Form 3160-3 (August 1999) UNITED STATES DEPARTMENT OF THE IN DUPE ALOF LAND MANAGE	Hobbs, NM 80249		0
DEPARTMENT OF THE IN		ОМЕ	3 No. 1004-0136
			November 30, 2000
	ITERIOR	5. Lease Serial N	0.
BUREAU OF LAND MANAGE	EMENT	Γ	NM-96237
APPLICATION FOR PERMIT TO DR		6. If Indian, Allo	ttee or Tribe Name
			Applicable
1a. Type of Work: X DRILL REE	NTER	7. If Unit or CA	Agreement, Name and No.
		Not	Applicable
b. Type of Well: X Oil Well Gas Other Well	Single 🔽 Multij Zone	ple Zone 8. Lease Name an Micro Bre	nd Well No. W BEU Federal #1
2. Name of Operator	Bone	9. API Well No.	
Yates Petroleum Corporation		30-02	5-36883
3A. Address 105 South Fourth Street	3b. Phone No. (include area code)	10, Field and Peo	or Exploratory
Artesia, New Mexico 88210	(505) 748-1471	Wildee	t Bone Spring
4. Location of Well (Report location clearly and in accordance with any	State requirements. *)		1., or Blk, and Survey or Area
At surface 990' FSL & 2	2310' FEL	a	
At proposed prod. Zone same a	sabove Unit		13, T22S-R32E
14. Distance in miles and direction from nearest town or post office*		12. County or Par	ish 13. State
15. Distance from prono sed*		Lea County	New Mexico
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of Acres in lease 17. 5 40	Spacing Unit dedicated to this w	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660'		40 acr BLM/BIA Bond No. on file	
		NM-28	18970777
	22. Approximate date work will start*	23. Estimated Dur	ation
3711' GL	ASAP	API CP In conform	40 Days P.
	24. Attachinems	ARLSBAD CONTROLL	ED SUGHER BASINS
The following, completed in accordance with the requirements of Onshore	Oil and Gas Order No. 1, shall be attach	hed to this form:	HE HERE
 Well plat certified by a registered surveyor. A Drilling Plan. 	4. Bond to cover the Item 20 above).	operations unless covered by an	n existing bond on file lie
3. A Surface Use Plan (if the location is on National Forest System Lands,		n.	100
SUPO shall be filed with the appropriate Forest Service Office.		fic information and/or plans as	may be required by the
25. Signature OA to DA	Name (Printed/Typed)		Date
Cliffin N. May	Clifton R. May		7/26/04
Title: Regulatory Agent		······································	
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed)S/ JOE	G. Lara	Date 2 2 SEP 2004
Title FIELD MANAGER	Office CARL	SBAD FIELD OF	FICE
Application approval does not warrant or certify that the applicant holds leg	gal or equitable title to those rights in the	e subject lease which would en	title the applicant to conduct
operations thereon. Conditions of approval, if any, are attached.		APPROVAL FO	
Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as to a	ime for any person knowingly and willf	ully to make to any department	or agency of the United
*(Instructions on reverse)	OPER. OGRID NO. 2	55-11-	
	1.	1200	1/
APPROVAL SUBJECT TO		1305	KZ
GENERAL REQUIREMENTS	POOL CODE 516	83	
AND SPECIAL STIPULATIONS	EFF. DATE 9/24	64	
ATTACHED	APINO. 30-02	5-36883	

FROM : GENERAL SURVEYING CO DIJIIIUUI I 1000 M. Provok TV., Rabba, MK 80240 DISTRICT II 811 South First, Artesia, NM 88810 DISTRICT III 1900 Rio Brazos Rd., Astec, NM 87410 DISTRICT IV 2040 Sputh Pacheco, Santa Fe, NM 87605

FAX NO. : 5053930023

Energy, Minerals and Natural Resources Department

Jul. 22 2004 07:25AM P3

Revised March 17, 1989 Instruction on back Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

OIL CONSERVATION DIVISION P.O. Box 2088 Santa Fe, New Mexico 87504-2088

AMENDED REPORT

AP1 30-02	Number	422		Pool Code	-	ed Tan	F BONE ST	RING	
Property	operty Cade Property Name Well N						mber		
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OGRID N	.			YATES	Operator Nam PETROLEUM CC			21evat 3711	100
025575					Surface Loci				.
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	L		Bottom	Hole Lo	eation If Diffe	rent From Sur	face		
JL or lot No.	Section	Township	Range	Lot. idn	Peet from the	North/South line	Feet from the	East/West lipe	County
Dedicated Acre	a Joint o	or Infill Co	molidation	Code Or	der No.		L	L	L
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				E.718 (NAD)	289.6 1103.4 -27) 3797 -2310	, <u> </u>	- Signatur A Profession	ANELAL VOIL	. X

YATES PETROLEUM CORPORATION Micro Brew BEU Federal #1 990' FSL and 2310 ' FEL Section 13-T22S-R32E Lea County, New Mexico

1. The estimated tops of geologic markers are as follows:

880'	Brushy Canyon	7055'
3030'	Bone Spring	8700'
4850'	FBSG	9820'
4950'	TD	10200'
5780'		
	3030' 4850' 4950'	3030' Bone Spring 4850' FBSG 4950' TD

2. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water: 200'to 500' Oil or Gas: All potential formations.

3. Pressure Control Equipment: BOPE will be installed on the 8 5/8" casing and rated for 5000# BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.
- 4. THE PROPOSED CASING AND CEMENTING PROGRAM:
 - A. Casing Program: (All New)

<u>Hole Size</u>	Casing Size	<u>Wt./Ft</u>	Grade	Coupling	Interval	Length
17.5"	13.375"	48#	H-40	ST&C	0-850'	850'
11.0"	8.625"	32#	J-55	ST&C	0-4200"	4200'
11.0"	8.625"	32#	HCK-55	ST&C	4200-4900'	700'
7. 875"	5.5"	17#	L-80	LT&C	0-1600'	1600'
7. 875"	5.5"	15.5#	J-55	LT&C	1600-7100'	5500'
7.875"	5.5"	17#	L-80	LT&C	7100-10200	° 3100'

- 1. Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, and Tensile Strength 1.8
- 2. A 5,000 psi BOP will be nippled up on the 8 5/8" casing and tested to 5000 psi .

Micro Brew BEU Federal #1

B. CEMENTING PROGRAM:

Surface Casing: Cement with 600 sx Lite (YLD 1.98 WT 12.5). Tail in with 200 sx class "C" + 2% CaCl (YLD 1.34 WT 14.8).

Intermediate Casing: 1275 sx premium plus (YLD 1.98 WT 12.5) and tail in with 200 sx class "C" + 2% CaCl (YLD 1.34 WT 14.8)

Production Casing: Stage I: 900 sx super H (YLD 1.72 WT 13). DV tool @ 4800'. Tail in with 100 sx thixset (YLD 1,42 WT 14.4) TOC 5800'. Stage II: 700 sx interfill C (YLD 2.41 WT 11.9. Tail in with 100 sx Class C neat (YLD 1.34 WT 14.8. Cement Circulated.

5. MUD PROGRAM AND AUXILIARY EQUIPMENT:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	Viscosity	Fluid Loss
0-850'	FW/Native Mud	8.5-9.2	30-32	N/C
850'-4900'	Brine	10-10.2	28-30	N/C
4900'-8600'	Cut Brine	8.4-98.6	28	N/C
8600'-TD	Cut Brine/Starch	8.6-9	34-40	<15CC

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Rig personnel will check mud hourly.

6. EVALUATION PROGRAM:

Samples:10' samples out from under surface casing.Logging:Platform Express-Hals; BHC Sonic; NGT GR-Neutron to surface; FNICoring:NoneDST's:As warranted

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Antici	pated	BHP:
	paroa	D

From:	0	TO: 850'	Anticipated Max. BHP: 400 PSI
From:	850'	TO: 4900'	Anticipated Max. BHP: 2600 PSI
From:	4900	TO: 10200'	Anticipated Max. BHP: 4775 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

Maximum Bottom Hole Temperature: 172 F

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 40 days to drill the well with completion taking another 40 days.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION Micro Brew BEU Federal #1 990' FSL & 2310' FEL Section 13-T22S-R32E Lea County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 47 miles northwest of Jal, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

From downtown Carlsbad, NM at the light at the intersection of 285 & 62/180 turn east. Stay on 62/180 for approximately 2.0 miles to U. S. Refinery Road. Turn right and go approximately 11.8 miles to Hwy 31. Turn left on 31 and go approximately 2.3 miles to 128 (Jal Hwy). Turn right and go approximately 16 miles to Red Road. Turn left and go approximately 6.9 miles to Mills Ranch Road (sign on the leftside of road). Turn right on lease road and go approximately 6.9 miles and turn left. Follow lease road approximately 0.65 miles and turn left. Follow lease road approximately 0.7 of a mile to a "T". Turn left and go approximately 0.4 of a mile. Turn left on lease road and go approximately 0.25 of a mile and turn right. Go approximately 0.3 of a mile to a Pogo location. The new road will start here and go east approximately 200' to the southwest corner of the pad.

- 2. PLANNED ACCESS ROAD:
 - A. The proposed new access will be approximately 200' in length from the point of origin to the southwest corner of the drilling pad.
 - B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
 - C. The new road will be bladed with drainage on both sides. No traffic turnout will be needed.
 - D. The route of the road is visible.
 - E. Existing roads will be maintained in the same or better condition.
- 3. LOCATION OF EXISTING WELL:
 - A. There is drilling activity within a one-mile radius of the well site.
 - B. Exhibit D shows existing wells within a one-mile radius of the proposed well site.
- 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:
 - A. There are no production facilities on this lease at the present time.

Mirco Brew BEU Federal #1 Page 2

B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is a producing gas well.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

The dirt contractor will be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required. Most of the caliche should be gotten from building the reserve pit.

- 7. METHODS OF HANDLING WASTE DISPOSAL:
 - A. Drill cuttings will be disposed of in the reserve pits.
 - B. The reserve pits will be constructed and reclamation done according to NMOCD guidelines.
 - C. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
 - D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
 - E. Oil produced during operations will be stored in tanks until sold.
 - F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
 - G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.
- 8. ANCILLARY FACILITIES: NONE
- 9. WELLSITE LAYOUT:
 - A. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, the location of the drilling equipment, rig orientation and access road approach. Note: Pits to North.
 - B. The reserve pits will be plastic lined with 12 mil.
 - C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.

Micro Brew BEU Federal #1 Page 3

C. If the proposed well is plugged and abandoned, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level after they have evaporated and dried.

11. SURFACE OWNERSHIP:

The well is on Federal Lands administered by the BLM.

- 12. OTHER INFORMATION:
 - Α. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, and historical and cultural sites.
 - Β. The primary surface use is for grazing.
- 13. **OPERATOR'S REPRESENTATIVE:**
 - Α. Through A.P.D. Approval: Β. Clifton R. May, Regulatory Agent Yates Petroleum Corporation 105 South Fourth Street Artesia, New Mexico 88210 Phone (505) 748-1471
- Through Drilling, Completions & Prod. Pinson McWhorter, Operations Manager Yates Petroleum Corporation 105 South Fourth Street Artesia, New Mexico 88210 Phone (505) 748-1471

14. **CERTIFICATION:**

> I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Yates Petroleum Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Clifton R/May, Regulatory Agent







Head to Reserve Pit will vary between rigs

The above dimension should be a maximum PB - L1



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Yates Petroleum Corporation

Typical 5.000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



Typical 5,000 psi choke manifold assembly with at least these minimun features



BOP-4

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H₂S CONTINGENCY PLAN

YATES PETROLEUM CORPORATION

MICRO BREW "BEU" FEDERAL #1 Section 13, Township 22 South, Range 32 East Lea County, New Mexico

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SCOPE

This plan establishes Yates Petroleum Corporation's guidelines for all company and contract employees whose duties may involve exposure to hydrogen sulfide (H_2S) gas on the Micro Brew BEU Federal #1 location. This lease is located 990' from the south line and 2310' from the east line in Section 13 of Township 22 South, Range 32 East of Lea County, New Mexico. This plan also establishes procedure for isolation of the work site and evacuating the public on the condition that:

- A. There is a release of H₂S that encompasses the radius of exposure (ROE) in this plan and,
- B. There are houses, persons and/or roads within the ROE and,
- C. There is the endangerment of human or animal life within the ROE.

OBJECTIVE

The objective of the Yates Petroleum Corporation is to:

- A. Prevent any and all accidents, and to prevent the uncontrolled release of H₂S into the atmosphere and,
- B. Provide proper evacuation procedures to cope with emergencies and,
- C. Provide immediate and adequate medical attention should an injury occur.

It should be noted that Yates Petroleum Corporation does not expect there to be any release of H_2S into the atmosphere but has taken the necessary steps to react properly to and control any hazards encountered on any of our facilities.

GENERAL EMERGENCY ACTION

In the event of an emergency, the following action should be initiated,

- 1. All personnel shall immediately evacuate to an up-wind and up-hill "safe breathing" area.
- 2. Those who must enter the hazard area must wear positive pressure self-contained breathing apparatus and must use other appropriate safety equipment as outlined on page 12.
- 3. Isolate the well, if possible.
- 4. Use the "buddy system" at all times.
- 5. Account for all personnel and take appropriate action as necessary for personnel safety.
- 6. Display the appropriate color warning flag to describe the type of emergency.
- 7. Contact Yates Petroleum Corporation personnel at the earliest time available according to the emergency call out list below.

The Yates Petroleum Corporation supervisor will assess the situation and assign duties to various persons to bring the situation under control. Notification of local emergency response agencies and residents will be assigned by the Yates Petroleum Corporation supervisor. Media inquiries are to be referred to Yates Petroleum Corporation at 105 South Fourth Street in Artesia, New Mexico.

Yates Petroleum Corporation Emergency call out numbers

NAME	OFFICE PHONE	CELL PHONE
Yates Corporate Office	(505) 748-1471	
Tim Bussell	(505) 748-1471	(505) 365-5695
Jim Krogman	(505) 748-1471	(505) 365-8340

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Emergency Notification Numbers Lea County

Organization or Agency	Phone Number
New Mexico State Police	(505) 392-5588
Lea County Sheriff 's Department	(505) 395-2121
Emergency Medical Service (Ambulance)	911 or (505) 395-2501
Lea County Emergency Management (Harry Burgess)	(505) 887-9511
State Emergency Response Center (SERC) Chairman (Max Johnson)	(505) 476-9620
Jal Fire Department	(505) 395-2221
Carlsbad Fire Department	(505) 887-6718
Oil Conservation Division (District II)	(505) 748-1283
National Response Center (NRC)	(800) 424-8802
Chemtrec	(800) 424-9300
Action Safety	(505) 393-3501

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EMERGENCY PROCEDURES FOR UNCONTROLLABLE RELEASE OF HYDROGEN SULFIDE GAS (H₂S)

- 1. Secure and don self-contained breathing apparatus.
- 2. Remove all personnel to up-wind and up-hill "safe breathing" zone.
- 3. Contact all concerned employees and immediate supervisor for instructions.
- 4. Take steps to protect and/or remove the general public to an upwind area away from the source of H_2S .
- 5. Deny entry to unnecessary personnel.
- 6. Notify necessary public safety personnel:
 - State Police = if on or near a state road
 - Sheriff's Department = if on or near a county road

(for assistance in the evacuation of the general public and to help maintain roadblocks)

- 7. Contact the Oil Conservation Division.
- 4. While attempting to control the release, maintain tight security and safety procedures.
- 5. Use the buddy system when entering any hazardous area.

The responsibility of this plan is with the Yates Petroleum Corporation supervisor(s) who shall be in complete command during the emergency.



PUBLIC PROTECTION PLAN

There is an access road within the calculated potential radius of exposure (ROE) of this well. Block this road off a safe distance from the hazardous zone. These roadblocks shall be maintained until it has been determined by the Yates Petroleum Corporation supervisor that affected areas are safe to be re-entered.

The company supervisor(s) have been designated within this contingency plan and his phone number listed. If a release of any type is detected on a Yates Petroleum Corporation lease, a supervisor shall be notified.

see "General Emergency Action" (Page 3)

PUBLIC EVACUATION PLAN

- 1. When the company supervisor determines the H₂S cannot be limited to the Micro Brew BEU Federal #1 Well location and the public will be involved, the evacuation plan shall be activated.
- 2. The supervisor will notify local emergency response agencies that a hazardous condition exists and implement evacuation procedures.
- 3. A safety person, trained in the use of H₂S detection equipment and self-contained breathing apparatus, shall monitor H₂S concentrations, wind directions and area of exposure. He will determine the outer perimeter of the hazardous gas area. Extension to the evacuation area shall be determined from the information gathered. Continuous monitoring shall remain in effect until the incident is terminated.
- 4. Law enforcement shall be called to aid in setting up and maintaining roadblocks. They will also aid in evacuation of the public if necessary but shall not be asked to enter the hazardous zone.
- 5. Continuous communication shall be maintained between company personnel and law enforcement personnel.
- 6. After the discharge of gas has been controlled, the safety person shall determine when the area is safe for re-entry.

All atmospheric monitoring of hydrogen sulfide (H₂S) gas shall be done only with monitors that have a minimum capability of reading H2S, oxygen, and flammability values.

IGNITION PROCEDURES FOR UNCONTROLLABLE WELL CONDITIONS

The decision to ignite the well is the decision of the company supervisor(s). This decision should be made only as a last resort and in a situation where it is determined that:

- Human life and/or property are endangered.
- There is no hope of controlling the blowout under the prevailing conditions at the well.

INSTRUCTIONS FOR IGNITING THE RELEASE

- 1. Two personnel are required for the ignition operation. They <u>must</u> wear positive pressure self-contained breathing apparatus and a D-ring style, OSHA approved full body safety harness with a non-flammable safety rope attached
- 2. One (safety) person will test the atmosphere for explosive gases with an approved Triple-range (H₂S, O₂, LFL) monitor. The other person (company supervisor) is responsible for igniting the well.
- 3. Primary method of ignition shall be with a 25mm flare gun with range of approximately 500 feet.
- 4. Ignite up-wind and do not approach any closer than is warranted.
- 5. Select a safe ignition site which offers ultimate egress.
- 6. Before activating flare gun, check for presence of combustible gas.
- 7. After ignition, continue emergency action and procedure as before.
- 8. All unassigned personnel will limit their actions to those directed by the company supervisor.
- > After the well is ignited, burning H_2S will produce SO_2 , which is also highly toxic. Do not assume the area is safe after the well is ignited.
- > A No Smoking policy shall be strictly enforced on location at all times.

EMERGENCY EQUIPMENT REQUIREMENTS

1. Respiratory Protection

- Rescue Units (SCBA's) 1 unit shall be placed at each briefing area.
- Emergency Escape Units 4 units shall be stored in the top dog house for emergency evacuation purposes.
- 2. Signs and Flags
 - One (1) Condition Sign shall be placed at location entrance with the following language:



• Condition Flags shall be displayed at the sign in one of following designations:

Green / normal conditions Yellow / potential danger Red / danger, H₂S present

- 3. Briefing Area: Two (2) briefing areas, designated by signs, shall be located perpendicular to each other and be easily visible and readily accessible.
- 4. Windsocks: Two (2) windsocks shall be strategically placed where they are easily visible from all points.

5. Hydrogen Sulfide Detectors and Alarms:

- One (1) stationary H₂S monitor with three sensors shall be located on the rig in the top dog house. The H₂S monitor shall be calibrated to alarm at 10 PPM for the low alarm (visual alarm) and 15 PPM for the high alarm (audible alarm). Calibrations shall be checked every 30 days or as needed. The sensors shall be located as follows:
- #1 Rig floor

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- #2 Bell Nipple
- #3 Flow line or where the well bore fluid is discharged
- A Gas sampling pump, with detector tubes capable of measuring H₂S gas, shall be located in the safety trailer.

6. Auxiliary Rescue Equipment:

- One (1) Stretcher
- Two (2) OSHA approved full body harness
- One Hundred (100) feet of 5/8" OSHA approved rope

7. Fire Extinguishers:

• One (1) 20#, class ABC fire extinguisher shall be located in the safety trailer

8. Communication:

• Mobile, cellular phones or two way radio's shall be available via the vehicles on location and on the rig floor.

TOXIC EFFECTS OF HYDROGEN SULFIDE

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 = 1.19, approximately 20% heavier) and colorless. It forms an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide is almost as toxic as hydrogen cyanide and is between 5 and 6 times more toxic than carbon monoxide.

Common Name	Chemical Formula	Specific Gravity	Threshold Limit ¹	Hazardous Limit ²	Lethal Concentration ³
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H ₂ S	1.189	10 ppm ⁴ 15 ppm ⁵	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21	2 ppm	N/A	1000 ppm
Chlorine	CL ₂	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	СО	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO ₂	1.52	5000 ppm	5%	10%
Methane	CH ₄	0.55	90,000 ppm	Combustible @ 5%	N/A

Toxicity of Various Gases

1 Threshold limit - Concentration 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

Concentrations		Physical Effects	
0.001%	10 ppm	Obvious and unpleasant odor. Safe for 8 hour exposure.	
0.005%	50 ppm	Can cause some flu-like symptoms and can cause pneumonia.	
0.01%	100 ppm	Kills the sense of smell in 3 to 15 minutes. May irritate eyes and throat.	
0.02%	200 ppm	Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hours may cause lung damage and/or death.	
0.06%	600 ppm	Loss of consciousness quickly, death will result if not rescued promptly.	

(These concentrations are calculated @ 15.00 psia and 60 degree F.)

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<u>THE USE OF SELF-CONTAINED BREATHING AIR</u> EQUIPMENT

SCBA should be worn when:

- working near the top or on top of any 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 of H₂S has been detected.
- at any time there is a doubt as to the H_2S level in the area to be entered.

Air quality testing shall be continuous throughout the entire operation if a container is breeched or in a hazardous location.

All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

Facial hair and standard eyeglasses are not allowed with SCBA use.

Contact lenses are never allowed with the use of the SCBA.

The SCBA shall be inspected monthly.

After each use, the SCBA shall be cleaned, disinfected, serviced, inspected and refilled to proper specifications.

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

Do not panic

Remain calm and think

Don breathing apparatus.

Remove victim to fresh air as quickly as possible; i.e. upwind and uphill from source or crosswind to achieve upwind. *Do not run downwind*.

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.

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe office

Form C-144 March 12, 2004

Is pit or below-grade tank	de Tank Registration or Closur covered by a "general plan"? Yes XX No below-grade tank XX Closure of a pit or below-grade			
Operator: <u>Yates Petroleum Corporation</u> Telep	hone: (505) 748-4347e-mail address:debb	<u>viec@ypcnm.com</u>		
Address: 105 South 4th Street, Artesia, NM 88210 30. DOK-31	1983			
Address: <u>105 South 4th Street, Artesia, NM 88210</u> Facility or well name: <u>Micro Brew BEU Federal #1</u>	U/L or Qtr/Qtr O Sec <u>13</u> T <u>22S</u> R <u>32E</u>			
County: <u>Lea</u> Latitude <u>N32.3873</u> Longitude <u>W103.6273</u> NAD: 1927	🗴 1983 🔲 Surface Owner Federal 🔀 State 🗆 Pr	rivate 🗌 Indian 🗌		
Pit_Type: Drilling X Production Disposal Workover Emergency Lined XX Unlined Liner type: Synthetic XX Thickness 12 mil Clay Volume 24,000 bbl	Below-grade tank Volume: bbl Type of fluid: Construction material:			
Depth to ground water (vertical distance from bottom of pit to seasonal high	Less than 50 feet	(20 points)		
water elevation of ground water.)	50 feet or more, but less than 100 feet	(10 points)		
	100 feet or more	(0 points)		
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) $(0^{2})^{23}$ $(0^$		
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 po		
	Ranking Score (Total Points)	0 Points		
If this is a pit closure: (1) attach a diagram of the facility showing the pit's onsite offsite If offsite, name of facility date. (4) Groundwater encountered: No Yes If yes, show depth belo	(3) Attach a general description of remedial action	on taken including remediation start date and end		
diagram of sample locations and excavations. I hereby certify that the information above is true and complete to the best of a been/will be constructed or closed according to NMOCD guidelines , a	my knowledge and belief. I further certify that the a general permit \overline{XX} , or an (attached) alternative O	above-described pit or below-grade tank has CD-approved plan [].		
Date: July 28, 2004	OH RM.			
Printed Name/Title Clifton R. May/Regulatory Agent Signature	lifter K. May			
Your certification and NMOCD approval of this application/closure does not a otherwise endanger public health or the environment. Nor does it relieve the regulations.	relieve the operator of liability should the contents of to operator of its responsibility for compliance with any o	the pit or tank contaminate ground water or other federal, state, or local laws and/or		
Approval:				
Date:				
Printed Name/TitleSignatureSignature				

Micro Brew BEU Federal #1 YATES PETROLEUM CORPORATION General Plan was approved 4/15/04

The reserve pit will be to the North. The Southeast corner of the pit will be approximately 60' North of the well bore. The pit will be a 150' X 150' and 6' deep with a capacity of 24,000 bbls. The pit will be lined with a 12 mil liner.



Standard reserve pit. All Reserve pits are double Horse shoe size varies with depth of well