

OCD-ARTESIA

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 26 2007
OCD-ARTESIA

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. 16-069157	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Marshall & Winston, Inc.		7. If Unit or CA Agreement, Name and No.	
3a. Address PO Box 50880, Midland, TX 79710-0880		8. Lease Name and Well No. 35709 Dublin Federal 23 #4	
3b. Phone No. (include area code) 432-684-6373		9. API Well No. 30-015-35730	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1980' FSL and 660' FEL At proposed prod. zone CARLSBAD CONTROLLED WATER BASIN		10. Field and Pool, or Exploratory Herradura Bend, Delaware East	
11. Sec., T. R. M. or Blk. and Survey or Area S23, T22S, R28E		12. County or Parish Eddy	
13. State NM		14. Distance in miles and direction from nearest town or post office* 10 from SE Carlsbad	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		16. No. of acres in lease 320	
17. Spacing Unit dedicated to this well 40		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1120'	
19. Proposed Depth 5,000'		20. BLM/BIA Bond No. on file NM0877	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3192' GL		22. Approximate date work will start* 10/01/2007	
23. Estimated duration 20 days		24. Attachments	

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

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

25. Signature Tom M Brandt	Name (Printed/Typed) Tom Brandt	Date 06/19/07
Title Vice President		

Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) Don Peterson	Date JUL 24 2007
Title FIELD MANAGER		Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 30670	Pool Name Herradura Bend; Detawie, East
Property Code 35709	Property Name DUBLIN FEDERAL 23	Well Number 4
OGRID No. 14187	Operator Name MARSHALL & WINSTON, INC.	Elevation 3192'

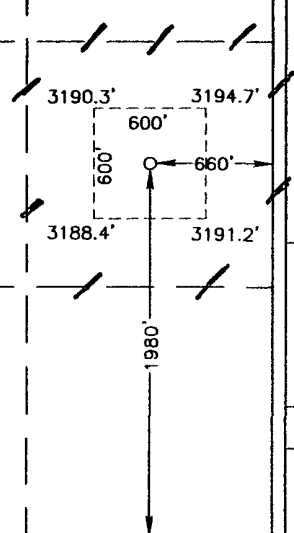
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	23	22-S	28-E		1980	SOUTH	660	EAST	EDDY

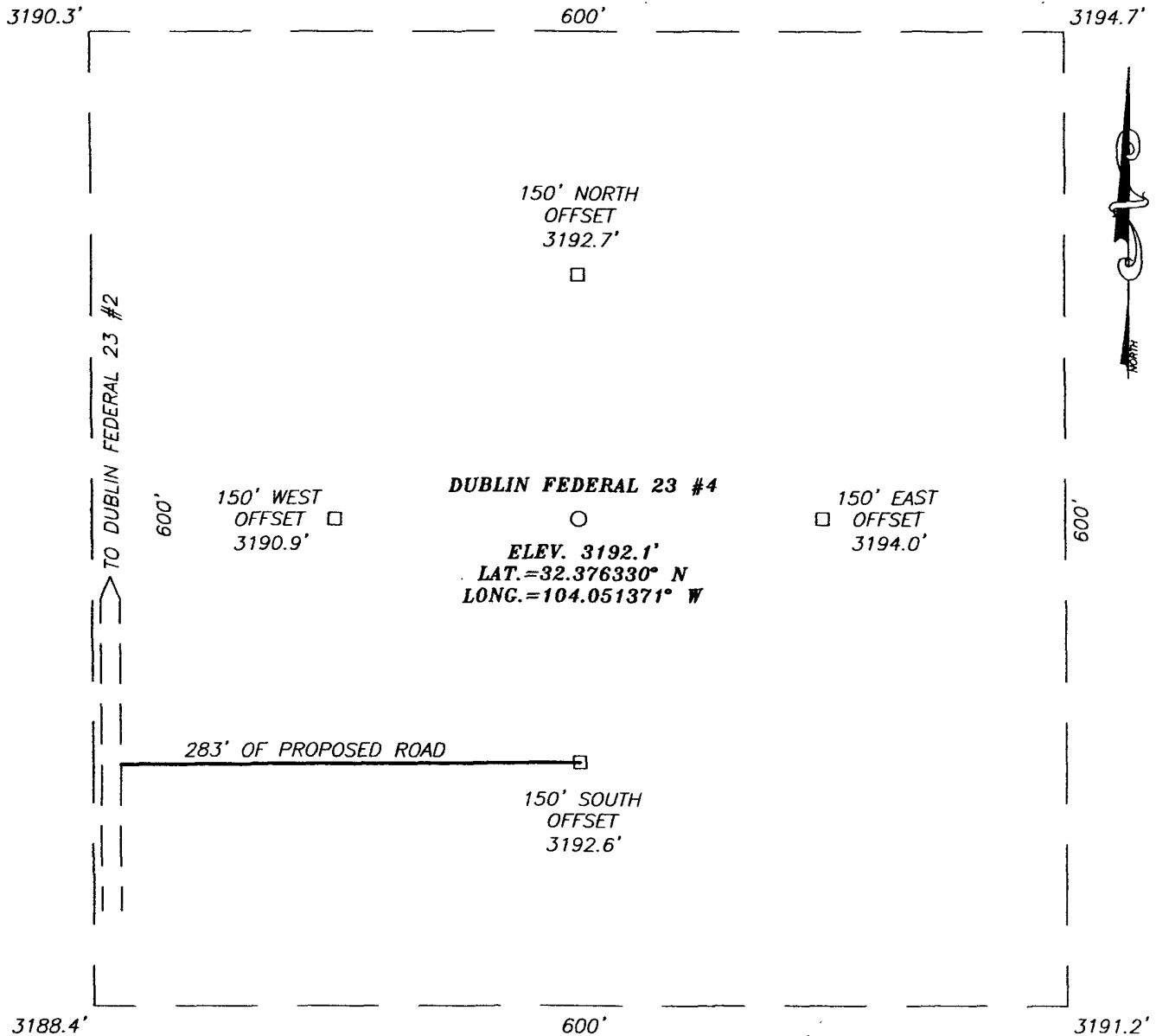
Bottom Hole Location If Different From Surface

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

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

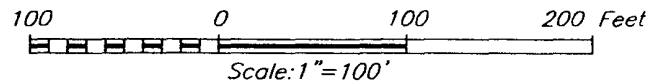
<p>GEODETTIC COORDINATES NAD 27 NME Y=500738.4 N X=587048.2 E LAT.=32.376330° N LONG.=104.051371° W</p> 	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Tom M Brandt 6/19/07 Signature Date Tom M. Brandt, V.P. Ops. Printed Name</p>
	<p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>MARCH 6, 2007</p> <p>Date Surveyed JR Signature & Seal of Professional Surveyor Ronald J. Eidson 3/23/07 07:11:02 95 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>

SECTION 23, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY #31 AND CO. RD. #606 (U.S. REFINERY RD.) GO NORTH ON CO. RD. #606 APPROX. 3.6 MILES. TURN RIGHT AND GO NORTHEAST APPROX. 0.5 MILES, VEER LEFT AND CONTINUE NORTHEAST APPROX. 0.8 MILES. TURN LEFT AND GO NORTHWEST APPROX. 0.2 MILES, VEER RIGHT AND GO NORTHEAST APPROX. 0.2 MILES, VEER LEFT AND GO NORTHWEST APPROX. 0.4 MILES TO THE EXISTING DUBLIN FEDERAL 23 #1 WELL. FOLLOW PROPOSED ROAD SURVEY APPROX. 1989 FEET TO THIS LOCATION.



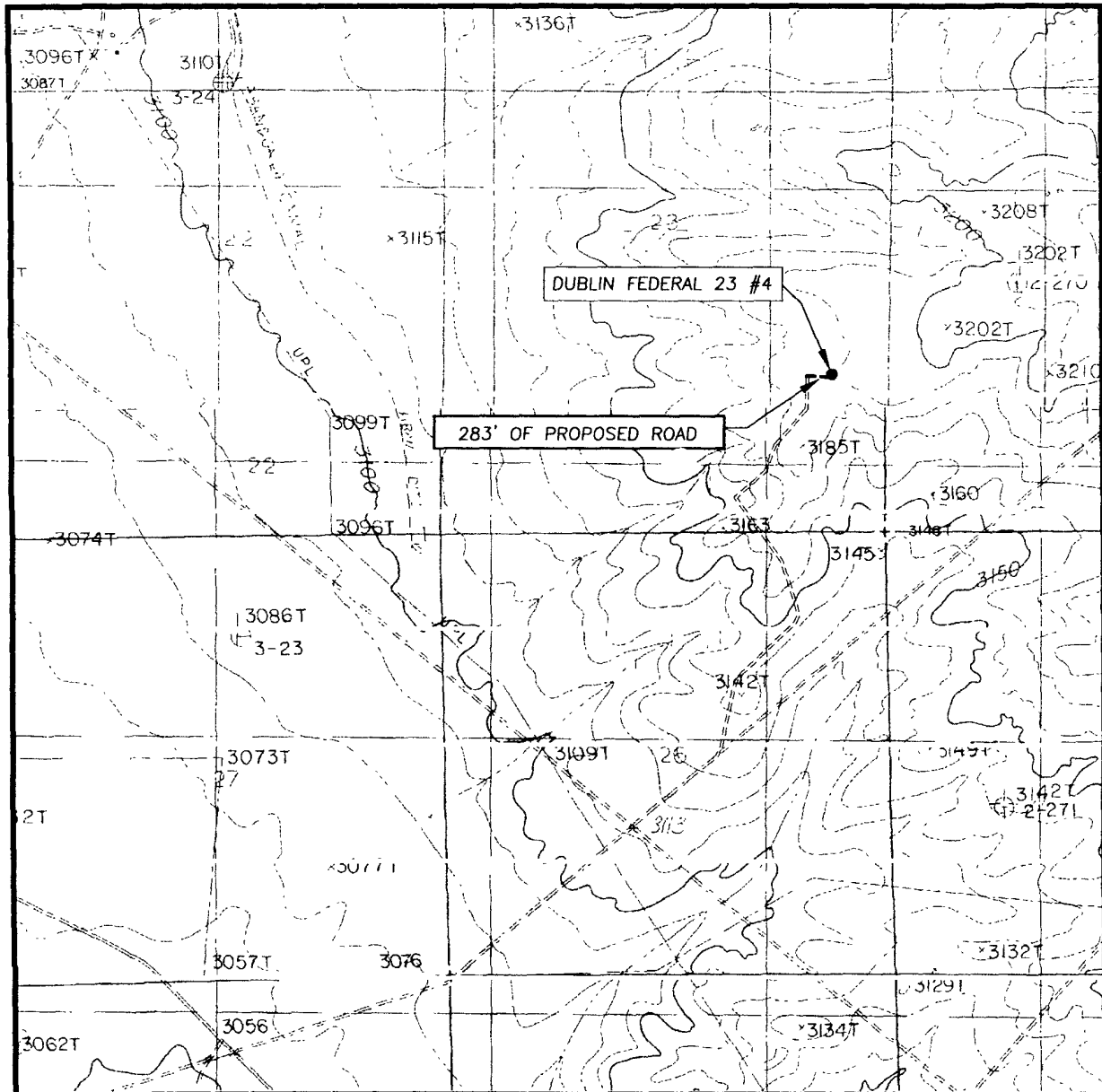
MARSHALL & WINSTON, INC.

DUBLIN FEDERAL 23 #4 WELL
 LOCATED 1980 FEET FROM THE SOUTH LINE
 AND 660 FEET FROM THE EAST LINE OF SECTION 23,
 TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 03/06/07	Sheet 1 of 1 Sheets
W.O. Number: 07.11.0279	Dr By: J.R.
Date: 03/22/07	Disk: CD#7
07110279	Scale: 1"=100'

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

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
 LOVING, N.M. - 10'
 INDIAN FLAT, N.M. - 10'

SEC. 23 TWP. 22-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

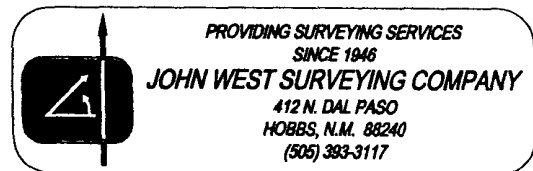
DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3192'

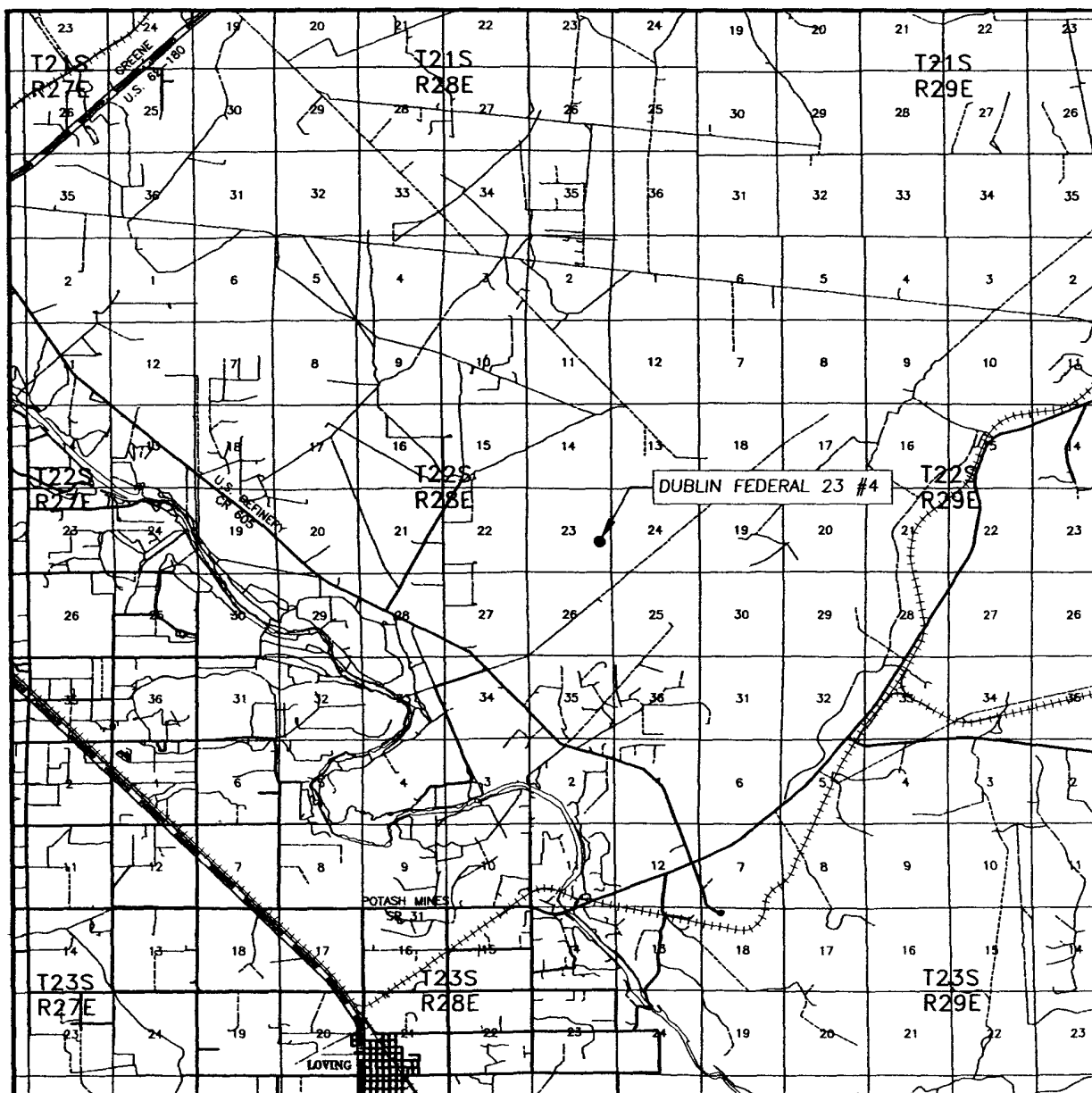
OPERATOR MARSHALL & WINSTON, INC.

LEASE DUBLIN FEDERAL 23

U.S.G.S. TOPOGRAPHIC MAP
INDIAN FLATS, N.M.



VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 23 TWP. 22-S RGE. 28-E

SURVEY N.M.P.M.


COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 1980' FSL & 660' FEL

ELEVATION 3192'

OPERATOR MARSHALL & WINSTON

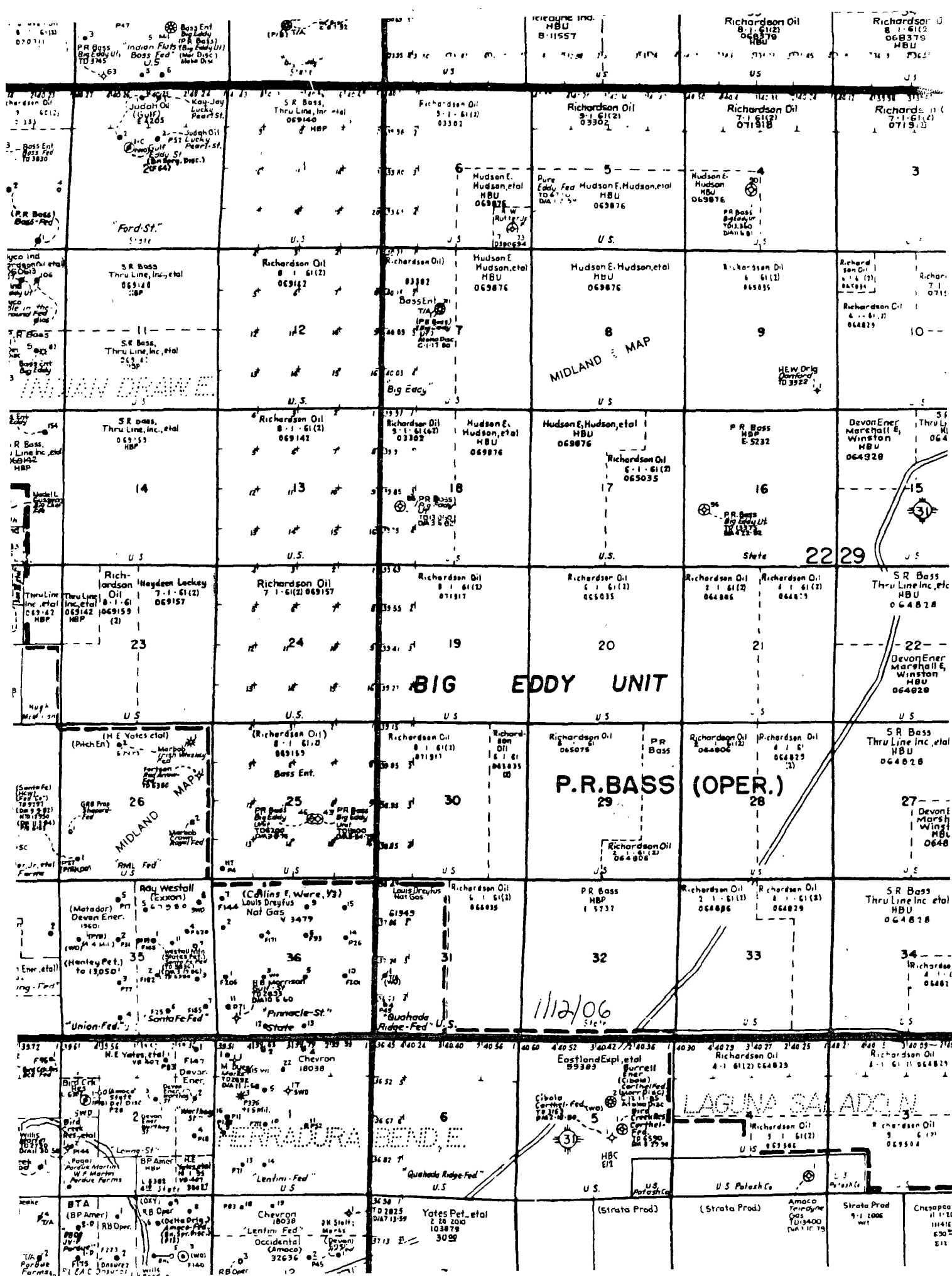
LEASE DUBLIN FEDERAL 23



PROVIDING SURVEYING SERVICES
SINCE 1946

JOHN WEST SURVEYING COMPANY

412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117



MARSHALL & WINSTON, INC.

DRILLING PLAN

DUBLIN FEDERAL 23 No. 4
LEASE No.: LC-069157

EDDY COUNTY, NEW MEXICO: U/L I S23 T22S R28E 1980' FSL, 660' FEL

1. SURFACE:

GL 3192': Tan/red & tan/brown/gray, loamy silty sands mixed with caliche and lag gravels.

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS: (Est. KB: 3204')

Formation	Est. Top from KB	Est. Subsea Top	BERINGS
T/Salt	470'	+2734'	Barren
B/Salt	2760'	+444'	Barren
T/Lamar Lm.	2780'	+424'	Barren
T/Bell Canyon	2804'	+400'	Oil/Gas
T/Cherry Canyon	3670'	-466'	Oil/Gas

Freshwater zones will be protected by setting surface casing at +/- 450' and circulating cement to surface.

Hydrocarbon zones will be protected by setting production casing at approximately 5000' and circulating cement to surface.

3. CASING PROGRAM:

Proposed Drilling Depth: 5,000' TVD

Hole Size	Type	Intervals	Purpose	Condition
24"	20"	0-40'	Conductor	Cont. Discretion
12 1/4"	8 5/8", 32#, J-55, STC	0-450'	Surface	New
7 7/8"	5 1/2", 15.5#, J-55, STC	0-5,000'	Production	New
		Collapse	Burst	Tension
	8 5/8"	2530 psi	330-2950 psi	313 244,000 lbs.
	5 1/2"	4040 psi	480-4270 psi	300 172,000 lbs.

4. MUD PROGRAM:

Depth	Mud Type	Weight	FV	PV	YP	FL	Ph
0-450'	FW	8.5-9.2ppg	45-35	NC	NC	NC	9.5
450'-3500'	BW	10.0-10.2	28-30	NC	NC	NC	9.5
3500'-5000'	BW/Polymer	10.0-10.5	32-55	12-20	12-22	10-15	9.5-10.0

5. TESTING, LOGGING AND CORING PROGRAM:

TESTING:

Drill stem tests may be performed on significant shows in zones of interest, but none are anticipated.

LOGGING:

Run No. 1: GR – DLL - MGRD TD to surface casing.

Run No. 2: GR – DSNSD TD to base of salt.

CORING:

No cores are anticipated.

6. CEMENT PROGRAM:

Interval: Surface Casing

0-450' cement circulated to surface

Cement Volume: 300sx (390 ft³) 100% excess

Slurry Weight: 14.8 ppg

Slurry Yield: (ft³/sx) 1.3

Amount of Water: 6.36 gps

Type of Cement: Class "C" + 2% bwoc CaCl

Interval: Production Casing Program (Two stage DV tool @ 3,000')

1st Stage: 5,000'-3,000'

Cement Volume: 400 sx (520 ft³) 50% excess

Slurry Weight: 14.8 ppg

Slurry Yield: (ft³/sx) 1.3

Amount of Water: 6.36 gps

Type of Cement: Class "C"

2nd Stage: 3,000'-0' circulate cement to surface

Cement Volume: 780 ft³ 50% excess

Lead Slurry: 600 sx (35:65) Poz (Fly Ash) Class "C" Cement

+ 1% bwoc CaCl + 0.25 lbs./sx Cello Flake

Tail Slurry: 100 sx Class "C" Cement

	Lead Slurry	Tail Slurry
Slurry Weight (ppg)	12.50	14.8
Slurry Yield (ft ³ /sx)	1.96	1.33
Amount of Water (gps)	10.22	6.33

*Volumes may be altered after actual borehole volumes are circulated from open hole caliper log.

Estimated BHP: Normal pressures are anticipated with max BHP in Cherry Canyon at 1860 psi (equivalent mud weight 8.4 ppg)

7. PRESSURE CONTROL EQUIPMENT:

A BOP equivalent to attached BOP diagram will be nipped up on the surface casinghead and the BOP stack, choke, kill lines, Kelly cocks, inside BOP etc. will be hydrostatically tested to 70% of internal yield pressure of casing or 2500 psig whichever is less with rig pump. Due to depth of well and normal anticipated pressures, BOP equipment will be tested and utilized as 2000# equipment.

SEE
← COA

A function test to insure that the preventers are operating correctly will be performed on each trip.

8. HYDROGEN SULFIDE GAS: Not anticipated

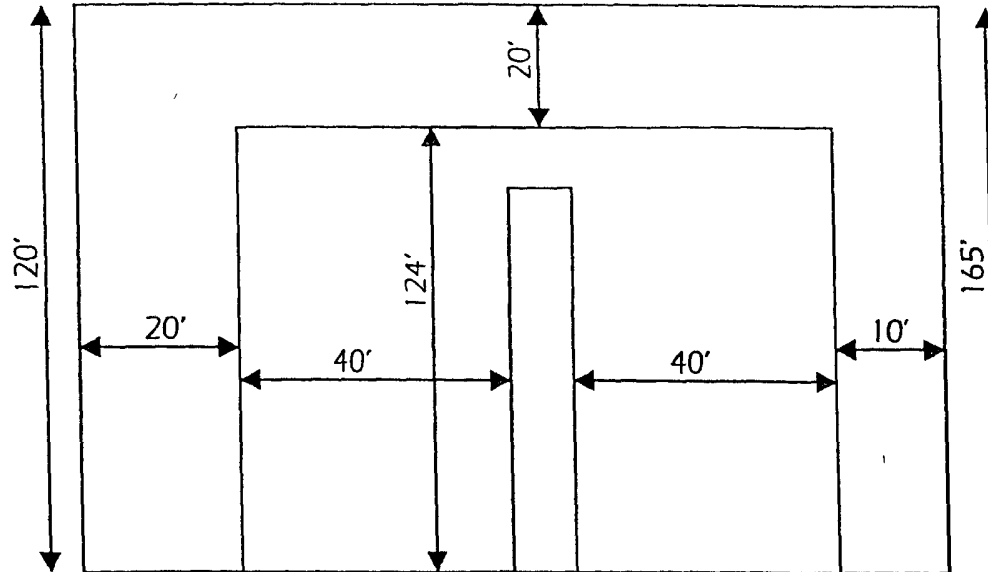
9. START DATE/COMPLETION DATE: 8/1/07 / completion approx. 20 days

10. LOCATION ACCESS DIRECTIONS: See plat.

RIG

First wall on reserve @
back of cellar on pump side

6' x 6'
Cellar



150'

170'

150'

Rathole/Mousehole

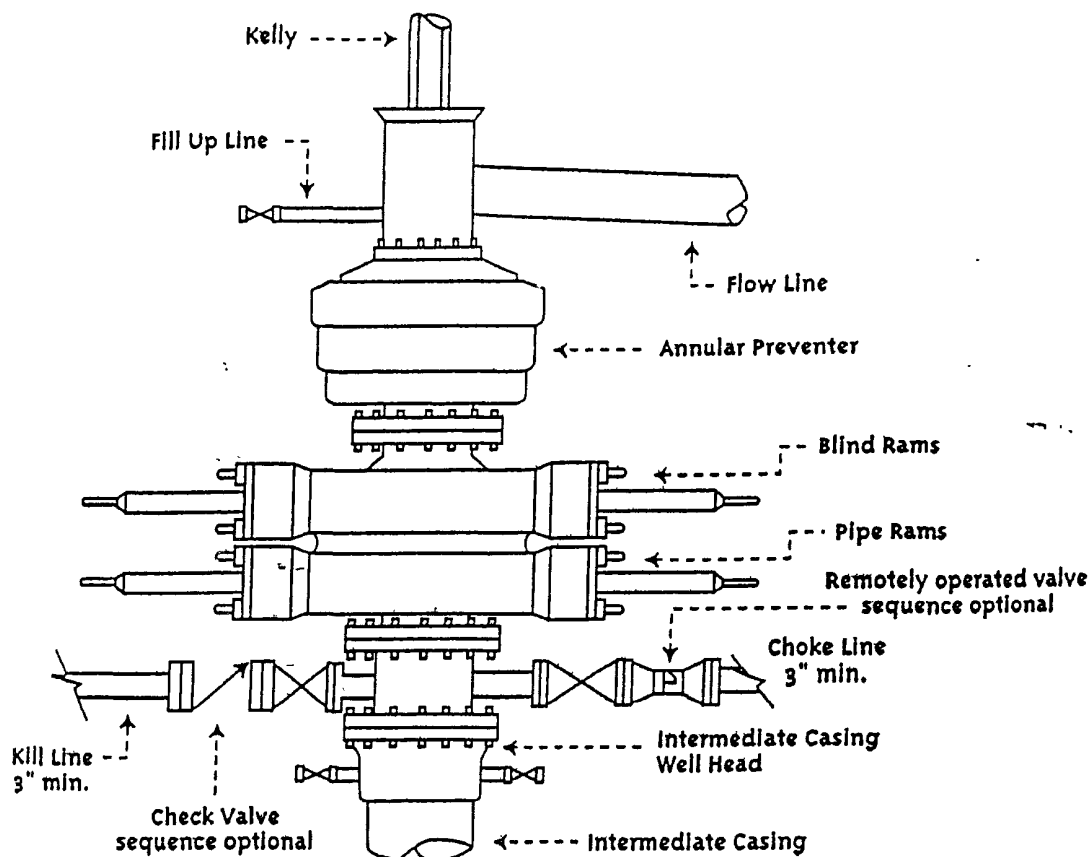
S 5' 5" → M 20' @ 3 deg

8' 2" → 7' 8"

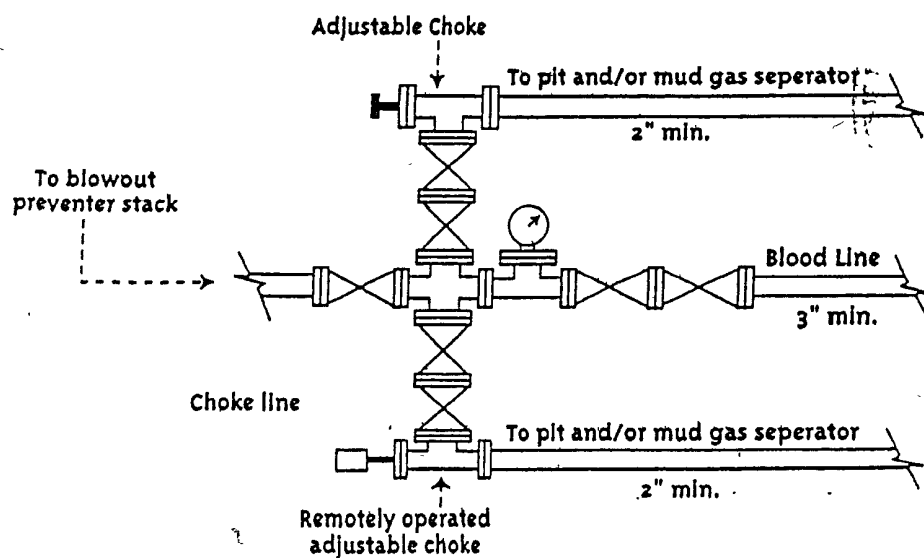
R 30' @ 6 deg



Typical 5,000 psi Pressure System Schematic Annular Double Ram Preventer Stack



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



SURFACE USE PLAN

Dublin Federal 23 No. 4

LOCATION: U/L 1 Sec. 23, T22S, R28E 1980' FSL and 660' FEL
Lease No. : LC 069157

EXISTING ROADS: (see Vicinity Map)

Directions to the location follow: From intersection of SH 31 and CR 606 (US Refinery Road) travel northwest on CR 606 approximately 3.5 miles following plat from this point to the northeast.

ACCESS ROAD: A new access road of approximately 283' will be built to the location. This access road has been archeologically surveyed and cleared for construction. (see Arch report)

EXISTING WELLS: The Dublin Federal 23 No. 1 also exists in Section 23.

LOCATION OF EXISTING OR PROPOSED FACILITIES: Flow lines will run parallel to the existing roads where the archeological surveys have been completed and cleared for development. This activity shall exist within the lease boundary of the Dublin Federal 23 No. 1 in Section 23.

SOURCE OF CONSTRUCTION MATERIALS: Construction material (caliche) required for the access road and well site pad will be obtained on location, if available, or from an approved pit. No surface materials shall be disturbed except those necessary for actual grading and construction of the drill site and access road.

METHODS FOR HANDLING WASTE DISPOSAL: All drilling fluids and cuttings shall be disposed of pursuant to the NMOCDD Regulatory Performance. Drilling pits shall be lined as per the C-144. All other waste generated by drilling, completion and testing of this well will be removed from the location within 30 days of completion activities. A Porta-John will be provided for the crews which shall be properly maintained at all times.

ANCILLARY FACILITIES: Drilling, completion and/or testing of this well will require temporary test facilities. Any oil produced during completion will be stored in tanks until sold.

WELLSITE LAYOUT: Refer to the "Drilling Pad Layout" attached for details.

SURFACE RESTORATION: Surface reclamation shall be in accordance with BLM requirements and infield decisions at the time.

OTHER INFORMATION: Surface ownership and drill site access is under the jurisdiction of the BLM, 620 E. Greene St., Carlsbad, NM 88220 (505-887-6544) or Barry Hunt 505-361-4078 (cell). The Drilling Contractor has not yet been determined.

OPERATOR'S REPRESENTATIVE

Dublin Federal 23 No. 4 APD

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

Mr. Tom Brandt
Marshall & Winston, Inc.
PO Box 50880
Midland, TX 79710-0880

432-684-6373 (office)
432-553-9747 (cell)

CERTIFICATION:

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



Tom Brandt, Vice President
Marshall & Winston, Inc.

Date: 6/19/07

2District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-144
June 1, 2004
For drilling and production facilities, submit to
appropriate NMOCD District Office
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

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

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

Operator **Marshall & Winston, Inc.** Telephone **432-684-6373** e-mail address **tbrandt@mar-win.com**

Address **PO Box 50880, Midland, Texas 79710-0880**

Facility or well name: **Dublin Federal 23 No. 4** API # **30 015 (pending)** U/L **I Sec 23 T22S R28E 1980' FSL and 660' FEL**

County **Eddy** Latitude **N** Longitude **W** NAD 1927 ☐ 1983 ☐

Surface Owner Federal ☒ State Private ☐ Indian ☐

Pit

Type Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type Synthetic ☒ Thickness. 12ml HDPE liner Clay ☐

Pit Volume 8,000 bbl (Approximately)

Below-grade tank **N/A**

Volume **N/A** bbl Type of fluid **N/A**

Construction material **N/A**

Double-walled, with leak detection? ☐ If not, explain why not

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

Less than 50 feet

(20 points)

50 feet or more, but less than 100 feet

(10 points)

100 feet or more

(0 points)

0 pts

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

Yes

(20 points)

No ☒

(0 points)

0 pts

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

Less than 200 feet

(20 points)

200 feet or more, but less than 1000 feet

(10 points)

1000 feet or more

(0 points)

0 pts

Ranking Score (Total Points)

0 pts.

If this is a pit closure. (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks (2) Indicate disposal location If offsite, name of facility (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered No ☒ Yes ☐ If yes, show depth below ground surface ft and attach sample results

(5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments. **Drilling pits will be constructed, maintained and removed as per NMOCD guidelines.**

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

Date **14 June 2007**

Printed Name/Title **Tom Brandt, Vice President - Operations**

Signature



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

Approval

Printed Name/Title

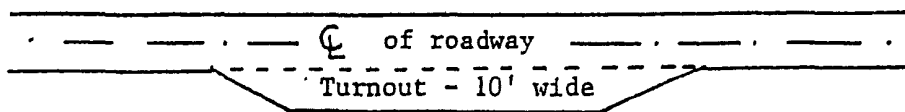
Signature

Date

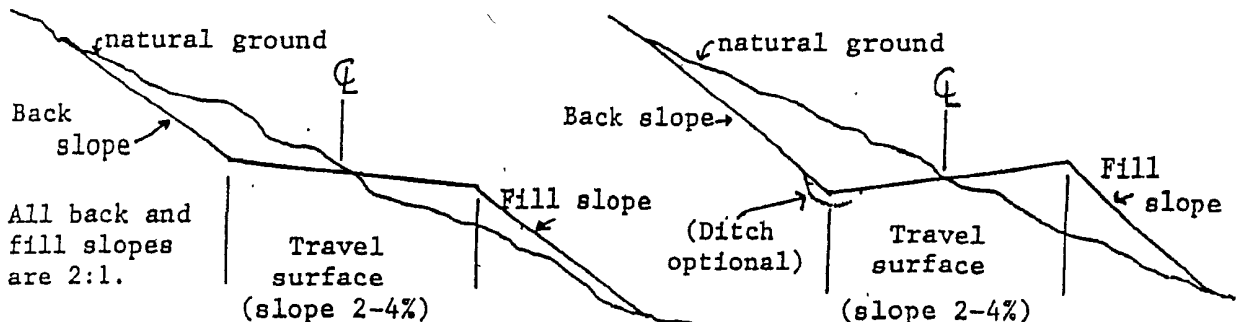
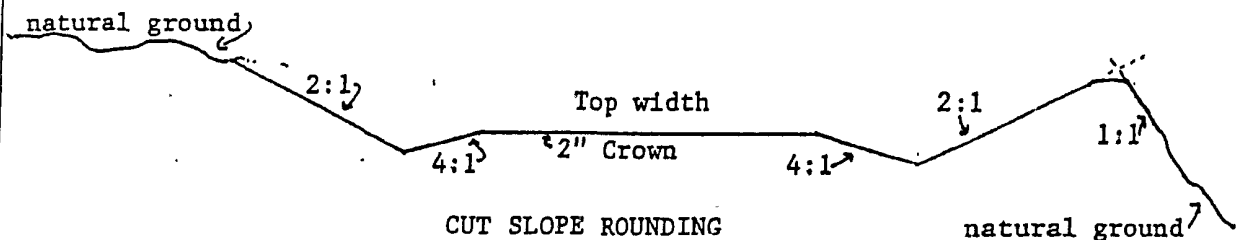
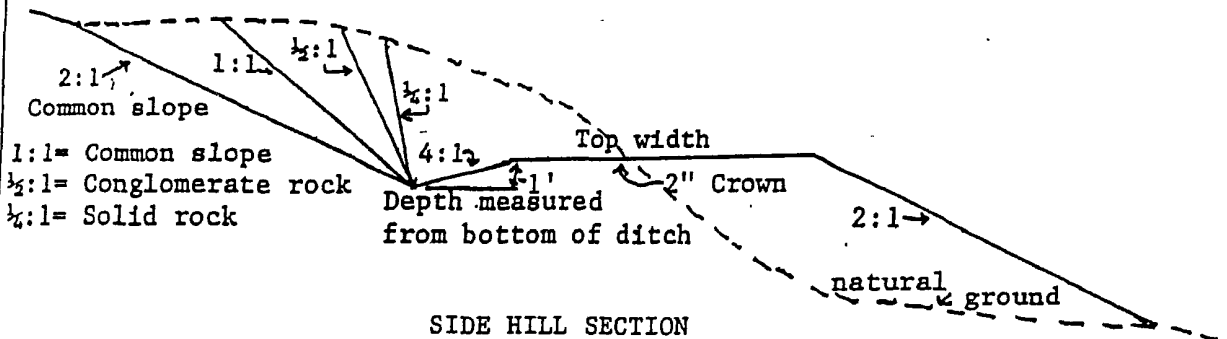
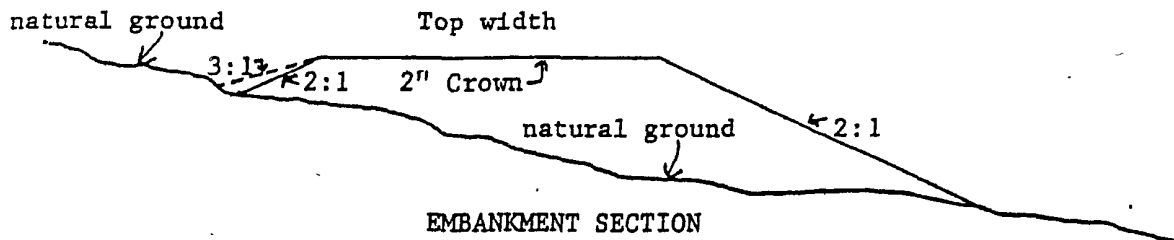
FIGURE 1: CROSS SECTIONS AND PLANS FOR TYPICAL AD CONSTRUCTION
REPRESENTATIVE OF BLM RESOURCE, AND HIGHER CLASS, ROADS.

copy for reference

(Travel way, top width, driving surface, and travel surface are synonymous.)



TYPICAL TURNOUT PLAN



TYPICAL OUTSLOPED SECTION

TYPICAL INSLOPED SECTION

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name Marshall & Winston, Inc Well Name & # Dublin Federal 23 #4
Location 1980 F S L & 660 F E L; Sec 23, T 22 S, R 28 E
Lease # LC-069157 County Eddy State New Mexico

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

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

I SPECIAL ENVIRONMENT REQUIREMENTS

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

II ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

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

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

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

() Other

III WELL COMPLETION REQUIREMENTS

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

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

() A Seed Mixture 1 (Loamy Sites)

Side Oats Grama (*Bouteloua curtipendula*) 5.0
Sand Dropseed (*Sporobolus cryptandrus*) 1.0
Plains lovegrass (*Eragrostis intermedia*) 0.5

() B Seed Mixture 2 (Sandy Sites)

Sand Dropseed (*Sporobolus cryptandrus*) 1.0
Sand Lovegrass (*Eragrostis trichodes*) 1.0
Plains Bristlegrass (*Setaria magrostachya*) 2.0

(x) C. Seed Mixture 3 (Shallow Sites)

Side oats Grama (*Bouteloua curtipendula*) 5.0
Green Spangletop (*Leptochloa dubia*) 2.0
Plains Bristlegrass (*Setaria magrostachya*) 1.0

() D Seed Mixture 4 (Gypsum Sites)

Alkali Sacaton (*Sporobolus airoides*) 1.0
Four-Wing Saltbush (*Atriplex canescens*) 5.0

() OTHER SEE ATTACHED SEED MIXTURE

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

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 Number 5Y 4/2.

() Other

RESERVE PIT CONSTRUCTION STANDARDS

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic

Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease

Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

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

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

CULTURAL

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

TRASH PIT STIPS

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

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marshall and Winston, Inc
Well Name & No. 4-Dublin Federal 23
Location: 1980' FSL, 0660' FEL, Sec. 23, T-22-S, R-28-E, Eddy County, NM
Lease: LC-069157

.....

I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 2 hours in advance for a representative to witness:
1. Spudding well
 2. Setting and/or Cementing of all casing strings
 3. BOPE tests
- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822.
- B. No Hydrogen Sulfide has been reported in the area.
- C. 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.

II. CASING:

- A. The 8-5/8 inch surface casing shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 450 feet** and cemented to the surface.
1. 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.
 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 18 hours, 24 hours in the potash area or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 3. 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.
 4. **If cement falls back, remedial action will be done prior to drilling out that string.**

**Possible lost circulation in the Delaware and Bone Spring formations.
Medium cave/karst potential.**

- B. The minimum required fill of cement behind the 5-1/2 inch production casing is **for cement to come to surface. Both stages to circulate.** If cement does not circulate see A.1 thru 4.
- C. 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.

III. PRESSURE CONTROL:

- A.** 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.
- B.** The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.
 - 1. The tests shall be done by an independent service company.**
 - 2.** The results of the test shall be reported to the appropriate BLM office.
 - 3.** 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.
 - 4.** 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.

IV. Drill Stem Test

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

Engineer on call phone (after hours): Carlsbad - 505-706-2779

WWI 072007

BLM Lease #: LC-069157
Company Reference: Marshall & Winston, Inc.
Well # & Name: Dublin Federsl 23 #4

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS
CARLSBAD FIELD OFFICE

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

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

1. ROAD WIDTH AND GRADE

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

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

2. CROWNING AND DITCHING

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

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

☐ Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

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

SPACING INTERVAL FOR TURNOUT DITCHES

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

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

For this road the spacing interval for lead-off ditches shall be at

☒ 400 foot intervals.

☐ _____ foot intervals.

☐ locations staked in the field as per spacing intervals above.

☐ locations delineated on the attached map.

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

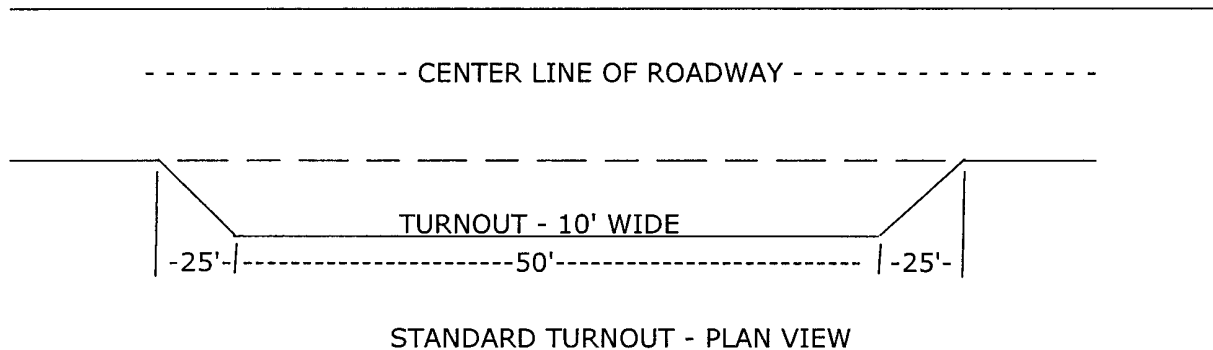
C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

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

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

4. TURNOUTS

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



5. SURFACING

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

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

6. CATTLEGUARDS

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

7. MAINTENANCE

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

8. PUBLIC ACCESS

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

9. CULTURAL RESOURCES

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

10. SPECIAL STIPULATIONS: