1625 N. French Dr., Hobbs, NM 88240

Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210

Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410

Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

### State of New Mexico

Form C-101 Revised November 14, 2012

Energy Minerals and Natural Resources-Oil Conservation DivISION CEIVED

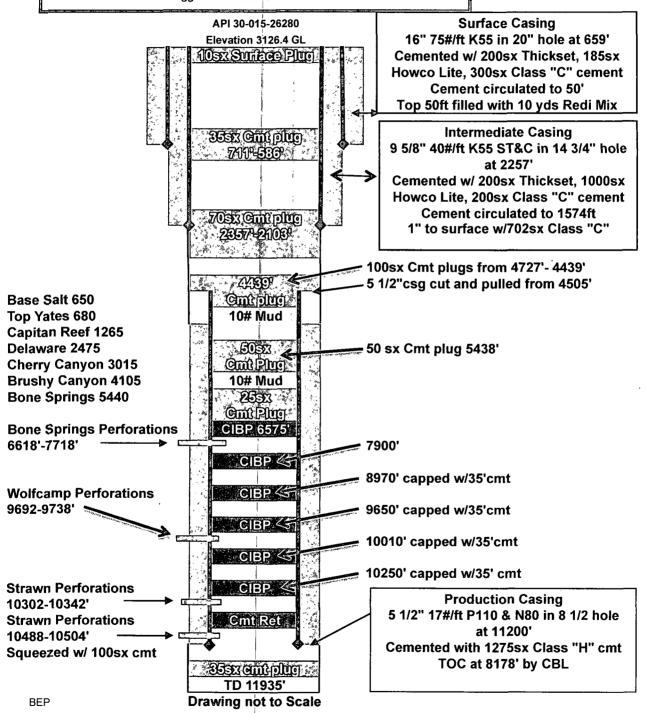
1220 South St. Francis DrAN 2 8 2013

Santa Fe, NM 87505MOCD ARTESIA

☐AMENDED REPORT

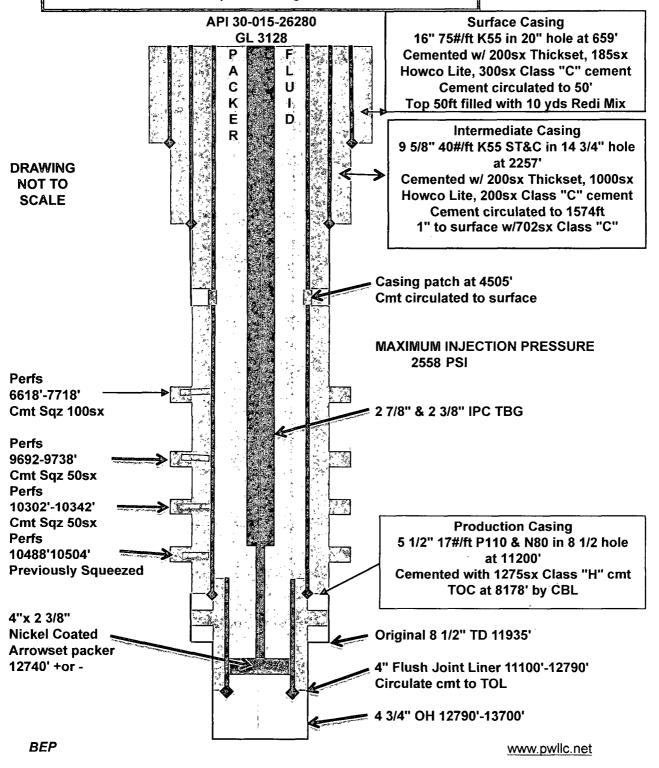
APPL	CATIO	ON FOR	<ol> <li>Onerator Na</li> </ol>	ame and Address		R, DE	EPEN,	PLUGBAC	K, OR A	ADD A ZONE	
			Nabors Well : 515 Wes	Services Compa t Green Road	iny				1709		
			riousto	n, TX 77067						PI Number 015-26280	
20%	erry Code				S. Property Name Nabors SWD				,	6. Well No. 001	
- 140	Q O			<sup>7.</sup> Sı	urface Locatio	n					
UL - Lot <b>N</b>	Section 24	Township 21S	Range 27E	Lot Idn	Feet from 660		S Line	Feet From 2120	E/W Lin		
	<u>.                                    </u>		- ·	* Propos	ed Bottom Ho	le Loca	ation				
UL - Lot	Section	Township	Range	Lot ldn	Feet from	N/	S Line	Feet From	E/W Lin	ne County	
	<u> </u>	<u> </u>	1	· Po	 	 n					
					Name Devonian					Pool Code <b>96101</b>	
				Addition	nal Well Inforr	nation					
	rk Type E		12. Well Type		13. Cable/Rotary			Lease Type	. 1	5. Ground Level Elevation 3128	
	ultiple		17. Proposed Depth		18. Formation		. 1	19. Contractor		20. Spud Date	
Depth to Grou	N und water		13700	nce from nearest	Devonian frach water well				soon as approved		
Depui to Oroi	59		Distat	ice nom nearest	116	Greater than 1 mile					
		·							- Greater ti		
		····	21.	Proposed Ca	sing and Cem	ent Pr	ogram		•		
Туре	Hol	e Size	Casing Size	Casing Wo	eight/ft	Setting	g Depth	Sacks of C	Cement	Estimated TOC	
Surface	; ;	20	16	75		6:	59	500+Rec	di Mix	Surface-In Place	
Inter	-	3/4	9 5/8	40		22	57	210	2	Surface-In Place	
Prod	8	1/2	5 1/2	17			)-4505		1275 4505-In P		
			-		ogram: Addit				•		
		Well PA	n 1998. See attac	hed drilling pl	lan for complete	casing	, cementing	g and drilling flu	ids progra	ım	
					owout Prevent	ion Pr	ogram				
	Туре		V	Vorking Pressure	:	Test Pressure				Manufacturer	
Doub	le - Hy	<u>draulic</u>		5000			5000	<u> </u>	Car	neron/Schaffer	
<sup>23.</sup> I hereby ce	rtify that th	e informatio	n given above is tru	e and complete t	to the best						
of my knowle I further cer	dge and be	lief. have compli	ed with 19,4 <b>5</b> ,14.9	•	and/or	roved By		CONSERVAT	ION DI	VISION	
19.15.14.9 (B Signature:	NMAC [	d, if applic	E. Frul	hue	Аррі			Mapar	d		
Printed name	Billy E	: Prichar	i		Title	: 6	50040	45 1			
Title: Agen	t for Nat	ors Well	Services Comp	pany	Аррі	roved Da	ite: //2	9/2013 E	xpiration Da	tc: 1/29/2015	
E-mail Addre	ss: billy(	@pwllc.ne	et					<i>'</i>		/ /	
Date:	1/20,	/13_	Phone: 432-93	4-7680	Conc	litions of	Approval A	ttached			
•	•										

Nabors Well Services Company
Nabors SWD # 001
660 FSL X 2120 FWL
Unit Letter "N", Section 24, T21S, R27E
Eddy County, New Mexico
Spud 03/20/1990
Plugged and Abandoned 12/28/1998



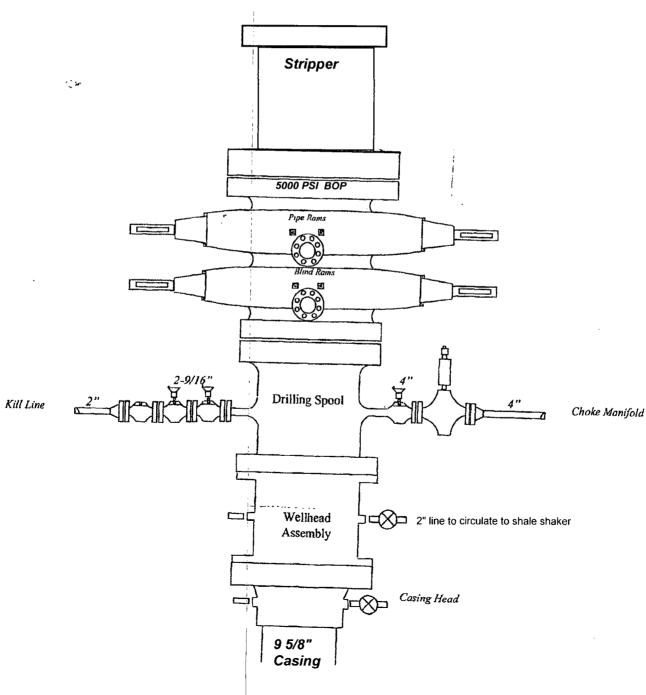
www.pwllc.net

Nabors Well Services Company
Nabors SWD # 001
660 FSL X 2120 FWL
Unit Letter "N", Section 24, T21S, R27E
Eddy County, New Mexico
Spud 03/20/1990
Proposed well diagram



Nabors Well Services Company Nabors SWD # 1 API # 30-015-26280 660 FSL X 2120 FWL Unit Letter"N", Section 24, T21S, R27E Eddy County, New Mexico

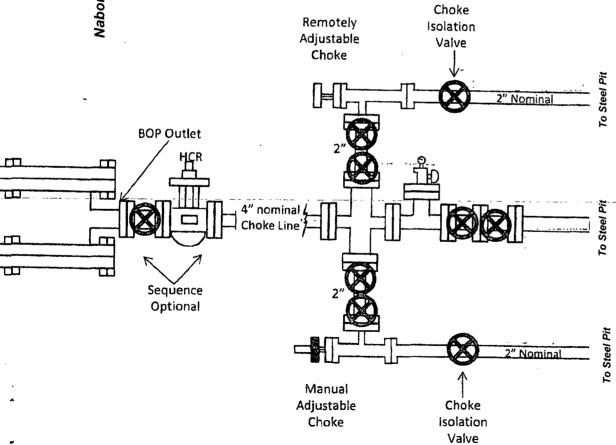
Carlsbad Truck Yard



BEP www.pwllc.net

# Drilling Operations Choke Manifold 5M Service

Nabors Well Services Company Nabors SWD # 1 API # 30-015-26280



# Nabors Well Services Company API 30-015-26280 Proposed Drilling Program

Nabors proposes to re-enter the plugged and abaondoned Lone Tree Federal Com # 1 for purpose of testing the Devonian formation for private commercial salt water disposal

Plugs will be drilled out to total depth of 13700 feet

0-2100

Fresh Water

2100-11200

**Cut Brine** 

11200-13700

Cut Brine with 6%KCL

Suface casing is in place
Intermediate casing is in place
Production casing from TD of 11200-4505ft

If logs indicate Devonian porosity will take water
5 1/2" 17# J55 casing will be ran and tied in to casing top at 4505 feet
Casing will be cemented with sufficient volume to circulate to surface
Please see attached well diagram
4 " Flush Joint liner will be run from 11100 feet to 12790 feet
Liner will be cemented with sufficient volme to circulate to liner top

NMOCD form C108 is in the preparation stage

This well is located inside the Nabors \( \frac{1}{2} \) Carlsbad Truck Yard

No activities will take place until like approval received from the City of Carlsbad

### DISTRICTI

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#### DISTRICT IV

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### 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-102 Revised August 1, 2011

Submit one copy to appropriate

District Office

Fee Lease - 3 copies

AMENDED REPORT

WELL LOCATION	AND ACREAGE	DEDICATION PLAT	

<sup>1</sup> API Number 30-015-26280	<sup>3</sup> Pool Code 96101	SWD; Devonian	
Property Code —	NAI	<sup>8</sup> Well Number 1	
<sup>7</sup> OGRID No. 170966	Nabors Well	<sup>9</sup> Elevation 3128'	

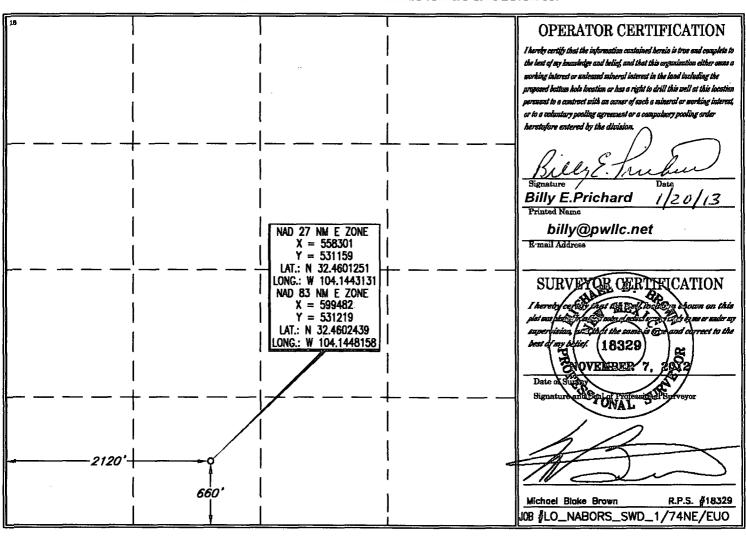
### <sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	24	21 SOUTH	27 EAST, N.M.P.M.		660'	SOUTH	2120'	WEST	EDDY

### 11 Rottom Hole Location If Different From Surface

bottom note 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
1	ł	_	1		1				1
			1	1			1		1 1
19 Decicated Acr	es 18 Je	oint or Infill	14 Consolidation Code	15 Order I	No.				<del>'</del>
40	i		1	1					

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



### NABORS COMPLETIONS & PRODUCTIONS SERVICES

DRAWING OF A 84.56 ACRE TRACT OF LAND IN THE S/2 OF SECTION 24, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

#### METES AND BOUNDS DESCRIPTION

Metes and Bounds description of a tract of land as described by a Warranty Deed recorded in Vol. 744, Page 0378, Deed Records, Eddy CO., NM. Said tract is in the S/2 of Section 24, Township 21 South, Range 27 East, N.M.P.M., Eddy County, New Mexico and is more particularly described as follows.

Beginning at a 1/2" iron rod with cap, Typ. "PS 18329", set at the Southwest corner of the E/2 of SW/4 of said Section 24, whence a 2" iron pipe with brass cap found for the Southwest corner of said Section 24 bears S 89°16′29" W, a distance of 1340.34 feet and being the Southwest corner of this tract;

Thence N 00°28'55" W, along the West line of the E/2 of SW/4 of said Section 24, a distance of 2005.30 feet to a 1/2" iron rod with cap set on the Easterly R-O-W of Southwestern Railroad for the most Southerly Northwest corner of this tract;

Thence along said R-O-W, through a curve to the left with a radius of 2918.16 feet a distance of 970.99 feet with a chord which bears N 46°38'37" E, a distance of 966.52 feet to a point on the North line of the S/2 of said Section 24 and being the most Northerly Northwest corner of tract, whence a 1/2" iron rod found with destroyed cap bears S 83°14'57" E, a distance of 1.59 feet.

Thence N 89°11'37" E, along the North line of the S/2 of said Section 24, at 630.78 feet pass a 1/2" iron rod found for the Northeast corner of the SW/4 of said Section 24, in all 697.98 feet to a 1/2" iron rod with cap set for the Northeast corner of this tract.

Thence S 41°02'33" E. a distance of 1173.03 feet to a 1/2" iron rod found for the Eastern most corner of this tract:

Thence S 48°46'49" W, a distance of 124.42 feet to a 1" iron rod found for an interior corner of this tract;

Thence through a curve to the right with a radius of 340.00 feet a distance of 237.70 feet with a chord which bears S 69°27'57" W, a distance of 232.89 feet to 1/2" iron rod with cap set for an interior corner of this tract.

Thence S 88°24'03" W, a distance of 100.99 feet to a 1/2" iron rod with cap set for an interior corner of this tract;

Thence S 42°49'25" E. a distance of 55.11 feet to a 1/2" iron rod found for an exterior corner of this tract:

Thence S 48°57'07" W, a distance of 619.89 feet to a 1/2" iron rod found for an interior corner of this tract;

Thence S 40°55'41" E, a distance of 359.33 feet to a 1/2" iron rod with cap set on the Northwestern R-O-W of State Highway 62 for the most Easterly Southeast corner of this tract;

Thence along said R-O-W S 49°05'06" W, a distance of 1377.23 feet to a 1/2" iron rod with cap set for the most Westerly Southeast corner of this tract;

Thence S 89°16'29" W, a distance of 506.06 feet to the PLACE OF BEGINNING.

Containing 84.47 Acres or 3,679,727.6 sq. ft.



New Mexico Reg. No. \_\_\_\_\_\_18329

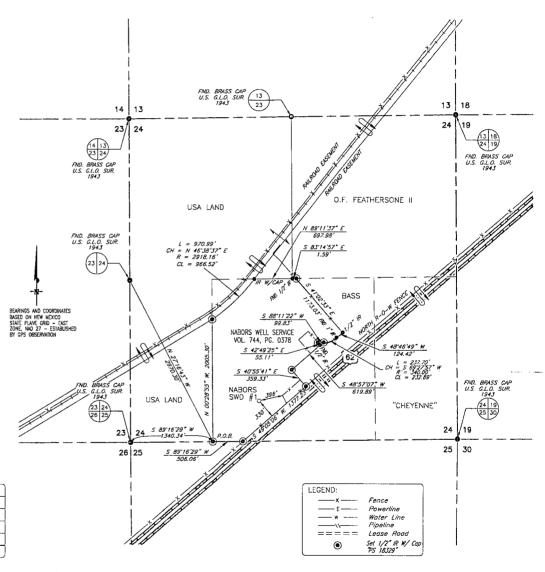
TOWAL SIN

THE INFORMATION IN THIS DRAWING WAS DERIVED FROM FIELD NOTES OF ELECTRONIC DATA OF AN ACTUAL ON-THE-GROUND SURVEY MADE WINDER MY SUPERMISON AND IS TRUE AND CORRECT TO THE ESTS OF MY KNOWLEDGE AND BELLET. THE INFORMATION HERDON IS FOR RIGHT-OWN ACQUISTION PURPOSES ONLY AND DOES NOT CONSTITUTE A COUNTER BOUNDAY SURVEY AS DETACD BY THE T.B.P.L.S. "PROTESSIONAL MAD SURVEYUP PRACTICES CAT", ALL AURODINGR INFORMATION, PROPERTY LUCES, AND DESCRIPTIONS ASS EVEN MY SIGN OF MY PROVIDED BY PLANS FIFTHER, L.P.

TOPOGRAPHIC

2903 N. BIG SPRING \* MIDLAND, TEXAS 79705 TELEPHONE: (432) 682-1653 \* (800) 767-1653 \* FAX: (432) 682-1743

SCALE:	1" = 1000'
DATE:	DECEMBER 3, 2012
COGO:	74-192476
SHEET:	1 OF 1
В	O_NABORS_SWD1
DRAWN	BY: EUO; 12-10-12
ORIG	INAL DOC. SIZE: 8.5"x14"



# **CONTINGENCY PLAN**

NABORS COMPLETION AND PRODUCTION SERVICES COMPANY

NABORS SWD # 1

Section 24, Township 21 South, Range 27 East 660' FSL and 2120' FWL Eddy County, New Mexico

Prepared For: Date Prepared:

Nabors Well Service - Carlsbad Truck Yard

January 3, 2013

Prepared By: Indian Fire & Safety, A DXP Company

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	TOXIC EFFECTS OF HYDROGEN SULFIDE POISONING	
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### HYDROGEN SULFIDE CONTINGENCY PLAN

### **SCOPE**

THIS CONTINGENCY PLAN ESTABLISHES GUIDELINES FOR THE PUBLIC, ALL COMPANY EMPLOYEES WHO'S WORK ACTIVITIES MAY INVOLVE EXPOSURE TO HYDROGEN SULFIDE (H2S) GAS.

### **OBJECTIVE**

- 1. PREVENT ANY AND ALL ACCIDENTS, AND PREVENT THE UNCONTROLLED RELEASE OF HYDROGEN SULFIDE INTO THE ATMOSPHERE.
- 2. PROVIDE PROPER EVACUATION PROCEDURES TO COPE WITH EMERGENCIES!
- 3. PROVIDE IMMEDIATE AND ADEQUATE MEDICAL ATTENTION SHOULD AN INJURY OCCUR.

### **DISCUSSION**

**GEOLOGICAL PROGNOSIS** 

IMPLEMENTATION: THIS PLAN WITH ALL DETAILS IS TO BE

FULLY IMPLEMENTED BEFORE DRILLING TO

PRODUCTION CASING POINT.

**EMERGENCY RESPONSE** 

PROCEDURE:

THIS SECTION OUTLINES THE CONDITIONS

AND DENOTES STEPS TO BE TAKEN IN THE

EVENT OF AN EMERGENCY.

**EMERGENCY EQUIPMENT** 

PROCEDURE:

THIS SECTION OUTLINES THE SAFETY AND EMERGENCY EQUIPMENT THAT WILL BE

REQUIRED FOR THE DRILLING OF THIS WELL.

TRAINING PROVISIONS: THIS SECTION OUTLINES THE TRAINING

PROVISIONS THAT MUST BE ADHERED TO PRIOR TO DRILLING TO PRODUCTION CASING

POINT.

DRILLING EMERGENCY

CALL LISTS:

INCLUDED ARE THE TELEPHONE NUMBERS

OF ALL PERSONS TO BE CONTACTED SHOULD

AN EMERGENCY EXIST.

BRIEFING: THIS SECTION DEALS WITH THE BRIEFING OF

ALL PEOPLE INVOLVED IN THE DRILLING

OPERATION.

PUBLIC SAFETY: PUBLIC SAFETY PERSONNEL WILL BE MADE

AWARE OF THE DRILLING OF THIS WELL.

CHECK LISTS: STATUS CHECK LISTS AND PROCEDURAL

CHECK LISTS HAVE BEEN INCLUDED TO

INSURE ADHERENCE TO THE PLAN.

GENERAL INFORMATION: A GENERAL INFORMATION SECTION HAS

BEEN INCLUDED TO SUPPLY SUPPORT

INFORMATION.

### **EMERGENCY PROCEDURES**

- A. IN THE EVENT OF ANY EVIDENCE OF H2S LEVEL ABOVE 10 PPM, TAKE THE FOLLOWING STEPS:
  - 1. SECURE BREATHING EQUIPMENT.
  - 2. ORDER NON-ESSENTIAL PERSONNEL OUT OF DANGER ZONE.
  - 3. TAKE STEPS TO DETERMINE IF THE H2S LEVEL CAN BE CORRECTED OR SUPPRESSED AND, IF SO, PROCEED IN NORMAL OPERATION.
- B. IF UNCONTROLLABLE CONDITIONS OCCUR:
  - 1. TAKE STEPS TO PROTECT AND/OR REMOVE ANY PUBLIC IN THE DOWN-WIND AREA FROM THE RIG PARTIAL EVACUATION AND ISOLATION. NOTIFY NECESSARY PUBLIC SAFETY PERSONNEL AND THE BUREAU OF LAND MANAGEMENT OF THE SITUATION.
  - 2. REMOVE ALL PERSONNEL TO SAFE BREATHING AREA.
  - 3. NOTIFY PUBLIC SAFETY PERSONNEL TO SAFE BREATHING AREA.
  - 4. PROCEED WITH BEST PLAN (AT THE TIME) TO REGAIN CONTROL OF THE WELL. MAINTAIN TIGHT SECURITY AND SAFETY PROCEDURES.

### C. RESPONSIBILITY:

- 1. DESIGNATED PERSONNEL.
  - a. SHALL BE RESPONSIBLE FOR THE TOTAL IMPLEMENTATION OF THIS PLAN.
  - b. SHALL BE IN COMPLETE COMMAND DURING ANY EMERGENCY.
  - c. SHALL DESIGNATE A BACK-UP.

### **EMERGENCY PROCEDURES**

\*(Procedures are the same for both Drilling and Tripping)

### ALL PERSONNEL:

- 1. ON ALARM, DON ESCAPE UNIT AND REPORT IN UP WIND BRIEFING AREA.
- 2. CHECK STATUS OF PERSONNEL (BUDDY SYSTEM).
- 3. SECURE BREATHING EQUIPMENT.
- 4. AWAIT ORDERS FROM SUPERVISOR.

### **DRILLING FOREMAN:**

- 1. REPORT TO UP WIND BRIEFING AREA.
- 2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH TOOL PUSHER OR DRILLER (BUDDY SYSTEM).
- 3. DETERMINE H2S CONCENTRATIONS.
- 4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

### TOOL PUSHER:

- 1. REPORT TO UP WIND BRIEFING AREA.
- 2. DON BREATHING EQUIPMENT AND RETURN TO POINT OF RELEASE WITH DRILLING FOREMAN OR DRILLER (BUDDY SYSTEM).
- 3. DETERMINE H2S CONCENTRATION.
- 4. ASSESS SITUATION AND TAKE CONTROL MEASURES.

### DRILLER:

- 1. DON ESCAPE UNIT.
- 2. CHECK MONITOR FOR POINT OF RELEASE.
- 3. REPORT TO BRIEFING AREA.
- 4. CHECK STATUS OF PERSONNEL (IN AN ATTEMPT TO RESCUE, USE THE BUDDY SYSTEM).
- 5. ASSIGNS LEAST ESSENTIAL PERSON TO NOTIFY DRILLING FOREMAN AND TOOL PUSHER BY QUICKEST MEANS IN CASE OF THEIR ABSENCE.
- 6. ASSUMES THE RESPONSIBILITIES OF THE DRILLING FORMAN AND TOOL PUSHER UNTIL THEY ARRIVE SHOULD THEY BE ABSENT.

### **EMERGENCY PROCEDURES**

DERRICK MAN FLOOR MAN #1 FLOOR MAN #2 1. WILL REMAIN IN BRIEFING AREA UNTIL INSTRUCTED BY SUPERVISOR.

MUD ENGINEER:

1. REPORT TO BRIEFING AREA.

2. WHEN INSTRUCTED, BEGIN CHECK OF MUD FOR PH AND H2S LEVEL. (GARETT GAS TRAIN.)

SAFETY PERSONNEL:

1. MASK UP AND CHECK STATUS OF ALL PERSONNEL AND SECURE OPERATIONS AS INSTRUCTED BY DRILLING FOREMAN AND REPORT TO BRIEFING AREA.

### TAKING A KICK

WHEN TAKING A KICK DURING AN H2S EMERGENCY, ALL PERSONNEL WILL FOLLOW STANDARD BOP PROCEDURES AFTER REPORTING TO BRIEFING AREA AND MASKING UP.

### **OPEN-HOLE LOGGING**

ALL UNNECESSARY PERSONNEL OFF FLOOR. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD MONITOR CONDITION, ADVISE STATUS AND DETERMINE NEED FOR USE OF AID EQUIPMENT.

### **RUNNING CASING OR PLUGGING**

FOLLOWING THE SAME "TRIPPING" PROCEDURE AS ABOVE. DRILLING FOREMAN AND SAFETY PERSONNEL SHOULD DETERMINE IF ALL PERSONNEL HAVE ACCESS TO PROTECTIVE EQUIPMENT.

### **IGNITION PROCEDURES**

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF COMPANY FOREMAN. IN THE EVENT HE IS INCAPACITATED, IT BECOMES THE RESPONSIBILITY OF THE CONTRACT RIG TOOL PUSHER. THE DECISION SHOULD BE MADE ONLY AS A LAST RESORT AND IN A SITUATION WHERE IT IS CLEAR THAT:

- 1. HUMAN LIFE AND PROPERTY ARE ENDANGERED.
- 2. THERE IS NO HOPE CONTROLLING THE BLOWOUT UNDER THE PREVAILING CONDITIONS AT THE WELL.

NOTIFY THE DISTRICT OFFICE IF TIME PERMITS, BUT DO NOT DELAY IF HUMAN LIFE IS IN DANGER.

INITIATE FIRST PHASE OF EVACUATION PLAN.

### **IGNITION PROCEDURES**

### INSTRUCTIONS FOR IGNITING THE WELL

- 1. TWO PEOPLE ARE REQUIRED FOR THE ACTUAL IGNITING OPERATION. THEY MUST WEAR SELF-CONTAINED BREATHING UNITS AND HAVE SAFETY ROPE ATTACHED. ONE MAN (TOOL PUSHER OR SAFETY ENGINEER) WILL CHECK THE ATMOSPHERE FOR EXPLOSIVE GASES WITH THE EXPLOSIMETER. THE OTHER MAN (DRILLING FOREMAN) IS RESPONSIBLE FOR IGNITING THE WELL.
- 2. PRIMARY METHOD TO IGNITE: 25 MM FLARE GUN WITH RANGE OF APPROXIMATELY 500 FEET.
- 3. IGNITE UP WIND AND DO NOT APPROACH ANY CLOSER THAN IS WARRANTED.
- 4. SELECT THE IGNITION SITE BEST FOR PROTECTION, AND WHICH OFFERS AN EASY ESCAPE ROUTE.
- 5. BEFORE FIRING, CHECK FOR PRESENCE OF COMBUSTIBLE GAS.
- 6. AFTER LIGHTING, CONTINUE EMERGENCY ACTION AND PROCEDURE AS BEFORE.
- 7. ALL UNASSIGNED PERSONNEL WILL LIMIT THEIR ACTIONS TO THOSE DIRECTED BY THE DRILLING FOREMAN.

**REMEMBER**: AFTER WELL IS IGNITED, BURNING HYDROGEN SULFIDE WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY TOXIC. <u>DO</u> NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED.

### TRAINING REQUIREMENTS

WHEN WORKING IN AN AREA WHERE HYDROGEN SULFIDE GAS (H2S) MIGHT BE ENCOUNTERED, DEFINITE TRAINING REQUIREMENTS MUST BE CARRIED OUT. ALL COMPANIES WILL INSURE THAT ALL PERSONNEL AT THE WELL SITE WILL HAVE HAD ADEQUATE TRAINING IN THE FOLLOWING:

- 1. HAZARDS AND CHARACTERISTICS OF H2S.
- 2. PHYSICAL EFFECTS OF HYDROGEN SULFIDE ON THE HUMAN BODY.
- 3. TOXICITY OF HYDROGEN SULFIDE AND SULFUR DIOXIDE.
- 4. H2S DETECTION.
- 5. EMERGENCY RESCUE.
- 6. RESUSCITATORS.
- 7. FIRST AID AND ARTIFICIAL RESPIRATION.
- 8. EFFECTS OF H2S ON METALS.
- 9. LOCATION SAFETY.

### SERVICE COMPANY AND VISITING PERSONNEL

- A. EACH SERVICE COMPANY THAT WILL BE ON THIS WELL WILL BE NOTIFIED IF THE ZONE CONTAINS H2S.
- B. EACH SERVICE COMPANY MUST PROVIDE FOR THE TRAINING AND EQUIPMENT OF THEIR EMPLOYEES BEFORE THEY ARRIVE AT THE WELL SITE.
- C. EACH SERVICE COMPANY WILL BE EXPECTED TO ATTEND A WELL SITE BRIEFING.

### **EMERGENCY EQUIPMENT REQUIREMENTS**

### 1. SIGNS

A. ONE SIGN LOCATED AT LOCATION ENTRANCE WITH THE FOLLOWING LANGUAGE:

# (LEASE) CAUTION – POTENTIAL POISON GAS HYDROGEN SULFIDE NO ADMITTANCE WITHOUT AUTHORIZATION

### 2. WIND SOCK – WIND STREAMERS

- A. ONE 36" (IN LENGTH) WIND SOCK LOCATED AT PROTECTION CENTER, AT HEIGHT VISIBLE FROM RIG FLOOR.
- B. ONE 36" (IN LENGTH) WIND SOCK LOCATED AT HEIGHT VISIBLE FROM PIT AREAS.

### 3. HYDROGEN SULFIDE DETECTOR AND ALARMS

- A. H2S MONITORS WITH ALARMS WILL BE LOCATED ON THE RIG FLOOR, AT THE BELL NIPPLE, AND AT THE FLOW LINE. THESE MONITORS WILL BE SET TO ALARM AT 10 PPM WITH RED LIGHT, AND TO ALARM AT 15 PPM WITH RED LIGHT AND AUDIBLE ALARM.
- B. HAND OPERATED DETECTORS WITH TUBES.
- C. H2S MONITOR TESTER.

### 4. CONDITION FLAGS

A. ONE EACH OF ORANGE, YELLOW, AND RED CONDITION FLAGS TO BE DISPLAYED TO DENOTE CONDITIONS.

GREEN – NORMAL CONDITIONS YELLOW – POTENTIAL DANGER RED – DANGER, H2S PRESENT

B. CONDITION FLAG SHALL BE POSTED AT LOCATION SIGN ENTRANCE.

### **EMERGENCY EQUIPMENT REQUIREMENTS**

- 5. <u>AUXILIARY RESCUE EQUIPMENT</u>
  - A. STRETCHER
  - B. 100' LENGTH OF 5/8" NYLON ROPE.
- 6. MUD INSPECTION DEVICES

GARRETT GAS TRAIN OR HACH TESTER FOR INSPECTION OF SULFIDE CONCENTRATION IN MUD SYSTEM.

7. FIRE EXTINGUISHER

ADEQUATE FIRE EXTINGUISHERS SHALL BE LOCATED AT STRATEGIC LOCATIONS.

8. BLOW OUT PREVENTION EQUIPMENT

THE WELL SHALL HAVE HYDRAULIC BOP EQUIPMENT FOR THE ANTICIPATED BHP OF 1500 PSI. EQUIPMENT IS TO BE TESTED ON INSTALLATION.

9. COMBUSTIBLE GAS DETECTOR

THERE SHALL BE ONE COMBUSTIBLE GAS DETECTOR ON LOCATION AT ALL TIMES.

10. BOP TESTING

BOP AND CHOKE LINE AND KILL LINE WILL BE TESTED.

11. AUDIO SYSTEM

RADIO COMMUNICATION WILL BE AVAILABLE AT THE RIG.

- A. RIG FLOOR OR TRAILER
- B. VEHICLE
- 12. SPECIAL CONTROL EQUIPMENT
  - A. HYDRAULIC BOP EQUIPMENT WITH REMOTE CONTROL ON GROUND.
  - B. ROTATING HEAD

### **EMERGENCY EQUIPMENT REQUIREMENTS**

13. EVACUATION PLAN

EVACUATION ROUTES SHOULD BE ESTABLISHED PRIOR TO SPUDDING EACH WELL AND DISCUSSED WITH ALL RIG PERSONNEL.

### 14. DESIGNATED AREA

- A. PARKING AND VISITOR AREA: ALL VEHICLES ARE TO BE PARKED AT A PREDETERMINED SAFE DISTANCE FROM THE WELLHEAD. THIS WILL BE THE DESIGNATED SMOKING AREA.
- B. TWO BRIEFING AREAS ON EITHER SIDE OF THE LOCATION AT THE MAXIMUM ALLOWABLE DISTANCE FROM THE WELL BORE SO THEY OFFSET PREVAILING WINDS PERPENDICULARLY, OR AT A 45-DEGREE ANGLE IF WIND DIRECTION TENDS TO SHIFT IN THE AREA.
- C. PROTECTION CENTERS OR IF A MOVABLE TRAILER IS USED, IT SHOULD BE DEPT UPWIND OF EXISTING WINDS. WHEN WIND IS FROM THE PREVAILING DIRECTIONS, BOTH PROTECTION CENTERS SHOULD BE ACCESSIBLE.

### STATUS CHECK LIST

NOTE: ALL ITEMS ON THIS LIST MUST BE COMPLETED BEFORE DRILLING TO PRODUCTION CASING POINT.

- 1. SIGN AT LOCATION ENTRANCE.
- 2. TWO (2) WIND SOCKS LOCATED AS REQUIRED.
- 3. TWO (2) 30-MINUTE PRESSURE DEMAND AIR PACKS ON LOCATION FOR ALL RIG PERSONNEL AND MUD LOGGERS.
- 4. AIR PACK INSPECTED FOR READY USE.
- 5. CASCADE SYSTEM AND HOSE LINE HOOK-UP.
- 6. CASCADE SYSTEM FOR REFILLING AIR BOTTLES.
- 7. SAFE BREATHING AREAS SET UP.
- 8. CONDITION FLAG ON LOCATION AND READY FOR USE.
- 9. H2S DETECTION SYSTEM HOOKED UP.
- 10. H2S ALARM SYSTEM HOOKED UP AND READY.
- 11. OXYGEN RESUSCITATOR ON LOCATION AND TESTED FOR USE.
- 12. STRETCHER ON LOCATION AT SAFETY TRAILER.
- 13. 1-100' LENGTH OF NYLON ROPE ON LOCATION.
- 14. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.
- 15. ALL OUTSIDE SERVICE CONTRACTORS ADVISED OF POTENTIAL H2S HAZARD ON WELL.
- 16. NO SMOKING SIGN POSTED.
- 17. HAND OPERATED H2S DETECTOR WITH TUBES ON LOCATION.

CHECKED BY:	DATE:	
		(12

### PROCEDURAL CHECK LIST

### PERFORM EACH TOUR:

- 1. CHECK FIRE EXTINGUISHERS TO SEE THAT THEY HAVE THE PROPER CHARGE.
- 2. CHECK BREATHING EQUIPMENT TO ENSURE THAT IT HAS NOT BEEN TAMPERED WITH.
- 3. MAKE SURE ALL THE H2S DETECTION SYSTEM IS OPERATIVE.

### PERFORM EACH WEEK:

- 1. CHECK EACH PIECE OF BREATHING EQUIPMENT TO MAKE SURE THAT DEMAND REGULATOR IS WORKING. THIS REQUIRES THAT THE BOTTLE BE OPENED AND THE MASK ASSEMBLY BE PUT ON TIGHT ENOUGH SO THAT WHEN YOU INHALE, YOU RECEIVE AIR.
- 2. BLOW OUT PREVENTER SKILLS.
- 3. CHECK SUPPLY PRESSURE ON BOP ACCUMULATOR STAND BY SOURCE.
- 4. CHECK ALL SKA-PAC UNITS FOR OPERATION: DEMAND REGULATOR, ESCAPE BOTTLE AIR VOLUMES, SUPPLY BOTTLE OF AIR VOLUME.
- 5. CHECK BREATHING EQUIPMENT MASK ASSEMBLY TO SEE THAT STRAPS ARE LOOSENED AND TURNED BACK, READY TO PUT ON.
- 6. CHECK PRESSURE ON BREATHING EQUIPMENT AIR BOTTLES TO MAKE SURE THEY ARE CHARGED TO FULL VOLUME.
- 7. CONFIRM PRESSURE ON ALL SUPPLY AIR BOTTLES.
- 8. PERFORM BREATHING EQUIPMENT DRILLS WITH ON-SITE PERSONNEL.
- 9. CHECK THE FOLLOWING SUPPLIES FOR AVAILABILITY.
  - A. EMERGENCY TELEPHONE LIST.
  - B. HAND OPERATED H2S DETECTORS AND TUBES.

### GENERAL EVACUATION PLAN

THE DIRECT LINES OF ACTION PREPARED BY INDIAN FIRE & SAFETY, INC. TO PROTECT THE PUBLIC FROM HAZARDOUS GAS SITUATIONS ARE AS FOLLOWS:

- 1. WHEN THE COMPANY APPROVED SUPERVISOR (DRILLING FOREMAN, CONSULTANT, RIG PUSHER, OR DRILLER) DETERMINES THE H2S GAS CANNOT BE LIMITED TO THE WELL LOCATION AND THE PUBLIC WILL BE INVOLVED, HE WILL ACTIVATE THE EVACUATION PLAN. ESCAPE ROUTES ARE NOTED ON AREA MAP.
- 2. "COMPANY MAN" OR DESIGNEE WILL NOTIFY LOCAL GOVERNMENT AGENCY THAT A HAZARDOUS CONDITION EXISTS AND EVACUATION NEEDS TO BE IMPLEMENTED.
- 3. COMPANY SAFETY PERSONNEL THAT HAVE BEEN TRAINED IN THE USE OF H2S DETECTION EQUIPMENT AND SELF-CONTAINED BREATHING EQUIPMENT WILL MONITOR H2S CONCENTRATIONS, WIND DIRECTIONS, AND AREA OF EXPOSURE. THEY WILL DELINEATE THE OUTER PERIMETER OF THE HAZARDOUS GAS AREA. EXTENSION TO THE EVACUATION AREA WILL BE DETERMINED FROM INFORMATION GATHERED.
- 4. LAW ENFORCEMENT PERSONNEL (STATE POLICE, POLICE DEPT., FIRE DEPT., AND SHERIFF'S DEPT.) WILL BE CALLED TO AID IN SETTING UP AND MAINTAINING ROAD BLOCKS. ALSO, THEY WILL AID IN EVACUATION OF THE PUBLIC IF NECESSARY.

IMPORTANT: LAW ENFORCEMENT PERSONNEL WILL NOT BE ASKED TO COME INTO A CONTAMINATED AREA. THEIR ASSISTANCE WILL BE LIMITED TO UNCONTAMINATED AREAS. CONSTANT RADIO CONTACT WILL BE MAINTAINED WITH THEM.

5. AFTER THE DISCHARGE OF GAS HAS BEEN CONTROLLED, COMPANY SAFETY PERSONNEL WILL DETERMINE WHEN THE AREA IS SAFE FOR RE-ENTRY.

### **EMERGENCY ACTIONS**

### WELL BLOWOUT - IF EMERGENCY

- 1. EVACUATE ALL PERSONNEL IF POSSIBLE.
- 2. IF SOUR GAS EVACUATE RIG PERSONNEL.
- 3. IF SOUR GAS EVACUATE PUBLIC WITHIN 3000 FT RADIUS OF EXPOSURE.
- 4. DON SCBA AND RESCUE.
- 5. CALL 911 FOR EMERGENCY HELP (FIRE DEPT AND AMBULANCE) AND NOTIFY SR. DRILLING FOREMAN AND DISTRICT FOREMAN.
- 6. GIVE FIRST AID.

### PERSON DOWN LOCATION/FACILITY

- 1. IF IMMEDIATELY POSSIBLE, CONTACT 911. GIVE LOCATION AND WAIT FOR CONFIRMATION.
- 2. DON SCBA AND RESCUE.

## **EMERGENCY PHONE LIST**

## **GOVERNMENTAL AGENCIES**

Eddy County Sheriff's Office  Non emergency	575-746-9888	911
Fire Departments  Carlsbad – Non-emergency	575-885-2111	911
BLM Carlsbad	575-361-2822	
State Police Department Non-emergency	575-437-1313	911
City of Carlsbad	575-885-2111	
Ambulance Carlsbad – Non Emergency		911
Hospitals Carlsbad	575-887-4121	
AEROCARE	806-747-8923	
<u>CHEMTREC</u>	1-800-424-9300	
OSHA Lubbock TX	1-800-692-4204	

### **EMERGENECY CONTACT LIST**

### NABORS WELL SERVICES CO.

<u>District Office</u> 3300 N "A" Street, Bldg 2 Suite 200 Midland, Texas 79710 432-683-5000

Carlsbad Area
3006 East Greene Street
Carlsbad, New Mexico 88220

575-885-3372

Hobbs Fishing Tools
3311 W. County Road
Hobbs, New Mexico 88241

Epi Esparza

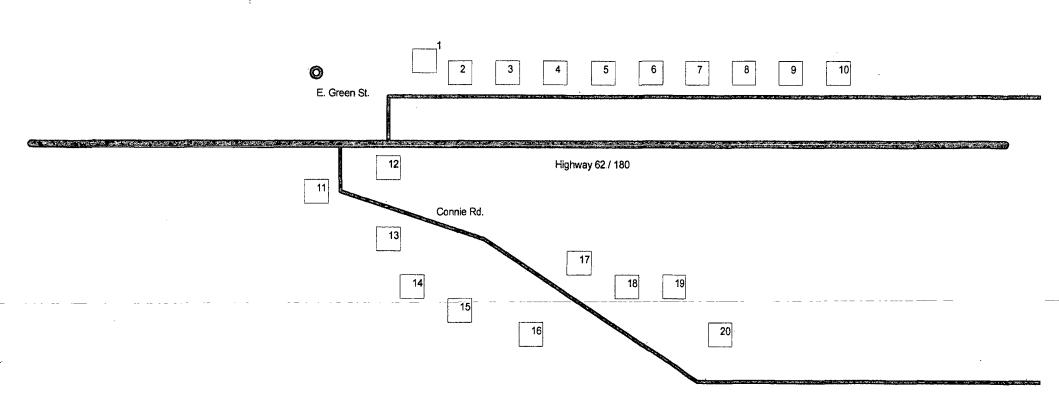
**Operations Manager** 

575-397-3144

Indian Fire & Safety, Inc. 3317 W. County Road 575-393-3093 - office 800-530-8693 - toll free 575-392-6274 - fax

### **Personnel Contact List**

	Cell Phone	Home Phone
Chris Spurgeon	575-631-3177	
Scott Dudenhoeffer	575-631-9753	575-392-4833
Sam Abney	575-631-9712	575-393-5427
Curtiss Newton	575-631-1255	575-393-3762
Joe Spurgeon	806-215-1087	806-592-0079

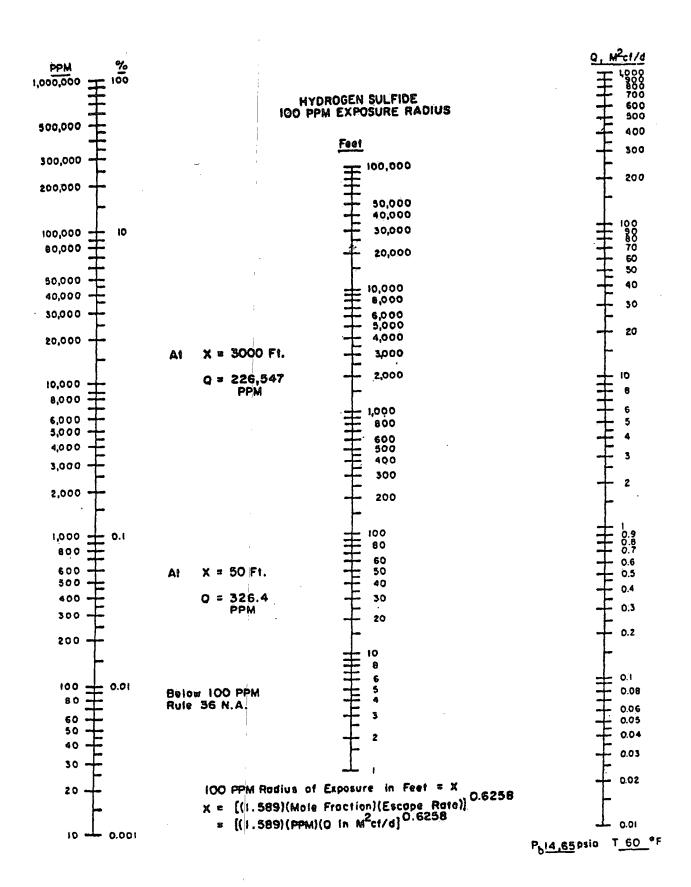


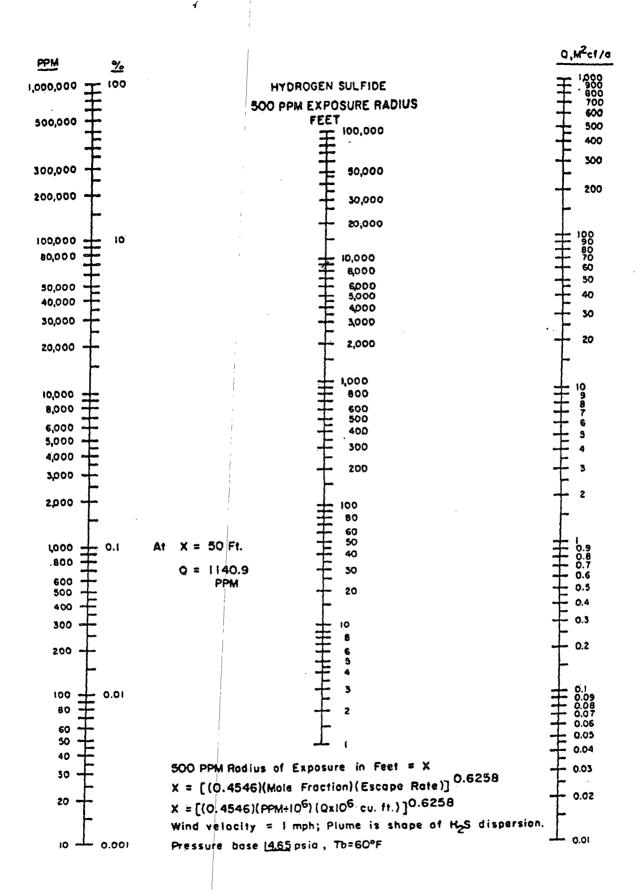
NABORS Completions & Productions Services SWD # 1 Sec. 2, T-21S, R-27E Eddy County, NM



## CARLSBAD, NEW MEXICO RESIDENTS

MAP#	LAST NAME	PHONE
1	Universal Boiler	
	Works	575-234-1242
2	Nabors	
3	Enterprise Products	
	Operating Carlsbad	575-885-7212
	Pipeline District	575-885-7218
4	Cast Speciality Transportation	575-628-0468
5	BOPCO, Inc.	575-887-7329
6	Western Environmental	
	Management Corp. LTD	575-885-5709
7	Chevron USA	
8	Exterran	575-887-5258
9	Wagner Equipment Co	575-499-6799
10	Marks Crane & Rigging Co.	575-885-4264
11	Vacant	
12	Ballard & Sons Contractors	575-885-2490
13	Vacant	
14	Camper	
15	Vacant	
16	Gina Leija	575-706-3932
17	Betty & Gary Franklin	575-302-5625
18	Terry	
19	Beverly Hardaway	575-302-3741
20	Tom Phillips	575-302-5415





## TOXIC EFFECTS OF HYDROGEN SULFIDE

TABLE II
PHYSICAL EFFECTS OF HYDROGEN SULFIDE

PERCENT (%)	<u>PPM</u>	GRAINS 100 STD. FT3*	PHYSICAL EFFECTS
0.001	<10	00.65	Obvious and unpleasant odor.
0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kill smell in $3 - 15$ minutes. May sting eyes and throat.
0.020	200	12.96	Kills smell shortly; Stings eyes and throat.
0.050	500	32.96	Dizziness; Breathing ceases in a few minutes; Needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; Death will result if not
0.100	1000	64.30	rescued promptly. Unconscious at once; Followed by death within minutes.

<sup>\*</sup>AT 15.00 PSIA AND 60'F.

### USE OF SELF-CONTAINED BREATHING EQUIPMENT

- 1. WRITTEN PROCEDURES SHALL BE PREPARED COVERING SAFE USE OF SCBA'S IN DANGEROUS ATMOSPHERE, WHICH MIGHT BE ENCOUNTERED IN NORMAL OPERATIONS OR IN EMERGENCIES. PERSONNEL SHALL BE FAMILIAR WITH THESE PROCEDURES AND THE AVAILABLE SCBA.
- 2. SCBA'S SHALL BE INSPECTED FREQUENTLY AT RANDOM TO INSURE THAT THEY ARE PROPERLY USED, CLEANED, AND MAINTAINED.
- 3. ANYONE WHO MAY USE THE SCBA'S SHALL BE TRAINED IN HOW TO INSURE PROPER FACE-PIECE TO FACE SEAL. THEY SHALL WEAR SCBA'S IN NORMAL AIR AND THEN WEAR THEM IN A TEST ATMOSPHERE. (NOTE: SUCH ITEMS AS FACIAL HAIR {BEARD OR SIDEBURNS} AND EYEGLASSES WILL NOT ALLOW PROPER SEAL.) ANYONE THAT MAY BE REASONABLY EXPECTED TO WEAR SCBA'S SHOULD HAVE THESE ITEMS REMOVED BEFORE ENTERING A TOXIC ATMOSPHERE. A SPECIAL MASK MUST BE OBTAINED FOR ANYONE WHO MUST WEAR EYEGLASSES OR CONTACT LENSES.
- 4. MAINTENANCE AND CARE OF SCBA'S:
  - A. A PROGRAM FOR MAINTENANCE AND CARE OF SCBA'S SHALL INCLUDE THE FOLLOWING:
    - 1. INSPECTION FOR DEFECTS, INCLUDING LEAK CHECKS.
    - 2. CLEANING AND DISINFECTING.
    - 3. REPAIR.
    - 4. STORAGE.
  - B. INSPECTION; SELF-CONTAINED BREATHING APPARATUS FOR EMERGENCY USE SHALL BE INSPECTED MONTHLY FOR THE FOLLOWING PERMANENT RECORDS KEPT OF THESE INSPECTIONS.
    - 1. FULLY CHARGED CYLINDERS.
    - 2. REGULATOR AND WARNING DEVICE OPERATION.
    - 3. CONDITION OF FACE PIECE AND CONNECTIONS.
    - 4. ELASTOMER OR RUBBER PARTS SHALL BE STRETCHED OR MASSAGED TO KEEP THEM PLIABLE AND PREVENT DETERIORATION.
  - C. ROUTINELY USED SCBA'S SHALL BE COLLECTED, CLEANED AND DISINFECTED AS FREQUENTLY AS NECESSARY TO INSURE PROPER PROTECTION IS PROVIDED. (22)

### USE OF SELF-CONTAINED BREATHING EQUIPMENT

- 5. PERSONS ASSIGNED TASKS THAT REQUIRES USE OF SELF-CONTAINED BREATHING EQUIPMENT SHALL BE CERTIFIED PHYSICALLY FIT FOR BREATHING EQUIPMENT USAGE BY THE LOCAL COMPANY PHYSICIAN AT LEAST ANNUALLY.
- 6. SCBA'S SHOULD BE WORN WHEN:
  - A. ANY EMPLOYEE WORKS NEAR THE TOP OR ON TOP OF ANY TANK UNLESS TEST REVEALS LESS THAN 10 PPM OF H2S.
  - B. WHEN BREAKING OUT ANY LINE WHERE H2S CAN REASONABLY BE EXPECTED.
  - C. WHEN SAMPLING AIR IN AREAS TO DETERMINE IF TOXIC CONCENTRATIONS OF H2S EXISTS.
  - D. WHEN WORKING IN AREAS WHERE OVER 10 PPM H2S HAS BEEN DETECTED.
  - E. AT ANY TIME THERE IS A DOUBT AS TO THE H2S LEVEL IN THE AREA TO BE ENTERED.

### RESCUE FIRST AID FOR H2S POISONING

### DO NOT PANIC!

### **REMAIN CALM - THINK!**

- 1. HOLD YOUR BREATH. (DO NOT INHALE FIRST; STOP BREATHING.)
- 2. PUT ON BREATHING APPARATUS.
- 3. REMOVE VICTIM(S) TO FRESH AIR AS QUICKLY AS POSSIBLE. (GO UP-WIND FROM SOURCE OR AT RIGHT ANGLE TO THE WIND. NOT DOWN WIND.)
- 4. BRIEFLY APPLY CHEST PRESSURE ARM LIFT METHOD OF ARTIFICIAL RESPIRATION TO CLEAN THE VICTIM'S LUNGS AND TO AVOID INHALING ANY TOXIC GAS DIRECTLY FROM THE VICTIM'S LUNGS.
- 5. PROVIDE FOR PROMPT TRANSPORTATION TO THE HOSPITAL, AND CONTINUE GIVING ARTIFICIAL RESPIRATION IF NEEDED.
- 6. HOSPITAL(S) OR MEDICAL FACILITIES NEED TO BE INFORMED, BEFORE-HAND, OF THE POSSIBILITY OF H2S GAS POISONING NO MATTER HOW REMOTE THE POSSIBILITY IS.
- 7. NOTIFY EMERGENCY ROOM PERSONNEL THAT THE VICTIM(S) HAS BEEN EXPOSED TO H2S GAS.

BESIDES BASIC FIRST AID, EVERYONE ON LOCATION SHOULD HAVE A GOOD WORKING KNOWLEDGE OF ARTIFICIAL RESPIRATION, AS WELL AS FIRST AID FOR EYES AND SKIN CONTACT WITH LIQUID H2S. EVERYONE NEEDS TO MASTER THESE NECESSARY SKILLS.