Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM13641

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM112758

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
MAD DOG 15 FED COM 1

2. Name of Operator
DEVON ENERGY PRODUCTION COM LP
Contact: REBECCA DEAL
E-Mail: Rebecca.Deal@dvn.com

9. API Well No.
30-025-36778-00-S1

3a. Address
6488 SEVEN RIVERS HIGHWAY
ARTESIA, NM 88211

3b. Phone No. (include area code)
Ph: 405-228-8429

10. Field and Pool or Exploratory Area
ANTELOPE RIDGE-BONE SPRING, W

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T23S R34E SESE 660FSL 660FEL

11. County or Parish, State
LEA COUNTY, NM

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

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

Devon Energy Production Co. respectfully requests to convert the Mad Dog 15 Fed Com 1 to a SWD. Proposed SWD conversion is in the Devonian formation. Please see attached detailed procedure and wellbore schematic.

REQUIRES ADMINISTRATIVE SWD ORDER

HOBBS OCD
OCT 11 2018
RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #419170 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION COM LP, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 05/08/2018 (18PP0997SE)

Name *(Printed/Typed)* REBECCA DEAL — Title REGULATORY COMPLIANCE PROFESSI

Signature (Electronic Submission) — Date 05/07/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE — Title PETROLEUM ENGINEER — Date 09/20/2018

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 Hobbs

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Revisions to Operator-Submitted EC Data for Sundry Notice #419170

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	INJ NOI	INJ NOI
Lease:	NMNM13641	NMNM13641
Agreement:		NMNM112758 (NMNM112758)
Operator:	DEVON ENERGY PRODUCTION COMPAN 333 WEST SHERIDAN AVENUE OKLAHOMA CITY, OK 73102 Ph: 405-228-8429	DEVON ENERGY PRODUCTION COM LP 6488 SEVEN RIVERS HIGHWAY ARTESIA, NM 88211 Ph: 575-748-1854
Admin Contact:	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429
Tech Contact:	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429
Location: State: County:	 NM LEA	 NM LEA
Field/Pool:	ANTELOPE RIDGE	ANTELOPE RIDGE-BONE SPRING, W
Well/Facility:	MAD DOG 15 FED COM 1 Sec 15 T23S R34E Mer NMP SESE 600FSL 660FEL	MAD DOG 15 FED COM 1 Sec 15 T23S R34E SESE 660FSL 660FEL

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220
575-234-5972

Devon Energy
Mad Dog 15 Fed Com 1
NMNM13641
30-025-36778

09/20/2018

All previous COAs still apply except for the following:

Notification: Contact the appropriate BLM office at least 24 hours prior to the commencing of any plug back operations. For wells in Eddy County, call 575-361-2822. For wells in Lea County, call 575-393-3612.

1. Must conduct a MIT before commencing operation. Submit results to BLM. Notify BLM if test fails.

A. WELL COMPLETION

Special Requirements:

The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated insitu water salinity based on open-hole logs. If hydrocarbon shows occur while drilling, the operator shall notify the BLM. The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open hole logs from TD to top of Devonian

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. **Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.**
2. **Restrict the injection fluid to the approved formation.**
3. **If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval**

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

MHH 09202018

devon

Mad Dog 15 Federal Com 1 – SWD Conversion

5/3/2018

WELL NAME: Mad Dog 15 Federal Com 1 **API:** 30-025-36778

WBS: MM-XXXXXX Lea County, NM

WELLBORE DATA

KB: 3,431'; GL: 3,408'; KB: 23'

Size	Weight	Grade	Interval	Collapse	Burst	Drift	Capacity
13-3/8"	48	H-40	0-929'	-	-	-	-
9-5/8"	53.5	P-110	0-4,996'	7,930	10,900	-	-
7"	26	P-110	0-11,892'	6,210	9,960	6.151"	0.03826
5"	23.2	L-80	11,604'-14,711'	13,830	13,380	3.919"	0.01589
3-7/8" (OH)	-	-	14,711'-14,832'	-	-	-	0.01459

IMPORTANT NOTES

1) TA'd with Schlumberger (copper) CIBP & 35' cmt in Oct. 2016 – beware trapped pressure below.

2) NMOCD requires packer to be set within 100' of injection interval – current CIBP & cement are within this depth, so pre-job MIT would satisfy regulation, providing go-forward or abandon decision point.

3) Well was loaded with 2% KCl and corrosion inhibitor, any pressure seen on wellhead gauges *should* be thermal effects, use caution in the case any H_2S laden gas migrated post TA/SI.

4) Wellbore is build-hold-drop with 20° hold. Beware of many < 3.0°/100' DLS in hold portion – most recent well service & wireline did not report any issues with tortuosity.

RELEVANT CONCERNS

1) Flowed ESP with high H_2S production. Acknowledge & manage safety risk. DVN will need to WL verify casing integrity.

2) The clearance between the 5" liner and the BHA will be very tight, increasing our stuck pipe risk. Do not stack too heavy on the plug/cement, it is better to be slower and generate small "cuttings" than to end up fighting stuck pipe or fishing. After drilling a stand, circulate at a minimum enough strokes to move "cuttings" half way up 7" production casing before shutting down pumps. "Cuttings" are most likely to fall out above the Drill Collars and above the 5" liner hanger where annular volume increases (causing fluid velocity to drop). Avoid shutting down pumps without circulating off bottom if at all possible. If significant over pull (3,000 lbs or greater) is seen, stop, RIH, rotate and circulate before attempting to pick back up. Do not proceed deeper than 5" shoe until returns are clear of solids.

PROCEDURE

SAFETY: All personnel will wear hard hats, safety glasses with side shields, steel toed boots, H_2S monitor and fire retardant clothing while on location. Any personnel arriving on location after the pre-job safety meeting will check in with the Devon PIC and review hazards before proceeding. All personnel have the obligation and full authority to stop the job if any action may be perceived as harmful to people or the environment. H_2S safety personnel and monitoring equipment are to be on location at all times during workover operations.

PRE-JOB

1) Check tubing & casing pressures, open valves to SCADA transducers.

2) Check well head for flange/sizing abnormalities – communicate to PIC.

3) Hold PJSM. Historic production contained H_2S.

4) Record SITP & SICP.

5) MIRU blow down tank & safety equipment.

6) Blow down/bleed off any gas/thermal pressure.

**Any pressure should be thermal, take necessary precaution given history of H_2S production. Wellbore was CIRC/loaded with 2% KCl & corrosion inhibitor after dump bailing cement.*

7) Rig up hot oiler to production casing, ensure valves are open to tbg and csg gauges.

8) Perform preliminary MIT, monitor both tbg and csg gauges throughout MIT – report any discrepancy in tbg/csg pressures to DVN engineer (gauges should read similar pressures).

9) Pressure up to 500 psi and hold for 30 min. If pressure loss exceeds 10% (50 psi) over 30 min, contact DVN engineer and WOO.

WL CSG INTEGRITY LOGS & CCL

1) RU WL & 5K WL BOP/LUBE. Check LUBE length can house required tools. PTEST per DVN protocol.

2) PU 3.625" GR/JB and necessary weight bars, fill LUBE & equalize over WHP.

3) OWH & RIH to 14,660'. Be sure to slow down above 5" liner hanger @ 11,604'.

4) POH maintaining a reasonable speed until clear of 5" liner hanger.

5) PU 40 ARM CALIPER, USIT, CCL & necessary weight bars, fill LUBE & equalize over WHP.

6) OWH & RIH to 14,660'. Be sure to slow down above 5" liner hanger @ 11,604'.

7) POH maintaining a reasonable speed until clear of 5" liner hanger.

8) RDMO WL. Report results of CSG integrity logs to DVN engineer.

MIRU WSU & TOH KILL STRING

1) Hold PJSM. Historic production contained H_2S.

2) Record SITP & SICP.

3) Install and/or test anchors. MIRU WSU & reverse unit, necessary flow back iron/equipment, flare stack, safety equipment & rental equipment.

4) Blow down/kill well if necessary.

5) ND tree.

6) NU 7-1/16" 10K BOPE with annular, tbg rams, blind rams. Previous well service could not remove 10K flange, removed 3K x 5K flange and rigged up spooler. Same may be required.

7) PTEST BOPE according to Devon protocol.

**Job scope involves several sizes of pipe to be run in hole, usually multiple sizes in same string – if spooler and additional rams are necessary, take additional height into account when setting rig floor. PIC should use own discretion regarding most efficient call out/rental of different rams.*

8) TOH laying down 5,000' 2-7/8" L-80 tbg.

D/O 35' CMT & CIBP

1) MU CMT + CIBP D/O BHA:

-3-7/8" full open right mill (consult with tool hand to determine ideal mill type)

-5" 23.2# Casing scraper

-3-1/8" bumper jars

-3-1/8" oil jars

-4 x 3-1/8" DC's

-126 jts 2-3/8" PH-6 **want to keep 2-7/8" out of 5" liner. OH + liner + 20 jts = ~3,840' = ~126 jts*

-FIH x 2-7/8" L-80 tbg

2) Strap in hole with D/O assembly to 11,478' (4 jts above TOL), RU power swivel.

3) Continue TIH, D/O 35' cmt & CIBP. Monitor return tank for cmt & plug parts. If possible, catch cmt & plug parts using the smallest reasonable screen mesh.

**Beware of trapped pressure beneath plug – take necessary precautions.*

***Once solids show up at surface, regularly take pictures, note "cuttings" size & submit to DVN engineer while continuing to drill out cmt.*

****If all solids were able to be caught, cmt + plug would be about five, 5 gallon buckets worth of solids to surface. Expect to see less, some solids will be too small to catch with screen.*

4) Wash & scrape csg to 5" liner shoe (14,711'). Do not exit 5" liner shoe.

5) CIRC, rotate & work last stand until returns come back clean – avoid shutting down pumps until returns are clean.

6) TOH scraping liner & racking back tubing until above 5" liner hanger (11,604'). RD power swivel & continue TOH racking back tbg.

7) MU OH D/O BHA:

-3-5/8" junk mill or bit (consult with tool hand to determine ideal mill/bit & gauge)

-3-1/8" bumper jars

-3-1/8" oil jars

-4 x 3-1/8" DC's

-126 jts 2-3/8" PH-6 **want to keep 2-7/8" out of 5" liner. OH + liner + 20 jts = ~3,840' = ~126 jts*

-FIH x 2-7/8" L-80 tbg

8) Strap in hole with D/O assembly to 11,478' (4 jts above TOL), RU power swivel.

9) Continue TIH to 5" liner shoe @ 14,711'. Wash to bottom if necessary.

10) Wash 1 stand into OH, PU to 14,711' (inside 5"), CIRC 1.5 BU & monitor for solids in returns.

**If taking significant weight when entering top of OH, immediately TOH to 5" shoe & CIRC while contacting DVN engineer. Record & report stacked weight.*

11) If solids return from OH, CIRC inside 5" liner shoe until returns are clean.

12) Wash ~2 stands into OH to PBTD (14,832'), rotate & work pipe while CIRC until no solids return.

**DO NOT LET PIPE SIT STILL IN OPEN HOLE EXCEPT IF NECESSARY FOR CONNECTIONS. REDUCE CONNECTION TIME & PUMP SHUT DOWN TIME AS MUCH AS POSSIBLE.*

13) TOH to above 5" liner hanger (11,604') racking back 2-7/8" work string. RD power swivel.

14) TOH racking back 2-7/8" work string. Lay down 2-3/8" PH-6 & BHA.

RIH TREATMENT STRING & ACIDIZE WELL

1) MIRU tubing testers.

2) MU treating/injection string:

-2-7/8" Muleshoe

-2-7/8" x 1.87" "R" landing nipple (internal Ni coated)

-2-7/8" x 8' 6.5# L-80 tubing sub (internal Ni coated)

-5" x 2-7/8" Arrowset AS1-X 10K Injection Packer (internal Ni coated)

-2-7/8" x 1.87" "F" seal nipple (internal Ni coated)

-5" x 2-7/8" T2 On/Off Tool (internal Ni coated)

-FIH x 2-7/8" L-80 tbg

3) RIH to ~14,630'. Hydro-test tbg below slips to 4,000 psi.

4) Load & CIRC hole with ~385 bbls 2% KCl. Set packer @ 14,620'. Use 10# Nadine Brine if necessary. Be sure to maintain CIRC rate below max provided by packer hand to prevent fluid cutting packer elements.

Per NMOCD, packer must be set within 100' of injection zone (OH @ 14,711'). Move packer set depth deeper or shallower to avoid collars indicated by CCL, **while staying below 14,611'. Avoid setting packer deeper than old plug TOC (14,625') if possible.*

5) Perform MIT. Pressure test 2-7/8" annulus to 500 psi for 30 min. If pressure drops more than 10% (50 psi) in 30 min, unseat packer & TOH to 5" liner top (11,604'). Set packer & test 7" casing above liner. Notify DVN office of both test results & WOO.

6) MIRU pumping services & PTEST lines to 4,000 psi. **Max injection pressure is 2,923 psi.**

7) Spot 110 gal PAA trickled into 5 bbl water. Let soak 4 hours. (See attached Nalco Procedure).

8) Pump 10,000 gal 15% HCl over 3 stages using treated brine + rock salt as diverter. Flush acid with 96 bbl treated brine. Record 5, 10, 15 min ISIP. (See attached Halliburton Procedure).

9) Let acid soak a minimum of 3 hours. It is acceptable to let acid soak overnight if required to leave a kill string in the hole.

10) Bleed off pressure, if any. Back off On/Off tool & TOH laying down 2-7/8" work string.

RIH INJECTION STRING & SPACE OUT

1) Once production casing & liner PTEST good & all tubulars have been removed, NU 10K rams necessary for running injection assembly & PTEST per DVN protocol.

2) MU with injection string:

-5" x 2-7/8" T2 On/Off Tool (internal Ni coated)

-2-7/8" x 3,060' 6.5# L-80 DuoLine tbg

-2-7/8" x 4-1/2" DuoLine XO

-4-1/2" x 11,560' 12.75# L-80 DuoLine tbg

3) RIH to On/Off tool (~14,615').

4) RU pumping services & PTEST lines to 4,000 psi. **Max injection pressure is 2,923 psi.**

5) Reverse CIRC ~385 bbls 2% KCl + Corrosion inhibitor (CI ppm per chemical vendor recommendation). Use 10 ppg Nadine Brine if necessary.

6) MU to On/Off tool and space out. **Changes to tree/wellhead are required to accommodate 4-1/2" tbg.*

devon

Mad Dog 15 Federal Com 1 – SWD Conversion

5/3/2018

PERFORM PRELIMINARY MIT & STEP RATE TESTS. RDMO.

1) Run preliminary MIT on csg – tbg annulus using chart recorder. Test to 500 psi for 30 min with less than 10% (50 psi) bleed off over 30 min. If PTEST fails notify DVN engineer & WOO.

2) RU pumping services. PTEST lines to 4,000 psi. Using clean produced water from area, load tubing and perform step rate test to establish injection rate. Start at 2 bpm, holding each rate for 5 min before increasing injection rate in 1 bpm increments. Chart & record step rate test. **Max injection pressure is 2,923 psi (0.2 psi/ft * 14,619 ftTVD).**

3) SI well & record 5, 10, & 15 min SITP & SICP. RDMO pumping services.

4) ND BOP & NU 10K tree with sour trim. PTEST tree to rating.

5) RDMO WSU & all rental equipment. Install surface facilities for disposal.

PERFORM OFFICIAL MIT W/ REGULATORY REPRESENTATIVES

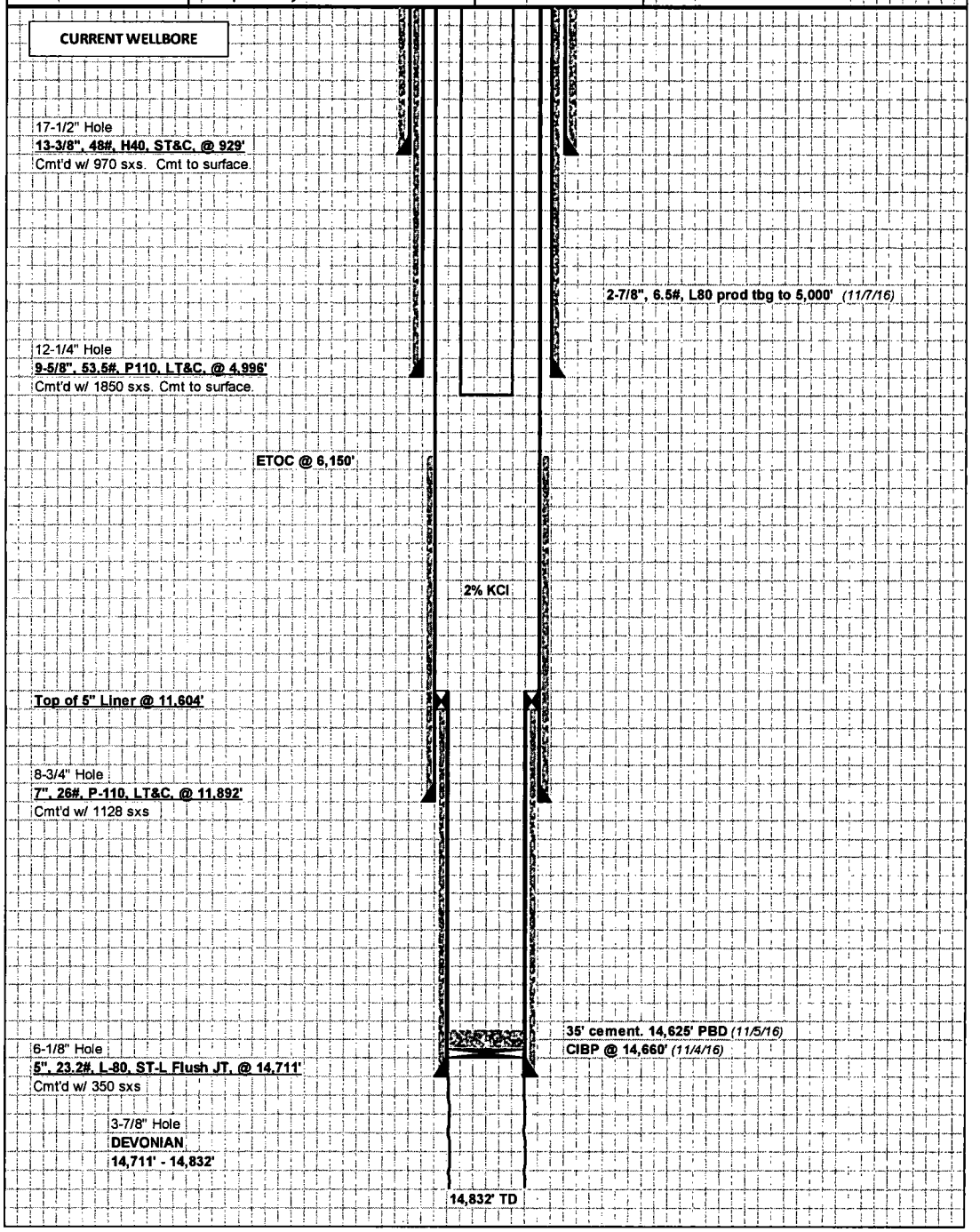
1) Notify & set up NMOCD & BLM for official MIT with chart recorder. Once MIT is approved & NMOCD OK's injection, initiate disposal into Devonian. **Do not exceed max pressure of 2,923 psi per NMOCD.**

**Any future slickline tools will require a smooth surface to prevent tbg coating damage.*

***Per NMOCD, any unseating of injection packer will require an additional witnessed MIT prior to commencing injection.*

CURRENT WELLBORE SCHEMATIC

DEVON ENERGY PRODUCTION COMPANY LP			
Well Name: MAD DOG 15 FEDERAL COM 1	Field: GAUCHO/RED BULL		
Location: 660' FSL & 660' FEL; SEC 15-T23S-R34E	County: LEA	State: NM	
Elevation: 3431' KB; 3408' GL; 23' KB to GL	Spud Date: 8/4/04	Compl Date: 11/17/04	
API#: 30-025-36778 Prepared by: Ronnie Slack	Date: 4/25/18	Rev:	



PROPOSED WELLBORE SCHEMATIC

DEVON ENERGY PRODUCTION COMPANY LP			
Well Name: MAD DOG 15 FEDERAL COM 1	Field: GAUCHO/RED BULL		
Location: 660' FSL & 660' FEL; SEC 15-T23S-R34E	County: LEA	State: NM	
Elevation: 3431' KB; 3408' GL; 23' KB to GL	Spud Date: 8/4/04	Compl Date: 11/17/04	
API#: 30-025-36778 Prepared by: Clifton Harlin	Date: 4/25/18	Rev: