

<b>Well Name:</b> GATO GRANDE 9-4 FED STATE COM	<b>Well Location:</b> T23S / R32E / SEC 9 / SESE / 32.3125737 / -103.6747743	<b>County or Parish/State:</b> LEA / NM
<b>Well Number:</b> 714H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM98192	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002551326	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP	

**Notice of Intent**

**Sundry ID:** 2840455

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 03/07/2025

**Time Sundry Submitted:** 06:50

**Date proposed operation will begin:** 03/07/2025

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to move the SHL/BHL on the subject well. Devon is also requesting a variance for break testing and offline cementing. Please see attached revised C102, Drill plan, directional plan. Permitted SHL: SESE, 250 FSL, 1145 FEL, 9-23S-32E Proposed SHL: SESE, 206 FSL, 1122 FEL, 9-23S-32E Permitted BHL: Lot 1, 20 FNL, 1990 FEL, 9-23S-32E Proposed BHL: Lot 1, 20 FNL, 430 FEL, 4-23S-32E

**NOI Attachments**

**Procedure Description**

New\_Site\_MAP\_714H\_GATO\_GRANDE\_9\_WP\_3\_R2\_20250307125012.pdf

Offline\_Cementing\_\_\_Variance\_Request\_20250306140146.pdf

Break\_Test\_Variance\_Offline\_BOP\_2\_3\_2025\_20250306140146.pdf

GATO\_GRANDE\_9\_4\_FED\_COM\_714H\_Directional\_Plan\_03\_05\_25\_20250306140055.pdf

WA018132079\_GATO\_GRANDE\_9\_4\_FED\_COM\_714H\_R3\_\_\_Signed\_20250306140056.pdf

GATO\_GRANDE\_9\_4\_FED\_COM\_714H\_combined\_20250306140055.pdf

Well Name: GATO GRANDE 9-4 FED STATE COM

Well Location: T23S / R32E / SEC 9 / SESE / 32.3125737 / -103.6747743

County or Parish/State: LEA / NM

Well Number: 714H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM98192

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002551326

Operator: DEVON ENERGY PRODUCTION COMPANY LP

### Conditions of Approval

#### Additional

9\_23\_32\_P\_Sundry\_ID\_2840455\_Alt\_20250321095138.pdf

Gato\_Grande\_9\_4\_Fed\_State\_Com\_714H\_Dr\_COA\_20250321095138.pdf

9\_23\_32\_P\_Sundry\_ID\_2840455\_20250321095139.pdf

### Operator

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

Operator Electronic Signature: LAUREN WATSON

Signed on: MAR 07, 2025 06:50 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Professional

Street Address: 333 W. SHERIDAN AVE.

City: OKLAHOMA CITY State: OK

Phone: (405) 552-3379

Email address: LAUREN.WATSON@DVN.COM

### Field

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: 04/16/2025

Signature: Chris Walls

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

<b>SUBMIT IN TRIPLICATE - Other instructions on page 2</b>		5. Lease Serial No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)	
	Title
Signature	Date

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by		
	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
	Office	

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.

(Instructions on page 2)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13*: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

## Additional Information

### Location of Well

0. SHL: SESE / 250 FSL / 1145 FEL / TWSP: 23S / RANGE: 32E / SECTION: 9 / LAT: 32.3125737 / LONG: -103.6747743 ( TVD: 0 feet, MD: 0 feet )

PPP: SESE / 100 FSL / 990 FEL / TWSP: 23S / RANGE: 32E / SECTION: 9 / LAT: 32.312163 / LONG: -103.6742723 ( TVD: 12097 feet, MD: 12133 feet )

PPP: SENE / 2509 FNL / 1006 FEL / TWSP: 23S / RANGE: 32E / SECTION: 4 / LAT: 32.333876 / LONG: -103.6744218 ( TVD: 12239 feet, MD: 20100 feet )

PPP: SESE / 152 FSL / 1022 FEL / TWSP: 23S / RANGE: 32E / SECTION: 4 / LAT: 32.3267303 / LONG: -103.6744736 ( TVD: 12278 feet, MD: 17500 feet )

BHL: LOT 1 / 20 FNL / 990 FEL / TWSP: 23S / RANGE: 32E / SECTION: 4 / LAT: 32.3408129 / LONG: -103.6742898 ( TVD: 12203 feet, MD: 22590 feet )

CONFIDENTIAL

Devon Energy Production Company LP

10 3/4		surface csg in a		14 3/4		inch hole.		Design Factors				Surface	
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	45.50		j 55	btc	13.27	3.77	1,185	7	0.94	7.13	53,918		
"B"				btc			0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500							Totals:	1,185			53,918		
Comparison of Proposed to Minimum Required Cement Volumes													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
14 3/4	0.5563	711	1024	659	55	9.00	3820	5M			1.50		

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.

Site plan (page links S or E) as per OGD. LHO D.A. not found.

8 5/8		casing inside the		10 3/4		Design Factors				Int 1				
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"	32.00		p 110	vam sprint fj	1.98	0.62	11,737	1	1.80	1.05	375,584			
"B"							0				0			
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	11,737			375,584			
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 1185 overlap.														
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg			
9 7/8	0.1261	552	795	1490	-47	10.50	3972	5M			0.61			
D V Tool(s):							sum of sx	Σ CuFt			Σ%excess			
t by stage % :							31	27			1040	1917		29
Class 'C' tail cmt yld > 1.35														

Tail cmt 5 1/2		casing inside the		8 5/8		Design Factors				Prod 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	20.00		p 110	dwc/c is+	2.99	1.82	22,638	2	3.62	3.04	452,760		
"B"							0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,685							Totals:	22,638			452,760		
The cement volume(s) are intended to achieve a top of 11537 ft from surface or a 200 overlap.													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
7 7/8	0.1733	1547	2442	1924	27	10.50					0.79		
Class 'C' tail cmt yld > 1.35													

#N/A 0		casing inside the		5 1/2		Design Factors				<Choose Casing>			
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"			0.00				0				0		
"B"			0.00				0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0		
Cmt vol calc below includes this csg, TOC intended #N/A ft from surface or a #N/A overlap.													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
0		#N/A	#N/A	0	#N/A								
#N/A Capitan Reef est top XXXX.													

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP ▼
<b>LOCATION:</b>	Section 9, T.23 S., R.32 E., NMPM
<b>COUNTY:</b>	Lea County, New Mexico ▼

<b>WELL NAME &amp; NO.:</b>	Gato Grande 9-4 Fed State Com 714H
<b>ATS/API ID:</b>	3002551326
<b>APD ID:</b>	10400064656
<b>Sundry ID:</b>	2840455

COA

**Primary Design:**

H2S	Yes		
Potash	None	None	
Cave/Karst Potential	Low		
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Other
Wellhead	Conventional and Multibowl		
Other	<input type="checkbox"/> 4 String <input type="checkbox"/> 5 String	Capitan Reef None	<input type="checkbox"/> WIPP
Other	Pilot Hole None	<input type="checkbox"/> Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter Int 1	Primary Cement Squeeze None
Special Requirements	<input type="checkbox"/> Water Disposal/Injection	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry	Waste Prevention None	
Special Requirements Variance	<input checked="" type="checkbox"/> BOPE Break Testing <input checked="" type="checkbox"/> Offline BOPE Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

**Alternate Design:**

Potash	None ▼	None ▼	
Cave/Karst Potential	Low ▼		
Cave/Karst Potential	<input type="checkbox"/> Critical		
Other	<input type="checkbox"/> 4 String <input type="checkbox"/> 5 String	Capitan Reef None ▼	<input type="checkbox"/> WIPP
Other	Pilot Hole None ▼	<input type="checkbox"/> Open Annulus	
Cementing	Contingency Squeeze None ▼	Echo-Meter Int 1 ▼	Primary Cement Squeeze None ▼

## A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### Primary Design

## B. CASING

1. The **9-5/8** inch surface casing shall be set at approximately **1258 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **13 1/2** inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

### Option 1 (Single Stage):

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

### Option 2:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 6915'**.

## b. Second stage:

- Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. (**Squeeze 385 sxs Class C**)

Operator has proposed to pump down **9-5/8" X 7-5/8"** annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 7-5/8" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

**Alternate Design****C. CASING**4. The **10-3/4** inch surface casing shall be set at approximately **1185 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4** inch in diameter.

- e. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- f. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- g. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength,

whichever is greater.

- h. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

5. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

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

**Option 2:**

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- c. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 6915'**.
- d. Second stage:
- Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **(Squeeze 488 sxs Class C)**

Operator has proposed to pump down **10-3/4" X 8-5/8"** annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the **8-5/8"** casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

6. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

#### **D. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

##### **Option 1:**

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. Annular which shall be tested to 5000 (5M) psi.**
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

##### **Option 2:**

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

## E. SPECIAL REQUIREMENT (S)

### Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in **43 CFR part 3170 Subpart 3171**
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

### BOPE Break Testing Variance (Approved)

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-689-5981 Lea County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **21-day** intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR part 3170 Subpart 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

**Offline BOPE Testing**

Operator has been **(Approved)** to test the BOPE offline.

The BOPE offline testing shall be stationary during pressure testing.

Online BOPE testing should commence within 72 hours of offline BOPE testing completion. Notify the BLM if interval exceeds 72 hours.

Notify the BLM 4hrs prior to offline BOPE testing at **Lea County: 575-689-5981**.

**Offline Cementing**

Operator has been **(Approved)** to pump the proposed cement program offline in the **Intermediate(s) interval**.

Offline cementing should commence within 24 hours of landing the casing for the interval.

Notify the BLM 4hrs prior to cementing offline at **Lea County: 575-689-5981**.

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,  
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

#### B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke

manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be

initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

#### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and

disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

Long Vo (LVO) 3/21/2025

9-23-32-P Sundry ID 2840455 Devon Energy Production Company LP Lea NM98192 Gato Grande 9-4 Fed State Com 714H 13-22c 11-03-2021 LV

Devon Energy Production Company LP

9 5/8		surface csg in a		13 1/2		inch hole.		Design Factors				Surface	
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	40.00		j 55	btc	12.52	4.37	1,258	7	1.03	8.25	50,320		
"B"				btc			0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500							Totals:	1,258			50,320		
Comparison of Proposed to Minimum Required Cement Volumes													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
13 1/2	0.4887	622	896	615	46	9.00	3820	5M			1.44		

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.

Site plan (page links S or E) as per QD. The D.A. not found.

7 5/8		casing inside the		9 5/8		Design Factors				Int 1				
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"	29.70		p 110	talon sfc	2.63	1.13	11,737	2	2.71	1.90	348,589			
"B"							0				0			
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	11,737			348,589			
The cement volume(s) are intended to achieve a top of							0	ft from surface or a			1258		overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg			
8 3/4	0.1005	439	632	1190	-47	10.50	3972	5M			0.43			
D V Tool(s):							sum of sx	Σ CuFt			Σ%excess			
t by stage % :							30	26			824	1518		28
Class 'C' tail cmt yld > 1.35														

Tail cmt 5 1/2		casing inside the		7 5/8		Design Factors				Prod 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	20.00		p 110	talon rd	2.99	1.98	22,638	2	3.62	3.31	452,760		
"B"							0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,685							Totals:	22,638			452,760		
The cement volume(s) are intended to achieve a top of							11537	ft from surface or a			200		overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
6 3/4	0.0835	751	1195	928	29	10.50					0.43		
Class 'C' tail cmt yld > 1.35													

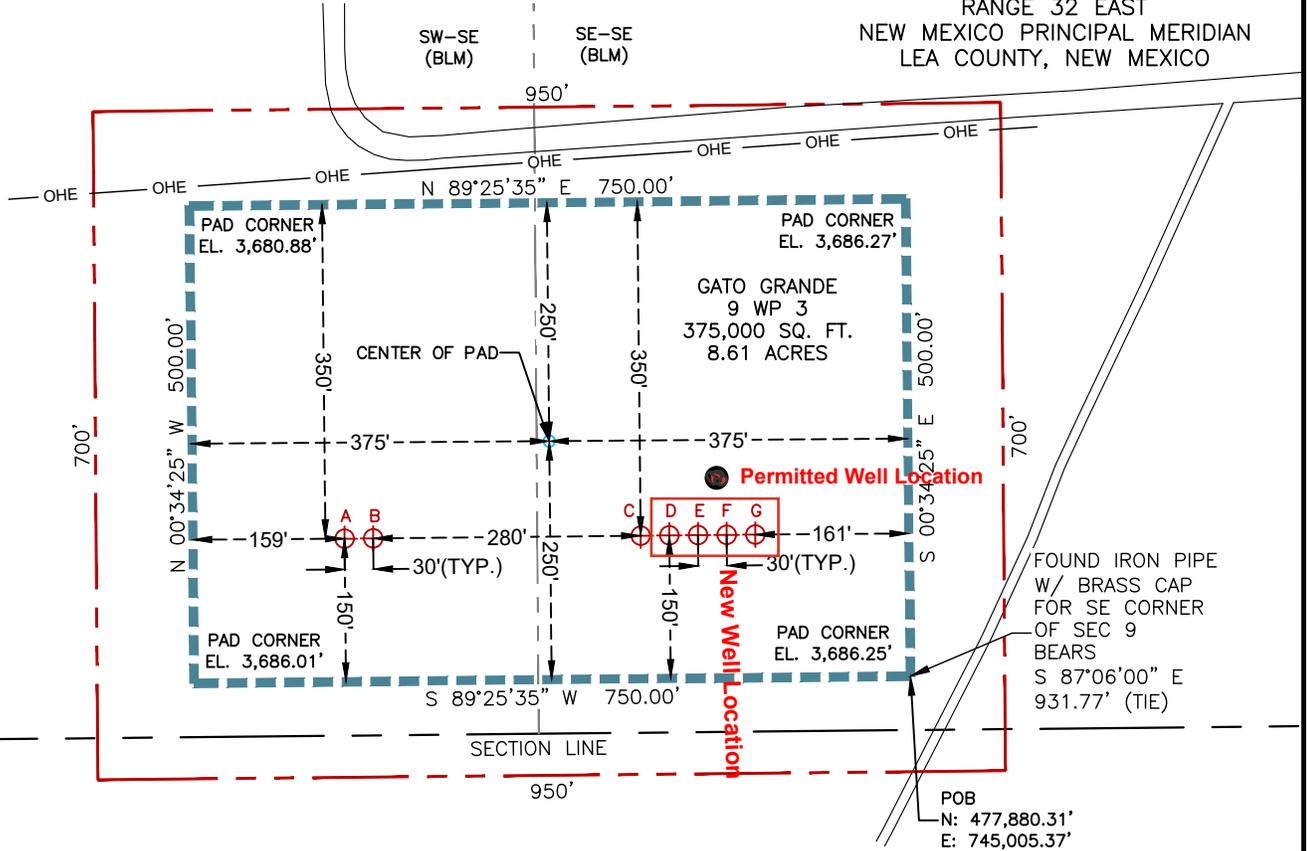
#N/A 0		casing inside the		5 1/2		Design Factors				<Choose Casing>			
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"			0.00				0				0		
"B"			0.00				0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0			0		
Cmt vol calc below includes this csg, TOC intended							#N/A	ft from surface or a			#N/A		overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg		
0		#N/A	#N/A	0	#N/A								
#N/A Capitan Reef est top XXXX.													



PROPOSED SURFACE SITE EXHIBIT  
GATO GRANDE 9 WP3 R2

UCID# AA000487611  
SECTION 9, TOWNSHIP 23 SOUTH, RANGE 32 EAST  
NEW MEXICO PRINCIPAL MERIDIAN  
LEA COUNTY, NEW MEXICO

SECTION 9  
TOWNSHIP 23 SOUTH  
RANGE 32 EAST  
NEW MEXICO PRINCIPAL MERIDIAN  
LEA COUNTY, NEW MEXICO



SECTION 9  
SECTION 16



TOTAL SURFACE SITE ACREAGE BREAKDOWN BY SECTION 1/4 1/4			
1/4 1/4	OWNERSHIP	SQ. FEET	ACRES
SW-SE	BLM	180,518	4.14
SE-SE	BLM	194,482	4.46
TOTAL		375,000	8.61



- LEGEND**
- SECTION LINES
  - x-x-x- EXISTING FENCE
  - OHE-OHE- EXISTING ELECTRIC
  - |-|- FOREIGN PIPELINE
  - - - - PROPOSED SURFACE SITE
  - - - - 100' OFFSET BOUNDARY
  - ⊕ PROPOSED SURFACE HOLE
  - FOUND MONUMENT
  - CALCULATED CORNER

A	GATO GRANDE 9 4 FED COM 832H
B	GATO GRANDE 9 4 FED COM 835H
C	GATO GRANDE 9 4 FED COM 833H
D	GATO GRANDE 9 4 FED COM 614H
E	GATO GRANDE 9 4 FED COM 814H
F	GATO GRANDE 9 4 FED COM 714H
G	GATO GRANDE 9 4 FED COM 834H

I, Nicholas Cole Phipps, New Mexico Professional Surveyor No. 29796, do hereby certify that this Easement Survey Plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision, that I am responsible for this survey; that this survey meets the Minimum Standards for Surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this survey is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is an Easement Survey Plat of an existing tract or tracts.

**NOTES:**

- 1.) BEARINGS AND COORDINATES ARE GRID AS DERIVED FROM GPS OBSERVATION AND ARE BASED ON THE STATE PLANE COORDINATES FOR THE NEW MEXICO EAST ZONE 3001-NAD83.
- 2.) CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT. IN RELATION TO THE EVIDENCE DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY THE CLIENT. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES KNOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

Nicholas Cole Phipps *Nicholas Cole Phipps* PS NO. 29796 Date **2-24-25**  
DWG: AA000487611\_GATO\_GRANDE\_9\_WP\_3\_R2

Drawn: JMJ	Date: 02/24/2025	Job: 24-122788	Scale: 1=200'
Checked: NCP	Date: 02/24/2025	REVISION NO. 2	SHEET 1 OF 2



PO BOX 1583, MIDLAND, TEXAS 79701

## **Offline Cementing**

### Variance Request

Devon Energy requests to offline cement on intermediate strings that are set in formations shallower than the Wolfcamp. Prior to commencing offline cementing operations, the well will be monitored for any abnormal pressures and confirmed to be static. A dual manifold system (equipped with chokes) for the returns will also be utilized as a redundancy. All equipment used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements.

**Section 2 - Blowout Preventer Testing Procedure**

Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. The initial BOP test will follow 43 CFR 3172, and subsequent tests following a skid will only test connections that are broken. This test will at minimum include the Top Pipe Ram, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and BOP shell of the 10M BOPE to 5M for 10 minutes. Additional pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, testing the Annular during initial BOP testing to a minimum of 70% RWP and higher than MASP, and pressure testing at a 21-day interval frequency. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. In the event break testing is not utilized, then a full BOPE test would be conducted.

Devon Energy requests to perform offline BOP stump testing and offline BOPE testing. All pressure-containing and pressure-controlling seals will be tested either online or offline as denoted in the table below and per BLM approval during initial BOP test following test pressure requirements set forth in 43 CFR 3172. Remaining components not tested offline or on the stump will be tested within 72-hours when the BOP is connected to the wellhead. If stump testing exceeds 72-hour window prior to connecting to the wellhead, the BLM will be notified and either stump testing restarted, or the BOP being tested online. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. In the event stump testing is not utilized, then a full BOPE test would be conducted.

Components	Offline	Offline, BOPE	Break	Online
Upper Rams		X	X	X
Blind Rams		X		X
Lower Rams				X
Outside Kill Valve		X	X	X
Inside Kill Valve		X	X	X
Kill Line Check Valve		X	X	X
Inside Choke Valve		X	X	X
HCR		X	X	X
Kill Line	X			X
Annular		X		X
Choke Manifold Valves and Hose	X			X
Mudline (Mud Pumps, Rig Floor Valves, Kelly Hose, Mud Line)	X			X
Standpipe Valve	X			X
IBOP (Upper and Lower)	X			X

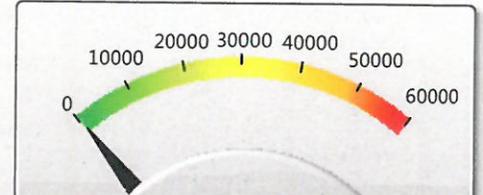
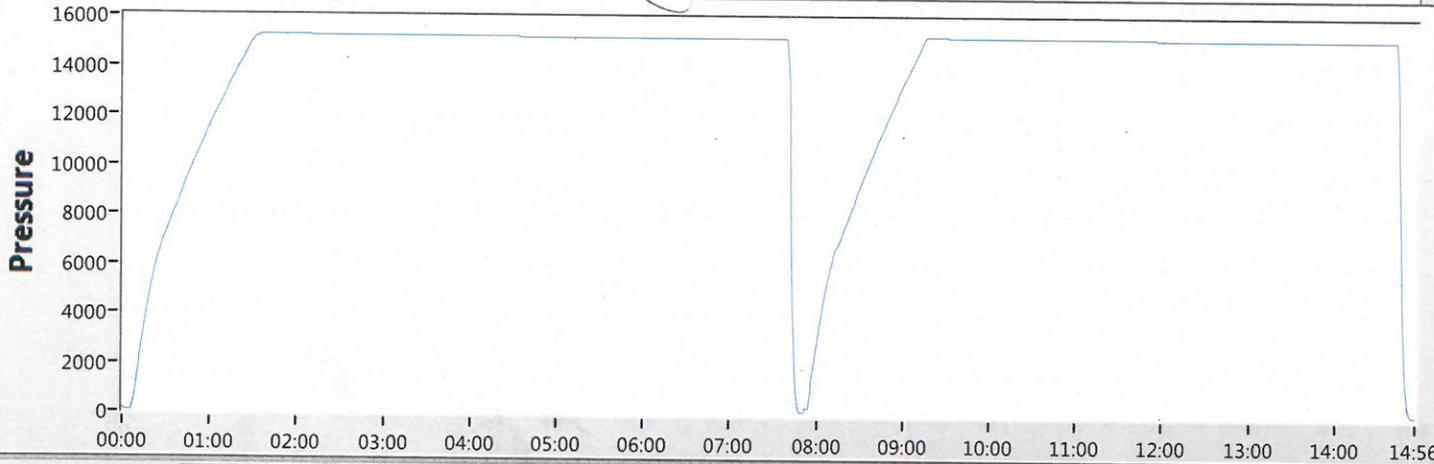
Devon requests offline BOPE testing for the following components: Upper Rams, Blind Rams, Kill Valves, Choke Valves, and Annular  
 Remaining well control equipment components will either be tested offline or online, per BLM approval  
 Remaining BOPE will be tested online within 72-hours form completing the offline BOPE component testing  
 Notify the BLM if the online BOPE testing exceeds 72-hours  
 All Full Tests not completed "Offline" or "Offline, BOPE" are required to be complete Online  
 Devon requests Break testing as stated above for 5K tests, not including production hole  
 Annular Preventer will be tested to minimum of 70% RWP and higher than MASP during initial BOP test  
 Pressure testing is required for pressure-containing connections if the integrity of a pressure seal is broken during a break test  
 Full Tests required when entering production hole

**Cactus**  
**Wellhead**

2-9-17  
E Bell

80.7 °F

15:49



50

Date 02-09-17

Tested By E.BELL

Transducer bay2

Transducer Serial 181504

Calibration Date 9/6/15

Job#	Part#	Serial#	Description	Test Pressure
1	TRJ0006341-0007 116966	TRJ6341-7-1	ADPT,DRLG,CW,MBU-3T,13-5/8 10M	15000
2				
3				
4				
5			TRANSDUCER CALIBRATION DUE 03/13/2017	
6				
7				
8				

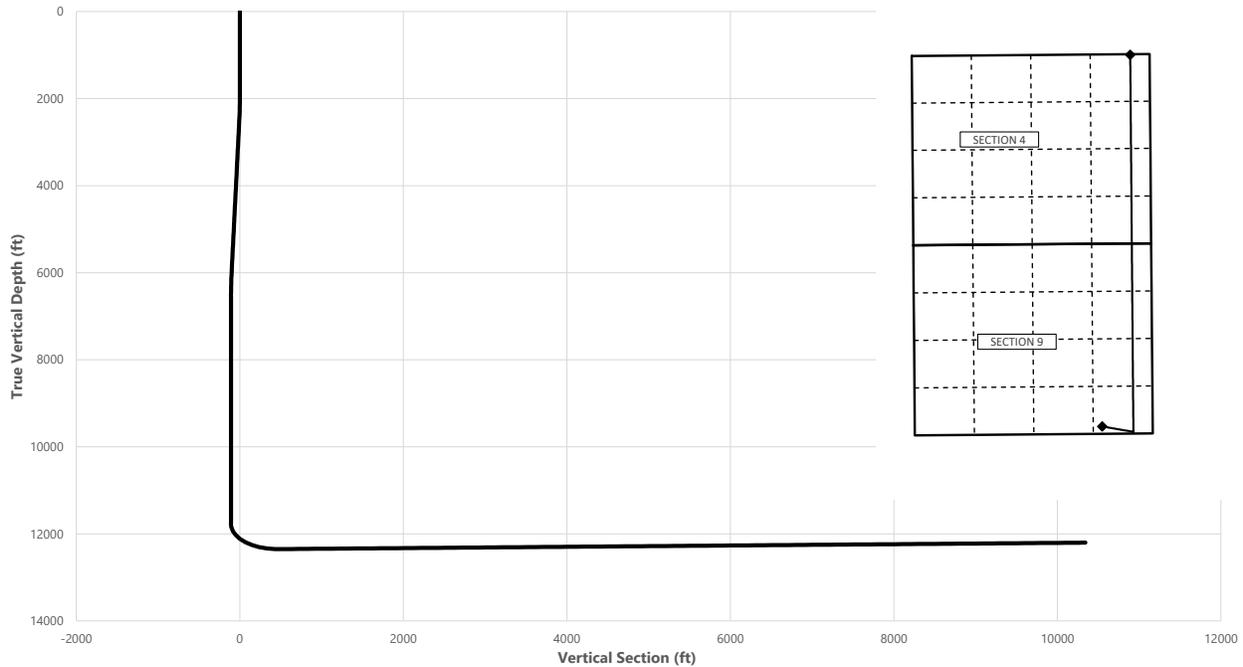
Start Stop Zero Config Save Print EXIT



Well: GATO GRANDE 9-4 FED COM 714H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1927  
 Ellipsoid: Clarke 1866  
 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	102.20	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	102.20	2497.47	-9.20	42.54	-6.62	2.00	Hold Tangent
6081.15	10.00	102.20	6024.21	-140.61	650.36	-101.21	0.00	Drop to Vertical
6581.15	0.00	102.20	6521.68	-149.81	692.90	-107.83	2.00	Hold Vertical
11836.58	0.00	359.61	11777.11	-149.81	692.90	-107.83	0.00	KOP
12745.15	90.86	359.61	12350.00	431.71	688.98	472.39	10.00	Landing Point
22637.97	90.86	359.61	12202.00	10323.19	622.44	10341.94	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	1160.00	1160.00
Salt	1454.00	1454.00
Base of Salt	4598.41	4564.00
Delaware	4857.35	4819.00
Cherry Canyon	6022.04	5966.00
Brushy Canyon	6974.47	6915.00
1st Bone Spring Lime	8699.47	8640.00
Bone Spring 1st	9839.47	9780.00
Bone Spring 2nd	10467.47	10408.00
3rd Bone Spring Lime	11005.47	10946.00
Bone Spring 3rd	11609.47	11550.00
Wolfcamp / Point of Penetration	12006.98	11945.00
exit	22557.97	12203.21

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.3124	-103.6748	206' FSL, 1122' FEL of Sec 9 in T23S, R32E
KOP	11836.58	11777.11	32.3120	-103.6724	50' FSL, 430' FEL of Sec 9 in T23S, R32E
Point of Penetration	12006.98	11945.00	32.3122	-103.6725	100' FSL, 430' FEL of Sec 9 in T23S, R32E
Exit	22557.97	12203.21	32.3406	-103.6725	100' FNL, 430' FEL of Sec 4 in T23S, R32E
BHL	22637.97	12202.00	32.3407	-103.6726	20' FNL, 430' FEL of Sec 4 in T23S, R32E

	Y	X	MD
KOP	477879	745506	11836.58



Well: GATO GRANDE 9-4 FED COM 714H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1927  
 Ellipsoid: Clarke 1866  
 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	102.20	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	102.20	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	102.20	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	102.20	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	102.20	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	102.20	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	102.20	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	102.20	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	102.20	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	102.20	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	102.20	1100.00	0.00	0.00	0.00	0.00	
1160.00	0.00	102.20	1160.00	0.00	0.00	0.00	0.00	Rustler
1200.00	0.00	102.20	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	102.20	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	102.20	1400.00	0.00	0.00	0.00	0.00	
1454.00	0.00	102.20	1454.00	0.00	0.00	0.00	0.00	Salt
1500.00	0.00	102.20	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	102.20	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	102.20	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	102.20	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	102.20	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	102.20	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	102.20	2099.98	-0.37	1.71	-0.27	2.00	
2200.00	4.00	102.20	2199.84	-1.47	6.82	-1.06	2.00	
2300.00	6.00	102.20	2299.45	-3.32	15.34	-2.39	2.00	
2400.00	8.00	102.20	2398.70	-5.89	27.25	-4.24	2.00	
2500.00	10.00	102.20	2497.47	-9.20	42.54	-6.62	2.00	Hold Tangent
2600.00	10.00	102.20	2595.95	-12.87	59.51	-9.26	0.00	
2700.00	10.00	102.20	2694.43	-16.54	76.48	-11.90	0.00	
2800.00	10.00	102.20	2792.91	-20.21	93.46	-14.54	0.00	
2900.00	10.00	102.20	2891.39	-23.88	110.43	-17.19	0.00	
3000.00	10.00	102.20	2989.87	-27.55	127.40	-19.83	0.00	
3100.00	10.00	102.20	3088.35	-31.21	144.38	-22.47	0.00	
3200.00	10.00	102.20	3186.83	-34.88	161.35	-25.11	0.00	
3300.00	10.00	102.20	3285.31	-38.55	178.32	-27.75	0.00	
3400.00	10.00	102.20	3383.79	-42.22	195.29	-30.39	0.00	
3500.00	10.00	102.20	3482.27	-45.89	212.27	-33.03	0.00	
3600.00	10.00	102.20	3580.75	-49.56	229.24	-35.68	0.00	
3700.00	10.00	102.20	3679.23	-53.23	246.21	-38.32	0.00	
3800.00	10.00	102.20	3777.72	-56.90	263.18	-40.96	0.00	
3900.00	10.00	102.20	3876.20	-60.57	280.16	-43.60	0.00	
4000.00	10.00	102.20	3974.68	-64.24	297.13	-46.24	0.00	
4100.00	10.00	102.20	4073.16	-67.91	314.10	-48.88	0.00	
4200.00	10.00	102.20	4171.64	-71.58	331.07	-51.52	0.00	
4300.00	10.00	102.20	4270.12	-75.25	348.05	-54.17	0.00	
4400.00	10.00	102.20	4368.60	-78.92	365.02	-56.81	0.00	
4500.00	10.00	102.20	4467.08	-82.59	381.99	-59.45	0.00	
4598.41	10.00	102.20	4564.00	-86.20	398.70	-62.05	0.00	Base of Salt
4600.00	10.00	102.20	4565.56	-86.26	398.97	-62.09	0.00	
4700.00	10.00	102.20	4664.04	-89.93	415.94	-64.73	0.00	
4800.00	10.00	102.20	4762.52	-93.60	432.91	-67.37	0.00	
4857.35	10.00	102.20	4819.00	-95.70	442.64	-68.89	0.00	Delaware
4900.00	10.00	102.20	4861.00	-97.27	449.88	-70.01	0.00	
5000.00	10.00	102.20	4959.48	-100.94	466.86	-72.66	0.00	
5100.00	10.00	102.20	5057.97	-104.61	483.83	-75.30	0.00	
5200.00	10.00	102.20	5156.45	-108.28	500.80	-77.94	0.00	
5300.00	10.00	102.20	5254.93	-111.95	517.77	-80.58	0.00	
5400.00	10.00	102.20	5353.41	-115.62	534.75	-83.22	0.00	
5500.00	10.00	102.20	5451.89	-119.29	551.72	-85.86	0.00	
5600.00	10.00	102.20	5550.37	-122.95	568.69	-88.50	0.00	
5700.00	10.00	102.20	5648.85	-126.62	585.66	-91.15	0.00	
5800.00	10.00	102.20	5747.33	-130.29	602.64	-93.79	0.00	
5900.00	10.00	102.20	5845.81	-133.96	619.61	-96.43	0.00	
6000.00	10.00	102.20	5944.29	-137.63	636.58	-99.07	0.00	
6022.04	10.00	102.20	5966.00	-138.44	640.32	-99.65	0.00	Cherry Canyon
6081.15	10.00	102.20	6024.21	-140.61	650.36	-101.21	0.00	Drop to Vertical
6100.00	9.62	102.20	6042.78	-141.29	653.50	-101.70	2.00	
6200.00	7.62	102.20	6141.65	-144.46	668.15	-103.98	2.00	
6300.00	5.62	102.20	6240.98	-146.90	679.42	-105.74	2.00	



**Well:** GATO GRANDE 9-4 FED COM 714H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1927  
**Ellipsoid:** Clarke 1866  
**Zone:** 3001 - NM East (NAD83)

MD (ft)	INC (")	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	3.62	102.20	6340.65	-148.60	687.30	-106.96	2.00	
6500.00	1.62	102.20	6440.54	-149.57	691.77	-107.66	2.00	
6581.15	0.00	102.20	6521.68	-149.81	692.90	-107.83	2.00	Hold Vertical
6600.00	0.00	359.61	6540.53	-149.81	692.90	-107.83	0.00	
6700.00	0.00	359.61	6640.53	-149.81	692.90	-107.83	0.00	
6800.00	0.00	359.61	6740.53	-149.81	692.90	-107.83	0.00	
6900.00	0.00	359.61	6840.53	-149.81	692.90	-107.83	0.00	
6974.47	0.00	359.61	6915.00	-149.81	692.90	-107.83	0.00	Brushy Canyon
7000.00	0.00	359.61	6940.53	-149.81	692.90	-107.83	0.00	
7100.00	0.00	359.61	7040.53	-149.81	692.90	-107.83	0.00	
7200.00	0.00	359.61	7140.53	-149.81	692.90	-107.83	0.00	
7300.00	0.00	359.61	7240.53	-149.81	692.90	-107.83	0.00	
7400.00	0.00	359.61	7340.53	-149.81	692.90	-107.83	0.00	
7500.00	0.00	359.61	7440.53	-149.81	692.90	-107.83	0.00	
7600.00	0.00	359.61	7540.53	-149.81	692.90	-107.83	0.00	
7700.00	0.00	359.61	7640.53	-149.81	692.90	-107.83	0.00	
7800.00	0.00	359.61	7740.53	-149.81	692.90	-107.83	0.00	
7900.00	0.00	359.61	7840.53	-149.81	692.90	-107.83	0.00	
8000.00	0.00	359.61	7940.53	-149.81	692.90	-107.83	0.00	
8100.00	0.00	359.61	8040.53	-149.81	692.90	-107.83	0.00	
8200.00	0.00	359.61	8140.53	-149.81	692.90	-107.83	0.00	
8300.00	0.00	359.61	8240.53	-149.81	692.90	-107.83	0.00	
8400.00	0.00	359.61	8340.53	-149.81	692.90	-107.83	0.00	
8500.00	0.00	359.61	8440.53	-149.81	692.90	-107.83	0.00	
8600.00	0.00	359.61	8540.53	-149.81	692.90	-107.83	0.00	
8699.47	0.00	359.61	8640.00	-149.81	692.90	-107.83	0.00	1st Bone Spring Lime
8700.00	0.00	359.61	8640.53	-149.81	692.90	-107.83	0.00	
8800.00	0.00	359.61	8740.53	-149.81	692.90	-107.83	0.00	
8900.00	0.00	359.61	8840.53	-149.81	692.90	-107.83	0.00	
9000.00	0.00	359.61	8940.53	-149.81	692.90	-107.83	0.00	
9100.00	0.00	359.61	9040.53	-149.81	692.90	-107.83	0.00	
9200.00	0.00	359.61	9140.53	-149.81	692.90	-107.83	0.00	
9300.00	0.00	359.61	9240.53	-149.81	692.90	-107.83	0.00	
9400.00	0.00	359.61	9340.53	-149.81	692.90	-107.83	0.00	
9500.00	0.00	359.61	9440.53	-149.81	692.90	-107.83	0.00	
9600.00	0.00	359.61	9540.53	-149.81	692.90	-107.83	0.00	
9700.00	0.00	359.61	9640.53	-149.81	692.90	-107.83	0.00	
9800.00	0.00	359.61	9740.53	-149.81	692.90	-107.83	0.00	
9839.47	0.00	359.61	9780.00	-149.81	692.90	-107.83	0.00	Bone Spring 1st
9900.00	0.00	359.61	9840.53	-149.81	692.90	-107.83	0.00	
10000.00	0.00	359.61	9940.53	-149.81	692.90	-107.83	0.00	
10100.00	0.00	359.61	10040.53	-149.81	692.90	-107.83	0.00	
10200.00	0.00	359.61	10140.53	-149.81	692.90	-107.83	0.00	
10300.00	0.00	359.61	10240.53	-149.81	692.90	-107.83	0.00	
10400.00	0.00	359.61	10340.53	-149.81	692.90	-107.83	0.00	
10467.47	0.00	359.61	10408.00	-149.81	692.90	-107.83	0.00	Bone Spring 2nd
10500.00	0.00	359.61	10440.53	-149.81	692.90	-107.83	0.00	
10600.00	0.00	359.61	10540.53	-149.81	692.90	-107.83	0.00	
10700.00	0.00	359.61	10640.53	-149.81	692.90	-107.83	0.00	
10800.00	0.00	359.61	10740.53	-149.81	692.90	-107.83	0.00	
10900.00	0.00	359.61	10840.53	-149.81	692.90	-107.83	0.00	
11000.00	0.00	359.61	10940.53	-149.81	692.90	-107.83	0.00	
11005.47	0.00	359.61	10946.00	-149.81	692.90	-107.83	0.00	3rd Bone Spring Lime
11100.00	0.00	359.61	11040.53	-149.81	692.90	-107.83	0.00	
11200.00	0.00	359.61	11140.53	-149.81	692.90	-107.83	0.00	
11300.00	0.00	359.61	11240.53	-149.81	692.90	-107.83	0.00	
11400.00	0.00	359.61	11340.53	-149.81	692.90	-107.83	0.00	
11500.00	0.00	359.61	11440.53	-149.81	692.90	-107.83	0.00	
11600.00	0.00	359.61	11540.53	-149.81	692.90	-107.83	0.00	
11609.47	0.00	359.61	11550.00	-149.81	692.90	-107.83	0.00	Bone Spring 3rd
11700.00	0.00	359.61	11640.53	-149.81	692.90	-107.83	0.00	
11800.00	0.00	359.61	11740.53	-149.81	692.90	-107.83	0.00	
11836.58	0.00	359.61	11777.11	-149.81	692.90	-107.83	0.00	KOP
11900.00	6.34	359.61	11840.40	-146.30	692.87	-104.34	10.00	
12000.00	16.34	359.61	11938.32	-126.66	692.74	-84.74	10.00	
12006.98	17.04	359.61	11945.00	-124.66	692.73	-82.74	10.00	Wolfcamp / Point of Penetration
12100.00	26.34	359.61	12031.34	-90.32	692.50	-48.47	10.00	
12200.00	36.34	359.61	12116.64	-38.37	692.15	3.36	10.00	
12300.00	46.34	359.61	12191.63	27.60	691.70	69.18	10.00	
12400.00	56.34	359.61	12254.01	105.59	691.18	147.00	10.00	



**Well:** GATO GRANDE 9-4 FED COM 714H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1927  
**Ellipsoid:** Clarke 1866  
**Zone:** 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12500.00	66.34	359.61	12301.91	193.22	690.59	234.44	10.00	
12600.00	76.34	359.61	12333.86	287.85	689.95	328.85	10.00	
12700.00	86.34	359.61	12348.90	386.58	689.28	427.36	10.00	
12745.15	90.86	359.61	12350.00	431.71	688.98	472.39	10.00	Landing Point
12800.00	90.86	359.61	12349.18	486.55	688.61	527.11	0.00	
12900.00	90.86	359.61	12347.68	586.53	687.94	626.87	0.00	
13000.00	90.86	359.61	12346.19	686.52	687.27	726.64	0.00	
13100.00	90.86	359.61	12344.69	786.51	686.60	826.40	0.00	
13200.00	90.86	359.61	12343.20	886.49	685.92	926.17	0.00	
13300.00	90.86	359.61	12341.70	986.48	685.25	1025.93	0.00	
13400.00	90.86	359.61	12340.20	1086.47	684.58	1125.70	0.00	
13500.00	90.86	359.61	12338.71	1186.45	683.90	1225.46	0.00	
13600.00	90.86	359.61	12337.21	1286.44	683.23	1325.23	0.00	
13700.00	90.86	359.61	12335.72	1386.43	682.56	1424.99	0.00	
13800.00	90.86	359.61	12334.22	1486.41	681.88	1524.76	0.00	
13900.00	90.86	359.61	12332.73	1586.40	681.21	1624.52	0.00	
14000.00	90.86	359.61	12331.23	1686.38	680.54	1724.29	0.00	
14100.00	90.86	359.61	12329.73	1786.37	679.86	1824.05	0.00	
14200.00	90.86	359.61	12328.24	1886.36	679.19	1923.82	0.00	
14300.00	90.86	359.61	12326.74	1986.34	678.52	2023.58	0.00	
14400.00	90.86	359.61	12325.25	2086.33	677.84	2123.35	0.00	
14500.00	90.86	359.61	12323.75	2186.32	677.17	2223.11	0.00	
14600.00	90.86	359.61	12322.25	2286.30	676.50	2322.88	0.00	
14700.00	90.86	359.61	12320.76	2386.29	675.82	2422.64	0.00	
14800.00	90.86	359.61	12319.26	2486.28	675.15	2522.41	0.00	
14900.00	90.86	359.61	12317.77	2586.26	674.48	2622.17	0.00	
15000.00	90.86	359.61	12316.27	2686.25	673.80	2721.93	0.00	
15100.00	90.86	359.61	12314.77	2786.24	673.13	2821.70	0.00	
15200.00	90.86	359.61	12313.28	2886.22	672.46	2921.46	0.00	
15300.00	90.86	359.61	12311.78	2986.21	671.79	3021.23	0.00	
15400.00	90.86	359.61	12310.29	3086.20	671.11	3120.99	0.00	
15500.00	90.86	359.61	12308.79	3186.18	670.44	3220.76	0.00	
15600.00	90.86	359.61	12307.29	3286.17	669.77	3320.52	0.00	
15700.00	90.86	359.61	12305.80	3386.16	669.09	3420.29	0.00	
15800.00	90.86	359.61	12304.30	3486.14	668.42	3520.05	0.00	
15900.00	90.86	359.61	12302.81	3586.13	667.75	3619.82	0.00	
16000.00	90.86	359.61	12301.31	3686.12	667.07	3719.58	0.00	
16100.00	90.86	359.61	12299.82	3786.10	666.40	3819.35	0.00	
16200.00	90.86	359.61	12298.32	3886.09	665.73	3919.11	0.00	
16300.00	90.86	359.61	12296.82	3986.08	665.05	4018.88	0.00	
16400.00	90.86	359.61	12295.33	4086.06	664.38	4118.64	0.00	
16500.00	90.86	359.61	12293.83	4186.05	663.71	4218.41	0.00	
16600.00	90.86	359.61	12292.34	4286.03	663.03	4318.17	0.00	
16700.00	90.86	359.61	12290.84	4386.02	662.36	4417.94	0.00	
16800.00	90.86	359.61	12289.34	4486.01	661.69	4517.70	0.00	
16900.00	90.86	359.61	12287.85	4585.99	661.01	4617.47	0.00	
17000.00	90.86	359.61	12286.35	4685.98	660.34	4717.23	0.00	
17100.00	90.86	359.61	12284.86	4785.97	659.67	4816.99	0.00	
17200.00	90.86	359.61	12283.36	4885.95	658.99	4916.76	0.00	
17300.00	90.86	359.61	12281.86	4985.94	658.32	5016.52	0.00	
17400.00	90.86	359.61	12280.37	5085.93	657.65	5116.29	0.00	
17500.00	90.86	359.61	12278.87	5185.91	656.98	5216.05	0.00	
17600.00	90.86	359.61	12277.38	5285.90	656.30	5315.82	0.00	
17700.00	90.86	359.61	12275.88	5385.89	655.63	5415.58	0.00	
17800.00	90.86	359.61	12274.38	5485.87	654.96	5515.35	0.00	
17900.00	90.86	359.61	12272.89	5585.86	654.28	5615.11	0.00	
18000.00	90.86	359.61	12271.39	5685.85	653.61	5714.88	0.00	
18100.00	90.86	359.61	12269.90	5785.83	652.94	5814.64	0.00	
18200.00	90.86	359.61	12268.40	5885.82	652.26	5914.41	0.00	
18300.00	90.86	359.61	12266.91	5985.81	651.59	6014.17	0.00	
18400.00	90.86	359.61	12265.41	6085.79	650.92	6113.94	0.00	
18500.00	90.86	359.61	12263.91	6185.78	650.24	6213.70	0.00	
18600.00	90.86	359.61	12262.42	6285.77	649.57	6313.47	0.00	
18700.00	90.86	359.61	12260.92	6385.75	648.90	6413.23	0.00	
18800.00	90.86	359.61	12259.43	6485.74	648.22	6513.00	0.00	
18900.00	90.86	359.61	12257.93	6585.73	647.55	6612.76	0.00	
19000.00	90.86	359.61	12256.43	6685.71	646.88	6712.53	0.00	
19100.00	90.86	359.61	12254.94	6785.70	646.20	6812.29	0.00	
19200.00	90.86	359.61	12253.44	6885.69	645.53	6912.05	0.00	
19300.00	90.86	359.61	12251.95	6985.67	644.86	7011.82	0.00	



**Well:** GATO GRANDE 9-4 FED COM 714H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

**Geodetic System:** US State Plane 1983  
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**Ellipsoid:** Clarke 1866  
**Zone:** 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19400.00	90.86	359.61	12250.45	7085.66	644.18	7111.58	0.00	
19500.00	90.86	359.61	12248.95	7185.64	643.51	7211.35	0.00	
19600.00	90.86	359.61	12247.46	7285.63	642.84	7311.11	0.00	
19700.00	90.86	359.61	12245.96	7385.62	642.17	7410.88	0.00	
19800.00	90.86	359.61	12244.47	7485.60	641.49	7510.64	0.00	
19900.00	90.86	359.61	12242.97	7585.59	640.82	7610.41	0.00	
20000.00	90.86	359.61	12241.48	7685.58	640.15	7710.17	0.00	
20100.00	90.86	359.61	12239.98	7785.56	639.47	7809.94	0.00	
20200.00	90.86	359.61	12238.48	7885.55	638.80	7909.70	0.00	
20300.00	90.86	359.61	12236.99	7985.54	638.13	8009.47	0.00	
20400.00	90.86	359.61	12235.49	8085.52	637.45	8109.23	0.00	
20500.00	90.86	359.61	12234.00	8185.51	636.78	8209.00	0.00	
20600.00	90.86	359.61	12232.50	8285.50	636.11	8308.76	0.00	
20700.00	90.86	359.61	12231.00	8385.48	635.43	8408.53	0.00	
20800.00	90.86	359.61	12229.51	8485.47	634.76	8508.29	0.00	
20900.00	90.86	359.61	12228.01	8585.46	634.09	8608.06	0.00	
21000.00	90.86	359.61	12226.52	8685.44	633.41	8707.82	0.00	
21100.00	90.86	359.61	12225.02	8785.43	632.74	8807.59	0.00	
21200.00	90.86	359.61	12223.52	8885.42	632.07	8907.35	0.00	
21300.00	90.86	359.61	12222.03	8985.40	631.39	9007.11	0.00	
21400.00	90.86	359.61	12220.53	9085.39	630.72	9106.88	0.00	
21500.00	90.86	359.61	12219.04	9185.38	630.05	9206.64	0.00	
21600.00	90.86	359.61	12217.54	9285.36	629.37	9306.41	0.00	
21700.00	90.86	359.61	12216.04	9385.35	628.70	9406.17	0.00	
21800.00	90.86	359.61	12214.55	9485.34	628.03	9505.94	0.00	
21900.00	90.86	359.61	12213.05	9585.32	627.36	9605.70	0.00	
22000.00	90.86	359.61	12211.56	9685.31	626.68	9705.47	0.00	
22100.00	90.86	359.61	12210.06	9785.29	626.01	9805.23	0.00	
22200.00	90.86	359.61	12208.57	9885.28	625.34	9905.00	0.00	
22300.00	90.86	359.61	12207.07	9985.27	624.66	10004.76	0.00	
22400.00	90.86	359.61	12205.57	10085.25	623.99	10104.53	0.00	
22500.00	90.86	359.61	12204.08	10185.24	623.32	10204.29	0.00	
22557.97	90.86	359.61	12203.21	10243.20	622.93	10262.12	0.00	exit
22600.00	90.86	359.61	12202.58	10285.23	622.64	10304.06	0.00	
22637.97	90.86	359.61	12202.00	10323.19	622.44	10341.94	0.00	BHL





GATO GRANDE 9-4 FED COM 714H

**1. Geologic Formations**

TVD of target	12203	Pilot hole depth	N/A
MD at TD:	22638	Deepest expected fresh water	

**Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	1160		
Salt	1454		
Base of Salt	4564		
Delaware	4819		
Cherry Canyon	5966		
Brushy Canyon	6915		
1st Bone Spring Lime	8640		
Bone Spring 1st	9780		
Bone Spring 2nd	10408		
3rd Bone Spring Lime	10946		
Bone Spring 3rd	11550		
Wolfcamp	11945		

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## GATO GRANDE 9-4 FED COM 714H

**2. Casing Program (Primary Design)**

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	9 5/8	40	J-55	BTC	0	1185	0	1185
8 3/4	7 5/8	29.7	P110HP	TALON SFC	0	11737	0	11737
6 3/4	5 1/2	20	P110HP	TALON RD	0	22638	0	12203

•All casing strings will be tested in accordance with 43 CFR 3172.

**3. Cementing Program (Primary Design)**

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon 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. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures

Casing	# Skis	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	622	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	385	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	439	6974	13.2	1.44	Tail: Class H / C + additives
Production	62	9837	9	3.27	Lead: Class H / C + additives
	689	11837	13.2	1.44	Tail: Class H / C + additives

Devon Energy requests to offline cement on intermediate strings that are set in formations shallower than the Wolfcamp. Prior to commencing offline cementing operations, the well will be monitored for any abnormal pressures and confirmed to be static. A dual manifold system (equipped with chokes) for the returns will also be utilized as a redundancy. All equipment used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Prod	10%

GATO GRANDE 9-4 FED COM 714H

**2. Casing Program (Secondary Design)**

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
14 3/4	10 3/4	45 1/2	J-55	BTC	0	1185	0	1185
9 7/8	8 5/8	32	P110	Sprint FJ	0	11737	0	11737
7 7/8	5 1/2	20	P110	DWC / C-IS+	0	22638	0	12203

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.

**3. Cementing Program (Secondary Design)**

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon 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. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	711	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	488	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	552	6974	13.2	1.44	Tail: Class H / C + additives
Production	117	9837	9	3.27	Lead: Class H / C + additives
	1430	11837	13.2	1.44	Tail: Class H / C + additives

Devon Energy requests to offline cement on intermediate strings that are set in formations shallower than the Wolfcamp. Prior to commencing offline cementing operations, the well will be monitored for any abnormal pressures and confirmed to be static. A dual manifold system (equipped with chokes) for the returns will also be utilized as a redundancy. All equipment used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements.

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Prod	10%

**4. Pressure Control Equipment**

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular	X	5M	50% of rated working pressure
			Blind Ram	X		
			Pipe Ram			
			Double Ram	X		
			Other*			
Production	13-5/8"	10M	Annular (5M)	X	10M	100% of rated working pressure
			Blind Ram	X		
			Pipe Ram			
			Double Ram	X		
			Other*			
			Annular (5M)			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
Y	A variance is requested to run a 5 M annular on a 10M system					

GATO GRANDE 9-4 FED COM 714H

**5. Mud Program**

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Production	OBM	10-10.5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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**6. Logging and Testing Procedures**

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

Additional logs planned	Interval
Resistivity	Int. shoe to KOP
Density	Int. shoe to KOP
X CBL	Production casing
X Mud log	Intermediate shoe to TD
PEX	

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	6663
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR 3176. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

**8. Other facets of operation**

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

- X   Directional Plan
- Other, describe

Sante Fe Main Office  
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Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 453093

**CONDITIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 453093
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
matthew.gomez	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	5/14/2025
matthew.gomez	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.	5/14/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	5/14/2025
matthew.gomez	Any previous COA's not addressed within the updated COA's still apply.	5/14/2025