

HOBBS OCD

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

MAY 16 2017

RECEIVED

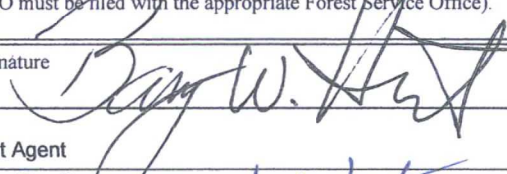
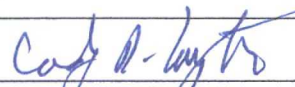
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☒ REENTER		5. Lease Serial No. LC-065710-A
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator SHACKELFORD OIL COMPANY (20595)		8. Lease Name and Well No. LUSK FEDERAL #8A 315243
3a. Address 203 W. WALL, SUITE 200, MIDLAND, TEXAS 79701		9. API Well No. 30-025-30494
3b. Phone No. (include area code) (432) 682-9784		10. Field and Pool, or Exploratory LUSK; DELAWARE, WEST 41540
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 165' FNL & 330 FEL At proposed prod. zone SAME		11. Sec., T. R. M. or Blk. and Survey or Area Section 20, T. 19 S., R. 32 E.
14. Distance in miles and direction from nearest town or post office* 40 MILES SOUTHWEST OF HOBBS, NM		12. County or Parish LEA
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'		13. State NM
16. No of acres in lease 640		17. Spacing Unit dedicated to this well 40
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 358'		20. BLM/BIA Bond No. in file NM 2156
19. Proposed Depth 4967'		21. Estimated duration 15 DAYS
22. Approximate date work will start* ASAP		23. Estimated duration 15 DAYS
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature 	Name (Printed/Typed) BARRY W. HUNT	Date 12/12/16
Title Permit Agent		
Approved by (Signature) 	Name (Printed/Typed) Cody D. Layman	Date 05/10/17
Title for FIELD MANAGER	Office BLM-CARLSBAD FIELD OFFICE	

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, are attached.

APPROVAL FOR TWO YEARS

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.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

KZ
05/10/17

RE-ENTRY PROCEDURE
SHACKELFORD OIL COMPANY
LUSK WEST DELAWARE UNIT #8
(LUSK FEDERAL # 8A)
H-SEC. 20-T19S-R32E
1651' FNL & 330' FEL

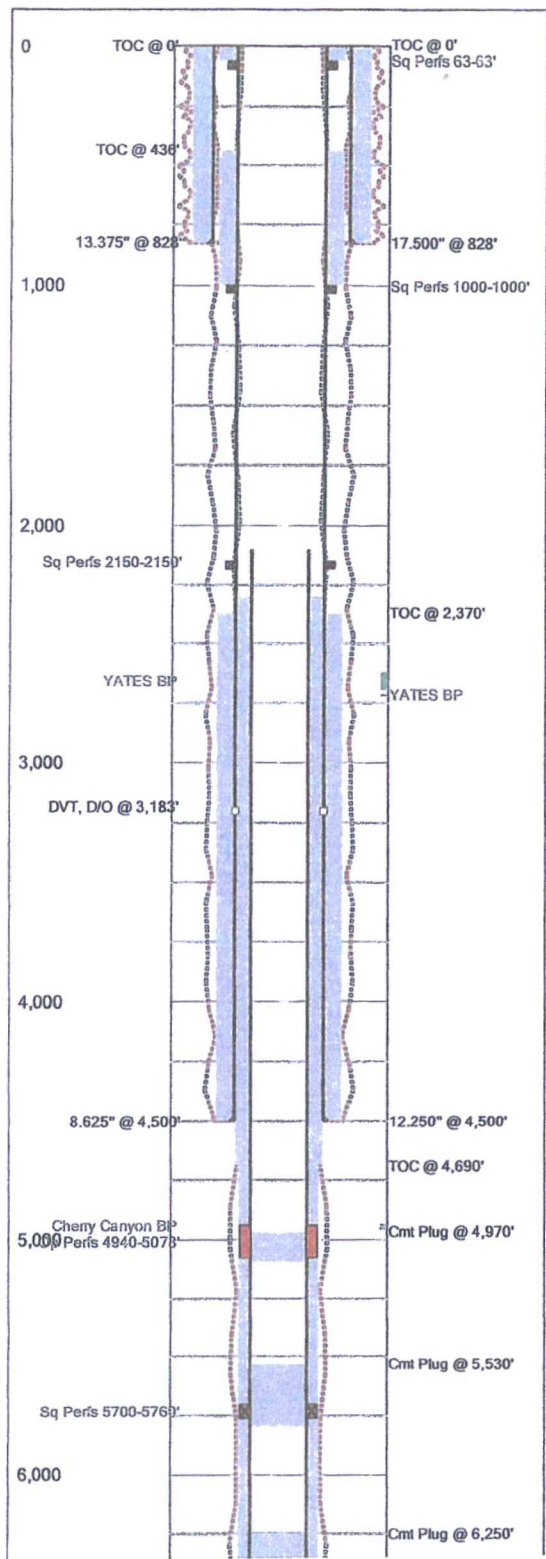
1. Cut wellhead.
2. Install BOP test to 3000 PSI
3. GIH w/ 7 7/8" Bit and drill collars
4. Drill out 63' surface plug, tag 2nd plug at 766'
5. Drill out 2nd plug to 1000', tag 3rd plug at 1977'
6. Drill out 3rd plug to top of 5 1/2" casing stub at 2100'
7. GIH w/ 4 3/4" Bit and drill collars. Drill out remainder of 3rd plug to 2150'. Tag top of 4th plug at 2437'.
8. Drill out 4th plug to 2928'. Tag 5th plug at 3087'.
9. Drill out 5th plug to 3275'. Tag 6th plug at 4444
10. Drill 6th plug to 4777'. Tag 7th plug to 4828'.
11. Drill out 7th plug to 4920'. Circulate hole clean. Pressure test casing to 500 #. POOH w/Bit and Drill Collars.
12. GIH w/Cement Bond Log, log from 4920' to surface. Determine where top of cement is on 5 1/2" casing and determine where the cement is on 8 5/8" casing to be sure salt section is covered.

REVIEW CEMENT BOND LOG WITH BLM TO DETERMINE CASING AND CEMENT PROCEDURE, IF NEEDED FILE SUNDRY NOTICE WITH BLM FOR NEW CASING AND CEMENT PROGRAM.

13. If cement is ok, drill out to 4967', circulate hole clean, then perforate 5 ½" casing from 4935'-4946'. Acidize with 15% HCL. Swab test for oil shows. If zones look productive put on pump.
14. If 4935'-4946' does not look productive set CIBP at 4600'. Perforate 5 ½" casing at 2624'-2696' and 2714'-2722'. Acidize w/ 15% HCL. Swab test for oil show. If zones look productive Frack and put on pump.

PROPOSED

Last Updated: 10/20/2016 11:04 AM



Field Name		Lease Name		Well No.
Lusk West Delaware		Lusk West Delaware Unit		8
County		State	API No.	
Lea		New Mexico	30025304940000	
Version	Version Tag			
2	Proposed			
GL (ft)	KB (ft)	Section	Township/Block	Range/Survey
		20	19s	32e
Operator		Well Status	Latitude	Longitude
Shackelford Oil Company		Plugged		
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
1651	FNL	330	FEL	
Prop Num		Spud Date	Comp. Date	
		11/17/1988	2/17/1989	
Additional Information				
Other 1				
Other 2				
Other 3				
Other 4				
Prepared By		Updated By		Last Updated
Shackelford		Shackelford		10/20/2016 11:04 AM

Hole Summary				
Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	828	
	12.250	0	4,500	
	7.875	0	7,220	

Tubular Summary						
Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
11/24/1988	Surface Casing	13.375	48.00	H-40	0	828
11/30/1988	Intermediate Casing	8.625	24.00	J-55	0	4,500
12/9/1988	Production Casing	5.500	17.00	K-55	2,100	2,675
12/9/1988	Production Casing	5.500	17.00	K-55	2,675	2,924
12/9/1988	Production Casing	5.500	15.50	K-55	2,924	7,220

Casing Cement Summary						
C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	11/24/1988	1,400	13.375	0	828	Class C
	3/15/2011	0	8.625	0	63	circulated 50 sx cement
	3/15/2011	125	8.625	436	1,000	estimated
	11/30/1988	700	8.625	2,370	4,500	
		348	5.500	2,300	4,690	New cement
	12/12/1988	600	5.500	4,690	7,220	

Tools/Problems Summary					
Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
	DVT, D/O	7.875	0.000	3,183	0
3/3/2011	CIBP	5.500	0.000	6,450	0
11/11/1989	CIBP	5.500	0.000	7,030	0

Cement Plug Summary					
Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
3/5/2011	25	5.500	4,970	5,100	
3/4/2011	25	5.500	5,530	5,800	
3/4/2011	25	5.500	6,250	6,450	
		5.500	6,944	7,220	

Perforation Summary						
C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
	3/15/2011	Squeezed		63	63	
	3/15/2011	Squeezed		1,000	1,000	
	3/15/2011	Squeezed		2,150	2,150	

Last Updated: 10/20/2016 11:04 AM

Field Name	Lease Name	Well No.	County	State	API No.
Lusk West Delaware	Lusk West Delaware Unit	8	Lea	New Mexico	30025304940000
Version	Version Tag	Spud Date	Comp. Date	GL (ft)	KB (ft)
2	Proposed	11/17/1988	2/17/1989		
Section	Township/Block	Range/Survey	Dist. N/S (ft)	N/S Line	Dist. E/W (ft)
20	19s	32e	1,651	FNL	330
Operator	Well Status	Latitude	Longitude	Prop Num	
Shackelford Oil Company	Plugged				
Other 1	Other 2	Other 3	Other 4		
Last Updated	Prepared By	Updated By			
10/20/2016 11:04 AM	Shackelford	Shackelford			
Additional Information					

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	828	
	12.250	0	4,500	
	7.875	0	7,220	

Tubular Summary

Date	Description	No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	Comments
11/24/1988	Surface Casing		13.375	48.00	H-40	0	828	
11/30/1988	Intermediate Casing		8.625	24.00	J-55	0	4,500	
12/9/1988	Production Casing		5.500	17.00	K-55	2,100	2,675	
12/9/1988	Production Casing		5.500	17.00	K-55	2,675	2,924	
12/9/1988	Production Casing		5.500	15.50	K-55	2,924	7,220	

Casing Cement Summary

C	Date	No. Sx	Yield (ft ³ /sk)	Vol. (ft ³)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	11/24/1988	1,400	.00	1,400	13.375	0	828		Class C
	3/15/2011	0	.00	25	8.625	0	63		circulated 50 sx cement
	3/15/2011	125	.00		8.625	436	1,000		estimated
	11/30/1988	700	.00	700	8.625	2,370	4,500		
		346	1.26	436	5.500	2,300	4,690		New cement
	12/12/1988	600	.00	600	5.500	4,690	7,220		

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	DV tool (drilled out)	7.875	0.000	3,183	0		
3/3/2011	Cast Iron Bridge Plug	5.500	0.000	6,450	0		
11/11/1988	Cast Iron Bridge Plug	5.500	0.000	7,030	0	4 sx cement on top	

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
3/5/2011	25	5.500	4,970	5,100	
3/4/2011	25	5.500	5,530	5,800	
3/4/2011	25	5.500	6,250	6,450	
		5.500	6,944	7,220	

Perforation Summary

C	Date	Perf. Status	Formation			Comments	
	3/15/2011	Squeezed				Pressured up no rate	
Top (MD ft)		Bottom (MD ft)		SPF	Shots	Phasing (deg)	Interval Comments
2,150		2,150					
C	Date	Perf. Status	Formation			Comments	
	3/15/2011	Squeezed				Sqzd 125 sx	
Top (MD ft)		Bottom (MD ft)		SPF	Shots	Phasing (deg)	Interval Comments
1,000		1,000					
C	Date	Perf. Status	Formation			Comments	
	3/15/2011	Squeezed				Sqzd 125 sx	

Last Updated: 10/20/2016 11:04 AM

C	Date	Perf. Status	Formation		Comments	
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	4,940	5,078				
C	Date	Perf. Status	Formation		Comments	
	1/6/1989	Open				
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	7,121	7,136				
C	Date	Perf. Status	Formation		Comments	
	1/12/1989	Open				
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	6,468	6,478				

Behind Pipe Summary

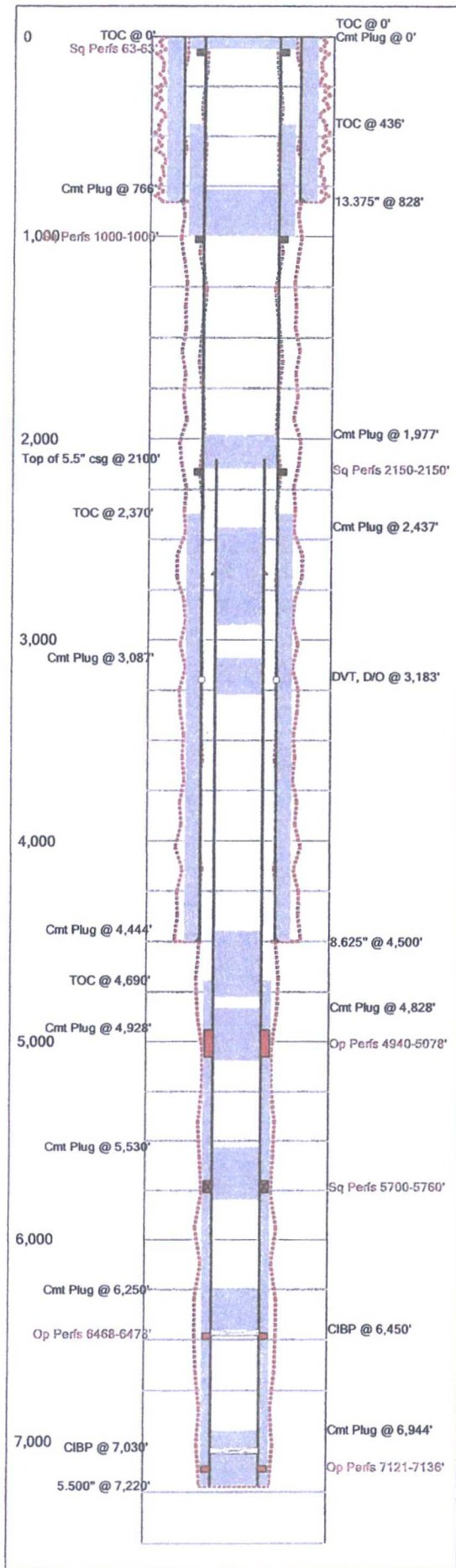
C	Formation Name	Top (MD ft)	Bottom (MD ft)	Net Pay(ft)	Drain. Area(Acre)	Res. Pres.(psi)	Water Sat. (%)	Eff. Por. (%)	EUR Oil (MBO)	EUR Gas (MMCF)	Comments
	YATES	2,624	2,696	0	0	0	0.0%	0.0%	0	0	
	YATES	2,714	2,722	0	0	0	0.0%	0.0%	0	0	
	Cherry Canyon	4,936	4,956	0	0	0	0.0%	0.0%	0	0	4950' Zone

Well History Summary

Date	Comments
3/5/2011	Attempt to cut and pull 5 1/2" casing @ 4527', not free, pressured up on casing 1500#.
3/6/2011	Attempt to cut 5 1/2" casing @ 3224', not free
3/8/2011	Attempt to cut 5 1/2" casing @ 2878', not free, pressure up to 500#
3/9/2011	Ran free point tool casing free @ 2100', 50% free @ 2150', 100% stuck @ 2200'
3/10/2011	Cut 5 1/2" casing @ 2100', pulled casing at 2100'
3/11/2011	Attempt to spear 5 1/2" casing, free @ 2100' to 2878', unsuccessful

EXISTING

Last Updated: 10/20/2016 10:56 AM



Field Name		Lease Name	Well No.
Lusk West Delaware		Lusk West Delaware Unit	8
County		State	API No.
Lea		New Mexico	30025304940000
Version		Version Tag	
1		Present	
GL (ft)	KB (ft)	Section	Township/Block
		20	19s
Operator		Well Status	Latitude
Shackelford Oil Company		Plugged	
Dist. N/S (ft)		Dist. E/W (ft)	Footage From
1651 FNL		330 FEL	
Prop Num		Spud Date	Comp. Date
		11/17/1988	2/17/1989
Additional Information			
Other 1	Other 2	Other 3	Other 4
Prepared By		Updated By	Last Updated
Shackelford		Shackelford	10/20/2016 10:56 AM

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	828	
	12.250	0	4,500	
	7.875	0	7,220	

Tubular Summary

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
11/24/1988	Surface Casing	13.375	48.00	H-40	0	828
11/30/1988	Intermediate Casing	8.625	24.00	J-55	0	4,500
12/9/1988	Production Casing	5.500	17.00	K-55	2,100	2,675
12/9/1988	Production Casing	5.500	17.00	K-55	2,675	2,924
12/9/1988	Production Casing	5.500	15.50	K-55	2,924	7,220

Casing Cement Summary

C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	11/24/1988	1,400	13.375	0	828	Class C
	3/15/2011	0	8.625	0	63	circulate 50 sx cement
	3/15/2011	125	8.625	436	1,000	estimated
	11/30/1988	700	8.625	2,370	4,500	
	12/12/1988	600	5.500	4,690	7,220	

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
	DVT, D/O	7.875	0.000	3,183	0
3/3/2011	CIBP	5.500	0.000	6,450	0
11/11/1989	CIBP	5.500	0.000	7,030	0

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
3/16/2011	50	8.625	0	63	
3/15/2011	125	8.625	766	1,000	
3/15/2011	25	8.625	1,977	2,150	
3/14/2011	40	5.500	2,437	2,928	
3/7/2011	30	5.500	3,087	3,275	
3/6/2011	25	5.500	4,444	4,777	
3/5/2011	30	5.500	4,828	4,928	
3/5/2011	25	5.500	4,928	5,100	
3/4/2011	25	5.500	5,530	5,800	
3/4/2011	25	5.500	6,250	6,450	
		5.500	6,944	7,220	

Perforation Summary

C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
	3/15/2011	Squeezed		63	63	
	3/15/2011	Squeezed		1,000	1,000	
	3/15/2011	Squeezed		2,150	2,150	
	12/30/1993	Open		4,940	5,078	
	12/15/1993	Squeezed		5,700	5,760	
	1/12/1989	Open		6,468	6,478	
	1/6/1989	Open		7,121	7,136	

Last Updated: 10/20/2016 10:56 AM

Field Name		Lease Name		Well No.	County	State	API No.	
Lusk West Delaware		Lusk West Delaware Unit		8	Lea	New Mexico	30025304940000	
Version	Version Tag			Spud Date	Comp. Date	GL (ft)	KB (ft)	
1	Present			11/17/1988	2/17/1989			
Section	Township/Block	Range/Survey	Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From	
20	19s	32e	1,651	FNL	330	FEL		
Operator		Well Status		Latitude		Longitude		Prop Num
Shackelford Oil Company		Plugged						
Other 1		Other 2		Other 3		Other 4		
Last Updated		Prepared By		Updated By				
10/20/2016 10:56 AM		Shackelford		Shackelford				
Additional Information								

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	828	
	12.250	0	4,500	
	7.875	0	7,220	

Tubular Summary

Date	Description	No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	Comments
11/24/1988	Surface Casing		13.375	48.00	H-40	0	828	
11/30/1988	Intermediate Casing		8.625	24.00	J-55	0	4,500	
12/9/1988	Production Casing		5.500	17.00	K-55	2,100	2,675	
12/9/1988	Production Casing		5.500	17.00	K-55	2,675	2,924	
12/9/1988	Production Casing		5.500	15.50	K-55	2,924	7,220	

Casing Cement Summary

C	Date	No. Sx	Yield (ft3/sk)	Vol. (ft3)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	11/24/1988	1,400	.00	1,400	13.375	0	828		Circ Class C
	3/15/2011	0	.00	25	8.625	0	63		circulate 50 sx cement
	3/15/2011	125	.00	125	8.625	436	1,000		estimated
	11/30/1988	700	.00	700	8.625	2,370	4,500		
	12/12/1988	600	.00	600	5.500	4,690	7,220		

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	DV tool (drilled out)	7.875	0.000	3,183	0		
3/3/2011	Cast Iron Bridge Plug	5.500	0.000	6,450	0		
11/11/1989	Cast Iron Bridge Plug	5.500	0.000	7,030	0	4 sx cement on top	

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
3/16/2011	50	8.625	0	63	
3/15/2011	125	8.625	766	1,000	
3/15/2011	25	8.625	1,977	2,150	
3/14/2011	40	5.500	2,437	2,928	
3/7/2011	30	5.500	3,087	3,275	
3/6/2011	25	5.500	4,444	4,777	
3/5/2011	30	5.500	4,828	4,928	
3/5/2011	25	5.500	4,928	5,100	
3/4/2011	25	5.500	5,530	5,800	
3/4/2011	25	5.500	6,250	6,450	
		5.500	6,944	7,220	

Perforation Summary

C	Date	Perf. Status	Formation	Comments
	3/15/2011	Squeezed		Pressured up no rate
			SPF	Shots
		Top (MD ft)	Bottom (MD ft)	Phasing (deg)
		2,150	2,150	
C	Date	Perf. Status	Formation	Comments
	3/15/2011	Squeezed		Sqzed 125 sx
			SPF	Shots
		Top (MD ft)	Bottom (MD ft)	Phasing (deg)
		1,000	1,000	
C	Date	Perf. Status	Formation	Comments
	3/15/2011	Squeezed		Circulated 50 sx
			SPF	Shots
		Top (MD ft)	Bottom (MD ft)	Phasing (deg)
		63	63	
C	Date	Perf. Status	Formation	Comments
	12/15/1993	Squeezed		Pressured casing to 500# held OK

Last Updated: 10/20/2016 10:56 AM

C	Date	Perf. Status	Formation		Comments	
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	5,700	5,760				
C	Date	Perf. Status	Formation		Comments	
	12/30/1993	Open			attempted sqz 2/8/1994, 2/15/1994, 2/18/1994 did not hold.	
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	4,940	5,078				
C	Date	Perf. Status	Formation		Comments	
	1/6/1989	Open				
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	7,121	7,136				
C	Date	Perf. Status	Formation		Comments	
	1/12/1989	Open				
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	6,468	6,478				

Well History Summary

Date	Comments
3/5/2011	Attempt to cut and pull 5 1/2" casing @ 4527', not free, pressured up on casing 1500#.
3/6/2011	Attempt to cut 5 1/2" casing @ 3224', not free
3/8/2011	Attempt to cut 5 1/2" casing @ 2878', not free, pressure up to 500#
3/9/2011	Ran free point tool casing free @ 2100', 50% free @ 2150', 100% stuck @ 2200'
3/10/2011	Cut 5 1/2" casing @ 2100', pulled casing at 2100'
3/11/2011	Attempt to spear 5 1/2" casing, free @ 2100' to 2878', unsuccessful

DRILLING PLAN:

SHACKELFORD OIL COMPANY, INC.
(RE-ENTRY) LUSK FEDERAL #8-A
1651' FNL & 330' FEL, 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		812'	Salt
Tansil		2422'	Water/Oil/Gas
Yates		2607'	Water/Oil/Gas
Seven Rivers		2808'	Water/Oil/Gas
Top Capitan Reef		2903'	Water/Oil/Gas
Base Capitan Reef		3920'	Water/Oil/Gas
Delaware		4840'	Water/Oil/Gas
TD		4967'	Water/Oil/Gas

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 (Originally the Lusk Deep Unit-A #15) Lusk West Delaware Unit #8 well. This vertical oil well will be re-entered for the Delaware (**SEE RE-ENTRY PROCEDURE**).

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' - 828'	13 3/8"	48#	STC	H-40 (8 Round)	New	N/A	N/A	N/A
12-1/4"	0' - 4500'	8-5/8"	24#	STC	K-55 (8 Round)	New	N/A	N/A	N/A
7-7/8"	2100' - 7220'	5 1/2"	17#	STC	K-55 (8 Round)	New	N/A	N/A	N/A

5 1/2" Casing cut and pulled at 2100' when well was plugged on 3/8/2011.

4. CEMENT PROGRAM: EXISTING

- A. **Surface Casing: Existing.** 13 3/8", 48#, H-40, @828' cmtnd w 1000 sx Class C 2% CaCl, 14.8 ppg, 1.32 yield, 6.3 gal. Circ 220 sx. to surface.
- B. **Intermediate Casing: Existing.** 8 5/8", 24#, K-55, @ 4500' cmtnd w 550 sx. Class C w/20% Diacel D, 12 ppg., and 150 sx. Class C Neat, 14.8ppg. TOC 2320'.
- C. **Production Casing: Existing.** 5 1/2", 17#, K-55 @ 7220' cmtnd w 300 sx. Class C w/20% Diacel D and 300 sx. Class C Neat, 14.8 ppg. TOC 4690'.

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 8 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 – 4967'		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. A Visual mud monitoring system will be utilized.

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.

CBL will be run from TD to surface.

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 2,454 psi., and BHT of 95 degrees anticipated.

H2S: None expected. None in the previously drilled well, but the Mud Log Unit will be cautioned to use a gas trap to detect H2S and if any is detected the mud weight will be increased along with H2S 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.

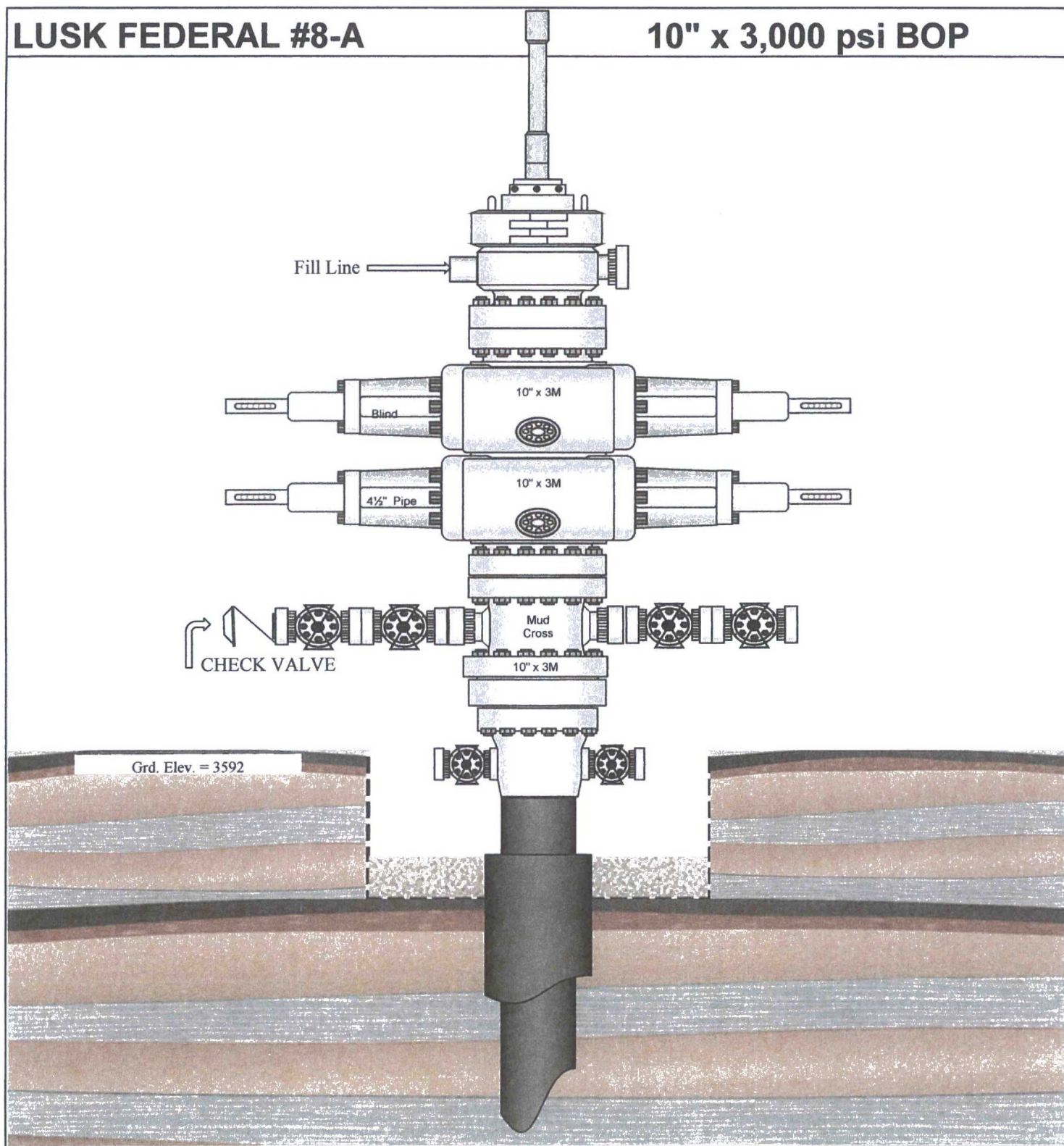
The operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

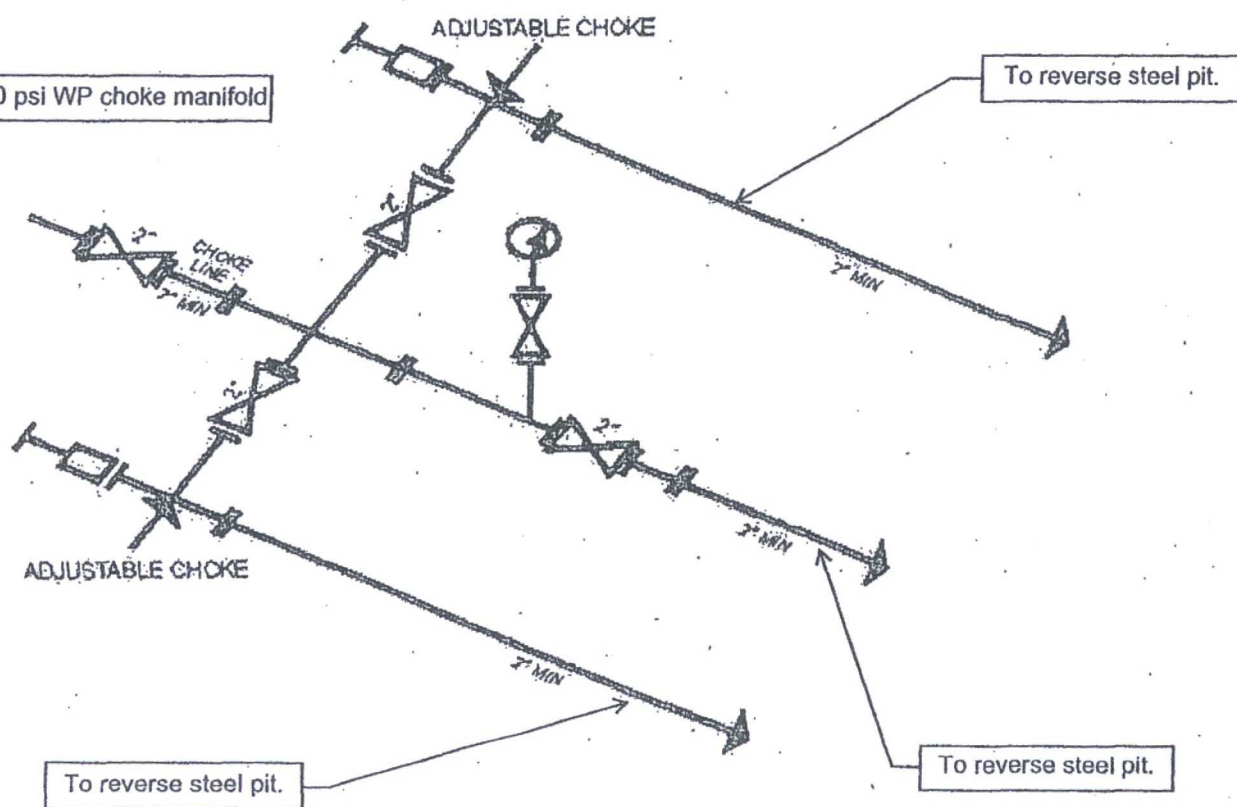
A. Road and location construction will begin after BLM has approved APD. Anticipated spud date will be as soon after BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 15 days. An additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

LUSK FEDERAL #8-A

10" x 3,000 psi BOP



3000 psi WP choke manifold



CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Shackelford Oil Company am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 14th. day of November 2016.

Signed: _____

A handwritten signature in black ink, appearing to read "Barry W. Hunt", written over a horizontal line.

Printed Name: Barry Hunt

Position: Agent for Shackelford Oil Company

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: specialtpermitting@gmail.com

POWER OF ATTORNEY
DESIGNATION OF AGENT

SHACKELFORD OIL COMPANY, hereby names the following person as its agent

Name of Agent: Barry W. Hunt

Agent's Address: 1403 Spring Farm Place, Carlsbad, NM 88220

Agent's Telephone Number: (575) 361-4078

GRANT OF SPECIAL AUTHORITY

SHACKELFORD OIL COMPANY, grants its agent the authority to act for it with respect to the following only:

1. Executing forms required to be filed with the Bureau of Land Management of the Department of Interior of the United States of America.
2. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.

EFFECTIVE DATE

This power of attorney is effective immediately.

RELIANCE ON THE POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

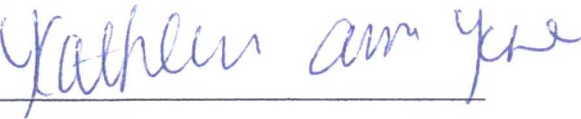
ACKNOWLEDGEMENT

SHACKELFORD OIL COMPANY:



By: Don Shackelford

This instrument was acknowledged before me on this 8 day of
April 2014 by Don Shackelford President of
Shackelford Oil Company.



Notary Public



My Commission Expires 9, 2015

WELL NAME CHANGE

Lusk West Delaware Unit #8

H-Sec. 20-T19S-R32E

1651' FNL & 330' FEL

Proposed zones to be tested:

2624'-2696' Yates sand (Non-unitized zone)

2714'-2722' Yates sand (Non-unitized zone)

4936'-4958' Cherry Canyon zone (Non-unitized zone)

The Lusk West Delaware Unit #8 re-entry will be a non-unit well, the proposed name change will be the Lusk Federal #8-A.