#### State of New Mexico Energy Minerals and Natural Resources

Form C-101 March 4, 2004

W. Grand Avenue, Artesia, NM 88210 nstrict III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Oil Conservation Division RECEIVE Submit to appropriate District Office 1220 South St. Francis Dr.

MAY 2 7 2005

CASING

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Santa Fe, NM 87505 OCD-AHIESIA

☐ AMENDED REPORT

| APPI   | ICATI  | ON I  | FOR  | PERMIT  | TO DR   | ILL, RI   | E-ENTI   | ER, DE                    | CEPEN                         | I, PLUGBA                    | <u>CK,</u>        | OR ADI                                | A ZONE             |  |
|--|--|---|--|---|---|---|--|---------------------------|-------------------------------|------------------------------|-------------------|---------------------------------------|--------------------|--|
|  | EO THON  | IPSON   | & J  | AMES CLEO   | THOMPSC   | on, Jr., L  | .P.  |                           |                               | <sup>2</sup> OGRID<br>Number | 1118 <sup>,</sup> | f                                     |                    |  |
|  | 3ox 125<br>sa, TX  |   | 5_2 <i>5</i> 7   | 77  |   |   |  |                           |                               | API Number                   |                   | 3                                     | ~ ~                |  |
| Property_  | 5a, IA   | 1910.   | 3-23   | Property  |   |   |  |                           |                               | 150 0                        | I S               | ell No.                               |                    |  |
| Property Code 348  | 349  |   |  | Name Mo   | ntura F   |   |  |                           |                               |                              |                   | 00                                    | 1                  |  |
| <sup>7</sup> Surface   |  |   |  |   |   |   | ce Loca  | tion                      | <del></del>                   |                              |                   | <del></del>                           |                    |  |
| UL or lot no.  | Section<br>15  | Towns   | s  | Range <b>26-E</b>   | Lot ldr<br>N  |   | et from the<br>990   |                           | outh line                     | Feet from the 1751           | 1751              |                                       | County<br>EDDY     |  |
|  |  |   |  | <sup>8</sup> Proposed   | Bottom  | Hole Lo   | cation I   | f Differ                  | rent Fr                       | <u>or</u>                    |                   |                                       |                    |  |
| UL or lot no.  | Section  | Towns   |  | Range   | Lot Ide   |   | et from the  |                           | outh line                     | CEMIEN                       |                   |                                       | ,                  |  |
| Proposed Poo   | i i Ha   | ppy V   | /alley   | y (Morrow)  | 000   | 7800  | 60   | 10 Propo                  | sed Pool 2                    |                              |                   | O COVER ALL OIL,<br>ATER BEARING<br>* |                    |  |
|  |  |   |  | Dri   | Iling Pit   |   |  | ther In                   | format                        | ion                          |                   |                                       |                    |  |
| UL or lot no.  | Section<br>15  | Town  |  | Range<br>26-E   | Lot ld  |   | et from the<br>1035  | 1                         | outh line                     | Feet from the                | E                 | W EDDY  13 Ground Level Elevation     |                    |  |
| Depth to   | <del>!</del>   | J   |  |   |   | rom nearest   |  |                           |                               | Distance from neare          | st                |                                       |                    |  |
| ground water " Work Type C   | ode<br>well  | $\overline{}$   | <sup>12</sup> Wel  | 1 Type Code<br><b>Gas</b>   | fresh water   | 13 Cable/Rota   | ry<br>Rotary   | ·                         | surface water Lease Type Code |                              |                   |                                       |                    |  |
| <sup>16</sup> Multiple   |  |   | 17 Prop  | oosed Depth<br>11,600'  |   | 18 Formation  | orrow  | 19 Contractor             |                               |                              |                   |                                       |                    |  |
|  |  |   |  | 21  | Propose   | ed Casin  | g and C  | ement                     | Progra                        | m .                          |                   |                                       |                    |  |
| Hole S   | ize  |   | Casi   | ng Size   |   | weight/foot   |  | Setting D                 |                               | Sacks of (                   | Cement            |                                       | Estimated TOC      |  |
| 17.5   |  |   | 13.  | 375   |   | 48 500  |  |                           |                               | 400                          |                   |                                       | 0                  |  |
| 12.25  |  |   | 9.   | 625   |   | 36  | 2,500  |                           |                               | 1,200                        | )                 |                                       |                    |  |
| 7.87   | 5  | -   | 5.   | 5   |   | 17  |  | 11,700                    |                               | 725                          | 725               |                                       | 8,000' ***         |  |
| ***Pli   | us anv o   | il-be   | arin   | g zones ab  | ove 8.00  | 0'  |  |                           |                               |                              |                   |                                       |                    |  |
| Describe the land Describe the land Drill to 50 Drill to 2,5 Drill to TE An option | ne proposed<br>plowout pre<br>0'. Set 1<br>500'. Set<br>0 with 8 '<br>nal 7" ca                                | i progra<br>evention<br>3 /8 C<br>: with<br>% bit a<br>sing s | m. If in programme | this application is<br>am, if any. Use a<br>g & cement to<br>n water and r<br>set 5 ½ 17# N<br>g may be set | s to DEEPE<br>additional sh<br>to surface<br>native sol<br>1-80 & P-<br>if hole p | N or PLUG<br>neets if neces<br>e.<br>lids; set \$<br>110 casir<br>roblems | ssary.<br>) <sup>5</sup> / <sub>8</sub> casii<br>ig.<br>are encq | ng & ce                   | ment to                       |                              | ne and            | proposed nev                          | v productive zone. |  |
| of my knowle   | dge and be   | lief. I fe  | urther   | given above is to<br>certify that the<br>zuidelines <b>X</b> . a  | drilling pit  | t will be   |  | OIL CONSERVATION DIVISION |                               |                              |                   |                                       |                    |  |
|  | constructed according to NMOCD guidelines . a general permit ., or an (attached) alternative OCD-approved plan |   |  |   |   |   |  | roved by:                 |                               | epro a                       | A GA              | <b>~</b> 0000                         |                    |  |
| Signature:   | Signature: Levelle Comments  |   |  |   |   |   |  |                           |                               |                              |                   | GUM                                   |                    |  |
| Printed name:  | Printed name: Kenneth C. Dickeson  |   |  |   |   |   |  | :                         |                               | DISTRICT                     |                   |                                       |                    |  |
| Title:   |  |   |  |   |   |   | Appr   | roval Date                | UN 0                          | 1 2005                       | Expire            | ation Date:                           | MN 0 1 50006       |  |
| E-mail Addre   | ss: <u>ictw</u>  | rest@   | onts-  | online.net  | (Operato  | r's e-ma  | i)   |                           |                               |                              |                   |                                       | ID & TIME TO       |  |
| Date: 5/18   | /05  |   |  |   | ( <b>432) 55</b><br>Operators   |   |  | ditions of A              | Approval:                     | WITHE:                       | SS CI             | EMENTII<br>INTERN                     | 4G OF              |  |

Dr., Hobbs, NM 88240

## State of New Mexico Energy Minerals and Natural Resources

Form C-144 June 1, 2004

venue, Artesia, NM 88210

Road, Aztec, NM 87410

ncis Dr., Santa Fe, NM 87505

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure
Is pit or below-grade tank covered by a "general plan"? Yes \( \subseteq \) No \( \subseteq \)
of action: Registration of a pit or below-grade tank \( \subseteq \) Closure of a pit or below-grade tank \( \subseteq \)

| Type of action. Registration of a pit of below-grade tank   |  |   |
|---|--|---|
| or:J. CLEO THOMPSONTelephone: (4  | 32) 550-8887 e-mail address: jctwest@  | nts-online.net                            |
| cess: P.O. BOX 12577, ODESSA, TX 79765-2577  ucility or well name: MONTURA FED COM_API#:  | 27   |   |
| cility or well name: MONTURA FED COM_API#:  | U/L or Qtr/Qtr N Sec 15 T 22-S   | _R26-E                                    |
| County: EDDY Latitude Longitude NAD: 1927 19  | 983 🔲 Surface Owner Federal 🔲 State 🔲 Priv   | ateXIndian 🗌                              |
| <u>it</u>   | Below-grade tank   | RECEIVED                                  |
| ype: Drilling X Production  Disposal  | Volume:bbl Type of fluid:  |   |
| Workover  |  | MAY 27 2005                               |
| ined X Unlined  | Construction material:   | DOWLINSIN                                 |
| iner type: SyntheticXThickness12_mil Clay [   | Double-walled, with leak detection? Yes If no  | ot, explain why not.                      |
| it Volum <u>e 12,000</u> bbl  |  |   |
|   | Less than 50 feet  | (20 points)                               |
| epth to ground water (vertical distance from bottom of pit to seasonal high   | 50 feet or more, but less than 100 feet  | (10 points)                               |
| vater elevation of ground water.) 150 FT.   | 100 feet or more   | ( 0 points)                               |
|   |  |   |
| Vellhead protection area: (Less than 200 feet from a private domestic water   | Yes  | (20 points)                               |
| ource, or less than 1000 feet from all other water sources.)  | No No  | ( 0 points)                               |
|   | Less than 200 feet   | (20 points)                               |
| Distance to surface water: (horizontal distance to all wetlands, playas,  | 200 feet or more, but less than 1000 feet  | (10 points)                               |
| rigation canals, ditches, and perennial and ephemeral watercourses.)  | 1 1000 feet or more  | ( 0 points)                               |
|   |  | 0   |
|   | Ranking Score (Total Points)   |   |
| If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other  |  |   |
| your are burying in place) onsite Offsite I foffsite, name of facility  |  |   |
| remediation start date and end date. (4) Groundwater encountered: No 🗌 Yes 🔲 If yes, show   | v depth below ground surfaceft. and attach   | sample results. (5)                       |
| Attach soil sample results and a diagram of sample locations and excavations.   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
| I hereby certify that the information above is true and complete to the best of my knowledge an been/will be constructed or closed according to NMOCD guidelines X a general permit [ | d belief. I further certify that the above-described pit on , or an (attached) alternative OCD-approved plan | r below-grade tank has                    |
| Date: <u>5/16/2005</u> Printed Name/Title_ <u>J.E. STEVENS, OPERATIONS MANAGER</u> Sig  | gnature Jestinn  |   |
| Your certification and NMOCD approval of this application/closure does not relieve the operator of its res  | or of liability should the contents of the pit or tank contami   | nate ground water or<br>local laws and/or |
| Approval:   |  | · <u>- ·</u>                              |
| Printed Name/Title  | Signature  | ·   |

DD, Artesia, NM 88210 CT III Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV P. O Box 2088, Santa Fe, NM 87504-2088

12Dedicated Acres

320

13 Joint or Infill

#### State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised May 17, 2002 Instructions on back

OIL CONSERVATION DIVISION

State Lease-4 copies Fee Lease-3 copies

## PO Box 2088 Santa Fe, NM 87504-2088

AMENDED REPORT

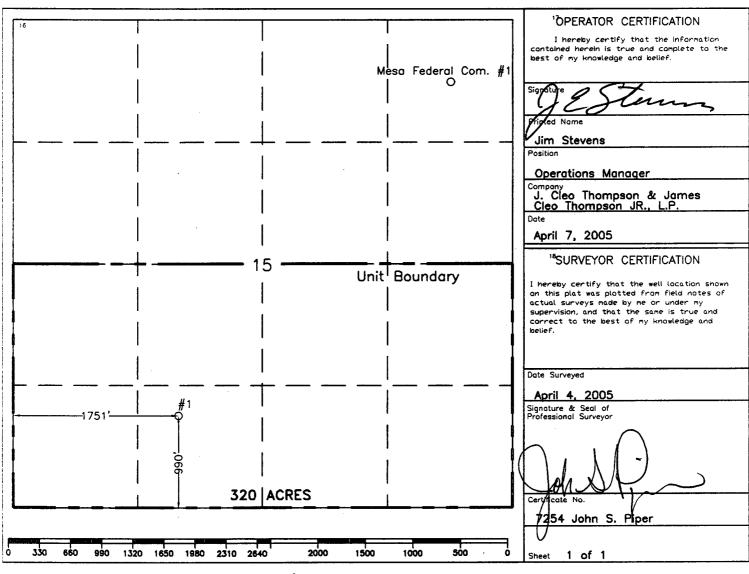
Submit to Appropriate District Office

| 1 д          | Pl Number     |   | Ţ.     | <sup>2</sup> Paol Cade |   | <sup>3</sup> Pool Name               |               |                               |                     |  |  |
|--------------|---------------|---|--------|------------------------|---|--------------------------------------|---------------|-------------------------------|---------------------|--|--|
| Property Co. | de            |   | 1_     |                        | <sup>5</sup> Property Name  Montura Federal Com |                                      |               |                               |                     |  |  |
| OGRID No.    |               |   | J. CLE | EO THOMP               | •   | & JAMES CLEO THOMPSON, JR., L.P. 340 |               |                               |                     |  |  |
|              |               |   |        | 1                      | <sup>10</sup> Surface l                         | _ocation                             |               | •                             |                     |  |  |
| L or lot no. | Section<br>15 | Section Township Range Lot Idn Feet from the North/South line Feet from the East/ |        |                        |   |                                      |               | East/West line<br><b>West</b> | County<br>Eddy      |  |  |
|              |               |   | 11 B   | ottom Hol              | e Location If                                   | Different From                       | Surface       |                               |                     |  |  |
| L or lot no. | Section       | Township  | Range  | Lot Idn                | Feet from the                                   | North/South line                     | Feet from the | East/West line                | <sup>7</sup> County |  |  |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION.

<sup>15</sup>Order No.

¹Consolidation Code



O = Staked Location • = Producing Well = Injection Well • = Water Supply Well • = Plugged & Abandon Well O = Found Section Corner, 2 or 3" Iron Pipe & GLO B.C. O = Found /4 Section Corner, 1" Iron Pipe & GLO B.C.

#### ADDITIONAL INFORMATION ON THE LOCATION

| State Plane Coordinate | es                   |                        |                 |  |  |  |
|------------------------|----------------------|------------------------|-----------------|--|--|--|
| rthing 504851.73       |                      | Easting 556685.83      |                 |  |  |  |
| Latitude 32°23'16.4    | <b>!</b> 27"         | Longitude 104*17'00.99 | 97"             |  |  |  |
| Zone                   | North American Datum | Combined Grid Factor   | Coordinate File |  |  |  |
| East                   | 1983                 | 0.999909               | Carlsbad.cr5    |  |  |  |
| Drawing File           | Revised              | Field Book             |                 |  |  |  |
| Carlsbad.Dwg           | 5/25/05 by G.M.R.    | Eddy #8, Pg. 54        |                 |  |  |  |



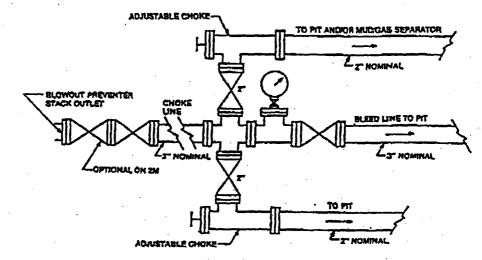


FIGURE K4-1. Typical choke manifold assembly for ZM and 3M rated working pressure service — surface installation.

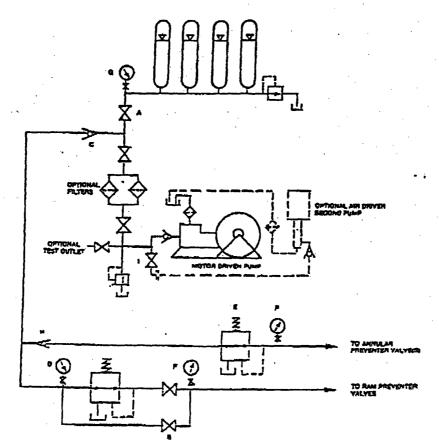


FIGURE K6-1. The schematic sketch of an actumulator system shows required and optional components.

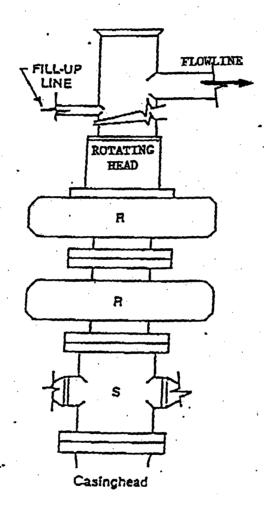


FIGURE KI-1. Recommended IADC Class 2 BOP stack, 2000 psi WP. Either SRd (left) or SA (right) arrangement is acceptable and drilling spool is optional.



Master Marketing & Safety P.O. Box 69338 Odessa, Texas 79769

## **H2S CONTINGENCY PLAN**

J. Cleo Thompson Montura Fed Com #1 Section 15, Township 22 South, Range 26 East Eddie County, NM

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#### **SCOPE**

This plan establishes J. Cleo Thompson guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide gas (H<sub>2</sub>S) on the Montura Fed Com #1 location. This lease is located 900 feet from the south line, 1751 feet from the west line in Section 15 of Township 22, Range 26 East, unit Letter N of Eddy County, New Mexico. This plan also establishes procedure for isolation of the work site and evacuating the public on the condition that:

- A. There is a release of H<sub>2</sub>S that encompasses the radius of exposure (ROE) in this plan and,
- B. There are persons and/or roads within the ROE and,
- C. There is the endangerment of human or animal life within the ROE.
- \*\* There are no homes located within one (1) mile either direction of this particular location\*\*

#### **OBJECTIVE**

#### The objective of the <u>J. Cleo Thompson Company</u> is to:

- A. Prevent any and all accidents, and to prevent the uncontrolled release of H<sub>2</sub>S into the atmosphere and,
- B. Provide proper evacuation procedures to cope with emergencies and,
- C. Provide immediate and adequate medical attention should an injury occur.

It should be noted that J. Cleo Thompson does not expect there top be any release of  $H_2S$  into the atmosphere but has taken the necessary steps to react properly to and control any hazards encountered on any of our facilities.

#### **GENERAL EMERGENCY ACTION**

#### In the event of an emergency, the following action should be initiated,

- 1. All personnel shall immediately evacuate to an up-wind and up-hill "safe breathing" area.
- 2. Those who must enter the hazard area must wear positive pressure selfcontained breathing apparatus and must use other appropriate safety equipment as outlined on page 10.
- 3. Isolate the well, if possible.
- 4. Use the "Buddy System" at all times.
- 5. Account for all personnel and take appropriate action as necessary for personnel safety.
- 6. Display the appropriate color warning flag to describe the type of emergency.
- 7. Contact *J. Cleo Thompson* personnel at the earliest time available according to the emergency call out list on Page 4.

The *J. Cleo Thompson* supervisor will assess the situation and assign duties to various persons to bring the situation under control. Notification of local emergency response agencies and residents will be assigned by the *J. Cleo Thompson* supervisor. Media inquiries are to be referred to:

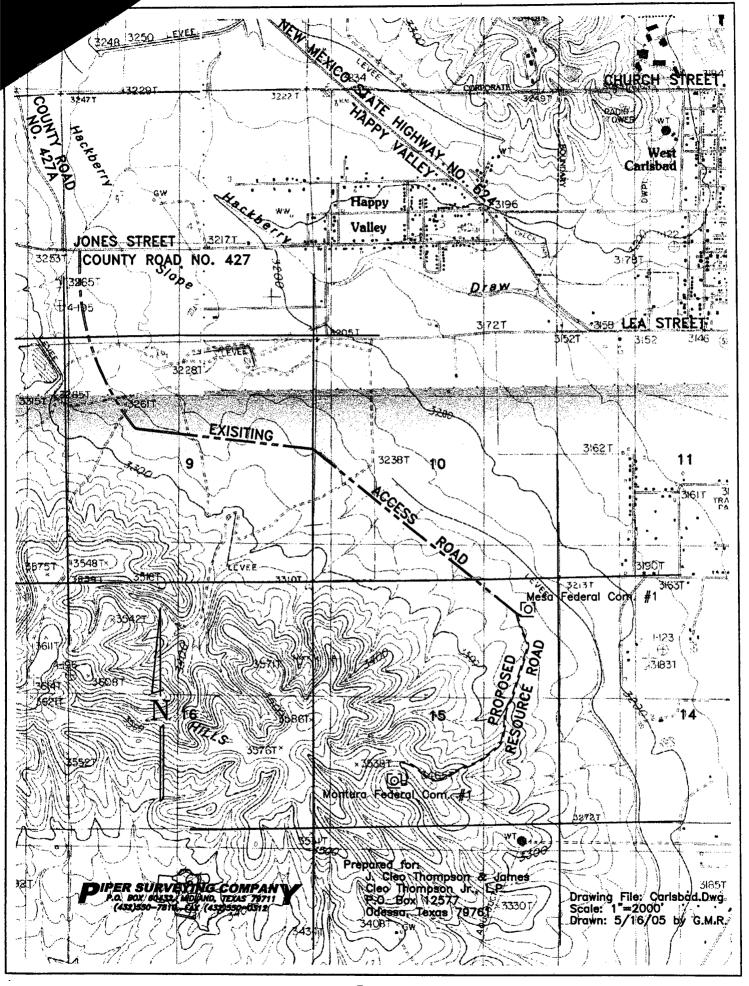
J. Cleo Thompson 325 North St. Paul, Suite 4300 Dallas, Texas 75201

### J. Cleo Thompson Emergency Call Out Numbers

| NAME               | OFFICE<br>NUMBER | CELLULAR<br>NUMBER | HOME<br>NUMBER |
|--------------------|------------------|--------------------|----------------|
| Johnny Holder      |                  |                    |                |
| Drilling Foreman   | (432) 550-8887   | (432) 556-9325     | (432) 363-8054 |
| Jim Stevens        |                  |                    |                |
| Operations Manger  | (432) 550-8887   | (432) 664-2917     | (432) 563-5504 |
| Amador Pando       |                  |                    |                |
| Production Foreman | (505) 677-2396   | (505) 746-7324     | (505) 677-2396 |
| Gary Moreau        |                  |                    |                |
| Pumper             | (505) 677-2396   | (505) 631-5643     |                |

# **Emergency Notification Numbers Eddy, County**

| Organization or Agency  | Phone Number          |
|---|-----------------------|
| New Mexico State Police                                       | (505) 885-3137        |
| Eddy County Sheriff's Department                              | (505) 887-7551        |
| Emergency Medical Service                                     |                       |
| (Ambulance)   | 911                   |
| Eddy County Emergency Management                              | (505) 887-9511        |
| State Emergency Response Center (SERC) Max Johnson (Chairman) | (505) 476-9620        |
| Carlsbad Fire Department                                      | 911 or (505) 885-3125 |
| Oil Conservation Division (District II)                       | (505) 748-1283        |
| National Response Center (NRC)                                | (800) 424-8802        |
| Chemtrec  | (800) 424-9300        |
| Omega Safety  | (432) 563-3721        |
| Krisha Marker   | (432) 425-8262        |
| Mike Lipsey   | (432) 528-9112        |
| Terry Wells   | (432) 967-1346        |
| Terry Wells   | (432) 230-5499        |



# EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF HYDROGEN SULFIDE GAS (H<sub>2</sub>S)

- 1. Secure and don self-contained breathing apparatus.
- 2. Remove all personnel to up-wind and up-hill "safe breathing" zone.
- 3. Contact all concerned employees and immediate supervisor for instructions.
- 4. Take steps to protect and/or remove the general public to an upwind area away from the source of H<sub>2</sub>S.
- 5. Deny entry to unnecessary personnel.
- 6. Notify necessary public safety personnel:
  - a. State Police if on or near a state road
- b. Sheriff's Department if on or near a county road (for assistance in the evacuation of the general public and to help maintain roadblocks)
  - 7. Contact the Oil Conservation Division. (OCD)
  - 8. While attempting to control the release, maintain tight security and safety procedures
  - 9. Use the "Buddy System" when entering any hazardous area.

The responsibility of this plan is with the <u>J. Cleo Thompson</u> supervisor(s) who shall be in complete command during the emergency.

# IGNITION PROCEDURES FOR UNCONTROLLABLE WELL CONDITIONS

The decision to ignite the well is the decision of the company supervisor(s). This decision should be made only as a last resort and in a situation where it is determined that:

- Human life and/or property are endangered
- There is no hope of controlling the blowout under the prevailing conditions at the well.

#### INSTRUCTIONS FOR IGNITING THE RELEASE

- 1. Two personnel are required for the ignition operation. They must wear positive pressure self-contained breathing apparatus and a D-ring style full body safety harness with a non-flammable safety rope attached. (Must be an OSHA approved body harness)
- 2. One (safety) person will test the atmosphere for explosive gases with an approved Triple-range (H<sub>2</sub>S, O<sub>2</sub>, LFL) monitor. The other person (company supervisor) is responsible for igniting the well.
- 3. Primary method of ignition shall be with the 25mm flare gun with range of approximately 500 feet.
- 4. Ignite up-wind and do not approach any closer than is warranted.
- 5. Select a safe ignition site which offers ultimate egress.
- 6. Before activating flare gun, check for presence of combustible gas.
- 7. After ignition, continue emergency action and procedure as before.
- 8. All unassigned personnel will limit their actions to those directed by the company supervisor.

After the well is ignited, burning  $H_2S$  will produce  $SO_2$ , which is also highly toxic. Do not assume the area is safe after the well is ignited.

A NO SMOKING POLICY shall be strictly enforced on location at all times.



#### EMERGENCY EQUIPMENT REQUIREMENTS

#### 1. Respiratory Protection

- Rescue Units (SCBA's): One (1) unit shall be placed at each briefing area and 2 shall be stored in the safety trailer.
- Work/Escape Units: Four (4) units shall be stored on the rig floor connected to the safety trailer with sufficient hose to allow workers to adequately perform duties with minimal restriction.
- Emergency Escape Units: Four (4) units shall be stored in the top dog house for emergency evacuation purposes.

#### 2. Signs and Flags

 One (1) Condition Sign shall be placed at location entrance with the following language:

#### DANGER H<sub>2</sub>S



Condition Flags shall be displayed at the sign in one of the following designations:

#### Green / normal conditions Yellow

Yellow / potential danger

Red/danger, H<sub>2</sub>S Present

- 3. **Briefing Area:** Two (2) briefing areas, designated by signs, shall be located perpendicular to each other and be easily visible and readily accessible.
- **4.** Windsocks: Two (2) windsocks shall be strategically placed where they are easily visible from all points.

#### 5. Hydrogen Sulfide Detectors and Alarms:

- One (1) stationary H<sub>2</sub>S monitor with three sensors shall be located on the rig in the top dog house. The H<sub>2</sub>S monitor shall be calibrated to alarm at 10PPM for the low alarm (visual alarm) and 15 PPM for the high alarm (audible alarm). Calibrations shall be checked every 30 days or as needed. The sensors shall be located as follows:
- #1 Rig floor
- #2 Bell Nipple
- #3 Flow line or where the well bore fluid is discharged
- A gas sampling pump, with detector tubes capable of measuring H<sub>2</sub>S gas, shall be located in the safety trailer.

#### 6. Additional Rescue Equipment

- One Hundred Feet (100') of 5/8" OSHA approved rope.
- Two (2) OSHA approved full body harness
- One (1) Stretcher

#### 7. Fire Extinguishers:

• One (1) 20#, Class ABC fire extinguisher shall be located in the safety trailer.

#### 8. Communication:

 Cellular Phones/Mobile Phones or two- way radios shall be available via the vehicles on location and on the rig floor.

#### TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen sulfide ( $H_2S$ ) is extremely toxic. The acceptable ceiling concentration for an eight (8) hour exposure is 10 PPM, which is .001% by volume. Hydrogen sulfide ( $H_2S$ ) is colorless. Hydrogen Sulfide ( $H_2S$ ) is heavier than air, the specific gravity is equal to 1.19 which is 20% heavier than ambient temp air which is 1.00. Hydrogen sulfide ( $H_2S$ ) can form an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide ( $H_2S$ ) is as toxic as hydrogen cyanide and is between 5-6 times more toxic than carbon monoxide.

#### **TOXICITY OF VARIOUS GASES**

| Common<br>Name      | Chemical<br>Formula | Specific<br>Gravity | Threshold<br>Limit <sup>1</sup>            | Hazardous<br>Limit <sup>2</sup> | Lethal<br>Concentration <sup>3</sup> |
|---------------------|---------------------|---------------------|--|---------------------------------|--------------------------------------|
| Hydrogen<br>Cyanide | HCN                 | 0.94                | 10 PPM                                     | 150 PPM/Hr                      | 300 PPM                              |
| Hydrogen<br>Sulfide | H <sub>2</sub> S    | 1.189               | 10 PPM <sup>4</sup><br>15 PPM <sup>5</sup> | 100 PPM/Hr                      | 600 PPM                              |
| Sulfur<br>Dioxide   | SO <sub>2</sub>     | 2.21                | 2 PPM                                      | N/A                             | 100 PPM                              |
| Chlorine            | $CL_2$              | 2.45                | 1 PPM                                      | 4 PPM/Hr                        | 1000 PPM                             |
| Carbon<br>Monoxide  | СО                  | 0.97                | 50 PPM                                     | 400 PPM/Hr                      | 1000 PPM                             |
| Carbon<br>Dioxide   | CO <sub>2</sub>     | 1.52                | 5000 PPM                                   | 5%                              | 10%                                  |
| Methane             | CH <sub>4</sub>     | 0.55                | 90,000 PPM                                 | Combustible @ 5%                | N/A                                  |

- (1) Threshold limit Concentration at which it is believed that all workers may be repeatedly exposed, day after day with out adverse effects also referred to as Time Weighted Average (TWA).
- (2) Hazardous limit Concentration that may cause death
- (3) Lethal concentration Concentrations that will cause death with short-term exposure
- (4) Threshold limit 10PPM NIOSH guide to chemical hazards
- (5) Short-term threshold limit Concentration higher than Threshold limit with limits placed on time one can be exposed. Exposure time is limited to 15 minutes followed by one (1) hour in fresh air. This cycle can be repeated for (4) times during a normal eight (8) hour work day.

#### PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H2S)

(Concentrations are calculated @, 15.00 psia and 60 degrees F.)

| Concentrations |         | Physical Effects   |  |  |  |  |  |
|----------------|---------|--|--|--|--|--|--|
| 0.001%         | 10 PPM  | Obvious & unpleasant odor. Safe for an eight (8) hour exposure   |  |  |  |  |  |
| 0.005% 50 PPM  |         | Can cause some flu-like symptoms and can cause pneumonia.  |  |  |  |  |  |
| 0.01%          | 100 PPM | IDLH <sup>1</sup> . Kills the sense of smell in 3 to 15 minutes. May irritate eyes and throat.   |  |  |  |  |  |
| 0.02%          | 200 PPM | Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hours may cause lung damage and/or death. |  |  |  |  |  |
| 0.06%          | 600 PPM | Loss of consciousness quickly, death will result if not rescued promptly.  |  |  |  |  |  |

(1) Immediately dangerous to life or health

# TOXICITY OF HYDROGEN SULFIDE

| 8 - 48<br>Hours                    |  | Hemorrhage &<br>Death *   | Hemorrhage &<br>Death *                                |   |  | ·  |   |
|------------------------------------|--|---|--|---|--|--|---|
| 4 - 8<br>Hours                     |  | Increased<br>Symptoms*  | Serious Irritating<br>Effects                          |   | Death ◆  |  |   |
| 1 - 4<br>Hours                     |  | Salivation & Mucous Discharge;<br>Sharp Pain in Eyes;<br>Coughing | Difficult Breathing;<br>Blurred Vision;<br>Light & Shy | Hemorrhage &<br>Death   | Dizziness<br>Weakness;<br>Increased Irritation;<br>Death                                       |  |   |
| 30 Minutes<br>to 1 Hour            | Mild<br>Conjunctivitis;<br>Respiratory Tract<br>Irritation | Throat  | Throat & Eye<br>Irritation                             | Light & Shy; Nasal<br>Catamh; Pain in<br>Eyes; Difficult<br>Breathing | Increased Irritation<br>of Eyes & Nasal<br>Tract; Dull Pain<br>Head; Weariness;<br>Light & Shy | Severe Pain in Eyes and Head Dizziness; Trembling of Extremities; Great Weakness & Death * |   |
| 15 - 30<br>Minutes                 |  | Disturbed<br>Respiration;<br>Pain in Eyes;<br>Sleepiness          | Throat & Eye<br>Irritation                             | Painful Secretion of<br>Tears; Weariness                              | Difficult Respiration<br>Coughing:<br>Irritation of Eyes                                       | Serious Eye<br>Inritation; Palpitation<br>of Heart; Few<br>Cases of Death*                 |   |
| 0 - 15<br>Minutes                  |  | Coughing:<br>Irritation of Eyes;<br>Loss of Sense of<br>Smell     | Loss of Sense of<br>Smell                              | Irritation of Eyes  | Irritation of Eyes;<br>Loss of Sense of<br>Smell   | Respiratory<br>Disturbances;<br>Irritation of Eyes;<br>Collapse                            | Collapse *<br>Unconsciousness<br>Death *  |
| 0 - 2<br>Minutes                   |  |   |  | Irritation of Eyes;<br>Loss of Sense of<br>Smell                      |  | Coughing Collapse & Unconsciousness  | Collapse *<br>Unconsciousness<br>Death *  |
| H <sub>2</sub> S Per Cent<br>(PPM) | 0.005 (50 ppm)<br>0.010 (100 ppm)                          | 0.010 (100 ppm)<br>0.015 (150 ppm)                                | 0.015 (150 ppm)<br>0.020 (200 ppm)                     | 0-025 (250 ppm)<br>0.035 (350 ppm)                                    | 0-035 (350 ppm)  | 0.050 (500 ppm)  | 0.060 (600 ppm)<br>0.070 (700 ppm)<br>0.080 (800 ppm)<br>0.100 (1000 ppm)<br>1.150 (1500 ppm) |

<sup>\*</sup> Data secured from experiments of dogs, which have susceptibility similar to men/women. \*\*PPM parts per million

# THE USE OF SELF-CONTAINED BREATHING AIR EQUIPMENT

#### SCBA should be worn when:

- Working near the top or on top of any tank.
- Disconnecting any line where H<sub>2</sub>S can reasonably be expected.
- Sampling air in the area to determine if toxic concentrations of H<sub>2</sub>S exist.
- Working in areas where over 10 PPM of H<sub>2</sub>S has been detected.
- At any time there is a doubt as to the H<sub>2</sub>S level in the area to be entered.

Air quality testing shall be continuous throughout the entire operation if a container is breeched or in a hazardous location.

All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

Facial hair and standard eyeglasses are not allowed with SCBA use.

Contact lenses are never allowed with the use of SCBA.

The SCBA shall be inspected monthly.

After each use, the SCBA shall be cleaned, disinfected, serviced, inspected and refilled to proper specifications.

# RESCUE & FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H2S) POISONING

Do not panic!

Remain calm and think with your head and not your heart.

Don breathing apparatus.

Protect yourself, then remove victim to fresh air as quickly as possible. When evacuating: walk not run, upwind and uphill from the source or crosswind to achieve upwind.

Notify emergency response personnel

Provide artificial respiration and /or CPR, as necessary.

Remove all contaminated clothing to avoid further exposure.

A minimum of two (2) personnel on location shall be trained in CPR and First Aid.



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON** 

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

June1, 2005

J. Cleo Thompson & James Cleo Thompson, Jr., L.P.

P.O. Box 12577

Odessa, TX 79765-2577

Attn: Mr. Kenneth C. Dickeson

Re: J. Cleo Thompson & James Cleo Thompson, Jr. L.P.: Montura Federal Com. # 1, located

in Unit N of Section 15, Township 22 South, Range 26 East, Eddy County, New Mexico,

NMPM API # 30-015-34127

Dear Mr. Dickeson or To Whom It May Concern:

In regards with conditions for approval (in part) for the above captioned well, the New Mexico Oil Conservation Division (NMOCD) will require the following:

This is for J. Cleo Thompson & James Cleo Thompson, Jr., L.P. to take samples from the flow line of the drilling mud every 100 'in order to determine the chloride levels starting at surface down through the intermediate casing point which is projected to be @ 2500'.

In addition, the drilling of the Capitan Reef is to be drilled with fresh water mud as noted in your APD. The results of this data are to be submitted to the NMOCD in Artesia.

Please call our office if you have any questions regarding this matter.

Respectfully yours,

Bryan **G**. Arrant

**PES** 

CC: Well File





P.O. Box 10152 Midland, Texas 79702 432-682-4002 432-684-4741 Fax

May 18, 2005

RECEIVEL

MAY 1 9 2005

GOD-MATEON

Mr. Bryan Arrant NMOCD 1301 W. Grand Ave. Artesia, NM 88210

RE: C-101 for MONTURA FED COM #1

J. CLEO THOMPSON & JAMES CLEO THOMPSON, JR., LP

EDDY COUNTY, NEW MEXICO

Dear Mr. Arrant:

To complete the requirements for the subject-drilling permit, I submit the following:

- Agreements: We agree to function test the BOP's daily.
- □ <u>Location</u>: The well is located in a rural area. (The closest home is approximately one mile from the location.)
- □ Requirements: The H<sub>2</sub>S Contingency Plan includes the emergency phone numbers for our company and the local residents are listed above. (This should therefore meet your requirement for an emergency notification list.)
- □ Attachments: Attached is a detailed map of the area and a signed C-102.

Please process our application and contact us if there is anything else you may need.

Very truly your

Kenneth C. Dickeson Consulting Landman

**Enclosures** 

tlnmocd