A at						D-06-F
Form 3160-3 (August 1999)	FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000					
U DEPARTM	5. Lease Serial No.					
BUREAU	NM-0559539					
APPLICATION FOR	PERMIT TO DR		EENTER		6. If Indian, Allottee	e or Tribe Name
la. Type of Work: 🔽 DRILL		1				eement, Name and No.
1b. Type of Well: 🔽 Oil Well 🗖 Gas We	II 🔲 Other		ngle Zone 🔲 Multi	ple Zone	8. Lease Name and W	deral. Well No. 5.
2. Name of Operator				•	9. API Well No.	
Harvard Petroleum Corp.			<10155	>	30-025	38039
3a. Address		3b. Phone No	. (include area code)		10. Field and Pool, or	Exploratory 25 (945)
P.O. Box 936 Roswell, NM 88202		505/ 523-			Triste Draw Delay	and the second
4. Location of Well Report location clearly and At surface 1980 FNL & 400		ny State requi	La VIIII	A FEL		r Blk. and Survey or Area
At proposed prod. zone same RD. alla	hils is lat	1780	UN TSA	100	Sec. 19-R23	3S-T32E
14. Distance in miles and direction from nearest to	own or post office*	<i>4_6_1</i>			12. County or Parish	13. State
36.5 miles east of Carlsbad, NM					Lea	• NM
 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any) and the second transformer of the second se	400'		acres in lease		g Unit dedicated to this	well
18. Distance from proposed location*		1440 19. Propose	d Depth	40 20. BLM/E	BIA Bond No. on file	
to nearest well, drilling, completed, applied for, on this lease, ft.	1060'	8700'		NM-110		
21. Elevations (Show whether DF, KDB, RT, G 3676 GL	L, etc.)		imate date work will s e 15, 2006	itart*	23. Estimated duration3 - 4 weeks	on
		24. Atta	chments 🕻	arkbo d	Controlled Water	Bash.
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on Nat SUPO shall be filed with the appropriate Fores 		Name	Item 20 above). 5. Operator certific 6. Such other site authorized offic (Printed/Typed)	cation. specific info	·	as may be required by the
Title Agent for: Harvard Petroleum Corp.	mith	Geo	rge R. Smith	·		1/12/06
Approved by (Signature)/ Tony J. Herr		Name	: (Printed/Typed)	_	<u></u>	Date
	en			<u> Fony J</u>	Herrell	JUL 2 8 2006
FIELD MANAGE		Offic	CARLSEA		LD OFFICE	
Application approval does not warrant or certify th operations thereon. Conditions of approval, if any, are attached.	at the applicant holds	regal of equita		-	ROVAL FO	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. States any false, fictitious or fraudulent statements	Section 1212, make i or representations as t	t a crime for a to any matter t	ny person knowingly a within its jurisdiction.	and willfully	to make to any departm	nent or agency of the United
*(Instructions on reverse)			1/			
Lease Responsibility Statemer restrictions concerning operati	ons conducted on APPROVAL	the leased	land or portion the	reof.	14151617787520 70151617787520 70151617787520	E2
Witness Surface Casing	SPECIAL ST ATTACHED	IPULAT	IONS			125

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form [*] 3160-5 (August 1999) ²	UNITED STATES DEPARTMENT OF THE INTERIOR	FORM APPROVED OMB No. 1004-0135 Expires November 30, 2000
	BUREAU OF LAND MANAGEMENT	5. Lease Serial No.
	NDRY NOTICES AND REPORTS ON WELLS	NM-0559539
abandone	e this form for proposals to drill or to re-enter an d well. Use Form 3160-3 (APD) for such proposals.	6. If Indian, Allottee or Tribe Name
1. Type of Well	mainful senies of the dimension on sever even and the	7. If Unit or CA/Agreement, Name and/or No.
Oil Well Gas We	11 🔲 Other	8. Well Name and No.
2. Name of Operator		James 19 Federal, Well No. 5
Harvard Petroleum Corp.		9. API Well No.
3a. Address	3b. Phone No. (include area code)	30-025-38039
P.O. Box 1996 Roswell,		10. Field and Pool, or Exploratory Area
4. Location of Well (Footage,	Sec., T, R., M., or Survey Description)	West Triste Draw Delaware
	Sec. 19-T23S-R32E New Location Sec. 19-T23S-R32E Old Location	Lea
12. CHECK	APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE,	REPORT, OR OTHER DATA
TYPE OF SUBMISSION	N TYPE OF ACTION	
Notice of Intent	Acidize Deepen Production (St Alter Casing Fracture Treat Reclamation	Well Integrity
Subsequent Report	Casing Repair New Construction Recomplete	Other Change APD
Final Abandonment Noti	Ce Change Plans Plug and Abandon Temporarily and Abandon ce Convert to Injection Plug Back Water Dispose	
If the proposal is to deepe Attach the Bond under wi following completion of t testing has been complete	npleted Operation (clearly state all pertinent details, including estimated starting date on n directionally or recomplete horizontally, give subsurface locations and measured and hich the work will be performed or provide the Bond No. on file with BLM/BIA. Req he involved operations. If the operation results in a multiple completion or recompletion ed. Final Abandonment Notices shall be filed only after all requirements, including rec ready for final inspection.)	true vertical depths of all pertinent markers and zones. uired subsequent reports shall be filed within 30 days in in a new interval, a Form 3160-4 shall be filed once
Harvard Petroleum Corp. is terrain problems.	requesting to change the proposed APD, dated 1/12/06, to reflect a 200 foot m	ove to the north as requested by BLM do to

ok	6,2610	6
	GR.L.	

 14. 1 hereby certify that the foregoing is true and correct Name (Printed Typed) 	1	· · ·		<u></u>			
George R. Smith	Title	Agent					
Signature Deorge & Smith	Date	6/16/06					
THISISPACEBOR	Al COL	Sinthe option	sidse of				
Approved by (Signature) /s/ Tony J. Herrell –		Name (Printed/Typed)	/s/ Tony	J. HEFE		MANAG	EP
Conditions of approval, if any, are attached. Approval of this notice does not was certify that the applicant holds legal or equitable title to those rights in the subject which would entitle the applicant to conduct operations thereon.	rrant or	Office			Date	282008	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for a States any false, fictitious or fraudulent statements or representations as to any matter	any pers within i	on knowingly and ts jurisdiction.	willfully to mal	te to any departr	nent or ag	ency of the Ur	ited

(Continued on next page)

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District I					State of	New Mexico				Form C-
1625 N. French D	r., Hobbs, I	NM 88240	I	Energy.		tural Resources Dep	artment		Re	vised June 10, 2
District II 1301 W. Grand A	venue, Art	esia, NM 8821				ATION DIVISIO		Submit to	Approp	riate District Of
District III						St. Francis Dr.				tte Lease - 4 Co
1000 Rie Brazes !	Rd., Aztec,	NM 87410				, NM 87505			F	ee Lease - 3 Co
<u>District IV</u> 1220 S. St. Franc	is Dr., Sant	a Fe, NM 875	05			,				IENDED REPO
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	API Numi		7	۳۵۰ ² 59945	I Code /	Talat		ol Name	Veet	
¹ Property		3 <u>8039</u>		59945		erty Name	e Draw D	eraware,		• Well Number
174	43					9 FEDERAL				5
'OGRII	Na.	+		<u>. </u>	* Ope	stor Name			+	'Elevation
1015	55			HAJ	RVARD PE	ROLEUM CO	RP.			3678
						ace Location				
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UL or lot no.	Section	Township	Range	Lot Id		North/South line	Feet from the		t line	County
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40	1 I									
						08	contra	act with an owner of s	uch a working	this location pursuant to interest, or to a voluntar, ing order heretafore enter
						*******	IXXXXX	vision.		
						<u> </u>		lorget	Am	<u></u>
						Č.	Signa	iture	-	Date
							400 Ge	orge R.	<u>Smith</u>	, agent
						R	R R			
						LAT N32.29				
			·····		<u> </u>	LON W103.7	0652 2 XXXXX 18c	TIDVEVO		
						-	i he	reby certify that	the well l	ocation shown on l
							1			tes of actual survey
							maa	te by me or und	er my supe	rvision, and that th
							sam	e is true and co	rrect to the	e best of my belief.
							Jun	e 15, 2006		
								of Spotter R. R	00,	
							Sten		1	Surveyor:
							REGIS	5417	VEYOR	
							Cen DA	N R. REDEFES	SH BUB	5412

SUBMIT: IN-TRIPELIGATE- COUPE INSTRUCTIONS ON TRAVACES SUPE 1. Type of Well Oit Well Gas Well Other 8. Well Name and No. 2. Name of Operator 3b. Phone No. (include area code) 9. API Well No. 5 3. Address 3b. Phone No. (include area code) 9. API Well No. 5 9. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec. T. R., M. or Survey Description) 11. County or Parish, State 12. 1780' FNL & 400' FEL, Sec. 19-T23S-R32E New Location Lea 11. County or Parish, State 1780' FNL & 400' FEL, Sec. 19-T23S-R32E New Location TYPE OF ACTION Lea 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Image: Subsequent Report Acidize Deepen Production (Start/Resume) Wet Shut-Off Image: Subsequent Report Casing Repair New Construction Recomplete Other Image: Subsequent Report Casing Repair New Construction Recomplete or any opposed work and approximate duration the iffed only or recomplete horizontally, give subsafice locations and measured and rue vertical depths of all perinent matkers and zo following completion of the involved operations. [I the operation results in a multiple	orm 3160-5 (August 1999)	E Sundr	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DRY NOTICES AND REPORTS ON WELLS this form for proposals to drill or to re-enter an well. Use Form 3160-3 (APD) for such proposals.						FORM APPROVED OMB No. 1004-0135 Expires November 30, 2000 5. Lease Serial No. NM-0559539 6. If Indian, Allottee or Tribe Name		
^O Oil Well Gas Well Other ^S Well Name and No. ^I Name of Operator ^I James 19 Federal, Well No. 5 ^I Arvard Petroleum Corp. ^I James 19 Federal, Well No. 5 ^I Adverss ^I James 19 Federal, Well No. 5 ^I P.O. Box 1996 Roswell, NM 88202 ^I (505) 623-1581 Ext. 102 ^I Location of Well (Footage, Sec. 7, R., M., or Survey Description) ^I (505) 623-1581 Ext. 102 ^I Ro' FNL & 400' FEL, Sec. 19-T23S-R32E New Location ^I Lea ^I Ro' FNL & 400' FEL, Sec. 19-T23S-R32E New Location ^I Lea ^I Ro' FNL & 400' FEL, Sec. 19-T23S-R32E New Location ^I Lea ^I Ro' FNL & 400' FEL, Sec. 19-T23S-R32E New Location ^I Lea ^I Ro' FNL & 400' FEL, Sec. 19-T23S-R32E New Location ^I Lea ^I Subsequent Report ^A Aditize ^D Deepen ^I Subsequent Report ^A Aditize ^I Production (Start/Resume) ^I Subsequent Report ^C Casing Repair		a service and the service of the ser	RLIC	ATE - Cutor Instr	uct	lonsontavarse	side		7. If Unit or	CA/	Agreement, Name and/or No.
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P.O. Box 1996 Roswell, NM 88202 (505) 623-1581 Ext. 102 10. Field and Pool, or Exploratory Area 4. Location of Well (Footage, Sec., T. R., M., or Survey Description) 1780' FNL & 400' FEL, Sec. 19-T23S-R32E New Location 11. County or Parish, State 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Image: Construction of the involution the indeving or the involution of the involution of t	Harvard Pet	roleum Corp.							9. API Wel	l No	
P.O. Box 1996 Roswell, NM 88202 [303] 623-1381 Ext. 102 West Triste Draw Delaware 4. Location of Well (Footage, Sec., T. R., M., or Survey Description) I1. County or Parish, State I1. County or Parish, State 1780' FNL & 400' FEL, Sec. 19-T23S-R32E New Location Lea Lea 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION Subsequent Report Acidize Deepen Production (Start/Resume) Water Shut-Off Subsequent Report Casing Repair New Construction Recomplete Other If the proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration the Hob ond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed only after all requirements, including reclamation, have been completed, and the operation centration shall be filed only after all requirements, including reclamation, have been completed, and the operator determined that the site is ready for final inspection.) Harvard Petroleum Corp. is proposing to constuct a lease road from the James 19 Federal, Well No. 2 to the James 19 Federal, Well No. 5 and the James 20 Fed. #3. Autor the proposed access road is being cleared by Archaeological Survey Consultants, Box 2285, Roswell, NM 88202. See Exhibit See Exhibit	3a. Address					3b. Phone No. <i>(include</i>	area	code)			
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TYPE OF SUBMISSION TYPE OF ACTION Image: Subsequent Report Image: Acidize Deepen Production (Start/Resume) Water Shut-Off Image: Subsequent Report Image: Acidize Deepen Production (Start/Resume) Water Shut-Off Image: Subsequent Report Image: Casing Repair Image: New Construction Recomplete Other Image: Casing Repair Image: Subsequent Report Image: Change Plans Plug and Abandon Temporarily Abandon Image: Final Abandonment Notice Image: Convert to Injection Plug Back Water Disposal 3. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration the If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zo 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 do following completion of the involved operations. If the operation results in a multiple completion or recompleted normalities in a multiple completion in a new interval, a Form 3160-4 shall be filed only after all requirements, including reclamation, have been completed, and the operator determined that the site is ready for final inspection.) Harvard Petroleum Corp. is proposing to constuct a lease road from the James 19 Federal, Well No. 2 to the James 19 Federal, Well No. 5 and the James 20 Fed	1760 THE C	C 400 I EE , Sec. I	-125	5-N52E New Elecation					Lea		
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If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zo 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 d following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed on testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator determined that the site is ready for final inspection.) Harvard Petroleum Corp. is proposing to constuct a lease road from the James 19 Federal, Well No. 2 to the James 19 Federal, Well No. 5 and the Jame 20 Federal, Well No. 3. The proposed access road is being cleared by Archaeological Survey Consultants, Box 2285, Roswell, NM 88202. See Exhibit "A" for road layout on Topo map. The road will run east for 2200' to the powerline road at the section line, then 500' feet east to the James 20 Fed. #3.	🖵 Final Aba	indonment Notice		Convert to Injection		Plug Back		Water Disposal			
	If the propo Attach the following o testing has determined Harvard Petro 20 Federal, W "A" for road la	seal is to deepen dire Bond under which th completion of the inv been completed. Fin that the site is ready leum Corp. is prop ell No. 3. The prop ayout on Topo map	ctionall ne work olved o nal Aba for fina osing t posed a o. The i	y or recomplete horizonta c will be performed or pro operations. If the operation indonment Notices shall b al inspection.) to constuct a lease road access road is being cle road will run east for 22	lly, povide n respective from area 200'	give subsurface locatio e the Bond No. on file sults in a multiple comp led only after all requir m the James 19 Feder d by Archaeological 3 to the powerline roa	ns and with E pletion rement ral, W Surve d at th	measured and true BLM/BIA. Require or recompletion in s, including reclan /ell No. 2 to the J y Consultants, Bo he section line, th	armes 19 Fed ox 2285, Ros en 500' feet	leral swel east	all pertinent markers and zones. rts shall be filed within 30 days Form 3160-4 shall be filed once completed, and the operator has , Well No. 5 and the James I, NM 88202. See Exhibit

9L	
CL	6/26/00

14. I hereby certify that the foregoing is true and correct Name (PrintedlTyped)		
George R. Smith	Title	Agent
Signature Deorget Smith.	Date	6/20/06
THIS SPACE FOR FEDERA		STATE OFFICENSES CARAGE AND
Approved by (Signature) /s/ Tony J. Herrell		Name (Printed/Typed) /s/ Tony J. Herroweld MANAGER
Conditions of approval, if any, are attached. Approval of this notice does not war certify that the applicant holds legal or equitable title to those rights in the subject which would entitle the applicant to conduct operations thereon.	rant or t lease	ARLSBAD FIELD OFFICE JUL 2 8 2006
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for a States any false, fictitious or fraudulent statements or representations as to any matter of the statement o	ny perso within it	on knowingly and willfully to make to any department or agency of the United s jurisdiction.

(Continued on next page)



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APPLICATION FOR DRILLING

HARVARD PETROLEUM CORP. James 19 Federal, Well No. 5 1980 FNL & 400 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 Corp. 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	1020	Lower Brushy Canyon	8220
Salt	1470'	Bone Spring	8470'
Delaware	4640'	Bone Spring Sand	8560
Cherry Canyon	5660	T.D.	8700
Brushy Canyon	7300		

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

Water: Surface water between 100' - 300'.

Oil: Possible in the Delaware 4640–8500'and the Bone Spring below 8500'.

Gas: None expected.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2'	13 3/ 8 '	54.5#	J-55	ST&C	550	Circ. 400 sx"C"
10'	8 5/ 8 '	24.0#	J-55	ST&C	2,500	
10'	8 5/8 "	32.0#	J-55	ST&C	4,500'	Circ. 1200 sx 35/65 Poz +100 sx"H"
7 7/8'	5 1/2"	15.5#	K-55	LT&C	6,850	450 sx 35/65/ Poz + 100 sx"C"neat
7 7/8"	5 1/2"	15.5#	K-55	LT&C	8,700	400 sx 15/61/10 Poz-C-CSE, 2 stage

5. Proposed Control Equipment: A 10'3000 psi wp Shaffer Type'E'BOP will be installed on the 13 3/8' casing and operated as a 2M system. Casing and BOP will be tested with the rig pump before drilling out with 10'll Request waiver to test BOPE and the 8 5/8' casing to a maximum of 2000 psi wp in accordance with Onshore Oil & Gas Order No. 2. See Exhibit'E'.

6. <u>MUD PROGRAM:</u>	MUD WEIGHT	VIS.	W/L CONTROL
0' - 550': Fresh water w/gel spud mud:	8.4 - 9.0 ppg	32 - 38	No W/L control
550'-1400' Fresh water w/gel spud mud	8.4 - 9.0 ppg	32-38	No W/L control
1400' - 4500': Cut Brine w/gel & lime:	9.0 - 10.0 ppg	28 - 3 0	No W/L control
4500' - 8700': Fresh Wtr w/gel & starch:	8.4 - 8.8 ppg	29 - 31	W/L control 10-15 cc +/-

7. Auxiliary Equipment: Blowout Preventer, Kelly cock, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: None unless conditions warrant.

Logging: T.D. to 4500': GR-CNL-LDT-DLL

T.D. to Surface: GR-Neutron

Coring: Rotary sidewall as dictated by logs.

HARVARD PETROLEUM CORP.

James 19 Federal, Well No. 5 Page 2

- 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 evacuated BHP = 3828 psi and a surface pressure of 1914 psi with a temperature of 147°.
- 10. H,S: None expected. None in previous wells.
- 10. Anticipated starting date: June 15, 2006. Anticipated completion of drilling operations: Approximately 45 days.

Well Name & No.5 – JAMES 19 FEDERALOperator's Name:HARVARD PETROLEUM CORP.Location:1780' FNL & 400' FEL , Sec. 19 – T23S – R32E – LEA COUNTYLease:NM-0559539

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - 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: <u>13-3/8</u> inch <u>8-5/8</u> inch <u>5-1/2</u> inch

C. BOP tests

2. Hydrogen Sulfide (H2S) gas has been reported in Sec 18 – T23S – R32E however there are no reports of H2S gas in Sec 19 – T23S – R32E.

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.

II. CASING:

1. The <u>13-3/8</u> inch surface casing shall be set at <u>550 feet</u>, 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. <u>Note: The Lea County Alternative Conditions of Approval for Drilling, Casing and Cementing should be used (copy attached).</u>

2. The minimum required fill of cement behind the <u>8-5/8</u> inch salt protection casing is <u>circulate cement to</u> <u>the surface.</u>

3. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is <u>cement shall extend</u> <u>upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.</u>

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 <u>13-3/8</u> 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) is 2000 psi.

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

- A variance to test the <u>13-3/8" surface casing and BOP</u> to the reduced pressure of <u>1200</u> 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.

ALTERNATIVE CONDITIONS OF APPROVAL - DRILLING

Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:

Casing and Cementing

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler formation it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

Drilling Fluid

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler formation., fresh water spud mud may be used to drill down to the first salt in the Rustler Formation. after which brine or fresh water may be used.

Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

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Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler formation.

Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.

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

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 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 March 12, 2004 For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe

office

Form C-144

	de Tank Registration or Clos					
Type of action: Registration of a pit of	r below-grade tank X Closure of a pit or below-g	rade tank				
perator: _Harvard Petroleum Corp						
ddress: _P.O. Box 316 Roswell, NM 88202acility or well name: _James19 Federal , Well No. 5API #	30-025-38039 U/L or Qtr/Qtr SE4NW	4_ <u>H</u>				
County: _Lea Latitude_N 32'29'18.1" Longitude	W 103'70'65.2" NAD: 1927 🗖 1983X S	urface Owner Federal 🔲 State 🔲 Private 🗍 Indian				
it Ype: DrillingX Production Disposal	Below-grade tank Volume: bbl Type of fluid:					
Workover Emergency	Construction material: Double-walled, with leak detection? Yes \Box If not, explain why not.					
iner type: Synthetic Thickness 12_mil Clay Volume 10,000 /bbl						
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) (10 points) (0 points)				
Vellhead protection area: (Less than 200 feet from a private domestic vater 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, rrigation 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)	-0-				

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:

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.

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 X, a general permit [], or an (attached) alternative OCD-approved plan []. Date: January 12, 2006_____

Printed Name/Title Agent for Harvard Petroleum Corp.

esqu Signature ø mitte

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit of 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 Mandride 2006 Signature	
PETROLEUM ENGINEER	



EXHIBIT "D" HARVARD PETROLEUM CORP. James 19 Federal, Well No. 5 Pad & Pit Layout



EXHIBIT "E" HARVARD PETROLEUM CORP. James 19 Federal, Well No. 5 BOP Specifications