Form: 3160-5 (April 2004)	UNITED STATE DEPARTMENT OF THE BUREAU OF LAND MAD	E INTERIOR	CEME	TESIA Sillase Seria	FORM APPROVED OM B No. 1004-0137 Expires: March 31, 2007
Do not use	Y NOTICES AND RE this form for proposals well. Use Form 3160-3	PORTS ON WE	LLS	<u>NM-65</u> 6. If Indian,	Allottee or Tribe Name
	RIPLICATE- Other ins			7. TriUnit or	CA/Agreement, Name and/or No.
1. Type of Well XOil Well	Gas Well Other	AUG 2	8 2008	8. Well Nan	
2. Name of Operator GREAT WESTERN DR	ILLING COMPANY (M	IKE CURE 432-		MADERA ' 9. API We	
3a Address P. O. BOX 1659 M	IIDLAND, TEXAS 797	3b. Phone No. (include 02 432-682-5	•	30 -0 10. Field and	25-36 161 Pool, or Exploratory Area
4. Location of Well (Footage, See	c., T., R., M., or Survey Description)			JABALINA	A-BONE SPRING
<del>660'</del> FNL & 660'	FEL SECTION 25 T	26S-R34E		11. County o	r Parish, State
700 1100		Unit	A	EDDY CO	NEW MEXICO
12. CHECK	APPROPRIATE BOX(ES) TO	O INDICATE NATUR	E OF NOTICE, RI	EPORT, OR	OTHER DATA
TYPE OF SUBMISSION		TY	PE OF ACTION		
X Notice of Intent	Acidize	Deepen Fracture Treat	Production (Sta Reclamation Recomplete	rt/Resume)	Water Shut-Off Well Integrity Other
Final Abandonment Notice	X Change Plans	Plug and Abandon Plug Back	Temporarity Ab	andon	
If the proposal is to deepen d	leted Operation (clearly state all per lirectionally or recomplete horizonta h the work will be performed or pro-	lly, give subsurface locatio	ns and measured and true	e vertical depths	

Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

1. Great Western Drilling Company requests the approval to move their MADERA "25"
FEDERAL # 2 From: 700' FNL & 1100' FEL SEC. 25 T26S-R34E EDDY CO. NM.
To: 660' FNL & 660' FEL SEC. 25 T26S-R34E EDDY CO. NM.

2. Change the depth from 16,000' to 9500' and from a gas well to an oil well.

3. See attached pages for details.

SUBJECT TO LIKE

APPROVAL BY STATE

# SEE ATTACHED FOR CONDITIONS OF APPROVAL

- martin martine - - -

14 I hereby deruify that the foregoing is true and correct Name (Printed/Typed)	TuttePERMIT Eng.		
/Signature	Date 07/23/08	APPROV	ED_
THIS SPACE FOR FEDERA	E		
Approved by	Title	Date AUG 2 6 20	08
Conditions of approval, if any, are attached. Approval of this notice does not warracerufy that the applicant holds legal or equitable title to those rights in the subject l which would entitle the applicant to conduct operations thereon.	ease Office	WESLEY W. ING	INTER-
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for an States any false, fictitious or fraudulent statements or representations as to any matter	y person knowingly and willfully to make er within its jurisdiction.	te to any department or agency of d	ne United

(Instructions on page 2)

DISTRICT 4 . 1625 N. FRENCH DR., HOBBS, NM 86240

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DISTRICT II 1301 W. grand avenue, artesia, nw 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

Energy, Minerals and Natural Resources Department

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

DISTRICT IV 1220 s st. prancis 1	DR., SANTA FE.	NM 87505	WELL LO	CATION	AND ACREA	GE DEDICATI	ON PLAT	🗆 AMENDI	ED REPORT	
	Number	Pool Code Pool Name								
Property	Code	ļ · · · ·	JABALINA-BONE SPRING Property Name Well Num						mber	
			MADERA 25 FEDERAL							
OGRID N 226678	0.		G	REAT V	Operator Nam WESTERN DF	RILLING, CO.			Elevation 3191'	
220070		I			Surface Loca				J	
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
А	25	26-S	34-E		660	NORTH	660	EAST	LEA	
	L	<u></u>	Bottom	Hole Lo	cation If Diffe	erent From Sur	face	L		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
				<u> </u>						
Dedicated Acre	s Joint o	r Infill C	onsolidation	Code Or	der No.					
40										
NO ALLO	OWABLE W					JNTIL ALL INTER APPROVED BY '		EN CONSOLIDA	TED	
	[				DETAIL			OR CERTIFICAT		
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	1			1	0 000	SEE DETAIL	or unleased m.	ther owns a working ineral interest in th proposed bottom hol	e land	
				L	600'		or has a right location pursu	to drill this well at ant to a contract wi	this than	
				3192 5'	3190.6' N	M-65441	owner of such or to a volunt compulsory po	mineral or working ary pooling agreemen pling order heretofor	interest, nt or a	
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	1						Certificate N	o. GARY EIDSON RONALD J. EIDSO	12641 DN 3239	
				L			L		J	



VICINITY MAP



SCALE: 1'' = 2 MILES

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SEC. 25 TWP. 26-S RGE. 34-E SURVEY N.M.P.M. COUNTY LEA STATE NEW MEXICO DESCRIPTION 660' FNL & 660' FEL ELEVATION 3191' GREAT WESTERN OPERATOR DRILLING CO. LEASE MADERA 25 FEDERAL

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# LOCATION VERIFICATION MAP

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In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your information.

- 1. LOCATION: 660' FNL & 660' FWL SECTION 25 T26S-R34E LEA CO. NM
- 2. ELEVATION ABOVE SEA LEVEL: 3191' GL
- 3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternery Aeolian Deposits.
- <u>k</u>.
- 4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
- 5. PROPOSED DRILLING DEPTH: 9500'

#### 6. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Rustler Anhydrite	970 <b>'</b>	Delaware Sand	5360 <b>'</b>
Yates	2365'	Bone spring	9450 <b>'</b>
San Andres	3620'	TD	9500 <b>'</b> ±
Delaware Lime	5330'		

#### 7. POSSIBLE MINERAL BEARING FORMATION:

Delaware Lime	011	Bone Spring	011
Delaware Sand 8. CASING PROGRAM:	011		

HOLE SIZE	INTERVAL	OD OF CASING	WEIGHT	THREAD	COLLAR	GRADE	CONDITION
26"	0-40'	20"	NA	NA	NA	CONDUCTOR	New
1711	0-1040±'	13 3/8"	54.5#	8-R	ST&C	J-55 _S-80	New
121"	0-5300'	8 5/8"	32#	8-R	ST&C	J-5502	New F-Dottop
7 7/8"	0-9500'	5 <u>1</u> "	17#	8-R	LT&C	N-80	New

per operator 6/26/06

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#### 9. CASING CEMENTING & SETTING DEPTHS:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Set 1040±' of 13 3/8" 54.5# J-55 ST&C casing. Cement with 750 Sx. of 35/65 Class "C" POZ + 3% Salt, + 6% Bentonite, + additives, Yield 1.90. Tail in with 250 Sx. of Class "C" cement + 1% CaCl, Yield 1.34, circulate cement to surface.
8 5/8"	Intermediate Actoria	circulate cement to surface. Set 5300±' of 8 5/8" 32# S-80 ST&C casing as follows >1500' of 8 5/8" 32# S-80 ST&C, 3800' of 8 5/8" 32# J-55 ST&C casing. Cement with 1500 Sx. of 35/65 Class "C" POZ, + 3% Salt, + 6¢ Bentonite, + additives, Yield 1.90, tail in with500 Sx. of Class "C" cement + 1%CaCl, + additives Yield 1.34, circulate cement to surface.
51"	Production	Set 9500' of 5½" 17# N-80 LT&C casing. Cement with 350 Sx. of 50/50 Class "C" POZ cement + 5% Salt, + 10% Bentonite + retarder, + additives, Yield 2.45. Tail in with 350 Sx. of Class "C" cement + additives, Yield 1.33 estimated top of cement 4500' from surface

- 10. <u>PRESSURE CONTROL EQUIPMENT:</u> Exhibit "E" shows a 1500 Series 5000 PSI working -pressure B.O.P. consisting of an annular bag type preventor, middle blind rams, and bottom pipe rams. The B.O.P. will be nippled up on the 13 3/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraulically operated closing unit and a 3" 5000 PSI working pressure choke manifold with dual adjustable chokes. No abnormal pressure or temperatures are expected while drilling this well.
- 11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-1040'	8.4-8.6	28-36	NC	Fresh water Spud Mud use paper to control seepage
1040- 5300'	10.0-10.2	28-38	NC	Brine water use paper to control seepage, and high viscosity sweeps to clean hole.
53-TD	8.4-8.7	28-30	NC	Fresh water if necessary add fresh water Gel to control viscosity to clean If water loss is needed use starch to control water loss.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, and casing the viscosity and/or the water loss may have to be adjusted to meet these needs.

#### 12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Electric logs that will be run: GR/SP/DIL/ & Gamma Ray/Caliper/CNL/FDT, from TD back to 5300' Run MRI. Gamma Ray CNL from 5300' back to surface.
- B. Mud logger will be rigged up on the hole at 5300' and remain on the hole to TD.

Report a data for the second

C. No full hole cores or DST's are planned at this time, sidewall cores may be taken.

#### 13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of  $H^2S$  in this area. If  $H^2S$  is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP <u>4700±</u> PSI, and Estimated BHT 180°.

#### 14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take <u>38</u> days. If production casing is run then an additional <u>30</u> days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

#### 15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The <u>BONE SPRING</u> formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

# I. DRILLING

## A. DRILLING OPERATIONS REQUIREMENTS

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

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

Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Bone Spring** formation. 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.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string.

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

Possible lost circulation in the shallow zones.

Possible high pressure gas bursts in the Wolfcamp formation and high pressure in the Pennsylvanian section.

- 1. The 13-3/8 inch surface casing shall be set at approximately 1040 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial action 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-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

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. 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.

### **D. DRILL STEM TEST**

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

WWI 082608