eceived by UCD: 2/21/2023 4:48:02 PM U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Repor
Well Name: LONECAT FEDERAL	Well Location: T23S / R32E / SEC 20 / SESW /	County or Parish/State: LEA / NM
Well Number: 01	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM116573	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002538447	Well Status: Producing Oil Well	Operator: HARVARD PETROLEUM COMPANY LLC

Notice of Intent

Sundry ID: 2715382 Type of Submission: Notice of Intent Date Sundry Submitted: 02/13/2023 Date proposed operation will begin: 02/13/2023

Type of Action: Plug and Abandonment Time Sundry Submitted: 11:49

Procedure Description: Harvard is planning on performing P&A procedure. Please see the attachment.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

BLM_Sundry_P_A_Lonecat_Fed_1_20230213113853.pdf

k	eceived by OCD: 4/21/2023 4:48:02 PM Well Name: LONECAT FEDERAL	Well Location: T23S / R32E / SEC 20 / SESW /	County or Parish/State: LER/ 2 of 3
	Well Number: 01	Type of Well: OIL WELL	Allottee or Tribe Name:
	Lease Number: NMNM116573	Unit or CA Name:	Unit or CA Number:
	US Well Number: 3002538447	Well Status: Producing Oil Well	Operator: HARVARD PETROLEUM COMPANY LLC

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CHRIS JAMISON

Signed on: FEB 13, 2023 11:49 AM

Name: HARVARD PETROLEUM COMPANY LLC

Title: Operation Mgr.

Street Address: PO BOX 936

City: ROSWELL

State: NM

Phone: (575) 208-7710

Email address: CJAMISON@HPCNM.COM

Field

Representative Name: Street Address: City: Phone: Email address:

State:

Approval Subject to General Requirements and Special Stipulations Attached

Zip:

PLUG AND ABANDONMENT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Harvard Petroleum Company
LEASE NO.:	NMNM116573
WELL NAME & NO.:	Lonecat Federal 1
US Well Number:	3002538447
LOCATION:	Section 20, T.23 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico
Sundry ID:	2715382
Karst:	⊠Low □Medium □High □Critical
Potash:	□Secretary □R111P
Special Area:	⊠Prairie Chicken □Capitan Reef

Harvard Petroleum proposes to plug the well as follows:

MIRU Pulling Unit. POH w/rods and tubing

- 1. Tag TD and circulate clean, spot cement from 8700' to 8513'. WOC and Tag.
- 2. Set CIBP at 8323'. Spot 25 sxs on top. Leak test CIBP. 25 sxs class C. Leak test CIBP.
- 3. Spot cement from 6800' to 6632'. WOC and Tag. (DV Tool)
- 4. Perforate and squeeze from 4832' to 4459'. WOC and Tag. (In 37 sxs/Out 51 sxs) (Delaware, Shoe, Base of Salt)
- 5. Perforate and squeeze from 1460' to 1154'. WOC and Tag. (In 31 sxs/Out 41 sxs) (Top of Salt, Shoe)
- 6. Perforate and squeeze from 200' to surface. Verify at surface. (200 sxs (In/Out))
- 7. After plugging operations the casing will be cut off 3' below ground level, a steel plate will be welded on top of the casings and a dry hole marker will be installed. The location will then be cleaned and re-mediated to BLM standards.

Approval Subject to General Requirements and Special Stipulations Attached

- No more than 3000 feet between cement plugs in cased hole.
- Wait on Cement and Tag Top of Cement Requirement:

1. Shoe, Top of Salt, Base of Salt, DV tool, Perforate and Squeeze, Open Perforation.

2. Formation plug is optional if a solid base is established and confirmed.

Form 3160-5 UNITED STATES (June 2019) DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT						FORM APPROVED OMB No. 1004-0137 Expires: December 31, 2024 5. Lease Serial No. NMNM116573			
Do n aban	6. If Indian, Allottee or Tribe Name								
	SUBMIT IN TRIFLICATE - Ouler insudcions on page 2					7. If Unit of CA/Agree	ement	, Name and/or No.	
1. Type of Well ✓ Oil W	ell 🗌 Gas W	Vell Other				8. Well Name and No.	Lone	cat Federal #1	
2. Name of Operator	Harvard Petrole	um Company)	9. API Well No. 30-02	25-38	447	
3a. Address PO Box				0. <i>(include area cod</i>		10. Field and Pool or I	Explo	ratory Area	
4. Location of Well (Footage, Sec., T.,R	RM., or Survey Description)	(575) 623-1	100		Triste Draw Delaw 11. Country or Parish,	,		
660 FSL & 1980 F						Lea, New Mexico			
	12. CHE0	CK THE APPROPRIATE B	OX(ES) TO I	NDICATE NATURI	E OF NOTI	CE, REPORT OR OTH	IER D	DATA	
TYPE OF SUE	MISSION			TY	PE OF ACT	ION			
Notice of Inter	nt	Acidize		epen draulic Fracturing	=	uction (Start/Resume) mation] Water Shut-Off] Well Integrity	
Subsequent Re	port	Casing Repair		w Construction		mplete		Other	
Final Abandon	ment Notice	Change Plans		g and Abandon g Back		orarily Abandon Disposal			
is ready for final inspection.) Harvard Petroleum proposes to plug the well as follows: MIRU Pulling Unit. POH w/ rods and tubing Set CIBP @ 8323' and cap with 35' bailed on top of CIBP OR 25 sx class H spotted on top of CIBP - Perfs Load hole with plugging mud and test casing to 500 psi. Perf and squeeze 35 sx class C @ 4858'; 4723-4853', WOC and tag - Top Delaware Perf and squeeze 35 sx class C @ 4607'; 4472-4607' WOC and tag - 8 5/8" casing shoe Pefr and squeeze 35 sx class C @ 1388'; 1079-1388' WOC and tag - 8 5/8" Top of Salt and 13 3/8" casing shoe Perf and squeeze app 200 sx class C @ 200' - Surface to 200' - Surface plug After plugging operations the casing will be cut off 3' below ground level, a steel plate will be welded on top of the casings and a dry hole marker will be installed. The location will then be cleaned and re-mediated to BLM standards. Attachments: Current Wellbore Diagram, Proposed Wellbore Diagram						eral Requirements and cial Stipulations ched			
14. I hereby certify that Phelps White	14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Consultant Phelps White Title								
Signature	2			Date		01/30/20	23		
	THE SPACE FOR FEDERAL OR STATE OFICE USE								
Approved by									
certify that the applicat	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.								
		U.S.C Section 1212, make ints or representations as to a			ly and will fi	ally to make to any dep	artme	ent or agency of the United States	
(Instructions on pa	ige 2)								

Well Bore Diagram Worksheet

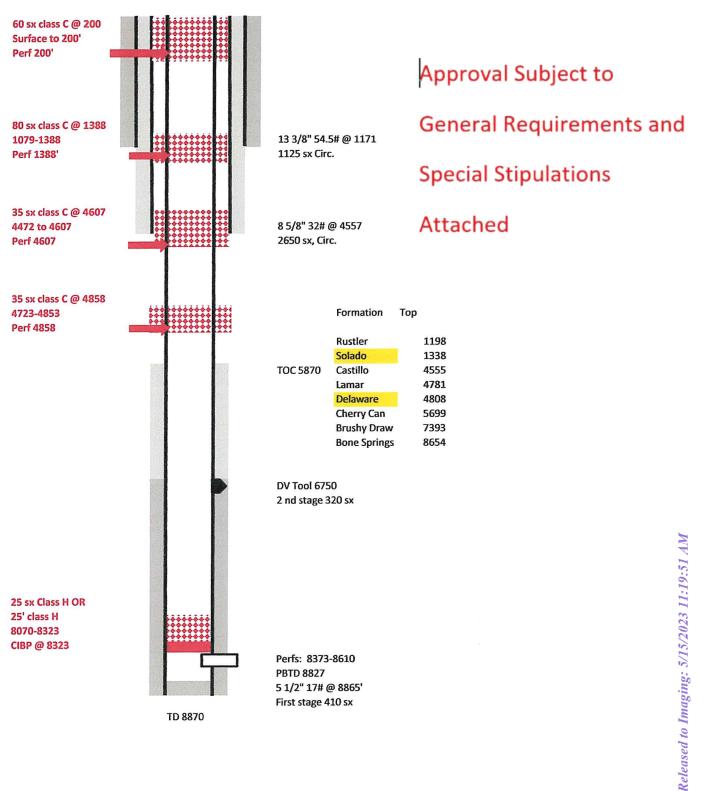
Operataor:Harvard Petroleum Co.Well Name:Lonecat Fed #1API #30-025-38447Location:20, 23S, 32E

7/24/2007 12/18/2007

Date Spud:

Date Complete:

PROPOSED PLUGS

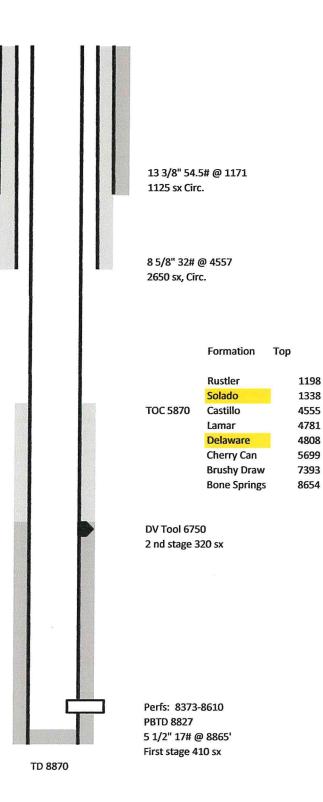


Received by OCD: 4/21/2023 4:48:02 PM

Well Bore Diagram Worksheet

Operataor:	Harvard Petroleum Co.	Date Spud:	7/24/2007
Well Name:	Lonecat Fed #1	Date Complete:	12/18/2007
API #	30-025-38447		
Location:	20, 23S, 32E		

CURRENT WELLBORE



Released to Imaging: 5/15/2023 11:19:51 AM

BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

Permanent Abandonment of Federal Wells Conditions of Approval (LPC Habitat)

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within <u>ninety (90)</u> days from the approval date of this Notice of Intent to Abandon.

If you are unable to plug the well by the 90th day provide this office, prior to the 90th day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.

The rig used for the plugging procedure cannot be released and moved off without the prior approval of the authorized officer. Failure to do so may result in enforcement action.

2. <u>Notification:</u> Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 575-627-0272; Eddy County, call 575-361-2822; Lea County, call 575-689-5981.

3. <u>Blowout Preventers</u>: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. <u>Mud Requirement:</u> Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of **brine** water. Minimum nine (9) pounds per gallon.

5. <u>Cement Requirement</u>: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient. **Before pumping or bailing cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.**

Unless otherwise specified in the approved procedure, the cement plug shall consist of either Neat Class "C", for up to 7,500 feet of depth or Neat Class "H", for deeper than 7,500 feet plugs.

6. <u>Below Ground Level Cap (Lesser Prairie-Chicken Habitat)</u>: All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). **The BLM is to be notified a minimum of 4 hours prior to the wellhead being cut off to verify that cement is to surface in the casing and all annuluses. Wellhead cut off shall commence within ten (10) calendar days of the well being plugged. If the cut off cannot be done by the 10th day, the BLM is to be contacted with justification to receive an extension for completing the cut off.** Upon the plugging and subsequent abandonment of wells that are located in lesser prairie-chicken habitat, the casings shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least ¹/₄ inch thick and welded in place. A weep hole shall be left in the plate and/or casing.

NMOCD also requires the operator to notify NMOCD when this type of dry hole marker is used. This can be done on the subsequent report of abandonment which is submitted to the BLM after the well is plugged. State that a below ground cap was installed as required in the COA's from the BLM.

7. <u>Subsequent Plugging Reporting:</u> Within 30 days after plugging work is completed, file one original and three copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. <u>Show date well was plugged.</u>

8. <u>Trash:</u> All trash, junk and other waste material shall 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 permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration will be required. See attached reclamation objectives.

<u>**Timing Limitation Stipulation/ Condition of Approval for Lesser Prairie-Chicken:</u></u> From March 1st through June 15th annually, abandonment activities will be allowed except between the hours from 3:00 am and 9:00 am. Normal vehicle use on existing roads will not be restricted</u>**



United States Department of the Interior

BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 E. Greene St. Carlsbad, New Mexico 88220-6292 www.blm.gov/nm



In Reply Refer To: 1310

Reclamation Objectives and Procedures

Reclamation Objective: Oil and gas development is one of many uses of the public lands and resources. While development may have a short- or long-term effect on the land, successful reclamation can ensure the effect is not permanent. During the life of the development, all disturbed areas not needed for active support of production operations should undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses. At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land and water are restored.

The long-term objective of final reclamation is to set the course for eventual ecosystem restoration, including the restoration of the natural vegetation community, hydrology, and wildlife habitats. In most cases this means returning the land to a condition approximating or equal to that which existed prior to the disturbance. The final goal of reclamation is to restore the character of the land and water to its predisturbance condition. The operator is generally not responsible for achieving full ecological restoration of the site. Instead, the operator must achieve the short-term stability, visual, hydrological, and productivity objectives of the surface management agency and take steps necessary to ensure that long-term objectives will be reached through natural processes.

To achieve these objectives, remove any/all contaminants, scrap/trash, equipment, pipelines and powerlines (Contact service companies, allowing plenty of time to have the risers and power lines and poles removed prior to reclamation, don't wait till the last day and try to get them to remove infrastructure). Strip and remove caliche, contour the location to blend with the surrounding landscape, re-distribute the native soils, provide erosion control as needed, rip (across the slope and seed as specified in the original APD COA. This will apply to well pads, facilities, and access roads. Barricade access road at the starting point. If reserve pits have not reclaimed due to salts or other contaminants, submit a plan for approval, as to how you propose to provide adequate restoration of the pit area.

- The Application for Permit to Drill or Reenter (APD, Form 3160-3), Surface Use Plan of Operations must include adequate measures for stabilization and reclamation of disturbed lands. Oil and Gas operators must plan for reclamation, both interim and final, up front in the APD process as per Onshore Oil and Gas Order No. 1.
- 2. For wells and/or access roads not having an approved plan, or an inadequate plan for surface reclamation (either interim or final reclamation), the operator must submit a proposal describing the procedures for reclamation. For interim reclamation, the appropriate time for submittal would be when filing the Well Completion or Recompletion Report and Log (Form 3160-4). For final reclamation, the appropriate time for submittal would be when filing the Notice of Intent, or the Subsequent Report of Abandonment, Sundry Notices and Reports on Wells (Form 3160-5). Interim reclamation is to be completed within 6 months of well completion, and final reclamation is to be completed within 6 months.
- 3. The operator must file a Subsequent Report Plug and Abandonment (Form 3160-5) following the plugging of a well.
- 4. Previous instruction had you waiting for a BLM specialist to inspect the location and provide you with reclamation requirements. If you have an approved Surface Use Plan of Operation and/or an approved Sundry Notice, you are free to proceed with reclamation as per approved APD. If you

have issues or concerns, contact a BLM specialist to assist you. It would be in your interest to have a BLM specialist look at the location and access road prior to the removal of reclamation equipment to ensure that it meets BLM objectives. Upon conclusion submit a Form 3160-5, Subsequent Report of Reclamation. This will prompt a specialist to inspect the location to verify work was completed as per approved plans.

- 5. The approved Subsequent Report of Reclamation will be your notice that the native soils, contour and seedbed have been reestablished. If the BLM objectives have not been met the operator will be notified and corrective actions may be required.
- 6. It is the responsibility of the operator to monitor these locations and/or access roads until such time as the operator feels that the BLM objective has been met. If after two growing seasons the location and/or access roads are not showing the potential for successful revegetation, additional actions may be needed. When you feel the BLM objectives have been met submit a Final Abandonment Notice (FAN), Form 3160-5, stating that all reclamation requirements have been achieved and the location and/or access road is ready for a final abandonment inspection.
- 7. At this time the BLM specialist will inspect the location and/or access road. If the native soils and contour have been restored, and the revegetation is successful, the FAN will be approved, releasing the operator of any further liability of the location and/or access road. If the location and/or access road have not achieved the objective, you will be notified as to additional work needed or additional time being needed to achieve the objective.

If there are any questions, please feel free to contact any of the following specialists:

Jim Amos Supervisory Petroleum Engineering Tech/Environmental Protection Specialist 575-234-5909 (Office), 575-361-2648 (Cell)

Arthur Arias Environmental Protection Specialist 575-234-6230

Crisha Morgan Environmental Protection Specialist 575-234-5987

Jose Martinez-Colon Environmental Protection Specialist 575-234-5951

Mark Mattozzi Environmental Protection Specialist 575-234-5713

Robert Duenas Environmental Protection Specialist 575-234-2229

Trishia Bad Bear, Hobbs Field Station Natural Resource Specialist 575-393-3612 *Received by OCD: 4/21/2023 4:48:02 PM*

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Sundry ID	2715382		1			1	· · · · · · · · · · · · · · · · · · ·
Plug Type	Тор	Bottom	Length	Тад	Sacks	Cement Class	Notes
		Bottom	Length	Tay	Jacks	01833	Perforate and
							squeeze from 100'
							to surface. Verify at surface. (In 10
Surface Plug	0.00	100.00	100.00	Tag/Verify	25.00	С	sxs/Out 15 sxs)
Shoe Plug	1154.83	1267.00		Tag/Verify			
							Perforate and squeeze from 1460'
							to 1154'. WOC and
						_	Tag. (In 31 sxs/Out
Top of Salt @ 1338 Base of Salt @ 4555	1274.62 4459.45			Tag/Verify Tag/Verify	72.00	С	41 sxs)
Shoe Plug	4461.43			Tag/Verify			
				,			
				lf solid			
				h solid base no			
				need to			
				Tag			
				(CIBP present			
				and/or			
				Mechanic			
				al Integrity Test), If			
				Perf &			
				Sqz then			
				Tag, Leak Test all			Perforate and
				CIBP if no			squeeze from 4832'
				Open			to 4459'. WOC and
	4004.40	4000.00	4.47.00	Perforatio	00.00	0	Tag. (In 37 sxs/Out
Delaware @ 4782	4684.18	4832.00	147.82	ns	88.00	C	51 sxs) Spot cement from
							6800' to 6632'.
DV tool plug		6800.00	167.50	Tag/Verify	25.00	С	WOC and Tag.
Perforations Plug (If No CIBP)	8244.22	8428.00	183.78	Tag/Verify			
				If solid			
				base no need to			
				Tag			
				(CIBP			
				present and/or			
				and/or Mechanic			
				al Integrity			
				Test), If			
				Perf & Sqz then			
				Tag, Leak			
				Test all			
				CIBP if no Open			Set CIBP at 8323'.
				Open Perforatio			Set CIBP at 8323 . Spot 25 sxs on top.
CIBP Plug	8288.00	8323.00	35.00		25.00	С	Leak test CIBP.

Derferations Diver (If No. CIDD)	0240.05	0505.00	404 75	Teel/eete			i
Perforations Plug (If No CIBP)	8340.25			Tag/Verify			
Perforations Plug (If No CIBP)	8473.90	8660.00	186.10	Tag/Verify			
				If solid base no need to Tag (CIBP present and/or Mechanic al Integrity Test), If Perf & Sqz then Tag, Leak Test all CIBP if no Open Perforatio			Tag TD and circulate clean, Spot cement from 8700' to 8513'. WOC and
Bonesprings @ 8650	8513.50	8700.00	186.50	ns	25.00	Н	Tag.
Shoe Plug	8726.35	8915.00	188.65	Tag/Verify			

No more than 2000' is to be allowed between plugs in open hole, and no more than 3000' between plugs in cased hole.

Class H >7500'

Class C<7500'

Fluid used to mix the cement in R111P shall be saturated with the salts common to the section penetrated, and in suitable proportions, but not more than 3% calcium chloride by weight of cement will be considered the desired mixture whenever possible.

Medium, Secretary: Top of salt to surface If no salt take the deepest fresh water or Karst Depth

High, Critical: Bottom of Karst to surface or Deepest fresh water, whichever is greater R111P: 50 Feet from Base of Salt to surface.

Class C: 1.32 ft³/sx Class H: 1.06 ft³/sx

DV Tool @

Onshore Order 2.III.G Drilling Abandonment Requirements: "All formations bearing usable-quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected.

CIBP @

8323.00

Cave Karst/Potash Cement	Low		
Shoe @ Shoe @	1217.00 4557.00		
Shoe @	8865.00	TOC @	5870.00
Perforatons Top @ Perforatons Top @ Perforatons Top @	8540.00 8429.00 8373.00	Perforations Perforations Perforations	8610.00 8475.00 8378.00

6750.00

<i>Ceived by UCD: 2/21/2023 4:48:02 PM</i> U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Repor
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US Well Number: 3002538447	Well Status: Producing Oil Well	Operator: HARVARD PETROLEUM COMPANY LLC

Notice of Intent

Sundry ID: 2715382 Type of Submission: Notice of Intent Date Sundry Submitted: 02/13/2023 Date proposed operation will begin: 02/13/2023

Type of Action: Plug and Abandonment Time Sundry Submitted: 11:49

Procedure Description: Harvard is planning on performing P&A procedure. Please see the attachment.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

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Received by OCD: 4/21/2023 4:48:02 PM Well Name: LONECAT FEDERAL	Well Location: T23S / R32E / SEC 20 / SESW /	County or Parish/State: Les 16 of 3
Well Number: 01	Type of Well: OIL WELL	Allottee or Tribe Name:
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Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CHRIS JAMISON

Signed on: FEB 13, 2023 11:49 AM

Name: HARVARD PETROLEUM COMPANY LLC

Title: Operation Mgr.

Street Address: PO BOX 936

City: ROSWELL

State: NM

State:

Phone: (575) 208-7710

Email address: CJAMISON@HPCNM.COM

Field

Representative Name: Street Address: City: Phone: Email address: Approval Subject to General Requirements and Special Stipulations Attached

Zip:

PLUG AND ABANDONMENT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Harvard Petroleum Company
LEASE NO.:	NMNM116573
WELL NAME & NO.:	Lonecat Federal 1
US Well Number:	3002538447
LOCATION:	Section 20, T.23 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico
Sundry ID:	2715382
Karst:	\boxtimes Low \square Medium \square High \square Critical
Potash:	□Secretary □R111P
Special Area:	⊠Prairie Chicken □Capitan Reef

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MIRU Pulling Unit. POH w/rods and tubing

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- 5. Perforate and squeeze from 1460' to 1154'. WOC and Tag. (In 31 sxs/Out 41 sxs) (Top of Salt, Shoe)
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- 7. After plugging operations the casing will be cut off 3' below ground level, a steel plate will be welded on top of the casings and a dry hole marker will be installed. The location will then be cleaned and re-mediated to BLM standards.

Approval Subject to General Requirements and Special Stipulations Attached

- No more than 3000 feet between cement plugs in cased hole.
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1. Shoe, Top of Salt, Base of Salt, DV tool, Perforate and Squeeze, Open Perforation.

2. Formation plug is optional if a solid base is established and confirmed.

Form 3160-5 UNITED STATES (June 2019) DEPARTMENT OF THE INTERIOR					FORM APPROVED OMB No. 1004-0137 Expires: December 31, 2024			
		EAU OF LAND MAN				5 Lease Serial No	110	116573
						6. If Indian, Allottee or	Trib	e Name
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 page 2					7. If Unit of CA/Agreer	nent	, Name and/or No.	
1. Type of Well							_	
Oil V						8. Well Name and No.	.one	cat Federal #1
2. Name of Operator	Harvard Petrole	um Company				9. API Well No. 30-025	5-38	447
3a. Address PO Bo	x 936, Roswell, N	NM 88202	3b. Phone 1 (575) 623	No. <i>(include area cod</i> 1581	le)	10. Field and Pool or Ex Triste Draw Delawa	•	
4. Location of Well (Footage Sec. T.R	R., M., or Survey Description,	· ·	-1301		11. Country or Parish, S		
660 FSL & 1980						Lea, New Mexico		
	12. CHE	CK THE APPROPRIATE B	OX(ES) TO	INDICATE NATUR	E OF NOTI	CE, REPORT OR OTHE	ER D	ATA
TYPE OF SU	BMISSION			TY	PE OF ACT	ΠΟΝ		
✓ Notice of Inte	ent	Acidize		Deepen	Prode	uction (Start/Resume)		Water Shut-Off
		Alter Casing	Шн	lydraulic Fracturing		amation		Well Integrity
Subsequent R	eport	Casing Repair		lew Construction	—	mplete	L	Other
Final Abando	nment Notice	Change Plans		lug and Abandon lug Back		porarily Abandon r Disposal		
is ready for final inspection.) Harvard Petroleum proposes to plug the well as follows: MIRU Pulling Unit. POH w/ rods and tubing Set CIBP @ 8323' and cap with 35' bailed on top of CIBP OR 25 sx class H spotted on top of CIBP - Perfs Load hole with plugging mud and test casing to 500 psi. Perf and squeeze 35 sx class C @ 4858'; 4723-4853', WOC and tag - Top Delaware Perf and squeeze 35 sx class C @ 4607'; 4472-4607' WOC and tag - 8 5/8" casing shoe Pefr and squeeze 35 sx class C @ 1388'; 1079-1388' WOC and tag - 8 5/8" Top of Salt and 13 3/8" casing shoe Perf and squeeze app 200 sx class C @ 200' - Surface to 200' - Surface plug After plugging operations the casing will be cut off 3' below ground level, a steel plate will be welded on top of the casings and a dry hole marker will be installed. The location will then be cleaned and re-mediated to BLM standards. Attachments: Current Wellbore Diagram, Proposed Wellbore Diagram						eral Requirements and ial Stipulations ched		
14. I hereby certify the Phelps White	at the foregoing is	true and correct. Name (Pri	nted/Typed)	Consultar Title	nt			
Signature		9 		Date		01/30/202	3	
		THE SPACE	FOR FE	DERAL OR ST	ATE OF	CE USE		
Approved by								
certify that the application	ant holds legal or ea	ed. Approval of this notice of quitable title to those rights i duct operations thereon.				Da	te	
		U.S.C Section 1212, make ints or representations as to a			ly and willf	ully to make to any depa	rtme	ent or agency of the United States
(Instructions on p	age 2)							

Well Bore Diagram Worksheet

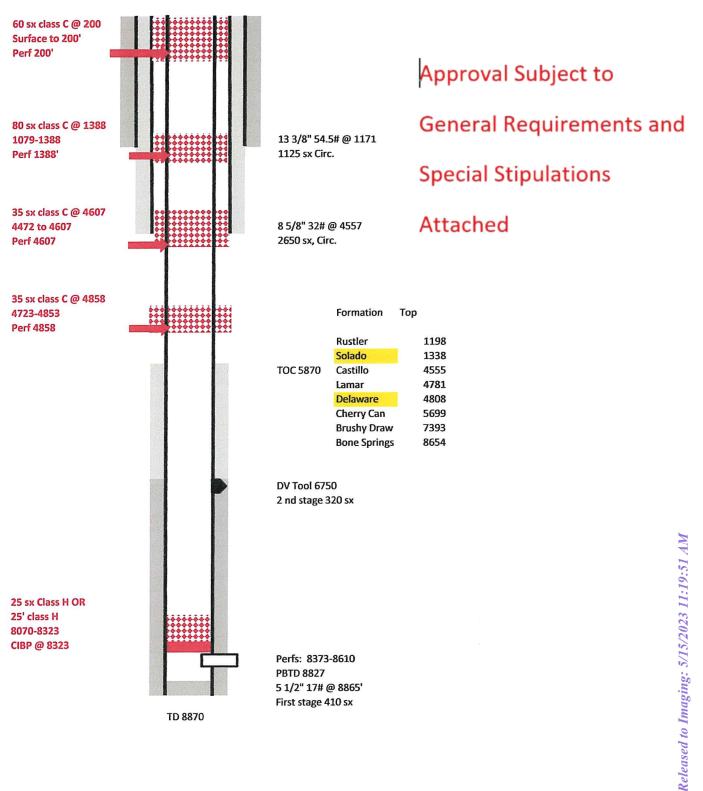
Operataor:Harvard Petroleum Co.Well Name:Lonecat Fed #1API #30-025-38447Location:20, 23S, 32E

7/24/2007 12/18/2007

Date Spud:

Date Complete:

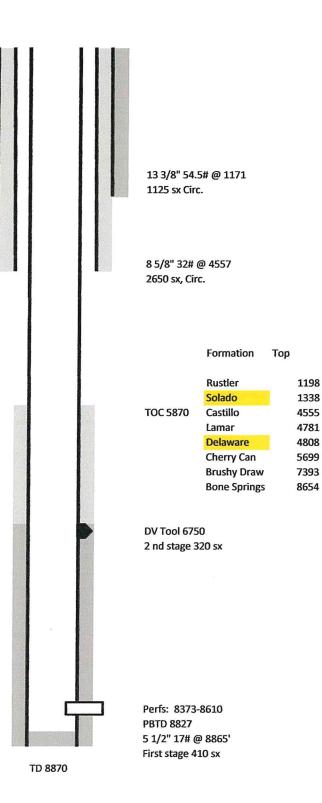
PROPOSED PLUGS



Well Bore Diagram Worksheet

Operataor:	Harvard Petroleum Co.	Date Spud:	7/24/2007
Well Name:	Lonecat Fed #1	Date Complete:	12/18/2007
API #	30-025-38447		
Location:	20, 23S, 32E		

CURRENT WELLBORE



BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

Permanent Abandonment of Federal Wells Conditions of Approval (LPC Habitat)

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within <u>ninety (90)</u> days from the approval date of this Notice of Intent to Abandon.

If you are unable to plug the well by the 90th day provide this office, prior to the 90th day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged. Failure to do so will result in enforcement action.

The rig used for the plugging procedure cannot be released and moved off without the prior approval of the authorized officer. Failure to do so may result in enforcement action.

2. <u>Notification:</u> Contact the appropriate BLM office at least 24 hours prior to the commencing of any plugging operations. For wells in Chaves and Roosevelt County, call 575-627-0272; Eddy County, call 575-361-2822; Lea County, call 575-689-5981.

3. <u>Blowout Preventers</u>: A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. <u>Mud Requirement:</u> Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of **brine** water. Minimum nine (9) pounds per gallon.

5. <u>Cement Requirement</u>: Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient. **Before pumping or bailing cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.**

Unless otherwise specified in the approved procedure, the cement plug shall consist of either Neat Class "C", for up to 7,500 feet of depth or Neat Class "H", for deeper than 7,500 feet plugs.

6. <u>Below Ground Level Cap (Lesser Prairie-Chicken Habitat)</u>: All casing shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). **The BLM is to be notified a minimum of 4 hours prior to the wellhead being cut off to verify that cement is to surface in the casing and all annuluses. Wellhead cut off shall commence within ten (10) calendar days of the well being plugged. If the cut off cannot be done by the 10th day, the BLM is to be contacted with justification to receive an extension for completing the cut off.** Upon the plugging and subsequent abandonment of wells that are located in lesser prairie-chicken habitat, the casings shall be cut-off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper). The well bore shall then be covered with a metal plate at least ¹/₄ inch thick and welded in place. A weep hole shall be left in the plate and/or casing.

NMOCD also requires the operator to notify NMOCD when this type of dry hole marker is used. This can be done on the subsequent report of abandonment which is submitted to the BLM after the well is plugged. State that a below ground cap was installed as required in the COA's from the BLM.

7. <u>Subsequent Plugging Reporting:</u> Within 30 days after plugging work is completed, file one original and three copies of the Subsequent Report of Abandonment, Form 3160-5 to BLM. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. <u>Show date well was plugged.</u>

8. <u>Trash:</u> All trash, junk and other waste material shall 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 permitted.

Following the submission and approval of the Subsequent Report of Abandonment, surface restoration will be required. See attached reclamation objectives.

<u>Timing Limitation Stipulation/ Condition of Approval for Lesser Prairie-Chicken:</u> From March 1st through June 15th annually, abandonment activities will be allowed except between the hours from 3:00 am and 9:00 am. Normal vehicle use on existing roads will not be restricted



United States Department of the Interior

BUREAU OF LAND MANAGEMENT Carlsbad Field Office 620 E. Greene St. Carlsbad, New Mexico 88220-6292 www.blm.gov/nm



In Reply Refer To: 1310

Reclamation Objectives and Procedures

Reclamation Objective: Oil and gas development is one of many uses of the public lands and resources. While development may have a short- or long-term effect on the land, successful reclamation can ensure the effect is not permanent. During the life of the development, all disturbed areas not needed for active support of production operations should undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses. At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land and water are restored.

The long-term objective of final reclamation is to set the course for eventual ecosystem restoration, including the restoration of the natural vegetation community, hydrology, and wildlife habitats. In most cases this means returning the land to a condition approximating or equal to that which existed prior to the disturbance. The final goal of reclamation is to restore the character of the land and water to its predisturbance condition. The operator is generally not responsible for achieving full ecological restoration of the site. Instead, the operator must achieve the short-term stability, visual, hydrological, and productivity objectives of the surface management agency and take steps necessary to ensure that long-term objectives will be reached through natural processes.

To achieve these objectives, remove any/all contaminants, scrap/trash, equipment, pipelines and powerlines (Contact service companies, allowing plenty of time to have the risers and power lines and poles removed prior to reclamation, don't wait till the last day and try to get them to remove infrastructure). Strip and remove caliche, contour the location to blend with the surrounding landscape, re-distribute the native soils, provide erosion control as needed, rip (across the slope and seed as specified in the original APD COA. This will apply to well pads, facilities, and access roads. Barricade access road at the starting point. If reserve pits have not reclaimed due to salts or other contaminants, submit a plan for approval, as to how you propose to provide adequate restoration of the pit area.

- The Application for Permit to Drill or Reenter (APD, Form 3160-3), Surface Use Plan of Operations must include adequate measures for stabilization and reclamation of disturbed lands. Oil and Gas operators must plan for reclamation, both interim and final, up front in the APD process as per Onshore Oil and Gas Order No. 1.
- 2. For wells and/or access roads not having an approved plan, or an inadequate plan for surface reclamation (either interim or final reclamation), the operator must submit a proposal describing the procedures for reclamation. For interim reclamation, the appropriate time for submittal would be when filing the Well Completion or Recompletion Report and Log (Form 3160-4). For final reclamation, the appropriate time for submittal would be when filing the Notice of Intent, or the Subsequent Report of Abandonment, Sundry Notices and Reports on Wells (Form 3160-5). Interim reclamation is to be completed within 6 months of well completion, and final reclamation is to be completed within 6 months.
- 3. The operator must file a Subsequent Report Plug and Abandonment (Form 3160-5) following the plugging of a well.
- 4. Previous instruction had you waiting for a BLM specialist to inspect the location and provide you with reclamation requirements. If you have an approved Surface Use Plan of Operation and/or an approved Sundry Notice, you are free to proceed with reclamation as per approved APD. If you

have issues or concerns, contact a BLM specialist to assist you. It would be in your interest to have a BLM specialist look at the location and access road prior to the removal of reclamation equipment to ensure that it meets BLM objectives. Upon conclusion submit a Form 3160-5, Subsequent Report of Reclamation. This will prompt a specialist to inspect the location to verify work was completed as per approved plans.

- 5. The approved Subsequent Report of Reclamation will be your notice that the native soils, contour and seedbed have been reestablished. If the BLM objectives have not been met the operator will be notified and corrective actions may be required.
- 6. It is the responsibility of the operator to monitor these locations and/or access roads until such time as the operator feels that the BLM objective has been met. If after two growing seasons the location and/or access roads are not showing the potential for successful revegetation, additional actions may be needed. When you feel the BLM objectives have been met submit a Final Abandonment Notice (FAN), Form 3160-5, stating that all reclamation requirements have been achieved and the location and/or access road is ready for a final abandonment inspection.
- 7. At this time the BLM specialist will inspect the location and/or access road. If the native soils and contour have been restored, and the revegetation is successful, the FAN will be approved, releasing the operator of any further liability of the location and/or access road. If the location and/or access road have not achieved the objective, you will be notified as to additional work needed or additional time being needed to achieve the objective.

If there are any questions, please feel free to contact any of the following specialists:

Jim Amos Supervisory Petroleum Engineering Tech/Environmental Protection Specialist 575-234-5909 (Office), 575-361-2648 (Cell)

Arthur Arias Environmental Protection Specialist 575-234-6230

Crisha Morgan Environmental Protection Specialist 575-234-5987

Jose Martinez-Colon Environmental Protection Specialist 575-234-5951

Mark Mattozzi Environmental Protection Specialist 575-234-5713

Robert Duenas Environmental Protection Specialist 575-234-2229

Trishia Bad Bear, Hobbs Field Station Natural Resource Specialist 575-393-3612 *Received by OCD: 4/21/2023 4:48:02 PM*

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Sundry ID	2715382	1	1	r		1	· · · · · · · · · · · · · · · · · · ·
Plug Type	Тор	Bottom	Length	Tag	Sacks	Cement Class	Notes
		Bottom	Length	Tug	Oucks		Perforate and squeeze from 100' to surface. Verify at surface. (In 10
Surface Plug	0.00	100.00	100.00	Tag/Verify	25.00	С	sxs/Out 15 sxs)
Shoe Plug	1154.83	1267.00	112.17	Tag/Verify			
Top of Salt @ 1338	1274.62			Tag/Verify	72.00	с	Perforate and squeeze from 1460' to 1154'. WOC and Tag. (In 31 sxs/Out 41 sxs)
Base of Salt @ 4555 Shoe Plug	4459.45 4461.43			Tag/Verify Tag/Verify			
				If solid base no need to Tag (CIBP present and/or Mechanic al Integrity Test), If Perf & Sqz then Tag, Leak Test all CIBP if no Open Perforatio			Perforate and squeeze from 4832' to 4459'. WOC and Tag. (In 37 sxs/Out
Delaware @ 4782	4684.18	4832.00	147.82	ns	88.00	С	51 sxs) Spot cement from 6800' to 6632'.
DV tool plug	6632.50	6800.00	167.50	Tag/Verify	25.00	с	WOC and Tag.
Perforations Plug (If No CIBP)		8428.00	183.78	Tag/Verify			Ŭ
				If solid base no need to Tag (CIBP present and/or Mechanic al Integrity Test), If Perf & Sqz then Tag, Leak Test all CIBP if no Open			Set CIBP at 8323'.
CIBP Plug	8288.00	8323.00	35.00	Perforatio ns	25.00	с	Spot 25 sxs on top. Leak test CIBP.

Denfenetiens Diver (If Ne. OIDD)	0040.05	0505.00	404 75	Τ Λ /: f		1	
Perforations Plug (If No CIBP)	8340.25			Tag/Verify			
Perforations Plug (If No CIBP)	8473.90	8660.00	186.10	Tag/Verify			
				If solid base no need to Tag (CIBP present and/or Mechanic al Integrity Test), If Perf & Sqz then Tag, Leak Test all CIBP if no Open Perforatio			Tag TD and circulate clean, Spot cement from 8700' to 8513'. WOC and
Bonesprings @ 8650	8513.50	8700.00	186.50	ns	25.00	Н	Tag.
Shoe Plug	8726.35	8915.00	188.65	Tag/Verify			

No more than 2000' is to be allowed between plugs in open hole, and no more than 3000' between plugs in cased hole.

Class H >7500'

Class C<7500'

Fluid used to mix the cement in R111P shall be saturated with the salts common to the section penetrated, and in suitable proportions, but not more than 3% calcium chloride by weight of cement will be considered the desired mixture whenever possible.

Medium, Secretary: Top of salt to surface If no salt take the deepest fresh water or Karst Depth

High, Critical: Bottom of Karst to surface or Deepest fresh water, whichever is greater R111P: 50 Feet from Base of Salt to surface.

Class C: 1.32 ft³/sx Class H: 1.06 ft³/sx

DV Tool @

Onshore Order 2.III.G Drilling Abandonment Requirements: "All formations bearing usable-quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected.

CIBP @

8323.00

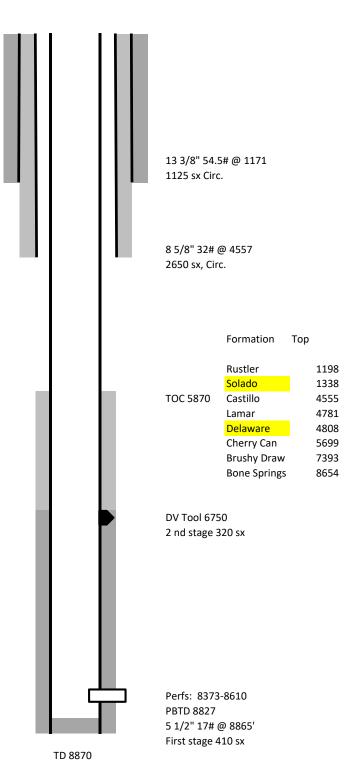
Cave Karst/Potash Cement	Low		
Shoe @ Shoe @	1217.00 4557.00		
Shoe @	8865.00	TOC @	5870.00
Perforatons Top @ Perforatons Top @ Perforatons Top @	8540.00 8429.00 8373.00	Perforations Perforations Perforations	8610.00 8475.00 8378.00

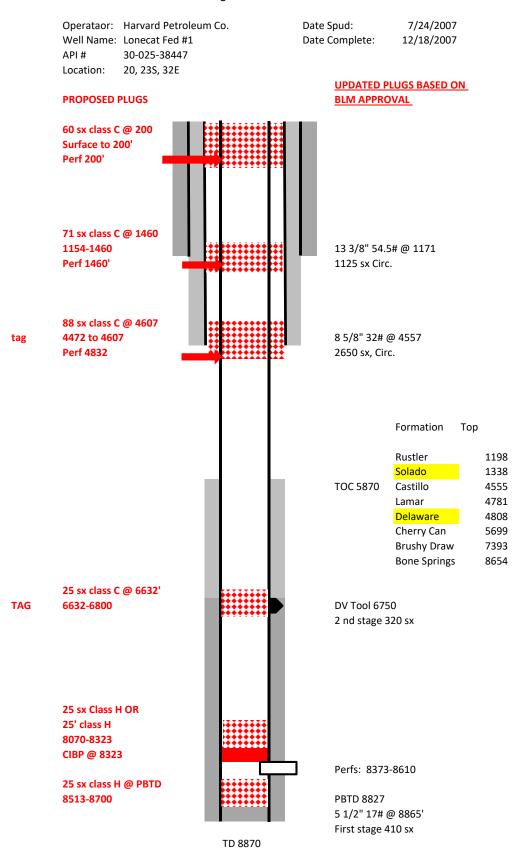
6750.00

Well Bore Diagram Worksheet

Operataor:	Harvard Petroleum Co.	Date Spud:	7/24/2007
Well Name:	Lonecat Fed #1	Date Complete:	12/18/2007
API #	30-025-38447		
Location:	20, 23S, 32E		

CURRENT WELLBORE





District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
HARVARD PETROLEUM COMPANY, LLC	10155
P.O. Box 936	Action Number:
Roswell, NM 88202	209835
	Action Type:
	[C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By		Condition Date
john.harrison	None	5/15/2023

CONDITIONS

Page 31 of 31

Action 209835