



**Devon Energy Center  
333 West Sheridan Avenue  
Oklahoma City, Oklahoma 73102-5015**

# **Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan**

**For**

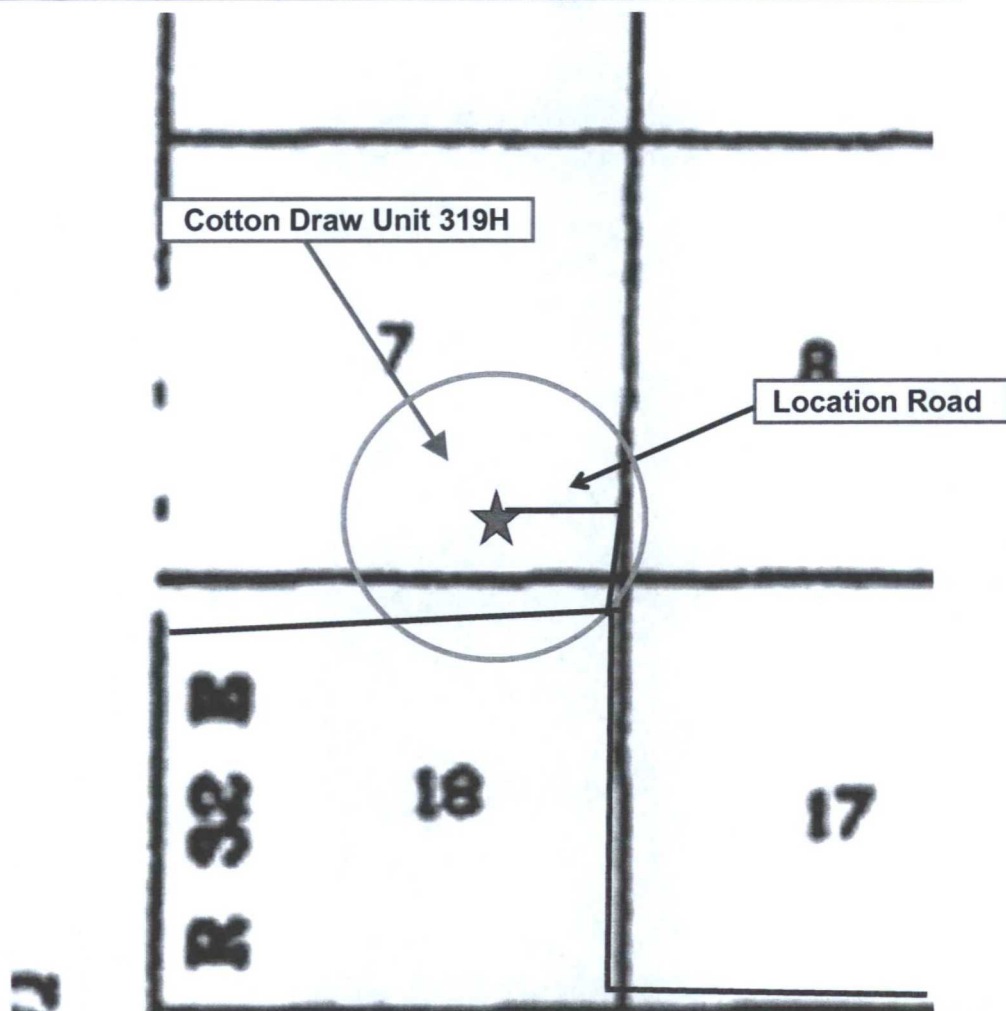
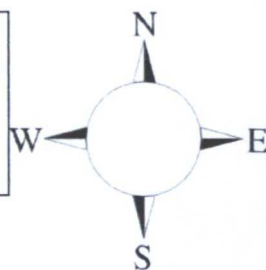
**Cotton Draw Unit 319H**

**Sec-7 T-25S R-32E  
690' FSL & 1405' FEL  
LAT = 32.1394720' N (NAD83)  
LONG = 103.7103627' W**

**Lea County NM**

## Cotton Draw Unit 319H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



Assumed 100 ppm 3000' ( )  
100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'**

**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

### **Emergency Procedures**

**In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must**

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H<sub>2</sub>S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

### **Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

<b>Common Name</b>	<b>Chemical Formula</b>	<b>Specific Gravity</b>	<b>Threshold Limit</b>	<b>Hazardous Limit</b>	<b>Lethal Concentration</b>
<b>Hydrogen Sulfide</b>	<b>H<sub>2</sub>S</b>	<b>1.189 Air = 1</b>	<b>10 ppm</b>	<b>100 ppm/hr</b>	<b>600 ppm</b>
<b>Sulfur Dioxide</b>	<b>SO<sub>2</sub></b>	<b>2.21 Air = 1</b>	<b>2 ppm</b>	<b>N/A</b>	<b>1000 ppm</b>

### **Contacting Authorities**

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with



## **Hydrogen Sulfide Drilling Operation Plan**

### **I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

### **II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.



## **1. Well Control Equipment**

- A. Flare line
- B. Choke manifold – Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

## **2. Protective equipment for essential personnel:**

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with one escape unit available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

## **3. H<sub>2</sub>S detection and monitoring equipment:**

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

- Bell nipple
- Shale shaker
- Trip tank
- Suction pit
- Rig floor
- Cellar
- Choke manifold
- Living Quarters (usually the company man's trailer stairs.)

### **Visual warning systems:**

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

#### **4. Mud program:**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### **5. Metallurgy:**

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### **6. Communication:**

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

#### **7. Well testing:**

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

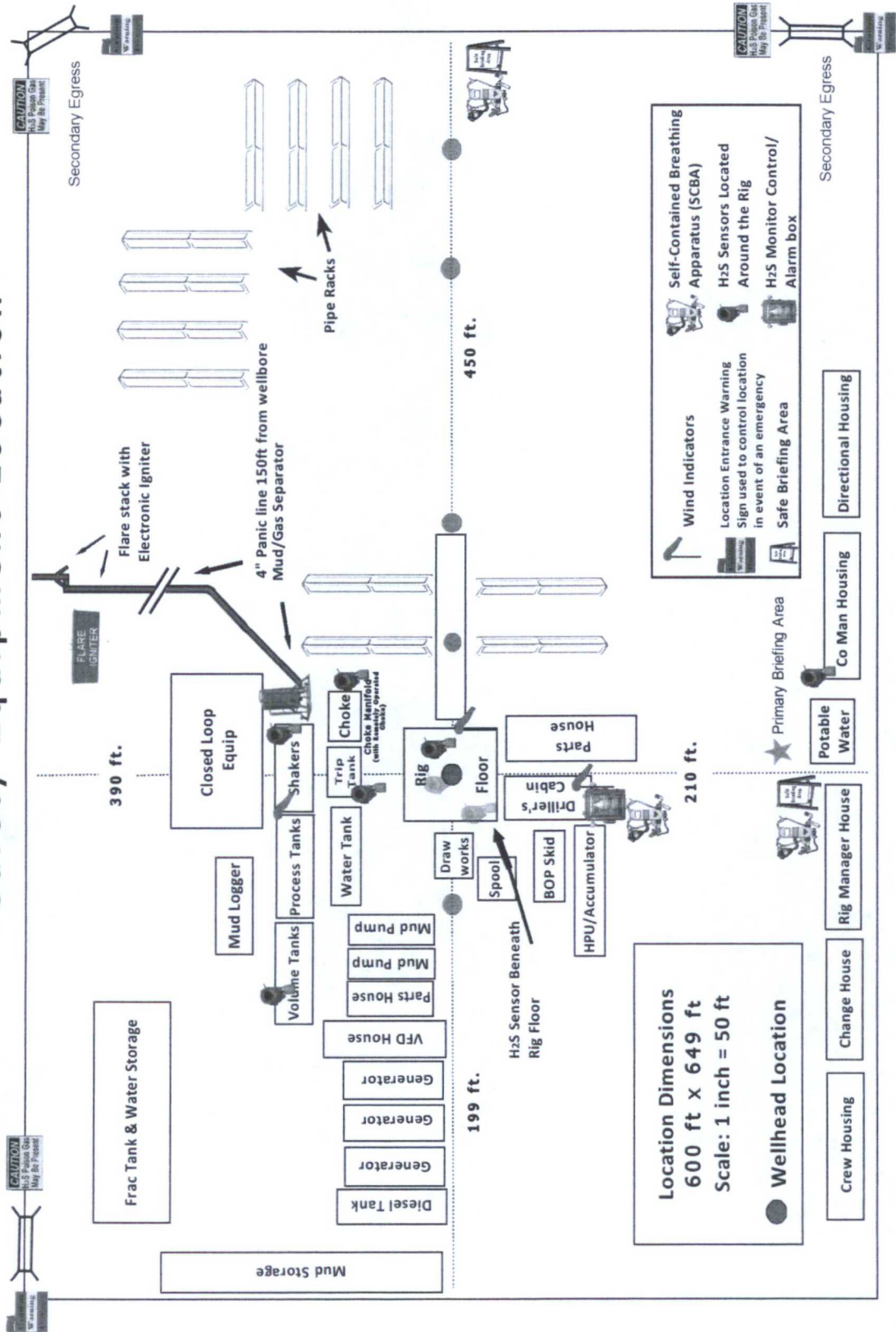
<b><u>Devon Energy Corp. Company Call List</u></b>		
	Drilling Supervisor – Basin – Mark Kramer	405-823-4796
	Drilling Supervisor – Slope – Norman Naill	405-760-7234
	EHS Professional – Mark Hurst	575-513-9087
<b><u>Agency Call List</u></b>		
<b><u>Lea County (575)</u></b>	<b>Hobbs</b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b>Carlsbad</b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	<b>Emergency Services</b>	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control (915) 699-0139	(915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
<b><u>Give GPS position:</u></b>	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>	

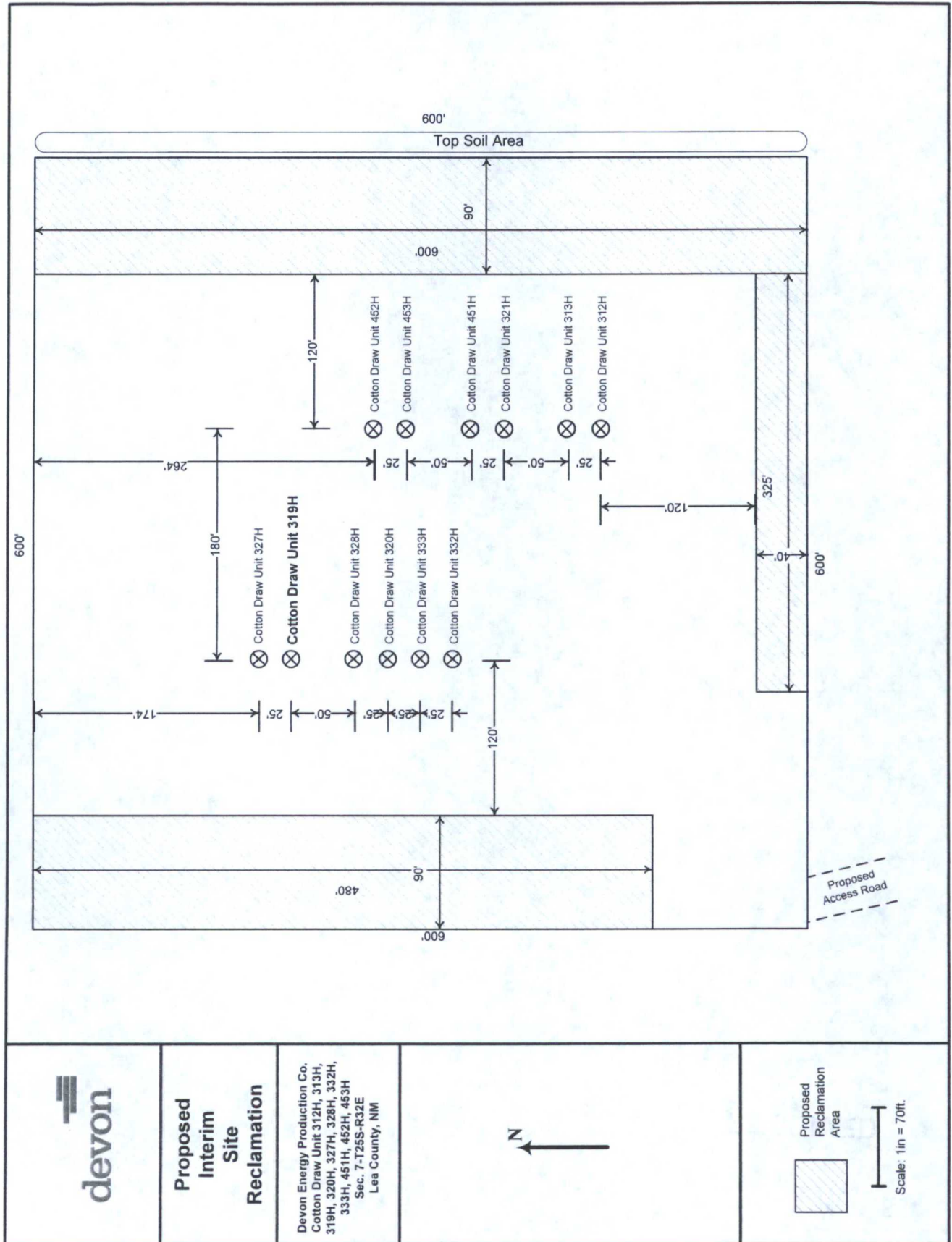
Prepared in conjunction with  
Dave Small





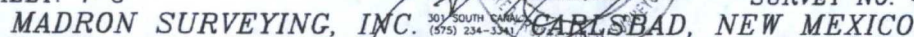
# Devon Energy - Well Pad Rig Location Layout Safety Equipment Location







DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & SE/4 SE/4 & NW/4 SE/4 & NE/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO



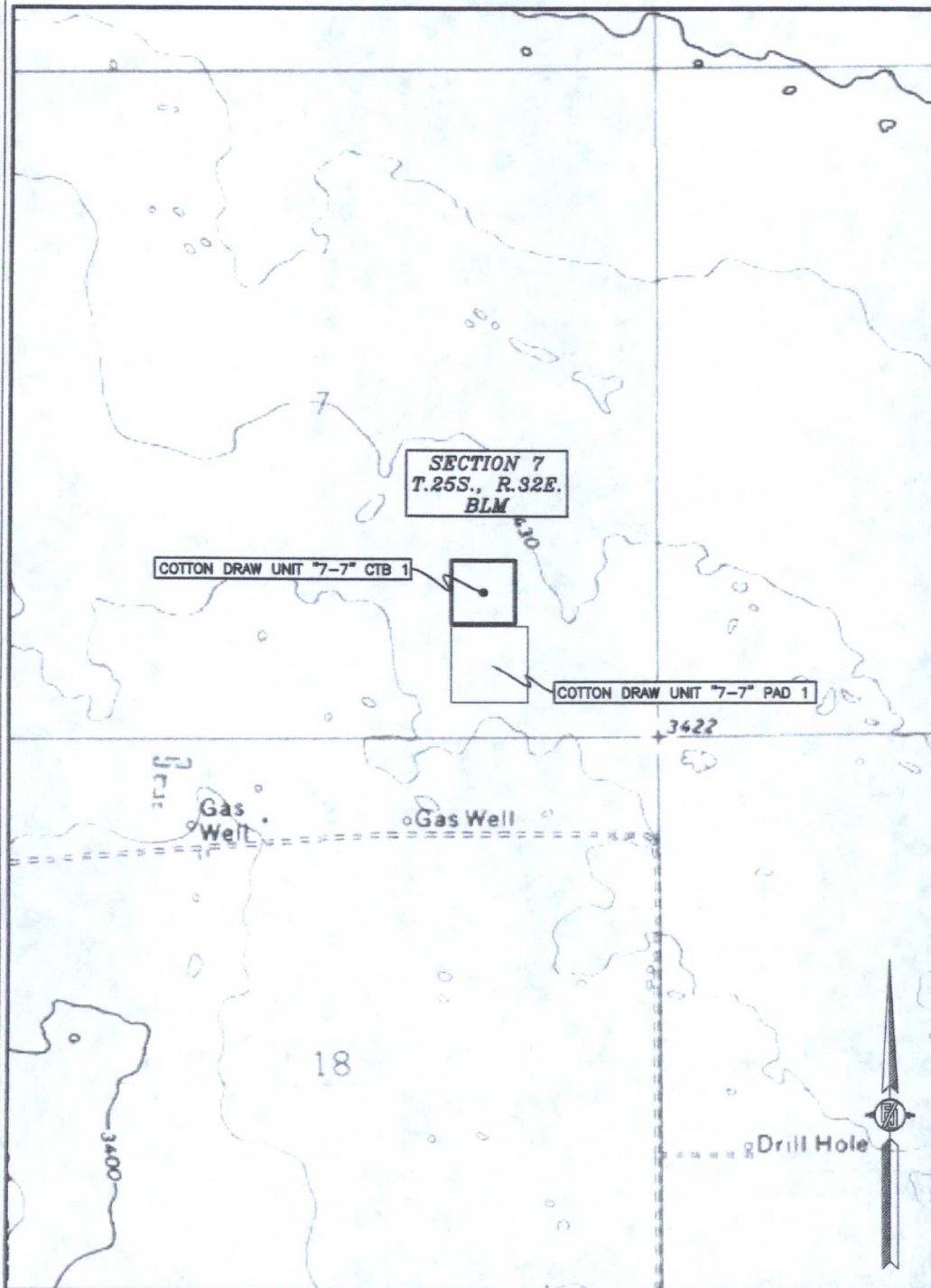


COTTON DRAW UNIT "7-7" CTB 1 (AA000062044)

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & SE/4 SE/4 & NW/4 SE/4 & NE/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

APRIL 7, 2016

QUAD MAP



SHEET: 2-3

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

SURVEY NO. 4311C

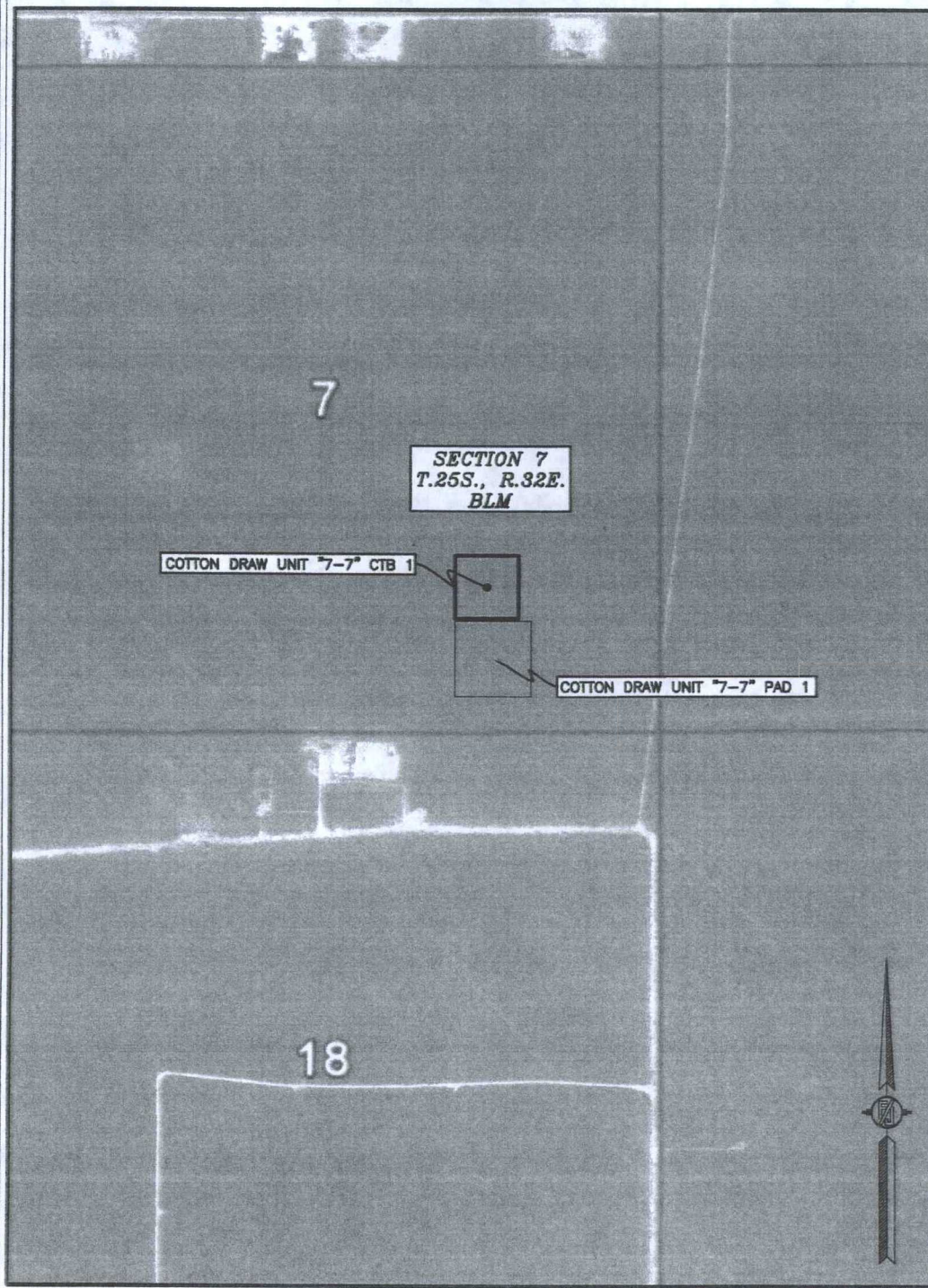


COTTON DRAW UNIT "7-7" CTB 1 (AA000062044)

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SW/4 SE/4 & SE/4 SE/4 & NW/4 SE/4 & NE/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

APRIL 7, 2016

AERIAL PHOTO



SHEET: 3-3

MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3341

SURVEY NO. 4311C

CARLSBAD, NEW MEXICO



DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SE/4 SE/4 & SW/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

APRIL 7, 2018

NW/4 SE/4

NE/4 SE/4

SW/4 SE/4

SE/4 SE/4

PROPOSED 1208 LF ACCESS ROAD

PROPOSED 1228 LF ACCESS ROAD

PROPOSED COTTON DRAW UNIT "7-7" CTB 1

30' FACILITY ROAD

30' FACILITY ROAD

COTTON DRAW UNIT "7-7" PAD 1

8.265± ACRES

EL. 3431.6'

LAT. = 32°08'21.104"N (NAD83)

LONG. = 103°42'36.270"W

589' FSL 1316' FEL

PROPOSED 30 LF ACCESS ROAD

PROPOSED 30 LF ACCESS ROAD

PROPOSED 30 LF (TIE) SE CORNER S7, T25S, R32E S74°31'45"E 1055.66 FT

LEGEND

• SET NAIL

Scale: 1" = 200'

CIMAREX BPL

4/W POWER LINE

POLE

POLE

POLE

PROPOSED 1966 LF ACCESS ROAD

### *DESCRIPTION*

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN THE SE/4 SE/4 & SW/4 SE/4 OF SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHEAST CORNER OF THE PARCEL, WHENCE THE SOUTHEAST CORNER OF SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S74°31'45"E, A DISTANCE OF 1055.66 FEET;  
THENCE S89°59'19"W A DISTANCE OF 599.99 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;  
THENCE N00°00'53"W A DISTANCE OF 600.02 FEET TO THE NORTHWEST CORNER OF THE PARCEL;  
THENCE N89°59'22"E A DISTANCE OF 600.09 FEET TO THE NORTHEAST CORNER OF THE PARCEL;  
THENCE S00°00'18"E A DISTANCE OF 600.02 FEET TO THE SOUTHEAST CORNER OF THE PARCEL, TO THE POINT OF BEGINNING;  
CONTAINING 4.321 ACRES IN THE SE 1/4 SE 1/4 & 3.944 ACRES IN THE SW 1/4 SE 1/4 FOR A TOTAL OF 8.265 ACRES MORE OR LESS.

### GENERAL NOTES

- 1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A PAD
- 2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83)

**DRIVING DIRECTION:** FROM THE INTERSECTION OF STATE HIGHWAY 128 & CR 1 (ORLA HIGHWAY) GO SOUTH ON CR 1 APPROX. 6.2 MILES TO MONSANTO ROAD ON RIGHT (WEST). TURN WEST ON MONSANTO ROAD GO APPROX. 2.1 MILES ROAD TURNS RIGHT (NORTH). GO NORTH APPROX. 0.9 MILE ROAD TURNS LEFT (WEST). GO WEST APPROX. 25'. TURN RIGHT (NORTH) GO NORTH APPROX. 928' TO A PROPOSED ROAD LATH ON LEFT (WEST). FOLLOW PROPOSED ROAD LATHS WEST APPROX. 1018'. TURN RIGHT GO NORTH 30' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION

*SHEET: 1-3*

### SURVEYOR CERTIFICATE

I, FILMON F. GARAMILLO, 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 27 DAY OF APRIL 2016

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

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

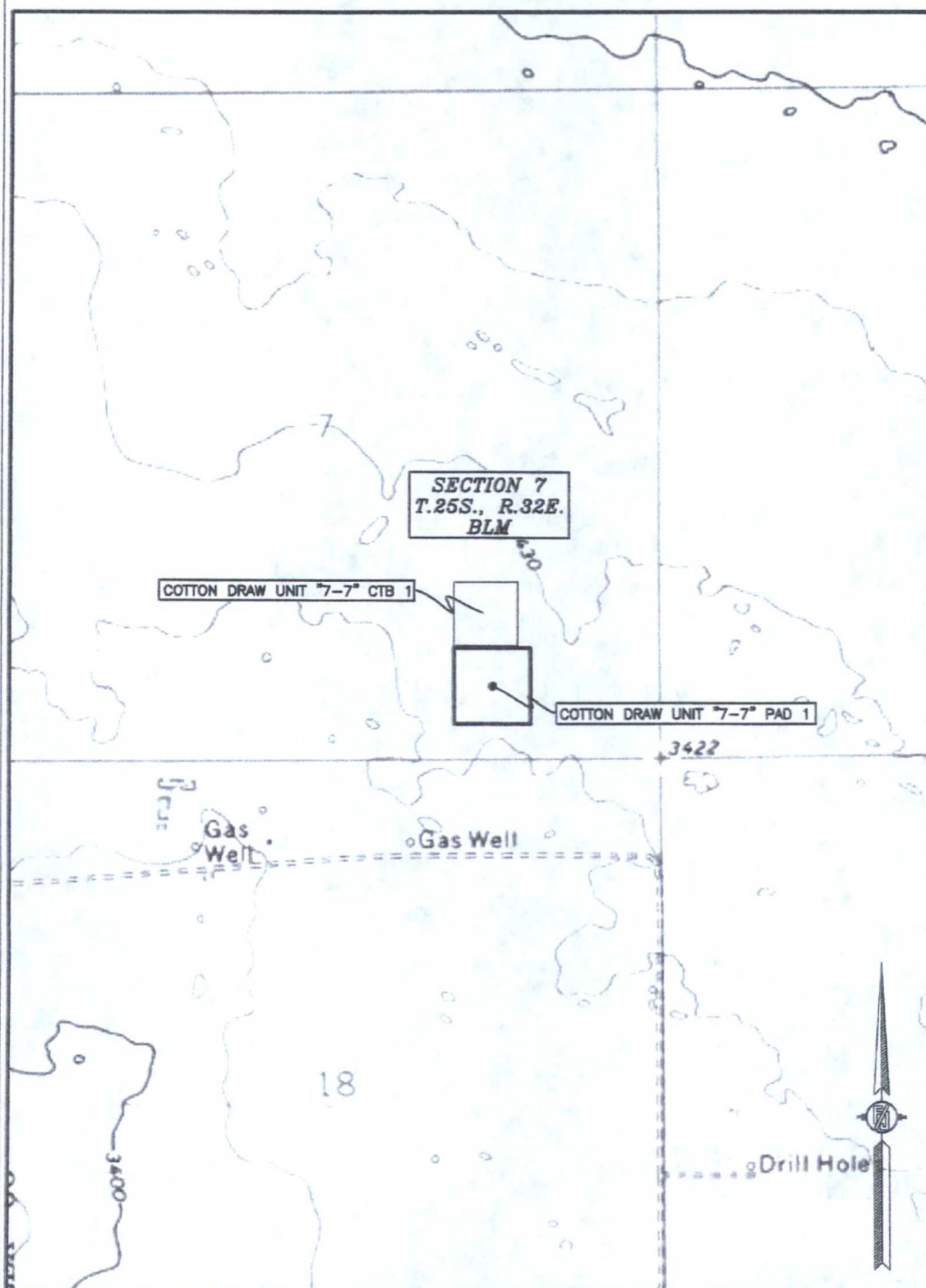


COTTON DRAW UNIT "7-7" PAD 1 (AA000060044)

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SE/4 SE/4 & SW/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

APRIL 7, 2016

QUAD MAP



SHEET: 2-3

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

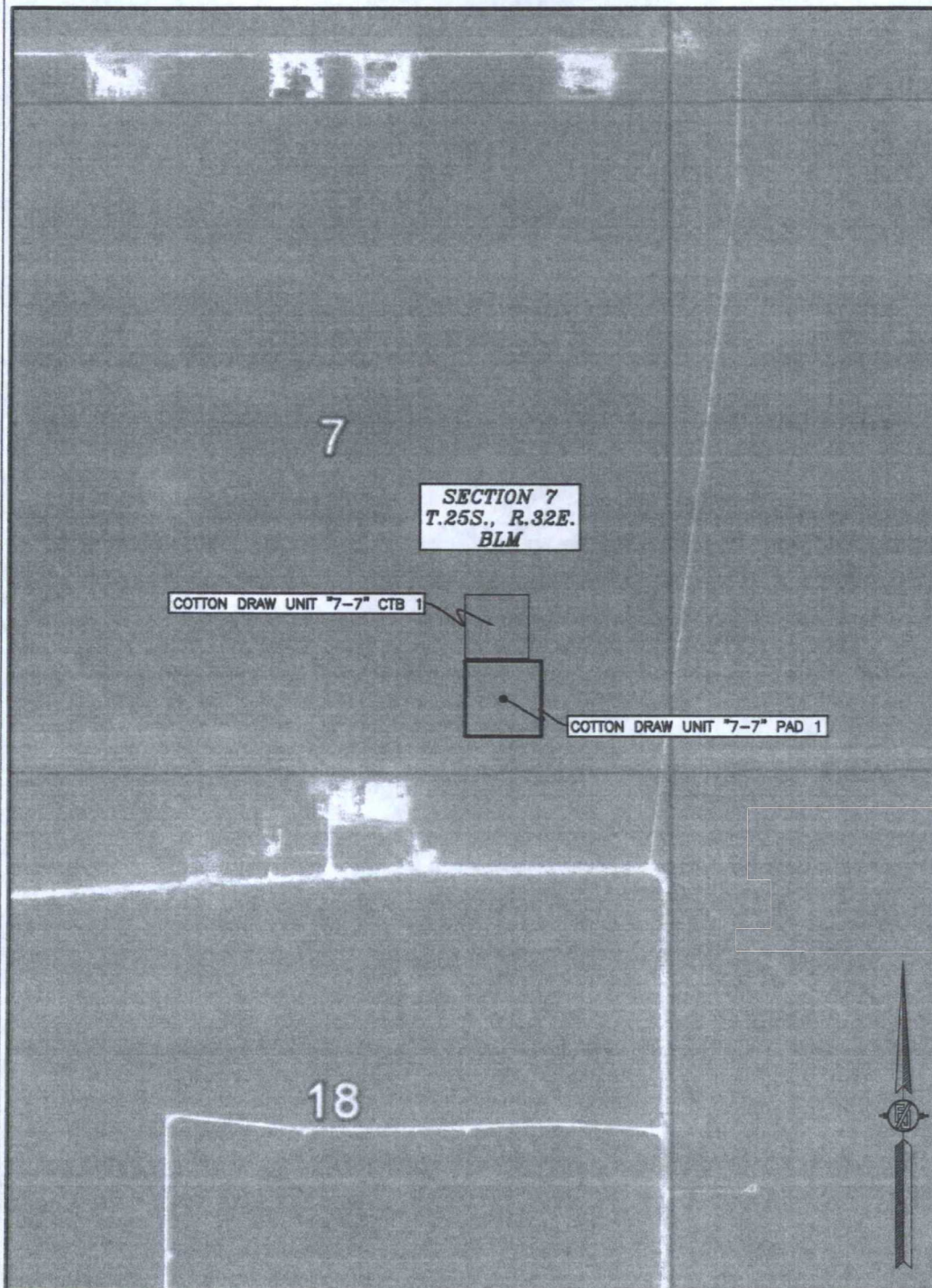
SURVEY NO. 4290C

COTTON DRAW UNIT "7-7" PAD 1 (AA000060044)

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE SE/4 SE/4 & SW/4 SE/4 OF  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO

APRIL 7, 2016

AERIAL PHOTO



SHEET: 3-3

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

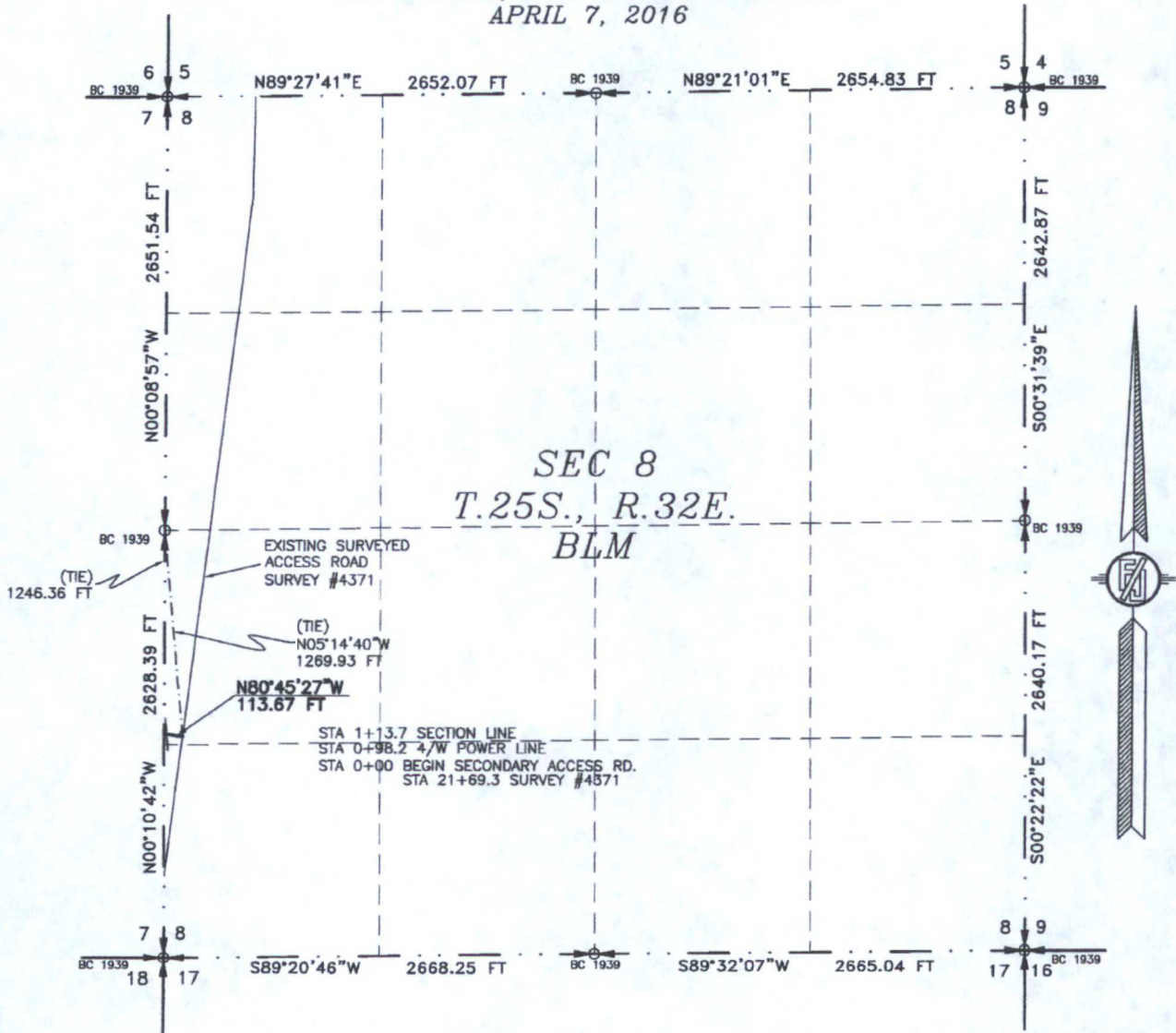
SURVEY NO. 4290C



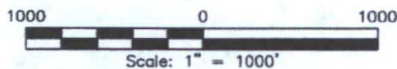
# ACCESS ROAD PLAT (AA000060044)

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016



SEE NEXT SHEET (2-10) FOR DESCRIPTION



## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

## 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 21 DAY OF APRIL 2016

*[Signature]*  
FILMON F. JARAMILLO PLS. 12797

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

SHEET: 1-10

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

SURVEY NO. 4347E



**ACCESS ROAD PLAT (AA000060044)**

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 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 NW/4 SW/4 OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N05°14'40"W, A DISTANCE OF 1269.93 FEET;  
THENCE N80°45'27"W A DISTANCE OF 113.67 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 8, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N00°10'42"W, A DISTANCE OF 1246.36 FEET;

SAID STRIP OF LAND BEING 113.67 FEET OR 6.89 RODS IN LENGTH, CONTAINING 0.078 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 SW/4 113.67 L.F. 6.89 RODS 0.078 ACRES

**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 21 DAY OF APRIL 2016

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

SHEET: 2-10

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

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

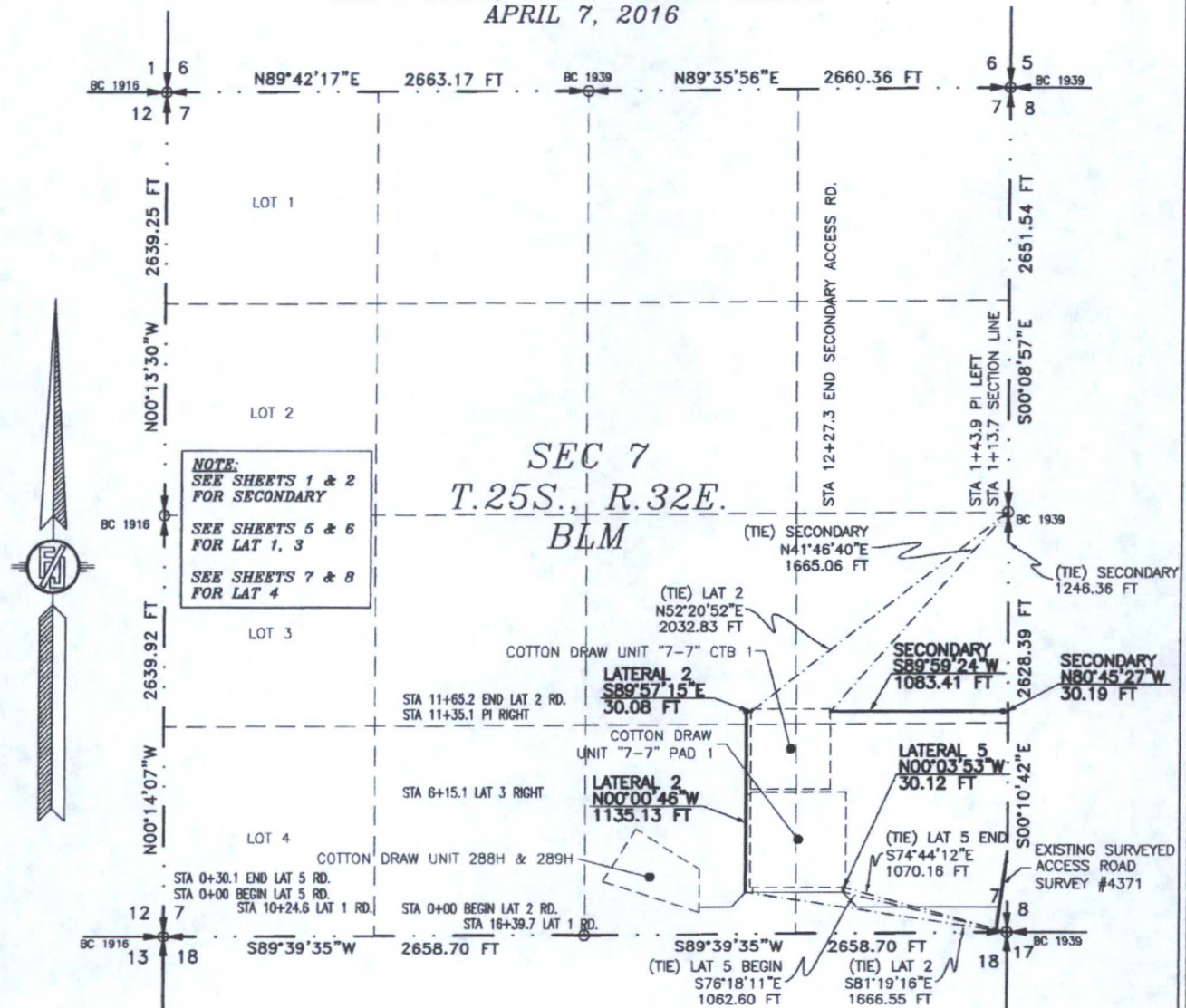
SURVEY NO. 4347E



# ACCESS ROAD PLAT (AA000060044)

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016



## 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 07 DAY OF APRIL 2016

FILIMON F. JARAMILLO, P.S. 12797

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

SURVEY NO. 4347E

## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

SHEET: 3-10

MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3341

CARLSBAD, NEW MEXICO



**ACCESS ROAD PLAT (AA000060044)**

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

**SECONDARY ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE NE/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N00°10'42"W, A DISTANCE OF 1246.36 FEET;  
THENCE N80°45'27"W A DISTANCE OF 30.19 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°59'24"W A DISTANCE OF 1083.41 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N41°46'40"E, A DISTANCE OF 1665.06 FEET;

SAID STRIP OF LAND BEING 1113.60 FEET OR 67.49 RODS IN LENGTH, CONTAINING 0.767 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 SE/4 1113.60 L.F. 67.49 RODS 0.767 ACRES

**LATERAL 2 ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S81°19'16"E, A DISTANCE OF 1666.55 FEET;  
THENCE N00°00'46"W A DISTANCE OF 1135.13 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°57'15"E A DISTANCE OF 30.08 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N52°20'52"E, A DISTANCE OF 2032.83 FEET;

SAID STRIP OF LAND BEING 1165.21 FEET OR 70.62 RODS IN LENGTH, CONTAINING 0.802 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4 1054.73 L.F. 63.92 RODS 0.726 ACRES  
NW/4 SE/4 110.48 L.F. 6.70 RODS 0.076 ACRES

**LATERAL 5 ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S76°18'11"E, A DISTANCE OF 1062.60 FEET;  
THENCE N00°03'53"W A DISTANCE OF 30.12 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S74°44'12"E, A DISTANCE OF 1070.16 FEET;

SAID STRIP OF LAND BEING 30.12 FEET OR 1.83 RODS IN LENGTH, CONTAINING 0.021 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4 30.12 L.F. 1.83 RODS 0.021 ACRES

**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 21 DAY OF APRIL 2016

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

SHEET: 4-10

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

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

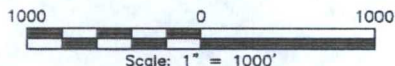
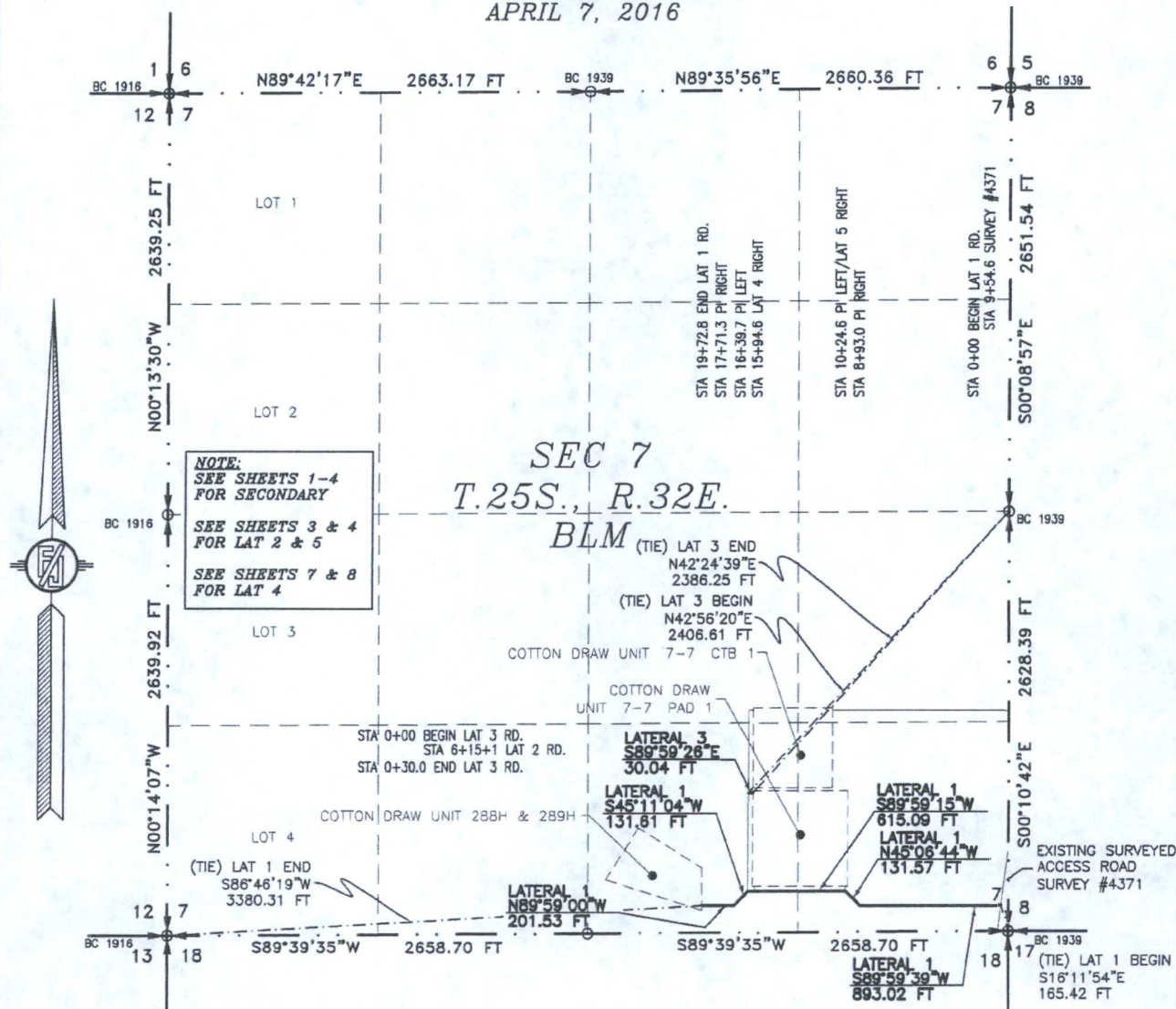
SURVEY NO. 4347E



# ACCESS ROAD PLAT

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016



## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

## 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 21 DAY OF APRIL 2016

12797

FILIMON F. JARAMILLO, PLS. 12797

RECEIVED

APR 10 2016

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

SURVEY NO. 4347E

SHEET: 5-10

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO



**ACCESS ROAD PLAT (AA000060044)**

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

**LATERAL 1 ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S16°11'54"E, A DISTANCE OF 165.42 FEET;

THENCE S89°59'39"W A DISTANCE OF 893.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N45°06'44"W A DISTANCE OF 131.57 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE S89°59'15"W A DISTANCE OF 615.09 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE S45°11'04"W A DISTANCE OF 131.61 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;

THENCE N89°59'00"W A DISTANCE OF 201.53 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S86°46'19"W, A DISTANCE OF 3380.31 FEET;

SAID STRIP OF LAND BEING 1972.82 FEET OR 119.56 RODS IN LENGTH, CONTAINING 1.359 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4 1322.35 L.F. 80.14 RODS 0.911 ACRES

SW/4 SE/4 650.47 L.F. 39.42 RODS 0.448 ACRES

**LATERAL 3 ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N42°56'20"E, A DISTANCE OF 2406.61 FEET;

THENCE S89°59'26"E A DISTANCE OF 30.04 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N42°24'39"E, A DISTANCE OF 2386.25 FEET;

SAID STRIP OF LAND BEING 30.04 FEET OR 1.82 RODS IN LENGTH, CONTAINING 0.021 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4 30.04 L.F. 1.82 RODS 0.021 ACRES

**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 21 DAY OF APRIL 2016

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

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

SHEET: 6-10

MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3341

SURVEY NO. 4347E

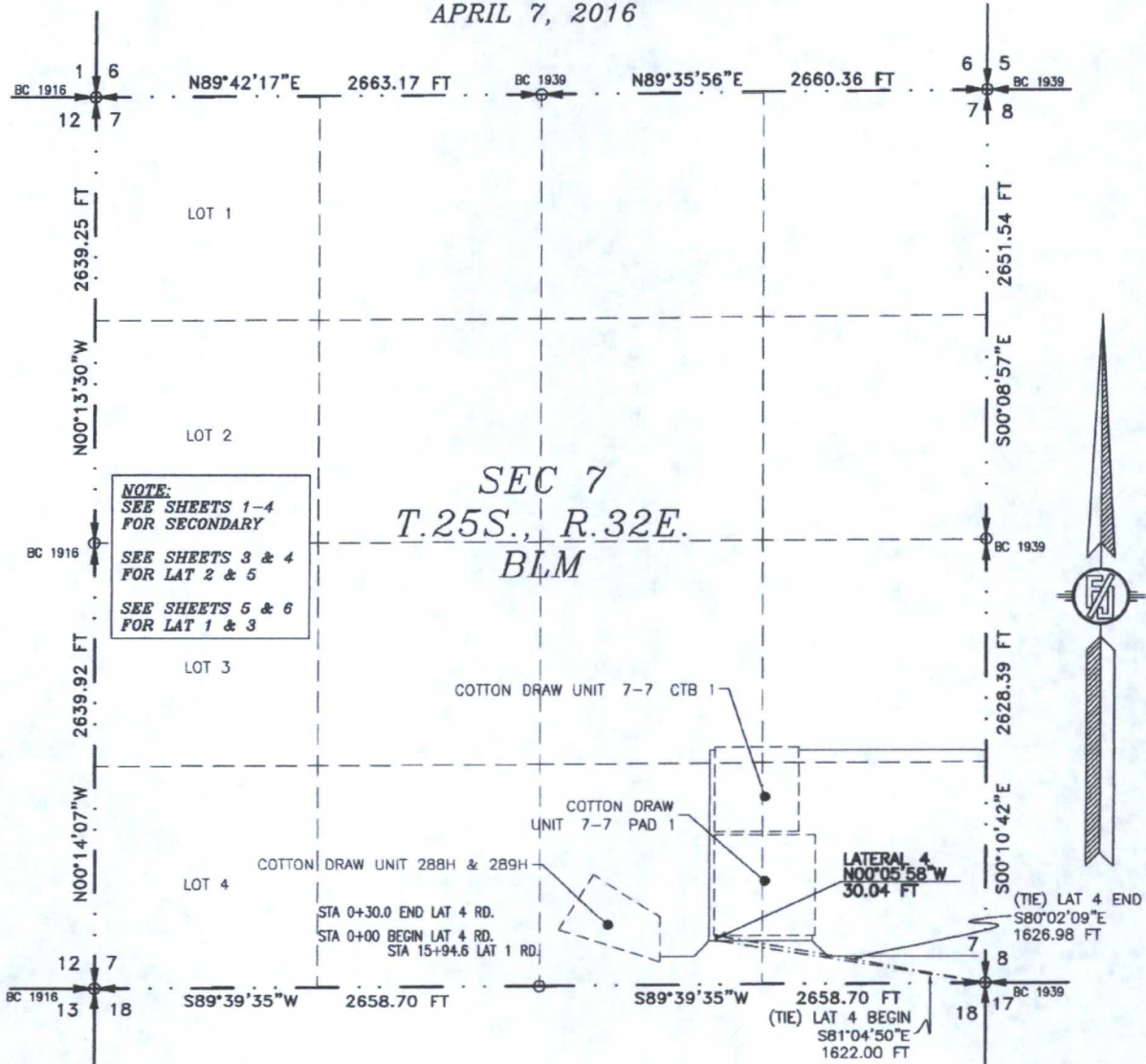
CARLSBAD, NEW MEXICO



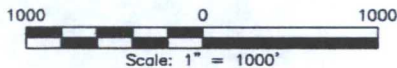
# ACCESS ROAD PLAT (AA000060044)

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016



SEE NEXT SHEET (8-10) FOR DESCRIPTION



## GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

## 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 21 DAY OF APRIL 2016

FILMON F. JARAMILLO, PLS. 12797  
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

SHEET: 7-10

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO 88220  
(575) 234-3341 SURVEY NO. 4347E



**ACCESS ROAD PLAT (AA000060044)**

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE  
COTTON DRAW UNIT 288H & 289H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

**LATERAL 4 ACCESS ROAD**

BEGINNING AT A POINT WITHIN THE SW/4 SE/4 OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S81°04'50"E, A DISTANCE OF 1622.00 FEET;

THENCE N00°05'58"W A DISTANCE OF 30.04 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S80°02'09"E, A DISTANCE OF 1626.98 FEET;

SAID STRIP OF LAND BEING 30.04 FEET OR 1.82 RODS IN LENGTH, CONTAINING 0.021 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SE/4 30.04 L.F. 1.82 RODS 0.021 ACRES

**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 21 DAY OF APRIL 2016

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING IS NMSP EAST MODIFIED TO SURFACE COORDINATES.

**SHEET: 8-10**

**MADRON SURVEYING, INC.**

301 SOUTH CANAL  
(575) 234-3341

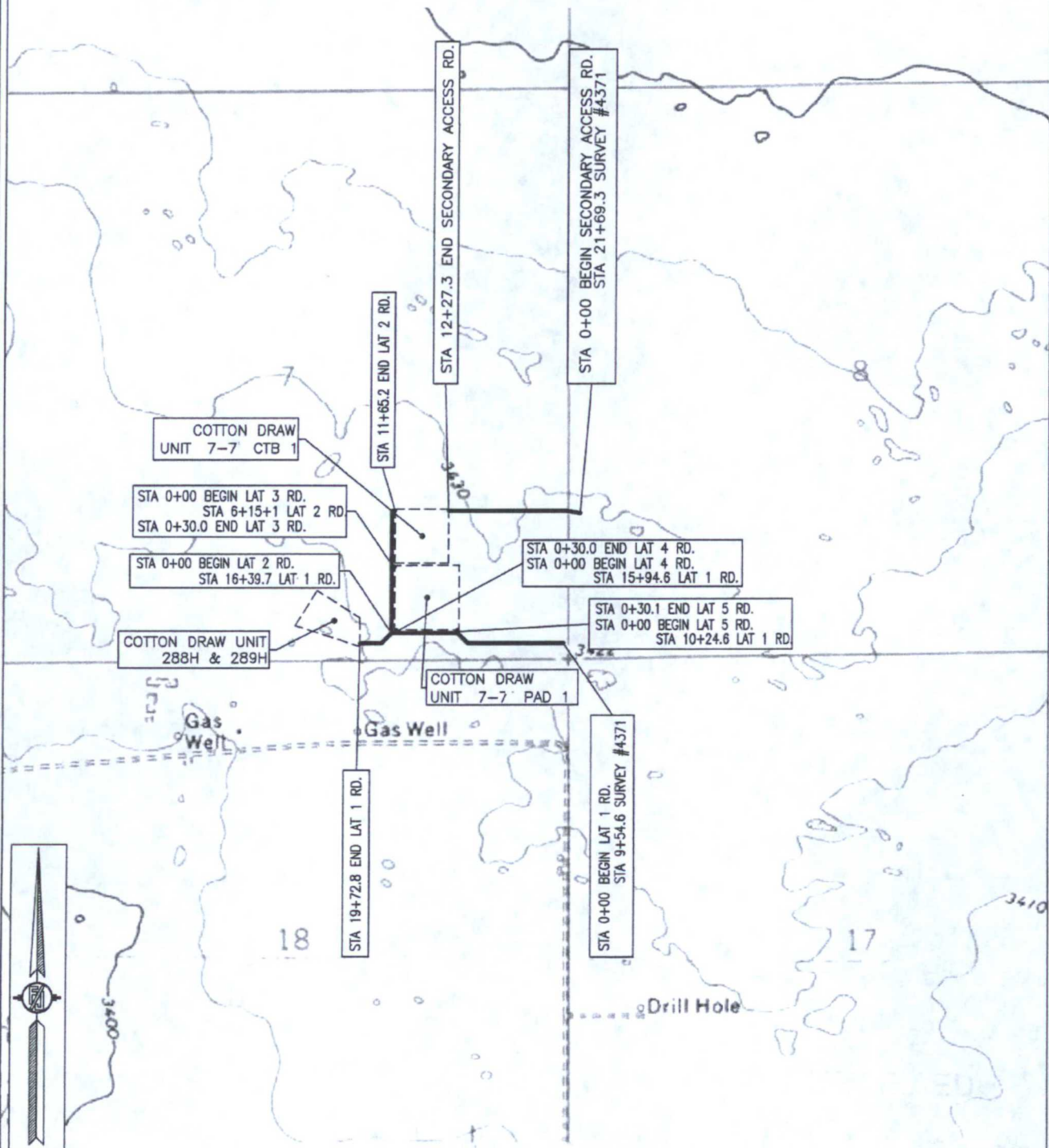
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 4347E**

# ACCESS ROAD PLAT

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTIONS 8, 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016



SHEET: 9-10

MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3341

CARLSBAD, NEW MEXICO

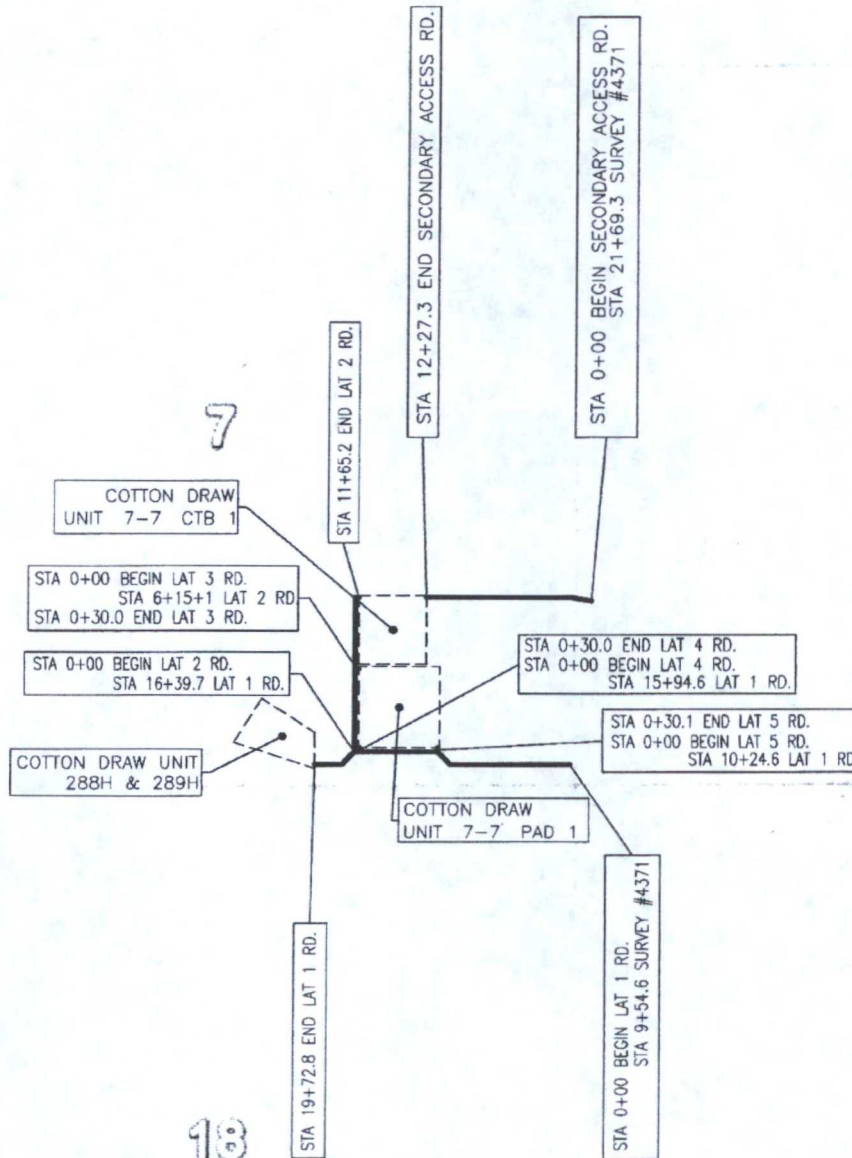
SURVEY NO. 4347E



**ACCESS ROAD PLAT (AA000060044)**

ACCESS ROAD TO THE COTTON DRAW UNIT 7-7 PAD 1, COTTON DRAW UNIT 7-7 CTB 1, AND THE COTTON DRAW UNIT 288H & 289H

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTIONS 8, 7, TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.  
LEA COUNTY, STATE OF NEW MEXICO  
APRIL 7, 2016

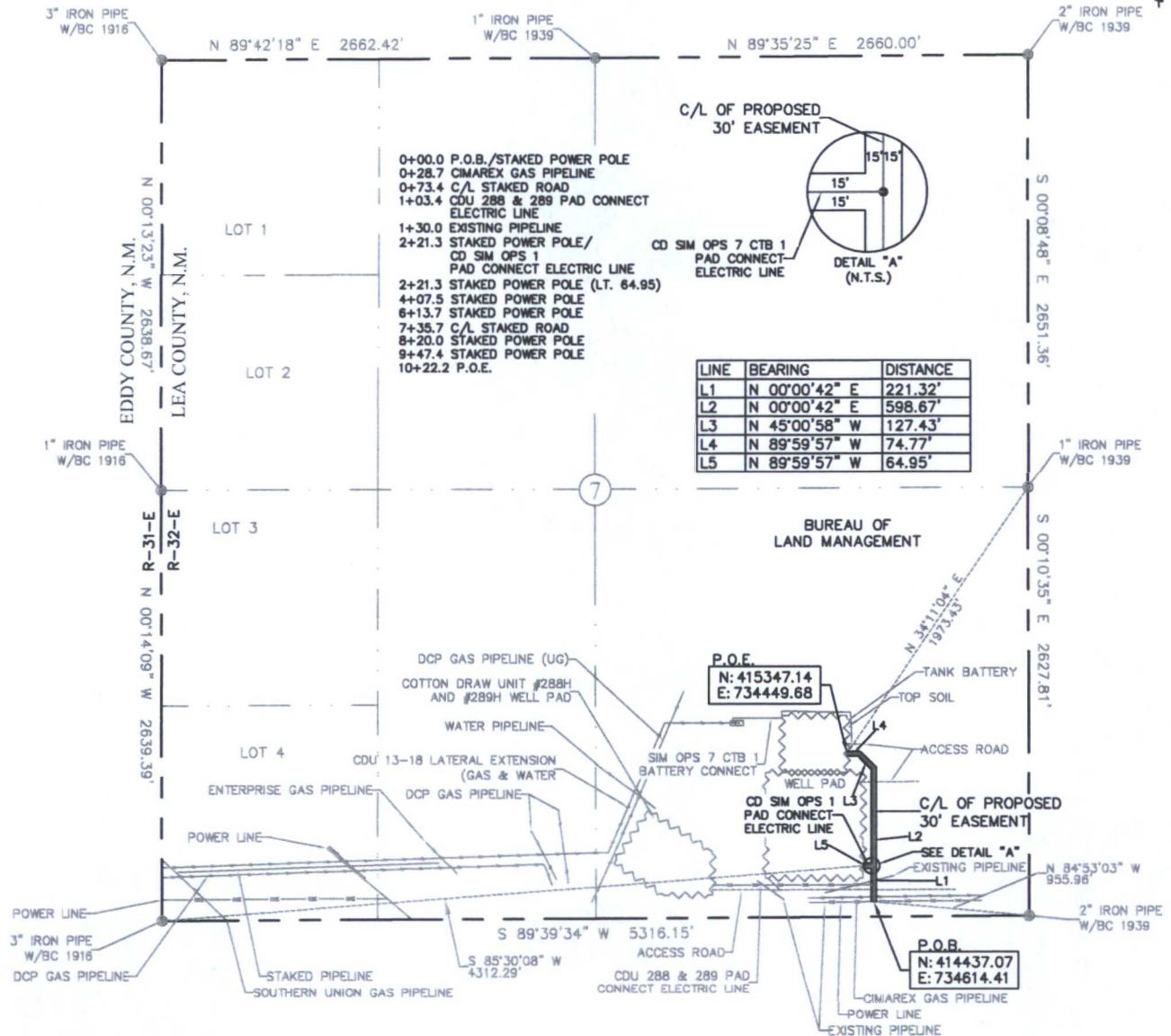


SHEET: 10-10

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

SURVEY NO. 4347E

EXHIBIT "A"  
PAGE 1 of 5  
ELECTRIC LINE PLAT  
SECTION 7, T25S-R32E, N.M.P.M.  
LEA COUNTY, NEW MEXICO



30' EASEMENT AREA = 0.738 ACRE(S)  
1087.14 FEET OR 65.88 RODS

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico Professional Surveyor No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404  
Date Signed: 01-31-2016  
Horizonrow, LLC  
571 State Street Jasper, TX  
(409) 202-5111 75951  
Employee of Horizonrow, LLC



LEGEND  
● POWER POLE

0 1000 2000



<b>HORIZONROW LLC</b>		WBS NUMBER:	LINE NUMBER:
XCEL TO CD SIM OPS CTB 1 BATTERY CONNECT ELECTRIC LINE		CC-112971.AL	
CD SIM OPS 1 PAD CONNECT ELECTRIC LINE		CC-112971.AL	
Drawn for:	DEVON ENERGY PRODUCTION COMPANY, L.P.		
Drawn by: CHRIS MAAS	Date: 01/21/2016	SCALE: 1" = 1000' REVISIONS: 1/29/16 C.M.AAS SHEET: 1 OF 5	
PROPOSED 30' EASEMENT ON THE PROPERTY OF BUREAU OF LAND MANAGEMENT SECTION 7, T25S-R32E, N.M.P.M.			