

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.*

**HOBBS OCD**  
**NOV 27 2017**  
**RECEIVED**

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. FIGHTING OKRA 18-19 FED 14H ✓
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY Contact: REBECCA DEAL Email: Rebecca.Deal@dvn.com		9. API Well No. 30-025-43992-00-X1
3a. Address 333 WEST SHERIDAN AVENUE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405-228-8429	10. Field and Pool or Exploratory Area WC025G09S253336D-UPPER WC
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 18 T26S R34E NENW 330FNL 1695FWL ✓ 32.049789 N Lat, 103.512062 W Lon		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			
<input checked="" 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 checked="" type="checkbox"/> Other Change to Original APD
	<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.

Devon respectfully requests the following changes to the original APD:

Name change from Jayhawk 7-6 Fed 83H to Fighting Okra 18-19 Fed 14H.

BHL location change from 330 FNL & 2188 FWL, Sec. 6-26S-34E to 330 FSL & 1620 FWL, Sec. 19-26S-34E

Change from 12810'TVD/22,967'MD to 12,504'TVD/22,161'MD

See attached revised C-102, Drilling and Directional Plan

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. <b>Electronic Submission #395035 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION COMPAN, sent to the Hobbs Committed to AFMSS for processing by CHARLES NIMMER on 11/14/2017 (18CN0015SE)</b>	
Name (Printed/Typed) REBECCA DEAL	Title REGULATORY COMPLIANCE PROFESSI
Signature (Electronic Submission)	Date 11/14/2017

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

Approved By <u>CHARLES NIMMER</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>11/14/2017</u>
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 \*\***

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**Devon Energy, Fighting Okra 18-19 Fed 14H**

**2. Casing Program**

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	900'	13.375"	48	H-40	STC	1.125	1.25	1.6
12.25"	0	5,150'	9.625"	40	J-55	BTC	1.125	1.25	1.6
8.75"	0	22,161'	5.5"	17	P-110	BTC	1.125	1.25	1.6

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

**Devon Energy, Fighting Okra 18-19 Fed 14H**

**3. Cementing Program**

Casing	# Sks	Wt. lb/gal	H <sub>2</sub> O gal/sk	Yld ft <sup>3</sup> /sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	666	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1186	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod	825	11	17.38	2.81	n/a	1 <sup>st</sup> Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	2152	13.2	7.44	1.46	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

If a DV tool is run, DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
13-3/8" Surface	0'	50%
9-5/8" Intermediate	0'	30%
5-1/2" Production Casing	4950'	25%

**Devon Energy, Fighting Okra 18-19 Fed 14H**

**4. Pressure Control Equipment**

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure  3M
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure  3M
			Blind Ram		
			Pipe Ram		
			Double Ram	x	
			Other*		

\*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

**Devon Energy, Fighting Okra 18-19 Fed 14H**

	Y	Are anchors required by manufacturer?
Y	<p>A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.</p> <p>Devon proposes the option of using 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 3000 (3M) psi.</p> <ul style="list-style-type: none"> <li>• Wellhead will be installed by vendor's representatives.</li> <li>• If the welding is performed by a third party, the vendor's representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.</li> <li>• Vendor representative will install the test plug for the initial BOP test.</li> <li>• Vendor will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.</li> <li>• If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.</li> <li>• Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.</li> <li>• Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.</li> </ul> <p>After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.</p> <p>After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.</p> <p>The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.</p> <p>Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.</p>	

**Devon Energy, Fighting Okra 18-19 Fed 14H**

See attached schematic.
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**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	900'	FW Gel	8.6-8.8	28-34	N/C
900'	5,150'	Saturated Brine	10.0-10.2	28-34	N/C
5,150'	22,161'	Cut Brine	8.5-9.3	28-34	N/C

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**

<b>Logging, Coring and Testing.</b>	
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?
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**Devon Energy, Fighting Okra 18-19 Fed 14H**

BH Pressure at deepest TVD	6800 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions: 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 Onshore Oil and Gas Order #6. 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? Yes

1. In the event the spudder rig is unable to drill the surface holes the 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 with either OBM or cut brine 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 or cut brine, 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? Yes

1. Spudder rig will move in and drill surface hole.
  - a. Rig will utilize fresh water based mud to drill 17 1/2" 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 (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the 13-3/8" 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 pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At 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.

**Devon Energy, Fighting Okra 18-19 Fed 14H**

Attachments

Directional Plan

Other, describe

# Devon Energy

Project: Lea County, NM (NAD-83)  
 Site: Fighting Okra 18-19 Fed  
 Well: 14H  
 Wellbore: OH  
 Design: Plan #1



Azimuths to Grid North  
 True North: -0.44°  
 Magnetic North: 6.36°  
 Magnetic Field  
 Strength: 47891.0snT  
 Dip Angle: 59.78°  
 Date: 9/13/2017  
 Model: HDGM

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

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



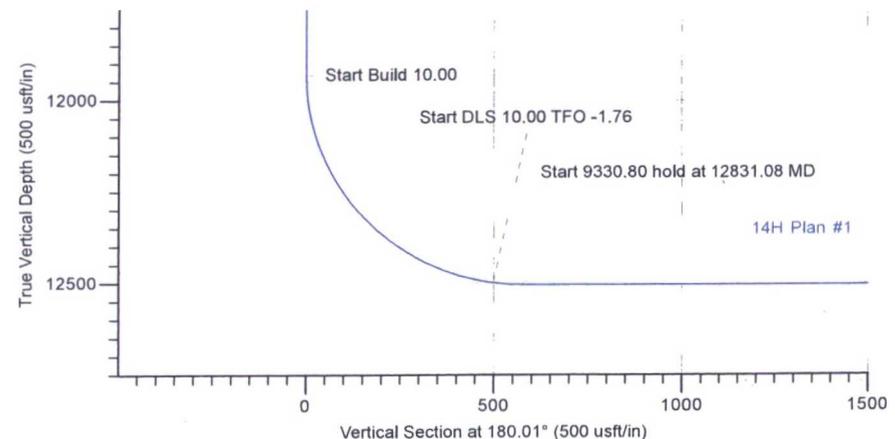
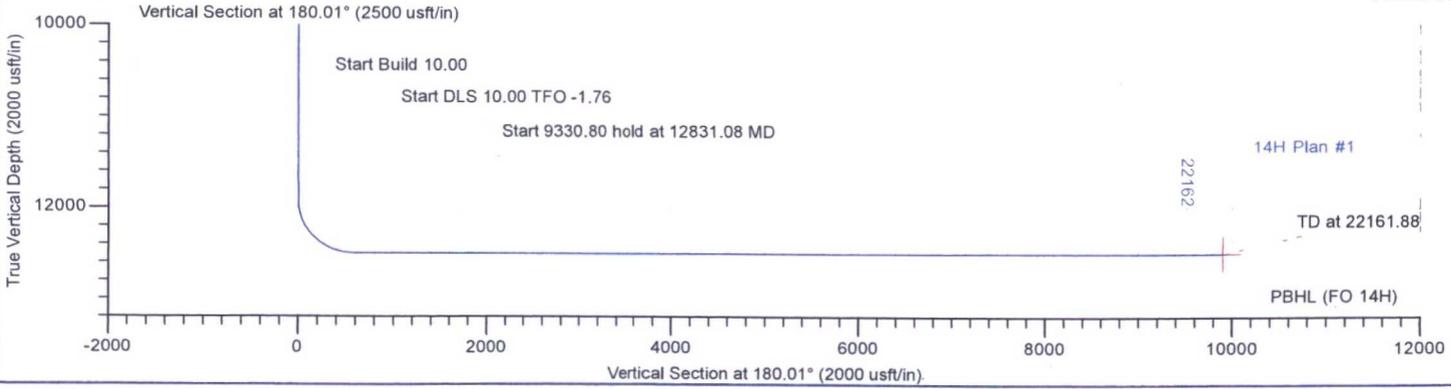
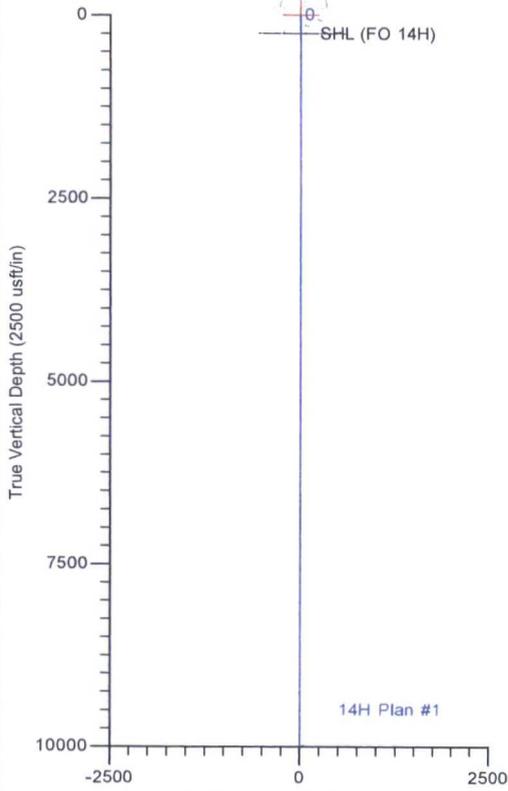
3371.2' GE + 25' KB @ 3396.20usft  
 Ground Level: 3371.20

### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11931.04	0.00	0.00	11931.04	0.00	0.00	0.00	0.00	0.00	Start Build 10.00
12756.04	82.50	180.23	12499.10	-498.17	-2.00	10.00	180.23	498.17	Start DLS 10.00 TFO -1.76
12831.08	90.00	180.00	12504.00	-572.99	-2.15	10.00	-1.76	572.99	Start 9330.80 hold at 12831.08 MD
22161.88	90.00	180.00	12504.00	-9903.79	-2.15	0.00	0.00	9903.79	TD at 22161.88

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (FO 14H)	12504.00	-9903.79	-2.15	32° 1' 21.2389 N	103° 30' 44.3348 W
SHL (FO 14H)	0.00	0.00	0.00	32° 2' 59.2401 N	103° 30' 43.4352 W



LEAM DRILLING SYSTEMS LLC  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (14H/OH)  
 Fighting Okra 18-19 Fed  
 Created By: Dustin Ault  
 Date: \_\_\_\_\_  
 Approved: \_\_\_\_\_  
 Date: 12:00, September 13 2017

# Devon Energy

Project: Lea County, NM (NAD-83)  
 Site: Fighting Okra 18-19 Fed  
 Well: 14H  
 Wellbore: OH  
 Design: Plan #1



**Azimuths to Grid North**  
 True North: -0.44°  
 Magnetic North: 6.36°

**Magnetic Field**  
 Strength: 47891.0snT  
 Dip Angle: 59.78°  
 Date: 9/13/2017  
 Model: HDGM



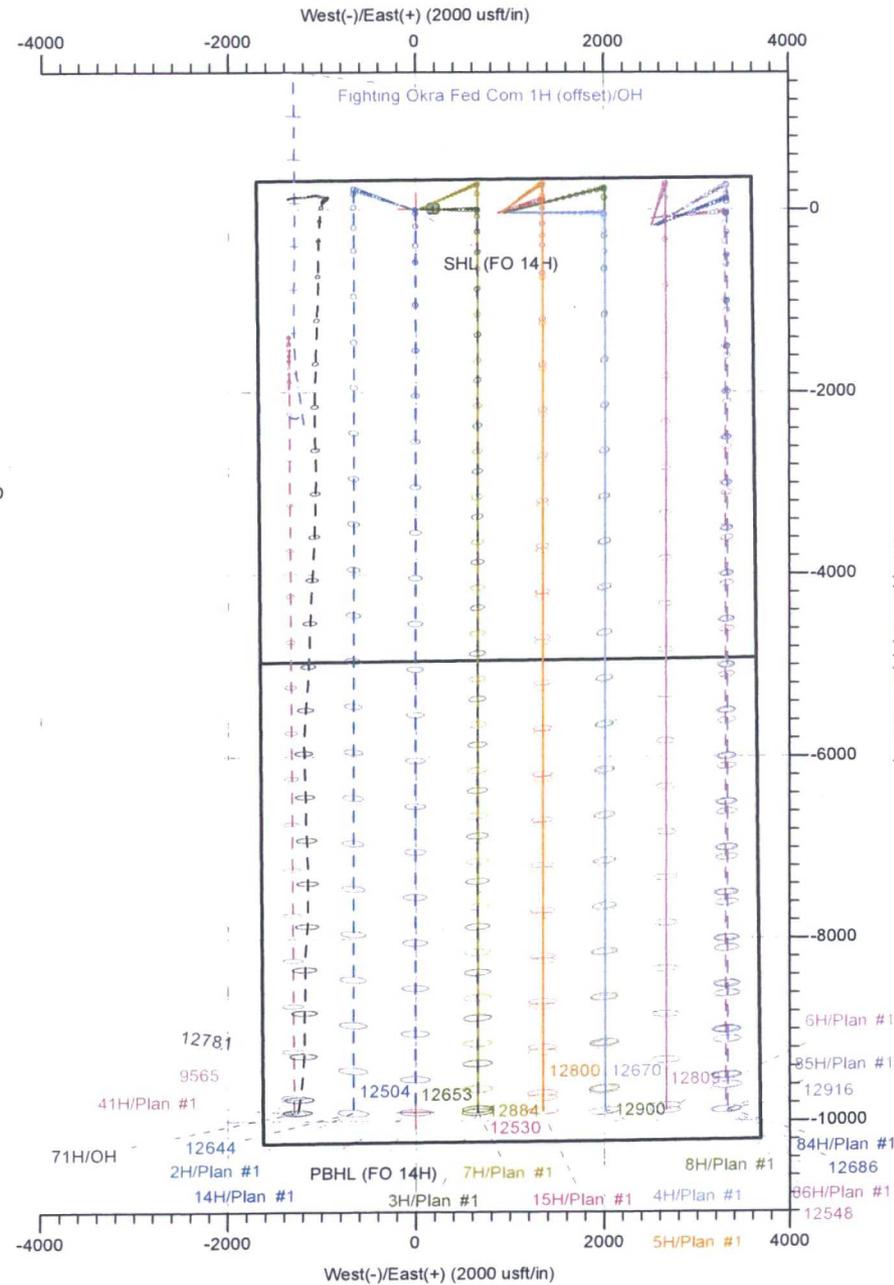
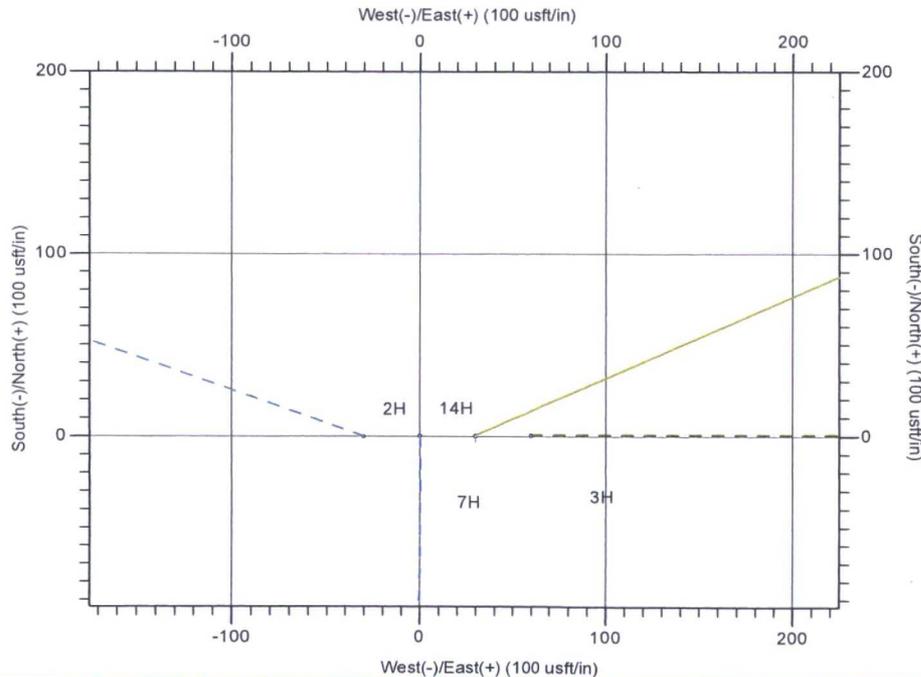
**PROJECT DETAILS:** Lea County, NM (NAD-83)  
 Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: New Mexico Eastern Zone

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (FO 14H)	12504.00	-9903.79	-2.15	372915.19	795784.80	32° 1' 21.2389 N	103° 30' 44.3348 W
SHL (FO 14H)	0.00	0.00	0.00	382818.98	795786.95	32° 2' 59.2401 N	103° 30' 43.4352 W

### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11931.04	0.00	0.00	11931.04	0.00	0.00	0.00	0.00	0.00	Start Build 10.00
12756.04	82.50	180.23	12499.10	-498.17	-2.00	10.00	180.23	498.17	Start DLS 10.00 TFO -1.76
12831.08	90.00	180.00	12504.00	-572.99	-2.15	10.00	-1.76	572.99	Start 9330.80 hold at 12831.08 MD
22161.88	90.00	180.00	12504.00	-9903.79	-2.15	0.00	0.00	9903.79	TD at 22161.88



**LEAM DRILLING SYSTEMS LLC**  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (14H/OH)  
 Fighting Okra 18-19 Fed  
 Created By: Dustin Ault  
 Date: \_\_\_\_\_  
 Approved: \_\_\_\_\_  
 Date: 12:01, September 13 2017

# **Devon Energy**

**Lea County, NM (NAD-83)  
Fighting Okra 18-19 Fed  
14H**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**13 September, 2017**

# LEAM Drilling Systems LLC

## Planning Report

**Database:** EDM 5000.1 Multi User Db  
**Company:** Devon Energy  
**Project:** Lea County, NM (NAD-83)  
**Site:** Fighting Okra 18-19 Fed  
**Well:** 14H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well 14H  
**TVD Reference:** 3371.2' GE + 25' KB @ 3396.20usft  
**MD Reference:** 3371.2' GE + 25' KB @ 3396.20usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	Lea County, NM (NAD-83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

<b>Site</b>	Fighting Okra 18-19 Fed		
<b>Site Position:</b>		<b>Northing:</b>	382,937.52 usft
<b>From:</b>	Map	<b>Easting:</b>	794,421.25 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 3' 0.5157 N
		<b>Longitude:</b>	103° 30' 59.2921 W
		<b>Grid Convergence:</b>	0.43 °

<b>Well</b>	14H					
<b>Well Position</b>	<b>+N/-S</b>	-118.54 usft	<b>Northing:</b>	382,818.98 usft	<b>Latitude:</b>	32° 2' 59.2402 N
	<b>+E/-W</b>	1,365.70 usft	<b>Easting:</b>	795,786.95 usft	<b>Longitude:</b>	103° 30' 43.4352 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	3,383.00 usft	<b>Ground Level:</b>	3,371.20 usft

<b>Wellbore</b>	OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>	
			(°)	(°)	(nT)	
	HDGM	9/13/2017	6.80	59.78	47,891	

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	180.01

Plan Sections											
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11,931.04	0.00	0.00	11,931.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12,756.04	82.50	180.23	12,499.10	-498.17	-2.00	10.00	10.00	0.00	180.23		
12,831.08	90.00	180.00	12,504.00	-572.99	-2.15	10.00	10.00	-0.31	-1.76		
22,161.88	90.00	180.00	12,504.00	-9,903.79	-2.15	0.00	0.00	0.00	0.00	0.00	PBHL (FO 14H)

# LEAM Drilling Systems LLC

## Planning Report

**Database:** EDM 5000.1 Multi User Db  
**Company:** Devon Energy  
**Project:** Lea County, NM (NAD-83)  
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**Local Co-ordinate Reference:** Well 14H  
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**MD Reference:** 3371.2' GE + 25' KB @ 3396.20usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (")	Azimuth (")	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate ("/100usft)	Build Rate ("/100usft)	Turn Rate ("/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SHL (FO 14H)</b>									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00

# LEAM Drilling Systems LLC

## Planning Report

**Database:** EDM 5000.1 Multi User Db  
**Company:** Devon Energy  
**Project:** Lea County, NM (NAD-83)  
**Site:** Fighting Okra 18-19 Fed  
**Well:** 14H  
**Wellbore:** OH  
**Design:** Plan #1

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5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00	0.00	0.00

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## Planning Report

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10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,500.00	0.00	0.00	0.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,600.00	0.00	0.00	0.00	0.00	0.00	0.00
11,700.00	0.00	0.00	11,700.00	0.00	0.00	0.00	0.00	0.00	0.00
11,800.00	0.00	0.00	11,800.00	0.00	0.00	0.00	0.00	0.00	0.00
11,900.00	0.00	0.00	11,900.00	0.00	0.00	0.00	0.00	0.00	0.00
11,931.04	0.00	0.00	11,931.04	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 10.00</b>									
11,950.00	1.90	180.23	11,950.00	-0.31	0.00	0.31	10.00	10.00	0.00
12,000.00	6.90	180.23	11,999.83	-4.14	-0.02	4.14	10.00	10.00	0.00
12,050.00	11.90	180.23	12,049.15	-12.31	-0.05	12.31	10.00	10.00	0.00
12,100.00	16.90	180.23	12,097.56	-24.73	-0.10	24.73	10.00	10.00	0.00
12,150.00	21.90	180.23	12,144.71	-41.33	-0.17	41.33	10.00	10.00	0.00
12,200.00	26.90	180.23	12,190.23	-61.98	-0.25	61.98	10.00	10.00	0.00
12,250.00	31.90	180.23	12,233.78	-86.51	-0.35	86.51	10.00	10.00	0.00
12,300.00	36.90	180.23	12,275.02	-114.75	-0.46	114.75	10.00	10.00	0.00
12,350.00	41.90	180.23	12,313.65	-146.47	-0.59	146.47	10.00	10.00	0.00
12,400.00	46.90	180.23	12,349.37	-181.44	-0.73	181.44	10.00	10.00	0.00
12,450.00	51.90	180.23	12,381.90	-219.39	-0.88	219.39	10.00	10.00	0.00
12,500.00	56.90	180.23	12,411.00	-260.03	-1.04	260.03	10.00	10.00	0.00
12,550.00	61.90	180.23	12,436.44	-303.05	-1.22	303.05	10.00	10.00	0.00
12,600.00	66.90	180.23	12,458.04	-348.13	-1.40	348.13	10.00	10.00	0.00
12,650.00	71.90	180.23	12,475.63	-394.91	-1.59	394.91	10.00	10.00	0.00
12,700.00	76.90	180.23	12,489.08	-443.05	-1.78	443.05	10.00	10.00	0.00
12,750.00	81.90	180.23	12,498.28	-492.18	-1.98	492.18	10.00	10.00	0.00
12,756.04	82.50	180.23	12,499.10	-498.17	-2.00	498.17	10.00	10.00	0.00
<b>Start DLS 10.00 TFO -1.76</b>									
12,800.00	86.89	180.09	12,503.16	-541.93	-2.12	541.93	10.00	10.00	-0.31
12,831.08	90.00	180.00	12,504.00	-572.99	-2.15	572.99	10.00	10.00	-0.31
<b>Start 9330.80 hold at 12831.08 MD</b>									
12,900.00	90.00	180.00	12,504.00	-641.91	-2.15	641.91	0.00	0.00	0.00
13,000.00	90.00	180.00	12,504.00	-741.91	-2.15	741.91	0.00	0.00	0.00
13,100.00	90.00	180.00	12,504.00	-841.91	-2.15	841.91	0.00	0.00	0.00
13,200.00	90.00	180.00	12,504.00	-941.91	-2.15	941.91	0.00	0.00	0.00
13,300.00	90.00	180.00	12,504.00	-1,041.91	-2.15	1,041.91	0.00	0.00	0.00
13,400.00	90.00	180.00	12,504.00	-1,141.91	-2.15	1,141.91	0.00	0.00	0.00
13,500.00	90.00	180.00	12,504.00	-1,241.91	-2.15	1,241.91	0.00	0.00	0.00
13,600.00	90.00	180.00	12,504.00	-1,341.91	-2.15	1,341.91	0.00	0.00	0.00
13,700.00	90.00	180.00	12,504.00	-1,441.91	-2.15	1,441.91	0.00	0.00	0.00
13,800.00	90.00	180.00	12,504.00	-1,541.91	-2.15	1,541.91	0.00	0.00	0.00
13,900.00	90.00	180.00	12,504.00	-1,641.91	-2.15	1,641.91	0.00	0.00	0.00
14,000.00	90.00	180.00	12,504.00	-1,741.91	-2.15	1,741.91	0.00	0.00	0.00
14,100.00	90.00	180.00	12,504.00	-1,841.91	-2.15	1,841.91	0.00	0.00	0.00
14,200.00	90.00	180.00	12,504.00	-1,941.91	-2.15	1,941.91	0.00	0.00	0.00
14,300.00	90.00	180.00	12,504.00	-2,041.91	-2.15	2,041.91	0.00	0.00	0.00
14,400.00	90.00	180.00	12,504.00	-2,141.91	-2.15	2,141.91	0.00	0.00	0.00

# LEAM Drilling Systems LLC

## Planning Report

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**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,500.00	90.00	180.00	12,504.00	-2,241.91	-2.15	2,241.91	0.00	0.00	0.00
14,600.00	90.00	180.00	12,504.00	-2,341.91	-2.15	2,341.91	0.00	0.00	0.00
14,700.00	90.00	180.00	12,504.00	-2,441.91	-2.15	2,441.91	0.00	0.00	0.00
14,800.00	90.00	180.00	12,504.00	-2,541.91	-2.15	2,541.91	0.00	0.00	0.00
14,900.00	90.00	180.00	12,504.00	-2,641.91	-2.15	2,641.91	0.00	0.00	0.00
15,000.00	90.00	180.00	12,504.00	-2,741.91	-2.15	2,741.91	0.00	0.00	0.00
15,100.00	90.00	180.00	12,504.00	-2,841.91	-2.15	2,841.91	0.00	0.00	0.00
15,200.00	90.00	180.00	12,504.00	-2,941.91	-2.15	2,941.91	0.00	0.00	0.00
15,300.00	90.00	180.00	12,504.00	-3,041.91	-2.15	3,041.91	0.00	0.00	0.00
15,400.00	90.00	180.00	12,504.00	-3,141.91	-2.15	3,141.91	0.00	0.00	0.00
15,500.00	90.00	180.00	12,504.00	-3,241.91	-2.15	3,241.91	0.00	0.00	0.00
15,600.00	90.00	180.00	12,504.00	-3,341.91	-2.15	3,341.91	0.00	0.00	0.00
15,700.00	90.00	180.00	12,504.00	-3,441.91	-2.15	3,441.91	0.00	0.00	0.00
15,800.00	90.00	180.00	12,504.00	-3,541.91	-2.15	3,541.91	0.00	0.00	0.00
15,900.00	90.00	180.00	12,504.00	-3,641.91	-2.15	3,641.91	0.00	0.00	0.00
16,000.00	90.00	180.00	12,504.00	-3,741.91	-2.15	3,741.91	0.00	0.00	0.00
16,100.00	90.00	180.00	12,504.00	-3,841.91	-2.15	3,841.91	0.00	0.00	0.00
16,200.00	90.00	180.00	12,504.00	-3,941.91	-2.15	3,941.91	0.00	0.00	0.00
16,300.00	90.00	180.00	12,504.00	-4,041.91	-2.15	4,041.91	0.00	0.00	0.00
16,400.00	90.00	180.00	12,504.00	-4,141.91	-2.15	4,141.91	0.00	0.00	0.00
16,500.00	90.00	180.00	12,504.00	-4,241.91	-2.15	4,241.91	0.00	0.00	0.00
16,600.00	90.00	180.00	12,504.00	-4,341.91	-2.15	4,341.91	0.00	0.00	0.00
16,700.00	90.00	180.00	12,504.00	-4,441.91	-2.15	4,441.91	0.00	0.00	0.00
16,800.00	90.00	180.00	12,504.00	-4,541.91	-2.15	4,541.91	0.00	0.00	0.00
16,900.00	90.00	180.00	12,504.00	-4,641.91	-2.15	4,641.91	0.00	0.00	0.00
17,000.00	90.00	180.00	12,504.00	-4,741.91	-2.15	4,741.91	0.00	0.00	0.00
17,100.00	90.00	180.00	12,504.00	-4,841.91	-2.15	4,841.91	0.00	0.00	0.00
17,200.00	90.00	180.00	12,504.00	-4,941.91	-2.15	4,941.91	0.00	0.00	0.00
17,300.00	90.00	180.00	12,504.00	-5,041.91	-2.15	5,041.91	0.00	0.00	0.00
17,400.00	90.00	180.00	12,504.00	-5,141.91	-2.15	5,141.91	0.00	0.00	0.00
17,500.00	90.00	180.00	12,504.00	-5,241.91	-2.15	5,241.91	0.00	0.00	0.00
17,600.00	90.00	180.00	12,504.00	-5,341.91	-2.15	5,341.91	0.00	0.00	0.00
17,700.00	90.00	180.00	12,504.00	-5,441.91	-2.15	5,441.91	0.00	0.00	0.00
17,800.00	90.00	180.00	12,504.00	-5,541.91	-2.15	5,541.91	0.00	0.00	0.00
17,900.00	90.00	180.00	12,504.00	-5,641.91	-2.15	5,641.91	0.00	0.00	0.00
18,000.00	90.00	180.00	12,504.00	-5,741.91	-2.15	5,741.91	0.00	0.00	0.00
18,100.00	90.00	180.00	12,504.00	-5,841.91	-2.15	5,841.91	0.00	0.00	0.00
18,200.00	90.00	180.00	12,504.00	-5,941.91	-2.15	5,941.91	0.00	0.00	0.00
18,300.00	90.00	180.00	12,504.00	-6,041.91	-2.15	6,041.91	0.00	0.00	0.00
18,400.00	90.00	180.00	12,504.00	-6,141.91	-2.15	6,141.91	0.00	0.00	0.00
18,500.00	90.00	180.00	12,504.00	-6,241.91	-2.15	6,241.91	0.00	0.00	0.00
18,600.00	90.00	180.00	12,504.00	-6,341.91	-2.15	6,341.91	0.00	0.00	0.00
18,700.00	90.00	180.00	12,504.00	-6,441.91	-2.15	6,441.91	0.00	0.00	0.00
18,800.00	90.00	180.00	12,504.00	-6,541.91	-2.15	6,541.91	0.00	0.00	0.00
18,900.00	90.00	180.00	12,504.00	-6,641.91	-2.15	6,641.91	0.00	0.00	0.00
19,000.00	90.00	180.00	12,504.00	-6,741.91	-2.15	6,741.91	0.00	0.00	0.00
19,100.00	90.00	180.00	12,504.00	-6,841.91	-2.15	6,841.91	0.00	0.00	0.00
19,200.00	90.00	180.00	12,504.00	-6,941.91	-2.15	6,941.91	0.00	0.00	0.00
19,300.00	90.00	180.00	12,504.00	-7,041.91	-2.15	7,041.91	0.00	0.00	0.00
19,400.00	90.00	180.00	12,504.00	-7,141.91	-2.15	7,141.91	0.00	0.00	0.00
19,500.00	90.00	180.00	12,504.00	-7,241.91	-2.15	7,241.91	0.00	0.00	0.00
19,600.00	90.00	180.00	12,504.00	-7,341.91	-2.15	7,341.91	0.00	0.00	0.00
19,700.00	90.00	180.00	12,504.00	-7,441.91	-2.15	7,441.91	0.00	0.00	0.00
19,800.00	90.00	180.00	12,504.00	-7,541.91	-2.15	7,541.91	0.00	0.00	0.00

# LEAM Drilling Systems LLC

## Planning Report

**Database:** EDM 5000.1 Multi User Db  
**Company:** Devon Energy  
**Project:** Lea County, NM (NAD-83)  
**Site:** Fighting Okra 18-19 Fed  
**Well:** 14H  
**Wellbore:** OH  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well 14H  
**TVD Reference:** 3371.2' GE + 25' KB @ 3396.20usft  
**MD Reference:** 3371.2' GE + 25' KB @ 3396.20usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,900.00	90.00	180.00	12,504.00	-7,641.91	-2.15	7,641.91	0.00	0.00	0.00
20,000.00	90.00	180.00	12,504.00	-7,741.91	-2.15	7,741.91	0.00	0.00	0.00
20,100.00	90.00	180.00	12,504.00	-7,841.91	-2.15	7,841.91	0.00	0.00	0.00
20,200.00	90.00	180.00	12,504.00	-7,941.91	-2.15	7,941.91	0.00	0.00	0.00
20,300.00	90.00	180.00	12,504.00	-8,041.91	-2.15	8,041.91	0.00	0.00	0.00
20,400.00	90.00	180.00	12,504.00	-8,141.91	-2.15	8,141.91	0.00	0.00	0.00
20,500.00	90.00	180.00	12,504.00	-8,241.91	-2.15	8,241.91	0.00	0.00	0.00
20,600.00	90.00	180.00	12,504.00	-8,341.91	-2.15	8,341.91	0.00	0.00	0.00
20,700.00	90.00	180.00	12,504.00	-8,441.91	-2.15	8,441.91	0.00	0.00	0.00
20,800.00	90.00	180.00	12,504.00	-8,541.91	-2.15	8,541.91	0.00	0.00	0.00
20,900.00	90.00	180.00	12,504.00	-8,641.91	-2.15	8,641.91	0.00	0.00	0.00
21,000.00	90.00	180.00	12,504.00	-8,741.91	-2.15	8,741.91	0.00	0.00	0.00
21,100.00	90.00	180.00	12,504.00	-8,841.91	-2.15	8,841.91	0.00	0.00	0.00
21,200.00	90.00	180.00	12,504.00	-8,941.91	-2.15	8,941.91	0.00	0.00	0.00
21,300.00	90.00	180.00	12,504.00	-9,041.91	-2.15	9,041.91	0.00	0.00	0.00
21,400.00	90.00	180.00	12,504.00	-9,141.91	-2.15	9,141.91	0.00	0.00	0.00
21,500.00	90.00	180.00	12,504.00	-9,241.91	-2.15	9,241.91	0.00	0.00	0.00
21,600.00	90.00	180.00	12,504.00	-9,341.91	-2.15	9,341.91	0.00	0.00	0.00
21,700.00	90.00	180.00	12,504.00	-9,441.91	-2.15	9,441.91	0.00	0.00	0.00
21,800.00	90.00	180.00	12,504.00	-9,541.91	-2.15	9,541.91	0.00	0.00	0.00
21,900.00	90.00	180.00	12,504.00	-9,641.91	-2.15	9,641.91	0.00	0.00	0.00
22,000.00	90.00	180.00	12,504.00	-9,741.91	-2.15	9,741.91	0.00	0.00	0.00
22,100.00	90.00	180.00	12,504.00	-9,841.91	-2.15	9,841.91	0.00	0.00	0.00
22,161.88	90.00	180.00	12,504.00	-9,903.79	-2.15	9,903.79	0.00	0.00	0.00

TD at 22161.88 - PBHL (FO 14H)

### Design Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (FO 14H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	382,818.98	795,786.95	32° 2' 59.2402 N	103° 30' 43.4352 W
PBHL (FO 14H) - plan hits target center - Point	0.00	0.00	12,504.00	-9,903.79	-2.15	372,915.19	795,784.80	32° 1' 21.2389 N	103° 30' 44.3348 W

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,931.04	11,931.04	0.00	0.00	Start Build 10.00
12,756.04	12,499.10	-498.17	-2.00	Start DLS 10.00 TFO -1.76
12,831.08	12,504.00	-572.99	-2.15	Start 9330.80 hold at 12831.08 MD
22,161.88	12,504.00	-9,903.79	-2.15	TD at 22161.88

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr. Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-025-43992</b>	<sup>2</sup> Pool Code <b>97947 7280</b>	<sup>3</sup> Pool Name <b>BILBOLEY WC-025-G-09-S263426B; BONE SPRING</b>
<sup>4</sup> Property Code <b>30884 319566</b>	<sup>5</sup> Property Name <b>FIGHTING OKRA 18-19 FED</b>	
<sup>7</sup> OGRID No. <b>6137</b>	<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	
		<sup>6</sup> Well Number <b>14H</b>
		<sup>9</sup> Elevation <b>3371.2</b>

<sup>10</sup> Surface Location

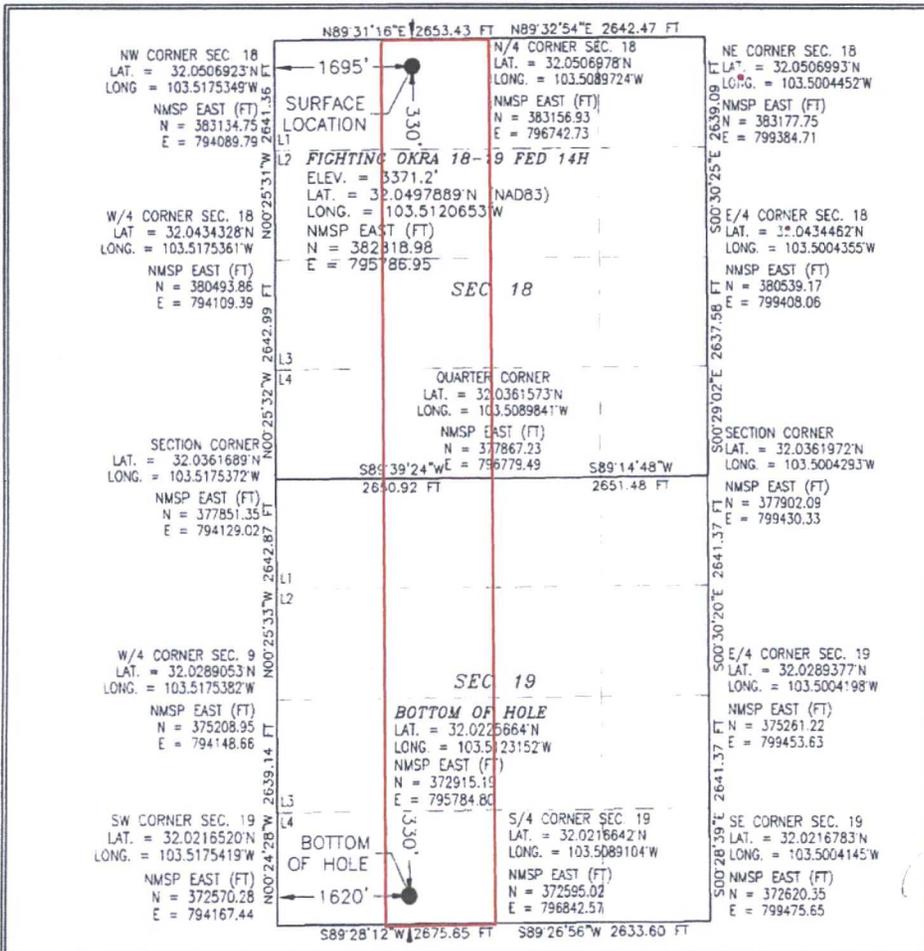
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	18	26 S	34 E		330	NORTH	1695	WEST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	19	26 S	34 E		330	SOUTH	1620	WEST	LEA

<sup>12</sup> Dedicated Acres <b>320</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
---	-------------------------------	----------------------------------	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



**<sup>17</sup> OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

**9/20/2017**

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Rebecca Deal, Regulatory Analyst**  
Printed Name

**rebecca.deal@dvn.com**  
E-mail Address

**<sup>18</sup> SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

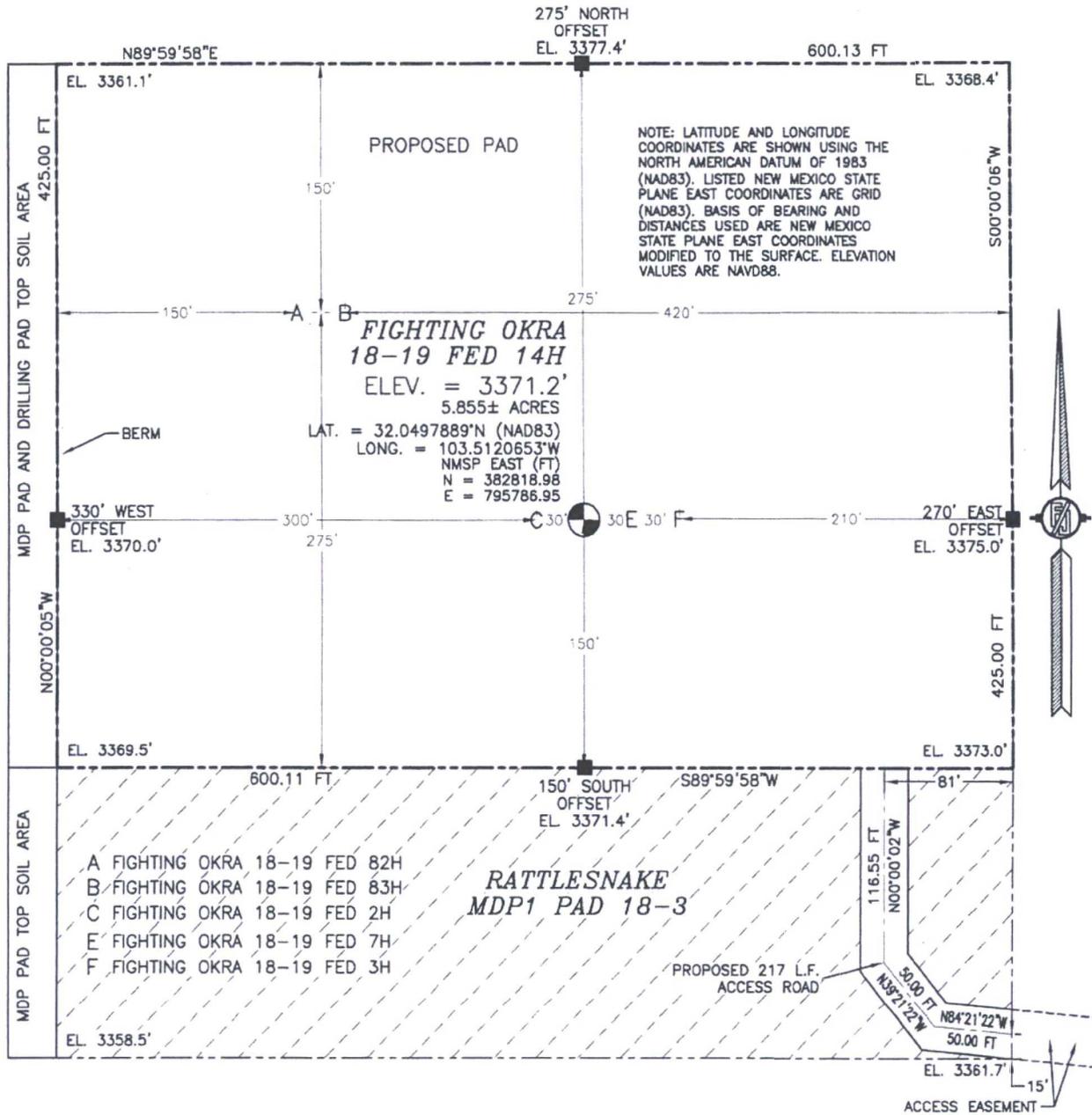
AUGUST 30, 2017

Date of Survey \_\_\_\_\_

Signature and Seal of Professional Surveyor \_\_\_\_\_

Certificate Number: **FILIMON F. JARAMILLO, P.L.S. 12797**  
SURVEY NO. 4812D

SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
SITE MAP



0 10 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM HWY 128 (JAL HWY) AND CR 2 (BATTLE AXE ROAD) GO SOUTH ON BATTLE AXE ROAD 12.31 MILES, TURN LEFT ON A CALICHE LEASE ROAD GO SOUTH 0.65 MILE TO PIPELINE ROAD TURN LEFT GO EAST 1.81 MILES TURN RIGHT AT CALICHE LEASE ROAD GO SOUTH 1.28 MILES TO A PROPOSED ROAD SURVEY, FOLLOW ROAD SURVEY WEST 0.45 MILE, THEN NORTH 747', THEN WEST 122' TO THE SOUTHWEST CORNER OF RATTLESNAKE MDP1 PAD 18-3, THEN FOLLOW ROAD FLAGS WEST 50' THEN NORTHWEST 50' THEN 117' NORTH TO SOUTHEAST PAD CORNER FOR THIS LOCATION.

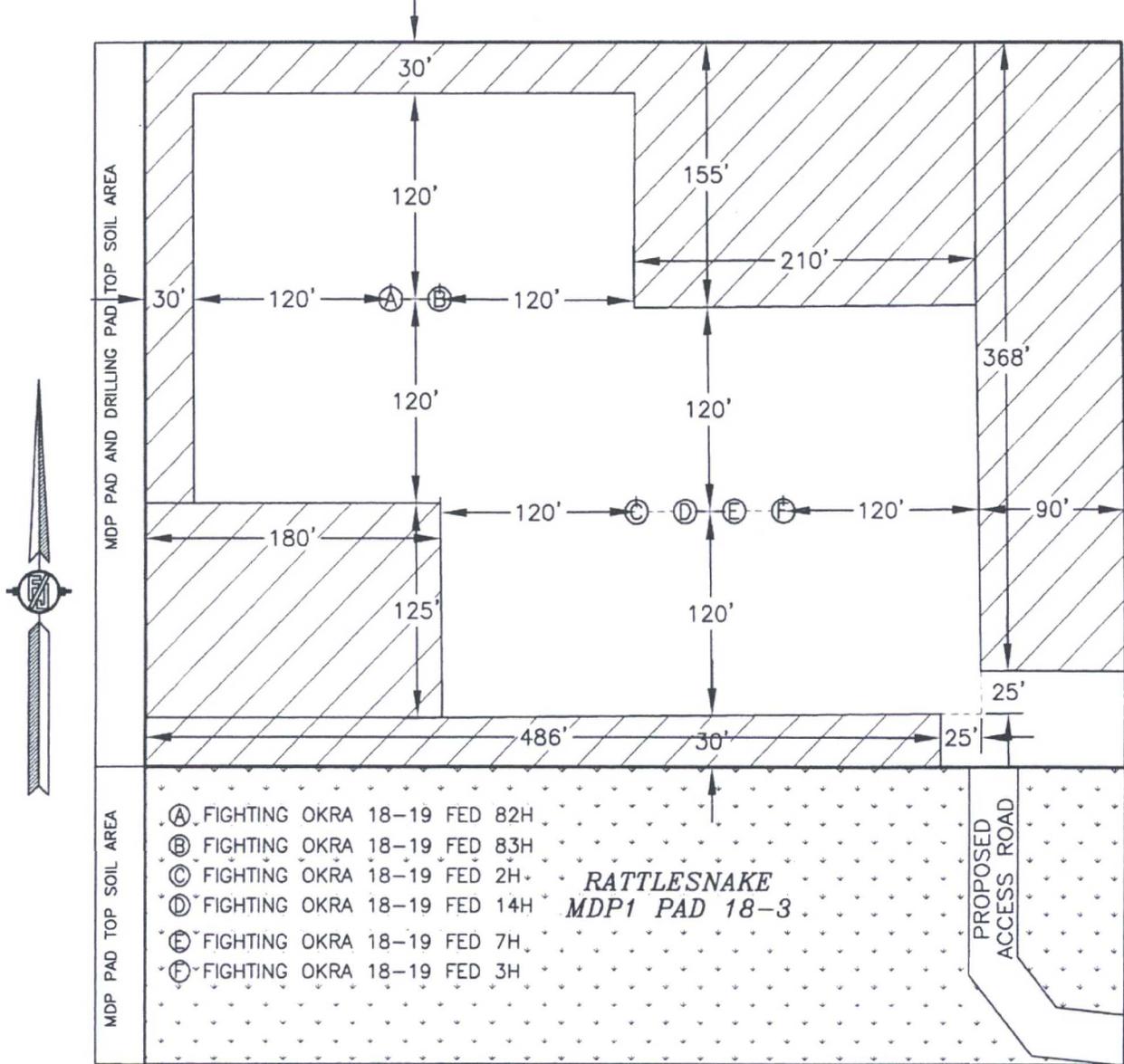
DEVON ENERGY PRODUCTION COMPANY, L.P.  
**FIGHTING OKRA 18-19 FED 14H**  
LOCATED 330 FT. FROM THE NORTH LINE  
AND 1695 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 26 SOUTH,  
RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

AUGUST 30, 2017

SURVEY NO. 4812D

MADRON SURVEYING, INC. 30' SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE BUILD PLAN



- Ⓐ FIGHTING OKRA 18-19 FED 82H
- Ⓑ FIGHTING OKRA 18-19 FED 83H
- Ⓒ FIGHTING OKRA 18-19 FED 2H
- Ⓓ FIGHTING OKRA 18-19 FED 14H
- Ⓔ FIGHTING OKRA 18-19 FED 7H
- Ⓕ FIGHTING OKRA 18-19 FED 3H

**RATTLESNAKE**  
**MDP1 PAD 18-3**

DENOTES INTERIM PAD RECLAMATION AREA

DENOTES GRADING SITE RECLAMATION AREA

0 10 50 100 200  
 SCALE 1" = 100'

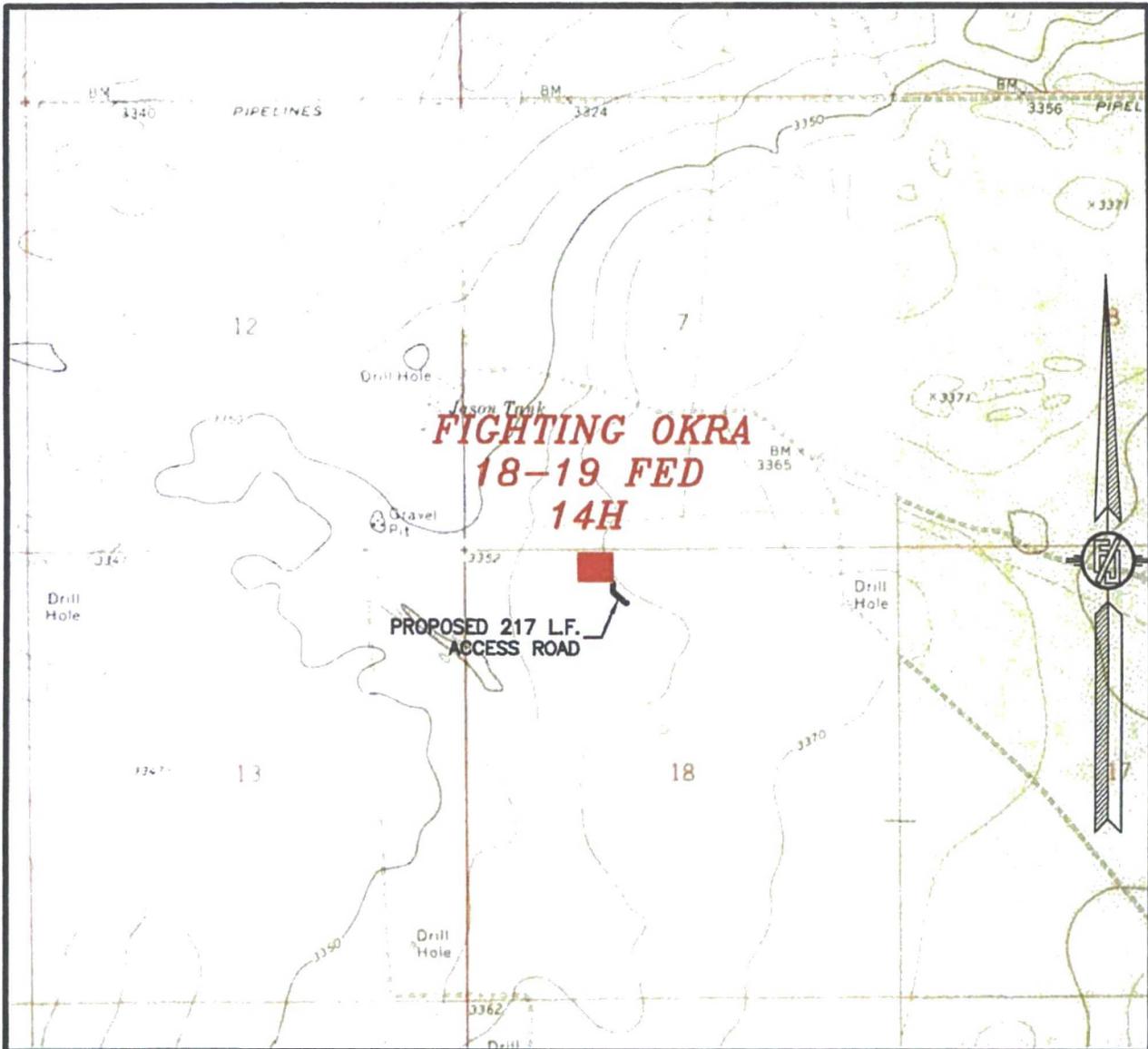
3.047± ACRES INTERIM PAD RECLAMATION AREA  
 2.264± ACRES GRADING SITE RECLAMATION AREA  
 2.958± ACRES NON-RECLAIMED AREA  
 8.269± ACRES RATTLESNAKE MDP1 PAD 18-3

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**FIGHTING OKRA 18-19 FED 14H**  
 LOCATED 330 FT. FROM THE NORTH LINE  
 AND 1695 FT. FROM THE WEST LINE OF  
 SECTION 18, TOWNSHIP 26 SOUTH,  
 RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO

AUGUST 30, 2017 SURVEY NO. 4812D

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
PADUCA BREAKS EAST

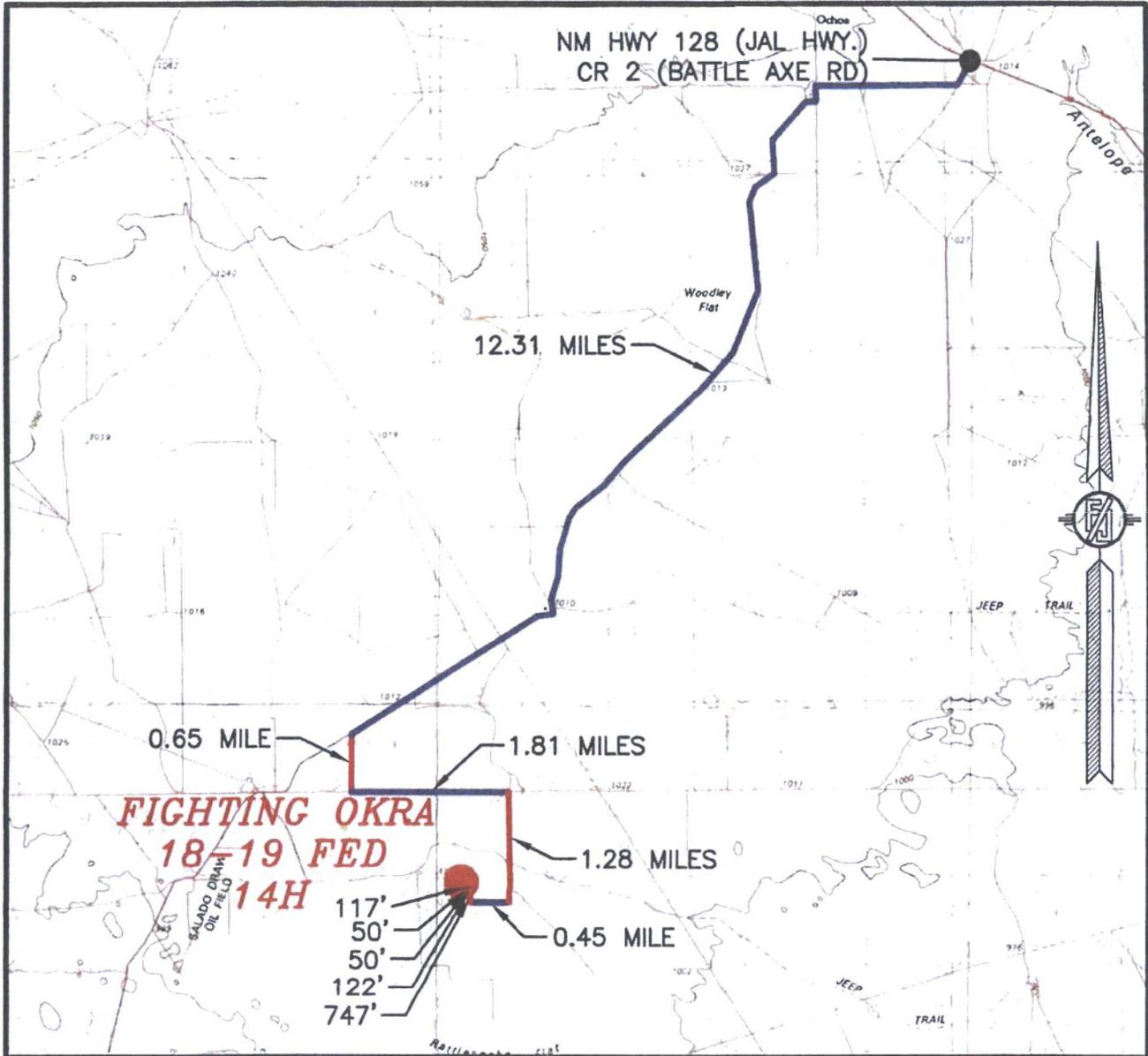
NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**FIGHTING OKRA 18-19 FED 14H**  
LOCATED 330 FT. FROM THE NORTH LINE  
AND 1695 FT. FROM THE WEST LINE OF  
SECTION 18, TOWNSHIP 26 SOUTH,  
RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

AUGUST 30, 2017

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO SURVEY NO. 4812D

SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF NM HWY 128 (JAL HWY) AND CR 2 (BATTLE AXE ROAD) GO SOUTH ON BATTLE AXE ROAD 12.31 MILES, TURN LEFT ON A CALICHE LEASE ROAD GO SOUTH 0.65 MILE TO PIPELINE ROAD TURN LEFT GO EAST 1.81 MILES TURN RIGHT AT CALICHE LEASE ROAD GO SOUTH 1.28 MILES TO A PROPOSED ROAD SURVEY, FOLLOW ROAD SURVEY WEST 0.45 MILE, THEN NORTH 747', THEN WEST 122' TO THE SOUTHWEST CORNER OF RATTLESNAKE MDP1 PAD 18-3, THEN FOLLOW ROAD FLAGS WEST 50' THEN NORTHWEST 50' THEN 117' NORTH TO SOUTHEAST PAD CORNER FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

**FIGHTING OKRA 18-19 FED 14H**

LOCATED 330 FT. FROM THE NORTH LINE

AND 1695 FT. FROM THE WEST LINE OF

SECTION 18, TOWNSHIP 26 SOUTH,

RANGE 34 EAST, N.M.P.M.

LEA COUNTY, STATE OF NEW MEXICO

AUGUST 30, 2017

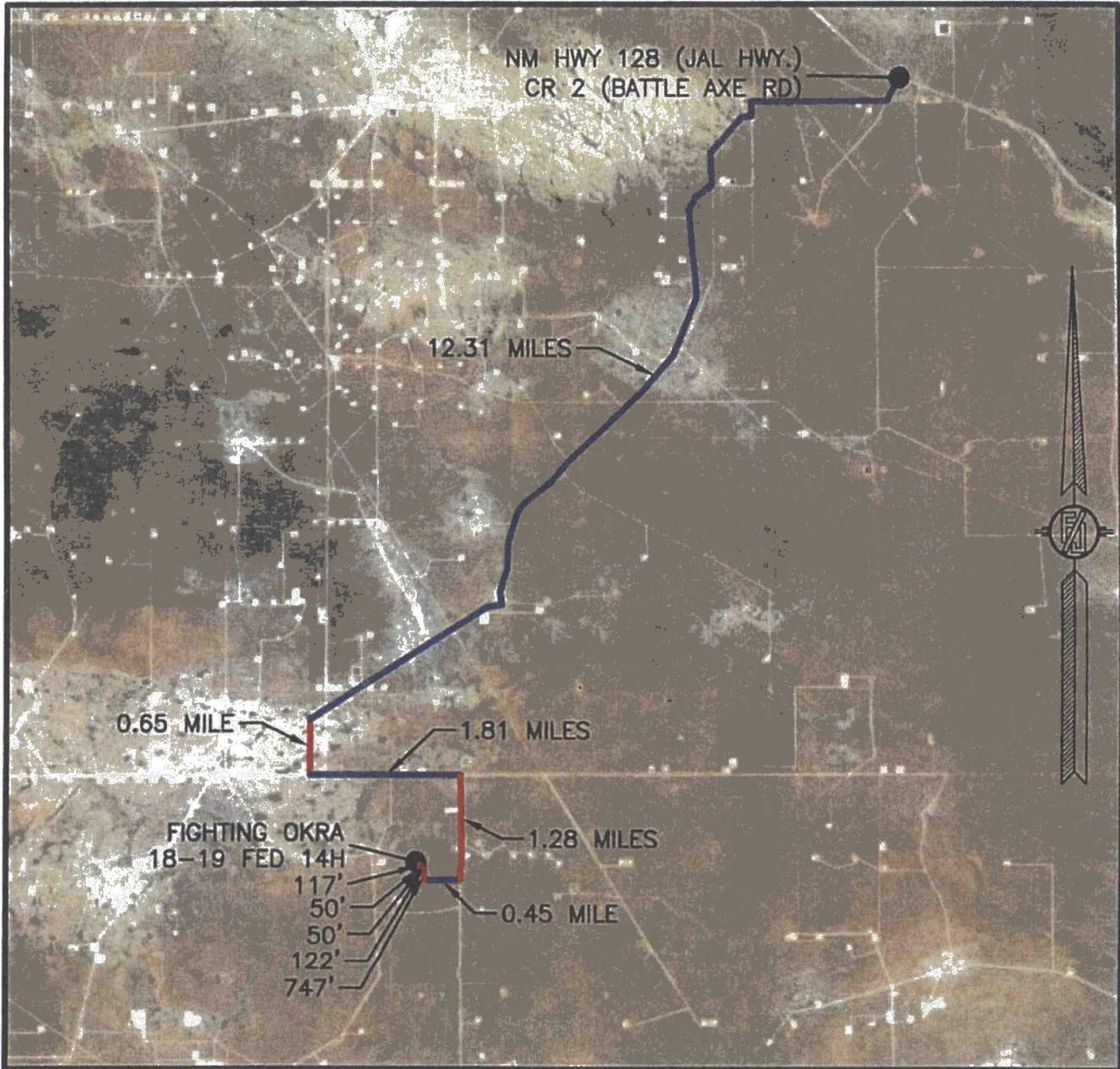
SURVEY NO. 4812D

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341

CARLSBAD, NEW MEXICO



SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO  
**AERIAL ACCESS ROUTE MAP**



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 NOV. 2015

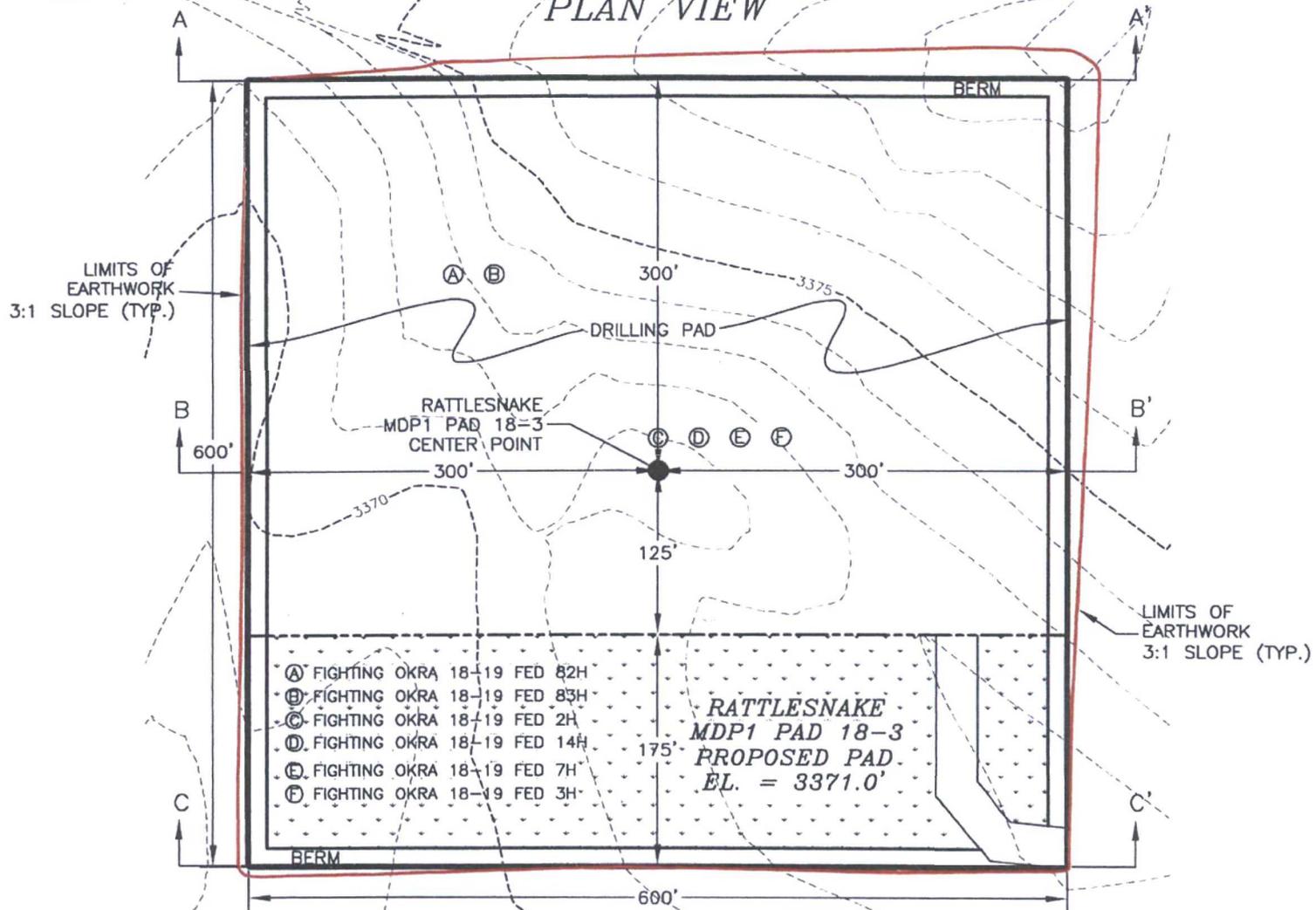
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**FIGHTING OKRA 18-19 FED 14H**  
 LOCATED 330 FT. FROM THE NORTH LINE  
 AND 1695 FT. FROM THE WEST LINE OF  
 SECTION 18, TOWNSHIP 26 SOUTH,  
 RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO

AUGUST 30, 2017

SURVEY NO. 4812D

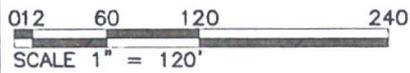
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

PLAN VIEW



- Ⓐ FIGHTING OKRA 18-19 FED 82H
- Ⓑ FIGHTING OKRA 18-19 FED 83H
- Ⓒ FIGHTING OKRA 18-19 FED 2H
- Ⓓ FIGHTING OKRA 18-19 FED 14H
- Ⓔ FIGHTING OKRA 18-19 FED 7H
- Ⓕ FIGHTING OKRA 18-19 FED 3H

RATTLESNAKE  
MDP1 PAD 18-3  
PROPOSED PAD  
EL. = 3371.0'



DEVON ENERGY PRODUCTION COMPANY, L.P.  
GRADING PLAN AND CROSS SECTIONS  
FOR FIGHTING OKRA 18-19 FED 14H  
SECTION 18, TOWNSHIP 26 SOUTH,  
RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

EARTHWORK QUANTITIES  
RATTLESNAKE MDP1 PAD 18-3

CUT	FILL	NET
26793 CU. YD	4287 CU. YD	22506 CU. YD (CUT)

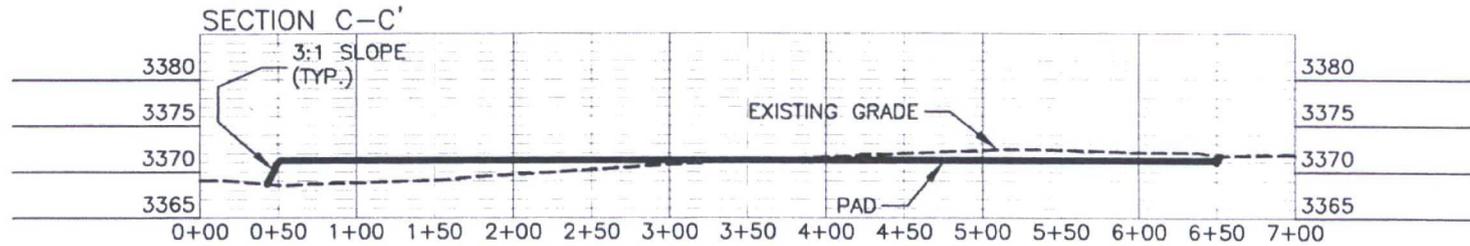
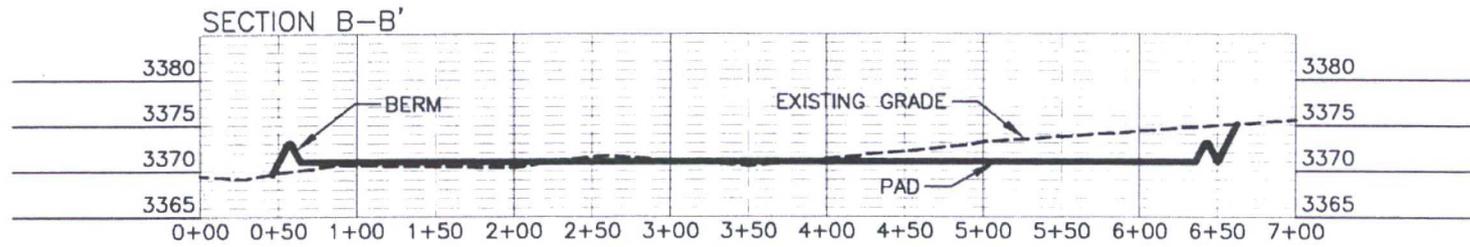
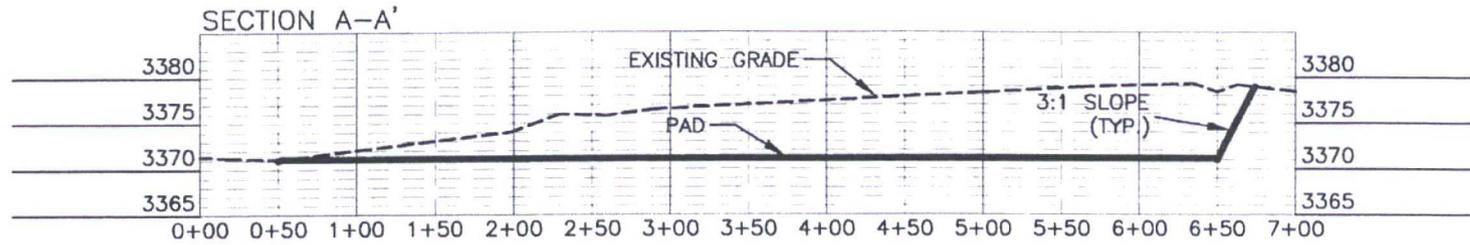
EARTHWORK QUANTITIES ARE ESTIMATED

AUGUST 30, 2017

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SHEET 1-2  
SURVEY NO. 4812D

# CROSS-SECTIONS



0 12 60 120 240  
SCALE 1" = 120' - 1" = 20' VER

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**GRADING PLAN AND CROSS SECTIONS**  
**FOR FIGHTING OKRA 18-19 FED 14H**  
 SECTION 18, TOWNSHIP 26 SOUTH,  
 RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO

EARTHWORK QUANTITIES  
RATTLESNAKE MDP1 PAD 18-3

CUT	FILL	NET
26793 CU. YD	4287 CU. YD	22506 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

AUGUST 30, 2017

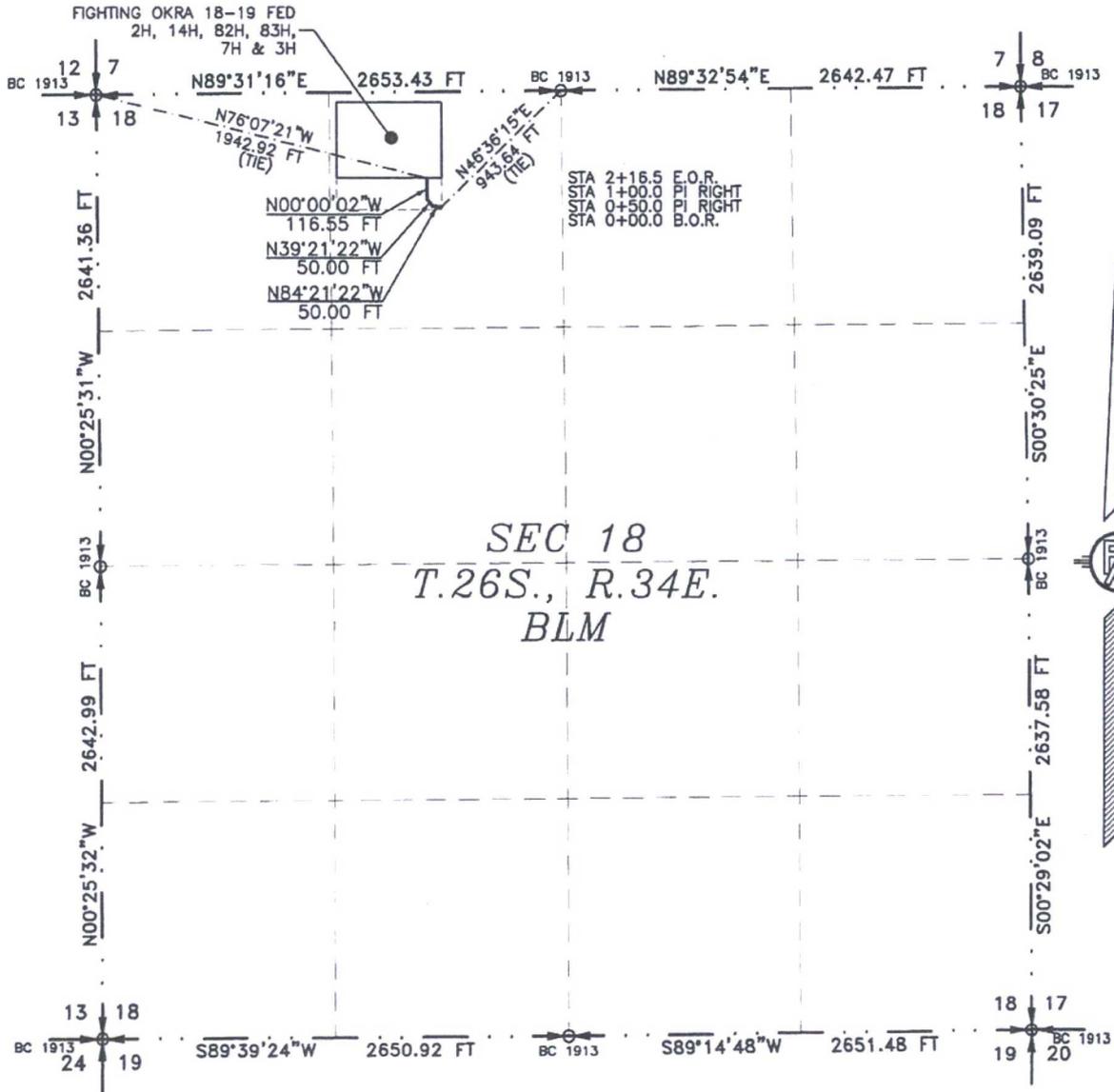
**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SHEET 2-2  
SURVEY NO. 4812D

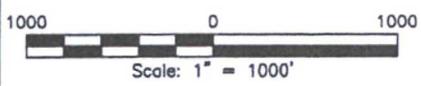
**ACCESS ROAD PLAT**

ACCESS ROAD FOR FIGHTING OKRA 18-19 FED 2H, 14H, 82H, 83H, 7H & 3H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.  
 LEA COUNTY, STATE OF NEW MEXICO  
 AUGUST 30, 2017



SEE NEXT SHEET (2-2) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 1-2

MADRON SURVEYING, INC.

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30 DAY OF AUGUST 2017

FILIMON F. JARAMILLO, PLS. 12797  
 MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341  
 SURVEY NO. 4812D

301 SOUTH CANAL  
 (575) 234-3341

CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**

ACCESS ROAD FOR FIGHTING OKRA 18-19 FED 2H, 14H, 82H, 83H, 7H & 3H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.**  
**LEA COUNTY, STATE OF NEW MEXICO**  
**AUGUST 30, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NE/4 NW/4 OF SAID SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS N46°36'15"E, A DISTANCE OF 943.64 FEET;  
THENCE N84°21'22"W A DISTANCE OF 50.00 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N39°21'22"W A DISTANCE OF 50.00 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°00'02"W A DISTANCE OF 116.55 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 18, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS N76°07'21"W, A DISTANCE OF 1942.92 FEET;

SAID STRIP OF LAND BEING 216.55 FEET OR 13.12 RODS IN LENGTH, CONTAINING 0.149 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NW/4    216.55 L.F.    13.12 RODS    0.149 ACRES

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SHEET: 2-2**

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 30<sup>TH</sup> DAY OF AUGUST 2017

*Filimon F. Jaramillo*  
FILIMON F. JARAMILLO PLS. 12797

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88270  
Phone (575) 234-3341

**SURVEY NO. 4812D**

**PECOS DISTRICT  
DRILLING OPERATIONS  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Prod Co
LEASE NO.:	NM114992
WELL NAME & NO.:	Fighting Okra 18-19 Fed 14H
SURFACE HOLE FOOTAGE:	330'/N & 1695'/W
BOTTOM HOLE FOOTAGE:	330'/S & 1620'/W, sec. 19
LOCATION:	Sec. 18, T. 26 S, R. 34 E
COUNTY:	Lea County

**Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, 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.
- 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.

**I. DRILLING OPERATIONS 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) 393-3612

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the **Wolfcamp** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public

protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. 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 is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

## II. CASING

**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.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

### 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.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Possibility of water flows in the Salado and Castile.**

**Possibility of lost circulation in the Red Beds, Rustler, and Delaware.  
Abnormal pressures may be encountered upon penetrating the 3<sup>rd</sup> Bone Spring  
Sandstone and all subsequent formations.**

- A. The 13-3/8 inch surface casing shall be set at approximately 900 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
1. 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.
  2. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  3. 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.
  4. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

- B. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

- C. 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. 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.

### III. PRESSURE CONTROL

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
- B. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
- C. **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 5000 (5M) psi. 10M 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.**
  - 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. Operator shall perform the 9-5/8" and 5 1/2" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.
  - 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.

D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

1. 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 when specified), 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).
2. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
3. 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.
4. The results of the test shall be reported to the appropriate BLM office.
5. 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.**
6. 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.
7. 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 Onshore Order No. 2.

#### IV. 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.

## **V. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## **VI. 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.

**CLN 11142017**