OCD-HOBBS

COPY

AT S-08-698

Form 3160-3
(April 2004)

SECRETARY'S POTASH
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.: NM-01747

6. If Indian, Allotee or Tribe Name:

7. If Unit or CA Agreement, Name and No.:

1a. Type of work: [X] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

8. Lease Name and Well No.: Lea Federal #29 <34342> <Unit>

2. Name of Operator: SAMSON RESOURCES COMPANY <20165> ATTN: DUKE ROUSH

9. API Well No.: 30-025-39077

3a. Address: Two West Second Street, Tulsa, OK 74103

3b. Phone No. (include area code): (432) 686-6336

10. Field and Pool, or Exploratory: Lea Penn Gas

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface: 1310' FNL & 1948' FWL Unit C
At proposed prod. zone: same

11. Sec., T. R. M. or Blk. and Survey or Area: Section 24, T20S, R34E

14. Distance in miles and direction from nearest town or post office*: 26 miles SW of Hobbs, 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)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
1310'	320	160 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
N/A	13,500'	NM 2037
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3670' GL	Upon approval	35-40 days

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature: Kimberly Dale FOR — Name (Printed/Typed): Kenneth C. Dickeson — Date: 5/14/08

Title: Authorized Agent

Approved by (Signature): William Merhege or — Name (Printed/Typed): William Merhege — Date: JUL 21 2008

Title: Acting 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)

RECEIVED

Capitan Controlled Water Basin

AUG - 4 2008

HOBBS OCD

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

State of New Mexico
Energy, Minerals and Natural Resources Department

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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

DISTRICT IV
1220 S ST. FRANCIS DR., SANTA FE, NM 87505

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-39077	80040	Lea Penn (Gas)

Property Code	Property Name	Well Number
34342	LEA FEDERAL Unit	29

OGRID No.	Operator Name	Elevation
20165	SAMSON RESOURCES	3670'

Surface Location

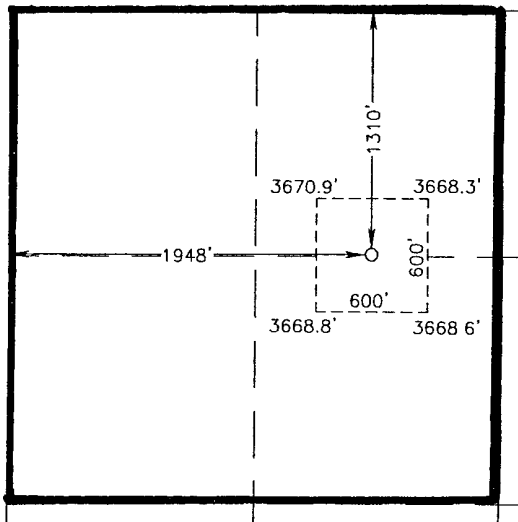
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	24	20-S	34-E		1310	NORTH	1948	WEST	LEA

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	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



GEODETIC COORDINATES
NAD 27 NME

Y=569187.4 N
X=751964.9 E

LAT.=32.562143° N
LONG.=103.515512° W

OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date 5/12/08

FOR: KENNETH C. DICKESON,
Printed Name AUTHORIZED AGENT
FOR SAMSON RESOURCES COMPANY

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.

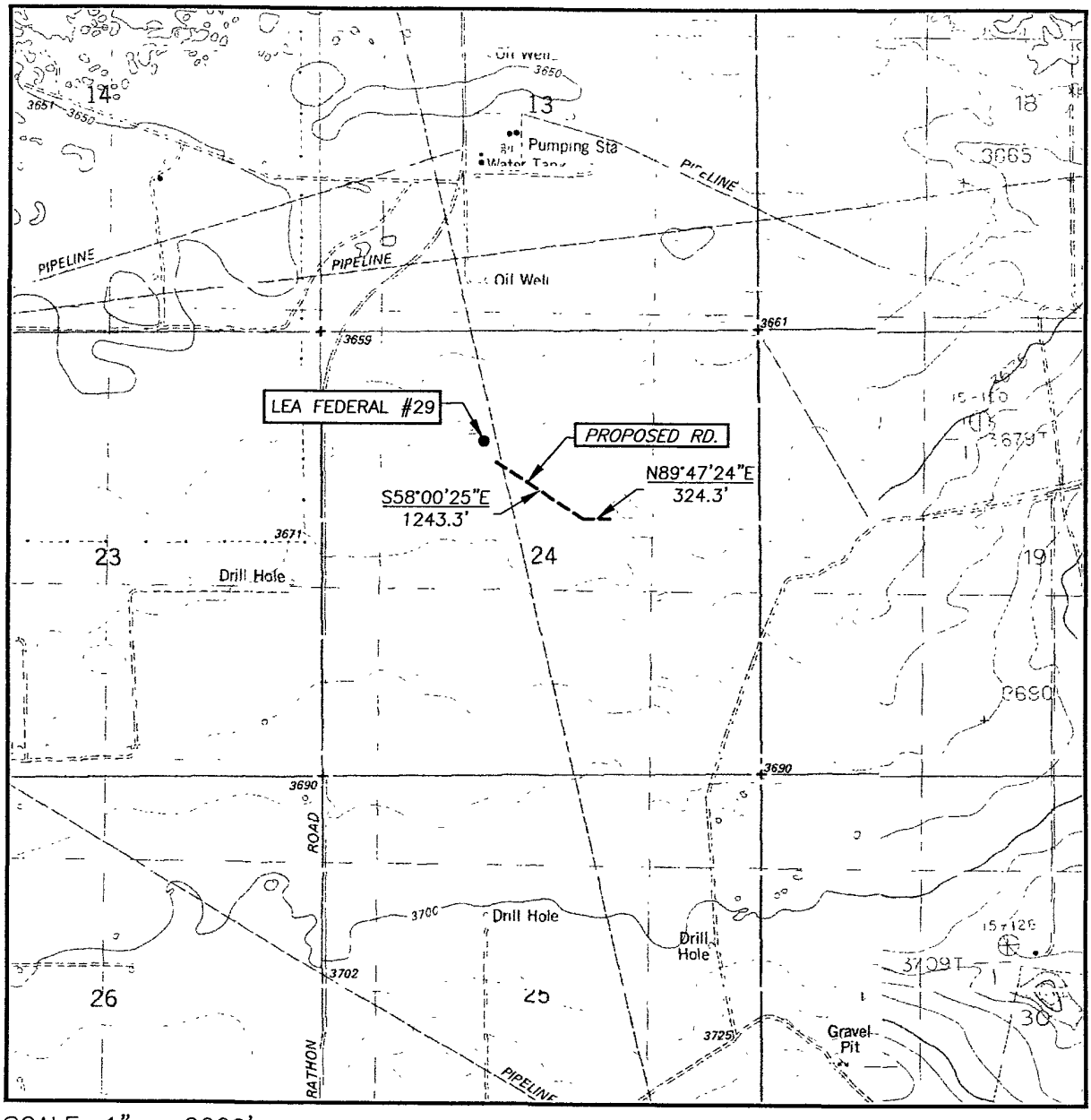
DECEMBER 12, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
LEA, N.M. – 10'
MONUMENT SW, N.M. – 5'

SEC. 24 TWP. 20 RGE. 34-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1310' FNL & 1948' FWL

ELEVATION 3670'

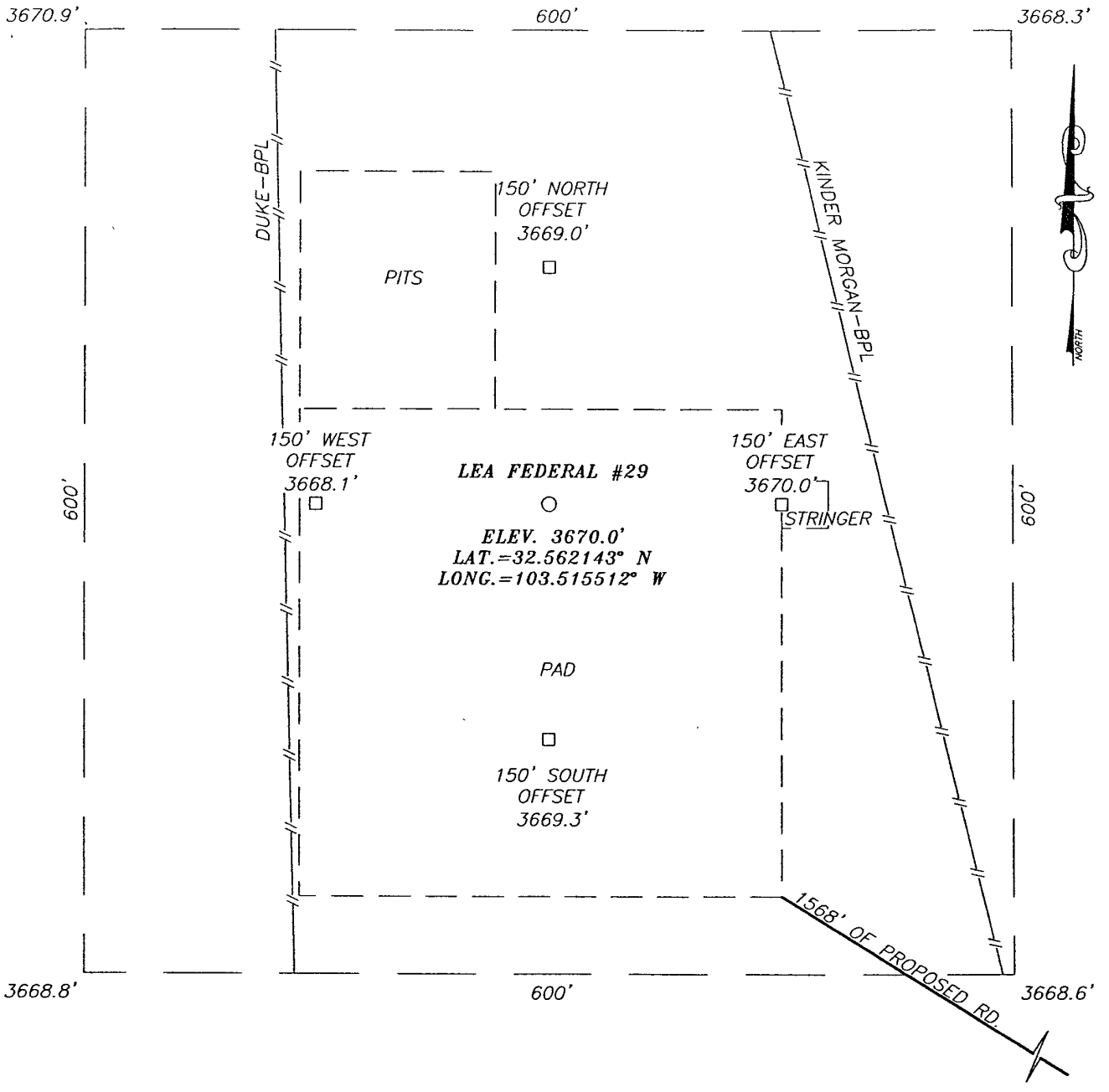
OPERATOR SAMSON RESOURCES

LEASE LEA FEDERAL

U.S.G.S. TOPOGRAPHIC MAP
LEA, N.M.

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

SECTION 24, TOWNSHIP 20 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF U.S. HWY. 62-180 AND CO. RD. #H27 (MARATHON RD.), GO SOUTH ON MARATHON RD. APPROX. 5.6 MILES. TURN LEFT AND GO EAST THROUGH CATTLE GUARD APPROX. 0.5 MILES. TURN LEFT AND GO NORTH APPROX. 0.2 MILES. TURN LEFT AND GO WEST THEN NORTHWEST ON STAKED ROAD APPROX. 0.3 MILES TO THE SOUTHEAST CORNER OF THIS LOCATION.

100 0 100 200 Feet

Scale: 1"=100'

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

SAMSON RESOURCES

LEA FEDERAL #29 WELL
LOCATED 1310 FEET FROM THE NORTH LINE
AND 1948 FEET FROM THE WEST LINE OF SECTION 24,
TOWNSHIP 20 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

Survey Date: 12/12/07	Sheet 1 of 1 Sheets		
W.O. Number: 07.11.1847	Dr By: AR	Rev 1:N/A	
Date: 12/20/07	Disk:	07111847	Scale: 1"=100'

APPLICATION FOR DRILLING

SAMSON RESOURCES COMPANY

Lea Federal #29
1310' FNL & 1948' FWL, Section 24, T20S, R34E, LEA COUNTY, NEW MEXICO
Lease No.: NM-01747
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Samson Resources 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	1600'
Yates	3560'
Seven Rivers	3920'
Delaware Sd	5475'
1st Bone Spring Lime	8250'
1st Bone Spring Sand (Pay1)	9500'
3rd Bone Spring Sand	10970'
Wolfcamp	11050'
Strawn	12140'
Atoka	12600'
Morrow	12860'

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

Water:	Surface water between 100' - 300'.
Oil:	Possible in the Delaware 5600'- 6000'.
Gas:	Possible in the Atoka below 12,295' and Morrow 12,830'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QTY OF CEMENT	TOC
17 ½"	13-3/8"	48.0#	H-40	BT&C	0-1650'	1500 sx	Surface
12 ¼"	9-5/8"	40.0#	L-80	BT&C	1650-5475'	1250 sx	Surface
8 ¾"	5 ½"	20.0#	P-110	LT&C	5475-13500'	1000 sx	5000' see COA

5. Minimum Specifications for Pressure Control Equipment:

A NU 13-5/8" 5M Double Gate BOP over single w/13 5/8" 5M Hydril annular preventer will be installed on the 13-3/8" before drilling 12 ¼" and 8 ¾" holes and operated as a 5000 psi system. Will perform a 3M test on BOP before drilling 12 ¼" hole and a 5M BOP test before drilling the 8 ¾" hole.

see COA

6. MUD PROGRAM:

DEPTH	DESCR	MUD WEIGHT	VISCOSITY	W/L CONTROL
0-1600'	Fresh water	8.4 ppg		
1600-5400'	Brine water	10.0 ppg		
5400-13900'	Cut Brine/Water	8.7-11.5 ppg		

7. Auxiliary Equipment: Blowout Preventer, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests:	None unless conditions warrant.
Logging:	5,600' to T.D.: CNL-DNL w/GR-Cal. 5,600' to Surface: CNL-GR
Coring:	Rotary sidewall if dictated by logs.

9. 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 evacuated BHP = 5856 psi and surface pressure of 2928 psi with a temperature of 193°. see note from operator

10. H_2S: None expected. None in existing wells in close vicinity, but the Mud Log Unit will be cautioned to use a gas trap to detect H_2S and if any is detected the mud weight will be increased along with H_2S inhibitors sufficient to control the gas.

11. Anticipated starting date: *Upon approval.*
Anticipated completion of drilling operations: *Approximately 6 weeks.*

CASING PROGRAM

New Casing will be used: See below Casing Safety Factors (SF = Safety Factor)

a. 13-3/8" 54.5 lb/ft J-55 BTC Casing @ 1650'
   i. Burst SF = 3.00 (1/3 BHP @ 5475' using 9.5 ppg pore pressure)
   ii. Collapse SF = 1.46 (full evacuation with 9 ppg on backside)
   iii. Tension SF = 9.48 (based on air weight of 1650' of 13-3/8" casing)

b. 9-5/8" 40# L-80 BTC Casing @ 5475'
   i. Burst SF = 3.41 (1/3 BHP @ 11300' using 8.6 ppg pore pressure)
   ii. Collapse SF = 2.16 (50% evacuation with 10 ppg on backside)
   iii. Tension SF = 4.18 (based on air weight of 5475' of 9-5/8" casing)

c. 5-1/2" 20# P-110 LTC Casing @ 13,500'
   i. Burst SF = 1.26 (10,000 psi maximum surface treating pressure during frac job)
   ii. Collapse SF = 1.37 (fully-depleted gas well with 11.5 ppg on backside)
   iii. Tension SF = 2.02 (based on air weight of 13500' of 5-1/2" casing)

CEMENT PROGRAM

Type Cement and Yield

a. 13-3/8" Casing Cement Job (Top of cement @ surface)
   i. Lead = Halliburton Light Premium Plus @ 12.5 ppg; 1.98 cubic ft/sx yield; 800 sxs
   ii. Tail = Halliburton Premium Plus @ 14.8 ppg; 1.35 cubic ft/sx yield; 400 sxs

b. 9-5/8" Casing Cement Job (Top of cement @ surface)
   i. 1st Stage Lead = Halliburton Interfill C @ 11.5 ppg; 2.76 cubic ft/sx yield; 1350 sxs
   ii. 1st Stage Tail = Halliburton Premium Plus Cement @ 14.8 ppg; 1.32 cubic ft/sx yield; 450 sxs
   iii. 2nd Stage Lead = Halliburton Interfill C @ 11.5 ppg; 2.76 cubic ft/sx yield; 250 sxs
   iv. 2nd Stage Tail = Halliburton Premium Plus Cement @ 14.8 ppg; 1.32 cubic ft/sx yield; 50 sxs

c. 5-1/2" Casing Cement Job (Top of cement @ 5000') ← see COA
   i. Lead = Interfill H @ 11.9 ppg; 2.45 cubic ft/sx yield; 600 sxs
   ii. Tail = Super H Cement @ 13 ppg; 1.67 cubic ft/sx yield; 1000 sxs

PRESSURE CONTROL PROGRAM

"BOP Testing Program During Day-to-Day Operations"

a. On-top of the 13-3/8" surface casing, nipple-up 13-5/8" 5M annular preventer (tested to 2500 psi high / 250 psi low) and 13-5/8" 5M Double Gate BOP (top = pipe, bottom = blind; tested to 3000 psi high / 250 psi low).
   i. Typically the time from initial test of 13-5/8" BOP stack + related BOPE (after nipple-up) to drilling the 12-1/4" hole section to total depth at +/- 5475' is +/- 9 days. However, if for some unforeseen reason there is excessive trouble to the point where 30 days has elapsed after the initial BOP test and before the 12-1/4" hole section is drilled to total depth at +/- 5475', another BOP test will be performed.

b. On-top of the 9-5/8" surface casing, nipple-up 11" 5M annular preventer (tested to 3000 psi high / 250 psi low) and 11" 10M Double Gate BOP (top = pipe, bottom = blind; tested to 7000 psi high / 250 psi low).
   i. Typically the time from initial test of 11" BOP stack + related BOPE (after nipple-up) to drilling the 8-3/4" hole section to total depth at +/- 13,500' is +/- 25 days. However, if 30 days elapse after the initial BOP test and before the 8-3/4" hole section is drilled to total depth at +/- 13,500', another BOP test will be performed.

see cont

SAMSON RESOURCES COMPANY WOULD LIKE TO REQUEST AN EXCEPTION/WAIVER allowing them to use a 5000 psi annular preventer ontop of the 11" 10M BOP stack, which is nippled-up above the 9-5/8" casing. Please see attached diagram.

see cont

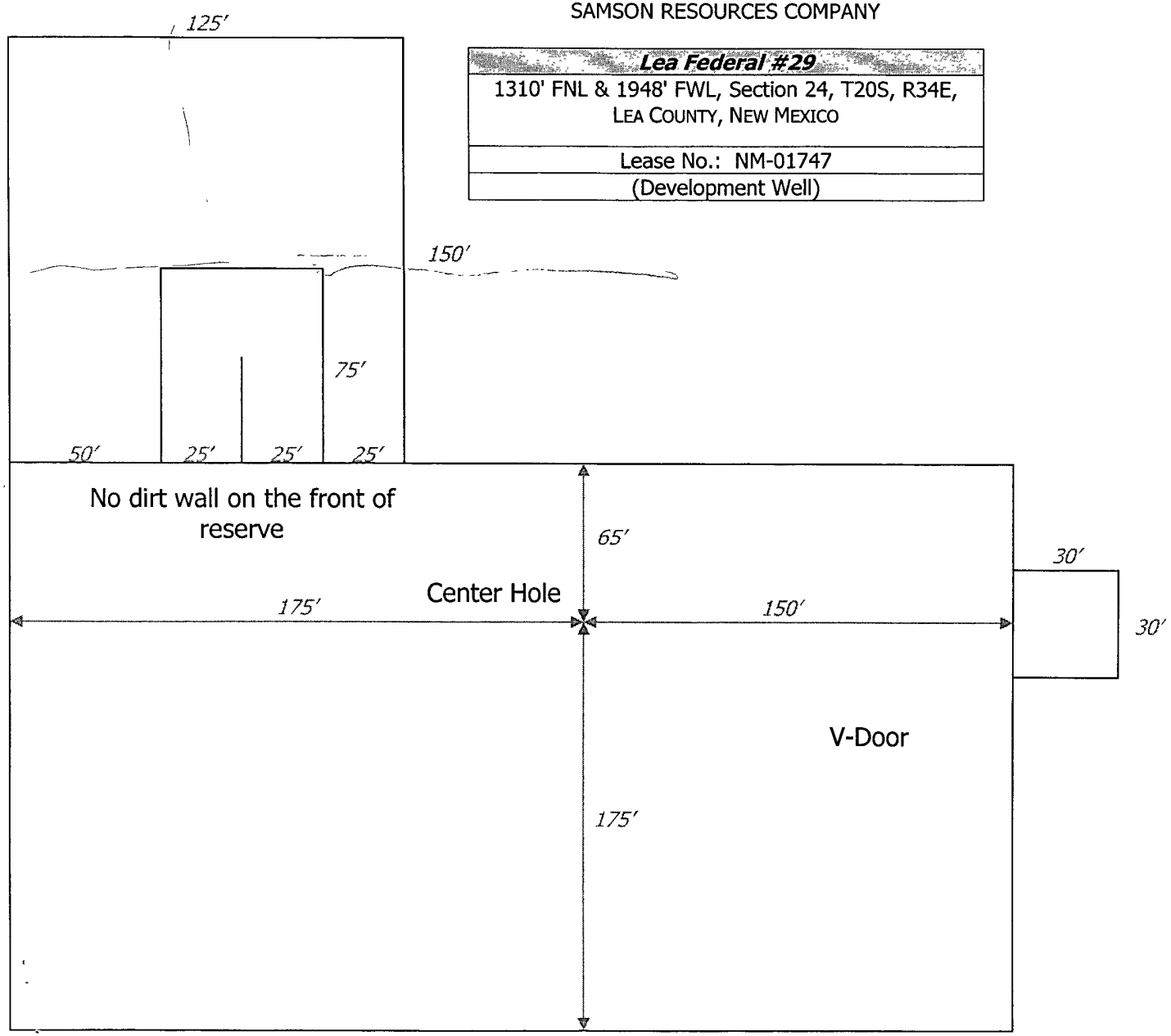
NOTE:

Based on offset Lea Unit Federal #28, expected TD mud weight @ 13,500' = 11.2 ppg. Therefore maximum pore pressure = 10.7 ppg (TD mud weight minus 0.5 ppg), which equates to a maximum 7512 psi bottom hole pressure, and a maximum expected surface pressure = 6761 psi (using a gas gradient of 0.1 psi/ft).

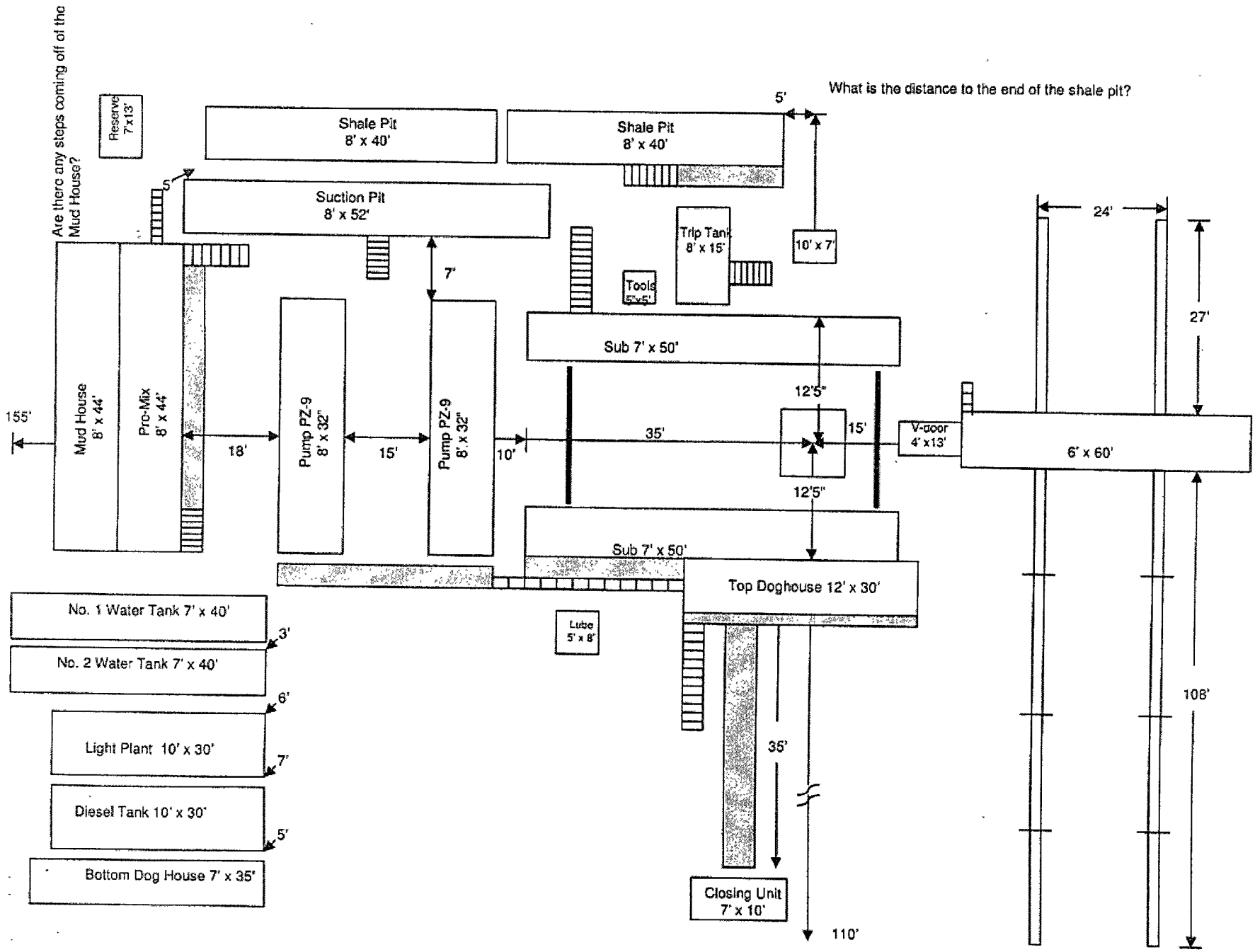
EXHIBIT "D"

SAMSON RESOURCES COMPANY

Lea Federal #29
1310' FNL & 1948' FWL, Section 24, T20S, R34E, LEA COUNTY, NEW MEXICO
Lease No.: NM-01747
(Development Well)

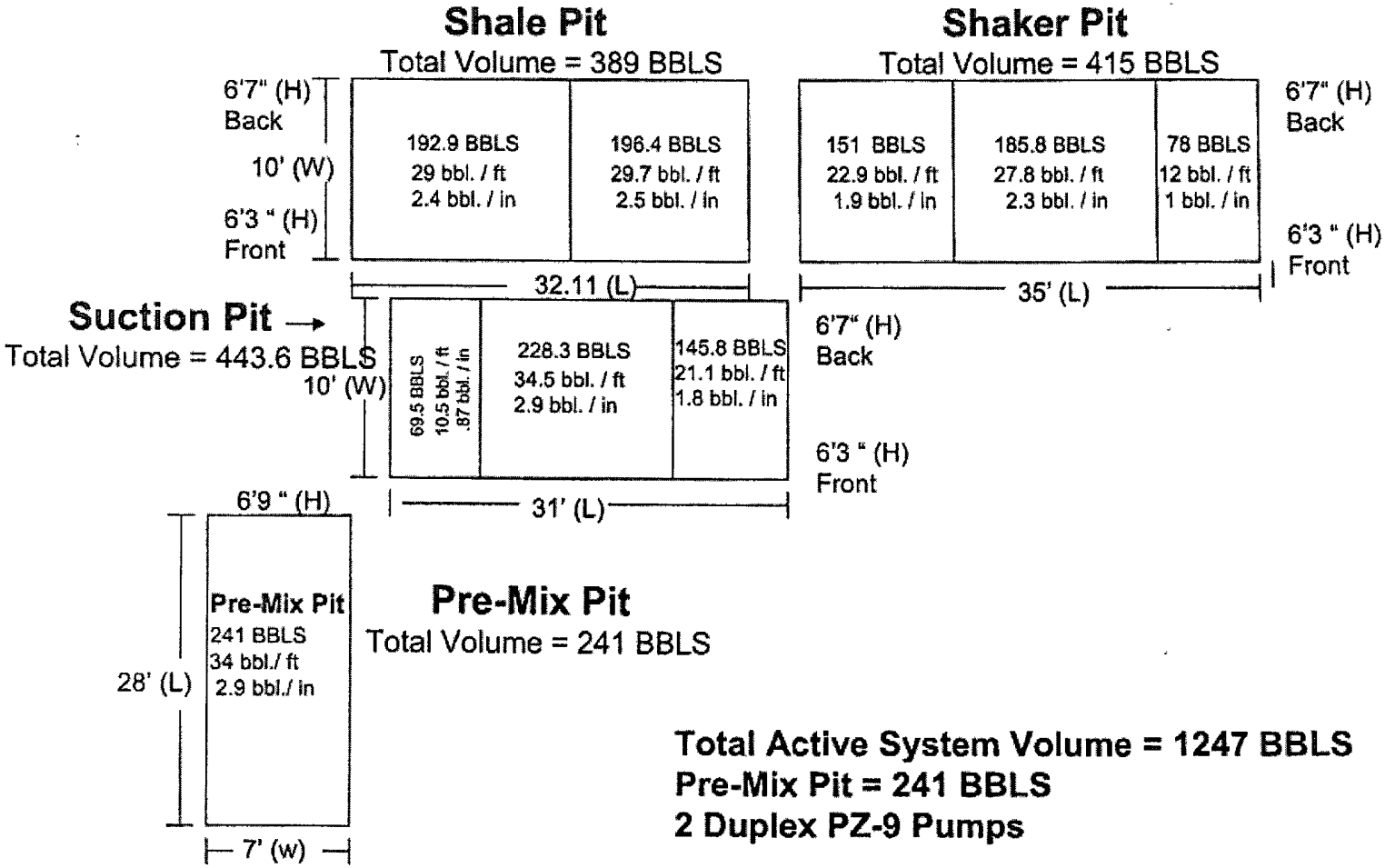


McVay Drilling Rig No. 10



McVay Drilling Co.

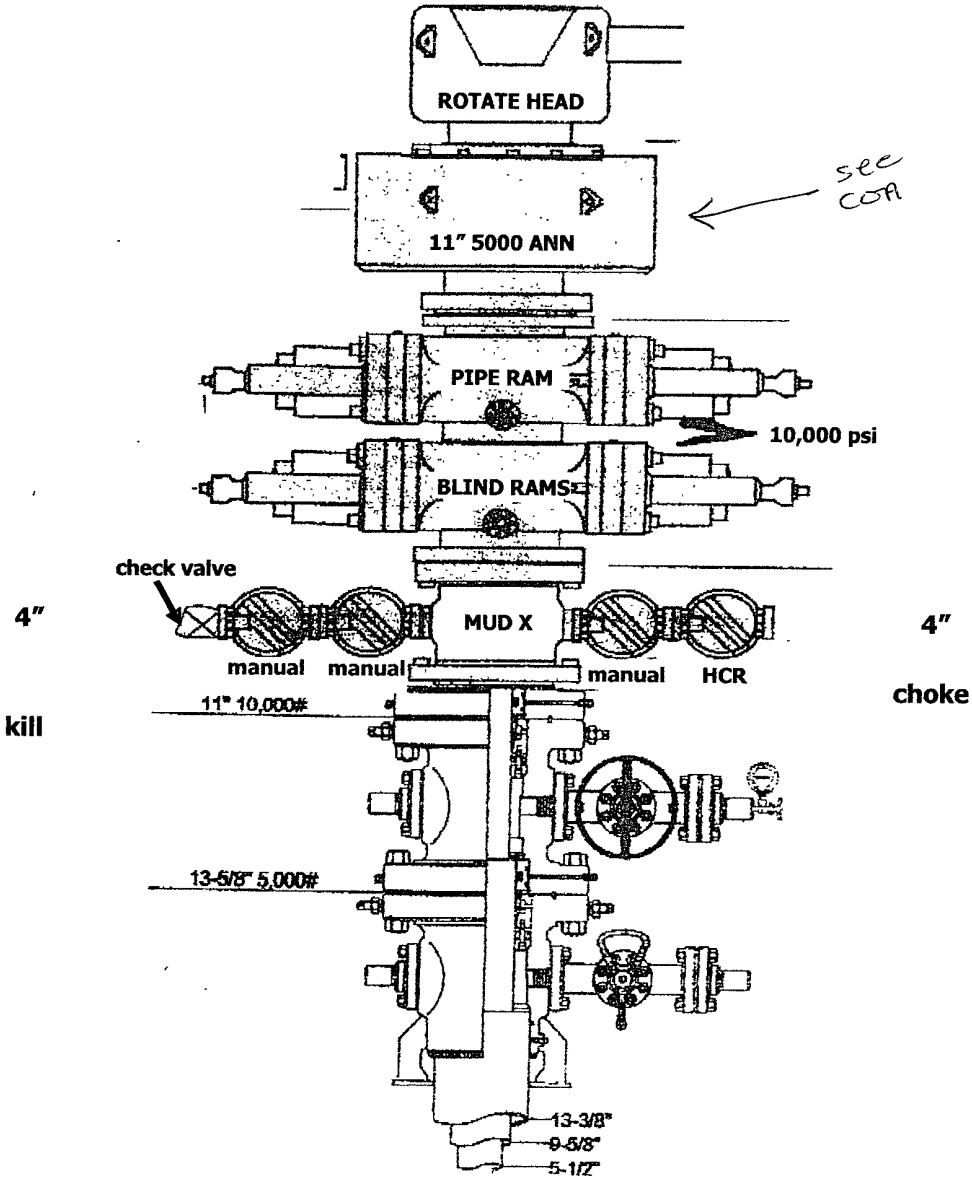
Rig # 10 – Pit System



Total Active System Volume = 1247 BBLS
Pre-Mix Pit = 241 BBLS
2 Duplex PZ-9 Pumps

Samson

McVay Rig #10



MULTI-POINT SURFACE USE AND OPERATIONS PLAN

SAMSON RESOURCES COMPANY

Lea Federal Well No. 29
1310' FNL & 1948' FWL, Section 24, T20S, R24E, LEA COUNTY, NEW MEXICO
Lease No.: NM-01747
(Development Well)

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, to be followed in rehabilitating the surface environmental effects associated with the operations.

1. EXISTING ROADS:

A. Exhibit "A" is a portion of a USGS/BLM Topo map showing the location of the proposed well as staked. The well site location is approximately 26 road miles southwest of Hobbs, New Mexico. Traveling west from Hobbs there will be approximately 25 miles of paved highway and 1 mile of gravel ranch/oilfield road.

B. Directions: From the intersection of U.S. Highway 62/180 and Lea County Road H-27 (Marathon Road), go south on Marathon for 5.5 miles. Turn left and go east 0.6 mile. Turn left and go north 0.2 mile to the existing Lea Federal #13 Well and a proposed road survey. Follow road survey northwest 3960 feet to this location.

2. PLANNED ACCESS ROAD:

A. Length and Width: The proposed access road is approximately 1567.6 feet in length and 12 foot in width. The access road is shown on Exhibit "A".

B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche and will be properly drained.

C. Turnouts: *As needed.*

D. Culverts: *As needed.*

E. Cuts and Fills: Some minor cuts on small dunes as approaching location.

F. Gates, Cattle guards: *None required.*

G. Off Lease R/W: *None required.*

3. LOCATION OF EXISTING WELLS:

A. One well in the N/2 (1660' FSL & 1980' FEL).

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Samson Resources has production facilities on the lease at this time.

B. If the well proves to be commercial, the necessary production facilities, gas production-process equipment, and tank battery, if required, will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for the access road and well site pad will be obtained on location, if available, or from an approved private pit. No surface materials will be disturbed except those necessary for actual grading and construction of the drill site and access road.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the reserve pits.

B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.

C. All pits will be fenced with normal fencing materials to prevent livestock and wildlife from entering the area.

D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.

E. Oil produced during operations will be stored in tanks until sold.

F. Current laws and regulations pertaining to the disposal of human waste will be complied with.

G. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged 600' X 600'.

B. Mat Size: 240' X 325', plus 125' X 150' mud pits. The pits will be on the north.

C. Cut & Fill: *As needed.*

D. The surface will be topped with compacted caliche and the mud pits will be plastic lined.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment and other material not required for operations will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled as soon as they are dry enough to work after abandonment.

11. OTHER INFORMATION:

A. Topography: The proposed well site and access road is located in an area of 3 - 4 foot sand dunes and deflation basins, which is part of the Querecho Plains. The location has an overall southwest slope of .4% from an elevation of 3664'.

B. Soil: The topsoil on the well site and access road is light brown colored fine sand. The soil is of the Kermit soils and Dune land series.

C. Flora and Fauna: The vegetation at the well site is a sparse to fair grass cover of three-awn, dropseed, bluestem, muhly and other miscellaneous native grasses along with plants of mesquite, yucca, sage, shinnery oak brush, broomweed, cacti, and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.

D. Ponds and Streams: *None.*

E. Residences and Other Structures: *None*, but existing oil field facilities.

F. Land Use: Cattle grazing.

G. Surface Ownership: The proposed well site and access road are on lands owned by:

Sims Brothers West, LLC
P.O. Box 2630
Hobbs, NM 88241

H. There is no evidence of archaeological, historical or cultural sites in the staked area. Danny Boone is conducting an archaeological survey and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

David Stonestreet
Samson Resources Company
Two West Second Street
Tulsa, OK 74103-3103
Office Phone: (918) 591-1624

CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Samson Resources Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

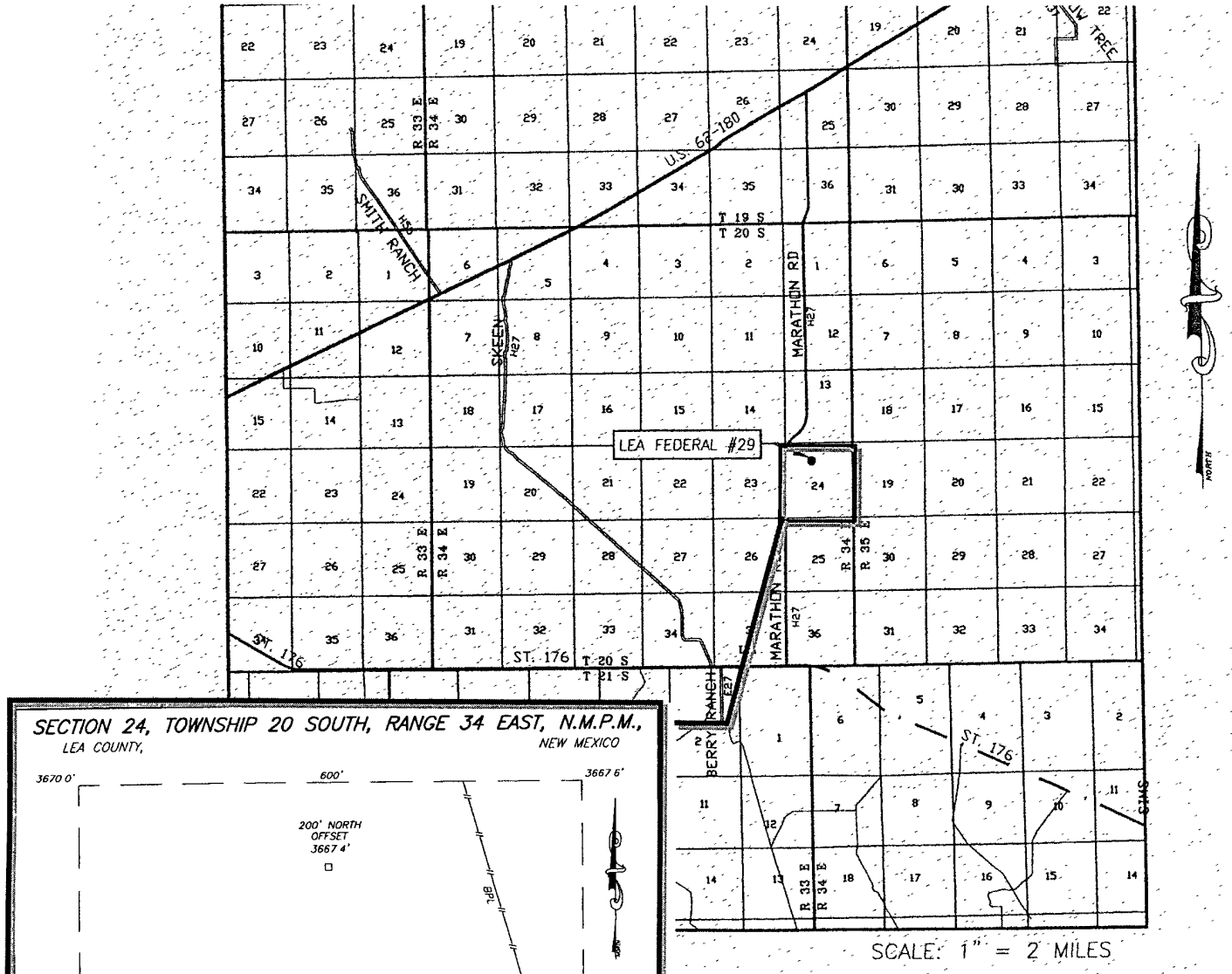
May 9, 2008

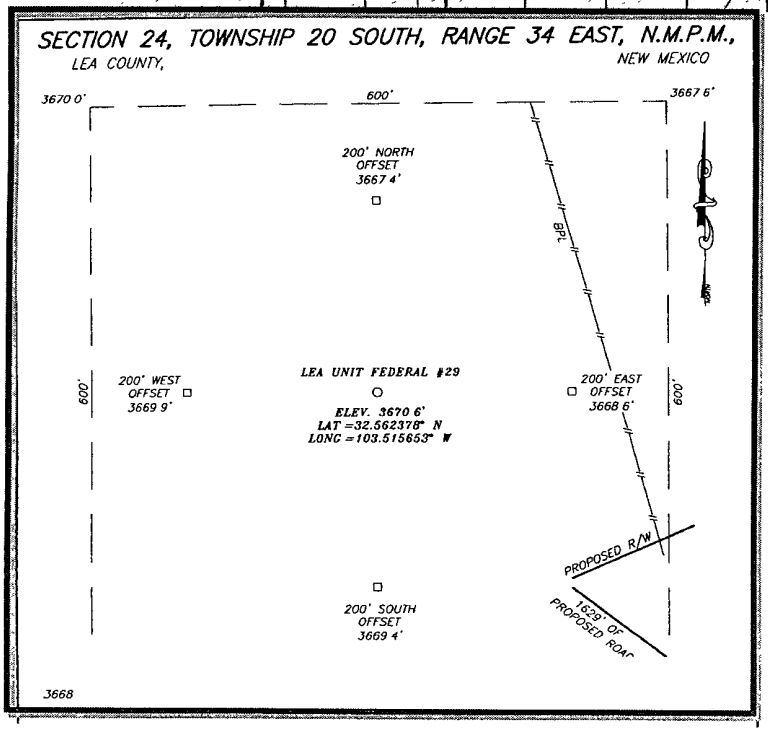
for Kenneth C. Dickeson
Agent for: Samson Resources Company

EXHIBIT "A"

SAMSON RESOURCES COMPANY

Lea Unit Federal Well No. 29
1310' FNL & 1948' FWL, Section 24, T20S, R34E, LEA COUNTY, NEW MEXICO
Lease No.: NM-01747
(Development Well)



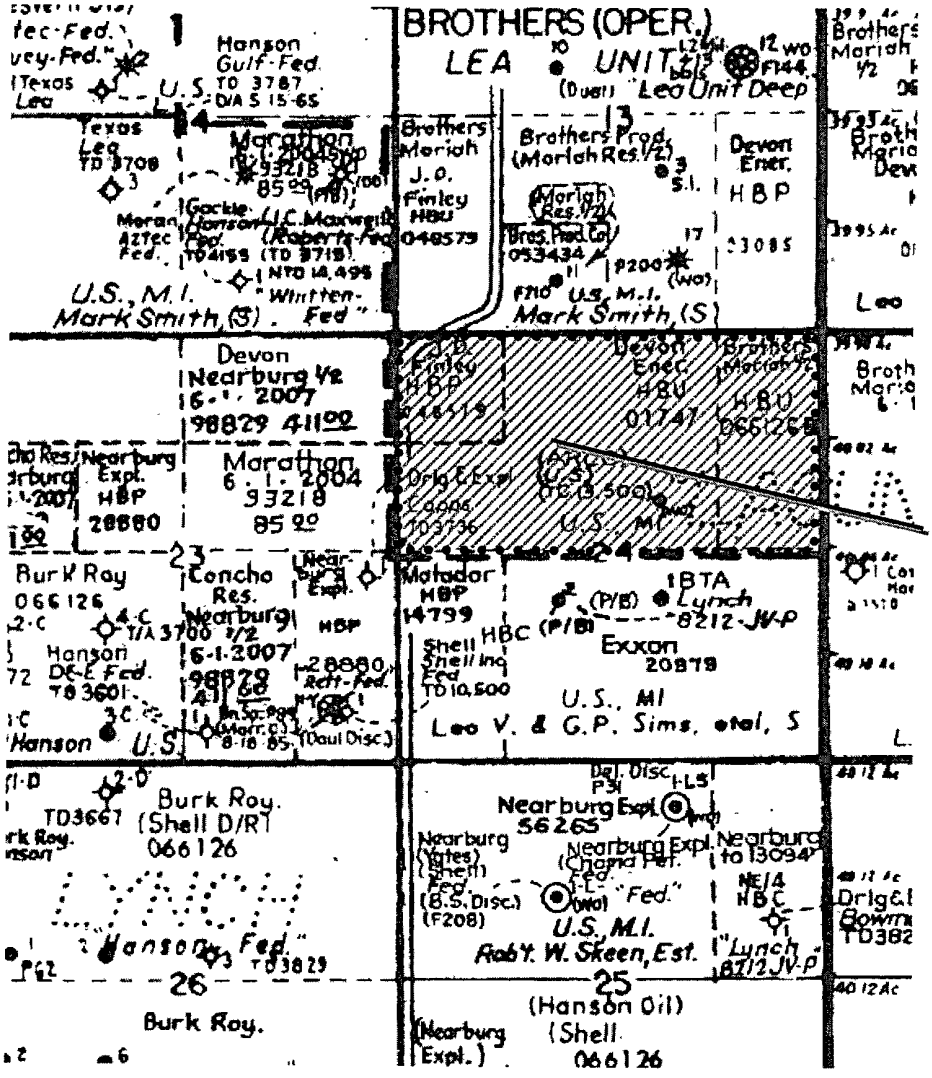


PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

EXHIBIT "C"

SAMSON RESOURCES COMPANY

Lea Federal #29
1310' FNL & 1948' FWL, Section 24, T20S, R34E, LEA COUNTY, NEW MEXICO
Lease No.: NM-01747
(Development Well)



Lea Federal #29

VERITAS 321
ENERGY PARTNERS, LP

June 6, 2008

RECEIVED
2008 JUN 23 AM 9:50
BUREAU OF LAND MGMT
CARLSBAD FIELD OFFICE

Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220-6292

RE: NMNM01747
Lea Federal #29 Well
1310' FNL & 1948 FWL, Section 24, T20S, R34E,
Lea County, New Mexico

Ladies and Gentlemen:

An agreement has been made between Samson Resources Company and the private surface owner for damages and other related fees regarding the drilling of the **Lea Federal #29 Well**, located in the above captioned lands.

The private surface owner is:

Mr. Leo V. Sims, II
Sims Brothers West, LLC
P.O. Box 2630
Hobbs, NM 88241-2630
(505) 397-3906

Thank you,

Kimberly Barker

V:|Vdata|Samson Resources|Lea Fed 29|PSOA.doc

P.O. Box 173 • Midland, Texas 79702 • 432.682.4002 • 432.684.4741 fax

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Samson Resources Company
LEASE NO.:	NM01747
WELL NAME & NO.:	Lea Federal No. 29
SURFACE HOLE FOOTAGE:	1310' FNL & 1948' FWL
BOTTOM HOLE FOOTAGE	Same
LOCATION:	Section 24, T. 20 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (505) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

There is no measurable soil on this well pad to stockpile. No topsoil stockpile is required.

C. RESERVE PITS

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

The reserve pit shall be constructed 125' X 150' on the North side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of three feet below ground level. Should the pit content level not meet the three foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of three feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the
Carlsbad Field Office at (505) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

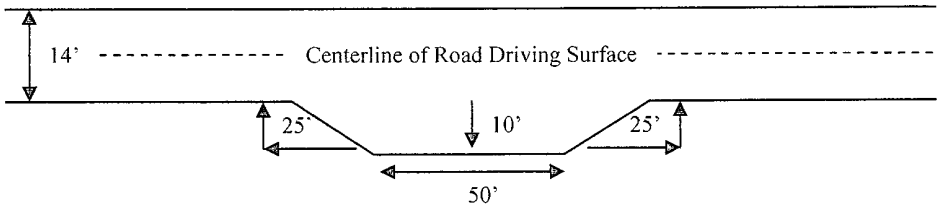
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

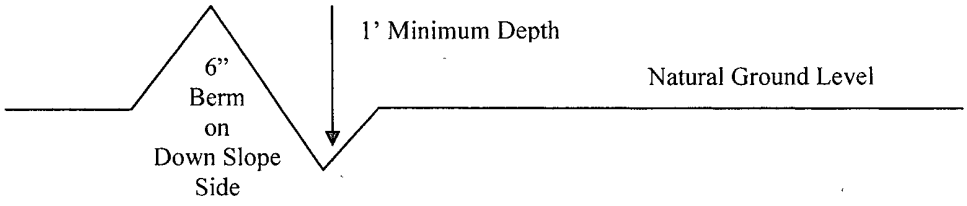


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

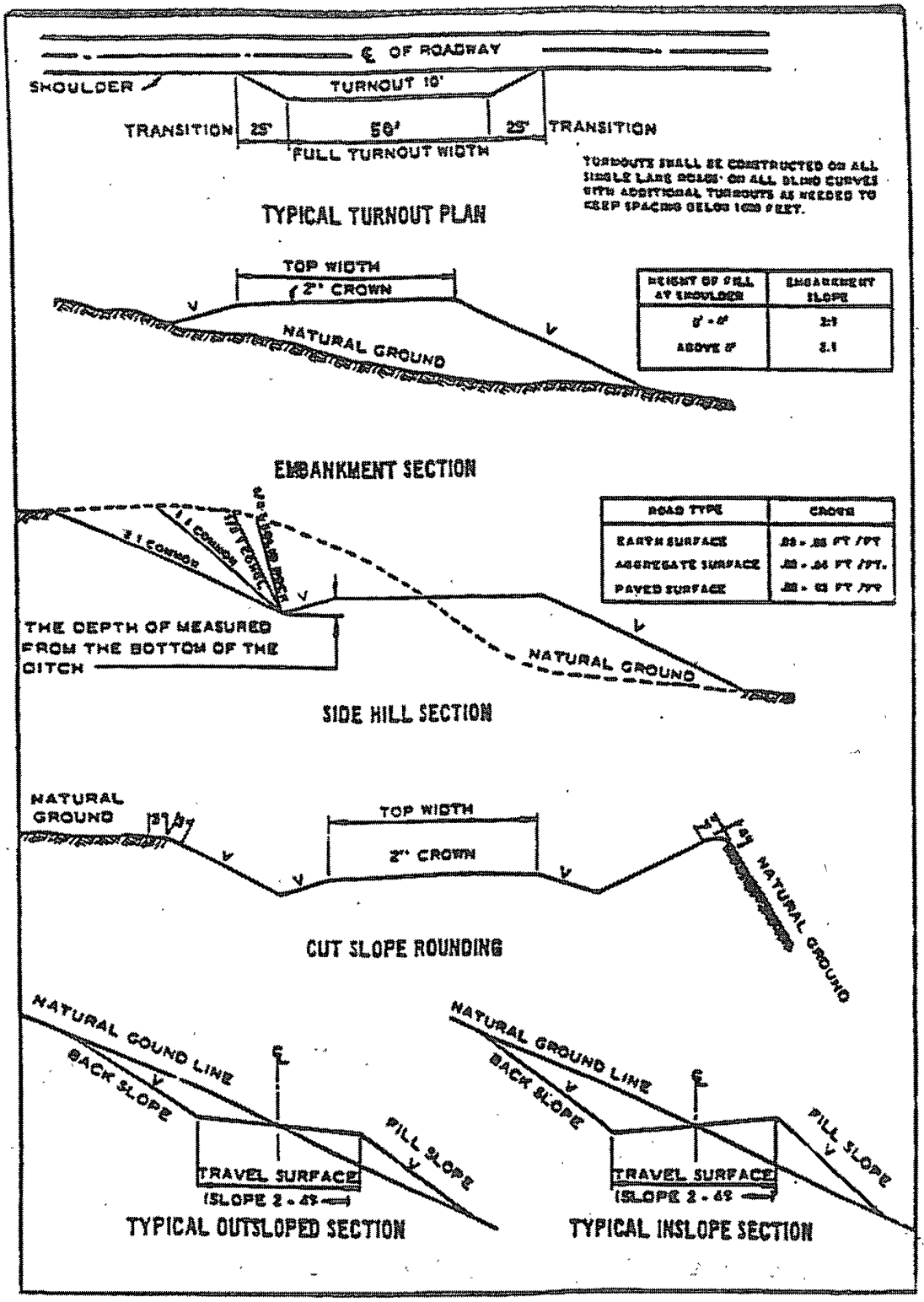
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Delaware** formation. **Hydrogen Sulfide has been reported in the gas stream measuring 0.5-500 ppm and in STVs measuring 10 ppm. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Red Beds, Capitan Reef, Delaware and Bone Spring formations.
Possible high pressure gas bursts in the Wolfcamp and over pressure through the Pennsylvanian Section.
Possible over pressured sour gas in the Canyon formation.

1. The **13-3/8** inch surface casing shall be set **at approximately 1650 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, **24 hours in the potash area**, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

If the Capitan Reef is encountered while drilling the intermediate hole (indicated by a loss of circulation), the mud must be changed to a fresh water mud to the setting depth of the intermediate casing.

While the 9-5/8" casing is being run, it must be kept liquid filled to meet the BLM safety factor for collapse.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    a. First stage to DV tool, cement shall:

    ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

    b. Second stage above DV tool, cement shall:

    ☒ Cement to surface. If cement does not circulate see B.1.a-d above.
    DV tool and ECP combination are to be set a minimum of 100' above the casing shoe.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification. **Tie back height required due to well's location in Secretary's Potash.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **10,000 (10M)** psi. **A 10M system requires a 10M annular, two pipe rams, and a blind ram. System to be tested to 10,000 psi.**

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. 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 test is done with a test plug and 30 minutes without a test plug.

e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days.** This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 063008

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

At the time reserve pits are to be reclaimed, operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

B. RESERVE PIT CLOSURE

The reserve pit, when dried and closed, shall be recontoured, all trash removed, and reseeded as follows:

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The see mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.