Form 3160-3
(March 2012)

HOBBS OCD
FEB 28 2018
RECEIVED

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. (320841)
NINA CORTELL FED COM 201H

2. Name of Operator MATADOR PRODUCTION COMPANY (228937)

9. API Well No.
30-025-44554

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
WILDCAT / WOLFCAMP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 150 FSL / 555 FWL / LAT 32.4138785 / LONG -103.6693415
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
319.84

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

19. Proposed Depth
12066 feet / 16815 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*
01/02/2018

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
(Electronic Submission)

Name *(Printed/Typed)*
Brian Wood / Ph: (505)466-8120

Date
11/29/2017

Title
President

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575)234-5959

Date
02/16/2018

Title
Supervisor Multiple Resources

Office
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

Approval Date: 02/16/2018

KB 02/16/18
Requires NSL

Double sided

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)

Approval Date: 02/16/2018

Additional Operator Remarks

Location of Well

1. SHL: SWSW / 150 FSL / 555 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4138785 / LONG: -103.6693415 (TVD: 0 feet, MD: 0 feet)
   PPP: SWNW / 2640 FSL / 990 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.420736 / LONG: -103.667948 (TVD: 12066 feet, MD: 14423 feet)
   PPP: SWSW / 150 FSL / 555 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4138785 / LONG: -103.6693415 (TVD: 0 feet, MD: 0 feet)
   BHL: LOT 4 / 240 FNL / 990 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4273146 / LONG: -103.6679712 (TVD: 12066 feet, MD: 16815 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: 5752342224

Email: tortiz@blm.gov

Approval Date: 02/16/2018

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.

AFMSS

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

Application Data Report
02/20/2018

APD ID: 10400025062
Submission Date: 11/29/2017
Operator Name: MATADOR PRODUCTION COMPANY
Well Name: NINA CORTELL FED COM
Well Number: 201H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400025062
Tie to previous NOS?
Submission Date: 11/29/2017
BLM Office: CARLSBAD
User: Brian Wood
Title: President
Federal/Indian APD: FED
Is the first lease penetrated for production Federal or Indian? FED
Lease number: NMNM135247
Lease Acres: 439.68
Surface access agreement in place?
Allotted?
Reservation:
Agreement in place? NO
Federal or Indian agreement:
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
Zip: 75240
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
Mater Development Plan name:
Well in Master SUPO? NO
Master SUPO name:
Well in Master Drilling Plan? NO
Master Drilling Plan name:
Well Name: NINA CORTELL FED COM
Well Number: 201H
Well API Number:
Field/Pool or Exploratory? Field and Pool
Field Name: WILDCAT
Pool Name: WOLFCAMP
Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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:** 30 FT **Distance to lease line:** 150 FT

Reservoir well spacing assigned acres Measurement: 319.84 Acres

Well plat: NC_201H_Plat_20171129110312.pdf

Well work start Date: 01/02/2018 **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	555	FWL	22S	32E	3	Aliquot SWSW	32.4138785	-103.6693415	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3807	0	0
KOP Leg #1	150	FSL	555	FWL	22S	32E	3	Aliquot SWSW	32.4138785	-103.6693415	LEA	NEW MEXICO	NEW MEXICO	S	STATE	-7675	11501	11482
PPP Leg #1	150	FSL	555	FWL	22S	32E	3	Aliquot SWSW	32.4138785	-103.6693415	LEA	NEW MEXICO	NEW MEXICO	S	STATE	3807	0	0

APD ID: 10400025062 **Submission Date:** 11/29/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	QUATERNARY	3807	0	0		USEABLE WATER	No
2	DEWEY LAKE	3398	409	409	SANDSTONE	USEABLE WATER	No
3	RUSTLER ANHYDRITE	2789	1018	1018	ANHYDRITE	NONE	No
4	SALADO	2422	1385	1385	SALT	NONE	No
5	CASTILE	314	3493	3500	ANHYDRITE	NONE	No
6	BASE OF SALT	-1054	4861	4873	SALT	NONE	No
7	BELL CANYON	-1133	4940	4952	SANDSTONE	NATURAL GAS,CO2,OIL	No
8	CHERRY CANYON	-2107	5914	5931	SANDSTONE	NATURAL GAS,CO2,OIL	No
9	BRUSHY CANYON	-2971	6778	6800	SANDSTONE	NATURAL GAS,CO2,OIL	No
10	BONE SPRING	-5069	8876	8895	LIMESTONE	NATURAL GAS,CO2,OIL	No
11	BONE SPRING 1ST	-5789	9596	9615	OTHER : CARBONATE	NATURAL GAS,CO2,OIL	No
12	BONE SPRING 1ST	-6164	9971	9990	SANDSTONE	NATURAL GAS,CO2,OIL	No
13	BONE SPRING 2ND	-6427	10234	10253	OTHER : CARBONATE	NATURAL GAS,CO2,OIL	No
14	BONE SPRING 2ND	-6674	10481	10490	SANDSTONE	NATURAL GAS,CO2,OIL	No
15	BONE SPRING 3RD	-7234	11041	11060	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
16	BONE SPRING 3RD	-7785	11592	11612	SANDSTONE	NATURAL GAS,CO2,OIL	No
17	BONE SPRING 3RD	-7825	11632	11655	SANDSTONE	NATURAL GAS,CO2,OIL	No
18	WOLFCAMP	-8144	11951	12050	OTHER : Carbonate	NATURAL GAS,CO2,OIL	Yes

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

Section 2 - Blowout Prevention

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 have the option of running a speed head for setting the intermediate 1 and 2 strings. In the case of running a speed head with landing mandrel for 9.625" and 7" casing, a minimum 3M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 250 psi high before drilling below the surface shoe. After 7" casing is set in the speed head, the BOP will then be lifted to install another casing head section for setting the production casing. Matador will nipple up the casing head and BOP and a minimum 5M BOPE system will be installed. Pressure tests will be made to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high. A diagram of the speed head is attached. 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. After setting the surface casing, and before drilling the surface casing shoe, a minimum 2M BOPE system will be installed. It will be tested to 250 psi low and 2000 psi high. Annular will be tested to 250 psi low and 1000 psi high. After setting intermediate 1 casing, a minimum 3M BOPE system will be installed and tested to 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high. After setting intermediate 2 casing, a minimum 5M BOPE system will be installed and tested to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high.

Choke Diagram Attachment:

NC_201H_Choke_20171129120410.pdf

BOP Diagram Attachment:

NC_201H_BOP_20171129112835.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	3807		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	4991	3807		5000	J-55	40	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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
3	INTERMEDIATE	8.75	7.0	NEW	API	N	0	12302	0	12066			12302	P-110	29	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
4	PRODUCTION	6.125	4.5	NEW	API	N	0	16816	0	12066	3807		16816	P-110	13.5	OTHER - BTC/TXP	1.125	1.125	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_201H_Casing_Design_Assumptions_20171129112905.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_201H_Casing_Design_Assumptions_20171129112926.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

Casing Attachments

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_201H_Casing_Design_Assumptions_20171129113043.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_201H_Casing_Design_Assumptions_20171129113203.pdf

Section 4 - Cement

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	240	1.82	12.8	436	100	CLASS C	BENTONITE + 2% CaCl2 + 3% NaCl + LCM
SURFACE	Tail		0	1200	839	1.38	14.8	1157	100	CLASS C	5% NaCl + LCM
INTERMEDIATE	Lead		0	5000	909	2.13	12.6	1936	100	Class C	Bentonite + 1% CaCl2 + 8% NaCl + LCM
INTERMEDIATE	Tail		0	5000	482	1.38	14.8	665	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	12302	561	2.36	11.5	1323	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		0	12302	326	1.38	13.2	449	35	TXI	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Lead		0	16816	597	1.17	15.8	698	25	Class H	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		0	16816	597	1.17	15.8	698	25	Class H	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
12302	16816	OIL-BASED MUD	12.5	12.5							
0	1200	SPUD MUD	8.3	8.3							
1200	5000	OTHER : BRINE WATER	10	10							
5000	12302	OTHER : FRESH WATER & CUT BRINE	9	9							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

Section 6 - Test, Logging, Coring

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

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,PROLOG,GR,MWD

Coring operation description for the well:

No core or drill stem test is planned.
A 2-person mud logging program will be used from 5000' to TD.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8000 **Anticipated Surface Pressure:** 5345.48

Anticipated Bottom Hole Temperature(F): 170

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:

NC_201H_H2S_Plan_20171129114141.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

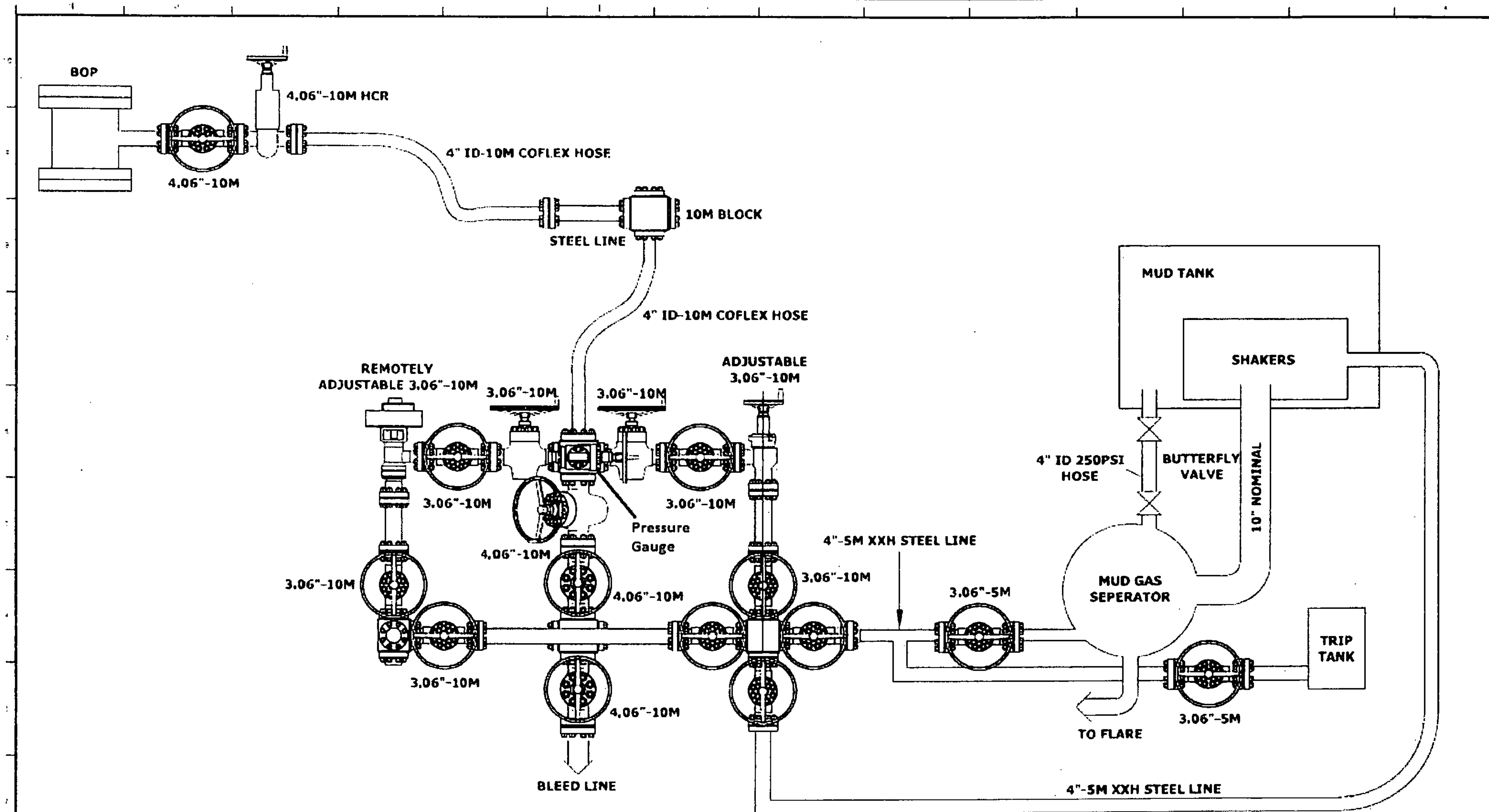
NC_201H_Horizontal_Drill_Plan_20171129114201.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

NC_201H_Speedhead_Specs_20171129114241.pdf
NC_201H_General_Drill_Plan_20171129120753.pdf

Other Variance attachment:



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED

REV	DATE	DESCRIPTION	DRAWN BY	CHK BY	APPVD ENG.
02	[illegible]	ISSUED FOR INFORMATION	CP	DSL	
01	[illegible]	ISSUED FOR INFORMATION	CDJ		

PATTERSON-UTI DRILLING COMPANY LLC

CHOKE MANIFOLD

10M CHOKE ARRANGEMENT
RIG 297

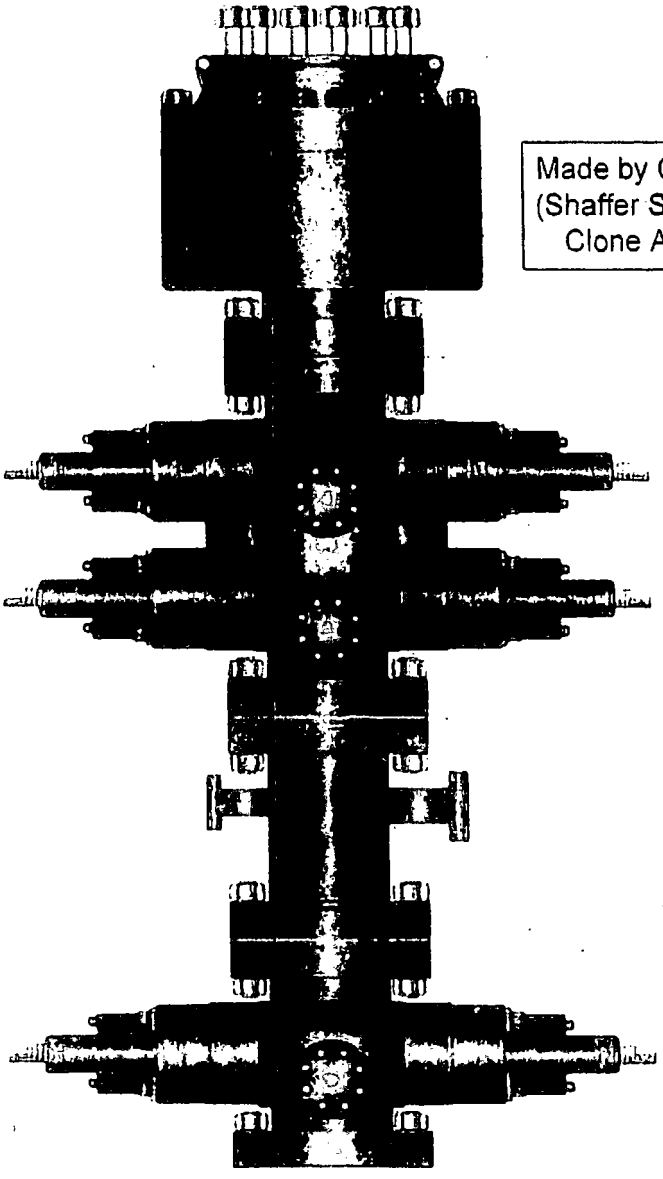
R0297-D.001.LAY.09

SHT 1 OF 1 — REV 02

Nina Cortell Fed Com #201H
Matador Resources Company

PATTERSON-UTI
Well Control

RIG: 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

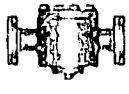
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

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

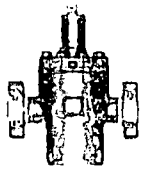
Length 40" **Outlets** 4" 10M
DSA 4" 10M x 2" 10M

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

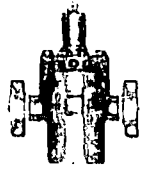
WING VALVES



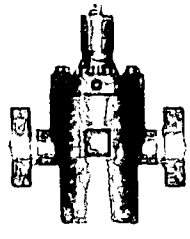
2" Check Valve



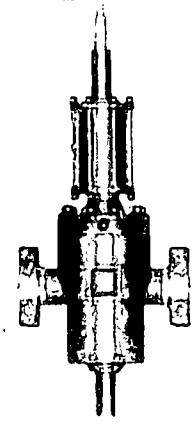
2" Manual Valve



2" Manual Valve



4" Manual Valve



4" Hydraulic Valve

Nina Cortell Fed Com #201H
Matador Resources Company

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

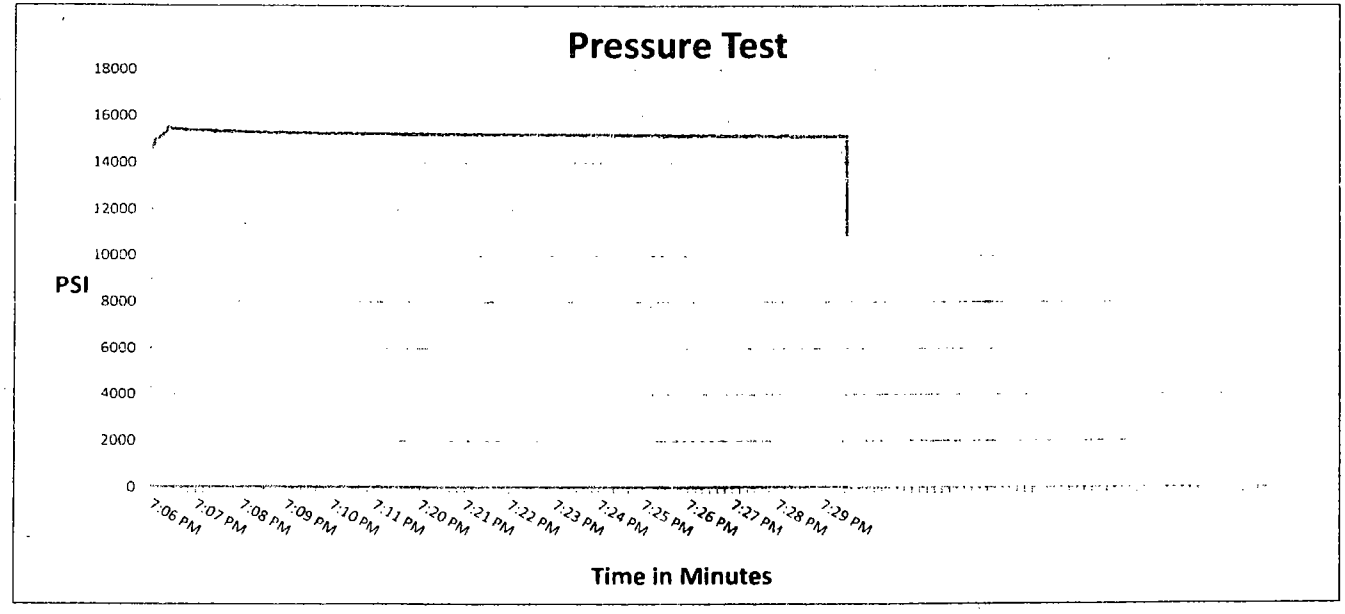
Pick Ticket #: 284918

Hose Specifications

Hose Type	Length
Ck	10'
I.D.	**O.D.**
3"	4.79"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4-1/16 10K	Swage
Die Size	**Final O.D.**
5.37"	5.37"
Hose Serial #	**Hose Assembly Serial #**
10490	284918-2



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15732 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.

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		

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 #	**287918-2**	*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**

Nina Cortell Fed Com #201H
Matador Resources Company

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

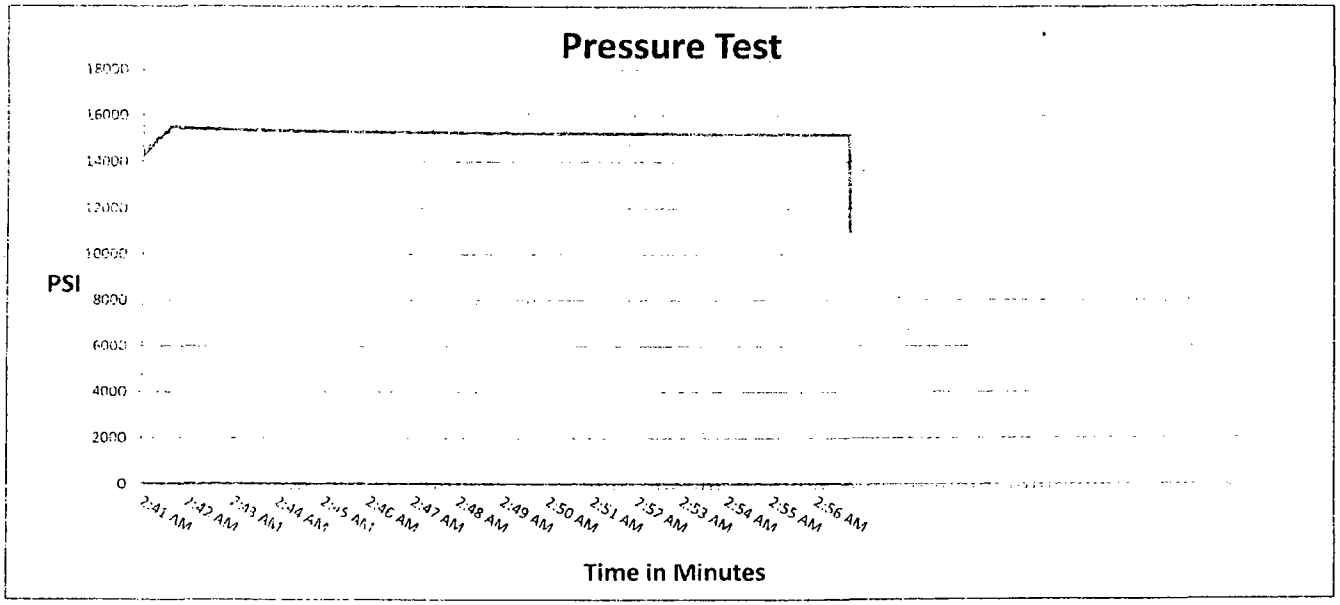
R297

Hose Specifications

Hose Type	Length
Ck	20'
I.D.	**O.D.**
3"	4.77"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4-1/16 10K	Swage
Die Size	**Final O.D.**
5.37"	5.40"
Hose Serial #	**Hose Assembly Serial #**
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*

Approved By: *Ryan Adams*

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 #)	287918-1	Hose O.D. (Inches)	5.30"
Hose Assembly Length	20'	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 #)	V3579	Connection (Heat #)	V3579
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
12/9/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

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

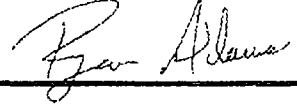
Specifications

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*
	12/9/2014

Nina Cortell Fed Com #201H
Matador Resources Company

Midwest Hose & Specialty, Inc.

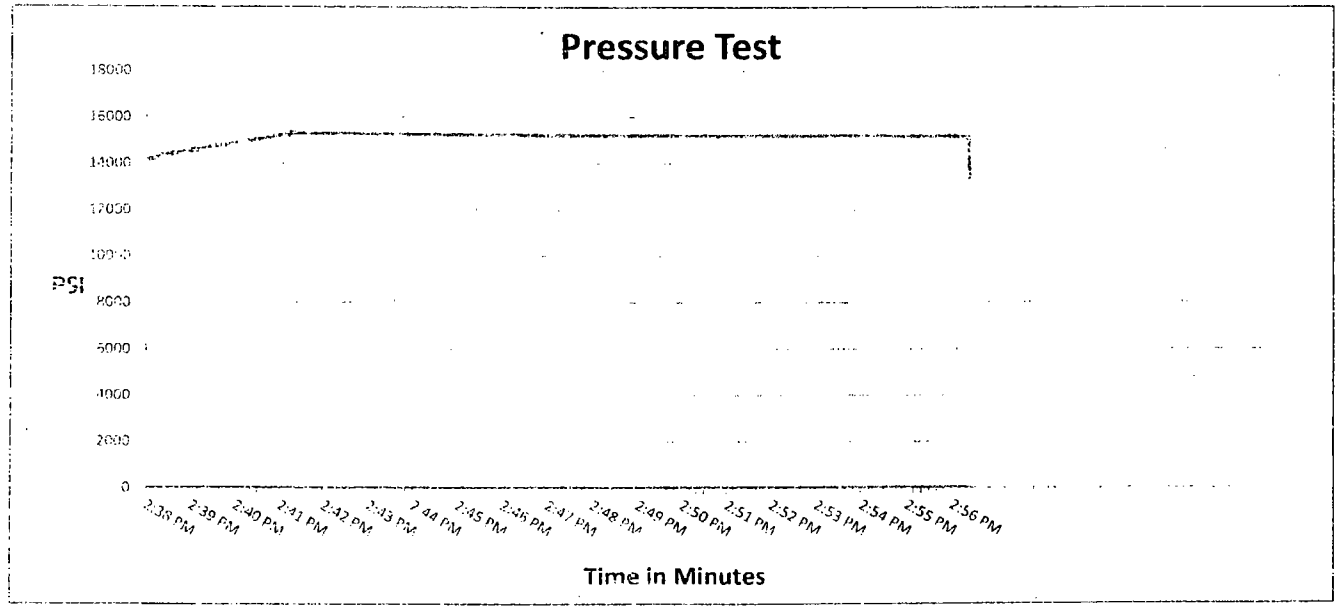
Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Mud	70'	4 1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.79"	5.37"	5.37"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-3



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 3/4 Minutes		15410 PSI

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

Tested By: *Tyler Hill*

Approved By: *Ryan Adams*

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		

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 #	**287918-3**	*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**

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).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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).

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 (0.47 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 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 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 (0.47 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 (9.0 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 (0.65 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 (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 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 (12.5 ppg).

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).

Intermediate #2 Casing

Collapse: DF_c=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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).

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 (0.47 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 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 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 (0.47 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 (9.0 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 (0.65 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 (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 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 (12.5 ppg).

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).

Intermediate #2 Casing

Collapse: DF_c=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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).

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 (0.47 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 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 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 (0.47 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 (9.0 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 (0.65 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 (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 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 (12.5 ppg).

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).

Intermediate #2 Casing

Collapse: DF_c=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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).

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 (0.47 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 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 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 (0.47 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 (9.0 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 (0.65 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 (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 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 (12.5 ppg).

APD ID: 10400025062 **Submission Date:** 11/29/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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_201H_Road_Map_20171129114318.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_201H_New_Road_Map_20171129114343.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:

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: TRACTOR TRAILER FOR CONSTRUCTION; SOIL TO BE STORED ONSITE

Access other construction information: Upgrading will consist of draining and/or patching ten potholes with caliche. The potholes are located (from east to west and in NAD 83) at: 32.41494, -103.67654 32.41504, -103.67879 32.41512, -103.68060 32.41702, -103.68328 32.41873, -103.68333 32.42312, -103.68326 32.42402, -103.68326 32.42804, -103.68354 32.43641, -103.68974 32.43644, -103.69497
Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Crowned and ditched

Road Drainage Control Structures (DCS) description: None

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:

NC_201H_Well_Map_20171129114451.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated Production Facilities description: NO PIPELINE OR POWER LINE PLANS HAVE BEEN FINALIZED AT THIS TIME. PRODUCTION EQUIPMENT WILL BE LOCATED ON THE SOUTH SIDE OF THE PAD.

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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,PRIVATE CONTRACT,PRIVATE CONTRACT,PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: TRUCKING,TRUCKING,TRUCKING,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_201H_Water_Source_Map_20171129114513.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:

Section 6 - Construction Materials

Construction Materials description: CALICHE WILL BE HAULED FROM AN EXISTING CALICHE PIT ON PRIVATE (MILLS) LAND IN E2NE4 3-22s-32e.
Construction Materials source location attachment:

NC_201H_Construction_Methods_20171129114534.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, other chemicals

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: Roll-off mud tanks

Safe containmant attachment:

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

Disposal location description: R360's state approved (NM-01-0006) disposal site in Halfway, NM

Waste type: GARBAGE

Waste content description: General trash

Amount of waste: 50 pounds

Waste disposal frequency : Weekly

Safe containment description: Portable trash cage

Safe containmant attachment:

Waste disposal type: OTHER **Disposal location ownership:** OTHER

Disposal type description: Lea County landfill

Disposal location description: Lea County landfill

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

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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_201H_Well_Site_Layout_20171129114559.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_201H_Recontour_Plat_20171129114647.pdf

NC_201H_Interim_Reclamation_Diagram_20171129114654.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:** 201H

Well pad proposed disturbance (acres): 3.65
Road proposed disturbance (acres): 0.97
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 0
Total proposed disturbance: 4.62

Well pad interim reclamation (acres): 0.65
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 0.65

Well pad long term disturbance (acres): 3
Road long term disturbance (acres): 0.97
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 0
Total long term disturbance: 3.97

Reconstruction method: Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad 18% (0.65 acre) by removing caliche and reclaiming the northwest corner (150' x 380' x 408'). This will leave 3.00 acres for the production equipment (e. g., tank battery, heater-treaters, separators, flare/CBU), 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 State Land Office's requirements.
Topsoil redistribution: Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the last well is plugged, then the rest of the pad and 1,404.27' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.
Soil treatment: None

Existing Vegetation at the well pad:

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? NO

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? NO

Seed harvest description:

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:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: NM STATE LAND OFFICE, PO BOX 1148, SANTA FE, NM 87504 (505) 827-5760

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: NM STATE LAND OFFICE, PO BOX 1148, SANTA FE, NM 87504 (505) 827-5760

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: NM STATE LAND OFFICE, PO BOX 1148, SANTA FE, NM 87504 (505) 827-5760

Military Local Office:

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:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED COM **Well Number:** 201H

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_201H_General_SUPO_20171129114834.pdf

NC_201H_Surface_Use_Agreement_20171129120920.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:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

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: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

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:

AFMSS

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

Bond Info Data Report

02/20/2018

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:

Engineer Worksheet

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220-6292

Tracking Number:	ATS-17-444	County:	Lea
Company:	Matador Operating Co.	Well Name and Number:	NINA CORTELL FED COM-201H
Surface Hole Location:	150'/S.& 555'/W. SEC003 T022S, R032E	Bottom Hole Location:	240'/N.& 990'/W. SEC003 T022S, R032E

Lease Number:	NMNM135247	Prod Status:		Effective:	
Bond:	Statewide	Bond #:	NMB001079	Potash:	SEC
NOS Received:	YES	APD Received:	11-29-2017	10-Day LTR Sent:	1-3-2018
Acreage:		Orthodox:	Yes	COM Agr Required:	Yes

Deficiencies Noted:

☐ Form 3160-3 ☐ Survey Plat ☐ Drilling Plan ☐ Surface Plan ☐ Bonding ☐ Original Signature ☐ Operator Cert Statement

Other Deficiencies: ☐

Adjudication Comments:

GEO Report Completed: 2-9-2018

Technical Checklist

Plat:	ok	Elevation:	3807		
Proposed Depth:	TVD: 12066	MD:	16815	Targeted Formation:	Wolfcamp

Anticipated Water-Oil, Gas, Etc.: Fresh water above 360 feet. Oil/Gas: Bell Canyon, Cherry Canyon, Brushy Canyon, Bone Spring, and Wolfcamp

Casing/Cement Program: Okay / Okay

Bottom Hole Mud Weight	12.5	BHP:	7842.9	MASP:	5188.38

◉ Horizontal ○ Directional ○ Vertical ☐ Re-entry

Well Control Prog(BOP, ETC)	2M BOP after surface casing, 3M BOP after first intermediate casing, and 10M BOP after second intermediate casing. Variance: 10M multibowl after first intermediate casing.	Mud Program:	Ok

Test-Log-Cores Program: Required: See COA. Proposed: Mud log from 5000' to TD. GR from intermediate casing to TD.

H2S or Other Hazards: H2S no. Secretary's Potash. Abnormal pressure might be encountered upon entering third Bone Spring and subsequent formations. Possible lost circulation in the Rustler, Red Beds, and Delaware. Possible water flows from the Salado, and Castile.

Water Basin: Carlsbad

Casings to Witness: ☑ Surface ☑ Intermediate ☐ Production ☐ CIT Required

☐ Other Witness

Comments: Witness surface and intermediate casing.

Mustafa Haque 2-10-2018

Engineer	Date	Siganture	Adjudication Date	Adjudicator Initials