

OPER. OGRID NO. 10155

PROPERTY NO. 17443

TEC-2000 approved.
Budget Bureau No. 1004-0136
Expires: December 31, 1991

UNITED STATES
DEPARTMENT OF
BUREAU OF LAND MANAGEMENT

POOL CODE 53805

EFF. DATE 9/1/95

APPLICATION FOR PERMIT API NO. 30-025-33085

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER

SINGLE ZONE ☐

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Harvard Petroleum Corporation

3. ADDRESS AND TELEPHONE NO.

P. O. Box 936

Roswell, NM 88202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

660' FSL & 2100' FEL

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

34 miles SE of Carlsbad, NM

10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any)

540'

16. NO. OF ACRES IN LEASE

1440

17. NO. OF ACRES ASSIGNED TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

6,550'

19. PROPOSED DEPTH

9900'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

3611' GL

22. APPROX. DATE WORK WILL START*

Nov. 15, 1995

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14 3/4"	11 3/4" WC-40	42.0#	550'	Circ 400 sx "C"
11"	8 5/8" WC-50	24 & 32#	4500' TIE	1200 35/65 Poz + 150 "H"
7 7/8"	5 1/2" K-55	15.5-17#	9900' BACK	1400 sx 35/65-50/50 POZ

Mud Program:

0' - 550': Fresh water w/Gel spud mud:
550' - 4500': Cut Brine w/gel & lime:
4500' - 9900': Fresh water w/gel & starch:

Mud Wt.

8.4-9.0 ppg
9.0-10. ppg
8.4-8.8 ppg

Vis.

32-38
28-30
29-31

W/L Control

No W/L control
No W/L control
W/L cont. 10-15cc

BOP Program:

A 10" 3000 psi wp Shaffer Type "E" double ram BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested before drilling out with 7 7/8". BOP will be tested daily.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Agent for:

July 26, 1995

SIGNED

George W. Smith

TITLE

Harvard Pet. Corp.

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval 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.
CONDITIONS OF APPROVAL, IF ANY:

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

APPROVED BY

George W. Smith

TITLE

DATE

AUG 21 1995

*See Instructions On Reverse Side

RECEIVED

AUG 2 1954

U.S. DEPT. OF JUSTICE
OFFICE

District I
PO Box 1988, Hobbs, NM 88241-1988
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-33085		Pool Code 53850	Pool Name Friste Draw West S. Sand Dunes BS
Property Code 17443	Property Name James Federal "19"		Well Number 1
OGRID No. 10155	Operator Name Harvard Petroleum Corporation		Elevation 3611

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	19	23 S	32 E		660	South	2100	East	Lea

11 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

12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 Order No.
--------------------------	--------------------	-----------------------	--------------

535 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

<p>16</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>George R. Smith</i></p> <p>Signature George R. Smith, agent for:</p> <p>Printed Name Harvard Petroleum Corporation</p> <p>Title July 26, 1995</p> <p>Date</p>	
	<p>18 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>July 12, 1995</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor: R. P. Ratton</p> <p>NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR Certificate Number 8112</p>	
	<p>NM-0559539 Amoco Prod. Co.</p>	
	<p>3606.14 3620.28 3615.75 3618.85</p>	

APPLICATION FOR DRILLING

HARVARD PETROLEUM CORPORATION
James Federal "19", Well No. 1
660' FSL & 2100' FEL, Sec. 19-T23S-R32E
Lea County, New Mexico
Lease No.: NM-0559539
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Harvard Petroleum Corporation submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	1120'	Lower Brushy Canyon	8130'
Top/Salado	1470'	Bone Spring	8470'
Delaware	4640'	Bone Spring Sand	8560'
Cherry Canyon	5560'	T.D.	9900'
Brushy Canyon	7125'		
3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 350'.

Oil: Possible in the Delaware 4763'-8500' and Bone Spring below 8500'.

Gas: None.
4. Proposed Casing Program: See Form 3160-3 and page 2 this report.
5. Proposed Control Equipment: See Form 3160-3 and Exhibit "E".
6. Mud Program: See Form 3160-3.
7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.
8. Testing, Logging, and Coring Program:

Drill Stem Tests: None unless conditions warrant.

Logging: T.D. to surface casing: CNL-LDT, DLL and Gamma Ray

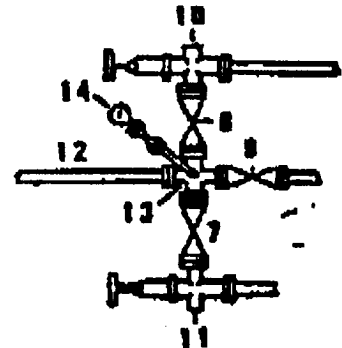
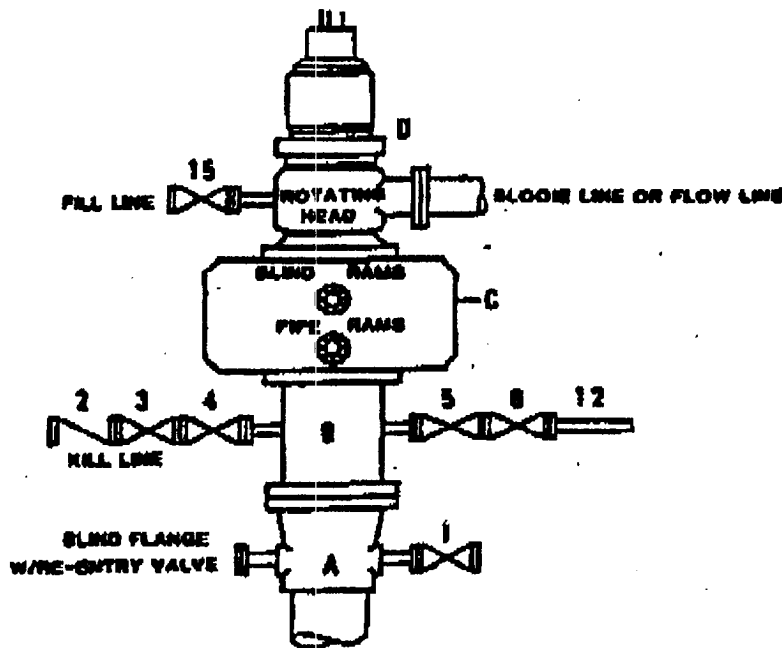
Coring: None.
9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated BHP = 4150 psi (Exc. Hole), Temp. = 155°. No H₂S problem in previous area wells.
10. Anticipated starting date: December 15, 1995.
Anticipated completion of drilling operations: Approximately 45 days.

Ref. Par. 4: PROPOSED CASING AND CEMENTING PROGRAM:

Hole Size	Casing Size,Grade	Weight/ft	Depth Set	Quantity of Cement
14 3/4"	11 3/4" WC-40	42.0#	550'	Circ. 400 sx "C"
11"	8 5/8" WC-50	24.0#	2500'	Circ. 1200 Sx 35/65 Poz + 150 sx "H"
"	" WC-50	32.0#	2000'	
7 7/8"	5 1/2" K-55	15.5#	7500'	7000'-3500': 700 sx 35/65 Poz
"	" "	17.0#	1700'	T.D.-7000': 700 sx 50/50 Poz
"	" L-80	17.0#	700'	

DRILLING CONTROL
CONDITION II-B 3000 W.P.
FOR AIR DRILLING OR
WHERE NITROGEN OR AIR BLOWS ARE EXPECTED

H₂S TRIM REQUIRED
 YES _____ NO X



DRILLING CONTROL

MATERIAL LIST - CONDITION II - B

- | | |
|----------------|---|
| A | Wellhead |
| B | 3000# W.P. drilling spool with a 2" minimum flanged outlet for kill line and 1" minimum flanged outlet for choke line. |
| C | 3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where sub-structure height is adequate, 2 - 3000# W.P. single ram type preventers may be utilized). |
| D | Rotating Head with fill up outlet and extended Blow Line. |
| 1, 3, 4, 7, 8, | 2" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve. |
| 2 | 3" minimum 3000# W.P. back pressure valve. |
| 5, 6, 9 | 1" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve. |
| 12 | 1" minimum schedule 80, Grade "B", seamless line pipe. |
| 13 | 2" minimum x 1" minimum 3000# W.P. flanged cross. |
| 10, 11 | 2" minimum 3000# W.P. adjustable choke bodies. |
| 14 | Cameron Mud Gauge or equivalent (location optional in choke line). |
| 15 | 2" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Torc Plug valve. |

EXHIBIT "E"
 HARVARD PETROLEUM CORPORATION
 James Federal "19", Well No. 1
 BOP Specifications

SCALE	DATE	ESS NO	DRS NO
DRAWN BY			
CHECKED BY			
APPROVED BY			