Form 3160-3
(March 2012)

HOBBS OCD
FEB 28 2018
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FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM135247

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: NINA CORTELL FED COM 121H 320981

2. Name of Operator: MATADOR PRODUCTION COMPANY 228937

9. API Well No.: 30-025-44648

3a. Address: 5400 LBJ Freeway, Suite 1500 Dallas TX 752

3b. Phone No. *(include area code)*: (972)371-5200

10. Field and Pool, or Exploratory: BILBREY BASIN / BONESPRING 5695

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: SWSW / 150 FSL / 585 FWL / LAT 32.4138789 / LONG -103.6692442

At proposed prod. zone: LOT 4 / 240 FNL / 990 FWL / LAT 32.4273146 / LONG -103.6679712

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 3 / T22S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*: 27 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 150 feet

16. No. of acres in lease: 439.68

17. Spacing Unit dedicated to this well: 160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1923 feet

19. Proposed Depth: 10996 feet / 15653 feet

20. BLM/BIA Bond No. on file: FED: NMB001079

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3807 feet

22. Approximate date work will start*: 12/01/2017

23. Estimated duration: 90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Brian Wood / Ph: (505)466-8120	11/21/2017

Title: President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	02/26/2018

Title	Office
Supervisor Multiple Resources	CARLSBAD

Application approval 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.
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 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.

(Continued on page 2)

GCP 2/28/18

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ 03/01/18

Approval Date: 02/26/2018

Miss. 5 pgs

Additional Operator Remarks

Location of Well

1. SHL: SWSW / 150 FSL / 585 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4138789 / LONG: -103.6692442 (TVD: 0 feet, MD: 0 feet)
   PPP: SWNW / 2640 FSL / 990 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.420737 / LONG: -103.66795 (TVD: 10996 feet, MD: 13261 feet)
   PPP: SWSW / 150 FSL / 585 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4138789 / LONG: -103.6692442 (TVD: 0 feet, MD: 0 feet)
   BHL: LOT 4 / 240 FNL / 990 FWL / TWSP: 22S / RANGE: 32E / SECTION: 4 / LAT: 32.4273146 / LONG: -103.6679712 (TVD: 10996 feet, MD: 15653 feet)

BLM Point of Contact

Name: Tenille Ortiz
Title: Legal Instruments Examiner
Phone: 5752342224
Email: tortiz@blm.gov

Approval Date: 02/26/2018

AFMSS

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

Operator Certification Data Report

02/26/2018

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 **Signed on:** 11/21/2017

Title: President

Street Address: 37 Verano Loop

City: Santa Fe **State:** NM **Zip:** 87508

Phone: (505)466-8120

Email address: afmss@permitswest.com

Field Representative

Representative Name: Sam Pryor

Street Address: 5400 LBJ Freeway, Suite 1500

City: Dallas **State:** TX **Zip:** 75240

Phone: (972)371-5241

Email address:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** NINA CORTELL **Number:** SLOT 1

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 27 Miles **Distance to nearest well:** 1923 FT **Distance to lease line:** 150 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: NC_121H_plat_20171120131447.pdf

Well work start Date: 12/01/2017 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

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 Leg #1	150	FSL	585	FWL	22S	32E	3	Aliquot SWSW	32.4138789	-103.6692442	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3807	0	0
KOP Leg #1	150	FSL	585	FWL	22S	32E	3	Aliquot SWSW	32.4138789	-103.6692442	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-6616	10440	10423
PPP Leg #1	150	FSL	585	FWL	22S	32E	3	Aliquot SWSW	32.4138789	-103.6692442	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3807	0	0

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

Pressure Rating (PSI): 5M **Rating Depth:** 12000

Equipment: A 12,000' 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, choke manifold, co-flex hose, and speed head 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.

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: 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 1000 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 and the annular will be tested to 250 psi low and 2500 psi high. Wellhead seals will be 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:

NC_121H_choke_20171120210542.pdf

BOP Diagram Attachment:

NC_121H_BOP_20171120210650.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	17.5	13.375	NEW	API	N	0	1200	0	1200			1200	J-55	54.5	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5000	0	4986			5000	J-55	40	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
3	PRODUCTION	8.75	5.5	NEW	API	N	0	15653	0	10996			15653	P-110	20	OTHER - BTC/TXP	1.125	1.125	DRY	1.8	DRY	1.8

Casing Attachments

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1200	250	1.82	12.8	455	100	CLASS C	BENTONITE + 2% CaCl2 + 3% NaCl + LCM
SURFACE	Tail				889	1.38	14.8	1226	100	CLASS C	5% NaCl + LCM
INTERMEDIATE	Lead		0	5000	1044	2.13	12.6	2223	100	Class C	Bentonite + 1% CaCl2 + 8% NaCl + LCM
INTERMEDIATE	Tail		0	5000	554	1.38	14.8	764	100	Class C	5% NaCl + LCM
PRODUCTION	Lead		0	15653	888	2.35	11.5	2086	35	TXI	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		0	15653	1533	1.39	13.2	2130	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

Section 5 - Circulating Medium

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: No core or drill stem test is planned. A 2-person mud logging program will be used from 5000' 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.
Describe the mud monitoring system utilized: 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.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1200	SPUD MUD	8.3	8.3							
1200	5000	OTHER : BRINE WATER	10	10							

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

NC_121H_horiz_drill_plan_20171120214708.pdf

Other proposed operations facets description:

GENERAL DRILL PLAN ATTACHED

SPEEDHEAD VARIANCE FROM BOP/CHOKE SECTION ATTACHED HERE

Other proposed operations facets attachment:

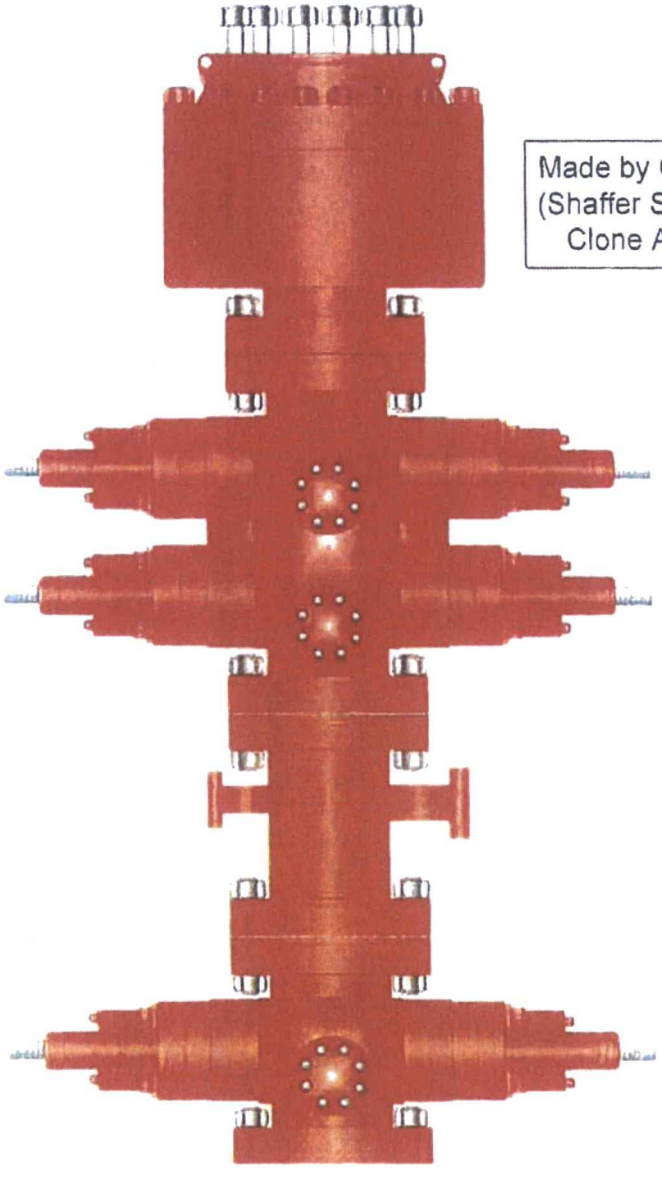
NC_121H_speedhead_variance_20171120214746.pdf
NC_121H_general_drill_plan_20171120214952.pdf

Other Variance attachment:

Nina Cortell Fed Com #121H
Matador Resources Company

PATTERSON-UTI
Well Control

RIG: 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

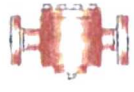
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" PRESSURE 5,000
HEIGHT: 48 ½" WEIGHT: 13,800 lbs

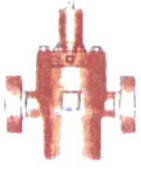
PATTERSON-UTI # PC2-128
STYLE: New Cameron Type U
BORE 13 5/8" PRESSURE 10,000
RAMS: TOP 5" Pipe BTM Blinds
HEIGHT: 66 5/8" WEIGHT: 24,000 lbs

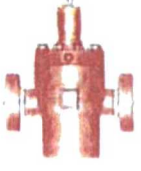
Length 40" Outlets 4" 10M
DSA 4" 10M x 2" 10M

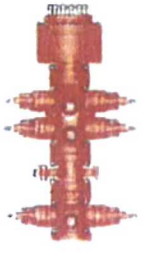
PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" PRESSURE 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" WEIGHT: 13,000 lbs

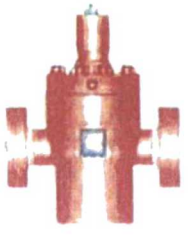
WING VALVES

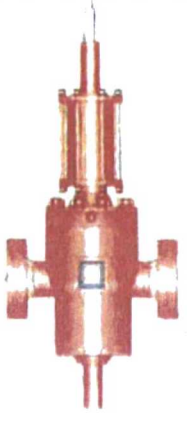

2" Check Valve


2" Manual Valve


2" Manual Valve




4" Manual Valve


4" Hydraulic Valve

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-2	Hose O.D. (Inches)	5.30"
Hose Assembly Length	10'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	91996	Stem (Heat #)	91996
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	*Hose assembly was tested with ambient water temperature.*
Test Pressure Hold Time (minutes)	15 1/2	

Date Tested	Tested By	Approved By
12/8/2014		

Nina Cortell Fed Com #121H
Matador Resources Company

Midwest Hose & Specialty, Inc.

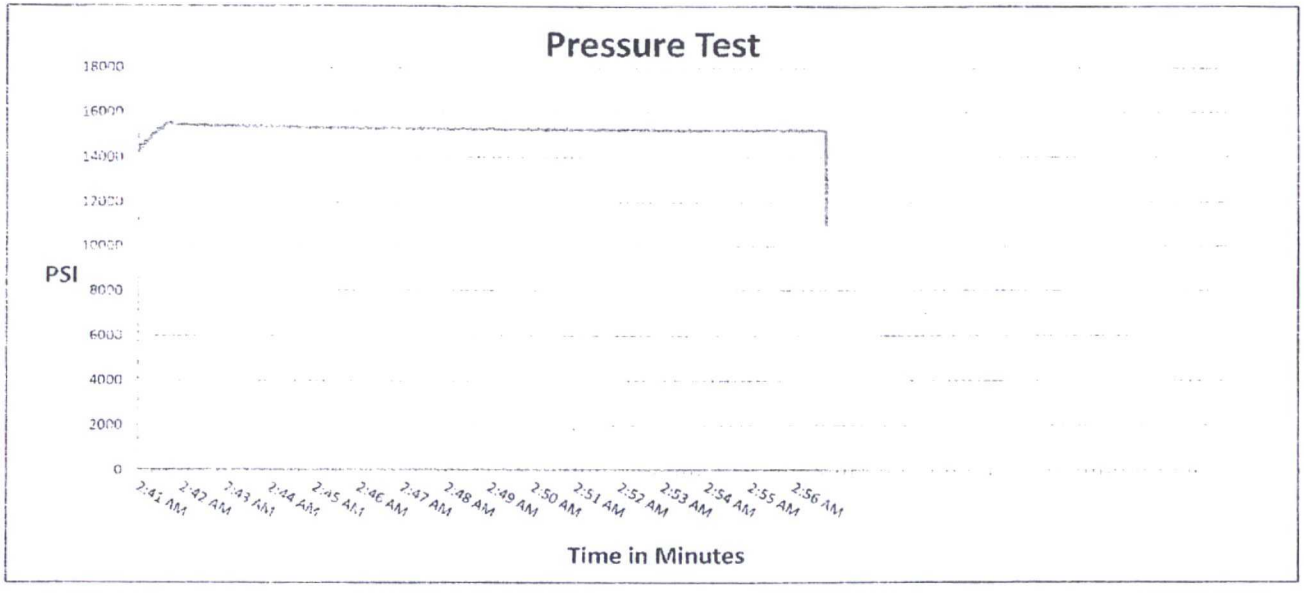
Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Ck	20'	4-1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.77"	5.37"	5.40"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-1



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15893 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Tyler Hill*

x

Approved By: *Ryan Adams*

x

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-1**	*Hose Lot # and Date Code*	**10490-01/13**
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:

Approved By	*Date*
Ryan Adams	12/9/2014

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	*Hose assembly was tested with ambient water temperature.*
Test Pressure Hold Time (minutes)	16 3/4	

Date Tested	Tested By	Approved By
12/9/2014		

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_c=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_b=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: DF_t=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_c=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_b=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_t=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).

Production Casing

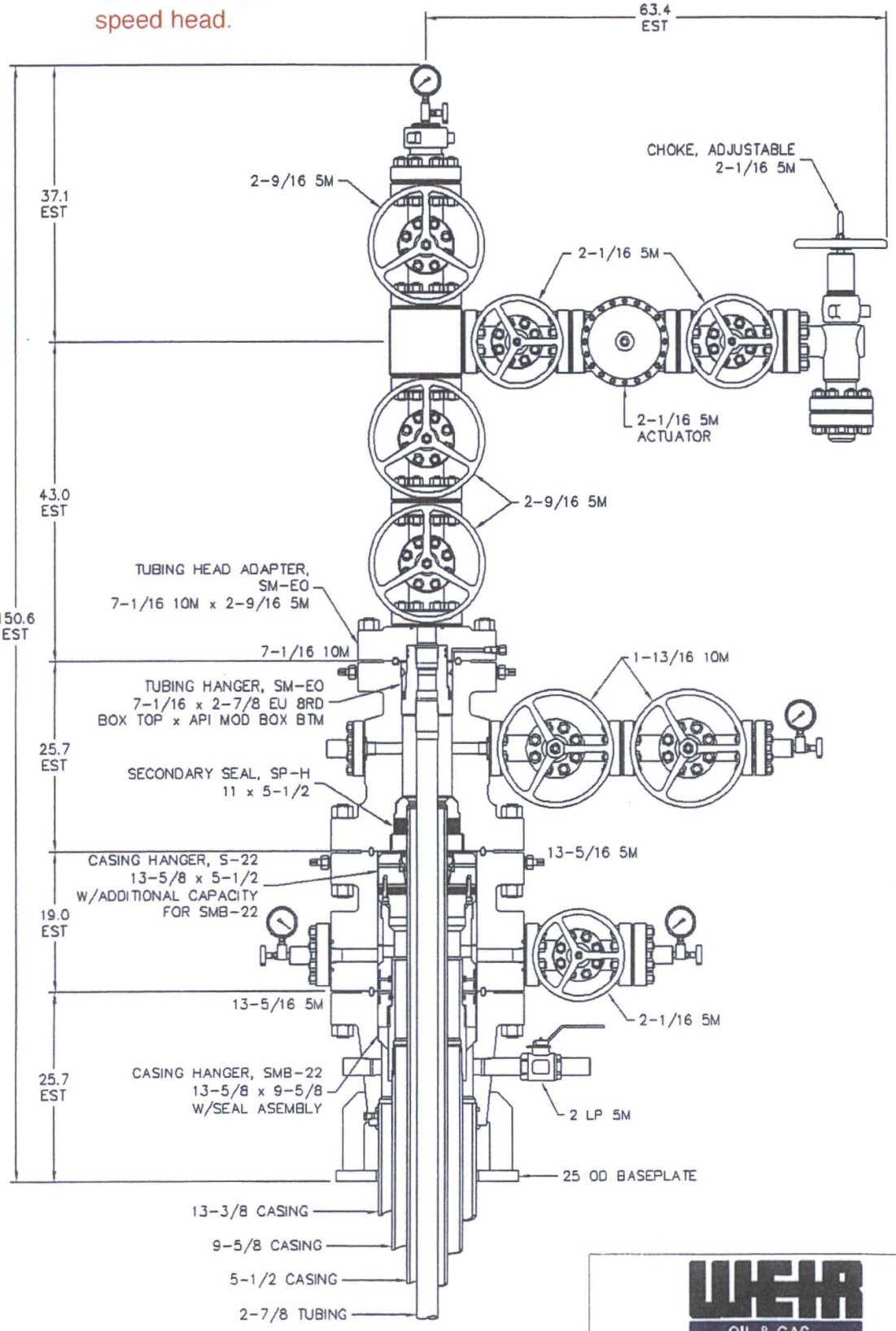
Collapse: DF_c=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 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 mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

MATADOR PROD. CO.

HO-35272

Matador requesting variance to use speed head.



NOTE:
DIMENSIONS SHOWN ON THIS DRAWING ARE ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY DEPENDING ON RAW MATERIAL LENGTHS.
NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED.
DIMENSIONS SHOWN SHOULD BE CONSIDERED FOR REFERENCE PURPOSES ONLY.

WEIR OIL & GAS

5,000 PSI WELLHEAD ASSEMBLY
13-3/8 X 9-5/8 X 5-1/2 X 2-7/8

DRAWN BY: RPL	SCALE 1:13	DATE 17APR15	REV
CHECKED BY:	DRAWING NO. QD-000475		
APPROVED BY:			

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com

APD ID: 10400024798 **Submission Date:** 11/21/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

NC_121H_road_map_20171120215357.pdf

Existing Road Purpose: ACCESS **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:

NC_121H_new_road_map_20171120215516.pdf

New road type: RESOURCE

Length: 1404.27 Feet **Width (ft.):** 30

Max slope (%): 0 **Max grade (%):** 5

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: CROWNED AND DITCHED

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

Water source use type: DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING

Water source type: GW WELL

Describe type:

Source longitude:

Source latitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: TRUCKING

Source transportation land ownership: STATE

Water source volume (barrels): 20000

Source volume (acre-feet): 2.577862

Source volume (gal): 840000

Water source and transportation map:

NC_121H_water_source_map_20171120221001.pdf

Water source comments: WATER WILL BE TRUCKED FROM EXISTING WATER STATIONS ON PRIVATE LAND. BERRY'S WATER STATION (CP 00802) IS IN NWNE 2-21s-33e.

New water well? NO

New Water Well Info

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 inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location ROLL-OFF MUD TANKS STORED ON SITE AND HAULED OFF FOR DISPOSAL TO STATE APPROVED FACILITY IN HALFWAY, NM.

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

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

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:

NC_121H_well_site_layout_20171120222146.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** NINA CORTELL

Multiple Well Pad Number: SLOT 1

Recontouring attachment:

NC_121H_recontour_plat_20171120222234.pdf

NC_121H_interim_reclamation_20171130145956.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

Seed harvest description attachment:

Seed Management

Seed Table

Seed type: **Seed source:**

Seed name:

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM/State Land Office standards

Weed treatment plan attachment:

Monitoring plan description: To BLM/State Land Office standards

Monitoring plan attachment:

Success standards: To BLM/State Land Office satisfaction

Pit closure description: NO PIT

Pit closure attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 121H

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: GENERAL SUPO ATTACHED SURFACE USE STATEMENT ATTACHED

Use a previously conducted onsite? YES

Previous Onsite information: ON-SITE WITH VANCE WOLF (BLM), JUNE 2, 2017. LONE MOUNTAIN WILL INSPECT AND FILE AN ARCHAEOLOGY REPORT.

Other SUPO Attachment

NC_121H_general_SUPO_20171120223809.pdf

NC_121H_surface_use_statement_20171121113436.pdf

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:

PWD disturbance (acres):

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:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **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: **PWD disturbance (acres):**

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: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

United States Department of the Interior
Bureau of Land Management
Carlsbad Field Office

Refer to: 3160-3

COPY

To: AFM, Lands & Minerals, CFO
From: Geologist, CFO
Subject: Geologic Review of Application for Permit to Drill

Operator: Matador Operating Co.

Well Name and Number: NINA CORTELL FED COM-121H

Potash: No

Location: SHL:150'/S.& 585'/W. SEC003 T022S, R032E.(SWSW)

County Lea **Lease Number:** NMNM135247 **APD Received:** 11-21-2017

Ground Level Elevation: 3807 **Surface Geology:** Qe/Qp-Eolian deposits/Piedmont alluvial deposits

TVD: 10996 **MD:** 16653 **BH Mud Weight:** 9

BHP: 5146 **MASP:** 2727

1. Geologic Marker Tops (from reports on surrounding wells):

	BILBREY FEDERAL COM #001	OTTOWA STATE #001	BARR NONE FEDERAL #001	BOOTLEG 11 FEDERAL COM #002	**Proposed Well** NINA CORTELL FED COM-121H
	3002527472	3002531986	3002532221	3002537083	T022S, R032E.(SWSWSEC003
	T22S R32E Sec 4	T22S R32E Sec 3	T22S R32E Sec 10	T22S R32E Sec 11	150'/S.& 585'/W
	660FNL 1980FWL	1980FSL 1980FWL	1980FNL 660FWL	1980FNL 1980FWL	Unit
	Elevation	Elevation	Elevation	Elevation	Elevation
Geologic Marker	Depth	Depth	Depth	Depth	Estimated Depth
Rustler	-	-	-	-	1058
Top of Salt	749	744	800	892	1425
Castile	1075	-	-	1190	3533
Lamar	-	-	-	-	4980
Bell Canyon	-	-	-	-	5035
Cherry Canyon	4820	4850	4847	4840	5954
Brushy Canyon	4950	4931	4910	4920	6918
Bone Spring Lime	5757	5825	5800	5802	8916
1st BS Sand	7000	7056	7007	6990	9636
2nd BS Lime	8792	8820	8800	8678	10274
2nd BS Sand	9813	-	-	-	10481
3rd BS Lime	-	-	-	-	10616
3rd BS Sand	10447	-	-	-	11550
Wolfcamp	-	-	-	-	11936
Red Beds	11500	-	-	11619	449
BX BLM	11897	-	-	11986	4861

2. Fresh Water Information

a. Fresh Water: 360

b. Fresh Water Remarks:

Two water wells: According to well data from the New Mexico Office of the State Engineer's Water Rights Reporting System, there are 16 water wells attempted within a six-mile radius of the proposed project 7 wells closed leaving 7 total dry borings and two water wells . Depth to water is 340' Santa Rosa water sands and 360' Dewey Lake Silt stone with the deepest boring drilled to 4,911' dry hole. Groundwater, if any, may be encountered in the Magenta Dolomite Member of the Rustler Formation down to a depth of approximately 1,095'.

c. Water Basin: Carlsbad Water Basin

3. Recommended Casing Setting Depth

a. Surface Casing Depth: 1200

b. Intermediate Casing Depth: 5000

c. 2nd Interm. Casing Depth

d. Casing Depth Remarks:

The operator proposes to set surface casing at 1200':BLM accepts managing the BLM identified Santa Rosa mem. Chile formation groundwater zone. The operator proposes to set intermediate casing to a depth of 5000': BLM accepts black marker-Lamar LS. member Bell Canyon Formation, the operators chosen well casing set depth.

4. Geologic Hazards

a. Cave/Karst Occurance: Low

b. Potential Cave/Karst Depth: 350

c. Possible Water Flows: Castile, Salado,

d. Possible Lost Circulation: Rustler, Red Beds, Delaware,

e. Possible Abnormal Pressure: NO

f. H2S within 1 mile: NO

g. H2S Remarks:

PETs - 11,695' feet top of Wolf camp marks 500' H2S safety for the Cisco and Canyon formations of the Pennsylvanian Series.

5. Additional Remarks

UL M SWSW 2BS 2 Red Bed Chinle Fm. water producing wells of 16 attempts. 340' & 360' Dewey Lake siltstone groundwater water well producing zone.

Geologist: Mark Lewis **Sign Off Date:** 2-8-2018