

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.*

5. Lease Serial No.  
NMNM0545035

6. If Indian, Allottee or Tribe Name

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

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

8. Well Name and No.  
PURE GOLD MDP1 29-17 FED COM 2H

9. API Well No.  
30-015-45646-00-X1

10. Field and Pool or Exploratory Area  
INGLE WELLS

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
OXY USA INCORPORATED

Contact: SARAH CHAPMAN  
E-Mail: SARAH\_CHAPMAN@OXY.COM

3a. Address  
5 GREENWAY PLAZA SUITE 110  
HOUSTON, TX 77046-0521

b. Check the appropriate box(es) for the county  
Ph: 713-350-4997

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 29 T23S R31E SWSW 690FSL 1025FWL  
32.270073 N Lat, 103.805038 W Lon

11. County or Parish, State  
EDDY COUNTY, NM

**Carlsbad Field Office**  
**Operator Copy**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair <input type="checkbox"/> New Construction <input type="checkbox"/> Recomplete <input checked="" type="checkbox"/> Other Change to Original APD
	<input type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> 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 recomple 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 recomple 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.

OXY USA Inc respectfully requests to amend the approved APD for the following changes:

- Change from 3 string to 4 string casing design  
Casing program updated  
Cementing program updated  
Mud program updated
- Add the TORQ DQW Design
- BOP table updated.
- Add sacrificial wellhead

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

RECEIVED

MAY 22 2019

GC 5/23/19  
Accepted for record - NMOCD

DISTRICT II-ARTESIA O.C.D.

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

Electronic Submission #457162 verified by the BLM Well Information System  
For OXY USA INCORPORATED, sent to the Carlsbad  
Committed to AFMSS for processing by PRISCILLA PEREZ on 03/06/2019 (19PP1283SE)

Name (Printed/Typed) DAVID STEWART Title REGULATORY ADVISOR

Signature (Electronic Submission) Date 03/06/2019

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By ZOTA STEVENS Title PETROLEUM ENGINEER Date 05/06/2019

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 \*\***

**Additional data for EC transaction #457162 that would not fit on the form**

**32. Additional remarks, continued**

Please see updated drill plan, DQW TORQ specs and sacrificial wellhead attachments for more information.

Oxy USA Inc. - Pure Gold MDP1 29\_17 Federal Com 2H

1. Geologic Formations

TVD of target	9872'	Pilot Hole Depth	N/A
MD at TD:	22658'	Deepest Expected fresh water:	387'

Delaware Basin

Formation	TVD - RKB	Expected Fluids
Rustler	387	
Salado	728	Brine
Castile	2,616	Brine
Lamar/Delaware	4,093	Brine
Bell Canyon	4,119	Oil/Gas
Cherry Canyon	5,032	Oil/Gas
Brushy Canyon	6,284	Losses
Bone Spring	7,961	Oil/Gas
1st Bone Spring	8,992	Oil/Gas
<b>2nd Bone Spring</b>	<b>9,256</b>	<b>Oil/Gas</b>

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	Buoyant			
	From (ft)	To (ft)					SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
17.5	0	670	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
12.25	0	4200	9.625	43.5	L-80	BTC	1.125	1.2	1.4	1.4
8.5	0	9256	7.625	26.4	L-80 HC	SF (0 ft to 4100 ft) FJ (4100 ft to 9256 ft)	1.125	1.2	1.4	1.4
6.75	0	22658	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4

SF Values will meet or Exceed

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

\*Oxy requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool may be run in case hole conditions merit pumping a second stage cement job to comply with permitted top of cement. If cement circulated to surface during first stage we will drop a cancellation cone and not pump the second stage.

\*Oxy requests the option to run production casing with DQX, SF TORQ, and/or DQX TORQ (name changing to TORQ DQW) connections to accommodate hole conditions or drilling operations.

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**Annular Clearance Variance Request**

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

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3. Cementing Program

Casing String	# Sk.	Wt. (lb/gal)	Yld. (ft <sup>3</sup> /sack)	H <sub>2</sub> O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Surface (Tail)	711	14.8	1.33	6.365	5:26	Class C Cement, Accelerator
Intermediate (Lead)	887	12.9	1.88	10.130	14:22	Pozzolan Cement, Retarder
Intermediate (Tail)	155	14.8	1.33	6.370	12:45	Class C Cement, Accelerator
Intermediate II 1st Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate II 1st Stage (Tail)	134	13.2	1.65	8.640	11:54	Class H Cement, Retarder, Dispersant, Salt
Intermediate II 2nd Stage (Tail Slurry) to be pumped as Bradenhead Squeeze from surface, down the Intermediate annulus						
Intermediate II 2nd Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate II 2nd Stage (Tail)	344	12.8	1.92	10.410	23:10	Class C Cement, Accelerator
Production (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Production (Tail)	1018	13.2	1.38	6.686	3:49	Class H Cement, Retarder, Dispersant, Salt

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	N/A	N/A	N/A
Surface (Tail)	0	670	100%
Intermediate (Lead)	0	3700	50%
Intermediate (Tail)	3700	4200	20%
Intermediate II 1st Stage (Lead)	N/A	N/A	N/A
Intermediate II 1st Stage (Tail)	6534	9256	5%
Intermediate II 2nd Stage (Lead)	N/A	N/A	N/A
Intermediate II 2nd Stage (Tail)	0	6534	25%
Production (Lead)	N/A	N/A	N/A
Production (Tail)	8756	22658	20%

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8"	3M	Annular	✓	70% of working pressure
			Blind Ram	✓	
			Pipe Ram		250 psi / 3000 psi
			Double Ram	✓	
Other*					
8.5" Hole	13-5/8"	3M	Annular	✓	70% of working pressure
			Blind Ram	✓	
			Pipe Ram		250 psi / 3000 psi
			Double Ram	✓	
Other*					
6.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			Blind Ram	✓	
			Pipe Ram		250 psi / 5000 psi
			Double Ram	✓	
Other*					

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\*Specify if additional ram is utilized.

Oxy will utilize a 5M annular with a 10M BOPE stack. The BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. Due to the four string design, Oxy plans to employ a 13-3/8" 3K sacrificial wellhead that will be employed to drill the 12.25" Intermediate Hole. Upon completion of drilling and cementing operations on the 12.25" Intermediate Hole section (along with proper WOC time), the wellhead will be cut off and salvaged. At this point, a standard 13-5/8 MNDS 5x10 Slips (13.375 x 9.625 x 7.625 x 5.5) wellhead will be welded onto the 9-5/8" casing for the remainder of drilling operations on the pad. See attached schematics.

**BOP Break Testing Request**

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow BOP Break Testing under the following conditions:

- After a full BOP test is conducted on the first well on the pad.
- When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.
- Full BOP test will be required prior to drilling any production hole.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	670	Water-Based Mud	8.6-8.8	40-60	N/C
670	4200	Saturated Brine-Based Mud	9.8-10.0	35-45	N/C
4200	9256	Water-Based or Oil-Based Mud	8.0-9.6	38-50	N/C
9256	22658	Water-Based or Oil-Based Mud	8.0-9.6	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing	
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
No	Logs are planned based on well control or offset log information.
No	Drill stem test? If yes, explain
No	Coring? If yes, explain

Additional logs planned	Interval
No	Resistivity
No	Density
No	CBL
Yes	Mud log ICP - TD
No	PEX

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4929 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	159°F

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Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

**8. Other facets of operation**

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. <ul style="list-style-type: none"> <li>We plan to drill the four well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.</li> </ul>	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. <ul style="list-style-type: none"> <li>Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.</li> </ul>	Yes

**Total estimated cuttings volume: 1662 bbls.**

**Attachments**

- Directional Plan
- H2S Contingency Plan
- Flex III Attachments
- Spudder Rig Attachment
- Premium Connection Specs

**9. Company Personnel**

<u>Name</u>	<u>Title</u>	<u>Office Phone</u>	<u>Mobile Phone</u>
Price Maxwell	Drilling Engineer	713-552-8744	830-370-6326
Diego Tellez	Drilling Engineer Supervisor	713-350-4602	713-303-4932
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
John Willis	Drilling Manager	713-366-5556	713-259-1417

**TUBULAR PARAMETERS**

Nominal OD, (inch)	7.625
Wall Thickness, (inch)	0.328
Pipe Grade	L80 HC
Drift	Standard

**CONNECTION PARAMETERS**

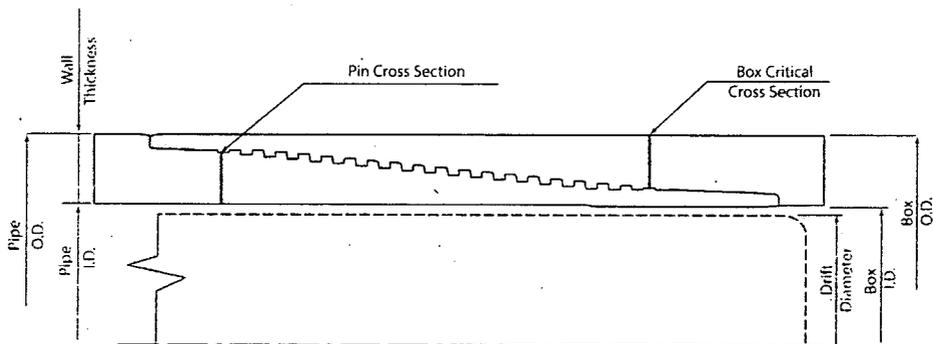
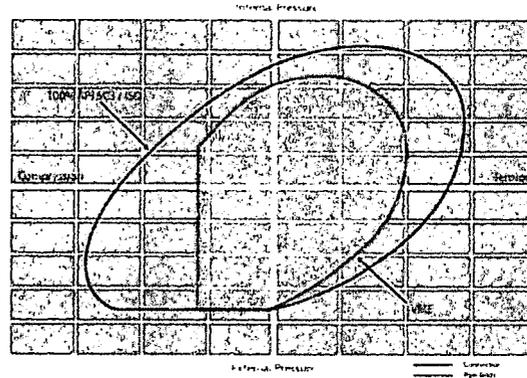
Connection OD (inch)	7.625
Connection ID, (inch)	6.975
Make-Up Loss, (inch)	4.165
Connection Critical Area, (sq inch)	4.344
Yield Strength in Tension, (klbs)	347
Yield Strength in Compression, (klbs)	347
Tension Efficiency	58%
Compression Efficiency	58%
Min Internal Yield Pressure, (psi)	6 020
Collapse Pressure, (psi)	3 910
Uniaxial Bending (deg/100ft)	28.0

**MAKE-UP TORQUES**

Minimum Make-Up Torque, (ft-lb)	12 500
Optimum Make-Up Torque, (ft-lb)	13 900
Maximum Make-Up Torque, (ft-lb)	15 300
Operating Torque, (ft-lb)	12 500
Yield Torque, (ft-lb)	22 200

**PIPE BODY PROPERTIES**

PE Weight, (lbs/ft)	25.56
Nominal Weight, (lbs/ft)	26.40
Nominal ID, (inch)	6.969
Drift Diameter, (inch)	6.844
Nominal Pipe Body Area, (sq inch)	7.519
Yield Strength in Tension, (klbs)	601
Min Internal Yield Pressure, (psi)	6 020
Collapse Pressure, (psi)	3 910
Minimum Yield Strength, (psi)	80 000
Minimum Tensile Strength, (psi)	95 000

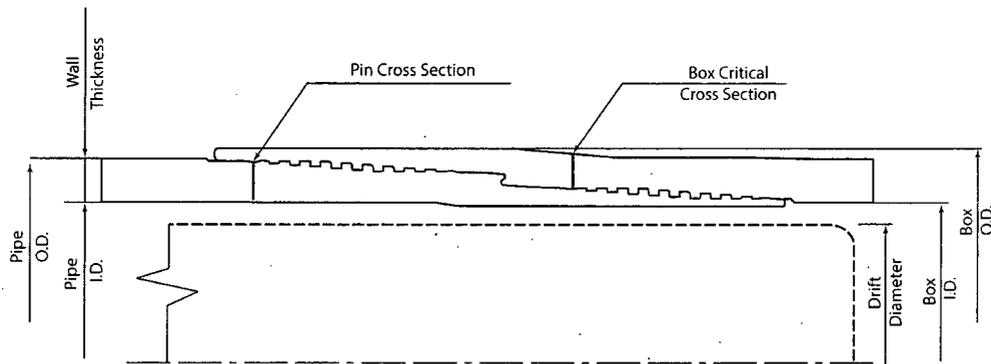
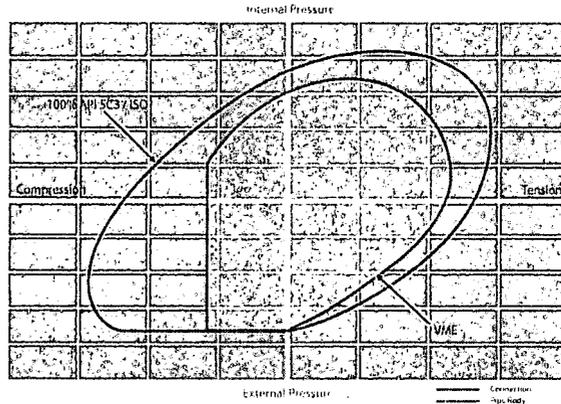


NOTE: This technical data sheet is a general informational guide only and does not constitute a performance or fitness-for-use warranty. The user shall be responsible for determining the suitability of the product for their application. The user shall be responsible for determining the suitability of the product for their application. The user shall be responsible for determining the suitability of the product for their application. The user shall be responsible for determining the suitability of the product for their application.

Print date 04/19/2019 01:07

# TECHNICAL DATA SHEET TMK UP SF 7.625 X 26.4 L80 HC

TUBULAR PARAMETERS		PIPE BODY PROPERTIES	
Nominal OD, (inch)	7.625	PE Weight, (lbs/ft)	25.56
Wall Thickness, (inch)	0.328	Nominal Weight, (lbs/ft)	26.40
Pipe Grade	L80 HC	Nominal ID, (inch)	6.969
Drift	Standard	Drift Diameter, (inch)	6.844
<b>CONNECTION PARAMETERS</b>		Nominal Pipe Body Area, (sq inch)	7.519
		Yield Strength in Tension, (klbs)	601
Connection OD (inch)	7.79	Min. Internal Yield Pressure, (psi)	6 020
Connection ID, (inch)	6.938	Collapse Pressure, (psi)	3 910
Make-Up Loss, (inch)	6.029		
Connection Critical Area, (sq inch)	5.948		
Yield Strength in Tension, (klbs)	533		
Yield Strength in Compression, (klbs)	533		
Tension Efficiency	89%		
Compression Efficiency	89%		
Min. Internal Yield Pressure, (psi)	6 020		
Collapse Pressure, (psi)	3 910		
Uniaxial Bending (deg/100ft)	42.7		
<b>MAKE-UP TORQUES</b>			
Yield Torque, (ft-lb)	22 600		
Minimum Make-Up Torque, (ft-lb)	15 000		
Optimum Make-Up Torque, (ft-lb)	16 500		
Maximum Make-Up Torque, (ft-lb)	18 200		



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