

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
HOBBSOCD

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

FEB 16 2015

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM97153
2. Name of Operator BTA OIL PRODUCERS		6. If Indian, Allottee or Tribe Name
Contact: MAYTE X REYES E-Mail: mreyes1@concho.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 104 SOUTH PECOS STREET MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 575-748-6945	8. Well Name and No. VACA DRAW 9418 JV P 5H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 10 T25S R33E NWNW 190FNL 330FWL 32.151659 N Lat, 103.567258 W Lon		9. API Well No. 30-025-41624-00-X1
		10. Field and Pool, or Exploratory RED HILLS
		11. County or Parish, and State LEA COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC on behalf of BTA Oil Producers, LLC, respectfully requests approval for the following drilling changes to the original approved APD.

Operator will need a variance for a flex hose. Attached is all the necessary paperwork.

Operator will pump the following surface cement:

Lead: 700 sx Class C + 4% Gel (13.5 ppg/ 1.75 yd)

Tail: 250 sx Class + 2% CC (14.8 ppg/ 1.34 yd)

Operator will drill 8-3/4" hole out from intermediate to TD.

Operator will pump sufficient production cement to tie back a minimum of 500' into the 9-5/8" casing.

Operator will use the attached well plan.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #291223 verified by the BLM Well Information System For BTA OIL PRODUCERS, sent to the Hobbs Committed to AFMSS for processing by JENNIFER MASON on 02/11/2015 (15JAM0073SE)	
Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 02/11/2015
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By	Title
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

APPROVED
FEB 11 2015
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

FEB 17 2015

jm



COG Operating LLC
Project: Lea County, NM
Site: 9418 JV-P Vaca Draw
Well: #5H
Wellbore: OH
Plan: Plan #1 (#5H/OH)

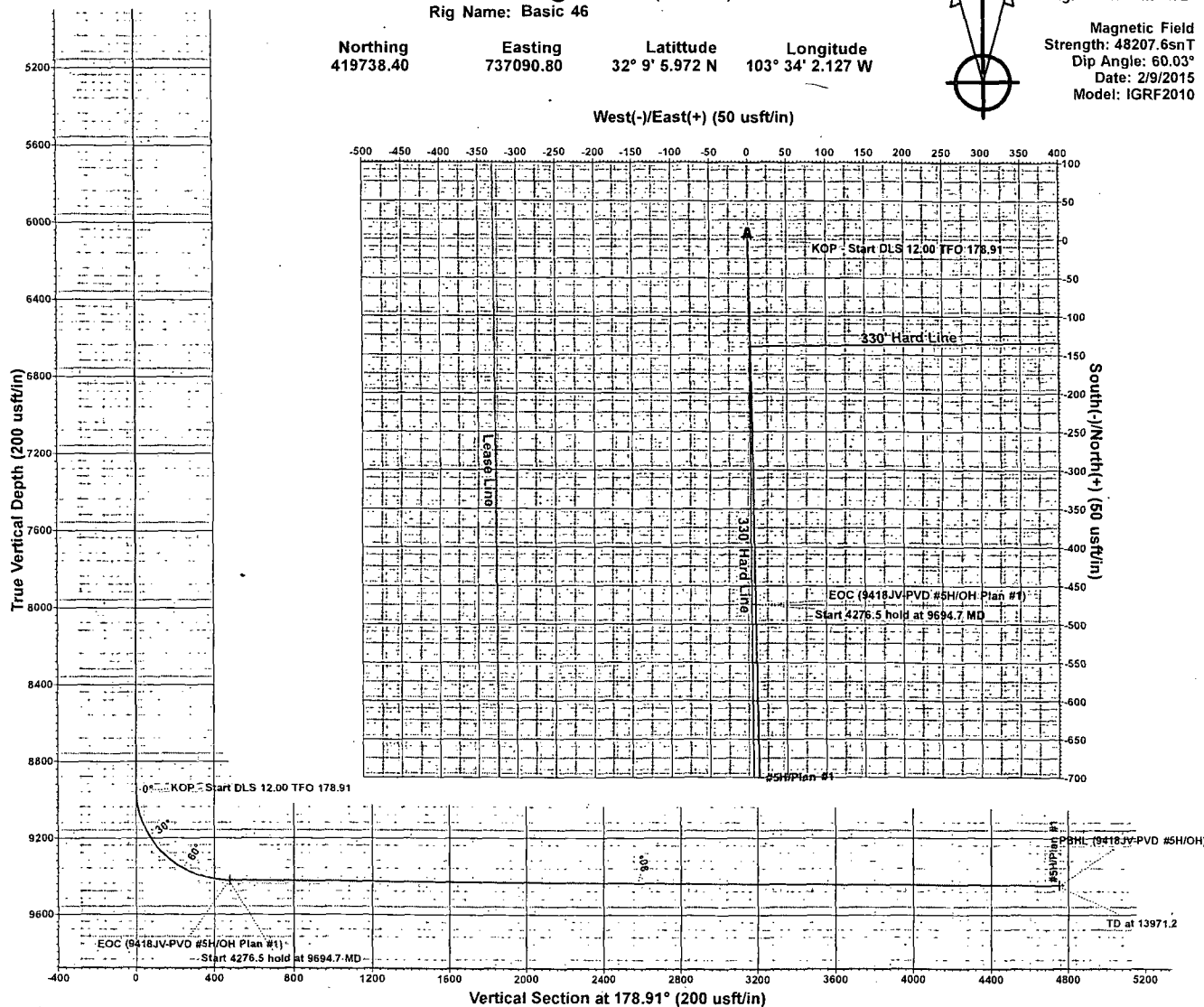
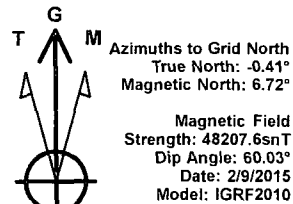
Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	8947.5	0.00	0.00	8947.5	0.0	0.0	0.00	0.00	0.0	
3	9694.7	89.66	178.91	9425.0	-474.6	9.0	12.00	178.91	474.7	
4	13971.2	89.66	178.91	9450.0	-4750.2	90.2	0.00	0.00	4751.1	PBHL (9418JV-PVD #5H/OH)

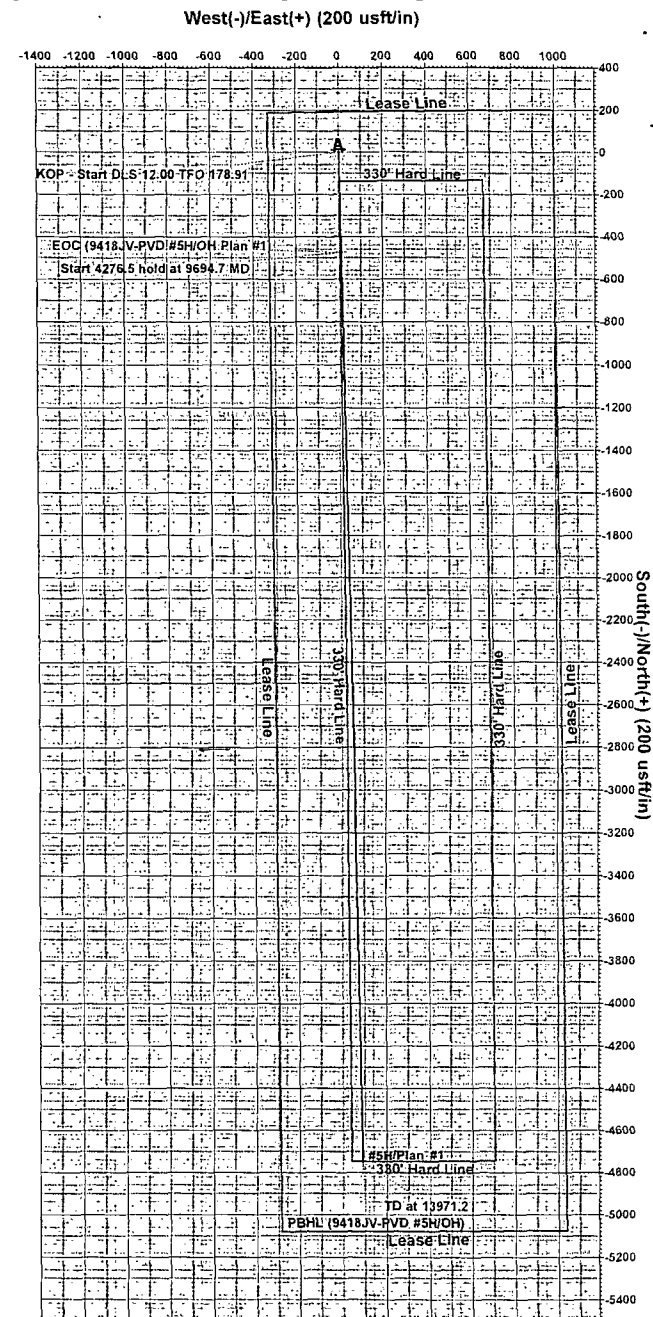
WELL DETAILS: #5H

Ground Elevation:: 3419.4
RKB Elevation: KB @ 3441.4usft (Basic 46)
Rig Name: Basic 46

Northing 419738.40 Easting 737090.80 Latitude 32° 9' 5.972 N Longitude 103° 34' 2.127 W



Vertical Section at 178.91° (200 usft/in)



Terra Directional Services LLC
322 Spring Hill Drive, Suite A300, Spring, Tx 77386
Phone: 432-425-7532

PROJECT DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



COG Operating LLC

Lea County, NM
9418 JV-P Vaca Draw
#5H

OH

Plan: Plan #1

Standard Planning Report

09 February, 2015





TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	COG Operating LLC	TVD Reference:	KB @ 3441.4usft (Basic 46)
Project:	Lea County, NM	MD Reference:	KB @ 3441.4usft (Basic 46)
Site:	9418 JV-P Vaca Draw	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM		
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		

Site	9418 JV-P Vaca Draw		
Site Position:		Northing:	419,738.40 usft
From:	Map	Easting:	737,090.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 5.972 N
		Longitude:	103° 34' 2.127 W
		Grid Convergence:	0.41 °

Well	#5H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 9' 5.972 N
		Longitude:	103° 34' 2.127 W
		Ground Level:	3,419.4 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	2/9/2015	7.13
			Dip Angle
			(°)
			60.03
			Field Strength
			(nT)
			48,208

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			178.91

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,947.5	0.00	0.00	8,947.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,694.7	89.66	178.91	9,425.0	-474.6	9.0	12.00	12.00	23.94	178.91	
13,971.2	89.66	178.91	9,450.0	-4,750.2	90.2	0.00	0.00	0.00	0.00	PBHL (9418JV-PVD #



TDS
Planning Report



Database:	EDM,5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	COG Operating LLC	TVD Reference:	KB @ 3441.4usft (Basic 46)
Project:	Lea County, NM	MD Reference:	KB @ 3441.4usft (Basic 46)
Site:	9418 JV-P Vaca Draw	North Reference:	Grid:
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	COG Operating LLC	TVD Reference:	KB @ 3441.4usft (Basic 46)
Project:	Lea County, NM	MD Reference:	KB @ 3441.4usft (Basic 46)
Site:	9418 JV-P Vaca Draw	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,947.5	0.00	0.00	8,947.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start DLS 12.00 TFO 178.91									
8,950.0	0.30	178.91	8,950.0	0.0	0.0	0.0	12.00	12.00	0.00
8,975.0	3.30	178.91	8,975.0	-0.8	0.0	0.8	12.00	12.00	0.00
9,000.0	6.30	178.91	8,999.9	-2.9	0.1	2.9	12.00	12.00	0.00
9,025.0	9.30	178.91	9,024.7	-6.3	0.1	6.3	12.00	12.00	0.00
9,050.0	12.30	178.91	9,049.2	-11.0	0.2	11.0	12.00	12.00	0.00
9,075.0	15.30	178.91	9,073.5	-16.9	0.3	16.9	12.00	12.00	0.00
9,100.0	18.30	178.91	9,097.4	-24.1	0.5	24.1	12.00	12.00	0.00
9,125.0	21.30	178.91	9,120.9	-32.6	0.6	32.6	12.00	12.00	0.00
9,150.0	24.30	178.91	9,144.0	-42.3	0.8	42.3	12.00	12.00	0.00
9,175.0	27.30	178.91	9,166.5	-53.2	1.0	53.2	12.00	12.00	0.00
9,200.0	30.30	178.91	9,188.4	-65.2	1.2	65.2	12.00	12.00	0.00
9,225.0	33.30	178.91	9,209.6	-78.4	1.5	78.4	12.00	12.00	0.00
9,250.0	36.30	178.91	9,230.2	-92.6	1.8	92.7	12.00	12.00	0.00
9,275.0	39.30	178.91	9,249.9	-108.0	2.1	108.0	12.00	12.00	0.00
9,300.0	42.30	178.91	9,268.8	-124.3	2.4	124.3	12.00	12.00	0.00



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	COG Operating LLC	TVD Reference:	KB @ 3441.4usft (Basic 46)
Project:	Lea County, NM	MD Reference:	KB @ 3441.4usft (Basic 46)
Site:	9418 JV-P Vaca Draw	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)
9,325.0	45.30	178.91	9,286.9	-141.6	2.7	141.6	12.00	12.00	0.00
9,350.0	48.30	178.91	9,304.0	-159.8	3.0	159.8	12.00	12.00	0.00
9,375.0	51.30	178.91	9,320.1	-178.9	3.4	178.9	12.00	12.00	0.00
9,400.0	54.30	178.91	9,335.2	-198.8	3.8	198.8	12.00	12.00	0.00
9,425.0	57.30	178.91	9,349.3	-219.5	4.2	219.5	12.00	12.00	0.00
9,450.0	60.30	178.91	9,362.2	-240.9	4.6	240.9	12.00	12.00	0.00
9,475.0	63.30	178.91	9,374.1	-262.9	5.0	262.9	12.00	12.00	0.00
9,500.0	66.30	178.91	9,384.7	-285.5	5.4	285.5	12.00	12.00	0.00
9,525.0	69.30	178.91	9,394.1	-308.6	5.9	308.7	12.00	12.00	0.00
9,550.0	72.30	178.91	9,402.4	-332.2	6.3	332.3	12.00	12.00	0.00
9,575.0	75.30	178.91	9,409.3	-356.2	6.8	356.3	12.00	12.00	0.00
9,600.0	78.30	178.91	9,415.0	-380.6	7.2	380.6	12.00	12.00	0.00
9,625.0	81.30	178.91	9,419.5	-405.2	7.7	405.2	12.00	12.00	0.00
9,650.0	84.30	178.91	9,422.6	-430.0	8.2	430.0	12.00	12.00	0.00
9,675.0	87.30	178.91	9,424.4	-454.9	8.6	455.0	12.00	12.00	0.00
9,694.7	89.66	178.91	9,425.0	-474.6	9.0	474.7	12.00	12.00	0.00
EOC - Start 4276.5 hold at 9694.7 MD									
9,700.0	89.66	178.91	9,425.0	-479.9	9.1	480.0	0.00	0.00	0.00
9,800.0	89.66	178.91	9,425.6	-579.9	11.0	580.0	0.00	0.00	0.00
9,900.0	89.66	178.91	9,426.2	-679.8	12.9	680.0	0.00	0.00	0.00
10,000.0	89.66	178.91	9,426.7	-779.8	14.8	780.0	0.00	0.00	0.00
10,100.0	89.66	178.91	9,427.3	-879.8	16.7	880.0	0.00	0.00	0.00
10,200.0	89.66	178.91	9,427.9	-979.8	18.6	980.0	0.00	0.00	0.00
10,300.0	89.66	178.91	9,428.5	-1,079.8	20.5	1,080.0	0.00	0.00	0.00
10,400.0	89.66	178.91	9,429.1	-1,179.7	22.4	1,180.0	0.00	0.00	0.00
10,500.0	89.66	178.91	9,429.7	-1,279.7	24.3	1,280.0	0.00	0.00	0.00
10,600.0	89.66	178.91	9,430.3	-1,379.7	26.2	1,379.9	0.00	0.00	0.00
10,700.0	89.66	178.91	9,430.8	-1,479.7	28.1	1,479.9	0.00	0.00	0.00
10,800.0	89.66	178.91	9,431.4	-1,579.7	30.0	1,579.9	0.00	0.00	0.00
10,900.0	89.66	178.91	9,432.0	-1,679.6	31.9	1,679.9	0.00	0.00	0.00
11,000.0	89.66	178.91	9,432.6	-1,779.6	33.8	1,779.9	0.00	0.00	0.00
11,100.0	89.66	178.91	9,433.2	-1,879.6	35.7	1,879.9	0.00	0.00	0.00
11,200.0	89.66	178.91	9,433.8	-1,979.6	37.6	1,979.9	0.00	0.00	0.00
11,300.0	89.66	178.91	9,434.4	-2,079.6	39.5	2,079.9	0.00	0.00	0.00
11,400.0	89.66	178.91	9,434.9	-2,179.5	41.4	2,179.9	0.00	0.00	0.00
11,500.0	89.66	178.91	9,435.5	-2,279.5	43.3	2,279.9	0.00	0.00	0.00
11,600.0	89.66	178.91	9,436.1	-2,379.5	45.2	2,379.9	0.00	0.00	0.00
11,700.0	89.66	178.91	9,436.7	-2,479.5	47.1	2,479.9	0.00	0.00	0.00
11,800.0	89.66	178.91	9,437.3	-2,579.5	49.0	2,579.9	0.00	0.00	0.00
11,900.0	89.66	178.91	9,437.9	-2,679.4	50.9	2,679.9	0.00	0.00	0.00
12,000.0	89.66	178.91	9,438.5	-2,779.4	52.8	2,779.9	0.00	0.00	0.00
12,100.0	89.66	178.91	9,439.0	-2,879.4	54.7	2,879.9	0.00	0.00	0.00
12,200.0	89.66	178.91	9,439.6	-2,979.4	56.6	2,979.9	0.00	0.00	0.00
12,300.0	89.66	178.91	9,440.2	-3,079.4	58.5	3,079.9	0.00	0.00	0.00
12,400.0	89.66	178.91	9,440.8	-3,179.3	60.4	3,179.9	0.00	0.00	0.00
12,500.0	89.66	178.91	9,441.4	-3,279.3	62.3	3,279.9	0.00	0.00	0.00
12,600.0	89.66	178.91	9,442.0	-3,379.3	64.2	3,379.9	0.00	0.00	0.00
12,700.0	89.66	178.91	9,442.6	-3,479.3	66.1	3,479.9	0.00	0.00	0.00
12,800.0	89.66	178.91	9,443.1	-3,579.3	68.0	3,579.9	0.00	0.00	0.00
12,900.0	89.66	178.91	9,443.7	-3,679.2	69.9	3,679.9	0.00	0.00	0.00
13,000.0	89.66	178.91	9,444.3	-3,779.2	71.8	3,779.9	0.00	0.00	0.00
13,100.0	89.66	178.91	9,444.9	-3,879.2	73.7	3,879.9	0.00	0.00	0.00
13,200.0	89.66	178.91	9,445.5	-3,979.2	75.6	3,979.9	0.00	0.00	0.00
13,300.0	89.66	178.91	9,446.1	-4,079.2	77.5	4,079.9	0.00	0.00	0.00



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #5H
Company:	COG Operating LLC	TVD Reference:	KB @ 3441.4usft (Basic 46)
Project:	Lea County, NM	MD Reference:	KB @ 3441.4usft (Basic 46)
Site:	9418 JV-P Vaca Draw	North Reference:	Grid
Well:	#5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)
13,400.0	89.66	178.91	9,446.7	-4,179.1	79.4	4,179.9	0.00	0.00	0.00
13,500.0	89.66	178.91	9,447.2	-4,279.1	81.3	4,279.9	0.00	0.00	0.00
13,600.0	89.66	178.91	9,447.8	-4,379.1	83.2	4,379.9	0.00	0.00	0.00
13,700.0	89.66	178.91	9,448.4	-4,479.1	85.1	4,479.9	0.00	0.00	0.00
13,800.0	89.66	178.91	9,449.0	-4,579.1	87.0	4,579.9	0.00	0.00	0.00
13,900.0	89.66	178.91	9,449.6	-4,679.0	88.8	4,679.9	0.00	0.00	0.00
13,971.2	89.66	178.91	9,450.0	-4,750.2	90.2	4,751.1	0.00	0.00	0.00
TD at 13971.2									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
EOC (9418JV-PVD #5H)	0.00	0.00	9,425.0	-474.6	9.0	419,263.82	737,099.81	32° 9' 1.275 N	103° 34' 2.062 W
- plan hits target center									
- Point									
PBHL (9418JV-PVD #5H)	0.00	0.00	9,450.0	-4,750.2	90.2	414,988.20	737,181.00	32° 8' 18.959 N	103° 34' 1.471 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,947.5	8,947.5	0.0	0.0	KOP - Start DLS 12.00 TFO 178.91
9,694.7	9,425.0	-474.6	9.0	EOC - Start 4276.5 hold at 9694.7 MD
13,971.2	9,450.0	-4,750.2	90.2	TD at 13971.2

Flex Hose Variance Request

Flex Hose Variance Statement

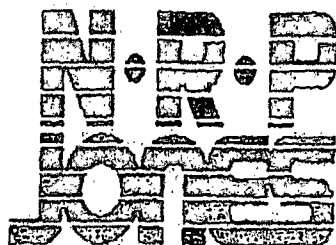
LOG (operator) requests a variance if Basic 46 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.

Manufacturer: N. R. P. Jones

Serial Number: MA31113 Repair

Length: 23 Size: 3 1/2 Ends - flanges/clamps

WP rating: 5000 psi Anchors required by manufacturer - Yes/No



Certificate of Conformance

DATE ~~2/13~~ 3/11/13

SERIAL NO. MA31113REPAIR PART NO. _____

SIZE 3 1/2 LENGTH 23

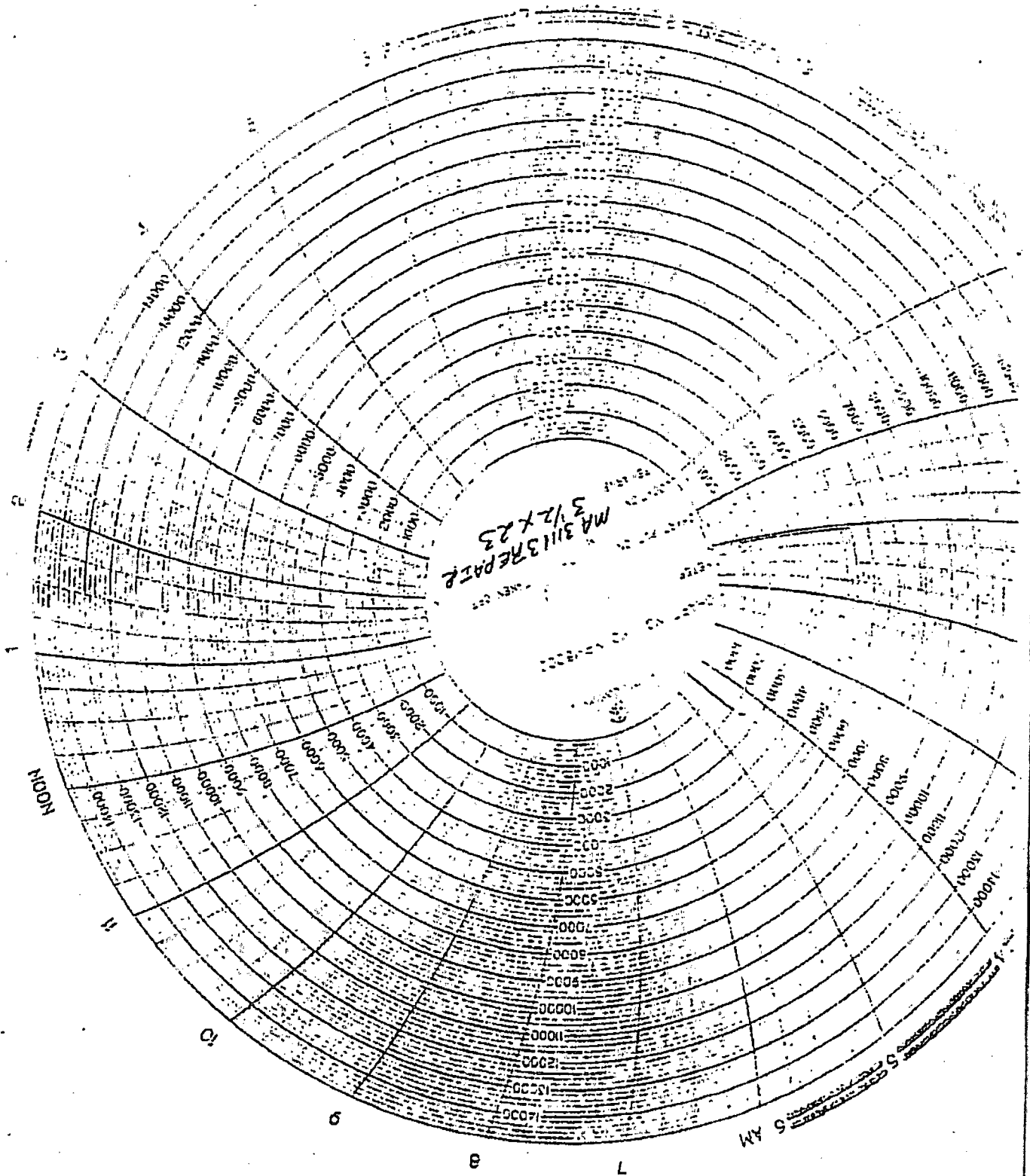
HYDROSTATICALLY TESTED AT 5000

BY Chance Perkins Q.A. Alvin Casey

NEPHI RUBBER PRODUCTS CORP.

Corporate Office: P.O. Box 310 • LaPorte, Indiana 46352 • (800)348-8868 • (219)362-9908 • Fax Number (219)324-0815

Manufacturing: 255 West 11th North • Nephi, Utah 84648 • (800)453-1480 • (435)623-1740 • Fax Number (435)623-2638





Product Specification **3 1/2" CHOKE AND KILL LINE**

Catalog Item? Yes

Design Factor 2:1

Scope Hydraulic control line between BOP control system and Manifold Equipment.

Tube High grade abrasion resistant synthetic HNBR for H₂S service

Cover High grade Neoprene with high ozone, abrasion and heat resistance

Fluids Oil based drilling fluids, glycols and polyglycols, and hydraulic oil

Reinforcement Multiple plies of Nylon Cord, with 2 high tensile spiraled wound cables

Pressure 5000 PSI Working Pressure 10,000 PSI Burst Test Pressure

Thermal Barrier Layer of thermal insulation material rated from -250° F to +1500° F
1/16" Chemical Resistant, Non-Flammable Industrial grade braided yarn

Outer Armor Interlocking stainless steel armor heat resistant +1500° F

Fittings Hose fitting is an Integral Swage Coupling with 4 1/6" RX-39 Flanges
Coupling combines locking features of the insulation and armor.

Lengths Lengths vary by request.

Testing Hydrostatically tested at 2 times working pressure for 5 minutes.

Conformity Manufactured to meet or exceed API 16C Specifications.
A prototype of each control line manufactured is then fire tested per API 16C.
Each control line is hydrostatically tested per API 16C Specifications.
Each control line is issued a serial number which is etched on the completed assembly and documented with a Certificate of Proof Test.

ID	OD	WEIGHT FT/LBS	BEND RADIUS	W.P PSI	BURST PSI
3 1/2"	5.75"	18.6	54"	5,000 PSI	10,000PSI

Construction

Tube: Black, oil and abrasion resistant HNBR for H₂S service.

Reinforcement: Multiple plies of bias laid textile cord for extra strength and flexibility. Spirally wound, high tensile, multiple strand cables to provide unsurpassed ruggedness and reliability to withstand sudden high pressure.

Cover: Special flame resistant red Neoprene (CR) with optional stainless steel armor.

Fittings: Integral connection flanged or hubbed.

Temperature: -40 to 212°F (-40 to 100°C)

Branding: NRP Choke & Kill Hose. MADE IN USA.

Choke & Kill Specifications

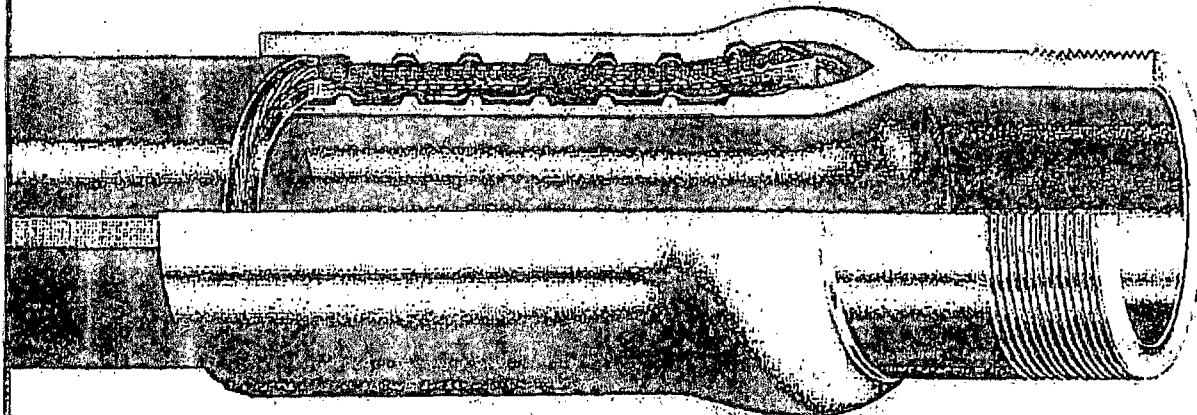
NRP Part Number	Hose ID (in)	Hose OD (in)	Rated WP (psi)	Test Pressure (psi)	Minimum Bend Radius	Weight per Foot (lbs)
5035-32	2.00	4.45	5,000	10,000	44	12.9
5035-40	2.50	4.60	5,000	10,000	48	13.9
5035-48	3.00	5.10	5,000	10,000	52	16.1
5040-32	2.00	4.68	10,000	15,000	48	22.4
5040-40	2.50	5.34	10,000	15,000	52	27.4
5040-48	3.00	5.84	10,000	15,000	56	28.8

Super Choke & Kill Specifications

5085-40	2.50	5.84	15,000	22,500	60	28.2
5085-48	3.00	6.34	15,000	22,500	60	34.1

Specifications

NRP Rotary Number	NRP Vibrator Number	Hose ID (in)	Hose OD (in)	Grade	Rated WP (psi)	Test Pressure (psi)	Minimum Bend Radius	Weight per Foot (lbs)	Weight of 2 Cplgs (lbs)	Cplg Thread API (in)
5501-40	5502-40	2.50	4.45	C	4,000	8,000	36	12.9	54	3
5501-48	5502-48	3.00	4.95	C	4,000	8,000	48	14.9	74	4
5501-56	5502-56	3.50	5.45	C	4,000	8,000	54	16.6	94	4
5603-40	5604-40	2.50	4.60	D	5,000	10,000	36	13.6	54	3
5603-48	5604-48	3.00	5.10	D	5,000	10,000	48	15.5	74	4
5603-56	5604-56	3.50	5.75	D	5,000	10,000	54	18.6	94	4
5603-64	5604-64	4.00	6.25	D	5,000	10,000	54	19.8	105	5



PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BTA Oil Producers, LLC
LEASE NO.:	NMMN-97153
WELL NAME & NO.:	9418 JV-P Vaca Draw 5H
SURFACE HOLE FOOTAGE:	0190' FNL & 0330' FWL
BOTTOM HOLE FOOTAGE	0330' FSL & 0380' FWL
LOCATION:	Section 10, T. 25 S., R 33 E., NMPM
COUNTY:	Lea County, New Mexico
API:	30-025-41624

The original COAs still stand with the following drilling modifications:

I. DRILLING

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)

☒ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide has been reported as a hazard in formations deeper than the proposed depth. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe and if H₂S is detected in concentrations greater than 100 ppm the well will be shut in and the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, report measurements 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.

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

Possibility of water flows in the Salado and Delaware.

Possibility of lost circulation in Red Beds, Rustler, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **1190** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt**) and cemented to the surface. **Fresh water mud to be used to setting depth.**
 - 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.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **5050** feet, is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.
4. 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 RP 53 Sec. 17.

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. **In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**
4. 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.**
5. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M) psi.**
6. 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.**
 - 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.
 - 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.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JAM 021115