District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 2006
RECEIVED
OCD - ARTESIA

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
THOMPSON, J. CLEO P.O. BOX 12577 ODESSA, TX 79768-2577	11181
	[4] API Number 30-015- 35218

[3] Property Code	[5] Property Name	[6] Well No.
32551	MESA ARRIBA	2

[9] Proposed Pool 1	[10] Proposed Pool 2
HAPPY VALLEY (MORROW)	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	22-S	26-E		660'	NORTH	660'	EAST	EDDY

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
N	G	ROTARY		3372
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
N	11,600			/ /2006

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water

Pit: Liner: Synthetic ☒ ____ mils thick Clay ☐ Pit Volume: ____ bbls Drilling Method:

Closed-Loop System ☐ Fresh Water ☒ Brine ☒ Diesel/Oil-based ☐ Gas/Air ☐

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17.5	13.375	48	500	400	0
12.25	9.625	36	2500	1200	0
7.875	5.5	17	11,700	725	5000'

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

DRILL TO 500'. SET 13 3/8 CSG & CEMENT TO SURFACE.
DRILL TO 2500 WITH FRESH WATER AND NATIVE SOLIDS; SET 9 5/8 CSG & CEMENT TO SURFACE.
DRILL TO TD WITH 8 3/4 BIT AND SET 5 1/2 17# N-80 & P110 CASING.
AN OPTIONAL 7" CSG STRING MAY BE SET IF HOLE PROBLEMS ARE ENCOUNTERED.

NOTIFY OCD OF SPUD & TIME TO WITNESS CEMENTING OF SURFACE & INTERMEDIATE CASING

CEMENT TO COVER ALL OIL, GAS AND WATER BEARING ZONES

[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Printed name: JIM STEVENS J E Stevens
Title: OPERATIONS MANAGER
E-mail Address: jstevens@jcleo.com
Date: 10/24/2006 Phone: (432)550-8887

OIL CONSERVATION DIVISION

Approved by: BRYAN G. ARRANT
Title: DISTRICT II GEOLOGIST
Approval Date: OCT 30 2006 Expiration Date: OCT 30 2007
Conditions of Approval Attached ☐

DISTRICT I
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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease–4 copies
Fee Lease–3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	78060	Happy Valley; Morrow

[4] Property Code	[5] Property Name	[6] Well Number
	MESA ARRIBA	2

[7] OGRID No.	[8] Operator Name	[9] Elevation
11181	J. CLEO THOMPSON & JAMES CLEO THOMPSON, JR., L.P.	3172'

[10] Surface Location

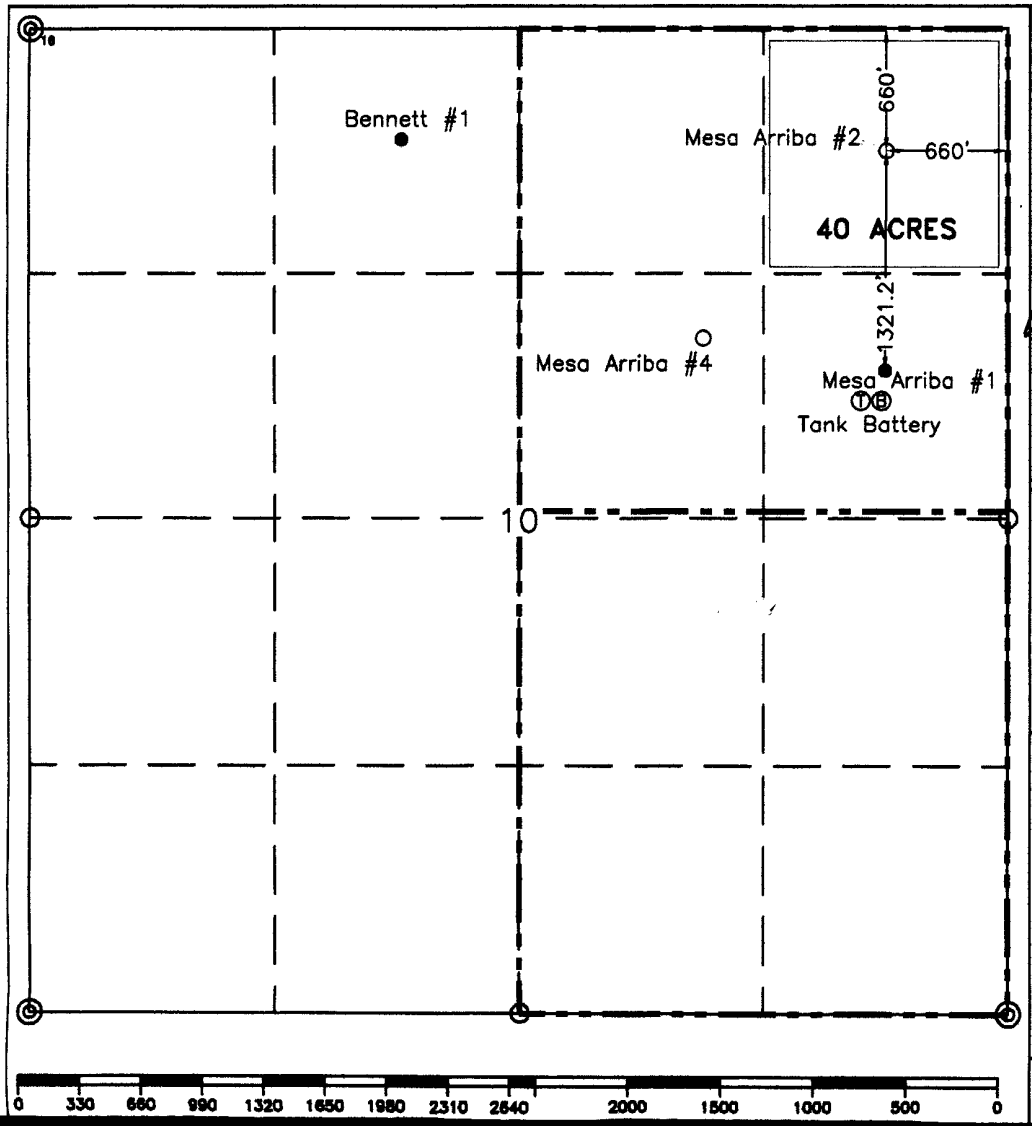
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	[7] County
A	10	22-S	26-E		660'	North	660'	East	Eddy

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	[7] County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40 320			

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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

J E Stevens 10/20/06

Signature Date

Jim Stevens

Printed Name

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

7/08/06

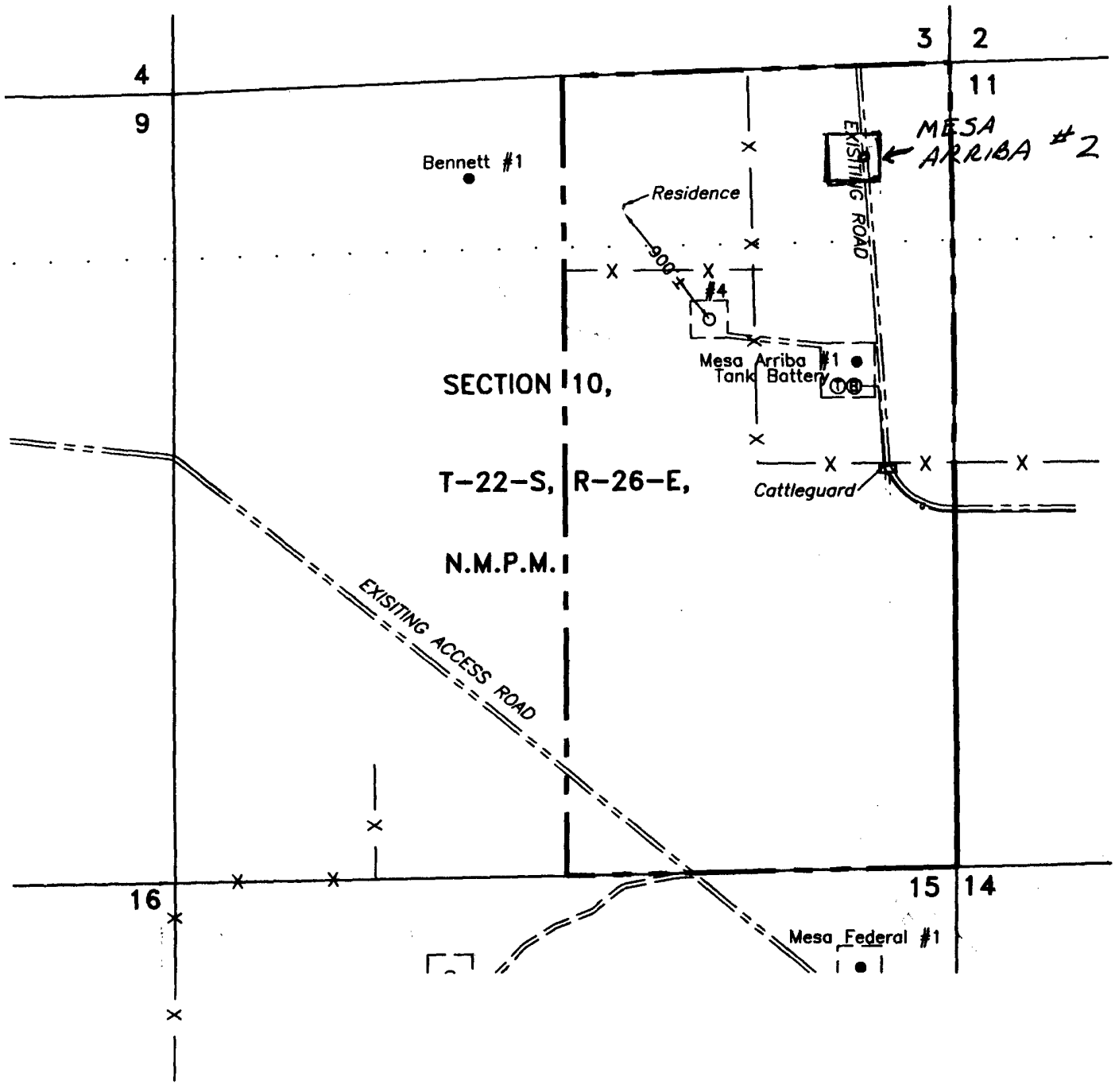
Date of Survey

Signature & Seal of Professional Surveyor:

John S. Piper

Certificate No.

7254 John S. Piper



LEGEND OF SYMBOLS

- = Access Road
- = Resource Road on Lease
- = Resource Road on State Land
- = Resource Road on Private Land
- = Resource Road on Federal Land
- = Proposed Resource Road
- o = Staked Well Location
- o = Found 1" Iron Pipe with Brass Cap
- O = Found 2" or 3" Iron Pipe with Brass Cap
- = Unit or Lease Boundary

EXHIBIT "A"
ACCESS ROAD MAP

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

MESA ARRIBA NO. 2
Located 660' FNL & 660' FEL, Section 10, T-22-S, R-26-E, NMPM, Eddy County, NM

Drawn by: Gene M. Rodriguez	Scale: 1" = 1000'
Date: July 10, 2006	Jim Stevens
Checked by: J.S. Piper	Sheet 1 of 1

J. CLEO THOMPSON & JAMES CLEO THOMPSON, JR., L.P.
WEST TEXAS DIVISION OFFICE
P.O. BOX 12577
ODESSA, TEXAS 79768
(432)550-8887

October 25, 2006

Mr. Bryan Arrant
1302 W. Grand Ave.
Artesia, New Mexico 88210

Re: Mesa Arriba #2
A-T22S-R26E
Eddy County, New Mexico

The BOP pipe rams will be function tested on a daily basis and the blind rams will be function tested on all trips due to the close proximity of dwellings. This of course will follow the NU and testing of the BOPE. We are also including a H2S Contingency Plan because of the proximity of dwellings.

We will also take 100 feet samples of the Captain Reef from 500 feet to the top of the Delaware (approximately 2300 feet).

Sincerely,

Jim Stevens
Operations Manager

H2S CONTINGENCY PLAN

J. Cleo Thompson
Mesa Arriba #2
Unit A: Section 10, Township 22 South
660' North Line, 660' East Line
Eddy County, NM

TABLE OF CONTENTS

SCOPE

This plan establishes **J. Cleo Thompson** guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide gas (H2S) on the **Mesa Arriba #2. This well is located 660' FNL & 660' FEL in Unit A, Section 10 of the Township 22-S, Range 26-E 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_2S that compasses the radius of exposure (ROE) in this plan,

B. There are persons and/or roads within the ROE and,

C. There is the endangerment of human or animal life within the ROE.

OBJECTIVE

The objective of the *J. Cleo Thompson Company* is to:

A. Prevent any and all accidents, and to prevent the uncontrolled release of H_2S into the atmosphere and,

B. Provide proper evacuation procedures to cope with emergencies and,

C. Provide immediate and adequate medical attention should in injury occur.

It should be noted that J. Cleo Thompson does not expect there top be any release of H2S into the atmosphere but has taken the necessary steps to react properly to and control any hazards encountered on any of our facilities.

Master Marketing

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 self-contained 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. The ***J. Cleo Thompson*** supervisor will assign the notification of local emergency response agencies and residents. 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 NUMBER	CELLULAR NUMBER	HOME NUMBER
Johnnie 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	

J. Cleo Thompson is aware and will abide by city; county and state burn ban policies.

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
City of Carlsbad, New Mexico	(505) 887-1191
National Response Center (NRC)	(800) 424-8802
Chemtrec	(800) 424-9300
Midland Safety & Health	(432) 520-3838
Krisha Marker (MM Safety Inc.)	(432) 425-8262

Mesa Arriba #1

Carlsbad Eddy County Contacts:

Eddy County Offices

County Offices	101 Greene Street	505-887-9511
County Manager:	Steve Massey	
Commissioner:	Lucky Briggs	Cell: 505-706-1425
Emergency Coordinator: Joel Arwine		Cell: 505-361-3404

******Please contact Joel on any emergency********

City Of Carlsbad, New Mexico Offices:

City of Carlsbad	101 N. Halaqueno Street	505-887-1191
Mayor Bob Forrest		505-887-1191
Harry Burgess / City Administrator		505-887-1191
		Cell: 505-200-6360

City Emergency Management Coordinator:

Liz Baggs	Office: 505-887-1191
	Home: 505-885-6564
	Cell: 505-361-0860

Carlsbad Youth Sports Complex:

City Administrator	Office: 505-887-1191
Access to Complex:	
Public Works Director / Luis Camero	Home: 505-885-8624
	Cell: 505-706-2270

Neighboring Residents to Mesa Arriba #1

Roger Armstrong	3514 W. Lea Street	Contact: 505-887-1937
Ben Jenkins	4023 W. Lea Street	Contact: 505-887-2755

EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF HYDROGEN SULFIDE GAS (H_2S)

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_2S.
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 *J. Cleo Thompson* 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_2S, O_2, 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_2S

[redacted]

MODERATE DANGER (Yellow or Orange

[redacted]

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

Green / normal conditions **Yellow or Orange / potential danger** **Red/ danger, H_2S 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_2S monitor with three sensors shall be located on the rig in the top dog house. The H_2S 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_2S 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 Name	*Chemical Formula*	*Specific Gravity*	*Threshold Limit*[1]	*Hazardous Limit*[2]	*Lethal Concentration*[3]
Hydrogen Cyanide	HCN	0.94	10 PPM	150 PPM/Hr	300 PPM
Hydrogen Sulfide	H_2S	1.189	10 PPM[4] 15 PPM[5]	100 PPM/Hr	600 PPM
Sulfur Dioxide	SO_2	2.21	2 PPM	N/A	100 PPM
Chlorine	CL_2	2.45	1 PPM	4 PPM/Hr	1000 PPM
Carbon Monoxide	CO	0.97	50 PPM	400 PPM/Hr	1000 PPM
Carbon Dioxide	CO_2	1.52	5000 PPM	5%	10%
Methane	CH_4	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 workday.

PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H_2S)

(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[1]. 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

H_2S Per Cent (PPM)	0 - 2 Minutes	0 - 15 Minutes	15 - 30 Minutes	30 Minutes to 1 Hour	1 - 4 Hours	4 - 8 Hours	8 - 48 Hours
0.005 (50 ppm) 0.010 (100 ppm)				Mild Conjunctivitis; Respiratory Tract Irritation			
0.010 (100 ppm) 0.015 (150 ppm)		Coughing; Irritation of Eyes; Loss of Sense of Smell	Disturbed Respiration; Pain in Eyes; Sleepiness	Throat	Salivation & Mucous Discharge; Sharp Pain in Eyes; Coughing	Increased Symptoms*	Hemorrhage & Death *
0.015 (150 ppm) 0.020 (200 ppm)		Loss of Sense of Smell	Throat & Eye Irritation	Throat & Eye Irritation	Difficult Breathing; Blurred Vision; Light & Shy	Serious Irritating Effects	Hemorrhage & Death *
0-025 (250 ppm) 0.035 (350 ppm)	Irritation of Eyes; Loss of Sense of Smell	Irritation of Eyes	Painful Secretion of Tears; Weariness	Light & Shy; Nasal Catarrh; Pain in Eyes; Difficult Breathing	Hemorrhage & Death		
0-035 (350 ppm)		Irritation of Eyes; Loss of Sense of Smell	Difficult Respiration Coughing; Irritation of Eyes	Increased Irritation of Eyes & Nasal Tract; Dull Pain Head; Weariness; Light & Shy	Dizziness Weakness; Increased Irritation; Death	Death *	
0.050 (500 ppm)	Coughing Collapse & Unconsciousness	Respiratory Disturbances; Irritation of Eyes; Collapse	Serious Eye Irritation; Palpitation of Heart; Few Cases of Death*	Severe Pain in Eyes and Head Dizziness; Trembling of Extremities; Great Weakness & Death *			
0.060 (600 ppm) 0.070 (700 ppm) 0.080 (800 ppm) 0.100 (1000 ppm) 1.150 (1500 ppm)	Collapse * Unconsciousness Death *	Collapse * Unconsciousness Death *					

* 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_2S can reasonably be expected.
- Sampling air in the area to determine if toxic concentrations of H_2S exist.
- Working in areas where over 10 PPM of H_2S has been detected.
- At any time there is a doubt as to the H_2S 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.

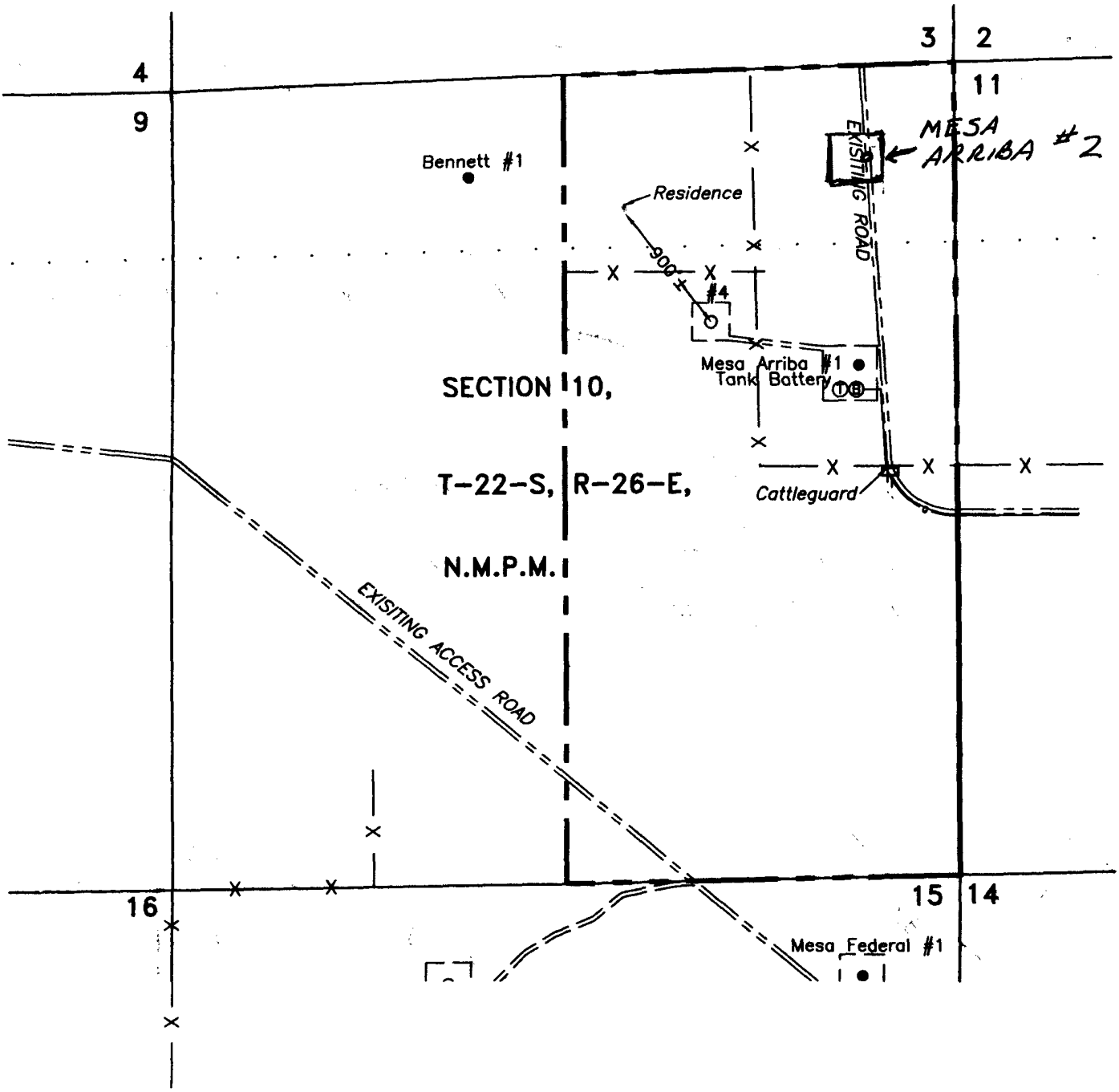
Protect yourself, then remove victim to fresh air as quickly as possible. When evacuating: walk not run, upwind and uphill from the source or crosswind to achieve upwind.

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.



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N

EXHIBIT "A"
ACCESS ROAD MAP

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

MESA ARRIBA NO. 2
Located 660' FNL & 660' FEL, Section 10,
T-22-S, R-26-E, NMPM, Eddy County, NM

Drawn by: Gene M. Rodriguez	Scale: 1" = 1000'
Date: July 10, 2006	Jim Stevens
Checked by: J.S. Piper	Sheet 1 of 1