

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

HOBBS OGD

NOV 26 2012

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM106715	
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		6. If Indian, Allottee or Tribe Name	
2. Name of Operator SM ENERGY COMPANY		7. If Unit or CA Agreement, Name and No. NMNM101361X EAST SHUGART	
3a. Address 3300 N "A" ST BLDG 7-200 MIDLAND, TX 79705		8. Lease Name and Well No. ESDU 257437 29	
3b. Phone No. (include area code) (432)688-1709		9. API Well No. 30-025-40870	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2245 FNL & 460 FWL UNIT E Lot 2 At proposed prod. zone SAME AS ABOVE		10. Field and Pool, or Exploratory SHUGART; DELAWARE, EAST	
14. Distance in miles and direction from nearest town or post office* 8 MILES SOUTH OF MALJAMAR		11. Sec., T. R. M. or Blk. and Survey or Area SEC 19 - T18S - R32E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 122.07	17. Spacing Unit dedicated to this well 40 41.04	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 5500'	20. BLM/BIA Bond No. on file NMB000805	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3707	22. Approximate date work will start* 10/21/2012	23. Estimated duration 30 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>Malcolm Kintzing</i>	Name (Printed/Typed) MALCOLM KINTZING	Date 08/02/2012
Title RESERVOIR ENGINEER		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) /s/ Don Peterson	Date NOV 21 2012
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)

Capitan Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached
DEC 03 2012

Drilling program

SM Energy Company
ESDU #29
2245 FNL & 460 FWL
Sec 19-T18S-R32E
Lea County, New Mexico

The estimated tops of geologic markers are as follows

Rustler	895'
Top of Salt	1617'
Base of Salt	2219'
Yates	2408'
*Seven Rivers	2892'
*Queen	3562'
*Cherry Canyon	4292'
*Brushy Canyon	4824'

Estimated depths of anticipated fresh water, oil, or gas

Fresh water is anticipated at 380' and will be protected by setting surface casing at 920'. 960' *see copy*

Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as required.

Pressure and control equipment

A 3M Double Ram BOP and 3M Annular will be installed after running the 8 -5/8" casing. Pressure tests will be conducted prior to drill out the surface casing. BOP controls will be installed prior to drilling out from under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated as regulated in Onshore Order #2. A Kelly cock valve and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the in the open position when the Kelly is not in use. SM Energy Company will have the 11" BOPE tested to 3000# and the annular tested to 1500# with a third party testing company before drilling below the surface casing shoe. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if the test is done with a test plug. All blowout preventer are related equipment shall comply with well control requirements in Onshore Oil and Gas Order No. 2 and API RP 53 Sec 17.

Proposed casing and cementing program

A. Casing program:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Casing #/foot</u>	<u>Grade</u>	<u>Setting Depth</u>	<u>Collar</u>
12-1/4"	8-5/8" (new)	24	J55	0-920' 960'	STC
7-7/8"	5-1/2" (new)	15.5	J55	0-5500'	LTC

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

*Subject to casing availability

A. Cementing Program:

- I. **Surface casing:** 560 sx Class C light cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flack + 4% bwoc Bentonite + 81.4% Fresh Water, 14.8 ppg. **Yield 1.34 cf/sk TOC @ SURFACE. 100% Excess**
- II. **Production Casing:** Lead 400 sks (35:65) Poz (fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs / Sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg. **YIELD: 1.96 CF/SK. Tail 270 sks Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5, 14.8 ppg YIELD 1.34 CF/SK. TOC @ 700'. 35% Excess**

*SM Energy Company reserves the right to change cement designs as hole conditions may warrant.

Mud Program

<u>Interval</u>	<u>mud type</u>	<u>weight</u>	<u>Viscosity</u>	<u>Fluid loss</u>
0-920' 960'	Fresh water spud mud	8.6-9.4	32-34	No Control
920'-5500'	Brine	10	28-30	No Control

Evaluation Program

- I. Mud log samples will be taken after drilling out the surface casing.
- II. No Drill stem tests or coring is planned at this time
- III. Cased hole Gamma Ray/Neutron log from surface to TD (5,500')
- IV. Additional testing may be initiated based on geological sample shows

Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and production holes
Maximum bottom hole temperature:	110 degrees F
Maximum bottom hole pressure:	9.5 lbs/gal or less psi/ft gradient (2,700 psi)

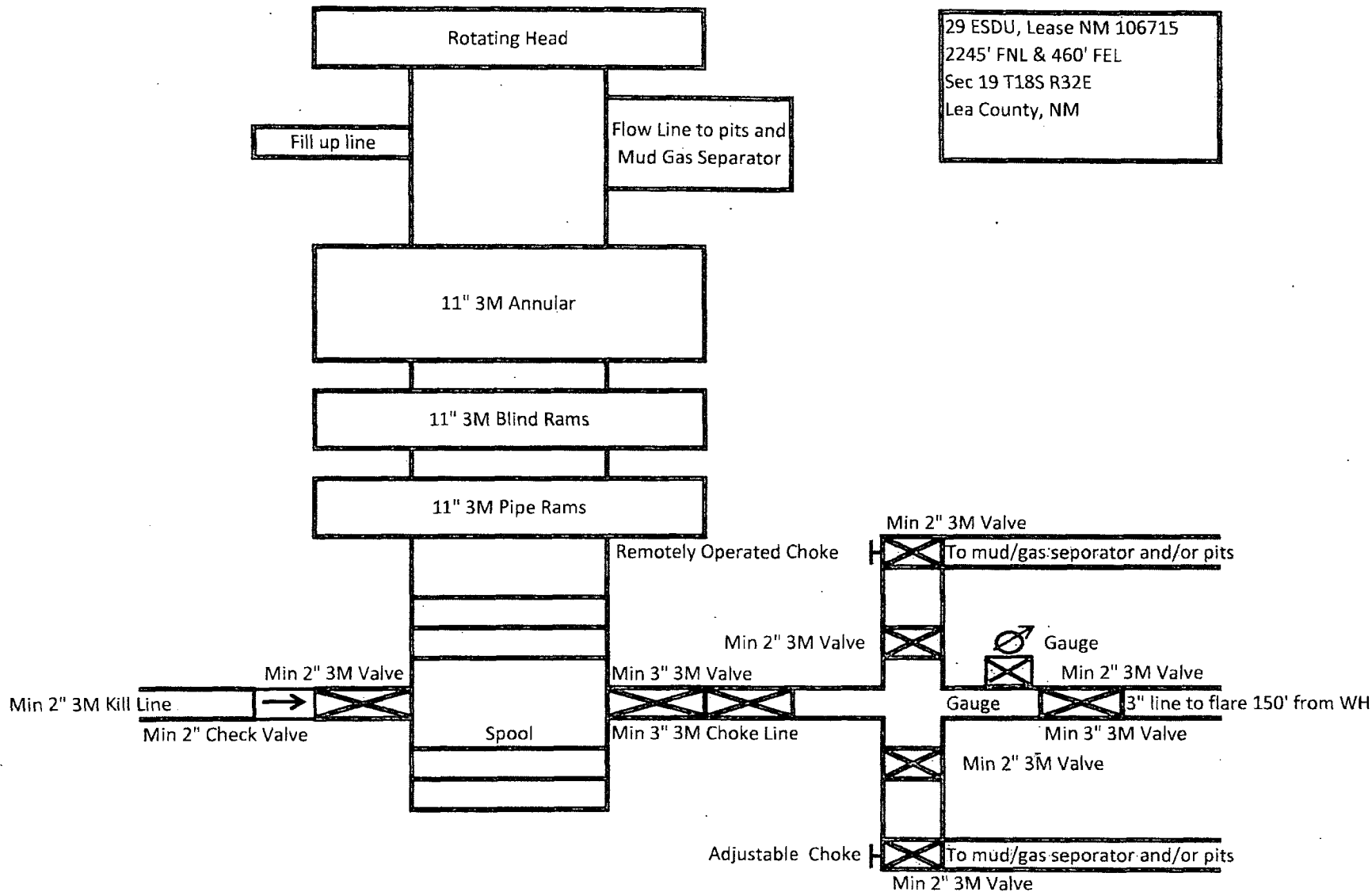
Anticipated Starting Date

SM Energy Company intends to drill this well late 2012 with approximately 20 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

Potential Hazards

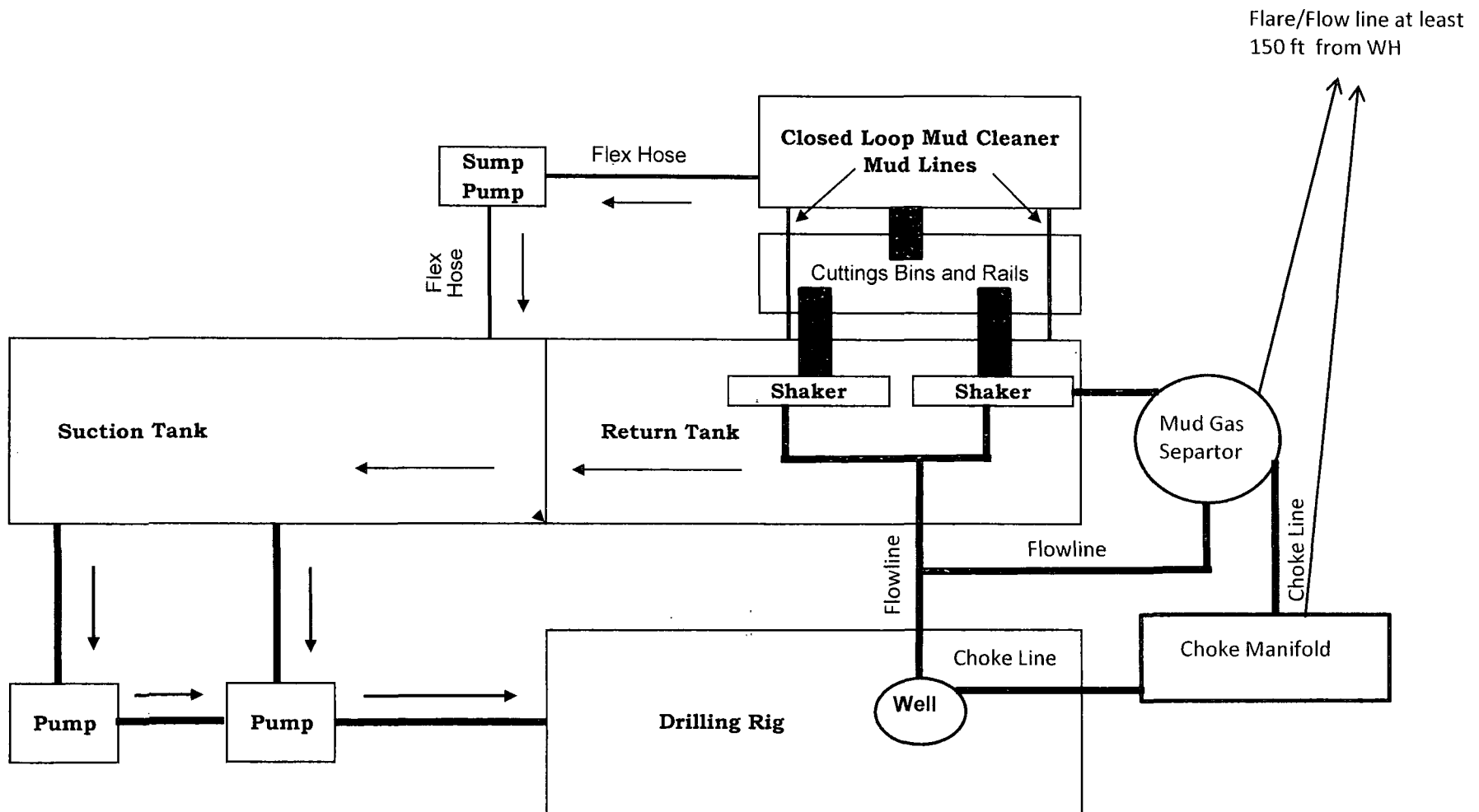
No abnormal pressures or temperatures are expected. No lost circulation is expected. SM Energy Company does not anticipate H₂S during drilling operations but will start monitoring for H₂S prior to drilling out the surface casing shoe. If H₂S is encountered the operator will comply with the provisions of Onshore Order No 6. No lost circulation is expected.

BOP SCHEMATIC



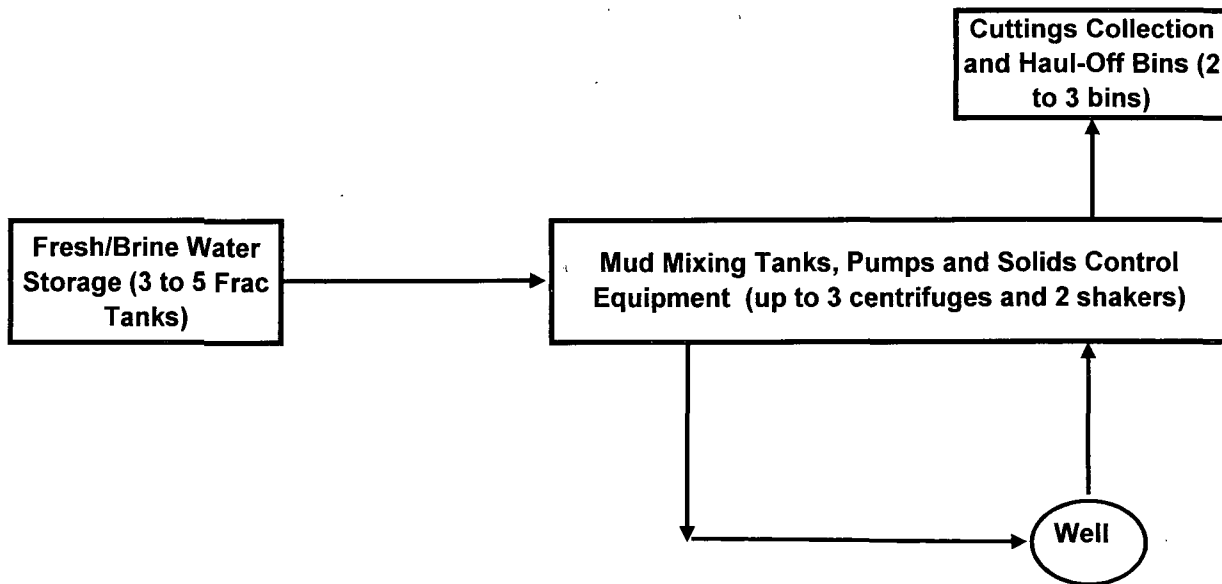
29 ESDU, Lease NM 106715
2245' FNL & 460' FEL
Sec 19 T18S R32E
Lea County, NM

Choke Manifold Schematic for Closed Loop System



CLOSED-LOOP SYSTEM

Design Plan:



Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility as noted on the C-144 form. At the end of the well, all closed loop equipment will be removed from the location.