



3106 N. Big Spring St. Ste. 100  
Midland, TX 79705  
Tel: (432) 685-9158

April 27, 2007



Oil Conservation Division  
1301 W. Grand Avenue  
Artesia, New Mexico  
Attn: Bryan Arrant

Re: Esperanza "24" #1  
API # 30-015-34205  
Unit F, Section 24, T22S, R26E  
1685' FNL & 1935' FWL  
Eddy County, New Mexico  
Bold Energy, L.P.  
TRANSFER OF APD FROM CHEVRON

Dear Bryan:

Per our email conversations, attached are the original documents needed and requested to transfer Chevron's Application to Drill to Bold Energy, LP, including the C103, C102, copy of the C145, Drill Plan, Directional Plan, and H2S Contingency Plan with Bold's contacts. The Change of Operator was completed online on the OCD's Website. As requested, I am sending the original and three (3) copies.

If you have questions, please feel free to call me at (505) 457-2019.

Sincerely,

*Denise Menoud*

Denise Menoud,  
Agent for Bold Energies, LP  
Gray Surface Specialties  
Denise\_graysurfacespecialties@yahoo.com

encls

Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88201  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505



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

WELL API NO. 30-015-34205
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Esperanza "24"
8. Well Number 1
9. OGRID Number 229137
10. Pool name or Wildcat Carlsbad; Strawn, South (Gas) (74120) Carlsbad; Wolfcamp, South (Gas) (74200)

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator  
C.O.G. Operating, LLC

3. Address of Operator  
550 W. Texas, Suite 1300, Midland, TX 79701

Month - Year  
MAY 27  
OCD - ARTESIA, NM

4. Well Location  
Unit Letter F : 1685 feet from the North line and 1935 feet from the West line  
Section 24 Township 22S Range 26E NMPM County Eddy

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3171' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Open Depth to Groundwater 77' Avg Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume 2800 bbls; Construction Material Synthetic

## 2. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

### NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: ☐

### SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Chevron Midcontinent, LP (OGRID #241333) has submitted to the OCD a Change of Operator Permit #52345 that assigns the above Application to Drill on the above proposed well to Bold Energy, LP (copy attached). Bold respectfully requests to make the following changes to that Application on file:

- 1) The BHL will change from 750' FNL & 1400' FWL to 660' FNL & 990' FWL.
- 2) A new Directional Survey reflecting the above BHL change is attached.
- 3) A plat with the above change of BHL is attached.
- 4) An H2S Contingency Plan with Bold Energy's contacts is attached.
- 5) A new Drill Plan is attached.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Denise Menoud TITLE Agent DATE 04/25/2007

Type or print name: Denise Menoud, E-mail address: denise.menoud@chevron.com, Telephone No. 432-685-9158

For State Use Only

APPROVED BY: BRYAN G. ARANT TITLE DISTRICT II GEOLOGIST  
Conditions of Approval (if any):

MAY 03 2007  
DATE



DISTRICT I  
2000 N. MEXICO ST., SUITE 200, ALBUQUERQUE, NM 87102

DISTRICT II  
2000 N. MEXICO ST., SUITE 200, ALBUQUERQUE, NM 87102

DISTRICT III  
2000 N. MEXICO ST., SUITE 200, ALBUQUERQUE, NM 87102

DISTRICT IV  
2000 N. MEXICO ST., SUITE 200, ALBUQUERQUE, NM 87102

State of New Mexico  
Energy, Minerals and Natural Resources Department

**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-100  
Revised JUNE 20, 2000  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 3 Copies

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

☐ Abstract Report

Oil Number <b>30-015-34205</b>	Foot Cuts <b>7412.0</b> <b>742.00</b>	Property Name <b>CARLSBAD, STRAWN, So. (GAS)</b> <b>CARLSBAD, WOLF CAMP, So. (GAS)</b>
Supply Cuts	Property Name <b>ESPERANZA 24</b>	Well Number <b>1</b>
GRID No. <b>233545</b>	Operator Name <b>BOLD ENERGY, LP</b>	Elevation <b>3171'</b>

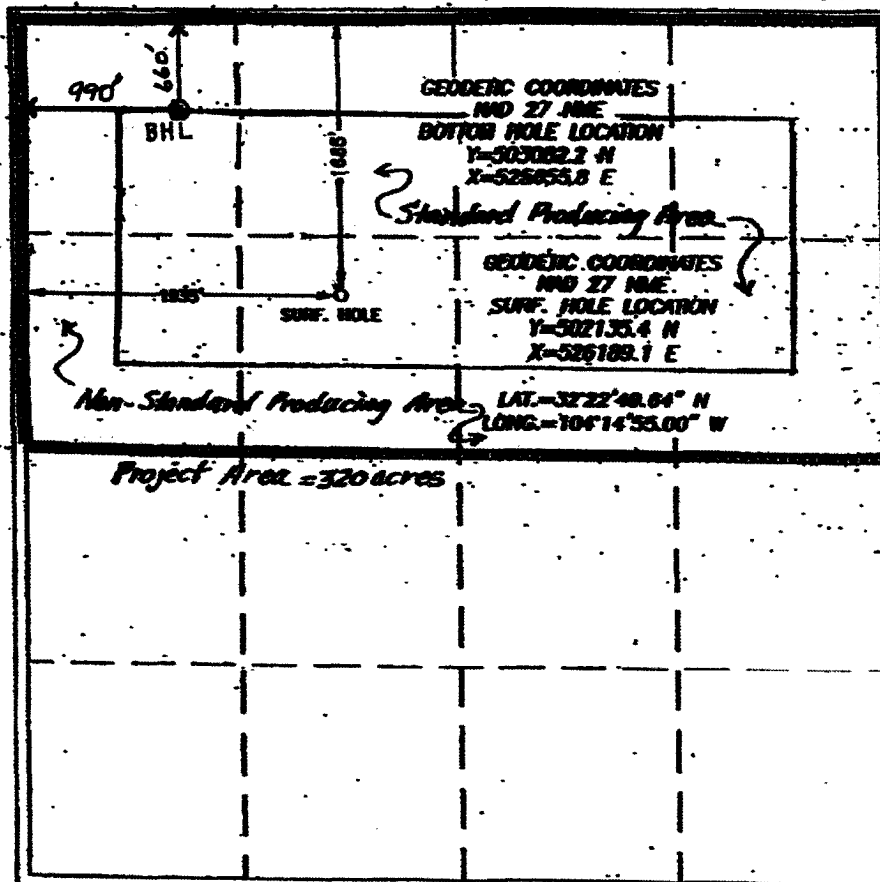
**Surface Location**

W. or S. Sec. No.	Section	Township	Range	Lot No.	Foot from Sec.	North/South Line	Foot from Sec.	East/West Line	County
<b>F</b>	<b>24</b>	<b>22-S</b>	<b>26-E</b>		<b>1685</b>	<b>NORTH</b>	<b>1935</b>	<b>WEST</b>	<b>EDDY</b>

**Bottom Hole Location if Different From Surface**

W. or S. Sec. No.	Section	Township	Range	Lot No.	Foot from Sec.	North/South Line	Foot from Sec.	East/West Line	County
<b>D</b>	<b>24</b>	<b>22-S</b>	<b>26-E</b>		<b>660</b>	<b>NORTH</b>	<b>990</b>	<b>WEST</b>	<b>EDDY</b>
Produced Area <b>320</b>		Joint or Well		Consolidation Code		Other No.			

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



**OPERATOR CERTIFICATION**

I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.

*Denise Menoud*  
Signature

**DENISE MENOUD**

Regulatory Agent

APRIL 25, 2007

**SURVEYOR CERTIFICATION**

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

MAY 31, 2005

Date Surveyed **LA** REV. 6/16/85  
Signature & Seal of Professional Surveyor

05.11.0759

Certificate No. **00000000** **20001**

District II  
1301 W. Grand Ave., Artesia, NM 88210  
Phone: (505) 748-1283 Fax: (505) 748-9720

**State of New Mexico**  
**Energy, Minerals and Natural Resources**

Form C-145  
Permit 52345

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

**Change of Operator**

**Previous Operator Information**

OGRID: 241333  
Name: CHEVRON MIDCONTINENT, L.P.  
Address: 11111 S. WILCREST  
Address:  
City, State, Zip: HOUSTON, TX 77099

**New Operator Information**

Effective Date: 4/24/2007  
OGRID: 233545  
Name: BOLD ENERGY, L.P.  
Address: 415 WEST WALL  
Address:  
City, State, Zip: MIDLAND, TX 79701

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information on this form and the certified list of wells is true to the best of my knowledge and belief.

**Previous Operator**

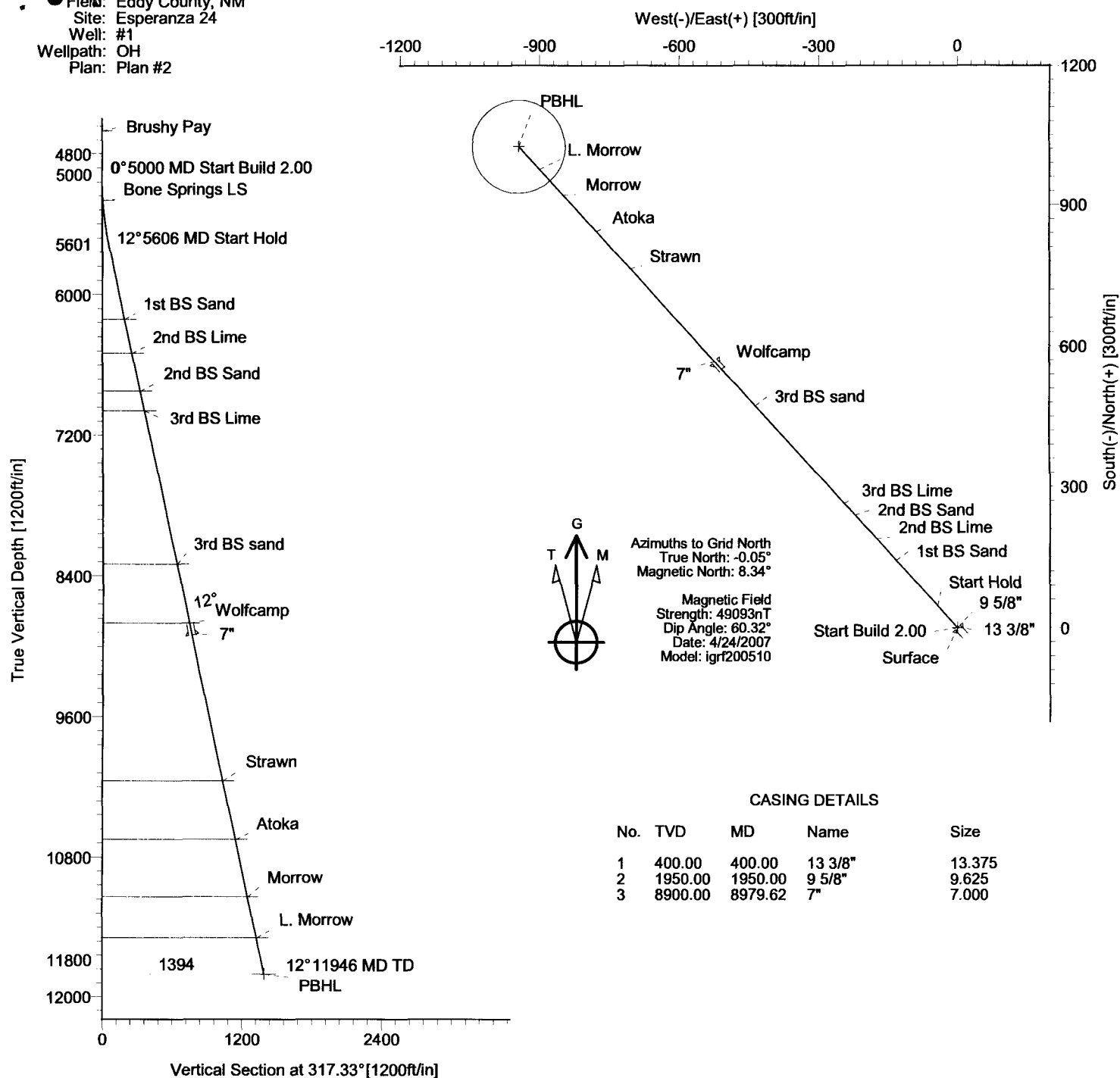
Signature: Daniso Pinkerton  
Printed Name: DANISO PINKERTON  
Title: Regulatory Specialist  
Date: 4-26-07 Phone: 432-687-1375

**New Operator**

Signature: Peggy Kerr  
Printed Name: PEGGY KERR  
Title: Land Mgr.  
Date: 4/26/07 Phone: (432) 686-1100

# BOLD ENERGY, LP

Field: Eddy County, NM  
Site: Esperanza 24  
Well: #1  
Wellpath: OH  
Plan: Plan #2



## CASING DETAILS

No.	TVD	MD	Name	Size
1	400.00	400.00	13 3/8"	13.375
2	1950.00	1950.00	9 5/8"	9.625
3	8900.00	8979.62	7"	7.000

## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface	0.00	0.00	0.00	502135.40	526189.10	32°22'49.644N	104°14'54.596W	Point
PBHL	11800.00	1025.00	-945.00	503160.40	525244.10	32°22'59.794N	104°15'05.607W	Circle (Radius: 100)

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	317.33	0.00	0.00	0.00	0.00	0.00	0.00	
2	5000.00	0.00	317.33	5000.00	0.00	0.00	0.00	0.00	0.00	
3	5605.64	12.11	317.33	5601.14	46.89	-43.23	2.00	317.33	63.78	
4	11945.65	12.11	317.33	11800.00	1025.00	-945.00	0.00	0.00	1394.15	PBHL

Plan: Plan #2 (#1/OH)

LEAM DRILLING SYSTEMS, INC.  
101 Industrial Court Conroe, Texas 77301  
Phone: 936-756-7577 Fax: 936-756-7595

Created By: Well Planner Date: 4/24/2007  
Checked: Date:   
Reviewed: Date:   
Approved: Date:



# LEAM Drilling Systems, Inc.

## Planning Report

Company: BOLD ENERGY, LP  
 Field: Eddy County, NM  
 Site: Esperanza 24  
 Well: #1  
 Wellpath: OH

Date: 4/24/2007 Time: 17:18:19 Page: 2  
 Co-ordinate(NE) Reference: Site: Esperanza 24, Grid North  
 Vertical (TVD) Reference: SITE 0.0  
 Section (VS) Reference: Well (0.00N,0.00E,317.33Azi)  
 Survey Calculation Method: Minimum Curvature Db: Sybase

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6500.00	12.11	317.33	6475.59	184.87	-170.44	251.45	0.00	0.00	0.00	
6524.97	12.11	317.33	6500.00	188.72	-173.99	256.69	0.00	0.00	0.00	2nd BS Lime
6600.00	12.11	317.33	6573.36	200.30	-184.66	272.43	0.00	0.00	0.00	
6700.00	12.11	317.33	6671.13	215.73	-198.89	293.42	0.00	0.00	0.00	
6800.00	12.11	317.33	6768.91	231.15	-213.11	314.40	0.00	0.00	0.00	
6852.26	12.11	317.33	6820.00	239.21	-220.54	325.37	0.00	0.00	0.00	2nd BS Sand
6900.00	12.11	317.33	6866.68	246.58	-227.34	335.38	0.00	0.00	0.00	
7000.00	12.11	317.33	6964.46	262.01	-241.56	356.37	0.00	0.00	0.00	
7026.13	12.11	317.33	6990.00	266.04	-245.27	361.85	0.00	0.00	0.00	3rd BS Lime
7100.00	12.11	317.33	7062.23	277.44	-255.78	377.35	0.00	0.00	0.00	
7200.00	12.11	317.33	7160.00	292.86	-270.01	398.34	0.00	0.00	0.00	
7300.00	12.11	317.33	7257.78	308.29	-284.23	419.32	0.00	0.00	0.00	
7400.00	12.11	317.33	7355.55	323.72	-298.45	440.30	0.00	0.00	0.00	
7500.00	12.11	317.33	7453.32	339.15	-312.68	461.29	0.00	0.00	0.00	
7600.00	12.11	317.33	7551.10	354.57	-326.90	482.27	0.00	0.00	0.00	
7700.00	12.11	317.33	7648.87	370.00	-341.12	503.25	0.00	0.00	0.00	
7800.00	12.11	317.33	7746.64	385.43	-355.35	524.24	0.00	0.00	0.00	
7900.00	12.11	317.33	7844.42	400.86	-369.57	545.22	0.00	0.00	0.00	
8000.00	12.11	317.33	7942.19	416.28	-383.79	566.21	0.00	0.00	0.00	
8100.00	12.11	317.33	8039.97	431.71	-398.02	587.19	0.00	0.00	0.00	
8200.00	12.11	317.33	8137.74	447.14	-412.24	608.17	0.00	0.00	0.00	
8300.00	12.11	317.33	8235.51	462.57	-426.46	629.16	0.00	0.00	0.00	
8365.96	12.11	317.33	8300.00	472.74	-435.84	643.00	0.00	0.00	0.00	3rd BS sand
8400.00	12.11	317.33	8333.29	477.99	-440.69	650.14	0.00	0.00	0.00	
8500.00	12.11	317.33	8431.06	493.42	-454.91	671.12	0.00	0.00	0.00	
8600.00	12.11	317.33	8528.83	508.85	-469.13	692.11	0.00	0.00	0.00	
8700.00	12.11	317.33	8626.61	524.28	-483.36	713.09	0.00	0.00	0.00	
8800.00	12.11	317.33	8724.38	539.70	-497.58	734.07	0.00	0.00	0.00	
8877.34	12.11	317.33	8800.00	551.64	-508.58	750.30	0.00	0.00	0.00	Wolfcamp
8900.00	12.11	317.33	8822.15	555.13	-511.80	755.06	0.00	0.00	0.00	
8979.62	12.11	317.33	8900.00	567.41	-523.13	771.77	0.00	0.00	0.00	7"
9000.00	12.11	317.33	8919.93	570.56	-526.03	776.04	0.00	0.00	0.00	
9100.00	12.11	317.33	9017.70	585.99	-540.25	797.03	0.00	0.00	0.00	
9200.00	12.11	317.33	9115.48	601.41	-554.47	818.01	0.00	0.00	0.00	
9300.00	12.11	317.33	9213.25	616.84	-568.70	838.99	0.00	0.00	0.00	
9400.00	12.11	317.33	9311.02	632.27	-582.92	859.98	0.00	0.00	0.00	
9500.00	12.11	317.33	9408.80	647.70	-597.14	880.96	0.00	0.00	0.00	
9600.00	12.11	317.33	9506.57	663.12	-611.37	901.94	0.00	0.00	0.00	
9700.00	12.11	317.33	9604.34	678.55	-625.59	922.93	0.00	0.00	0.00	
9800.00	12.11	317.33	9702.12	693.98	-639.81	943.91	0.00	0.00	0.00	
9900.00	12.11	317.33	9799.89	709.41	-654.04	964.90	0.00	0.00	0.00	
10000.00	12.11	317.33	9897.66	724.83	-668.26	985.88	0.00	0.00	0.00	
10100.00	12.11	317.33	9995.44	740.26	-682.48	1006.86	0.00	0.00	0.00	
10200.00	12.11	317.33	10093.21	755.69	-696.71	1027.85	0.00	0.00	0.00	
10258.08	12.11	317.33	10150.00	764.65	-704.97	1040.03	0.00	0.00	0.00	Strawn
10300.00	12.11	317.33	10190.99	771.12	-710.93	1048.83	0.00	0.00	0.00	
10400.00	12.11	317.33	10288.76	786.54	-725.16	1069.81	0.00	0.00	0.00	
10500.00	12.11	317.33	10386.53	801.97	-739.38	1090.80	0.00	0.00	0.00	
10600.00	12.11	317.33	10484.31	817.40	-753.60	1111.78	0.00	0.00	0.00	
10700.00	12.11	317.33	10582.08	832.83	-767.83	1132.76	0.00	0.00	0.00	
10769.47	12.11	317.33	10650.00	843.54	-777.71	1147.34	0.00	0.00	0.00	Atoka
10800.00	12.11	317.33	10679.85	848.25	-782.05	1153.75	0.00	0.00	0.00	
10900.00	12.11	317.33	10777.63	863.68	-796.27	1174.73	0.00	0.00	0.00	

# LEAM Drilling Systems, Inc.

## Planning Report

<b>Company:</b> BOLD ENERGY, LP <b>Field:</b> Eddy County, NM <b>Site:</b> Esperanza 24 <b>Well:</b> #1 <b>Wellpath:</b> OH	<b>Date:</b> 4/24/2007 <b>Co-ordinate(NE) Reference:</b> Site: Esperanza 24, Grid North <b>Vertical (TVD) Reference:</b> SITE 0.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,317.33Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
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**Field:** Eddy County, NM

**Map System:** US State Plane Coordinate System 1927  
**Geo Datum:** NAD27 (Clarke 1866)  
**Sys Datum:** Mean Sea Level

**Map Zone:** New Mexico, Eastern Zone  
**Coordinate System:** Site Centre  
**Geomagnetic Model:** igrf200510

**Site:** Esperanza 24

<b>Site Position:</b>	<b>Northing:</b> 502135.40 ft	<b>Latitude:</b> 32 22 49.644 N
<b>From:</b> Map	<b>Easting:</b> 526189.10 ft	<b>Longitude:</b> 104 14 54.596 W
<b>Position Uncertainty:</b> 0.00 ft		<b>North Reference:</b> Grid
<b>Ground Level:</b> 3171.00 ft		<b>Grid Convergence:</b> 0.05 deg

**Well:** #1

**Slot Name:**

<b>Well Position:</b>	<b>Northing:</b> 502135.40 ft	<b>Latitude:</b> 32 22 49.644 N
<b>+N/-S</b> 0.00 ft	<b>Easting:</b> 526189.10 ft	<b>Longitude:</b> 104 14 54.596 W
<b>+E/-W</b> 0.00 ft		
<b>Position Uncertainty:</b> 0.00 ft		

**Wellpath:** OH

<b>Current Datum:</b> SITE	<b>Height</b> 0.00 ft	<b>Drilled From:</b> Surface
<b>Magnetic Data:</b> 4/24/2007		<b>Tie-on Depth:</b> 0.00 ft
<b>Field Strength:</b> 49093 nT		<b>Above System Datum:</b> Mean Sea Level
<b>Vertical Section:</b> Depth From (TVD)	<b>+N/-S</b> ft	<b>Declination:</b> 8.39 deg
		<b>Mag Dip Angle:</b> 60.32 deg
		<b>+E/-W</b> ft
		<b>Direction</b> deg
0.00	0.00	0.00 317.33

**Plan:** Plan #2  
 Rev. plan to adjust PBHL  
**Principal:** No

**Date Composed:** 4/24/2007  
**Version:** 1  
**Tied-to:** From Surface

### Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	317.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5000.00	0.00	317.33	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5605.64	12.11	317.33	5601.14	46.89	-43.23	2.00	2.00	0.00	317.33	
11945.65	12.11	317.33	11800.00	1025.00	-945.00	0.00	0.00	0.00	0.00	PBHL

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5000.00	0.00	317.33	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5100.00	2.00	317.33	5099.98	1.28	-1.18	1.75	2.00	2.00	0.00	
5200.00	4.00	317.33	5199.84	5.13	-4.73	6.98	2.00	2.00	0.00	
5200.16	4.00	317.33	5200.00	5.14	-4.74	6.99	0.00	0.00	0.00	Bone Springs LS
5300.00	6.00	317.33	5299.45	11.54	-10.64	15.69	2.00	2.00	0.00	
5400.00	8.00	317.33	5398.70	20.50	-18.90	27.88	2.00	2.00	0.00	
5500.00	10.00	317.33	5497.47	32.00	-29.50	43.52	2.00	2.00	0.00	
5605.64	12.11	317.33	5601.14	46.89	-43.23	63.78	2.00	2.00	0.00	
5700.00	12.11	317.33	5693.40	61.45	-56.65	83.58	0.00	0.00	0.00	
5800.00	12.11	317.33	5791.17	76.88	-70.88	104.56	0.00	0.00	0.00	
5900.00	12.11	317.33	5888.95	92.30	-85.10	125.55	0.00	0.00	0.00	
6000.00	12.11	317.33	5986.72	107.73	-99.32	146.53	0.00	0.00	0.00	
6100.00	12.11	317.33	6084.49	123.16	-113.55	167.52	0.00	0.00	0.00	
6200.00	12.11	317.33	6182.27	138.59	-127.77	188.50	0.00	0.00	0.00	
6228.37	12.11	317.33	6210.00	142.96	-131.81	194.45	0.00	0.00	0.00	1st BS Sand
6300.00	12.11	317.33	6280.04	154.02	-141.99	209.48	0.00	0.00	0.00	
6400.00	12.11	317.33	6377.81	169.44	-156.22	230.47	0.00	0.00	0.00	

# LEAM Drilling Systems, Inc.

## Planning Report

<b>Company:</b> BOLD ENERGY, LP <b>Field:</b> Eddy County, NM <b>Site:</b> Esperanza 24 <b>Well:</b> #1 <b>Wellpath:</b> OH	<b>Date:</b> 4/24/2007 <b>Co-ordinate(NE) Reference:</b> Site: Esperanza 24, Grid North <b>Vertical (TVD) Reference:</b> SITE 0.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,317.33Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
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### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
11000.00	12.11	317.33	10875.40	879.11	-810.50	1195.72	0.00	0.00	0.00	
11100.00	12.11	317.33	10973.17	894.54	-824.72	1216.70	0.00	0.00	0.00	
11200.00	12.11	317.33	11070.95	909.96	-838.94	1237.68	0.00	0.00	0.00	
11270.62	12.11	317.33	11140.00	920.86	-848.99	1252.50	0.00	0.00	0.00	Morrow
11300.00	12.11	317.33	11168.72	925.39	-853.17	1258.67	0.00	0.00	0.00	
11400.00	12.11	317.33	11266.50	940.82	-867.39	1279.65	0.00	0.00	0.00	
11500.00	12.11	317.33	11364.27	956.25	-881.61	1300.63	0.00	0.00	0.00	
11600.00	12.11	317.33	11462.04	971.67	-895.84	1321.62	0.00	0.00	0.00	
11628.59	12.11	317.33	11490.00	976.09	-899.90	1327.62	0.00	0.00	0.00	L. Morrow
11700.00	12.11	317.33	11559.82	987.10	-910.06	1342.60	0.00	0.00	0.00	
11800.00	12.11	317.33	11657.59	1002.53	-924.28	1363.59	0.00	0.00	0.00	
11900.00	12.11	317.33	11755.36	1017.96	-938.51	1384.57	0.00	0.00	0.00	
11945.65	12.11	317.33	11800.00	1025.00	-945.00	1394.15	0.00	0.00	0.00	PBHL

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Surface			0.00	0.00	0.00	502135.40	526189.10	32 22 49.644 N	104 14 54.596 W
PBHL			11800.00	1025.00	-945.00	503160.40	525244.10	32 22 59.794 N	104 15 5.607 W
-Circle (Radius: 100)									
-Plan hit target									

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
400.00	400.00	13.375	17.500	13 3/8"
1950.00	1950.00	9.625	12.250	9 5/8"
8979.62	8900.00	7.000	8.750	7"

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1880.00	1880.00	Delaware		0.00	0.00
2580.00	2580.00	Cherry Canyon		0.00	0.00
2690.00	2690.00	B. Manzanita		0.00	0.00
3800.00	3800.00	Brushy Canyon		0.00	0.00
4210.00	4210.00	Twin Markers		0.00	0.00
4600.00	4600.00	Brushy Pay		0.00	0.00
5200.16	5200.00	Bone Springs LS		0.00	0.00
6228.37	6210.00	1st BS Sand		0.00	0.00
6524.97	6500.00	2nd BS Lime		0.00	0.00
6852.26	6820.00	2nd BS Sand		0.00	0.00
7026.13	6990.00	3rd BS Lime		0.00	0.00
8365.96	8300.00	3rd BS sand		0.00	0.00
8877.34	8800.00	Wolfcamp		0.00	0.00
10258.08	10150.00	Strawn		0.00	0.00
10769.47	10650.00	Atoka		0.00	0.00
11270.62	11140.00	Morrow		0.00	0.00
11628.59	11490.00	L. Morrow		0.00	0.00



# Drilling Prognosis

April 23, 2007

Operator: BOLD ENERGY, LP Field: Carlsbad; Morrow, South (Pro Gas)  
 Well: Esperanza "24" #1 API: 30 - 015 - 34205  
 APD: NMOCD Approval: Pending AFE: 700014

## General Information

Location: Directionally drilled: KOP = 5000', Build Rate = 2° / 100' to Max Angle = 12° and hold to 11,945' MDTD = 11,800' TVD.

Surface: 1685' FNL & 1935' FWL UL "F" Sec 24 - T22S - R26E, Eddy County, NM

BHL: 660' FNL & 990' FWL UL "C" Sec 24 - T22S - R26E, Eddy County, NM

Elevation: 3171' GL TD: 11,925' MD 11,800' TVD RKB: 18.0'

Objective: Middle Morrow Sands 11,150' - 11,160' 11,270' - 11,290' 11,330' - 11,380'  
Lower Morrow Sands 11,485' - 11,520' 11,550' - 11,555' 11,590' - 11,600'

Contractor Office: 432 / 550-7808 Superintendent: Don Nelson (664-9990)

Toolpushers: Roy Brumfield / William Lewis Cell: 432 / 664-9942

Sierra Supervisors: Tony Vickery / Greg Fore Cell: 432 / 557-1223 Trailer

## Drilling Program

Hole Size	Depth	Casing	Weight	Grade	Connect	Cement	TOC
17½"	400'	133/8"	48	H40	STC	475 sx	Surface
12¼"	1950'	95/8"	36	J55	STC	850 sx	Surface
8¾"	9000' 8900' TVD	7"	23	HCP-110	LTC	1390 sx	1700'
61/8"	11,968' MD	4½"	11.6	HCP-110	LTC	260 sx	8500'

## Wellhead / BOPE

Wellhead	135/8" - 3K SOW	13 5/8" - 3K x 11" - 5K	11" - 5K x 7 1/16" - 10K
BOPE	135/8" - 5K Stack SRRAG	135/8" - 5K Stack SRRAG	7 1/16" - 10K RSRRAG

## Mud Program

Interval	Type	MW	VIS	FL
0' - 400'	FW - Spud	8.4 - 8.8	27 - 40	NC
400' - 1950'	FW	8.4 - 10.2	28 - 32	NC
1950' - 9000'	FW - Cut Brine	8.4 - 9.0	28 - 30	NC
9000' - TD	Cut Brine / Polymer	9.8 - 12.2	36 - 50	6 - 8

Company: NOVA MUD, INC. 432 / 570-6663 Office: Dale Welch / Tech Advisor 432 / 557-1228

Engineer: Rick Rippey 505 / 631-9597 Warehouse: 800 / 530-8786

**Geological Data**

**Geologist:** John Worrall 505 / 622-5893 office 432 / 230-9431 cell 505 / 622-2768 home

**Projected Formation Tops: (TVD w/ RKB = 3179')**

Formation	TVD	Formation	TVD	Formation	TVD
Delaware	1880'	Bone Springs LS	5200'	Wolfcamp	8800'
Cherry Canyon	2580'	1 <sup>st</sup> BS Sand	6210'	Strawn	10,150'
B. Manzanita	2690'	2 <sup>nd</sup> BS Lime	6500'	Atoka	10,650'
Brushy Canyon	3800'	2 <sup>nd</sup> BS Sand	6820'	Morrow	11,140'
Twin Markers	4210'	3 <sup>rd</sup> BS Lime	6990'	L. Morrow	11,490'
Brushy Pay	4600'	3 <sup>rd</sup> BS Sand	8300'	TD	11,800'

**Logging - Coring - Testing Program**

**Mud Logs:** 1900' to TD **Mud Logger:** WOODCO Logging / Paul Amancio 505 / 361-2300

**Phone:** Jim Wood 505 / 887-2469 office 505 / 361-3059 cell

**Internet Access:** [www.woodcologging.com](http://www.woodcologging.com) **User:** ID woodco103 **Password:** 34707b

**DST / Coring Intervals:** None Anticipated

**E-Log Suite:** Triple Combo w/ GR NGT from TD to 7" shoe - pull GR-N surface. RFT's and/or SWC's may be taken in zones of interest.

**Logging Company:** Halliburton

**Contact:** Richard Kelley

**Location:** Hobbs, New Mexico

**Phone:** 505 / 914-0324 cell 505 / 392-0776 office

**Completion**

4½" production casing set from 0' - TD. A single completion in the Morrow is expected - selectively perfed and fraced down casing. Completion procedure to follow evaluation of drilling results and open hole logs.

**Notifications / Area Contacts**

Sierra Engineering	Drilling Superintendent	Russ Ginanni	432 / 425-7450 cell 432 / 683-8000 off
Bold Energy, LP	Operations Engineering Manager	Shannon Klier	432 / 296-8602 cell 432 / 686-1100 off
Bold Energy, LP	Production Supt.	Donny Money	432 / 661-8803 cell 432 / 686-1100 off
Sierra Engineering	HSE Manager	Montie Low	432 / 559-8950 cell 432 / 683-8000 off
NMOCD	District 2 - Artesia	Notifications - Office After Hours	505 / 748-1283 505 / 748-1283 ext 104

**Directions**

From the intersection of US Highways 62/180 and US 285 in downtown Carlsbad, NM, (1) go south on US 62/180 and continue south - southwest on this highway for approx 2.4 miles to West Rose Street; (2) turn west (right) onto West Rose and continue approx 1½ miles; (3) turn south for approx 0.4 mile; (4) location is approx 0.2 mile west of trail road.



# **BOLD ENERGY, LP**

## **HYDROGEN SULFIDE (H<sub>2</sub>S) CONTINGENCY PLAN FOR DRILLING / COMPLETING / WORKOVER / FACILITY WITH THE EXPECTATION OF H<sub>2</sub>S IN EXCESS OF 100 PPM**

**ESPERANZA "24" #1  
NEW DRILL WELL  
1685' FNL & 1935' FWL  
SECTION 24, T22S, R26E  
EDDY COUNTY, NEW MEXICO**

**This well / facility is not expected to have H<sub>2</sub>S, but the following is submitted as requested.**

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## **GENERAL H2S EMERGENCY ACTIONS**

In the event of any evidence of H2S emergency, the following plan will be initiated:

1. All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".
2. If for any reason a person must enter the hazardous area, they must wear a SCBA (self-contained breathing apparatus).
3. Always use the "buddy system".
4. Isolate the well / problem if possible.
5. Account for all personnel.
6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
7. Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

## **EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S**

1. All personnel will don the self-contained breathing apparatus.
2. Remove all personnel to the "safe area: (always use the "buddy system")".
3. Contact company representative if not on location.
4. Set in motion the steps to protect and / or remove the general public to any upwind "safe are". Maintain strict security and safety procedures while dealing with the source.
5. No entry to any unauthorized personnel.
6. Notify the appropriate agencies:  
City Police - City streets  
State Police - State Roads  
County Sheriff - County Roads
7. Call the NMOCD.

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harms way, he will immediately notify public safety personnel.

## **EMERGENCY CALL LIST**

<u>Contact</u>	<u>Office</u>	<u>Cell</u>	<u>Home</u>
Shannon Klier (drilling / completions)	432-686-1100	432-296-8602	432-669-6341
Donny Money (production)	432-686-1100	432-661-8803	
Joseph Castillo	432-686-1100	432-230-0202	

## **EMERGENCY RESPONSE NUMBERS** **Eddy County, New Mexico**

<b>State Police</b>	<b>505-748-9718</b>
<b>Eddy County Sheriff</b>	<b>505-746-2701</b>
<b>Emergency Medical Services (Ambulance)</b>	<b>911 or 505-746-2701</b>
<b>Eddy County Emergency Management (Harry Burgess)</b>	<b>505-887-9511</b>
<b>State Emergency Response Center (SERC)</b>	<b>505-476-9620</b>
<b>Carlsbad Police Department</b>	<b>505-885-2111</b>
<b>Carlsbad Fire Department</b>	<b>505-885-3125</b>
<b>New Mexico Oil Conservation Division - Artesia</b>	<b>505-748-1283</b>
<b>Callaway Safety Equipment, Inc.</b>	<b>505-392-2973</b>

## PROTECTION OF THE GENERAL (ROE) RADIUS OF EXPOSURE

In the event greater than 100 ppg H2S is present, the ROE calculations will be done to determine if the following is warranted:

- \* 100 ppm at any public area (any place not associated with this site)
- \* 500 ppm at any public road (any road which the general public may travel).
- \* 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H2S could be present in concentrations greater than 100 ppm in the gas mixture.

### **Calculation for the 100 ppm ROE:**

(H2S concentrations in decimal form)

$$X = [(1.589)(\text{concentration})(Q)] (0.6258)$$

$$10,000 \text{ ppm} + = .01$$

$$1,000 \text{ ppm} + = .001$$

### **Calculation for the 500 ppm ROE:**

$$100 \text{ ppm} + = .0001$$

$$10 \text{ ppm} + = .00001$$

$$X = [(0.4546)(\text{concentration})(Q)] (.06258)$$

EXAMPLE: If a well / facility has been determined to have 150 ppm H2S in the gas mixture and the well / facility is producing at a gas rate of 200 MCFD then:

$$\text{ROE for 100 ppm} \quad X = [(1.589)(.00010)(200,000)] (0.6258)$$

$$X = 8.8'$$

$$\text{ROE for 500 ppm} \quad X = [(0.4546)(.00050)(200,000)] (0.6258)$$

$$X = 10.9'$$

These calculations will be forwarded to the appropriate NMOCD district office when applicable.

## **PUBLIC EVACUATION PLAN**

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
2. A trained person in H2S safety shall monitor with detection equipment the H2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H2S, oxygen, and flammable values.
3. Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
4. The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the effected area is safe to enter.



## **PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION**

The decision to ignite a well should be a last resort and one, if not both, of the following pertain:

1. Human life and / or property are endangered.
2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

### **Instructions for Igniting the Well:**

1. Two people are required. They must be equipped with positive pressure, self-contained breathing apparatus and "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
2. One of the people will be a qualified safety person who will test the atmosphere for H<sub>2</sub>S, oxygen and LFL. The other person will be the company representative.
3. Ignite upwind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25mm flare gun with a range of approximately +/- 500 feet shall be used to ignite the gas.
4. Before igniting, check for the presence of combustible gases.
5. After igniting, continue emergency actions and procedures as before.

## **REQUIRED EMERGENCY EQUIPMENT**

### **1. Breathing Apparatus**

- \* Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- \* Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- \* Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

### **2. Signage and Flagging**

- \* One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- \* A Colored Condition flag will be on display reflecting the condition at the site at that time.

### **3. Briefing Area**

- \* Two perpendicular areas will be designated by signs and readily accessible.

### **4. Windsocks**

- \* Two windsocks will be placed in strategic locations, visible from all angles.

### **5. H2S Detectors and Alarms**

\* The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):

- \* Rig Floor
- \* Bell Nipple
- \* End of flow line or where well bore fluid is being discharged

### **6. Auxiliary Rescue Equipment**

- \* Stretcher
- \* Two OSHA full body harnesses
- \* 100' of 5/8" OSHA approved rope
- \* One 20 lb. Class ABC fire extinguisher
- \* Communication via cell phones on location and vehicles on location

## **USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)**

1. SCBA should be worn when any of the following are performed:
  - \* Working near the top or on top of a 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 of the level of H<sub>2</sub>S in the area.
2. All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
3. Facial hair and standard eyeglasses are not allowed with SCBA.
4. Contact lenses are never allowed with SCBA.
5. When breaking out any line where H<sub>2</sub>S can reasonably be expected.
6. After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.
7. All SCBA shall be inspected monthly.

## **RESCUE & FIRST AID FOR VICTIMS OF H<sub>2</sub>S POISONING**

- \* Do not panic.
- \* Remain calm and think.
- \* Get on the breathing apparatus.
- \* Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from 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.

## Toxic Effects of H2S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic than Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table 1. toxicity table for H2S and physical effects are shown in Table II.

**Table 1**  
Permissible Exposure Limits of Various Gasses

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H2S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO2	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	.97	25 ppm	200 ppm	
Carbon Dioxide	CO2	1.52	5000 ppm	30,000 ppm	
Methane	CH4	.55	4.7% LEL	14% UEL	

### Definitions

- A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.
- B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H2S is 19 PPM.
- C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H2S is 100 PPM.
- D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

**TABLE II**  
Toxicity Table of H<sub>2</sub>S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure
.0015	15	STEL for 15 minutes of exposure
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes.
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

## PHYSICAL PROPERTIES OF H<sub>2</sub>S

The properties of all gasses are usually described in the context of seven major categories:

COLOR  
ODOR  
VAPOR DENSITY  
EXPLOSIVE LIMITS  
FLAMMABILITY  
SOLUBILITY (IN WATER)  
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

### **COLOR – TRANSPARENT**

Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, a fact that makes the gas extremely dangerous to be around.

### **ODOR – ROTTEN EGGS**

Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs". For this reason it earned its common name "sour gas". However, H<sub>2</sub>S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

### **VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192**

Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H<sub>2</sub>S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

### **EXPLOSIVE LIMITS – 4.3% TO 46%**

Mixed with the right proportion of air or oxygen, H<sub>2</sub>S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

### **FLAMMABILITY**

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO<sub>2</sub>), another hazardous gas that irritates the eyes and lungs.

### **SOLUBILITY – 4 TO 1 RATIO WITH WATER**

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H<sub>2</sub>S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H<sub>2</sub>S may release the gas into the air.

**BOILING POINT – (-76 degrees Fahrenheit)**

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.