Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM118705

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
FOREHAND RANCH 35 FED 1H

2. Name of Operator
MATADOR PRODUCTION COMPANY

Contact: TAMMY R LINK
E-Mail: tlink@matadorresources.com

9. API Well No.
30-015-43490

3a. Address
5400 LBJ FREEWAY, SUITE 1500
DALLAS, TX 75240

3b. Phone No. (include area code)
Ph: 575-627-2465

10. Field and Pool or Exploratory Area
~~FOREHAND RANCH~~-WOLFCAMP
Purple SAGE 98220

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 35 T23S R27E Mer NMP SWSW ~~330~~FSL ~~2100~~FWL
330 1980

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Site Facility Diagram/Security Plan
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to APD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

BLM Bond: NMB0001079
Surety Bond:RLB0015172

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Please see attached for Forehand Rand 35 #1H, new plats, new drill plan, new certifications and new H2S contacts and drill plans.

1. Matador acquire approved permit from Caza Operating LLC;
2. Attached C-102 is a replacement of approved C-102;
3. Please note SHL relocation from 330'FSL and 1980' FWL to 390' FSL and 2100' FWL.
4. Please note BHL relocation from 660' FNL and 1980' FWL to 240' FNL and 1980' FWL.
5. See revised Drill Plan changing: casing program, casing and cement depths, pressure control, Testing logging and Coring program, downhole conditions and mud program, along with its

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 10 2017

Engineering review completed by m Hague. -No New Surface Disturbance

RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #363273 verified by the BLM Well Information System
For MATADOR PRODUCTION COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH HAM on 01/11/2017 ()

Name *(Printed/Typed)* TAMMY R LINK — Title PRODUCTION ANALYST

Signature (Electronic Submission) — Date 01/09/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By — Title for FIELD MANAGER — Date 07 Apr 2017

Conditions of approval, if any, are attached. Approval of this notice 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.

Office CARLSBAD FIELD OFFICE

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.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

RWP 4-18-17

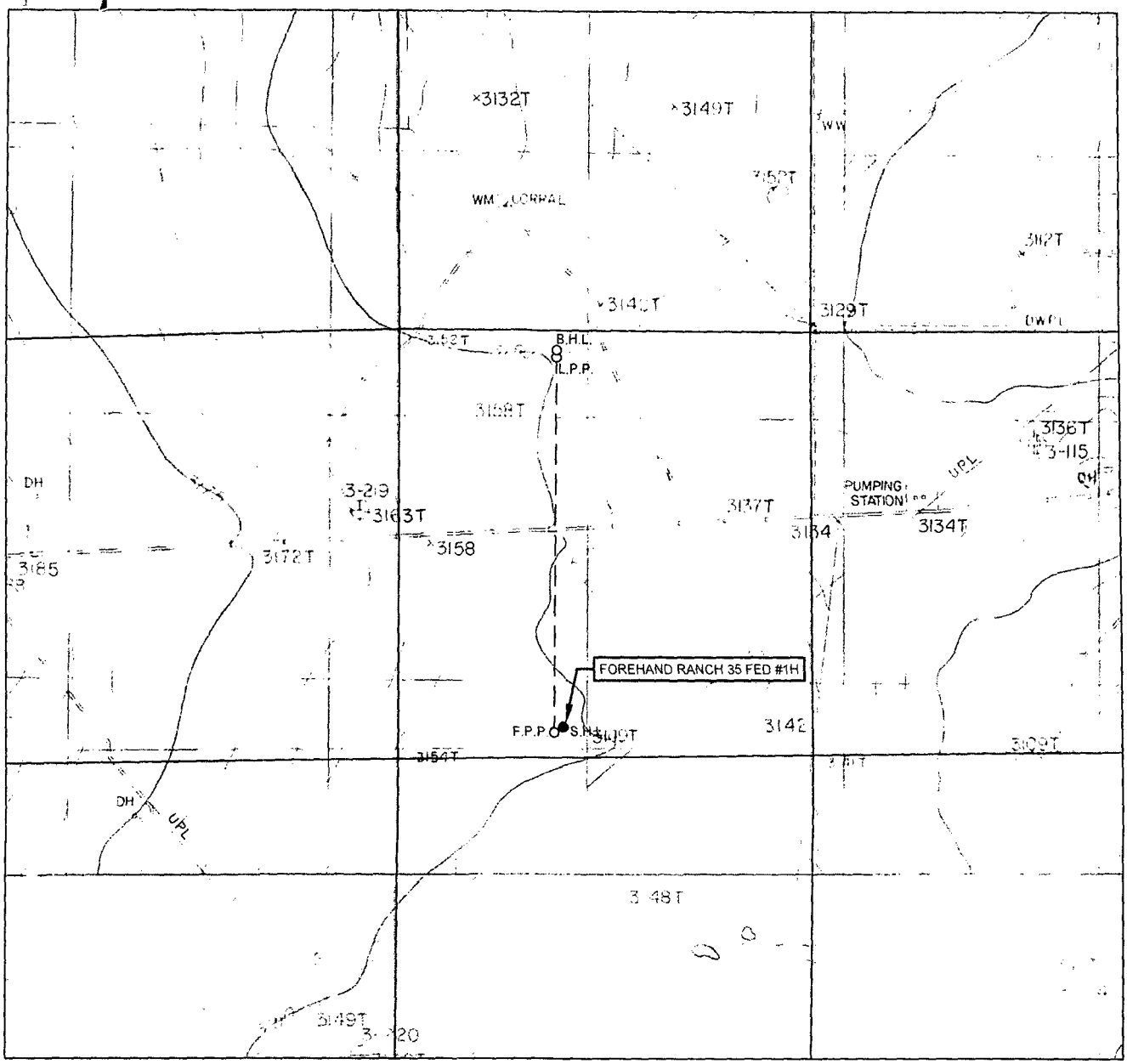
Additional data for EC transaction #363273 that would not fit on the form

32. Additional remarks, continued

corresponding exhibits and diagrams;
6. See attached revised 1 Mile radius map;
7. See attached pad location layout;
8. See revised Matador H2S emergency contacts;
9. See attached Matador H2S drilling plan;
10.See attached Matador H2S contingency plan.

See Attachments

LOCATION & ELEVATION VERIFICATION MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: FOREHAND RANCH 35 FED #1H

SECTION 35 TWP 23-S RGE 27-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3152'
DESCRIPTION 390' FSL & 2100' FWL

LATITUDE N 32.2550412 LONGITUDE W 104.1622964

-N-

SCALE: 1" = 2000'

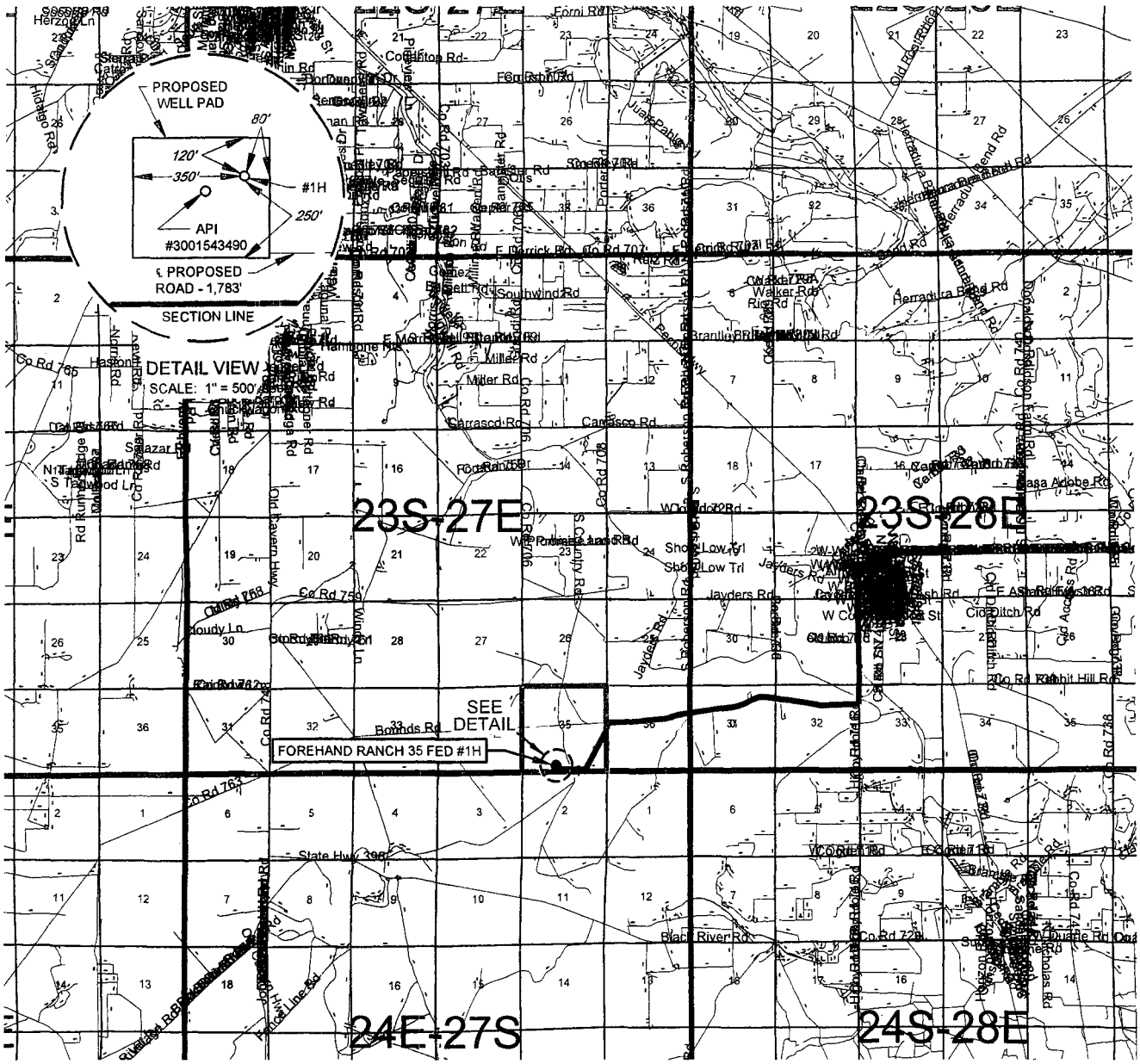
0' 1000' 2000'

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

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

VICINITY MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: FOREHAND RANCH 35 FED #1H

SECTION 35 TWP 23-S RGE 27-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 390' FSL & 2100' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-285 AND W CEDAR ST, GO SOUTH ON NM-285 ±1.0 MILE, THENCE SOUTHWEST (RIGHT) ON HIGBY HOLE RD. ±0.4 MILES, THENCE WEST (RIGHT) ON BOUNDS RD. ±3.0 MILES, THENCE SOUTH (LEFT) ON LEASE RD. ±0.6 MILES, THENCE WEST (RIGHT) ON A PROPOSED RD. ±1783 FEET TO A POINT ±250 FEET SOUTHEAST OF THE LOCATION.

-N-

SCALE: 1" = 10000'

0' 5000' 10000'

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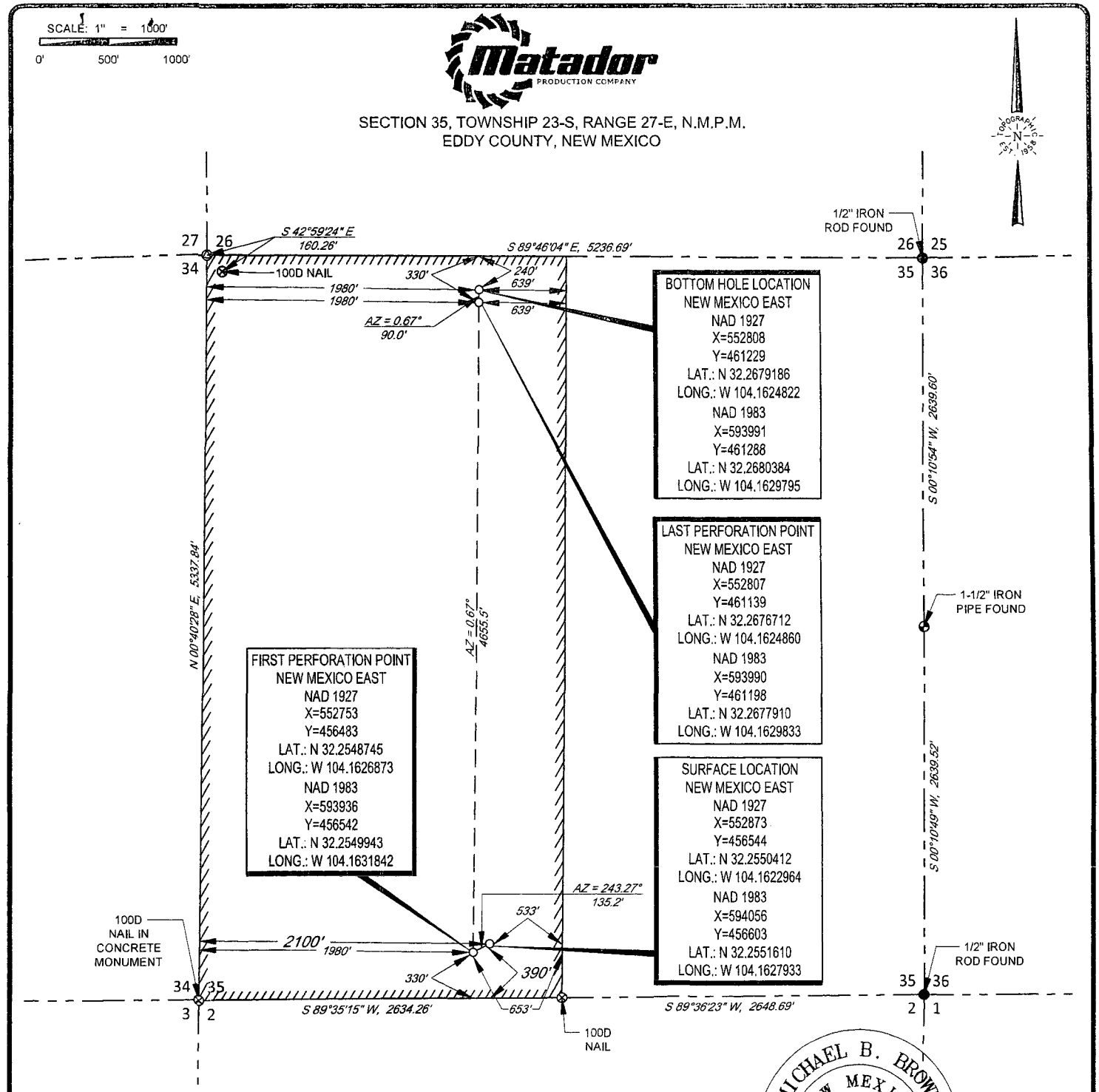

LEASE NAME & WELL NO.: FOREHAND RANCH 35 FED #1H

SECTION 35 TWP 23-S RGE 27-E SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 390' FSL & 2100' FWL

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AS OF THE DATE OF SURVEY, ALL ABOVE GROUND APPURTENANCES WITHIN 300' OF THE STAKED LOCATION ARE SHOWN HEREON.

MICHAEL B. BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329

JANUARY 06, 2017

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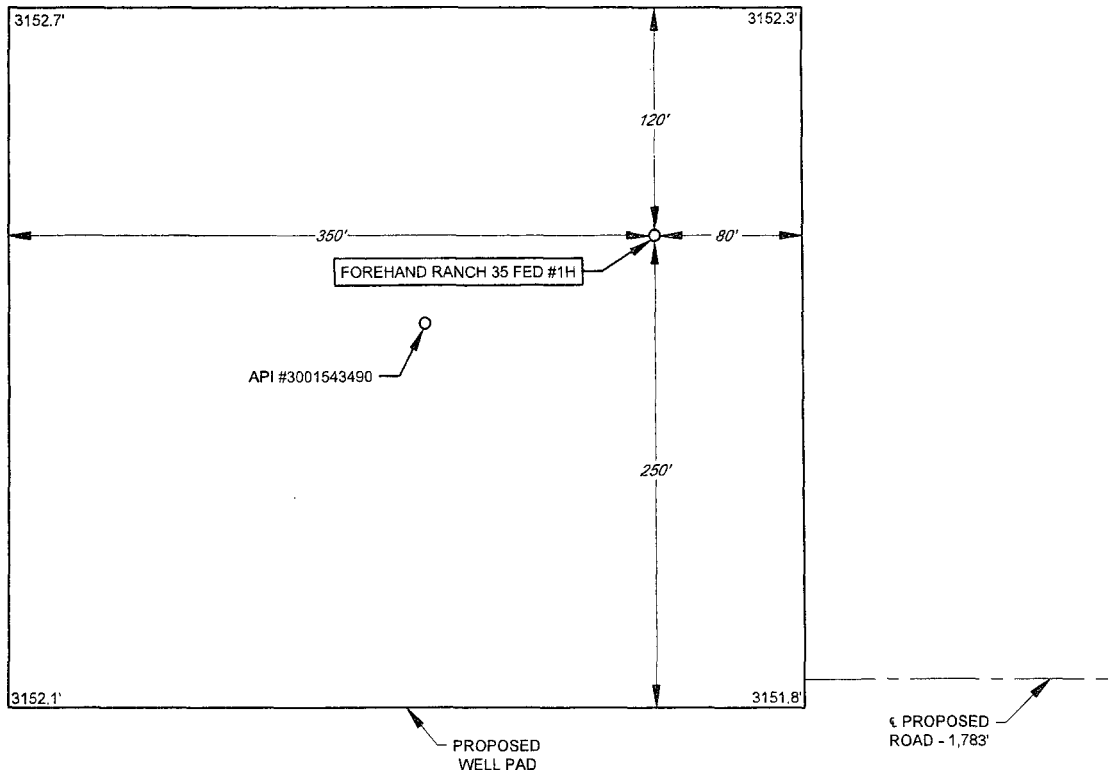
S:\SURVEY\MATADOR_RESOURCES\FOREHAND_RANCH_35_FED_1H\FINAL_PRODUCTS\LO_FOREHAND_RANCH_35_FED_1H.DWG 1/6/2017 6:14:32 PM mbrown

Matador PRODUCTION COMPANY

SECTION 35, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



SECTION LINE

LEASE NAME & WELL NO.: FOREHAND RANCH 35 FED #1H
#1H LATITUDE N 32.2550412 #1H LONGITUDE W 104.1622964

LEGEND

SECTION LINE
PROPOSED ROAD

-N-

SCALE: 1" = 100'
0' 50' 100'

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

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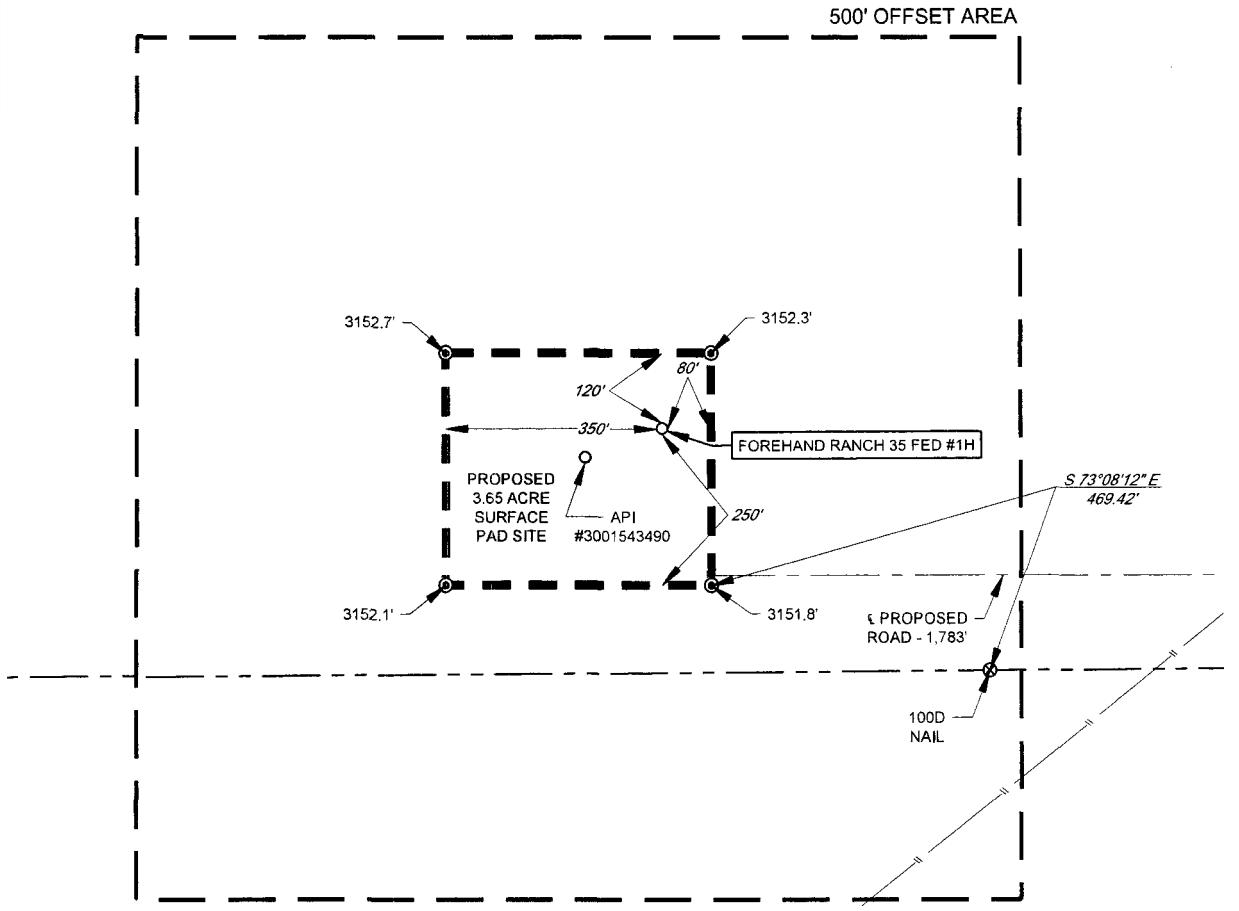
WWW.TOPOGRAPHIC.COM

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

SCALE: 1" = 300'

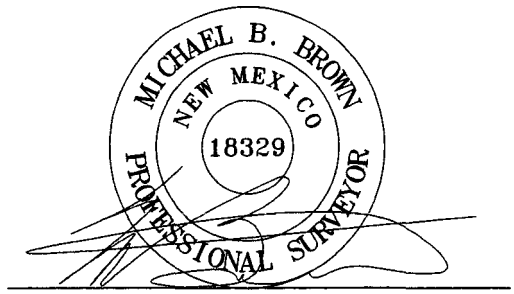
0' 150' 300'

SECTION 35, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEGEND

- SURVEY/SECTION LINE
- PROPOSED SITE
- 500' PROXIMITY
- ROAD WAY
- PROPOSED ROAD
- EXISTING PIPELINE
- NAIL FOUND
- IRON ROD SET



Michael Blake Brown, P.S. No. 18329
JANUARY 06, 2017

Matador PRODUCTION COMPANY

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FOREHAND RANCH 35 FED #1H PROXIMITY	REVISION: INT	DATE
DATE: 01/06/2017		
FILE: LO_FOREHAND_RANCH_35_FED_1H		
DRAWN BY: MML		
SHEET : 7 OF 7		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

Matador Production Company **DRILL PLAN PAGE 1**
Forehand Ranch 35 Fed #1H
SHL: 390' FSL 2100' FWL sec 35 T23S R27E
BHL: 330' FNL 1980' FWL sec 35 T23S R27E
Eddy County, NM

Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD
Quaternary	GL
Rustler Anhydrite	734'
Salt	1127'
Delaware	2627'
Cherry Canyon	3416'
Brushy Canyon	4516'
Avalon Shale	6230'
1st Bone Spring	7130'
2nd Bone Spring	7725'
3rd Bone Spring Sand	8528'
Lower 3rd Bone Spring	9074'
Wolfcamp	9423'
Wolfcamp B	9996'
Wolfcamp C	10564'
Wolfcamp D	10951'
Target Lower Woflcamp	10900
Pilot TD	11,100'

2. NOTABLE ZONES

Closest water well (C 03031) is 2,042.88' to the northwest. Depth of well is 150 feet and depth to water is 67 feet.

3. PRESSURE CONTROL - SEE COA

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

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

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as recommended 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. Test pressures will be as follows. After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate #1, pressure tests will be made to 250 psi low and 3000 psi high. On the intermediate #2, pressure tests will be made to 250 psi low and 5000 psi high. The annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate #1 and #2 casing. In the case of running a speed head with landing mandrel for 9-5/8" and 7" casing the initial, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high with wellhead seals tested to 5000 psi once the 9-5/8" casing has been landed and cemented. The BOP will then be lifted to install the 'C-section' of the wellhead. Matador will nipple the BOP back up and the pressure tests will be made to 250 psi low and 5000 psi high and the annular will be tested to 250 psi low and 2500 psi high.

Matador requests a variance to drill this well using a "speed head" wellhead. A Diagram of the wellhead 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. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

4. CASING & CEMENT → SEE COA

Hole O. D.	Set @ (MD)	Casing O. D.	Age	Weight (lb/ft)	Grade	Thread Collar	Collapse	Burst	Tension
17.5"	550'	13.375"	New	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	~~2600'~~ 2290'	9.625"	New	40	J-55	BTC	1.125	1.125	1.8
8.75"	9700'	7"	New	29	P-110	BTC	1.125	1.125	1.8
6.125"	14300'	4.5"	New	13.5	P-110	BTC/TXP	1.125	1.125	1.8

Name	Type	Sacks	Yield	Weight	Blend

Haque, Mustafa <mhaque@blm.gov>

Forehand Ranch 35 Fed #1H APD Docs

1 message

Adam Lange <alange@matadorresources.com> Tue, Mar 28, 2017 at 10:23 AM
To: "Haque, Mustafa" <mhaque@blm.gov>

Haque,

Here is the casing table and Directional Plan.

Please let me know if you need anything else or have any additional questions.

Name	Hole Size	Set @ (MD)	Casing Size (OD)	Age	Weight (lb/ft)	Grade	Thread Collar	Collapse	Burst	Tension
Surface	17-1/2"	360	13-3/8"	New	54.5#	J-55	BTC	1.125	1.125	1.8
Intermediate	12-1/4"	2290	9-5/8"	New	40#	J-55	BTC	1.125	1.125	1.8
Intermediate 2	8-3/4"	10482	7"	New	29#	P-110	BTC	1.125	1.125	1.8
Production	6-1/8"	14628	4-1/2"	New	13.5#	P-110	BTC/TXP	1.125	1.125	1.8

Thanks,

Adam Lange

Senior Drilling Engineer

Matador Resources Company

Cell: (214) 458-0788

Office: (972) 371-5247

Fax: (214) 866-4847

Surface	Tail	350	1.38	14.8	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
TOC = 0'		100% Excess			Class C + 5% NaCl + LCM Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	550	2.13	12.6	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	270	1.38	14.8	Class C + 5% NaCl + LCM
TOC = 0'		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface
Intermediate 2	Lead	600	2.36	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	310	1.38	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 1100'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to top of tail cement (500' above TOC)
Production	Tail	510	1.17	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 9400'		25% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of curve

5. MUD PROGRAM

An electronic Pason mud monitoring system satisfying the requirements of Onshore Order 1 will be used. All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17-1/2"	8.30	28	NC	FW Spud Mud
Intermediate	12-1/4"	10.00	30-32	NC	Brine Water
Intermediate 2	8-3/4"	8.00	30-31	NC	FW/Cut Brine
Production	6.125"	12.50	50-60	<10	OBM

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from 2300' to TD.

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

7. DOWN HOLE CONDITIONS ~~-SEE~~ COA

abnormal pressure might be encountered - SEE COA

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈6700 psi. Expected bottom hole temperature is ≈160° F.

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

8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take ≈3 months to drill and complete the well.

Matador Resources

Eddy County, New Mexico (NAD 27)
Forehand Ranch 35 Federal
1H

Wellbore #1

Plan: Design #1

Standard Planning Report

15 November, 2016

MS Energy Services
WWW.MSENERGYSERVICES.COM

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 1H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3181.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3181.00usft (Patterson 297)
Site:	Forehand Ranch 35 Federal	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Eddy County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	1H					
Well Position	**+N/-S**	456,543.40 usft	**Northing:**	456,543.40 usft	**Latitude:**	32.255039
	+E/-W	552,868.10 usft	**Easting:**	552,868.10 usft	**Longitude:**	-104.162313
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,152.00 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	12/1/2016	7.34	60.00	48,035

Design Design #1

Audit Notes:

Version:	**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	358.44

Plan Survey Tool Program **Date** 11/15/2016

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	14,628.15	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,266.67	4.00	199.48	1,266.45	-8.77	-3.10	1.50	1.50	0.00	199.48	VP - Forehand Ran
2,500.00	4.00	199.48	2,496.78	-89.88	-31.79	0.00	0.00	0.00	0.00	
2,766.38	8.00	199.48	2,761.64	-116.12	-41.07	1.50	1.50	0.00	0.00	
4,206.42	8.00	199.48	4,187.68	-304.96	-107.85	0.00	0.00	0.00	0.00	
4,739.46	0.00	0.00	4,719.00	-339.97	-120.23	1.50	-1.50	0.00	180.00	VP - Forehand Ran
9,681.70	0.00	0.00	9,661.24	-339.97	-120.23	0.00	0.00	0.00	0.00	
10,481.70	80.00	0.05	10,225.49	133.49	-119.84	10.00	10.00	0.00	0.05	PBHL - Forehand R
10,648.37	90.00	0.05	10,240.00	299.31	-119.70	6.00	6.00	0.00	0.00	
14,628.15	90.00	0.05	10,240.00	4,279.10	-116.40	0.00	0.00	0.00	0.00	PBHL - Forehand R

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 1H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3181.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3181.00usft (Patterson 297)
Site:	Forehand Ranch 35 Federal	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
1,100.00	1.50	199.48	1,099.99	-1.23	-0.44	-1.22	1.50	1.50	0.00
1,200.00	3.00	199.48	1,199.91	-4.94	-1.75	-4.89	1.50	1.50	0.00
1,266.67	4.00	199.48	1,266.45	-8.77	-3.10	-8.68	1.50	1.50	0.00
Begin 4.00° Tangent									
1,300.00	4.00	199.48	1,299.70	-10.96	-3.88	-10.85	0.00	0.00	0.00
1,400.00	4.00	199.48	1,399.46	-17.54	-6.20	-17.37	0.00	0.00	0.00
1,500.00	4.00	199.48	1,499.22	-24.12	-8.53	-23.88	0.00	0.00	0.00
1,600.00	4.00	199.48	1,598.97	-30.69	-10.86	-30.39	0.00	0.00	0.00
1,700.00	4.00	199.48	1,698.73	-37.27	-13.18	-36.90	0.00	0.00	0.00
1,800.00	4.00	199.48	1,798.48	-43.85	-15.51	-43.41	0.00	0.00	0.00
1,900.00	4.00	199.48	1,898.24	-50.42	-17.83	-49.92	0.00	0.00	0.00
2,000.00	4.00	199.48	1,998.00	-57.00	-20.16	-56.43	0.00	0.00	0.00
2,100.00	4.00	199.48	2,097.75	-63.58	-22.48	-62.94	0.00	0.00	0.00
2,200.00	4.00	199.48	2,197.51	-70.15	-24.81	-69.45	0.00	0.00	0.00
2,300.00	4.00	199.48	2,297.27	-76.73	-27.14	-75.96	0.00	0.00	0.00
2,400.00	4.00	199.48	2,397.02	-83.31	-29.46	-82.47	0.00	0.00	0.00
2,500.00	4.00	199.48	2,496.78	-89.88	-31.79	-88.98	0.00	0.00	0.00
Begin 1.50°/100' Build									
2,600.00	5.50	199.48	2,596.43	-97.69	-34.55	-96.71	1.50	1.50	0.00
2,700.00	7.00	199.48	2,695.84	-107.95	-38.18	-106.87	1.50	1.50	0.00
2,766.38	8.00	199.48	2,761.64	-116.12	-41.07	-114.96	1.50	1.50	0.00
Begin 8.00° Tangent									
2,800.00	8.00	199.48	2,794.94	-120.53	-42.63	-119.32	0.00	0.00	0.00
2,900.00	8.00	199.48	2,893.97	-133.64	-47.26	-132.31	0.00	0.00	0.00
3,000.00	8.00	199.48	2,993.00	-146.76	-51.90	-145.29	0.00	0.00	0.00
3,100.00	8.00	199.48	3,092.02	-159.87	-56.54	-158.27	0.00	0.00	0.00
3,200.00	8.00	199.48	3,191.05	-172.98	-61.18	-171.26	0.00	0.00	0.00
3,300.00	8.00	199.48	3,290.08	-186.10	-65.81	-184.24	0.00	0.00	0.00
3,400.00	8.00	199.48	3,389.11	-199.21	-70.45	-197.22	0.00	0.00	0.00
3,500.00	8.00	199.48	3,488.14	-212.32	-75.09	-210.20	0.00	0.00	0.00
3,600.00	8.00	199.48	3,587.16	-225.44	-79.73	-223.19	0.00	0.00	0.00
3,700.00	8.00	199.48	3,686.19	-238.55	-84.37	-236.17	0.00	0.00	0.00
3,800.00	8.00	199.48	3,785.22	-251.67	-89.00	-249.15	0.00	0.00	0.00
3,900.00	8.00	199.48	3,884.25	-264.78	-93.64	-262.14	0.00	0.00	0.00
4,000.00	8.00	199.48	3,983.27	-277.89	-98.28	-275.12	0.00	0.00	0.00
4,100.00	8.00	199.48	4,082.30	-291.01	-102.92	-288.10	0.00	0.00	0.00
4,206.42	8.00	199.48	4,187.68	-304.96	-107.85	-301.92	0.00	0.00	0.00
Begin 1.50°/100' Drop									
4,300.00	6.59	199.48	4,280.51	-316.16	-111.81	-313.01	1.50	-1.50	0.00
4,400.00	5.09	199.48	4,379.99	-325.76	-115.21	-322.51	1.50	-1.50	0.00
4,500.00	3.59	199.48	4,479.70	-332.90	-117.73	-329.57	1.50	-1.50	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 1H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3181.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3181.00usft (Patterson 297)
Site:	Forehand Ranch 35 Federal	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00	2.09	199.48	4,579.57	-337.57	-119.38	-334.20	1.50	-1.50	0.00
4,700.00	0.59	199.48	4,679.54	-339.78	-120.16	-336.39	1.50	-1.50	0.00
4,739.46	0.00	0.00	4,719.00	-339.97	-120.23	-336.58	1.50	-1.50	0.00
Begin Vertical Hold									
4,800.00	0.00	0.00	4,779.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
4,900.00	0.00	0.00	4,879.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,000.00	0.00	0.00	4,979.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,100.00	0.00	0.00	5,079.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,200.00	0.00	0.00	5,179.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,300.00	0.00	0.00	5,279.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,400.00	0.00	0.00	5,379.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,500.00	0.00	0.00	5,479.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,600.00	0.00	0.00	5,579.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,700.00	0.00	0.00	5,679.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,800.00	0.00	0.00	5,779.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
5,900.00	0.00	0.00	5,879.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,000.00	0.00	0.00	5,979.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,100.00	0.00	0.00	6,079.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,200.00	0.00	0.00	6,179.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,300.00	0.00	0.00	6,279.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,400.00	0.00	0.00	6,379.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,500.00	0.00	0.00	6,479.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,600.00	0.00	0.00	6,579.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,700.00	0.00	0.00	6,679.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,800.00	0.00	0.00	6,779.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
6,900.00	0.00	0.00	6,879.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,000.00	0.00	0.00	6,979.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,100.00	0.00	0.00	7,079.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,200.00	0.00	0.00	7,179.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,300.00	0.00	0.00	7,279.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,400.00	0.00	0.00	7,379.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,500.00	0.00	0.00	7,479.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,600.00	0.00	0.00	7,579.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,700.00	0.00	0.00	7,679.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,800.00	0.00	0.00	7,779.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
7,900.00	0.00	0.00	7,879.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,000.00	0.00	0.00	7,979.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,100.00	0.00	0.00	8,079.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,200.00	0.00	0.00	8,179.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,300.00	0.00	0.00	8,279.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,400.00	0.00	0.00	8,379.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,500.00	0.00	0.00	8,479.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,600.00	0.00	0.00	8,579.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,700.00	0.00	0.00	8,679.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,800.00	0.00	0.00	8,779.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
8,900.00	0.00	0.00	8,879.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,000.00	0.00	0.00	8,979.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,100.00	0.00	0.00	9,079.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,200.00	0.00	0.00	9,179.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,300.00	0.00	0.00	9,279.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,400.00	0.00	0.00	9,379.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,500.00	0.00	0.00	9,479.54	-339.97	-120.23	-336.58	0.00	0.00	0.00
9,600.00	0.00	0.00	9,579.54	-339.97	-120.23	-336.58	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 1H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3181.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3181.00usft (Patterson 297)
Site:	Forehand Ranch 35 Federal	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,681.70	0.00	0.00	9,661.24	-339.97	-120.23	-336.58	0.00	0.00	0.00
Begin 10.00°/100' Build									
9,700.00	1.83	0.05	9,679.54	-339.68	-120.23	-336.28	10.00	10.00	0.00
9,750.00	6.83	0.05	9,729.38	-335.91	-120.23	-332.51	10.00	10.00	0.00
9,800.00	11.83	0.05	9,778.70	-327.80	-120.22	-324.41	10.00	10.00	0.00
9,850.00	16.83	0.05	9,827.13	-315.43	-120.21	-312.05	10.00	10.00	0.00
9,900.00	21.83	0.05	9,874.30	-298.89	-120.20	-295.51	10.00	10.00	0.00
9,950.00	26.83	0.05	9,919.84	-278.29	-120.18	-274.92	10.00	10.00	0.00
10,000.00	31.83	0.05	9,963.42	-253.81	-120.16	-250.45	10.00	10.00	0.00
10,050.00	36.83	0.05	10,004.70	-225.62	-120.14	-222.27	10.00	10.00	0.00
10,100.00	41.83	0.05	10,043.36	-193.94	-120.11	-190.60	10.00	10.00	0.00
10,150.00	46.83	0.05	10,079.11	-159.01	-120.08	-155.69	10.00	10.00	0.00
10,200.00	51.83	0.05	10,111.69	-121.10	-120.05	-117.79	10.00	10.00	0.00
10,250.00	56.83	0.05	10,140.83	-80.49	-120.02	-77.20	10.00	10.00	0.00
10,300.00	61.83	0.05	10,166.33	-37.50	-119.98	-34.23	10.00	10.00	0.00
10,350.00	66.83	0.05	10,187.98	7.55	-119.94	10.81	10.00	10.00	0.00
10,400.00	71.83	0.05	10,205.63	54.32	-119.91	57.56	10.00	10.00	0.00
10,450.00	76.83	0.05	10,219.13	102.44	-119.87	105.66	10.00	10.00	0.00
10,481.70	80.00	0.05	10,225.49	133.49	-119.84	136.70	10.00	10.00	0.00
Begin 6.00°/100' Build									
10,500.00	81.10	0.05	10,228.50	151.54	-119.82	154.75	6.00	6.00	0.00
10,550.00	84.10	0.05	10,234.94	201.12	-119.78	204.30	6.00	6.00	0.00
10,600.00	87.10	0.05	10,238.78	250.97	-119.74	254.13	6.00	6.00	0.00
10,648.37	90.00	0.05	10,240.00	299.31	-119.70	302.46	6.00	6.00	0.00
Begin 90.00° Lateral									
10,700.00	90.00	0.05	10,240.00	350.95	-119.66	354.07	0.00	0.00	0.00
10,800.00	90.00	0.05	10,240.00	450.95	-119.58	454.03	0.00	0.00	0.00
10,900.00	90.00	0.05	10,240.00	550.95	-119.49	553.99	0.00	0.00	0.00
11,000.00	90.00	0.05	10,240.00	650.95	-119.41	653.95	0.00	0.00	0.00
11,100.00	90.00	0.05	10,240.00	750.95	-119.33	753.91	0.00	0.00	0.00
11,200.00	90.00	0.05	10,240.00	850.95	-119.24	853.88	0.00	0.00	0.00
11,300.00	90.00	0.05	10,240.00	950.95	-119.16	953.84	0.00	0.00	0.00
11,400.00	90.00	0.05	10,240.00	1,050.95	-119.08	1,053.80	0.00	0.00	0.00
11,500.00	90.00	0.05	10,240.00	1,150.95	-119.00	1,153.76	0.00	0.00	0.00
11,600.00	90.00	0.05	10,240.00	1,250.95	-118.91	1,253.72	0.00	0.00	0.00
11,700.00	90.00	0.05	10,240.00	1,350.95	-118.83	1,353.68	0.00	0.00	0.00
11,800.00	90.00	0.05	10,240.00	1,450.95	-118.75	1,453.64	0.00	0.00	0.00
11,900.00	90.00	0.05	10,240.00	1,550.95	-118.66	1,553.60	0.00	0.00	0.00
12,000.00	90.00	0.05	10,240.00	1,650.95	-118.58	1,653.56	0.00	0.00	0.00
12,100.00	90.00	0.05	10,240.00	1,750.95	-118.50	1,753.52	0.00	0.00	0.00
12,200.00	90.00	0.05	10,240.00	1,850.95	-118.41	1,853.48	0.00	0.00	0.00
12,300.00	90.00	0.05	10,240.00	1,950.95	-118.33	1,953.44	0.00	0.00	0.00
12,400.00	90.00	0.05	10,240.00	2,050.95	-118.25	2,053.40	0.00	0.00	0.00
12,500.00	90.00	0.05	10,240.00	2,150.95	-118.17	2,153.36	0.00	0.00	0.00
12,600.00	90.00	0.05	10,240.00	2,250.95	-118.08	2,253.33	0.00	0.00	0.00
12,700.00	90.00	0.05	10,240.00	2,350.95	-118.00	2,353.29	0.00	0.00	0.00
12,800.00	90.00	0.05	10,240.00	2,450.95	-117.92	2,453.25	0.00	0.00	0.00
12,900.00	90.00	0.05	10,240.00	2,550.95	-117.83	2,553.21	0.00	0.00	0.00
13,000.00	90.00	0.05	10,240.00	2,650.95	-117.75	2,653.17	0.00	0.00	0.00
13,100.00	90.00	0.05	10,240.00	2,750.95	-117.67	2,753.13	0.00	0.00	0.00
13,200.00	90.00	0.05	10,240.00	2,850.95	-117.58	2,853.09	0.00	0.00	0.00
13,300.00	90.00	0.05	10,240.00	2,950.95	-117.50	2,953.05	0.00	0.00	0.00
13,400.00	90.00	0.05	10,240.00	3,050.95	-117.42	3,053.01	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well 1H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3181.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3181.00usft (Patterson 297)
Site:	Forehand Ranch 35 Federal	**North Reference:**	Grid
Well:	1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.00	90.00	0.05	10,240.00	3,150.95	-117.34	3,152.97	0.00	0.00	0.00
13,600.00	90.00	0.05	10,240.00	3,250.95	-117.25	3,252.93	0.00	0.00	0.00
13,700.00	90.00	0.05	10,240.00	3,350.95	-117.17	3,352.89	0.00	0.00	0.00
13,800.00	90.00	0.05	10,240.00	3,450.95	-117.09	3,452.85	0.00	0.00	0.00
13,900.00	90.00	0.05	10,240.00	3,550.95	-117.00	3,552.82	0.00	0.00	0.00
14,000.00	90.00	0.05	10,240.00	3,650.95	-116.92	3,652.78	0.00	0.00	0.00
14,100.00	90.00	0.05	10,240.00	3,750.95	-116.84	3,752.74	0.00	0.00	0.00
14,200.00	90.00	0.05	10,240.00	3,850.95	-116.76	3,852.70	0.00	0.00	0.00
14,300.00	90.00	0.05	10,240.00	3,950.95	-116.67	3,952.66	0.00	0.00	0.00
14,400.00	90.00	0.05	10,240.00	4,050.95	-116.59	4,052.62	0.00	0.00	0.00
14,500.00	90.00	0.05	10,240.00	4,150.95	-116.51	4,152.58	0.00	0.00	0.00
14,600.00	90.00	0.05	10,240.00	4,250.95	-116.42	4,252.54	0.00	0.00	0.00
14,628.15	90.00	0.05	10,240.00	4,279.10	-116.40	4,280.68	0.00	0.00	0.00
PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP - Forehand Ranch - plan hits target center - Point	0.00	0.00	4,719.00	-339.97	-120.23	456,203.43	552,747.87	32.254105	-104.162704
PBHL - Forehand Rar - plan hits target center - Point	0.00	0.00	10,240.00	4,279.10	-116.40	460,822.50	552,751.70	32.266803	-104.162668

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
360.00	360.00	13 3/8"	13-3/8	17-1/2
2,290.00	2,287.29	9 5/8"	9-5/8	12-1/4
10,481.70	10,225.49	7"	7	7-1/2
14,628.15	10,240.00	4 1/2"	5-1/2	6

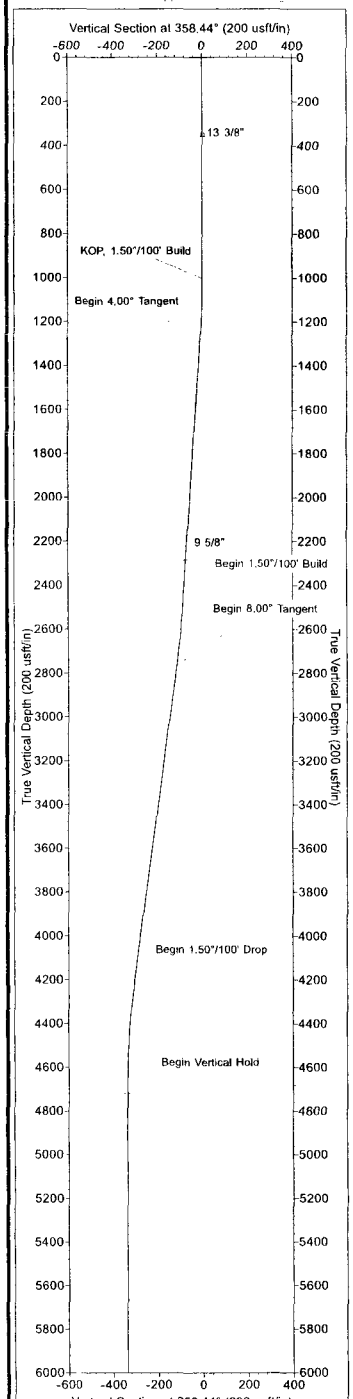
Plan Annotations

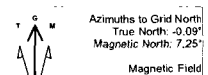
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.00	1,000.00	0.00	0.00	KOP, 1.50°/100' Build
1,266.67	1,266.45	-8.77	-3.10	Begin 4.00° Tangent
2,500.00	2,496.78	-89.88	-31.79	Begin 1.50°/100' Build
2,766.38	2,761.64	-116.12	-41.07	Begin 8.00° Tangent
4,206.42	4,187.68	-304.96	-107.85	Begin 1.50°/100' Drop
4,739.46	4,719.00	-339.97	-120.23	Begin Vertical Hold
9,681.70	9,661.24	-339.97	-120.23	Begin 10.00°/100' Build
10,481.70	10,225.49	133.49	-119.84	Begin 6.00°/100' Build
10,648.37	10,240.00	299.31	-119.70	Begin 90.00° Lateral
14,628.15	10,240.00	4,279.10	-116.40	PBHL

Company: Matador Resources
Site: Forehand Ranch 35 Federal
Well: 1H
Project: Eddy County, New Mexico (NAD 27)
Rig: Patterson 297

Matador RESOURCES COMPANY

MS Energy Services
WWW.MSENERGYSERVICES.COM





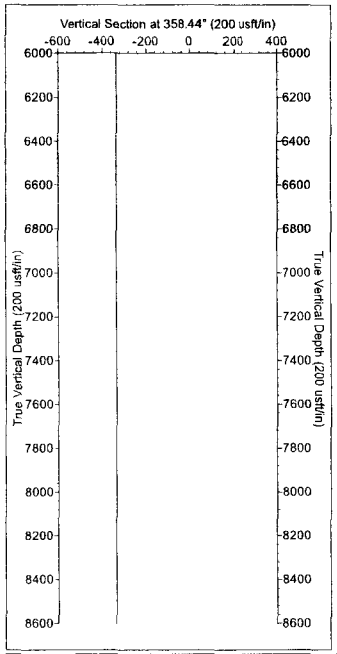
ANNOTATIONS

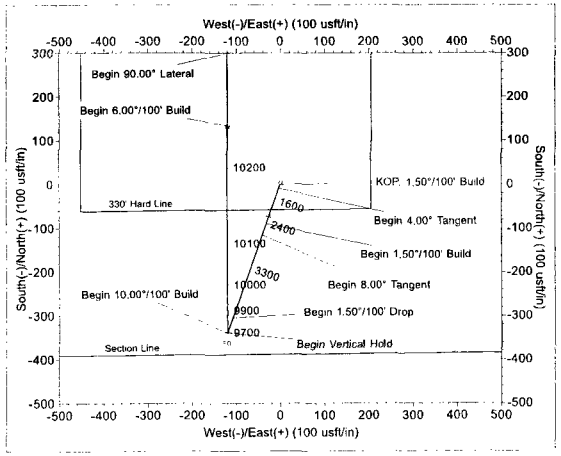
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
1266.67	4.00	199.48	1266.45	-8.77	-3.10	-8.68	9.30	Begin 4.00° Tangent
2500.00	4.00	199.48	2496.78	-89.88	-31.79	-88.98	95.34	Begin 1.50°/100' Build
2766.38	8.00	199.48	2761.64	-116.12	-41.07	-114.96	123.17	Begin 8.00° Tangent
4206.42	8.00	199.48	4187.68	-304.96	-107.85	-301.92	323.47	Begin 1.50°/100' Drop
4739.46	0.00	0.00	4719.00	-339.97	-120.23	-336.58	360.61	Begin Vertical Hold
9681.70	0.00	0.00	9661.24	-339.97	-120.23	-336.58	360.61	Begin 10.00°/100' Build
10481.70	80.00	0.05	10225.49	133.49	-119.84	136.70	834.07	Begin 6.00°/100' Build
10648.37	90.00	0.05	10240.00	299.31	-119.70	302.46	999.89	Begin 90.00° Lateral
14628.15	90.00	0.05	10240.00	4279.10	-116.40	4280.68	4979.68	PBHL

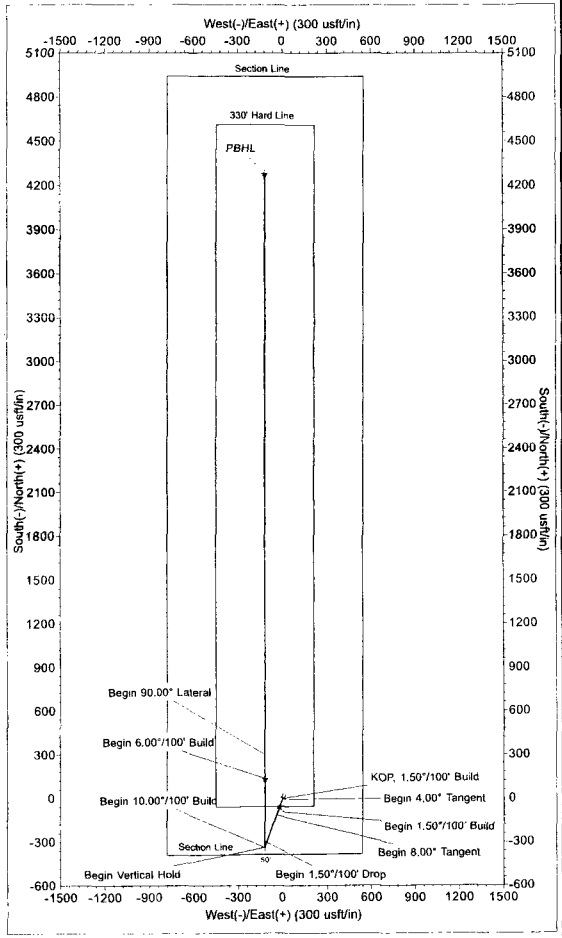
WELL DETAILS: 1H

3152.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	456543.40	552868.10	32° 15' 18.140 N	104° 9' 44.328 W







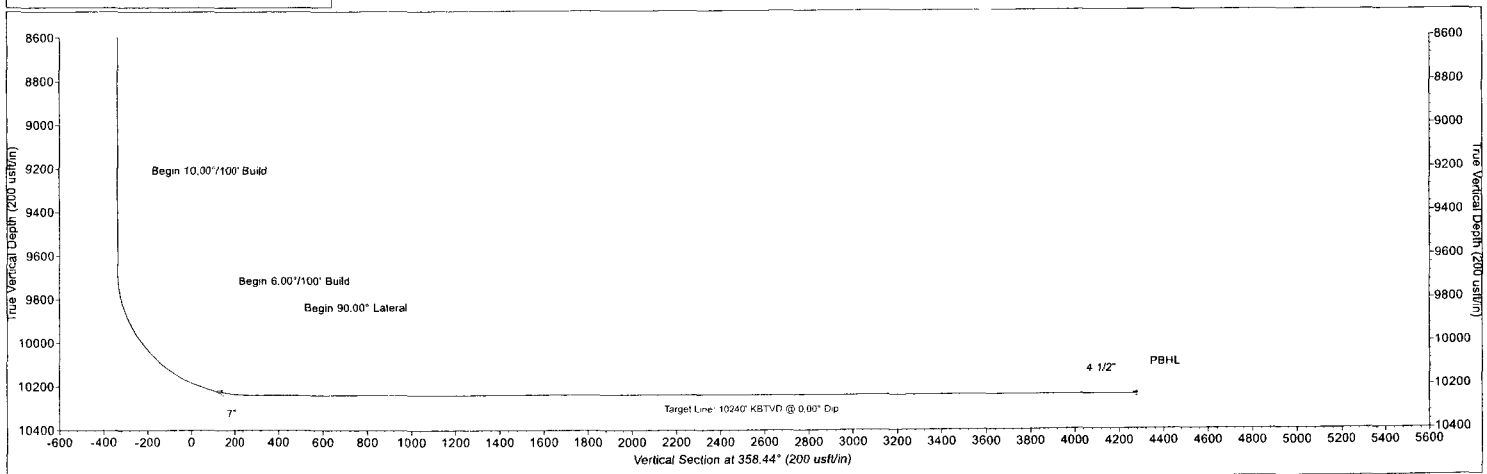
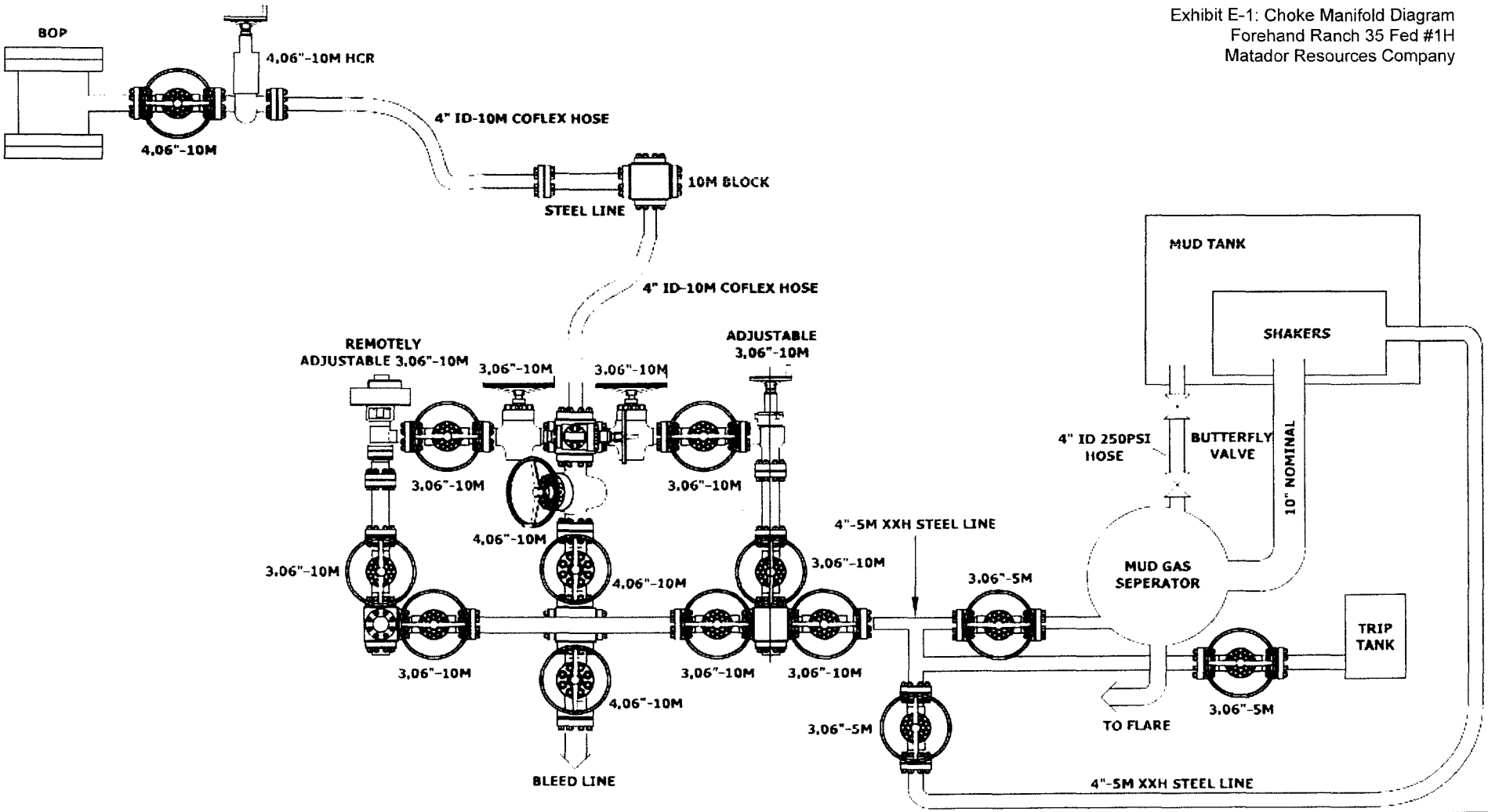


Exhibit E-1: Choke Manifold Diagram
Forehand Ranch 35 Fed #1H
Matador Resources Company



PATTERSON-UTI DRILLING COMPANY LLC

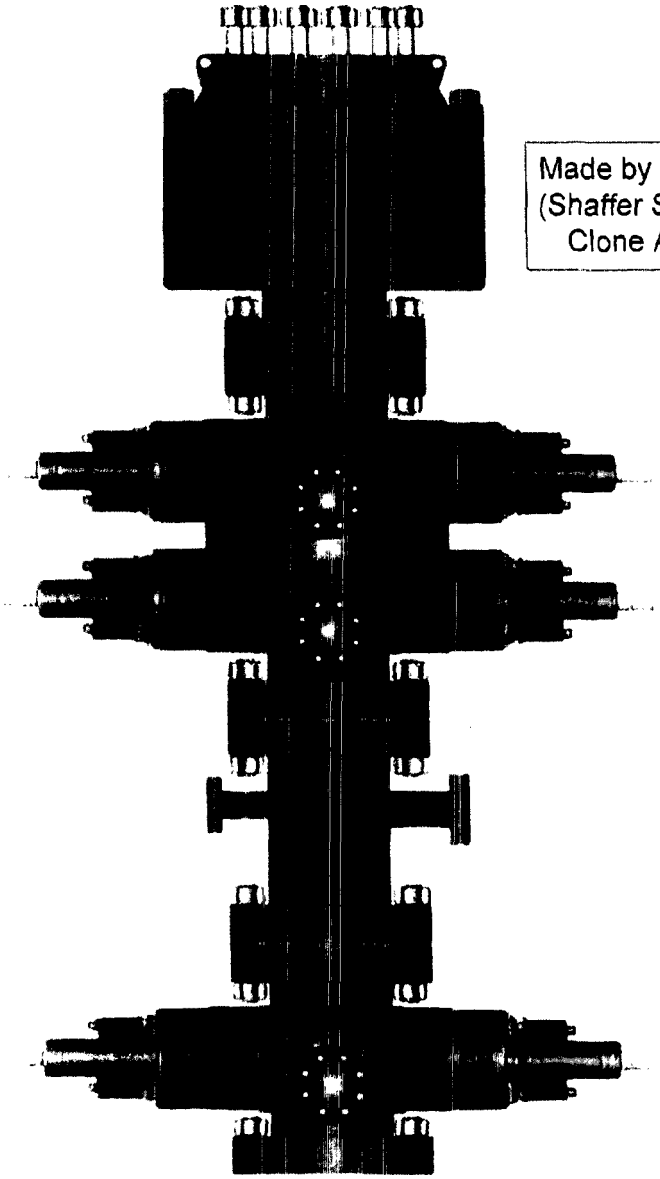
CHOKE MANIFOLD

15M CHOKE ARRANGEMENT
RIG 297

R0297-D.001.LAY.09

PATTERSON-UTI
Well Control

297



Made by Cameron
(Shaffer Spherical)
Clone Annular

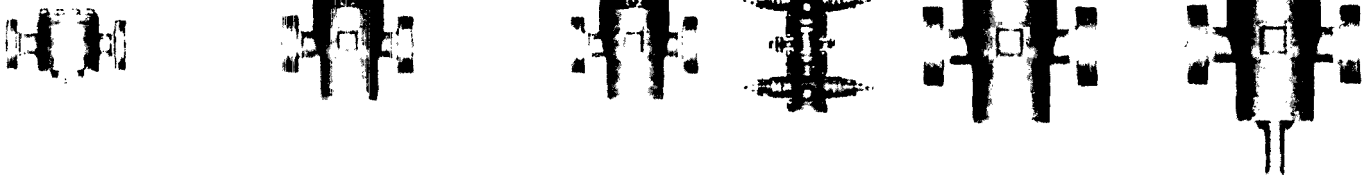
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

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

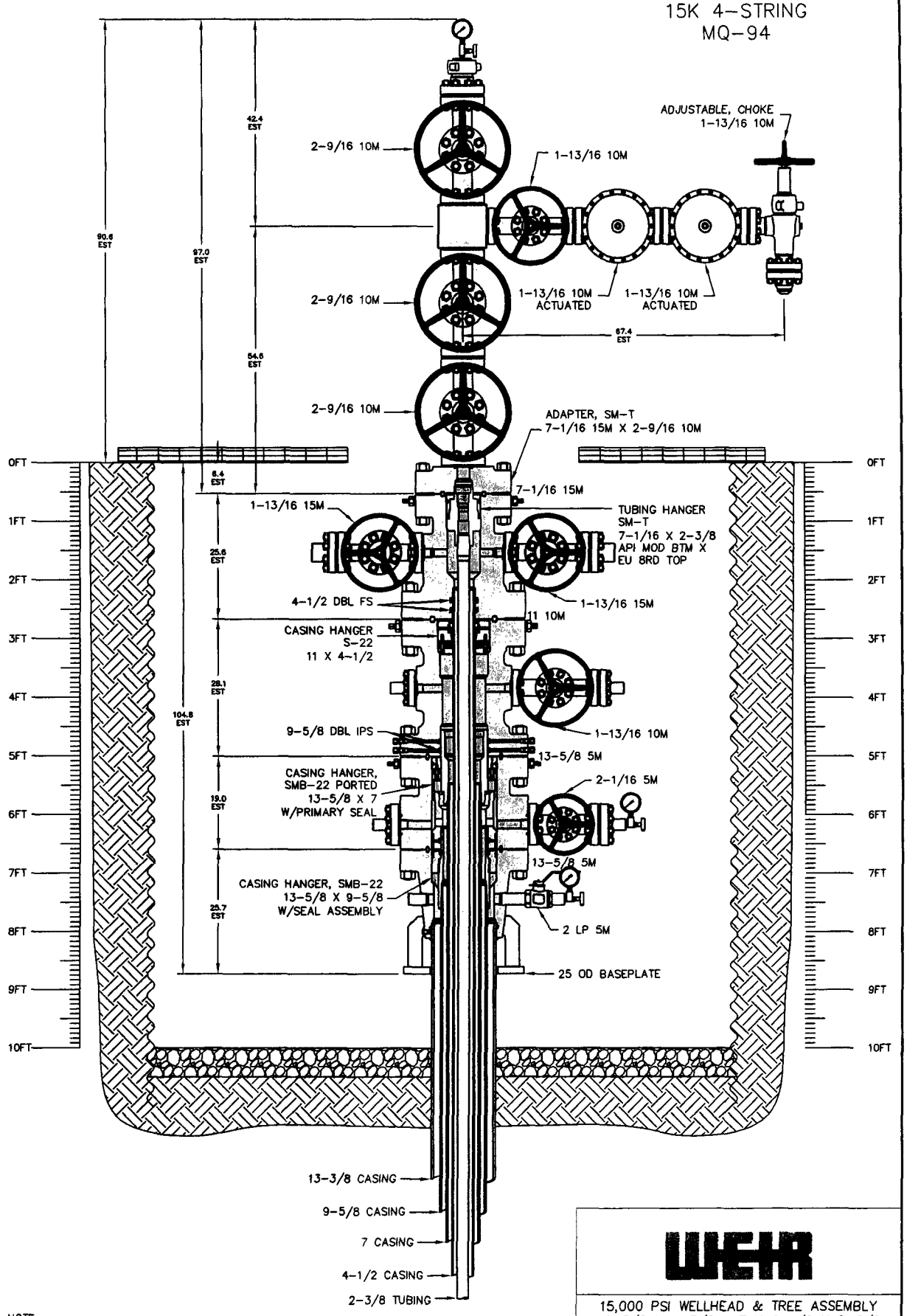
PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" **WEIGHT:** 13,000 lbs

WING VALVES



2" Check Valve | 2" Manual Valve | 2" Manual Valve | 4" Manual Valve | 4" Hydraulic Valve

MATADOR
15K 4-STRING
MQ-94



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

WEIR

15,000 PSI WELLHEAD & TREE ASSEMBLY
13-3/8 X 9-5/8 X 7 X 4-1/2 X 2-3/8

DRAWN BY:	RPL	SCALE	1:10	DATE	18JAN16	REV
CHECKED BY:		DRAWING NO.	P-20986			
APPROVED BY:						

Midwest Hose & Specialty, Inc.

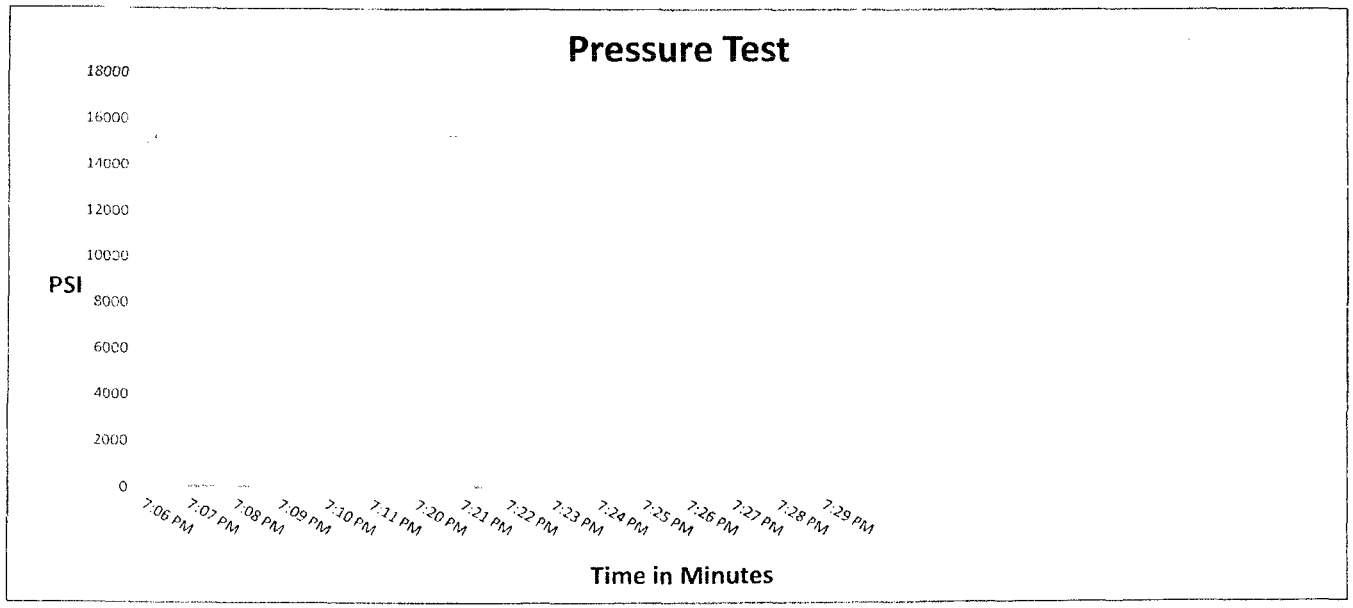
Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Ck	10'	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	284918-2



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

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 #)	287918-2	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

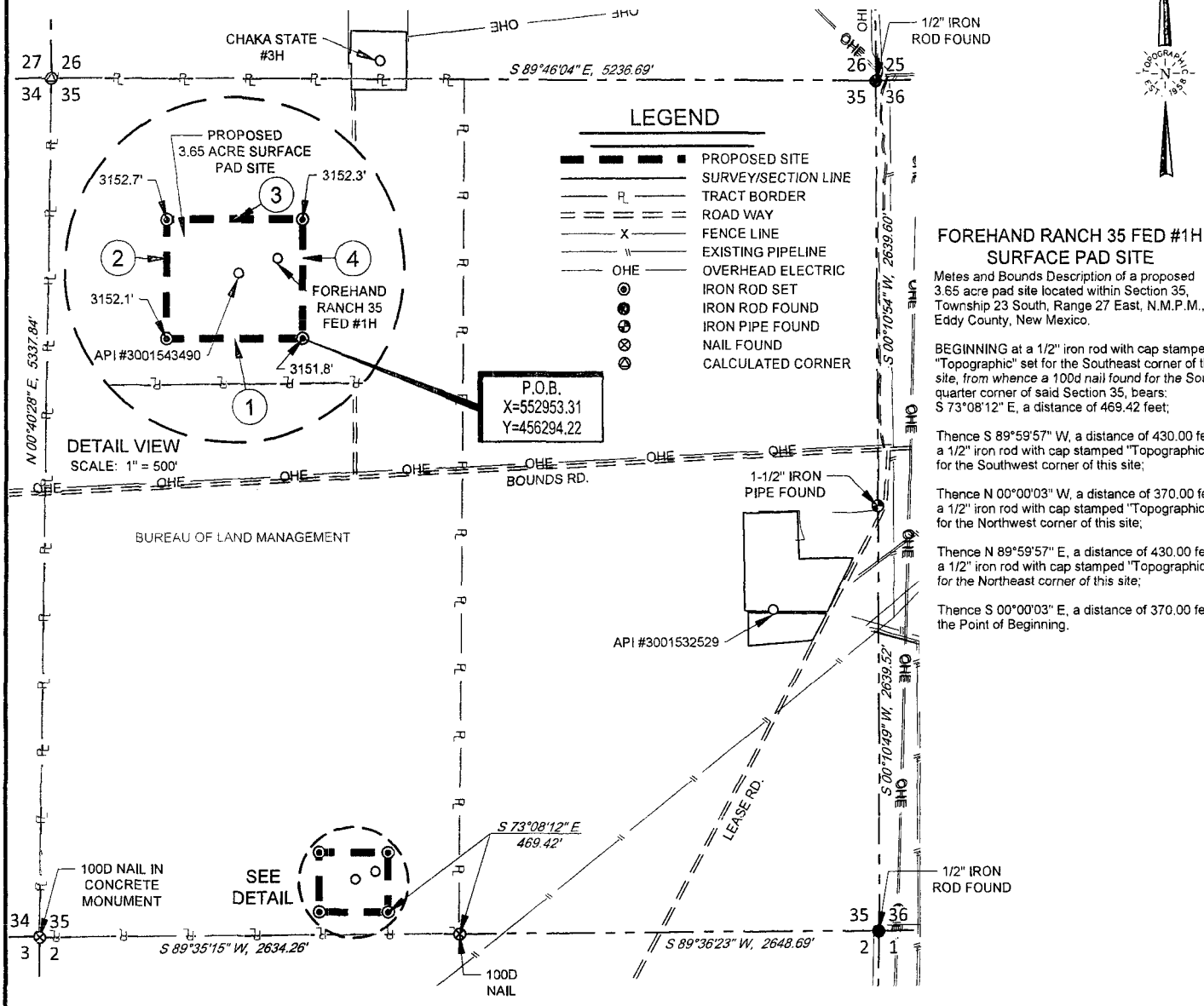
Comments:

Approved By	*Date*
	12/9/2014

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 35, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEGEND

- PROPOSED SITE
- SURVEY/SECTION LINE
- TRACT BORDER
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- IRON ROD SET
- IRON ROD FOUND
- IRON PIPE FOUND
- NAIL FOUND
- CALCULATED CORNER

FOREHAND RANCH 35 FED #1H SURFACE PAD SITE

Metes and Bounds Description of a proposed 3.65 acre pad site located within Section 35, Township 23 South, Range 27 East, N.M.P.M., in Eddy County, New Mexico.

BEGINNING at a 1/2" iron rod with cap stamped "Topographic" set for the Southeast corner of this site, from whence a 100d nail found for the South quarter corner of said Section 35, bears: S 73°08'12" E, a distance of 469.42 feet;

Thence S 89°59'57" W, a distance of 430.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Southwest corner of this site;

Thence N 00°00'03" W, a distance of 370.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Northwest corner of this site;

Thence N 89°59'57" E, a distance of 430.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Northeast corner of this site;

Thence S 00°00'03" E, a distance of 370.00 feet to the Point of Beginning.

FOREHAND RANCH 35 FED #1H SURFACE PAD SITE

LINE	BEARING	DISTANCE
1	S 89°59'57" W	430.00'
2	N 00°00'03" W	370.00'
3	N 89°59'57" E	430.00'
4	S 00°00'03" E	370.00'

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
JANUARY 06, 2017

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

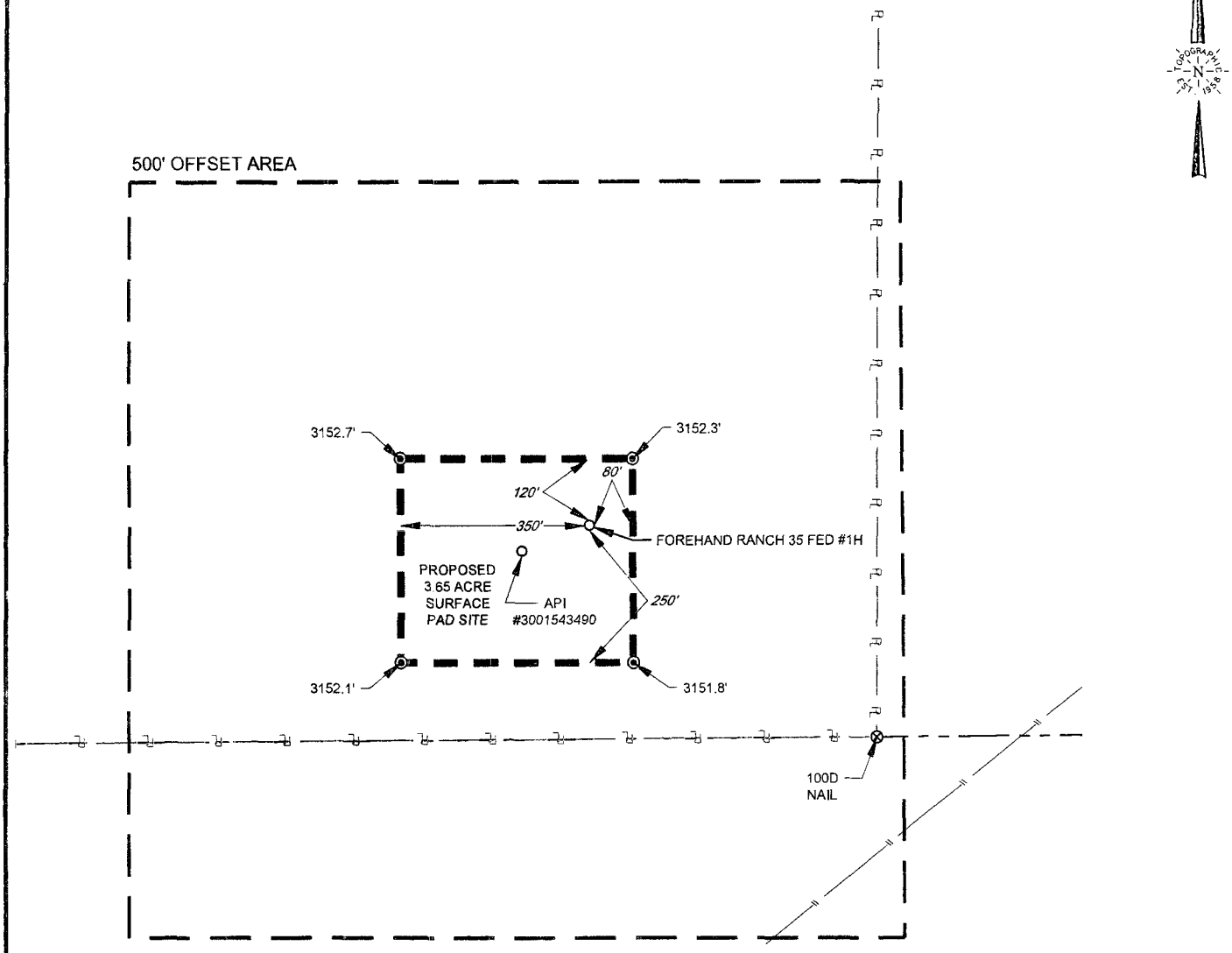
FOREHAND RANCH 35 FED #1H SURFACE PAD SITE	REVISION: INT	DATE
DATE: 01/06/2017		
FILE: BO_FOREHAND_RANCH_35_FED_1H_SURFACE_PAD_SITE		
DRAWN BY: MML		
SHEET: 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. *ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE* COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. P.O.B. = POINT OF BEGINNING

SCALE: 1" = 300'

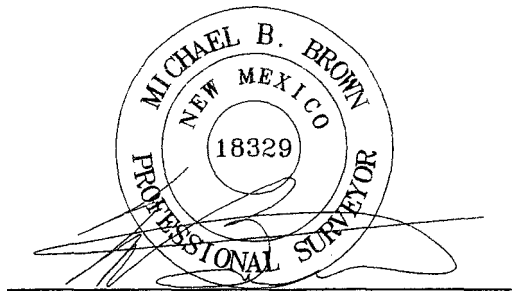
0' 150' 300'

SECTION 35, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEGEND

- SURVEY/SECTION LINE
- PROPOSED SITE
- 500' PROXIMITY
- ROAD WAY
- PROPOSED ROAD
- EXISTING PIPELINE
- NAIL FOUND
- IRON ROD SET



Michael Blake Brown, P.S. No. 18329
JANUARY 06, 2017

Matador PRODUCTION COMPANY

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WWW.TOPOGRAPHIC.COM

FOREHAND RANCH 35 FED #1H PROXIMITY	REVISION:	
	INT	DATE
DATE: 01/06/2017		
FILE: BO_FOREHAND_RANCH_35_FED_1H_SURFACE_PAD_SITE		
DRAWN BY: MML		
SHEET : 2 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
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District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Sante Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Sante Fe, NM 87505

NM OIL CONSERVATION
ARTESIA DISTRICT
APR 10 2017
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-015-43490	98220	Purple Sage; ~~Forehand Ranch~~-Wolfcamp ~~SW~~ (Gas)

[4]Property Code	[5]Property Name	[6]Well Number
317408	FOREHAND RANCH 35 FED	#1H

[7]OGRID No.	[8]Operator Name	[9]Elevation
228937	MATADOR PRODUCTION COMPANY	3152'

[10]Surface Location

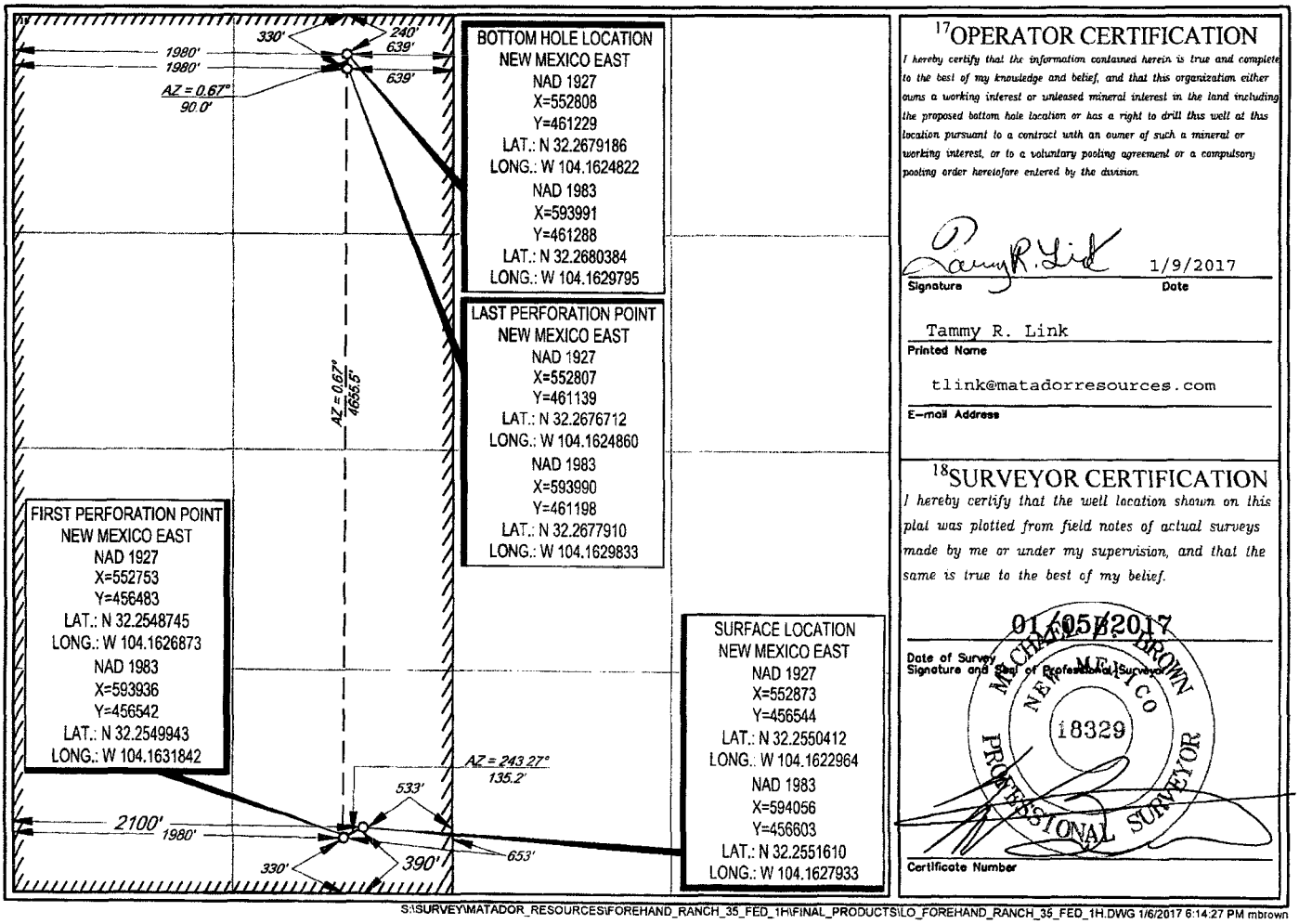
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	35	23-S	27-E	-	390'	SOUTH	2100'	WEST	EDDY

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	35	23-S	27-E	-	240'	NORTH	1980'	WEST	EDDY

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
320			

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



[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Tammy R. Link 1/9/2017
Signature Date

Tammy R. Link
Printed Name

tlink@matadorresources.com
E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

01/05/2017
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

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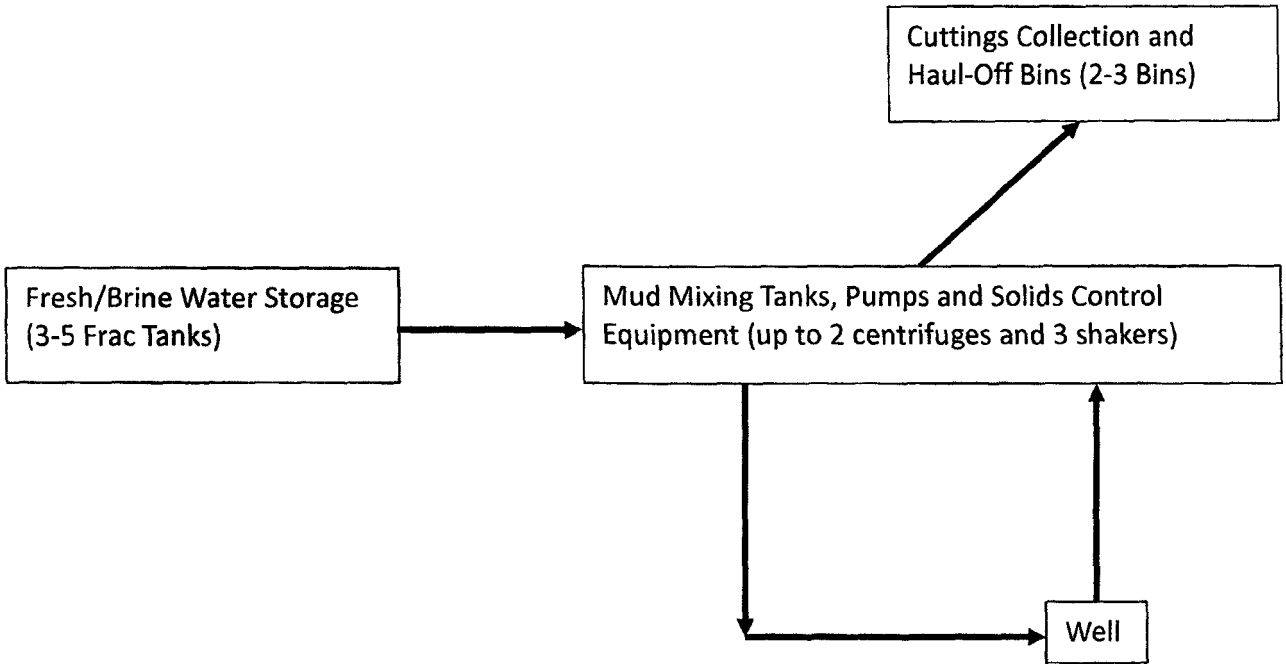
Closed-Loop System

Exhibit E-5: Closed-Loop System
Forehand Ranch 35 Fed #1H
Matador Resources Company
35-23S-27E
SHL 390' FSL & 2100' FWL
BHL 660' FNL & 1980' FWL
Eddy County, NM



Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluids and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.

Exhibit E-6: H2S Contingency Plan Emergency Contacts
Forehand Ranch 35 Fed #1H
Matador Resources Company
Sec. 35, 23S, 27E
Eddy County, NM

Company Office			
Matador Resources Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Adam Lange	Drilling Engineer	972-371-5247	214-458-0788
	Construction Superintendent		
	Construction Superintendent		

Artesia	
Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283
Carlsbad	
Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	575-887-3798
Local Emergency Planning Committee	575-887-6544
New Mexico Oil Conservation Division	575-887-6544
Santa Fe	
New Mexico Emergency Response Comission (Santa Fe)	505-476-9600
New Mexico Emergency Response Comission (Santa Fe) 24 hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National	
National Emegency Response Center (Washington, D.C.)	800-424-8802
Medical	
Flight for Life- 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare- R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb- 2301 Yale Blvd S.E., D3; Albuquerque, NM	505-842-4433
SB Air Med Service- 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other		
Boots & Coots IWC	800-256-9688	or 281-931-8884
Cudd Pressure Control	432-699-0139	or 432-563-3356
Haliburton	575-746-2757	
B.J. Services	575-746-3569	

Hydrogen Sulfide Drilling

Operations Plan

Matador Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
    - Green Flag – Normal Safe Operation Condition
    - Yellow Flag – Potential Pressure and Danger
    - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Exhibit E-1

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

11 Emergency Contacts

- See exhibit E-6

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Operating Company
LEASE NO.:	NMNM118705
WELL NAME & NO.:	1H – Forehand Ranch 35 Fed
SURFACE HOLE FOOTAGE:	390'/S & 2100'/W
BOTTOM HOLE FOOTAGE	240'/N & 1980'/W
LOCATION:	Section 35, T 23 S., R 27 E., NMPM
COUNTY:	Eddy County, New Mexico

All previous COAs still apply, except for the following:

A. DRILLING OPERATIONS REQUIREMENTS

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

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium Cave/Karst
Possibility of water flows in the Castile and Salado.
Possible lost circulation in the Delaware.
Abnormal pressure may be encountered within the 3rd Bone Spring Sandstone and Wolfcamp formation.

1. The **13-3/8** inch surface casing shall be set at approximately **360** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

If cement does not circulate to surface on the first intermediate casing, the cement on the second intermediate casing must come to surface.

2. The minimum required fill of cement behind the **9-5/8** inch first intermediate casing, is:

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

3. The minimum required fill of cement behind the **7** inch second intermediate casing, is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

Formation below the 7.0" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

4. The minimum required fill of cement behind the **4 1/2** inch production casing, is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Excess calculated to 19% - Additional cement might be required.**

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

Option 1:

i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch first intermediate casing shoe shall be **3000 (3M)** psi.

ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7** inch second intermediate casing shoe shall be **5000 (5M)** psi.

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

Option 2:

i. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the first intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the first intermediate casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.

d. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.

e. **After the 9 5/8" casing has been landed and cemented, the operator will then lift up the BOP to install the 'C-section' of the wellhead. Therefore, per Onshore Oil and Has Order No. 2, the entire BOP/BOPE shall be tested prior to drilling out the second intermediate casing hole.**

f. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

   b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for

the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Proposed mud weight may not be adequate for drilling through Wolfcamp.

MHH 03292017