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		um Inc. 340, Mid	lland, TX	7970	2-7340				30- 02	³ API N	Number	47	
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Printed name	: Cat	hy Wrigh	nt			Title	:	PET	ROLEUM EN	GINEE	آ		
Title:	Sr.	Operat	ion Tech			Appr	oval Date:	\ ₽_3_'	1 2004 E	xpiration	کی ت	3/31/05	
E-mail Addre	ess: tom	berli@po	goproduc						- 2001				
Date: Phone: 685-8144 03/26/04 432-685-8100						Conditions of Approval:							

OM : John West Surve DISTRICT I P.O. Bor 1980, Wolten, NK 68241-19 DISTRICT II P.O. Drawer DD, Artesia, NK 66811- DISTRICT III 1000 Rio Brance Bd., Astec, NK	60 -0719 OII	CONSERV	of New A Returned Bac 7ATIO Box 20	Mexico ourses Department N DIVIS 88	Mar. 24 2004 Submit (m C-102 y 10, 1994 trict Office - 4 Copics	
DISTRICT IV P.a. Bai 2000, Banta 92, N.M. 876 AP1 Number	194-2966 WELL L	OCATION AND	ACREAG	E DEDICATIO	ON PLAT	C AMENDED	REPORT	
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000962			ator Name			Elevatio	Elevation 3251'	
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J.R. Holt NCT "A" # 6

Drilling Plan Summary

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

- 1. Pre set 20 inch Conductor. Grout cement same to surface.
- 2. Miru Rotary tools. Drill 17 ¹/₂ inch hole to 1100 ft. Use 8.4 ppg fresh water with viscous sweeps.
- 3. Run 13 3/8 inch 48# H-40 casing to 1100 Ft. Centralize bottom 12 jts and top 3 jts. Run 13 3/8 inch insert valve 1 jt up from shoe.
- 4. Cement Casing w/ 650 sks "C" 65:35:6 cement followed by 200 sks "C" w/ 2% calcium Chloride. Cement should circulate.
- 5. Nipple up 11inch double ram BOP's w/ packoff. Test Casing and Bop's to 850 psi. using rig pump. R/U H2S monitoring equipment.
- 6. Drill 11 inch hole to 2500 ft using 10 ppg brine water and viscous sweeps as necessary. Run Fluid Caliper before POH.
- 7. Run 8 5/8 inch 32 # and 24 # J-55 ST&C casing to 2500 ft. Run Guide shoe and float collar. Centalize the bottom 12 joints and bottom 3 jts in 13 3/8 inch casing.
- 8. Cement Casing w/ ± 400 sks "C" 65:35:6 Lite cement + 5% salt. Tail with 200 sks "C" w/ 2% calcium chloride. Cement volume adjusted after running fluid caliper. Cement should be circulated.
- 9. Nipple up 9 inch 3M BOPE w/ Packoff. Test BOPE and Casing to 2000 psi. R/U H2S Monitoring Equipment.
- 10. Drill 7 7/8 inch hole to Total depth of 7700 ft. using Fresh Water and sweeps as necessary. Mud up is not anticipated though a starch Soup/ Salt gel system may be used if seepage is uncontrollable.
- 11. Log well as per Geologist recommendation. Run 5 $\frac{1}{2}$ inch production casing and centralize adjusted after viewing logs. Stage tool Anticipated @ ± 5000 ft.
- 12. Cement Casing 1^{st} stage w/ ± 650 sks "C" w/ 8 pps gilsonite mixed @ 14.09 ppg. Cement second stage w/ ± 800 sks "C" w/ 8 pps gilsonite mixed @ 14.09 ppg. Cement volumes will be adjusted according to log caliper.

J.R. Holt NCT "A" #6

Drilling Plan Summary

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

Note: No Drill Stem test or Coring is anticipated for this well.

Surface Casing:

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13 3/8 inch 48# H-40

Intermediate Csg:

500 ft 8 5/8 in 32# J-55 ST&C 1500 ft 8 5/8 in 24# J-55 ST&C 500 ft 8 5/8 in 32# J-55 ST&C

Production Csg:

1000 ft 5 ½ inch 17# J-55 LT&C 5000 ft 5 ½ inch 15.5# J-55 LT&C 1700 ft 5 ½ inch 17# J-55 LT&C stage tool @ ± 5000ft

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

This well and its anticipated facility are not expected to have Hydrogen Sulfide releases. In the event of a Hydrogen Sulfide release the following plan will be adopted during the drilling, completion and facility operating of the subject well. We will have a Safety trailer and monitoring equipment on location during the drilling below the Surface Casing depth of \pm 1100 ft.

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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PREOCEURE FOR IGNITION	page 7
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2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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.
- Notify the appropriate agencies: City Police-City Street (s) State Police- State Rd County Sheriff – County Rd.
- 7. Call the NMOCD

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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	IUMBERS:		
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

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

Carlsbad Police Dept		505 885 2111
Carlsbad Fire Dept		505 885 3125
Loco Hills Police Dept		505 677 2349
Jal Police Dept		505 395 2501
Jal Fire Dept		505 395 2221
Jal ambulance		505 395 2221
Eunice Police Dept		505 394 0112
Eunice Fire Dept		505 394 3258
Eunice Ambulance		505 394 3258
Hobbs Police Dept	CHAUBS RAN	685 <u>2</u> 30E
NMOCD	District 1 (Lea, Roosevelt, Curry)	505 393 6161
		505 748 1283
Lea County Information		505 393 8203
Callaway Safety	Lea/Eddy County	505 392 2973
BJ Services	Artesia	505 746 3140
	Hobbs	505 392 5556
Halliburton	Artesia	1 800 523 2482
	Hobbs	1 800 523 2482
Wild Well Control	Midland	432 550 6202
	Mobile	432 553 1166

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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 3000 ft. 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 groups A,B,C &D, Division 1, hazardous locations. All monitor will have a minimum capability of measuring H2S, oxygen, and flammable values).

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

- 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.

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

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
- 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.

2530 ft FNL & 1980 ft FEL, Sec 16, T24S, R37E, Lea County

- 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.

H2S 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 color less. It forms an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide (H2S) is almost as toxic as hydrogen cyanide and is 5-6 times more toxic than carbon monoxide.

Common	Chemical	Sp. Gr.	Threshold	Hazardous	Lethal
Name	Abbrev.		Limits	Limits	Concentration
Hydrogen Sulfide	H2S	1.19	10 ppm 15 ppm	100 ppm/ hr	600 ppm
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/ hr	300 ppm
Sulfur Dioxide	SO2	2.21	2 ppm	N/A	1000 ppm
Chlorine	CL2	2.45	l ppm	4 ppm / hr	1000 ppm
Carbon Monoxide	СО	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

Various Gases

1 Threshold limit - Concentrations at which it is believed that all workers may be repeatedly exposed, day after day without Adverse effects.

2 Hazardous limit – Concentration that may cause death

3 Lethal concentration - Concentration that will cause death with short-term exposure.

4 Threshold limit – 10 ppm – NIOSH guide to chemical hazards

5 Short-term threshold limit.

PHYSICAL EFFECTS OF HYDROGEN SULFIDE:

CONCEN	TRATIONS	PYSICAL EFFECTS
.001%	10 ppm	Obvious and unpleasant odor. Safe for 8hr 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 eyes and throat.
.02%	200 ppm	Kills the sense of smell rapidy. Severly irritates eyes and throat. Severe flu-like symptoms after 4 or more hours. May cause lung damage and/or death.
.06%	600 ppm	Loss of consciousness quickly, death will result in not rescued promptly.

VICINITY MAP

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SEC. <u>16</u> TWP.<u>24-S</u> RGE.<u>378-E</u> SURVEY_____N.M.P.M. COUNTY____LEA DESCRIPTION ______ ESSO' FNL & 1980' FEL ELEVATION ______ 3251' OPERATOR POGO PRODUCING COMPANY LEASE____JR HOLT NCT "A" #6

SCALE: 1'' = 2 MILES

JOHN WEST SURVEYING HOBBS, NEW MEXICO (505) 393-3117



LOCATION VERIFICATION MAP

