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Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM104684

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
SND 12 01 FED 002 4H

2. Name of Operator
CHEVRON USA INCORPORATED
Contact: LAURA BECERRA
E-Mail: LBECERRA@CHEVRON.COM

9. API Well No.
30-015-46241-00-X1

3a. Address
6301 DEAUVILLE BLVD
MIDLAND, TX 79706

3b. Phone No. (include area code)
Ph: 432-687-7665

10. Field and Pool or Exploratory Area
SAND DUNES

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 12 T24S R31E SESW 985FSL 1715FWL
32.227345 N Lat, 103.734520 W Lon

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 respectfully requests the following changes to the originally approved APD:

- Change of the originally approved 9-5/8" casing setting depth, weight & connection type, TOC requirement to 500' inside previous casing shoe instead of surface, safety factors for intermediate casing, intermediate lead cement weight and mud program. A copy of the revised 9 Point Drilling Plan is attached to this request.

- A variance to wait to 500 psi compressive strength of the tail cement slurries for both the Surface and Intermediate casing. Engineering lab tests as provided by the cementing provider Tests are attached to this request.

- A variance from the Onshore Order 2 to break test if able to finish the next hole section within

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #499574 verified by the BLM Well Information System
For CHEVRON USA INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 01/21/2020 (20PP0939SE)

Name *(Printed/Typed)* LAURA BECERRA — Title REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 01/16/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By NDUNGU KAMAU — Title PETROLEUM ENGINEER — Date 03/09/2020

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Carlsbad

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Accepted
KP 3-25-20

Additional data for EC transaction #499574 that would not fit on the form

32. Additional remarks, continued

21 days of the previous full BOP test. Upon the first nipple up of the pad a full BOP test will be performed. A break test will consist of a 250 psi low/ ~5,000 psi high 10 min each test against the connection that was broken when skidding the rig. A break test will not be performed on our last production section. A break test will only be performed on operations where BLM documentation states a 5M or less BOP can be utilized, details are attached. Details attached.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CHEVRON USA INCORPORATED
LEASE NO.:	NMNM120901
LOCATION:	SECTION 12, T24S, R31E, NMPM
COUNTY:	EDDY

WELL NAME & NO.:	1H – SND 12 01 FED 002
SURFACE HOLE FOOTAGE:	982'/S & 1640'/W
BOTTOM HOLE FOOTAGE	100'/N & 330/'W

WELL NAME & NO.:	2H – SND 12 01 FED 002
SURFACE HOLE FOOTAGE:	983'/S & 1665'/W
BOTTOM HOLE FOOTAGE	100'/N & 1254/'W

WELL NAME & NO.:	3H – SND 12 01 FED 002
SURFACE HOLE FOOTAGE:	984'/S & 1690'/W
BOTTOM HOLE FOOTAGE	100'/N & 2178/'W

WELL NAME & NO.:	4H – SND 12 01 FED 002
SURFACE HOLE FOOTAGE:	985'/S & 1715'/W
BOTTOM HOLE FOOTAGE	100'/N & 2178/'W

ALL PREVIOUS COAs STILL APPLY.

A. SPECIAL REQUIREMENT (S)

BOP Break Testing Variance (Note: For 5M BOP or less)

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOP Break Testing operations.
- A full BOP test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOP test will be required.

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:
Elevation: 3552 ft

FORMATION	SUB-SEA TVD	TVD	MD	LITHOLOGIES	MIN. RESOURCES	PROD. FORMATION
Rustler	2786	766	766	ANHYD	N/A	
Castile	562	2,990	2,990	SALT	N/A	
Lamar	-1023	4,575	4,575	LIMESTONE	N/A	
Bell Canyon	-1074	4,626	4,626	SAND STONE	N/A	
Cherry Canyon	-1928	5,480	5,480	SAND STONE	N/A	
Brushy Canyon	-3208	6,760	6,760	SAND STONE	N/A	
Bone Spring Lime	-4871	8,423	8,423	LIMESTONE	N/A	
Avalon	-4891	8,443	8,443	SHALE	Oil	
Lateral TD (Lower Avalon)	-5470	9,022	19,397	SHALE	Oil	Yes
First Bone Spring	-5828	9,380		SHALE	N/A	
Second Bone Spring	-6480	10,032		SHALE	N/A	
Third Bone Spring	-7778	11,330		SHALE	N/A	
Wolfcamp A	-8217	11,769		SHALE	N/A	
Wolfcamp B	-8993	12,545		SHALE	N/A	

WELLBORE LOCATIONS	SUB-SEA TVD	RKB TVD	MD
SHL	3552	-	
KOP	-4897	8,449	8,657
FTP	-5470	9,022	9,557
LTP	-5470	9,022	19,397

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 Expected Base of Fresh Water		400
Water	Castile	2,990
Water	Cherry Canyon	5,480
Oil/Gas	Brushy Canyon	6,760
Oil/Gas	Avalon	8,443
Oil/Gas	First Bone Spring	9,380
Oil/Gas	Second Bone Spring	10,032
Oil/Gas	Third Bone Spring	11,330
Oil/Gas	Wolfcamp A	11,769
Oil/Gas	Wolfcamp B	12,545

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

3. BOP EQUIPMENT

Chevron will have a minimum of a 5,000 psi rig stack (see proposed schematic) for drill out below surface casing. The stack will be tested as specified in the attached testing requirements. Batch drilling of the surface, intermediate, and production will take place. A full BOP test will be performed per hole section, unless approval from BLM is received otherwise. Flex choke hose will be used for all wells on the pad (see attached specs and variance). BOP test will be conducted by a third party.

Chevron requests a variance to use a FMC Technologies UH-S Multibowl wellhead, which will be run through the rig floor on surface casing. BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. The field report from FMC Technologies 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. All tests performed by third party.

4. **CASING PROGRAM**

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	800'	17-1/2"	13-3/8"	54.5 #	J-55	STC	New
Intermediate	0'	8,423'	12-1/4"	9-5/8"	40 #	L-80	BTC	New
Production	0'	19,397'	8-1/2"	5-1/2"	20.0 #	P-110	TXP BTC	New

Proposed	Hole Size	Casing Size	Top (MD)	Btm (MD)	Top (TVD)	Btm (TVD)	*Top (SSTVD)*	*Btm (SSTVD)*	Grade	Weight	Joint type
Surface	17-1/2"	13-3/8"	0'	800'	0'	800'	3,552'	2,752'	J-55	54.5 #	STC
Intermediate	12-1/4"	9-5/8"	0'	8,423'	0'	8,423'	3,552'	-4,871'	L-80	40 #	BTC
Production	8-1/2"	5-1/2"	0'	19,397'	0'	9,022'	3,552'	-5,470'	P110	20.0 #	TXP-BTC

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 recalculated & 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:	800'	ftTVD
Intermediate Casing:	8,423'	ftTVD
Production Casing:	19,397'	ftMD

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.80	3.12	3.17	2.26
Intermediate	1.20	1.00	1.60	1.20
Production	1.15	1.39	2.09	1.38

The following worst case load cases were considered for calculation of the above Min. Safety Factors:

Burst Design	Surf	Int	Prod
Pressure Test- Surface, Int, Prod Csg P external: Mud weight above TOC, PP below P internal: Test psi + next section heaviest mud in csg	X	X	X
Displace to Gas- Surf Csg P external: Mud weight above TOC, PP below P internal: Dry Gas from Next Csg Point	X		
Gas over mud (60/40) - Int Csg P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from hole TD PP		X	
Stimulation (Frac) Pressures- Prod Csg P external: Mud weight above TOC, PP below P internal: Max inj pressure w/ heaviest injected fluid			X
Tubing leak- Prod Csg (packer at KOP) P external: Mud weight above TOC, PP below P internal: Leak just below surf, 8.45 ppg packer fluid			X
Collapse Design	Surf	Int	Prod
Full Evacuation P external: Mud weight gradient P internal: none	X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X
Tension Design	Surf	Int	Prod
100k lb overpull	X	X	X

5. CEMENTING PROGRAM

Slurry	Type	Top	Bottom	*Sacks*	Yield	Density	%Excess	Water	*Volume*	Additives
Surface					(cu ft/sk)	(ppg)	Open Hole	gal/sk	cuft	
Tail	Class C	0'	800'	1076	1.34	14.8	100	6.40	1442	Extender, Antifoam, Retarder
Intermediate Csg										
Lead	Class C	0'	7,423'	884	3.42	10.5	30	21.20	3022	Extender, Antifoam, Retarder, Viscosifier
Tail	Class C	7,423'	8,423'	334	1.33	14.8	30	6.38	445	Extender, Antifoam, Retarder, Viscosifier
Production										
Lead 1	Class C	7,423'	8,500'	874	2.46	11.9	10	14.05	2151	Extender, Antifoam, Retarder, Viscosifier
Lead 2	Class C	8,500'	18,397'	1348	1.85	13.2	10	9.87	2494	Extender, Antifoam, Retarder, Viscosifier
Tail	Acid Sol Class H	18,397'	19,397'	115	2.19	15	10	9.54	252	Extender, Antifoam, Retarder, Viscosifier

1. Final cement volumes will be determined by 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 solid body type centralizer on every joint in the lateral, then every other joint to KOP. Bowspring type centralizers will be run from KOP to intermediate casing and surface.

6. MUD PROGRAM

From	To	Type	Weight	Viscosity	Filtrate
0'	800'	Fresh water mud	8.3 - 8.9	28-30	N/C
800'	8,423'	OBM	9.0 - 10.1	15-Oct	15-25
8,423'	19,397'	OBM	8.3 - 9.5	10-15	15-25

A closed system will be used consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations. And transportating of E&P waste will follow EPA regulations and accompanying manifests.

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	Interval	Timing
Mudlogs	2 man mudlog	Surface casing shoe through prod hole TD	While drilling or circulating
LWD	MWD Gamma	Int. and Prod. Hole	While Drilling

c. Conventional whole core samples are not planned.
d. A directional survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressure or temperatures are expected. Estimated BHP is: 4,457 psi
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered