

**NM OIL CONSERVATION
ARTESIA DISTRICT**

Intent ☒ As Drilled ☐

JAN 18 2019

API # 30-015-45644		RECEIVED	
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.		Property Name: LONE TREE DRAW 14-13 STATE COM	Well Number 336H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	14	21S	27E		330'	FSL	50'	FWL	EDDY
Latitude 32.473796					Longitude -104.168935				NAD 83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
M	14	21S	27E		330	SOUTH	100	WEST	EDDY
Latitude 32.4737948					Longitude 104.1687722				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	13	21S	27E		330	SOUTH	100	EAST	EDDY
Latitude 32.4740670					Longitude 104.1347417				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐ NO

Is this well an infill well? ☐ YES

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name: Devon Energy Production Co., lp	Property Name: LONE TREE DRAW 14-13 STATE COM	Well Number 335H

KZ 06/29/2018

Devon Energy – Lone Tree Draw 14-13 State Com 336H

1. Geologic Formations

TVD of target	8930	Pilot hole depth	N/A
MD at TD:	19310	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Tansill	263		
Capitan	635		
Delaware	2834		
1st BSPG Lime	5384		
1st BSPG Sand	6614		
2nd BSPG Lime	6770		
2nd BSPG Sand	7359		
3rd BSPG Lime	7706		
3rd BSPG Sand	8614		
3BSS F	8850		
3BSS G	8909		
Wolfcamp	8954		

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

Devon Energy – Lone Tree Draw 14-13 State Com 336H

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (PPF)	Grade	Conn.
	From	To				
17.5"	0	288	13.375"	48	H-40	STC
12.25"	0	2934	9.625"	36	J-55	LTC
8.75"	0	TD	5.5"	17	P-110	BTC
BLM Minimum Safety Factor				Collapse: 1.125	Burst: 1.00	Tension: 1.6 Dry 1.8 Wet

- 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
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing. No losses are expected in subsequent hole section.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth will be revised accordingly if needed.
- A variance is requested to waive the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate

Devon Energy – Lone Tree Draw 14-13 State Com 336H

	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 rd 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 nd 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 – Lone Tree Draw 14-13 State Com 336H

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	H ₂ O (gal/sk)	Yld (ft ³ /sack)	Slurry Description
Surface	300	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
Int	507	Surf	9	20.6	1.94	Lead: Class C Cement + additives
	196	500' above shoe	13.2	6.42	1.33	Tail: Class H / C + additives
Int 1 Two Stage w DV @ ~800	450	Surf	9	20.6	1.94	Stage 1 Lead: Class C Cement + additives
	196	500' above shoe	13.2	6.42	1.33	Stage 1 Tail: Class H / C + additives
	105	Surf	13.2	6.33	1.33	Stage 2 Lead: Class C Cement + additives
Production	850	500' tieback	9	20.6	1.94	Lead: Class H / C + additives
	2092	KOP	13.2	5.31	1.33	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	100%
Intermediate	50%
Production	10%

Devon Energy – Lone Tree Draw 14-13 State Com 336H

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	3M	Annular	X	50% of rated working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram		5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

Devon Energy – Lone Tree Draw 14-13 State Com 336H

5. Mud Program

Interval	Type	Weight (ppg)	Vis	Water Loss
Surface	FW	8.5 – 9.0	28-34	N/C
Intermediate	Brine	10 – 10.5	28-34	N/C
Production	WBM	8.5 – 9.0	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

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	
Density	
X CBL	Production casing
X Mud log	KOP to TD

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4179 psi
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 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

Devon Energy – Lone Tree Draw 14-13 State Com 336H

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

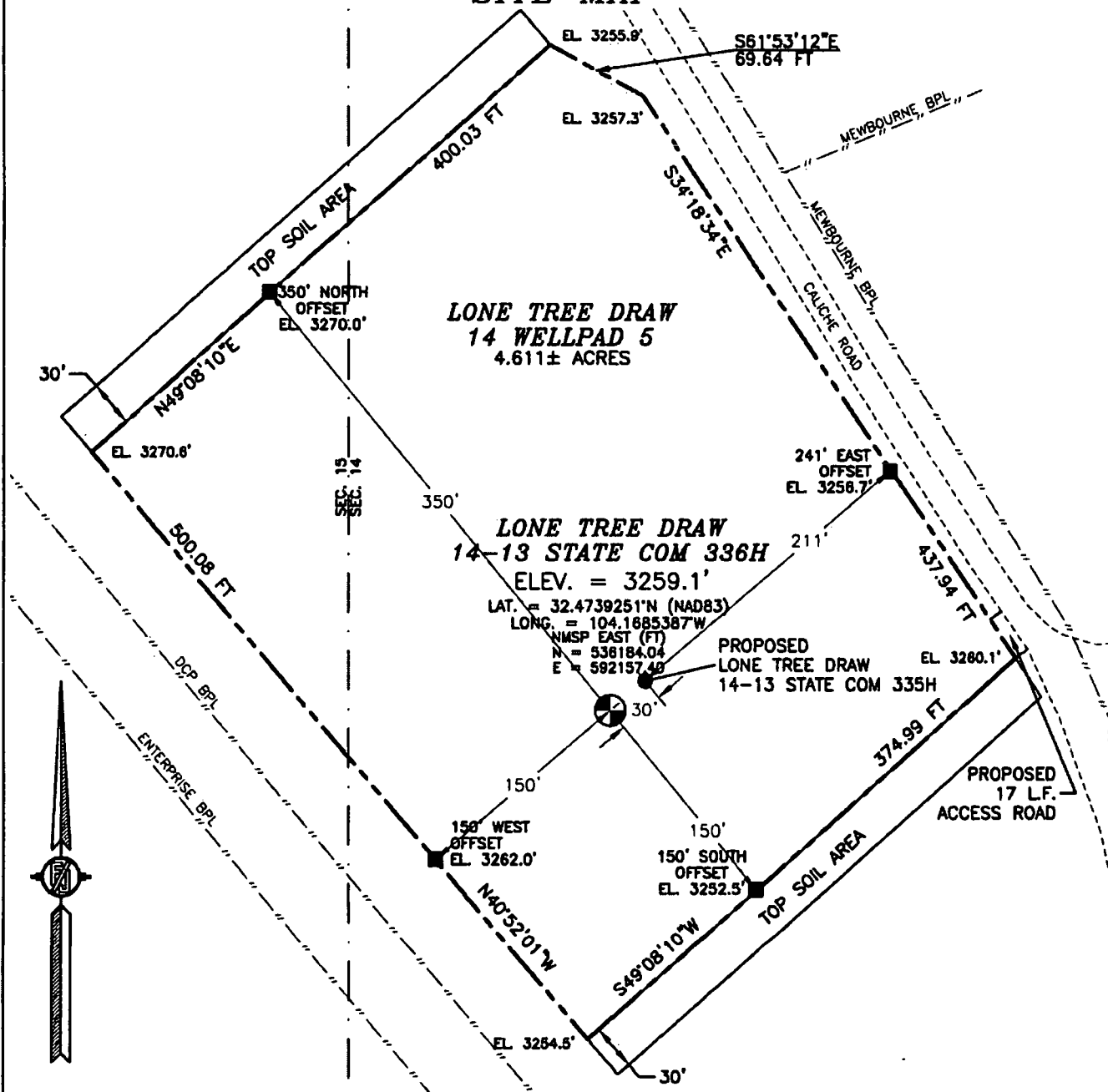
1. Spudder rig will move in and drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, 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 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.

Attachments

☒ Directional Plan

☐ Other, describe

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200
SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM CR. 208 (ILLINOIS CAMP) & CR. 600 (RAINS) GO
EAST-NORTHEAST ON CR. 600 2.2 MILES, BEND LEFT
AND GO NORTHEAST 0.1 MILE, TURN RIGHT AND GO
SOUTHEAST 0.52 MILE, BEND LEFT AND GO EAST 0.9
MILE, TURN RIGHT AND GO SOUTH 0.5 MILE, TURN
RIGHT AND GO SOUTHWEST 0.8 MILE, TURN LEFT AND
GO SOUTHEAST 0.47 MILE TO A ROAD SURVEY AND
FOLLOW FLAGS 17' TO THE SOUTHEAST PAD CORNER
FOR THIS LOCATION.

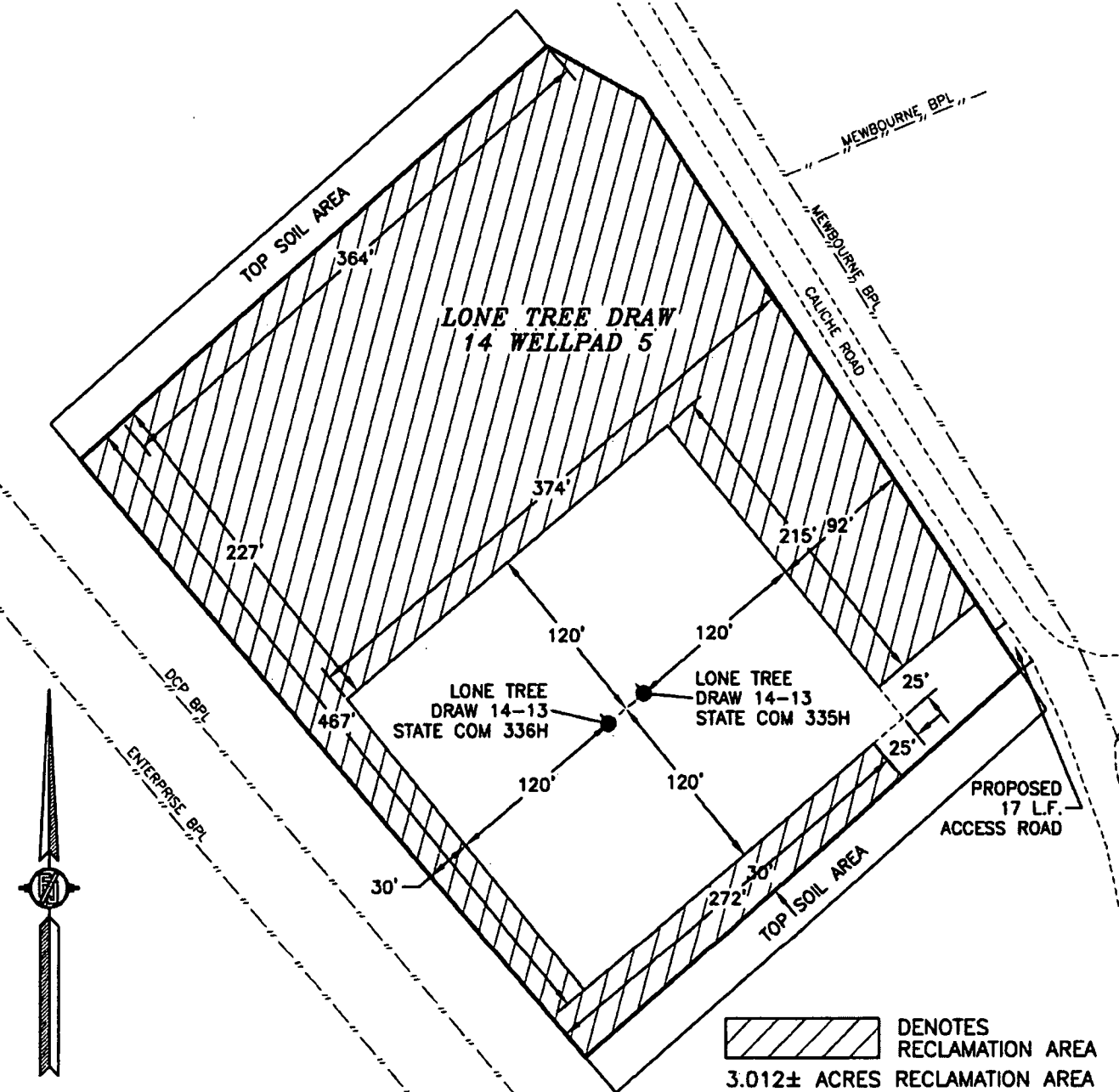
DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14-13 STATE COM 336H
LOCATED 377 FT. FROM THE SOUTH LINE
AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 6, 2018

SURVEY NO. 6793

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

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
INTERIM SITE RECLAMATION



DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14-13 STATE COM 336H
LOCATED 377 FT. FROM THE SOUTH LINE
AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

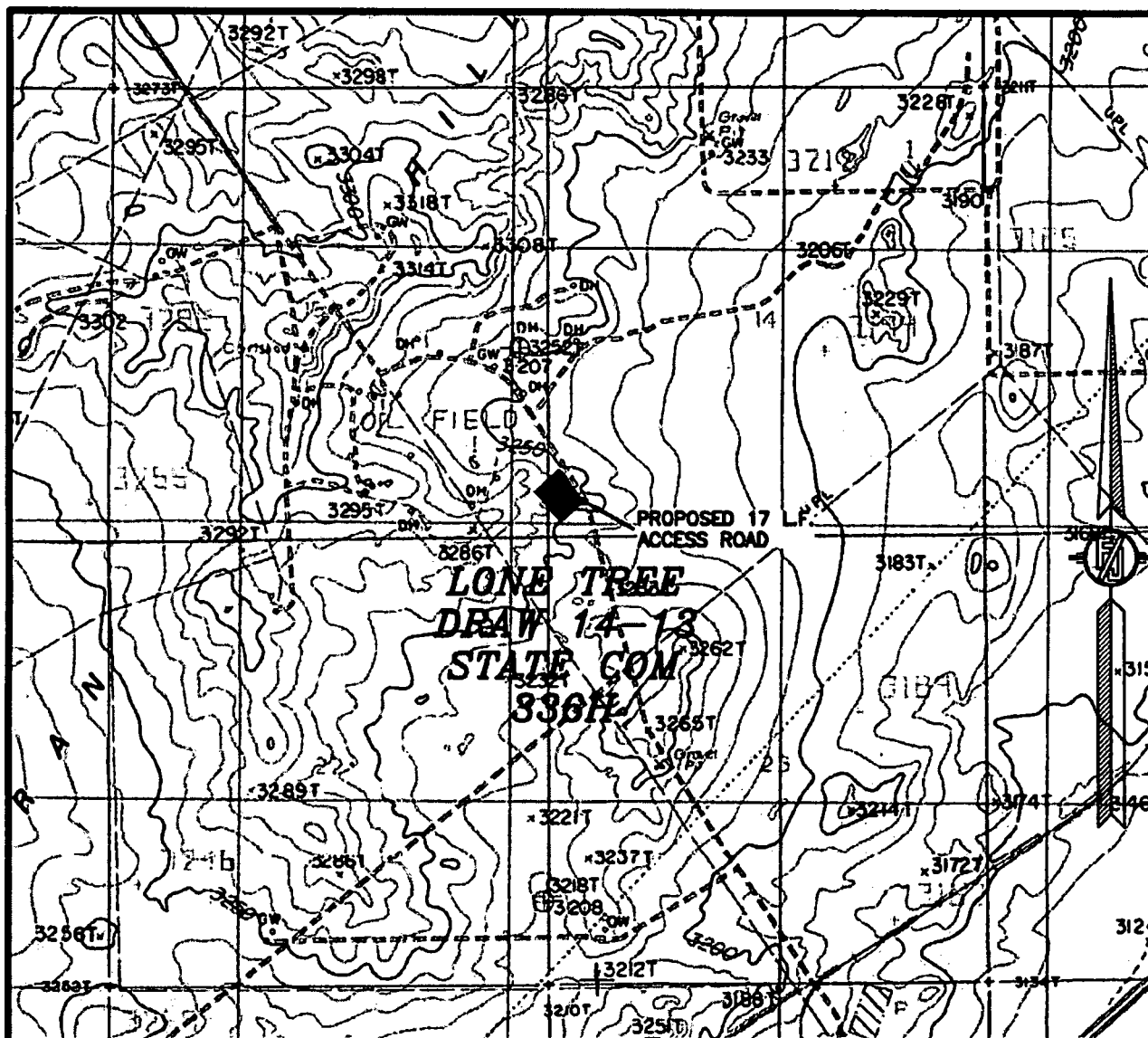
DECEMBER 6, 2018

SURVEY NO. 6733

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

CARLSBAD, NEW MEXICO

14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



**USGS QUAD MAP:
CARLSBAD EAST**

NOT TO SCALE

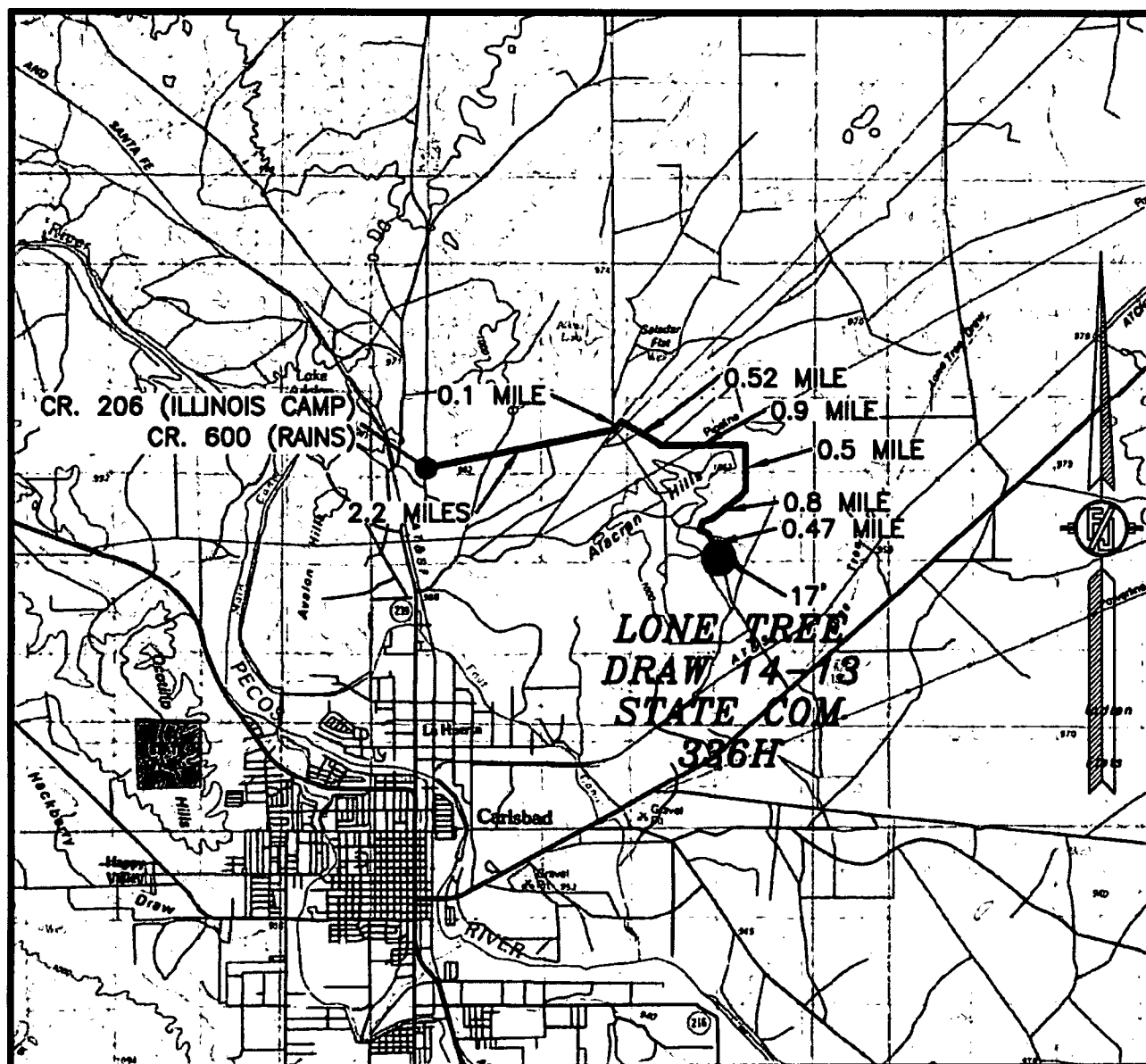
**DEVON ENERGY PRODUCTION COMPANY, L.P.
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LOCATED 377 FT. FROM THE SOUTH LINE
AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO**

DECEMBER 6, 2018

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

SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM CR. 206 (ILLINOIS CAMP) & CR. 600 (RAINS) GO EAST-NORTHEAST ON CR. 600 2.2 MILES, BEND LEFT AND GO NORTHEAST 0.1 MILE, TURN RIGHT AND GO SOUTHEAST 0.52 MILE, BEND LEFT AND GO EAST 0.9 MILE, TURN RIGHT AND GO SOUTH 0.5 MILE, TURN RIGHT AND GO SOUTHWEST 0.8 MILE, TURN LEFT AND GO SOUTHEAST 0.47 MILE TO A ROAD SURVEY AND FOLLOW FLAGS 17' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

**DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14-13 STATE COM 336H**

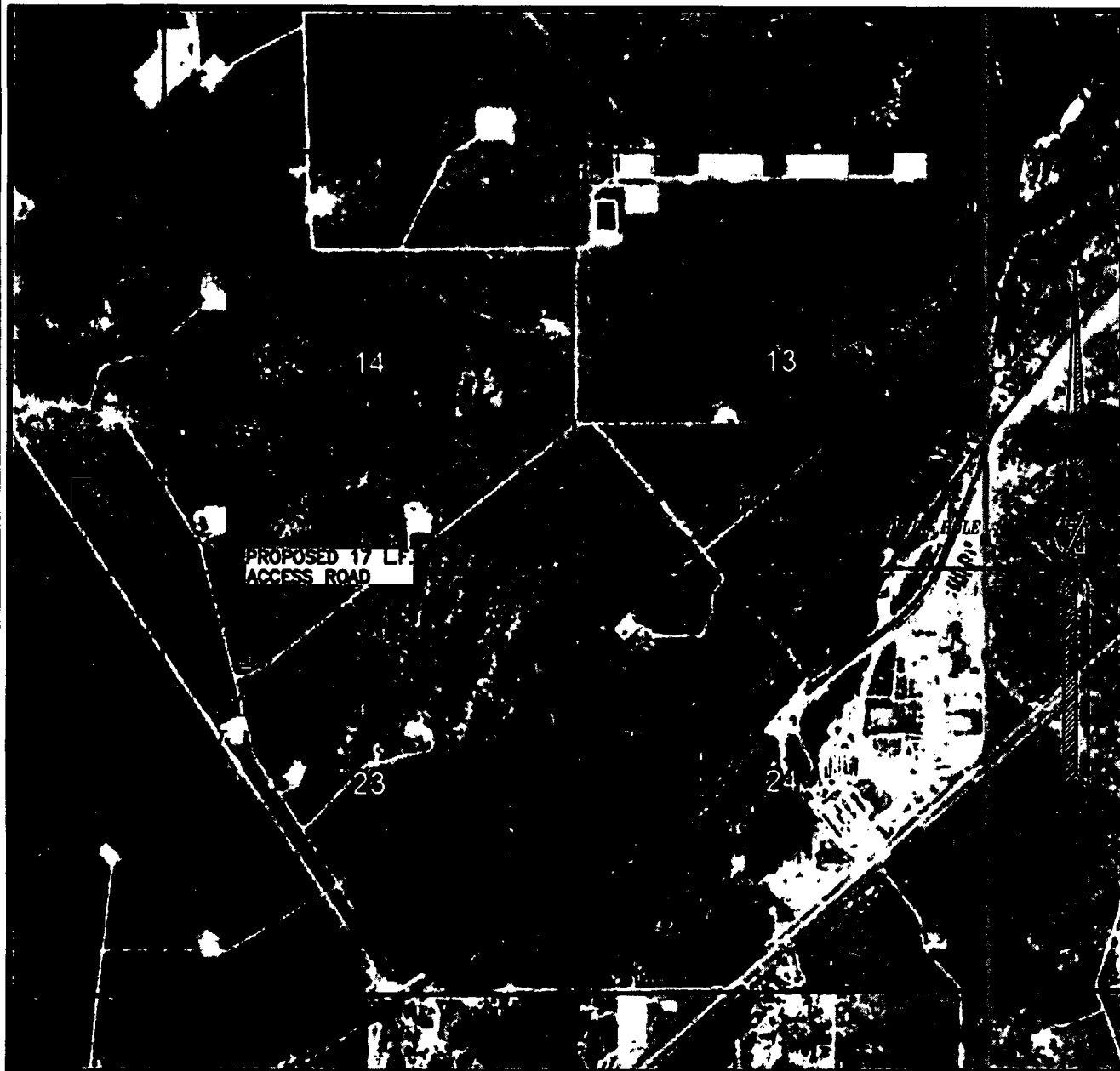
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AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

DECEMBER 6, 2018

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**SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO**



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAR. 2016

**DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14-13 STATE COM 336H
LOCATED 377 FT. FROM THE SOUTH LINE
AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO**

DECEMBER 6, 2018

SURVEY NO. 6733

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

**SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP**



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAR. 2016

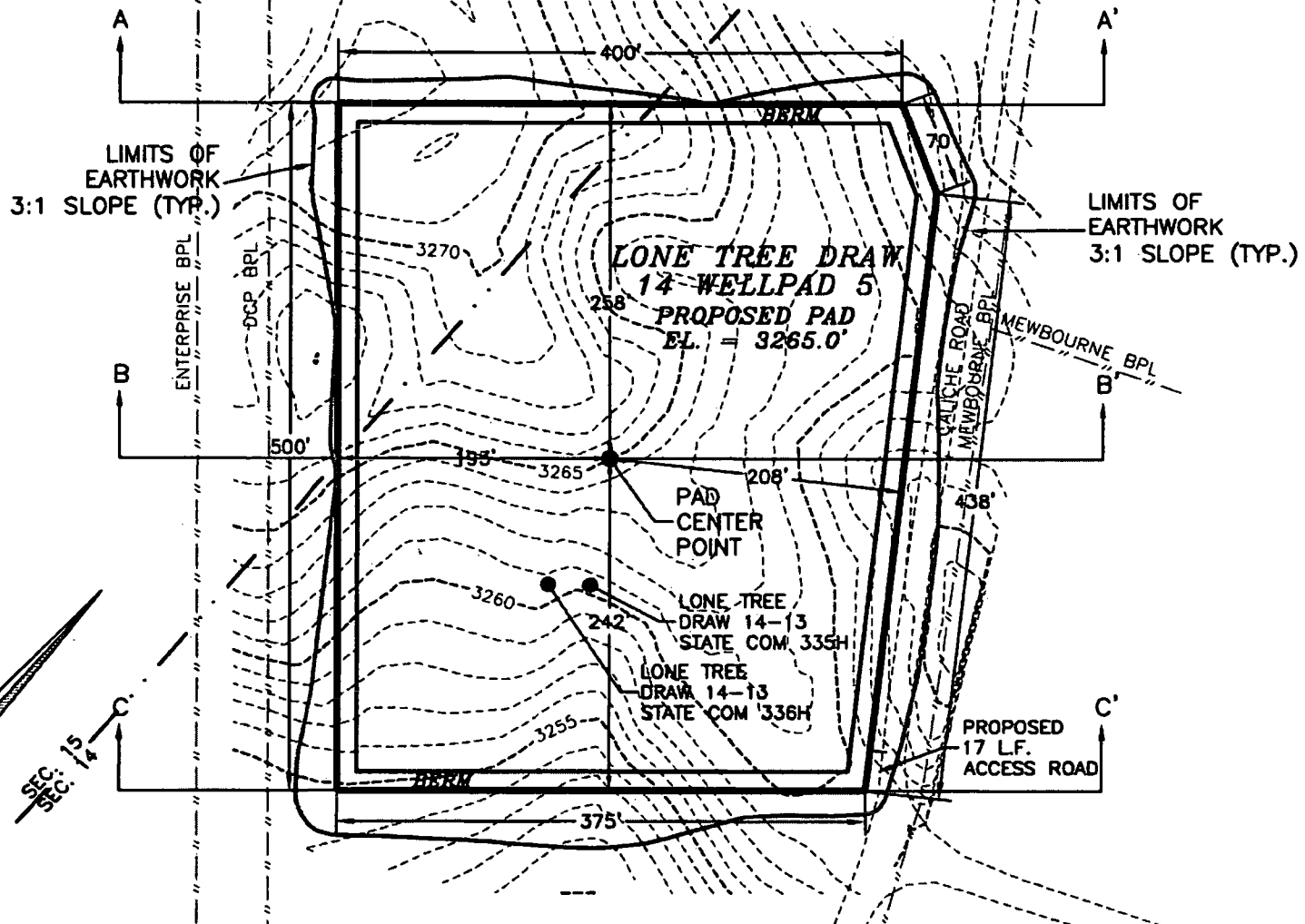
**DEVON ENERGY PRODUCTION COMPANY, L.P.
LONE TREE DRAW 14-13 STATE COM 336H
LOCATED 377 FT. FROM THE SOUTH LINE
AND 172 FT. FROM THE WEST LINE OF
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO**

DECEMBER 6, 2018

SURVEY NO. 6733

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

PLAN VIEW



012 60 120 240
SCALE 1" = 120'

DEVON ENERGY PRODUCTION COMPANY, L.P.
PAD GRADING AND CROSS SECTIONS
FOR LONE TREE DRAW 14-13 STATE COM 336H
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

CUT	FILL	NET
7260 CU. YD	29489 CU. YD	22229 CU. YD (FILL)

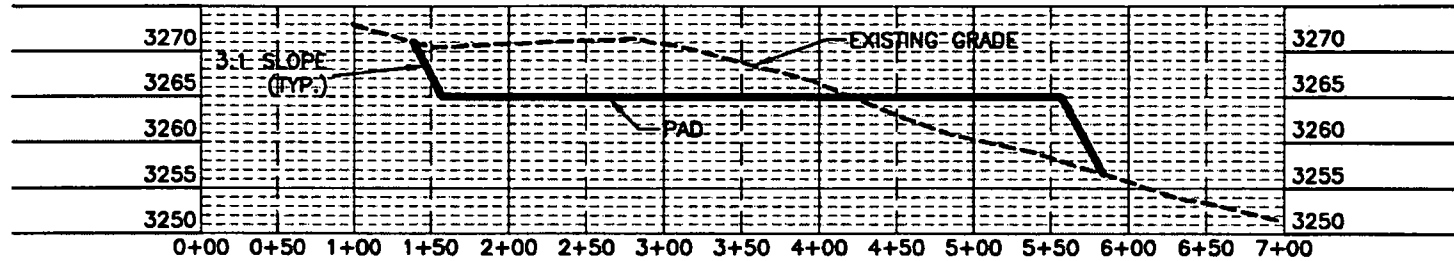
EARTHWORK QUANTITIES ARE ESTIMATED

DECEMBER 6, 2018
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
(575) 234-3341

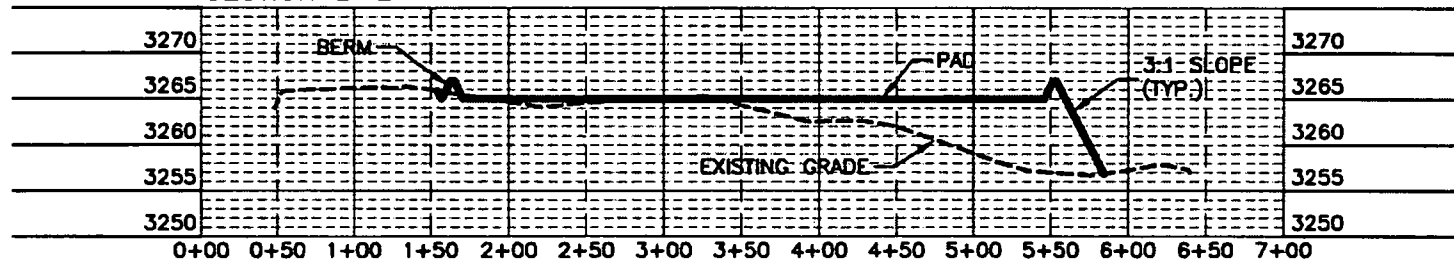
SHEET 1-2
SURVEY NO. 6733

CROSS-SECTIONS

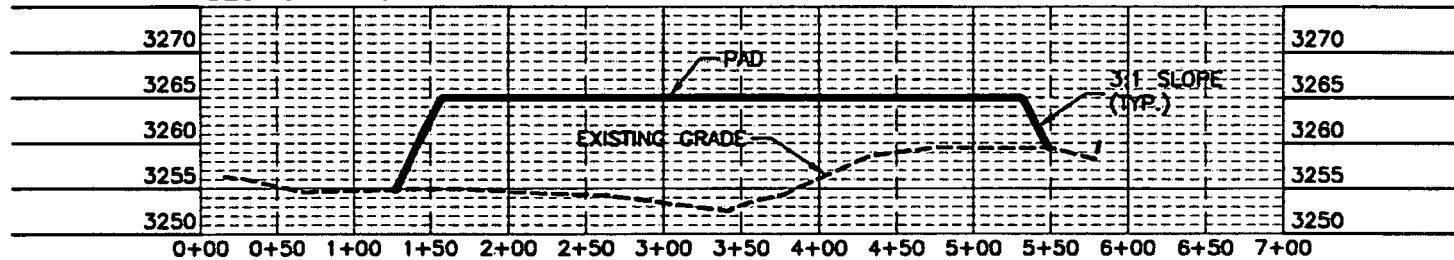
SECTION A-A'



SECTION B-B'



SECTION C-C'



012 60 120 240
SCALE 1" = 120' - 1" = 20' VER

DEVON ENERGY PRODUCTION COMPANY, L.P.
PAD GRADING AND CROSS SECTIONS
FOR LONE TREE DRAW 14-13 STATE COM 336H
SECTION 14, TOWNSHIP 21 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

CUT	FILL	NET
7260 CU. YD	29489 CU. YD	22229 CU. YD (FILL)
EARTHWORK QUANTITIES ARE ESTIMATED		

DECEMBER 6, 2018

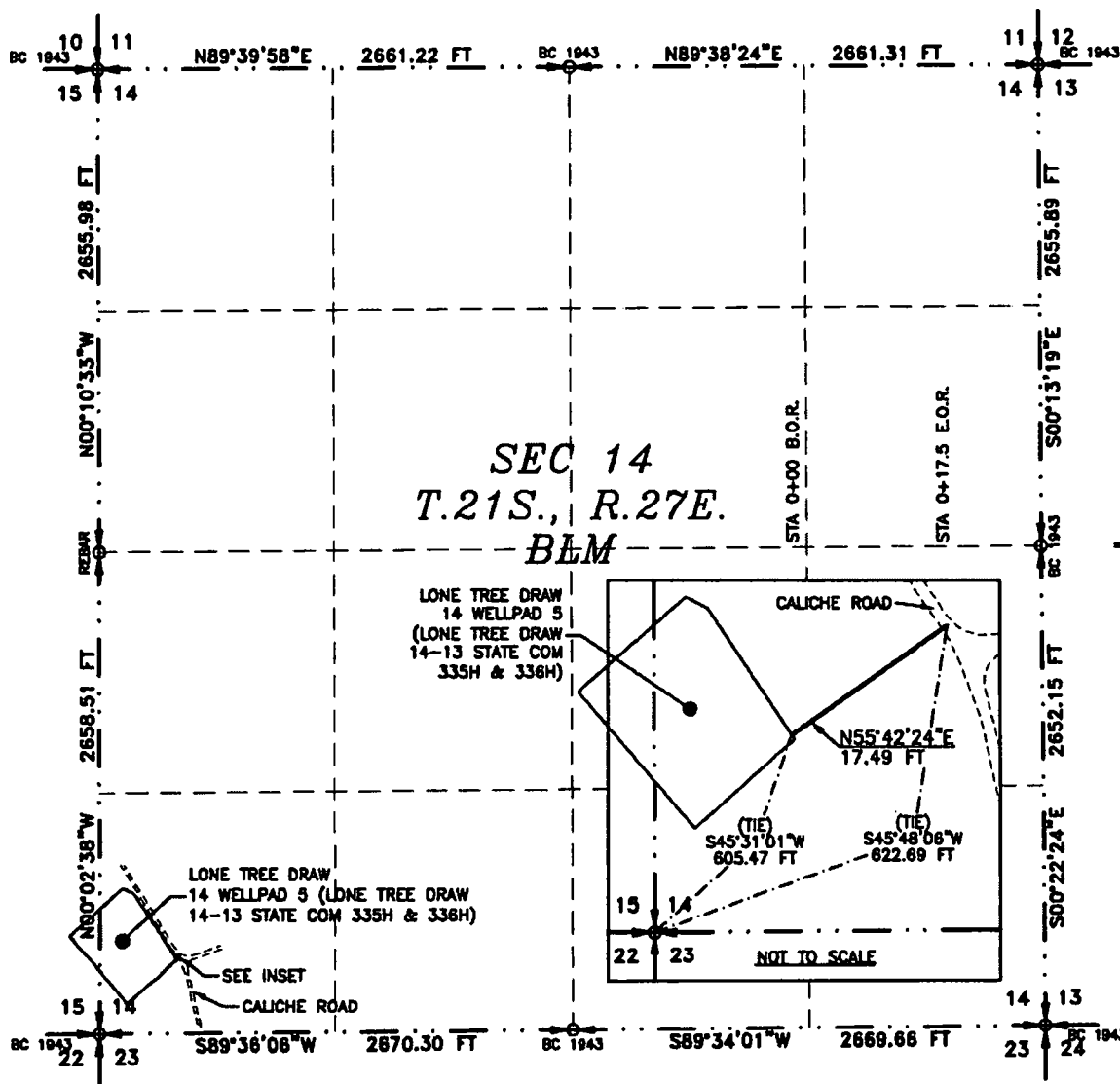
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
(575) 234-3341

SHEET 2-2
SURVEY NO. 6733

ACCESS ROAD PLAT

ACCESS ROAD FOR LONE TREE DRAW 14 WELLPAD 5
(LONE TREE DRAW 14-13 STATE COM 335H & 336H)

DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
DECEMBER 6, 2018



SEE NEXT SHEET (2-2) FOR DESCRIPTION

SURVEYOR CERTIFICATE

I, FILMON 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 12 DAY OF DECEMBER 2018

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SURVEY NO. 6733

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

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

ACCESS ROAD PLAT

**ACCESS ROAD FOR LONE TREE DRAW 14 WELLPAD 6
(LONE TREE DRAW 14-13 STATE COM 335H & 336H)**

**DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
DECEMBER 6, 2018**

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S45°31'01"W, A DISTANCE OF 605.47 FEET;
THENCE N55°42'24"E A DISTANCE OF 17.49 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 14, TOWNSHIP 21 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S45°48'06"W, A DISTANCE OF 622.69 FEET;

SAID STRIP OF LAND BEING 17.49 FEET OR 1.06 RODS IN LENGTH, CONTAINING 0.012 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 17.49 L.F. 1.06 RODS 0.012 ACRES

GENERAL NOTES

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- 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

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 11 DAY OF DECEMBER 2018

FILIMON F. JARAMILLO
FILIMON F. JARAMILLO, PLS. 12797
301 SOUTH CANAL
(575) 234-3341

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SURVEY NO. 6733