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

Form C-101 May 27, 2004

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL. RE-ENTER. DEEPEN, PLUGBACK, OR ADD A ZONE Operator Name and Address ² OGRID POGO PRODUCING COMPANY 017891 P.O. BOX 10340 MIDLAND, TEXAS 79702-7340 LAKE WOOD "15" Property Code 74*230* *Proposed Pool 1
FOUR MILE DRAW-MORROW Proposed Pool 2 (76960)⁷ Surface Location UL or lot no. Section Feet from the North South line Township Range Feet from the East/West line County 6601 15 19S 26E NORTH 6601 A EAST EDDY ⁸ Proposed Bottom Hole Location If Different From Surface UL or lot no. Section Let Ida Feet from the North South line Feet from the Township Fast/West line County Range Additional Well Information " Work Type Code ¹² Well Type Code 15 Cable/Rotary " Lease Type Code 15 Ground Level Elevation ROTARY 3345 N G P Contractor 16 Multiple Proposed Depth 9900 "Formation Spud Date MORROW CAPSTAR WHEN APPROVED Distance from nearest fresh water well . 8 Mi. Southeast Depth to Groundwater Distance from nearest surface water LAKE McMILLAN 2 M1 0015 701+ Southeast Liner: Synthetic X 12 mils thick Clay Pit Volume: 18M bbls Drilling Method: Fresh Water X Brine XX Diesel Oil based Gas 'Air Closed-Loop System Proposed Casing and Cement Program Hole Size Casing weight foot Setting Depth Sacks of Cement Estimated TOC Casing Size 26" 20" Conductor 40' Redi-Mix Surface <u>17⅓"</u> 13 3/8" 500¹ 48# 550 Sx. Surface 121" 8 5/8" 1050' 32# 600 Sx. Surface 7 7/8" 5 11 2000' FS 17# 1000 Sx. 99001 E 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. 10 sc tresh Water Mud To @ SEE ATTACHED SHEET FOR DETAIL NOTIFY OCD OF SPUD & TIME TO WITNESS CEMENTING OF SURFACE & INTERMEDIATE CASING ²³ I hereby certify that the information given above is true and complete to the best OIL CONSERVATION DIVISION of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines 2 general permit . or Approved by: an (attached) alternative OCD-approved plan **BRYAN G. ARRANT** DISTRICT II GEOLOGIST Printed name: Joe T. Janica Expiration Date: JUN 2 9 2007 Approval Date: Title: Agent E-mail Address: joejanica@valornet..com Conditions of Approval Attached Date: 06/26/06 Phone: 505-391-8503

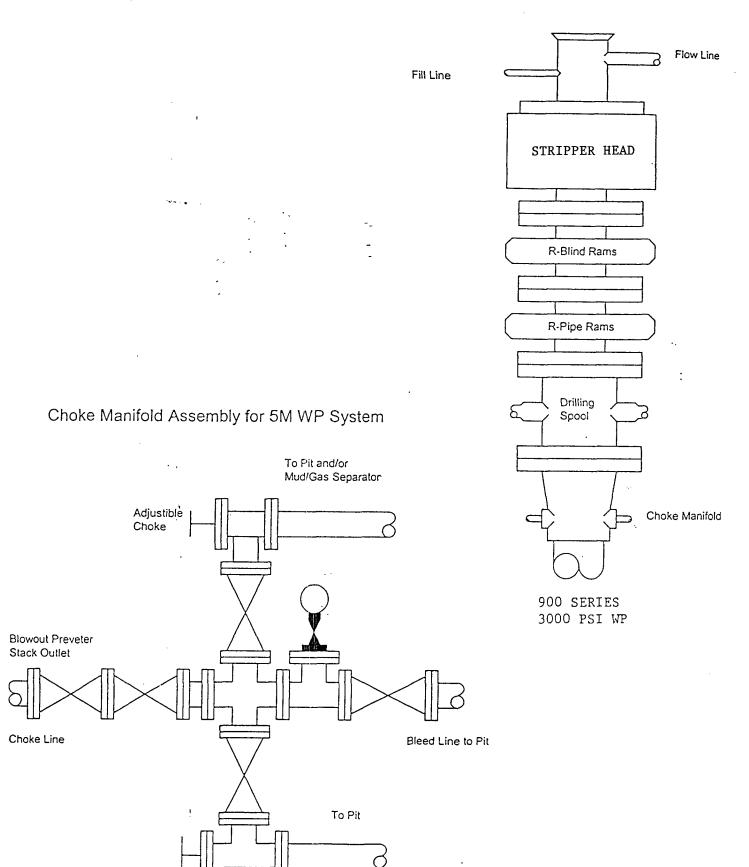
LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

- 1. Drill 26" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
- 2. Drill $17\frac{1}{2}$ " hole to 500'. Run and set 500' of 13 3/8" 48# H-40 ST&C casing. Cement with 550 Sx. of Class "C" cement + 2% CaCl, + $\frac{1}{4}\#$ Flocele/Sx. circulate cement to surface.
- 3. Drill $12\frac{1}{4}$ " hole to 1050'. Run and set 1050' of 9 5/8" 36# ST&C casing. Cement with 600 Sx. of Class "C" cement + additives, circulate cement to surface.
- 4. Drill 7 7/8" hole to 9900'. Run and set 9900' of $5\frac{1}{2}$ " 17# L-80 LT&C casing. Cement in two stages, with DV Tool at 5500'±. Cement with 650 Sx. of Class "H" Premium Plus cement + additives, cement 2nd stage with 350 Sx. of Class "C" cement + additives, estimate top of cement 2000' from surface.

BLOWOUT PREVENTER SYSTEM

3000 PSI

Adjustible Choke



State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

1220 SOUTH ST. FRANCIS DR.

OIL CONSERVATION DIVISION

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

Santa Fe, New Mexico 87505 DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA PE, NM 875	WELL LOCATION AND	ACREAGE DEDICATION PLAT	□ AMENDED REPORT		
API Number	Pool Code	Pool Name			
	76960	FOUR MILE DRAW-MORROW			
Property Code	Pro	Well Number			
	LAKE	WOOD 15	5		
OGRID No.	•	Operator Name			
017891	POGO PROD	3345'			

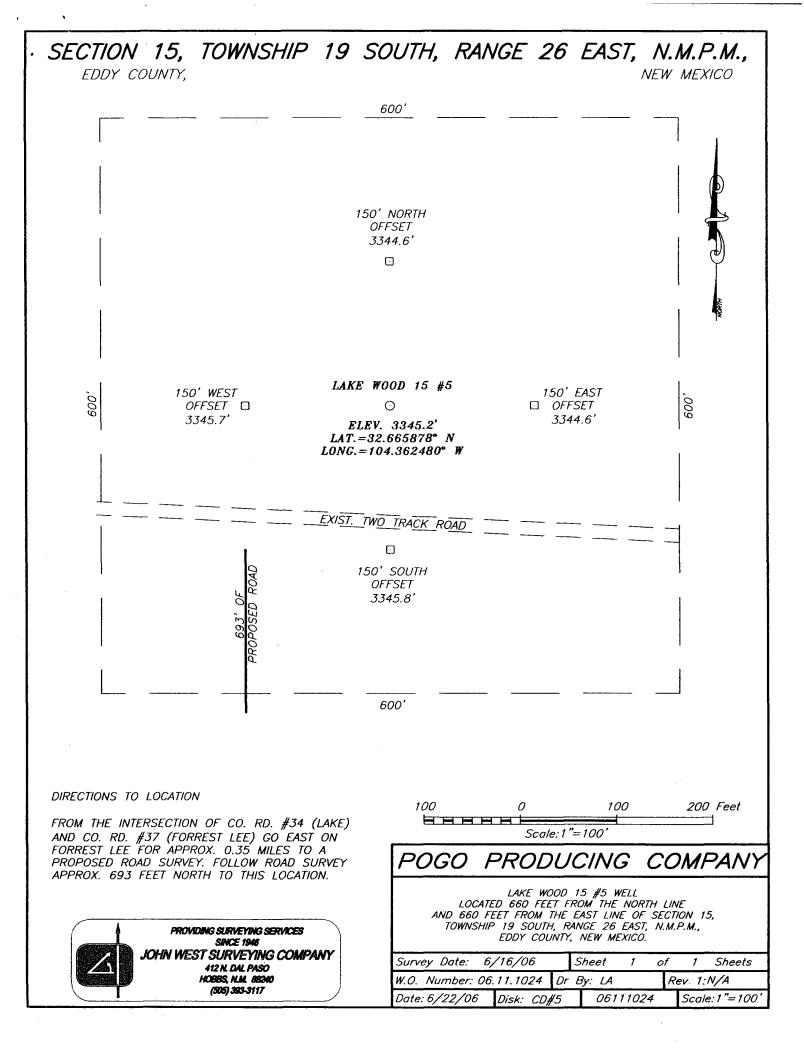
Surface Location

UL or lot No. Se	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	19-S	26-E		660	NORTH	660	EAST	EDDY

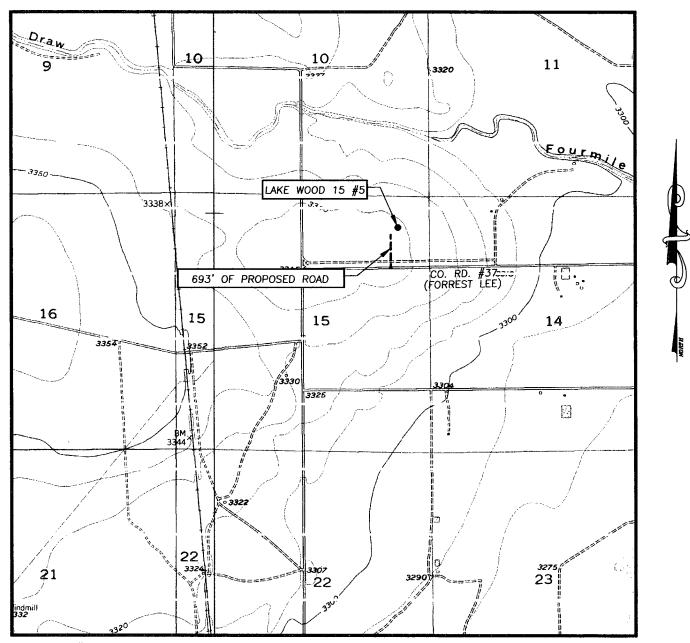
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill Co	nsolidation	Code Ore	der No.				

O THIS COMPLETION UNTI DARD UNIT HAS BEEN APP	L ALL INTERESTS HAVE BEEN CONSOLIDATED PROVED BY THE DIVISION
11 (2)	OPERATOR CERTIFICATION I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered
GEODETIC COORDINATES NAD 27 NME Y=605959.0 N X=491030.5 E LAT.=32.665878 N LONG.=104.362480 W FEE	Signature Date Joe T. Janica Printed Name Agent 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 belief.
	JUNE 16, 2006 Date Surveyed Signature & Seal of Company of Cartificate No. GARY. EDSON 3239



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: LAKE McMILLAN NORTH, N.M. - 10'

SEC. 15 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 660' FNL & 660' FEL

ELEVATION 3345'
POGO

OPERATOR PRODUCING COMPANY

LEASE LAKE WOOD 15

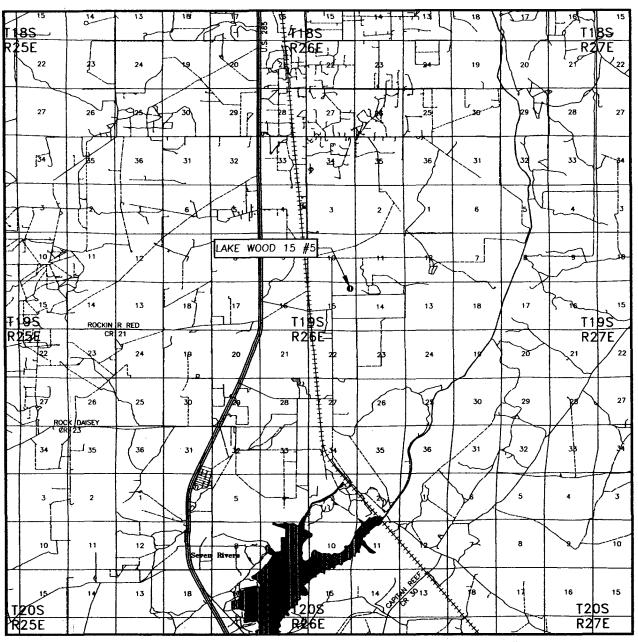
U.S.G.S. TOPOGRAPHIC MAP

LAKE McMILLAN NORTH, N.M.



PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 15 TWP. 19-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 660' FNL & 660' FEL

ELEVATION 3345'

POGO

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LEASE LAKE WOOD 15



PROVIDING SURVEYING SERVICES
SINCE 1946
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HOBBS, N.M. 88240
(505) 383-3117



LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

This well and its anticipated facility are not expected to have Hydrogen Sulfide releases. However, there may be Hydrogen Sulfide production in the nearby area. There are no private Residences in the area but a contingency plan has been orchestrated. Pogo Producing Company will have a Company Representative living on location through out the drilling of this well. An un-manned H2S safety trailer and monitoring equipment will also be station on location during the drilling operation below the Surface Casing depth of ± 500 FT. until the completion of the subject well at ± 9900 FT

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

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LAKE WOOD "15" # 5
660' FNL & 660' FE L
UNIT "A" SECTION 15
T19S-R26E EDDY CO. NM

General H2S Emergency Actions:

- 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 unsuspection personnel of the danger at hand.
- 7. Contact the Company personnel 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 the emergency response agencies and nearby 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 personnel if not on location.
- 4. Set in motion the steps to protect and or remove the general public to an upwind "safe area". Maintain strict security & safety procedures while dealing with the source.
- 5. No entry to any unauthorized personnel.
- 6. Notify the appropriate agencies: City Police-City Street (s)

 State Police- State Rd

 County Sheriff County Rd.
- 7. Call the NMOCD

LAKE WOOD "15" # 5
660' FNL & 660' FE L
UNIT "A" SECTION 15
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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 take the necessary steps to protect the workers and the public.

EMERGENCY CALL LIST: (Start and continue until ONE of these people have been contacted)

	OFFICE	MOBILE	HOME
POGO Producing Co.	432 685 8100		
Richard Wright	432 685 8140	432 556 7595	432 699 7108
Barrett Smith	432 685 8141	432 425 0149	432 520 7337
Rex Jasper	432 685 8143	432 631 0127	432 694 1839
Donny Davis	pgr 432 563 6944	432 556 5927	432 570 9555
Jerry Cooper	432 685 8101		432 697 4629
EMERGENCY RESPONSE N	UMBERS:		
State Police:	Eddy County		505 748 9718
State Police:	Lea County	,	505 392 5588
Sheriff	Eddy County		505 746 2701
Sheriff	Lea County		
Emergency Medical Ser	Eddy County		911 or 505 746 2701
(Ambulance)	Lea County	Eunice	911 or 505 394 3258
Emergency Response	Eddy County SERC Lea County		505 476 9620
Artesia Police Dept			505 746 5001
Artesia Fire Dept			505 746 5001

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

Carlsbad Police Dept Carlsbad Fire Dept		505 885 2111 505 885 3125
Loco Hills Police Dept		505 677 2349
Jal Police Dept Jal Fire Dept Jal ambulance		505 395 2501 505 395 2221 505 395 2221
Eunice Police Dept Eunice Fire Dept Eunice Ambulance		505 394 0112 505 394 3258 505 394 3258
Hobbs Police Dept		
NMOCD	District 1 (Lea, Roosevelt, Curry) District 2 (Eddy Chavez)	505 393 6161 505 748 1283
Lea County Information		505 393 8203
Callaway Safety	Lea/Eddy County	505 392 2973
BJ Services	Artesia Hobbs	505 746 3140 505 392 5556
Halliburton	Artesia Hobbs	1 800 523 2482 1 800 523 2482
Wild Well Control	Midland Mobile	432 550 6202 432 553 1166

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

PROTECTION OF THE GENERAL PUBLIC (ROE):

- 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 ¼ mile in New Mexico 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

CALCULATIONS FOR THE 100 PPM (ROE) "Pasquill-Gifford equation"

X = [(1.589) (mole fraction) (Q- volume in std cu ft)] to the power of (0.6258)

CALCULATION FOR THE 500 PPM ROE:

X = [(.4546) (mole fraction) (Q - volume in std cu ft)] to the power of (0.6258)

Example:

If a well/facility has been determined to have 150 / 500 ppm H2S in the gas mixture and the well/facility is producing at a gas rate of 100 MCFPD then:

150 ppm X=
$$[(1.589) (.00015) (100,000 cfd)]$$
 to the power of (.6258) X= 7 ft

500 ppm X = [(.4546) (.0005) (100,000 cfd)] to the power of (.6258) X = 3.3 ft

(These calculations will be forwarded to the appropriate District NMOCD office when Applicable)

PUBLIC EVACUATION PLAN:

- 1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
- A trained person in H2S safety, shall monitor with detection equipment the H2S concentration, wind and area exposure (ROE). 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 1

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

groups A,B,C &D, Division 1, hazardous locations. All monitor will have a minimum capability of measuring H2S, oxygen, and flammable values).

- 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.
- The company supervising personnel shall stay in communication with all agencies through out the duration of the situation and inform such agencies when the situation has been contained and the effected area(s) is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLABLE CONDITION:

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

INSTRUCTION FOR IGNITION:

- 1. Two people are required. They must be equipped with positive pressure, self contained breathing apparatus and a "D" ring style full body, OSHA approved safety harness. Non flammable rope will be attached.
- 2. One of the people will be qualified safety person who will test the atmosphere for H2S, Oxygen & LFL. The other person will be the company supervisor; he is responsible for igniting the well.
- 3. Ignite up wind from a distance no closer than necessary. Make sure that where you
 ignite from has the maximum escape avenue available. A 25 mm flare gun shall be used,
 with a ± 500 ft. range to ignite the gas.
- 4. Prior to ignition, make a final check for combustible gases.
- 5. Following ignition, continue with the emergency actions & procedures as before.

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

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 & Flagging:

- > One color code condition sign will be placed at the entrance to the site reflection the possible conditions at the site.
- > A colored condition flag will be on display, reflecting the condition at the site at the time.
- 3. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- 4. Wind Socks: Two wind socks will be placed in strategic locations, visible from all angles.
- 5. H2S detectors and alarms: The stationary detector with thre sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days ora as needed. The 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 are being discharged.

• 6. Auxiliary Rescue Equipment:

- > Stretcher
- > Two OSHA full body harness
- > 100 ft 5/8 inch OSHA approved rope

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

- > 1-20# class ABC fire extinguisher
- > Communication via cell phones on location and vehicles on location.

USING SELF CONTAINED BREATHING AIR EQUIPMENT (SCBA):

- (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 H2S can reasonably be expected
 - > Sampling air in the area to determine if toxic concentrations of H2S exist.
 - > Working in areas where over 10 ppm on H2S has been detected.
 - > At any teim there is a doubt as the level of H2S in the area.
- All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous locaton.
- Facial hair and standard eyeglasses are not allowed with SCBA.
- Contact lenses are never allowed with SCBA.
- Air quality shall be continuously be checked during the entire operation.
- After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected
- All SCBA shall be inspected monthly.

RESCUE AND FIRST AID FOR VICTIMS OF HYDROGEN SULFIDE (H2S) POISONING:

- Do not panic
- Remain Calm & think
- Get on the breathing apparatus

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

- Remove the victim to the safe breathing area as quickly as possible. Up wind an uphill from source or cross wind 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 personnel on location shall be trained in CPR and First Aid.

LAKE WOOD "15" # 5 660' FNL & 660' FE L UNIT "A" SECTION 15 T19S-R26E EDDY CO. NM

HYDROGEN SULFIDE TOXIC EFFECTS

H2S is extremely toxic. The acceptable ceiling for eight hours of exposure is 10 ppm, which is .001% by volume. H2S is approximately 20% heavier than air (Sp. Gr= 1.19)(Air = 1) and colorless. It forms an explosive mixture with air between 4.3% and 46%. By volume hydrogen sulfide is almost as toxic as hydrogen cyanide and is 5-6 times more toxic than carbon monoxide.

Various Gases

COMMON NAME	CHEMICAL ABBREV.	SPECIFIC GRVTY.	THRESHOLD LIMITS	HAZARDOUS LIMITS	LETHAL CONCENTRATIONS
	,		,		
Hydrogen Sulfide	H2S	1.19	10ppm 15 ppm	100 ppm/hr	600 ppm
Hydrogen Cyanide	нси	0.94	10 ppm	150 ppm/hr	300 ppm
Sulfur Dioxide	SO2	2.21	2 ppm	N/A	1000 ppm
Chlorine	CL2	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO2	1.52	5000 ppm	5%	10%
Methane	CH4	0.55	90,000	Combustible @ 5%	N/A

Threshold limit: Concentrations at which it is believed that all workers may be repeatedly

exposed, day after day without adverse effects.

Hazardous Limit: Concentrations that may cause death

Lethal

Concentrations: Concentrations that will cause death with short term exposure

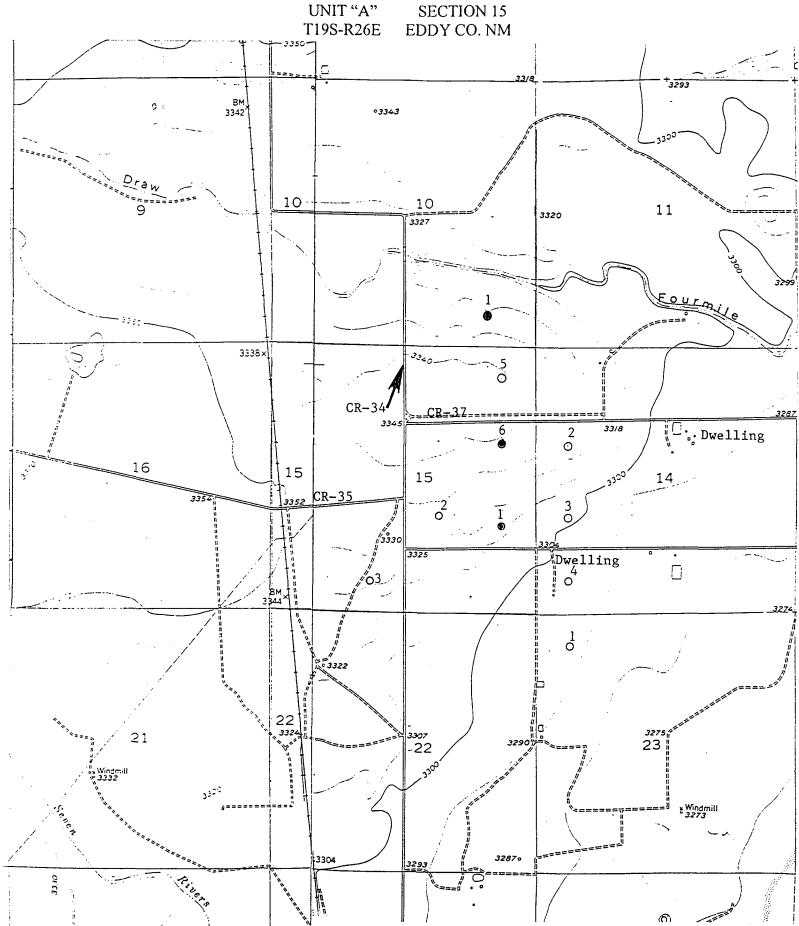
Threshold limit -

10 ppm: NIOSH guide to chemical hazards

PHYSICAL EFFECTS OF HYDROGEN SULFIDE:

CONCENTRATION		PHYSICAL EFFECTS
.001%	10 PPM	Obvious and unpleasant odor. Safe for 8 hr exposure
.005%	50 ppm	Can cause some flu like symptoms and can cause pneumonia
.01%	100 ppm	Kills the sense of smell in 3-15 minutes. May irritate the eyes and throat.
.02%	200 ppm	Kills the sense of smell rapidly. Severly irritates the eyes and throat. Severe flu like symptoms after 4 or more ours. May cause lung damage and or death.
.06%	600 ppm	Loss of consciousness quickly, death will result if not rescued promptly.

LAKE WOOD "15" # 5
660' FNL & 660' FE L
JNIT "A" SECTION 15



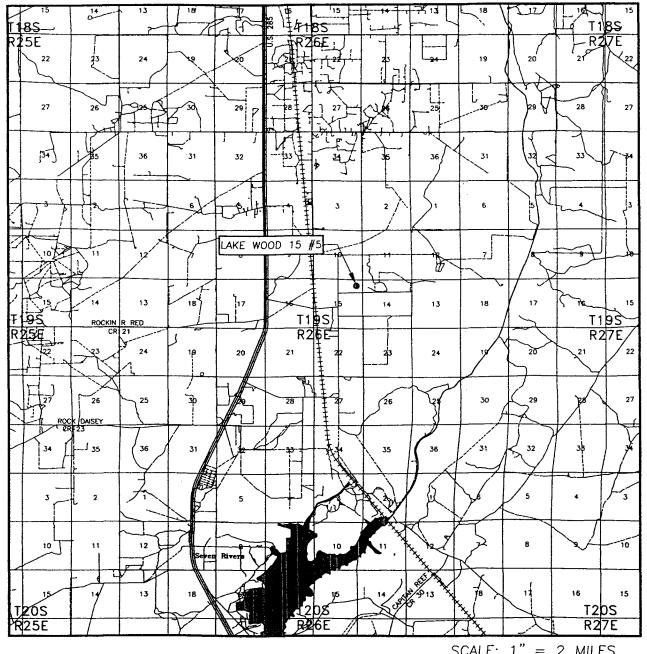
LAKE WOOD "15" # 5 660' FNL & 660' FE L

UNIT "A"

SECTION 15

T19S-R26E

EDDY CO. NM



SCALE: 1" = 2 MILES

SEC. 15 T	WP. <u>19-S</u> RGE. <u>26-E</u>
SURVEY	N.M.P.M.
COUNTY_ED	DDY STATE NEW MEXICO
DESCRIPTION	660' FNL & 660' FEL
ELEVATION	3345'
OPERATOR	POGO PRODUCING COMPANY
LEASE	LAKE WOOD 15



PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

