

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011
Permit 272883

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702		2. OGRID Number 7377
4. Property Code 326204		3. API Number 30-015-46375
5. Property Name WAR HAWK 2 STATE		6. Well No. 401H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	3	16S	29E	16	2962	S	470	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	2	16S	29E	16	2970	S	100	E	Eddy

9. Pool Information

County Line Tank, abo	97197
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3737
16. Multiple N	17. Proposed Depth 12732	18. Formation Abo	19. Contractor	20. Spud Date 4/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	40	2600	905	0
Prod	8.75	5.5	20	7543	1112	0
Prod	8.5	5.5	20	12732	1112	

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	Whichever is available

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature:	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by Kay Maddox	Approved By: Raymond Podany
Title: Regulatory Agent	Title: Geologist
Email Address: kay_maddox@eogresources.com	Approved Date: 10/15/2019 Expiration Date: 10/15/2021
Date: 10/15/2019 Phone: 432-686-3658	Conditions of Approval Attached

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GAS CAPTURE PLAN

Date: 10/15/2019

☒ Original

Operator & OGRID No.: [7377] EOG RESOURCES INC

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
WAR HAWK 2 STATE #401H	30-015-46375	M-3-16S-29E	2962S 0470E	500	None	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP Low Pressure gathering system located in Eddy County, New Mexico. It will require 1500' of pipeline to connect the facility to Low Pressure gathering system. EOG RESOURCES INC provides (periodically) to DCP OPERATING COMPANY, LP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, EOG RESOURCES INC and DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 07, Twn. 18S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on DCP OPERATING COMPANY, LP system at that time. Based on current information, it is EOG RESOURCES INC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

 Permit 272883

PERMIT COMMENTS

Operator Name and Address: EOG RESOURCES INC [7377] P.O. Box 2267 Midland, TX 79702		API Number: 30-015-46375
		Well: WAR HAWK 2 STATE #401H

Created By	Comment	Comment Date
tinah	EOG Resources requests the approval of an intermediate casing string contingency to be determined if losses are encountered in the vertical portion of our wellbore. Surface and production casing will remain the same. Production cement will be tied back 200' into previous casing string if the intermediate string is run.	10/11/2019
rpodany	Fee not attached, re-try resubmit	10/11/2019
rpodany	Change Lease type to state and re submit with payment.	10/15/2019

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Form APD Conditions

Permit 272883

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: EOG RESOURCES INC [7377] P.O. Box 2267 Midland, TX 79702		API Number: 30-015-46375
		Well: WAR HAWK 2 STATE #401H
OCD Reviewer	Condition	
rpodany	Will require a directional survey with the C-104	
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing	

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

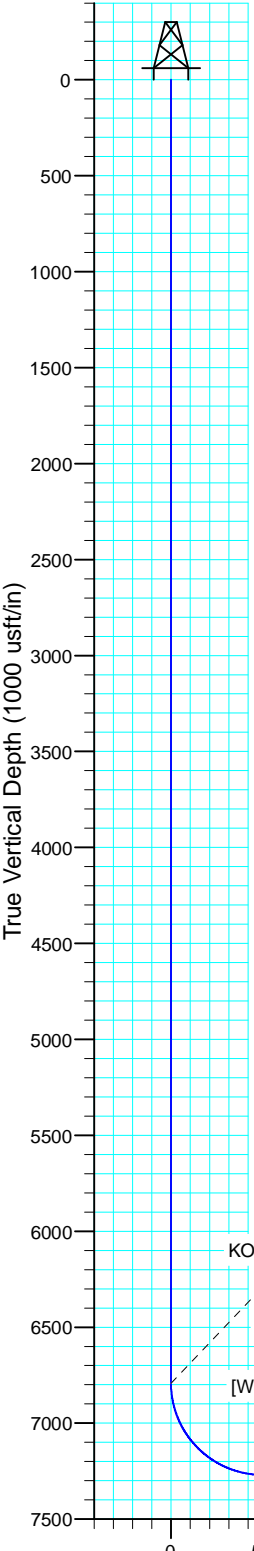
UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number



Project: Eddy County (NAD83)
 Site: War Hawk
 Well: War Hawk 2 State #401H
 Wellbore: Lateral
 Design: Plan #1
 Ground Elevation 3737.00
 Northing 710041.00
 Easting 626523.00
 KB @ 3755.00usft (Planning Rig)

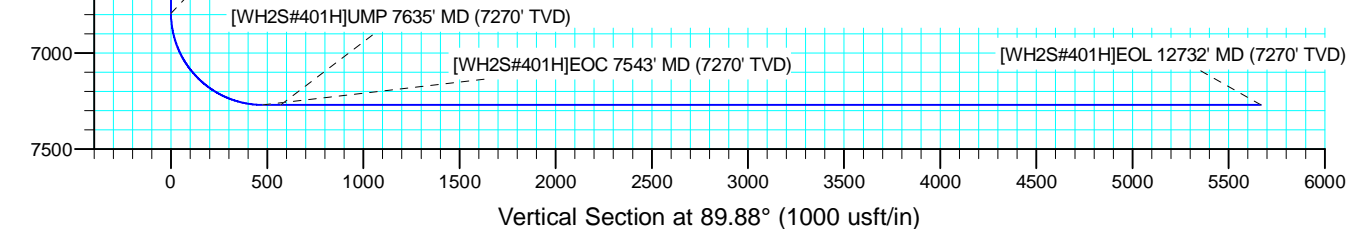
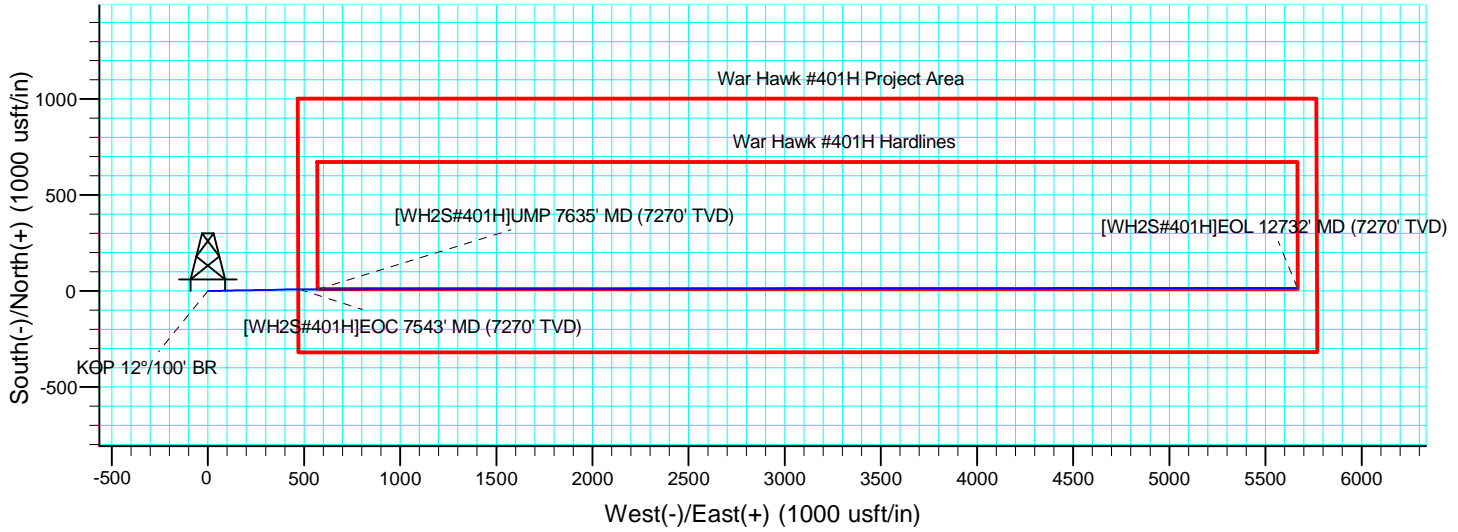
PROJECT DETAILS: Eddy County (NAD83)
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

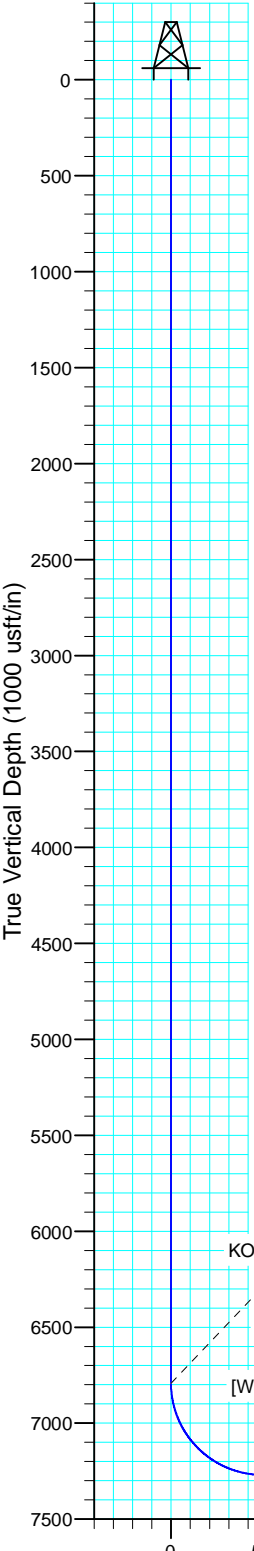
Azimuths to Grid North
 True North: -0.15°
 Magnetic North: 6.84°

Magnetic Field
 Strength: 48083.8nT
 Dip Angle: 60.62°
 Date: 9/9/2019
 Model: IGRF2015

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6792.54	0.00	0.00	6792.54	0.00	0.00	0.00	0.00	0.00
3	7542.54	90.00	88.98	7270.00	8.50	477.39	12.00	88.98	477.41
4	7589.61	90.00	89.92	7270.00	8.95	524.46	2.00	90.00	524.48
5	12732.16	90.00	89.92	7270.00	16.00	5667.00	0.00	0.00	5667.02

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
[WH2SC#401H]BHL - plan hits target center	7270.00	16.00	5667.00	710057.00	632190.00
[WH2SC#401H]UMP - plan misses target center by 0.01usft at 7635.15usft MD (7270.00 TVD, 9.01 N, 570.00 E)	7270.00	9.00	570.00	710050.00	627093.00

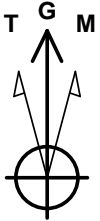




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 Well: War Hawk 2 State #401H
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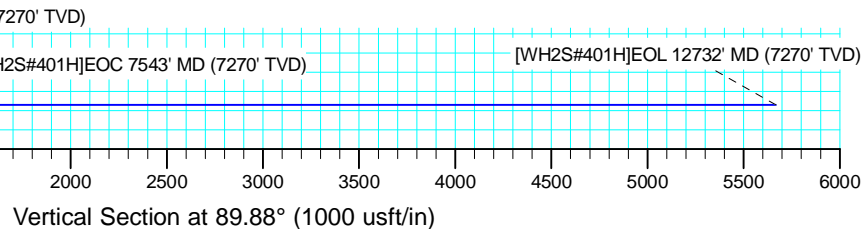
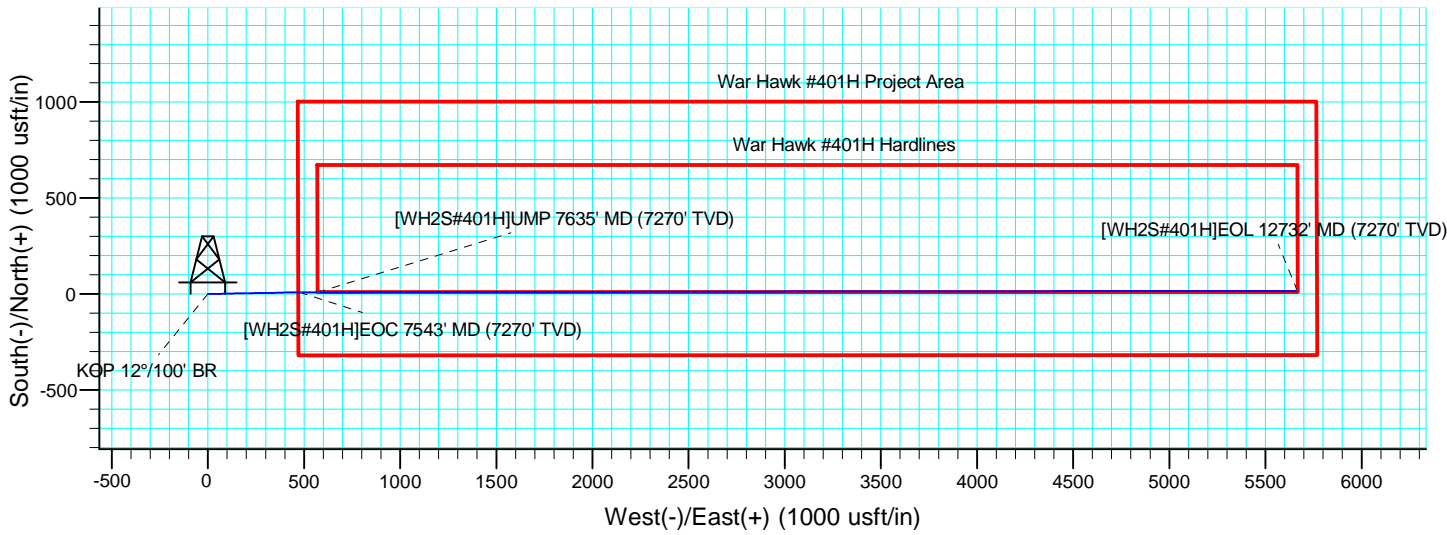


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State Permit Information:**Well Name: War Hawk 2 State #401H****Location:**

SL: 2962' FSL 470' FEL, Lot 16 3-16S-29E

BHL: 2970' FSL 100' FEL, Lot 16 2-16S-29E

Primary Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
12.25"	0'-2,600'	9.625"	40#	J-55	LTC	1.125	1.25	1.80
8.75"	0'-7,543'	5.5"	20#	P-110	BTC	1.125	1.25	1.80
8.5"	7,543'-12,732'	5.5"	20#	P-110	BTC	1.125	1.25	1.80

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
2,600'	670	12.9	1.97	Lead: Class 'C' + 4%PF20(Bentonite Gel) + 2%PF1(Calcium Chloride) + 0.125#/skPF29(Celloflake) + 0.4#/skPF45 (Defoamer) 100% Excess (TOC @ Surface)
	235	14.8	1.34	Tail: Class 'C' + 2%PF1(Calcium Chloride)
12,732'	900	11.9	2.47	Lead: Class 50/50 PozC + 5%PF44(BWOW)(Salt) + 10% PF20(Bentonite Gel) +.2%PF153(Anti Settling Agent(+ 3#/sk OF42(Kolseal) + 0.125#/sk PF29 (celloflake) + 0.4#/sk PF45 (Defoamer) (TOC @ Surface) 35% Excess
	1325	13	1.48	Tail: Class PVL + 1.3% PF44(BWOW)(Salt) + 5% PF174 (Expanding Cement) + 0.5% PF606 (Fluid Loss) + 0.1% PF153 (Anti Settling Agent) + 0.4#/sk PF45 (Defoamer) 35% Excess

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0-2,600'	Fresh Water	8.6-8.8	28-32	N/c
2,600'-12,732'	Cut Brine	8.8-9.6	34-40	Less than

State Permit Information:**Well Name: War Hawk 2 State #401H****Location:**

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