OCD-HOBBS

Form 3160-3 (February 2005)	. 01	CDETADVIA ma		OMB N	APPROVE to 1004-013 March 31,	37	
UNITED STATE: DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIO		TASH	5 Lease Senal No. NM 14496			
APPLICATION FOR PERMIT TO				6 If Indian, Allotee	or Tribe	Name	
la. Type of work DRILL REENT	ER			7 If Unit or CA Agra	ement, N	ame and N	lo \
lb. Type of Well	√	Single Zone Multıp	ole Zone	8 Lease Name and Ling Federal		≤ เชื	167
2 Name of Operator Fasken Oil and Ranch, Ltd.		(151416>		9 API Well No 30-02		391	21
3a Address 303 West Wall, Suite 1800 Midland, TX 79701	L	587-1777		10. Field and Pool, or Apache Ridge	•	•	
4. Location of Well (Report location clearly and in accordance with at At surface 990' FNL, 660' FWL	ny State requir Unit	ements*) /Lot 1		11 Sec, TRM or B		rvey or Ar	ea
At proposed prod zone				Sec. 31, T19S,	R34E		
14 Distance in miles and direction from nearest town or post office* 29 miles SW of Hobbs				12 County or Parish Lea		13 State	: NM
15 Distance from proposed* location to nearest property or lease line, ft		acres in lease		g Unit dedicated to this			
(Also to nearest drig. unit line, if any) 18 Distance from proposed location*				MBIA Bond No. on file			
to nearest well, drilling, completed, applied for, on this lease, ft	1 9500 BUZ		1 2729 Statewide Bond				
21 Elevations (Show whether DF, KDB, RT, GL, etc.) 3619' GL	22. Approx	ximate date work will star 07/15/2008	t*	23. Estimated duration 20 days	n		
		achments					
The following, completed in accordance with the requirements of Onsho	re Oil and Ga	s Order No 1, must be at	tached to the	s form			
Well plat certified by a registered surveyor A Drilling Plan		4 Bond to cover the Item 20 above)	e operation	ns unless covered by an	existing b	ond on fil	le (see
3 A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office)	Lands, the	5. Operator certific		ormation and/or plans as	may be re	equired by	the
25 Signature Linux Carrier	Nam	e (Printed/Typed) Jimmy D. Carlile	·		Date 06/0	04/2008	
Title Regulatory Affairs Coordinator	· · · · · · · · · · · · · · · · · · ·		···		-		
Approved by (Sig fsfr Linda S.C. Rundell	Nam	e (Pri jis d/Tlypedda S	.C. Rui	ndell	PATUG	2 5	2008
Title STATE DIRECTOR	Offic		IM ST	ATE OFFIC	E.		
Application approval does not warrant or certify that the applicant hold conduct operations thereon. Conditions of approval, if any, are attached.	s legal or equ	uitable title to those right	s in the subj	ect lease which would en	ntitle the a		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a createst any false, fictitious or fraudulent statements or representations as t	ime in			ake to any department o	r agency,	of the Uni	ted
*(Instructions on page 2)	1 63 6	The second secon					

AUG 27 2009

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FUR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO **GENERAL REQUIREMENTS** AND SPECIAL STIPULATIONS **ATTACHED**

DISTRICT I 1625 N. French Dr., Hobbs, NM 88240 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 88210

State of New Mexico Energy, Minerals and Natural Resources Department Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name	
30-025-39121	2260 Apache Ridge Bone Spring		
Property Code	Property Name LING FEDERAL		Well Number 5
OGRID No. 151416	•	erator Name AND RANCH, LTD	Elevation 3619'

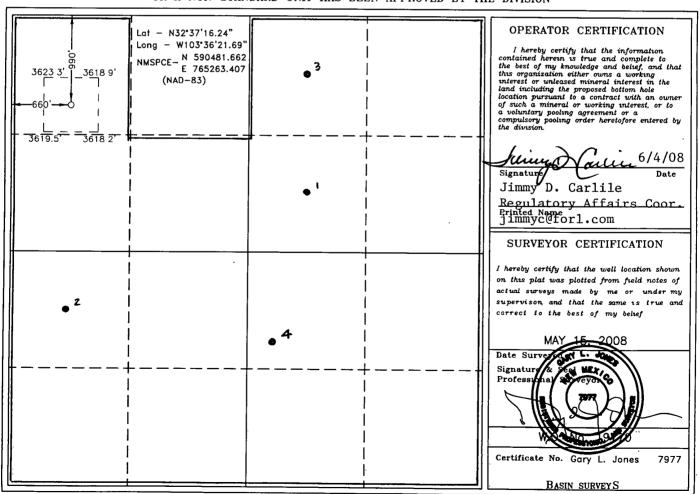
Surface Location

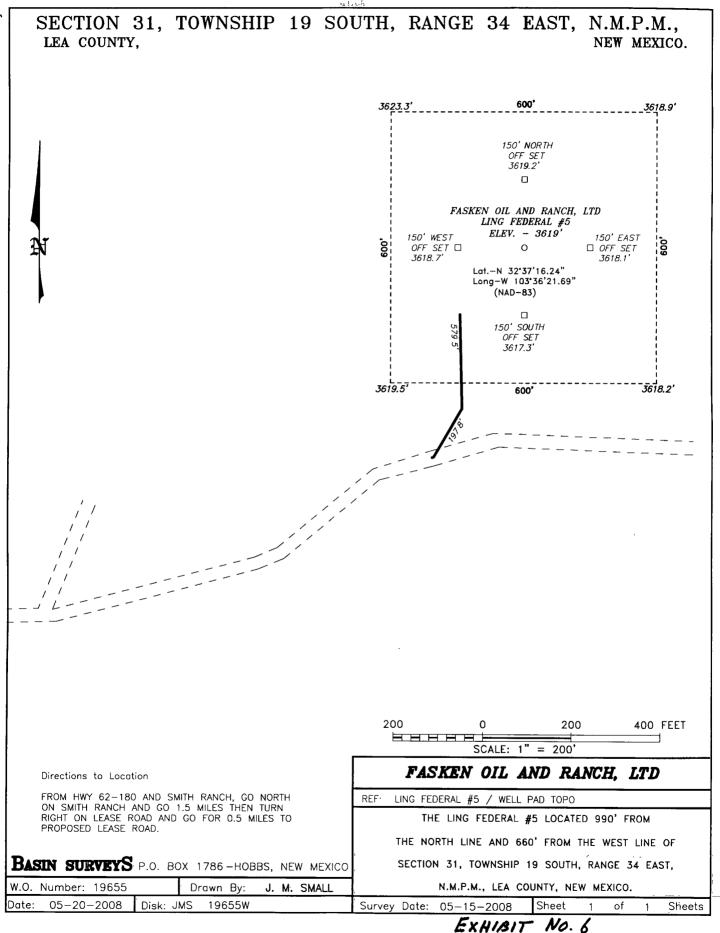
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	31	19 S	34 E		990	NORTH	660	WEST	LEA

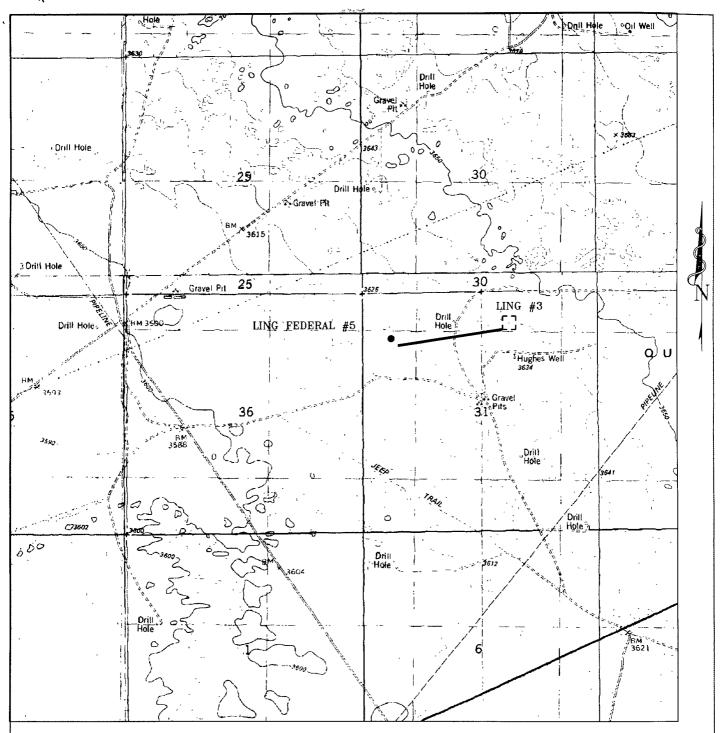
Bottom Hole Location If Different From Surface

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 o	r Infill Co	nsolidation	Code Or	der No.			,	· · · · ·
40									

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







PROPOSED PIPELINE TO THE LING FEDERAL #5 Section 31, Township 19 South, Range 34 East, N.M.P.M., Lea County, New Mexico.



P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com

W.O Number. JMS 19655
Survey Date 05-15-2008
Scale. 1" = 2000'
Date. 05-20-2008

FASKEN OIL AND RANCH, LTD

APPLICATION FOR PERMIT TO DRILL

Fasken Oil and Ranch, Ltd. Ling Federal No. 5 990' FNL & 660' FWL Sec 31, T19S, R34E Lea County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Fasken Oil and Ranch, Ltd. submits the following items of pertinent information in accordance with Onshore Oil & Gas Order Nos. 1 & 2, and with all other applicable federal and state regulations.

- 1. The geologic surface formation is of Permian age. Ground elevation is 3619'.
- 2. Estimate tops of geologic markers are as follows;

Rustler	1500'
Yates	3400'
Queen	4550'
San Andres	5150'
Delaware	5700'
Bone Springs	8250'
1 st Bone Springs Sand	9400'

3. The estimated depths at which water, oil or gas formation are expected to be encountered;

Yates	3400'	Oil
San Andres	5150'	Oil
Bone Springs	8250'	Oil

^{*} Groundwater to be protected by 13-3/8" surface casing with cement circulated to the surface.

4. <u>Proposed Casing Program:</u> All casing strings will new pipe. Minimum design safety factors are 1.0 for burst, 1.125 for collapse and 1.8 for tension on 8rd threaded pipe.

String	Footage	Hole Size	Casing Size	Weight	Grade	Thread
Surface	1100° 500° 1600°	17-1/2"	13-3/8" 13-3/8"	48.00# 54.50#	H-40 K-55	ST&C ST&C
Intermediate	5200'	12-1/4"	8-5/8"	32.00#	K-55	LT&C
Production	9500'	7-7/8"	5-1/2"	17.00#	N- 80	LT&C
Tubing	9400'		2-3/8°	4.70#	N-80	EUE 8 ^{rc}

^{**} Potentially productive horizons to be protected by 5-1/2" production casing with cement tied back to 5000'.

Cement 13-3/8" casing with 600 sx Class "C" cement with 4% gel and 2% CaCl₂ (s.w. 13.5 ppg, yield 1.74 cuft/sx) plus 400 sx Class "C" with 2% ČàCl₂ (s.w. 14.8 ppg, yield 1.32 cuft/sx). Circulate cement to surface.

Cement 8-5/8" casing with 1300 sx Halliburton Lite "C" with 15# salt and 1/8# Poly-E-Flake (12.6 ppg, yield 2.23 ft³/sx) plus 300 sx Class "C" neat (s.w. 14.8 ppg, yield 1.32 ft³/sx). Circulate cement to surface.

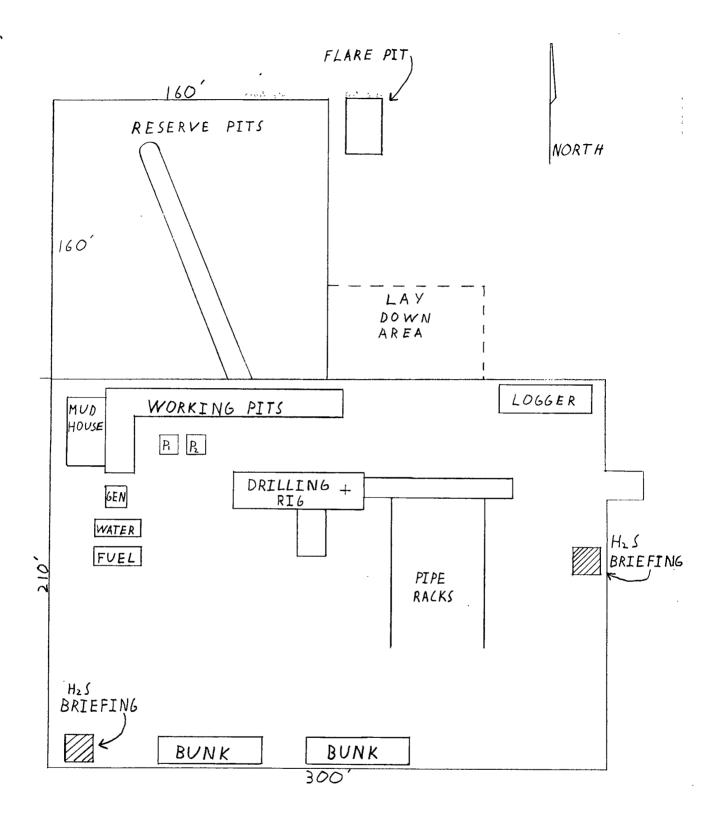
- 6. Set 5-1/2" casing at TD (Resin coat and centralize through all prospective pay zones), and cement with DV tool at estimate 8400' as follows;
 - First Stage: Note, batch mix lead slurry. 10 bfw + 500 gallons Mud Flush 102 + 10 bfw and 450 sx Super "H" Modified with 0.5% LAP-1, 0.4% CFR-3, 5# gilsonite, 1/8# Poly-E-Flake and 0.2% HR-7 (s.w. 13.2 ppg, yield 1.60 ft³/sx). Open DV tool and circulate 6 hours.
 - ii. Second stage: 20 bfw + 400 sx Halliburton Light "H" with 1/8# Poly-E-Flake (s.w. 12.6 ppg, yield 1.93 ft³/sx) plus 200 sx Class "H" with 0.5% Halad-9 (s.w. 15.6 ppg, yield 1.18 ft³/sx). Calculate second stage cement volume for TOC at 5000'

 ✓
- 7. Pressure Control Equipment: See exhibit #5 (13-5/8" 3000# BOP). Operator request variance and proposes to pressure test BOP stack with rig pump to 1000 psig prior to drilling out the 13-3/8" casing shoe. The 8-5/8" casing will be Hydrotested before drill out the shoe joint. Hydrotest will included testing the rams, choke line, choke manifold, upper and lower kelly valves and floor safety valves to 3000 psig high and 300 psig low. The annular preventor will be hydrotested to 1500 psig high and 300 psig low. Additional BOP Hydrotesting will be performed after any pressure seal is broken, following any BOP repair and at 30 day intervals.

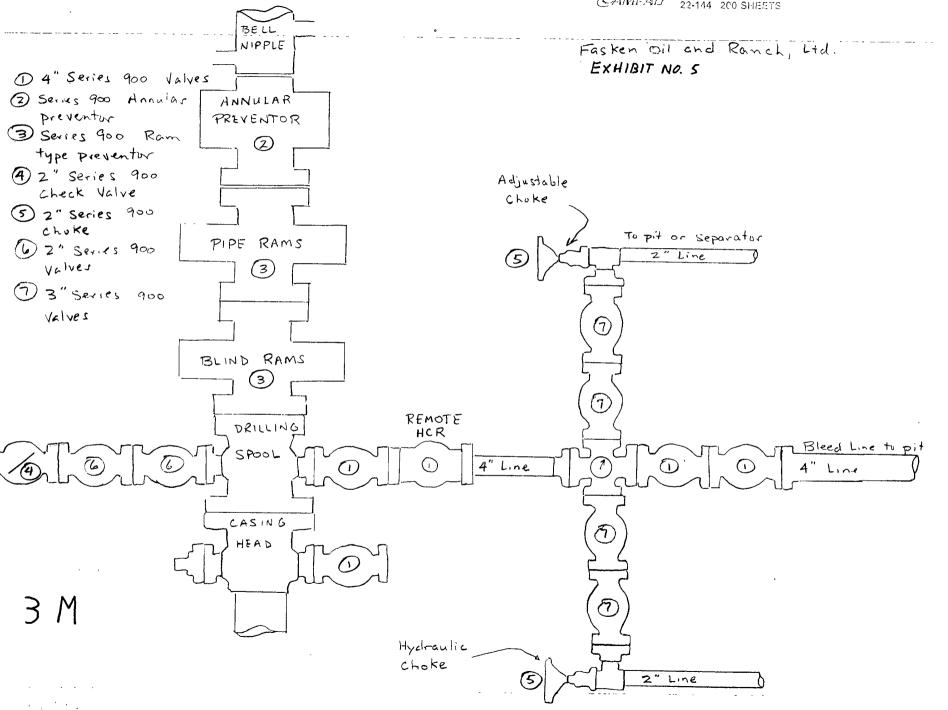
8. Mud Program:

<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	Waterloss
0-1600'	Fresh Water	8.5	40	N.C.
1600'-5200'	Brine Water	10.0-10.5	29	N.C.
5200'-9000'	Fresh Water	8.4-8.8	28	N.C.
9000'-9,500'	Gel/Starch/PAC	9.0-10.0	30	12 cc

- 9. <u>Auxiliary Equipment</u>: Upper Kelly Cock, Full Opening Stabbing Valve, PVT.
- 10. Testing Logging and Coring Programs:
 - DST's: None anticipated.
 - Logging: 2-man Mudlogging unit from 5200' to T.D.
 - Electric Logs: Platform Express with CNL-LDT, DLL-MSFL, GR and Caliper.
 - Coring: None anticipated
- 11. <u>Abnormal Pressure, Temperatures or Other Hazards</u>: No lost circulation is anticipated. Maximum bottomhole pressure is estimated to be 4114 psig.
- 12. Anticipated Starting Date: July 15, 2008.



FASKEN OIL AND RANCH, LTD. SCALE: 1"= 50' EXHIBIT # 4



HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

EXHIBIT #3
Fasken Oil and Ranch, Ltd.
Ling Federal No. 5
990' FNL & 660' FWL
Sec. 31, T19S, R34E
Lea County, New Mexico

I. Hydrogen sulfide Training.

All personnel, whether regularly assigned, contracted or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H2S).
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques of first aid and rescue procedures.

In addition the supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan. This plan shall be available at the will site. All personnel will be required to carry documentation that they have received the proper training.

II. H2S Safety Equipment and Systems.

NOTE: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above or three days prior to penetration the first zone containing or reasonable expected to contain H2S

- 1. Well Control Equipment:
 - A. Flare line.
 - B. Choke manifold.

- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment to include: annular preventer, mud-gas separator (if necessary) and rotating head.
- 2. Protective equipment for essential personnel:
 - A. 5-minute escape units located in the dog house and 30-minute air units at briefing areas, as indicated on well site diagram.
- 3. H2S detection and monitoring equipment:
 - A. 3 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.
 - B. 1 portable SO2 monitor positioned near flare line during H2S flaring operations.
- 4. Visual warning systems:
 - A. Wind direction indicators as shown on well site diagram.
 - B. Caution/Danger signs shall be posted on roads providing direct access to location Signs will be painted a high visibility yellow with black lettering of sufficient size to be a readable distance from the immediate location.
- 5. Mud program:
 - A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight safe drilling practices and the use of H2S scavengers when necessary will minimize hazards when penetrating H2S bearing zones.
 - B. A Mud-gas separator will be utilized.
- 6. Metallurgy:
 - A. All drill strings, casings, tubing, wellhead, blowout preventors, drilling spools kill lines, choke manifold and lines valves shall be suitable for H2S service.
 - B. All elastomers used for packing and seals shall be H2S trimmed.
- 7. Communications:
 - A. Radio communications will be available in company vehicles and rig dog house.
- 8. Well testing:
 - A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing of any known formation that contains H2S will be conducted during daylight hours.

Fasken Oil and Ranch, Ltd.

H2S Contingency Plan

Emergency Phone Numbers

Ling Federal Nos. 5 and 6

RECEIVED

CARLSBAD RELD OFFICE

Fasken Oil and Ranch, Ltd.

432 687-1777

Key Personnel

Tommy Taylor, Drilling Manager	432 556-2228
Jimmy Davis, Operations Manager	432 557-5668
Deryl Briles, Drilling Foreman	432 556-4269
Mark Jacobs, Drilling Foreman	432 634-6318
Jordan Evans, Drilling Engineer	432 557-6941

Hobbs, Lea County, New Mexico

Ambulance	911
State Police	911 or 575 392-5580
Sheriff's Office	911 or 575 396-3611
Fire Department	911 or 575 397-9308
Local Emergency Planning Committee	575 393-2870
New Mexico Oil Conservation Division	575 393-6161

Carlsbad, Eddy County, New Mexico

Ambulance	911
State Police	911 or 575 885-3138
Sheriff's Department	911 or 575 887-7551
Fire Department	911 or 575 885-3125
Local Emergency Planning Committee	575 887-7553
Bureau of Land Management	575 887-6544
New Mexico Oil Conservation Division (Artesia)	575 748-1283

Statewide and National Emergency Numbers

New Mexico Department of Homeland Security
And Emergency Management

New Mexico State Emergency Operations

Center (24 Hour Number)

505 476-9635

505 476-9600

National Emergency Response Center

800 424-8802

Other Numbers for Emergency Response

Boots & Coots IWC 800 256-9688 or 281 931-8884

Cudd Pressure Control 432 563-3356

MCH Care Star Flight Service (air ambulance) 432 640-4000

Aerocare (air ambulance) 806 725-1111

SURFACE USE PLAN

Fasken Oil and Ranch, Ltd. Ling Federal No. 5 990' FNL & 660' FWL Sec. 31, T19S, R34E Lea County, New Mexico

- 1. EXISTING ROADS Area map, Exhibit #1, is a reproduction of the U.S.G.S, SE/4 Laguna Gatuna Quadrangle. Existing and proposed roads are shown on the exhibit. All roads shall be maintained in a condition equal to that which existed prior to start of construction.
 - A. Exhibit #1 shows the proposed development well site as staked.
 - B. From US 62-180 and Smith Ranch road, go North 1.5 miles then turn East on lease road and go 0.8 miles to location.
- 2. PLANNED ACCESS ROADS AND PIPELINE 777' of new access road will be constructed. If the well is successful, we will bury 2386' of 4" flowline and 2386' of a 3" test line to connect to an existing battery at the Ling Federal No. 3 location.
- LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS.
 - A. Water wells Larry Hughes wind mill water well approximately 2800' South East of the Ling Federal No. 5 location.
 - B. Disposal wells None Known.
 - C. Drilling wells None known.
 - D. Producing wells As shown on Exhibit #2

Fasken Oil and Ranch, Ltd.:

Fasken Oil and Ranch, Ltd.

Fasken Oil and Ranch, Ltd.

Fasken Oil and Ranch, Ltd.

Gruy Petroleum

Gruy Petroleum

Cimarex

Ling Federal No. 2

Ling Federal No. 2

Ling Federal No. 3

Pennzoil State No. 1

Pennzoil "36" State No. 1

Cimarex Pennzoil No. 1
Cimarex Pennzoil No. 2B
Cimarex Laguna Deep Ur

Cimarex Laguna Deep Unit No. 16 Cimarex Laguna No. 20

Cimarex Laguna No. 20
Cimarex Laguna No. 21

Gruy Petroleum Mescalero "30" Federal No. 1
Gruy Petroleum Mescalero "30" Federal No. 2.
Gruy Petroleum Mescalero Ridge Federal No. 4
Gruy Petroleum Mallon "30" Federal No. 43
Gruy Petroleum Quail Ridge State No. 2

E. Abandoned wells - As shown on Exhibit #2.

Drlg and Expl of Delaware Nell Gillespie No. 1
Trigg Government No. 1

4. If, upon completion, the well is a producer Fasken Oil and Ranch, Ltd. will furnish maps or plats showing "On Well Pad Facilities" and "Off Well Pad Facilities" (if needed) on a Sundry Notice before construction of these facilities starts.

LOCATION AND TYPE OF WATER SUPPLY

Fresh and Brine water will be purchased locally from a private source and trucked over the access roads.

6. SOURCE OF CONSTRUCTION MATERIALS

If needed, construction materials will be obtained from the drill sites excavations or from a local source. These materials will be transported over the access roads as shown on Exhibit #1.

METHOD FOR HANDLING WASTE DISPOSAL

- A. 1. Drill cuttings will be disposed of in the reserve pit.
 - 2. Trash, waste paper, and garbage will be contained in a trash trailer and disposed of in an approved public landfill.
 - All mud materials including salts will be picked up by the mud supplier and transported back to their warehouse facilities.
 - 4. Sewage from trailer houses will drain into hole with a minimum depth of 10'. A "Porta John" will be provided for the rig crews. This will be properly maintained and removed after drilling operations are completed.
 - 5. Chemicals remaining after completion of the well will be stored in the manufacturer containers and picked up by the supplier.
- B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for backfilling. In the event drilling fluids will not evaporate in a reasonable period of time, they will be transported by tank truck to a state approved disposal site.

Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during the testing of the well will be stored in test tanks until sold and hauled from the site.

8 ANCILLARY FACILITIES

No camps or airstrips will be constructed.

9. WELL SITE LAYOUT

- A. Exhibit #3 is the H₂S Drilling Operations Plan.
- B. Exhibit #4 (Scale 1" = 50') shows the proposed well site layout.
- C. This exhibit indicates the proposed location of reserve pit, trash trailer and living facilities.
- D. Mud pits in the active circulation system will be steel pits.
- E. The reserve pit will be lined with a 20 mil polyethylene liner. The pit liner will be a minimum of 2' over the reserve pit walls where the liner will be anchored down.

F. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion operations. The fourth side will be fenced after drilling has been completed. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

10. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured to conform to the original and surrounding area. Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location pad and surface facilities. After the area has been shaped and contoured, top soil from the spoil pile (if any) will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recontoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

11. OTHER INFORMATION

- A. The topography is of sand hills with vegetation of sagebrush and native grasses. The soils are sandy and very shallow.
- B. The surface is used for livestock grazing. The surface is owned by the Federal Government and leased by Mr. Kenneth Smith.
- C. The archeological study for this location, road and proposed pipeline is attached herewith.
- D. There are no buildings of any kind in the area.
- 12. OPERATOR'S REPRESENTATIVE Field representative for contact regarding compliance with the Surface Use Plan is:

Before, during & after Construction:

Tommy E. Taylor 303 W. Wall Ave., Suite 1800 Midland, Texas 79701-5116 (432) 687-1777

Fasken Oil and Ranch, Ltd.

Ling Federal No. 5

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws application 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 the company I represent, 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 4th day of June, 2008.

ommy (.) any

Name:

Tommy Taylor

Position:

Drilling Manager

Address:

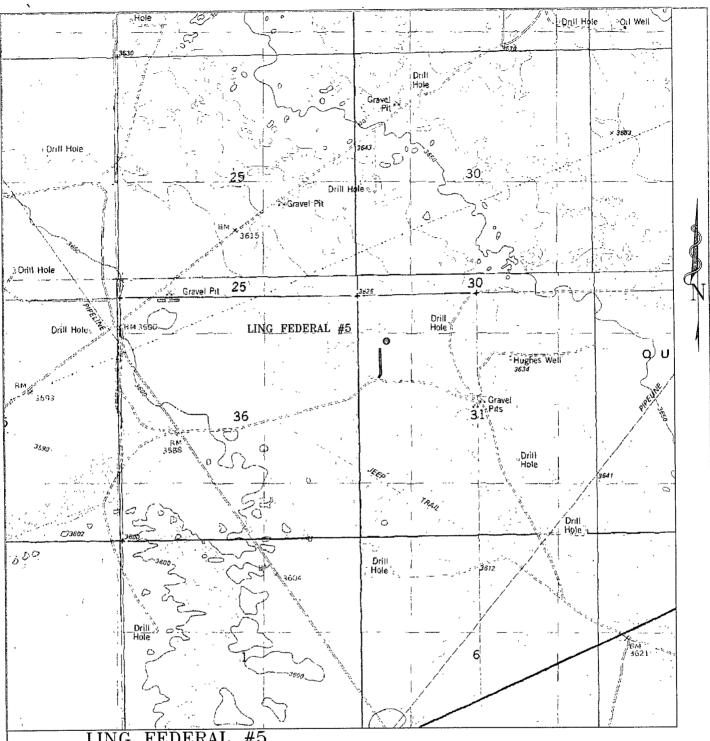
303 West Wall, Suite 1800

Midland, TX 79701

Telephone: (432) 687-1777

Email:

tommyt@forl.com



LING FEDERAL #5
Located 990' FNL and 660' FWL
Section 31, Township 19 South, Range 34 East,
N.M.P.M., Lea County, New Mexico.

Date: 05-20-2008



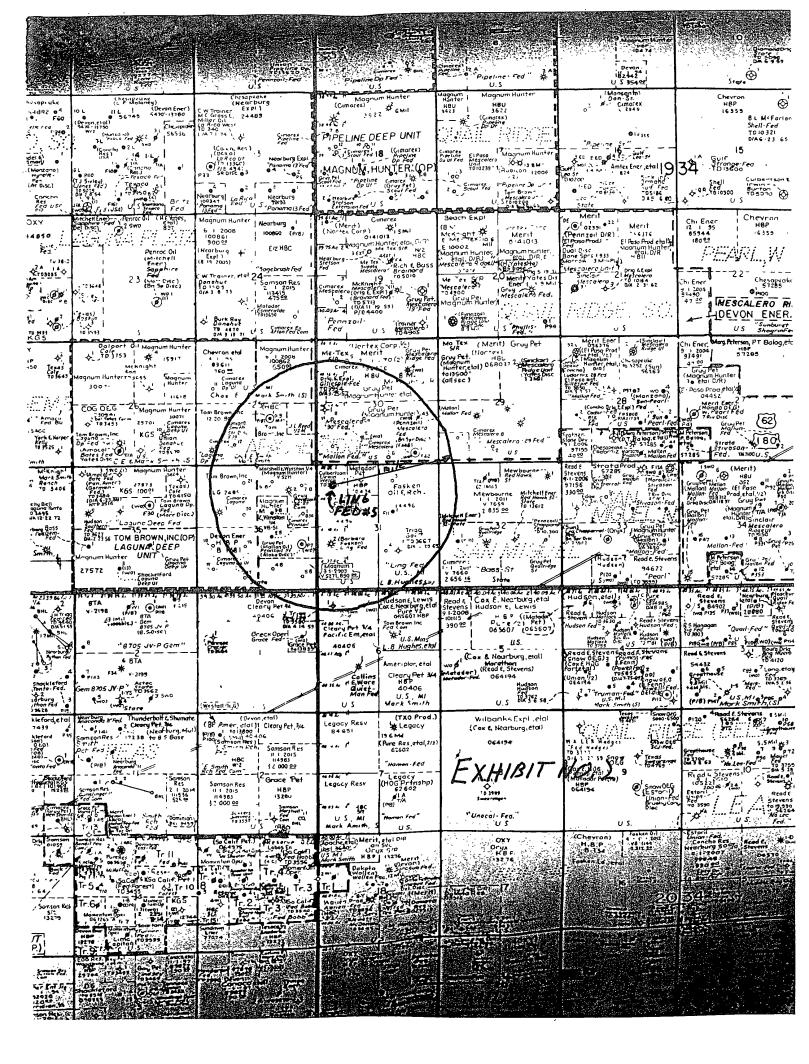
P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (505) 393-7316 - Office (505) 392-3074 - Fax basinsurveys.com W.O. Number: JMS 19655

Survey Date. 05-15-2008

Scale: 1" = 2000'

FASKEN OIL AND RANCH, LTD

EXHIBIT No. 1



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:
LEASE NO.:
WELL NAME & NO.:
SURFACE HOLE FOOTAGE:
BOTTOM HOLE FOOTAGE
LOCATION:
COUNTY:
Fasken Oil and Ranch, Ltd.
NM-14496
Ling Federal #5
990' FNL & 660' FWL
Section 31, T. 19 S., R 34 E., NMPM
Lea County, New Mexico

TABLE OF CONTENTS

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.

☐ General Provisions		
Permit Expiration		
Archaeology, Paleontology, and Historical Sites		
Noxious Weeds		
Special Requirements		
Lesser Prairie Chicken		
Construction		
Notification		
Topsoil		
Reserve Pit		
Federal Mineral Material Pits		
Well Pads		
Roads		
Road Section Diagram		
☑ Drilling		
☐ Production (Post Drilling)		
Well Structures & Facilities		
Reserve Pit Closure/Interim Reclamation		
Final Abandonment/Reclamation		

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 1 through June 15 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 Carlsbad Field Office at (505) 234-5972 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

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

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

The reserve pit shall be constructed 160' X 160' 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.

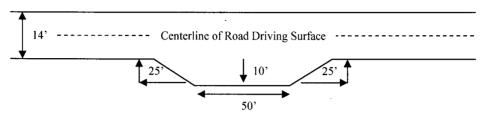
Ditching

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

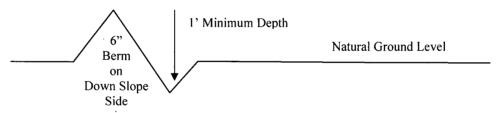


Drainage

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

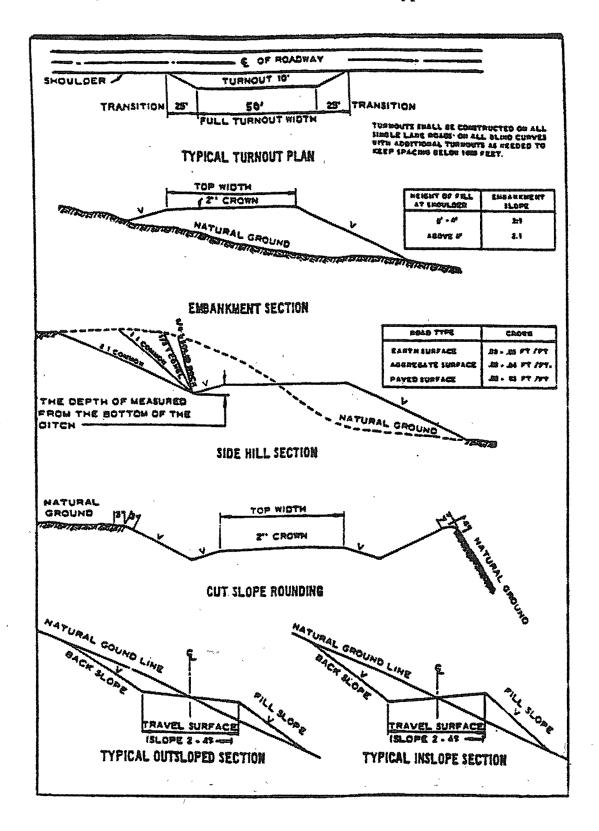
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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 Yates formation. H2S has been measured at 500-700 ppm in gas streams and 300-7000 ppm in STVs in neighboring sections. If Hydrogen Sulfide is encountered, please provide measured values 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 or water flows in the Capitan Reef.

- 1. The 13-3/8 inch surface casing shall be set at approximately 1600 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, operator is to switch to fresh water mud to setting of intermediate casing.

Operator to fill up every 25 joints while running 8-5/8" casing and pump through the floats.

2.	The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
	⊠ Cement to surface. If cement does not circulate see B.1.a-d above.
3. The minimum required fill of cement behind the 5-1/2 inch production ca	
	a. First stage to DV tool, cement shall:

- Ement 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 should tie-back at least 500 feet into previous casing string.
 Operator shall provide method of verification. Tieback of 500' required 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. 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. The variance for testing of the BOP/BOPE on the surface casing is not approved since MASP based on 8.5 ppg mud weight for the next hole exceeds 1000 psi.

D. DRILL STEM TEST

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

WWI 071708

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 for LPC Sand/Shinnery 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 <u>no</u> 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 seed 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:

<u>Species</u>	<u>lb/acre</u>	
Plains Bristlegrass	5lbs/A	
Sand Bluestem	5lbs/A	
Little Bluestem	3lbs/A	
Big Bluestem	6lbs/A	
Plains Coreopsis	2lbs/A	
Sand Dropseed	11bs/A	

^{**}Four-winged Saltbush

5lbs/A

Pounds of seed \mathbf{x} percent purity \mathbf{x} percent germination = pounds pure live seed

(Insert Seed Mixture Here)

^{*} This can be used around well pads and other areas where caliche cannot be removed.

^{*}Pounds of 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.