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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

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

1 Operator Name and Address		2 OGRID Number
HEC PETROLEUM, INC. 15 SMITH ROAD MIDLAND, TEXAS 79705	RECEIVED JAN 30 2006 OCD-ARTESIA	9812
		3 API Number 30- 015-34792

4 Property Code	5 Property Name	6 Well No.
4876	CATCLAW DRAW UNIT	23

8 Proposed Pool 1	10 Proposed Pool 2
CATCLAW DRAW-MORROW (PRORATED GAS) (74320)	

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	14	21S	25E		1330'	SOUTH	1330'	WEST	EDDY

8 Proposed Bottom Hole Location If Different From Surface

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

Additional Well Information

11 Work Type Code	12 Well Type Code	13 Cable/Rotary	14 Lease Type Code	15 Ground Level Elevation
N	G	ROTARY	S	3346'
16 Multiple	**17 Proposed Depth**	**18 Formation**	**19 Contractor**	**20 Spud Date**
NO	10,700'	MORROW	UNKNOWN	WHEN APPROVED

Depth to Groundwater: ~~200'~~ < 50' | Distance from nearest fresh water well: 1.3 Miles | Distance from nearest surface water: 7 miles

Pit: Liner: Synthetic ☒ 12 mils thick Clay ☐ Pit Volume: 18M bbls | Drilling Method:

Closed-Loop System ☐ 20 Points | Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	Conductor	80'	Redi-mix	Surface
17½"	13 3/8"	48#	400'	450 Sx.	Surface
11"	8 5/8"	32#	1900'	585 Sx.	Surface
7 7/8"	5½"	17#	10,700'	1040 Sx.	2000' from surface

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

SEE ATTACHED SHEET

A PIT CLOSURE PLAN MUST BE APPROVED PRIOR TO THE COMMENCEMENT OF CLOSURE OPERATIONS.

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

Printed name: Joe T. Janica

Title: Agent

E-mail Address: joejanica@valornet.com

Date: 01/27/06 | Phone: 505-391-8503

OIL CONSERVATION DIVISION

Approved by: Jim W. Gum
District II Supervisor

Title:

Approval Date: APR 19 2006 | Expiration Date: APR 19 2007

Conditions of Approval Attached ☐

1. Drill 26" hole to 80'. Set 80' of 20" conductor pipe and cement to surface with Redi-mix.
2. Drill 17½" hole to 400'. Run and set 400' of 13 3/8" 48# H-40 ST&C casing. Cement with 450 Sx. of Class "C" cement + 2% CaCl, + ¼# Flocele/Sx., circulate cement to surface.
3. Drill 11" hole to 1900'. Run and set 1900' of 8 5/8" 32# J-55 ST&C casing. Cement with 585 Sx. of Class "C" cement + 5# Gilsonite/Sx. + ¼# Flocele/Sx., tail in with 250 Sx. of Class "C" cement + 2% CaCl, circulate cement to surface.
4. Drill 7 7/8" hole to 10,700'. Run and set 10,700' of 5½" 17# N-80 LT&C casing. Cement with 685 Sx. of Class "H" Interfill cement + ¼# Flocele/Sx., + 5# Gilsonite/Sx., + 0.1% HR7, tail in with 355 Sx. of Super Class "H" cement + 0.4% HALAD R344 + 0.3% CFR3 + 0.3% HR7. Estimate top of cement 2000' from surface.

Proposed Mud Program:

Interval	Type	MW (ppg)	VIS (sec/qt)	FL (cc)
0 – 400'	Fresh Water	8.4 – 8.6	26 – 32	NC
400' – 1,900'	FW (possibly aerated)	8.4	26	NC
1,900' – 8,500'	Fresh Water	8.4 – 8.8	26 – 30	NC
8,500' – 10,700'	FW/Starch/PAC	8.8 – 9.0	34 – 40	10 – 15

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

DISTRICT II
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DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

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 JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	74320	CATCLAW DRAW-MORROW (PRORATED GAS)

Property Code	Property Name	Well Number
4876	CATCLAW DRAW	23

OGRID No.	Operator Name	Elevation
9812	HEC PETROLEUM, INC.	3346'

Surface Location

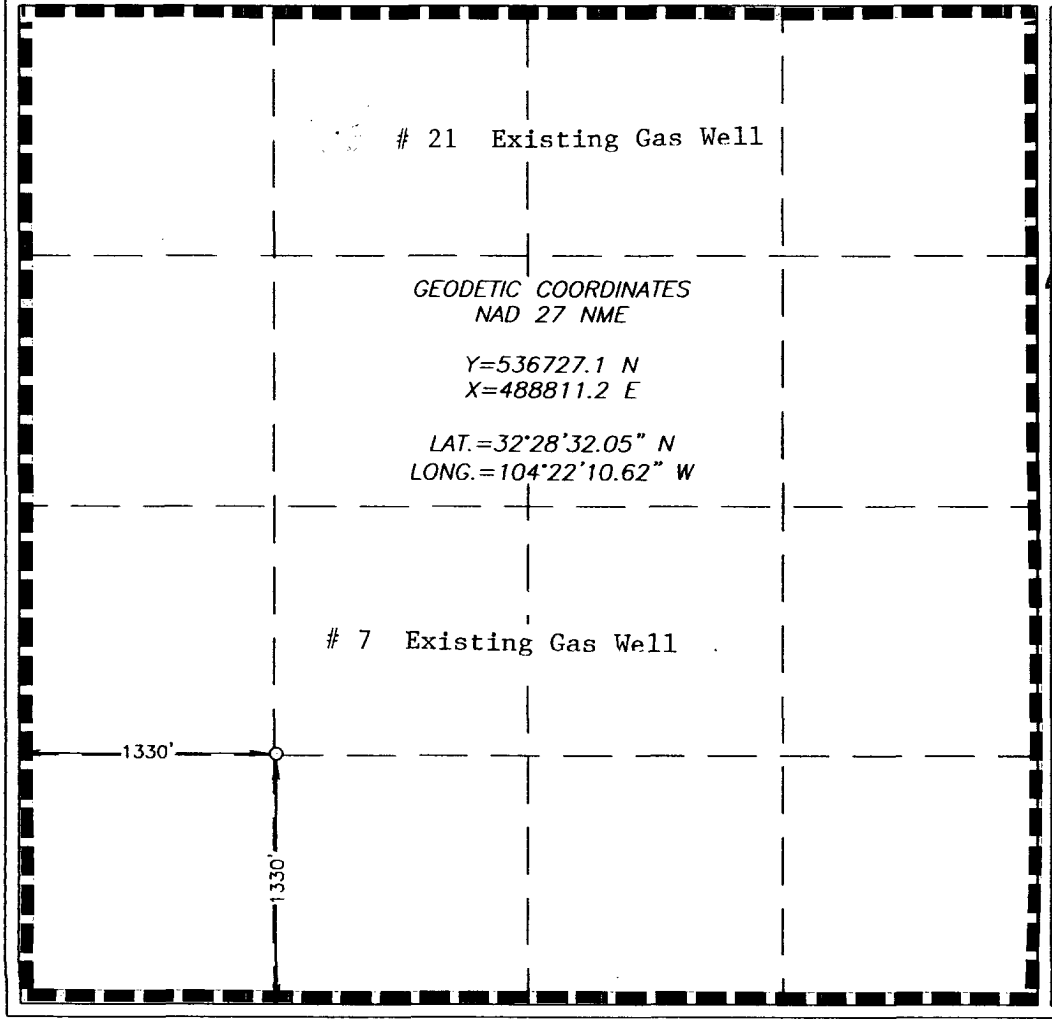
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	14	21-S	25-E		1330	SOUTH	1330	WEST	EDDY

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 or Infill	Consolidation Code	Order No.
640			

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



OPERATOR CERTIFICATION

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

Joe T. Janica
Signature

Joe T. Janica
Printed Name

Agent
Title

Date

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 supervison, and that the same is true and correct to the best of my belief.

NOVEMBER 23, 2005
Date Surveyed REV: 12/21/05 JR
Signature & Seal of Professional Surveyor

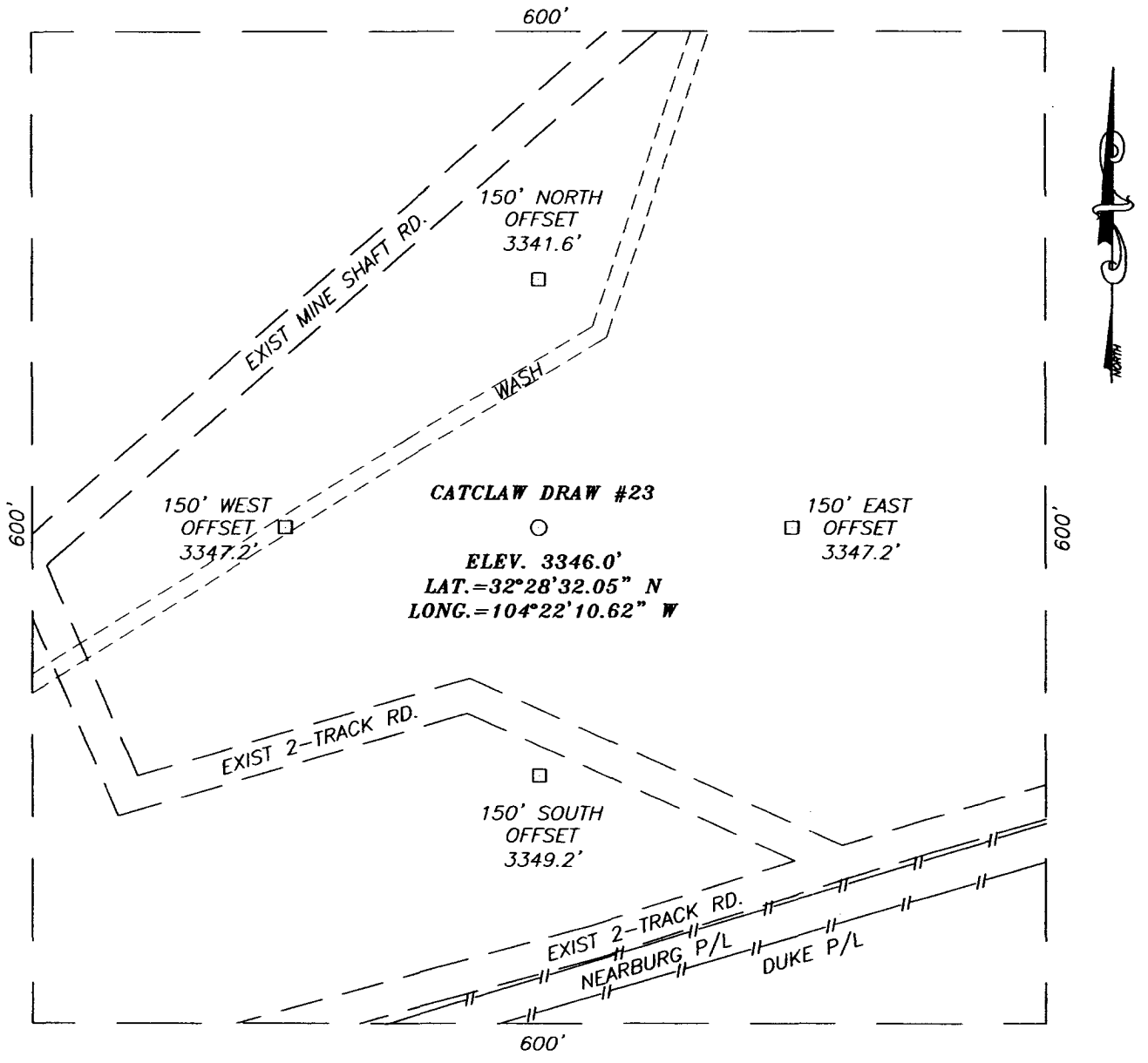
GARY L. EIDSON
NEW MEXICO
12641

Gary L. Eidson 12/21/05
05.11.1806

Certificate No. GARY EIDSON 12641

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 25 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY #285 AND CO. RD. #407 (DOUGLAS FIR RD.) GO WEST/SW ON CO. RD. #407 FOR APPROX. 1.6 MILES. TURN RIGHT (WEST) AND GO APPROX. 0.9 MILES. THIS LOCATION IS APPROX. 250' NORTH.

100 0 100 200 Feet

Scale: 1"=100'

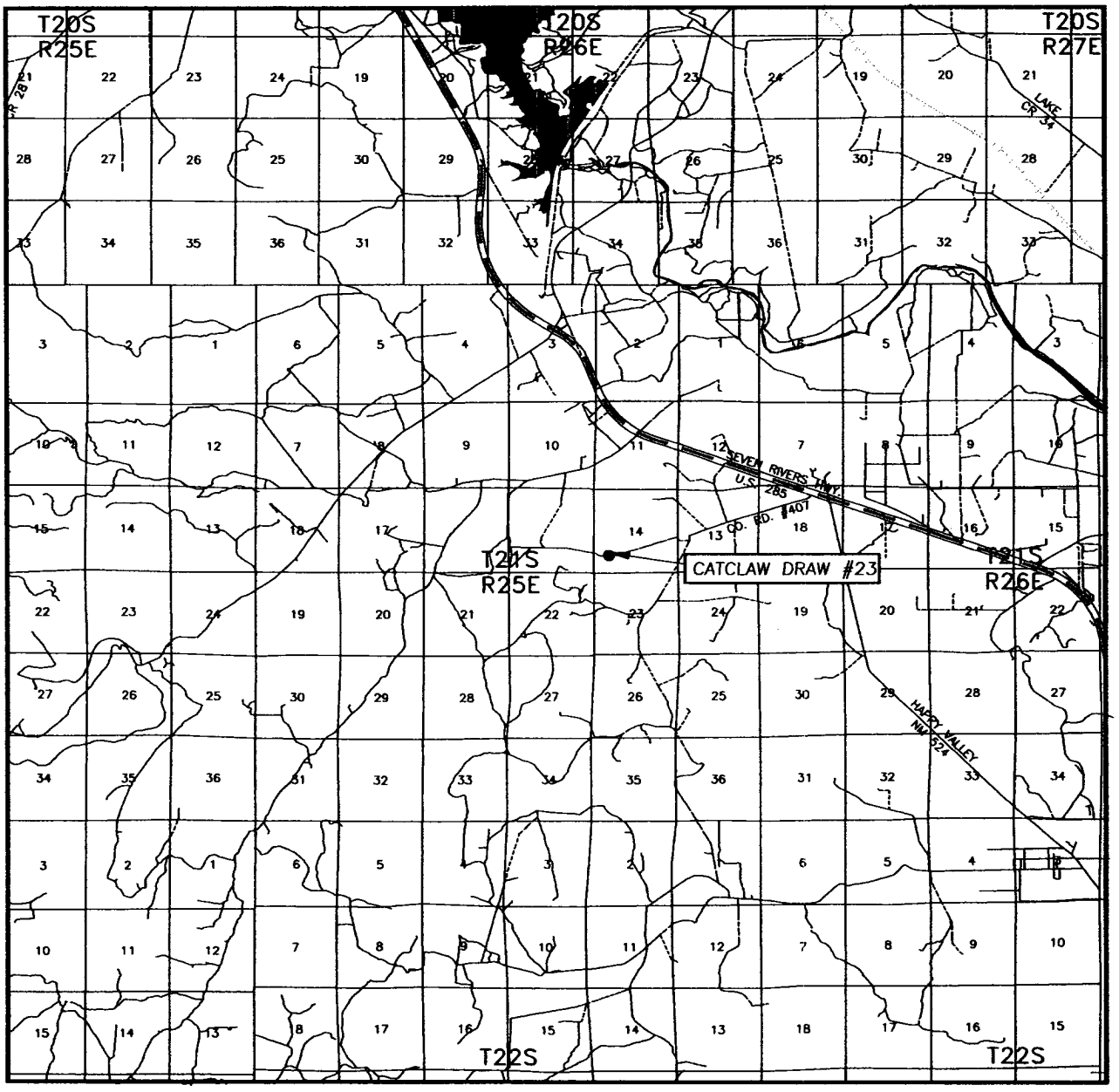
HEC PETROLEUM, INC.

CATCLAW DRAW FEDERAL #23 WELL
LOCATED 1330 FEET FROM THE SOUTH LINE
AND 1330 FEET FROM THE WEST LINE OF SECTION 14,
TOWNSHIP 21 SOUTH, RANGE 25 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.

Survey Date: 11/23/05	Sheet 1 of 1 Sheets		
W.O. Number: 05.11.1806	Dr By: J.R.		Rev 1: 12/21/05
Date: 12/01/05	Disk: CD#5	05111806	Scale: 1"=100'

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. 14 TWP. 21-S RGE. 25-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1330' FSL & 1330' FWL

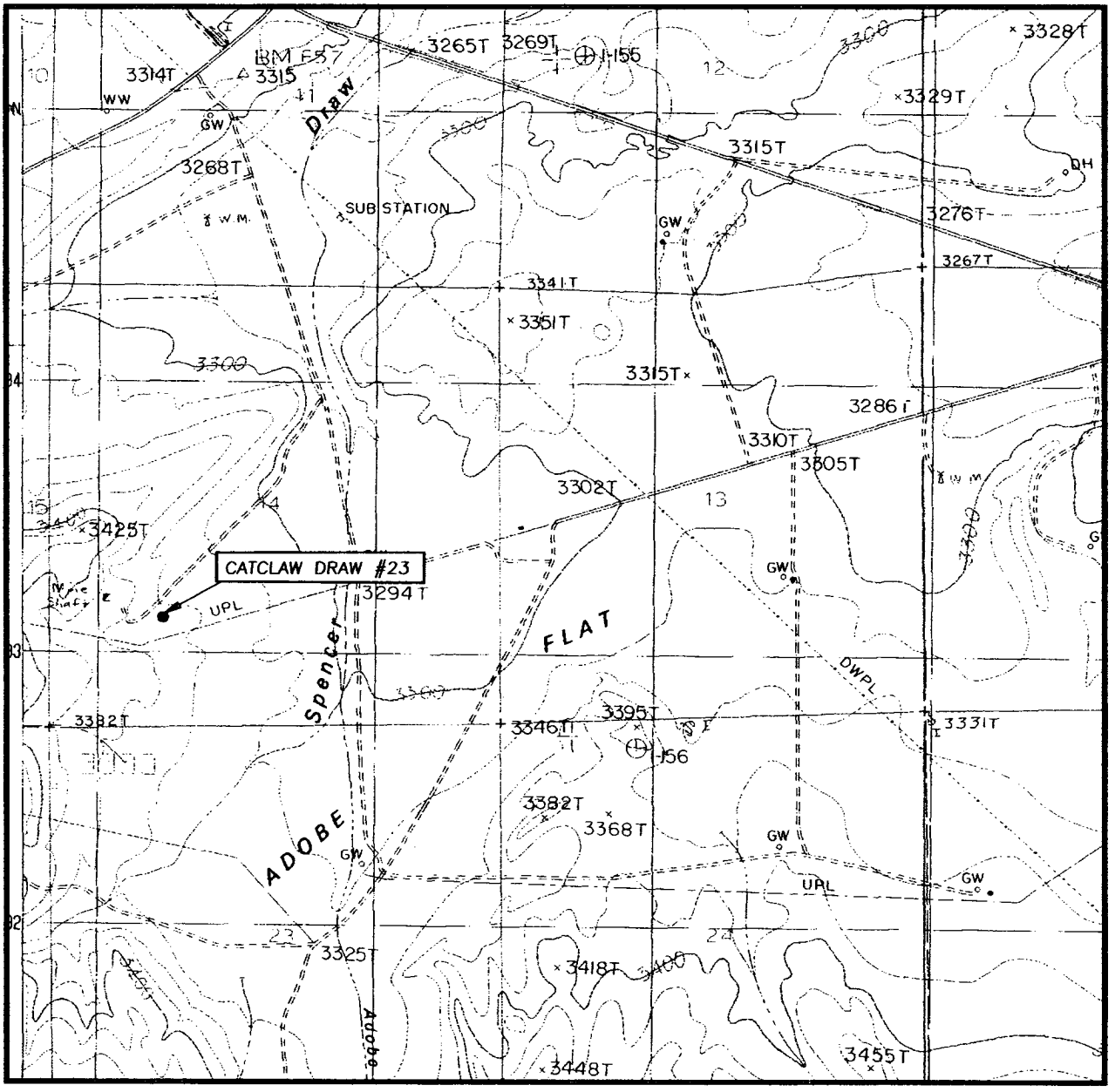
ELEVATION 3346'

OPERATOR HEC PETROLEUM, INC.

LEASE CATCLAW DRAW

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
CARLSBAD WEST, N.M. – 20'

SEC. 23 TWP. 21-S RGE. 25-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1330' FSL & 1330' FWL

ELEVATION 3346'

OPERATOR HEC PETROLEUM, INC.

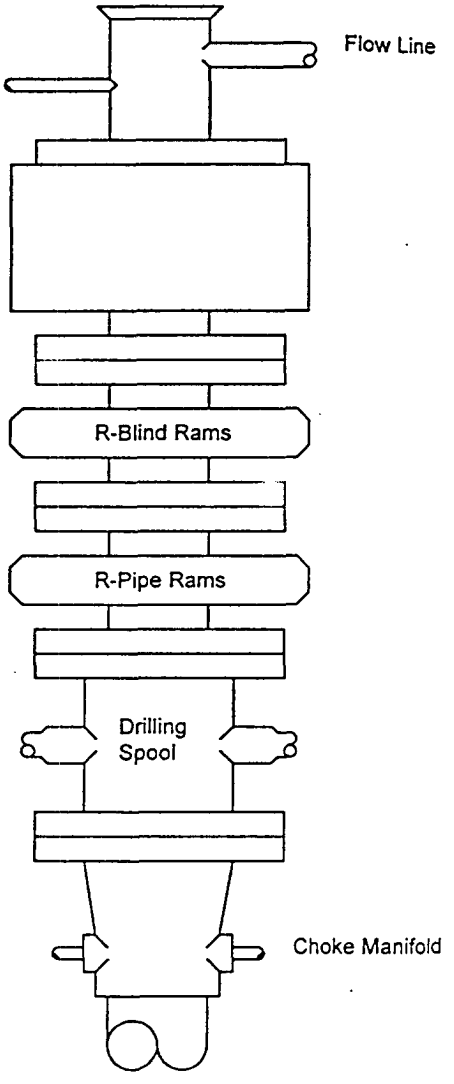
LEASE CATCLAW DRAW

U.S.G.S. TOPOGRAPHIC MAP
CARLSBAD WEST, N.M.

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

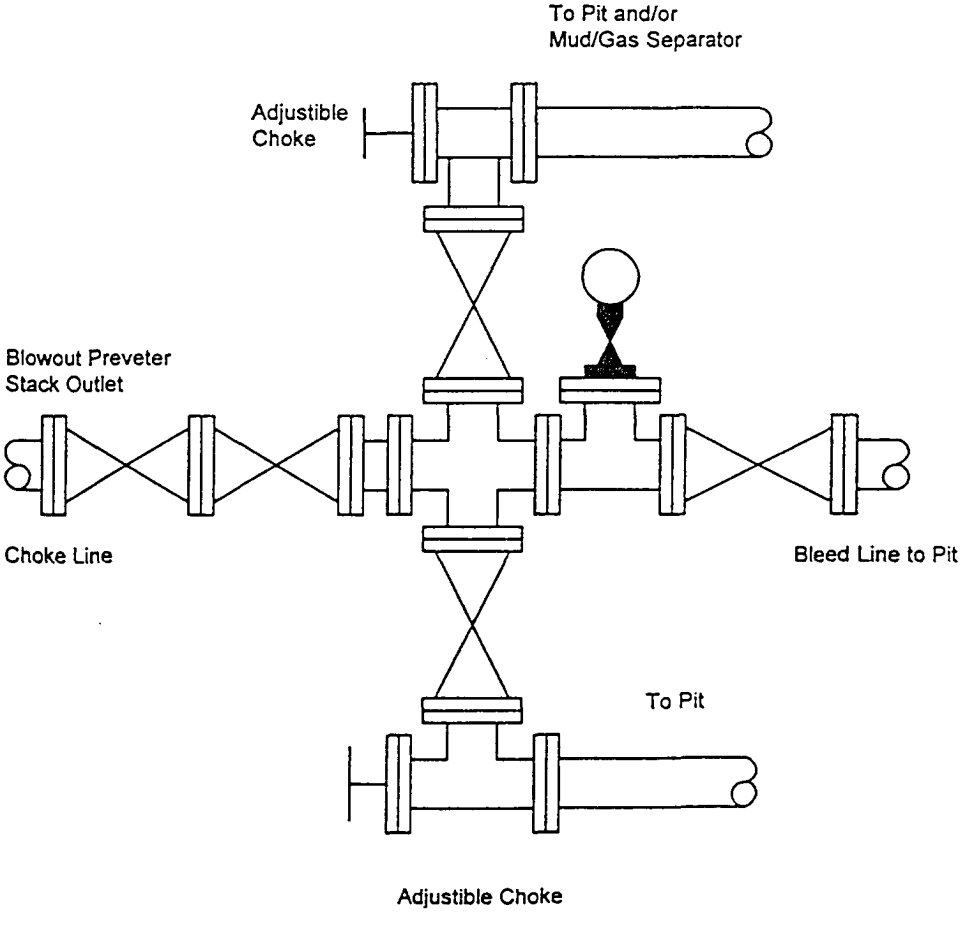
BLOWOUT PREVENTER SYSTEM

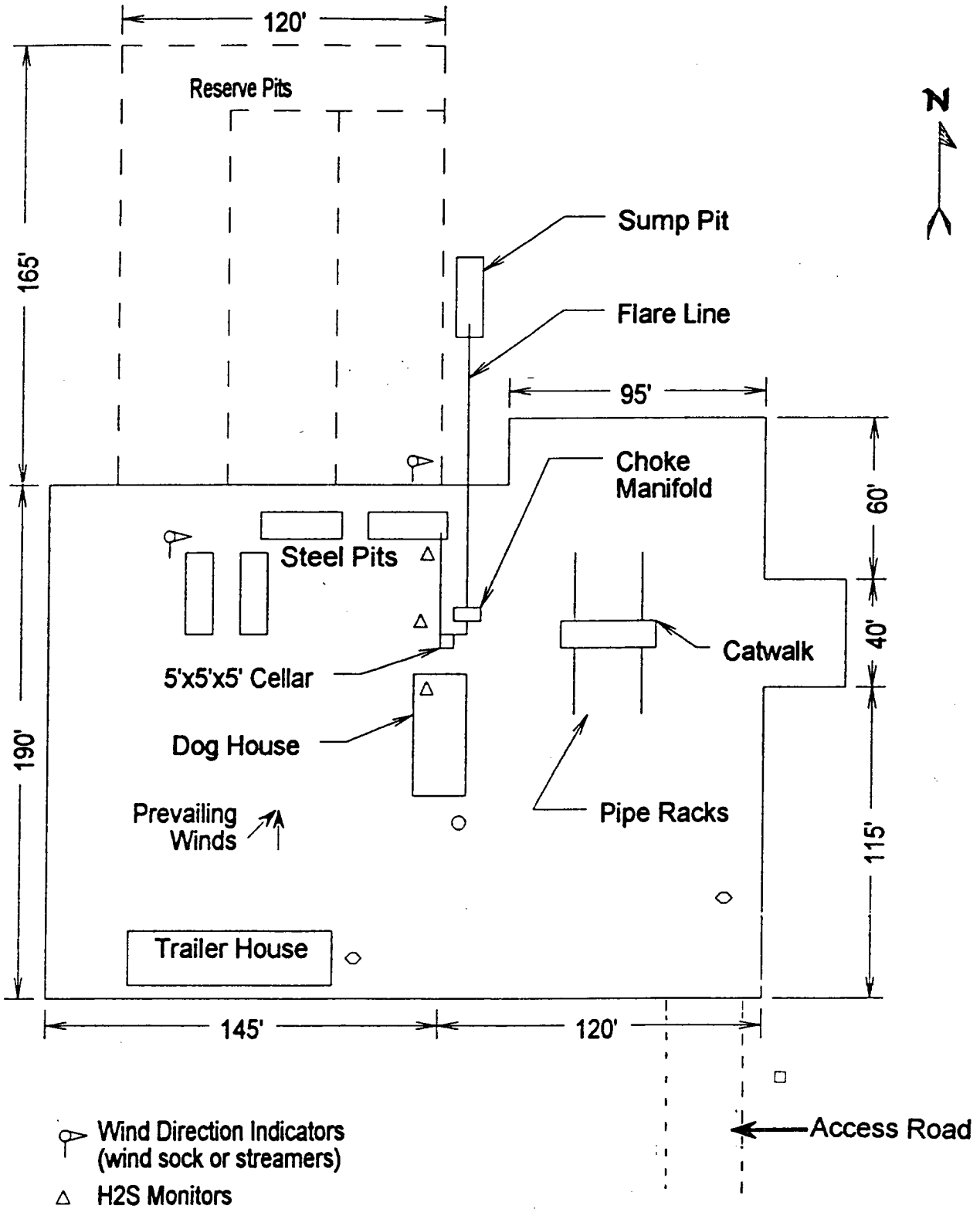
5000 PSI



TYPE 1500 SERIES
5000 psi WP

Choke Manifold Assembly for 5M WP System





- Wind Direction Indicators (wind sock or streamers)
- △ H2S Monitors (alarms at bell nipple and shale shaker)
- ◇ Briefing Areas
- ○ Remote BOP Closing Unit
- □ Sign and Condition Flags

H2S DRILLING OPERATIONS PLAN

I. HYDROGEN SULFIDE TRAINING

All contractors and subcontractors employed by Chevron U.S.A. Inc. will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on this well.

1. The hazards and characteristics of hydrogen sulfide (H2S)
2. Safety precautions
3. Operations of safety equipment and life support systems

In addition, Chevron supervisory personnel will be trained or prepared in the following areas:

1. The effect of H2S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-down procedures when drilling or working a well, blowout prevention and well control procedures, if the nature of work performed involves these items.

3. The contents and requirements of the contingency plan when such plan is required.

All personnel will be required to carry documentation of the above training on their person.

II. H2S EQUIPMENT AND SYSTEMS

1. Safety Equipment

   The following safety equipment will be on location.

   A. Wind direction indicators as seen in attached diagram.
   B. Automatic H2S detection alarm equipment (both audio and visual).
   C. Clearly visible warning signs as seen on the attached diagram. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.
   D. Protective breathing equipment will be located in the dog house and at the briefing areas as seen in the attached diagram.

2. Well Control Systems

A. Blowout Prevention Equipment
Equipment includes but is not limited to:

a. pipe rams to accommodate all pipe sizes
b. blind rams
c. choke manifold
d. closing unit

Auxiliary equipment added as appropriate includes:

a. annular preventor	Yes
b. rotating head	Yes
c. mud-gas separator	Yes
d. flare line and means of ignition	Yes
e. remote operated choke	Yes

B. Communication

The rig contractor will be required to have a two-way communication capability. Chevron U.S.A. Inc. will have either land-line or mobile telephone capabilities.

C. Mud Program

The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers when appropriate will minimize hazards when penetrating H2S bearing formations.

D. No Drill Stem Tests are planned.

III. WELL SITE DIAGRAM

A complete well site diagram including the following information is attached.

1. Rig orientation
2. Briefing areas
3. Ingress and egress
4. Pits and flare lines
5. Caution and danger signs
6. Wind indicators and prevailing wind direction

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

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
CHEVRONTEXACO	432-687-7100		
BOYD SCHANEMAN	432-687-7402	432-238-3667	432-520-5877
ROB LOVELADY	432-687-7169	432-238-8900	432-697-2899
RAY MATTHEWS	432-687-7224	432-557-0623	432-697-0201
JERRY ORNDOFF	432-687-7236	432-631-4295	432-520-5407
JOHN JACKSON	281-561-3545	713-927-4139	713-465-0510

EMERGENCY RESPONSE NUMBERS:

State Police:	Eddy County		505 748 9718
State Police:	Lea County		505 392 5588
Sheriff	Eddy County		505 746 2701
Sheriff	Lea County		505-396-3611
Emergency Medical Ser	Eddy County		911 or 505 746 2701
(Ambulance)	Lea County	Eunice	911 or 505 394 3258
Emergency Response	Eddy County SERC		505 476 9620
	Lea County		
Artesia Police Dept			505 746 5001
Artesia Fire Dept			505 746 5001

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

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		505 394-2112
Eunice Fire Dept		505 394 3258
Eunice Ambulance		505 394 3258
Hobbs Police Dept		
NMOCD	District 1 (Lea, Roosevelt, Curry)	505 393 6161
	District 2 (Eddy Chavez)	505 748 1283
Lea County Information		505 393 8203
INDIAN FIRE & SAFETY,INC.	Lea/Eddy County	505-393-3093
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

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

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**

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.

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

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

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

- 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

HEC PETROLEUM, INC.
CATCLAW DRAW UNIT # 23
UNIT "K" SECTION 14
T21S-R25E EDDY CO. NM

HYDROGEN SULFIDE CONTINGENCY PLAN FOR DRILLING/WORKOVER/FACILITY

- 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.