

R-111-POTASH

OCD Hobbs

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Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APR 04 2011

HOBBSOCD

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. LE-070335
2. Name of Operator Shackelford Oil Company		9. API Well No. 30-025-40104
3a. Address 3510 N. A DSt. Bldg. B-100 Misland, TX 79705	3b. Phone No. (include area code) 432-682-9784	10. Field and Pool, or Exploratory Teas; Yates-Seven Rivers
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1730' FSL & 1980' FWL At proposed prod. zone same		11. Sec., T. R. M. or Blk. and Survey or Area Sec. 23-T20S-R33E
14. Distance in miles and direction from nearest town or post office* 36 miles east of Carlsbad, 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) 660' 410'		13. State NM
16. No. of acres in lease 160	17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 3500'	20. BLM/BIA Bond No. on file NM-3104 2156
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3619' GL	22. Approximate date work will start* 12/15/2010	23. Estimated duration 3-4 weeks

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall 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 shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>George R. Smith</i>	Name (Printed Typed) George R. Smith	Date 11/16/2010
Title POA agent for Shackelford Oil Company		

Approved by (Signature) /s/ Linda S.C. Rundell	Name (Printed Typed)	Date MAR 24 2011
Title STATE DIRECTOR	Office NM STATE 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.

*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

APR 05 2011

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Erazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-40104	Pool Code 59090	Pool Name Teas; Yates-Seven Rivers
Property Code 10075	Property Name CHARLES S. LOOMIS A FEDERAL	Well Number 3
OGRID No. 20595	Operator Name SHACKELFORD OIL COMPANY	Elevation 3619'

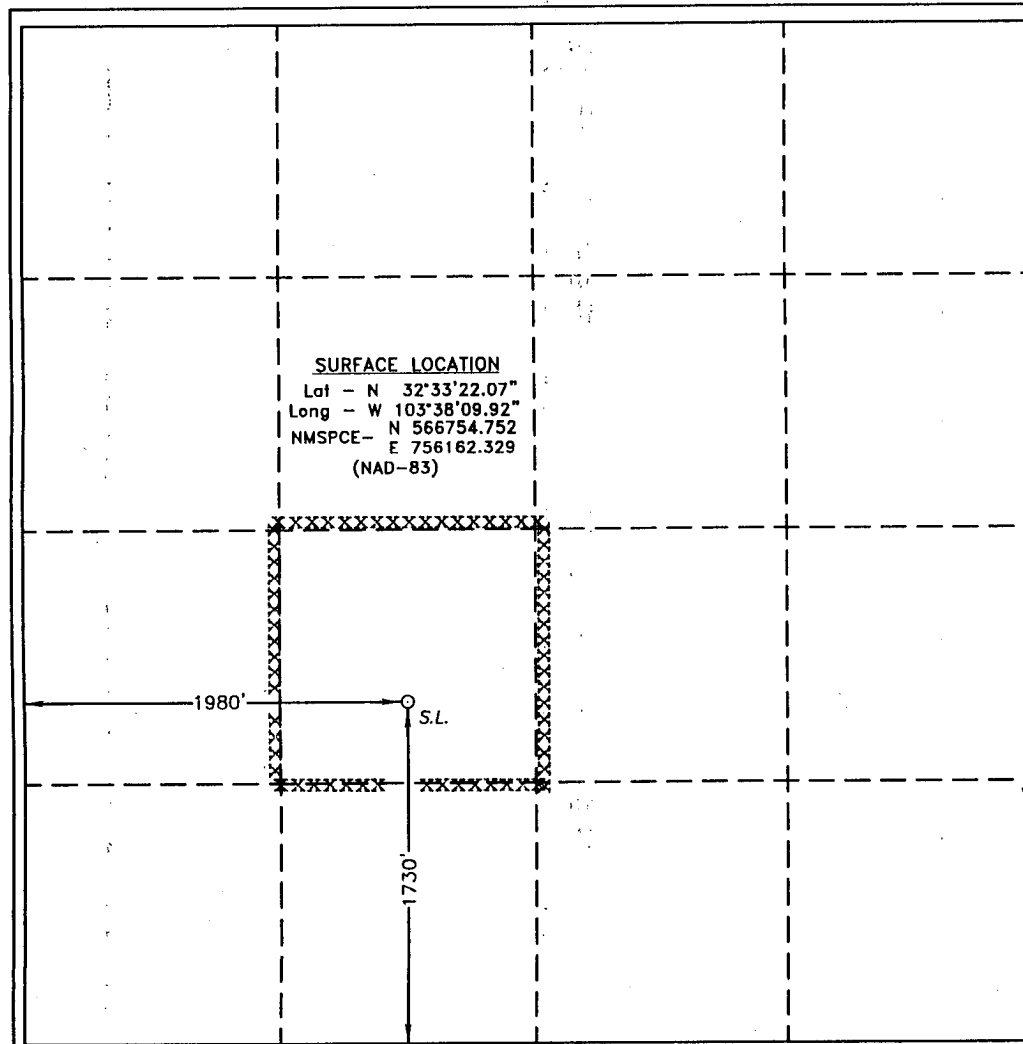
Surface Location

UL or lot No. K	Section 23	Township 20 S	Range 33 E	Lot Idn	Feet from the 1730	North/South line SOUTH	Feet from the 1980	East/West line WEST	County EDDY
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

George R. Smith 11/16/10
Signature Date

George R. Smith, agent

Printed Name

Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

AUGUST 18, 2010

Date Surveyed

Signature & Seal of
Professional Surveyor

W.O. No. 23244

Certificate No. Gary Jones 7977

Basin Surveys 23244

**APPLICATION FOR DRILLING
SHACKELFORD OIL COMPANY**
Charles S Loomis A Federal, Well No. 3
1730' FSL & 1980' FWL, Sec. 23-T20S-R33E
Lea County, New Mexico
Lease No.: NMNM-070335
(Development Well)

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In conjunction with Form 3160-3, Application for Permit to Drill (Deepen) subject well, SHACKELFORD OIL COMPANY submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

Rustler	1,428'	Yates	3,155'
Top of salt	1,550'	Seven Rivers	3,377'
Base of salt	2,989'	Est. top Capitan Reef	3,522'
Tansill	3,017'	T.D.	3,500'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water in the between 50' - 230'. Strong water flow possible at approx 2,450'.
Oil: Possible in the, Yates below 3,155 and the Seven Rivers below 3,377'.
Gas: None expected.

4. Proposed New Casing Program:

See COA

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	COLLAPSE DESIGN FACTOR	BURST DESIGN FACTOR	TENSION DESIGN FACTOR
17 1/2"	13 3/8"	48.0#	H-40	STC	1,450' 1,535'	1.06	2.22	2.57
12 1/4"	9 5/8"	36.0#	K-55	STC	3,100' *	1.11	1.8	2.11
(1) 8 3/4"	7"	23.0#	N-80	LTC	3,362'	2.05	3.18	3.18
(2) 8 3/4"	5 1/2"	15.5#	J-55	LTC	3,500'	2.08	2.32	2.22
* or 100'	Below salt							
Note:	Opt. 2 to be	used if	Yates	Sand looks	non-productive			

5. Cement Program

CASING	SETTING DEPTH	QUANTITY OF CEMENT	YEILD
13 3/8"	1,450' 1,535'	1. Lead 935 sx Extendacem-CZ 2. Tail 340sx Halcem-C, 1% calcium chloride flake accelerator TOC = surface	1.71 1.34
9 5/8"	3,100'	1. Lead 585 sx Econocem-HLC 6% salt 2. Tail 310 sx Halcem-C, 1% calcium chloride flake accelerator TOC = surface	2.14 1.33
7"	3,362' Opt. #1	1. Lead 225 sx Econocem-HLC, 6% salt 2. Tail 125 sx Versacem-C, .5% LAP-1, .3% CFR-3, .25 lb/sk D-air 3000 TOC = surface	2.14 1.29
5 1/2"	3,500' Opt #2	1. Lead: 90 sx Versacem-C, 5% LAP-1, .3% CFR-3, .25 lb/sk D-air 3000 2. 2 nd stage = 380 sx Econocem-HLC, 6% salt 3. Tail: 100 sx Halcem-C 1% calcium chloride flake accelerator = TOC surface	1.29 2.14 1.33

See COA

SHACKELFORD OIL COMPANY

Charles S Loomis A Federal, Well No. 3

Page 2

6. Proposed Control Equipment: See Exhibit "E":BOP Program:

13 5/8"

A 3000 psi wp Shaffer Type E double gate hydraulic ram BOP, will be installed on the 13 3/8" casing. Casing and BOP will be tested as described in Onshore Order No. 2 before drilling out with 12 1/4". The pipe rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on driller's log. See Exhibit "E".

7. Mud Program

MUD PROGRAM		MUD WEIGHT	VIS.	W/L CONTROL
DEPTH	MUD			
0 - 1,450'	Fresh water mud w/add	8.4 - 8.6 ppg	32-34	No W/L control
1,450' - 3,100'	Brine water mud w/lime	10.0 ppg	29- 30	No W/L control
3,100' - 3,362' or 3,500'	Cut brine mud	9.0 - 9.5 ppg	29- 32	W/L control 15-20 cc

8. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock.**9. Testing, Logging, and Coring Program:** See COA

Drill Stem Tests: None unless warranted.

Logging: T.D to 3,100': CNL/LDT/ CAL/G/R

T.D to 3,100': DLL/GR

T.D to surface: CNL/GR

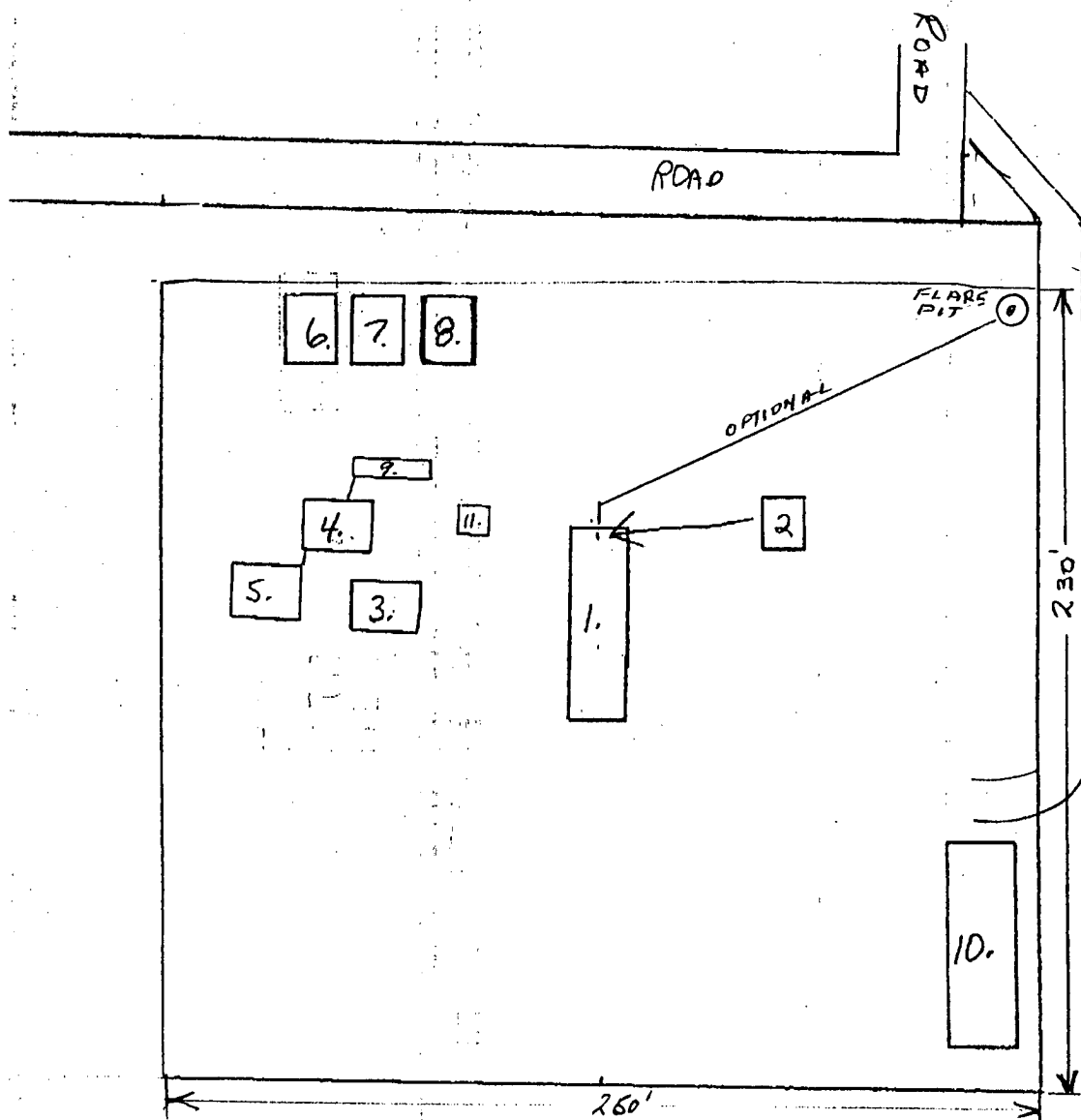
Coring: May do sidewall coring of the Yates and/or Seven Rivers.

10. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, the proposed mud program will be modified to increase the mud weight. Estimated (evac) BHP=1729, surface pressure = 959 psi (part. evac. hole) with BH temperature of 95°.
11. H₂S: None expected. None in previously drilled wells, 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.
12. Anticipated starting date: December 15, 2010.
Anticipated completion of drilling operations: Approx. 3 -4 wks

SHACKELFORD
OIL COMPANY23-205-33E
LOOMIS LEASE

N

RIG LAYOUT



1. RIG
2. BOP - ACCUMULATOR
3. PUMP, SWIVEL & MANIFOLD
4. REVERSE TANK
5. WASTE FLUID
6. FRESH WATER

7. BRINE WATER
8. 290 KCL
9. CRI TANKS + TRUCK
10. TRAILERS
11. MANIFOLD

EXHIBIT "D"
SHACKELFORD OIL CO.
Charles S Loomis A Federal, Well No. 3
Pad & Closed Loop Area Layout

BOP DIAGRAM 3000# SYSTEM

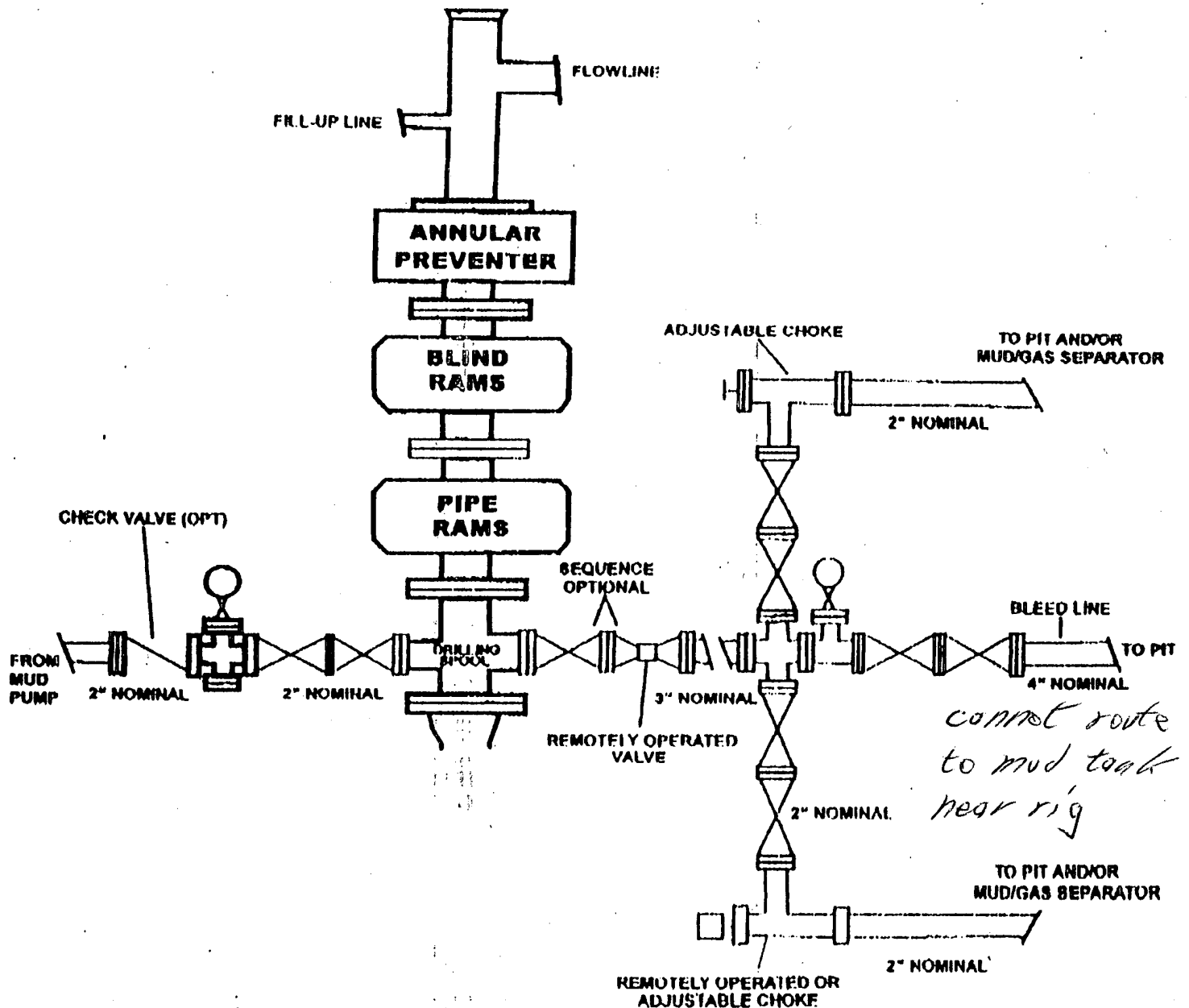


EXHIBIT "E"
SHACKELFORD OIL CO.
Charles S Loomis A Federal, Well No. 3
BOP Specifications

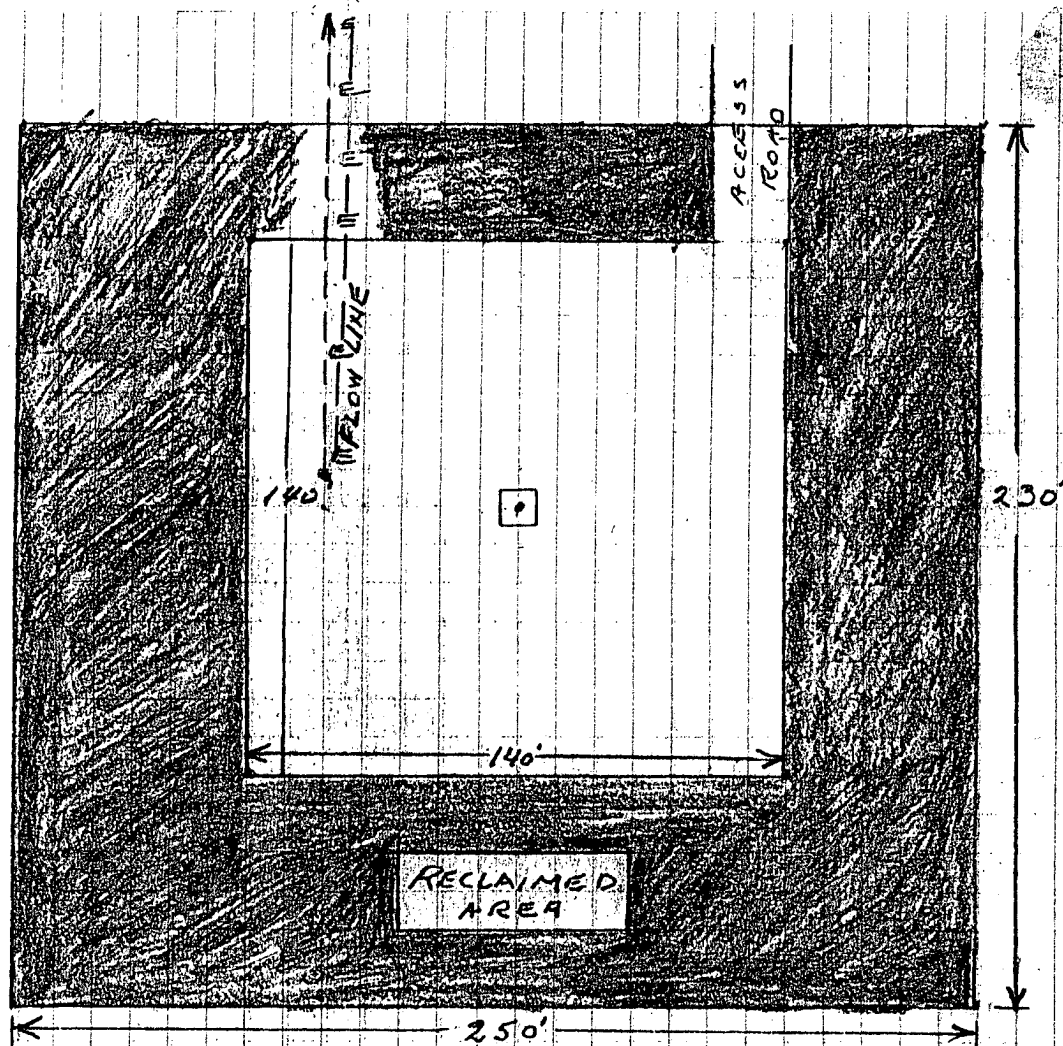


EXHIBIT "F"
SHACKELFORD OIL CO.
Charles S Loomis A Federal, Well No. 3
Pad after Reclamation