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

Sundry Print Report

02/09/2021

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Notice of Intent

Type of Submission: Notice of Intent

Type of Action APD Change

Date Sundry Submitted: 01/12/2021

Time Sundry Submitted: 09:36

Date proposed operation will begin: 01/26/2021

Procedure Description: EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes: Change BHL to T-25-S R-33-E Sec 13 100 feet FNL 2310 feet FWL Lea Co, NM Increase HSU to 640 acres

Application

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 1 - General

APD ID: 10400045804

Tie to previous NOS? N

Submission Date: 08/13/2019

BLM Office: CARLSBAD

User: Jayna K Hobby

Title: Regulatory Specialist

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM108504

Lease Acres:

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO

APD Operator: EOG RESOURCES INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED

Operator Address: 1111 BAGBY SKY LOBBY2

Zip: 77002

Operator PO Box:

Operator City: HOUSTON

State: TX

Operator Phone: (713)651-7000

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: VACA 24 FED COM

Well Number: 704H

Well API Number: 3002546963

Field/Pool or Exploratory? Field and Pool

Field Name: WC025G08S253235G; LWR BS

Pool Name: BOBCAT DRAW; UPPER WOLFCAMP

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

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: VACA 24 FED COM

Number: 704H,705H

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

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

Well sub-Type: INFILL

Describe sub-type:

Distance to town: **Distance to nearest well:** 33 FT **Distance to lease line:** 679 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: VACA_24_FED_COM_704H_C_102_Signed_20190813082817.pdf

Well work start Date: 12/01/2019 **Duration:** 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** KELLY BUSHING

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	679	FSL	2110	FWL	25S	33E	24	Aliquot SESW	32.1106313	-103.527786	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108504	3332	0	0	Y
KOP Leg #1	50	FSL	1869	FWL	25S	33E	24	Aliquot SESW	32.1089016	-103.5285629	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108504	-8687	12053	12019	Y
PPP Leg #1-1	100	FSL	1869	FWL	25S	33E	24	Aliquot SESW	32.1090395	-103.5285631	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108504	-8899	12273	12231	Y
EXIT Leg #1	2541	FSL	1869	FWL	25S	33E	13	Aliquot NESW	32.1302643	-103.5285687	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108503	-9164	20097	12496	Y

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
BHL Leg #1	2541	FSL	1869	FWL	25S	33E	13	Aliquot NESW	32.1302643	-103.5285687	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 108503	-9164	20097	12496	Y

Drilling Plan

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1374772	PERMIAN	3332	0	0	ALLUVIUM	NONE	N
1374773	RUSTLER	2262	1070	1070	ANHYDRITE	NONE	N
1374774	TOP SALT	1944	1388	1388	SALT	NONE	N
1374776	BASE OF SALT	-1725	5057	5057	SALT	NONE	N
1374777	LAMAR	-1826	5158	5158	LIMESTONE	NONE	N
1374778	BELL CANYON	-1852	5184	5184	SANDSTONE	NATURAL GAS, OIL	N
1374779	CHERRY CANYON	-2867	6199	6199	SANDSTONE	NATURAL GAS, OIL	N
1374780	BRUSHY CANYON	-4793	8125	8125	SANDSTONE	NATURAL GAS, OIL	N
1374775	BONE SPRING LIME	-5929	9261	9261	LIMESTONE	NONE	N
1374768	FIRST BONE SPRING SAND	-6942	10274	10274	SANDSTONE	NATURAL GAS, OIL	N
1374769	BONE SPRING 2ND	-7503	10835	10835	SANDSTONE	NATURAL GAS, OIL	N
1374770	BONE SPRING 3RD	-8580	11912	11912	SANDSTONE	NATURAL GAS, OIL	N
1374771	WOLFCAMP	-9000	12332	12332	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Pressure Rating (PSI): 10M **Rating Depth:** 12496

Equipment: The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. A multi-bowl wellhead system will be utilized. After running the 9-5/8 surface casing, a 9-5/8 BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2 The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi. The multi-bowl wellhead will be installed by vendors representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM. The wellhead will be installed by a third party welder while being monitored by WH vendors representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.
Requesting Variance? YES

Variance request: Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack. Variance is requested to waive the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Variance is also requested to waive any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation. Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement. EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions: - Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings. - Annular clearance less than 0.422'' is acceptable for the curve and lateral portions of the production open hole section. EOG Resources also requests approval to implement Casing Design B (pg. 8-9). BLM will be notified of elected design at spud.
Testing Procedure: Pipe rams and blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.
Choke Diagram Attachment:

Co_Flex_Hose_Certification_20190813085350.pdf

Co_Flex_Hose_Test_Chart_20190813085351.pdf

10_M_Choke_Manifold_20190813085352.pdf

BOP Diagram Attachment:

10_M_BOP_Diagram_9.675_in_20190813085406.pdf

EOG_BLM_10M_Annular_Variance___9.675_in_20190813085407.pdf

10_M_BOP_Diagram_13.375_in_20190813085407.pdf

EOG_BLM_10M_Annular_Variance___13.375_in_20190813085407.pdf

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type
1	SURFACE	12.25	9.625	NEW	API	N	0	1200	0	1200	3332	2132	1200	J-55	40	LT&C	1.125	1.25	BUOY	1.6	BUOY
2	PRODUCTION	6.75	5.5	NEW	API	N	0	10930	0	10930		-7598	10930	OTHER	20	OTHER - DWC/C-IS MS	1.125	1.25	BUOY	1.6	BUOY
3	PRODUCTION	6.75	5.5	NEW	API	N	10930	11430	10930	11430	-7588	-8098	500	OTHER	20	OTHER - VAM SFC	1.125	1.25	BUOY	1.6	BUOY
4	INTERMEDIATE	8.75	7.625	NEW	API	N	0	11430	0	11430		-8098	11430	HCP-110	29.7	OTHER - FXL	1.125	1.25	BUOY	1.6	BUOY
5	PRODUCTION	6.75	5.5	NEW	API	N	11430	20097	11430	12496	-8088	-9164	8667	OTHER	20	OTHER - DWC/C-IS MS	1.125	1.25	BUOY	1.6	BUOY

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Vaca_24_Fed_Com_704H_Permit_Info_20191104142600.pdf

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Casing Attachments

Casing ID: 2 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20190813085736.pdf

5.500in_20.00_VST_P110EC_DWC_C_IS_MS_Spec_Sheet_20190813085736.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

7.625in_29.70_P110HC_FXL_20190813085715.pdf

See_previously_attached_Drill_Plan_20190813085715.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20190813085854.pdf

5.500in_20.00_VST_P110EC_VAM_SFC_20190813085855.pdf

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Casing Attachments

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20190813085815.pdf

5.500in_20.00_VST_P110EC_DWC_C_IS_MS_Spec_Sheet_20190813085815.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	N/A	N/A
PRODUCTION	Lead		0	0	0	0	0	0	0	n/a	n/a
SURFACE	Lead		0	1000	1050	1.73	13.5	1817	25	Class C	Class C + 4.0% Bentonite + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
SURFACE	Tail		1000	1200	100	14.8	1.34	134	25	Class C	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1,000')
INTERMEDIATE	Lead		0	8100	1000	2.3	12.7	2300	25	Class C	Lead: Bradenhead Squeeze Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ Surface)
INTERMEDIATE	Tail		8100	11430	400	14.2	1.11	444	25	Class C	Tail: Class C: + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC 8,100')

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		10930	20097	800	1.31	14.2	1048	25	Class H	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,930')

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: ((A) A kelly cock will be kept in the drill string at all times. (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times. (C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.
Describe the mud monitoring system utilized: The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized. An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1200	11430	SALT SATURATED	10	10.2							
0	1200	WATER-BASED MUD	8.6	8.8							
11430	12053	OIL-BASED MUD	8.7	9.4							
12053	12496	OIL-BASED MUD	10	14							

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Section 6 - Test, Logging, Coring

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

Open-hole logs are not planned for this well.

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

DIRECTIONAL SURVEY,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 9087 **Anticipated Surface Pressure:** 6337

Anticipated Bottom Hole Temperature(F): 181

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Vaca_24_Fed_Com_704H_H2S_Plan_Summary_20191104142757.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Vaca_24_Fed_Com_704H_Wall_Plot_20191104142826.pdf

Vaca_24_Fed_Com_704H_Planning_Report_20191104142827.pdf

Other proposed operations facets description:

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both A and B sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

EOG requests to pump a two stage cement job on the 7-5/8 intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (8,125) and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. The final cement top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

EOG Resources respectfully requests approval to implement Casing Design B (Pages 8-9 of the attached Permit Info document). BLM will be notified of elected design at spud.

Other proposed operations facets attachment:

Vaca_24_Fed_Com_704H_Rig_Layout_20191104142849.pdf
Vaca_24_Fed_Com_704H_Permit_Info_20191104142849.pdf
5.500in_20.00_VST_P110EC_DWC_C_IS_MS_Spec_Sheet_20191104142910.pdf
5.500in_20.00_VST_P110EC_VAM_SFC_20191104142910.pdf
Wellhead_13.375_in_20191104142910.pdf
7.625in_29.70_P110HC_FXL_20191104142910.pdf
Wellhead_9.675_in_20191104142910.pdf

Other Variance attachment:

10_M_BOP_Diagram_9.675_in_20191104142949.pdf
Co_Flex_Hose_Certification_20191104142949.pdf
10_M_BOP_Diagram_13.375_in_20191104142949.pdf
Co_Flex_Hose_Test_Chart_20191104142949.pdf
EOG_BLM_10M_Annular_Variance___13.375_in_20191104142949.pdf
EOG_BLM_10M_Annular_Variance___9.675_in_20191104142954.pdf

SUPO

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

VACA_24_FED_COM_704H_Vicinity_20190813090741.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

VACA_24_FED_COM_704H_Padsite_20190813090949.pdf
VACA_24_FED_COM_704H_Wellsite_20190813090949.pdf
VACA_24_FED_COM_INFRA_REV3_20190813091013.pdf

New road type: RESOURCE

Length: 157 Feet **Width (ft.):** 25

Max slope (%): 2 **Max grade (%):** 20

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 25

New road access erosion control: Newly constructed or reconstructed roads will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road. We plan to grade and water twice a year.

New road access plan or profile prepared? N

New road access plan attachment:

Access road engineering design? N

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: 6" of Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: An adequate amount of topsoil/root zone will be stripped by dozer from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram / survey plat.

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossings

Road Drainage Control Structures (DCS) description: N/A

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

VACA_24_FED_COM_704H_Radius_20190813091136.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Vaca 24 Fed Com Central Tank Battery is located in the S/2 of Section 24.

Production Facilities map:

EP_VACA24FEDCOM_704H_705H_FL_1_S_20190813091211.PDF
EP_TRAPER_VACA_GL_S24_STATE_S_20190813091228.pdf
EP_VACA24FC_GAS_S24_STATE_1_S_20190813091228.pdf
EP_VACA24FC_GAS_S24_USA_S_20190813091228.pdf
EP_TRAPPER_VACA_GL_S30_STATE_S_20190813091229.pdf
EP_TRAPPER_VACA_GL_S19_S_20190813091229.pdf
EP_VACA24FC_GAS_S25_S_20190813091229.pdf
EP_TRAPPER_VACA_GL_S24_USA_S_20190813091229.pdf
EP_VACA24FC_GAS_S30_S_20190813091229.pdf
EP_VACA24FEDCOM_704H_705H_ROAD_1_S_20190813091314.PDF
EP_VACA24FEDCOM_CTB_ROAD_1_S_20190813091314.PDF
EP_VACA24FC_WATER_S24_STATE_S_20190813091331.pdf
EP_VACA24FC_WATER_S30_S_20190813091332.pdf
EP_VACA24FC_WATER_S24_USA_S_20190813091332.pdf
EP_VACA24FC_WATER_S25_S_20190813091333.pdf
VACA_24_FED_COM_INFRA_REV3_20190813091350.pdf
VACA_24_FED_COM_CTB_S_20190813091350.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: RECYCLED

Water source use type: OTHER

Describe use type: Water will be supplied from the fra
water source map. This location will be drilled using a c
(outlined in the drilling program). The water will be obta
in the area or recycled treated water and hauled to loca
using existing and proposed roads depicted on the prop
these cases where a poly pipeline is used to transport f
proper authorizations will be secured by the contractor.

Source latitude:

Source longitude:

Source datum:

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

OTHER

Describe use type: Water will be supplied from the fra water source map. This location will be drilled using a c (outlined in the drilling program). The water will be obta in the area or recycled treated water and hauled to loca using existing and proposed roads depicted on the prop these cases where a poly pipeline is used to transport f proper authorizations will be secured by the contractor.

Water source permit type: WATER RIGHT

Water source transport method: TRUCKING

PIPELINE

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 0

Source volume (acre-feet): 0

Source volume (gal): 0

Water source and transportation map:

Vaca_Water_and_Caliche_Map_20190813091440.pdf

Water source comments:

New water well? N

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be supplied from pits shown on the attached caliche source map. Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by “Flipping” the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for “Flipping” a well location is as follows: * -An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat. -An area will be used within the proposed well site dimensions to excavate caliche. Subsoil will be removed and stockpiled within the surveyed well pad dimensions. -Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions. -Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available). -Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat. * In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

Construction Materials source location attachment:

Vaca_Water_and_Caliche_Map_20190813091459.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts, frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.

Amount of waste: 0 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY

Disposal location ownership: COMMERCIAL

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? N

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

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

Reserve pit liner

Reserve pit liner specifications and installation description

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Closed Loop System. Drill cuttings will be disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

VACA_24_FED_COM_704H_Padsite_20190813091541.pdf
VACA_24_FED_COM_704H_Wellsite_20190813091543.pdf
Vaca_24_Fed_Com_704H_Rig_Layout_20191104143247.pdf

Comments: Exhibit 2A-Wellsite & Exhibit 2B-Padsite Rig Layout Exhibit 4

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: VACA 24 FED COM

Multiple Well Pad Number: 704H,705H

Recontouring attachment:

VACA_24_FED_COM_704H_Reclamation_20190813091621.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

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

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

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

Disturbance Comments: All Interim and Final reclamation must be within 6 months. Interim must be within 6 months of completion and final within 6 months of abandonment plugging. Dual pad operations may alter timing.

Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found.
Weed treatment plan attachment:

Monitoring plan description: Reclamation will be completed within 6 months of well plugging. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds.
Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

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

Section 12 - Other Information

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: Poly lines are planned to transport water for operations. Will truck if necessary. See attached SUPO Plan.

Use a previously conducted onsite? N

Previous Onsite information:

Other SUPO Attachment

VACA_24_FED_COM_704H_Location_20190813091730.pdf

SUPO_VACA_24_FED_COM_704H_20190813091742.pdf

Gas_CapturePlan_Vaca24FedCom701H_706H_20190813091756.pdf

PWD

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Operator Certification

Well Name: VACA 24 FED COM

Well Location: T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM108504

Unit or CA Name:

Unit or CA Number:

US Well Number: 300254696300X1

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Jayna K Hobby

Signed on: 01/12/2021

Title: Regulatory Specialist

Street Address: 5509 CHAMPIONS DR

City: MIDLAND **State:** TX **Zip:** 79706

Phone: (432)686-6997

Email address: Jayna_Hobby@eogresources.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

NOI Attachments

Procedure Description

VACA_24_FED_COM_704H_Rev_C102_1_20210112091605.pdf

Vaca_24_Fed_Com_704H_Wall_Plot_20210112090823.pdf

Well Name: VACA 24 FED COM	**Well Location:** T25S / R33E / SEC 24 / SESW / 32.1106313 / -103.527786	**County or Parish/State:** LEA / NM
Well Number: 704H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM108504	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300254696300X1	**Well Status:** Approved Application for Permit to Drill	**Operator:** EOG RESOURCES INCORPORATED

Vaca_24_Fed_Com_704H_Planning_Report_20210112090736.pdf

Vaca_24_Fed_Com_704H_Permit_Info___Revised_HSU__BHL_1.5.2020_20210112090721.pdf

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: HARRELL **Signed on:** JAN 12, 2021 09:15 AM

Name: EOG RESOURCES INCORPORATED

Title: Regulatory Specialist

Street Address: NOT ENTERED

City: NOT ENTERED **State:** NOT ENTERED

Phone: (432) 686-3600

Email address: NOT ENTERED

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS **BLM POC Title:** Petroleum Engineer

BLM POC Phone: 5752342234 **BLM POC Email Address:** cwalls@blm.gov

Disposition: Approved **Disposition Date:** 02/09/2021

Signature: Chris Walls

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., Santa 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.
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
30-025-46963	98094	BOBCAT DRAW; UPPER WOLFCAMP

[4]Property Code	[5]Property Name	[6]Well Number
39180	VACA 24 FED COM	704H

[7]OGRID No.	[8]Operator Name	[9]Elevation
7377	EOG RESOURCES, INC.	3332'

[10]Surface Location

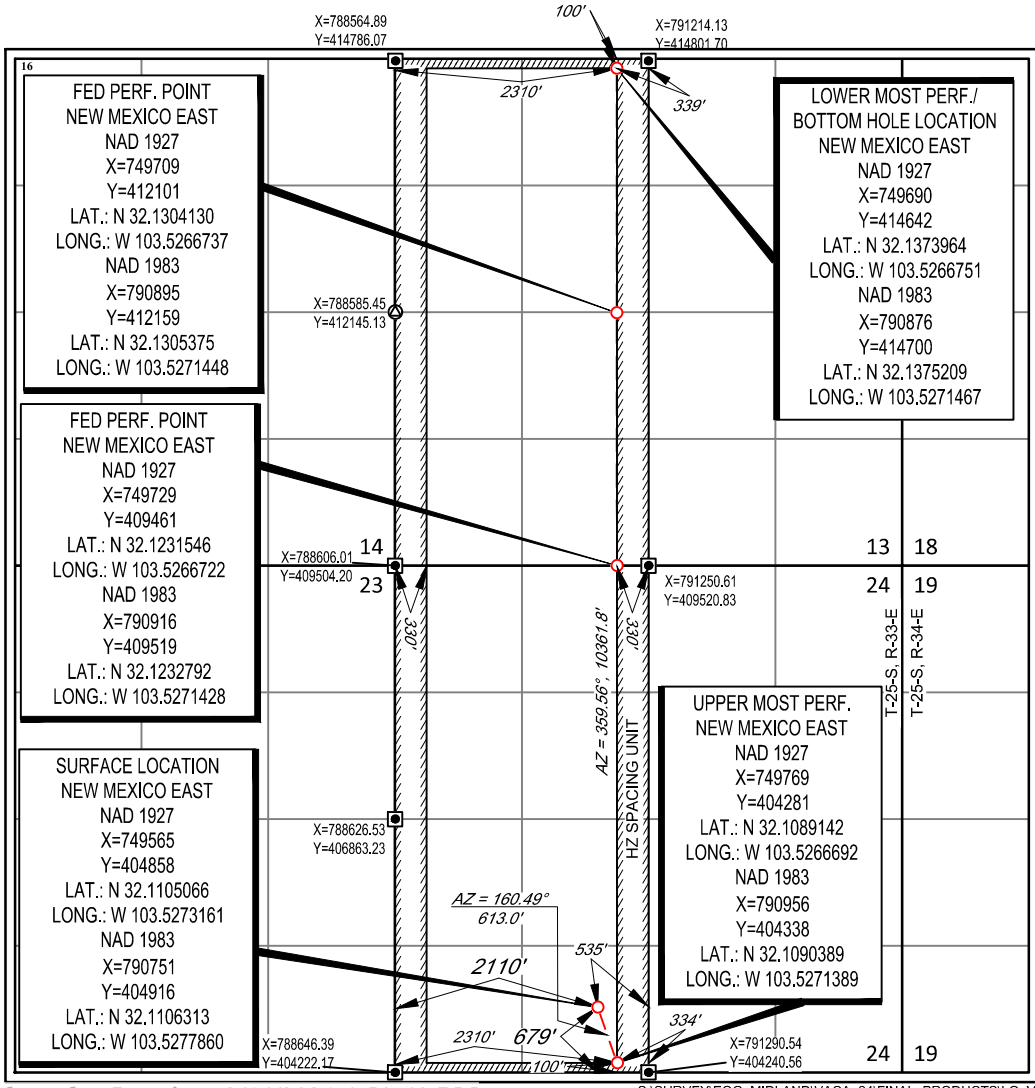
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	24	25-S	33-E	-	679'	SOUTH	2110'	WEST	LEA

[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	13	25-S	33-E	-	100'	NORTH	2310'	WEST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
640			

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.

Emily Follis — 1-11-2021
Signature — Date

Emily Follis
Printed Name

emily_follis@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.

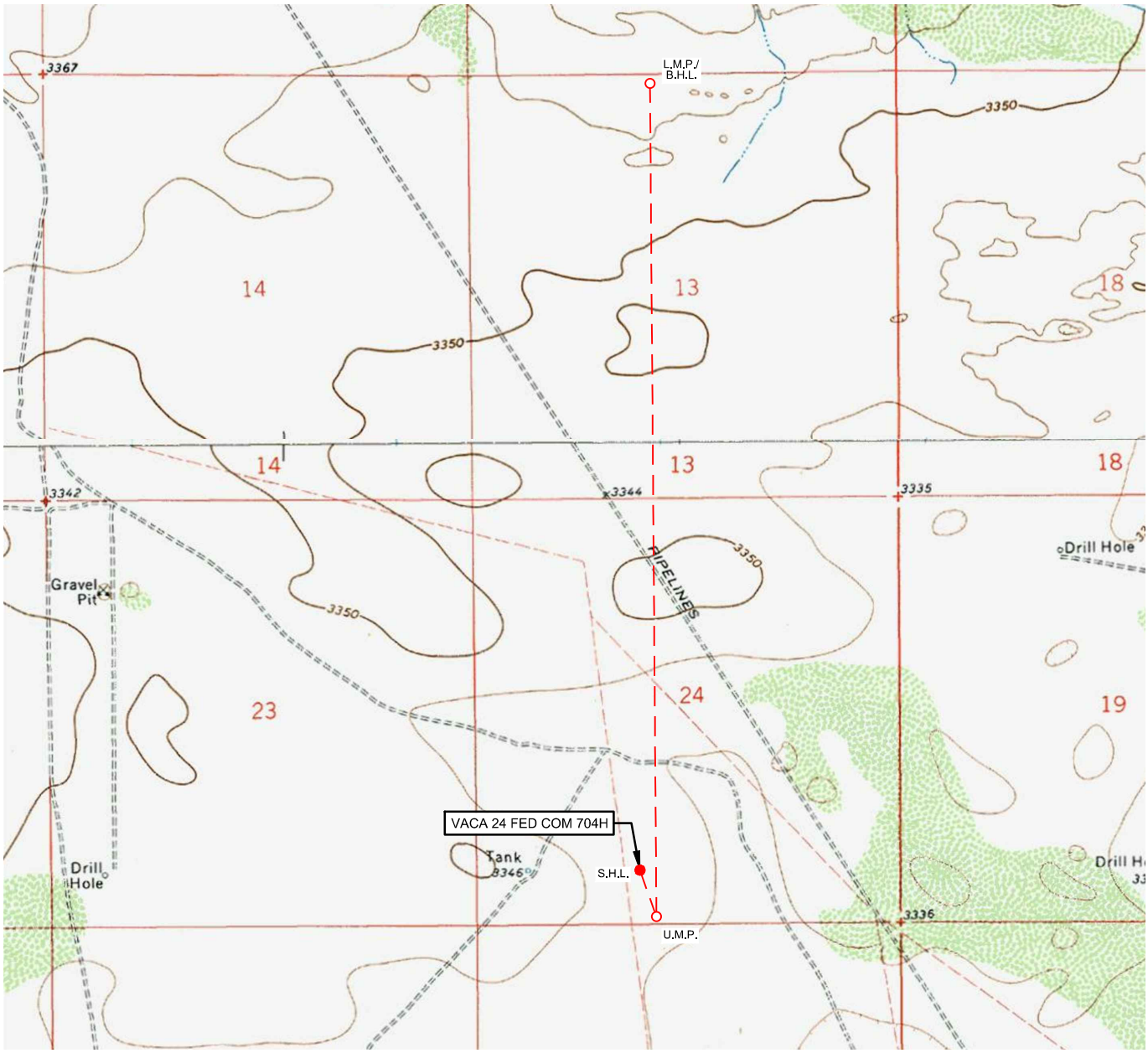
04/13/2019
Date of Survey
Signature and Seal of Professional Surveyor

RAMON A. DOMINGUEZ
NEW MEXICO
24508
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:40 AM rdominguez

LOCATION & ELEVATION VERIFICATION MAP

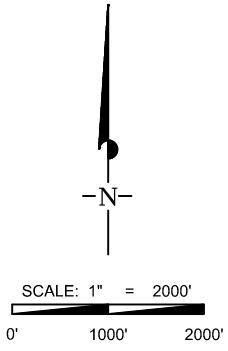


eog resources, inc.

LEASE NAME & WELL NO.: VACA 24 FED COM 704H

SECTION 24 TWP 25-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3332'
DESCRIPTION 679' FSL & 2110' FWL

LATITUDE N 32.1106313 LONGITUDE W 103.5277860



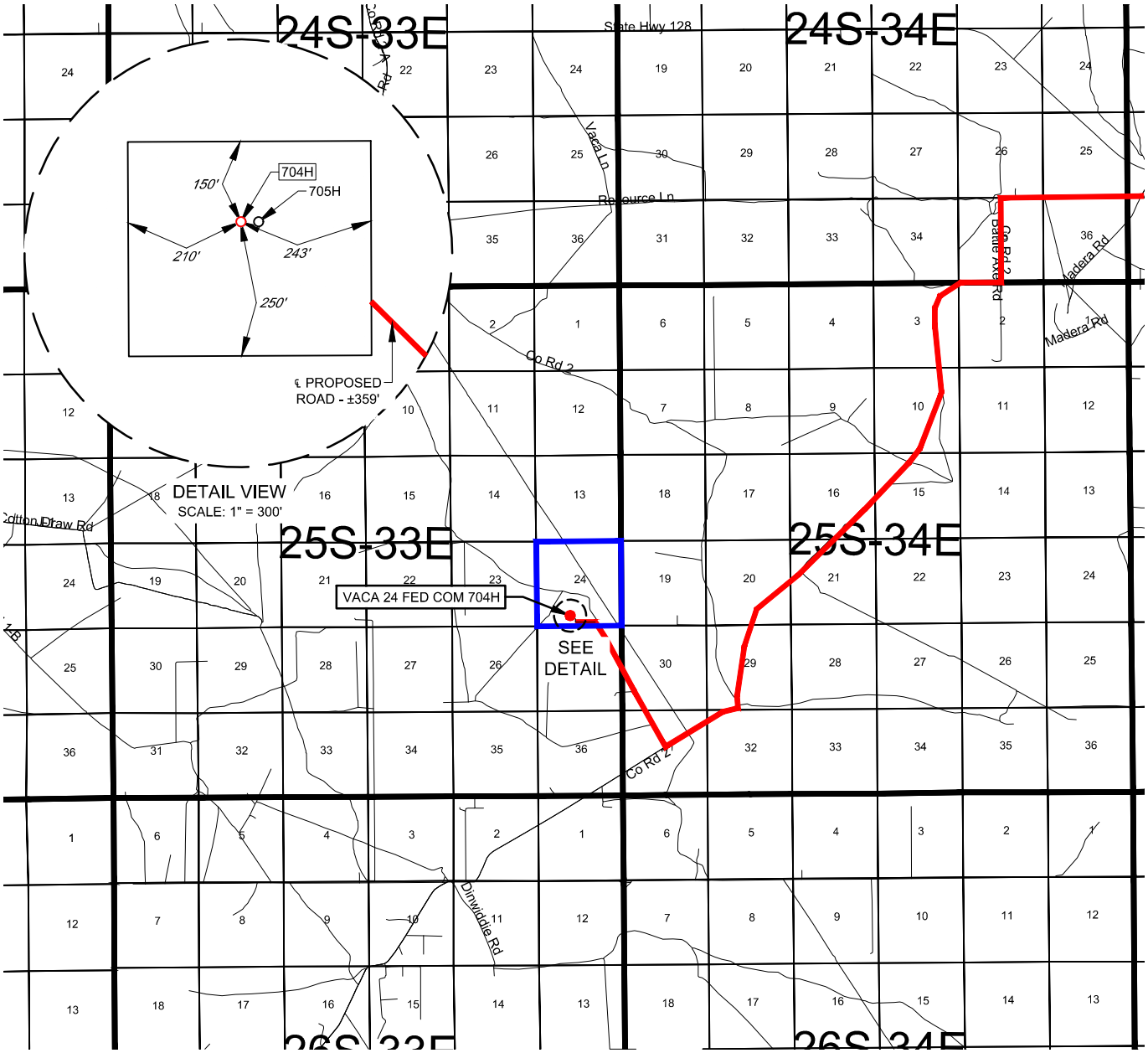
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS 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 COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

EXHIBIT 2

VICINITY MAP



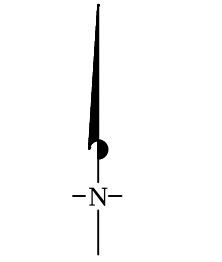
eog resources, inc.

LEASE NAME & WELL NO.: VACA 24 FED COM 704H

SECTION 24 TWP 25-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 679' FSL & 2110' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & NM-128, GO WEST ON NM-128 ±14.1 MILES, THENCE SOUTHWEST (LEFT) ON BATTLE AXE RD. ±10.4 MILES, THENCE NORTHWEST (RIGHT) ON LEASE RD. ±1.7 MILES, THENCE WEST (LEFT) ON A PROPOSED RD. ±1246 FEET, THENCE NORTH (RIGHT) ON A PROPOSED RD. ±359 FEET TO A POINT ±286 FEET SOUTHEAST OF THE LOCATION.



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 EOG RESOURCES, INC. 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 COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

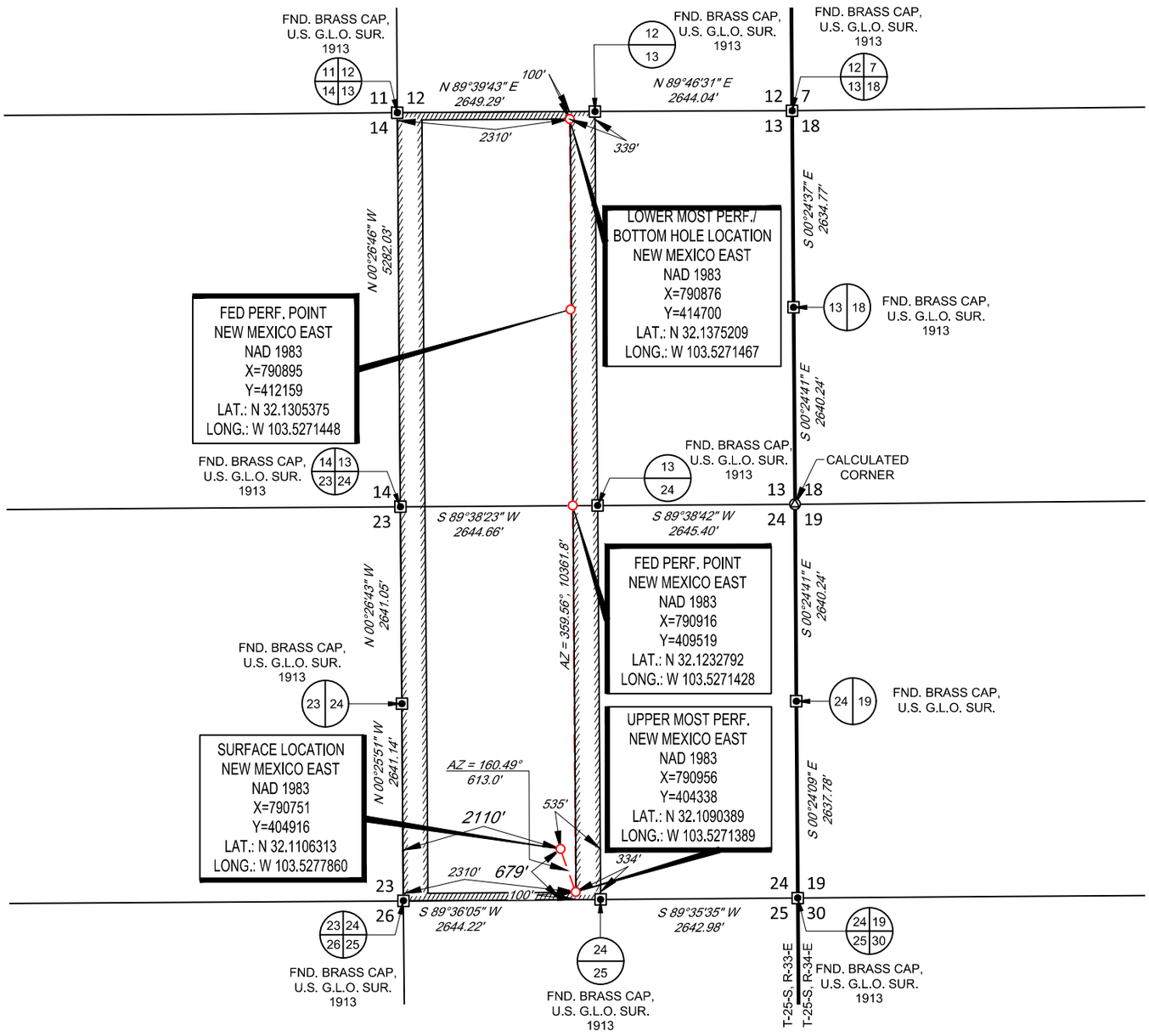
TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

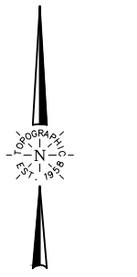
S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:42 AM rdominguez

eog resources, inc.

EXHIBIT 2A

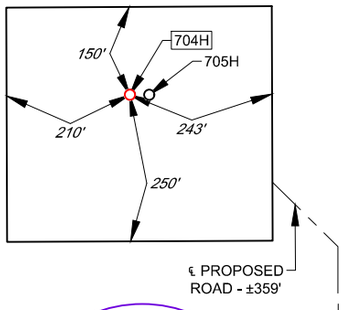
SECTION 24, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO





SCALE: 1" = 2000'

0' 1000' 2000'



DETAIL VIEW
SCALE: 1" = 300'

LEASE NAME & WELL NO.: VACA 24 FED COM 704H

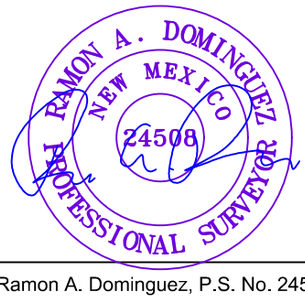
SECTION 24 TWP 25-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 679' FSL & 2110' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & NM-128, GO WEST ON NM-128 ±14.1 MILES, THENCE SOUTHWEST (LEFT) ON BATTLE AXE RD. ±10.4 MILES, THENCE NORTHWEST (RIGHT) ON LEASE RD. ±1.7 MILES, THENCE WEST (LEFT) ON A PROPOSED RD. ±1246 FEET, THENCE NORTH (RIGHT) ON A PROPOSED RD. ±359 FEET TO A POINT ±286 FEET SOUTHEAST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

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 EOG RESOURCES, INC. 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.



Ramon A. Dominguez, P.S. No. 24508
December 14, 2020

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:43 AM rdominguez

EXHIBIT 2B

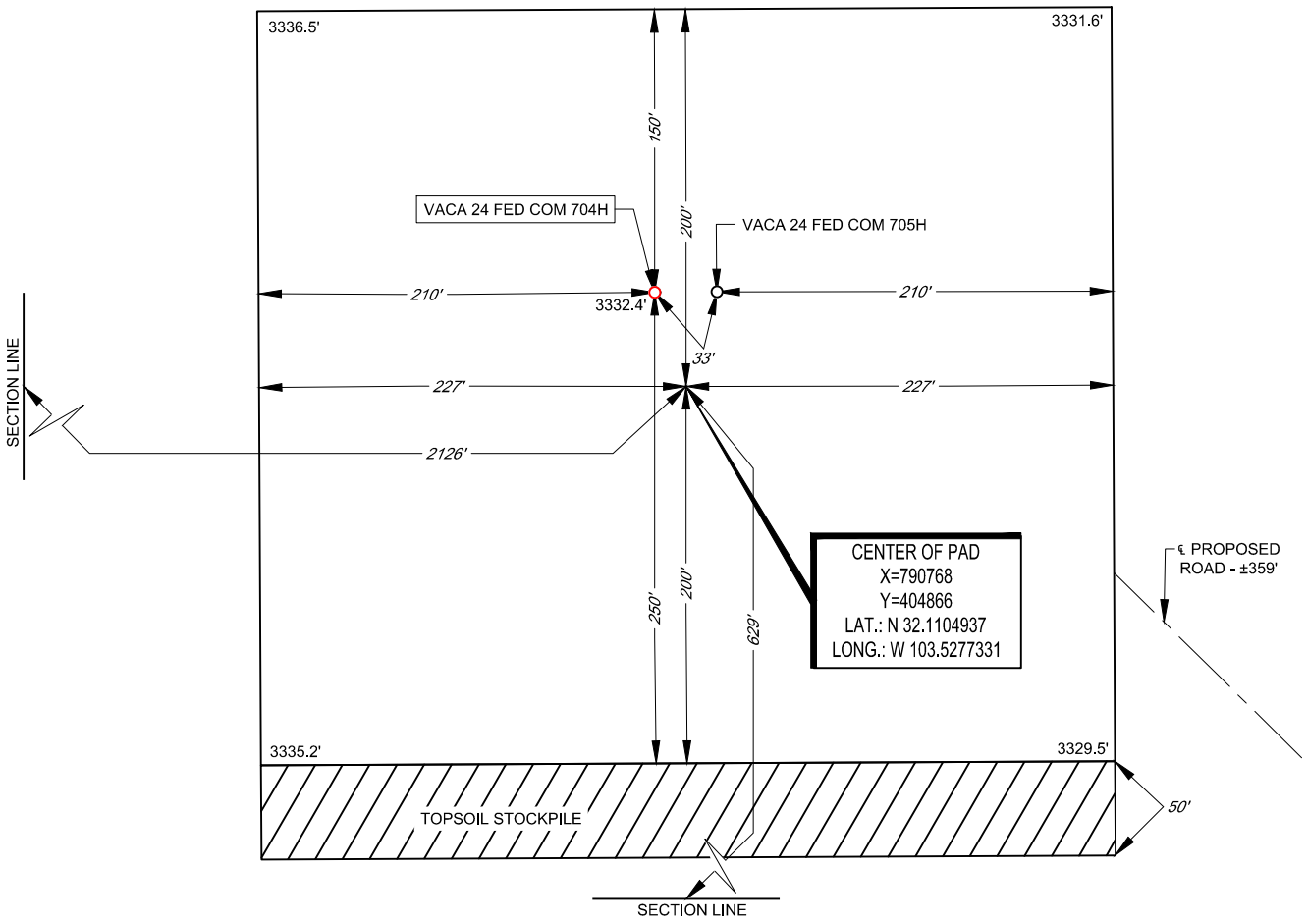
eog resources, inc.

SECTION 24, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

LEGEND

SECTION LINE
PROPOSED ROAD



LEASE NAME & WELL NO.: VACA 24 FED COM 704H

704H LATITUDE N 32.1106313 704H LONGITUDE W 103.5277860

CENTER OF PAD IS 629' FSL & 2126' FWL

RAMON A. DOMINGUEZ NEW MEXICO 24508 PROFESSIONAL SURVEYOR

Ramon A. Dominguez, P.S. No. 24508

DECEMBER 14, 2020

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

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 EOG RESOURCES, INC. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO, ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. 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.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

N

SCALE: 1" = 100'

0' 50' 100'

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

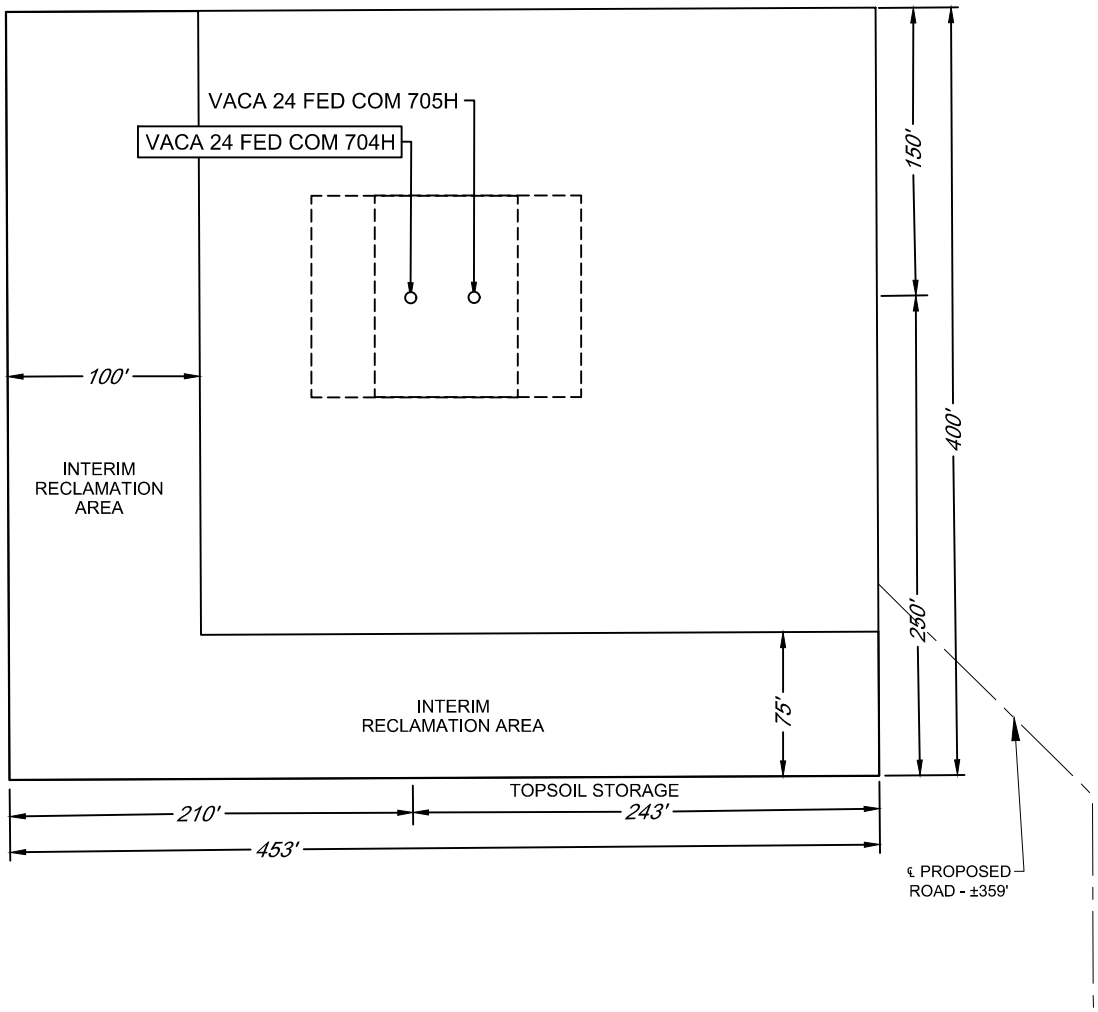
S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:44 AM rdominguez

EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 24, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: VACA 24 FED COM 704H

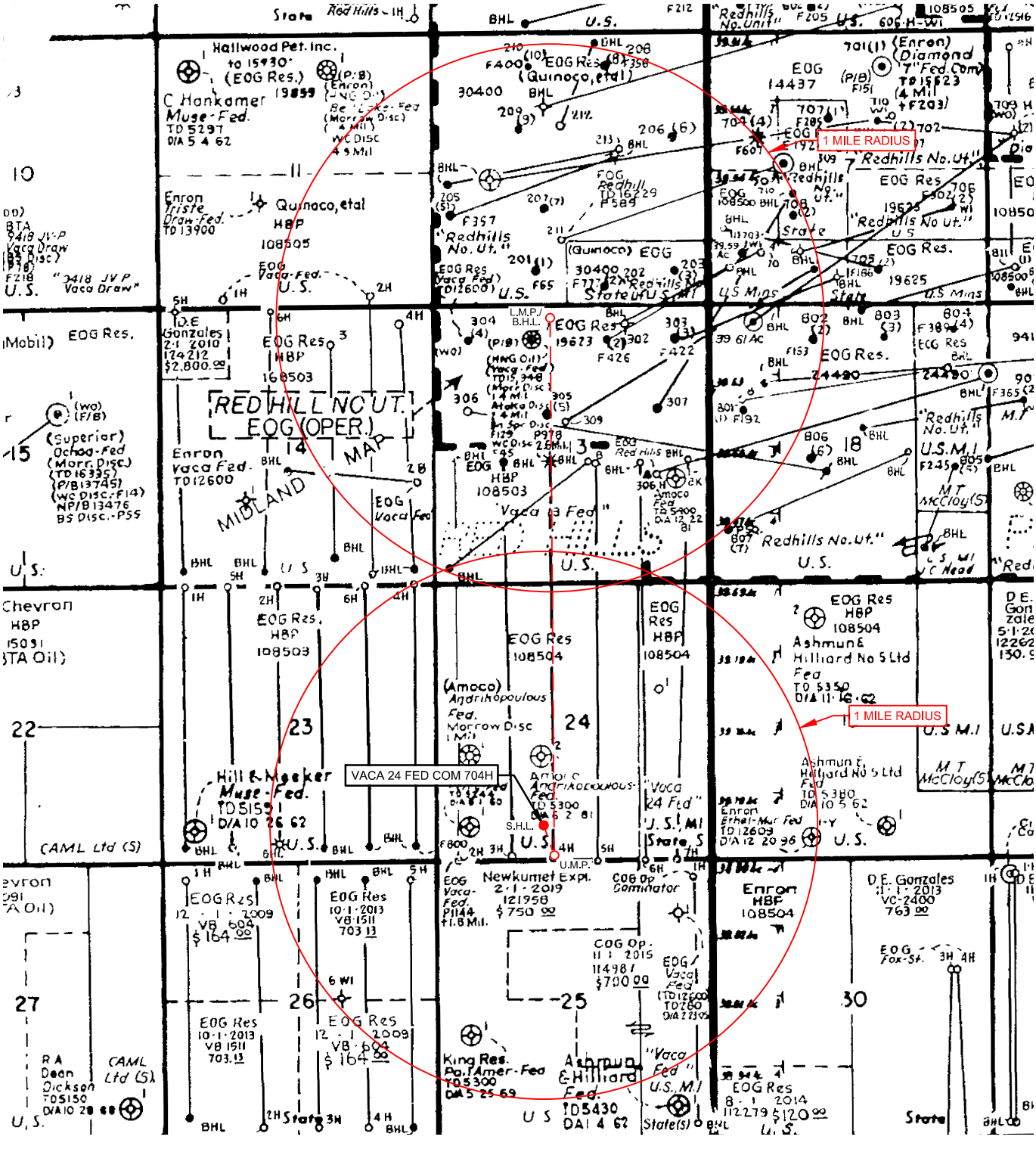
704H LATITUDE N 32.1106313 704H LONGITUDE W 103.5277860

S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:44 AM rdominguez

EXHIBIT 3

eog resources, inc.

SECTION 24, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: VACA 24 FED COM 704H

704H LATITUDE N 32.1106313 704H LONGITUDE W 103.5277860

SCALE: NTS

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

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 EOG RESOURCES, INC. 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.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

S:\SURVEY\EOG_MIDLAND\VACA_24\FINAL_PRODUCTS\LO_VACA_24_FED_COM_704H_REV1.DWG 12/15/2020 9:45:45 AM rdominguez

Revised Permit Information 1/5/2020:

Well Name: Vaca 24 Fed Com #704H

Location:
SHL: 679' FSL & 2110' FWL, Section 24, T-25-S, R-33-E, Lea Co., N.M.
BHL: 100' FNL & 2310' FWL, Section 13, T-25-S, R-33-E, Lea Co., N.M.

Design A

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0' – 1,200'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,430'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 10,930'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,930'–11,430'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,430' – 22,736'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

Variance is requested to wave the centralizer requirements for the 7-5/8" casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

EOG requests variance to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422'' is acceptable for the curve and lateral portions of the production open hole section.

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/sk	Slurry Description
1,200' 9-5/8"	330	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	100	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 1,000')
11,430' 7-5/8"	420	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,925')
	1,320	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
22,736' 5-1/2"	1,000	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,930')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

EOG requests variance from minimum standards to pump a two stage cement job on the 7-5/8'' intermediate casing string with the first stage being pumped conventionally with the calculated TOC at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top of cement will be verified by Echo-meter.

EOG will include the final fluid top verified by Echo-meter and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Mud Program:

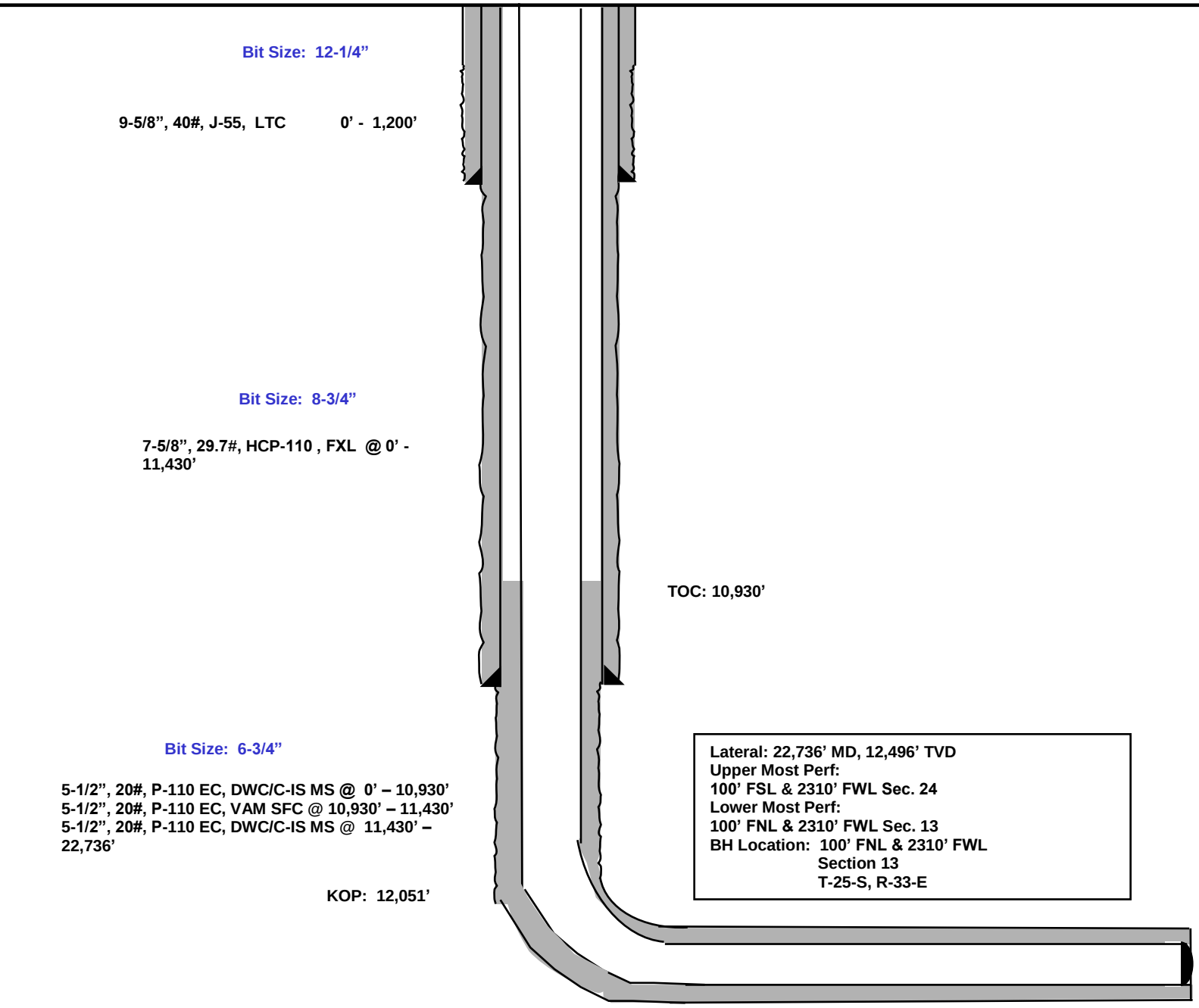
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,200'	Fresh - Gel	8.6-8.8	28-34	N/c
1,200' – 11,430'	Brine	10.0-10.2	28-34	N/c
11,430' – 12,051'	Oil Base	8.7-9.4	58-68	N/c - 6
12,051' – 22,736' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

679’ FSL
2110’ FWL
Section 24
T-25-S, R-33-E

Revised Wellbore

API: 30-025-46963

KB: 3,357’
GL: 3,332’



EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Vaca 24 Fed Com
#704H

OH

Plan: Plan #0.1

Standard Planning Report

06 January, 2021

eog resources

EOG Resources
Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Project Lea County, NM (NAD 83 NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Vaca 24 Fed Com

Site Position:		**Northing:**	404,270.00 usft	**Latitude:**	32° 6' 31.982 N
From:	Map	**Easting:**	789,366.00 usft	**Longitude:**	103° 31' 56.186 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.43 °

Well #704H

Well Position	**+N/-S**	646.0 usft	**Northing:**	404,916.00 usft	**Latitude:**	32° 6' 38.272 N
	+E/-W	1,385.0 usft	**Easting:**	790,751.00 usft	**Longitude:**	103° 31' 40.028 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,332.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/8/2019	6.70	59.94	47,664.69785927

Design Plan #0.1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.73

Plan Survey Tool Program **Date** 1/6/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,736.2	Plan #0.1 (OH)	MWD	
				OWSG MWD - Standard	

eog resources

EOG Resources

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,588.6	5.77	161.92	1,588.1	-13.8	4.5	2.00	2.00	0.00	161.92	
7,869.2	5.77	161.92	7,836.9	-614.2	200.5	0.00	0.00	0.00	0.00	
8,157.8	0.00	0.00	8,125.0	-628.0	205.0	2.00	-2.00	0.00	180.00	
12,051.3	0.00	0.00	12,018.5	-628.0	205.0	0.00	0.00	0.00	0.00	KOP(Vaca 24 Fed Co
12,801.3	90.00	359.56	12,496.0	-150.6	201.3	12.00	12.00	-0.06	359.56	
17,555.0	90.00	359.56	12,496.0	4,603.0	165.0	0.00	0.00	0.00	0.00	Fed Perf 1(Vaca 24 F
17,555.9	90.00	359.54	12,496.0	4,603.9	165.0	2.00	0.05	-2.00	-88.62	
20,195.1	90.00	359.54	12,496.0	7,243.0	144.0	0.00	0.00	0.00	0.00	Fed Perf 2(Vaca 24 F
20,196.4	90.00	359.57	12,496.0	7,244.4	144.0	2.00	0.00	2.00	90.00	
22,736.2	90.00	359.57	12,496.0	9,784.0	125.0	0.00	0.00	0.00	0.00	PBHL(Vaca 24 Fed C

eog resources

EOG Resources
Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	2.00	161.92	1,400.0	-1.7	0.5	-1.7	2.00	2.00	0.00
1,500.0	4.00	161.92	1,499.8	-6.6	2.2	-6.6	2.00	2.00	0.00
1,588.6	5.77	161.92	1,588.1	-13.8	4.5	-13.7	2.00	2.00	0.00
1,600.0	5.77	161.92	1,599.5	-14.9	4.9	-14.8	0.00	0.00	0.00
1,700.0	5.77	161.92	1,698.9	-24.5	8.0	-24.4	0.00	0.00	0.00
1,800.0	5.77	161.92	1,798.4	-34.0	11.1	-33.9	0.00	0.00	0.00
1,900.0	5.77	161.92	1,897.9	-43.6	14.2	-43.4	0.00	0.00	0.00
2,000.0	5.77	161.92	1,997.4	-53.1	17.3	-52.9	0.00	0.00	0.00
2,100.0	5.77	161.92	2,096.9	-62.7	20.5	-62.4	0.00	0.00	0.00
2,200.0	5.77	161.92	2,196.4	-72.3	23.6	-71.9	0.00	0.00	0.00
2,300.0	5.77	161.92	2,295.9	-81.8	26.7	-81.5	0.00	0.00	0.00
2,400.0	5.77	161.92	2,395.4	-91.4	29.8	-91.0	0.00	0.00	0.00
2,500.0	5.77	161.92	2,494.9	-100.9	32.9	-100.5	0.00	0.00	0.00
2,600.0	5.77	161.92	2,594.4	-110.5	36.1	-110.0	0.00	0.00	0.00
2,700.0	5.77	161.92	2,693.9	-120.1	39.2	-119.5	0.00	0.00	0.00
2,800.0	5.77	161.92	2,793.4	-129.6	42.3	-129.1	0.00	0.00	0.00
2,900.0	5.77	161.92	2,892.9	-139.2	45.4	-138.6	0.00	0.00	0.00
3,000.0	5.77	161.92	2,992.4	-148.7	48.5	-148.1	0.00	0.00	0.00
3,100.0	5.77	161.92	3,091.9	-158.3	51.7	-157.6	0.00	0.00	0.00
3,200.0	5.77	161.92	3,191.3	-167.8	54.8	-167.1	0.00	0.00	0.00
3,300.0	5.77	161.92	3,290.8	-177.4	57.9	-176.7	0.00	0.00	0.00
3,400.0	5.77	161.92	3,390.3	-187.0	61.0	-186.2	0.00	0.00	0.00
3,500.0	5.77	161.92	3,489.8	-196.5	64.2	-195.7	0.00	0.00	0.00
3,600.0	5.77	161.92	3,589.3	-206.1	67.3	-205.2	0.00	0.00	0.00
3,700.0	5.77	161.92	3,688.8	-215.6	70.4	-214.7	0.00	0.00	0.00
3,800.0	5.77	161.92	3,788.3	-225.2	73.5	-224.2	0.00	0.00	0.00
3,900.0	5.77	161.92	3,887.8	-234.8	76.6	-233.8	0.00	0.00	0.00
4,000.0	5.77	161.92	3,987.3	-244.3	79.8	-243.3	0.00	0.00	0.00
4,100.0	5.77	161.92	4,086.8	-253.9	82.9	-252.8	0.00	0.00	0.00
4,200.0	5.77	161.92	4,186.3	-263.4	86.0	-262.3	0.00	0.00	0.00
4,300.0	5.77	161.92	4,285.8	-273.0	89.1	-271.8	0.00	0.00	0.00
4,400.0	5.77	161.92	4,385.3	-282.6	92.2	-281.4	0.00	0.00	0.00
4,500.0	5.77	161.92	4,484.8	-292.1	95.4	-290.9	0.00	0.00	0.00
4,600.0	5.77	161.92	4,584.2	-301.7	98.5	-300.4	0.00	0.00	0.00
4,700.0	5.77	161.92	4,683.7	-311.2	101.6	-309.9	0.00	0.00	0.00
4,800.0	5.77	161.92	4,783.2	-320.8	104.7	-319.4	0.00	0.00	0.00
4,900.0	5.77	161.92	4,882.7	-330.4	107.8	-329.0	0.00	0.00	0.00
5,000.0	5.77	161.92	4,982.2	-339.9	111.0	-338.5	0.00	0.00	0.00
5,100.0	5.77	161.92	5,081.7	-349.5	114.1	-348.0	0.00	0.00	0.00
5,200.0	5.77	161.92	5,181.2	-359.0	117.2	-357.5	0.00	0.00	0.00

eog resources

EOG Resources

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
5,300.0	5.77	161.92	5,280.7	-368.6	120.3	-367.0	0.00	0.00	0.00
5,400.0	5.77	161.92	5,380.2	-378.2	123.4	-376.5	0.00	0.00	0.00
5,500.0	5.77	161.92	5,479.7	-387.7	126.6	-386.1	0.00	0.00	0.00
5,600.0	5.77	161.92	5,579.2	-397.3	129.7	-395.6	0.00	0.00	0.00
5,700.0	5.77	161.92	5,678.7	-406.8	132.8	-405.1	0.00	0.00	0.00
5,800.0	5.77	161.92	5,778.2	-416.4	135.9	-414.6	0.00	0.00	0.00
5,900.0	5.77	161.92	5,877.7	-425.9	139.0	-424.1	0.00	0.00	0.00
6,000.0	5.77	161.92	5,977.2	-435.5	142.2	-433.7	0.00	0.00	0.00
6,100.0	5.77	161.92	6,076.6	-445.1	145.3	-443.2	0.00	0.00	0.00
6,200.0	5.77	161.92	6,176.1	-454.6	148.4	-452.7	0.00	0.00	0.00
6,300.0	5.77	161.92	6,275.6	-464.2	151.5	-462.2	0.00	0.00	0.00
6,400.0	5.77	161.92	6,375.1	-473.7	154.6	-471.7	0.00	0.00	0.00
6,500.0	5.77	161.92	6,474.6	-483.3	157.8	-481.3	0.00	0.00	0.00
6,600.0	5.77	161.92	6,574.1	-492.9	160.9	-490.8	0.00	0.00	0.00
6,700.0	5.77	161.92	6,673.6	-502.4	164.0	-500.3	0.00	0.00	0.00
6,800.0	5.77	161.92	6,773.1	-512.0	167.1	-509.8	0.00	0.00	0.00
6,900.0	5.77	161.92	6,872.6	-521.5	170.2	-519.3	0.00	0.00	0.00
7,000.0	5.77	161.92	6,972.1	-531.1	173.4	-528.8	0.00	0.00	0.00
7,100.0	5.77	161.92	7,071.6	-540.7	176.5	-538.4	0.00	0.00	0.00
7,200.0	5.77	161.92	7,171.1	-550.2	179.6	-547.9	0.00	0.00	0.00
7,300.0	5.77	161.92	7,270.6	-559.8	182.7	-557.4	0.00	0.00	0.00
7,400.0	5.77	161.92	7,370.1	-569.3	185.9	-566.9	0.00	0.00	0.00
7,500.0	5.77	161.92	7,469.5	-578.9	189.0	-576.4	0.00	0.00	0.00
7,600.0	5.77	161.92	7,569.0	-588.5	192.1	-586.0	0.00	0.00	0.00
7,700.0	5.77	161.92	7,668.5	-598.0	195.2	-595.5	0.00	0.00	0.00
7,800.0	5.77	161.92	7,768.0	-607.6	198.3	-605.0	0.00	0.00	0.00
7,869.2	5.77	161.92	7,836.9	-614.2	200.5	-611.6	0.00	0.00	0.00
7,900.0	5.16	161.92	7,867.5	-617.0	201.4	-614.4	2.00	-2.00	0.00
8,000.0	3.16	161.92	7,967.3	-623.9	203.7	-621.2	2.00	-2.00	0.00
8,100.0	1.16	161.92	8,067.2	-627.4	204.8	-624.8	2.00	-2.00	0.00
8,157.8	0.00	0.00	8,125.0	-628.0	205.0	-625.3	2.00	-2.00	0.00
8,200.0	0.00	0.00	8,167.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,300.0	0.00	0.00	8,267.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,400.0	0.00	0.00	8,367.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,500.0	0.00	0.00	8,467.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,600.0	0.00	0.00	8,567.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,700.0	0.00	0.00	8,667.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,800.0	0.00	0.00	8,767.2	-628.0	205.0	-625.3	0.00	0.00	0.00
8,900.0	0.00	0.00	8,867.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,000.0	0.00	0.00	8,967.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,100.0	0.00	0.00	9,067.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,200.0	0.00	0.00	9,167.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,300.0	0.00	0.00	9,267.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,400.0	0.00	0.00	9,367.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,467.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,567.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,667.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,767.2	-628.0	205.0	-625.3	0.00	0.00	0.00
9,900.0	0.00	0.00	9,867.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,000.0	0.00	0.00	9,967.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,100.0	0.00	0.00	10,067.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,200.0	0.00	0.00	10,167.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,267.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,400.0	0.00	0.00	10,367.2	-628.0	205.0	-625.3	0.00	0.00	0.00

eog resources

EOG Resources

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
10,500.0	0.00	0.00	10,467.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,567.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,667.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,767.2	-628.0	205.0	-625.3	0.00	0.00	0.00
10,900.0	0.00	0.00	10,867.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,000.0	0.00	0.00	10,967.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,100.0	0.00	0.00	11,067.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,200.0	0.00	0.00	11,167.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,300.0	0.00	0.00	11,267.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,400.0	0.00	0.00	11,367.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,500.0	0.00	0.00	11,467.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,600.0	0.00	0.00	11,567.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,700.0	0.00	0.00	11,667.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,800.0	0.00	0.00	11,767.2	-628.0	205.0	-625.3	0.00	0.00	0.00
11,900.0	0.00	0.00	11,867.2	-628.0	205.0	-625.3	0.00	0.00	0.00
12,000.0	0.00	0.00	11,967.2	-628.0	205.0	-625.3	0.00	0.00	0.00
12,051.3	0.00	0.00	12,018.5	-628.0	205.0	-625.3	0.00	0.00	0.00
12,075.0	2.84	359.56	12,042.2	-627.4	205.0	-624.7	12.00	12.00	0.00
12,100.0	5.84	359.56	12,067.1	-625.5	205.0	-622.9	12.00	12.00	0.00
12,125.0	8.84	359.56	12,091.9	-622.3	205.0	-619.7	12.00	12.00	0.00
12,150.0	11.84	359.56	12,116.5	-617.8	204.9	-615.2	12.00	12.00	0.00
12,175.0	14.84	359.56	12,140.8	-612.1	204.9	-609.4	12.00	12.00	0.00
12,200.0	17.84	359.56	12,164.8	-605.0	204.8	-602.4	12.00	12.00	0.00
12,225.0	20.84	359.56	12,188.4	-596.8	204.8	-594.1	12.00	12.00	0.00
12,250.0	23.84	359.56	12,211.5	-587.3	204.7	-584.6	12.00	12.00	0.00
12,275.0	26.84	359.56	12,234.1	-576.6	204.6	-573.9	12.00	12.00	0.00
12,300.0	29.84	359.56	12,256.1	-564.7	204.5	-562.0	12.00	12.00	0.00
12,325.0	32.84	359.56	12,277.4	-551.7	204.4	-549.0	12.00	12.00	0.00
12,350.0	35.84	359.56	12,298.1	-537.6	204.3	-534.9	12.00	12.00	0.00
12,375.0	38.84	359.56	12,318.0	-522.4	204.2	-519.8	12.00	12.00	0.00
12,400.0	41.84	359.56	12,337.0	-506.2	204.1	-503.6	12.00	12.00	0.00
12,425.0	44.84	359.56	12,355.2	-489.1	203.9	-486.4	12.00	12.00	0.00
12,450.0	47.84	359.56	12,372.4	-471.0	203.8	-468.4	12.00	12.00	0.00
12,475.0	50.84	359.56	12,388.7	-452.0	203.7	-449.4	12.00	12.00	0.00
12,500.0	53.84	359.56	12,404.0	-432.2	203.5	-429.6	12.00	12.00	0.00
12,525.0	56.84	359.56	12,418.2	-411.7	203.3	-409.1	12.00	12.00	0.00
12,550.0	59.84	359.56	12,431.3	-390.4	203.2	-387.8	12.00	12.00	0.00
12,575.0	62.84	359.56	12,443.3	-368.5	203.0	-365.9	12.00	12.00	0.00
12,600.0	65.84	359.56	12,454.2	-345.9	202.8	-343.3	12.00	12.00	0.00
12,625.0	68.84	359.56	12,463.8	-322.9	202.7	-320.3	12.00	12.00	0.00
12,650.0	71.84	359.56	12,472.2	-299.3	202.5	-296.7	12.00	12.00	0.00
12,675.0	74.84	359.56	12,479.4	-275.4	202.3	-272.8	12.00	12.00	0.00
12,700.0	77.84	359.56	12,485.3	-251.1	202.1	-248.5	12.00	12.00	0.00
12,725.0	80.84	359.56	12,489.9	-226.5	201.9	-223.9	12.00	12.00	0.00
12,750.0	83.84	359.56	12,493.2	-201.8	201.7	-199.2	12.00	12.00	0.00
12,775.0	86.84	359.56	12,495.2	-176.8	201.6	-174.3	12.00	12.00	0.00
12,801.3	90.00	359.56	12,496.0	-150.6	201.3	-148.0	12.00	12.00	0.00
12,900.0	90.00	359.56	12,496.0	-51.9	200.6	-49.3	0.00	0.00	0.00
13,000.0	90.00	359.56	12,496.0	48.1	199.8	50.7	0.00	0.00	0.00
13,100.0	90.00	359.56	12,496.0	148.1	199.1	150.7	0.00	0.00	0.00
13,200.0	90.00	359.56	12,496.0	248.1	198.3	250.6	0.00	0.00	0.00
13,300.0	90.00	359.56	12,496.0	348.1	197.5	350.6	0.00	0.00	0.00
13,400.0	90.00	359.56	12,496.0	448.1	196.8	450.6	0.00	0.00	0.00
13,500.0	90.00	359.56	12,496.0	548.1	196.0	550.6	0.00	0.00	0.00

eog resources

EOG Resources

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
13,600.0	90.00	359.56	12,496.0	648.1	195.2	650.6	0.00	0.00	0.00
13,700.0	90.00	359.56	12,496.0	748.1	194.5	750.5	0.00	0.00	0.00
13,800.0	90.00	359.56	12,496.0	848.1	193.7	850.5	0.00	0.00	0.00
13,900.0	90.00	359.56	12,496.0	948.1	192.9	950.5	0.00	0.00	0.00
14,000.0	90.00	359.56	12,496.0	1,048.1	192.2	1,050.5	0.00	0.00	0.00
14,100.0	90.00	359.56	12,496.0	1,148.1	191.4	1,150.5	0.00	0.00	0.00
14,200.0	90.00	359.56	12,496.0	1,248.1	190.7	1,250.4	0.00	0.00	0.00
14,300.0	90.00	359.56	12,496.0	1,348.1	189.9	1,350.4	0.00	0.00	0.00
14,400.0	90.00	359.56	12,496.0	1,448.1	189.1	1,450.4	0.00	0.00	0.00
14,500.0	90.00	359.56	12,496.0	1,548.1	188.4	1,550.4	0.00	0.00	0.00
14,600.0	90.00	359.56	12,496.0	1,648.1	187.6	1,650.3	0.00	0.00	0.00
14,700.0	90.00	359.56	12,496.0	1,748.1	186.8	1,750.3	0.00	0.00	0.00
14,800.0	90.00	359.56	12,496.0	1,848.1	186.1	1,850.3	0.00	0.00	0.00
14,900.0	90.00	359.56	12,496.0	1,948.1	185.3	1,950.3	0.00	0.00	0.00
15,000.0	90.00	359.56	12,496.0	2,048.1	184.5	2,050.3	0.00	0.00	0.00
15,100.0	90.00	359.56	12,496.0	2,148.1	183.8	2,150.2	0.00	0.00	0.00
15,200.0	90.00	359.56	12,496.0	2,248.1	183.0	2,250.2	0.00	0.00	0.00
15,300.0	90.00	359.56	12,496.0	2,348.1	182.2	2,350.2	0.00	0.00	0.00
15,400.0	90.00	359.56	12,496.0	2,448.1	181.5	2,450.2	0.00	0.00	0.00
15,500.0	90.00	359.56	12,496.0	2,548.1	180.7	2,550.2	0.00	0.00	0.00
15,600.0	90.00	359.56	12,496.0	2,648.1	179.9	2,650.1	0.00	0.00	0.00
15,700.0	90.00	359.56	12,496.0	2,748.1	179.2	2,750.1	0.00	0.00	0.00
15,800.0	90.00	359.56	12,496.0	2,848.1	178.4	2,850.1	0.00	0.00	0.00
15,900.0	90.00	359.56	12,496.0	2,948.0	177.7	2,950.1	0.00	0.00	0.00
16,000.0	90.00	359.56	12,496.0	3,048.0	176.9	3,050.1	0.00	0.00	0.00
16,100.0	90.00	359.56	12,496.0	3,148.0	176.1	3,150.0	0.00	0.00	0.00
16,200.0	90.00	359.56	12,496.0	3,248.0	175.4	3,250.0	0.00	0.00	0.00
16,300.0	90.00	359.56	12,496.0	3,348.0	174.6	3,350.0	0.00	0.00	0.00
16,400.0	90.00	359.56	12,496.0	3,448.0	173.8	3,450.0	0.00	0.00	0.00
16,500.0	90.00	359.56	12,496.0	3,548.0	173.1	3,550.0	0.00	0.00	0.00
16,600.0	90.00	359.56	12,496.0	3,648.0	172.3	3,649.9	0.00	0.00	0.00
16,700.0	90.00	359.56	12,496.0	3,748.0	171.5	3,749.9	0.00	0.00	0.00
16,800.0	90.00	359.56	12,496.0	3,848.0	170.8	3,849.9	0.00	0.00	0.00
16,900.0	90.00	359.56	12,496.0	3,948.0	170.0	3,949.9	0.00	0.00	0.00
17,000.0	90.00	359.56	12,496.0	4,048.0	169.2	4,049.8	0.00	0.00	0.00
17,100.0	90.00	359.56	12,496.0	4,148.0	168.5	4,149.8	0.00	0.00	0.00
17,200.0	90.00	359.56	12,496.0	4,248.0	167.7	4,249.8	0.00	0.00	0.00
17,300.0	90.00	359.56	12,496.0	4,348.0	166.9	4,349.8	0.00	0.00	0.00
17,400.0	90.00	359.56	12,496.0	4,448.0	166.2	4,449.8	0.00	0.00	0.00
17,500.0	90.00	359.56	12,496.0	4,548.0	165.4	4,549.7	0.00	0.00	0.00
17,555.0	90.00	359.56	12,496.0	4,603.0	165.0	4,604.7	0.00	0.00	0.00
17,555.9	90.00	359.54	12,496.0	4,603.9	165.0	4,605.6	2.00	0.05	-2.00
17,600.0	90.00	359.54	12,496.0	4,648.0	164.6	4,649.7	0.00	0.00	0.00
17,700.0	90.00	359.54	12,496.0	4,748.0	163.8	4,749.7	0.00	0.00	0.00
17,800.0	90.00	359.54	12,496.0	4,848.0	163.1	4,849.7	0.00	0.00	0.00
17,900.0	90.00	359.54	12,496.0	4,948.0	162.3	4,949.7	0.00	0.00	0.00
18,000.0	90.00	359.54	12,496.0	5,048.0	161.5	5,049.6	0.00	0.00	0.00
18,100.0	90.00	359.54	12,496.0	5,148.0	160.7	5,149.6	0.00	0.00	0.00
18,200.0	90.00	359.54	12,496.0	5,248.0	159.9	5,249.6	0.00	0.00	0.00
18,300.0	90.00	359.54	12,496.0	5,348.0	159.1	5,349.6	0.00	0.00	0.00
18,400.0	90.00	359.54	12,496.0	5,448.0	158.3	5,449.6	0.00	0.00	0.00
18,500.0	90.00	359.54	12,496.0	5,548.0	157.5	5,549.5	0.00	0.00	0.00
18,600.0	90.00	359.54	12,496.0	5,648.0	156.7	5,649.5	0.00	0.00	0.00
18,700.0	90.00	359.54	12,496.0	5,748.0	155.9	5,749.5	0.00	0.00	0.00

eog resources

EOG Resources

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
18,800.0	90.00	359.54	12,496.0	5,848.0	155.1	5,849.5	0.00	0.00	0.00
18,900.0	90.00	359.54	12,496.0	5,948.0	154.3	5,949.4	0.00	0.00	0.00
19,000.0	90.00	359.54	12,496.0	6,048.0	153.5	6,049.4	0.00	0.00	0.00
19,100.0	90.00	359.54	12,496.0	6,148.0	152.7	6,149.4	0.00	0.00	0.00
19,200.0	90.00	359.54	12,496.0	6,247.9	151.9	6,249.4	0.00	0.00	0.00
19,300.0	90.00	359.54	12,496.0	6,347.9	151.1	6,349.4	0.00	0.00	0.00
19,400.0	90.00	359.54	12,496.0	6,447.9	150.3	6,449.3	0.00	0.00	0.00
19,500.0	90.00	359.54	12,496.0	6,547.9	149.5	6,549.3	0.00	0.00	0.00
19,600.0	90.00	359.54	12,496.0	6,647.9	148.7	6,649.3	0.00	0.00	0.00
19,700.0	90.00	359.54	12,496.0	6,747.9	147.9	6,749.3	0.00	0.00	0.00
19,800.0	90.00	359.54	12,496.0	6,847.9	147.1	6,849.3	0.00	0.00	0.00
19,900.0	90.00	359.54	12,496.0	6,947.9	146.3	6,949.2	0.00	0.00	0.00
20,000.0	90.00	359.54	12,496.0	7,047.9	145.6	7,049.2	0.00	0.00	0.00
20,100.0	90.00	359.54	12,496.0	7,147.9	144.8	7,149.2	0.00	0.00	0.00
20,195.1	90.00	359.54	12,496.0	7,243.0	144.0	7,244.2	0.00	0.00	0.00
20,196.4	90.00	359.57	12,496.0	7,244.4	144.0	7,245.6	2.00	0.00	2.00
20,200.0	90.00	359.57	12,496.0	7,247.9	144.0	7,249.2	0.00	0.00	0.00
20,300.0	90.00	359.57	12,496.0	7,347.9	143.2	7,349.1	0.00	0.00	0.00
20,400.0	90.00	359.57	12,496.0	7,447.9	142.5	7,449.1	0.00	0.00	0.00
20,500.0	90.00	359.57	12,496.0	7,547.9	141.7	7,549.1	0.00	0.00	0.00
20,600.0	90.00	359.57	12,496.0	7,647.9	141.0	7,649.1	0.00	0.00	0.00
20,700.0	90.00	359.57	12,496.0	7,747.9	140.2	7,749.1	0.00	0.00	0.00
20,800.0	90.00	359.57	12,496.0	7,847.9	139.5	7,849.0	0.00	0.00	0.00
20,900.0	90.00	359.57	12,496.0	7,947.9	138.7	7,949.0	0.00	0.00	0.00
21,000.0	90.00	359.57	12,496.0	8,047.9	138.0	8,049.0	0.00	0.00	0.00
21,100.0	90.00	359.57	12,496.0	8,147.9	137.2	8,149.0	0.00	0.00	0.00
21,200.0	90.00	359.57	12,496.0	8,247.9	136.5	8,249.0	0.00	0.00	0.00
21,300.0	90.00	359.57	12,496.0	8,347.9	135.7	8,348.9	0.00	0.00	0.00
21,400.0	90.00	359.57	12,496.0	8,447.9	135.0	8,448.9	0.00	0.00	0.00
21,500.0	90.00	359.57	12,496.0	8,547.9	134.2	8,548.9	0.00	0.00	0.00
21,600.0	90.00	359.57	12,496.0	8,647.9	133.5	8,648.9	0.00	0.00	0.00
21,700.0	90.00	359.57	12,496.0	8,747.9	132.7	8,748.9	0.00	0.00	0.00
21,800.0	90.00	359.57	12,496.0	8,847.9	132.0	8,848.8	0.00	0.00	0.00
21,900.0	90.00	359.57	12,496.0	8,947.9	131.3	8,948.8	0.00	0.00	0.00
22,000.0	90.00	359.57	12,496.0	9,047.9	130.5	9,048.8	0.00	0.00	0.00
22,100.0	90.00	359.57	12,496.0	9,147.9	129.8	9,148.8	0.00	0.00	0.00
22,200.0	90.00	359.57	12,496.0	9,247.9	129.0	9,248.8	0.00	0.00	0.00
22,300.0	90.00	359.57	12,496.0	9,347.9	128.3	9,348.7	0.00	0.00	0.00
22,400.0	90.00	359.57	12,496.0	9,447.9	127.5	9,448.7	0.00	0.00	0.00
22,500.0	90.00	359.57	12,496.0	9,547.9	126.8	9,548.7	0.00	0.00	0.00
22,600.0	90.00	359.57	12,496.0	9,647.9	126.0	9,648.7	0.00	0.00	0.00
22,700.0	90.00	359.57	12,496.0	9,747.8	125.3	9,748.7	0.00	0.00	0.00
22,736.2	90.00	359.57	12,496.0	9,784.0	125.0	9,784.8	0.00	0.00	0.00

eog resources

EOG Resources
Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3357.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3357.0usft
Site:	Vaca 24 Fed Com	**North Reference:**	Grid
Well:	#704H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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
KOP(Vaca 24 Fed Com - plan hits target center - Point	0.00	0.00	12,018.5	-628.0	205.0	404,288.00	790,956.00	32° 6' 32.043 N	103° 31' 37.699 W
PBHL(Vaca 24 Fed Com - plan hits target center - Point	0.00	0.01	12,496.0	9,784.0	125.0	414,700.00	790,876.00	32° 8' 15.078 N	103° 31' 37.724 W
FTP(Vaca 24 Fed Com # - plan misses target center by 163.5usft at 12450.0usft MD (12372.4 TVD, -471.0 N, 203.8 E) - Point	0.00	0.00	12,496.0	-578.0	205.0	404,338.00	790,956.00	32° 6' 32.538 N	103° 31' 37.695 W
Fed Perf 2(Vaca 24 Fed - plan hits target center - Point	0.00	0.00	12,496.0	7,243.0	144.0	412,159.00	790,895.00	32° 7' 49.933 N	103° 31' 37.724 W
Fed Perf 1(Vaca 24 Fed - plan hits target center - Point	0.00	0.00	12,496.0	4,603.0	165.0	409,519.00	790,916.00	32° 7' 23.808 N	103° 31' 37.709 W

eog resources

Lea County, NM (NAD 83 NME)

Vaca 24 Fed Com #704H

Plan #0.1

Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.27°

Magnetic Field
Strength: 47664.7nT
Dip Angle: 59.94°
Date: 7/8/2019
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.27°
To convert a Magnetic Direction to a True Direction, Add 6.70° East
To convert a True Direction to a Grid Direction, Subtract 0.43°

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

WELL DETAILS: #704H

3332.0
KB = 25 @ 3357.0usft

Northing	Easting	Latittude	Longitude
404916.00	790751.00	32° 6' 38.272 N	103° 31' 40.028 W

SECTION DETAILS

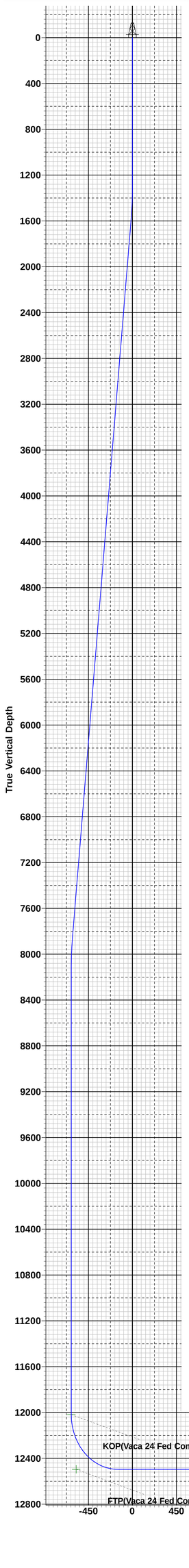
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1588.6	5.77	161.92	1588.1	-13.8	4.5	2.00	161.92	-13.7	
4	7869.2	5.77	161.92	7836.9	-614.2	200.5	0.00	0.00	-611.6	
5	8157.8	0.00	0.00	8125.0	-628.0	205.0	2.00	180.00	-625.3	
6	12051.3	0.00	0.00	12018.5	-628.0	205.0	0.00	0.00	-625.3	KOP(Vaca 24 Fed Com #704H)
7	12801.3	90.00	359.56	12496.0	-150.6	201.3	12.00	359.56	-148.0	
8	17555.0	90.00	359.56	12496.0	4603.0	165.0	0.00	0.00	4604.7	Fed Perf 1(Vaca 24 Fed Com #704H)
9	17555.9	90.00	359.54	12496.0	4603.9	165.0	2.00	-88.62	4605.6	
10	20195.1	90.00	359.54	12496.0	7243.0	144.0	0.00	0.00	7244.2	Fed Perf 2(Vaca 24 Fed Com #704H)
11	20196.4	90.00	359.57	12496.0	7244.4	144.0	2.00	90.00	7245.6	
12	22736.2	90.00	359.57	12496.0	9784.0	125.0	0.00	0.00	9784.8	PBHL(Vaca 24 Fed Com #704H)

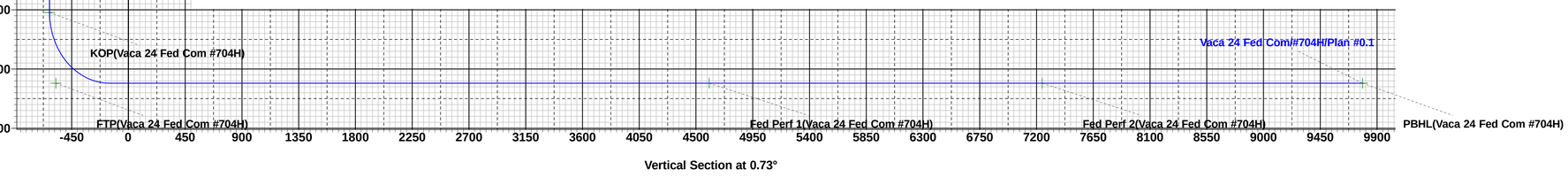
CASING DETAILS

No casing data is available

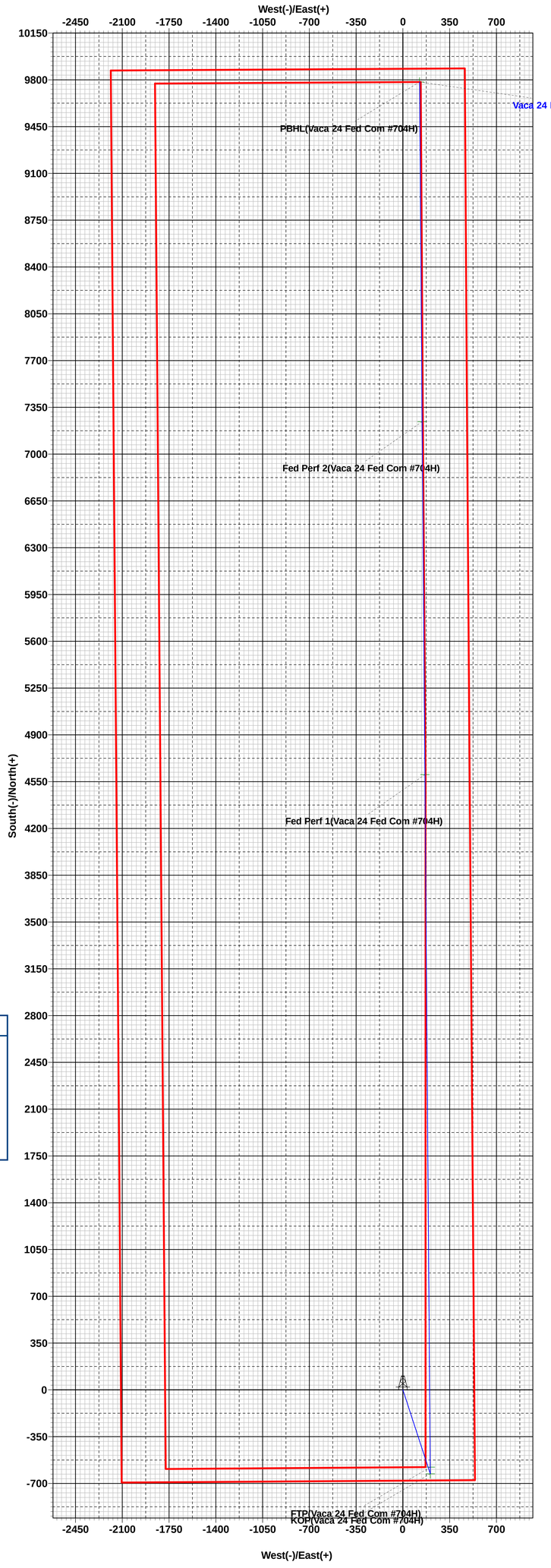
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(Vaca 24 Fed Com #704H)	12018.5	-628.0	205.0	404288.00	790956.00
Fed Perf 1(Vaca 24 Fed Com #704H)	12496.0	4603.0	165.0	409519.00	790916.00
Fed Perf 2(Vaca 24 Fed Com #704H)	12496.0	7243.0	144.0	412159.00	790895.00
PBHL(Vaca 24 Fed Com #704H)	12496.0	9784.0	125.0	414700.00	790876.00
FTP(Vaca 24 Fed Com #704H)	12496.0	-578.0	205.0	404338.00	790956.00





Vertical Section at 0.73°



West(-)/East(+)

Lea County, NM (NAD 83 NME)
Vaca 24 Fed Com
#704H
OH
Plan #0.1
10:56, January 06 2021

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

CONDITIONS

Action 17605

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
EOG RESOURCES INC P.O. Box 2267 Midland, TX79702	7377	17605	C-103A

OCD Reviewer	Condition
pkautz	None