

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	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: 01/14/2021	Time Sundry Submitted: 04:09
Date proposed operation will begin: 01/13/2021	
Procedure Description: EOG respectfully requests an amendment to our approved APD for this well to reflect the following changes: Change surface hole size to 16 inches, adjust cement volumes accordingly	

Application

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
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Section 1 - General

APD ID: 10400058911	Tie to previous NOS?	Submission Date: 07/10/2020
BLM Office: CARLSBAD	User: Star Harrell	Title: Regulatory Specialist
Federal/Indian APD: FED	Is the first lease penetrated for production Federal or Indian? FED	
Lease number: NMNM015317	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: VALIANT 24 FED COM	Well Number: 511H	Well API Number: 3002547989
Field/Pool or Exploratory? Field and Pool	Field Name: BOBCAT DRAW; UPR WOLFCAMP	Pool Name: RED HILLS; LOWER BONE SPRING
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: VALIANT 24 FED COM	Number: 506H-511H-709H-710H-725H
Well Class: HORIZONTAL	Number of Legs: 1	
Well Work Type: Drill		
Well Type: OIL WELL		
Describe Well Type:		

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Type of Well: OIL WELL

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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: 100 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: VALIANT_24_FED_COM_511H_C_102_20200730065651.pdf

Well work start Date: 01/15/2021

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	1773	FSL	615	FEL	25S	32E	24	Aliquot NESE	32.1136897	-103.6218887	LEA	NEW MEXICO	NEW MEXICO	F	NMNM015317	3462	0	0	N
KOP Leg #1	2592	FSL	750	FEL	25S	32E	24	Aliquot NESE	32.1159391	-103.6223291	LEA	NEW MEXICO	NEW MEXICO	F	NMNM015317	-6980	10475	10442	N
PPP Leg #1-1	2542	FSL	750	FEL	25S	32E	24	Aliquot NESE	32.1158015	-103.6223315	LEA	NEW MEXICO	NEW MEXICO	F	NMNM015317	-7214	10718	10676	N
EXIT Leg #1	100	FSL	750	FEL	25S	32E	25	Aliquot SESE	32.0945768	-103.62234	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM110836	-7553	18574	11015	Y

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Allottee or Tribe Name:

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Unit or CA Name:

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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	100	FSL	750	FEL	25S	32E	25	Aliquot SESE	32.0945768	-103.62234	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 110836	-7553	18574	11015	Y

Drilling Plan

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1383052	PERMIAN	3462	0	0	ANHYDRITE	NONE	N
1383040	RUSTLER	2592	870	870	ANHYDRITE	NONE	N
1383041	TOP SALT	2262	1200	1200	SALT	NONE	N
1383042	BASE OF SALT	-1213	4675	4675	SALT	NONE	N
1383043	LAMAR	-1433	4895	4895	LIMESTONE	NONE	N
1383044	BELL CANYON	-1458	4920	4920	SANDSTONE	NATURAL GAS, OIL	N
1383045	CHERRY CANYON	-2458	5920	5920	SANDSTONE	NATURAL GAS, OIL	N
1383046	BRUSHY CANYON	-3983	7445	7445	SANDSTONE	NATURAL GAS, OIL	N
1383051	BONE SPRING LIME	-5558	9020	9020	LIMESTONE	NONE	N
1383047	AVALON SAND	-5628	9090	9090	SHALE	NATURAL GAS, OIL	Y
1383053	FIRST BONE SPRING SAND	-6543	10005	10005	SANDSTONE	NATURAL GAS, OIL	N
1383054	BONE SPRING 2ND	-7113	10575	10575	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

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Pressure Rating (PSI): 10M Rating Depth: 11015

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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2. EOG will utilize wing unions on BOPE connections that can be isolated from wellbore pressure through means of a choke. All wing unions will be rated to a pressure that meets or exceeds the pressure rating of the BOPE system. A multi-bowl wellhead system will be utilized. After running the 13-3/8 surface casing, a 13-3/8 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 Cameron 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. EOG Resources reserves the option to conduct BOPE testing during wait on cement periods provided a test plug is utilized. 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 waive the centralizer requirements for the 9-5/8" casing in the 12-1/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 12-1/4" hole interval to maximize cement bond and zonal isolation. Variance is also requested to waive any centralizer requirements for the 5-1/2" 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 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.

Testing Procedure: Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/250 psig and the annular preventer to 5,000/250 psig. 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. Cement integrity tests will be performed immediately following plug bump. 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.

Choke Diagram Attachment:

- Co_Flex_Hose_Certification_20200406102150.pdf
- 10_M_Choke_Manifold_20200406102201.pdf
- Co_Flex_Hose_Test_Chart_20200406102151.pdf

BOP Diagram Attachment:

- 10_M_BOP_Diagram_4_String_20200630142228.pdf
- EOG_BLM_Variance_1c___10M_Annular_Variance___3_String_Large_surface_hole_20200630142229.pdf

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	17.5	13.375	NEW	API	N	0	980	0	980	3462	2482	980	J-55	54.5	ST&C	1.125	1.25	BUOY	1.6	BUOY

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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
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4000	0	4000	3138	-538	4000	J-55	40	LT&C	1.125	1.25	BUOY	1.6	BUOY
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4000	4775	4000	4755	-553	-1293	775	HCK-55	40	LT&C	1.125	1.25	BUOY	1.6	BUOY
4	PRODUCTION	8.75	5.5	NEW	API	N	0	11375	0	11375	3138	-7913	11375	HCP-110	17	LT&C	1.125	1.25	BUOY	1.6	BUOY
5	PRODUCTION	8.5	5.5	NEW	API	N	11375	18574	11375	11015	-7913	-7553	7199	HCP-110	17	LT&C	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):
Valiant_24_Fed_Com_511H_Permit_Info_20200710062912.pdf

Casing ID: 2

String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):
Please_see_previously_attached_drill_plan_20190429130107.pdf

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Unit or CA Number:

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Casing Attachments

Casing ID: 3String Type:INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20200710062955.pdf

Casing ID: 4String Type:PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Please_see_previously_attached_drill_plan_20190429130039.pdf

Casing ID: 5String Type:PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Please_see_previously_attached_drill_plan_20190429130053.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
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Unit or CA Number:

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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

SURFACE	Lead		0	780	570	1.73	13.5	986.1	25	Class C	Class C + 4.0% Bentonite Gel + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
SURFACE	Tail		780	980	160	1.34	14.8	214.4	25	Class C	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 780')
INTERMEDIATE	Lead		0	3820	760	2.22	12.7	1687.2	25	Class C	Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
INTERMEDIATE	Tail		3820	4775	300	1.32	14.8	396	25	Class C	Class C + 10% NaCl + 3% MagOx (TOC @ 3,820')
PRODUCTION	Lead		4275	10475	630	3.21	11	2022.3	25	Class C	Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,275')
PRODUCTION	Tail		10475	18574	2140	1.2	14.4	2568	25	Class H	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,475")

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: 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

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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
980	4775	SALT SATURATED	8.6	8.8							
4775	11015	OIL-BASED MUD	8.8	9.5							
0	980	WATER-BASED MUD	8.6	8.8							

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: 5441 Anticipated Surface Pressure: 3017

Anticipated Bottom Hole Temperature(F): 180

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:

Valiant_24_Fed_Com_511H_H2S_Plan_Summary_20200710063102.pdf

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Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Valiant_24_Fed_Com_511H_Planning_Report_20200710063117.pdf
Valiant_24_Fed_Com_511H_Wall_Plot_20200710063121.pdf

Other proposed operations facets description:

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.

Other proposed operations facets attachment:

Valiant_24_Fed_Com_511H_Permit_Info_20200710063144.pdf
Valiant_24_Fed_Com_511H_Rig_Layout_20200710063144.pdf
EOG_Cameron_3_String_13in_10M_MNDS_20200630154606.PDF

Other Variance attachment:

10_M_BOP_Diagram_4_String_20200630154658.pdf
Co_Flex_Hose_Certification_20200406110007.pdf
Co_Flex_Hose_Test_Chart_20200406110007.pdf
EOG_BLM_Variance_1c___10M_Annular_Variance___3_String_Large_surface_hole_20200630154659.pdf

SUPO

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

VALIANT_24_FED_COM_511H_VICINITY_20200710063159.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:

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Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

VALIANT_24_FED_COM_511H_RADIUS_20200710063212.pdf

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Valiant 24 Fed Com CTB is located in NW/4 of Sec 24.

Production Facilities map:

EP_VALIANT_24_FED_COM_GAS_S_20200709155150.PDF
EP_VALIANT_24_FED_COM_LGL_S_20200709155151.PDF
EP_VALIANT_24_FED_COM_WATER_S_20200709155224.PDF
VALIANT_24_FED_COM_CTB__20200709155255.PDF
VALIANT_24_FED_COM_ELECTRIC__20200709155257.PDF
EP_VALIANT_24_FED_COM_506H_511H_FLOWLINE_S_20200710063229.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: RECYCLED

Water source use type: OTHER

Describe use type: The source and location of the water location will be drilled using a combination of water muc program. (i) Water will be obtained from commercial wa to location by trucks using existing and proposed roads attached. (ii) Water may as be supplied from frac ponds temporary above ground surface lines a shown on the r 5-inch polyethylene and or layflat lines for the purpose c Freshwater is defined as containing less than 10,000 m exhibiting no petroleum sheen when standing, and not p processes that expose it to heavy metals or other poten

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OTHER

to five 12-inch layflat lines for the purpose of transporting defined as the reconditioning of produced water to a re mechanical and chemical processes. Freshwater Source Gulch Frac Pond located in Section 8, Township 26-S, Mexico. 2. Texas Pacific Land Trust Frac Pond located Loving County, Texas Treated Produced Water Source Reuse Pit located in Section 16, Section 8, Township 2 New Mexico. Temporary surface lines would originate fr or multiple water source locations in the surrounding ar temporarily laid above ground with minimal disturbance laid no more than 10 feet from the edge of the existing ditch, road surface or two-track road or other man-made off arm or other mechanism will be used. All vehicle equ existing disturbance. Map or maps showing the location be provided with the APD and will be included in the En map file (shape file or KMZ file) shall be submitted with Valiant Water & Caliche Map depicts the proposed rout ground surface lines and maybe installed on the surface above ground surface lines shall supplying water for dri

Source latitude:

Source datum:

Water source permit type: WATER WELL

Water source transport method: TRUCKING
PIPELINE

Source land ownership: FEDERAL

Source transportation land ownership: FEDERAL

Water source volume (barrels): 1

Source volume (gal): 42

Source longitude:

Source volume (acre-feet): 0.00012889

Water source and transportation map:

Valiant_Water___Caliche_20200709155439.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 Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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:	

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:

Valiant_Water___Caliche_20200709155509.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

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

Reserve Pit

Reserve Pit being used? NO

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

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:

Valiant_24_Fed_Com_511H_Rig_Layout_20200710063329.pdf

VALIANT_24_FED_COM_511H_PADSITE_20200710063337.pdf

VALIANT_24_FED_COM_511H_WELLSITE_20200710063344.pdf

Comments: Wellsite Exhibit 2A, Padsite Exhibit 2B, Rig Layout Exhibit 4

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance	Multiple Well Pad Name: VALIANT 24 FED COM
Multiple Well Pad Number: 506H-511H-709H-710H-725H	

Recontouring attachment:
VALIANT_24_FED_COM_511H_RECLAMATION_20200710063400.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 pad proposed disturbance (acres): 0	Well pad interim reclamation (acres): 0	Well pad long term disturbance (acres): 0
Road proposed disturbance (acres): 0	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 0
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 0	Total interim reclamation: 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 resspreading. 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:

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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:

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	
Seed Type	Pounds/Acre

Total 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:

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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

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

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Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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

VALIANT_24_FED_COM_511H_LOCATION_20200710063418.pdf
SUPO_Valiant_24_Fed_Com_511H_20200710063428.pdf

PWD

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:

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Well Name: VALIANT 24 FED COM

Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887

County or Parish/State: LEA / NM

Well Number: 511H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM015317, NMNM15317

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002547989

Well Status: Approved Application for Permit to Drill

Operator: EOG RESOURCES INCORPORATED

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:

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:

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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

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

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Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

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

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: Star Harrell Signed on: 01/14/2021

Title: Regulatory Specialist

Street Address: 5509 CHAMPIONS DRIVE

City: MIDLAND State: TX Zip: 79702

Phone: (432)848-9161

Email address: Star_Harrell@eogresources.com

Field Representative

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

Well Name: VALIANT 24 FED COM	Well Location: T25S / R32E / SEC 24 / NESE / 32.1136897 / -103.6218887	County or Parish/State: LEA / NM
Well Number: 511H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM015317, NMNM15317	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547989	Well Status: Approved Application for Permit to Drill	Operator: EOG RESOURCES INCORPORATED

NOI Attachments

Procedure Description

Valiant_24_Fed_Com_511H_Permit_Info____Revised_csg_12.22.2020_20210114160858.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: FOLLIS	Signed on: JAN 14, 2021 04:09 PM
Name: EOG RESOURCES INCORPORATED	
Title: Sr. Regulatory Administrator	
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	

Revised Permit Information 12/22/2020:

Well Name: Valiant 24 Fed Com #511H

Location:

SHL: 1773' FSL & 615' FEL, Section 24, T-25-S, R-32-E, Lea Co., N.M.

BHL: 100' FSL & 750' FEL, Section 25, T-25-S, R-32-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
16"	0' – 1,015'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0' – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,750'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,375'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60
8.5"	11,375' – 18,522'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Variance is requested to waive the centralizer requirements for the 9-5/8" casing in the 12-1/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 12-1/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to waive any centralizer requirements for the 5-1/2" casing in the 8-3/4" and 8-1/2" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" and 8-1/2" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /sk	Slurry Description
1,015'	300	13.5	1.73	Lead: Class C + 4.0% Bentonite + 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 @ 1,040')
4,750'	690	9.0	3.5	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	300	14.4	1.20	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,890')
18,522'	620	11.0	3.21	Lead: Class C + 3% CaCl ₂ + 3% Microbond (TOC @ 4,365')
	1,960	14.4	1.2	Tail: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,475')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	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

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.

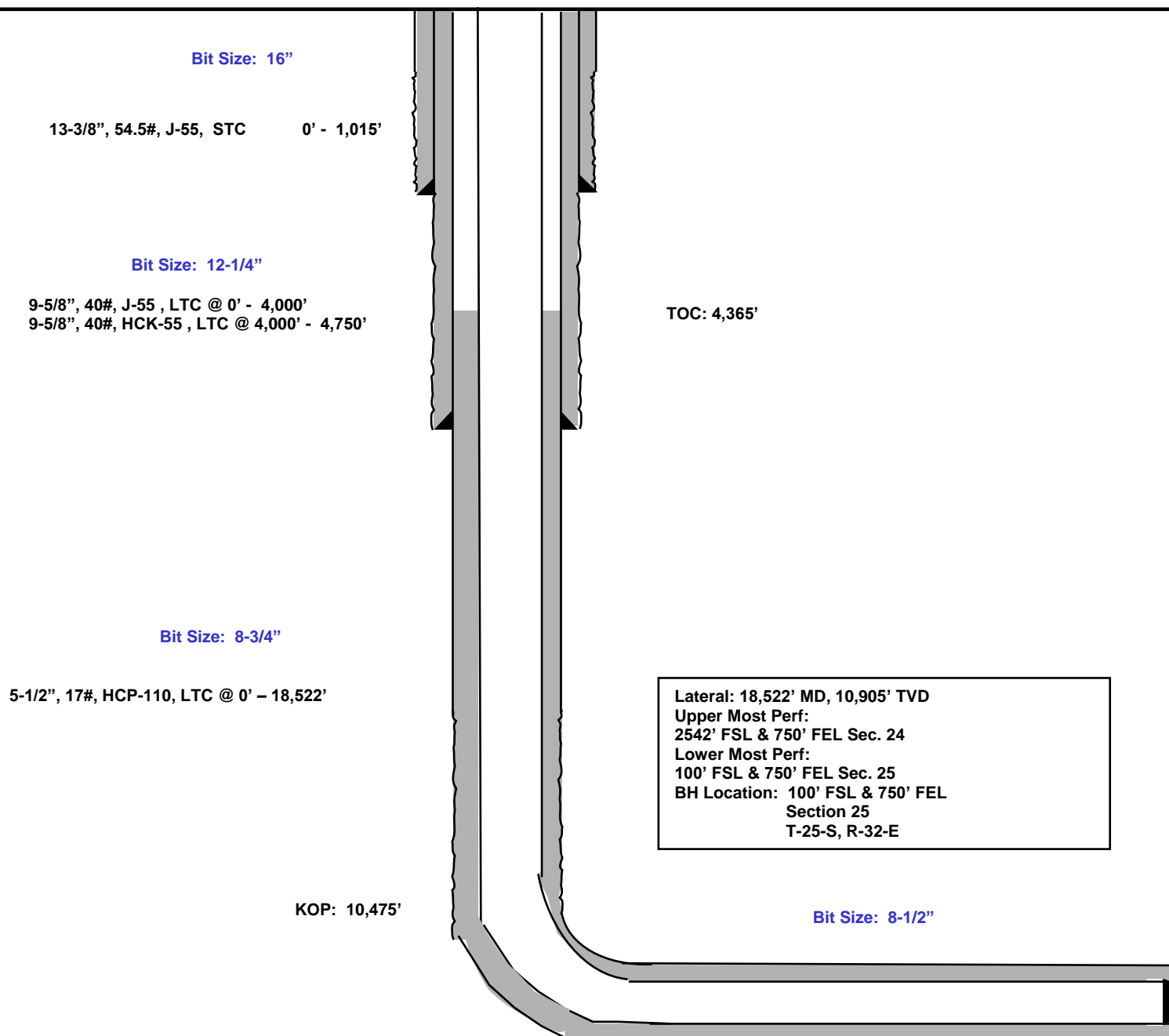
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,015'	Fresh - Gel	8.6-8.8	28-34	N/c
1,015' – 4,750'	Brine	8.6-8.8	28-34	N/c
4,750' – 18,522'	Oil Base	8.8-9.5	58-68	N/c - 6

1773' FSL
615' FEL
Section 24
T-25-S, R-32-E

Proposed Wellbore
Revised 12/22/2020

KB: 3,487'
GL: 3,462'

API: 30-025-47989



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 17650

CONDITIONS OF APPROVAL

Operator:	EOG RESOURCES INC	P.O. Box 2267	Midland, TX79702	OGRID:	7377	Action Number:	17650	Action Type:	C-103A
OCD Reviewer									Condition
pkautz									None