

OCD-1
OCD-HOBBS

ATG-07-19

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. YOUNG DEEP UNIT <i><12993></i>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. #039
2. Name of Operator HARVEY E. YATES COMPANY		9. API Well No. #30-025-34351 <i>38179</i>
3a. Address PO BOX 1933 ROSWELL, NM 88202-1933	3b. Phone No. (include area code) 505.623.6601	10. Field and Pool, or Exploratory YOUNG; MORROW
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1980' FSL & 660' FEE; UNIT 10000 At proposed prod. zone Same ROSWELL CONTROLLED WATER BASIN		11. Sec., T. R. M. or Blk. and Survey or Area Sec 10, T18S, R32E
14. Distance in miles and direction from nearest town or post office* Approximately 12 miles south of Maljamar, NM		12. County or Parish Lea County
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		13. State NM
16. No. of acres in lease 80.00 acres	17. Spacing Unit dedicated to this well 320.00 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 3,000'	19. Proposed Depth 12,950'	20. BLM/BIA Bond No. on file NMB000317
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,982' GL	22. Approximate date work will start* ASAP	23. Estimated duration 60 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Keith Cannon</i>	Name (Printed/Typed) KEITH CANNON	Date 10-5-06
Title DRILLING SUPERINTENDENT		

Approved by (Signature) <i>Don Peterson</i>	Name (Printed/Typed) CARL SPAD FIELD OFFICER	Date NOV 17 2006
Title FIELD MANAGER		

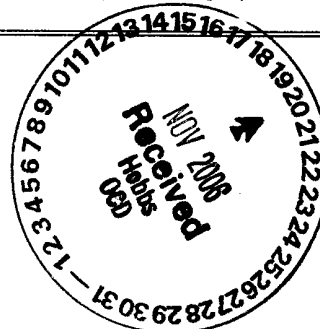
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the lease or leasehold that the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

GWW



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell Resource Area

P.O. Drawer 1857

Roswell, New Mexico 88202-1857

Statement Accepting Responsibilities for Operations

Operator Name: Harvey E. Yates Company
Street or Box: P.O. Box 1933
City, State: Roswell, New Mexico
Zip Code: 88202

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.: NMNM- 22642

Lease Name: YOUNG DEEP UNIT #39

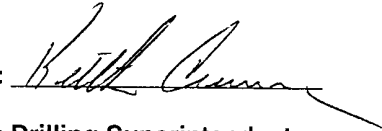
Legal description of land: 1980' FSL & 660' FEL, Sec 10, T18S, R32E, Lea County New Mexico

Formation(s) (if applicable): Morrow

Bond Coverage: Statewide Bond

BLM Bond File No.: NMB000317

Authorized Signature:



Title: Drilling Superintendent

Date: October 5 2006

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007**SUNDRY NOTICES AND REPORTS ON WELLS***Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

HARVEY E. YATES COMPANY

3a. Address

PO BOX 1933 ~ ROSWELL NM 88202-1930

3b. Phone No. (include area code)

505.623.6601

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1980' FSL & 660' FEL, UNIT I (NWSE) Sec 10, T18S, R32E

5. Lease Serial No.

NMNM-22642

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

YOUNG DEEP UNIT

8. Well Name and No.

YOUNG DEEP UNIT #039

9. API Well No.

#30-025-34551

10. Field and Pool, or Exploratory Area

YOUNG; MORROW

11. County or Parish, State

LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other request variance on
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	BOP for drlg 12 1/4"
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	intermediate hole

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Request for variance on BOP for drilling 12 1/4" intermediate hole.

Due to no pressured formations from base of surface to TD of 12 1/4" hole @ 3,350', we propose to:

1. Use a 3,000 psi BOP with one set of pipe rams and one set of blind rams.
2. Test the 13 3/8" casing and BOP stack to 1,000 psi with rig pump prior to drilling 13 3/8" casing shoe.
3. Change pipe rams to 8 5/8" rams prior to running 8 5/8" casing.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Jen Serrano

Title Eng. Tech

Signature

Date

10/02/2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

/s/ Don Peterson

FIELD MANAGER NOV 17 2006

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

DISTRICT I

1025 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1225 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025- 345 38179	Pool Code 87820	Pool Name Young; Morrow
Property Code 12993	Property Name YOUNG DEEP UNIT	Well Number 39
OGRID No. 10179	Operator Name HARVEY E. YATES COMPANY	Elevation 3830'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	10	18-S	32-E		1980	SOUTH	660	EAST	LEA

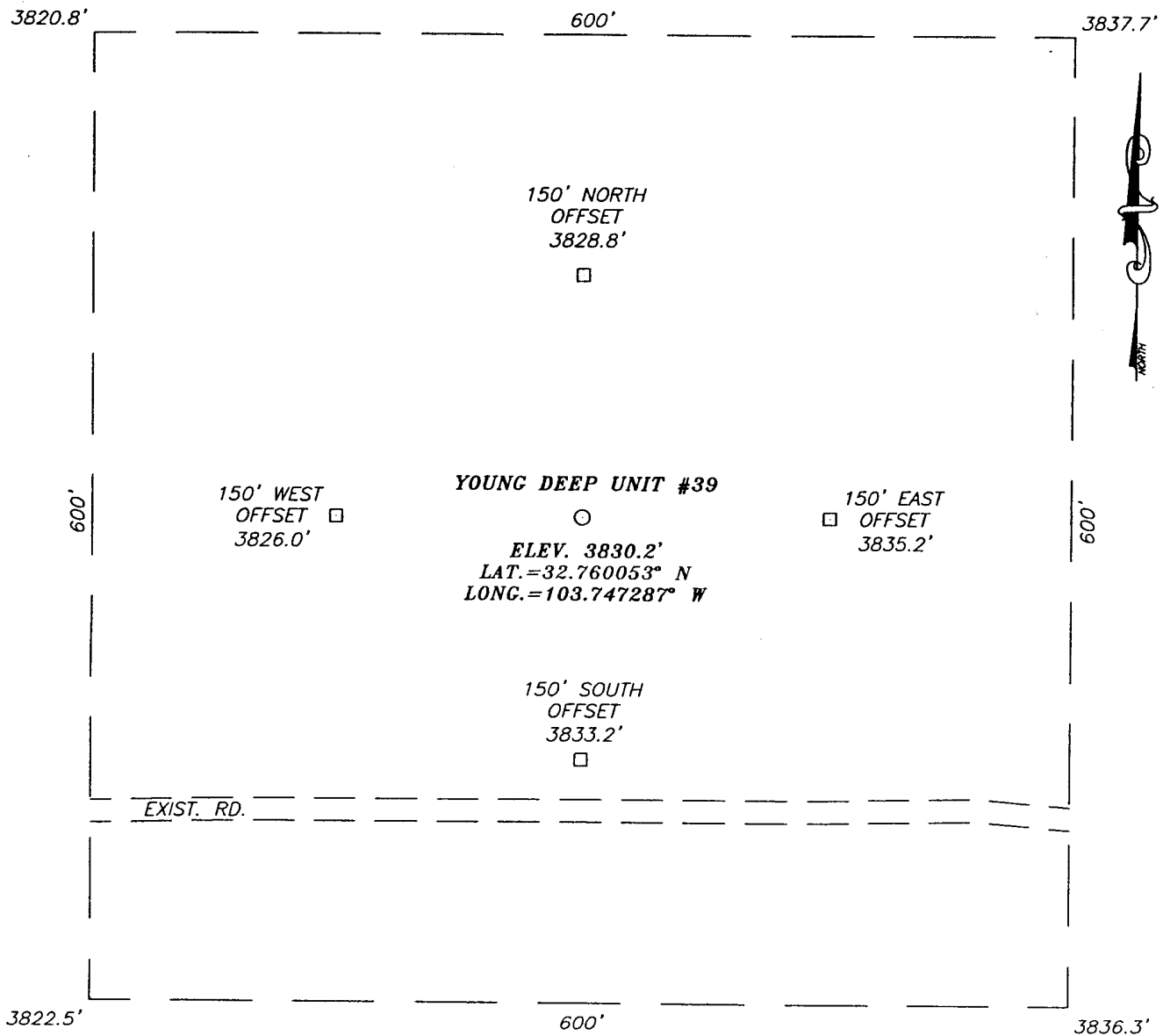
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320 acres	Joint or Infill	Consolidation Code	Order No.						

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

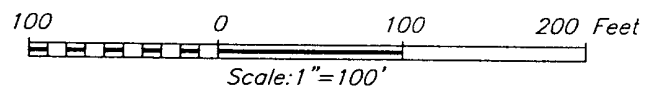
NM 16350-A 80 acres	NM 20971 80 acres	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom 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 by the division.</p> <p><i>Keith Cannon</i> Signature Date Keith Cannon, Drlg Supt. Printed Name</p>
<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=640716.7 N X=680158.1 E</p> <p>LAT.=32.760053° N LONG.=103.747287° W</p>		
NM 40454 80 acres	NM 22642 80 acres	<p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>AUGUST 08, 2006</p> <p>Date Surveyed MR</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Ronald J. Edson</i> 8/16/06 06:11.1271</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>

SECTION 10, TOWNSHIP 18 SOUTH, RANGE 32 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #529 AND
 CO. RD. #126 (MALJAMAR RD.), GO SOUTH ON
 CO. RD. #126 APPROX. 1.9 MILES. TURN LEFT
 AND GO SOUTHEAST APPROX. 0.9 MILES. TURN
 LEFT AND GO NORTHEAST APPROX. 1.3 MILES.
 TURN RIGHT AND GO SOUTH APPROX. 0.3 MILES.
 TURN LEFT AND GO EAST APPROX. 0.3 MILES.
 THIS LOCATION IS APPROX. 170 FEET NORTH.



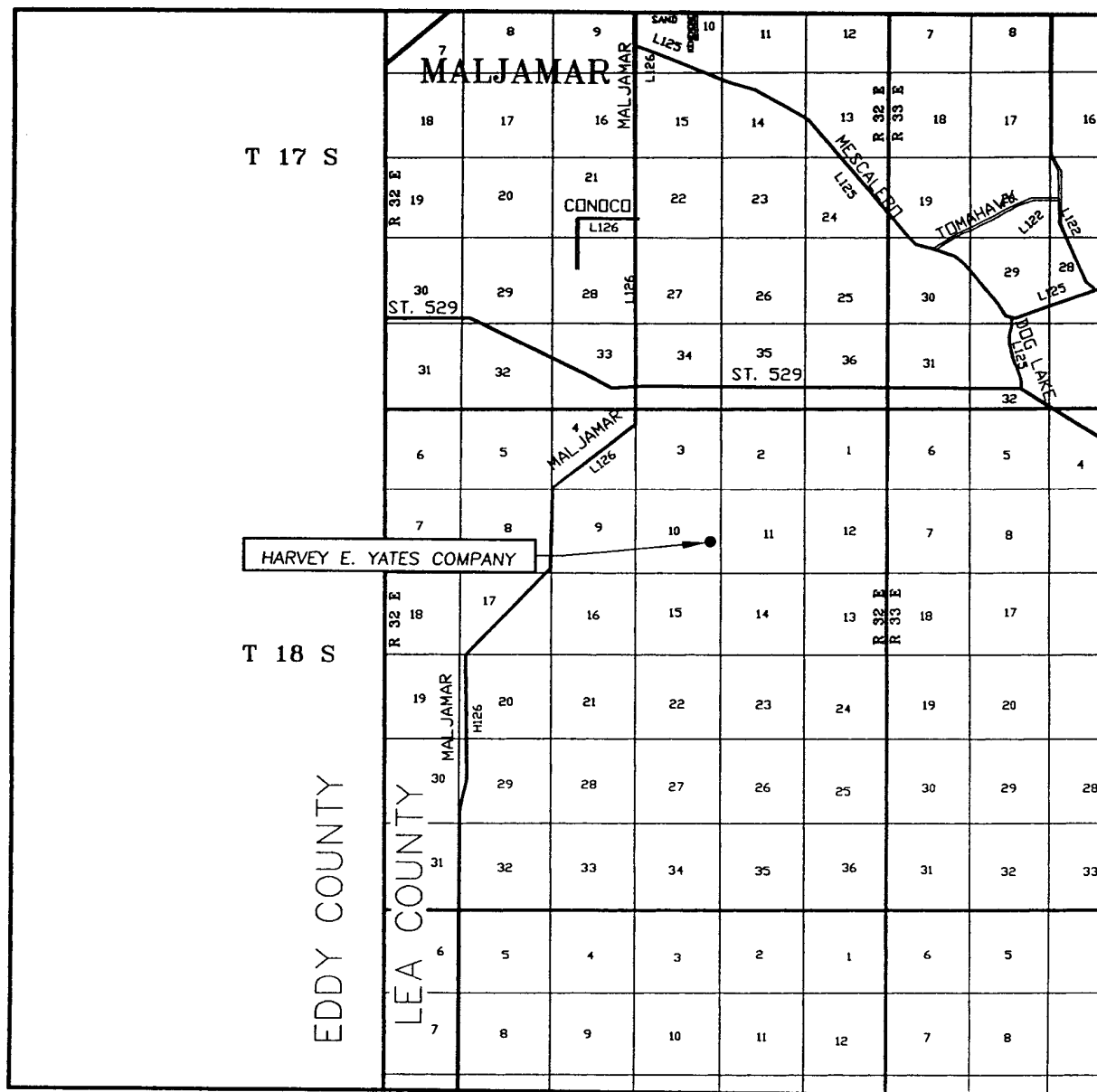
HARVEY E. YATES COMPANY

YOUNG DEEP UNIT #39
 LOCATED 1980 FEET FROM THE SOUTH LINE
 AND 660 FEET FROM THE EAST LINE OF SECTION 10,
 TOWNSHIP 18 SOUTH, RANGE 32 EAST, N.M.P.M.,
 LEA COUNTY, NEW MEXICO.

Survey Date: 08/09/06	Sheet 1 of 1 Sheets
W.O. Number: 06.11.1271	Dr By: M.R.
Date: 08/15/06	Disk: CD#6
06111271	Scale: 1"=100'

PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 353-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 10 TWP. 18-S RGE. 32-E

SURVEY N.M.P.M.

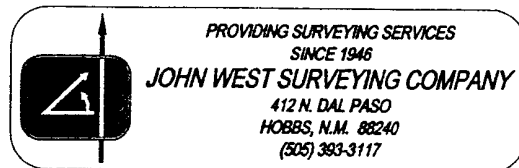
COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

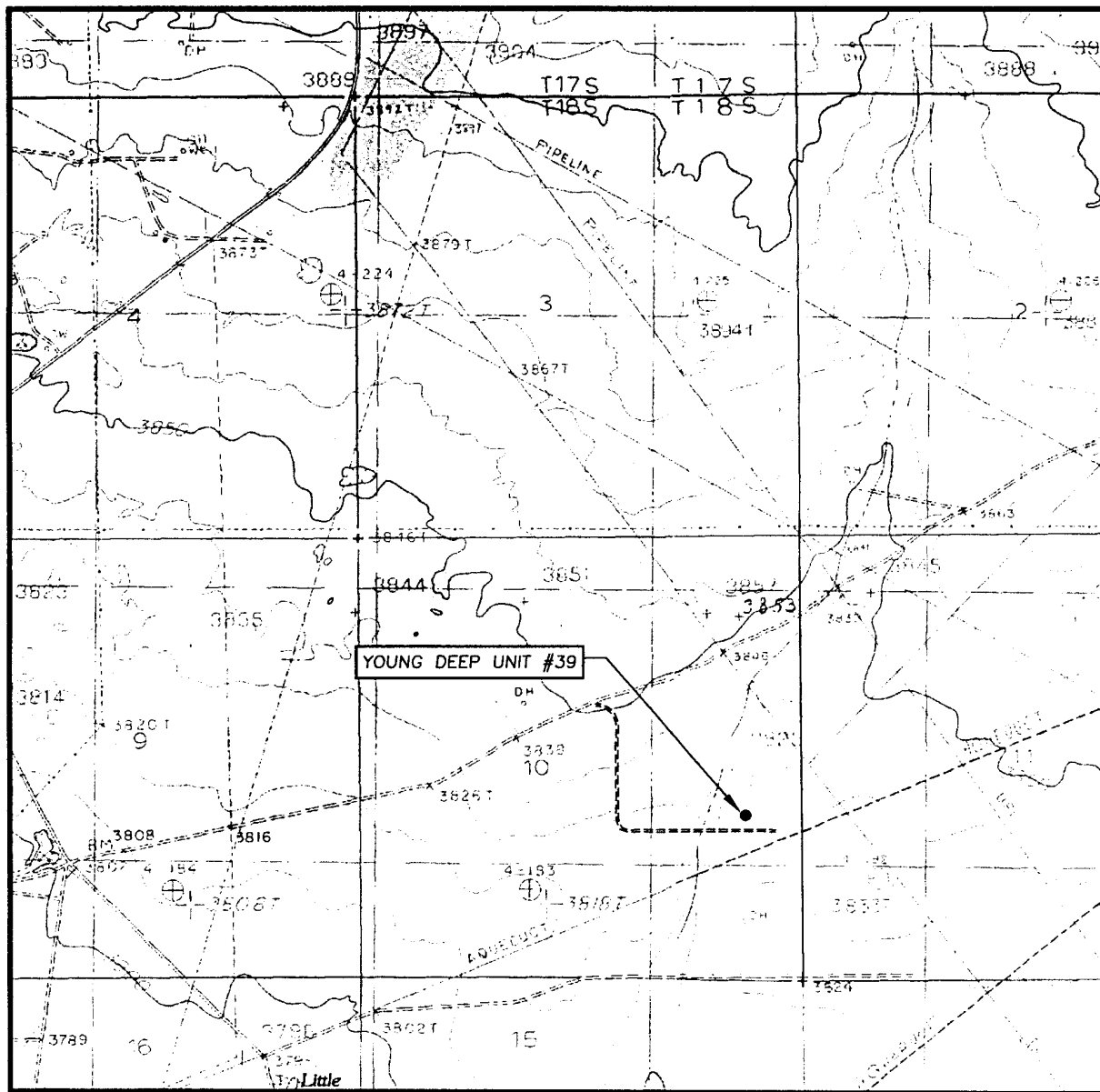
ELEVATION 3830'

OPERATOR HARVEY E. YATES COMPANY

LEASE YOUNG DEEP UNIT



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:

DOG LAKE, N.M. - 10'

MALJAMAR, N.M. - 10'

SEC. 10 TWP. 18-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

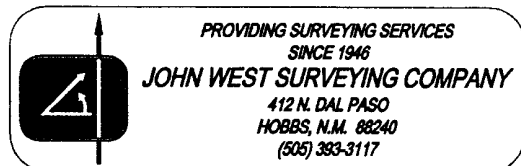
DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3830'

OPERATOR HARVEY E. YATES COMPANY

LEASE YOUNG DEEP UNIT

U.S.G.S. TOPOGRAPHIC MAP
DOG LAKE, N.M.



Application
Harvey E. Yates Company
YOUNG DEEP UNIT #39
1980' FSL & 660 FEL
Sec. 10, T18S, R32E
Lea County, New Mexico

In conjunction with Form 3160-3, Application For Permit To Drill Or Deepen subject well, Harvey E. Yates Company submits the following ten items of pertinent information in accordance with Onshore Oil & Gas Order No. 10.

1. Geologic Name of Surface Formation:
Quaternary Alluvium and Bolson deposits

2. Estimated Tops of Significant Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Rustler	1225'
Yates	2785'
Seven Rivers	3200'
Bowers	3650'
Queen	3925'
Penrose	4175'
Grayburg	4500'
Premier	4175'
San Andres	4975'
Delware	5260'
Bone Spring	6500'
1 st Sand	8100'
B-Zone	8325'
2 nd Sand	8850'
C-zone	9340'
3 rd Sand	9410'
Wolfcamp	9690'
Penn Shale	10,800'
Strawn	11,550'
Atoka	11,850'
Morrow Clastics	12,240'
Barnett	12,850'
PTD	12950'

3. Estimated Depths at which Water, Oil, or Gas Formations are expected:

<u>Formation</u>	<u>Depth</u>	<u>Remarks</u>
BSPG sand	6500'	

4. Proposed Casing Program:

Hole size	Grade, size Csg	Wt/ft	Depth	Quantity of cement
17 1/2"	13 3/8 J-55	54.5#	400'	circ to surface
12 1/4"	8 5/8" J-55	32.0#	3300'	circ to surface
7 7/8"	5 1/2" N-80 & P-110	17.0#	12,950'	cmt up into 8 5/8 csg

5. Pressure Control Equipment:
This well will be 5M BOP

6. Drilling Fluid Program:

0' - 400' Fresh water w/ paper & Shale guard. MW 9.0 Vis 31
400' - 1225' Fresh water w/ paper & shale guard. into top of rustler
1225' - 3300' Brine water w/ paper & Shale guard MW 10.0 Vis 31
3300' - 9650' Fresh water, paper, Actguard & Ammonia Nitrate
9650 - 12,400' Mud up w/ Barazan , 30-60,00 Chlorides, MW 9.6-9.8, Vis 34, WL 5- 10
Mud Program Subject to change due to hole conditions.

7. Auxiliary Equipment: N/a

8. **Testing, Logging, & Coring Program:**
Mud log, 2 DST- Possible, Platform Express w/HALS, BHC Sonic and Rotary Sidewall Coring.
9. **Abnormal Conditions, Pressures, Temperature, or Potential Hazards:**
No abnormal conditions are anticipated in this well bore.
9. **Anticipated Starting Date & Duration of Operation:**
The anticipated starting date is set for as soon as possible after examination and approval of all drilling requirements.
Duration of this project will be approximately 50 days from start of
Construction of drilling pad until finish of completion operations

Surface Use Plan
Harvey E. Yates Company
YOUNG DEEP UNIT #39
1980' FSL & 660' FEL
Section 10, T18S, R32E
Lea County, New Mexico

1. Existing Roads:

Exhibit A is a portion of a New Mexico map showing the location of the proposed location. The location is approximately 10 miles South of , Maljamar NM. Leave Artesia on US 82 & travel east to junction 529. Go southeast to m.m 7 Turn South on 126 Go 1.6 miles & turn left. Go 0.9 miles turn left. Go 1.6 miles turn left into location.

2. Planned Access Roads:

0.1 Miles new road will be built to access this location come in from the south

3. Location of Existing Wells:

See EXHIBIT B From the surveying company / vicinity map

4. Location of Tank Batteries, Electric Lines, Etc:

In the event a producing well is drilled, a tank battery will be built on the location.

5. Location and Type of Water Supply:

Water will be obtained from commercial sources.

6. Source of Construction Material:

We will use materials from reserve pit or a State, BLM approved pits to build the location.

7. Methods of Handling Waste Disposal:

Waste will be handled in an approved manner. The wellsite will be cleaned of all waste within 30 days of final completion of the well.

8. Ancillary Facilities:

N/A

9. Wellsite Layout:

a. EXHIBIT D shows the relative location and dimensions of the well pad, reserve pits, and major rig components.

b. The land is relatively flat with sandy soil and sand dunes.

c. The pad and pit area have been staked.

10. Plan for Restoration of the Surface:

a. After drilling and completion operations are completed, all equipment and other materials not needed for further operations will be removed. Pits will be back filled and the location cleaned of all trash to leave the wellsite as pleasant in appearance as possible.

b. If the proposed operation is nonproductive, all restoration and/or vegetation requirements of the BLM will be complied with, and will be accomplished as quickly as possible. All pits will be filled and leveled within 90 days after abandonment.

11. Other Information:

a. The mineral and surface owner is the Federal Government, Grazing leasing Williams & Son had been contacted.

b. The topography consists of sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.

c. There are no ponds, lakes, or rivers in this area.

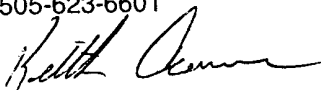
d. An Archaeological Survey has been made and a copy has been sent to the Carlsbad BLM office. There is no evidence of any significant archaeological, historical, or cultural sites in the area. Further, there are no occupied dwellings or windmills in the area.

e. Should any incidental oil be recovered during testing of this well, this oil will be considered waste oil and not sellable due to contamination by drilling and/or completion fluids.

12. Operator's Representative:

I 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 currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; that the work associated with operations proposed herein will be performed by Harvey E. Yates Company 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.

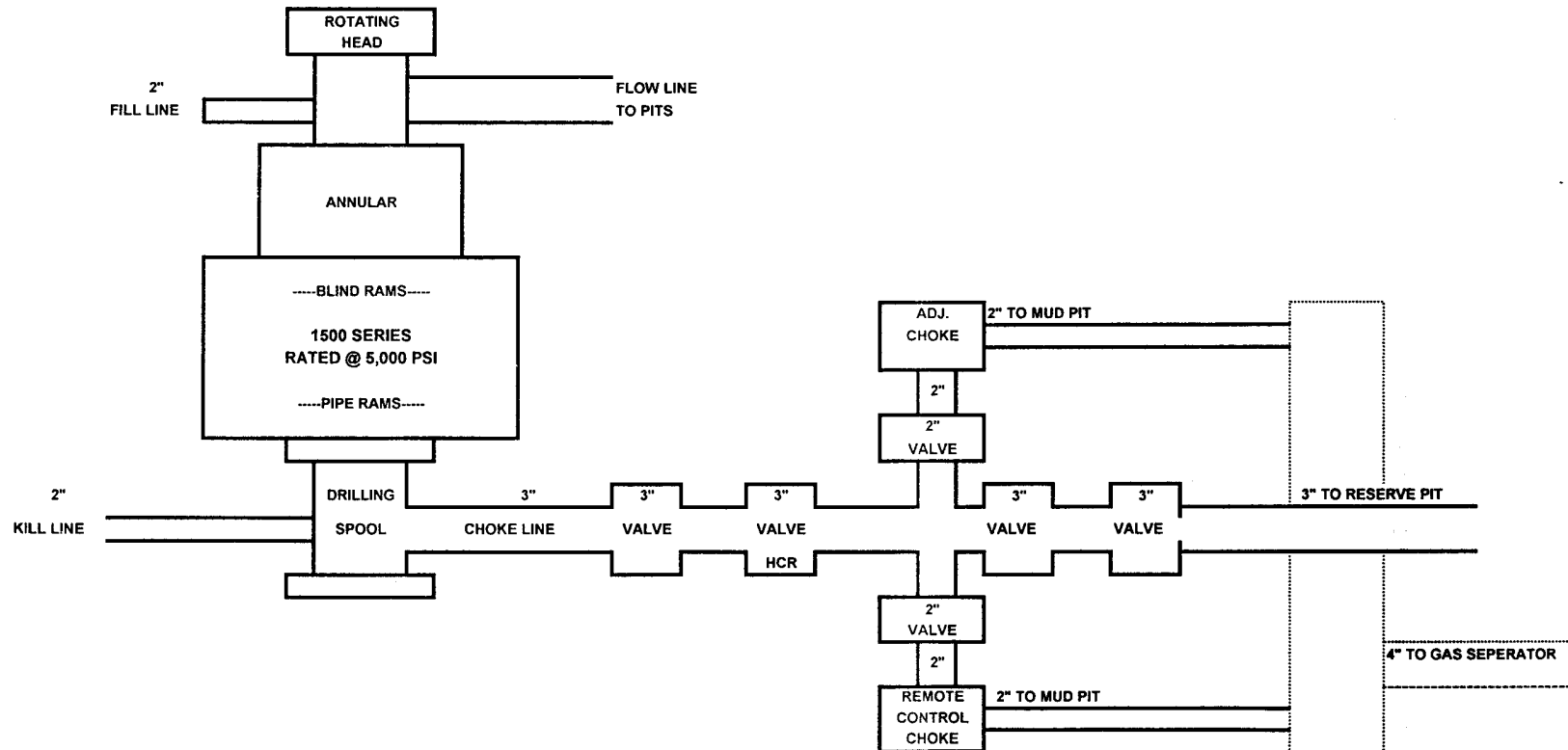
Keith Cannon, Drilling Superintendent
Harvey E. Yates Company
P.O. Box 1933
Roswell, NM
505-623-6601



OCTOBER 5 2006

EXHIBIT "C" BOP STACK

YOUNG DEEP UNIT #39
1980' FSL & 660' FEL
Sec. 10, T18S, R32E
Lea Co. N.M.



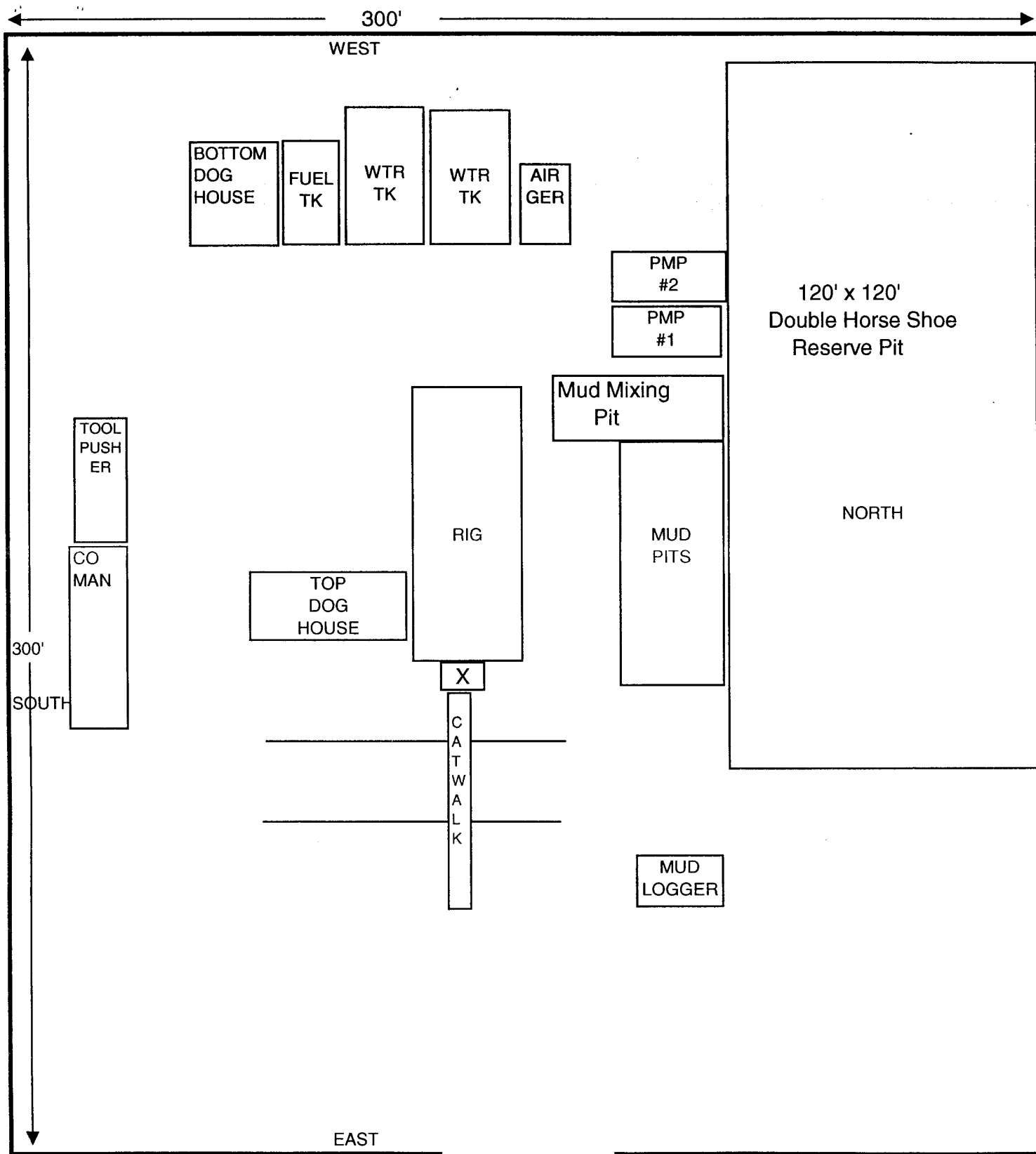
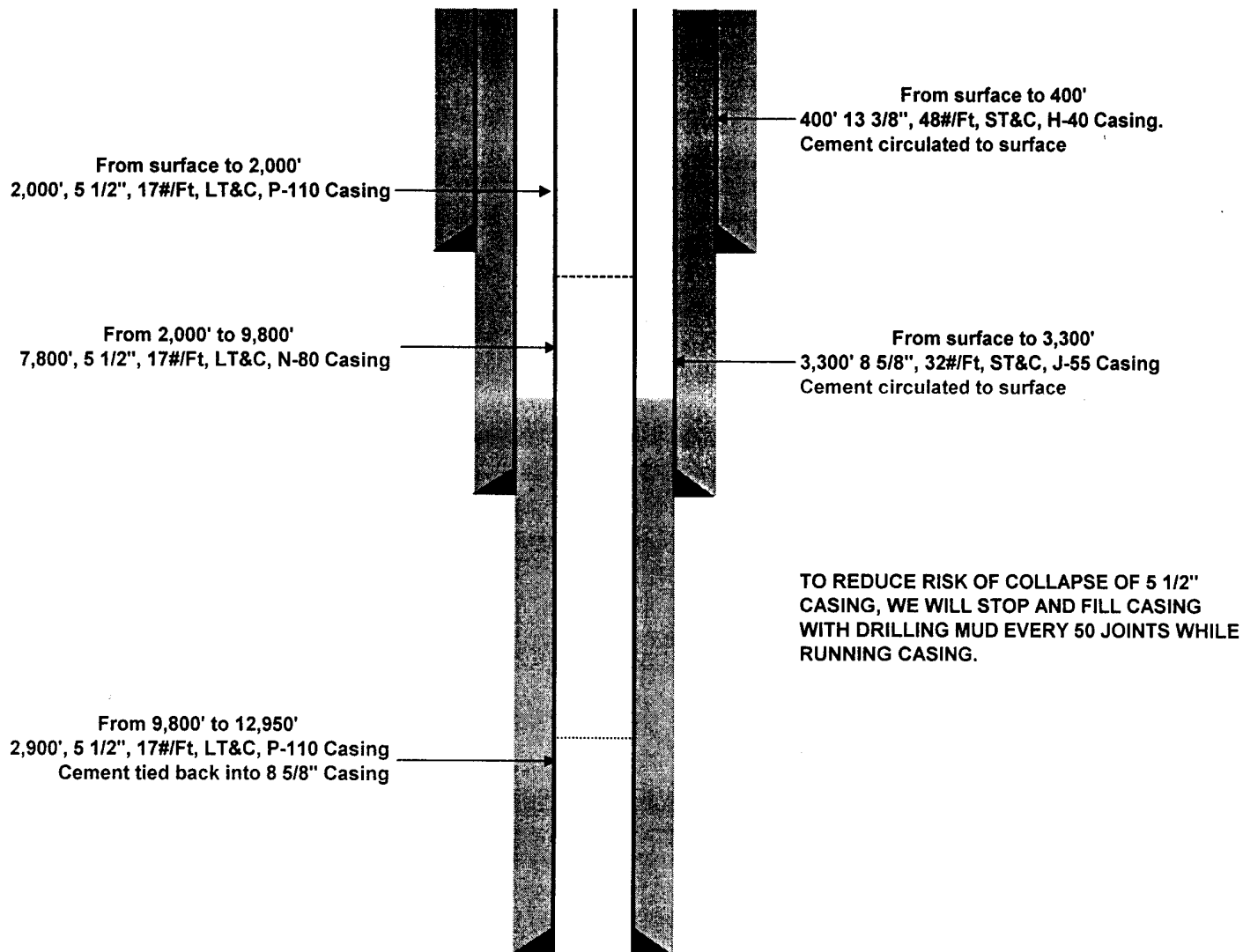


EXHIBIT "D" LOCATION DIAGRAM
YOUNG DEEP UNIT #39
1980' FSL & 660' FEL
Sec. 10, T18S, R32E
Lea Co. N.M.

EXHIBIT "E" CASING DESIGN

YOUNG DEEP UNIT #39
1980' FSL & 1660' FEL
Sec. 10, T18S, R32E
Lea Co. N.M.



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.

H₂S CONTINGENCY PLAN

DISCUSSION

GEOLOGICAL PROGNOSIS

IMPLEMENTATION:

THIS PLAN WITH ALL DETAILS IS TO BE FULLY IMPLEMENTED AFTER DRILLING TO INTERMEDIATE 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 INTERMEDIATE 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: | <ol style="list-style-type: none">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: | <ol style="list-style-type: none">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: | <ol style="list-style-type: none">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. DO 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 GREEN, 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.

5. AUXILIARY RESCUE EQUIPMENT

- 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 POSSIBLE FORMATIONS CONTAINING H2S.

- 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. SAFE BREATHING AREAS SET UP.
- 6. CONDITION FLAG ON LOCATION AND READY FOR USE.
- 7. H2S DETECTION SYSTEM HOOKED UP.
- 8. H2S ALARM SYSTEM HOOKED UP AND READY.
- 9. ALL RIG CREW AND SUPERVISORS TRAINED AS REQUIRED.
- 10. ALL OUTSIDE SERVICE CONTRACTORS ADVISED OF POTENTIAL H2S HAZARD ON WELL.
- 11. NO SMOKING SIGN POSTED.
- 12. HAND OPERATED H2S DETECTOR WITH TUBES ON LOCATION.

CHECKED BY: _____ DATE: _____

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 1 HOUR 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.

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 – 1.192) AND COLORLESS. IT FORMS AN EXPLOSIVE MIXTURE WITH AIR BETWEEN 4.3 AND 46.0 PERCENT BY VOLUME. HYDROGEN SULFIDE IS ALMOST AS TOXIC AS HYDROGEN CYANIDE AND IS BETWEEN FIVE AND SIX TIMES MORE TOXIC THAN CARBON MONOXIDE. TOXICITY DATA FOR HYDROGEN SULFIDE AND VARIOUS OTHER GASES ARE COMPARED IN TABLE I. PHYSICAL EFFECTS AT VARIOUS HYDROGEN SULFIDE EXPOSURE LEVELS ARE SHOWN IN TABLE II.

TABLE I
TOXICITY OF VARIOUS GASES

COMMON NAME	CHEMICAL FORMULA	SPECIFIC GRAVITY (SC=1)	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	1.18	10 PPM	250 PPM/HR	600 PPM
SULFUR DIOXIDE	SO ₂	2.21	5 PPM	-	1000 PPM
CHLORINE	CL ₂	2.45	1 PPM	4 PPM/HR	1000 PPM
CARBON MONOXIDE	CO	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 ABOVE 5% IN AIR	

- 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 WILL CAUSE DEATH WITH SHORT-TERM EXPOSURE.
- 3) LETHAL CONCENTRATION – CONCENTRATION THAT WILL CAUSE DEATH WITH SHORT-TERM EXPOSURE.

TOXIC EFFECTS OF HYDROGEN SULFIDE

TABLE II
PHYSICAL EFFECTS OF HYDROGEN SULFIDE

PERCENT (%)	PPM	CONCENTRATION GRAINS 100 STD. FT ³ *	PHYSICAL EFFECTS
0.001	10	00.65	Obvious and unpleasant odor.
0.002	20	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 rescued promptly.
0.100	1000	64.30	Unconscious at once; Followed by death within minutes.

*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 HAT 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. ROUTINELYUSED SCBA'S SHALL BE COLLECTED, CLEANED AND DISINFECTED AS FREQUENTLY AS NECESSARY TO INSURE PROPER PROTECTION IS PROVIDED.

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.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Harvey E Yates Co
Well Name & No. Young Deep Unit # 39
Location: 1980' FSL, 660' FEL, SEC 10, T18S, R32E, Lea County, NM
Lease: NM-22642

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:
 - A. Spudding
 - B. Cementing casing: 13 3/8 inch 8 5/8 inch 5 1/2 inch
 - C. BOP tests
2. A Hydrogen Sulfide (H₂S) Drilling Plan should be activated prior to drilling into the Queen Formation. A copy of the plan shall be posted at the drilling site.
3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.
7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

II. CASING:

1. The 13 3/8 inch surface casing shall be set at approximately 400 feet, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 8 5/8 inch intermediate casing is circulate cement to the surface.
4. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend upward a minimum of 200 feet above the base of the intermediate casing string. The 5 1/2 inch 17# N-80 shall not be set any lower than 12300 feet.
5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 3/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be 2000 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8 5/8 inch casing shall be 5000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- A variance to test the 13 3/8 inch casing, BOP and BOPE to the reduced pressure of 1000 psi with the rig pumps is approved.

- The tests shall be done by an independent service company.

- The results of the test shall be reported to the appropriate BLM office.

- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp Formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

1. Recording pit level indicator to indicate volume gains and losses.

2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.

3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.

Engineering may be contacted at 505-706-2779 for variances if necessary.

Fwright 11/02/06

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

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

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☐

Operator: HERVEY E. YATES COMPANY Telephone: (505) 623-6601 e-mail address: kcannon@heycoenergy.co		
Address: P.O. BOX 1933 ROSWELL N.M. 88202		
Facility or well name: YOUNG DEEP UNIT #39 API #: 30-025- 335 ³⁹¹⁷⁹ U/L or Qtr/Qtr UNIT I		
Sec 10. T18S, R 32E		
County: LEA	Latitude 32.760053	Longitude 103.747287 NAD: 1927 X 1983 <input type="checkbox"/>
Surface Owner: Federal X State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
Pit	Below-grade tank	
Type: Drilling X Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined X Unlined <input type="checkbox"/> Liner type: Synthetic X Thickness 12mil Clay <input type="checkbox"/> Pit Volume 2500bbl	Volume: Type of fluid: Construction material: Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why no: _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) <u>(10 points)</u> (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)
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 points) (0 points)
Ranking Score (Total Points)		<u>10</u>

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility: _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 11/21/2006

Printed Name/Title KEITH CANNON DRILLING SUPERINTENDENT

Signature

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title GARY W. WINK/STAFF MGR

Signature

Date

11/22/06