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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

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 133H (320842)

2. Name of Operator: MATADOR PRODUCTION COMPANY (228937)

9. API Well No.: 30-025-44553

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 / BONE SPRING (96695)

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

At surface: SWSE / 150 FSL / 2118 FWL / LAT 32.4139081 / LONG -103.6608755

At proposed prod. zone: LOT 2 / 240 FNL / 2313 FWL / LAT 32.4273269 / LONG -103.6615558

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: 159.92

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 60 feet

19. Proposed Depth: 11944 feet / 16689 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3806 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	Brian Wood / Ph: (505)466-8120	11/30/2017

Title: President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	02/16/2018

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

KA 03/01/18

Approval Date: 02/16/2018

* 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: SWSE / 150 FSL / 2118 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4139081 / LONG: -103.6608755 (TVD: 0 feet, MD: 0 feet)
   PPP: SWSE / 150 FSL / 2118 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4139081 / LONG: -103.6608755 (TVD: 0 feet, MD: 0 feet)
   BHL: LOT 2 / 240 FNL / 2313 FWL / TWSP: 22S / RANGE: 32E / SECTION: 3 / LAT: 32.4273269 / LONG: -103.6615558 (TVD: 11944 feet, MD: 16689 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

Operator Certification Data Report

02/20/2018

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:** 11/30/2017

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:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

APD ID: 10400025089 **Submission Date:** 11/30/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400025089 **Tie to previous NOS?** **Submission Date:** 11/30/2017

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 **Well Number:** 133H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** BILBREY BASIN **Pool Name:** BONE SPRING

Is the proposed well in an area containing other mineral resources? NATURAL GAS,CO2,OIL

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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:** SLOT **Number:** 3

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

Reservoir well spacing assigned acres Measurement: 159.92 Acres

Well plat: NC_133H_Plat_20171129160147.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	2118	FWL	22S	32E	3	Aliquot SWSE	32.4139081	-103.6608755	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 135247	3806	0	0
KOP Leg #1	150	FSL	2118	FWL	22S	32E	3	Aliquot SWSE	32.4139081	-103.6608755	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 135247	-7565	11379	11371
PPP Leg #1	150	FSL	2118	FWL	22S	32E	3	Aliquot SWSE	32.4139081	-103.6608755	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 135247	3806	0	0

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

	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
EXIT Leg #1	240	FNL	2313	FWL	22S	32E	3	Lot 2	32.4273269	-103.6615558	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 135247	-8138	16689	11944
BHL Leg #1	240	FNL	2313	FWL	22S	32E	3	Lot 2	32.4273269	-103.6615558	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 135247	-8138	16689	11944

- Compressed Natural Gas is likely to be uneconomic to operate when the gas volume declines.

- NGL Removal – On lease
  - NGL Removal requires a plant and is expensive on such a small scale rendering it uneconomic and still requires residue gas to be flared.

AFMSS

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

Drilling Plan Data Report

02/20/2018

APD ID: 10400025089 **Submission Date:** 11/30/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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	---	3806	0	0	OTHER : Quaternary	USEABLE WATER	No
2	DEWEY LAKE	3423	383	383	SANDSTONE	USEABLE WATER	No
3	RUSTLER ANHYDRITE	2827	979	979		NONE	No
4	TOP SALT	2453	1353	1353		NONE	No
5	CASTILE	319	3487	3493	ANHYDRITE	NONE	No
6	BASE OF SALT	-1055	4861	4870		NONE	No
7	BELL CANYON	-1119	4925	4934	SANDSTONE	NATURAL GAS,CO2,OIL	No
8	CHERRY CANYON	-2109	5915	5924	SANDSTONE	NATURAL GAS,CO2,OIL	No
9	BRUSHY CANYON	-3072	6878	6886	SANDSTONE	NATURAL GAS,CO2,OIL	No
10	BONE SPRING	-5068	8874	8883	LIMESTONE	NATURAL GAS,CO2,OIL	No
11	BONE SPRING 1ST	-5777	9583	9592	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
12	BONE SPRING 1ST	-6130	9936	9945	SANDSTONE	NATURAL GAS,CO2,OIL	No
13	BONE SPRING 2ND	-6415	10221	10230	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
14	BONE SPRING 2ND	-6688	10494	10503	SANDSTONE	NATURAL GAS,CO2,OIL	No
15	BONE SPRING 3RD	-7228	11034	11043	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
16	BONE SPRING 3RD	-7766	11572	11585	SANDSTONE	NATURAL GAS,CO2,OIL	Yes

Section 2 - Blowout Prevention

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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_133H_Choke_20171130103705.pdf

BOP Diagram Attachment:

NC_133H_BOP_20171130103724.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	3806		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	3806		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	16689	0	11944	3806		16689	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 **Well Number:** 133H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_133H_Casing_Design_Assumptions_20171130104759.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_133H_Casing_Design_Assumptions_20171130104807.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

NC_133H_Casing_Design_Assumptions_20171130104816.pdf

Section 4 - Cement

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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		0	1200	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	16689	966	2.35	11.5	2270	35	TXI	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		0	16689	1670	1.39	13.2	2321	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: 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.

Describe the mud monitoring system utilized: An electronic Pason mud monitoring system complying with Onshore Order 1 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
1200	5000	OTHER : Brine water	10	10							
5000	16689	OTHER : Fresh water & cut brine	9	9							
0	1200	OTHER : Fresh water spud	8.3	8.3							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

Section 6 - Test, Logging, Coring

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

A 2-person mud logging program will be used from 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.

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

CBL,GR,OTH

Other log type(s):

CCL

Coring operation description for the well:

No core or drill stem test is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6500 **Anticipated Surface Pressure:** 3872.32

Anticipated Bottom Hole Temperature(F): 165

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_133H_H2S_Plan_20171130105737.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

NC_133H_Horizontal_Drill_Plan_20171130105806.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

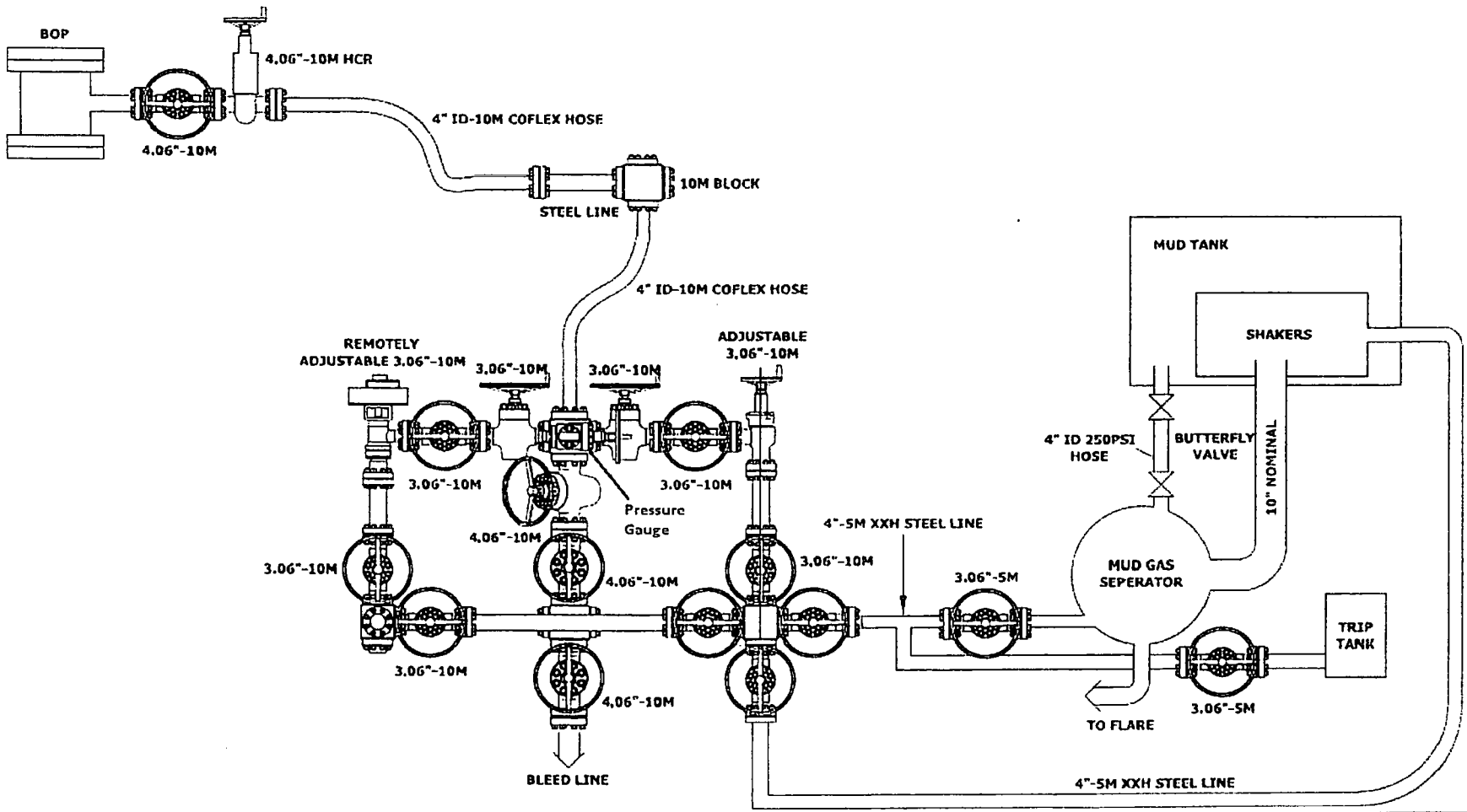
NC_133H_General_Drill_Plan_20171130105818.pdf

NC_133H_Speehead_Specs_20171130105919.pdf

Other Variance attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

GENERAL WELDING NOTE:
ALL ACCESSIBLE CONTACT SURFACES SHALL BE JOINED WITH CONTINUOUS 45 DEGREE FILLET WELDS, WELD SIZE TO BE SPECIFIED SMALLER THAN THINNER MEMBER JOINED UP TO 1/2 INCH THICKNESS AND 1/8 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 3/4 INCH THICKNESS. WELDMENT TOLERANCE = +/- 1/16

MACHINING TOLERANCES:
1 PLACE DECIMAL = ±.1
2 PLACE DECIMAL = ±.03
3 PLACE DECIMAL = ±.015
FRACTIONAL TOLERANCE = +/- 1/64
HOLE MACHINED CORNER RADII = .015
CHAMFER OUTSIDE CORNERS .03 x 45 DEG
ANGLE TOLERANCE = +/- 1 DEGREE
MACHINED SURFACE FINISH 125 RMS
ALL UNSPECIFIED DIMENSIONS ARE INCHES

REV	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPROVED ENG.
02	8-3-16	ISSUED FOR INFORMATION	CP	CDL	
01	7-5-16	ISSUED FOR INFORMATION	CDL		

PATTERSON-UTI DRILLING COMPANY LLC

CHOKE MANIFOLD

10M CHOKE ARRANGEMENT
RIG 297

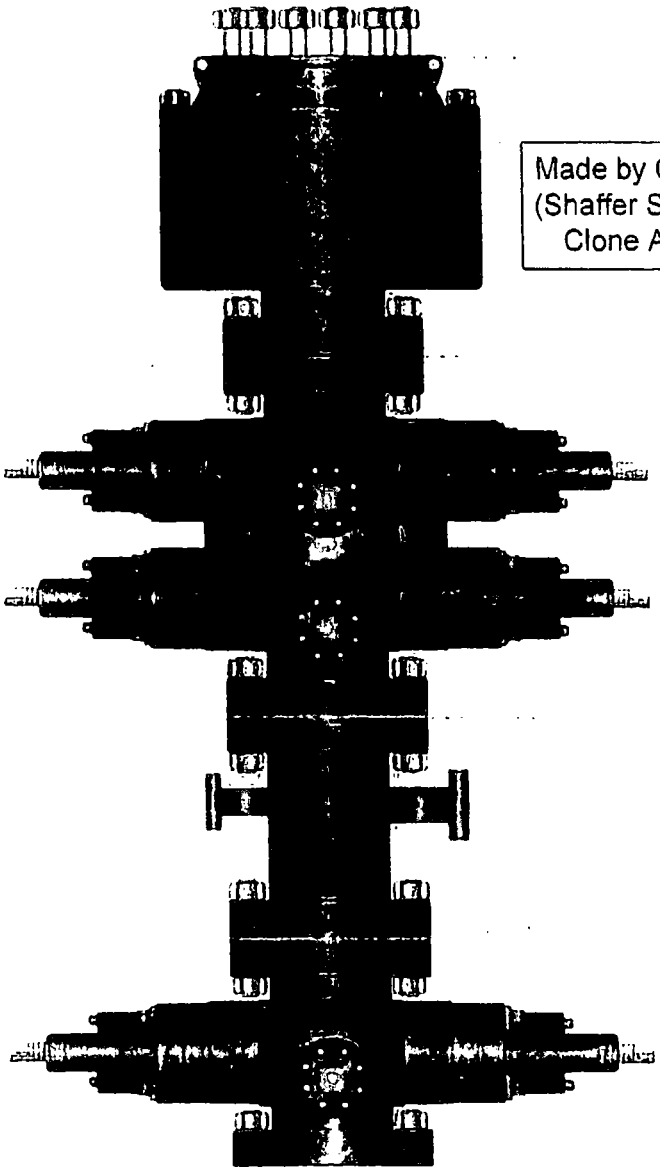
DWG No. R0297-D.001.I.AY.09

SHT 1 OF 1 REV. 02

Nina Cortell Fed Com #133H
Matador Resources Company

PATTERSON-UTI
Well Control

RIG 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

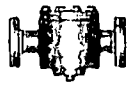
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" PRESSURE 5,000
HEIGHT: 48 ½" WEIGHT: 13,800 lbs

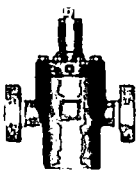
PATTERSON-UTI # PC2-128
STYLE: New Cameron Type U
BORE 13 5/8" PRESSURE 10,000
RAMS: TOP 5" Pipe BTM Blinds
HEIGHT: 66 5/8" WEIGHT: 24,000 lbs

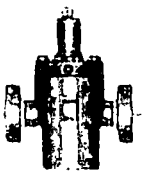
Length 40" Outlets 4" 10M
DSA 4" 10M x 2" 10M

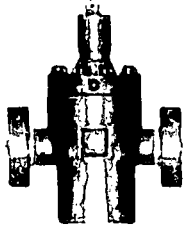
PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" PRESSURE 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" WEIGHT: 13,000 lbs

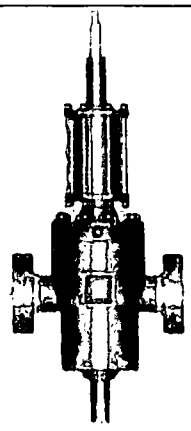
WING VALVES


2" Check Valve


2" Manual Valve


2" Manual Valve


4" Manual Valve


4" Hydraulic Valve

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

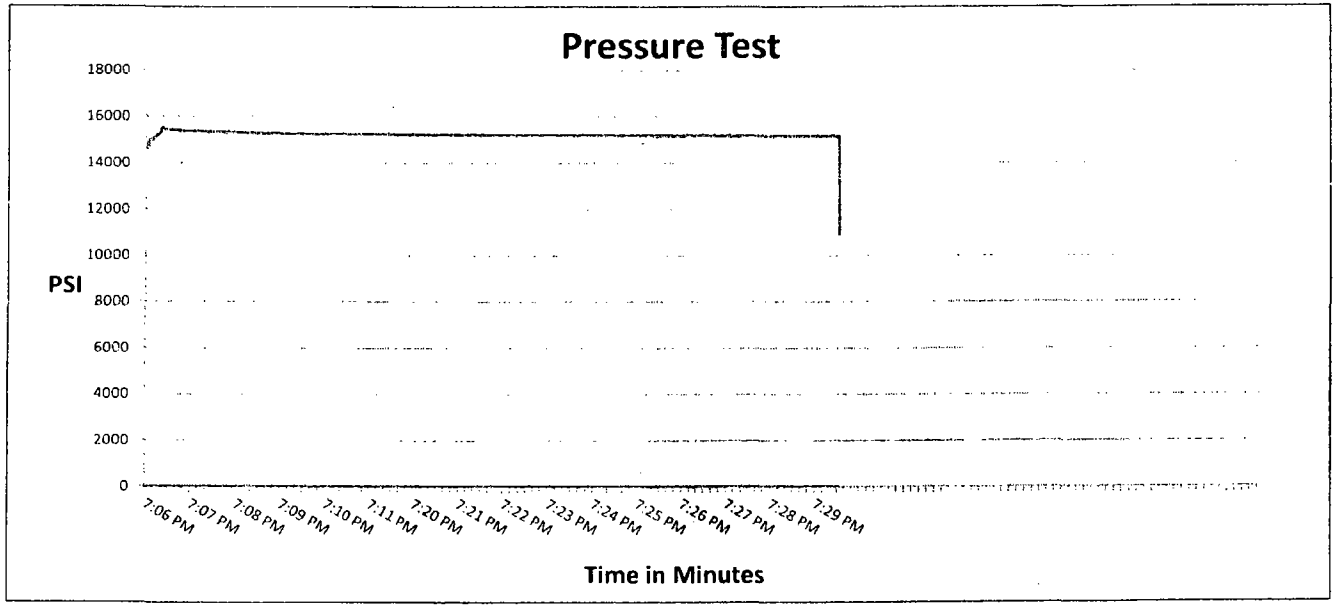
Pick Ticket #: 284918

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**

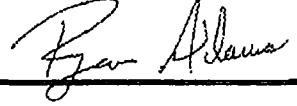
Specifications

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***
	**12/9/2014**

Midwest Hose & Specialty, Inc.

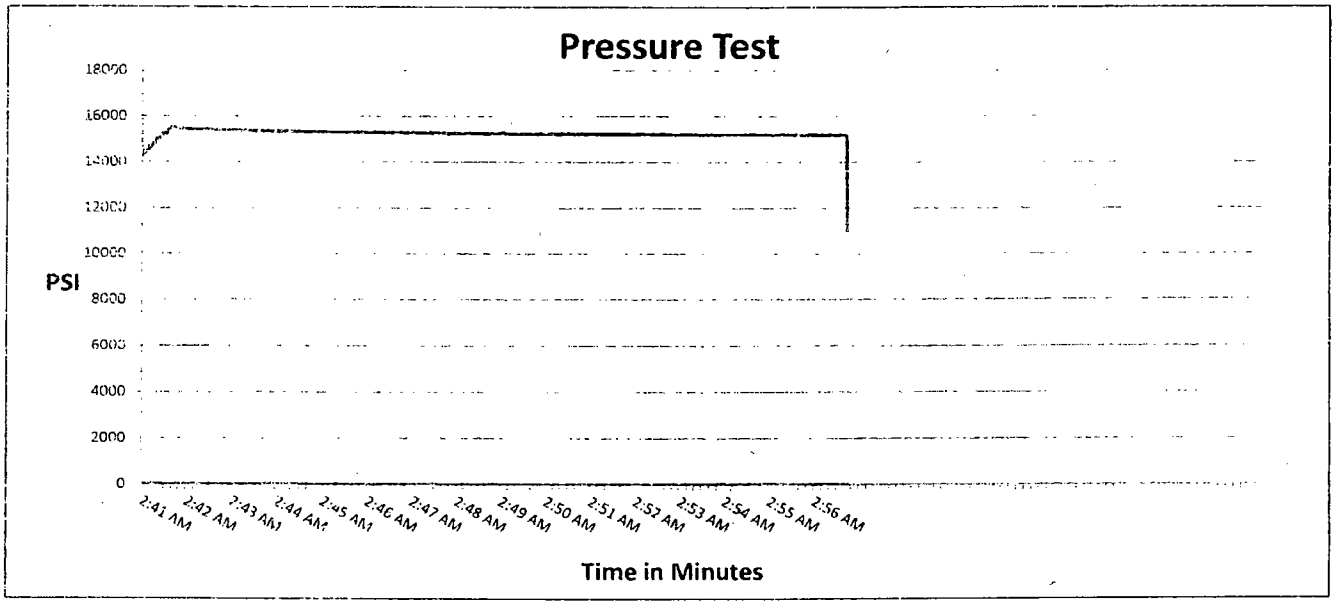
Internal Hydrostatic Test Graph

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.

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**

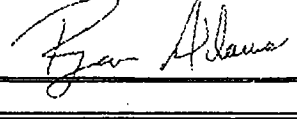
Specifications

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

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

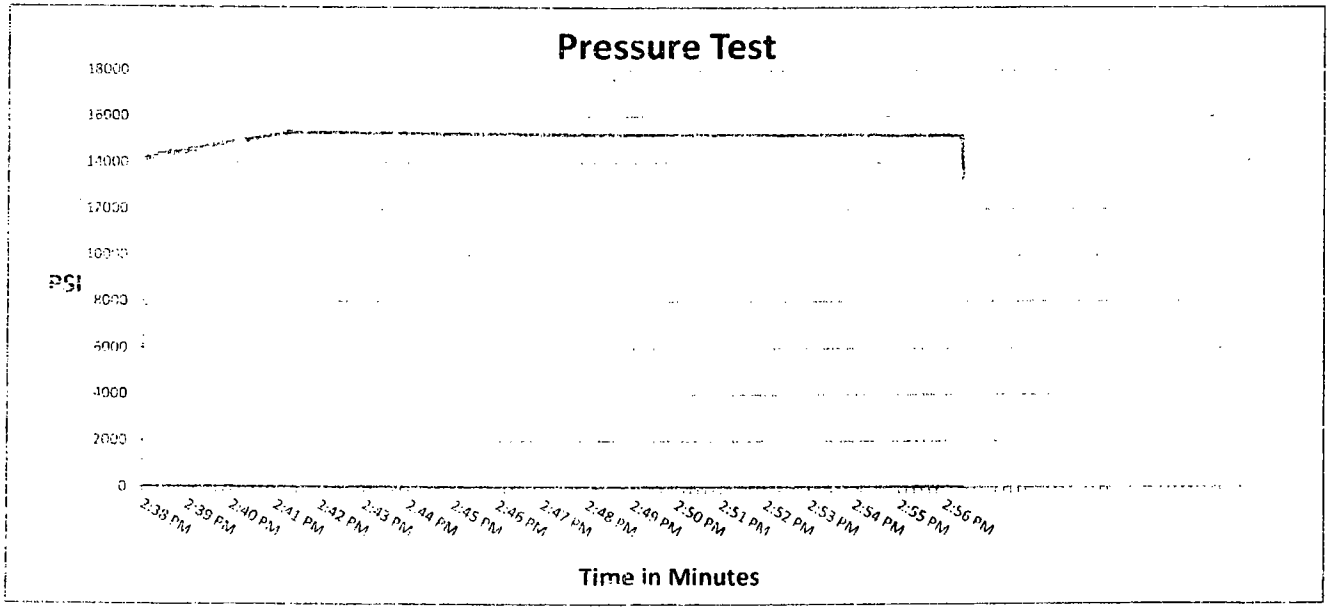
Pick Ticket #: 284918

Hose Specifications

Hose Type	Length
Mud	70'
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	284918-3



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***
	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).

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 (0.47 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 (0.47 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).

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).

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 (0.47 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 (0.47 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).

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.
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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).

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 (0.47 psi/ft), which is a more conservative backup force than pore pressure.
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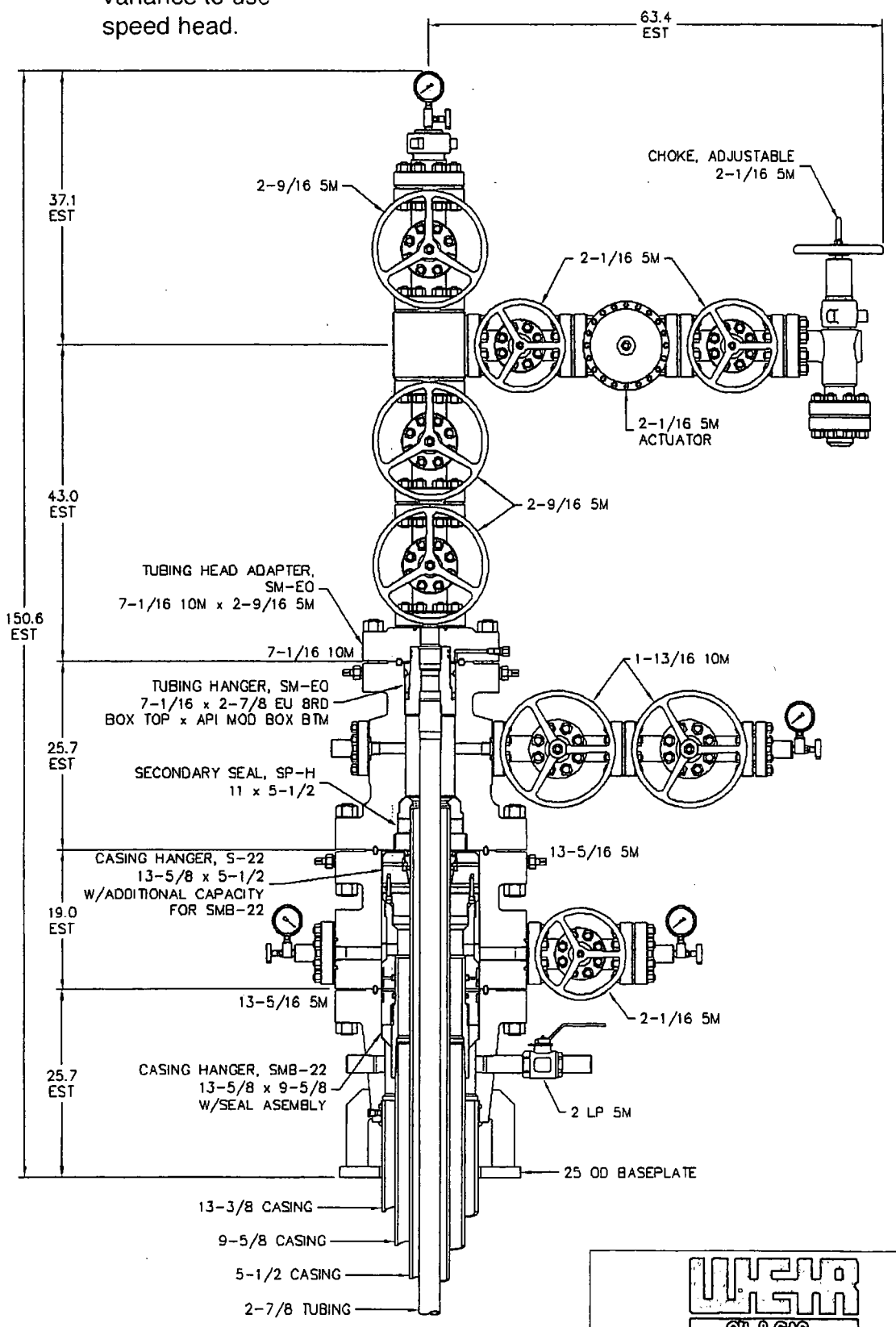
Tensile: DF_t=1.8

- 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).

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.

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:			

For the latest performance data, always visit our website: www.tenaris.com

July 15 2015

Tenaris

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

Connection: TenarisXP™ BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.500** in.	Nominal Weight	**20.00** lbs/ft	Standard Drift Diameter	**4.653** in.
Nominal ID	**4.778** in.	Wall Thickness	**0.361** in.	Special Drift Diameter	**N/A**
Plain End Weight	**19.83** lbs/ft				

PERFORMANCE

Body Yield Strength	**641** x 1000 lbs	Internal Yield	**12630** psi	SMYS	**110000** psi
Collapse	**12100** psi				

TENARISXP™ BTC CONNECTION DATA

GEOMETRY

Connection OD	**6.100** in.	Coupling Length	**9.450** in.	Connection ID	**4.766** in.
Critical Section Area	**5.828** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.204** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**641** x 1000 lbs	Internal Pressure Capacity[1]	**12630** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**641** x 1000 lbs	Structural Bending[2]	**92** °/100 ft
External Pressure Capacity	**12100** psi				

ESTIMATED MAKE-UP TORQUES[2]

Minimum	**11270** ft-lbs	Optimum	**12520** ft-lbs	Maximum	**13770** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**21500** ft-lbs	Yield Torque	**23900** ft-lbs		

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: 10400025089 **Submission Date:** 11/30/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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_133H_Road_Map_20171130105935.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_133H_New_Road_Map_20171130110006.pdf

New road type: RESOURCE

Length: 808.35 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 **Well Number:** 133H

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information: 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_133H_Well_Map_20171130110230.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 **Well Number:** 133H

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: FEDERAL

Water source volume (barrels): 20000

Source volume (acre-feet): 2.577862

Source volume (gal): 840000

Water source and transportation map:

NC_133H_Water_Source_Map_20171130110338.pdf

Water source comments:

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:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

Section 6 - Construction Materials

Construction Materials description: NM One Call (811) will be notified before construction starts. A straw wattle will be installed south of the pad before moving earth to protect an arroyo. Top 6" of soil and brush will be stockpiled west of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from an existing caliche pit on private (Mills) land in E2NE4 3-22s-32e.

Construction Materials source location attachment:

NC_133H_Construction_Methods_20171130110515.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

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

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel 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 at Halfway, NM.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

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

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Steel tanks on pad

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_133H_Well_Site_Layout_20171130110738.pdf

Comments:

Section 10 - Plans for Surface Reclamation

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

Multiple Well Pad Number: 3

Recontouring attachment:

NC_133H_Recontour_Plat_20171130110753.pdf
NC_133H_Interim_Reclamation_Diagram_20171130110803.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Well pad proposed disturbance (acres): 3.65
Road proposed disturbance (acres): 0.56
Powerline proposed disturbance (acres): 0
Pipeline proposed disturbance (acres): 0
Other proposed disturbance (acres): 0
Total proposed disturbance: 4.21

Well pad interim reclamation (acres): 0.62
Road interim reclamation (acres): 0
Powerline interim reclamation (acres): 0
Pipeline interim reclamation (acres): 0
Other interim reclamation (acres): 0
Total interim reclamation: 0.62

Well pad long term disturbance (acres): 3.03
Road long term disturbance (acres): 0.56
Powerline long term disturbance (acres): 0
Pipeline long term disturbance (acres): 0
Other long term disturbance (acres): 0
Total long term disturbance: 3.59

Reconstruction method: Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad 17% (0.62 acre) by removing caliche and reclaiming a 100' x 270' area on the east side of

the pad. This will leave 3.03 acres for the through road, 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.
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 808.35' 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?

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	
Seed Type	**Pounds/Acre**

Total 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 State Land Office/BLM standards

Weed treatment plan attachment:

Monitoring plan description: To State Land Office/BLM standards

Monitoring plan attachment:

Success standards: To State Land Office/BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Fee Owner: Jimmy Mills Trust **Fee Owner Address:** 1602 Ave J, Abernathy TX 79311

Phone: (806)298-2752 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: See attachment

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

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

Military Local Office:

USFWS Local Office:

Other Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

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

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: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: NINA CORTELL FED **Well Number:** 133H

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Fee Owner: Jimmy Mills Trust **Fee Owner Address:** 1602 Ave J, Abernathy TX 79311

Phone: (806)298-2752 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: See attachment

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

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

ROW Type(s):

ROW Applications

SUPO Additional Information: Deficiency letter dated 1/8/18 requested road route going around Devon's topsoil pile in Map 6 - see attached analysis

Use a previously conducted onsite? YES

Previous Onsite information: On site inspection was held with Vance Wolf (BLM) on June 2, 2017. Lone Mountain will inspect and file an archaeology report.

Other SUPO Attachment

NC_133H_General_SUPO_20171130111533.pdf

NC_133H_Surface_Use_Agreement_20171130111540.pdf

NC_133H_Devon_Topsoil_Pile_Deficiency_20180112124245.pdf

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-18-198	County:	Lea
Company:	Matador Production Company	Well Name and Number:	LESLIE FED COM-201H
Surface Hole Location:	295'/S.& 1202'/W. SEC027 T025S, R035E	Bottom Hole Location:	240'/N.& 450'/W. SEC017 T025S, R035E

Lease Number:	NMNM136226	Prod Status:		Effective:	
Bond:	Statewide	Bond #:	NMB001079	Potash:	No
NOS Received:	NO	APD Received:	10-5-2017	10-Day LTR Sent:	
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 11-28-2017

Technical Checklist

Plat:	okay	Elevation:	3311		
Proposed Depth: TVD:	12493	MD:	17242	Targeted Formation:	Wolfcamp
Anticipated Water-Oil, Gas, Etc.:	Fresh water at 270 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:	8120.45	MASP:	5371.99

◉ Horizontal ○ Directional ○ Vertical ☐ Re-entry

Well Control Prog(BOP, ETC)	2M below surface casing, 5M below first intermediate casing, and 10M below second intermediate casing. Variance: 10M Multibowl after surface casing.	Mud Program:	Ok
Test-Log-Cores Program:	Required: See COA. Proposed: Mud log from 5600' to TD. GR from intermediate casing to TD.		
H2S or Other Hazards:	H2S no. Possible water flows from the Castile and Salado. Possible lost circulation in the Rustler, Red Beds, and Delaware. Abnormal pressure might be encountered upon entering third Bone Spring and subsequent formations.		

Water Basin: Capitan

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

☐ Other Witness

Comments: Witness surface casing.

Mustafa Haque 2-22-2018

Engineer	Date	Siganture	Adjudication Date	Adjudicator Initials

Engineer Worksheet

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220-6292

Tracking Number:	ATS-18-199	County:	Lea
Company:	Matador Production Company	Well Name and Number:	LESLIE FED COM-203H
Surface Hole Location:	390'/S.& 584'/E. SEC017 T025S, R035E	Bottom Hole Location:	240'/N.& 990'/E. SEC017 T020S, R034E

Lease Number:	NMNM136226	Prod Status:		Effective:	
Bond:	Statewide	Bond #:	NMB001079	Potash:	No
NOS Received:	NO	APD Received:	10-5-2017	10-Day LTR Sent:	
Acreage:		Orthodox:	No	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: 11-28-2017

Technical Checklist

Plat: ok Elevation: 3254

Proposed Depth: TVD: 12472 MD: 17236 Targeted Formation: Wolfcamp

Anticipated Water-Oil, Gas, Etc.: Expected fresh water above 270 ft/ Oil-Gas: Delaware, Bone Spring, and Wolfcamp

Casing/Cement Program: OK / OK

Bottom Hole Mud Weight: 12.5 BHP: 8106.8 MASP: 5362.96

◉ Horizontal ○ Directional ○ Vertical ☐ Re-entry

Well Control Prog(BOP, ETC): Using 10M mulitbowl, however they are requesting to test to 2,000 psi after surface casing, and 5,000 psi after 1st intermediate casing and 10,000 psi after the 2nd intermediate w/ a variance to use a 5M annular testing to 5,000 psi. Mud Program: Ok

Test-Log-Cores Program: No core or drill stem tests planned/ mud logs are planned as well as CBLw/ CCL and GR.

H2S or Other Hazards: H2S no. Possibility of water flows in the Castile and Salado formations. Possibility of lost circulation in the Rustler, Red Beds, and Delaware formations. Abnormal pressure may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

Water Basin: Carlsbad

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

☐ Other Witness

Comments:

Jennifer Sanchez 1-25-2018

Engineer	Date	Siganture	Adjudication Date	Adjudicator Initials

Engineer Worksheet

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220-6292

Tracking Number:	ATS-17-70	County:	Lea
Company:	Matador Operating Co.	Well Name and Number:	LESLIE FED COM-217H
Surface Hole Location:	300'/S.& 2085'/E. SEC017 T025S, R035E	Bottom Hole Location:	240'/N.& 2130'/E. SEC017 T025S, R035E

Lease Number:	NMNM136226	Prod Status:		Effective:	
Bond:	Statewide	Bond #:	NMB001079	Potash:	No
NOS Received:	YES	APD Received:	8-31-2017	10-Day LTR Sent:	
Acreage:		Orthodox:	No	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: 10-12-2017

Technical Checklist

Plat:	ok	Elevation:	3279		
Proposed Depth:	TVD: 12563	MD:	17282	Targeted Formation:	Wolfcamp

Anticipated Water-Oil, Gas, Etc.: Expected fresh water above 965 ft/ Oil-Gas: Delaware, Bone Spring, and Wolfcamp

Casing/Cement Program: OK / OK

Bottom Hole Mud Weight	12.5	BHP:	8165.95	MASP:	5402.09

◉ Horizontal ○ Directional ○ Vertical ☐ Re-entry

Well Control Prog(BOP, ETC)	Using 10M mulitbowl, however they are requesting to test to 2,000 psi after surface casing, and 5,000 psi after 1st intermediate casing and 10,000 psi after the 2nd intermediate w/ a variance to use a 5M annular testing to 5,000 psi.	Mud Program:	Ok

Test-Log-Cores Program: No core or drill stem tests planned/ mud logs are planned as well as CBLw/ CCL and GR.

H2S or Other Hazards: H2S no. Possibility of water flows in the Castile and Salado formations. Possibility of lost circulation in the Rustler, Red Beds, and Delaware formations. Abnormal pressure may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

Water Basin: Carlsbad

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

☐ Other Witness

Comments:

Engineer	Date	Siganture	Adjudication Date	Adjudicator Initials
Jennifer Sanchez	1-25-2018			

Engineer Worksheet

Carlsbad Field Office

620 E. Greene St.

Carlsbad, NM 88220-6292

Tracking Number:	ATS-17-431	County:	Lea
Company:	Matador Operating Co.	Well Name and Number:	NINA CORTELL FED -133H
Surface Hole Location:	150'/S.& 2118'/E. SEC003 T022S, R032E	Bottom Hole Location:	240'/N.& 2313'/E. SEC003 T022S, R032E

Lease Number:	NMNM135247	Prod Status:		Effective:	
Bond:	Statewide	Bond #:	NMB001079	Potash:	SEC
NOS Received:	YES	APD Received:	11-30-2017	10-Day LTR Sent:	1-3-2018
Acreage:		Orthodox:	Yes	COM Agr Required:	No

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:	3806		
Proposed Depth:	TVD: 11944	MD:	16689	Targeted Formation:	Bone Spring
Anticipated Water-Oil, Gas, Etc.:	Fresh water above 360 feet. Oil/Gas: Bell Canyon, Cherry Canyon, Brushy Canyon, and Bone Spring.				
Casing/Cement Program:	Okay / Okay				
Bottom Hole Mud Weight	9	BHP:	5589.792	MASP:	2962.112

◉ Horizontal ○ Directional ○ Vertical ☐ Re-entry

Well Control Prog(BOP, ETC)	2M BOP after surface casing, 5M BOP after intermediate casing. Variance: 5M multibowl after surface 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 subsequnet fomations. 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