Form 3160-5 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

<b>O</b> CD	Hobbs
-------------	-------

FORM APPROVED OMB NO. 1004-0135 Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an HOBBS OCT

i. Lease Serial No. NMNM114998

	TC	T	111	A 11		T. 11.	B 1
-		_	_	 	_	 _	_

abandoned well. Use form 3160-3 (API	o) for such proposals. MAY 2 6 201	)			
SUBMIT IN TRIPLICATE - Other instruc		7. If Unit or CA/Agreement, Name and/or No.			
1. Type of Well  ☐ Gas Well ☐ Other	RECEIVED	8. Well Name and No. TALCO 25 25 35 FEDERAL 1H			
Name of Operator     CHEVRON USA INCORPORATED E-Mail: CHERRER	CINDY H MURILLO AMURILLO@CHEVRON.COM	9. API Well No. <b>42548</b> 30-025-4 <del>2458</del> -00-X1			
3a. Address 15 SMITH ROAD MIDLAND, TX 79705	3b. Phone No. (include area code) Ph: 575-263-0431 Fx: 575-263-0431	10. Field and Pool, or Exploratory WC-025 G08 S253534O			
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)		11. County or Parish, and State			
SOUTESTINE NWNW 280FNL 660FWL 32.107717 N Lat, 103.327186 W Lon	-25S-35E	LEA COUNTY, NM			
12. CHECK APPROPRIATE BOX(ES) TO	INDICATE NATURE OF NOTICE, RI	EPORT, OR OTHER DATA			

TYPE OF SUBMISSION	TYPE OF ACTION							
Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	■ Water Shut-Off				
<del>-</del>	☐ Alter Casing	☐ Fracture Treat	■ Reclamation	■ Well Integrity				
☐ Subsequent Report	Casing Repair	■ New Construction	□ Recomplete	Other				
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug and Abandon	□ Temporarily Abandon	Change to Original A PD				
	Convert to Injection	□ Plug Back	☐ Water Disposal					

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. 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.)

CHEVRON USA INC REQUESTS TO MAKE CHANGES TO THE ORIGINAL APD. CHEVRON HAS CHANGED THE PILOT HOLE, PLEASE FIND ATTACHED A REVISED DRILLING PLAN. IF YOU HAVE ANY QUESTIONS, PLEASE CALL CHIDUBEM ALINNOR AT 713-372-6475.

				· · · · · · · · · · · · · · · · · · ·	
14. I hereby certify that th	e foregoing is true and correct. Electronic Submission #301105 verifie For CHEVRON USA INCORP Committed to AFMSS for processing by LI	DRÁTE	D. sent to the H	Hobbs	
Name(Printed/Typed)	CINDY H MURILLO	Title	PERMITTING	G SPECIALIST	
Signature	(Electronic Submission)  THIS SPACE FOR FEDERA	Date	05/08/2015 STATE OFF	ICE WSE TO THE TOTAL PROVED	
Approved By		Title		MAY 2 0 2015 Pate	
Conditions of approval, if ar certify that the applicant hol	y, are attached. Approval of this notice does not warrant or its legal or equitable title to those rights in the subject lease icant to conduct operations thereon.	Office		/s/ Chris Walls BUREAU OF LAND MANAGEMENT	

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 it any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*



#### 1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD.
Rustler	2347	775	
Magenta Dolomite	2297	825	
Salado	1961	1161	
Castile	-155	3277	
Lamar	-1920	5042	
Bell Canyon	-1965	5087	
Cherry Canyon	-2859	5981	
Brushy Canyon	-4354	7476	
Bone Spring Limestone	-5516	8638	
1st Bone Spring	-6811	9933	
2nd Bone Spring	-7460	10582	
3rd Bone Spring	-8548	. 11670	
Pilot TD	-8992	12114	
Lateral TD (3rd Bone Spring)	(8,895)	12,017	16484

# 2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth
Deepest Ex	pected Base of Fresh Water	825
Water	Rustler	775
Water	Bell Canyon	5087
Water Cherry Canyon		7476
Oil/Gas	Brushy Canyon	7476
Oil/Gas	Bone Spring Limestone	8638
Oil/Gas	1st Bone Spring	9933
Oil/Gas 2nd Bone Spring		10582
Oil/Gas	3rd Bone Spring	11670

All shows of fresh water and minerals will be reported and protected.

## 3. **BOP EQUIPMENT**

Will have a minimum of a 5000 psi rig stack (see proposed schematic) for drill out below surface casing. Stack will be tested as specified in the attached testing requirements. Chevron requests a variance to use A coflex hose with a metal protective covering that will be utilized between the BOP and Choke manifold. Please see the attached testing and certification information.

Chevron requests a variance to use a GE/Vetco SH-2 Multibowl wellhead, which will be run through the rig foor on surface casing. BOPE will be nippled up and test after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from GE/Vetco and BOP test information will be provided in a subsequent report at the end of the well. Please see the attached wellhead schematic. An installation manual has been placed on file with the BLM office and remains unchanged from previous submittal.

CONFIDENTIAL -- TIGHT HOLE DRILLING PLAN

PAGE:

4. CASING PROGRAM

a. The proposed casing program will be as follows:

Purpose	From	7 To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0' (5	1-120	17-1/2"	13-3/8"	54.5#	J-55	STC	New
Intermediate	0'	9,800'	12-1/4"	9-5/8"	43.5 #	HCP-110	LTC	New
Production	0'	16,489'	8-1/2"	5-1/2"	20.0 #	HCP-110	CDC	New

see APD

- b. Casing design subject to revision based on geologic conditions encountered.
- c. \*\*\*A "Worst Case" casing design for wells in a particular area is used below to calculate the Casing Safety Factors. If for any reason the casing design for a particular well requires setting casing deeper than the following "worst case" design, then the Casing Safety Factors will be recalcuated & sent to the BLM prior to drilling.
- d. Chevron will fill casing at a minimum of every 20 jts (840') while running for intermediate and production casing in order to maintain collapse SF.

SF Calculations based on the following "Worst Case" casing design.

Surface Casing:

1500'

Intermediate Casing:

9100'

**Production Casing:** 

16800' MD/12300' TVD (5000' VS @ 90 deg inc)

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.2	1.2	1.6
Deep Intermediate	1.2	1.2	1.6
Production	1.2	1.2	1.6

Min SF is the smallest of a group of safety factors that include the following considerations:

	Surf	Int	Prod
Burst Design			
Pressure Test- Surface, Int, Prod Csg	X	X	X
P external: Water	ľ		
P internal: Test psi + next section heaviest mud in csg			
Displace to Gas- Surf Csg	X		
P external: Water			
P internal: Dry Gas from Next Csg Point			
Frac at Shoe, Gas to Surf- Int Csg	1	X	
P external: Water		i	
P internal: Dry Gas, 15 ppg Frac Gradient			
Stimulation (Frac) Pressures- Prod Csg			X
P external: Water			
P internal: Max inj pressure w/ heaviest injected fluid			
Tubing leak- Prod Csg (packer at KOP)			X
P external: Water			
P internal: Leak just below surf, 8.7 ppg packer fluid			
Collapse Design			
Full Evacuation	X	X	X
P external: Water gradient in cement, mud above TOC			
P internal: none			,
Cementing- Surf, Int, Prod Csg	X	Х	X
P external: Wet cement		ļ	
P internal: water			
Tension Design			
100k lb overpull	X	X	Х

CONFIDENTIAL -- TIGHT HOLE DRILLING PLAN PAGE:

## 5. CEMENTING PROGRAM

Slurry	Type	Тор	Bottom	Weight	Yield	%Excess	Sacks	Water
Surface				(ppg)	(sx/cu ft)	Open Hole		gal/sk
Lead	C + 4% Gel+2%CaCl	0'	820'	13.5	1.75	150	766	9.18
Tail	Class C+2%CaCl	820'	1,120'	14.8	1.36	150	441	6.39
<u>Intermediate</u>					T			
1st Stage Lead	50% Class H+ 50% Silicalite +2% Gel	5,050'	9,200'	11.3	2.54	40	716	15.51
1st Stage Tail	1st Stage Tail Class C		9,800'	14.8	1.33	40	227	6.57
2nd Stage Lead	2nd Stage Lead 65C/35Poz +6%Gel +5%Salt		4,750'	12.9	1.87	100	1442	9.87
2nd Stage Tail	Class C	4,750'	5,050'	14.8	1.33	100	141	6.57
Production			T					
1st Lead	50% Class H+ 50% Silicalite +2% Gel	4,550'	11,039'	11.3	2.54	75	735	15.07
2nd Land	Versacem	11,039'	12,289'.	13.2	1.61	75	315	8.10
2nd Lead	(Halliburton)							
Tail	Acid Soluble Cement	12,289'	16,484'	15	2.6	35	499	11.2

- 1. Final cement volumes will be determined by fluid caliper.
- 2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
- 3. Production casing will have one horizontal type centralizer on every joint for the first 1000' from TD, then every other joint to EOB, and then every third joint to KOP. Bowspring type centralizers will be run from KOP to intermediate
- 4. Intermediate cement job will be performed in 2 stages with a DV tool with at ~5050'. An ECP will placed below the DV tool and inflated before pumping the 2nd stage

#### Pilot Hole Plugging Plan:

The 8-1/2" pilot hole will TD in the Wolfcamp formation ~12,114' (exact depth of Pilot TD will depend on geologic tops encountered while drilling). An open hole cemented whipstock will be utilized with 2-7/8" tail pipe. The tail 2-7/8" tail pipe will be cemented in place from the Pilot hole TD of 12,144' MD/TVD to the whipstock/KOP at 11,539' MD/TVD ( KOP subject to change after evaluating Pilot Hole logs).

Plug	Slurry	Туре	Тор	Bottom .	Weight	Yield	%Excess	Sacks	Mix Water
					(ppg)	(sx/cu ft)	Open Hole	· ·	Gal/Sk
Pilot Hole Plug	Plug Cement	Class H	11,539	12,114'	17.2	0.97	35	424	3.61

CONFIDENTIAL -- TIGHT HOLE DRILLING PLAN

psi

## PAGE:

#### 6. MUD PROGRAM

	From	То	Туре	Weight	F. Vis	OWR
ار	0'	1,120	Spud Mud	8.3 - 8.7	32 - 34	NC - NC
	1=120	3,277'	Oil based mud	8.8 - 9.0	50 - 60	70 - 30
	3,277'	9,800'	Oil based mud	8.8 - 9.0	50 - 60	70 - 30
ſ	9,800'	11,539'	Oil based mud	9.5 - 11.0	55 - 65	70 - 30
[	11,539'	12,289'	Oil based mud	9.5 - 11.0	55 - 65	70 - 30
	12,289'	16,484'	Oil based mud	9.5 - 11.0	55 - 65	70 - 30

After drilling through the fresh water sands in the 12.25" hole with spud mud, the mud system will be changed to oil based mud to allow for decreased mud weights without excessive salt washout. This has been successfully implemented in previous wells.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume. When abnormal pressures are anticipated -- a pit volume totalizer (PVT), stroke counter, and flow sensor will be used to detect volume changes indicating loss or gain of circulating fluid volume.

A weighting agent and lost circulating material (LCM) will be onsite to mitigate pressure or lost circulation as hole conditions dictate.

## 7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

- a. Drill stem tests are not planned.
- b. The logging program will be as follows:

TYPE	Logs	Inter	/al Tim	ning	Vendor
Mudlogs	2 man mudlog	5000	' to TD Dril	llout of Surf Csg	TBD
LWD	MWD Gamma	Curve	e and Lateral Wh	nile Drilling	TBD
OH	Quad Combo	9800	to Pilot Hole TD Afte	er drilling pilot hole	Schlumberger
-	-				-
-	-	-	-	•	-
-	_	-	-		- ,

- No coring is planned
- d. A Directional Survey will be run.

# 8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

- a. Increased pressure is expected in the base of the 3rd Bone Spring sand. No abnormal temperatures are expected. Estimated BHP is:
- 6561 b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered