

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 274262

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 326328		3. API Number 30-015-46442
5. Property Name STATE JM 25		6. Well No. 605H

7. Surface Location

UL - Lot M	Section 30	Township 18S	Range 25E	Lot Idn 4	Feet From 1057	N/S Line S	Feet From 501	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot M	Section 25	Township 18S	Range 24E	Lot Idn M	Feet From 810	N/S Line S	Feet From 100	E/W Line W	County Eddy
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9. Pool Information

Penasco Permo Penn Oil	98330
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3647
16. Multiple N	17. Proposed Depth 12683	18. Formation Permo Penn	19. Contractor	20. Spud Date 12/2/2019
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	36	1300	480	0
Prod	8.75	5.5	20	7507	1185	1300
Prod	8.5	5.5	20	12683	1185	7507

Casing/Cement Program: Additional Comments

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.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	What ever 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 ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Kay Maddox

Title: Regulatory Agent

Email Address: kay_maddox@eogresources.com

Date: 11/6/2019

Phone: 432-686-3658

OIL CONSERVATION DIVISION

Approved By: Raymond Podany

Title: Geologist

Approved Date: 11/13/2019

Expiration Date: 11/13/2021

Conditions of Approval Attached

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

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 Wildcat Permo Penn
⁴ Property Code	⁵ Property Name STATE JM 25	⁶ Well Number 605H
⁷ OGRID No. 7737	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3647'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	30	18-S	25-E	-	1057'	SOUTH	501'	WEST	EDDY

¹¹Bottom 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
M	25	18-S	24-E	-	810'	SOUTH	100'	WEST	EDDY

¹² Dedicated Acres 160.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

16 LOWER MOST PERF./ BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=433529 Y=623539 LAT.: N 32.7140197 LONG.: W 104.5494500 NAD 1983 X=474708 Y=623601 LAT.: N 32.7141314 LONG.: W 104.5499722 UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=438583 Y=623599 LAT.: N 32.7142110 LONG.: W 104.5330200 NAD 1983 X=479761 Y=623660 LAT.: N 32.7143231 LONG.: W 104.5335420 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=439183 Y=623847 LAT.: N 32.7148977 LONG.: W 104.5310707 NAD 1983 X=480361 Y=623909 LAT.: N 32.7150098 LONG.: W 104.5315928			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. <i>Jeremy Haass</i> 11/06/2019 Signature Date Jeremy Haass Printed Name jeremy_haass@eogresources.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. 08/13/2019 Date of Survey <i>Ramon A. Dominguez</i> Signature and Seal of Professional Surveyor RAMON A. DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR Certificate Number			

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GAS CAPTURE PLAN

Date: 11/13/2019

☒ 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
STATE JM 25 #605H	30-015-46442	M-30-18S-25E	1057S 0501W	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 Lucid Artesia Company and will be connected to Lucid Artesia Company Low Pressure gathering system located in Eddy County, New Mexico. It will require 1000' of pipeline to connect the facility to Low Pressure gathering system. EOG RESOURCES INC provides (periodically) to Lucid Artesia Company 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 Lucid Artesia Company have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Lucid Artesia Company Processing Plant located in Sec. 26, Twn. 18S, Rng. 25E, 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 Lucid Artesia Company 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 274262

PERMIT COMMENTS

Operator Name and Address: EOG RESOURCES INC [7377] P.O. Box 2267 Midland, TX 79702	API Number: 30-015-46442
	Well: STATE JM 25 #605H

Created By	Comment	Comment Date
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Form APD Conditions

Permit 274262

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: EOG RESOURCES INC [7377] P.O. Box 2267 Midland, TX 79702		API Number: 30-015-46442
		Well: STATE JM 25 #605H
OCD Reviewer	Condition	
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing	
rpodany	Will require a directional survey with the C-104	

State JM 25 #605H**Contingency****Location:**

SL: 1057' FSL 501' FWL, Lot 4, 30-18S-25E

BHL: 810' FSL 100' FWL, Unit M, 25-18S-25E

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.

Casing and cement designs are shown below:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
12.25"	0'-1,300'	9.625"	36#	J-55	LTC	1.125	1.25	1.80
8.75"	0'-6,300'	7.625"	29.7#	L-80	FLUSHMAX-III	1.125	1.25	1.60
8.5"	0'-12,683'	5.5"	20#	P-110	BTC	1.125	1.25	1.80

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,300'	255	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)
	210	14.8	1.34	Tail: Class 'C' + 2%PF1(Calcium Chloride) (100% excess)
6300'	905	12.8	1.79	Lead: 35:65 Poz C + .02 gal/sk Anti Foam + 1% Extender + .13 lb/sk Lost Circulation (TOC @ Surface) (100% Excess)
	205	14.8	1.34	Tail: Class C + 0.13% Anti Foam
12,683'	1375	13	1.48	Lead: 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) (TOC @ 200' into previous casing string) 35% Excess

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0-1,300'	Fresh Water	8.6-8.8	28-32	N/c
1,300'-12,683'	Cut Brine	8.8-9.6	34-40	Less than



EOG Resources - Artesia

Eddy County (NAD83)

State JM

State JM 25 #605H

Lateral

Plan: Plan #1

Standard Planning Report

30 October, 2019



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well State JM 25 #605H
Company:	EOG Resources - Artesia	TVD Reference:	KB @ 3665.000usft (Training Rig)
Project:	Eddy County (NAD83)	MD Reference:	KB @ 3665.000usft (Training Rig)
Site:	State JM	North Reference:	Grid
Well:	State JM 25 #605H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project	Eddy County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	State JM		
Site Position:		Northing:	623,909.00 usft
From:	Map	Easting:	480,028.00 usft
Position Uncertainty:	0.000 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 42' 54.029 N
		Longitude:	104° 31' 57.633 W
		Grid Convergence:	-0.11 °

Well	State JM 25 #605H		
Well Position	+N/-S	0.000 usft	Northing:
	+E/-W	333.000 usft	Easting:
Position Uncertainty	0.000 usft	Wellhead Elevation:	0.000 usft
		Latitude:	32° 42' 54.035 N
		Longitude:	104° 31' 53.735 W
		Ground Level:	3,647.000 usft

Wellbore	Lateral		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	10/16/2019	7.18
			Dip Angle (°)
			60.33
			Field Strength (nT)
			47,883.30101345

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.000
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.000	0.000	0.000
			Direction (°)
			266.455

Plan Survey Tool Program	Date	10/16/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.000	12,682.333	Plan #1 (Lateral)	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
0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	
6,500.000	0.00	0.000	6,500.000	0.000	0.000	0.00	0.00	0.00	0.00	
6,698.223	23.79	175.578	6,692.577	-40.439	3.128	12.00	12.00	0.00	175.58	
6,736.933	23.79	175.578	6,727.999	-56.006	4.332	0.00	0.00	0.00	0.00	
7,506.895	90.41	270.600	7,180.000	-251.000	-478.000	12.00	8.65	12.34	94.43	[SFJMFC#5H]LP
7,569.624	90.61	269.361	7,179.441	-251.021	-540.725	2.00	0.32	-1.97	-80.82	
12,682.507	90.61	269.361	7,125.000	-308.000	-5,653.000	0.00	0.00	0.00	0.00	[SFJMFC#5H]BHL



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well State JM 25 #605H
Company:	EOG Resources - Artesia	TVD Reference:	KB @ 3665.000usft (Training Rig)
Project:	Eddy County (NAD83)	MD Reference:	KB @ 3665.000usft (Training Rig)
Site:	State JM	North Reference:	Grid
Well:	State JM 25 #605H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
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)
0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00
100.000	0.00	0.000	100.000	0.000	0.000	0.000	0.00	0.00	0.00
200.000	0.00	0.000	200.000	0.000	0.000	0.000	0.00	0.00	0.00
300.000	0.00	0.000	300.000	0.000	0.000	0.000	0.00	0.00	0.00
400.000	0.00	0.000	400.000	0.000	0.000	0.000	0.00	0.00	0.00
500.000	0.00	0.000	500.000	0.000	0.000	0.000	0.00	0.00	0.00
600.000	0.00	0.000	600.000	0.000	0.000	0.000	0.00	0.00	0.00
700.000	0.00	0.000	700.000	0.000	0.000	0.000	0.00	0.00	0.00
800.000	0.00	0.000	800.000	0.000	0.000	0.000	0.00	0.00	0.00
900.000	0.00	0.000	900.000	0.000	0.000	0.000	0.00	0.00	0.00
1,000.000	0.00	0.000	1,000.000	0.000	0.000	0.000	0.00	0.00	0.00
1,100.000	0.00	0.000	1,100.000	0.000	0.000	0.000	0.00	0.00	0.00
1,200.000	0.00	0.000	1,200.000	0.000	0.000	0.000	0.00	0.00	0.00
1,300.000	0.00	0.000	1,300.000	0.000	0.000	0.000	0.00	0.00	0.00
1,400.000	0.00	0.000	1,400.000	0.000	0.000	0.000	0.00	0.00	0.00
1,500.000	0.00	0.000	1,500.000	0.000	0.000	0.000	0.00	0.00	0.00
1,600.000	0.00	0.000	1,600.000	0.000	0.000	0.000	0.00	0.00	0.00
1,700.000	0.00	0.000	1,700.000	0.000	0.000	0.000	0.00	0.00	0.00
1,800.000	0.00	0.000	1,800.000	0.000	0.000	0.000	0.00	0.00	0.00
1,900.000	0.00	0.000	1,900.000	0.000	0.000	0.000	0.00	0.00	0.00
2,000.000	0.00	0.000	2,000.000	0.000	0.000	0.000	0.00	0.00	0.00
2,100.000	0.00	0.000	2,100.000	0.000	0.000	0.000	0.00	0.00	0.00
2,200.000	0.00	0.000	2,200.000	0.000	0.000	0.000	0.00	0.00	0.00
2,300.000	0.00	0.000	2,300.000	0.000	0.000	0.000	0.00	0.00	0.00
2,400.000	0.00	0.000	2,400.000	0.000	0.000	0.000	0.00	0.00	0.00
2,500.000	0.00	0.000	2,500.000	0.000	0.000	0.000	0.00	0.00	0.00
2,600.000	0.00	0.000	2,600.000	0.000	0.000	0.000	0.00	0.00	0.00
2,700.000	0.00	0.000	2,700.000	0.000	0.000	0.000	0.00	0.00	0.00
2,800.000	0.00	0.000	2,800.000	0.000	0.000	0.000	0.00	0.00	0.00
2,900.000	0.00	0.000	2,900.000	0.000	0.000	0.000	0.00	0.00	0.00
3,000.000	0.00	0.000	3,000.000	0.000	0.000	0.000	0.00	0.00	0.00
3,100.000	0.00	0.000	3,100.000	0.000	0.000	0.000	0.00	0.00	0.00
3,200.000	0.00	0.000	3,200.000	0.000	0.000	0.000	0.00	0.00	0.00
3,300.000	0.00	0.000	3,300.000	0.000	0.000	0.000	0.00	0.00	0.00
3,400.000	0.00	0.000	3,400.000	0.000	0.000	0.000	0.00	0.00	0.00
3,500.000	0.00	0.000	3,500.000	0.000	0.000	0.000	0.00	0.00	0.00
3,600.000	0.00	0.000	3,600.000	0.000	0.000	0.000	0.00	0.00	0.00
3,700.000	0.00	0.000	3,700.000	0.000	0.000	0.000	0.00	0.00	0.00
3,800.000	0.00	0.000	3,800.000	0.000	0.000	0.000	0.00	0.00	0.00
3,900.000	0.00	0.000	3,900.000	0.000	0.000	0.000	0.00	0.00	0.00
4,000.000	0.00	0.000	4,000.000	0.000	0.000	0.000	0.00	0.00	0.00
4,100.000	0.00	0.000	4,100.000	0.000	0.000	0.000	0.00	0.00	0.00
4,200.000	0.00	0.000	4,200.000	0.000	0.000	0.000	0.00	0.00	0.00
4,300.000	0.00	0.000	4,300.000	0.000	0.000	0.000	0.00	0.00	0.00
4,400.000	0.00	0.000	4,400.000	0.000	0.000	0.000	0.00	0.00	0.00
4,500.000	0.00	0.000	4,500.000	0.000	0.000	0.000	0.00	0.00	0.00
4,600.000	0.00	0.000	4,600.000	0.000	0.000	0.000	0.00	0.00	0.00
4,700.000	0.00	0.000	4,700.000	0.000	0.000	0.000	0.00	0.00	0.00
4,800.000	0.00	0.000	4,800.000	0.000	0.000	0.000	0.00	0.00	0.00
4,900.000	0.00	0.000	4,900.000	0.000	0.000	0.000	0.00	0.00	0.00
5,000.000	0.00	0.000	5,000.000	0.000	0.000	0.000	0.00	0.00	0.00
5,100.000	0.00	0.000	5,100.000	0.000	0.000	0.000	0.00	0.00	0.00
5,200.000	0.00	0.000	5,200.000	0.000	0.000	0.000	0.00	0.00	0.00
5,300.000	0.00	0.000	5,300.000	0.000	0.000	0.000	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well State JM 25 #605H
Company:	EOG Resources - Artesia	TVD Reference:	KB @ 3665.000usft (Training Rig)
Project:	Eddy County (NAD83)	MD Reference:	KB @ 3665.000usft (Training Rig)
Site:	State JM	North Reference:	Grid
Well:	State JM 25 #605H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
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)
5,400.000	0.00	0.000	5,400.000	0.000	0.000	0.000	0.00	0.00	0.00
5,500.000	0.00	0.000	5,500.000	0.000	0.000	0.000	0.00	0.00	0.00
5,600.000	0.00	0.000	5,600.000	0.000	0.000	0.000	0.00	0.00	0.00
5,700.000	0.00	0.000	5,700.000	0.000	0.000	0.000	0.00	0.00	0.00
5,800.000	0.00	0.000	5,800.000	0.000	0.000	0.000	0.00	0.00	0.00
5,900.000	0.00	0.000	5,900.000	0.000	0.000	0.000	0.00	0.00	0.00
6,000.000	0.00	0.000	6,000.000	0.000	0.000	0.000	0.00	0.00	0.00
6,100.000	0.00	0.000	6,100.000	0.000	0.000	0.000	0.00	0.00	0.00
6,200.000	0.00	0.000	6,200.000	0.000	0.000	0.000	0.00	0.00	0.00
6,300.000	0.00	0.000	6,300.000	0.000	0.000	0.000	0.00	0.00	0.00
6,400.000	0.00	0.000	6,400.000	0.000	0.000	0.000	0.00	0.00	0.00
6,500.000	0.00	0.000	6,500.000	0.000	0.000	0.000	0.00	0.00	0.00
KOP 12°/100' BR									
6,525.000	3.00	175.578	6,524.988	-0.652	0.050	-0.010	12.00	12.00	0.00
6,550.000	6.00	175.578	6,549.908	-2.608	0.202	-0.040	12.00	12.00	0.00
6,575.000	9.00	175.578	6,574.692	-5.861	0.453	-0.090	12.00	12.00	0.00
6,600.000	12.00	175.578	6,599.270	-10.403	0.805	-0.160	12.00	12.00	0.00
6,625.000	15.00	175.578	6,623.577	-16.221	1.255	-0.249	12.00	12.00	0.00
6,650.000	18.00	175.578	6,647.544	-23.299	1.802	-0.358	12.00	12.00	0.00
6,675.000	21.00	175.578	6,671.108	-31.619	2.445	-0.485	12.00	12.00	0.00
6,698.223	23.79	175.578	6,692.577	-40.439	3.128	-0.621	12.00	12.00	0.00
6,700.000	23.79	175.578	6,694.203	-41.154	3.183	-0.632	0.00	0.00	0.00
6,736.933	23.79	175.578	6,727.999	-56.006	4.332	-0.860	0.00	0.00	0.00
6,750.000	23.71	179.467	6,739.960	-61.261	4.559	-0.762	12.00	-0.56	29.77
6,775.000	23.85	186.904	6,762.842	-71.307	3.998	0.419	12.00	0.53	29.75
6,800.000	24.33	194.163	6,785.670	-81.320	2.130	2.903	12.00	1.93	29.03
6,825.000	25.14	201.068	6,808.381	-91.272	-1.040	6.682	12.00	3.25	27.62
6,850.000	26.26	207.497	6,830.912	-101.136	-5.503	11.747	12.00	4.45	25.72
6,875.000	27.63	213.384	6,853.202	-110.884	-11.247	18.083	12.00	5.50	23.55
6,900.000	29.23	218.716	6,875.189	-120.490	-18.257	25.673	12.00	6.41	21.33
6,925.000	31.02	223.512	6,896.814	-129.927	-26.513	34.497	12.00	7.17	19.19
6,950.000	32.98	227.815	6,918.017	-139.171	-35.992	44.529	12.00	7.81	17.21
6,975.000	35.06	231.674	6,938.739	-148.194	-46.669	55.744	12.00	8.34	15.44
7,000.000	37.25	235.144	6,958.925	-156.974	-58.514	68.109	12.00	8.78	13.88
7,025.000	39.54	238.275	6,978.519	-165.484	-71.495	81.591	12.00	9.14	12.52
7,050.000	41.90	241.112	6,997.467	-173.704	-85.576	96.154	12.00	9.45	11.35
7,075.000	44.33	243.697	7,015.717	-181.609	-100.719	111.756	12.00	9.70	10.34
7,100.000	46.80	246.065	7,033.220	-189.178	-116.881	128.356	12.00	9.91	9.47
7,125.000	49.33	248.247	7,049.926	-196.390	-134.020	145.908	12.00	10.09	8.73
7,150.000	51.89	250.268	7,065.791	-203.226	-152.087	164.363	12.00	10.25	8.08
7,175.000	54.48	252.151	7,080.771	-209.666	-171.034	183.672	12.00	10.38	7.53
7,200.000	57.10	253.916	7,094.825	-215.694	-190.808	203.781	12.00	10.49	7.06
7,225.000	59.75	255.578	7,107.914	-221.293	-211.355	224.635	12.00	10.58	6.65
7,250.000	62.41	257.153	7,120.003	-226.446	-232.619	246.177	12.00	10.66	6.30
7,275.000	65.10	258.654	7,131.058	-231.141	-254.542	268.348	12.00	10.73	6.00
7,300.000	67.79	260.090	7,141.049	-235.365	-277.063	291.088	12.00	10.78	5.74
7,325.000	70.50	261.472	7,149.949	-239.105	-300.121	314.333	12.00	10.83	5.53
7,350.000	73.22	262.808	7,157.733	-242.351	-323.652	338.020	12.00	10.87	5.35
7,375.000	75.94	264.106	7,164.379	-245.095	-347.593	362.084	12.00	10.91	5.19
7,400.000	78.68	265.374	7,169.871	-247.329	-371.877	386.460	12.00	10.93	5.07
7,425.000	81.42	266.618	7,174.192	-249.047	-396.438	411.080	12.00	10.95	4.98
7,450.000	84.16	267.844	7,177.331	-250.244	-421.208	435.877	12.00	10.97	4.90
7,475.000	86.90	269.058	7,179.279	-250.917	-446.120	460.783	12.00	10.98	4.86



Planning Report

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Project:	Eddy County (NAD83)	MD Reference:	KB @ 3665.000usft (Training Rig)
Site:	State JM	North Reference:	Grid
Well:	State JM 25 #605H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
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)
7,500.000	89.65	270.266	7,180.032	-251.065	-471.105	485.729	12.00	10.99	4.83
7,506.895	90.41	270.600	7,180.000	-251.000	-478.000	492.607	12.05	11.03	4.85
7,506.900	90.41	270.600	7,180.000	-251.000	-478.005	492.611	0.00	0.00	0.00
[SJM25#605H]EOC 7507' MD (7180' TVD)									
7,569.624	90.61	269.361	7,179.441	-251.021	-540.725	555.213	2.00	0.32	-1.97
7,600.000	90.61	269.361	7,179.118	-251.360	-571.097	585.548	0.00	0.00	0.00
7,628.860	90.61	269.361	7,178.810	-251.681	-599.954	614.369	0.00	0.00	0.00
[SJM25#605H]JUMP 7629' MD (7179' TVD)									
7,700.000	90.61	269.361	7,178.053	-252.474	-671.085	685.414	0.00	0.00	0.00
7,800.000	90.61	269.361	7,176.988	-253.588	-771.074	785.280	0.00	0.00	0.00
7,900.000	90.61	269.361	7,175.923	-254.703	-871.062	885.145	0.00	0.00	0.00
8,000.000	90.61	269.361	7,174.859	-255.817	-971.050	985.011	0.00	0.00	0.00
8,100.000	90.61	269.361	7,173.794	-256.932	-1,071.038	1,084.877	0.00	0.00	0.00
8,200.000	90.61	269.361	7,172.729	-258.046	-1,171.026	1,184.742	0.00	0.00	0.00
8,300.000	90.61	269.361	7,171.664	-259.161	-1,271.014	1,284.608	0.00	0.00	0.00
8,400.000	90.61	269.361	7,170.599	-260.275	-1,371.002	1,384.474	0.00	0.00	0.00
8,500.000	90.61	269.361	7,169.535	-261.389	-1,470.990	1,484.339	0.00	0.00	0.00
8,600.000	90.61	269.361	7,168.470	-262.504	-1,570.978	1,584.205	0.00	0.00	0.00
8,700.000	90.61	269.361	7,167.405	-263.618	-1,670.967	1,684.071	0.00	0.00	0.00
8,800.000	90.61	269.361	7,166.340	-264.733	-1,770.955	1,783.936	0.00	0.00	0.00
8,900.000	90.61	269.361	7,165.275	-265.847	-1,870.943	1,883.802	0.00	0.00	0.00
9,000.000	90.61	269.361	7,164.211	-266.961	-1,970.931	1,983.668	0.00	0.00	0.00
9,100.000	90.61	269.361	7,163.146	-268.076	-2,070.919	2,083.533	0.00	0.00	0.00
9,200.000	90.61	269.361	7,162.081	-269.190	-2,170.907	2,183.399	0.00	0.00	0.00
9,300.000	90.61	269.361	7,161.016	-270.305	-2,270.895	2,283.265	0.00	0.00	0.00
9,400.000	90.61	269.361	7,159.952	-271.419	-2,370.883	2,383.130	0.00	0.00	0.00
9,500.000	90.61	269.361	7,158.887	-272.534	-2,470.872	2,482.996	0.00	0.00	0.00
9,600.000	90.61	269.361	7,157.822	-273.648	-2,570.860	2,582.862	0.00	0.00	0.00
9,700.000	90.61	269.361	7,156.757	-274.762	-2,670.848	2,682.727	0.00	0.00	0.00
9,800.000	90.61	269.361	7,155.692	-275.877	-2,770.836	2,782.593	0.00	0.00	0.00
9,900.000	90.61	269.361	7,154.628	-276.991	-2,870.824	2,882.459	0.00	0.00	0.00
10,000.000	90.61	269.361	7,153.563	-278.106	-2,970.812	2,982.324	0.00	0.00	0.00
10,100.000	90.61	269.361	7,152.498	-279.220	-3,070.800	3,082.190	0.00	0.00	0.00
10,200.000	90.61	269.361	7,151.433	-280.334	-3,170.788	3,182.056	0.00	0.00	0.00
10,300.000	90.61	269.361	7,150.368	-281.449	-3,270.776	3,281.921	0.00	0.00	0.00
10,400.000	90.61	269.361	7,149.304	-282.563	-3,370.765	3,381.787	0.00	0.00	0.00
10,500.000	90.61	269.361	7,148.239	-283.678	-3,470.753	3,481.653	0.00	0.00	0.00
10,600.000	90.61	269.361	7,147.174	-284.792	-3,570.741	3,581.518	0.00	0.00	0.00
10,700.000	90.61	269.361	7,146.109	-285.907	-3,670.729	3,681.384	0.00	0.00	0.00
10,800.000	90.61	269.361	7,145.044	-287.021	-3,770.717	3,781.250	0.00	0.00	0.00
10,900.000	90.61	269.361	7,143.980	-288.135	-3,870.705	3,881.115	0.00	0.00	0.00
11,000.000	90.61	269.361	7,142.915	-289.250	-3,970.693	3,980.981	0.00	0.00	0.00
11,100.000	90.61	269.361	7,141.850	-290.364	-4,070.681	4,080.847	0.00	0.00	0.00
11,200.000	90.61	269.361	7,140.785	-291.479	-4,170.669	4,180.712	0.00	0.00	0.00
11,300.000	90.61	269.361	7,139.720	-292.593	-4,270.658	4,280.578	0.00	0.00	0.00
11,400.000	90.61	269.361	7,138.656	-293.707	-4,370.646	4,380.443	0.00	0.00	0.00
11,500.000	90.61	269.361	7,137.591	-294.822	-4,470.634	4,480.309	0.00	0.00	0.00
11,600.000	90.61	269.361	7,136.526	-295.936	-4,570.622	4,580.175	0.00	0.00	0.00
11,700.000	90.61	269.361	7,135.461	-297.051	-4,670.610	4,680.040	0.00	0.00	0.00
11,800.000	90.61	269.361	7,134.397	-298.165	-4,770.598	4,779.906	0.00	0.00	0.00
11,900.000	90.61	269.361	7,133.332	-299.280	-4,870.586	4,879.772	0.00	0.00	0.00
12,000.000	90.61	269.361	7,132.267	-300.394	-4,970.574	4,979.637	0.00	0.00	0.00
12,100.000	90.61	269.361	7,131.202	-301.508	-5,070.563	5,079.503	0.00	0.00	0.00
12,200.000	90.61	269.361	7,130.137	-302.623	-5,170.551	5,179.369	0.00	0.00	0.00



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Project:	Eddy County (NAD83)	MD Reference:	KB @ 3665.000usft (Training Rig)
Site:	State JM	North Reference:	Grid
Well:	State JM 25 #605H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
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)
12,300.000	90.61	269.361	7,129.073	-303.737	-5,270.539	5,279.234	0.00	0.00	0.00
12,400.000	90.61	269.361	7,128.008	-304.852	-5,370.527	5,379.100	0.00	0.00	0.00
12,500.000	90.61	269.361	7,126.943	-305.966	-5,470.515	5,478.966	0.00	0.00	0.00
12,600.000	90.61	269.361	7,125.878	-307.081	-5,570.503	5,578.831	0.00	0.00	0.00
12,682.507	90.61	269.361	7,125.000	-308.000	-5,653.000	5,661.227	0.00	0.00	0.00
[SJM25#605H]BHL 12683' MD (7125' TVD)									

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
[SFJMFC#5H]BHL - plan hits target center - Point	0.00	360.000	7,125.000	-308.000	-5,653.000	623,601.00	474,708.00	32° 42' 50.878 N	104° 32' 59.896 W
[SFJMFC#5H]LP - plan hits target center - Point	0.00	0.000	7,180.000	-251.000	-478.000	623,658.00	479,883.00	32° 42' 51.543 N	104° 31' 59.325 W
[SFJMFC#5H]UMP - plan misses target center by 2.933usft at 7628.864usft MD (7178.811' TVD, -251.681 N, -599.957 E) - Point	0.00	0.000	7,180.000	-249.000	-600.000	623,660.00	479,761.00	32° 42' 51.560 N	104° 32' 0.753 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,500.000	6,500.000	0.000	0.000	KOP 12°/100' BR
7,506.900	7,180.000	-251.000	-478.005	[SJM25#605H]EOC 7507' MD (7180' TVD)
7,628.860	7,178.810	-251.681	-599.954	[SJM25#605H]UMP 7629' MD (7179' TVD)
12,682.507	7,125.000	-308.000	-5,653.000	[SJM25#605H]BHL 12683' MD (7125' TVD)

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

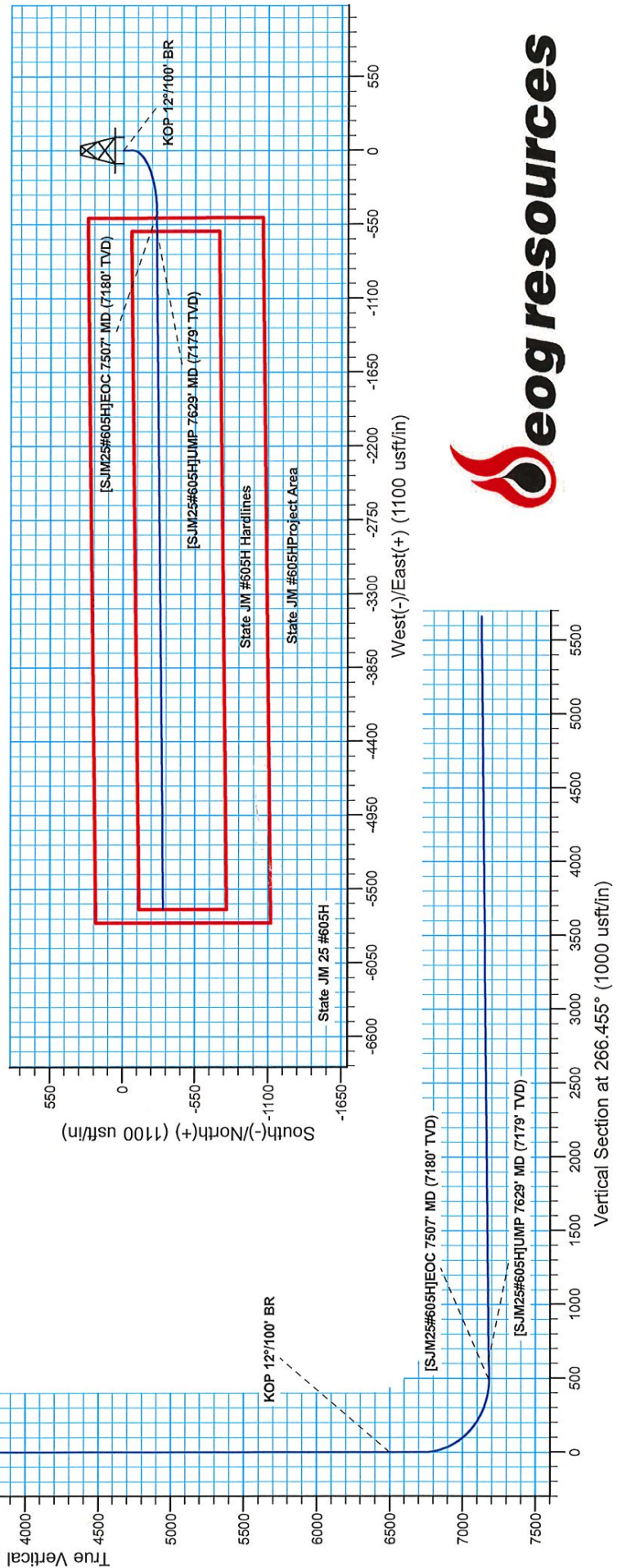


Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.000
2	6500.000	0.00	0.000	6500.000	0.000	0.000	0.00	0.00	0.000
3	6698.223	23.79	175.578	6692.578	-40.439	3.128	12.00	175.58	-0.621
4	6736.934	23.79	175.578	6728.000	-56.006	4.332	0.00	0.00	-0.860
5	7506.895	90.61	270.600	7180.000	-251.000	-478.000	12.00	94.43	492.607
6	7569.624	90.61	269.361	7179.442	-251.021	-540.725	2.00	-80.82	555.213
7	12682.506	90.61	269.361	7125.000	-308.000	5653.000	0.00	0.00	5661.227

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
[SFJMFC#5H]BHL - plan hits target center	7125.000	-308.000	-5653.000	623601.00	474708.00
[SFJMFC#5H]LP - plan hits target center	7180.000	-251.000	-478.000	623658.00	479883.00
[SFJMFC#5H]JUMP - plan hits target center	7180.000	-249.000	-600.000	623660.00	479761.00

- plan misses target center by 2.933usft at 7628.864usft MD (7178.811 TVD, -251.681 N, -599.957 E)



EOG RESOURCES, INC.
State JM 25 605H

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator

- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
State JM 25 605H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
State JM 25 605H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Eddy County Sheriff's Department (575) 887-7551

Fire Department:

Carlsbad (575) 885-3125

Artesia (575) 746-5050

Hospitals:

Carlsbad (575) 887-4121

Artesia (575) 748-3333

Hobbs (575) 392-1979

Dept. of Public Safety/Carlsbad (575) 748-9718

Highway Department (575) 885-3281

New Mexico Oil Conservation (575) 476-3440

U.S. Dept. of Labor (575) 887-1174

EOG Resources, Inc.

EOG / Artesia Office (575) 748-1471

Company Drilling Consultants:

Brent Patterson Cell (575) 365-7032

Drilling Engineer

Jeremiah Mullen Office (575) 748-4378

Cell (575) 703-5467

Safety

Brian Chandler (HSE Manager) Office (432) 686-3695

Cell (817) 239-0251

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

KZ 06/29/2018

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? ☐

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API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018