

If pits are used in connection with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

Form 3160-3  
(August 1999)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER



OMB No. 1004-0136  
Expires November 30, 2000

5. Lease Serial No. <b>NM-81953</b>
6. If Indian, Allottee or Tribe Name
7. If Unit or CA Agreement, Name and No.
8. Lease Name and Well No. <b>13749</b> <b>Glow Worm ALX Federal #12</b>
9. API Well No. <b>30-015-35314</b>
10. Field and Pool, or Exploratory
11. Sec., T., R., M., or Blk. and Survey or Area <b>Section 3, T23S-R31E</b>
12. County or Parish <b>Eddy County</b>
13. State <b>NM</b>

1a. Type of Work: ☒ DRILL ☐ REENTER

b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

R-III-POTASH

2. Name of Operator  
**Yates Petroleum Corporation**

3A. Address **105 South Fourth Street**  
**Artesia, New Mexico 88210**

3b. Phone No. (include area code)  
**(505) 748-1471**

4. Location of Well (Report location clearly and in accordance with any State requirements. \*)

At surface **330' FNL and 330' FWL**

At proposed prod. Zone **Same**

14. Distance in miles and direction from nearest town or post office\*  
**Approximately 23 miles east of Carlsbad, New Mexico.**

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
**330'**

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
**330'**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
**3404' GL**

22. Approximate date work will start\*  
**ASAP**

23. Estimated duration  
**45 days**

24. Attachments  
**Carlsbad Controlled Water Basin**

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.	4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
2. A Drilling Plan.	5. Operator certification.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).	6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature 	Name (Printed/Typed) <b>Cy Cowan</b>	Date <b>1/12/2006</b>
Regulatory Agent		
Regulatory Agent		
Approved by (Signature) <b>/s/ Linda S.C. Rundell</b>	Name (Printed/Typed) <b>/s/ Linda S.C. Rundell</b>	Date <b>DEC 19 2006</b>
Title <b>STATE DIRECTOR</b>	Office <b>NM STATE OFFICE</b>	

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 1 YEAR**

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.

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

**CEMENT BEHIND THE 8 5/8" CASING MUST BE CIRCULATED**

**WITNESS**

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
811 South First, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410  
DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised March 17, 1999  
Instruction on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 40297	Pool Name Undes. Los Mendanos.
Property Code	Property Name GLOW WORM "ALX" FEDERAL	Well Number 12
OGRID No. 025575	Operator Name YATES PETROLEUM CORPORATION	Elevation 3404

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 4	3	23S	31E		330	NORTH	330	WEST	EDDY

Bottom Hole Location If Different From Surface

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

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

3404 - 3414	<div><div>330'0"</div><div>330'0"</div><div>397 3404</div><div>Lot 4</div><div>NM-81953</div></div>	<div>N.32°20'23.4"</div> <div>W.103°46'23.5"</div> <div>N.487755.8</div> <div>E.673148.8</div> <div>(NAD-27)</div> <div>Lot 3</div>	Lot 2	Lot 1

**OPERATOR CERTIFICATION**

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

*Cy Cowan*

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

Date January 12, 2006

**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.

11/02/2005

Date Surveyed \_\_\_\_\_

Signature & Seal of Professional Surveyor \_\_\_\_\_

Certificate No. Herschel L. Jones RLS 3640

GLOW WORM 12

GENERAL SURVEYING COMPANY

0 330' 660' 990' 1650' 1980' 2310' 2310' 1980' 1650' 990' 660' 330' 0'

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☐

Operator: YATES PETROLEUM CORPORATION Telephone: (505) 748-1471

e-mail address: \_\_\_\_\_

Address: 105 South Fourth Street, Artesia, NM 88210

Facility or well name: Glow Worm ALX Federal #12 API #: 30-015-35314 U/L or Qtr/Qtr D Sec 3 T 23S R 31E

County: Eddy Latitude N32.2023.4 Longitude W103.4623.5 NAD: 1927 1983 X Surface Owner Federal X State Private ☐ Indian ☐

**Pit**  
Type: Drilling ☒ Production ☐ Disposal ☐  
Workover ☐ Emergency ☐  
Lined ☒ Unlined ☐  
Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Volume 20,000 bbl

**Below-grade tank**  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Construction material: \_\_\_\_\_  
Double-walled, with leak detection? Yes ☐ If not, explain why not. \_\_\_\_\_

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) 970'

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more	( 0 points)
	0 Points

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes	(20 points)
No	( 0 points)
	0 Points

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points)
200 feet or more, but less than 1000 feet	(10 points)
1000 feet or more	( 0 points)
	0 Points

**Ranking Score (Total Points)** 0 Points

**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐ a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

Date: 1/12/06

Printed Name/Title: Cy Cowan, Regulatory Agent

Signature: 

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Date: \_\_\_\_\_

Printed Name/Title: \_\_\_\_\_ Signature: \_\_\_\_\_

**YATES PETROLEUM CORPORATION**  
**Glow Worm ALX Federal #12**  
330' FNL and 330' FWL  
Section 3-T23S-R31E  
Eddy County, New Mexico

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

Rustler	380'
Base of Salt	4080'
Bell Canyon	4125'
Cherry Canyon	5040'
Brushy Canyon	6400'
Bone Spring	8030'
TD	8200'

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

Water: 354'  
Oil or Gas: All potential zones.

3. Pressure Control Equipment: BOPE will be installed on the 8 5/8" casing and rated for 3000 BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

4. THE PROPOSED CASING AND CEMENTING PROGRAM:

- A. Casing Program: (All New)

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt./Ft</u>	<u>Grade</u>	<u>Coupling</u>	<u>Interval</u>	<u>Length</u>
17 1/2"	13 3/8"	48#	H-40	ST&C	0-550'	550'
11"	8 5/8"	32#	J-55	ST&C	0-4050'	4050'
7 7/8"	5 1/2"	17#	J-55	LT&C	0-100'	100'
7 7/8"	5 1/2"	15.5#	J-55	LT&C	100'-6800'	6700'
7 7/8"	5 1/2"	17#	J-55	LT&C	6800'-8200'	1400'

Yates Petroleum Corporation requests a variance to install a rotating head on the surface casing strings when intermediate casing will be set. If a BOP system is required then we wish to install a 2M system and receive a variance to test the system to 500# using the rig pumps. The test will be held for 30 minutes on each system component. Components to be tested include pipe rams, blind rams, and annular preventor.

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Joint Strength 1.8

**B. CEMENTING PROGRAM:**

Surface casing: Lead with 500 sx Lite(Yld 1.96 Wt. 12.5) Tail in w/200 sx Class "C" + 2% CaCL2 (YLD 1.34 WT 14.8).

Intermediate Casing: Lead in with 1150 sx Lite (Yld 2.5 Wt 11.9). Tail in w/250 sx Class "C" + 2%CaCL2 (Yld 1.34 Wt. 14.8).

Production Casing: Stage I TOC 6400'; 150 Barrels nitrified mud ahead, lead DV tool packer at 4000'. 450 sx Super H (Yld 1.67 Wt. 13). Tail in w/50 sx ThixoTropic (Yld 1.4 Wt 14.4).

Stage II Lead with 350 sx Lite (Yld 2.5 Wt 11.9) Tail in with 50 sx Premium (Yld 1.3 Wt 14.8)

**5. MUD PROGRAM AND AUXILIARY EQUIPMENT:**

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-550'	FW/Native Mud	8.6-9.2	28-36	N/C
550'-4050'	Brine	10.0-10.2	28	N/C
4050'-6900'	Cut Brine	8.6-9.1	28	N/C
6900'-8200'	Cut Brine/Starch	8.6-9.1	28-32	<15cc

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

**6. EVALUATION PROGRAM:**

Samples: Every 10' from surface casing to TD.

Logging: Platform HALS: CMR.

Coring: Sidewall cores as warranted.

DST's: As warranted.

**7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:**

Anticipated BHP:

From: 0	TO: 550'	Anticipated Max. BHP: 260	PSI
From: 550'	TO: 4050'	Anticipated Max. BHP: 2150	PSI
From: 4050'	TO: TD	Anticipated Max. BHP: 3880	PSI

No abnormal pressures or temperatures are anticipated.

Lost Circulation Zones Anticipated: None

H2S Zones Anticipated: None Anticipated

**8. ANTICIPATED STARTING DATE:**

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 30 days to drill the well with completion taking another 15 days.

**MULTI-POINT SURFACE USE AND OPERATIONS PLAN**  
**YATES PETROLEUM CORPORATION**  
**Glow Worm ALX Federal #12**  
330' FNL and 330' FWL  
Section 3-T23S-R31E  
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 23 miles east of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go East of Carlsbad on Highway 62-180 to Hwy 31. Turn south on Hwy 31 and go to Hwy 128 (Jal Highway). Turn east and go approx. 16 miles to Red Road (CR-802). Turn left on Red Rd. and go approx. 7 miles to Mills Ranch Road (CR-798). Turn left here and go approx. 2.2 of a mile. Turn left here (there will be a blue marker here with H-175 on it) and go approx. 0.3 this spot will be just past a big WIPP sign. The new road will start here going east for approximately 200 feet to the southwest corner of the proposed Glow Worm #12 location.

2. PLANNED ACCESS ROAD:

- A. The proposed new access will go east for approximately 200 feet to the southwest corner of the drilling pad. The road will lie in an east to west.
- B. The new road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion.
- C. The new road will be bladed with drainage on one side. Some traffic turnouts will be built.
- D. The route of the road is visible.
- E. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

- A. There is no drilling activity within a one-mile radius of the well site.
- B. Exhibit D shows existing wells within a one-mile radius of the proposed well site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. There are not any production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

Dirt contractor will locate nearest pit and obtain any permits and materials needed for construction.

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. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES:

None

9. WELLSITE LAYOUT:

- A. Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, the location of the drilling equipment, rig orientation and access road approach.
- B. The reserve pits will be plastic lined.
- C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION:

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have dried and been leveled.
- 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 level after they have evaporated and dried.

11. SURFACE OWNERSHIP: Federal Surface, Administered by Bureau of Land Management, Carlsbad, New Mexico.

12. OTHER INFORMATION:

- A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
- B. The primary surface use is for grazing.

13. OPERATOR'S REPRESENTATIVE:

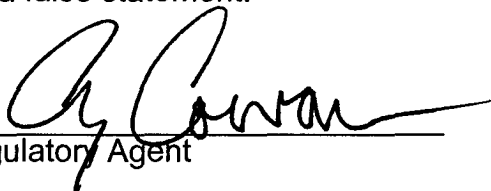
A. Through A.P.D. Approval:  
  
Cy Cowan, Regulatory Agent  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210  
Phone (505) 748-1471

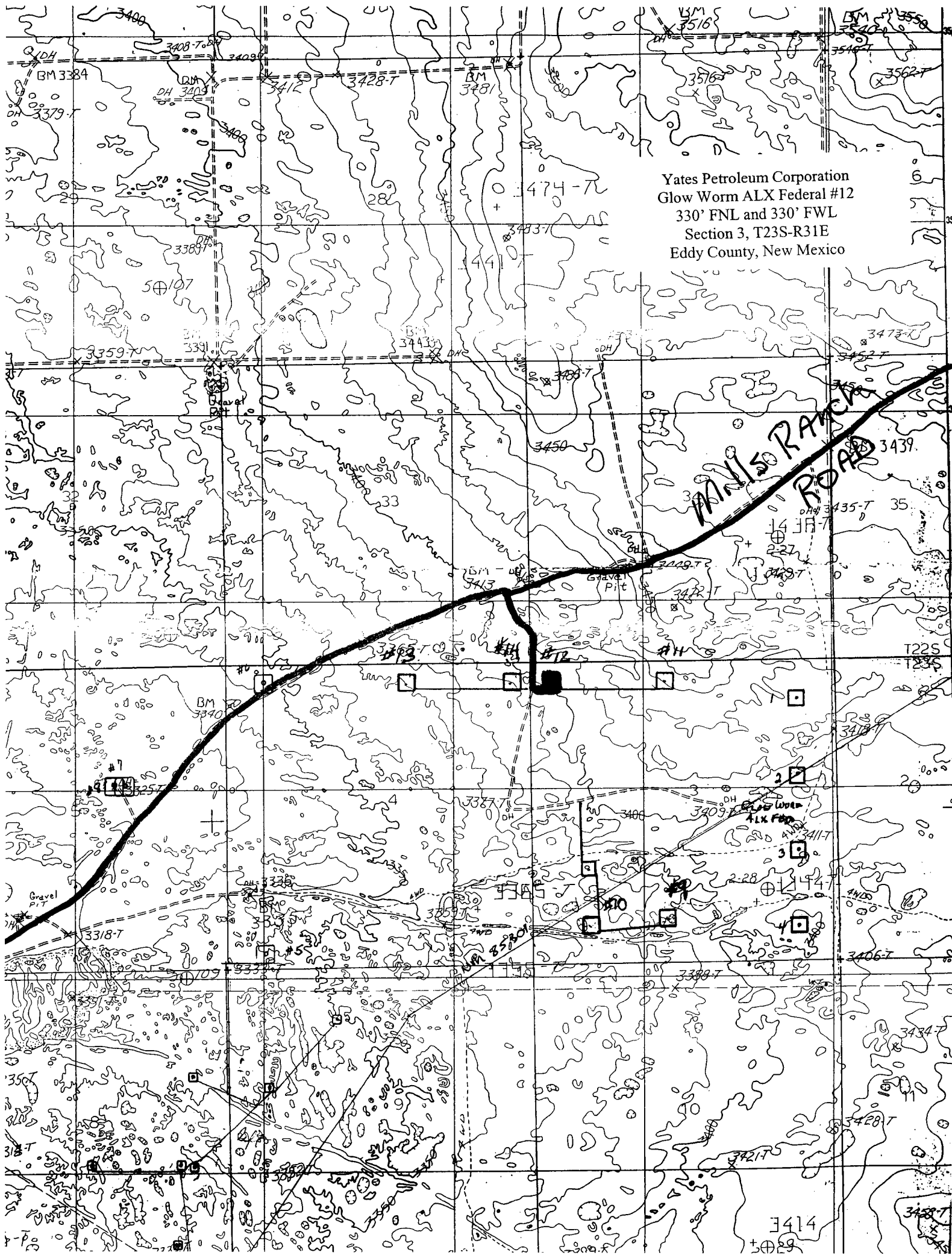
B. Through Drilling Operations,  
Completions and Production:  
Pinson McWhorter,  
Operations Manager  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, New Mexico 88210  
Phone (505) 748-1471

14. CERTIFICATION:

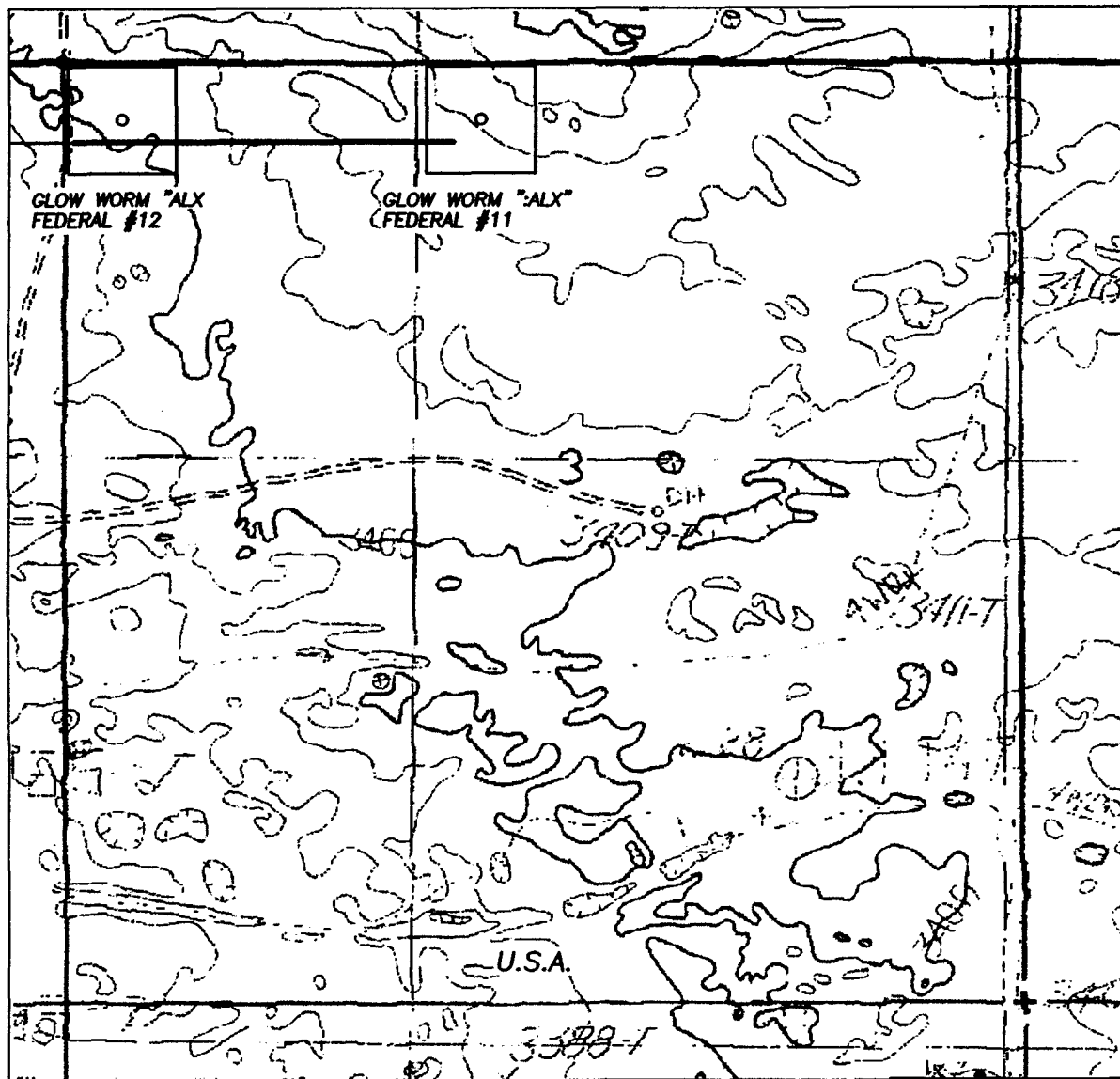
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Yates Petroleum Corporation 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.

1/12/06

  
Regulatory Agent



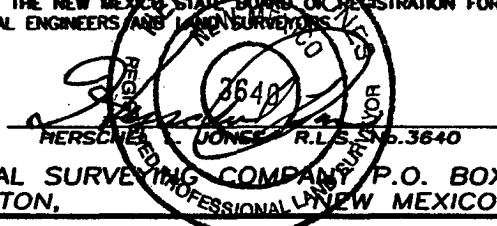
SECTION 3, TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM, EDDY COUNTY, NEW MEXICO.



1000' 0 1000' 2000'

Scale 1" = 1000'

THE PREPARATION OF THIS PLAT AND THE PERFORMANCE OF THE SURVEY UPON WHICH IT IS BASED WERE DONE UNDER MY DIRECTION AND THE PLAT ACCURATELY DEPICTS THE RESULTS OF SAID SURVEY AND MEET THE REQUIREMENTS OF THE STANDARDS FOR LAND SURVEYS IN NEW MEXICO AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

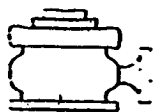


GENERAL SURVEYING COMPANY P.O. BOX 1928  
LOVINGTON, NEW MEXICO 88260

## YATES PETROLEUM CORP.

LEASE ROAD TO ACCESS THE YATES GLOW WORM "ALX"  
FEDERAL #11 & 12 WELLS, LOCATED IN SECTION 3,  
TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM, EDDY  
COUNTY, NEW MEXICO.

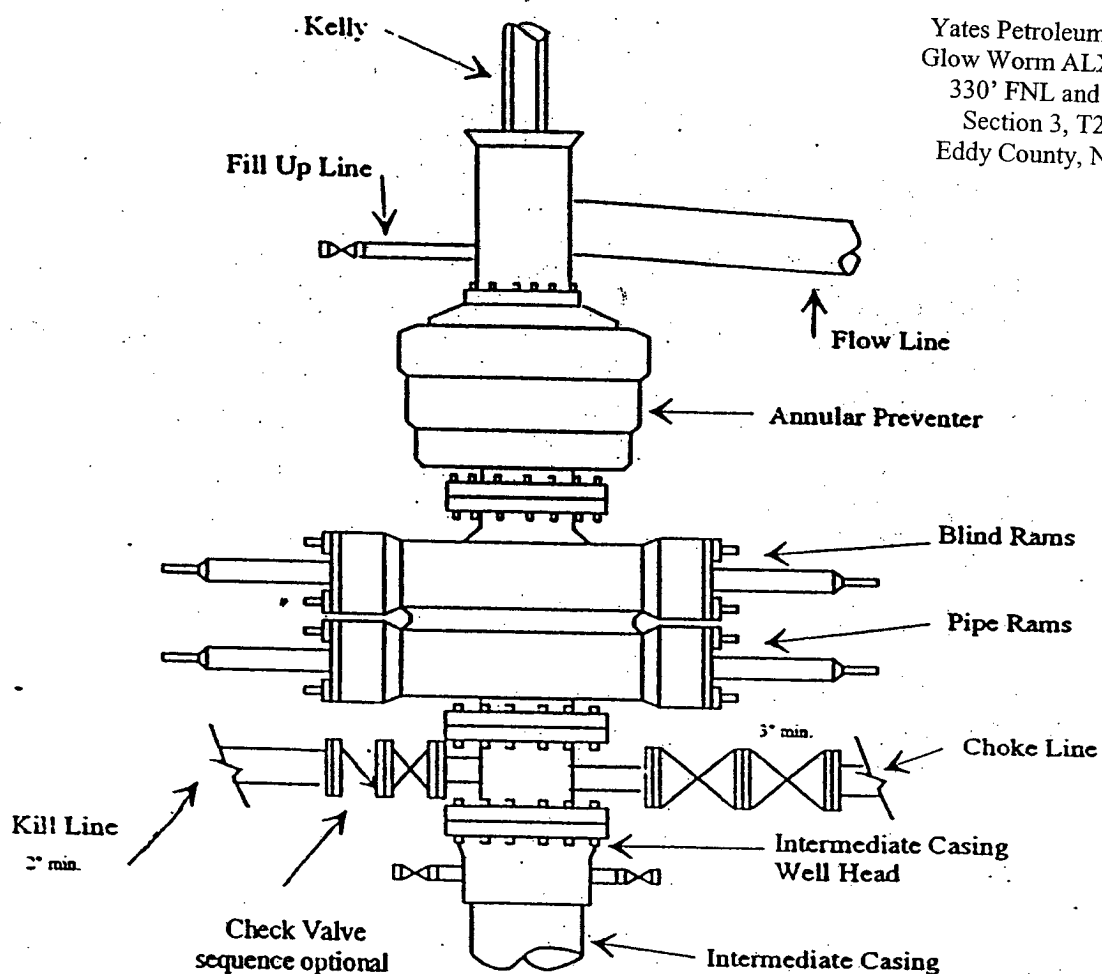
Survey Date: 11/02/2005	Sheet 1 of 1 Sheets
Drawn By: Ed Blevis	W.O. Number
Date: 11/02/05	Scale 1" = 1000' GLOW WORM



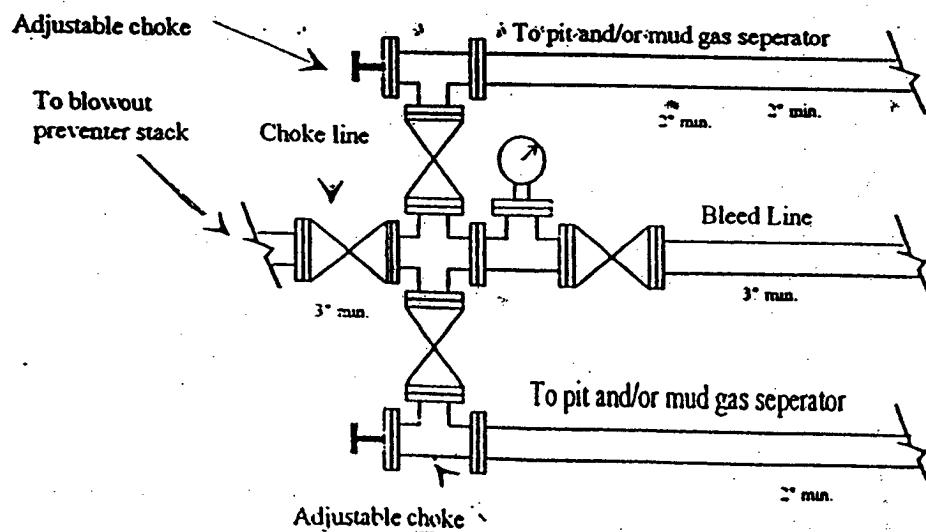
# Yates Petroleum Corporation

BOP-3

## Typical 3,000 psi Pressure System Schematic Annular with Double Ram Preventer Stack



## Typical 3,000 psi choke manifold assembly with at least these minimum features

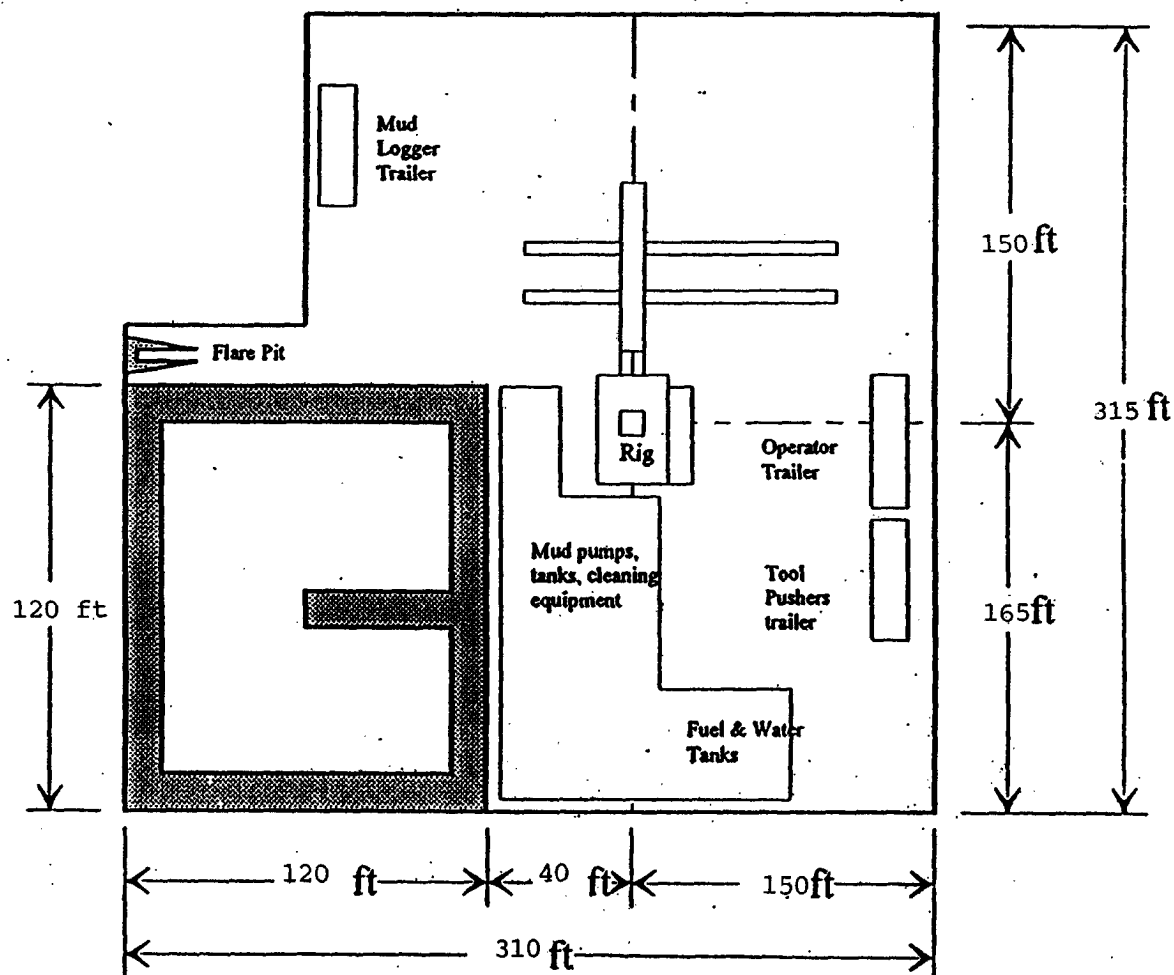
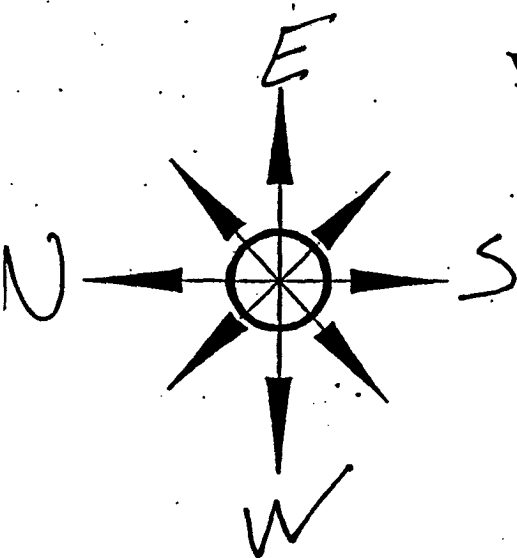


PB - L1

# Yates Petroleum Corporation

Location Layout for Permian Basin  
Up to 12,000'

Yates Petroleum Corporation  
Glow Worm ALX Federal #12  
330' FNL and 330' FWL  
Section 3, T23S-R31E  
Eddy County, New Mexico



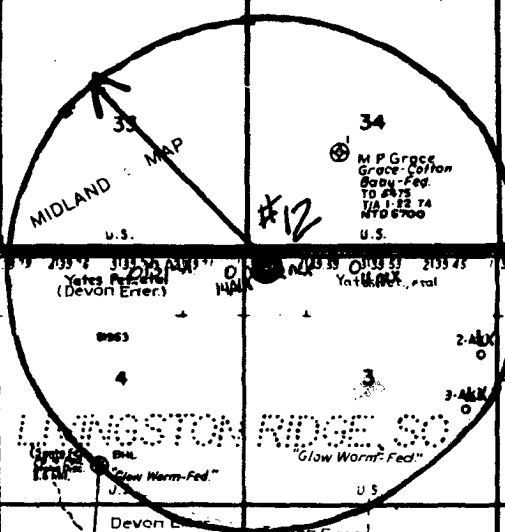
Distance from Well  
Head to Reserve Pit  
will vary between rigs

The above dimension  
should be a maximum

Yates Petroleum Corporation  
Glow Worm ALX Federal #12  
330' FNL and 330' FWL  
Section 3, T23S-R31E  
Eddy County, New Mexico

WIPP Site

MIDLAND MAP



LIVINGSTON RIDGE SO

JAMES ROCK

SAND DUNES

SAND DUNES W.

## SPECIAL DRILLING STIPULATIONS

### THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: Yates Petroleum Corporation Well Name & #: Glow Worm ALX Fed. #12  
Location 330 F N L & 330 F W L; Sec. 03, T. 23 S., R. 31 E.  
Lease #: NM-81953 County: Eddy State: New Mexico

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

#### I. SPECIAL ENVIRONMENT REQUIREMENTS

- ( ☒ ) Lesser Prairie Chicken (stips attached) ( ☐ ) Flood plain (stips attached)  
( ☐ ) San Simon Swale (stips attached) ( ☐ ) Other

#### II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

( ☒ ) The BLM will monitor construction of this drill site. Notify the ( ☒ ) Carlsbad Field Office at (505) 234-5972 ( ☐ ) Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

( ☒ ) Roads and the drill pad for this well must be surfaced with 6 inches of compacted caliche upon completion of well and it is determined to be a producer.

( ☐ ) All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately \_\_\_\_\_ inches in depth. Approximately \_\_\_\_\_ cubic yards of topsoil material will be stockpiled for reclamation.

( ☐ ) Other.

#### III. WELL COMPLETION REQUIREMENTS

( ☐ ) A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

( ☒ ) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of 1/2 inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre.

- |  |   |
|--|---|
| ( <input type="checkbox"/> ) A. Seed Mixture 1 (Loamy Sites)   | ( <input checked="" type="checkbox"/> ) B. Seed Mixture 2 (Sandy Sites) |
| Side Oats Grama ( <i>Bouteloua curtipendula</i> ) 5.0          | Sand Dropseed ( <i>Sporobolus cryptandrus</i> ) 1.0                     |
| Sand Dropseed ( <i>Sporobolus cryptandrus</i> ) 1.0            | Sand Lovegrass ( <i>Eragrostis trichodes</i> ) 1.0                      |
|  | Plains Bristlegrass ( <i>Setaria magrostachya</i> ) 2.0                 |
| ( <input type="checkbox"/> ) C. Seed Mixture 3 (Shallow Sites) | ( <input type="checkbox"/> ) D. Seed Mixture 4 (Gypsum Sites)           |
| Side oats Grama ( <i>Boute curtipendula</i> ) 1.0              | Alkali Sacaton ( <i>Sporobolus airoides</i> ) 1.0                       |
|  | Four-Wing Saltbush ( <i>Atriplex canescens</i> ) 5.0                    |

( ☐ ) OTHER SEE ATTACHED SEED MIXTURE

Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture.

( ☒ ) Other SEE ATTACHED DOI - WIPP SPECIAL CONDITIONS OF APPROVAL

## RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

Reclamation: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

## OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

## CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

## TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

T. 23 S., R. 31 E  
Section 03: ALL

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. 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 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the 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 feet from the source of the noise.

BLM Lease Number: NM-81953

Well Name & Number: Glow Worm ALX Federal #12

Location: 330 FNL & 330 FWL, Sec. 3, T.23S., R.31E. SHL

Operator: Yates Petroleum Corporation

#### **SPECIAL CONDITION OF APPROVAL**

Your proposed well location falls within 330 feet of the Department of Energy's (DOE) Waste Isolation Pilot Plant (WIPP) boundary.

In accordance with 43 CFR 3162.4-2 and pursuant to a Memorandum of Understanding (MOU) between BLM & DOE, the operator is required to submit daily drilling reports (including borehole deviation survey results) by facsimile to Mr. Gene Valett of DOE's WIPP Office [FAX #: (505) 234-7113; Phone #: (505) 234-7553] and Mr. Harold Johnson DOE's WIPP Office [FAX #: (505) 234-7061; Phone #: (505) 234-7349].

The operator is also required to perform a directional survey to establish bottomhole location on wells that experience deviation averages of more than five degrees from vertical in any 500-foot interval.

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Yates Petroleum Corporation Well No. 12 - Glow Worm ALX Federal

Location: 330' FNL & 330' FWL sec. 3, T. 23 S., R. 31 E.

Lease: NM-81953

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### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at (505) 234-5972 in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch

2. Include the API No. assigned to well by NMOCD on the subsequent report of setting the first casing string.

3. 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 of this office.

4. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface; cable speed not to exceed 30 feet per minute.

### II. CASING:

1. 13-3/8 inch surface casing should be set at approximately 550 feet in the Rustler Anhydrite above the top of the Salt, below usable water and circulate cement to the surface. If cement does not circulate to the surface, the Carlsbad BLM office shall be notified at (505) 234-5972 and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. Minimum required fill of cement behind the 8-5/8 inch salt protection casing is sufficient to circulate to the surface.

3. Minimum required fill of cement behind the 5-1/2 inch production casing is sufficient to tie circulate to the surface.

4. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

### III. PRESSURE CONTROL:

1. Before drilling below the 13-3/8 inch surface casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer or Two Ram-Type Preventers and a Kelly Cock/Stabbing Valve. Before drilling below the 8-5/8 inch salt protection casing, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the 13-3/8 inch surface casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi. Before drilling below the 8-5/8 inch salt protection casing, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

3. The BOPE shall be installed before drilling below the 8-5/8 inch salt protection casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

A. The results of the test will be reported to the BLM Carlsbad Resource Area office at 620 East Greene Street, Carlsbad, New Mexico 88220-6292.

B. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.

C. Testing must be done in a safe workman like manner. Hard line connections shall be required.

D. A variance to test the BOPE to a reduced pressure of 1300 psi using the rig pumps before drilling below the 13-3/8 inch surface casing string is approved.

BLM Lease #: NM-81953  
Company Reference: Yates Petroleum  
Well # & Name: Glow Worm ALX Fed. #12

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS  
CARLSBAD FIELD OFFICE

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

damages to Federal lands resulting there from the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar. The Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches,

out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

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

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at 400 foot intervals.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

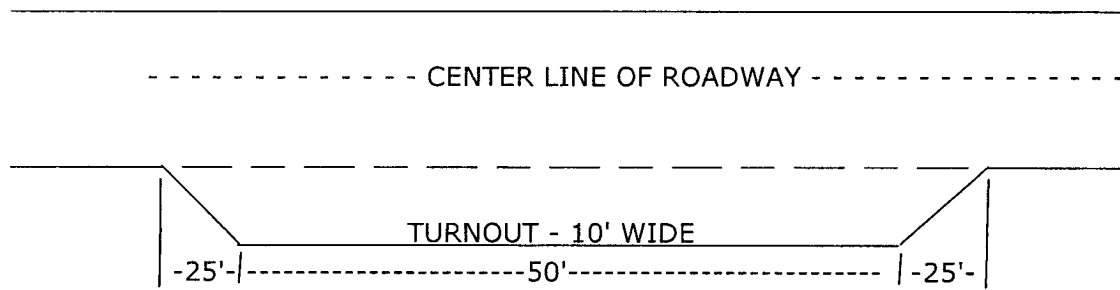
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

$$\text{Example: 4\% slope: spacing interval} = \frac{400}{4} + 100 = 200 \text{ feet}$$

#### 4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

## 5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

## 6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

7. MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder 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 will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS: