

OCD ~~HOBBS~~ OCD

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APR 27 2015

APPLICATION FOR PERMIT TO DRILL OR REENTER RECEIVED

1a. Type of work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No. <i>Unit NM 70982X</i>	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		Lusk West Delaware Unit <i>NM 94514X</i>	
2. Name of Operator SHACKELFORD OIL COMPANY <i>&lt;20595&gt;</i>		8. Lease Name and Well No. LUSK WEST DELAWARE UNIT #11 <i>(312725)</i>	
3a. Address 203 W. WALL, SUITE 200 MIDLAND, TEXAS 79701		9. API Well No. 30-025-34173	
3b. Phone No. (include area code) 432-682-9784		10. Field and Pool, or Exploratory LUSK; DELAWARE, WEST <i>&lt;41540&gt;</i>	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1980 FSL & 1980 FWL 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* 22 MILES NORTHEAST OF CARLSBAD, NM		12. County or Parish LEA	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1980'	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. 950'	19. Proposed Depth 5400'	20. BLM/BIA Bond No. on file NM - 2156	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3570' GL	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, must be attached to this form:

- |  |   |
|--|---|
| 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 required by the BLM.             |

25. Signature <i>[Signature]</i>	Name (Printed/Typed) BARRY W. HUNT	Date 5/22/14
Title PERMIT AGENT FOR SHACKELFORD OIL COMPANY		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) Steve Caffey	Date APR 23 2015
Title FIELD MANAGER Office 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.

(Continued on page 2)

\*(Instructions on page 2)

Re-Entry - Witness CIT/MIT

*KC*  
*04/22/15*

MAY 01 2015

ReComp	___	Add new well	___
Cancl Well	___	Create Pool	___
E-PERMITTING	___	New Well	___
Comp	___	P&A	___
CSNG	___	Loc Chng	___

DRILLING PLAN:

HOBBS OCD

SHACKELFORD OIL COMPANY, INC.  
 (RE-ENTRY) LUSK WEST DELAWARE #11  
 1980' FSL & 1980' FWL, SECTION 20, T19S, R32E  
 Lea County, NM

APR 27 2015

RECEIVED

**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		756'	Salt
Tansil		2474'	Water/Oil/Gas
Yates		2560'	Water/Oil/Gas
Seven Rivers		2770'	Water/Oil/Gas
Top Capitan Reef		2882'	Water/Oil/Gas
Base Capitan Reef		3920'	Water/Oil/Gas
Delaware		4690'	Water/Oil/Gas
TD		5400'	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 #11 well drilling out cement and plugs and setting CIBP at 5400'. This vertical Lusk West Delaware well will be drilled for the same.

**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' - 858'	13 3/8"	54.5#	STC	J-55	New	6.44	2.67	12.86
12-1/4"	0' - 4204'	8-5/8"	24#	STC	J-55	New	1.42	1.22	2.44
		8-5/8"	32#	STC	J-55	New			
7-7/8"	0' - 6630'	5 1/2"	15.5#	LTC	J-55	New	1.47	1.23	2.47

#### 4. CEMENT PROGRAM: EXISTING

- A. Surface Casing: Existing. 13 3/8", 54.5#, @858' cmtnd w 475 sx 35.65 poz CL "C" + 6% Gel + 5% salt + .25#/sx celloflakes, wt 12.7 ppg, yield 1.94 cuft/sx, wtr – 10.48 gal/sx. Tail: 200 sx "C" NEAT + 2% CaCl2 + 2.5#/sx celloflakes. Wt 14.86 ppg, yield 1.32 cuft/sx, wtr – 6.32 gal/sx. TOC: circ to surface.
- B. Intermediate Casing: Existing. 8 5/8", 32#, @ 4204' cmtnd w (1<sup>st</sup>. stage: 685 sx 50-50 POZ class C + 10% gel + .5% salt, 11.92ppg, yield. Tail w/200 sx class C NEAT + 1% CaCl 14.81 ppg, yield. DV tool @ 2620'. 2<sup>nd</sup>. Stage: 825sx 50-50 POZ class C + 10% gel + 5% salt, 11.92 ppg, yield 2.35. Tail w/150 sx class C NEAT + 2% CaCl2 14.81 ppg yield 1.33. TOC: circ to surface.
- C. Production Casing: Existing. 5 1/2", 15.5#, @ 6630' cmtnd w 900 sx 50-50 POZ Cl "C" + 2% gel + 5% Fl62, wt. 11.92 ppg, yield 1.25 cuft/sx, circ to surface.

#### 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 before drilling out with 7 7/8". 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 Exhibit #1 & #2).

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

INTERVAL		Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0 – 5400'		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.

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 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.

Last Updated: 3/11/2014 11:18 AM

Field Name		Lease Name		Well No.
Lusk West Delaware Unit		Lusk West Delaware Unit		11
County, State			API No.	
Lea, New Mexico			30025341736000	
Version		Version Tag		
1				
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey
		20	15S	32E
Operator		Well Status	Latitude	Longitude
Footage Call				
PropNum		Spud Date	Comp. Date	
		10/10/1997	12/3/1997	
Additional Information				
Prepared By		Updated By	Last Updated	
Brady Shackelford		Brady Shackelford	3/11/2014 11:18 AM	

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	848	
	12.250	0	4,204	
	7.875	0	6,632	

Tubular Summary

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
	Surface Casing	13.375	54.50	J-55	0	848
	Intermediate Casing	8.625	32.50	J-55	0	4,204
	Production Casing	5.500	15.50	J-55	0	6,632

Casing Cement Summary

Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	675	13.375	0	848	
	675	8.625	0	2,620	
	845	8.625	2,620	4,204	
	900	5.500	0	6,630	

Tools Problems Summary

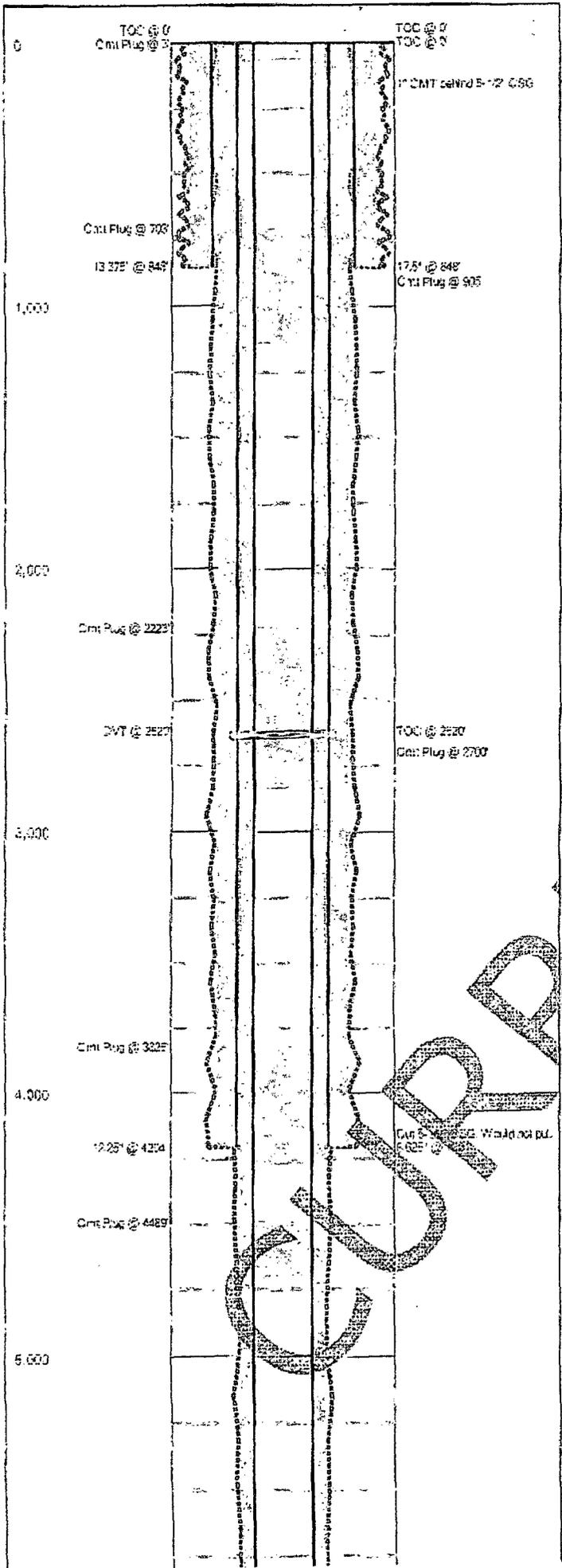
Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
	DVT	8.625	0.000	2,620	0
	CBP	5.500	0.000	6,375	0

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	10	5.500	3	63	
	25	5.500	705	905	
	50	5.500	905	1,140	
	40	5.500	2,223	2,700	
	40	5.500	2,700	2,837	
	50	5.500	3,925	4,270	
	25	5.500	4,489	4,710	
	25	5.500	5,172	6,375	

Perforation Summary

C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
		Open		6,443	8,451	15



Last Updated: 3/11/2014 11:18 AM

Field Name		Lease Name		Well No.	County, State		API No.
Lusk West Delaware Unit		Lusk West Delaware Unit		1	Lea New Mexico		3002534173000
Version	Version Tag			Spud Date	Comp. Date	G.L. (ft)	K.B. (ft)
1				11/10/1997	12/3/1997		
Sec.	Township/Block	Range/Survey		Footage Call			
20	19S	32E					
Operator			Well Status		Latitude	Longitude	PropNum
Last Updated		Prepared By			Updated By		
03/11/2014 11:18 AM		Brady Shackelford			Brady Shackelford		
Additional Information							

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	848	
	12.250	0	4,204	
	7.875	0	6,630	

Tubular Summary

Date	Description	No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	Comments
	Surface Casing		13.375	54.50	J-55	0	848	
	Intermediate Casing		8.625	32.00	J-55	0	4,204	
	Production Casing		5.500	15.50	J-55	0	6,630	

Casing Cement Summary

Date	No. Sx	Yield (cuft/sk)	Vol. (cuft)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	675	1.00	675	13.375	0	848		
	975	1.00	975	8.625	0	2,625		
	535	1.00	535	5.625	2,625	4,204		
	900	1.00	900	5.500	0	6,630		

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	DW tool	8.625	6.000	2,620			
	Cast Iron Bridge Plug	5.500	0.000	6,375			

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	10	5.500	3	63	
	25	5.500	703	505	
	53	5.500	805	1,140	
	40	5.500	2,223	2,700	
	40	5.500	2,700	2,837	
	50	5.500	3,825	4,275	
	25	5.500	4,493	4,710	
	25	5.500	5,172	6,375	

Perforation Summary

Date	Perf. Status	Formation	Comments		
	Open				
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
6,443	6,253	2	16		

Well History Summary

Date	Comments
3/10/2014	Cur 5-1/2" CSG @ 4137'. Would not pull, pressure to 1000# held
3/11/2014	1" CMT behind 5-1/2" CSG @ 160'. used 165 sx. TOC 3

Last Updated: 3/11/2014 11:30 AM

Field Name		Lease Name		Well No.	
Lusk West Delaware Unit		Lusk West Delaware Unit		11	
County, State				API No.	
Lea, New Mexico				30025341730033	
Version		Version Tag			
2		Proposed			
G.L. (ft)	K.B. (ft)	Sec.	Township/Block	Range/Survey	
		20	19S	32E	
Operator		Well Status	Latitude	Longitude	
Snackelford O-I Co					
Footage Call					
PropNum		Spud Date		Comp. Date	
		11/10/1997		12/31/1997	
Additional Information					
Prepared By		Updated By		Last Updated	
Brady Snackelford		Brady Snackelford		3/11/2014 11:30 AM	

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	848	
	12.250	0	4,204	
	7.875	0	6,830	

Tubular Summary

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
	Surface Casing	13.375	54.50	J-55	0	848
	Intermediate Casing	8.625	32.00	J-55	0	4,204
	Production Casing	5.500	15.50	J-55	0	6,830

Casing Cement Summary

Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	675	13.375	0	848	
	675	8.625	0	2,620	
	335	8.625	2,620	4,204	
	900	5.500	0	6,830	

Tools/Problems Summary

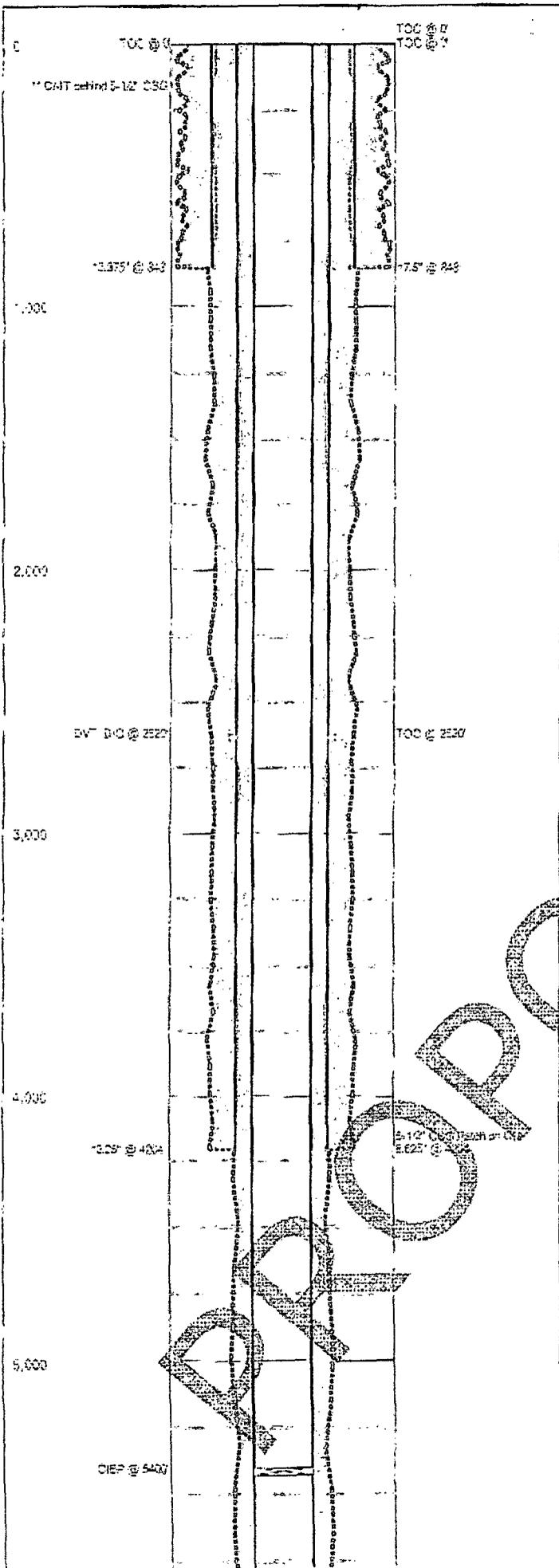
Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
	DVT, D/O	8.625	0.000	2,620	0
	C:BP	5.500	0.000	5,400	0
	C:BF	5.500	0.000	6,375	0

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	25	5.500	6,172	6,375	

Perforation Summary

C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
		Open		6,445	6,451	16



Last Updated: 3/11/2014 11:30 AM

Field Name		Lease Name		Well No.	County, State	API No.	
Lusk West Delaware Unit		Lusk West Delaware Unit		11	Lea New Mexico	30025341730000	
Version	Version Tag			Spud Date	Comp. Date	G.L. (ft)	K.B. (ft)
2	Processed			11/10/1997	12/3/1997		
Sec.	Township/Block	Range/Survey		Footage Call			
20	19S	32E					
Operator			Well Status	Latitude	Longitude	PropNum	
Shackelford Oil Co							
Last Updated			Prepared By	Updated By			
03/11/2014 11:30 AM			Brady Shackelford	Brady Shackelford			
Additional Information							

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	17.500	0	848	
	12.250	0	4,204	
	7.875	0	6,630	

Tubular Summary

Date	Description	No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	Comments
	Surface Casing		13.375	54.50	J-55	0	848	
	Intermediate Casing		6.625	32.00	J-55	0	4,204	
	Production Casing		5.500	15.50	J-55	0	6,630	

Casing Cement Summary

Date	No. Sx	Yield (cuft/sk)	Vol. (cuft)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	675	1.00	575	13.375	0	848		
	975	1.00	575	6.625	0	2,620		
	865	1.00	865	6.625	2,620	4,204		
	900	1.00	900	5.500	0	6,630		

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	Drill tool (drilled out)	3.825	0.000	2,620	0		
	Cast Iron Bridge Plug	5.500	0.000	5,475	0		
	Cast Iron Bridge Plug	5.500	0.000	5,475	0		

Cement Plug Summary

Date	No. Sx	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	25	6.500	6,172	6,375	

Perforation Summary

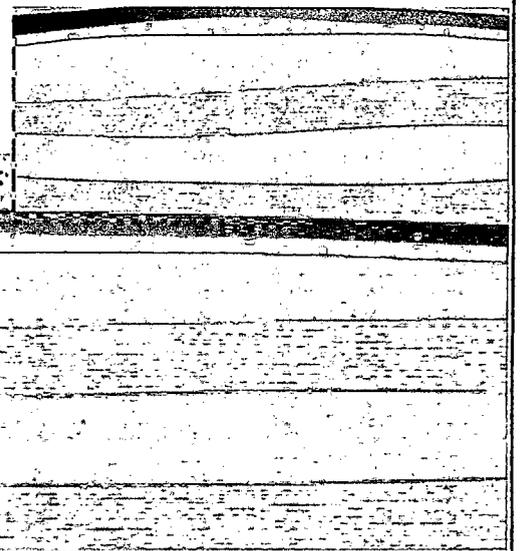
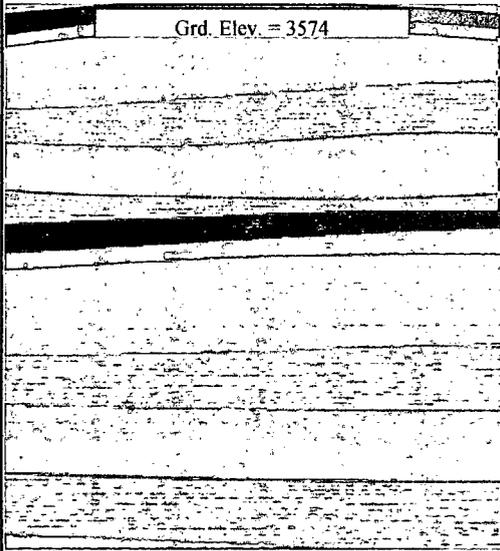
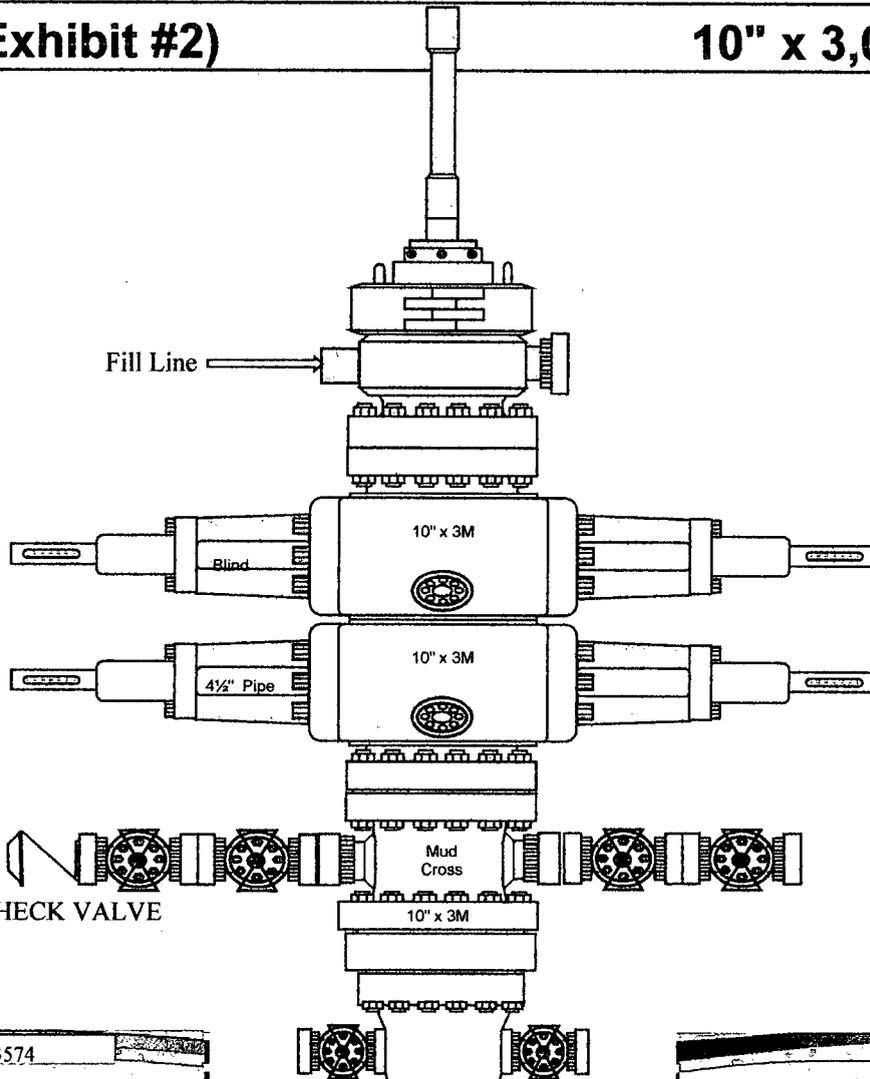
C	Date	Perf. Status	Formation	Comments	
		Open			
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Plugging (deg)	Interval Comments
6,443	6,457	2 1/2"	15		

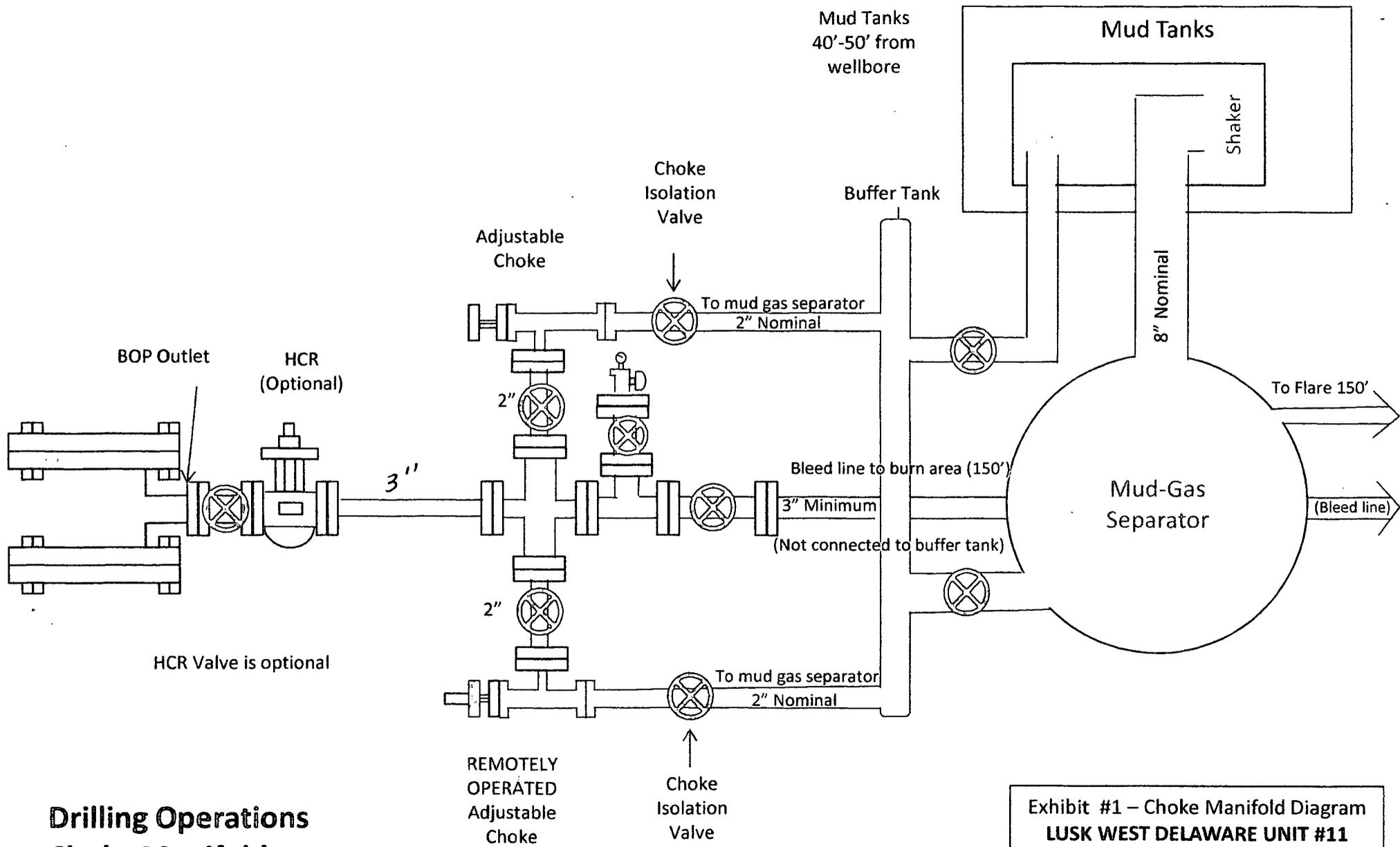
Well History Summary

Date	Comments
3/10/2014	Cur 5-1/2" CSG @ 4127', would not pull pressure to 1500# hold
3/11/2014	1" CMT behind 5-1/2" CSG @ 955' - 956' - 957' - 958' - 959' - 960' - 961' - 962' - 963' - 964' - 965' - 966' - 967' - 968' - 969' - 970' - 971' - 972' - 973' - 974' - 975' - 976' - 977' - 978' - 979' - 980' - 981' - 982' - 983' - 984' - 985' - 986' - 987' - 988' - 989' - 990' - 991' - 992' - 993' - 994' - 995' - 996' - 997' - 998' - 999' - 1000'

LWD #11 (Exhibit #2)

10" x 3,000 psi BOP





**Drilling Operations  
Choke Manifold  
3M Service**

**Exhibit #1 – Choke Manifold Diagram  
LUSK WEST DELAWARE UNIT #11  
SHACKELFORD OIL COMPANY.**

**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.

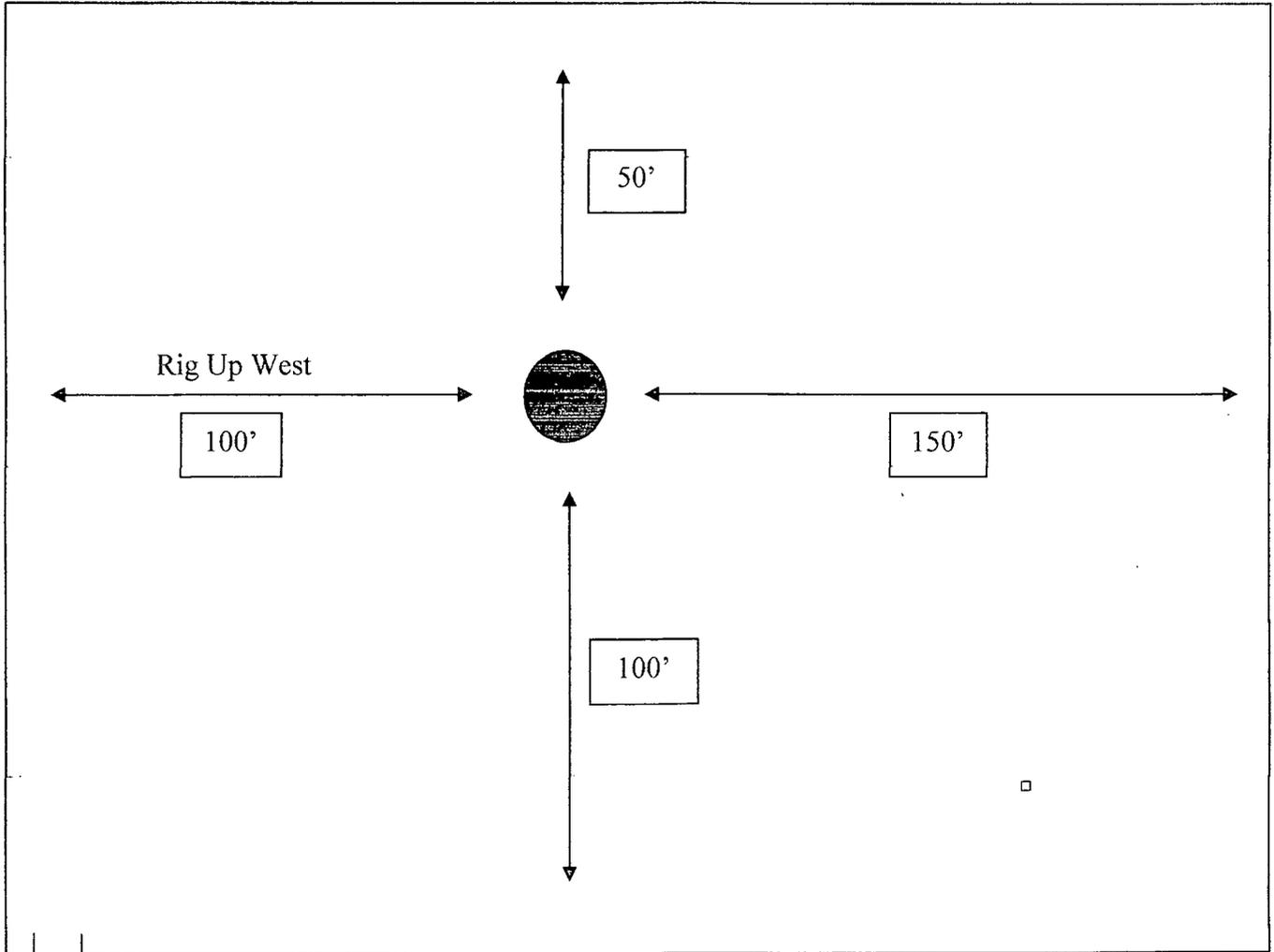
**CLOSURE:**

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

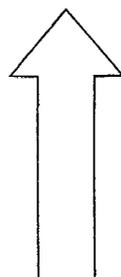
EXHIBIT D

LUSK WEST DELAWARE UNIT #11  
V-DOOR EAST  
Rig Up West

NORTH



14'



N  
O  
R  
T  
H

ACKNOWLEDGEMENT

SHACKELFORD OIL COMPANY:

  
\_\_\_\_\_

By: Don Shackelford

HOBBS OCD

APR 27 2015

RECEIVED

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