

Form 3160-3,

(August 2008)

6

**UNITED STATES** 

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

DEC - 1 2008

OCD-ARTESIA APPROVED

OMB NO 1004-0137 Expires July 31, 2010

| Lease | Senal | No |
|-------|-------|----|
|       |       |    |

NM-57274

| APPLICATION FOR PERMIT TO DRILL OR REENTER | 6 If Indian, Allottee or Tribe Name |
|--|-------------------------------------|
| ATTEINATION FOR TERMIT TO DRILE OR RELITER | 1                                   |

123

| la   | Type of Work. X DRILL   | REENT     | TER                                 | 7.            | If Unit or CA Agreement,    | Name and No.              |  |
|------|---|-----------|-------------------------------------|---------------|-----------------------------|---------------------------|--|
|      | •   |           |                                     | 8             | Lease Name and Well No.     |                           |  |
| lb   | Type of Well X Oil Well Gas Well Other                            |           | Single Zone Multiple Zo             | one           | Haracz AMO Fee              | deral #8H                 |  |
| 2    | Name of Operator  |           |                                     | 9.            | API Well No                 |                           |  |
|      |   |           |                                     |               | <u> </u>                    | 21 000                    |  |
|      | Yates Petroleum Corporation                                       | n 0255    | 575                                 |               | 30.015.3                    | 367.18                    |  |
| 3a   | Address   | 3b. Pho   | one No (include area code)          | 10            | Field and Pool, or Explora  | ntory                     |  |
|      | 105 South Fourth Street, Artesia, NM 88210                        |           | 505-748-1471                        |               | Wildcat Bone                | Spring                    |  |
| 4.   | Location of well (Report location clear Carl Sugar Cons           | vith lins | oState remirements (*)              | 11            | Sec, T, R, M, or Blk. A     |                           |  |
|      | At surface Validad Culii  | HUHU      | u water basiii .                    | ٠,            |                             |                           |  |
|      | 330' FSL and  | 1980' F   | EL Surface Hole Location            | :             | S4: 22 T24                  | C D21E                    |  |
|      | At proposed prod zone   |           |                                     |               | Section 23, T24             | S-K31E                    |  |
|      | 330' FNL and 198  |           | Bottom Hole Location                |               |                             |                           |  |
| 14   | Distance in miles and direction from the nearest town or post of  | office*   |                                     | 12.           | County or Parish            | 13. State                 |  |
|      | Approximately 29 miles southeast of C                             | arlshad   | New Mexico                          |               | Eddy County                 | New Mexico                |  |
| 15.  | Distance from proposed*   | 1115040   | 16 No of acres in lease             | 17 Spacing    | Unit dedicated to this we   |                           |  |
|      | location to nearest   |           | To The of deles in least            | 17 Spacing    | 5 oint dedicated to tins we |                           |  |
|      | property or lease line, ft  |           |                                     |               |                             |                           |  |
|      | (Also to nearest drlg unit line, if any) 330'                     |           | 1743.52                             |               | W2/E/2 160 acres.           |                           |  |
| 18.  | Distance from proposed location*                                  |           | 19 Proposed Depth                   | 20. BLM/ I    | LM/ BIA Bond No on file     |                           |  |
|      | to nearest well, drilling, completed,                             |           |                                     |               |                             |                           |  |
|      | applied for, on this lease, ft6 of a mile                         |           | 8500' TVD 12683 TMD                 | N             | ATIONWIDE BOND #N           | IMB000434                 |  |
| 21   | Elevations (Show whether DF, KDB, RT, GL, etc )                   |           | 22 Aproximate date work will        | start*        | 23 Estimated duration       |                           |  |
|      |   |           | 1                                   |               |                             |                           |  |
|      | 3544' GL  |           | ASAP                                |               | 60 da                       | ys                        |  |
|      | <b>4</b>  |           | 24. Attachments                     |               |                             |                           |  |
| The  | following, completed in accordance with the requirements of       | Onshore   | Oil and Gas Order No. 1 shall I     | e attached t  | o this form:                |                           |  |
|      |   |           |                                     |               |                             |                           |  |
| 1    | Well plat certified by a registered surveyor                      |           | 4. Bond to cover the                | operations ui | nless covered by existing b | ond on file(see           |  |
| 2    | A Drilling Plan   |           | ıtem 20 above).                     |               |                             |                           |  |
| 3.   | A Surface Use Plan ( if the location is on National Forest Syst   |           | ds, the 5 Operator certificat       | ion.          |                             |                           |  |
|      | SUPO must be filed with the appropriate Foiest Service Office     | e).       | 1                                   | cific informa | ation and/ or plans as may  | be required by the        |  |
|      | $\sim$ $\sim$   |           | BLM                                 |               |                             |                           |  |
| 25.  | Signature   | Name      | (Printed/ Typed)                    |               | Date                        |                           |  |
|      | ( A Dra   |           |                                     | Cy Cowar      | 1                           | 10/27/2008                |  |
| Titl |   |           |                                     |               |                             |                           |  |
|      | Regulatory Agent  |           |                                     | _             |                             |                           |  |
| App  | oroved By (Signaling) James Stovall                               | Name      | (Printed/ Typed)                    |               | Date M                      | OV 2 5 2008               |  |
|      | 131 Gailles Cloran  |           | /s/ James Stov                      | /all          |                             | UV Z J Z000               |  |
| Titl | E EIEID MANAGES   | Office    | CADICDAD                            | <u> </u>      | OFFIOE                      |                           |  |
|      | · FIELD MANAGER   | -         | CARLSBAD                            | rielu         | UFFICE                      |                           |  |
| App  | olication approval does not warrant or certify that the applicant | holds le  | gal or equitable title to those rig | hts in the su | bject lease which would en  | title the applicant to co |  |

operations thereon

Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U S C Section 1001 and Title 43 U S C Section 1212, make it a crime for any person knowingly and wilfully to make to any department or agency of the United

States any false, fictitious or fraudulent staten

\* (Instructions on page 2) C-144 Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

NOTIFY OCD 24-hrs PRIOR to Spud NOTIFY OCD of ALL Lost Circulation and Water Flow Zones NOTIFY OCD per 19.15.3.118 of H2S Values WHILE Drilling.

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DISTRICT I
1625 N. French Dr., Hobbs, NM 85240
DISTRACT II
1301 W. Grand Avenue, Artesia, NM 88210

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

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

State Lease — 4 Copies

Fee Lease — 3 Copies

#### DISTRICT III 1000 Rio Brazos Rd., Artec, NM 87410

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

160

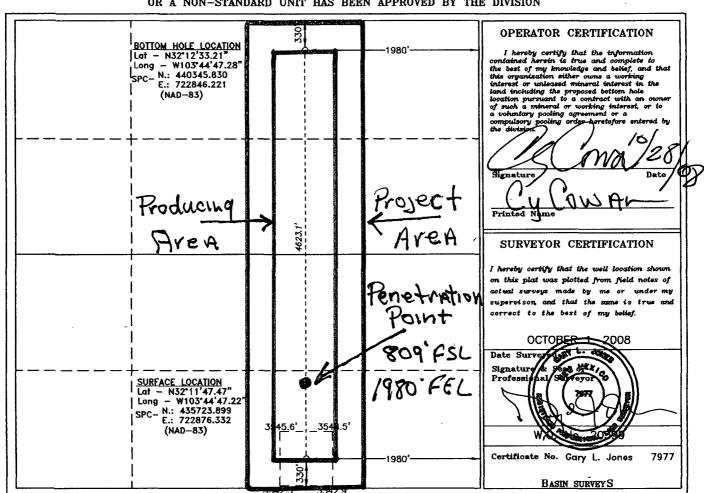
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

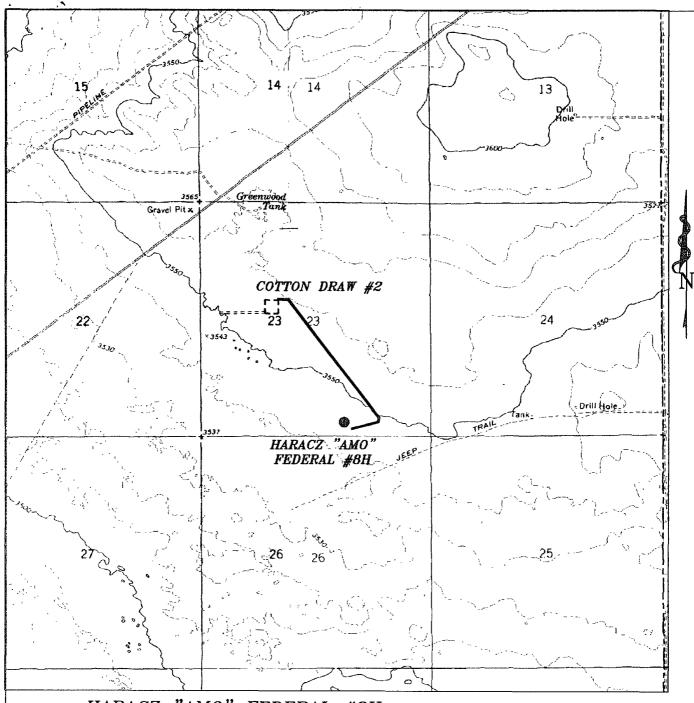
AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

|                |  |              |       |         | Pool Name     |                  |               |                |             |  |  |  |
|----------------|--|--------------|-------|---------|---------------|------------------|---------------|----------------|-------------|--|--|--|
| 30.            | 015.   | <i>36778</i> | 96    | 403     |               | Wild             | cat Bone Sp   | oring          |             |  |  |  |
| Property       | Code   |              |       |         | Property Nam  | le .             |               | Well No        | Well Number |  |  |  |
| 148.           | 35   |              |       | HARA    | ACZ "AMO" F   | FEDERAL          |               | 8H             |             |  |  |  |
| OGRID N        | 0.   |              |       |         | Operator Nam  | /e               |               | Kleva          |             |  |  |  |
| 02557          | 025575 YATES PETROLEUM CORP.                                       |              |       |         |               |                  | 3544'         |                |             |  |  |  |
|                | Surface Location   |              |       |         |               |                  |               |                |             |  |  |  |
| UL or lot No.  | Section  | Township     | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County      |  |  |  |
| 0              | 23   | 24 S         | 31 E  |         | 330           | SOUTH            | 1980          | EAST           | 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      |  |  |  |
| В              | 23   | 24 S         | 31 E  |         | 330           | NORTH            | 1980          | EAST           | EDDY        |  |  |  |
| Dedicated Acre | Dedicated Acres   Joint or Infill   Consolidation Code   Order No. |              |       |         |               |                  |               |                |             |  |  |  |

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





HARACZ "AMO" FEDERAL #8H
Located at 330' FSL AND 1980' FEL
Section 23, Township 24 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (575) 393-7316 - Office (575) 392-2206 - Fax basinsurveys.com

| WO. N                 | umber:   | 20399   |
|-----------------------|--|---|
| Survey                | Date:  | 10-01-2008  |
| STREET, CONTRACTOR OF | and Communication of the   |   |
| Scale:                | 1" = 20  | 00'   |
| Entertuse market      | THE PROPERTY OF THE PARTY OF TH | Control Control State Control |
| Date:                 | 10-02-   | 2008  |

YATES PETROLEUM CORP.

#### YATES PETROLËUM CORPORATION Haracz AMO Federal #8H 330' FSL and 1980' FEL, Surface Hole 330' FNL & 1980' FEL, Bottom Hole Section 23-T24S-R31F

Section 23-T24S-R31E Eddy County, New Mexico

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

| Rustler       | 650'      | Brushy Canyon        | 6570'-Oil |
|---------------|-----------|----------------------|-----------|
| Top of Salt   | 1000'     | Brushy Canyon Marker | 8100'-Oil |
| Base of Salt  | 4350'     | Brushy Sand Target   | 8270'-Oil |
| Bell Canyon   | 4550'     | Bone Spring          | 8370'-Oil |
| Cherry Canyon | 5300'-Oil | TD                   | 8500'     |
| ,             |           | TMD                  | 12683'    |

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

Water: 160 Oil or Gas: See above

- 3. Pressure Control Equipment: BOPE will be installed on the 9 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.
- 5.7 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  |
|---|------------------|-------------|--------|--------------|---------------|-----------------|---------|
| 7 | 17 1/2"          | 13 3/8"     | 48#    | H-40         | ST&C          | 0-,600'         | 600     |
| • | 12 1/4"          | 9 5/8"      | 40#    | J-55         | ST&C          | 0-100'          | 100'    |
|   | 12 1/4"          | 9 5/8"      | 36#    | J-55         | ST&C          | 100-3300'       | 3200'   |
|   | 12 1/4"          | 9 5/8"      | 40#    | J-55         | ST&C          | 3300-4300'      | 1000'   |
|   | 12 1/4"          | 9 5/8"      | 40#    | L-80         | SP&C L        | TC 4300-4400'   | 100'    |
|   | 8 3/4"           | 5.5"        | 17#    | HCP-110      | LT&C \uparrow | 0'-12683'       | 12683'  |
|   |                  |             |        |              | 4             | soroperator     | 11-9408 |

Pilot hole will be drilled vertically to 8500'. Well will then be plugged back and kicked off at approx. 7790' and directionally drilled at 12 degrees per 100' with a 8 3/4" hole to 12683' TMD (8250' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 809' FSL & 1980' FEL, Section 3, T23S-R31E. Deepest TVD in the well will be 8500' in the pilot hole. Deepest TVD in the Lateral will be 8267.46'. It is requested that a variance be granted to test the BOP on the surface casing to 1000 psi using rig pumps. A 3000 psi BOPE will be nippled up on the 9 5/8" casing and tested to 3000 psi,

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

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#### B. CEMENTING PROGRAM: —

Surface Casing: 285 sacks 'C' Lite (WT 12.5 YLD 1.96). Tail in with 200 sacks 'C' 

(WT 14.8 YLD 1.34). TOC Surface

Intermediate Casing: 1200 sacks of 'C' Lite (WT 12.6 YLD 2.0) Tail in with 250

sacks 'C' (WT 14.8 YLD 1.34). TOC Surface.

Production Casing: Stage One: 2300 sacks PecoVILt (WT 13.0 YLD 1.41). Top of Cement 6300'.

> Stage Two: DV tool will be placed at 6300'. Lead with 300 sacks Lite Crete (WT 9.90 YLD 2.78). Tail in with 100 sacks PecosVILt (WT 13.0 YLD 1.41). Top of Cement 3900'.

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

|    | <u>Interval</u>        | <u>Type</u>       | <u>Weight</u> | <u>Viscosity</u> | Fluid Loss |
|----|------------------------|-------------------|---------------|------------------|------------|
| Q  | /0-600°<br>-600°-4400° | Fresh Water       | 8.6-9.2       | 32-34            | N/C        |
| 30 | 600'-4400'             | Brine Water       | 10.0-10.2     | 28-28            | N/C        |
| Ó  | 4400'-8500'            | Cut Brine         | 8.5-8.8       | 28-29            | N/C        |
|    | 7790'-12663'           | Cut Brine         | 8.5-8.8       | 28-29            | N/C        |
|    |                        | (Lateral Section) |               |                  |            |

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: 30' samples to 4500'. 10' samples 4500-TD

Logging: Platform Hals, CMR Coring: None anticipated DST's: None Anticipated

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

Maximum Anticipated BHP:

0'-600' 290 PSI 600'-4400' 2335 PSI 4400'-8500' 3890 PSI

Abnormal Pressures Anticipated: None Lost Circulation Zones Anticipated: None.

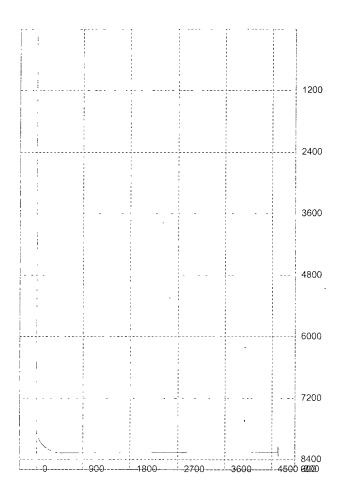
H2S Zones Anticipated: H2S water flow possible below 2800'

Maximum Bottom Hole Temperature: 150 F

#### 9. ANTICIPATED STARTING DATE:

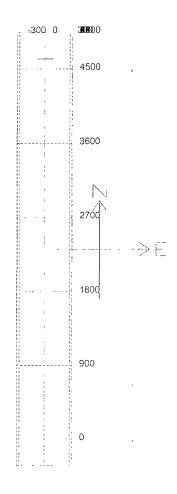
Plans are to drill this well as soon as possible after receiving approval. .It should take approximately 45 days to drill the well with completion taking another 20 days.

Company: Yates Petroleum Corporation Well: Haracz AMO Federal #8H



File: C:\Program Files\Drilling Toolbox 2001\Templates\Visual Wellbore\Horizontal\haracz8h.wpp

Company: Yates Petroleum Corporation Well: Haracz AMO Federal #8H



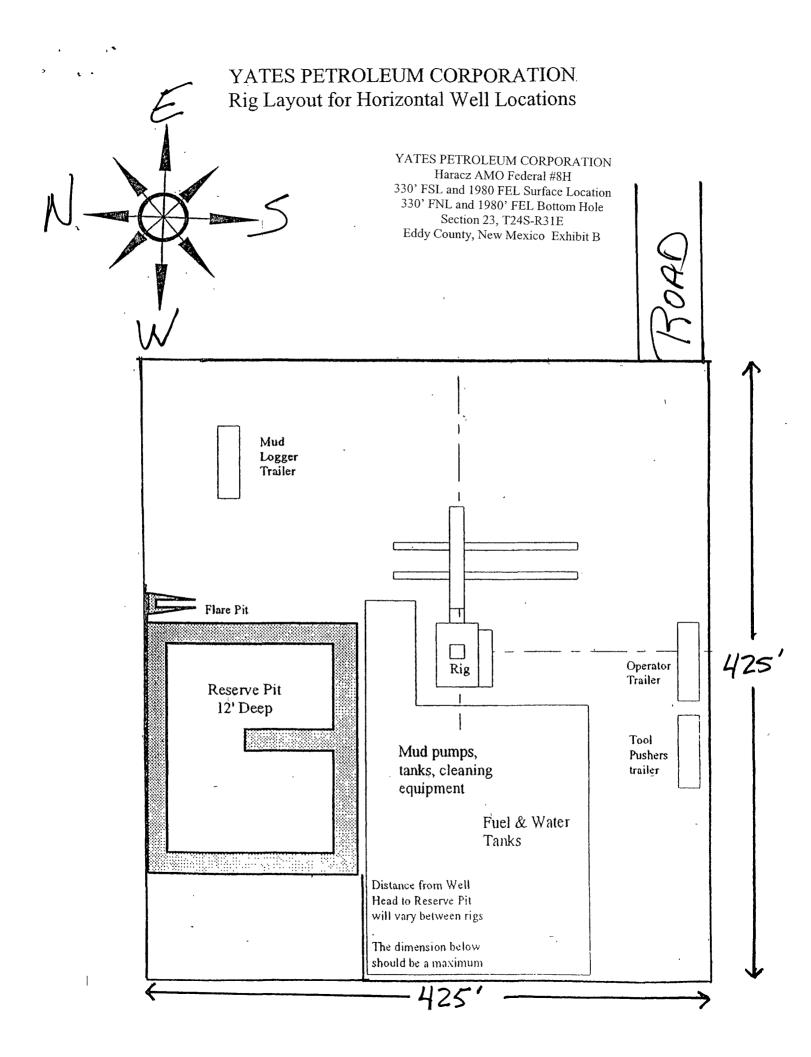
File: C:\Program Files\Drilling Toolbox 2001\Templates\Visual Wellbore\Horızontal\haracz8h.wpp

| , , M.D. | Inclination | . Azimuth 🤄 | ್ಪ <b>T.V.D</b> . | N+/S-  |   | ر. D.L.S., برا | ToolFace | T.F. Ref [HS/GN] | The profit of the best of |
|----------|-------------|-------------|-------------------|--------|---|----------------|----------|------------------|---------------------------|
| 0        | 0           | 0           | 0                 | 0      | 0 | 0              |          |                  |                           |
| 650      | 0           | 0           | 650               | 0      | 0 | 0              |          |                  | RUSTLER                   |
| 1,000    | 0           | 0           | 1,000             | 0      | 0 | 0              |          |                  | TOP OF SALT               |
| 4,350    | 0           | 0           | 4,350             | 0      | 0 | 0              |          |                  | BASE OF SALT              |
| 4,550    | 0           | 0           | 4,550             | 0      | 0 | 0              |          |                  | BELL CANYON               |
| 5,300    | 0           | 0           | 5,300             | 0      | 0 | 0              |          |                  | CHERRY CANYON             |
| 6,570    | 0           | 0           | 6,570             | 0      | 0 | 0              |          |                  | BRUSHY CANYON             |
| 7790     | 0           | 0           | 7790              | 0      | 0 | 12             | 0        | GN               | КОР                       |
| 7800     | 1.2         | Ö           | 7800              | 0.1    | 0 | 12             | 0        | HS               |                           |
| 7825     | 4.2         | 0           | 7824.97           | 1.28   | 0 | 12             | 0        | HS               |                           |
| 7850     | 7.2         | 0           | 7849.84           | 3.76   | 0 | 12             | 0        | HS               |                           |
| 7875     | 10.2        | 0           | 7874.55           | 7.55   | 0 | 12             | 0        | HS               |                           |
| 7900     | 13.2        | 0           | 7899.03           | 12 61  | 0 | 12             | 0        | HS               |                           |
| 7925     | 16.2        | 0           | 7923.21           | 18.96  | 0 | 12             | 0        | HS               |                           |
| 7950     | 19.2        | 0           | 7947.02           | 26.56  | 0 | 12             | 0        | HS               |                           |
| 7975     | 22.2        | 0           | 7970 41           | 35.39  | 0 | 12             | 0        | HS               |                           |
| 8000     | 25.2        | 0           | 7993.29           | 45.44  | 0 | 12             | 0        | HS               |                           |
| 8025     | 28.2        | 0           | 8015.63           | 56.67  | 0 | 12             | 0        | HS               |                           |
| 8050     | 31.2        | 0           | 8037.34           | 69.06  | 0 | 12             | 0        | HS               |                           |
| 8075     | 34.2        | 0           | 8058.38           | 82.56  | 0 | 12             | 0        | HS               |                           |
| 8100     | 37.2        | 0           | 8078.68           | 97.15  | 0 | 12             | 0        | HS               |                           |
| 8125     | 40.2        | 0           | 8098.18           | 112.78 | 0 | 12             | 0        | HS               |                           |
| 8127.5   | 40.5        | 0           | 8100.09           | 114.4  | 0 | 12             | 0        | HS               | BRUSHY CANYON MARKER      |
| 8150     | 43.2        | 0           | 8116.85           | 129 41 | 0 | 12             | 0        | HS               |                           |
| 8175     | 46.2        | 0           | 8134.62           | 146.99 | 0 | 12             | 0        | HS               |                           |
| 8200     | 49.2        | 0           | 8151.44           | 165.48 | 0 | 12             | 0        | HS               |                           |
| 8225     | 52.2        | 0           | 8167.27           | 184.82 | 0 | 12             | 0        | HS               |                           |
| 8250     | 55.2        | 0           | 8182.07           | 204.97 | 0 | 12             | 0        | HS               |                           |
| 8275     | 58.2        | 0           | 8195.79           | 225 86 | 0 | 12             | 0        | HS               |                           |
| 8300     | 61.2        | 0           | 8208.41           | 247.44 | 0 | 12             | ,0       | HS               |                           |
| 8325     | 64.2        | 0           | 8219 87           | 269.66 | 0 | 12             | 0        | HS               |                           |
| 8350     | 67.2        | 0           | 8230 16           | 292.44 | 0 | 12             | 0        | HS               |                           |
| 8375     | 70.2        | 0           | 8239 24           | 315.73 | 0 | 12             | 0        | HS               |                           |
| 8400     | 73.2        | 0           | 8247.09           | 339.46 | 0 | 12             | 0        | HS               |                           |
| 8425     | 76.2        | 0           | 8253.68           | 363.57 | 0 | 12             | 0        | HS               |                           |
| 8450     | 79.2        | 0           | 8259.01           | 388    | 0 | 12             | 0        | HS               |                           |
| 8475     | 82.2        | 0           | 8263 05           | 412.66 | 0 | 12             | 0        | HS               |                           |
| 8500     | 85.2        | 0           | 8265 79           | 437.51 | 0 | 12             | 0        | HS               |                           |
| 8525     | 88.2        | 0           | 8267.23           | 462.47 | 0 | 12             | 0        | HS               |                           |
| 8542.01  | 90 24       | 0           | 8267.46           | 479 48 | 0 | 0              |          |                  | BRUSHY SAND               |
| 12682.57 | 90.24       | 0           | 8250              | 4620   | 0 | 0              |          |                  | LATERAL TD                |

Pilot hole drilled vertically to 8500' Well will then be plugged back then kicked off at approx. 7790' and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 12,683' MD (8,250' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 809' FSL and 1980' FEL, 23-24S-31E Deepest TVD in the well is 8500' in the pilot hole. Deepest tvd in the lateral is 8267.46'.

| M.D.     | Inclination | Azimuth | , .\* <b>T.V.D.</b> } ⇒ | N+/S-  | E+/W- | D.L.S. | ToolFace | T.F. Ref [HS/GN] | Property of          |
|----------|-------------|---------|-------------------------|--------|-------|--------|----------|------------------|----------------------|
| 0        | 0           | 0       | 0                       | 0      | 0     | 0      |          |                  |                      |
| 650      | 0           | 0       | 650                     | 0      | 0     | 0      |          |                  | RUSTLER              |
| 1,000    | 0           | 0       | 1,000                   | 0      | 0     | 0      |          |                  | TOP OF SALT          |
| 4,350    | 0           | 0       | 4,350                   | 0      | 0     | 0      |          |                  | BASE OF SALT         |
| 4,550    | 0           | 0       | 4,550                   | 0      | 0     | 0      |          |                  | BELL CANYON          |
| 5,300    | 0           | 0       | 5,300                   | 0      | 0     | 0      |          |                  | CHERRY CANYON        |
| 6,570    | 0           | 0       | 6,570                   | 0      | 0     | 0      |          |                  | BRUSHY CANYON        |
| 7790     | 0           | 0       | 7790                    | 0      | 0     | 12     | 0        | GN               | KOP                  |
| 7800     | 1.2         | 0       | 7800                    | 0.1    | 0     | 12     | 0        | HS               |                      |
| 7825     | 4.2         | 0       | 7824.97                 | 1.28   | 0     | 12     | 0        | HS               |                      |
| 7850     | 7.2         | 0       | 7849.84                 | 3.76   | 0     | 12     | 0        | HS               |                      |
| 7875     | 10.2        | 0       | 7874.55                 | 7.55   | 0     | 12     | 0        | HS               |                      |
| 7900     | 13.2        | 0       | 7899.03                 | 12.61  | 0     | 12     | 0        | HS               |                      |
| 7925     | 16.2        | 0       | 7923.21                 | 18.96  | 0     | 12     | 0        | HS               |                      |
| 7950     | 19.2        | 0       | 7947.02                 | 26.56  | 0     | 12     | 0        | HS               |                      |
| 7975     | 22.2        | 0       | 7970.41                 | 35.39  | 0     | 12     | 0        | HS               |                      |
| 8000     | 25.2        | 0       | 7993.29                 | 45 44  | 0     | 12     | 0        | HS               |                      |
| 8025     | 28.2        | 0       | 8015.63                 | 56.67  | 0     | 12     | 0        | HS               |                      |
| 8050     | 31.2        | 0       | 8037.34                 | 69.06  | 0     | 12     | 0        | HS               |                      |
| 8075     | 34.2        | 0       | 8058.38                 | 82.56  | 0     | 12     | 0        | HS               |                      |
| 8100     | 37.2        | 0       | 8078.68                 | 97 15  | 0     | 12     | 0        | HS               |                      |
| 8125     | 40.2        | 0       | 8098.18                 | 112.78 | 0     | 12     | 0        | HS               |                      |
| 8127.5   | 40.5        | 0       | 8100.09                 | 114.4  | 0     | 12     | 0        | HS               | BRUSHY CANYON MARKER |
| 8150     | 43.2        | 0       | 8116.85                 | 129.41 | 0     | 12     | 0        | HS               |                      |
| 8175     | 46.2        | 0       | 8134.62                 | 146.99 | 0     | 12     | 0        | HS               | Ĭ                    |
| 8200     | 49.2        | 0       | 8151.44                 | 165.48 | 0     | 12     | 0        | HS               |                      |
| 8225     | 52.2        | 0       | 8167.27                 | 184.82 | 0     | 12     | 0        | HS               |                      |
| 8250     | 55.2        | 0       | 8182.07                 | 204.97 | 0     | 12     | 0        | HS               |                      |
| 8275     | 58.2        | 0       | 8195.79                 | 225.86 | 0     | - 12   | 0        | HS               |                      |
| 8300     | 61.2        | 0       | 8208.41                 | 247.44 | 0     | 12     | 0        | HS               |                      |
| 8325     | 64.2        | 0       | 8219.87                 | 269 66 | 0     | 12     | 0        | HS               |                      |
| 8350     | 67.2        | 0       | 8230.16                 | 292.44 | 0     | 12     | 0        | HS               |                      |
| 8375     | 70.2        | 0       | 8239.24                 | 315.73 | 0     | 12     | 0        | HS               |                      |
| 8400     | 73.2        | 0       | 8247.09                 | 339.46 | 0     | 12     | 0        | HS               |                      |
| 8425     | 76.2        | 0       | 8253.68                 | 363.57 | 0     | 12     | 0        | HS               |                      |
| 8450     | 79.2        | 0       | 8259.01                 | 388    | 0     | 12     | Ö        | HS               |                      |
| 8475     | 82.2        | 0       | 8263.05                 | 412 66 | 0     | 12     | 0        | HS               |                      |
| 8500     | 85.2        | 0       | 8265.79                 | 437.51 | 0     | 12     | 0        | HS               |                      |
| 8525     | 88.2        | 0       | 8267.23                 | 462 47 | 0     | 12     | 0        | HS               |                      |
| 8542.01  | 90.24       | 0       | 8267 46                 | 479.48 | 0     | 0      |          |                  | BRUSHY SAND          |
| 12682 57 | 90.24       | 0       | 8250                    | 4620   | 0     | 0      |          |                  | LATERAL TD           |

Pilot hole drilled vertically to 8500'. Well will then be plugged back then kicked off at approx. 7790' and directionally drilled at 12 degrees per 100' with an 8 3/4" hole to 12,683' MD (8,250' TVD) where 5 1/2" casing will be set and cemented. Penetration point of producing zone will be encountered at 809' FSL and 1980' FEL, 23-24S-31E Deepest TVD in the well is 8500' in the pilot hole Deepest tvd in the lateral is 8267.46'.



# Yates Petroleum Corporation Design Requirements For Temporary Reserve Pit

Sign posted on site / location or on the fence of reserve pit identifying the operator, listing their phone #, location of site by  $\frac{1}{4}$  /  $\frac{1}{4}$  or unit letter, and S- T- R.

Pit must be fenced to prevent unauthorized access. Fence must remain in good repair. The fence to be barbed wire, space at 1 foot intervals from 1' to 4' off ground. Pit will be fenced on 3 sides during drilling; the 4<sup>th</sup> side will be fenced upon removal of drilling rig.

Slope of the pit walls is no greater than two horizontal feet to one vertical foot.

Welded liner seams must run up & down the banks of the pit, not horizontally across them.

Field seams must be welded.

Edges of the liner must be anchored in trenches at least 18 inches deep. Edge of liner will protrude from the outside edge of the trench.

Pit shall be designed to prevent to run on of surface water.

# Yates Petroleum Corporation Drilling Operations Requirements for Temporary Reserve Pit

While the drilling rig is onsite, Operator's representative will inspect the temporary pit daily to ensure that the liner is intact, and that no releases are occurring.

Thereafter, the operator shall inspect at least once weekly as long as liquids remain in the temporary pit.

Operator will maintain a log of such inspections and make the log available to the appropriate NMOCD District office upon request.

A copy of the inspection log shall be filed with the NMOCD when operator closes the pit.

Operator must notify NMOCD if liner is damaged, and must repair or replace the damaged liner. Operator has 48 hours to notify NMOCD and make repairs.

NO HOLES in pit liners – not even in the part of the liner that is not in the reserve pit.

All drilling fluids to be removed from temporary pit within 30 days of rig release date

Hydrocarbon based drilling fluids will be stored in steel pits.

Liner –will be 20mil.,string reinforced with welded seams.

Fluids to be added to pit through a header, diverter, or other hardware that prevents damage to liner by erosion, fluid jets, or impacts from installations and removal of hoses or pipes.

Operator shall have onsite an oil absorbent boom or other device to contain and remove oil from a pits surface.

Operator must maintain a freeboard of at least two feet for a temporary pit.

Pit will be bermed to prevent run on of water into the pit.

# Safety:

With the use of a temporary pit operator is better able to conduct flammable and dangerous fluids further away from rig personnel and well bore.

### **Closure Procedure For Temporary Drilling Pits**

- 1. De-water pit within 30 days of rig release.
- 2. Weekly inspection of fluid level in drilling pit after rig release date until fluids are removed. Weekly levels will be recorded in a log to be submitted to the appropriate OCD district office at time of pit closure.
- 3. All removed pit fluids will be disposed of in an OCD approved manner at one of the listed OCD approved disposal facilities.

Disposal Facility: Gandy Marley NM-01-0019
Lea Land Farm WM-1-035
CRI R-9166

- 4. If fluids are reclaimed the appropriate OCD district office will be contacted beforehand for approval to do so.
- 5. Within 6 months of the rig release date and after the removal of all free liquids from the temporary drilling pit, the surface owner will be notified by certified mail, return receipt requested that the operator will close the pit. OCD division office will be notified verbally that waste excavation and removal will begin.
- 6. All impacted contents of the temporary drilling pit will be stabilized by mixing of dry non-waste containing earthen material so that such material will pass a paint filter test.
- 7. All stabilized pit contents, including the synthetic pit liner will be loaded into trucks and transferred to the division-approved facility listed below for proper disposal.

Disposal Facility: Gandy Marley NM-01-0019
Lea Land Farm WM-1-035
CRI R-9166

8. Once all visually impacted materials have been removed from the temporary drilling pit, testing and analyzing of the soils beneath the pit will be conducted in accordance with 19.15.17.13, B., 1(b) (i) or (ii) whichever is appropriate to determine if a release has occurred during utilization of the pit.

Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, 724S-R31E

Section 23, T24S-R31E Eddy County, New Mexico Exhibit "F"

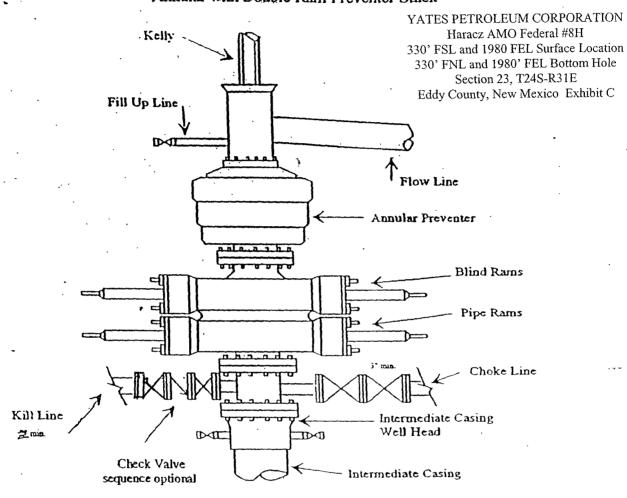
- 9. When analysis indicates that the soils within the pit area are within the recommended actions levels backfilling will begin.
- 10. Backfill material will consist of non-waste containing earthen material. The cleaned out drilling pit will be filled with such material to a level which shall allow space for the addition of topsoil which will be equal to the thickness of the background topsoil or one foot whichever is greater as directed in 19.15.17.13, H (1) NMAC.
- 11. The topsoil cover will be placed on to the drilling pit area in a manner of existing grade and will prevent ponding of water and erosion of the cover material.
- 12. Within 60 days of closure completion a closure report on form C-144 will be submitted to the appropriate district office. The report will contain detailed information on the backfilling, capping. The closure report will also include a plat of the closed pit location on a form C-105.
- 13. Within the first growing season after the approved pit closure seeding of the pit area shall occur. The seeding will be performed in accordance with 19.15.17.13, I, (2) (3) (4) (5).



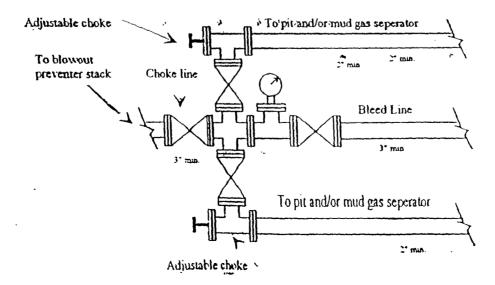
# Yates Petroleum Corporation

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 minimun features



# **Yates Petroleum Corporation**

105 S. Fourth Street Artesia, NM 88210

# Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

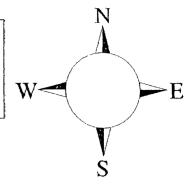
## For

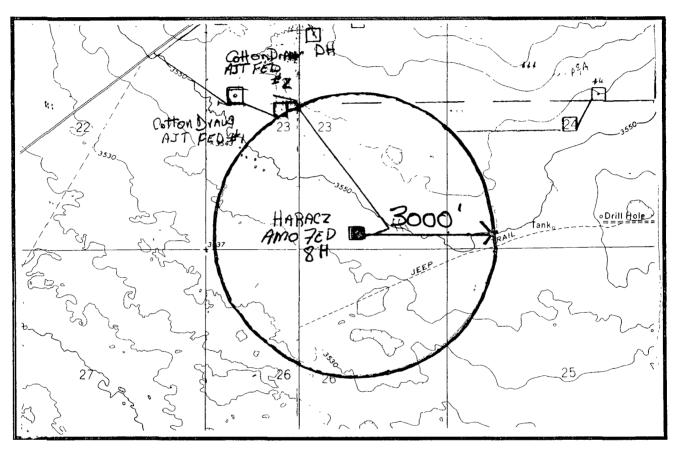
# Haracz AMO Federal #8H

330' FSL and 1980' FEL Surface Hole Location 330' FNL and 1980' FEL Bottom Hole Location Section 23, T-24S, R-31E Eddy County NM

# Haracz AMO Federal #8H

This is an open drilling site.  $H_2S$  monitoring equipment and emergency response equipment will be used within 500' of zones known to contain  $H_2S$ , including warning signs, wind indicators and  $H_2S$  monitor.





Assumed 100 ppm ROE =  $3000^{\circ}$  100 ppm H2S concentration shall trigger activation of this plan.

#### **Emergency Procedures**

In the case of a release of gas containing H<sub>2</sub>S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of  $H_2S$ , measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with  $H_2S$  monitors and air packs in order to control the release. Use the "buddy system' to ensure no injuries during the response.

#### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

| Common<br>Name      | Chemical<br>Formula | Specific<br>Gravity | Threshold<br>Limit | Hazardous<br>Limit | Lethal<br>Concentr-<br>ation |
|---------------------|---------------------|---------------------|--------------------|--------------------|------------------------------|
| Hydrogen<br>Sulfide | H <sub>2</sub> S    | 1.189<br>Air = 1    | 10 ppm             | 100 ppm/hr         | 600 ppm                      |
| Sulfur<br>Dioxide   | SO <sub>2</sub>     | 2.21<br>Air = 1     | 2 ppm              | N/A                | 1000 ppm                     |

#### **Contacting Authorities**

YPC personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. YPC Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

# Yates Petroleum Corporation Phone Numbers

| YPC Office   | (505) 748-1471  |
|--|-----------------|
| Paul Ragsdale/Operations Manager   |                 |
| Ron Beasley/Production Manager   |                 |
| Wade Bennett/Prod Superintendent   |                 |
| Mike Lankin/Drilling   |                 |
| Paul Hanes/Prod. Foreman/Roswell   | , .             |
| Tim Bussell/Drilling Superintendent  |                 |
| Artesia Answering Service  |                 |
| (During non-office hours)  | (303) 7 10 1302 |
| Agency Call List   |                 |
| Eddy County (505)  |                 |
| Artesia  |                 |
| State Police   | 746-2703        |
| City Police  | 746-2703        |
| Sheriff's Office   | 746-9888        |
| Ambulance  | 911             |
| Fire Department  | 746-2701        |
| LEPC (Local Emergency Planning Committee)  | 746-2122        |
| NMOCD  | 748-1283        |
| Carlsbad   |                 |
| State Police   | 885-3137        |
| City Police  | 885-2111        |
| Sheriff's Office   | 887-7551        |
| Ambulance  | 911             |
| Fire Department  | 885-2111        |
| LEPC (Local Emergency Planning Committee)  | 887-3798        |
| US Bureau of Land Management   | 887-6544        |
| New Mexico Emergency Response Commission (Santa Fe)  | (505)476-9600   |
| 24 HR  |                 |
| New Mexico State Emergency Operations Center   |                 |
| National Emergency Response Center (Washington, DC)  | (800) 424-8802  |
| Translat Emergency Response Center (Washington, DC)  | (000) 424-0002  |
| Other  |                 |
| Boots & Coots IWC1-800-256-9688 or (281) 931-8884<br>Cudd Pressure Control(915) 699-0139 or (915) 563-3356 |                 |
| Halliburton(505) 746-2757  |                 |
| B. J. Services(505) 746-3569   |                 |
| Flight For Life -4000 24th St, Lubbock, TX(  |                 |
| Aerocare -Rr 3 Box 49f, Lubbock, TX  |                 |
| Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM(   | (505) 842-4433  |

#### MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION Haracz AMO Federal #8H

Haracz AMO Federal #8H 330' FSL & 1980' FEL, Surface Hole 330' FNL & 1980' FWL, Bottom Hole Section 23-T24S-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.

#### 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 wellsite is located approximately 29 miles southeast 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 State Road 31. Turn south on 31 and go to Highway 128 (Jal Highway). Turn left on HWY 128 and go east for approximately 18.7 miles to the intersection of Highway 128 and Buck Jackson Road. Turn right on Buck Jackson Road and go approx. 2.9 miles. Turn left here at a cattle guard and lease road and go approximately .5 of a mile to the Cotton Draw AJT Federal #2 well location. The new road will start at the northeast corner of the Cotton Draw AJT Federal #2 going east for approximately 300' to an existing natural gas pipeline. The new road will turn right and follow the pipeline for approximately .7 of a mile. The proposed access road will then go right for 100 feet then will go right again for approximately .2 of a mile to the southeast corner of the proposed well location.

#### 2. PLANNED ACCESS ROAD.

- A. The proposed new access will be approximately 0.9 of a mile in length going east, southeast, and then southwest to the southeast corner of the proposed well location.
- 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. Traffic turnouts may 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 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. Drill cuttings will be disposed of in the reserve pits.
- B. The temporary drilling pit 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.
- B. Drilling fluids will be removed after drilling and completion operations are completed.
- 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, and the location of the drilling equipment, rig orientation and access road approach.
- B. The temporary drilling pit 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. Form C-144 attached.
- 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 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. All pits will be filled level after they have evaporated and dried. Pit reclamation will meet 19.15.17 requirements.
- 11. SURFACE OWNERSHIP: Federal Lands managed by the supervision of the Carlsbad BLM.

#### OTHER INFORMATION: 12

- 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 Haracz AMO Federal #8H

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; and an someone under employment of Yates Petroleum Corporation has 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 I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

| Executed this 27th day of October 2008   |
|--|
| Signature My Cra   |
| NameCy Cowan   |
| Position Title Regulatory Agent  |
| Address 105 South Fourth Street, Artesia, New Mexico 88210                     |
| Telephone(505) 748-4372  |
| Field Representative (if not above signatory) Tim Bussell, Drilling Supervisor |
| Address (if different from above) Same as above.                               |
| Telephone (if different from above) (505) 748-4221                             |
| E-mail (optional)  |

# Exhibit "A"

#### Haracz AMO Federal #8H - Siting Requirements:

Enclosed herewith are supporting maps and documents to support siting required by 19.15.17.10 NMAC.

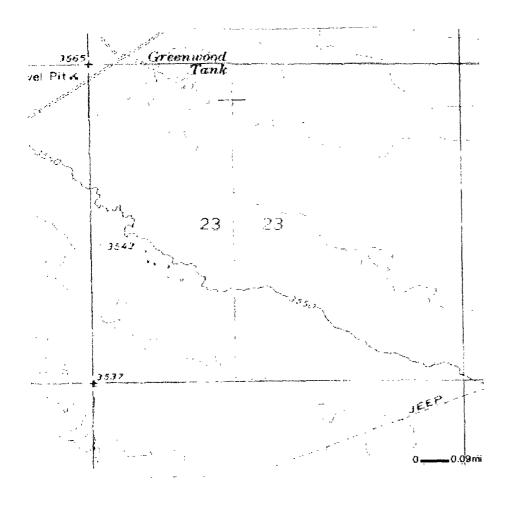
Attached is the water data for the area that indicates depth to water is greater than 70 feet (Exhibit B & B-1). From our site inspection of the location there are no continuously flowing watercourse within 300 feet or within 200 feet of any significant watercourse lakebeds, sinkhole or playa lakes. There are no permanent residences, school, hospital, institutions or church in existence within 300 feet or 1000 feet of the location. From iWaters database and visual inspection there are no domestic fresh water wells or springs within 500 horizontal feet or1000 horizontal feet from the well location (Exhibit B-1). The location is not within the incorporated municipal boundaries or within a defined fresh water well field covered under a municipal ordinance and not within 500 feet of a wetland. There are no subsurface mines overlying the area. 100 year flood plain has not been indicated on the FEMA website. Our Regulatory Agent has been and location shows no sign to be prone to flooding.

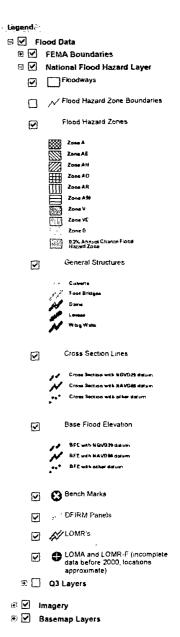
Regulatory Agent

Date

# Mapping magamatan platform







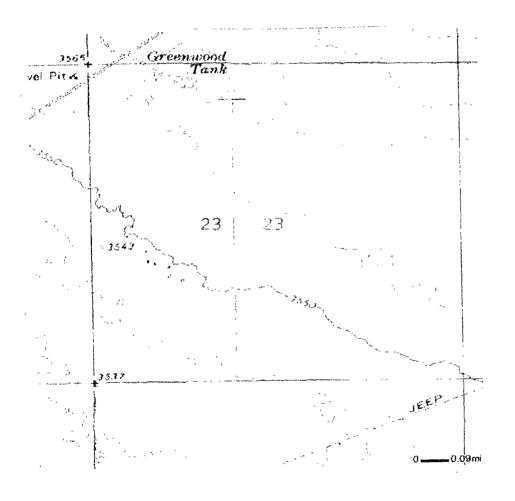


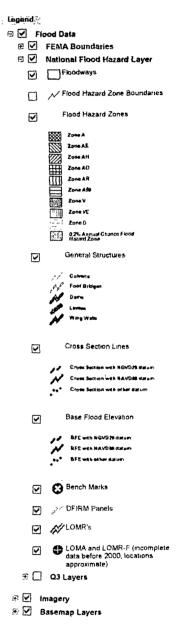
#### Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "A-1"

# Mapping Macrana Platos



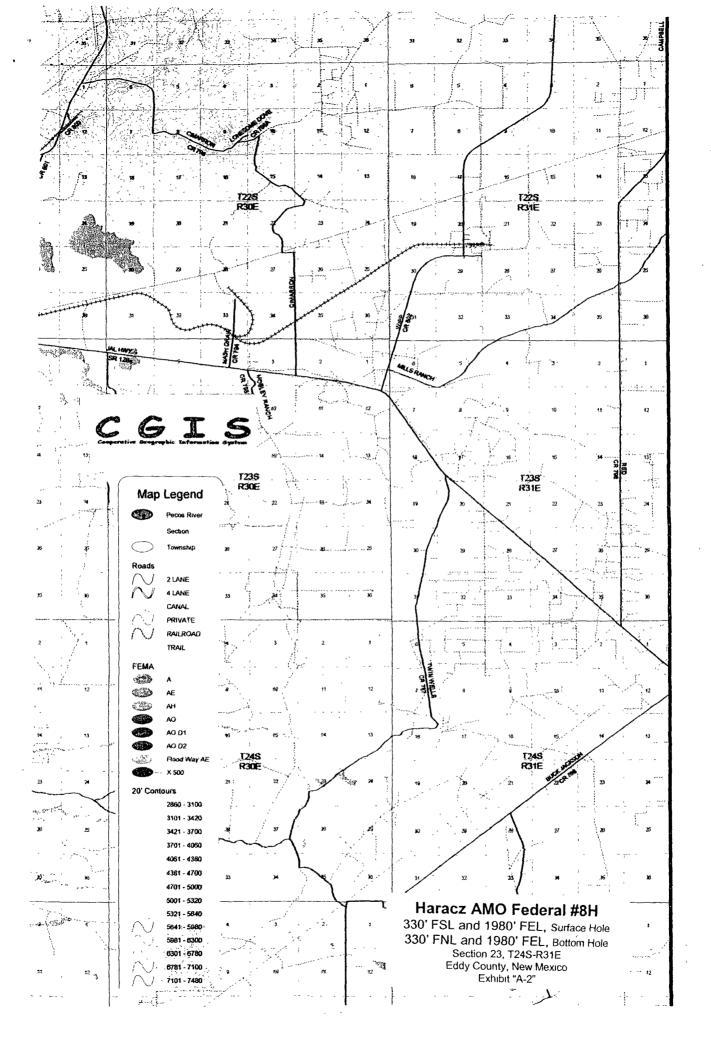


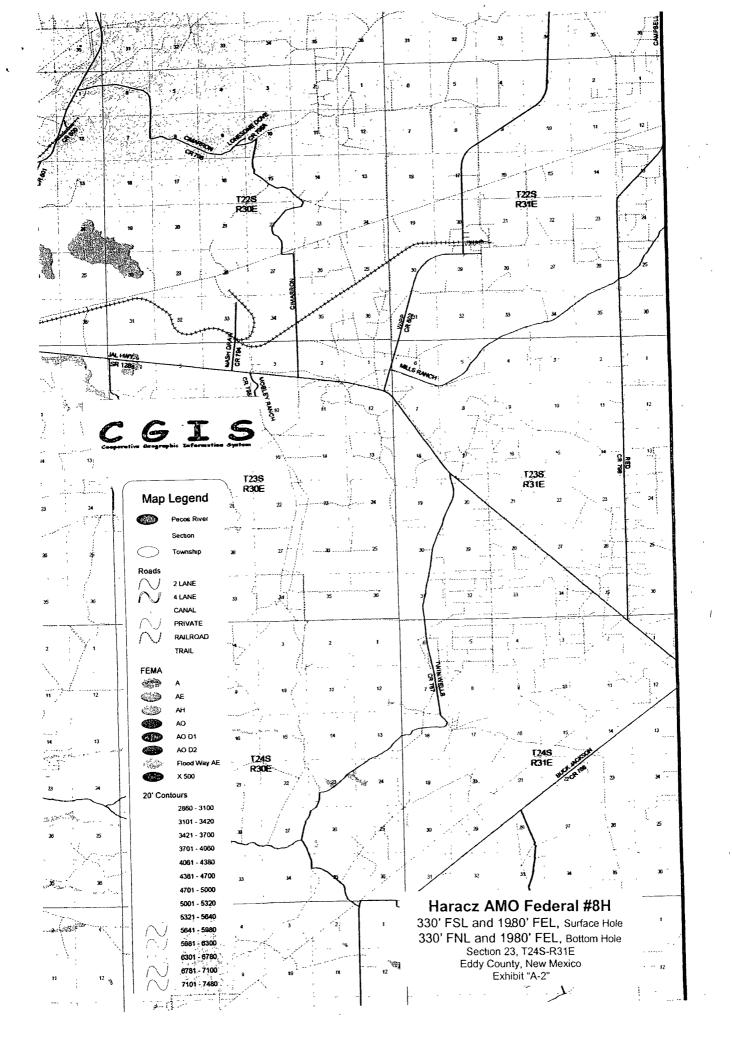




## Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL' and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "A-1"





# New Mexico Office of the State Engineer POD Reports and Downloads

| Tov   | wnship: 258 | Range: 31E | Sections:          |   |                |            |
|---|-------------|------------|--------------------|---|----------------|------------|
| NAD2  | 7 X:        | Y:         | Zone:              | <u> </u>  | Search Radius: |            |
| County:   | ¥           | Basin:     |                    | ÷   | Number:        | Suffix:    |
| Owner Name:   | (First)     | (1         | Last) 6 All        | MATERIAL MATERIAL AND | ○ Non-Domestic | ← Domestic |
| POD / Surface Data Report Avg Depth to Water Report |             |            |                    |   |                |            |
|   |             | Wa         | ater Column Report | iĝs (   |                |            |
|   |             | Clear Form | iWATERS Me         | nú, 💥   | Ĥelp.          |            |

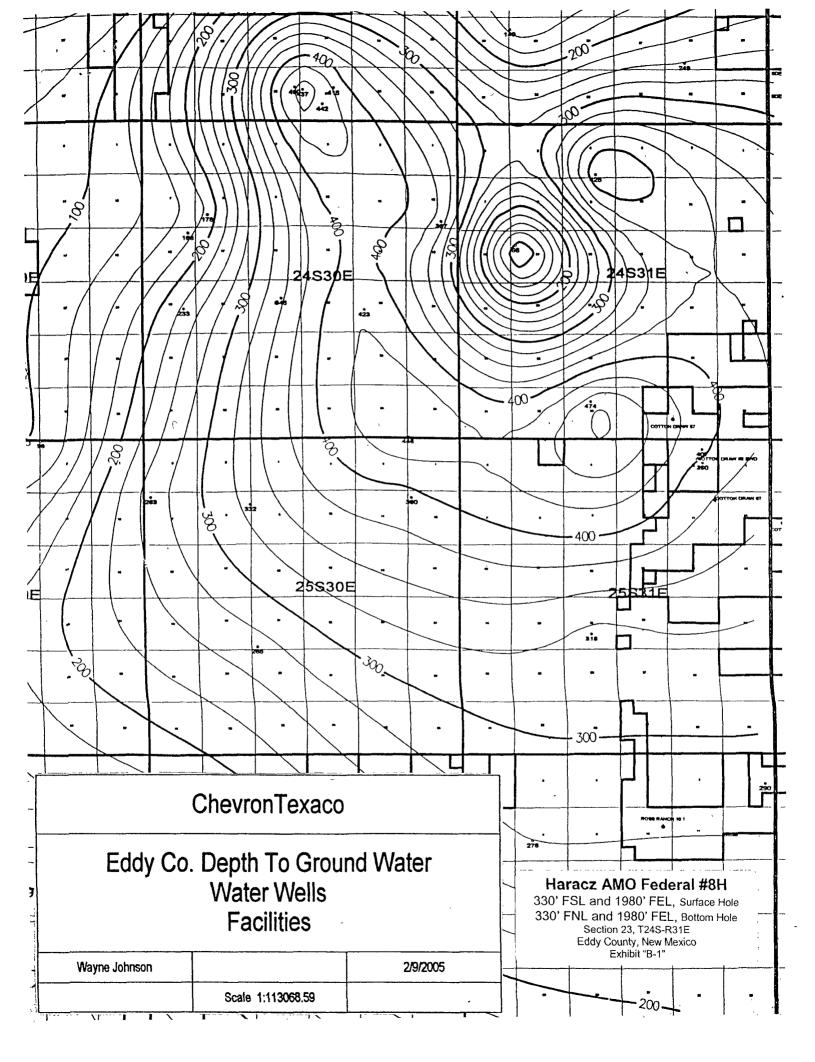
#### AVERAGE DEPTH OF WATER REPORT 10/28/2008

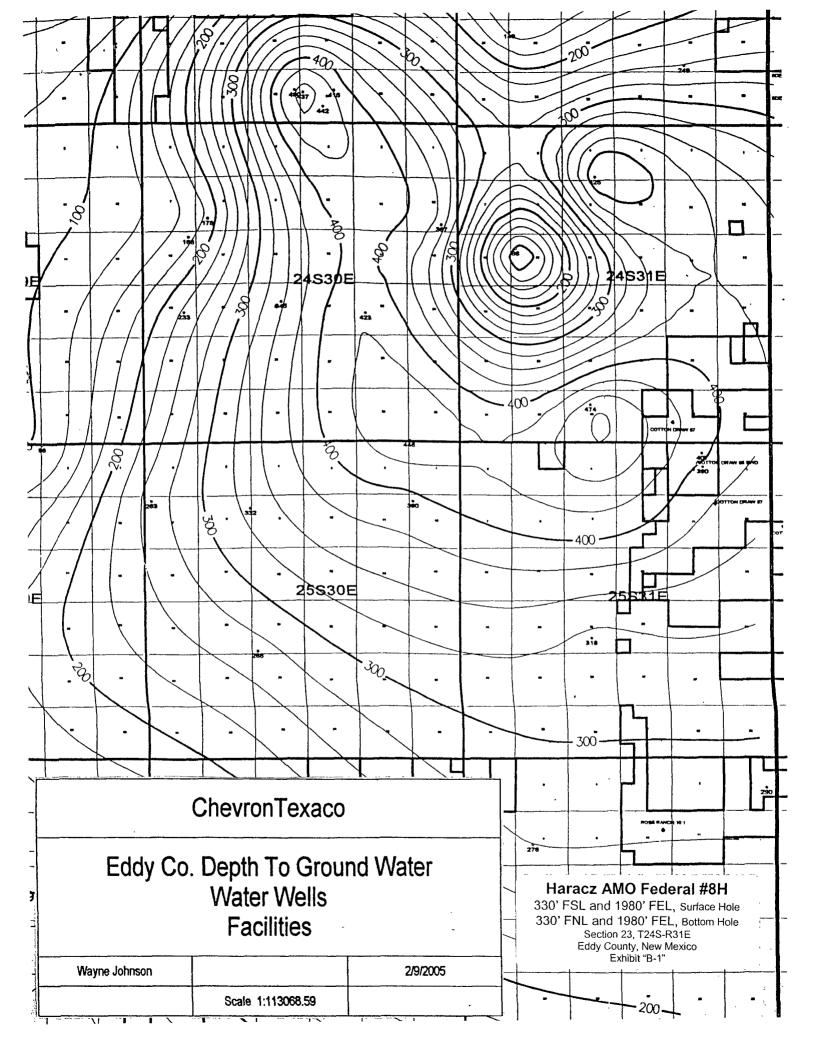
|     |     |        |        |   |   |       | (Depth | Water in | Feet) |
|-----|-----|--------|--------|---|---|-------|--------|----------|-------|
| Bsn | Tws | Rng Se | c Zone | x | Y | Wells | Min    | Max      | Avg   |
| С   | 25S | 31E 21 |        |   |   | 1     | 390    | 390      | 390   |

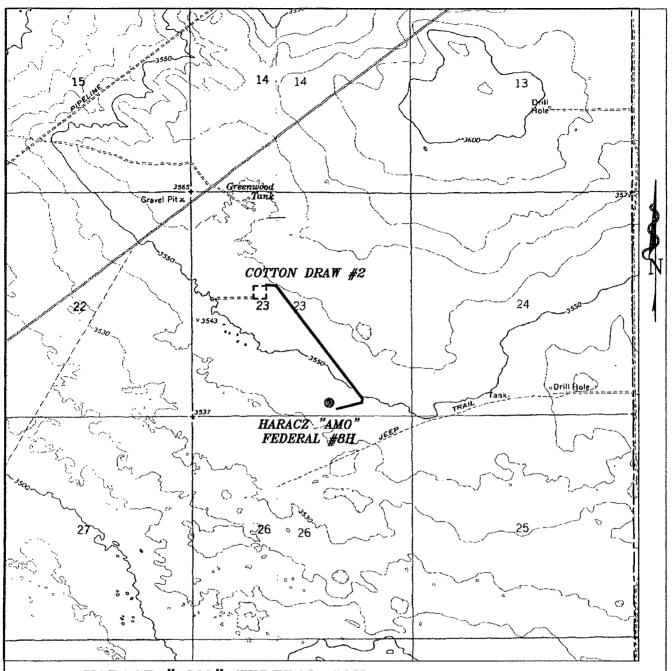
Record Count: 1

Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "B"







HARACZ "AMO" FEDERAL #8H Located at 330' FSL AND 1980' FEL Section 23, Township 24 South, Range 31 East, N.M.P.M., Eddy County, New Mexico.



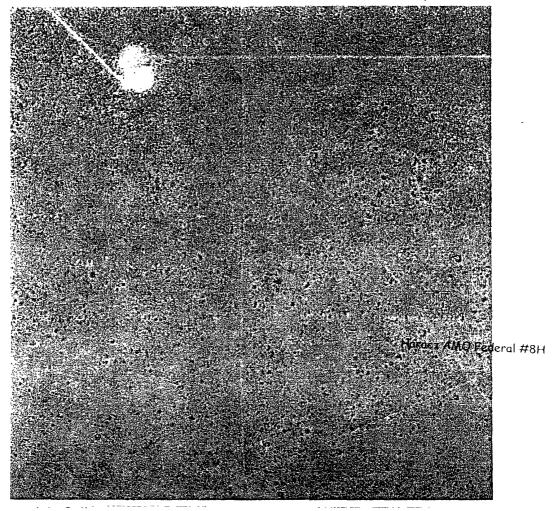
P.O. Box 1786 1120 N. West County Rd. Hobbs, New Mexico 88241 (575) 393-7316 - Office (575) 392-2206 - Fax

| W.O. Number: 20399      |
|-------------------------|
| Survey Date: 10-01-2008 |
| Scale: 1" = 2000'       |
| Date: 10-02-2008        |

## Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "C"

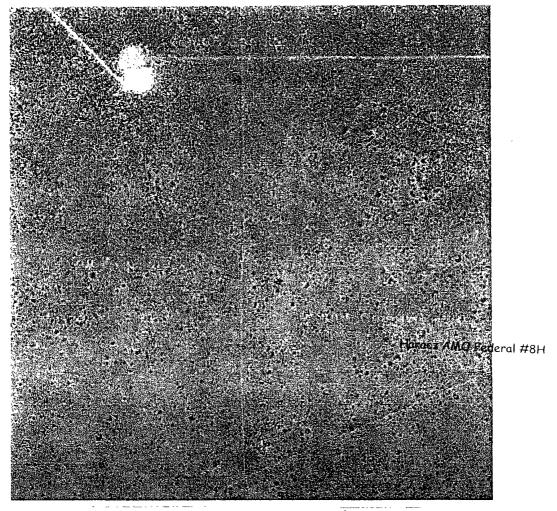
Gogle





## Haracz AMO Federal #8H

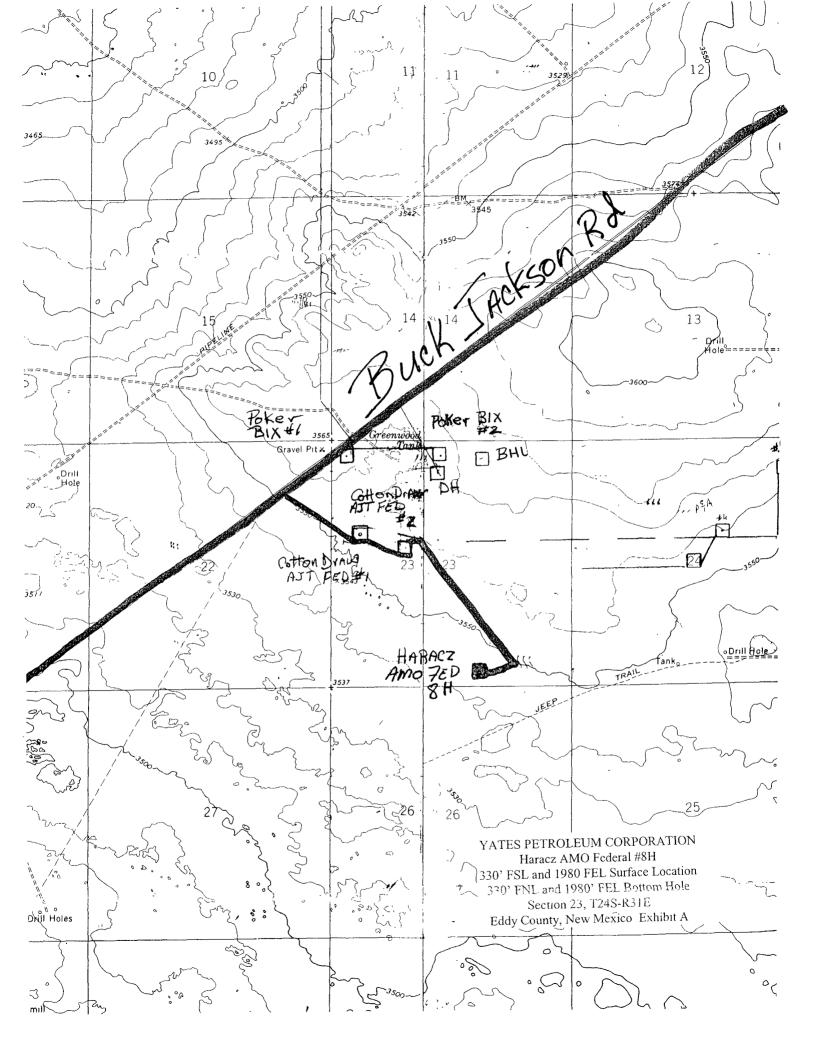
330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "C-1" Google

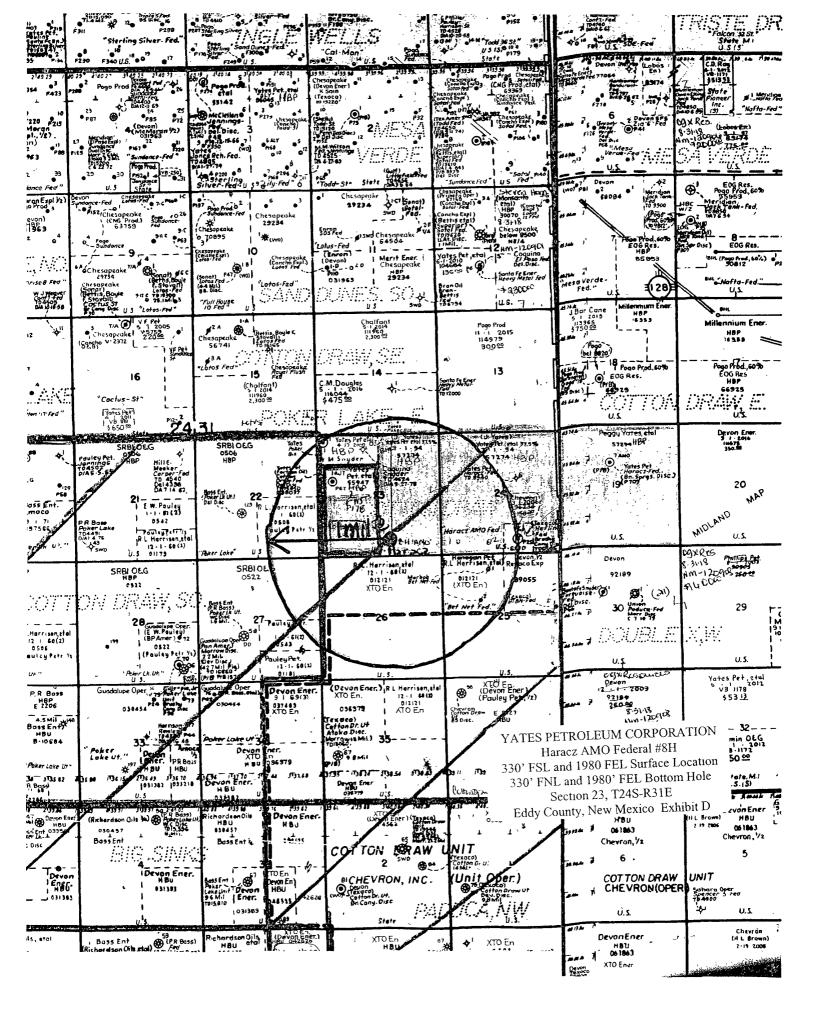




## Haracz AMO Federal #8H

330' FSL and 1980' FEL, Surface Hole 330' FNL and 1980' FEL, Bottom Hole Section 23, T24S-R31E Eddy County, New Mexico Exhibit "C-1"





# PECOS DISTRICT CONDITIONS OF APPROVAL

| OPERATOR'S NAME:      | Yates Petroleum Corporation         |
|-----------------------|-------------------------------------|
| LEASE NO.:            | NM57274                             |
| WELL NAME & NO.:      | Haracz AMO Federal 8H               |
| SURFACE HOLE FOOTAGE: | 330' FSL & 1980' FEL                |
| BOTTOM HOLE FOOTAGE   | 330' FNL & 1980' FEL                |
| LOCATION:             | Section 23, T. 24 S., R 31 E., NMPM |
| COUNTY:               | 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                            |
| Lesser Prairie Chicken                          |
| ☐ Construction                                  |
| Notification                                    |
| Topsoil   |
| Reserve Pit                                     |
| Federal Mineral Material Pits                   |
| Well Pads                                       |
| Roads   |
| Road Section Diagram                            |
| □ Drilling                                      |
| Surface casing depth                            |
| H2S phone numbers – area code                   |
| Production (Post Drilling)                      |
| Well Structures & Facilities                    |
| Reserve Pit Closure/Interim Reclamation         |
| Final Abandonment/Reclamation                   |

# I. GENERAL PROVISIONS

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

# II. PERMIT EXPIRATION

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

# III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

# IV. NOXIOUS WEEDS

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

# V. SPECIAL REQUIREMENT(S)

#### LESSER 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.

For the purpose of Protecting Lesser Prairie-Chickens:

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

# VI. CONSTRUCTION

#### A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (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.

# B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 8 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### C. RESERVE PITS

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

The reserve pit shall be constructed 175' X 150' on the north side of the well pad.

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

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

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

# D. FEDERAL MINERAL MATERIALS PIT

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

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

# E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

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

# F. ON LEASE ACCESS ROADS

# Road Width

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

# Surfacing

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

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

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

#### Crowning

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

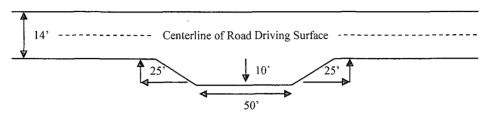
# Ditching

Ditching shall be required on both sides of the road.

#### Turnouts

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

#### Standard Turnout - Plan View

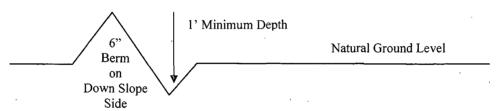


# Drainage

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

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

# Cross Section of a Typical Lead-off Ditch



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

# Formula for Spacing Interval of Lead-off Ditches

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

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

#### **Culvert Installations**

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

# Cattleguards

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

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

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

# Fence Requirement

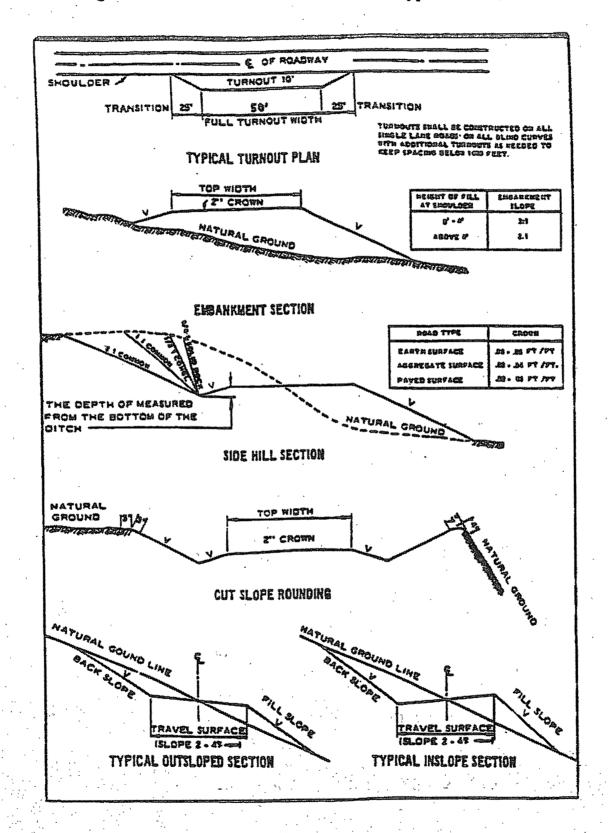
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

# **Public Access**

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

Figure 1 - Cross Sections and Plans For Typical Road Sections



# VII. DRILLING

# A. DRILLING OPERATIONS REQUIREMENTS

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

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

# **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 this section, 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 are located, this does not include the dog house or stairway area.

# B. CASING

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

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

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 and Bone Spring formations.

Possible water flows in the Castile, Salado, Delaware and Bone Spring formations.

- 1. The 13-3/8 inch surface casing shall be set at approximately 900 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. Fresh water mud to be used to setting depth. Additional cement may be needed due to additional depth, excess calculates to less than 25%.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job 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 9-5/8 inch intermediate casing is:
  - ☐ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Pilot hole – if a solid plug is not set back to the KOP, a 185 foot plug will be required at the bottom of the hole and must be tagged. Plug to be reset if tag indicates shorter than 185 feet. Tag depth to be reported on subsequent sundry

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 should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.
- 4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

# C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8" surface casing shoe shall be 3000 (3M) psi.
- 3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. The tests shall be done by an independent service company.
  - b. The results of the test shall be reported to the appropriate BLM office.
  - c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
  - d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
  - e. Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.

# D. DRILL STEM TEST

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

NOTE – area code for Eddy/Lea counties is 575 with effective date 10/05/2008 according to Windstream. H2S plan still has 505 numbers.

WWI 112208

# VIII. PRODUCTION (POST DRILLING)

# A. WELL STRUCTURES & FACILITIES

# **Placement of Production Facilities**

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

# **Containment Structures**

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

# **Painting Requirement**

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

# IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

#### A. INTERIM RECLAMATION

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

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

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

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

#### B. RESERVE PIT CLOSURE

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

# Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

| <u>Species</u>           | <u>lb/</u>   | <u>'acre</u> |  |
|--------------------------|--|--------------|--|
| Sar<br>Lit<br>Big<br>Pla | ins Bristlegrass and Bluestem tle Bluestem g Bluestem ins Coreopsis and Dropseed |              | 5lbs/A<br>5lbs/A<br>3lbs/A<br>6lbs/A<br>2lbs/A<br>1lbs/A |
|                          | F  | `            |  |

<sup>\*\*</sup>Four-winged Saltbush

Pounds of seed x percent purity x percent germination = pounds pure live seed (Insert Seed Mixture Here)

<sup>5</sup>lbs/A

<sup>\*</sup> This can be used around well pads and other areas where caliche cannot be removed.

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

# X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

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

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