``````````````````````````````````````	Form 3160-5 (June 2015)	DI	FORM APPROVED OMB NO. 1004-0137 Expires: January 31, 2018							
	_	BUNDRY	S. rLease, Serial No	lce						
	Di aba	o not use th andoned we	6-16m dian 7 Abottee or Tribe Name							
	<u></u>	SUBMIT IN	7. If Unit or CA/Agree	ement, Name and/or No.						
	1. Type of Well       Ø Oil Well	as Well 🗖 Otl	BS O	Cal Vell Name and No. LESLIE FED COM 202H						
	2. Name of Operator			INK JAN	VK JAN 16 2019 9. API Well No. 30-025-44812					
	3a. Address 5400 LBJ FREEV DALLAS, TX 752		1500	3b. Phone N Ph: 575-6	3b. Phone No. (include area code) Ph: 575-627-2465 RECEIVED DOGIE DRAW; WOLFO					
			., R., M., or Survey Description,	)			11. County or Parish,	State		
	Sec 17 T25S R35	5E Mer NMP	SWSE 295FSL 1192FWL	-			LEA COUNTY,	NM		
	12. CHE	ECK THE AI	F NOTICE,	REPORT, OR OTH	IER DATA					
	TYPE OF SUBMISSION				TYPE OF	ACTION				
	□ Notice of Intent		Acidize	Deepen		Product	ion (Start/Resume)	🗖 Water Shut-Off		
	Subsequent Rep		□ Alter Casing		draulic Fracturing	🖸 Reclam		□ Well Integrity		
	Final Abandonment Notice		Casing Repair	New Construction Plug and Abandon		Recomplete Temporarily Abandon		Other Change to Original A		
		nent Nouce	Change Plans Convert to Injection			□ Water Disposal		PD		
	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.									
	BLM Bond No: NMB0001079 PCM 12/27/18 Surety Bond:RLB0015172 PCM 12/27/18									
	Please see attached C-102 to revise the SHL and BHL of Matador's Leslie Fed Com #202H well: SHL: From 300' FSL and 2115' FEL of Sec. 17, T25S, R35E to 295' FSL and 1192' FWL of Sec. FOTAES, TTIONS OF APPROV, R35E BHL: from 240' FNL and 2250' FWL, Sec. 17, T25S, R35E, to 100' FNL and 2150' FWL of Sec. 17, T25S, R35E, Both SHL and BHL have been moved within previously approved footprint.									
	Adjusted Surface	casing deptl	e for the following change n from 1000' to 950' due to	s: o new inform	nation on the Rust	ler top base	ed on			
12/27	recent offset wells. 2010: Engineering Review completed by M Hagne									
	14. I hereby certify that	the foregoing is	Electronic Submission #4	146622 verifi RODUCTION	ed by the BLM Wel COMPANY, sent	l Information to the Hobbs	n System s	<u>, , , , , , , , , , , , , , , , , , , </u>		
	Name (Printed/Typed)	Name (Printed/Typed) TAMMY R LINK				CTION AN	ALYST			
	Signature	Date 12/05/2018								
		/	THIS SPACE FO	AL OR STATE	OFFICE U	SE	<u> </u>			
	Approved By				Title SPL	<u></u>		Date 2/27/18		
	Conditions of approval, if any, are attached. Approval of this notice does certify that the applicant holds legal or equitable title to those rights in the which would entitle the applicant to conduct operations thereon.				Office CFC	)				
	Title 18 U.S.C. Section 10 States any false, fictitiou	01 and Title 43 is or fraudulent	U.S.C. Section 1212, make it a statements or representations as	crime for any j to any matter	person knowingly and within its jurisdiction.	willfully to m	ake to any department or	agency of the United		
	(Instructions on page 2)	(Instructions on page 2) ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **								

### Additional data for EC transaction #446622 that would not fit on the form

#### 32. Additional remarks, continued

.

Adjusted Intermediate I casing depth from 5600' to 5500' due to new information on the Base of the salt from recent offset wells. Adjusted Intermediate II casing from 7 5/8" to x 7" to 7 5/8" longstring and adjusted estimated

Adjusted intermediate in casing from 7 5/5 to X 7 to 7 5/5 forgstring and adjusted estimated Adjusted production hole size from 6 1/8" to 6 3/4" and the bottom production casing size from 4 1/2" 13,5# P-110/TXP to 5 1/2" 20# P-110 Eagle SFH. Spec sheet attached for 5 1/2" 20# Eagle SFH. Adjusted cement volumes for all strings accordingly.

Please e-mail all questions to JD Harkrider, jharkrider@matadorresources.com

District I State of New Mexico 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 Energy, Minerals & Natural Resources District II 811 S. First St., Artesia, NM 88210 Department Phone: (575) 748-1283 Fax: (575) 748-9720 District III **OIL CONSERVATION DIVISION** 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 1220 South St. Francis Dr. District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

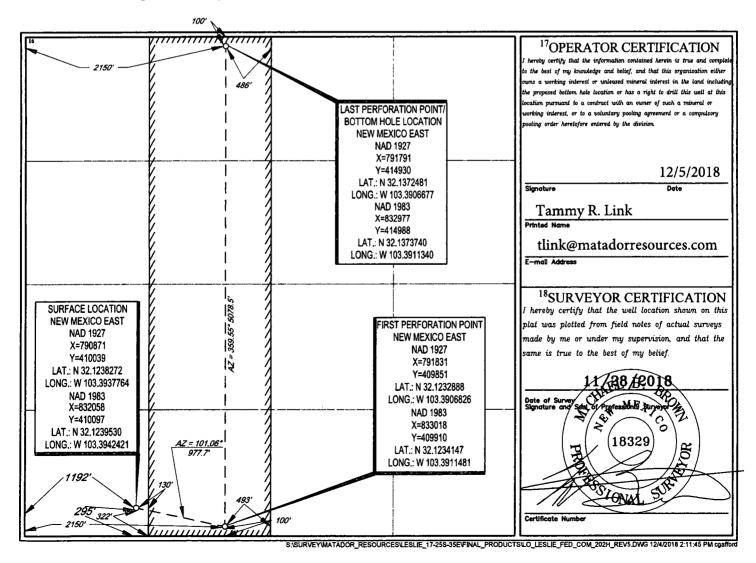
FORM C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

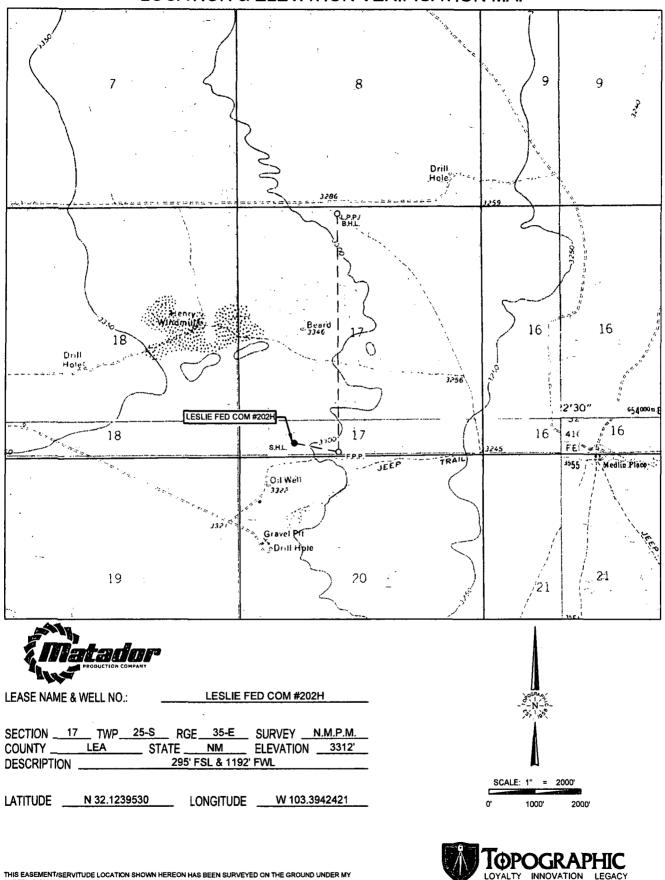
### WELL LOCATION AND ACREAGE DEDICATION PLAT

	¹ API Number			² Pool Code ³ Pool Name					
30-025-44812				17980 Dogie Draw; Wofcamp					
⁴ Property Code				⁵ Property N	ame		'w	'Well Number	
320549				LESLIE FE	D COM		#	#202H	
				⁸ Operator N	ame			⁹ Elevation	
228937			MATADOR PRODUCTION COMPANY					3312'	
				¹⁰ Surface Lo	cation				
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
17	25-S	35-E	-	295'	SOUTH	1192'	WEST	LEA	
	L	¹¹ I	Bottom Hol	e Location If D	ifferent From Sur	face			
Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
C   17   25-S   35-E -   100'   NORTH   2				2150'	WEST	LEA			
Dedicated Acres ¹³ Joint or Infill ¹⁴ Consolidation Code ¹⁵ Order No. 160									
	e 9 7 Section 17 Section 17	e 9 7 17 17 25-S Section Township 17 25-S	e 9 7 Section Township 17 25-S 35-E ¹¹ R Section Township 17 25-S 35-E ¹¹ R Range 35-E	Section     Township     Range     Lot Idn       17     25-S     35-E     -       11Bottom Hole       Section       Section       17     25-S     35-E       17     25-S     35-E       17     25-S     35-E	e ³ Property N 9 LESLIE FE ⁸ Operator N 7 MATADOR PRODUCT ¹⁰ Surface Lo ¹⁰ Surface Lo	e ³ Property Name 9 LESLIE FED COM ⁸ Operator Name 7 MATADOR PRODUCTION COMPAN ¹⁰ Surface Location ¹⁰ Surface Location ¹⁷ 25-S 35-E - 295' SOUTH ¹¹ Bottom Hole Location If Different From Sur ¹⁸ Bottom Hole Location If Different From Sur ¹⁹ Section ¹⁰ Surface Location If Different From Sur ¹¹ Bottom Hole Location If Different From Sur ¹⁰ Section ¹¹ South line ¹¹ Bottom Hole Location If Different From Sur ¹⁰ Section ¹¹ Cownship Range Lot Idn ¹¹ Section Township Range Lot Idn ¹² 25-S 35-E - 100' NORTH	e ³ Property Name 9 LESLIE FED COM ⁸ Operator Name 7 MATADOR PRODUCTION COMPANY ¹⁰ Surface Location Section Township Range Lot Idn Feet from the 295' SOUTH 1192' ¹¹ Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the 1192' ¹¹ Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the 2150'	e       *Property Name       *W         9       LESLIE FED COM       #         %Operator Name       *         7       MATADOR PRODUCTION COMPANY       *         10       Surface Location       *         Section       Township       Range       Lot Idn         17       25-S       35-E       -       295'       SOUTH       1192'       WEST         11Bottom Hole Location If Different From Surface         Section         17       25-S       35-E       -       100'       North/South line       Feet from the       East/West line         17       25-S       35-E       -       100'       North/South line       Feet from the       East/West line         17       25-S       35-E       -       100'       NORTH       2150'       WEST	

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



### LOCATION & ELEVATION VERIFICATION MAP



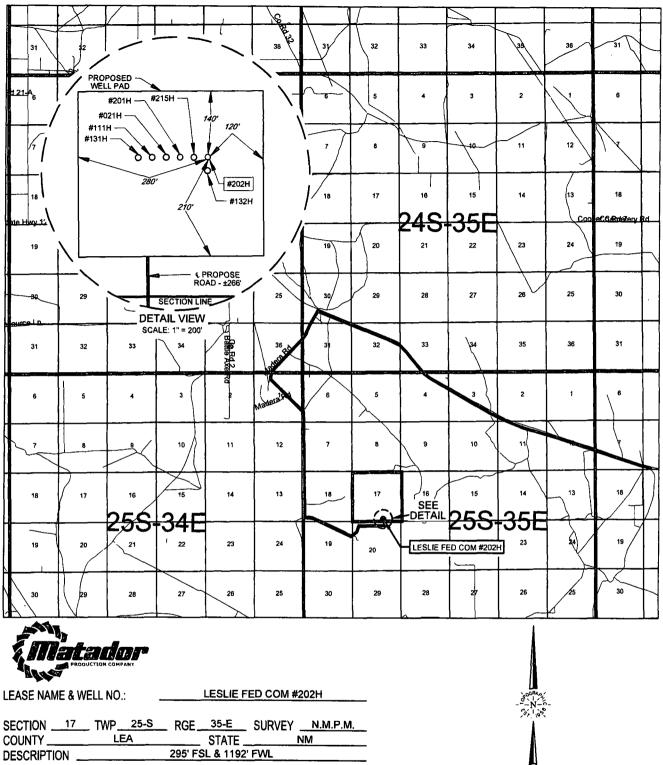
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140 <u>TELEPHONE:</u> (817) 744-7512 • FAX (817) 744-7554 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743 WWW.TOPOGRAPHIC.COM

### VICINITY MAP

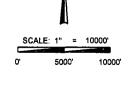


**DISTANCE & DIRECTION** 

FROM INT. OF NM-128 W. & NM-205 N GO WEST ON NM-128 ±13.8 MILES. THENCE WEST (LEFT) ON BATTLE AXE RD. ±0.3 MILES. THENCE CONTINUE SOUTH ON MADERA RD. ±1.4 MILES. THENCE SOUTHEAST (LEFT) ON LEASE RD. ±3.1 MILES. THENCE EAST (LEFT) ±1.0 MILES. THENCE NORTH (LEFT) ±0.4 MILES TO A POINT ±233 FEET SOUTH OF THE LOCATION.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OF ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET.



 TOPPOGRAPHIC

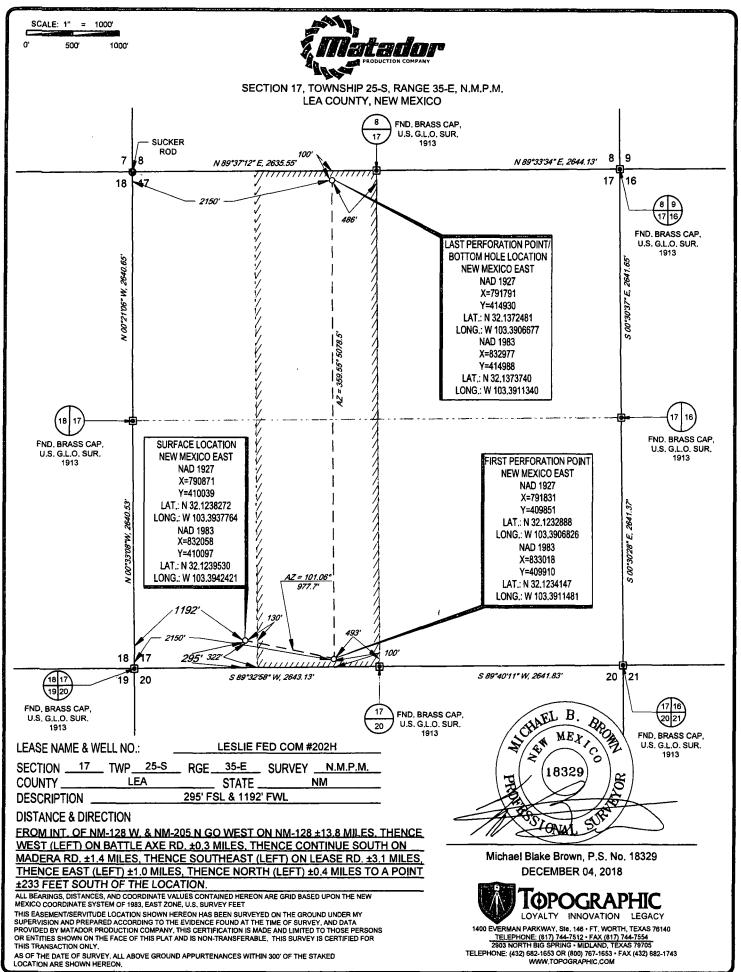
 1400 EVERMAN PARKWAY, Sile. 146 • FT. WORTH, TEXAS 76140

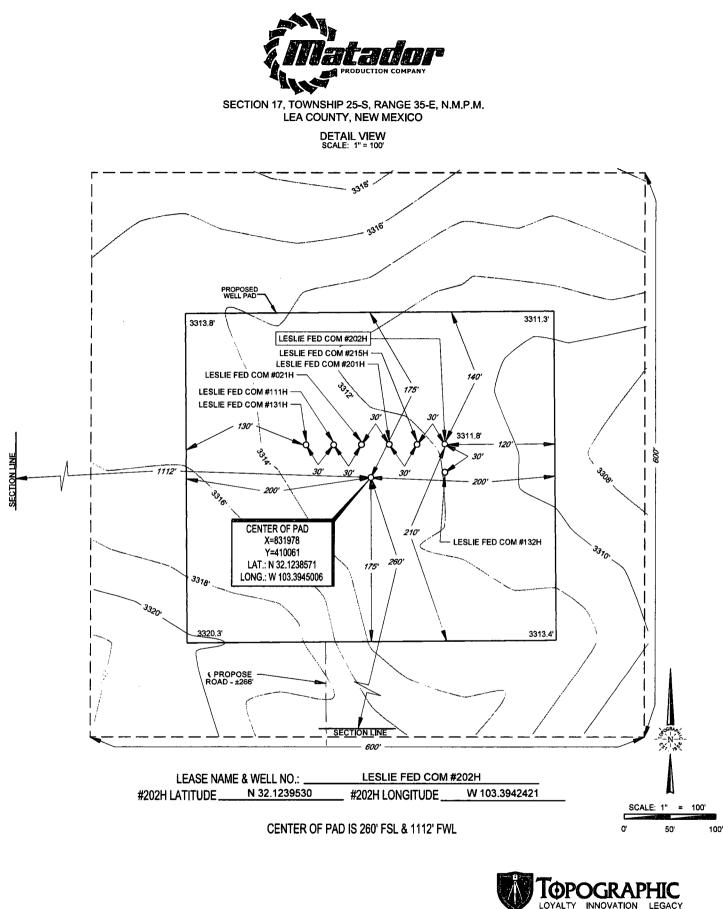
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554

 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

 TELEPHONE: (432) 682-1653 • FAX (432) 682-1743

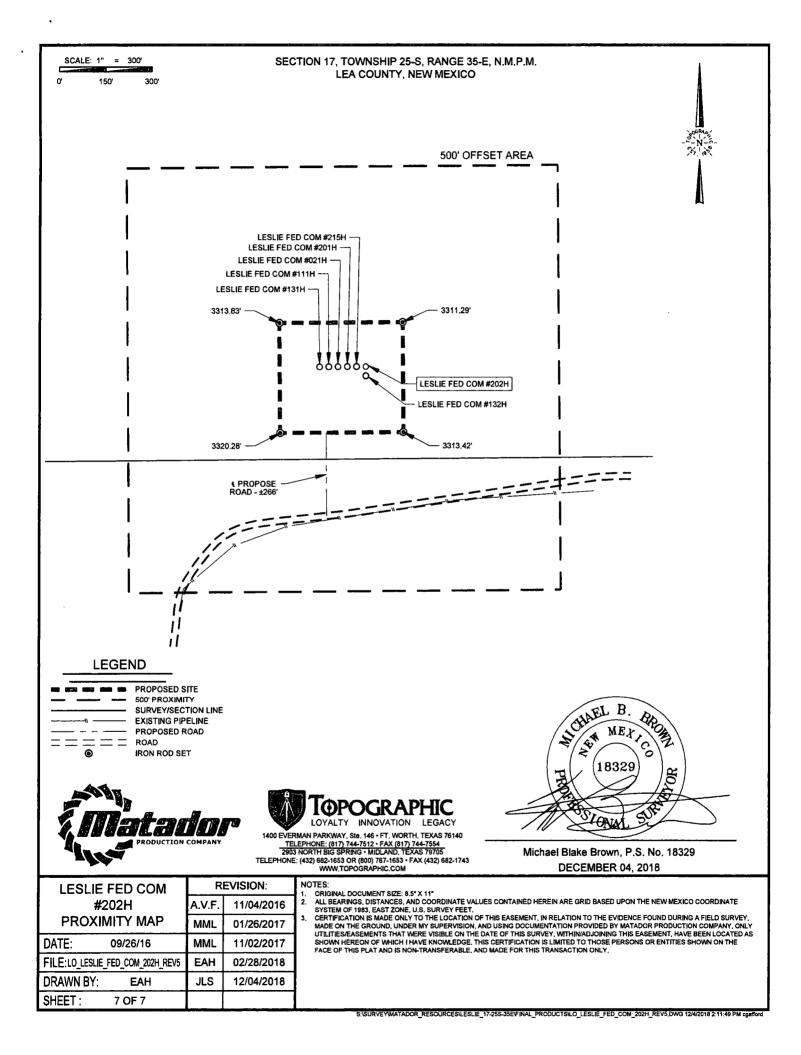
 WWW.TOPOGRAPHIC.COM





ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFICED FOR THIS TRANSACTION ONLY. LOYALTY INNOVATION LEGACY 1400 EVERMAN PARKWAY, Ste. 146 - FT, WORTH, TEXAS 76140 <u>TELEPHONE:</u> (432) 682-1653 OR (800) 767-1653 - FAX (47) 744-754 2903 NORTH BIG SPRING - MIDLAND, TEXAS 78705 TELEPHONE: (432) 682-1653 OR (800) 767-1653 - FAX (432) 682-1743 WWW.TOPOGRAPHIC.COM



Formation Name	TVD	Bearing
Quaternary Fill	0	Water
Dewey Lake	389	Water
Rustler	909	Water
Salado	1431	Barren
Castile	3724	Barren
Base of Salt	5451	Barren
Bell Canyon	5474	Hydrocarbons
Cherry Canyon	6469	Hydrocarbons
Brushy Canyon	7917	Hydrocarbons
Bone Spring Lime	9254	Hydrocarbons
1st Bone Spring Carbonate	10323	Hydrocarbons
1st Bone Spring Sand	10397	Hydrocarbons
2nd Bone Spring Carbonate	10605	Hydrocarbons
2nd Bone Spring Sand	10994	Hydrocarbons
3rd Bone Spring Carbonate	11456	Hydrocarbons
3rd Bone Spring Sand	12111	Hydrocarbons
Wolfcamp A	12443	Hydrocarbons
Wolfcamp B	12818	Hydrocarbons
Strawn	14281	Hydrocarbons

.

,

•

Name	Hole Size	Casing Size	Wt/Grade	Thread Collar	Setting Depth	<b>Top Cement</b>	
Surface	17-1/2"	13-3/8" (new)	54.5# J-55	BTC	950	Surface	
Intermediate	12-1/4"	9-5/8" (new)	40# J-55	BTC	5500	Surface	
Intermediate 2	8-3/4"	7-5/8" (new)	29.7# P-110	BTC	5200	5200	
		7-5/8" (new)	29.7# P110	HTFNR	12600	5200	
Production	6-3/4"	5-1/2" (new)	20# P-110	BTC	12000	12200	
		5-1/2" (new)	20# P-110	Eagle SFH	17236	12300	

,

***5-1/2" SF will be Eagle SFH or like connection

٠

.

Name	Туре	Sacks	Yield	Weight	Blend
Surface	Lead	200	1.75	13.5	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
	Tail	700	1.35	14.8	Class C + 5% NaCl + LCM
TOC = 0'			100% Exces	S	Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	500	1.94	12.8	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
Tail		180	1.35	14.8	Class C + 5% NaCl + LCM
TOC = 0'			50% Excess	;	2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface
Intermediate 2	Lead	315	2.79	11	Class C + Fluid Loss + Dispersant + Retarder + LCM
	Tail 110 1.46		1.46	13.2	Class C + Fluid Loss + Dispersant + Retarder + LCM
·					1 every 4th jt from KOP to TOC; See requested
TOC = 5200'			35% Excess	i	variance
Production	Tail	375	1.23	14.2	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 12300'			10% Excess	;	See requested Variance

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

•

٠

.

***Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

***A variance is requested to wave the centralizer requirement for the 7-5/8" flush casing in the last 800' of 8-3/4" hole and the 5-1/2" SF/Flush casing in the 6-3/4" hole.

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17-1/2"	8.30	28	NC	FW Spud Mud
Intermediate	12-1/4"	10.00	30-32	NC	Brine Water
Intermediate 2	8-3/4"	9.00	30-31	NC	FW/Cut Brine
Production	6-3/4"	12.00	50-60	<10	OBM

•

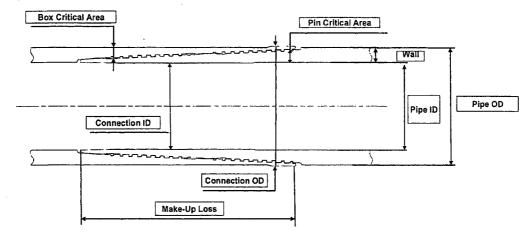
•

### **CONNECTION DATA SHEET (Imperial Units)**

VAM® HTF-NR 7,625" 29,70# P110EC **Connection:** 6,750" Alternate Drift:

Drawing: PD-101836P PD-101836B

#### **Isolated connection**



OD 7,625"

WEIGHT 29,70 lb/ft WALL GRADE 0,375" P110EC API DRIFT 6,750"

PIPE BODY PROPE	RTIES:	CONNECTION PROPERTIES:				
Outside Diameter Inch	6,875	Connection OD (nom) Anch 6,782 Connection ID Inch 6,782 Coupling Length Inch N/A				
Nominal Area sqin	8,541	Make-up Loss inch 4.657				
		Box Critical area				
Yield Strength klb: / Ultimate Strength klb	1_068 1_153	Yield Strength k/b 619 Ultimate strength k/b 669				
		Structural compression k/b 776 Compression with sealability k/b 371				
WIYP psi	10 760	MIYP // // // // // // // // // // // // //				
Collapse Pressure psi	5 670	Ext Pressure Resistance psi 5 670				
		Regular Make-up Torque ft./b				
		Opt 11 300				
		a∏ata kasan Poton pota Mâxin - tra n <b>13.000</b> ata				
		Maximum Torque with Sealability ft.lb 58 500 Maximum Torsional Value ft.lb 73 000				

Uk@Vamfieldservi/da.com dubal@Vamfieldservi/da.com angela@Vamfieldservi/ce.com shgela@Vamfieldservi/ce.com shgelagone@Vamfieldservi/ce.com canada@Vamfieldservi/ce.com canada@Vamfieldservi/ce.com mexico@Vamfieldservi/ce.com mexico@Vamfieldservi/ce.com





Designed by : X. MENCAGLIA Reference: VRCC16-1177 Revision : 0 July 19, 2016 Date :

# **U. S. Steel Tubular Products**

5.500" 20.00lbs/ft (0.361" Wall) P110 HP USS-EAGLE SFH™

MECHANICAL PROPERTIES	Pipe	USS-EAGLE SFH™	
Minimum Yield Strength	125,000		psi
Maximum Yield Strength	140,000		psi
Minimum Tensile Strength	130,000	-	psi
DIMENSIONS	Pipe	USS-EAGLE SFH™	
Outside Diameter	5.500	5.830	in.
Wall Thickness	0.361		in.
Inside Diameter	4,778	4.693	in.
Standard Drift	4.653	4.653	in.
Alternate Drift		4.653	in.
Nominal Linear Weight, T&C	20.00	-	lbs/ft
Plain End Weight	19.83		lbs/ft
SECTION AREA	Pipe	USS-EAGLE SFH™	
Critical Area	5.828	5.027	sq. in.
Joint Efficiency		86.3	%
PERFORMANCE	Pipe	USS-EAGLE SFH™	
Minimum Collapse Pressure	13,150	13,150	psi
External Pressure Leak Resistance	-	13,150	psi
Minimum Internal Yield Pressure	14,360	14,360	psi
Minimum Pipe Body Yield Strength	729,000	-	lbs
Joint Strength		628,000	lbs
Compression Rating		628,000	lbs
Reference Length		20,933	ft
Maximum Uniaxial Bend Rating		89.7	deg/100 ft
MAKEUPDATA	Pipo -		
Make-Up Loss			
Make-op Loss		5.92	in.
Minimum Make-Up Torque		5.92 14,200	ın. ft-lbs

#### Legal Notice

All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

> U. S. Steel Tubular Products 1-877-893-9461 460 Wildwood Forest Drive, Suite 300S Spring, Texas 77380

connections@uss.com www.usstubular.com

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
LEASE NO.:	NMNM136226
WELL NAME & NO.:	202H – LESLIE FEDERAL COM
SURFACE HOLE FOOTAGE:	295'/S & 1192'/W
BOTTOM HOLE FOOTAGE	100'/N & 2150'/W
LOCATION:	Section 17., T25S., R.35E., NMP
COUNTY:	LEA County, New Mexico

Potash	r None	C Secretary	C R-111-P
Cave/Karst Potential	C Low	C Medium	C High
Variance	C None	Flex Hose	C Other
Wellhead	Conventional	Multibowl	
Other	□4 String Area	Capitan Reef	□WIPP

### All previous COAs still apply, except for the following:

### A. CASING

- 1. The 13 3/8 inch surface casing shall be set at approximately 950 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u>
     <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

# First intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 2. The minimum required fill of cement behind the 9 5/8 inch first intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.

# Second intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 3. The minimum required fill of cement behind the **7** 5/8 inch second intermediate casing is:
  - Cement as proposed. Operator shall provide method of verification.
- 4. The minimum required fill of cement behind the 5 1/2 inch production casing is:
  - Cement as proposed. Operator shall provide method of verification.

### MHH 12272018

## **GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
  - Chaves and Roosevelt Counties Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201. During office hours call (575) 627-0272. After office hours call (575)

### Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

- Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612
- A. CASING
- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log.
- <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.