NMOCD ARTESIA

ATS-10-204

FA 10-414 FORM APPROVED

EXPIRES 2/28/10

OMB NO 1004-0137 Expires: July 31, 2010

Lease Serial No

Form 3160-3 (August 2007)

### **UNITED STATES** DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

| APPLICATION FOR PERMIT TO I  | 6. If Indian, A   | 6. If Indian, Allottee or Tribe Name    |                                 |  |
|--|---|---|---------------------------------|--|
|  |   | 7 1611                                  | N/A                             |  |
|  | TREENTER  | /. If Unit or C                         | A Agreement, Name and No        |  |
| 1a. Type of Work x DRILL   | 8. Lease Name   | N/A                                     |                                 |  |
| U. T (W.) V. O. W. Cos Well Cother   | Comple Zene Multiple Zen                                |   | or BPC Federal Com#1H           |  |
| 1b Type of Well X O1 Well Gas Well Other                                   | Single Zone Multiple Zon                                |   |                                 |  |
| 2 Name of Operator   | •   | 9. API Well N                           |                                 |  |
| Yates Petroleum Corporation  | on 025575   |   | 0-015 -3777                     |  |
| 3a Address   | 3b. Phone No. (include area code)                       | 10 Field and P                          | ool, or Exploratory             |  |
| 105 South Fourth Street, Artesia, NM 88210                                 | 505-748-1471  | Und                                     | esignated Bone Springs          |  |
| 4 Location of well (Report location clearly and In accordance              | with any State requirements.*)                          |   | M, or Blk. And Survey or Area   |  |
| At surface 13/01- Per 5 N 2/   |   |   | •                               |  |
| **************************************                                     | c.20-25S-25E, UL D, NWNW                                | S                                       | ection 20-T25S-R25E             |  |
| At proposed prod. zone   | OT C 20 250 250 TH A NUMBER                             |   | 200 20 1200                     |  |
| 14. Name of Operator   | EL, Sec. 20-25S-25E,UL A, NENE                          | 12 County or F                          | arish 13 State                  |  |
| 14. Name of Operator   | •   | 12 County of 1                          | arish 13 State                  |  |
| Yates Petroleum Corporati  |   | Ed                                      | <u> </u>                        |  |
| 15. Distance from proposed*  | 16' No of acres in lease                                | <ol><li>Spacing Unit dedicate</li></ol> | ted to this well                |  |
| location to nearest  |   |   |                                 |  |
| property or lease line, ft   | 4== 60  |   | 27272                           |  |
| (Also to nearest drlg. unit line, if any) 330'                             | 477.60  | O DIM/DIAD IN                           | N2N2                            |  |
| 18 Distance from proposed location*  | 19 Proposed Depth VD 5130'                              | 0 BLM/ BIA Bond No                      | o on file                       |  |
| to nearest well, drilling, completed, applied for, on this lease, ft  None | 101 Hole VD-6300' MD-9216 93                            | 46 NATIONWII                            | DE BOND #NMB000434              |  |
| 21 Elevations (Show whether DF, KDB, RT, GL, etc.)                         | 22 Aproximate date work will st                         | art* 23. Estima                         | ated duration                   |  |
| 3597   | .   25  | 25. 25,,,,,                             | ngo cananon                     |  |
|  | ASAP  | <u> </u>                                | 45 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                   |                                 |  |
|  |   |   |                                 |  |
| l Well plat certified by a registered surveyor                             | i ·   | erations unless covered                 | by existing bond on file(see    |  |
| 2. A Drilling Plan   | tem Lands, the 1tem 20 above) 5. Operator certification |   |                                 |  |
| 3 A Surface Use Plan ( if the location is on National Forest Syst          |   |   |                                 |  |
| SUPO must be filed with the appropriate Forest Service Offic               | BLM   | ne information and/ or                  | plans as may be required by the |  |
| 25 Signature / / / // 100  |   |   | 7.                              |  |
| 25 Signature (1) 4 M   | Name (Printed/ Typed)                                   | liften Man                              | Date 14 2010                    |  |
| Cayun 1 ' (ay  | 1   | lifton May                              | January 14,2010                 |  |
| Title Land Regulatory Agent  |   |   |                                 |  |
| Approved By (Signature)  | Name (Printed/ Typed)                                   |   | Date ADD 0.7 2010               |  |
| /s/ Don Peterson   | /a/ Don Peter   | 30 <b>n</b>                             | APR 0 7 2010                    |  |
| Title FIELD MANACED  | DE  |   |                                 |  |

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 co APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached

Title 18 U S C Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and wilfully 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)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

FIELD MANAGER

Approval Subject to General Requirements & Special Stipulations Attached

Form 3160-5 (February 2005)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No 1004-0137

NM-104662

#### Expires March 31, 2007 5. Lease Serial No

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an

| Do not use this   | 6 If Indian, Allo   | ottee or Tribe Name  |   |  |  |
|---|---|--|---|--|--|
|   | Use Form 3160-3 (APD)   |  |   | Not A  | Applicable   |
| SUBMITINTE  | IPLICATE - Other instr  | uctions on nage 2  |   | 7 If Unit or CA  | Agreement, Name and/o  |
|   | Not A   | Applicable   |   |  |  |
| 1. Type of Well   | Dot. ( )  |  |   | 8 Well Name at   | - 4 Nr   |
| 2. Name of Operator   | Other (re-entry)  |  |   | ]  |  |
| i ·   | 005575  |  |   | 9. API Well No.  | Federal Com. #1h   |
| Yates Petroleum Corporation  3a. Address  | n 025575  | 3b Phone No. (include  | a guar as dal   | 9. API Well No.  |  |
|   | ooio NIM 00010  | ,  | e area coae)  | 10. Field and Boo  | 1 on European Anna   |
| 105 South Fourth Street, Art  |   | (575) 748-1471   |   | 4  | ol, or Exploratory Area  |
| , ,   | •   | •  | _   | Undesigna<br>11 County or Par  | ted Bone Spring  |
|   | 0' FWL, Sec 20-T25S-F   | •  | 2   | County of Pai  | isn, state   |
| 000 FINE & 33   | 0' FEL, Sec 20-T25S-F   | R5/E, Bottom Hole  |   | Eddy Cour  | ity, New Mexico  |
| 12. CHECK THE APPR  | ROPRIATE BOX(ES) TO I   | NDICATE NATURE C   | F NOTICE, RI  | EPORT, OR OTH  | IER DATA   |
| TYPE OF SUBMISSION  |   | ТҮРЕ С   | OF ACTION   |  |  |
| <ul><li></li></ul>  | Acidize Alter Casing Casing Repair Change Plans Convert to Injection  | Deepen Fracture Treat New Construction Plug and Abandon Plug Back                            | Production Reclamatio Recomplete Temporaril Water Disp            | e<br>y Abandon   | Water Shut-Off Well Integrity Other Move surface location and road |
| 13 Describe Proposed or Completed Operati<br>the proposal is to deepen directionally or<br>Attach the Bond under which the work w<br>following completion of the involved oper<br>testing has been completed. Final Aband<br>determined that the site is ready for final in | recomplete horizontally, give subsurvill be performed or provide the Bon rations If the operation results in a comment Notices must be filed only a | rface locations and measured a<br>d No on file with BLM/BIA<br>multiple completion or recomp | nd true vertical dep<br>Required subseque<br>detion in a new inte | ths of all pertment mai<br>ent reports must be file<br>rval, a Form 3160-4 m | kers and zones.<br>d within 30 days<br>rust be filed once          |
| Yates Petroleum Corporation new footages are 1310' FNL is also attaching a new drilling. Thank you. <i>Engineer</i>   | & 660' FWL. Attacheding plan as well as surfa   | d are copies of a neace use plan New l   | ew C-102 and<br>horizontal dia                                    | d plat of the ro   | ad re-route. Yates   |
| RWR-Approved-A  | Vew 10 cation 3 is true and correct   | is STAKED  | 1. IAW  | ON-SITE  | e Results of   |

certify that the applicant holds legal or equitable title to those rights in the subject lease CARLSBAD FIELD OFFICE which would entitle the applicant to conduct operations thereon. Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United Salses fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Title

Date

THIS SPACE FOR FEDERAL OR STATE USE

Title

Office

FOR

Land Regulatory Agent

February 5, 2010

**FIELD MANAGER** 

APR 0 7 2010

(Instructions on reverse)

Name (Printed/Typed)

Signature

Approved by

Clifton May

/s/ Don Peterson

Conditions of approval, if any, are attached. Approval of this notice does not warrant or

DISTRICT I 1625 N. Prench Dr., Hobbs, NM 85240 DISTRICT II 1301 W. Grand Avenus, Artesia, NM 85210

### State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 15, 2009

Submit one copy to appropriate District Office

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

## OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

| 30-015              | 37779 Pool Code | Pool Name<br>Bone Spring  | /                  |
|---------------------|-----------------|---------------------------|--------------------|
| Property Code       |                 | erty Name C" FEDERAL COM  | Well Number<br>1 H |
| 0GRID No.<br>025575 | <del>-</del>    | ator Name<br>ROLEUM CORP. | Elevation<br>3597  |

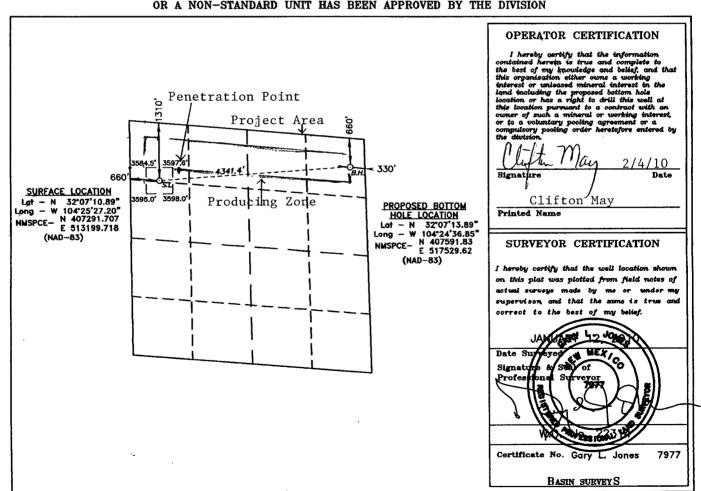
#### Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| Q             | 20      | 25 S     | 25 E  |         | 1310          | NORTH            | 660           | WEST           | EDDY   |

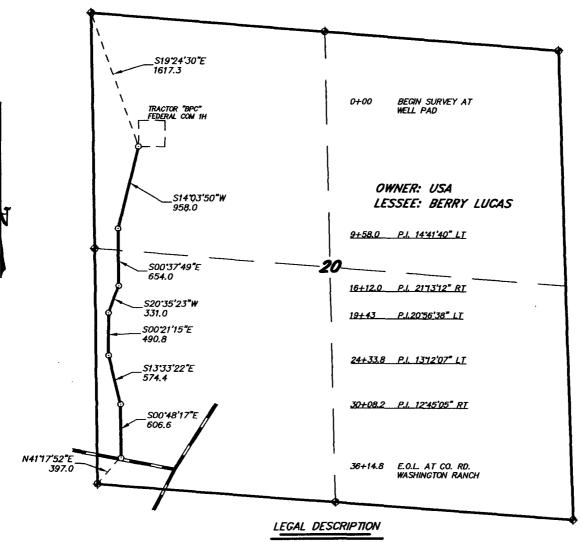
#### Bottom Hole Location If Different From Surface

| Γ | UL or lot No.  | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|--|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
|   | Α  | 20      | 25 S     | 25 E  |         | 660           | NORTH            | 330           | EAST           | EDDY   |
| ſ | Dedicated Acres Joint or Infill Consolidation Code Order No. |         |          |       |         |               |                  |               |                |        |
| ١ | 160  |         | ,        |       |         |               |                  |               |                |        |

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



SECTION 20, TOWNSHIP 25 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.



A STRIP OF LAND 30.0 FEET WIDE, LOCATED IN SECTION 20, TOWNSHIP 25 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

SECTION 20 = 3614.8 FEET = 219.08 RODS = 0.68 MILES = 2.49 ACRES

YATES PETROLEUM CORPORATION Tractor BPC Federal Com. #1H 1310' FNL and 660' FWL SHL 660' FNL and 330' FEL BHL Section 20, T25S-R25E Eddy County, New Mexico Exhibit B

1000

#### YATES PETROLEUM CORP.

REF: PROP LEASE ROAD TO THE TRACTOR "BPC" FEDERAL COM #1H

A LEASE ROAD CROSSING USA LAND IN SECTION 20, TOWNSHIP 25 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

W.O. Number: 22314 Drawn By: J. M. SMALL

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

RAS PLAT WAS PREPARED N SCTUAL SURVEY AND RECUREMENTS FOR LAND

No. 7977 No. 5074

STATE.

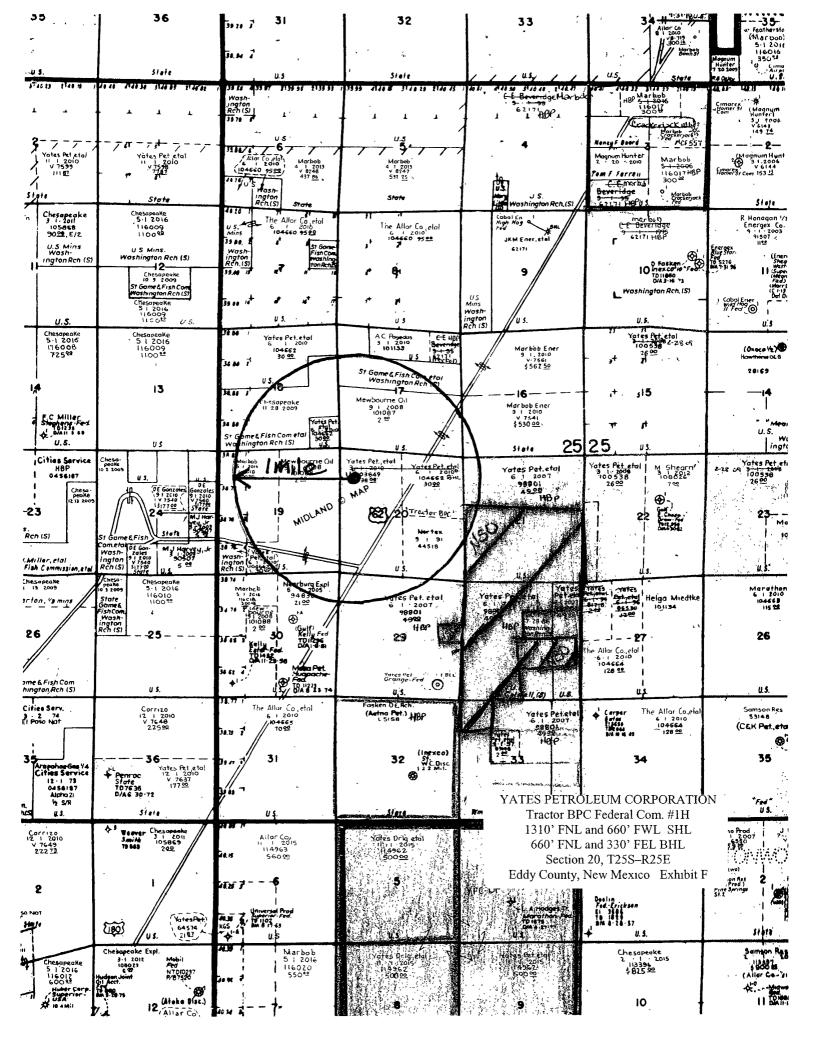
Disk: 22314 Date: 01-28-2010

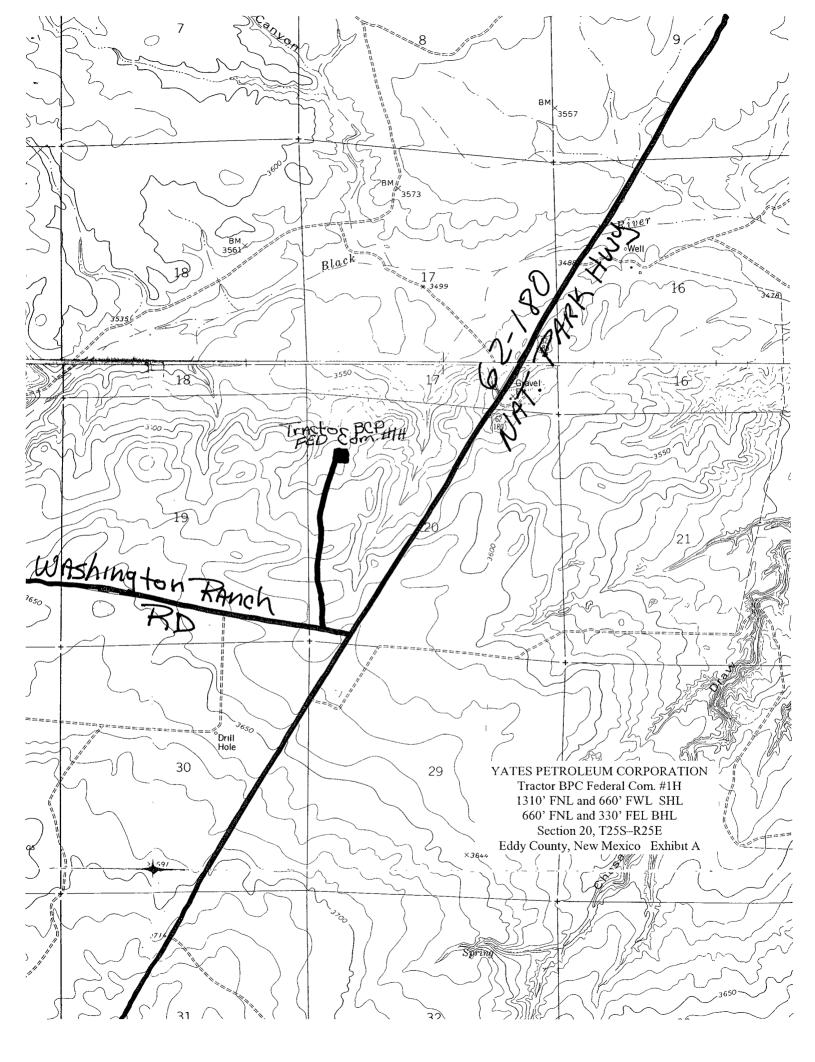
HEREBY CERTIFY THOSE FROM PULLS DETECTED OF EXCELLENAL

Survey Date: 01-27-2010

Sheet

Sheets





#### YATES PETROLEUM CORPORATION Tractor "BPC" Federal Com #1H

1310' FNL and 660' FWL Surface Hole Location 660' FNL & 330' FEL Bottom Hole Location Section 20-T25S-R25E

Eddy County, New Mexico

#### HORIZONTAL INFORMATION

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

| Castille             | 380'      | Bone Spring     | 5020'-Oil |
|----------------------|-----------|-----------------|-----------|
| Bell Canyon          | 1530'     | Avalon Shale    | 5130'-Oil |
| Cherry Canyon        | 2470'     | FBSG            | 5930'     |
| Brushy Canyon        | 3300-Oil  | TD (Pilot Hole) | 6300'     |
| Brushy Canyon Marker | 4700'-Oil | TMD (Lateral)   | 9246'     |

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

Water:

170'

Oil or Gas: Oil Zones: 3300', 4700', 5020' & 5130'.

- 3. Pressure Control Equipment: BOPE will be installed on the 11 3/4" and the 8 5/8" casing and rated for 3000# BOP System. Pressure tests will be conducted before drilling out from under all casing strings, which are set and cemented in place. Blowout Preventer controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventers 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.
- 4. 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.
- 5. THE PROPOSED CASING AND CEMENTING PROGRAM:
  - A. Casing Program: All new casing to be used

| <u>Hole Size</u> | Casing Size | Wt./Ft | <u>Grade</u> | Coupling | <u>Interval</u> | Length |
|------------------|-------------|--------|--------------|----------|-----------------|--------|
| 14 3/4"          | 11 3/4"     | 42#    | H-40         | ST&C     | 0-350'          | 350'   |
| 11"              | 8 5/8"      | 32#    | J-55         | ST&C     | 0-1650'         | 1650   |
| 7 7/8"           | 5.5"        | 17#    | HCP- 110     | ) LT&C   | 0'-9246'        | 9246'  |

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

#### B. CEMENTING PROGRAM: -

Surface Casing: Lead with 225 sacks Class C (Yld 1.34 Wt. 14.80). TOC surface.

Intermediate Casing: Lead with 300 sacks of Poz C (Yld 1.96 Wt 12.60). Tail in with 200 sacks Class C (YLD 1.34 WT 14.80 YLD). TOC surface

Production Casing: Stage One: Cement with 1150 sacks Pecos Valley Lite (Yld 1.41 Wt 13.00). TOC 4600'. DV Tool set approximately 4600.'

Stage Two: Lead with 350 sacks Lite crete (Yld 2.66 Wt 9.90). Tail in with 200 sacks Pecos Valley Lite (Yld 1.41 Wt 13.00). TOC 1150. Sur Face.

SeeCOA

Horizontal Information Continued Tractor "BPC" Federal Com. #1H Page Two

Pilot hole drilled vertically to 6300' TVD. Well will be plugged back with 180' plug on bottom then a 400'-500' kick off plug at approx. 4667'. Kicked off and directionally drilled at 12 degrees per 100' with a 7 7/8" hole to 9246 MD (5130' TVD) where 5 ½" casing will be set and cemented. Penetration point of producing zone will be encountered at 990' FNL & 1135' FWL, 20-25S-25E. Deepest TVD in the well is 6300' in the pilot hole. Deepest TVD in the lateral will be 5130'.

#### 6. MUD PROGRAM AND AUXILIARY EQUIPMENT:

| <u>Interval</u> | Type                       | Weight      | <u>Viscosity</u> | Fluid Loss |
|-----------------|----------------------------|-------------|------------------|------------|
| 0-350'          | Fresh Water Gel            | 8.60-9.20   | 29-36            | N/C        |
| 350'-1650'      | Brine Water                | 10.00-10.20 | 28-30            | N/C        |
| 1650'-6300'     | Cut Brine (Pilot Hole)     | 8.90-9.10   | 28-29            | N/C        |
| 4667-9246'      | Cut Brine(Lateral Section) | 9.00-9.30   | 28-34            | <15        |

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. Rig personnel will check mud hourly.

#### 7. EVALUATION PROGRAM:

Samples: Thirty foot samples to 3000'. Every 10' from 3000' to TD

Logging: Platform Hals; CMR; dipole sonic w/stress orientation - 5 ee COA

Coring: None anticipated DST's: None Anticipated Mudlogging: From surface casing

#### 8. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Maximum Anticipated BHP:

0'-350' 158 PSI 350'-1650' 875 PSI 1650'-6300' 3047 PSI

Abnormal Pressures Anticipated: None Lost Circulation Zones Anticipated: None. H2S Zones Anticipated: None Anticipated Maximum Bottom Hole Temperature: 150 F

#### 9. ANTICIPATED STARTING DATE:

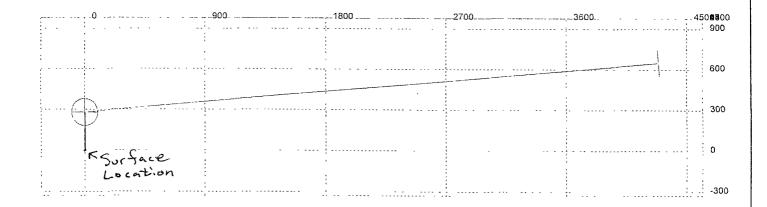
Plans are to drill this well as soon as possible after receiving approval. It should take approximately 60 days to drill the well with completion taking another 20 days.

| MD.             | Inclination | Azimuth | T.V.D.  | N+/S-  | E+/W-  | å≨D:E.S      | ToolFace | T.F. Ref [HS/GN] |                   |
|-----------------|-------------|---------|---------|--------|--------|--------------|----------|------------------|-------------------|
| 0               | 0           | 0       | 0       | 0      | 0      | 0            |          |                  |                   |
| 380             | 0           | 0       | 380     | 0      | 0      | 0            |          |                  | CASTILLE          |
| 1,530           | 0           | 0       | 1,530   | 0      | 0      | 0            |          |                  | BELL CANYON       |
| 1700            | # 10 P      | 0       | 1700    | - 0    | 0> 11  | 2.5          | 0        | GN               | KOP for s-curve   |
| 1725            | 0 62        | 0       | 1725    | 0 14   | 0      | 25           | 0        | HS               |                   |
| 1750            | 1 25        | 0       | 1750    | 0 55   | 0      | 25           | 0        | HS               |                   |
| 1775            | 1 88        | 0       | 1774 99 | 1 23   | 0      | 25           | 0        | HS               |                   |
| 1800            | 2.5         | 0       | 1799 97 | 2 18   | 0      | 25           | 0        | HS               |                   |
| 1825            | 3 12        | 0       | 1824 94 | 3 41   | 0      | 25           | 0        | HS               |                   |
| 1850            | 3 75        | 0       | 1849 89 | 4.91   | 0      | 25           | 0        | HS               |                   |
| 1875            | 4 38        | 0       | 1874 83 | 6 68   | 0      | 25           | 0        | HS               |                   |
| 1900            | 5           | 0       | 1899 75 | 8 72   | 0      | 2.5          | 0        | HS               |                   |
| 1925            | 5 63        | 0       | 1924.64 | 11 04  | 0      | 25           | 0        | H\$              |                   |
| 1949 76         | 6 24        | 0       | 1949 27 | 13 6   | 0      | 0            |          |                  |                   |
| 2473 59         | 6 24        | 0       | 2470    | 70 57  | 0      | 0            |          |                  | CHERRY CANYON     |
| 3308 55         | 6 24        | 0       | 3300    | 161 39 | 0      | 0            |          |                  | BRUSHY CANYON     |
| 4264 97         | 6 24        | 0       | 4250 74 | 265 41 | 0      | 0            |          |                  |                   |
| 4275            | 5 99        | 0       | 4260 71 | 266 47 | 0      | 25           | 180      | HS               |                   |
| 4300            | 5 37        | 0       | 4285 59 | 268 95 | 0      | 2.5          | 180      | HS               |                   |
| 4325            | 4 74        | 0       | 4310 49 | 271 15 | 0      | 25           | 180      | HS               |                   |
| 4350            | 4 12        | 0       | 4335 42 | 273 08 | 0      | 25           | 180      | HS               |                   |
| 4375            | 3 49        | Ö       | 4360 36 | 274 74 | 0      | 25           | 180      | HS               | -                 |
| 4400            | 2 87        | 0       | 4385 33 | 276 13 | 0      | 25           | 180      | HS               |                   |
| 4425            | 2 24        | Ö       | 4410 3  | 277 24 | 0      | 25           | 180      | HS               |                   |
| 4450            | 1 62        | 0       | 4435 29 | 278 09 | 0      | 25           | 180      | HS               |                   |
| 4475            | 0 99        | 0       | 4460 28 | 278 66 | 0      | 25           | 180      | HS               |                   |
| 4500            | 0 37        | 0       | 4485 28 | 278 95 | 0      | 25           | 180      | HS               |                   |
| 4514 72         | 0.05        | 0       | 4500    | 279    | 0      | 0            | 1        |                  |                   |
| 4667 72         | 0           | 0       | 4653    | 279    | 0      | 0            |          |                  |                   |
|                 | 0           | 0.7     | 4653    | 279    | . 0    | <b>第2月12</b> | 85       | GN S             | KOP for Lateral   |
| 4675            | 0.87        | 85 06   | 4660 28 | 279    | 0 06   | 12           | 360      | HS               |                   |
| 4700            | 3 87        | 85 06   | 4685 25 | 279 09 | 1 09   | 12           | 360      | HS               |                   |
| 4715            | 5 67        | 85 06   | 4700 2  | 279 2  | 2 33   | 12           | 360      | HS               | BRUSHY CANYON MKF |
| 4725            | 6.87        | 85 06   | 4710 14 | 279 3  | 3 42   | 12           | 360      | HS               |                   |
| 4750            | 9 87        | 85 06   | 4734 87 | 279 61 | 7 05   | 12           | 0        | HS               |                   |
| 4775            | 12 87       | 85 06   | 4759 38 | 280 03 | 11 96  | 12           | 0        | HS               |                   |
| 4800            | 15 87       | 85 06   | 4783 59 | 280 57 | 18 14  | 12           | 0        | HS               |                   |
| 4825            | 18 87       | 85 06   | 4807 45 | 281 21 | 25 58  | 12           | 360      | HS               |                   |
| 4850            | 21 87       | 85 06   | 4830 88 | 281 96 | 34 25  | 12           | 360      | HS               |                   |
| 4875            | 24 87       | 85 06   | 4853 83 | 282 82 | 44 13  | 12           | 0        | HS               |                   |
| 4900            | 27 87       | 85 06   | 4876 22 | 283 77 | 55 19  | 12           | 0        | HS               |                   |
| 4925            | 30 87       | 85 06   | 4898.01 | 284 83 | 67 4   | 12           | 0        | HS               |                   |
| 4950            | 33 87       | 85.06   | 4919 12 | 285 98 | 80 74  | 12           | 0        | HS               |                   |
| 4975            | 36 87       | 85 06   | 4939 5  | 287 23 | 95 16  | 12           | 360      | HS               |                   |
| 5000            | 39 87       | 85 06   | 4959 1  | 288 57 | 110 62 | 12           | 360      | HS               |                   |
| 5025            | 42 87       | 85 06   | 4977 86 | 289 99 | 127 08 | 12           | 0        | HS               |                   |
| 5050            | 45 87       | 85 06   | 4995 73 | 291 5  | 144 49 | 12           | 360      | HS               | 1                 |
| 5075            | 48 87       | 85 06   | 5012 65 | 293 08 | 162 82 | 12           | 0        | HS               | 1                 |
| 5087            | 50 31       | 85 06   | 5020 43 | 293 87 | 171 92 | 12           | 360      | HS               | BONE SPRINGS      |
| 5100            | 51 87       | 85 06   | 5028 6  | 294 74 | 182    | 12           | 0        | HS               |                   |
| 5125            | 54 87       | 85 06   | 5043 51 | 296 47 | 201 98 | 12           | 360      | HS               |                   |
| 5150            | 57 87       | 85 06   | 5057 35 | 298 26 | 222 72 | 12           | 0        | HS               |                   |
| 5175            | 60 87       | 85 06   | 5070 09 | 300 11 | 244 15 | 12           | 0        | HS               | 1                 |
| 5200            | 63 87       | 85 06   | 5081 68 | 302 02 | 266 22 | 12           | 0        | HS               |                   |
| 5225            | 66 87       | 85 06   | 5092 1  | 303 98 | 288 86 | 12           | 360      | HS               |                   |
| 5250            | 69 87       | 85 06   | 5101 31 | 305 98 | 312 01 | 12           | 0        | HS               |                   |
| 5275            | 72 87       | 85 06   | 5109 29 | 308 02 | 335 61 | 12           | 360      | HS               |                   |
| 5300            | 75 87       | 85 06   | 5116 03 | 310 1  | 359 59 | 12           | 0        | HS               |                   |
| 5325            | 78 87       | 85 06   | 5121 49 | 312 2  | 383 89 | 12           | 360      | HS               |                   |
| 5350            | 81 87       | 85 06   | 5125 67 | 314 32 | 408 44 | 12           | 0        | HS               |                   |
| 5375            | 84 87       | 85 06   | 5128.56 | 316 46 | 433 18 | 12           | 0        | HS               |                   |
|                 | 87 87       | 85 06   | 5130 14 | 318 61 | 458 04 | 12           | 360      | HS               |                   |
| 1 5400          |             |         |         |        |        |              |          |                  |                   |
| 5400<br>5417.78 | 90.01       |         | 5130.46 | 320.14 | 475.75 |              |          |                  | AVALON SHALE      |

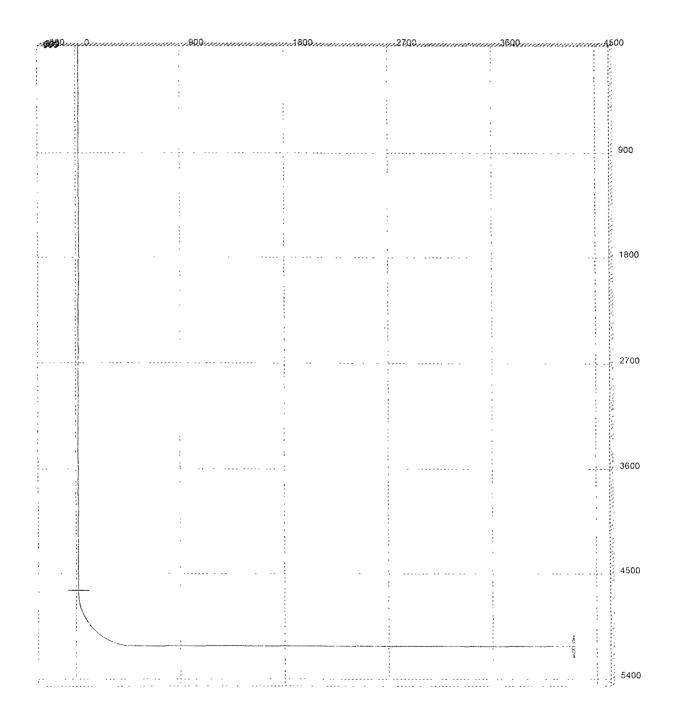
Pilot hole will be drilled directionally to 6,300 TVD. Well will then be plugged back with 180' plug on bottom and 400'-500' kick off plug. Well will then be kicked off at 4667' at 12 degrees per 100' with a 7 7/8" hole to 9246' MD (5,130' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be at 990' FNL and 1135' FWL, 20-25S-25E. Deepest TVD in the well is 6300' in the pilot hole. Deepest TVD in the lateral will be 5130'

#### 3D³ Directional Drilling Planner - 3D View

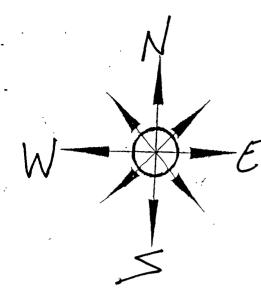
Company: Yates Petroleum Corporation Well: Tractor BPC Federal Com. #1H



File: G:\drilling toolbox wellplans\Horizontal\tractor1h(revised).wpp



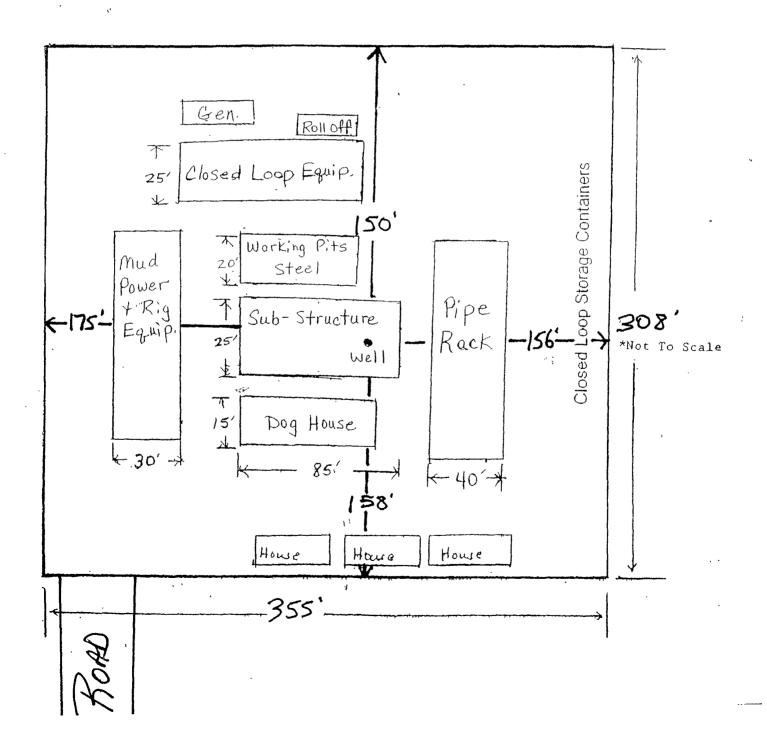
File: G:\drilling toolbox wellplans\Horizontal\tractor1h(revised).wpp



Yates Petroleum Corporation
Location Layout for Permian Basin

Closed Loop Design Plan

YATES PETROLEUM CORPORATION Tractor BPC Federal Com. #1H 1310' FNL and 660' FWL SHL 660' FNL and 330' FEL BHL Section 20, T25S-R25E Eddy County, New Mexico Exhibit C

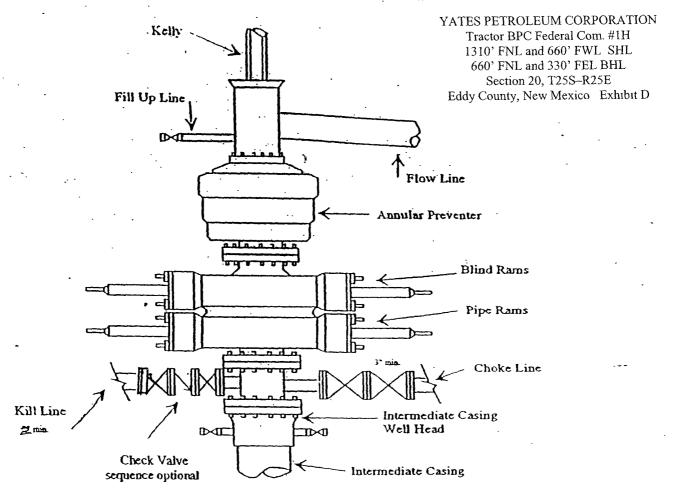




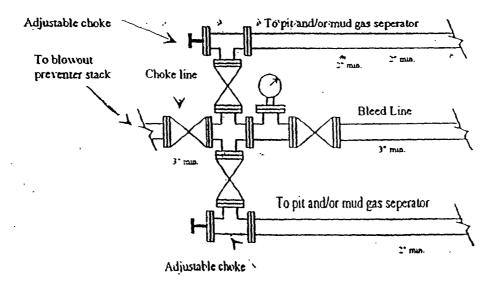
## Yates Petroleum Corporation

BOP-3

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

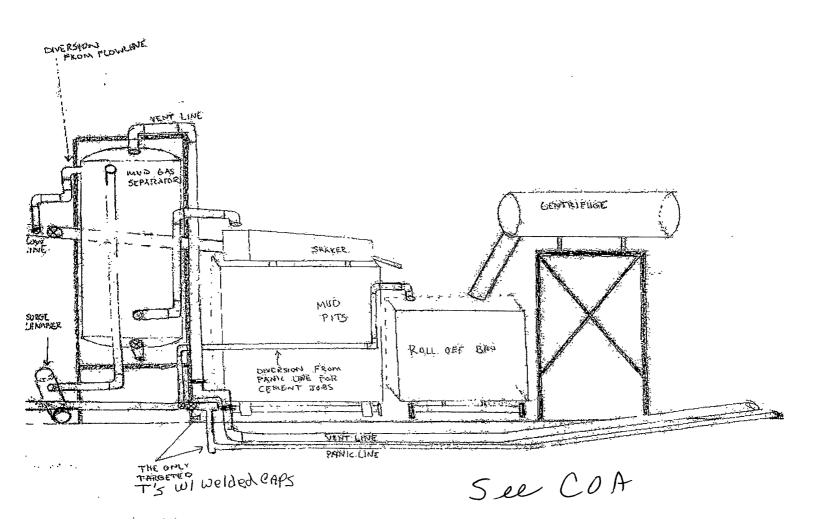


Typical 3,000 psi choke manifold assembly with at least these minimum features



# YATES PETROLEUM CORPORATION Piping from Choke Manifold to the Closed-Loop Drilling Mud System

YATES PETROLEUM CORPORATION
Tractor BPC Federal Com. #1H
1310' FNL and 660' FWL SHL
660' FNL and 330' FEL BHL
Section 20, T25S-R25E
Eddy County, New Mexico Exhibit E



## MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION

Tractor "BPC" Federal Com. #1H 1310' FNL & 660' FWL, Surface 660' FNL & 330' FEL, Bottom Hole Section 20-T25S-R25E 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 38 miles east of Carlsbad, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS: From Carlsbad, New Mexico take the National Parks Highway (62/180) to White City. Continue Southwest on 62/180 for approximately 5 miles to the Washington Ranch road. Turn right here on Washington Ranch Road and go west approximately 600'. The new road will start here going north for approx. 0.7 of a mile to the southwest corner of the proposed location.

#### 2. PLANNED ACCESS ROAD:

- A. The proposed new access will be approximately 0.7 of a mile in length from the point of origin to the southwest corner of the drilling pad.
- 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 both sides. Two to three traffic turnouts may be needed.
- 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 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 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 until an electric line can be built, if needed.

#### 5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with a brine 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:

The dirt contractor will be responsible for finding a source of material for construction of road and pad and will obtain any permits that may be required.

#### 7. METHODS OF HANDLING WASTE DISPOSAL:

- A. This well will be drilled with a closed loop system
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division the "Pit Rule" 19.15.17 NMAC.
- C. Drilling fluids will be removed after drilling and completions are completed.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- 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. 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 location of the drilling equipment, pulling unit orientation and access road approach.
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division the "Pit Rule" 19.15.17 NMAC.
- 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 have been leveled.
- C. If the proposed well is plugged and abandoned, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible

Tractor "BPC" Federal Com #1H Page Three

#### 11. SURFACE OWNERSHIP:

Federal Lands under the supervision of the Carlsbad BLM. .

#### 12. OTHER INFORMATION:

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

# CERTIFICATION YATES PETROLEUM CORPORATION Tractor BPC Federal Com #1H

I hereby certify that I or the company I represent, have inspected the drill site and access route proposed herein; that the company I represent is familiar with the conditions which currently exist; that full knowledge of state and federal laws applicable 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 the company I represent is 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          | 14th         | _day of            | January               | , 2010 |   |
|------------------------|--------------|--------------------|-----------------------|--------|---|
| Printed Name C         | lifton May   |                    |                       |        | _ |
| Signature              | liften       | Ma                 | <b>/</b>              |        |   |
| Position Title         | Land Re      | gulatory Ag        | ent                   |        |   |
| Address_105 So         | uth Fourth   | Street, Art        | esia, NM 88210        | )      |   |
| Telephone <u>575-7</u> | 748-4372     |                    |                       |        | _ |
| E-mail (optional       | ) cy@yate    | spetroleum.        | com                   |        |   |
| Field Representa       | ative (if no | t above sigr       | natory) <u>Tim Bu</u> | ssell  |   |
| Address (if diffe      | rent from    | above)             | Same                  |        |   |
| Telephone (if di       | fferent from | n above) <u>57</u> | 75-748-4221           |        |   |
| E-mail (optional       | .)           |                    |                       |        |   |

## PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:
LEASE NO.:
WELL NAME & NO.:
SURFACE HOLE FOOTAGE:
BOTTOM HOLE FOOTAGE
LOCATION:
COUNTY:

Vates Petroleum Corp
NM104642
1H-Tractor BPC Fed Com
1310' FNL & 660' FWL
660' FNL & 330' FEL
Section 20, T. 25 S., R 25 E., NMPM
Eddy 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                            |
| / Cave/Karst                                    |
| VRM   |
| Hydrology                                       |
| ☐ Construction                                  |
| Notification                                    |
| V-Door Direction                                |
| Topsoil   |
| Closed Loop System                              |
| Federal Mineral Material Pits                   |
| Well Pads                                       |
| Roads   |
| Road Section Diagram                            |
| <b>☑</b> Drilling                               |
| Critical cave/karst                             |
| Logging Requirements                            |
| <b>◯</b> Production (Post Drilling)             |
| Well Structures & Facilities                    |
| Pipelines – not requested                       |
| Electric Lines – not requested                  |
| 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 REQUIREMENTS

\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

#### Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

#### **Pad Berming:**

The entire pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off. A closed mud system using steel tanks for all cuttings and fluids is required. All fluids and cuttings will be hauled off site for disposal. No pits are allowed.

#### Tank Battery Liners and Berms:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

#### **Automatic Shut-off Systems:**

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

#### Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

#### Rotary Drilling with Fresh Water:

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

#### **Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

#### Fluorescent Dyes:

Nontoxic Fluorescent dyes will be added to the drilling fluid when the hole is spudded and will be circulated to the bottom of the karst layers. BLM must witness the dye being injected.

#### Florescene Dye (Acid Yellow 73):

Thirty-two (32) ounces dry powder Florescene (Acid Yellow 73) dye will be added to the drilling fluid before the well is spudded AND to the pre-flush fluids of the surface interval of casing.

These dyes will track the fluids if lost circulation occurs.

Arrangements will be made to have BLM witness the dye being injected prior to spudding the hole and before the pre-flush of the surface casing. Contact the BLM drilling on call phone at (575) 361-2822 to make arrangements.

#### **Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cavebearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

#### **Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

#### **Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

#### SPECIAL REQUIREMENTS (Continued)

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

A Cattleguard must be installed at the proposed fence-breeching along Washington Ranch Road. See instructions below for proper installation.

Low-profile tanks not greater than eight feet high shall be used to minimize visual impacts to the natural features of the landscape.

There are known populations of Malta Starthistle in the project area. 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

#### 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 (575) 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.

| В. | V-DOOR DIRECTION: |  |
|----|-------------------|--|
|    |                   |  |

#### C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

#### D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

#### E. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

#### F. 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.

#### G. 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 sixteen (16) 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

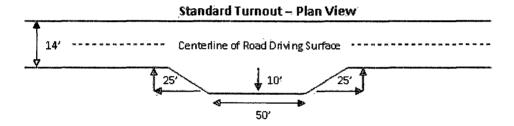
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

#### Ditching

Ditching shall be required on the uphill side 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:

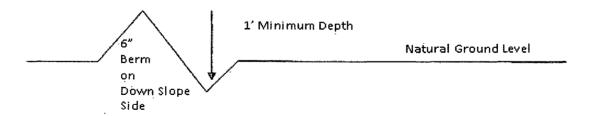


#### Drainage

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

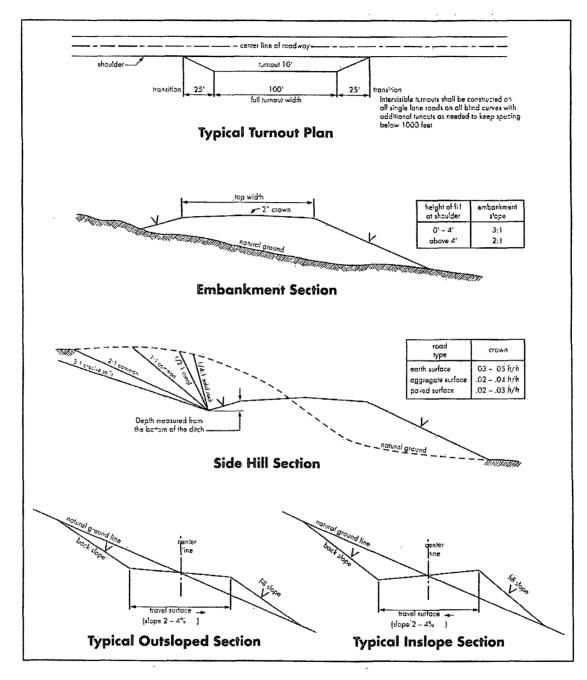
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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.

 $\label{eq:Figure 1-Cross Sections and Plans For Typical Road Sections }$ 



#### 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

#### **⊠** Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- 1. Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. 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 is located, this does not include the dog house or stairway area.
- 4. The record of the drilling rate along with the CAL/GR/N well log run from TD to surface will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### 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.

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 for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

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

Possible lost circulation in the Delaware Group.

CRITICAL CAVE/KARST – ALL THREE CASING STRINGS ARE TO BE CEMENTED TO SURFACE IN CRITICAL CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH THEREFORE, ONE INCH OPERATIONS WILL NOT BE PERMITTED. A DV TOOL MAY BE REQUIRED TO ENSURE ADEQUATE COVERAGE ON THE INTERMEDIATE AND/OR PRODUCTION CASING. OPERATOR TO CONTACT BLM PRIOR TO RUNNING CASING IF LOST CIRCULATION OCCURS ON INTERMEDIATE OR PRODUCTION HOLE.

- 1. The 11-3/4 inch surface casing shall be set at approximately 350 feet (a minimum of 25 feet into the Castile Group 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
  - 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.
- 2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:

Pilot hole plug is approved as is, but the bottom plug must be tagged and depth reported on the Subsequent Sundry detailing the casing activity.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

- 3. The minimum required fill of cement behind the 5-1/2 inch production 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, contact the appropriate BLM office.
- 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

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. Piping from choke manifold to flare to be as straight as possible.

- 1. 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.
- 2. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.
  - b. The tests shall be done by an independent service company using a test plug.
  - c. The results of the test shall be reported to the appropriate BLM office.

- d. 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.
- e. 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.

#### D. DRILL STEM TEST

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

RGH 02/09/2010

#### 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.

#### Tank Battery Liners and Berms:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### **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

#### **VRM Facility Requirement**

Low-profile tanks not greater than eight-feet-high shall be used.

- B. PIPELINES not requested in APD
- C. ELECTRIC LINES not requested in APD

#### IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

#### X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared; these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Seed Mixture 3, for Shallow 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:

| Species                                    | <u>lb/acre</u> |
|--|----------------|
| Plains Bristlegrass (Setaria magrostachya) | 1.0            |
| Green Spangletop (Leptochloa dubia)        | 2.0            |
| Side oats Grama (Bouteloua curtipendula)   | 5.0            |

<sup>\*</sup>Pounds of pure live seed:

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