

## Goetze, Phillip, EMNRD

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**From:** Verner, Frederick C <fredverner@chevron.com>  
**Sent:** Tuesday, September 4, 2018 9:30 AM  
**To:** Goetze, Phillip, EMNRD  
**Subject:** FW: Maelstrom request for administrative changes to well construction

Thanks Phil. Understood. We will get Hobbs what they need. Thanks.

**From:** Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>  
**Sent:** Tuesday, September 04, 2018 9:26 AM  
**To:** Verner, Frederick C <fredverner@chevron.com>  
**Cc:** Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>; Riley, Heather, EMNRD <Heather.Riley@state.nm.us>; Sayer, Matthias, EMNRD <MatthiasL.Sayer@state.nm.us>; Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Subject:** **[\*\*EXTERNAL\*\*]** RE: Maelstrom request for administrative changes to well construction

RE: Maelstrom SWD No. 1; 30-025-45127; J-Sec 15; T26S, R32E, NMPM

Fred:

Changes to the well design is considered a minor modification per the list found in 40 CFR 144.41:

**§144.41 Minor modifications of permits.**

**(f) Change construction requirements approved by the Director pursuant to §144.52(a)(1) (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this part and part 146.**

Also included in the list of "minor mod" items are change in ownership, the addition of new disposal sources, requirements for more frequent monitoring/reporting, amend the plugging program, change an interim compliance date in a schedule of compliance, and the correction of typos/incorrect admin content of the order (permit). And at this time, the Division handles most pressure increase applications as a minor mod. The reason for the re-opening of the hearing order is the critical significant the surface (and bottom-hole) location play in determining proper notice and proper AOR review. Since a change in location is a major modification and the order was approved through hearing, the change in location had to follow the same procedure.

No, I don't have any issues with the changes. I am assuming this modification of the design will be provided to the BLM for their approval. Please provide the Hobbs District Office with a copy of the approved Form 3160-3/Sundry along with a new well bore diagram so that it can be placed into the well file for future reference. This e-mail correspondence will also be placed in the well file.

Please contact me with any questions on this matter. PRG

Phillip Goetze, PG  
Engineering Bureau, Oil Conservation Division, NM EMNRD  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Direct: 505.476.3466  
E-mail: [phillip.goetze@state.nm.us](mailto:phillip.goetze@state.nm.us)

**From:** Verner, Frederick C <[fredverner@chevron.com](mailto:fredverner@chevron.com)>

**Sent:** Tuesday, September 4, 2018 8:53 AM

**To:** Goetze, Phillip, EMNRD <[Phillip.Goetze@state.nm.us](mailto:Phillip.Goetze@state.nm.us)>; Jones, William V, EMNRD <[WilliamV.Jones@state.nm.us](mailto:WilliamV.Jones@state.nm.us)>

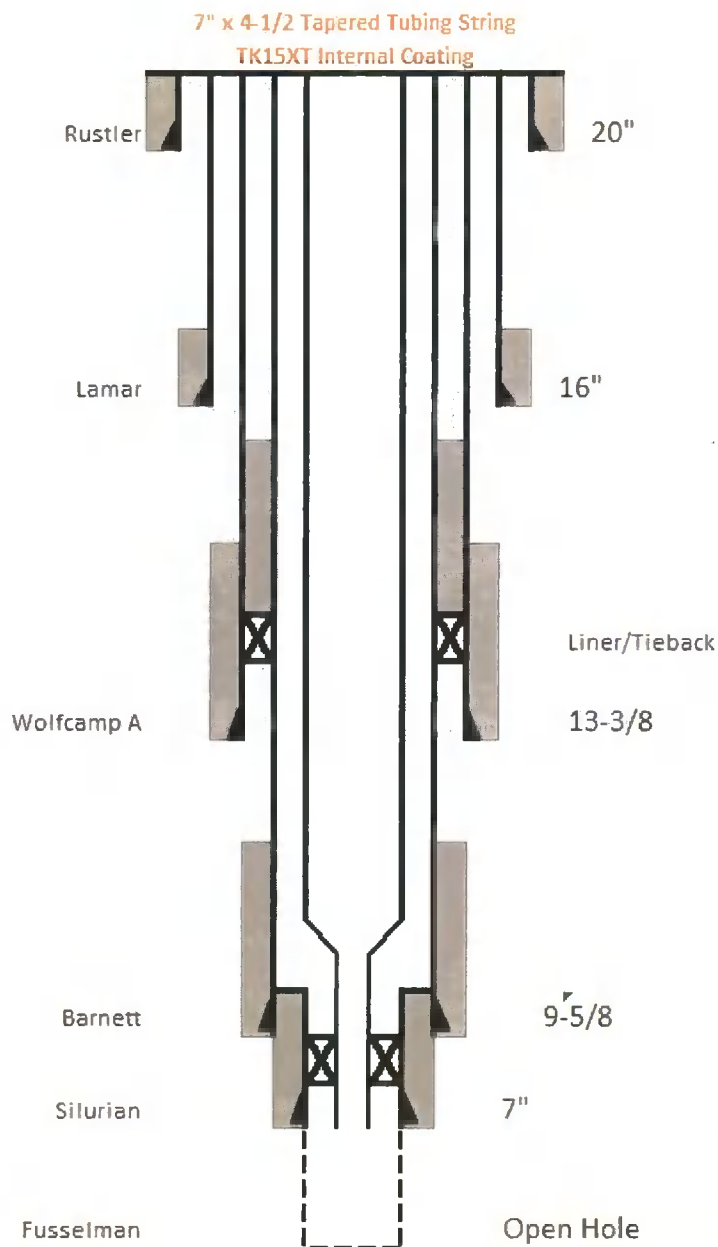
**Subject:** Maelstrom request for administrative changes to well construction

Will and Phil,

Our drilling department (Kenny in particular) is requesting what I think are very minor technical changes to the maelstrom well design. My understanding is that material changes to an order issued via hearing had to be amended by hearing, but that there was allowance for the Director to administratively allow modifications if the changes were deemed immaterial to the order. The changes proposed by Kenny (below items in red, with detail attached) actually make the design stronger, so I am hoping they can be handled administratively. Please consider and let me know if you concur or if you need more information.

Fred

- Please see below, I am showing the changes in hole sizes from the 18-1/2" to 18-1/8" and 5-7/8" to 6-1/8", as previously stated for better bit selection and more efficient drilling. I was mistaken in my earlier hole size, the hole size will be smaller for the 18-1/8". The 16" coupling OD is 17", so it still meets the .844" Annular clearance rule.
- The change in the 13-3/8", was from a Tenaris Wedge 513 flush connection to a Tenaris Wedge 523 Semi-Flush connection. The 513 flush connection casing was going to be NACE certified. We were told earlier that the 523 could not be NACE certified for H2S exposure, but later found out that was false. The 523 Semi-Flush connection is a stronger connection and increases the safety factors for the casing design loads. I have attached the spec sheets for both. Also, the 523 connection OD is 13.602", which still meets the .844" annular clearance rule.
- Please let me know if anything is unclear and you would like to discuss.



Hole Size	Casing	Mud Program
24" +/-800'	20" 94# J55 BTC	Spud Mud 8.3-9.0 ppg
<del>18-1/2"</del> 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-951C 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
<del>5-7/8"</del> 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		

Thanks,



**Kenneth Hodges**

Drilling Engineer  
Chevron North America Exploration and Production Co.  
MidContinent SBU  
1400 Smith Street  
HOU140/43048  
Houston, TX 77002  
Direct: (713) 372-2154  
Mobile: (832) 470-3579  
Email: [KHodges@CHEVRON.COM](mailto:KHodges@CHEVRON.COM)

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)

Wedge 523®

Printed on: 09/04/2018

Min. Wall Thickness	87.5%	(*)GradeTN 110SS		
Outside Diameter	13.375 in.	Connection OD REGULAR Option	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
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##### Operation Limit Torques

Operating Torque	161000 ft-lbs	Yield Torque	241000 ft-lbs		
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#### 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](http://www.tenaris.com)

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	Wedge 513®
	Connection OD Option
	REGULAR

Pipe Features

Outside Diameter	13.375 in.
Wall Thickness (Weight)	0.514 in.
Grade	TN 110SS

**PIPE BODY DATA**

Geometry

Nominal OD	13.375 in.
OD Tolerance	API
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

Performance

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

**CONNECTION DATA**

Geometry

Connection OD	13.375 in.
Connection ID	12.294 in.
Make-up Loss	4.940 in.
Threads per in	3.06
Connection OD Option	REGULAR

Performance

Tension Efficiency	62.1 %
Joint Yield Strength	1418.364 x1000 lbs
Internal Pressure Capacity	7400 psi
	73.7 %

Compression Efficiency	
Compression Strength	1683.308 x1000 lbs
Max. Allowable Bending	23.6 °/100 ft
External Pressure Capacity	2880 psi

#### Make-Up Torques

Minimum	26000 ft-lbs
Optimum	31000 ft-lbs
Maximum	46000 ft-lbs

#### Operation Limit Torques

Operating Torque	145000 ft-lbs
Yield Torque	218000 ft-lbs

## Notes

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