tagged "OUT OF ORDER" and turned in for repairs.

**D. In the event of escaping gas or a hydrogen sulfide emergency, these procedures should be used:**

1. Immediately go to the upwind briefing area and determine if all crew members and other personnel working on the location are safe and accounted for.
2. Notify the Davis Gas Processing supervisor and the plant supervisor /personnel as soon as possible.
3. Under no circumstances attempt to rescue anyone that has been overcome by gas unless #2 has been completed and wearing fresh air breathing equipment in use while making the rescue.
4. After protective breathing equipment is in use move any victims to a safe location upwind from the H<sub>2</sub>S source.
5. If the victim is unconscious and not breathing, trained personnel shall immediately apply mouth-to-mouth artificial respiration and continue it until normal breathing is restored.
6. After a victim is revived do not leave him alone. H<sub>2</sub>S victims can have irritations or suffer other complications from H<sub>2</sub>S exposure.
7. All H<sub>2</sub>S victims should receive medical attention. Keep victims under observation until examined by a doctor.
8. Keep everyone away from the scene of the H<sub>2</sub>S danger until supervisory personnel can take charge of the location.

**E. Hydrogen Sulfide Work Procedures**

1. Employees working in areas of 10 to 100 ppm shall use H<sub>2</sub>S detection monitors while performing work at these locations. Should the monitor alarm, the employee shall go to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10ppm. Any well, tank, battery, or work area where H<sub>2</sub>S may be in the atmosphere, should be approached from upwind if possible. Windssocks must be clearly visible and should be displayed at a height of at least eight feet.
2. Where the level of H<sub>2</sub>S is 100 to 299 ppm employees shall use H<sub>2</sub>S detection monitors while performing work in these locations. Should the monitor alarm, the employee shall egress to a safe area (up or cross wind) and shall not re-enter without supplied air respirator or until the levels are less than 10 ppm. Notify your supervisor when the potential for H<sub>2</sub>S is above 10 ppm before re-entry with respiratory protection. Respiratory Protection equipment shall be available in adequate

numbers and strategically located for quick and easy access. SCBA or airline respirators shall be donned before performing specific tasks such as:

- a. Where employee exposure exceeds or is expected to exceed, 10 ppm measured in the work-area atmosphere.
  - b. For confined space entry work when the concentration has not yet been determined and entry is required to perform the initial check. Persons shall not enter a tank, vessel, enclosed area or confined space, or any other area suspected to have H<sub>2</sub>S accumulation without addressing confined space entry permitting.
  - c. During emergency rescue where a worker may have been overcome by H<sub>2</sub>S.
  - d. When opening a system or bleeding down a systems vessels, lines or scrubbers and the concentration of H<sub>2</sub>S gas in the work-area atmosphere is at or suspected to be at 10 ppm or greater.
3. Employees who are required to work in areas where the atmosphere contains H<sub>2</sub>S concentrations of **300 ppm or greater** shall use monitors while performing work in these areas. Employees shall approach an open source only while wearing a SCBA or airline respirator and at least one standby person must be present and equipped with a SCBA or airline respirator.
4. Davis Gas Processing requires, back up personnel when H<sub>2</sub>S levels are greater than 100 ppm.

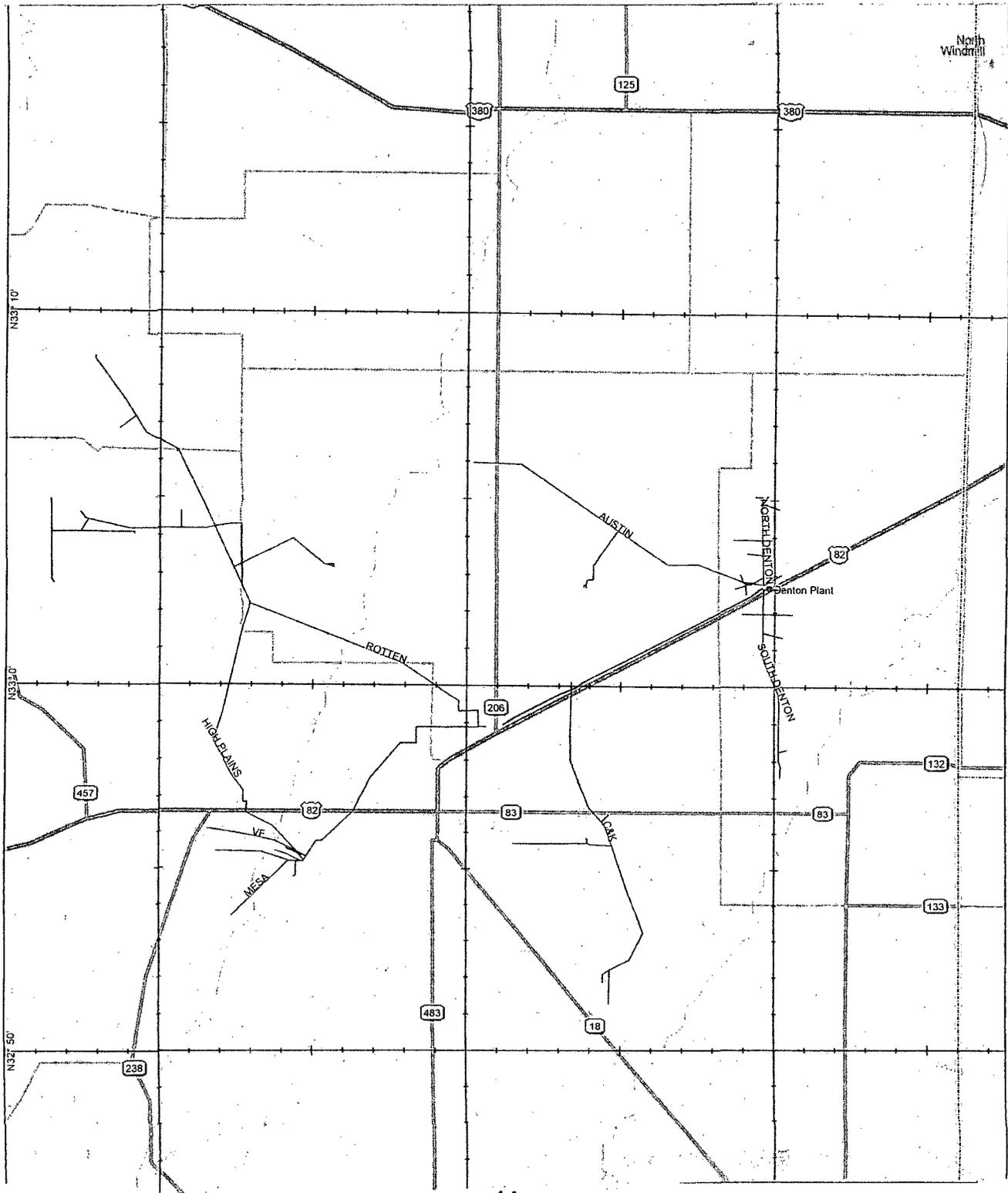
#### F. Electronic Monitors

1. H<sub>2</sub>S monitors are required whenever personnel are working in an area with potential exposure to hydrogen sulfide gas is at or above the Permissible Exposure Limit (PEL) of 10 parts per million (PPM) in the atmosphere. Employees assigned to a sour gas lease must have an electronic H<sub>2</sub>S monitor available for his/her use. All Davis Gas Processing employees, when working in a suspected H<sub>2</sub>S area, **MUST** utilize an H<sub>2</sub>S monitor, that registers an alert at a H<sub>2</sub>S level greater than 10 ppm. Crews can share a monitor's coverage if all the workers are within 6 feet of a portable H<sub>2</sub>S monitor, when they are on the same level (no worker breathing zones below sensor levels), when there is an unimpeded line of sight between each individual and the sensor, and when the sensor is generally upwind from each individual.
2. H<sub>2</sub>S monitors must be calibrated so that the first alarm reacts to H<sub>2</sub>S levels equal to or less than 10 ppm (permissible exposure limit, PEL), with the second alarm reacting to H<sub>2</sub>S levels equal to or less than 15 ppm (short term exposure limits, STEL). H<sub>2</sub>S monitors must have both an audible and a visual alarm.

3. H<sub>2</sub>S monitors shall be tested daily by the user to assure the monitor is functional, turning the monitor off, then on or pushing a test button will initiate the alarm sequence. If the alarm does not sound, the monitor shall be returned to the issuer for repairs. Monitors must be bump tested or calibrated as to the manufacturer's recommendations. Generally calibrations are required whenever the battery or sensor is replaced and every month or before use, whichever is less frequent. If the manufacturer recommends a calibration interval of less than 30 days, follow the manufacturer's recommendation.
4. Documentation of bump test and calibrations shall be maintained for 5 years.

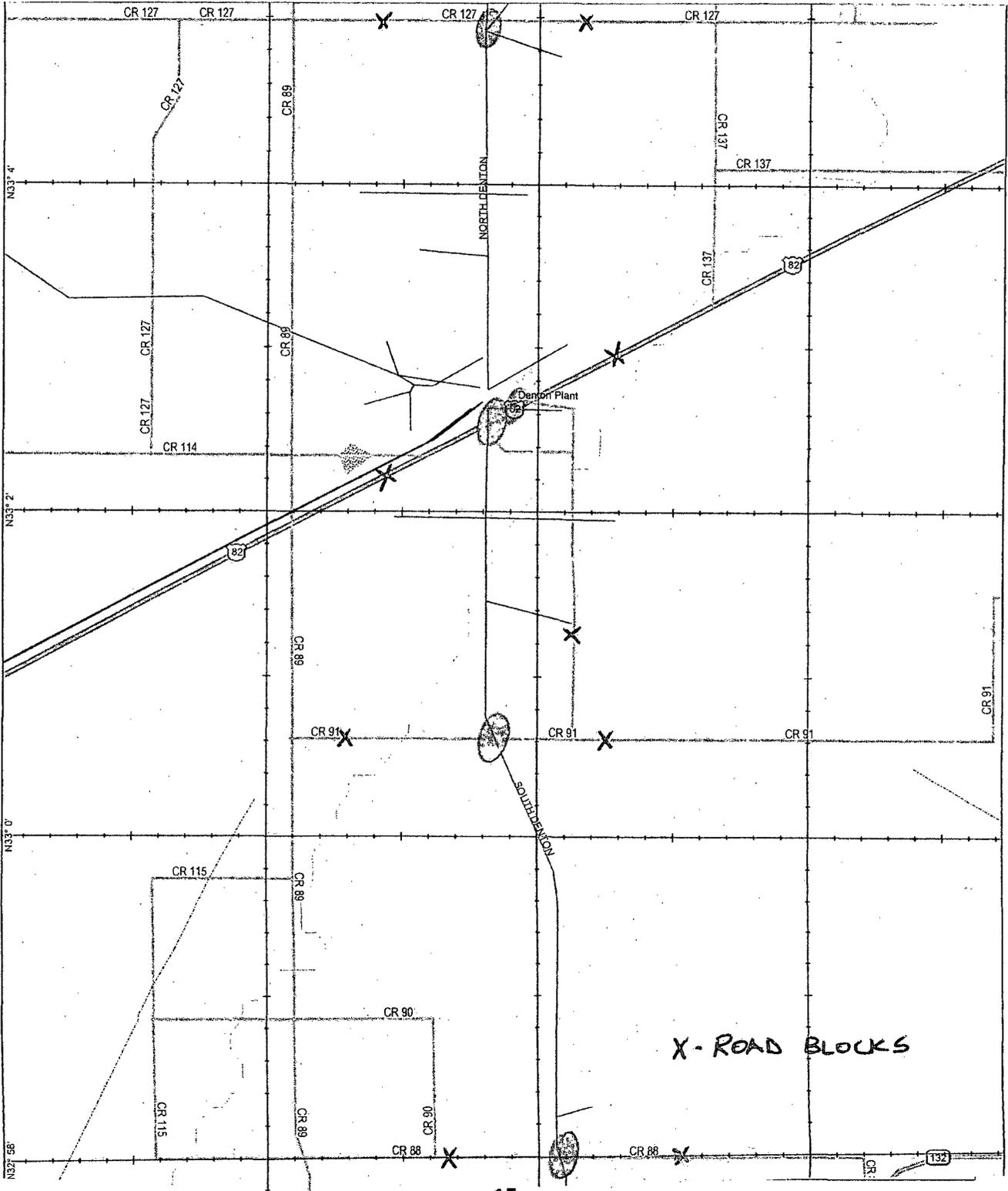
Safety and Loss Prevention Standard  
MAP OF PLANT AND GATHERING LINES

Davis Gas Processing  
Denton Plant



Safety and Loss Prevention Standard  
MAP OF RADIUS OF H2S EXPOSURE AREAS

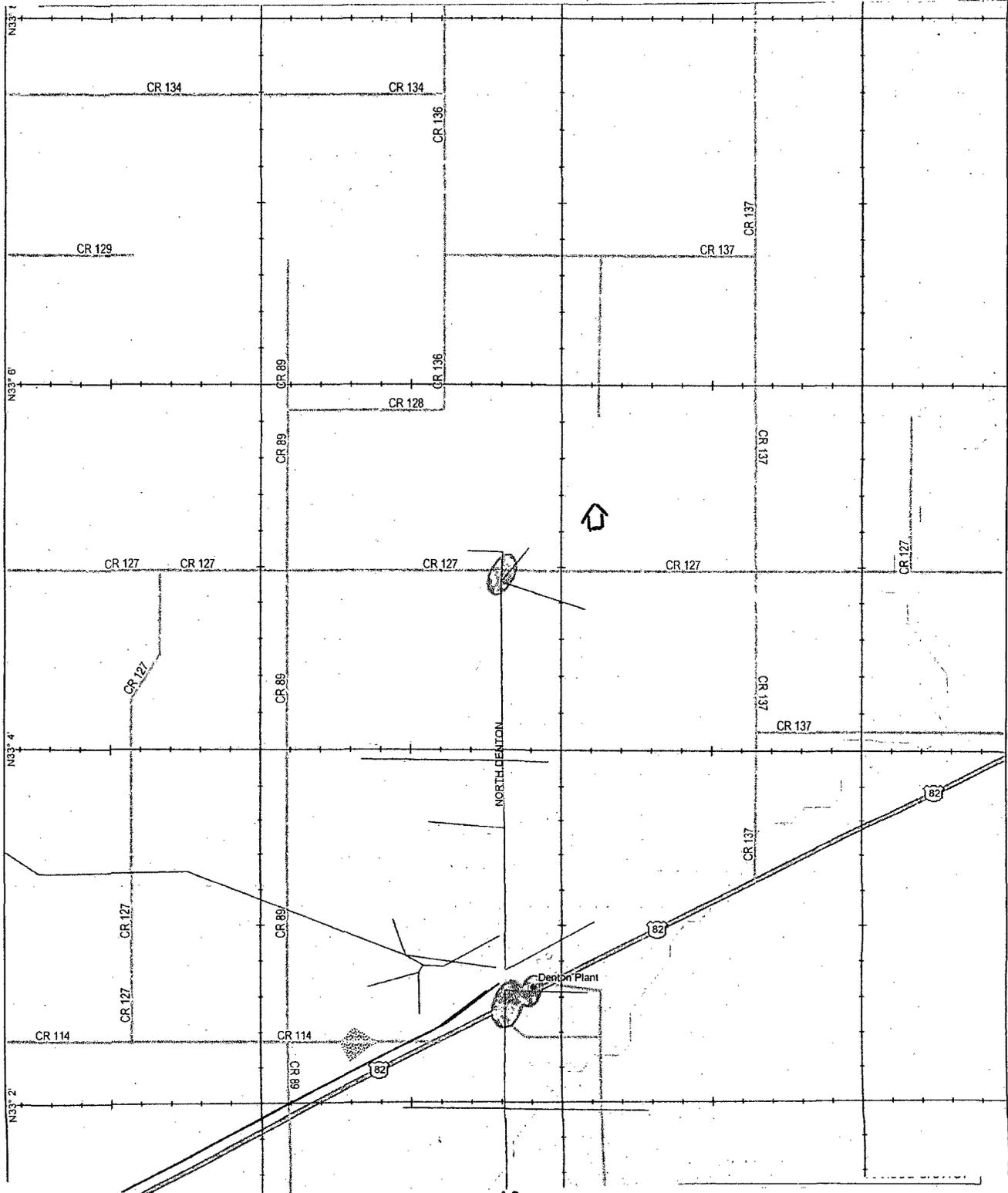
Davis Gas Processing  
Denton Plant



Safety and Loss Prevention Standard

Davis Gas Processing  
Denton Plant

MAP OF NORTH DENTON LINE (PUBLIC EXPOSURE)





# New Mexico Energy, Minerals and Natural Resources Department

**Susana Martinez**  
Governor

**Brett F. Woods, Ph.D.**  
Acting Cabinet Secretary

**Daniel Sanchez**  
Acting Division Director  
**Oil Conservation Division**



March 1, 2011

Mr. Bob Stewart  
Environmental Coordinator  
Davis Gas Processing, Inc.  
211 N. Colorado  
Midland, TX 79701

Dear Mr. Stewart:

**Re: Davis Denton Gas Plant (GW-048) Oil and Gas Facilities/Operations that may Vent and/or Flare H<sub>2</sub>S Gas**

The New Mexico Oil Conservation Division (OCD) is writing to operators of the above-referenced types of facilities or operations that may have New Mexico Environmental Department (NMED) - Air Quality Bureau (AQB) Oil and Gas type Permits. The purpose of this communication is to inform operators of such facilities regarding OCD Rules that may be applicable to gas plant operators and/or oil and gas facilities/operations in the hope that it provides some clarification regarding the applicability of these rules, and to ultimately increase overall compliance

In New Mexico, the OCD Rules that pertain to Hydrogen Sulfide (H<sub>2</sub>S) Gas are provided at § 19.15.11 *et seq.* NMAC (Hydrogen Sulfide Gas). The OCD Oil and Gas Rules that address "No-Flare" and the OCD Form C-129 process are provided at § 19.15.7.37 *et seq.* NMAC (Application for Exception to No-Flare). Gas plants have gas gathering pipelines with meters connected to operators who then either sell or vent casinghead gas into the gas gathering pipelines that feed into the plants. The OCD Rules that pertain to "Casinghead Gas" are provided at § 19.15.18.12 *et seq.* NMAC (Production Operating Practices).

This letter was precipitated by a recent event where a gas plant operator shut-in a "gas gathering pipeline." This "shutting-in" of the pipeline impacted approximately thirty individually-metered operators who may have continued operating instead of "shutting-in" their well(s). In spite of the fact that approximately thirty operators were impacted, the OCD observed that only one of those thirty operators contacted the OCD via Form C-129 as required under the OCD Rules to obtain approval of their application for an "exception to no-flare." (The operator initially had contacted the OCD to request approval to vent H<sub>2</sub>S gas into the air rather than shut-in the well.) The OCD has serious public safety concerns when operators do not properly shut-in their wells when gas gathering pipelines and/or meters are shut-in, especially where the wells are near populated and/or agricultural areas due to the potential for loss of life from toxic gas.

In subsequent communications with gas plant operators who flare gas, the OCD discovered that the operators were under the impression that if their facility has an NMED- AQB Construction Permit which includes a provision to flare/emit gas, then this is all that is needed to operate in New Mexico. This is actually only partially

Oil Conservation Division  
1220 South St. Francis Drive • Santa Fe, New Mexico 87505  
Phone (505) 476-3440 • Fax (505) 476-3462 • [www.emnrd.state.nm.us/OCD](http://www.emnrd.state.nm.us/OCD)



Mr. Stewart  
Davis Gas Processing, Inc.  
March 1, 2011  
Page 2 of 2

correct because operators are also required to comply with the requirements set out in the OCD Rules regarding flaring and venting. For example, in the situation where a gas plant operator has notified connected well operators of a gas-gathering pipeline shut-down, each of those well operators is required to shut-in its well(s) or to obtain OCD District Supervisor approval to flare via an OCD C-129 Form. Operators who do not comply are illegally venting and/or flaring gas under OCD Rules.

In addition, gas plants and/or oil and gas operators may be required to satisfy OCD § 19.15.11 *et seq.* NMAC (Hydrogen Sulfide Gas) Contingency Plan requirements for facilities and wells in cases where 100 ppm or greater H<sub>2</sub>S concentrations may impact public areas. OCD records indicate that Davis Gas Processing, Inc. does not currently have an H<sub>2</sub>S Contingency Plan (CP) on file with the OCD. If you do not have an approved CP under § 19.15.11 *et seq.* NMAC (Hydrogen Sulfide Gas) for your gas plant yet, please submit your CP to the OCD Environmental Bureau in Santa Fe on or before August 11, 2011. *(The OCD notes that it is aware of some operators who have recently submitted CPs to the OCD that are currently under review. Please advise if this is the case for Davis Gas Processing, Inc.)*

The OCD recognizes that when multiple sets of Rules, Regulations and Statutes apply, it can sometimes be tricky to definitively determine which requirements apply, to whom and in what circumstances. Operators must, however, take all care to ensure that they are at all times operating in compliance with all applicable state, federal and/or local rules and regulations. In this instance, this means that operators are subject not only to the requirements imposed by the NMED-AQB permitting structure, but also to those set forth in the OCD Rules.

We hope that this communication has helped to clarify the issue regarding the applicability of the OCD Rules in these situations, regardless of the existence of a valid NMED-AQB permit. Please contact Carl Chavez of my staff at (505) 476-3490 if you have questions or need assistance with the CP. The OCD looks forward to bringing your facility into compliance with OCD Rules if it is not currently already in compliance. Thank you for your cooperation in this matter.

Sincerely,



Daniel Sanchez,  
Compliance & Enforcement Manager

xc: Richard Goodyear, NMED- AQB  
OCD Environmental Bureau  
OCD District Offices