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Form 3160-3 (March 2012)			001	FORM OMB N	APPROVE 0. 1004-013	D 7
UNITED STATES		HOBBS	OCL	Expires O	ctober 31, 2	014
DEPARTMENT OF THE IN	TERIOR		0040	5. Lease Serial No. NMLC065607		
			2018	6. If Indian, Allotee	or Tribe N	Name
		DECEN	VED			
la. Type of work: DRILL REENTED	ł	KEOLI		7. If Unit or CA Agree	ement, Nai	me and No.
Ib. Type of Well: Voil Well Gas Well Other	✔ Sin	gle Zone 🔲 Multip	le Zone	8. Lease Name and W VERNA RAE FEDE	Vell No.	0M 114H
2. Name of Operator MATADOR PRODUCTION COMPANY	(228	5937)		9. API Well No.	-44	4340
3a. Address 5400 LBJ Freeway, Suite 1500 Dallas TX 7522	b. Phone No. (972)371-5	(include area code) 200		10. Field and Pool, or F TEAS BONE SPRI	Exploratory	y ST / TEAS BC
4. Location of Well (Report location clearly and in accordance with any	State requireme	ents.*)		11. Sec., T. R. M. or Bl	k. and Sur	vey or Area
At surface LOT 1 / 229 FNL / 722 FEL / LAT 32.6086482	/ LONG -10	3.592737		SEC 6 / T20S / R34	E / NMF	0
At proposed prod. zone SESE / 240 FSL / 660 FEL / LAT 32	.595443 / L	ONG -103.592648	6			
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>19 miles</li> </ol>		4		12. County or Parish LEA		13. State NM
15. Distance from proposed* location to nearest 229 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of ac 722.39	eres in lease	17. Spacin 160	g Unit dedicated to this w	vell	
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, 2156 feet applied for, on this lease, ft.</li> </ol>	19. Proposed 9490 feet /	Depth 14001 feet	20. BLM/F	BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3624 feet	22 Approxin 08/01/201	nate date work will star 7	t*	23. Estimated duration 90 days	1	
	24. Attac	hments				
The following, completed in accordance with the requirements of Onshore	Oil and Gas (	Order No.1, must be at	tached to thi	is form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>	5	4. Bond to cover th Item 20 above).	ne operation	ns unless covered by an	existing b	ond on file (see
3. A Surface Use Plan (if the location is on National Forest System L SUPO must be filed with the appropriate Forest Service Office).	ands, the	<ol> <li>Operator certific</li> <li>Such other site : BLM.</li> </ol>	ation specific info	ormation and/or plans as	may be re	equired by the
25. Signature	Name	(Printed/Typed)			Date	
(Electronic Submission)	Brian	Wood / Ph: (505)4	66-8120		05/31/2	2017
President						
Approved by (Signature)	Name	(Printed/Typed)			Date	
(Electronic Submission)	Bobby	Ballard / Ph: (575)	234-2235		12/21/2	2017
Natural Resource Specialist	CARL	SBAD				
Application approval does not warrant or certify that the applicant holds	legal or equit	able title to those right	ts in the sub	ject lease which would e	ntitle the a	applicant to
conduct operations thereon. Conditions of approval, if any, are attached.						
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cri States any false, fictitious or fraudulent statements or representations as to	me for any pe any matter w	rson knowingly and w ithin its jurisdiction.	villfully to n	nake to any department o	r agency (	of the United
(Continued on page 2)				*(Inst	ructions	s on page 2)
(continued on page 2)				1/1	aotions	, on page 2)
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	RD WIT			811		
APPROV						~
Approv	al Date:	12/21/2017				12
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						24

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#### INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

### NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts. ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

(Form 3160-3, page 2)

**Approval Date: 12/21/2017** 

# **Additional Operator Remarks**

#### Location of Well

SHL: LOT 1 / 229 FNL / 722 FEL / TWSP: 20S / RANGE: 34E / SECTION: 6 / LAT: 32.6086482 / LONG: -103.592737 (TVD: 0 feet, MD: 0 feet )
 PPP: SESE / 2640 FNL / 660 FEL / TWSP: 20S / RANGE: 34E / SECTION: 6 / LAT: 32.602052 / LONG: -103.5926 (TVD: 9490 feet, MD: 11620 feet )
 PPP: NENE / 229 FNL / 590 FWL / TWSP: 20S / RANGE: 34E / SECTION: 6 / LAT: 32.6086482 / LONG: -103.592737 (TVD: 0 feet, MD: 0 feet )
 BHL: SESE / 240 FSL / 660 FEL / TWSP: 20S / RANGE: 34E / SECTION: 6 / LAT: 32.6086482 / LONG: -103.592737 (TVD: 0 feet, MD: 0 feet )

# **BLM Point of Contact**

Name: Sipra Dahal Title: Legal Instruments Examiner Phone: 5752345983 Email: sdahal@blm.gov

(Form 3160-3, page 3)

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# **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

# Approval Date: 12/21/2017

(Form 3160-3, page 4)

# **FAFMSS**

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT Application Data Report 12/21/2017

APD ID: 10400014273

**Operator Name: MATADOR PRODUCTION COMPANY** 

Well Name: VERNA RAE FEDERAL COM

Submission Date: 05/31/2017

Well Number: 114H Well Work Type: Drill Highlighted data reflects the most recent changes

Show Final Text

Well Type: OIL WELL

Section 1 - General	· · ·	
APD ID: 10400014273	Tie to previous NOS?	Submission Date: 05/31/2017
BLM Office: CARLSBAD	User: Brian Wood	Title: President
Federal/Indian APD: FED	Is the first lease penetrated	d for production Federal or Indian? FED
Lease number: NMLC065607	Lease Acres: 722.39	
Surface access agreement in place?	Allotted?	Reservation:
Agreement in place? NO	Federal or Indian agreeme	nt:
Agreement number:		
Agreement name:		
Keep application confidential? NO		
Permitting Agent? YES	APD Operator: MATADOR	PRODUCTION COMPANY
Operator letter of designation:		

# **Operator Info**

### **Operator Organization Name: MATADOR PRODUCTION COMPANY**

Operator Address: 5400 LBJ Freeway, Suite 1500

**Operator PO Box:** 

**Operator City: Dallas** State: TX

Operator Phone: (972)371-5200

Operator Internet Address: amonroe@matadorresources.com

# Section 2 - Well Information

Well in Master Development Plan? NO

Well in Master SUPO? NO

Well in Master Drilling Plan? NO

Well Name: VERNA RAE FEDERAL COM

Field/Pool or Exploratory? Field and Pool

Mater Development Plan name:

Zip: 75240

Master SUPO name:

**Master Drilling Plan name:** 

Well Number: 114H

Field Name: TEAS BONE SPRINGS EAST Is the proposed well in an area containing other mineral resources? POTASH

Well API Number:

Pool Name: TEAS BONE SPRING EAST

Page 1 of 3

Operator Name: MATADOR PRODUCTION COMP	ANY
Well Name: VERNA RAE FEDERAL COM	

Describe of	ther minerals:		
is the prop	osed well in a Helium production area?	N Use Existing Well Pad? No	O New surface disturbance?
Type of We	II Pad: MULTIPLE WELL	Multiple Well Pad Name:	Number: SLOT 4
Well Class:	HORIZONTAL	VERNA RAE Number of Legs: 1	
Well Work	Type: Drill		
Well Type:	OIL WELL		
Describe W	/ell Type:	,	
Well sub-T	ype: INFILL		
Describe s	ub-type:		
Distance to	town: 19 Miles Distance to	nearest well: 2156 FT Di	stance to lease line: 229 FT
Reservoir v	vell spacing assigned acres Measureme	ent: 160 Acres	
Well plat:	VernaRae_114H_Plat_05-15-2017.pdf		
	VernaRae_114H_OGLease_Plat_2017	)905092636.pdf	
Well work s	start Date: 08/01/2017	Duration: 90 DAYS	

Well Number: 114H

# Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD27

Survey number: 18329

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL	229	FNL	722	FEL	205	34E	6	Lot	32.60864	-	LEA	NEW	NEW	F	NMLC0	362	0	0
Leg								1	82	103.5927		MEXI	MEXI		65607	4		
#1										37		co	co					
кор	280	FNL	650	FWL	20S	34E	6	Aliquot	32.60854	-	LEA	NEW	NEW	F	NMLCO	-	891	891
Leg								NENE	7	103.5927		MEXI	MEXI		65607	529	7	7
#1										43		co	co			3		
PPP	229	FNL	590	FWL	20S	34E	6	Aliquot	32.60864	-	LEA	NEW	NEW	F	NMLCO	362	0	0
Leg							· .	NENE	82	103.5927		MEXI	MEXI		65607	4		
#1										37		co	co					

Vertical Datum: NGVD29

Page 2 of 3

# Well Name: VERNA RAE FEDERAL COM

# Well Number: 114H

													<u>```</u>	٦				
	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type 🗠 🖯	Lease Number	Elevation	DM	DVT
PPP	264	FNL	660	FEL	20S	34E	6	Aliquot	32.60205	-	EDD	NEW	NEW	F	NMNM	-	116	949
Leg	0							SESE	2	103.5926	Y	MEXI	MEXI		40406	586	20	0
#1												co	CO.			6		
EXIT	240	FSL	660	FEL	20S	34E	6	Aliquot	32.59544	<b>-</b> .	LEA	NEW	NEW	F	NMNM	-	140	949
Leg								SESE	3	103.5926		MEXI	MEXI		40406	586	01	0
#1										486		co	co			6		
BHL	240	FSL	660	FEL	20S	34E	6	Aliquot	32.59544	-	LEA	NEW	NEW	F	NMNM	-	140	949
Leg								SESE	3	103.5926		MEXI	MEXI		40406	586	01	0
#1										486		lco	co			6		

# **FAFMSS**

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT Drilling Plan Data Report

APD ID: 10400014273

**Operator Name: MATADOR PRODUCTION COMPANY** 

Well Name: VERNA RAE FEDERAL COM

Submission Date: 05/31/2017

Highlighted data reflects the most recent changes

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Show Final Text

Well Type: OIL WELL

Well Number: 114H Well Work Type: Drill

# **Section 1 - Geologic Formations**

Formation			True Vertical	Measured			Producina
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1		3624	0	0	OTHER : Quaternary	USEABLE WATER	No
2	RUSTLER ANHYDRITE	2149	1475	1475	ANHYDRITE	OTHER : Anhydrite	No
3	TOP SALT	2019	1605	1605	SALT	OTHER : Salt	No
4	BASE OF SALT	504	3120	3120	SALT	OTHER : Salt	No
5	TANSILL	439	3185	3185	SANDSTONE	OTHER : Sandstone	No
6	YATES	284	3340	3340	GYPSUM	OTHER : Gypsum	No
7	SEVEN RIVERS	-126	3750	3750	DOLOMITE	NONE	No
8	QUEEN	-946	4570	4570	SANDSTONE	OTHER : Sandstone	No
9	CAPITAN REEF	-1126	4750	4750	OTHER : Carbonate	NONE	No
10	DELAWARE SAND	-1796	5420	5420	SANDSTONE	NATURAL GAS,CO2,OIL	No
11	BRUSHY CANYON	-2531	6155	6155	SANDSTONE	NATURAL GAS,CO2,OIL	No
12	BONE SPRING LIME	-4656	8280	8280		NATURAL GAS,CO2,OIL	No
13	BONE SPRING 1ST	-5381	9005	9008	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
14	BONE SPRING 1ST	-5766	9390	9477	SANDSTONE	NATURAL GAS,CO2,OIL	Yes

# Section 2 - Blowout Prevention

# Township 20 South Range 34 East of the New Mexico Principal Meridian, New Mexico

County: Lea - 025

#### BLM Field Office: Carlsbad

BUREAU OF LAND MANAGEMENT STATUS OF PUBLIC DOMAIN LAND AND MINERALS



#### **OG Plat**

#### T205 R34E

Entire Township included in: EO Wdl NM 1 Pot Res 6 (3/11/1926) Designated Pot Area SO 10/7/1975 (Partial) Cl of Public Lands NM 0560202 (Cl No 30-06-01)

UNITIZATION AGREEMENTS Lea UA NM 070976X Teas Yates Sand UA NM 071049X Quail Ridge UA NM 091041X

COMMUNITIZATION AGREEMENTS NM 082107 NM 088489 NM 091026 NK4 004499 NM 100722 NM 109692 NM 121888 NM 127606 NM 127960 NM 132395 NM 132812 NM 132988 NM 134225 NM 134272 NM 134520 NM 134674 NM 134709 NM 134768 NM 134773 NM 135022

NO [11: The Small Revolution databased are in the Bureau's UR2000 system format: af there is a stream in the 2<sup>-7</sup> constants (from the right), the serial intertier has a first of term, example MAR 002135. If there in the area in the 2<sup>-7</sup> constants (from the right) than the serial intertier does not have a "prefix" rang, example MAR 02135.

T 20 S R 34 E NMPM

025 05 1 1 inch = 30 chains 1 : 23,760 CAVEAT STATEMENT This plat a the Bureau is Record of Ede, and should be used only as a graphic display of the townsho survey data. Records hereon do not reflect blic charges which may have been affected by Bized movements of invers or other bodies of water. Refer to the cadastaria surveys to official survey millomation.

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

Pressure Rating (PSI): 5M

Rating Depth: 10000

**Equipment:** An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Requesting Variance? YES

**Variance request:** Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. Manufacturer does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

**Testing Procedure:** A third party company will test the BOPs. Surface casing will be pressure tested to 250 psi low and 2000 psi high. Intermediate casing pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 2500 psi high on the surface casing and tested to 250 psi low and 2500 psi high on the intermediate casing. In the case of running a speed head with landing mandrel for 9.625" casing, initial surface casing test pressures will be 250 psi low and 3000 psi high, with wellhead seals tested to 5000 psi once the 9.625" casing has been landed and cemented. Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 5.5" x 2.875".

#### **Choke Diagram Attachment:**

VernaRae\_114H\_Choke\_20171023100703.pdf

#### **BOP Diagram Attachment:**

VernaRae\_114H\_BOP\_05-16-2017.pdf

**Section 3 - Casing** 

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	20	13.375	NEW	API	N	0.	1600	0	1600	-5866	-7466	1600	J-55	54.5	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
2	INTERMED IATE	12.2 5	9.625	NEW	API	N ·	0	5400	0	5400	-5866	- 11266	5400	J-55	40	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
3	PRODUCTI ON	8.75	5.5	NEW	API	N	0	14001	0	9490	-5866	- 15356	14001	P- 110	20	OTHER - DWC/C	1.12 5	1.12 5	DRY	1.8	DRY	1.8

#### Casing Attachments

Well Name: VERNA RAE FEDERAL COM

Well Number: 1	14H
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# **Casing Attachments**

Casing ID: 1 String Type: SURFACE	
Inspection Document:	
· · · · · · · · · · · · · · · · · · ·	
Spec Document:	
Tapered String Spec:	
Casing Design Assumptions and Worksheet(s):	
Casing Assumption Surface 05-16-2017.docx	
Casing ID: 2 String Type: INTERMEDIATE	
Inspection Document:	
Spec Document:	
Tapered String Spec:	
Casing Design Assumptions and Worksheet(s):	
Casing_Assumption_Intermediate_05-16-2017.docx	
Casing ID: 3 String Type: PRODUCTION	
Spec Document:	
	,
Tapered String Spec:	
Casing Design Assumptions and Worksheet(s):	
Casing Design Assumptions and Worksheet(s):	

Section 4 - Cement

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

String Type	Lead/Tait	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		<b>0</b>	1600	1764	1.75	13.5	3087	100	Class C	3% NaCl + LCM
SURFACE	Tail		0	1600	559	1.38	14.8	771	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	5400	1262	1.81	13.5	2284	100	Class C	Bentonite + 1% CaCl2 + 8% NaCl + LCM
INTERMEDIATE	Tail		0	5400	490	1.38	14.8	676	100	Class C	5% NaCl + LCM
PRODUCTION	Lead		0	1400 1	503	2.25	11.5	1131	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		0	1400 1	1483	1.38	13.2	2046	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM

# Section 5 - Circulating Medium

**Circulating Medium Table** 

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

**Describe what will be on location to control well or mitigate other conditions:** All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times.

**Describe the mud monitoring system utilized:** An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	Hd	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics	
0	1600	SPUD MUD	8.4	8.4								
5400	1400 1	OTHER : Fresh water & cut brine	9	. 9		-						
1600	5400	SALT SATURATED	10	10								

Page 4 of 6

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

# Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

A 2-person mud logging program will be used from 1600' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

List of open and cased hole logs run in the well:

CBL,GR,MWD,OTH

Other log type(s):

Casing collar locator

Coring operation description for the well:

No core or drill stem test is planned.

# **Section 7 - Pressure**

Anticipated Bottom Hole Pressure: 4725

Anticipated Surface Pressure: 2637.2

Anticipated Bottom Hole Temperature(F): 140

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

**Describe:** 

**Contingency Plans geoharzards description:** 

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

VernaRae\_114H\_H2S\_Plan\_05-16-2017.pdf

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

# **Section 8 - Other Information**

Proposed horizontal/directional/multi-lateral plan submission:

VernaRae\_114H\_Horizontal\_Drilling\_Plan\_05-16-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

VernaRae\_114H\_General\_Drill\_Plan\_05-18-2017.pdf

VernaRae\_114H\_Wellhead\_Casing\_Spec\_20171023100857.pdf

#### **Other Variance attachment:**

VernaRae\_114H\_DV\_Tool\_Variance\_Request\_20171023101416.pdf



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Midwest Hose & Specialty, Inc. Internal Hydrostatic Test Certificate **General Information Hose Specifications** PATTERSON B&E Hose Assembly Type Choke & Kill Customer MWH Sales Representative API 7K/FSL Level 2 AMY WHITE Certification Date Assembled 3/10/2015 Hose Grade MUD Location Assembled окс Hose Working Pressure 10000 Sales Order # 11839-11/14 245805 Hose Lot # and Date Code Customer Purchase Order # 270590 Hose I.D. (Inches) 2" Assembly Serial # (Pick Ticket #) 296283 Hose O.D. (Inches) 3.99" 50' Hose Assembly Length Armor (yes/no) YES Fittings End A End B R2.0X32M1502 RF2.0 32F1502 Stem (Part and Revision #) Stem (Part and Revision #) 14104546 A144853 Stem (Heat #) Stem (Heat #) RF2.0 10K RF2.0 10K Ferrule (Part and Revision #) Ferrule (Part and Revision #) 41044 Ferrule (Heat #) 41044 Ferrule (Heat #) Connection . Flange Hammer Union Part Connection (Part #) Connection (Heat #) Connection (Heat #) 2" 1502 H2S Nut (Part #) Nut (Part #) Nut (Heat'#) Nut (Heat #) Dies Used 97MM Dies Used 97MM Hydrostatic Test Requirements Test Pressure (nsi) 15,000 Hose assembly was tested with ambient water Test Pressure Hold Time (minutes) 17 3/4 temperature. Date Tested Tested By Approved By 3/10/2015

# MHSI-008 Rev. 0.0 Proprietary

ដ្ឋារ	Midwest Hose & Specialty, inc.				
Certif	ficate of Conformity				
Customer: PATTERSON B&E	Customer P.O.# <b>270590</b>				
Sales Order # 245805	Date Assembled: 3/10/2015				
	Specifications				
Hose Assembly Type: Choke & Kil	II				
Assembly Serial # 296283	Hose Lot # and Date Code 11839-11/14				
Hose Working Pressure (psi) 10000	Test Pressure (psi) 15000				
We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards. Supplier: Midwest Hose & Specialty, Inc. 3312 S I-35 Service Rd Oklahoma City, OK 73129 Comments:					
	1				

MHSI-009 Rev.0.0 Proprietary

Molc Er 1

# Internal Hydrostatic Test Graph

Customer: Patterson

**Hose Specifications** 

Pick Ticket #: 286159

<u>Verification</u>

Midwest Hose & Specialty, Inc.



Midwest Hose & Specialty, Inc. Internal Hydrostatic Test Certificate **Hose Specifications General Information** Choke & Kill Customer **PATTERSON B&E** Hose Assembly Type API 7K/FSL Level 2 MWH Sales Representative AMY WHITE Certification MUD Date Assembled 12/23/2014 Hose Grade Location Assembled 10000 ОКС Hose Working Pressure 11784-10/14 Sales Order # 237566 Hose Lot # and Date Code Customer Purchase Order # 261581 Hose I.D. (Inches) 2" 4.00" Assembly Serial # (Pick Ticket #) 286159 Hose O.D. (Inches) Hose Assembly Length 50' Armor (yes/no) YES Fittings End B End A R2.0X32M1502 Stem (Part and Revision #) R2.0X32M1502 Stem (Part and Revision #) M14101226 M14104546 Stem (Heat #) Stem (Heat #) **RF2.0 10K RF2.0 10K** Ferrule (Part and Revision #) Ferrule (Part and Revision #) Ferrule (Heat #) 41044 Ferrule (Heat #) 41044 2"1502 Connection . Flange Hammer Union Part Connection (Part #) 2866 Connection (Heat #) Connection (Heat #) Nut (Part #) Nut (Part #) Nut (Heat#) Nut (Heat #) 97MM Dies Used Dies Used 97MM **Hydrostatic Test Requirements** Hose assembly was tested with ambient water Test Pressure (psi) 15,000 Test Pressure Hold Time (minutes) 15 1/4 temperature. Date Tested Tested By Approved By 12/24/2014

MHSI-008 Rev. 0.0 Proprietary

التان م الح	Aidwest Hose Specialty, Inc.
Certific	ate of Conformity
Customer: • PATTERSON B&E	Customer P.O.# 261581
Sales Order # 237566	Date Assembled: 12/23/2014
S	pecifications
Hose Assembly Type: Choke & Kill	
Assembly Serial # 286159	Hose Lot # and Date Code 11784-10/14
Hose Working Pressure (psi) 10000	Test Pressure (psi) 15000
·	
We hereby certify that the above material supp to the requirements of the purchase order and a Supplier: <b>Midwest Hose &amp; Specialty, Inc.</b> 3312 S I-35 Service Rd Oklahoma City, OK 73129	lied for the referenced purchase order to be true according current industry standards.
Comments:	
Approved By	Date

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MHSI-009 Rev.0.0 Proprietary



Matador Resources Company

Midwest Hose & Specialty, Inc.

# Internal Hydrostatic Test Certificate

GeneralInform	nation	Hose Spee	fications and the	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill	
MWH Sales Representative	AMY WHITE	Certification	API 7K/FSL Level 2	
Date Assembled	3/10/2015	Hose Grade	MUD	
Location Assembled	ОКС	Hose Working Pressure	10000	
Sales Order #	245805	Hose Lot # and Date Code	11839-11/14	
Customer Purchase Order #	270590	Hose I.D. (Inches)	2°	
Assembly Serial # (Pick Ticket #)	296283	Hose O.D. (Inches)	3.99"	
Hose Assembly Length	sembly Length 50'		YES	
	E E	tings a state of the		
End A		End	B	
Stem (Part and Revision #)	R2.0X32M1502	Stem (Part and Revision #)	RF2.0 32F1502	
Stem (Heat #)	14104546	Stem (Heat #)	A144853	
Ferrule (Part and Revision #)	RF2.0 10K	Ferrule (Part and Revision #)	RF2.0 10K	
Ferrule (Heat #)	41044	Ferrule (Heat #)	41044	
Connection . Flange Hammer Union Part		Connection (Part #)		
Connection (Heat #)		Connection (Heat #)		
Nut (Part #)	2" 1502 H2S	Nut (Port#)	· · ·	
Nut (Heat #)		Nut (Heat #)		
Dies Used	97MM	Dies Used	97MM	
	Hydrostatic Te	st Regulitements - 12		
Test Pressure (psi)	15,000	Hose assembly was teste	ed with ambient water	
Test Pressure Hold Time (minutes)	17 3/4	temperature.		

Date Tested

3/10/2015

Tested By

Proprietar

MHSI-008 Re

Approved By

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# Surface Casing

Collapse: DF<sub>c</sub>=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DF<sub>b</sub>=1.125

• Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

# Intermediate #1 Casing

Collapse: DF<sub>c</sub>=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF<sub>b</sub>=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DF<sub>t</sub>=1.8

 Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

A 5000 psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attached BOP and choke manifold diagrams.

An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required in Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

Surface casing will be pressure tested to 250 psi low and 2000 psi high. Intermediate casing pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 2500 psi high on the surface casing and tested to 250 psi low and 2500 psi high on the intermediate casing. In the case of running a speed head with landing mandrel for 9.625" casing, initial surface casing test pressures will be 250 psi low and 3000 psi high, with wellhead seals tested to 5000 psi once the 9.625" casing has been landed and cemented. Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 5.5" x 2.875".

Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. Manufacturer does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

#### 4. CASING & CEMENT

All casing will be API and new.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
20"	0′ - 1600'	0′ - 1600'	Surface 13.375"	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	0′ - 5400'	0′ - 5400'	Inter. 9.625"	<b>40</b> <sup>۲</sup>	J-55	BTC	1.125	1.125	1.8

# Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

8.75"	0' · 1400	- 0 )1' 94	′ –   Proc 90′   5.	Juct. 5"	2	20	P-1	10	DW	C/C	1.125	1.125	1.8
								•					
Casing N	lame	Туре	Sacks	Yie	ld	Cu.	Ft.	We	eight	2	~ Blend		
Surfa	ce	Lead	1764	·1.7	<b>'</b> 5	30	87	1	3.5		Class C + 39	% NaCl +	LCM
		Tail	559	1.3	8	77	'1	1	4.8		Class C + 59	% NaCl +	LCM
TO	C = GL		1	00% E	ixces	ss			Cer	ntralize	ers per Ons	hore Orc	ler 2
Interme	diate	Lead	1262	1.8	81 2284		1	3.5	Class C + Bentonite + 1% CaCl <sub>2</sub> + 8% NaCl + LCM		% CaCl₂ +		
		Tail	490	1.3	1.38 676		1	4.8	Class C + 5% NaCl + LCM			LCM	
то	TOC = GL		100% Excess				2 0	on btn	n jt, 1 (	on 2nd jt, 1	every 4t	h jt to GL	
Produc	tion	Lead	503	2.2	25	11	31	1	1.5	ТХІ	+ Fluid Los Retard	ss + Dispe ler + LCN	ersant +
		Tail	1483	1.3	8	20	46	1	3.2	ТХІ	+ Fluid Los Retard	ss + Dispe ler + LCN	ersant +
TOC = 4400' 35% Excess				2	on btr top c	n jt, 1 of tail c	on 2nd jt, 1 ement (10	Levery o 00' above	ther jt to e TOC)				

Matador requests the option to run a DV tool with annular packer as contingency in the intermediate section if lost circulation is encountered. If losses occur, then the DV tool with packer will be placed  $\geq 100^{\circ}$  above the loss zone to give the option to pump cement as either a single stage or two stage.

# 5. MUD PROGRAM

An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Туре	Interval	lb/gal	Viscosity	Fluid Loss
fresh water spud	0' - 1600'	8.4	28	NC
brine water	1600' - 5400'	10.0	30-32	NC
fresh water & cut brine	5400' - 14001'	9.0	30-32	NC

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

# 6. <u>CORES, TESTS, & LOGS</u>

No core or drill stem test is planned.

A 2-person mud logging program will be used from ≈1600' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

#### 7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈4725 psi. Expected bottom hole temperature is ≈140° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough  $H_2S$  from the surface to the Bone Spring to meet the BLM's minimum requirements for the submission of an " $H_2S$  Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an  $H_2S$  safety package on all wells, an " $H_2S$  Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

# 8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take  $\approx$ 3 months to drill and complete the well.

Matador Production Company owns the majority working interest in this well. Per its discussions with its potential partners, Matador will be named operator upon execution of the final Operating Agreements signed by the partners or the issuance of a pooling order by the State.



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# **Technical Specifications**

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
DWC/C-IS PLUS Cas	sing 5-1/2 in	20.00 lb/ft (0.361 in)	VST P110 EC
standard	•	· /	
		х.	·
	Material		
VST P110 EC	Grade		
125,000	Minimum Yield Strength (psi)		USA
135,000	Minimum Ultimate Strength (ps	i)	VANALISA
			4424 W. Sam Houston Pkwy. Suite 150
	Pipe Dimensions		Houston, TX 77041
5.500	Nominal Pipe Body O.D. (in)	· · · ·	Phone: 713-479-3200 Fax: 713-479-3234
4.778	Nominal Pipe Body I.D.(in)		E-mail: VAMUSAsales@vam-usa.com
0.361 ~	Nominal Wall Thickness (in)		in a constant of the second
20.00	Nominal Weight (lbs/ft)		
19.83	Plain End Weight (lbs/ft)		
5 828	Nominal Pine Body Area (sq in)		μ μ μ
0.020		, ,	Real
	Pine Body Performance Prop	ortios	i de la <b>D</b> e la companya de la company
729 000	Minimum Pipe Body Vield Strer	ath (lbs)	
12 000	Minimum Collapse Pressure (p		
14,090	Minimum Internal Viold Brossure (p.	o (noi)	5.
14,300	Hudrostotio Tost Prossure (psi)	e (psi)	
15,100	Hydrostatic Test Plessure (psi)		
	Connection Dimensions		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
0.000			5
6.300	Connection O.D. (in)		A A A
4.778	Connection I.D. (In)	• •	
4.653	Connection Drift Diameter (in)		
4.13	Make-up Loss (in)	1	
5.828	Critical Area (sq in)		
100.0	Joint Efficiency (%)		5
	Connection Performance Pro	perties	
729,000	Joint Strength (Ibs)		
26,040	Reference String Length (ft) 1	4 Design Factor	
728,000	API Joint Strength (lbs)		
729,000	Compression Rating (lbs)		
12,090	API Collapse Pressure Rating (	psi)	
14,360	API Internal Pressure Resistant	ce (psi)	
104.2	Maximum Uniaxial Bend Rating	[degrees/100 ft]	
		- •	8
	Appoximated Field End Torq	ue Values	
16,600	Minimum Final Torque (ft-lbs)		
19,100	Maximum Final Torque (ft-lbs)		
21,600	Connection Yield Torque (ft-lbs	)	

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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4/14/2015

#### **DWC Connection Data Notes:**

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.



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#### 4/14/2015

Matador requests the option to run a DV tool with annular packer as contingency in the intermediate 1 section on 9-5/8" casing if lost circulation is encountered. If losses occur the DV tool with packer will be placed at least 100' above loss zone to give the option to pump cement as either a single stage or two stage.

# **Matador DV Tool Specifications**

Example:

Assuming DV tool set at 4500' MD but if the setting depth changes, cement volumes will be adjusted proportionately.

Stage 1:

Lead	1262	1.81	13.5	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM	
Tail 👘	490	1.38	14.8	Class C + 5% NaCl + LCM	
100% excess, TOC = 0' MD					

Stage 2:

Lead	1324	1.81	13.5	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM			
100% excess, TOC = 0' MD							

# ℱAFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

APD ID: 10400014273

**Operator Name: MATADOR PRODUCTION COMPANY** 

Well Name: VERNA RAE FEDERAL COM

Well Type: OIL WELL

# Section 1 - Existing Roads

Will existing roads be used? YES

**Existing Road Map:** 

VernaRae 114H Road Map\_05-18-2017.pdf

Existing Road Purpose: ACCESS, FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

**Existing Road Improvement Description:** 

**Existing Road Improvement Attachment:** 

# Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

VernaRae\_114H\_Road\_Map\_05-18-2017.pdf

New road type: RESOURCE

Length: 830.32

Width (ft.): 30 Max grade (%): 3

Max slope (%): 0

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crown & ditch, surface with caliche

Feet

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Highlighted data reflects the most

Well Number: 114H Well Work Type: Drill

Submission Date: 05/31/2017

recent changes

Show Final Text

SUPO Data Report 12/21/2017

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: grader

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

# Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossings needed.

Road Drainage Control Structures (DCS) description: Crown & ditch, no culverts needed.

Road Drainage Control Structures (DCS) attachment:

#### Access Additional Attachments

Additional Attachment(s):

#### Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

VernaRae\_114H\_Well\_Map\_05-16-2017.pdf

**Existing Wells description:** 

# Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

**Production Facilities description:** 

Production Facilities map:

VernaRae 114H Production Diagram 05-18-2017.pdf

# Section 5 - Location and Types of Water Supply

Water Source Table

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

Water source type: GW WELL

Source longitude:

Source volume (acre-feet): 1.9333965

Water source use type: DUST CONTROL, STIMULATION

Describe type:

Source latitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: TRUCKING

Source transportation land ownership: PRIVATE

Water source volume (barrels): 15000

Source volume (gal): 630000

#### Water source and transportation map:

Additional information attachment:

VernaRae\_114H\_Water\_Source\_Map\_05-16-2017.pdf

Water source comments:

New water well? NO

New Water Well I	nfo	
Well latitude:	Well Longitude:	Well datum:
Well target aquifer:		
Est. depth to top of aquifer(ft):	Est thickness	of aquifer:
Aquifer comments:		
Aquifer documentation:		
Well depth (ft):	Well casing type	:
Well casing outside diameter (in.):	Well casing insid	de diameter (in.):
New water well casing?	Used casing sou	Irce:
Drilling method:	Drill material:	
Grout material:	Grout depth:	
Casing length (ft.):	Casing top dept	h (ft.):
Well Production type:	<b>Completion Meth</b>	nod:
Water well additional information:		
State appropriation permit:		

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

#### Section 6 - Construction Materials

**Construction Materials description:** NM One Call (811) will be notified before construction starts. Top 6" of soil and brush will be stockpiled north of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land. Klein pit is in SWNW 27-19s-35e. Berry pit is in E2NE4 35-20s-34e. **Construction Materials source location attachment:** 

# Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: cuttings and mud

Amount of waste: 15000 barrels

Waste disposal frequency : Daily

Safe containment description: steel tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE FACILITY Disposal type description:

Disposal type description.

Disposal location description: Halfway, NM

#### Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

**Reserve pit liner** 

Reserve pit liner specifications and installation description

**Cuttings Area** 

Cuttings Area being used? NO

Are you storing cuttings on location? NO

**Description of cuttings location** 

Cuttings area length (ft.)

Cuttings area depth (ft.)

Cuttings area width (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

#### WCuttings area liner

Cuttings area liner specifications and installation description

# **Section 8 - Ancillary Facilities**

Are you requesting any Ancillary Facilities?: NO Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

VernaRae\_114H\_Well\_Site\_Layout\_05-16-2017.pdf

Comments:

### Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: VERNA RAE

Multiple Well Pad Number: SLOT 4

**Recontouring attachment:** 

VernaRae\_114H\_Recontour\_plat\_05-16-2017.PDF

Drainage/Erosion control construction: Surface with caliche

**Drainage/Erosion control reclamation:** Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Wellpad long term disturbance (acres): 2.99	Wellpad short term disturbance (acres): 3.65
Access road long term disturbance (acres): 0.57	Access road short term disturbance (acres): 0.57
Pipeline long term disturbance (acres): 0	Pipeline short term disturbance (acres): 0
Other long term disturbance (acres): 0	Other short term disturbance (acres): 0.75
Total long term disturbance: 3.56	Total short term disturbance: 4.97

**Reconstruction method:** Within 7 days disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour with a grader. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Topsoil redistribution: Soil will be evenly spread over disturbed areas

Soil treatment: No soil treatment planned, site will be revegetated in accordance with the surface owner's requirements.

Existing Vegetation at the well pad:

**Operator Name:** MATADOR PRODUCTION COMPANY **Well Name:** VERNA RAE FEDERAL COM

Well Number: 114H

Seed source:

Source address:

Total pounds/Acre:

Proposed seeding season:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Existing Vegetation Community at the road attachment: Existing Vegetation Community at the pipeline: Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Existing Vegetation Community at other disturbances attachment:

Non native seed used?

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project?

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? Seed harvest description: Seed harvest description attachment:

# Seed Management

# Seed Table

Seed type:

Seed name:

Source name:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Seed Summary						
Seed Type	Pounds/Acre					

Page 6 of 9

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

Seed reclamation attachment:					
<b>Operator Contact/Responsible Official Contact Info</b>					
First Name:	Last Name:				
Phone:	Email:				
Seedbed prep:					
Seed BMP:					
Seed method:					
Existing invasive species? NO	· .				
Existing invasive species treatme	ent description:				
Existing invasive species treatme	ent attachment:				
Weed treatment plan description:	: Noxious weeds will be controlled.				
Weed treatment plan attachment:	:				
Monitoring plan description: On p	oumper visits.				
Monitoring plan attachment:					
Success standards: To landowner	r's specifications.				
Pit closure description: N/A (close	ed loop)				

Pit closure attachment:

# Section 11 - Surface Ownership

Disturbance type: WELL PAD Describe: Surface Owner: PRIVATE OWNERSHIP Other surface owner description: **BIA Local Office: BOR Local Office: COE Local Office:** 

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

**USFWS Local Office:** 

Well Name: VERNA RAE FEDERAL COM

Well Number: 114H

Other Lo	ocal Off	ice:
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USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Fee Owner: Larry Hughes

Phone: (575)263-7602

Fee Owner Address: HC 69 Box 57 Monument NM 88265 Email:

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: Matador Resources Company has a private surface owner agreement with Larry Hughes (HC 69 Box 57, Monument NM 88265) for the Verna Rae Fed Com road in SESE Sec. 31, T. 19 S., R. 34 E. and the Verna Rae Fed Com slot 4 well site, road, and power line in Lot 1 Section 6, T. 20 S., R. 34 E., Lea County, NM. His phone number is (575) 263-7602. Matador Resources Company will file an Application for Right-Of-Way Easement with the NM State Land Office (PO Box 1148, Santa Fe NM 87504) for road access across S2S2 32-19s-34e. Their phone number is (505) 827-5728. Surface Access Bond BLM or Forest Service: BLM

BLM Surface Access Bond number:

USFS Surface access bond number:

### Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

**ROW Applications** 

SUPO Additional Information:

Use a previously conducted onsite? YES

**Previous Onsite information:** On site inspection was held with Vance Wolf, Cassie Brooks, and Bob Ballard (all BLM) on April 3, 2017.

### Other SUPO Attachment

VernaRae\_114H\_Surface\_Use\_Plan\_05-18-2017.pdf

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

#### Surface Use Plan

### 1. <u>ROAD DIRECTIONS & DESCRIPTIONS</u> (See MAPS 1 – 7)

From the Hobbs Airport....

Go SW 22.3 miles on US 62/180 to the equivalent of Mile Post 78.2 Then turn right and go West 1.0 mile on a caliche road to a fence Then go W and SW 830.32' cross-country to the proposed pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed.

# 2. <u>ROAD TO BE BUILT OR UPGRADED</u> (See MAPS 4 - 7)

The 830.32' of new road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 3%. Maximum cut or fill = 2'. An underground pipeline will be padded before crossing. A cattle guard will be installed in the one fence that is crossed. No culvert or vehicle turn out is needed. Upgrading will consist of patching potholes with caliche.

3. EXISTING WELLS (See MAP 3)

Existing oil, gas, disposal, water, and P & A wells are within a mile. No injection wells are within a mile radius.

### 4. <u>PROPOSED PRODUCTION FACILITIES</u> (see MAPS 4, 8, & 9)

A 2203.97' long overhead raptor safe 3-phase power line will be built east to Southwestern Public Service's existing power line in Section 5. Oil tanks, water tanks, meter runs, separators, pumps, heater-treaters, combustion unit, and a flare will be installed on the south and west sides of the pad (see preceding diagram). Gas line

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

# **Drilling Program**

# 1. ESTIMATED TOPS

Formation Name	TVD	MD	Bearing
Quaternary	000′	000′	water
Rustler	1475′	1475′	anhydrite
Top salt	1605′	1605′	salt
Base salt	3120′	3120'	salt
Tansill	3185′	3185′	sandsone
Yates	3340′	3340′	gypsum
Seven Rivers	3750′	3750'	dolomite
Queen	4570′	4570′	sandstone
Capitan/Goat Seep Reef carbonate	4750′	4750′	water
Delaware Mt. Group sandstones	5420′	5420′	hydrocarbons
Brushy Canyon Sand	6155′	6155′	hydrocarbons
Bone Spring Lime	8280′	8280′	hydrocarbons
(КОР	8917′	8920'	hydrocarbons)
1 <sup>st</sup> Bone Spring carbonate	9005′	9008′	hydrocarbons
1 <sup>st</sup> Bone Spring Sand	9390′	9477	hydrocarbons & goal
TD	9490′	14001'	hydrocarbons

# 2. NOTABLE ZONES

First Bone Spring sand is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be  $\geq$ 330' from the dedication perimeter. Closest water well (L 07213) is 2079' NNW. Depth to water is 110' in this 160' deep well.

# 3. PRESSURE CONTROL



Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

plans have not been finalized, though it appears DCP will build a short line from its existing line that is between the Verna Rae Fed Com slot 3 and 4 pads.

#### 5. WATER SUPPLY (See MAP 2)

Water will be trucked from existing water stations on private land. Sonny's water station (L 07431A) is in NENE 5-19s-36e. Berry's water station (CP 00802) is in SWNE 2-21s-32e.

#### 6. CONSTRUCTION MATERIALS & METHODS (See MAPS 2 & 10-12)

NM One Call (811) will be notified before construction starts. Top  $\approx$ 6" of soil and brush will be stockpiled north of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land. Klein pit is in SWNW 27-19s-35e. Berry pit is in E2NE4 35-20s-34e.

#### 7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Lea County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Hobbs wastewater treatment plant.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, and mud logger.

# 9. WELL SITE LAYOUT (See MAPS 10 & 11)

See Rig Layout diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad  $\approx 18\%$  (0.66 acre) by removing caliche and reclaiming the north side (50' x 430') and southeast corner (100' x 150' x 180'). This will leave 2.99 acres for the production equipment (e. g., tank battery, heater-treater, separator), pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the well is plugged, then the rest of the pad and 830.32' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled. Land use:

 $830.32' \times 30' \text{ road} = 0.57 \text{ acres}$   $2203.97' \times 15' \text{ power line} = 0.75 \text{ acres}$   $+ 370' \times 430' \text{ pad} = 3.65 \text{ acres}$  4.97 acres short term - 0.75 acre power line - 0.66 acre interim reclamation 3.56 acres long term (0.57 road + 2.99 pad)

#### 11. SURFACE OWNER

All pad, most road (754.99'), and some power line (658.08') construction will be on land owned by Larry Hughes (HC 69 Box 57, Monument NM 88265). His phone number is 575 263-7602.

Remaining road construction (75.33') will be on NM State Land Office land. Their address is PO Box 1148, Santa Fe NM 87504. Phone is 505 827-5728.

Most power line construction (1545.89') will be on BLM for which a power line right-ofway application will be filed.

#### 12. OTHER INFORMATION

On site inspection was held with Vance Wolf, Cassie Brooks, and Bob Ballard (all BLM) on April 3, 2017.

Lone Mountain inspected and will file an archaeology report.

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

#### CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 12th day of May, 2017.

Brian Wood, Consultant Permits West, Inc. 37 Verano Loop, Santa Fe, NM 87508 (505) 466-8120 FAX: (505) 466-9682

Field representative will be:

Sam Pryor, Senior Staff Landman Matador Production Company 5400 LBJ Freeway, Suite 1500 Dallas TX 75240 Cellular: (505) 699-2276

Matador Production Company Verna Rae Fed Com 114H SHL 229' FNL & 722' FEL BHL 240' FSL & 660' FEL Sec. 6, T. 20 S., R. 34 E., Lea County, NM

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Phone: (972) 371-5241 FAX: (214) 866-4841

# **FAFMSS**

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U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

# **Section 1 - General**

Would you like to address long-term produced water disposal? NO

# **Section 2 - Lined Pits**

Would you like to utilize Lined Pit PWD options? NO Produced Water Disposal (PWD) Location: PWD surface owner: Lined pit PWD on or off channel: Lined pit PWD discharge volume (bbl/day): Lined pit specifications:

.

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

#### **PWD disturbance (acres):**

PWD Data Report

12/21/2017

# **Section 3 - Unlined Pits**

#### Would you like to utilize Unlined Pit PWD options? NO

**Produced Water Disposal (PWD) Location:** 

**PWD surface owner:** 

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

**Unlined pit specifications:** 

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

**Unlined Produced Water Pit Estimated percolation:** 

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

#### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**PWD disturbance (acres):** 

**PWD disturbance (acres):** 

Injection well type:

Injection well number:

Assigned injection well API number? Injection well new surface disturbance (acres): Minerals protection information: Mineral protection attachment: Underground Injection Control (UIC) Permit? UIC Permit attachment:

# Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

**PWD surface owner:** 

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

# Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location: PWD surface owner: Other PWD discharge volume (bbl/day): Other PWD type description: Other PWD type attachment: Have other regulatory requirements been met? Other regulatory requirements attachment: Injection well name:

#### Injection well API number:

PWD disturbance (acres):

PWD disturbance (acres):

# **FAFMSS**

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

# **Bond Information**

Federal/Indian APD: FED

BLM Bond number: NMB001079

**BIA Bond number:** 

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

**Reclamation bond number:** 

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

# Bond Info Data Report

12/21/2017

# **FMSS**

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

# **Operator Certification**

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Brian Wood

Title: President

Street Address: 37 Verano Loop

City: Santa Fe

State: NM

State:

Phone: (505)466-8120

Email address: afmss@permitswest.com

**Field Representative** 

**Representative Name:** 

Street Address:

City:

Phone:

Email address:

Signed on: 05/31/2017

Operator Certification Data Report

12/21/2017

Zip: 87508

Zip: