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.
NMNM118723

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: INJECTION

8. Well Name and No.
MAELSTROM SWD 1

2. Name of Operator
CHEVRON USA INCORPORATED
Contact: KAYLA MCCONNELL
E-Mail: kaylamcconnell@chevron.com

9. API Well No.
30-025-45127-00-X1

3a. Address
6301 DEAUVILLE BLVD
MIDLAND, TX 79706

3b. Phone No. (include area code)
Ph: 432-687-7375

10. Field and Pool or Exploratory Area
SWD-DELAWARE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T26S R32E NWSE 2050FSL 1793FEL
32.041229 N Lat, 103.659966 W Lon

11. County or Parish, State
LEA 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 request the following changes to the original APD, as approved:

Original: 18 1/2" hole
Change to: 18 1/8" hole

Original: 5 7/8" hole
Change to: 6 1/8" hole

Original: 13 3/8" Tenaris Wedge 513 Flush connection
Change to: 13 3/8" Tenaris Wedge 523 Semi-Flush connection (See attached data sheet)

Chevron also request to use the following BOP ratings for the hole sections listed below:

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

Electronic Submission #433686 verified by the BLM Well Information System
For CHEVRON USA INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/17/2018 (19PP0137SE)

Name *(Printed/Typed)* KAYLA MCCONNELL — Title PERMITTING SPECIALIST

Signature (Electronic Submission) — Date 09/04/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS — Title PETROLEUM ENGINEER — Date 11/13/2018

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 Hobbs

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 ****

Additional data for EC transaction #433686 that would not fit on the form

32. Additional remarks, continued

- 2M 21-1/4 BOP will be installed and tested to drill the 18 1/8" hole section (800' to 4,540').
- 5M 16-3/4 BOP will be installed and tested to drill the 14 3/4" hole section (4,540' to 12,000').

- 10M 13-5/8 BOP will be installed and tested to drill the 12 1/4", 8 1/2", and 6 1/8" hole section (12,000' to 19,100').

See attached 9 point drilling plan for highlighted changes & amended WBD.

Revisions to Operator-Submitted EC Data for Sundry Notice #433686

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM118722	NMNM118723
Agreement:		
Operator:	CHEVRON USA INC. 6301 DEAUVILLE BLVD. MIDLAND, TX 79706 Ph: 432-687-7375	CHEVRON USA INCORPORATED 6301 DEAUVILLE BLVD MIDLAND, TX 79706 Ph: 432.687.7100 Fx: 432-687-7221
Admin Contact:	KAYLA MCCONNELL REGULATORY ANALYST E-Mail: kaylamcconnell@chevron.com Ph: 432-687-7375	KAYLA MCCONNELL PERMITTING SPECIALIST E-Mail: kaylamcconnell@chevron.com Ph: 432-687-7375
Tech Contact:	KAYLA MCCONNELL REGULATORY ANALYST E-Mail: kaylamcconnell@chevron.com Ph: 432-687-7375	KAYLA MCCONNELL PERMITTING SPECIALIST E-Mail: kaylamcconnell@chevron.com Ph: 432-687-7375
Location: State: County:	 NM LEA	 NM LEA
Field/Pool:	SWD;SILURIAN	SWD-DELAWARE
Well/Facility:	MAELSTROM SWD 1 Sec 15 T26S R32E 2050FSL 1793FEL	MAELSTROM SWD 1 Sec 15 T26S R32E NWSE 2050FSL 1793FEL 32.041229 N Lat, 103.659966 W Lon

For the latest performance data, always visit our website: www.tenaris.com

Wedge 523®

Printed on: 09/04/2018

		Min. Wall Thickness	87.5%	(*)GradeTN 110SS	
Outside Diameter	13.375 in.	Connection OD Option	REGULAR	Coupling	Pipe Body
Wall Thickness	0.514 in.	Drift	Alternative Drift	Body: Brown	1st Band: Pink
Grade	TN 110SS*	Type	Casing	1st Band: Pink	2nd Band: Yellow
				2nd Band: Yellow	3rd Band: Brown
				3rd Band: -	4th Band: -

PIPE BODY DATA

Geometry

Nominal OD	13.375 in.	Nominal Weight	72.00 lbs/ft	Drift	12.25 in.
Nominal ID	12.347 in.	Wall Thickness	0.514 in.	Plain End Weight	70.67 lbs/ft
OD Tolerance	API				

Performance

Body Yield Strength	2284 x1000 lbs	Internal Yield	7400 psi	SMYS	110000 psi
Collapse	2880 psi				

CONNECTION DATA

Geometry

Connection OD	13.602 in.	Connection ID	12.294 in.	Make-up Loss	4.940 in.
Threads per in	3.06	Connection OD Option	REGULAR		

Performance

Tension Efficiency	71.5 %	Joint Yield Strength	1633.060 x1000 lbs	Internal Pressure Capacity	7400.000 psi
Compression Efficiency	82.3 %	Compression Strength	1879.732 x1000 lbs	Max. Allowable Bending	27.2 °/100 ft
External Pressure Capacity	2880.000 psi				

Make-Up Torques

Minimum	33000 ft-lbs	Optimum	40000 ft-lbs	Maximum	58000 ft-lbs

Operation Limit Torques

Operating Torque	161000 ft-lbs	Yield Torque	241000 ft-lbs

Notes

This connection is fully interchangeable with:

Wedge 513® - 13.375 in. - 72 lbs/ft

Wedge 523® - 13.375 in. - 68 lbs/ft

Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version

For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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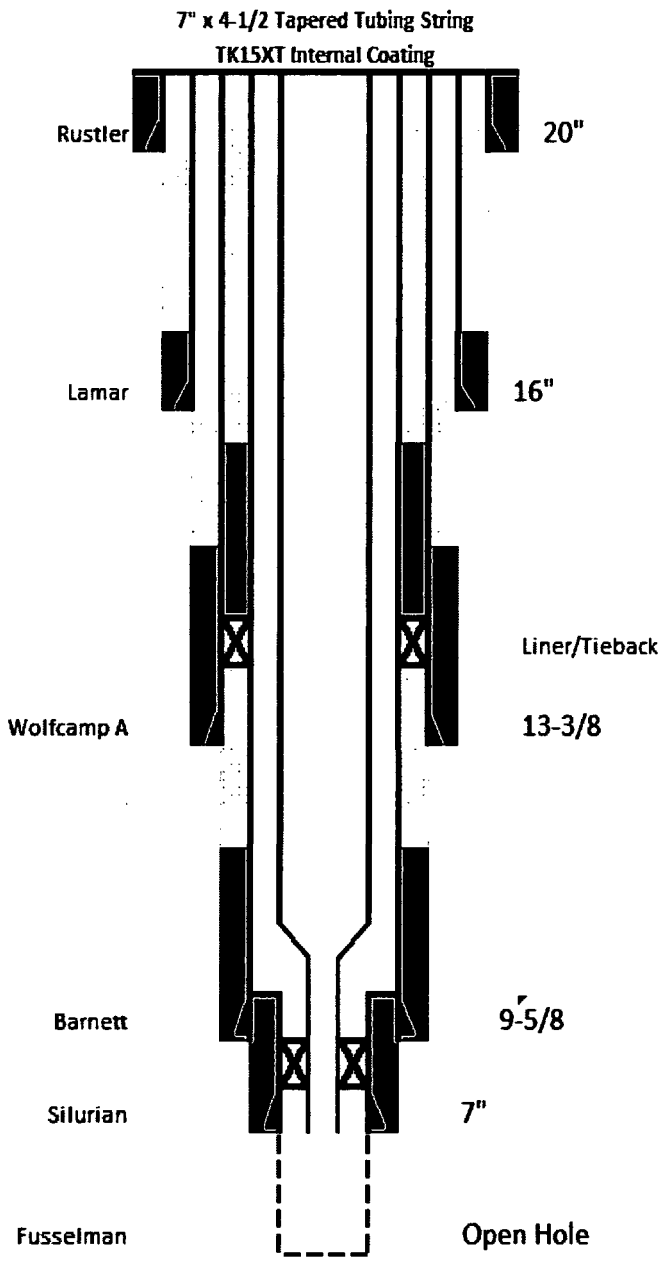
CHEVRON USA INC
MAELSTROM SWD #1
API: 30-025-4512
2050' FSL & 1783' FEL
Sec. 15 T26S R32E
Lea County, NM

PROPOSED WELLBORE DIAGRAM



Hole Size	Casing	Mud Program
24" +/-800'	20" 94# J55 BTC	Spud Mud 8.3-9.0 ppg
~~18-1/2"~~ 18-1/8" +/-4,540'	16" 97# L80 BTC	Brine Water 10-10.4 ppg
14-3/4" +/- 12,000'	13-3/8" 72# TN-110SS 523 Alt Drift 12.25"	OBM 8.7-10.0 ppg
12-1/4" +/- 17,410	9-5/8" 53.5# TN-95IC Blue Liner Alt Drift 8.5" ~11,700' 9-5/8" 53.5# TN-110HS Blue Tieback Alt Drift 8.5"	OBM 12.2-15.6 ppg
8-1/2" +/- 17,950'	7" 26# L80 Blue Liner	WBM 8.9-9.6 ppg
~~5-7/8"~~ 6-1/8" +/- 19,100'	N/A	Cut Brine 8.4-9.0 ppg
Injection interval will be treated with 15-20% HCL @ 50-100gal/ft		

1. **FORMATION TOPS**

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA TVD	KBTVD	MD
Rustler		580	580
Castile		2,710	2,710
Lamar		4,510	4,510
Bell Canyon		4,560	4,560
Cherry Canyon		5,570	5,570
Brushy Canyon		7,130	7,130
Bone Spring Lime		8,630	8,630
Upper Avalon		8,700	8,700
Top Bone Spring 1		9,650	9,650
Top Bone Spring 2		10,230	10,230
Top Bone Spring 3		10,320	10,320
Wolfcamp A		11,900	11,900
Wolfcamp B		12,600	12,600
Wolfcamp C		13,100	13,100
Wolfcamp D		14,100	14,100
Strawn		14,600	14,600
Atoka		15,000	15,000
Morrow		15,900	15,900
Barnett Shale		16,700	16,700
Mississippian Lime		17,400	17,400
Woodford		17,790	17,790
Silurian		17,950	17,950
Fusselman		18,815	18,815
Montoya		19,100	19,100

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
W	Castile	2,710
W	Lamar	4,510
O / W	Bell Canyon	4,560
O / W	Cherry Canyon	5,570
O / W	Brushy Canyon	7,130
O / G / W	Bone Spring Lime	8,630
O / G / W	Upper Avalon	8,700
O / G / W	Top Bone Spring 1	9,650
O / G / W	Top Bone Spring 2	10,230
O / G / W	Top Bone Spring 3	10,320
O / G / W	Wolfcamp A	11,900
O / G / W	Wolfcamp B	12,600
O / G / W	Wolfcamp C	13,100
O / G / W	Wolfcamp D	14,100
O / G / W	Strawn	14,600
G / W	Atoka	15,000
G / W	Morrow	15,900
W	Barnett Shale	16,700
W	Mississippian Lime	17,400
W	Woodford	17,790
W	Top Silurian	17,950
W	Top Fusselman	18,815
W	Montoya	19,100

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

3. **BOP EQUIPMENT**

A 2M 21-1/4 BOP will be installed and tested to drill the 18-1/8" hole section (800' to 4,540'). Please see schematic. The BOP will be tested as a 2M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated surface pressure in hole section 1456 psi =[(10.4ppg x 0.052) - 0.22] x 4540' TVD.

A 5M 16-3/4 BOP will be installed and tested to drill the 14-3/4" hole section (4,540' to 12,000'). Please see schematic. The BOP will be tested as a 5M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated pressure in hole section 3600 psi = [(10.0ppg x 0.052) - 0.22] x 12,000' TVD.

A 10M 13-5/8 BOP will be installed and tested to drill the 12-1/4", 8-1/2", and 6-1/8" hole section (12,000' to 19,100'). Please see schematic. The BOP will be tested as a 10M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe. Max anticipated pressure in hole section 9,750 psi =[(15.0 ppg x 0.052) - 0.22] x 17,410' TVD. After 17,410 there is a pressure regression back to normally pressured.

Chevron request a variance to use a felxible line with flanged ends between the BOP and the choke manifold. (Choke Line) Certification attached with BOP schematic.

BOPE will be nippled up and tested after cementing surface casing. Subsequent tests will be performed as needed, not to exceed 30 days. Chevron requests a variance to use a FMC Technologies Multibowl wellhead. Please see attached wellhead schematic.

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'	24"	20"	94#	J-55	BTC	New
Intermediate 1	0'	4,540'	18-1/8"	16"	97#	L-80	BTC	New
Intermediate 2	0'	12,000'	14-3/4"	13-3/8"	72#	TN-110SS	523	New
Production Liner 1	11,700'	17,410'	12-1/4"	9-5/8"	53.5#	T-95IC	Blue	New
Production Tieback	0'	11,700'	N/A	9-5/8"	53.5#	TN-110HS	Blue	New
Production Liner 2	17,110'	17,950'	8-1/2"	7"	26#	L80	Blue	New
Production Open Hole	17,950'	19,100'	6-1/8"	N/A	N/A	N/A	N/A	N/A

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.**

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

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension	Min SF Tri-Axial
Surface	1.4	1.13	4.68	1.56
Intermediate 1	1.28	1.34	3.37	1.51
Intermediate 2	1.23	1.14	1.69	1.35
Production Liner 1	2.29	1.14	2.89	1.57
Production Tieback	1.31	1.41	2.18	1.41
Production Liner 2	1.31	2.63	2.39	1.44

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

	Surf	Int1	Int2	Prod Liner1	Prod Tieback	Prod Liner2
Burst Design						
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	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/Liner P external: Mud weight above TOC, PP below P internal: 60% gas over 40% mud from Pilot hole TD PP		X				
Gas over mud (50/50) - Int Csg/Liner P external: Mud weight above TOC, PP below P internal: 50% gas over 50% mud from Pilot hole TD PP			X	X	X	X
Stimulation (Acid Job) Pressures- Prod Csg P external: Mud weight above TOC, PP below P internal: Max pemitted inj pressure w/ heaviest fluid				X	X	X
Tubing Leak- Prod Csg P external: Mud weight above TOC, PP below P internal: Leak just below surf, 9.1 ppg packer fluid				X	X	X
Collapse Design						
Partial Evacuation P external: Mud weight gradient P internal: Dry Gas to 2000', Mud Weight Gradient Below		X	X	X	X	X
Full Evacuation P external: Mud weight gradient P internal: none	X					
Fluid Drop Above Packer P external: Mud weight gradient P internal: 9.1 ppg packer fluid drops till blanced with TD PP				X	X	X
Cementing- Surf, Int, Prod Csg P external: Wet cement P internal: displacement fluid - water	X	X	X	X	X	X
Tension Design						
100k lb overpull	X	X	X	X	X	X

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Bottom	Weight	Yield	%Excess	Sacks	Water	Volume
Surface				(ppg)	(cu ft/sk)	Open Hole		gal/sk	bbls
Tail	Class C	0'	800'	14.8	1.33	100	962	6.37	227
Intermediate Csg 1									
Lead	50:50 Poz: Class C + Extender, Antifoam, Retarder, Salt	0'	3,540'	11.9	2.37	50	888	13.45	375
Tail	Class C + Retarder	3,540'	4,540'	14.8	1.33	50	518	6.37	123
Intermediate Csg 2									
Lead	50:50 Poz: Class C + Extender, Antifoam	4,240'	11,000'	11.9	2.36	10	664	13.40	279
Tail	Class H + Retarder + Extender + Dispersant	11,000'	12,000'	15.6	1.23	10	243	5.41	53
Production Liner1									
Lead	Class H + Extender, Antifoam, Dispersant, Gas Control, Viscosifier, Retarder	11,700'	16,410'	15.6	1.20	10	1291	5.40	288
Tail	Class H + Extender, Antifoam, Dispersant, Gas Control, Viscosifier, Retarder	16,410'	17,410'	15.6	1.20	10	314	5.40	67
Production Tieback									
Tail	Class H + Antifoam, Dispersant, Fluid Loss, Retarder, Extender	0'	11,700'	15.6	1.20	0	2642	5.40	683
Production Liner2									
Tail	TXI + Antifoam, Dispersant, Viscosifier, Fluid Loss, Retarder	17,110'	17,950'	12.5	1.56	50	100	8.38	27

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.

6. **MUD PROGRAM**

From	To	Type	Weight	Viscosity	Filtrate
0'	800'	Spud Mud	8.3 – 9.0	28-36	N/C
800'	4,540'	Brine Water	10 – 10.4	28-32	N/C
4,540'	12,000'	OBM	8.7-10.0	40-60	20-30
12,000'	17,410'	OBM	12.2-15.0	55-75	10-15
17,410'	17,950'	WBM	8.8-9.6	35-45	<10
17,950'	19,100'	Cut Brine	8.4-9.0	28-32	N/C

A closed system will by utilized 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.

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
Mudlogs	2 Man Mud Log	4,540' to TD
LWD	MWD Gamma	4,540' to TD
OH Logs	Quad Combo	17,950' - 19,100' Injection Zone
CH Logs	CBL	17,110' - 17,870' Production Liner 2

c. A Directional Survey will be run.

8. **ABNORMAL PRESSURES AND HYDROGEN SULFIDE**

a. Normal pressures are anticipated throughout the Delaware section. Pressures are anticipated to gradually increase from the Bone Springs into the Wolfcamp. Anticipated prerssure ramps are expected 1000' into the Wolfcamp and 200' into the Atoka with pressures returining to normal in the Mississipian Lime to TD. Estimated BHP is in injectional interval: **8270 psi**
b. Hydrogen sulfide gas is not anticipated. An H2S Contingency plan is attached with this APD in the event that H2S is encountered