s .					16-	.797		
Form 3160-3 (June 2015) Re-en- UNITED STAT	try	HOBBE	1 2016	FORM A OMB No Expires: Ja	APPROVED 0. 1004-0137 nuary 31, 20	18 (V		
DEPARTMENT OF THE	INTERIOR	JUN I.	ILU	5. Lease Serial No.				
BUREAU OF LAND MA	NAGEMEN	DEENTER	EIVE	6 If Indian Allatea	or Tribe Mar	20		
APPLICATION FOR PERMIT TO	DRILL OF	REENTER		6. If Indian, Anotee	or more real			
la. Type of work: DRILL	REENTER			7. If Unit or CA Agr	eement, Nar	ne and No.		
1b. Type of Well:                  ✓ Oil Well      Gas Well	Other			8. Lease Name and V	Well No.			
1c. Type of Completion: Hydraulic Fracturing	Single Zone	Multiple Zone		LUSK FEDERAL	AA	#3		
2. Name of Operator SHACKELFORD OIL COMPANY (20595)				9. API Well No. 30-025-00913		V		
3a. Address	3b. Phone N	lo. (include area cod	le)	10. Field and Pool, or Exploratory				
203 W. WALL, SUITE 200, MIDLAND, TEXAS 79701	(432) 682-9	9784		LUSK; DELAWARE	E, WEST	41340		
4. Location of Well (Report location clearly and in accordance	e with any State	requirements.*)		11. Sec., T. R. M. or	Blk. and Sur	vey or Area		
At surface TOOU FNL & OOU FVVL /			Section 20, T. 19 S	19 S., R. 32 E.				
14. Distance in miles and direction from nearest town or post of 40 MILES SOUTHWEST OF HOBBS. NM	office*			12. County or Parish LEA	13 NM	. State		
<ul> <li>15. Distance from proposed* 660' location to nearest property or lease line, ft.</li> <li>(Also to nearest drig unit line, if any)</li> </ul>	16. No of a	cres in lease	17. Spaci 40	ng Unit dedicated to th	is well			
18. Distance from proposed location*	19. Propose	d Depth	20. BLM	/BIA Bond No. in file				
to nearest well, drilling, completed, 360' (LDU #25) applied for, on this lease, ft.	5300'		NM 2156	3				
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3572' GL	22. Approxi ASAP	mate date work will	start*	23. Estimated duration 15 DAYS	on			
	24. Attac	hments		•				
The following, completed in accordance with the requirements (as applicable)	of Onshore Oil	and Gas Order No. 1	I, and the F	Hydraulic Fracturing ru	lle per 43 CF	R 3162.3-3		
1. Well plat certified by a registered surveyor.		4. Bond to cover the	e operation	is unless covered by an	existing bon	d on file (see		
3. A Surface Use Plan (if the location is on National Forest Sys SUPO must be filed with the appropriate Forest Service Off	stem Lands, the	5. Operator certific 6. Such other site sp BLM.	cation. pecific infor	mation and/or plans as	may be reque	ested by the		
25. Signature	Name	(Printed/Typed)			Date			
Myw. Hax	BARR	YW. HUNT			2/25/16			
Permit Agent-For share	Kel-An	d Dil Ca			7			
Approved by (Signature) Cody Layton	Name	(Printed/Typed)			JUN 9	- 2016		
Title FIELD MANAGER	Office		CARLSE	BAD FIELD OFFICE				
Application approval does not warrant or certify that the applic applicant to conduct operations thereon.	ant holds legal of	or equitable title to the	hose rights	in the subject lease when PPROVAL FO	ich would en	NTITLE THE		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, of the United States any false, fictitious or fraudulent statement	, make it a crime ts or representation	e for any person know ions as to any matter	wingly and within its	willfully to make to an jurisdiction.	ny departmen	nt or agency		
	1	Ka,	. 1.1	•				
Capitan Controlled Water Basin	SEE	ATTACHE	14/16 D FO	R				
Approval Subject to General Requirements	CON	DITIONS (	OF AF	PROVAL				

Approval Subject to General Requirements & Special Stipulations Attached

(Continued on page 2)

# **Well Name Change**

Lusk Deep Unit 3-A E-Sec. 20-T19S-R32E 1650' FNL & 660' FWL API# 3002500913

 Proposed zones to be tested: 4932'-4982' Cherry Canyon (Non-unitized zone) 4872'-4902' Cherry Canyon (Non-unitized zone) 2608'-2650' Yates Sand (Non-Unitized zone)

The Lusk Deep Unit #3-A re-entry will be a non-unit well, the proposed well name change will be the Lusk Federal #3-A.

Field Name Leas		se Na	e Name Well No. County						inty	Sta				API No.						
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Shackelford	Oil Cor	npany					Plugged	ł		-		1								
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#### Last Updated: 3/10/2016 10:03 AM Proposed **Field Name** Lease Name Lusk Delaware, West Lusk Deep Unit County State API No. 30025009130000 Lea New Mexico Version Tag Version 2 Proposed KB (ft) Section Township/Block Range/Survey GL (ft) 3,593.0 20 3,574.0 195 32E Longitude Operator Well Status Latitude Shackelford Oil Company Plugged Dist. N/S (ft) N/S Line Dist. E/W (ft) E/W Line Footage From 660 FWL 1650 FNL Prop Num Spud Date Comp. Date 11/1/1961 7/22/1961 Additional Information PROPOSED Other 1 Other 2 Other 3 Other 4 Prepared By Updated By Last Updated Shackelford 3/10/2016 10:03 AM Shackelford Hole Summary 0.D. (in) Comments Date Top Bottom (MD ft) (MD ft) 17.500 807 12.250 4,532 8.750 12,621 Tubular Summary Date OD Description Wt Grade Top Bottom (Ib/ft) (MD ft) (MD ft) (in) Surface Casing 54.50 J-55 13.375 807 Intermediate Casing 9.625 40.00 N-80 4,532 **Production Casing** 5.500 15.50 J-55 5,300 0 Production Casing 5.500 17.00 N-80 5,400 12,458 **Casing Cement Summary** No. Top Bottom (MD ft) (MD ft) Date Csg. O.D. (in) Bottom Comments Sx 13.375 807 CIRCULATED 900 4,532 2 STAGES, 2,730 9.625 CIRCULATED 1,300 5.500 CIRCULATE TO 5,300 SURFACE 382 5.500 10,065 12,458 **Tools/Problems Summary** Bottom Date Tool Type 0.D. I.D. Тор (in) (in) (MD ft) (MD ft) DVT, D/O 0.000 0.000 2,522 CIBP 0.000 0.000 10,500 **Cement Plug Summary** O.D. Date No. Top Bottom Comments (MD ft) (MD ft) Sx (in) 25 8.750 5,325 5,400 TOP OF PLUG EST. Perforation Summary C Date Perf. Status Formation OA Top OA Bottom Shots (MD ft) (MD ft) DELAWARE MTN 4,874 4.943 GP 12,390 11,310 Isolated Morrow Formation Tops Summary Formation Top Comments (TVD ft) RUSTLER 74 2,361 Tansill YATES 2,553 7-Rivers 2,769 CAPITAN 2,860 DELAWARE SAND 4,815

www.WellShadow.com

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### **RE-ENTRY PROCEDURE**

### LUSK DEEP UNIT 3-A (Lusk Fed #3-A)

- 1. Cut Well Head
- 2. Install BOP. Test to 3000 PSI
- 3. GIH w/ 7 7/8" bit and drill collars
- 4. Drill out 40' surface plug. Tag 2<sup>nd</sup> plug @ 700'
- 5. Drill out 2<sup>nd</sup> plug from 700'-800'
- Drill out 3<sup>rd</sup> plug from 2400'-2500'. Tag 4<sup>th</sup> plug at 4443'. Pressure test 9 5/8" casing to 1000 PSI
- 7. Drill out 4<sup>th</sup> plug from 4443'-4552'. Drill and circulate hole clean to ~ 5325'
- 8. RIH w/ 5 ½" 15.5# J-55 LTC casing to 5300'
- RU cementers. Break circulation. If good circulation, cement 5 ½" casing w/ 1300 sacks 50/50 POZ class C, 2% Gel 5% salt, .5% FL-62 (Fluid loss) Yield 1.26. Cement to surface. Displace cement
- 10. Nipple up BOP. GIH with 2 7/8" tubing. Clean out hole to ~ 5300'
- 11. Spot 15% NEFE acid over proposed perfs. POOH
- 12. Run GR/CLL Log from ~ 5300' to 2400'. Perforate 4931'-4943' and 4874'-4890' Cherry Canyon Sands
- 13. Acidize perfs w/1500 gallons 15% NEFE
- 14. Swab test well. If good oil show, frack well through casing

#### DRILLING PLAN:

### SHACKELFORD OIL COMPANY, INC. (RE-ENTRY) LUSK FEDERAL #3-A 1650' FNL & 660' FWL, SECTION 20, T19S, R32E Lea County, NM

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

A. Recent Permian with quaternary alluvium and other surficial deposits.

#### 2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Formation	Subsea Depth	Well Depth	Water / Oil / Gas
Anhydrite		745'	Salt
Tansil		2363'	Water/Oil/Gas
Yates		2552'	Water/Oil/Gas
Seven Rivers		2763'	Water/Oil/Gas
Top Capitan Reef		2860'	Water/Oil/Gas
Base Capitan Reef		3920'	Water/Oil/Gas
Delaware		4755'	Water/Oil/Gas
TD		5300'	Water/Oil/Gas
24			

Water : Surface water between 50' - 230' behind casing. Oil : Possible in the Yates below 2,600' and the Delaware below 4,820 Gas: None expected.

This project will involve re-entering the plugged and abandoned #3-A well, drilling out cement and plugs and setting CIBP at 5400'. This vertical gas well will be re-entered for the Delaware.

#### 3. CASING PROGRAM: EXISTING IN WELL

Hole Size	Depth	Casing Size	Weight	Joint	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17 1/2"	0' - 807'	13 3/8"	54.5#	STC	J-55 (8 Round)	New	N/A	N/A	N/A
12-1/4"	0'-4532'	9-5/8"	40#	STC	N-80 (8 Round)	New	N/A	N/A	N/A
7-7/8"	0'- 12,458'	5 1/2"	17#	LTC	N-80 (8 Round)	New	N/A	N/A	N/A

Plan on running new 5 1/2" casing (15.5#, J-55 (8-Round), LTC) to 5300'. SF (Burst 1.84) (Collapse 1.54) (Tension 3.43).

#### 4. CEMENT PROGRAM: EXISTING

- A. Surface Casing: Existing. 13 3/8", 54.5#, J-55, @807' cmtnd w 900 sx circ to surface.
- B. Intermidiate Casing: Existing. 9 5/8", 40#, N-80, @ 4532' cmtnd w 2730 sx, circ to surface.
- C. Production Casing: Existing. 5 1/2", 17#, N-80 @ 5400 12458' cmtnd w 382 sx, circ to surface.

# NEW 5 ½" CEMENT PROGRAM: 5 ½", 15.5, J-55 @0-5300' cmtnd w 1300 sx. Circ to surface. 50/50 POZ C, 2 % Gel, 5% Salt, .5% FL – 25, yield 1.26 (20% Excess).

#### 5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) for this well consists of a 10" 3M Cameron Space Saver, double ram BOP with choke manifold. The BOP will be installed on the 9 5/8" casing. Casing and BOP will be tested as described in Onshore Order No. 2. The pipe rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on drillers log. (See Exhibits).

### 6. PROPOSED MUD CIRCULATION SYSTEM: In lateral hole

INTERVAL	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0 – 5300'	Brine water mud	9.5	29	NC

If needed, the necessary mud products for weight addition and fluid loss control will be on location at all times.

#### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location.

#### 8. LOGGING, CORING AND TESTING PROGRAM:

Drill Stem Tests :	None.
Logging:	Bond Log was previously run.
Coring:	None.

#### 9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. In the event abnormal pressures are encountered, the proposed mud program will be modified to increase the mud weight. Max bottom hole pressure should not exceed 3,218 psi., surface pressure 1,856 psi (part. Evac. Hole) with BHT of 122 F anticipated.

inhibitors sufficient to control the gas. The well will be shut down until a mud separator and flare line can be installed on the choke manifold, if the gas monitor approaches 10.

The operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment.

#### **10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:**

A. Road and location construction will begin after BLM has approved APD. Anticipated spud date will be as soon after BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 25 days. An additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.





#### SHACKELFORD OIL COMPANY

203 W. Wall STE 200

#### Midland, TX 79701

#### **DESIGN:** Closed Loop system with roll-off steel bin (pits)

Contacts: Bob Shackelford - Office: 432-682-9784 Cell: 432-813-7090

Art Marquez - Office: 432-682-9784 Cell: 575-405-1334

Monitoring: 12 hour service

Equipment:

500 bbl waste fluid tank

500 bbl brine water tank

500 bbl 2% KCL Water Tank

Pump, swivel manifold

Reverse tank

1 CRI Bin with track system

Air pumps on location for immediate remediation process

Layout of Closed Loop System with bin, attached

Cuttings and associated liquids will be hauled to a State regulated third party disposal site, via CRI (Controlled Recovery, Inc.) Disposal Facility Permit # R9166

#### **OPERATIONS:**

Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed.

Any leak in system will be repaired and/or contained immediately.

OCD will be notified within 48 hours of the spill.

Remediation process started immediately.

#### **CLOSURE;**

During drilling operations all liquids, drilling fluids and cuttings will be hauled off via CRI (Controlled Recovery Incorporated) Disposal Facility Permit # R9166



# Plat for Closed Loop System

## **EXHIBIT D**

# Rig Plat Only LUSK FEDERAL #3-A V-DOOR EAST NORTHEAST Rig Up South

